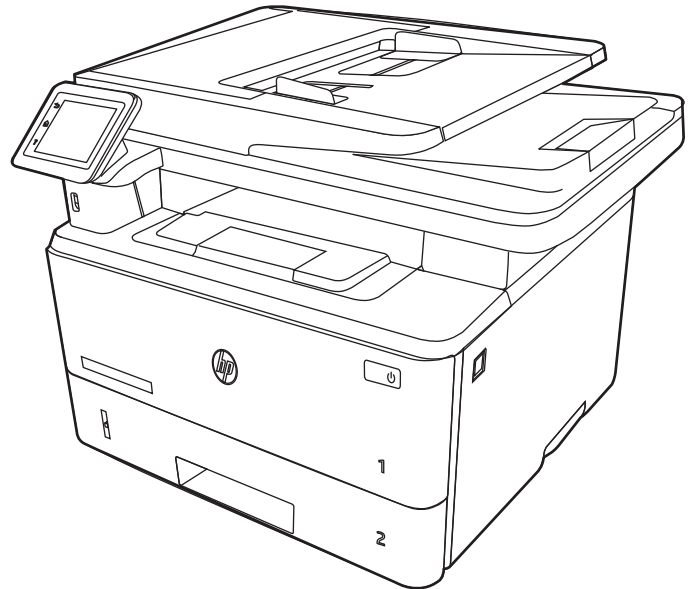
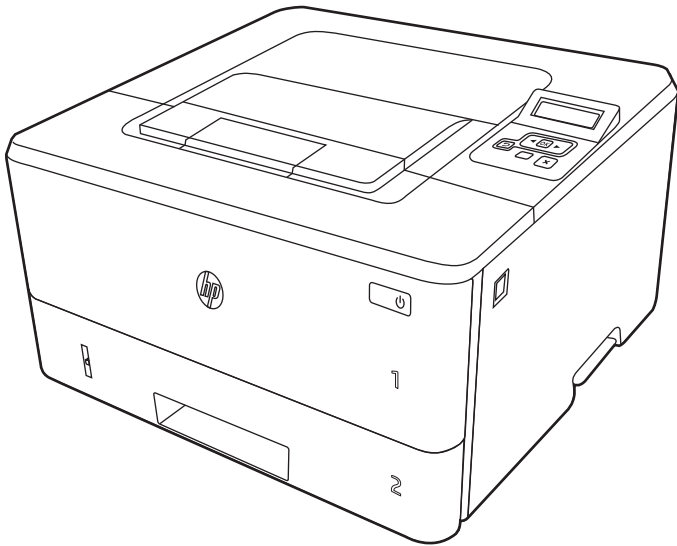




HP LaserJet Pro 4001, 4002, 4003, 4004  
HP LaserJet Pro MFP 4101, 4102, 4103, 4104

## Service Manual



[www.hp.com/support/lj4001-4004](http://www.hp.com/support/lj4001-4004)  
[www.hp.com/support/ljmfp4101-4104](http://www.hp.com/support/ljmfp4101-4104)



# HP LaserJet Pro 4001, 4002, 4003, 4004, 4101, 4102, 4103, 4104 - Service Manual

## **SUMMARY**

This guide provides theory of operation, troubleshooting, and repair information.

## Legal information

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Edition 4, 2/2023

# Revision history

View a list of document revisions.

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**Table** Revision history

Revision number	Revision date	Revision notes
4.2	5/20203	Separated Support Menu into two menus per Req 577. Support Menu and new menu <a href="#">Enable / Disable menu on page 137</a>
4.1	3/2023	Remove /Replace: Changed Field-replaceable units to Customer-replaceable units per CDD-BOI PR 520.
4	1/2023	Updated boot menu instructions for 2-line and touchscreen control panels. See <a href="#">Boot Screen menu on page 143</a> .
3	10/2022	Added the following: <ul style="list-style-type: none"><li>• <a href="#">HP Onsite Repair Application on page 527</a></li></ul>
2	04/2022	Added the following: <ul style="list-style-type: none"><li>• <a href="#">Removal and replacement: ADF top cover (with rollers) on page 292</a></li><li>• <a href="#">Removal and replacement: Scanner glass Mylar on page 300</a></li></ul>
1	01/2022	HP LaserJet Pro 4001, HP LaserJet Pro 4002, HP LaserJet Pro 4003, HP LaserJet Pro 4004, HP LaserJet Pro MFP 4101, HP LaserJet Pro MFP 4102, HP LaserJet Pro MFP 4103, HP LaserJet Pro MFP 4104 service manual initial release.



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# Conventions used in this guide

Learn about the conventions used in this publication.



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



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



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



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

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# HP service and support

Learn about access to additional service and support information.

## Additional service and support for channel partners

Channel partners can use the HP Partner Portal or the Channel Services Delivery Platform (CSDP) to access the HP Web-based Interactive Search Engine (WISE).

Find information about the following topics.

- Service manuals, service cost data, and service advisories
- The latest control panel message (CPMD) troubleshooting information
- Remove and replace part instructions and videos
- Solutions for printer issues and emerging issues
- Printer specifications, warranty, and regulatory information
- Install, configure, and how to information



[View a video of how to use the HP Partner First Portal to access WISE.](#)

### Access WISE for Channel partners (HP Partner Portal)

1. Sign-in to the HP Partner Portal (click <https://partner.hp.com> to access the sign-in page).
2. Select the **Services & Support** item (near the top of the screen).
3. Select the **Technical Support (WISE)** item.
4. Select the **Technical Documentation** item.
5. Use the WISE portal to search for printer information.

### Access WISE for Channel partners (CSDP)

1. Sign-in to the CSDP portal (click [csdp.hp.com](https://csdp.hp.com) to access the sign-in page).
2. Select the **Knowledge and Training** item.
3. Select the **HP Technical Documentation** item.
4. Use the WISE portal to search for printer information.

## Additional service and support for HP internal personnel

HP internal personnel, go to one of the following Web-based Interactive Search Engine (WISE) sites:



[View a video of how to access WISE for internal HP users.](#)

#### Americas (AMS)

- [WISE - English](#)
- [WISE - Spanish](#)
- [WISE - Portuguese](#)
- [WISE - French](#)

#### Asia Pacific / Japan (APJ)

- [WISE - English](#)
- [WISE - Japanese](#)
- [WISE - Korean](#)
- [WISE - Chinese \(simplified\)](#)
- [WISE - Chinese \(traditional\)](#)
- [WISE - Thai](#)

#### Europe / Middle East / Africa (EMEA)

- [WISE - English](#)

### **Additional technical support WISE videos**

The videos below provide additional ways to access printer information using WISE.



[View a video of how to use WISE to find technical support videos \(model number search\).](#)



[View a video of ow to use WISE to find technical support videos \(Product detail page \[PDP\] search\).](#)

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# 1 Printer information, configurations, and specifications

Learn about printer configuration and specifications.

## Document feeder / scanner

Learn about the printer document feeder and scanner configuration and specifications.

 **NOTE:** This section is for MFP printers only.

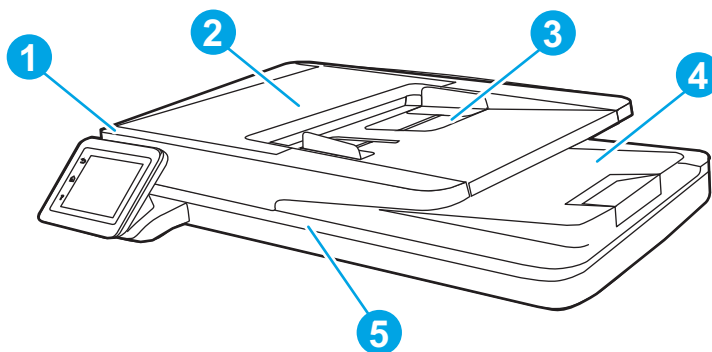
### Information (document feeder and scanner)

Learn about the document feeder and scanner.

#### Document feeder and scanner front view

Identify certain parts of the document feeder and scanner.

**Figure 1-1** Document feeder and scanner front view



Item	Description
1	Document feeder
2	Jam access door
3	Input tray (source documents)
4	Output bin (source documents)
5	Flatbed scanner



## Specifications (document feeder and scanner)

Learn about the document feeder and scanner specifications.

### Technical specifications

Learn about the document feeder and scanner specifications.

Review the technical specifications for the document feeder and scanner.

See [www.hp.com/support/ljmf4101-4104](http://www.hp.com/support/ljmf4101-4104) or [www.hp.com/support/ljmf4101-4104plus](http://www.hp.com/support/ljmf4101-4104plus) for current information.

**Table 1-1 Copy and scan specifications (document feeder and scanner)**

Copy and scan features	4101dw	4101fdn	4101fdw
	4102dw	4102fdn	4102fdw
	4101dwe	4101fdne	4101fdwe
	4102dwe	4102fdne	4102fdwe
	4103dw	4103fdn	4103fdw
	4104dw	4104fdn	4104fdw
Copies and scans up to 32 pages per minute (ppm)	Yes	Yes	Yes
50-page document feeder with dual-head scanning for single-pass duplex copying and scanning	Yes	Yes	Yes
Scan to E-mail, Scan to USB, and Scan to Network Folder option	Yes	Yes	Yes

## Base printer

Learn about the base printer (engine) configuration and specifications.

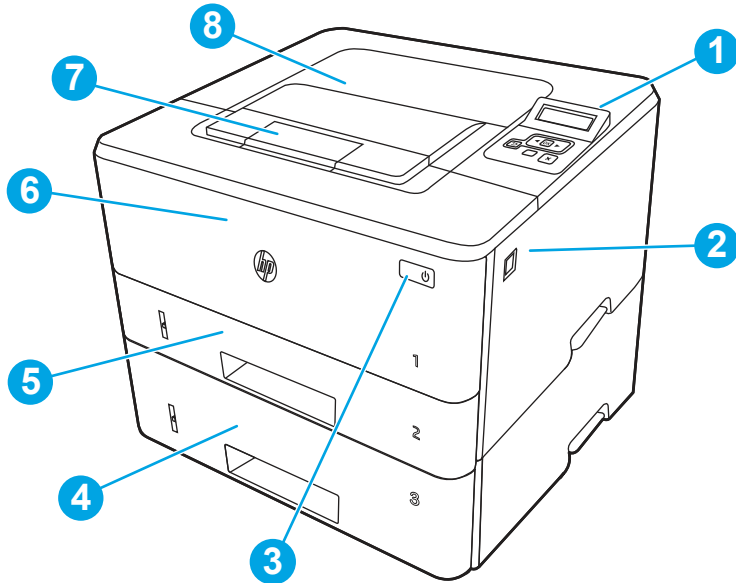
### Information (base printer)

Learn about the base printer.

### Printer front view (SFP)

Identify the parts on the front of the printer (SFP).

Figure 1-2 Printer front view (SFP)

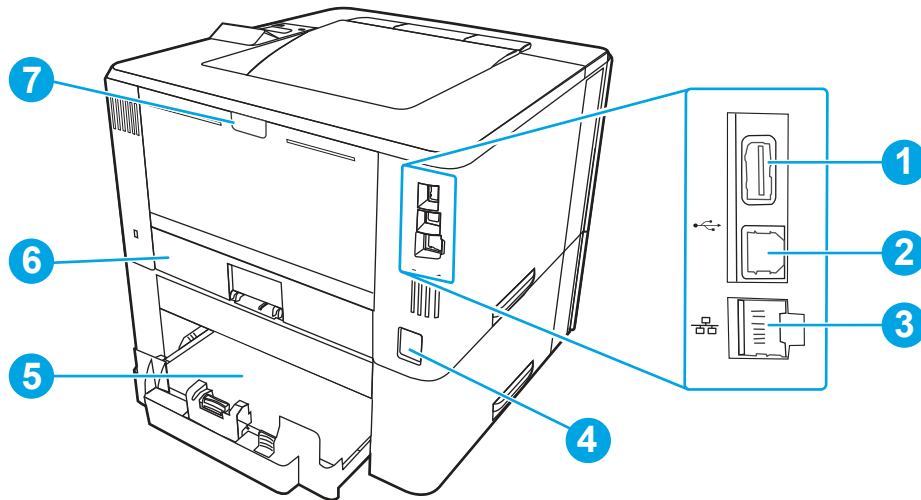


Number	Description
1	2-line backlit control panel
2	Front door release button (access to the toner cartridge)
3	Power on/off button
4	Tray 3 (optional)
5	Tray 2
6	Tray 1/Front door (access to the toner cartridge)
7	Output bin extension
8	Output bin

### Printer back view (SFP)

Identify the parts on the back of the printer (SFP).

Figure 1-3 Printer rear view (SFP)



Number	Description
1	USB port (for job storage and private printing) <b>NOTE:</b> This port should remain covered when not in use. Not available for the 4002d and 4004d model printers.
2	USB interface port
3	Ethernet port <b>NOTE:</b> Not available for the 4002d and 4004d model printers.
4	Power connection
5	Tray 3 (optional) <b>NOTE:</b> Tray 3 extends when legal-size or A4-size paper is loaded.
6	Dust cover for Tray 2 <b>NOTE:</b> Dust cover flips up when legal-size or A4-size paper is loaded.
7	Rear door (access for clearing jams)

### Control panel view (SFP)

Identify the buttons and lights on the printer control panel.

Figure 1-4 Printer control panel (SFP)

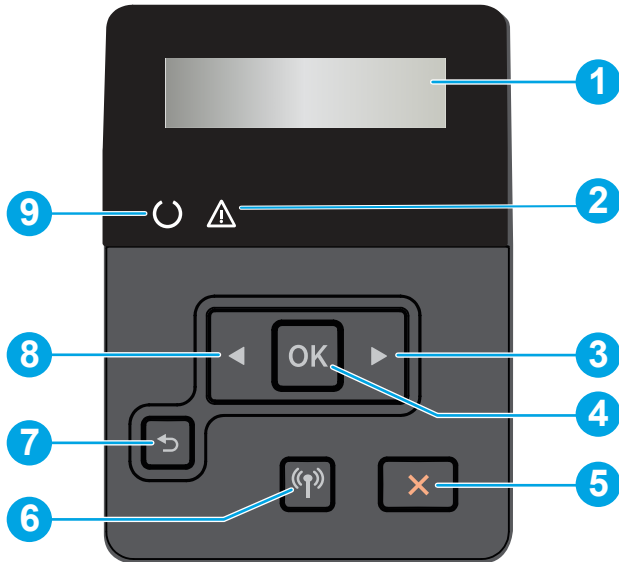




Table 1-2 Control panel features (SFP)

Number	Item	Description
1	Control panel display	This screen displays menus and printer information.
2	Attention light (amber)	This light blinks when the printer requires user attention.
3	Right arrow button ►	Use this button to navigate through the menus or to increase a value that appears on the display.
4	OK button	Press the <b>OK</b> button for the following actions: <ul style="list-style-type: none"> <li>• Open the control panel menus.</li> <li>• Open a sub-menu displayed on the control panel display.</li> <li>• Select a menu item.</li> <li>• Clear some errors.</li> <li>• Begin a print job in response to a control-panel prompt (for example, when the message <b>Press [OK] to continue</b> appears on the control panel display).</li> </ul>
5	Cancel button ✕	Press this button to cancel a print job or to exit the control panel menus.
6	Wireless button (W)	Use this button to access the wireless menu.

**NOTE:** Wireless models only

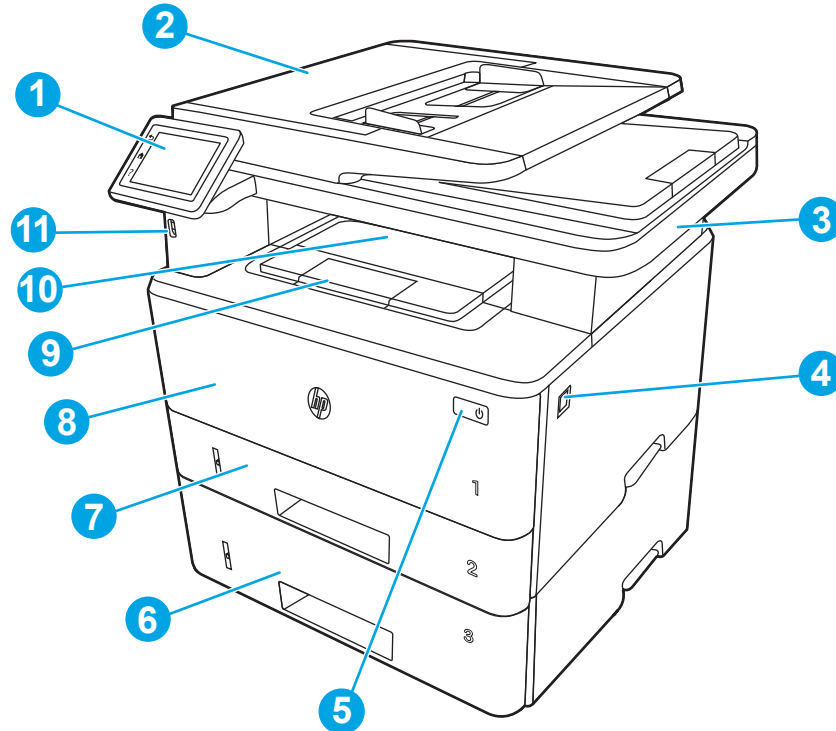
**Table 1-2 Control panel features (SFP) (continued)**

Number	Item	Description
7	Back arrow button 	Use this button for the following actions: <ul style="list-style-type: none"> <li>• Exit the control panel menus.</li> <li>• Scroll back to a previous menu in a sub-menu list.</li> <li>• Scroll back to a previous menu item in a sub-menu list (without saving changes to the menu item).</li> </ul>
8	Left arrow button 	Use this button to navigate through the menus or to decrease a value that appears on the display.
9	Ready light (green)	This light is on when the printer is ready to print. It blinks when the printer is receiving print data.

## Printer front view (MFP)

Identify the parts on the front of the printer (MFP).

**Figure 1-5 Printer front view (MFP)**



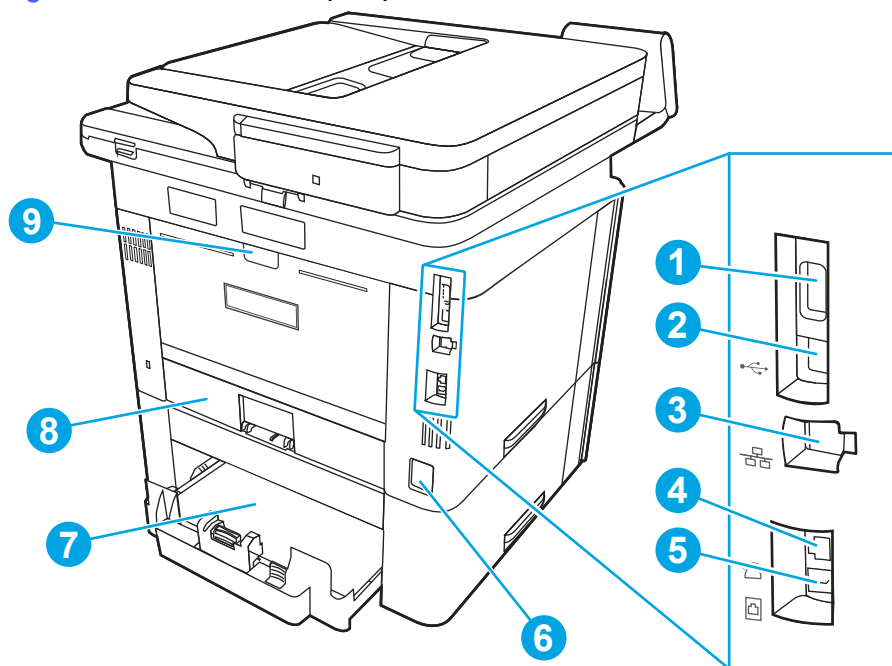
Number	Description
1	Control panel (tilts up for easier viewing)
2	Document feeder
3	Scanner

Number	Description
4	Front door release button (access to the toner cartridge)
5	Power on/off button
6	Tray 3 (optional)
7	Tray 2
8	Tray 1/Front door (access to the toner cartridge)
9	Output bin extension
10	Output bin
11	Walk-up USB port (for printing and scanning without a computer)

## Printer back view (MFP)

Identify the parts on the back of the printer (MFP).

**Figure 1-6 Printer rear view (MFP)**



Number	Description
1	USB port (for job storage and private printing) <b>NOTE:</b> This port should remain covered when not in use.
2	USB interface port
3	Ethernet port
4	Telephone "line out" port (for attaching an extension phone, answering machine, or other device) <b>NOTE:</b> This port should remain covered when not in use.
5	Fax "line in" port (for attaching the fax phone line to the printer)
6	Power connection

Number	Description
7	Tray 3 (optional) <b>NOTE:</b> Tray 3 extends when legal-size or A4-size paper is loaded.
8	Dust cover for Tray 2 <b>NOTE:</b> Dust cover flips up when legal-size or A4-size paper is loaded.
9	Rear door (provides access for clearing jams)

## Control panel view (MFP)

Identify the buttons and features on the touchscreen control panel.

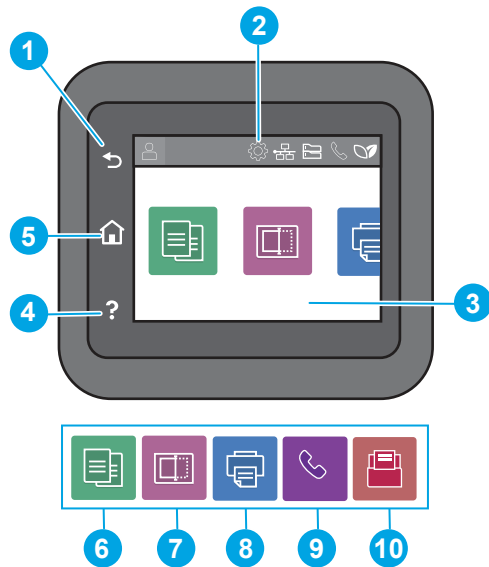
The Home screen provides access to the printer features and indicates the current status of the printer.

Return to the Home screen at any time by touching the Home button on the left side of the printer control panel, or touch the Home button in the upper-left corner of most screens.

**NOTE:** For more information about the printer control panel features, go to [www.hp.com/support/lj4001-4004](http://www.hp.com/support/lj4001-4004) or [www.hp.com/support/lj4001-4004plus](http://www.hp.com/support/lj4001-4004plus) or [www.hp.com/support/ljmfp4101-4104](http://www.hp.com/support/ljmfp4101-4104) or [www.hp.com/support/ljmfp4101-4104plus](http://www.hp.com/support/ljmfp4101-4104plus).

**NOTE:** The features that appear on the Home screen can vary, depending on the printer configuration.






**Figure 1-7** Control panel view (MFP)




**Table 1-3** Control panel features (MFP)

Number	Item	Description
1	Back button	Returns to the previous screen.
2	Home screen dashboard display icons	See the table that follows for a description of the icons. Pull down this tab to open the <a href="#">Jobs</a> menu.





**Table 1-3 Control panel features (MFP) (continued)**

Number	Item	Description
3	Color touchscreen	Provides access to menus, help animations, and printer information.
4	Help button	Provides access to the control panel help system.
5	Home button	Provides access to the Home screen.
6		<a href="#">Copy</a> icon: Touch this icon to open the <a href="#">Copy</a> menu.
7		<p><a href="#">Scan</a> icon: Touch this icon to open the <a href="#">Scan</a> menus:</p> <ul style="list-style-type: none"> <li>• <a href="#">Scan to USB Drive</a></li> <li>• <a href="#">Scan to Network Folder</a></li> <li>• <a href="#">Scan to E-mail</a></li> <li>• <a href="#">Scan to Computer</a></li> <li>• <a href="#">Scan to SharePoint</a></li> </ul>
8		<a href="#">Print</a> icon: Touch this icon to open the <a href="#">Print</a> menu.
9		<a href="#">Fax</a> icon (fax models only): Touch this icon to open the <a href="#">Fax</a> menu.
10		<a href="#">Apps</a> icon: Touch this icon to open the <a href="#">Apps</a> menu to print directly from select Web applications.

 **NOTE:** While the control panel does not have a standard [Cancel](#) button, during many printer processes a [Cancel](#) button appears on the touchscreen. This permits users to cancel a process before the printer completes it.





## Home screen dashboard display icons (MFP)

**Table 1-4 Home screen icons (MFP)**

Icon	Purpose
	Sign-in icon.
	<a href="#">Setup</a> icon: Opens the <a href="#">Setup</a> menu, where you can change preferences and perform maintenance functions.
	Wireless icon (wireless models only): Opens the <a href="#">Wireless Summary</a> menu, where you can check wireless status and change wireless settings. You can also print a wireless test report, which helps diagnosing network connection issues.
	Wi-Fi Direct icon (wireless models only): Opens the <a href="#">Wi-Fi Direct</a> menu, where you can turn on Wi-Fi Direct, turn off Wi-Fi Direct, and display the Wi-Fi Direct name and password.



**Table 1-4 Home screen icons (MFP) (continued)**

Icon	Purpose
	<b>Cartridge</b> icon: Opens the Cartridge Information screen, where you can view the estimated level and pages remaining for the toner cartridge.
	<b>Paper Setup</b> icon: Opens the Paper Setup menu, where you can configure the default Paper Size and Paper Type for the paper trays.
	<b>Fax Status</b> icon (fax models only): Displays status information for the Auto Answer function, fax logs, and the fax sound volume.
	<b>ECO</b> icon: Allows you to configure some of the printer environmental features.

## Specifications (base printer)

Learn about the base printer specifications.

### Technical specifications (SFP; 1 of 4)

Review the technical specifications for the printer.

#### Product numbers for each model

- 4001n - 2Z599F
- 4001dn - 2Z600F
- 4001dw - 2Z601F
- 4002n - 2Z604F
- 4002d - 2Z607F
- 4002dn - 2Z605F
- 4002dw - 2Z606F

**Table 1-5 Paper handling specifications**

Paper handling features	4001n 4002n	4001dn 4002d 4002dn	4001dw 4002dw
Tray 1 (100-sheet capacity)	✓	✓	✓
Tray 2 (250-sheet capacity)	✓	✓	✓
Optional 550-sheet accessory tray	Optional	Optional	Optional
Automatic duplex printing	Not available	✓	✓

**Table 1-6 Connectivity specifications**

Connectivity features	4002d	4001n 4002n	4001dn 4002dn	4001dw 4002dw
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	Not available	✓	✓	✓
Hi-Speed USB 2.0	✓	✓	✓	✓
Dual Band WiFi	Not available	Not available	Not available	✓
Bluetooth Low Energy (BLE)	Not available	Not available	Not available	✓
Wi-Fi Direct for printing from mobile devices	Not available	Not available	Not available	✓

**Table 1-7 Print specifications**

Print features	4001n 4002n	4001dn 4002dn	4002d	4001dw 4002dw
Prints 40 pages per minute (ppm) on A4 and 42 ppm on letter-size paper	✓	✓	✓	✓
Job storage and private printing	✓	✓	Not supported	✓

**Table 1-8 Control-panel display specifications**

Control-panel display features	4001n 4002n	4001dn 4002d 4002dn	4001dw 4002dw
2-line backlit control panel	✓	✓	✓
512 MB base memory	✓	✓	✓

## Technical specifications (SFP; 2 of 4)

Review the technical specifications for the printer.

### Product numbers for each model

- 4001ne - 2Z599E
- 4001dne - 2Z600E
- 4001dwe - 2Z601E
- 4002ne - 2Z604E
- 4002dne - 2Z605E

- 4002dwe - 2Z606E

**Table 1-9 Paper handling specifications**

Paper handling features	4001ne	4001dne	4001dwe
	4002ne	4002dne	4002dwe
Tray 1 (100-sheet capacity)	✓	✓	✓
Tray 2 (250-sheet capacity)	✓	✓	✓
Optional 550-sheet accessory tray	Optional	Optional	Optional
Automatic duplex printing	Not available	✓	✓

**Table 1-10 Connectivity specifications**

Connectivity features	4001ne	4001dne	4001dwe
	4002ne	4002dne	4002dwe
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓	✓	✓
Hi-Speed USB 2.0	✓	✓	✓
Dual Band WiFi Radio	Not available	Not available	✓
Bluetooth Low Energy (BLE)	Not available	Not available	✓
Wi-Fi Direct for printing from mobile devices	Not available	Not available	✓

**Table 1-11 Print specifications**

Print features	4001ne	4001dne	4001dwe
	4002ne	4002dne	4002dwe
Prints 40 pages per minute (ppm) on A4 and 42 ppm on letter-size paper	✓	✓	✓
Job storage and private printing	✓	✓	✓

**Table 1-12 Control-panel display specifications**

Control-panel display features	4001ne	4001dne	4001dwe
	4002ne	4002dne	4002dwe
2-line backlit control panel	✓	✓	✓
512 MB base memory	✓	✓	✓

## Technical specifications (SFP; 3 of 4)

Review the technical specifications for the printer.

### Product numbers for each model

- 4003n - 2Z611A
- 4003dn - 2Z609A
- 4003dw - 2Z610A

**Table 1-13** Paper handling specifications

Paper handling features	4003n	4003dn	4003dw
Tray 1 (100-sheet capacity)	✓	✓	✓
Tray 2 (250-sheet capacity)	✓	✓	✓
Optional 550-sheet accessory tray	Optional	Optional	Optional
Automatic duplex printing	Not available	✓	✓

**Table 1-14** Connectivity specifications

Connectivity features	4003n	4003dn	4003dw
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓	✓	✓
Hi-Speed USB 2.0	✓	✓	✓
Dual Band WiFi	Not available	Not available	✓
Bluetooth Low Energy (BLE)	Not available	Not available	✓
Wi-Fi Direct for printing from mobile devices	Not available	Not available	✓

**Table 1-15** Print specifications

Print features	4003n	4003dn	4003dw
Prints 40 pages per minute (ppm) on A4 and 42 ppm on letter-size paper	✓	✓	✓
Job storage and private printing	✓	✓	✓

**Table 1-16** Control-panel display specifications

Control-panel display features	4003n	4003dn	4003dw
2-line backlit control panel	✓	✓	✓
512 MB base memory	✓	✓	✓

## Technical specifications (SFP; 4 of 4)

Review the technical specifications for the printer.

### Product numbers for each model

- 4004d - 2Z613A
- 4004dn - 2Z614A
- 4004dw - 2Z615A

**Table 1-17 Paper handling specifications**

Paper handling features	4004d, 4004dn, 4004dw
Tray 1 (100-sheet capacity)	✓
Tray 2 (250-sheet capacity)	✓
Optional 550-sheet accessory tray	Optional
Automatic duplex printing	✓

**Table 1-18 Connectivity specifications**

Connectivity features	4004d	4004dn	4004dw
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	Not available	✓	✓
Hi-Speed USB 2.0	✓	✓	✓
Dual Band WiFi	Not available	Not available	✓
Bluetooth Low Energy (BLE)	Not available	Not available	✓
Wi-Fi Direct for printing from mobile devices	Not available	Not available	✓

**Table 1-19 Print specifications**

Print features	4004d	4004dn, 4004dw
Prints 40 pages per minute (ppm) on A4 and 42 ppm on letter-size paper	✓	✓
Job storage and private printing	Not supported	✓

**Table 1-20 Control-panel display specifications**

Control-panel display features	4004d	4004dn	4004dw
2-line backlit control panel	✓	✓	✓
512 MB base memory	✓	✓	✓

## Technical specifications (MFP; 1 of 4)

Review the technical specifications for the printer.

### Product numbers for each model

- 4101dw - 2Z620F
- 4101fdn - 2Z618F
- 4101fdw - 2Z619F
- 4102dw - 2Z622F
- 4102fdn - 2Z623F
- 4102fdw - 2Z624F

**Table 1-21 Paper handling specifications**

Paper handling features	4101dw	4101fdn	4101fdw
	4102dw	4102fdn	4102fdw
Tray 1 (100-sheet capacity)	✓	✓	✓
Tray 2 (250-sheet capacity)	✓	✓	✓
Optional 550-sheet accessory tray	Optional	Optional	Optional
Automatic duplex printing	✓	✓	✓

**Table 1-22 Connectivity specifications**

Connectivity features	4101dw	4101fdn	4101fdw
	4102dw	4102fdn	4102fdw
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓	✓	✓
Hi-Speed USB 2.0	✓	✓	✓
Walk-up USB port	✓	✓	✓
Dual Band WiFi	✓	Not available	✓
Bluetooth Low Energy (BLE)	✓	Not available	✓
Wi-Fi Direct for printing from mobile devices	✓	Not available	✓

**Table 1-23 Print specifications**

Print features	4101dw	4101fdn	4101fdw
	4102dw	4102fdn	4102fdw
Prints 40 pages per minute (ppm) on A4 and 42 ppm on letter-size paper	✓	✓	✓
Job storage and private printing	✓	✓	✓

**Table 1-24 Other specifications**

Other features	4101dw	4101fdn	4101fdw
	4102dw	4102fdn	4102fdw
Color touchscreen control panel	✓	✓	✓
512MB standard/maximum memory	✓	✓	✓
Fax features	Not available	✓	✓

## Technical specifications (MFP; 2 of 4)

Review the technical specifications for the printer.

### Product numbers for each model

- 4101dwe - 2Z620E
- 4101fdne - 2Z618E
- 4101fdwe - 2Z619E
- 4102dwe - 2Z622E
- 4102fdne - 2Z623E
- 4102fdwe - 2Z624E

**Table 1-25 Paper handling specifications**

Paper handling features	4101dwe	4101fdne	4101fdwe
	4102dwe	4102fdne	4102fdwe
Tray 1 (100-sheet capacity)	✓	✓	✓
Tray 2 (250-sheet capacity)	✓	✓	✓
Optional 550-sheet accessory tray	Optional	Optional	Optional
Automatic duplex printing	✓	✓	✓

**Table 1-26 Connectivity specifications**

Connectivity features	4101dwe	4101fdne	4101fdwe
	4102dwe	4102fdne	4102fdwe
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓	✓	✓
Hi-Speed USB 2.0	✓	✓	✓
Walk-up USB port	✓	✓	✓
Dual Band WiFi	✓	Not available	✓
Bluetooth Low Energy (BLE)	✓	Not available	✓

**Table 1-26 Connectivity specifications (continued)**

Connectivity features	4101dwe	4101fdne	4101fdwe
	4102dwe	4102fdne	4102fdwe
Wi-Fi Direct for printing from mobile devices	✓	Not available	✓

**Table 1-27 Print specifications**

Print features	4101dwe	4101fdne	4101fdwe
	4102dwe	4102fdne	4102fdwe
Prints 40 pages per minute (ppm) on A4 and 42 ppm on letter-size paper	✓	✓	✓
Job storage and private printing	✓	✓	✓

**Table 1-28 Other specifications**

Other features	4101dwe	4101fdne	4101fdwe
	4102dwe	4102fdne	4102fdwe
Color touchscreen control panel	✓	✓	✓
512MB standard/maximum memory	✓	✓	✓
Fax features	Not available	✓	✓

## Technical specifications (MFP; 3 of 4)

Review the technical specifications for the printer.

### Product numbers for each model

- 4103dw - 2Z627A, 2Z635A
- 4103fdn - 2Z628A, 2Z636A
- 4103fdw - 2Z629A

**Table 1-29 Paper handling specifications**

Paper handling features	4103dw	4103fdn	4103fdw
Tray 1 (100-sheet capacity)	✓	✓	✓
Tray 2 (250-sheet capacity)	✓	✓	✓
Optional 550-sheet accessory tray	Optional	Optional	Optional
Automatic duplex printing	✓	✓	✓



**Table 1-30 Connectivity specifications**

Connectivity features	4103dw	4103fdn	4103fdw
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓	✓	✓
Hi-Speed USB 2.0	✓	✓	✓
Walk-up USB port	✓	✓	✓
Dual Band WiFi	✓	Not available	✓
Bluetooth Low Energy (BLE)	✓	Not available	✓
Wi-Fi Direct for printing from mobile devices	✓	Not available	✓

**Table 1-31 Print specifications**

Print features	4103dw	4103fdn	4103fdw
Prints 40 pages per minute (ppm) on A4 and 42 ppm on letter-size paper	✓	✓	✓
Job storage and private printing	✓	✓	✓

**Table 1-32 Other specifications**

Other features	4103dw	4103fdn	4103fdw
Color touchscreen control panel	✓	✓	✓
512MB standard/maximum memory	✓	✓	✓
Fax features	Not available	✓	✓

## Technical specifications (MFP; 4 of 4)

Review the technical specifications for the printer.

### Product numbers for each model

- 4104dw - 2Z632A
- 4104fdn - 2Z633A
- 4104fdw - 2Z634A

**Table 1-33 Paper handling specifications**

Paper handling features	4104dw	4104fdn	4104fdw
Tray 1 (100-sheet capacity)	✓	✓	✓
Tray 2 (250-sheet capacity)	✓	✓	✓

**Table 1-33 Paper handling specifications (continued)**

Paper handling features	4104dw	4104fdn	4104fdw
Optional 550-sheet accessory tray	Optional	Optional	Optional
Automatic duplex printing	✓	✓	✓

**Table 1-34 Connectivity specifications**

Connectivity features	4104dw	4104fdn	4104fdw
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓	✓	✓
Hi-Speed USB 2.0	✓	✓	✓
Walk-up USB port	✓	✓	✓
Dual Band WiFi	✓	Not available	✓
Bluetooth Low Energy (BLE)	✓	Not available	✓
Wi-Fi Direct for printing from mobile devices	✓	Not available	✓

**Table 1-35 Print specifications**

Print features	4104dw	4104fdn	4104fdw
Prints 40 pages per minute (ppm) on A4 and 42 ppm on letter-size paper	✓	✓	✓
Job storage and private printing	✓	✓	✓

**Table 1-36 Other specifications**

Other features	4104dw	4104fdn	4104fdw
Color touchscreen control panel	✓	✓	✓
512MB standard/maximum memory	✓	✓	✓
Fax features	Not available	✓	✓

## Input devices

Learn about input device configuration and specifications.

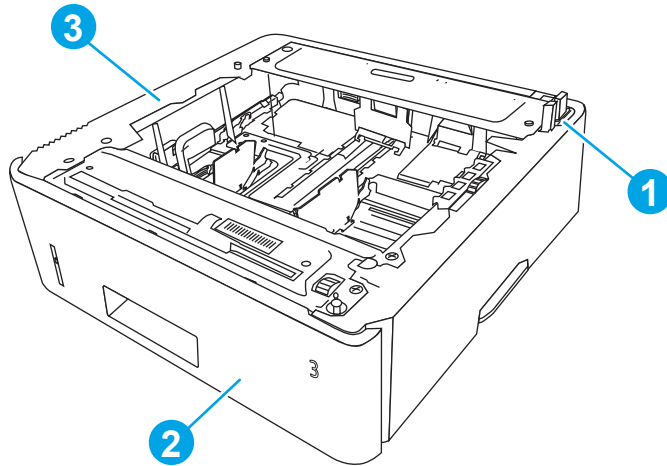
### Information (input devices)

Learn about the printer input devices.

## 550-sheet paper feeder front view

Identify the parts on the 550-sheet paper feeder.

Figure 1-8 550-sheet paper feeder front view



Number	Description
1	Drawer connector
2	Tray 3 (cassette)
3	550-sheet paper feeder (whole unit)

---

## 2 Printer installation and maintenance

Learn about printer installation and maintenance.

### Document feeder / scanner

Learn about the printer document feeder and scanner installation and maintenance.

### Clean the pickup rollers and separation pad in the document feeder (MFP)

Learn about cleaning the document feeder rollers and pads.

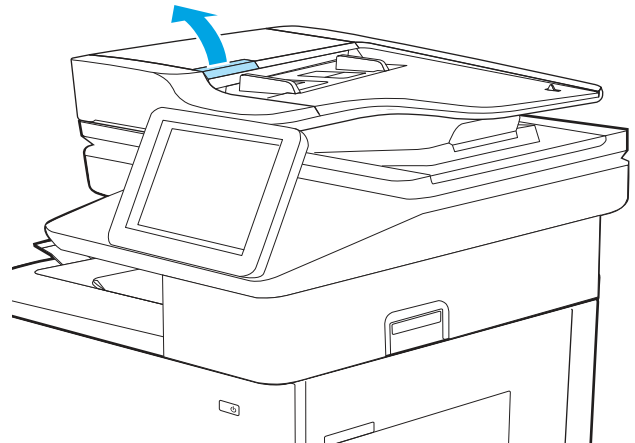
Over time, specks of debris might collect on the document feeder rollers and pads which can affect performance.

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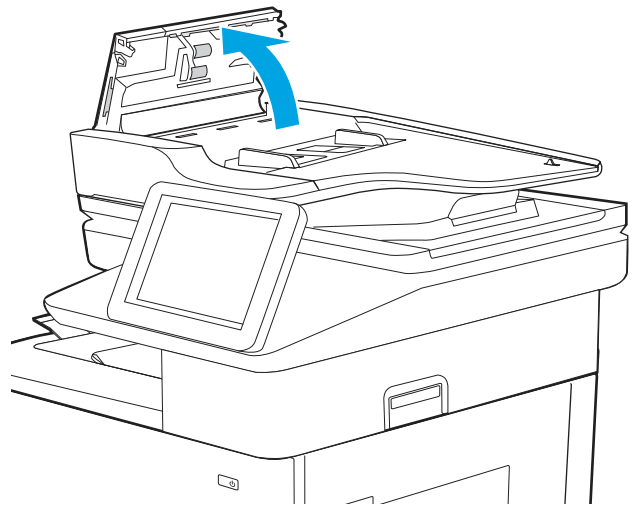
 **NOTE:** The figures in this topic show a typical MFP printer. However, the procedure is correct for all MFP printers.

---


1. Lift the document-feeder latch.



2. Open the document-feeder cover.



3. Remove any visible lint or dust from each of the feed rollers and the separation pad using compressed air or a clean lint-free cloth moistened with warm water.

 **NOTE:** Lift up the roller assembly to access and clean the second roller.



4. Close the document-feeder cover.

## Check the scanner glass for dirt and smudges

Learn about solving copy-quality debris problems.

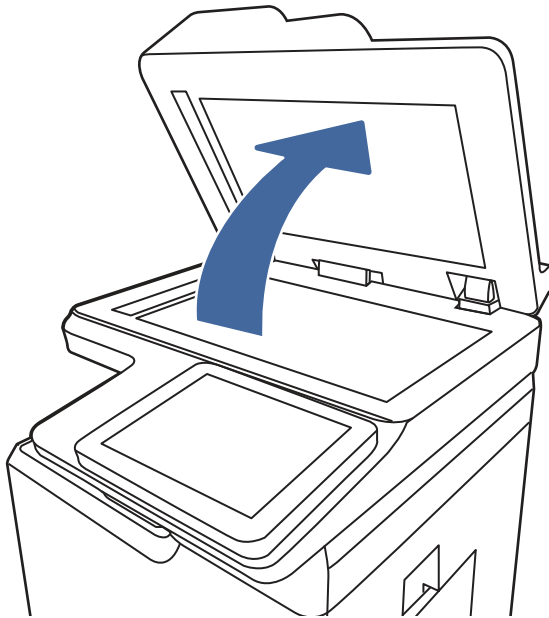
Over time, specks of debris might collect on the scanner glass and document feeder white plastic backing, which might cause print defects. Use the following procedure to clean the scanner if the printed pages have streaks, unwanted lines, black dots, poor print quality, or unclear text.

 [View a video of cleaning the document feeder glass and flatbed glass.](#)

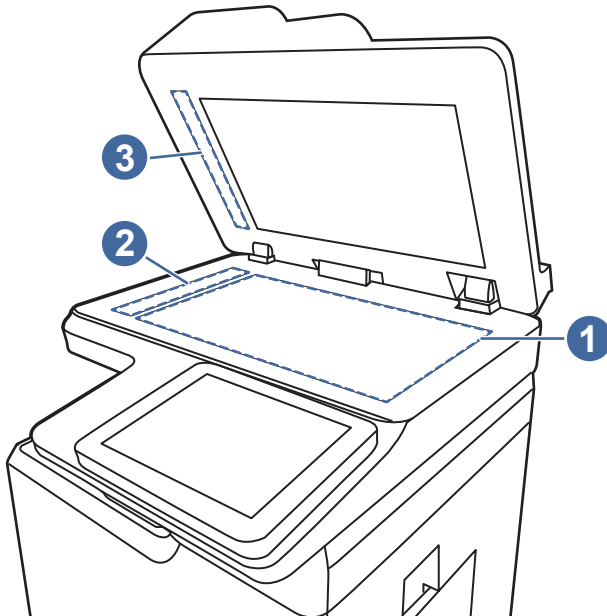
1. Press the power button to turn the printer off, and then disconnect the power cable from the electrical outlet.



2. Open the scanner lid.



3. Clean the scanner glass (callout 1) and the document feeder strips (callout 2, callout 3) with a soft cloth or sponge that has been moistened with nonabrasive glass cleaner.



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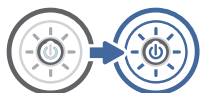
**⚠ CAUTION:** Do not use abrasives, acetone, benzene, ammonia, ethyl alcohol, or carbon tetrachloride on any part of the printer; these can damage the printer. Do not place liquids directly on the glass or platen. They might seep and damage the printer.

**📝 NOTE:** If you are having trouble with streaks on copies when you are using the document feeder, be sure to clean the small strips of glass on the left side of the scanner (callout 2, callout 3).

---

4. Dry the glass and white plastic parts with a chamois or a cellulose sponge to prevent spotting.

5. Connect the power cable to an outlet, and then press the power button to turn the printer on.



## Base printer

Learn about the base printer installation and maintenance.

## Supplies and long-life consumables (LLCs)

Learn about supplies and LLCs.

## Replace the toner cartridge

Replace the toner cartridge if you receive a message on the printer, or if you have print quality problems.

### Toner cartridge information

Review details about ordering replacement toner cartridges.

The printer indicates when the toner-cartridge level is low and very low. The actual toner cartridge life remaining can vary. Consider having a replacement cartridge available to install when print quality is no longer acceptable.

Continue printing with the current cartridge until redistributing the toner no longer yields acceptable print quality. To redistribute the toner, remove the toner cartridge from the printer and gently rock the cartridge back and forth end to end. For graphical representation, see the cartridge replacement instructions. Reinsert the toner cartridge into the printer, and then close the cover.

To purchase cartridges or check cartridge compatibility for the printer, go to [www.hp.com/go/suresupply](http://www.hp.com/go/suresupply). Scroll to the bottom of the page and verify that the country/region is correct.

**Table 2-1 Supplies - For use with 4001/4101 models only**

Item	Description	Part number (service/new)
HP 148A Black Original LaserJet Toner Cartridge	Standard-capacity replacement black toner cartridge	W1480A
HP 148X High Yield Black Original LaserJet Toner Cartridge	High-capacity replacement black toner cartridge	W1480X
HP 102XC High Yield Black Contract LaserJet Toner Cartridge	High-capacity replacement black toner cartridge (contract only)	W1020XC

**Table 2-2 Supplies - For use with 4002/4102 models only**

Item	Description	Part number (service/new)
HP 149A Black Original LaserJet Toner Cartridge	Standard-capacity replacement black toner cartridge	W1490A

**Table 2-2 Supplies - For use with 4002/4102 models only (continued)**


Item	Description	Part number (service/new)
HP 149X High Yield Black Original LaserJet Toner Cartridge	High-capacity replacement black toner cartridge	W1490X
HP 102XC High Yield Black Contract LaserJet Toner Cartridge	High-capacity replacement black toner cartridge (contract only)	W1020XC

**Table 2-3 Supplies - For use with 4003/4103 models only**


Item	Description	Part number (service/new)
HP 151A Black Original LaserJet Toner Cartridge	Standard-capacity replacement black toner cartridge	W1510A
HP 151X High Yield Black Original LaserJet Toner Cartridge	High-capacity replacement black toner cartridge	W1510X
HP 103XC High Yield Black Contract LaserJet Toner Cartridge	High-capacity replacement black toner cartridge (contract only)	W1030XC

**Table 2-4 Supplies - For use with 4004/4104 models only**

Item	Description	Part number (service/new)
HP 152A Black Original LaserJet Toner Cartridge	Standard-capacity replacement black toner cartridge	W1520A
HP 152A Black Original LaserJet Toner Cartridge	High-capacity replacement black toner cartridge	W1520X
HP 103XC High Yield Black Contract LaserJet Toner Cartridge	High-capacity replacement black toner cartridge (contract only)	W1030XC

 **NOTE:** High-yield toner cartridges contain more toner than standard cartridges for increased page yield. For more information, go to [www.hp.com/go/toneryield](http://www.hp.com/go/toneryield).

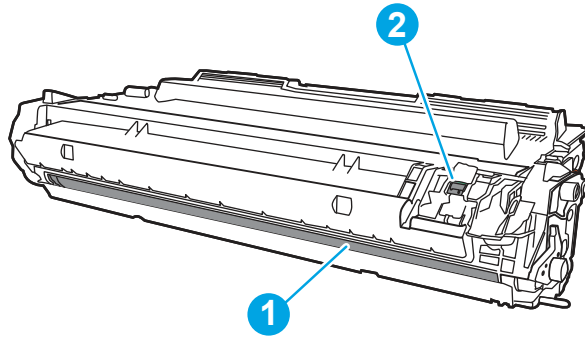
Do not remove the toner cartridge from its package until it is time to replace it.

 **CAUTION:** To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes. Cover the green imaging drum if the toner cartridge must be removed from the printer for an extended period of time.

The following illustration shows the toner cartridge components.



**Figure 2-1** Toner cartridge components



Number	Description
1	Imaging drum <b>CAUTION:</b> Do not touch the imaging drum. Fingerprints can cause print-quality problems.
2	Memory chip

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

**NOTE:** Information about recycling used toner cartridges is in the toner cartridge box or at [www.hp.com/hprecycle](http://www.hp.com/hprecycle).

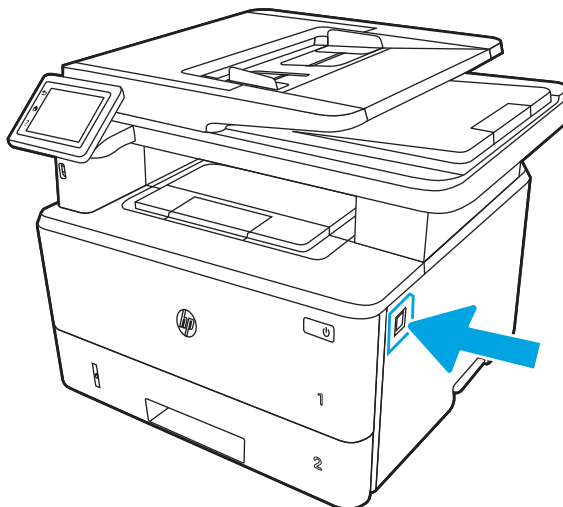
### Remove and replace the cartridge

Follow these steps to replace the toner cartridge.

An MFP printer is shown in this section. However, the procedure is correct for all printer models.

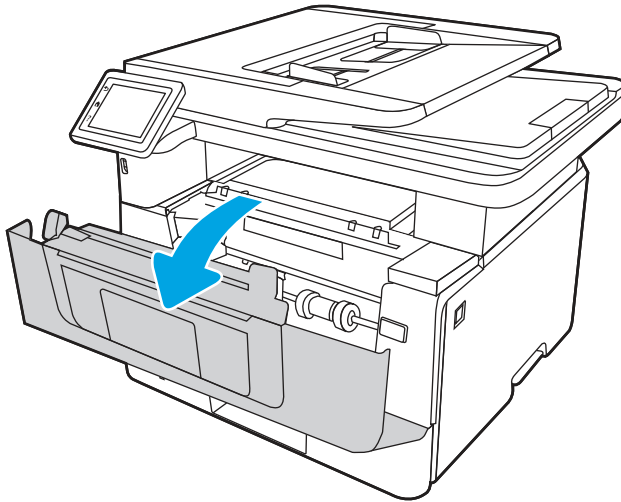
1. Press the front door release button.

**Figure 2-2** Release the front door



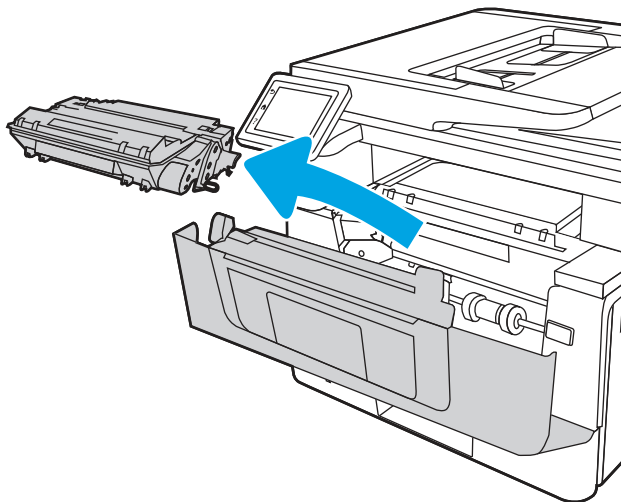
2. Open the front door.

**Figure 2-3** Open the front door



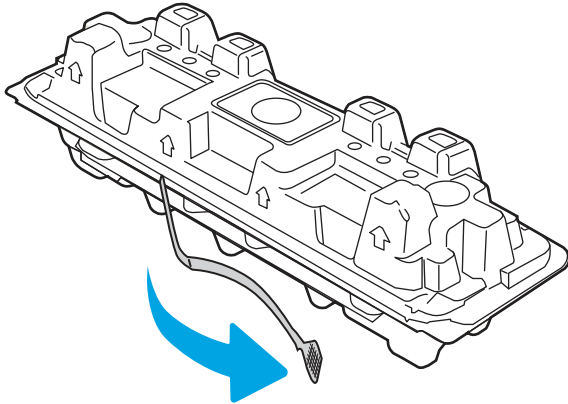
3. Remove the used toner cartridge from the printer.

**Figure 2-4** Remove toner cartridge



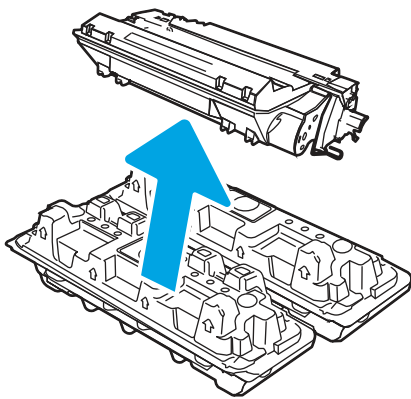
4. Remove the new toner cartridge package from the box, and then pull the release tab on the packaging.

**Figure 2-5** Pull release tab on cartridge packaging



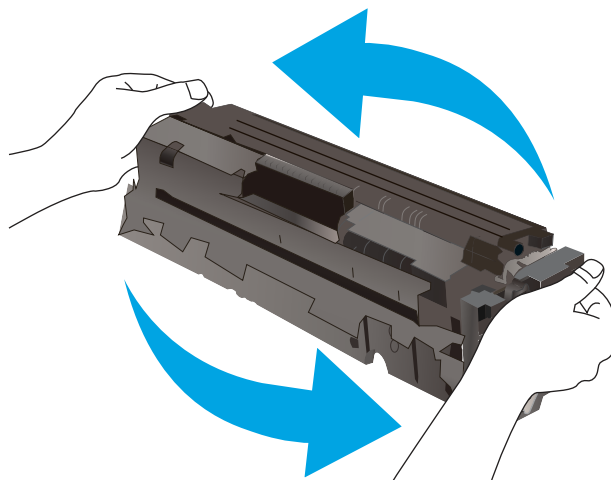
5. Remove the toner cartridge from the opened packaging shell. Place the used toner cartridge in the shell for recycling.

**Figure 2-6** Remove cartridge from opened packaging



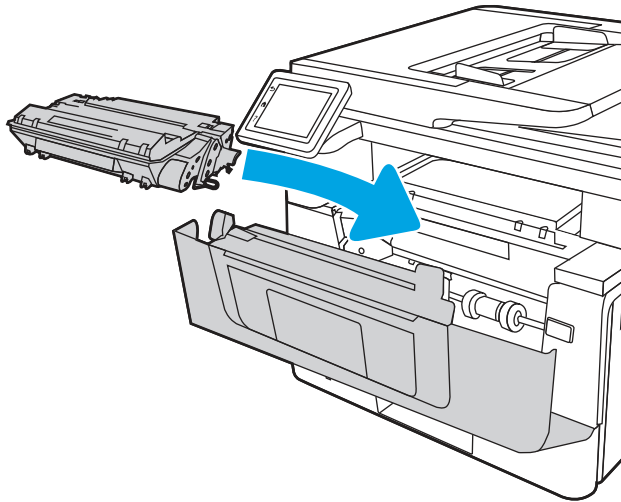
6. Hold both ends of the toner cartridge and rock it end to end to distribute the toner evenly inside the cartridge.

**Figure 2-7** Distribute toner



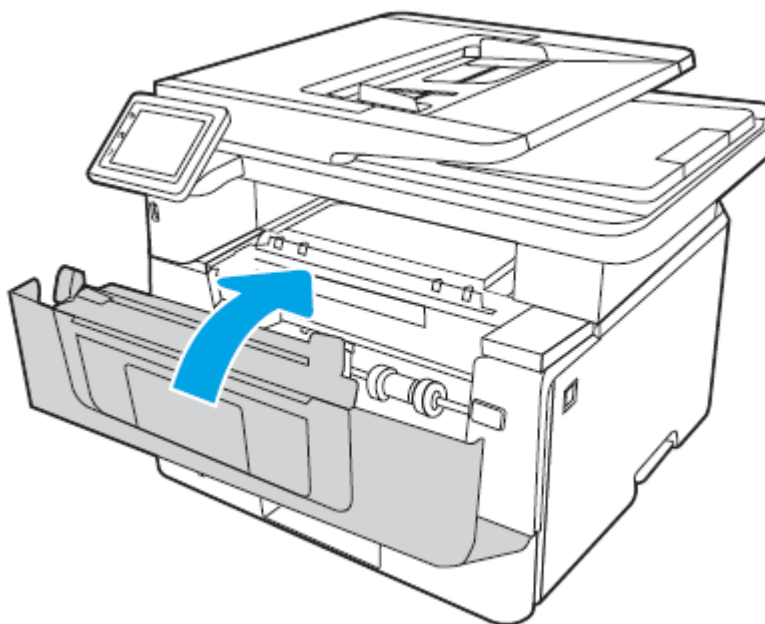
7. Align the toner cartridge with the tracks inside the printer, and install the toner cartridge until it is firmly seated.

**Figure 2-8** Install the cartridge




8. Close the front door.

**Figure 2-9** Close front door

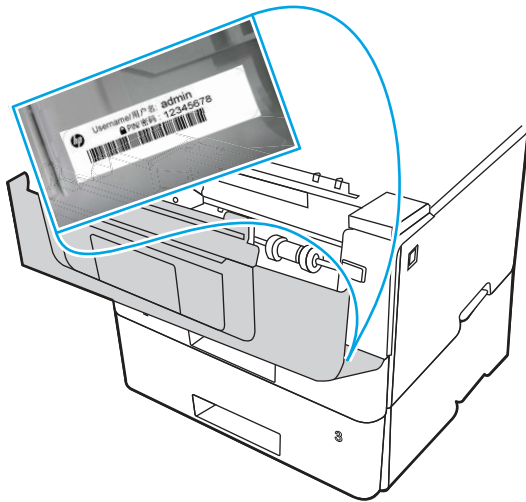


## Security setup

Review the following information about the printer security features.

 **IMPORTANT:** Access to the Embedded Web Server (EWS) requires a personal identification number (PIN). The default PIN for this printer is located on a sticker inside the front door. Use this PIN to open the EWS when prompted.

The default PIN (password) can be changed in the EWS (**Settings > Security > Password Settings**).




## Introduction

The printer includes several security features to restrict who has access to configuration settings, to secure data, and to prevent access to valuable hardware components.

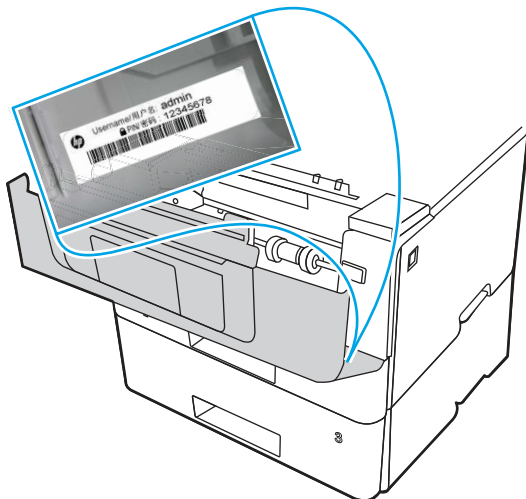
### Assign or change the system password using the Embedded Web Server



Assign an administrator password for access to the printer and the HP Embedded Web Server so that unauthorized users cannot change the printer settings.

Access the Embedded Web Server (EWS) requires a personal identification number (PIN). The default PIN for this printer is located on a sticker inside the front door. Use this PIN to open the EWS when prompted.

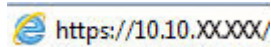
 **NOTE:** If the default PIN has been changed, contact the printer administrator.

The default PIN (password) can be changed in the EWS (**Settings > Security > Password Settings**).




1. Open the HP Embedded Web Server (EWS):
  - a. From the Home screen on the printer control panel, touch the Wireless icon  or the Ethernet icon  to view the printer's IP address or host name.

- b. Open a web browser, and in the address line, type the IP address or host name exactly as it displays on the printer control panel. Press the **Enter** key on the computer keyboard. The EWS opens.




---

 **NOTE:** If a message displays in the web browser indicating that the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.

---

2. On the EWS Home page, click the **Settings** tab.
3. In the left navigation pane, click **Security** to expand the options, and then click **Password Settings**.
4. Enter a password.
5. Re-enter the password in the **Confirm Password** field, and then click **Apply**.

---

 **NOTE:** Make note of the password and store it in a safe place.

---


## Cleaning

Learn about printer cleaning techniques and procedures.

### Print a cleaning page

Learn how to print a cleaning page.

---

 **NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).


---

During the printing process, paper, toner, and dust particles can accumulate inside the printer and can cause print-quality issues such as toner specks or spatter, smears, streaks, lines, or repeating marks.


### Print a cleaning page from a 2-line LCD control panel

1. Press the **OK** button to display the Home screen.
2. Use the arrow buttons and the **OK** button to navigate to and open the following menus:
  - a. **Setup**
  - b. **Printer Maintenance**
  - c. **Print Quality Tools**
  - d. **Cleaning Page**
3. When prompted, load plain Letter or A4 size paper into the paper tray, and then press **OK**.
4. A **Cleaning** message displays on the printer control panel. Wait until the process is complete. Discard the page that prints.

### Print a cleaning page from a touchscreen control panel

1. From the Home screen on the printer control panel, swipe the tab at the top of the screen downward to open the Dashboard, and then touch the Setup icon .
2. Open the following menus:
  - Printer Maintenance
  - Print Quality Tools
  - Cleaning Page
3. When prompted, load plain Letter or A4 size paper, and then touch **OK**.

---

 **NOTE:** A **Cleaning...** message displays on the control-panel display. Do not turn the printer off until the cleaning process has finished. When it is finished, discard the printed page.

---

## Clean the Tray 1 roller and separation pad


Learn about cleaning the Tray 1 roller and separation pad.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

---

If the part is damaged and cannot be cleaned, use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 2-5** Part information

Part number	Part description
3PZ15-67966	Tray 1 Pickup Roller

### Required tools

- No special tools are required to remove or install this assembly.

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Print any pages necessary to make sure the printer is functioning correctly.

## Remove the roller

Follow these steps to remove the roller.

An MFP printer is shown in this section. However, the procedure is correct for all printer models.

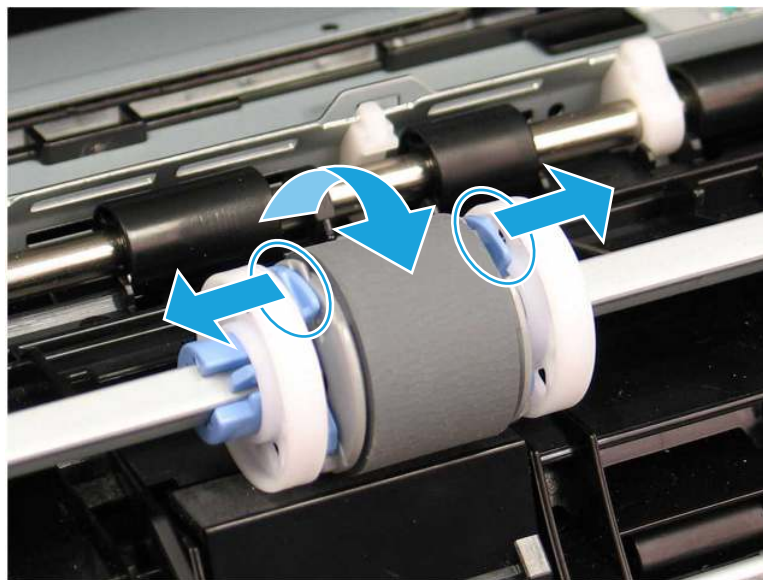
1. Press the door-release button, and then open the toner-cartridge door

**Figure 2-10** Open the toner-cartridge door



2. Release two tabs between the roller collar and roller, and then rotate the top of the roller out and away from the printer.

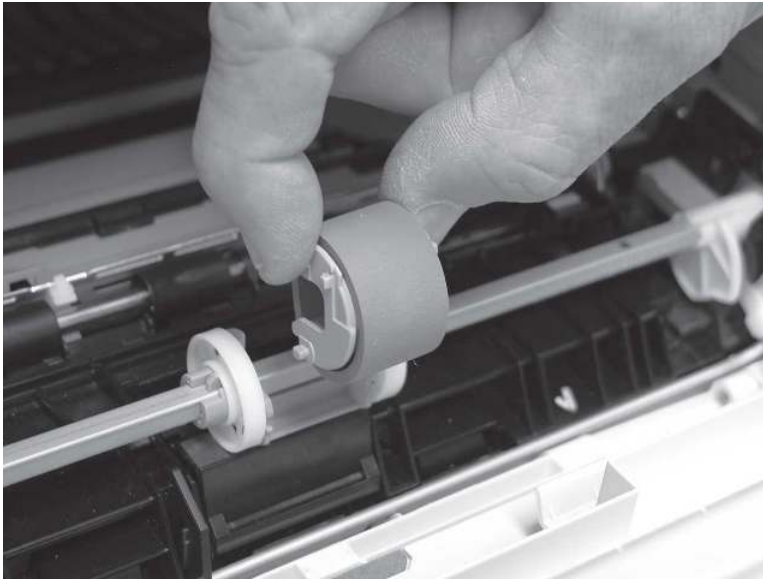
**Figure 2-11** Release the roller





3. Remove the roller.

**Figure 2-12** Remove the roller




### Clean the Tray 1 roller and separation pad

Carefully clean the Tray 1 roller and separation pad.


- Clean the Tray 1 roller and separation pad.

---

 **NOTE:** With the Tray 1 roller removed the separation pad is accessible in the printer (it does not need to be removed to be cleaned).

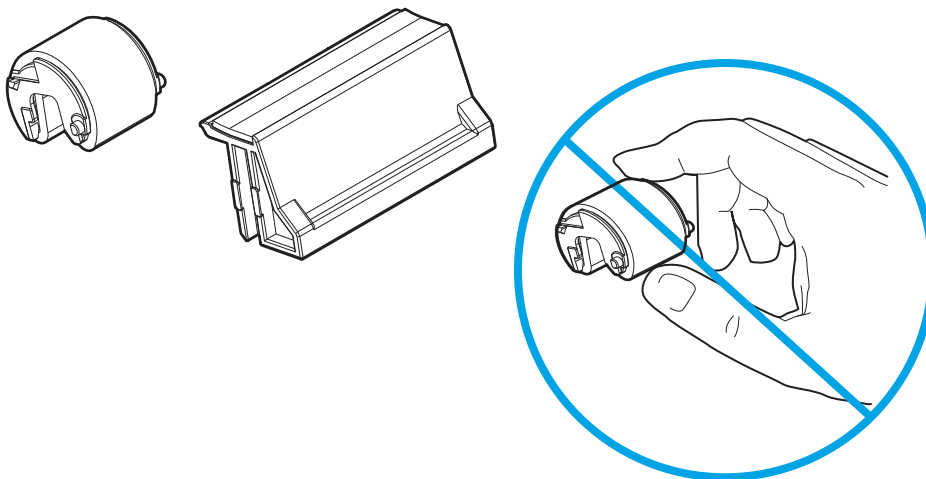
---

- Use a damp, lint-free cloth to gently clean the rollers.

 **CAUTION:** When handling the roller and/or pad, avoid touching the spongy surfaces. Skin oils and fingerprints on a roller surface can cause print-quality problems.

---

**Figure 2-13** Clean the roller and pad



## Install the roller

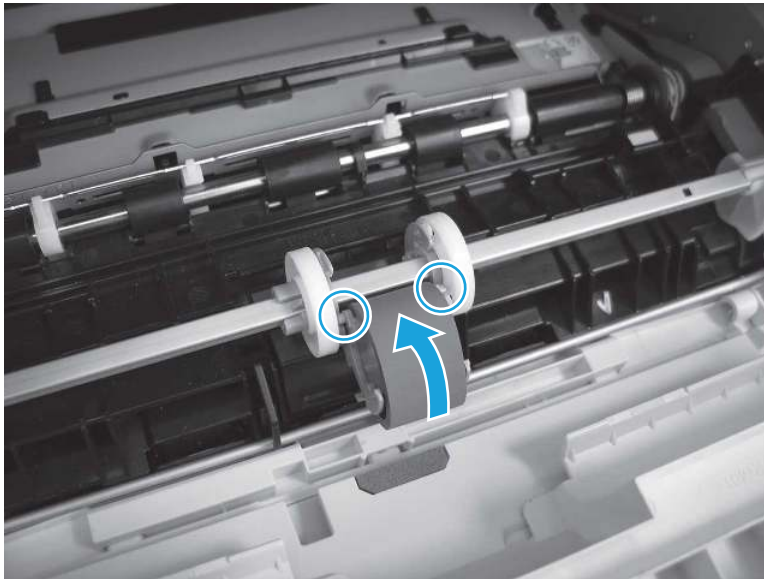
Follow these steps to install the roller.

- ⚠ CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

An MFP printer is shown in this section. However, the procedure is correct for all printer models.

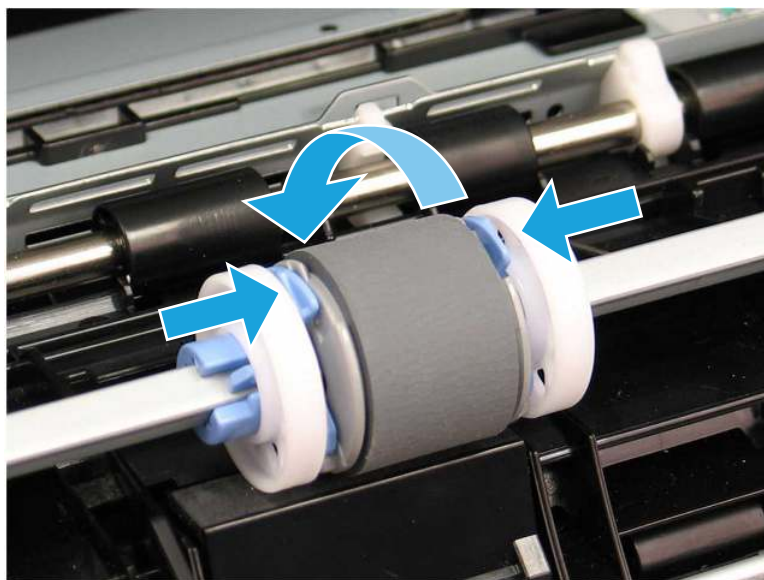
1. Position the pickup roller with the pins in the provided slots on the holder, and then rotate the top of the roller up and toward the printer.

**Figure 2-14** Install the roller



2. Continue to rotate the top of the roller toward the printer (callout 1), until two tabs (callout 2) snap into place.

**Figure 2-15** Engage two tabs



3. Close the toner-cartridge door

**Figure 2-16** Close the toner-cartridge door



## Clean the Tray 2 rollers

Learn about cleaning the Tray 2 rollers.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

**📄 IMPORTANT:** The originally installed Tray 2 pickup roller might look different than what is included in the kit below (3PZ15-67966). However, the roller supplied in the kit is correct for the 4001-4004 and 4101-4104 printers.

For more information, see the Additional information section at the end of this topic.

If the part is damaged and cannot be cleaned, use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 2-6** Part Information

Part number	Part description
3PZ15-67965	Tray 2 Pickup Roller
3PZ15-67964	Separation assembly (Tray 2)

### Required tools

- No special tools are required to remove or install this assembly.

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

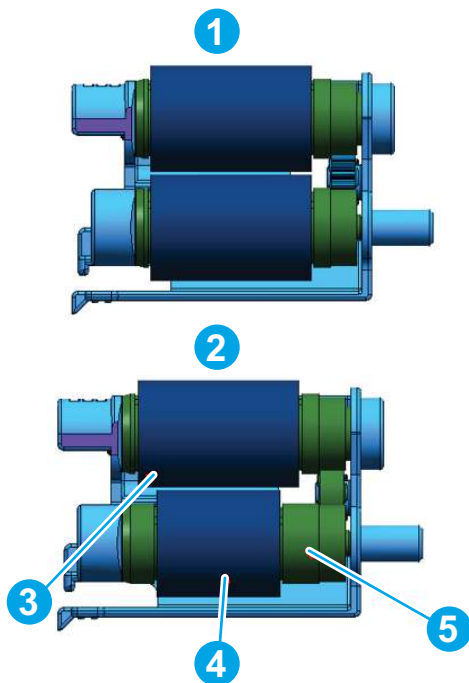
### Post service test

Print any pages necessary to make sure the printer is functioning correctly.

### Additional information

The following figure and table describe the design differences for the Tray2 pickup roller assembly.

**Figure 2-17** Tray 2 pickup roller



**Table 2-7** Tray 2 pickup roller differences

Item	Description
1	<b>Tray 2 pickup roller:</b> Included in kit 3PZ15-67966.
2	<b>Tray 2 pickup roller:</b> Installed in 4001-4004 and 4101-4104 printers during manufacturing.
3	<b>Feed roller:</b> Rubber reduction in width (0.33mm).
4	<b>Pick roller:</b> Rubber reduction in width.
5	<b>Pick core:</b> Thrust decision changes to accommodate rubber width reductions.

## Remove Tray 2

Follow these steps to remove Tray 2.


- Pull the tray straight out of the printer to remove it.

**Figure 2-18** Remove the tray




#### Remove the pickup roller assembly (Tray 2)

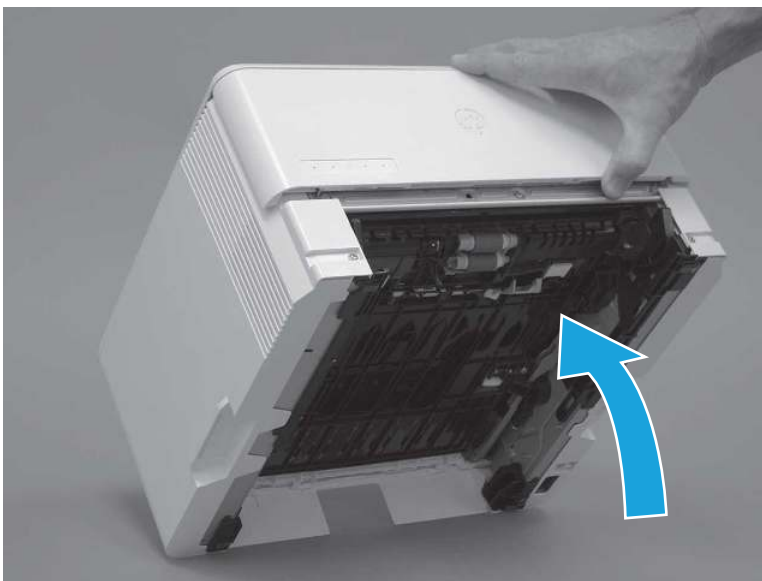
Follow these steps to remove the pickup roller assembly (Tray 2).

 **NOTE:** A SFP printer is shown in this section. However, the procedure is correct for all printer models.

1. Carefully rotate the printer backward.

 **CAUTION:** To avoid damage to the rear cassette cover, keep it in the closed position

**Figure 2-19** Tilt the printer backward



2. Continue rotate the printer backward until it rests on the rear cover, bottom-side face forward.

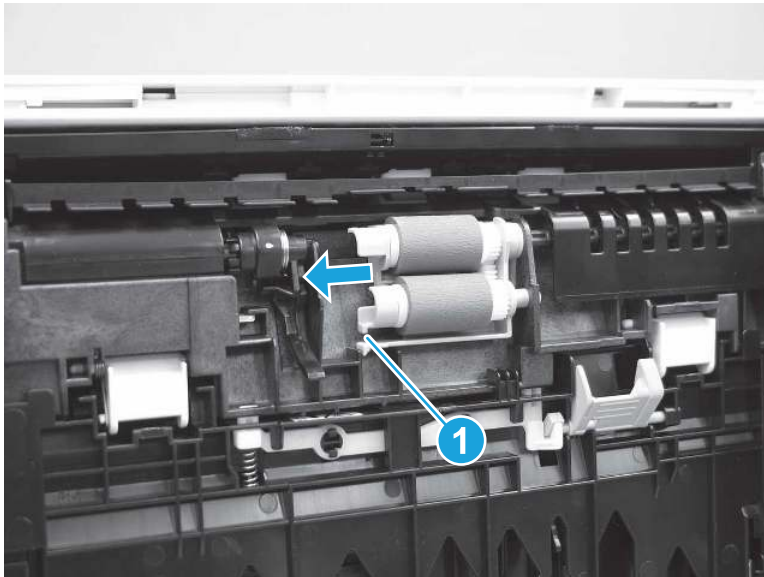
**⚠ CAUTION:** **MFP printers only:** The document feeder is not captive and can unexpectedly open when the printer is tilted backward.

**Figure 2-20** Place the printer bottom-side face forward



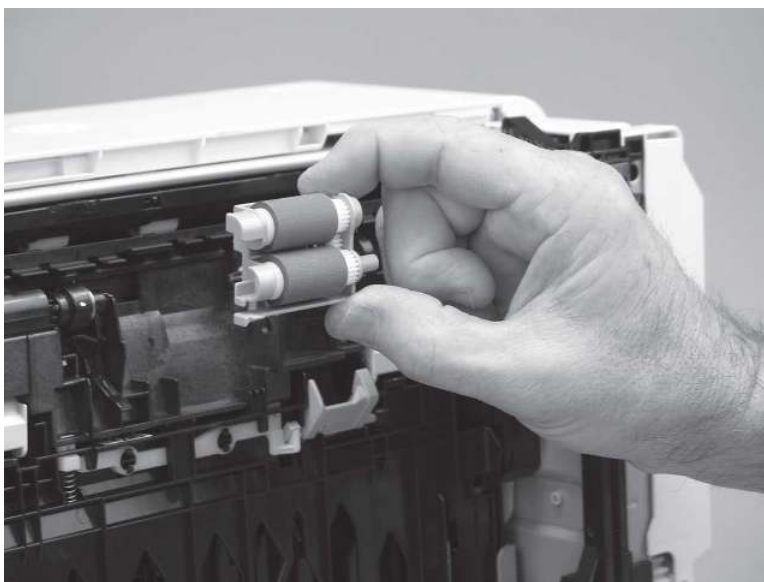
3. Release one tab (callout 1), and then slide the roller holder toward the left side of the printer to release it.

**Figure 2-21** Release one tab



4. Remove the roller assembly.

**Figure 2-22** Remove the roller assembly




### Clean the Tray 2 rollers

Learn about cleaning the Tray 2 rollers.

- Clean the Tray 2 rollers.


---

 **NOTE:** The roller in the tray (cassette) can be cleaned without removing it from the tray.

---

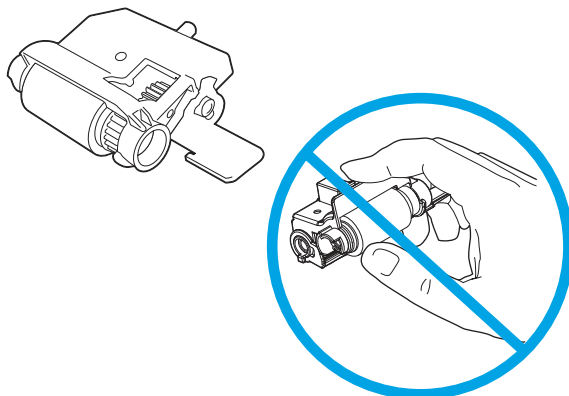
- Use a damp, lint-free cloth to gently clean the rollers.

---

 **CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

---

**Figure 2-23** Clean the rollers



### Install the pickup roller assembly (Tray 2)

Follow these steps to install the pickup roller assembly (Tray 2).

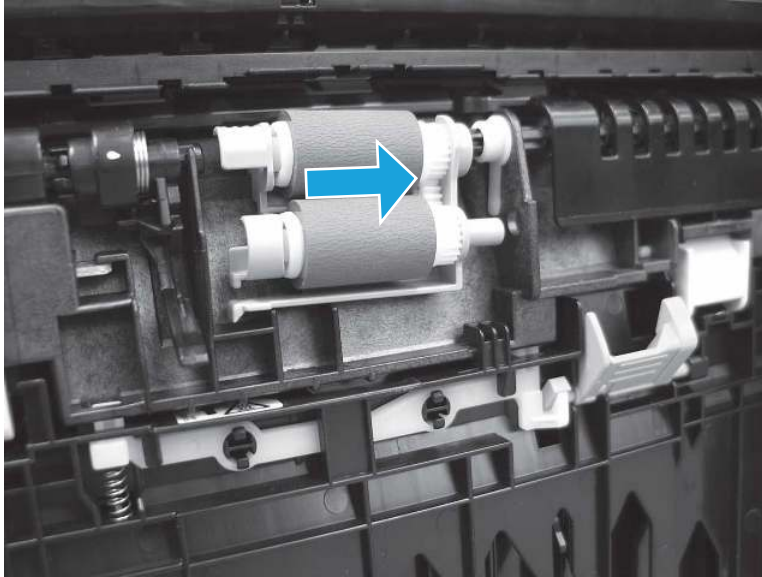


**⚠ CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

**📝 NOTE:** A SFP printer is shown in this section. However, the procedure is correct for all printer models.

1. Position the roller holder assembly in the printer as shown, and then slide it toward the right side of the printer.

**Figure 2-24** Install the roller holder



2. Make sure that the tab snaps into place.

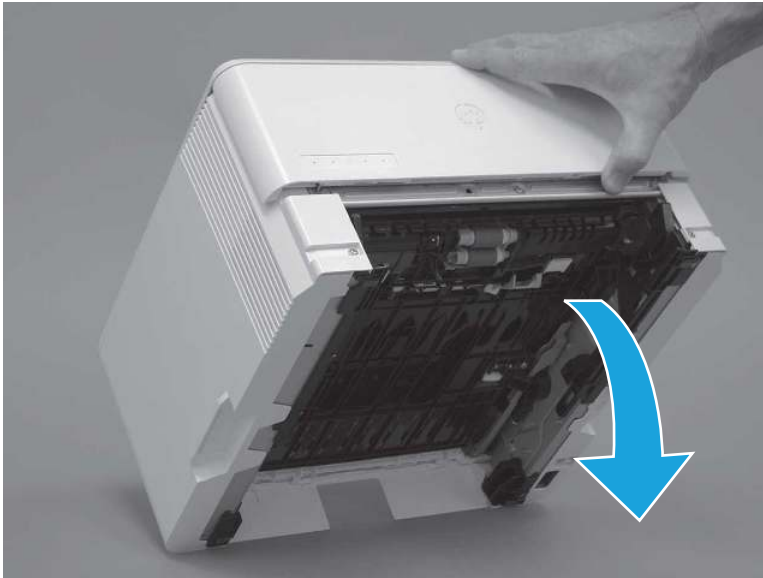
**Figure 2-25** Check the tab





- Carefully rotate the printer forward.

**Figure 2-26** Rotate the printer forward



- Continue rotate the printer forward until it rests in the operational position.

**Figure 2-27** Place the printer in the operational position



### Install Tray 2

Follow these steps to install Tray 2.

- Slide the tray straight into the printer to install it.

**Figure 2-28** Install the tray



## Input devices

Learn about input device installation and maintenance.

## Cleaning

Learn about input device cleaning techniques and procedures.

### Clean the Tray 3 rollers

Learn about cleaning the Tray 3 rollers.

#### Before performing service

##### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

If the part is damaged and cannot be cleaned, use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 2-8** Part information

Part number	Part description
3PZ15-67968	Tray pickup roller assembly (optional Tray 3)

#### Required tools

- No special tools are required to remove or install this assembly.

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

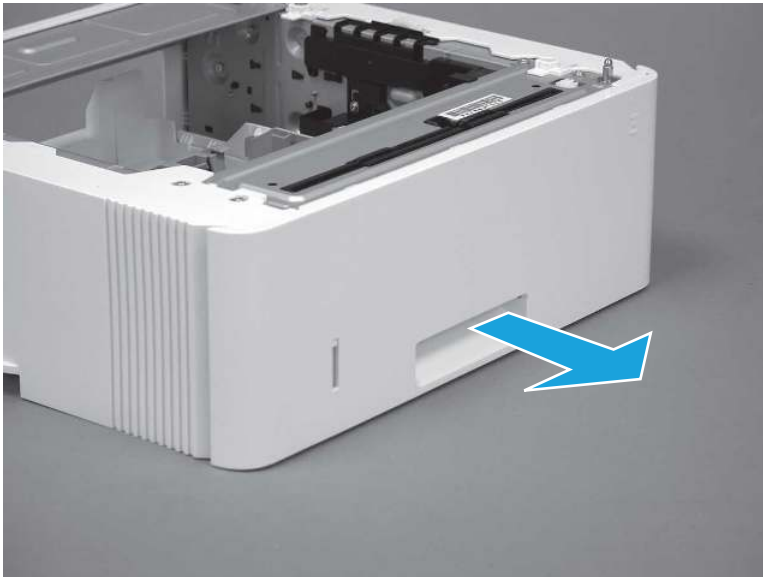
Print any pages necessary to make sure the printer is functioning correctly.

### Remove optional Tray 3

Follow these steps to remove optional Tray 3.

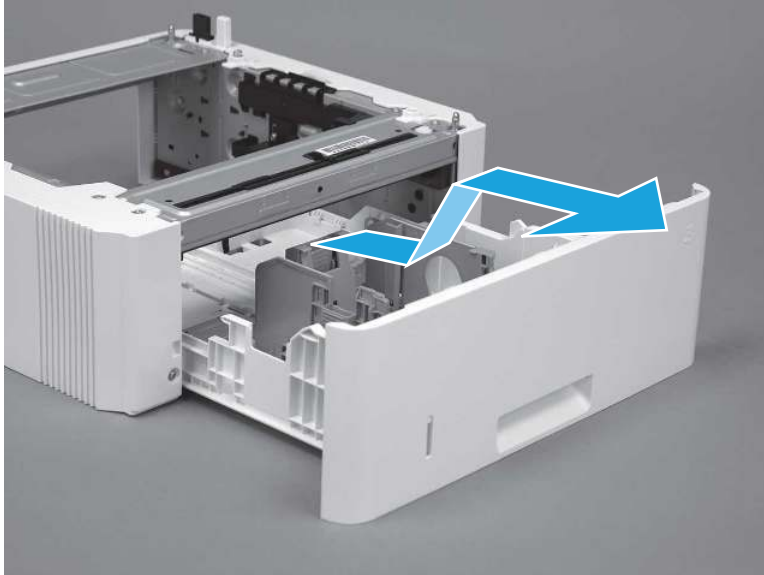
1. Pull the tray straight out of the printer until it stops.

**Figure 2-29** Pull the tray out of the printer



2. Slightly lift up on the front of the tray to release it, and then continue to pull the tray out of the accessory to remove it.

**Figure 2-30** Release and remove the tray



#### **Remove the pickup roller assembly (optional Tray 3)**

Follow these steps to remove the pickup roller assembly (optional Tray 3).

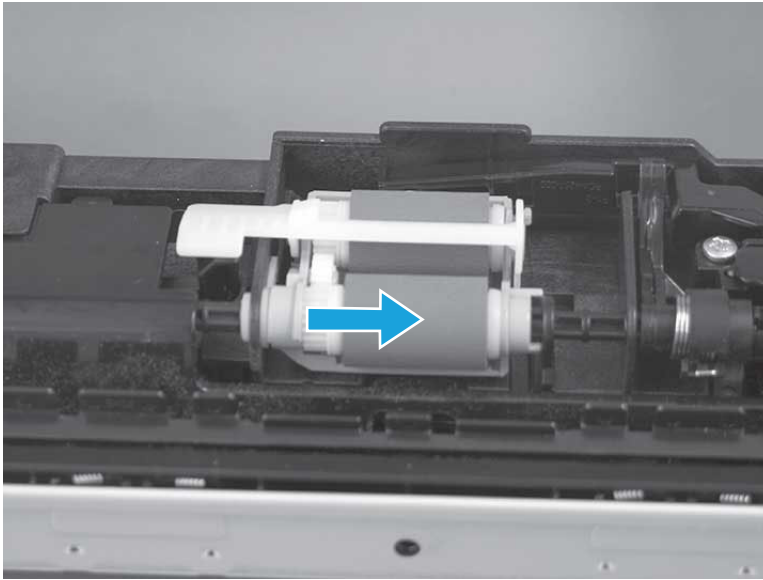
1. Carefully turn the accessory over to expose the roller assembly.

**Figure 2-31** Turn the accessory over



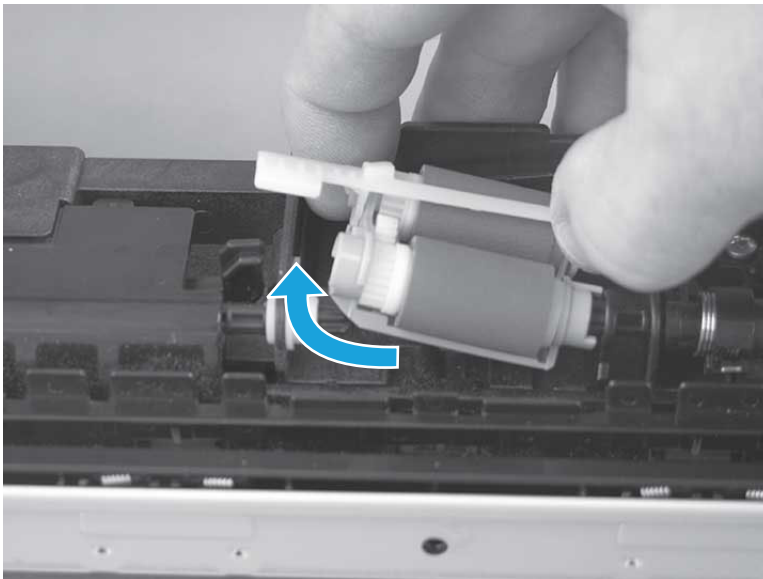
2. Slide the roller holder to the right to compress the spring-loaded shaft and release the assembly.

**Figure 2-32** Release the roller assembly



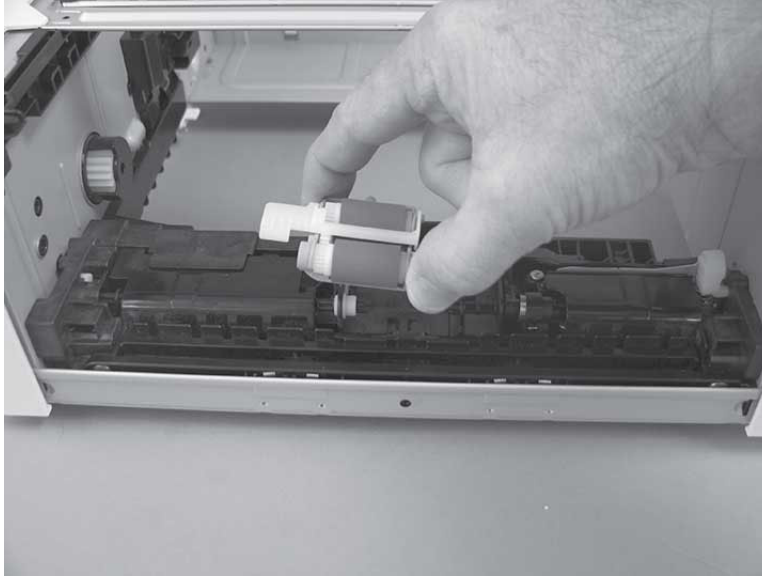
3. Rotate the end of the assembly up and away from the accessory.

**Figure 2-33** Rotate the assembly up



4. Remove the roller assembly.

**Figure 2-34** Remove the roller assembly



### Clean the 550-sheet paper feeder (Tray 3) rollers

Learn about cleaning the Tray 3 rollers.

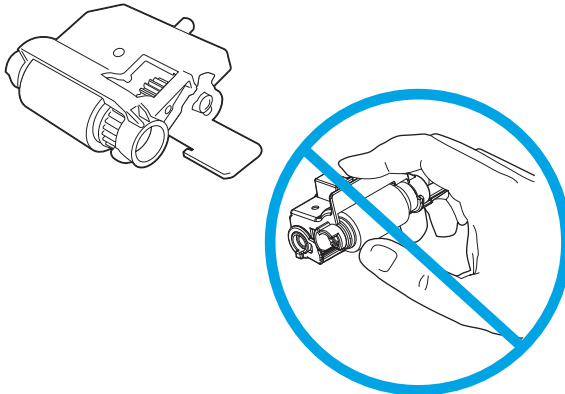


**TIP:** The roller in the tray (cassette) can be cleaned without removing it from the tray.

- Clean the 550-sheet paper feeder (Tray 3) rollers.
  - Use a damp, lint-free cloth to gently clean the rollers.

**CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

**Figure 2-35** Clean the rollers



### Install the pickup roller assembly (optional Tray 3)

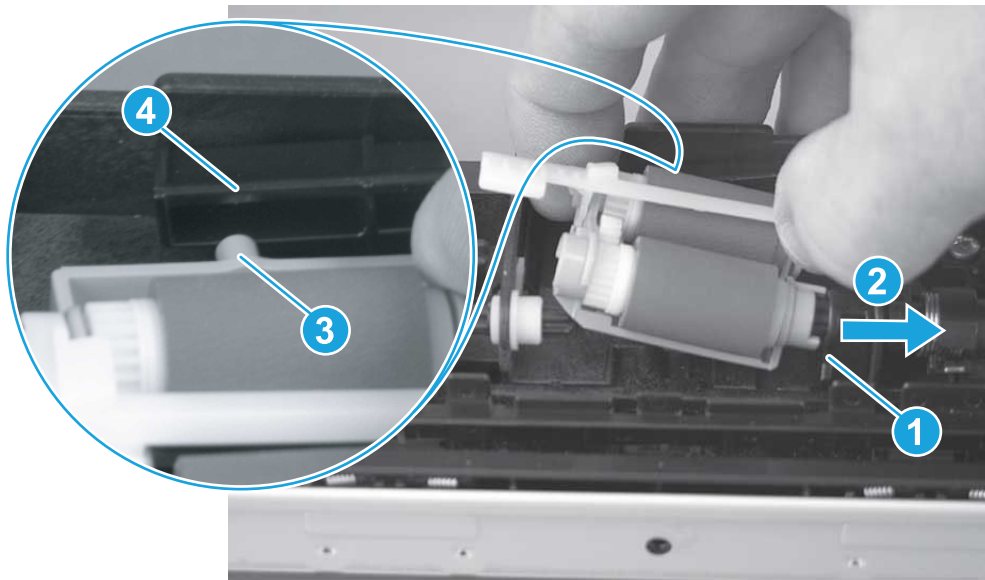
Follow these steps to install the pickup roller assembly (optional Tray 3).

**⚠ CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

1. Install the right end of the assembly on the spring-loaded shaft (callout 1), and then slide it to the right to compress the shaft (callout 2).

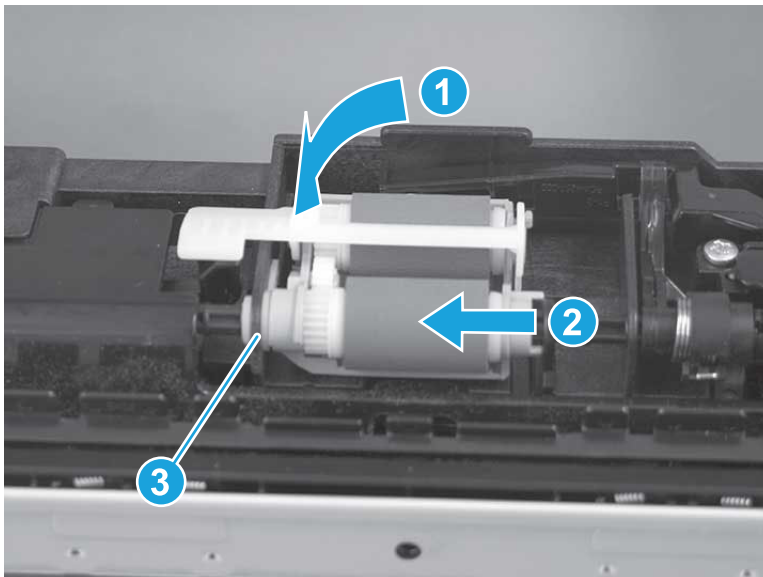
**📌 IMPORTANT:** Make sure that the pin on the back of the holder (callout 3) is inserted in the slot (callout 4) in the lever arm. If the pin is not correctly installed, the accessory will not pick paper.

**Figure 2-36** Install the roller assembly




2. Rotate the left end of the assembly down and into place (callout 1), and then slide the assembly to the left (callout 2) to engage the drive end of the assembly with the drive shaft (callout 3).

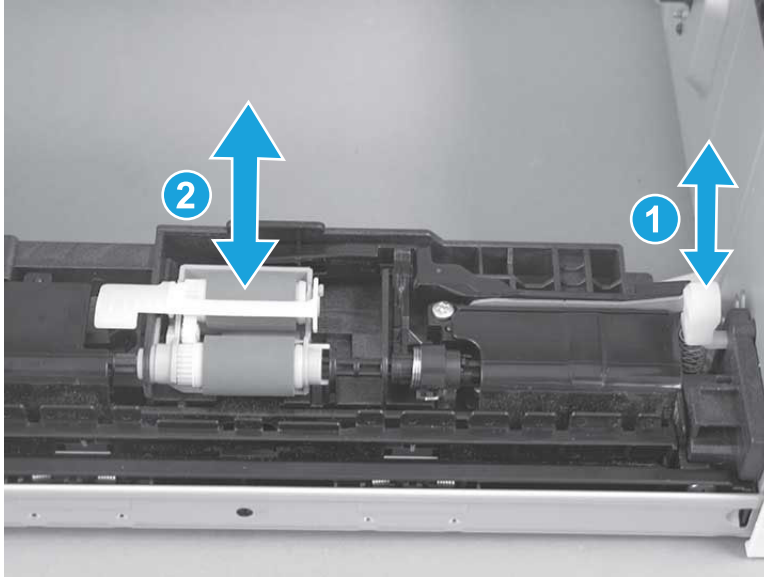
**Figure 2-37** Engage the assembly



3. Push down and then release the tray-roller actuator (callout 1) and observe the roller assembly. It should move up and down (callout 2) in response to the actuator.

 **NOTE:** If it does not, remove the roller assembly and reinstall it making sure that the pin on the back of the assembly is in the lever arm. See the previous steps in this section.

**Figure 2-38** Check the installation

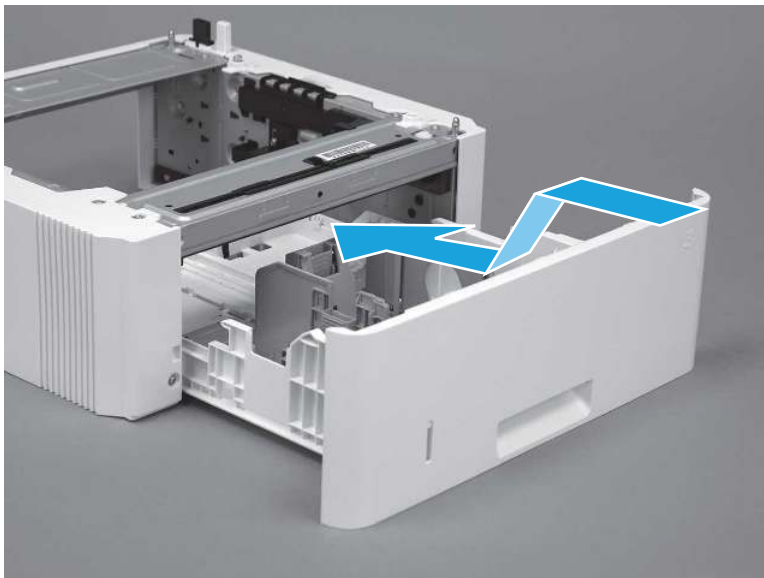


### Install optional Tray 3

Follow these steps to install optional Tray 3.

1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

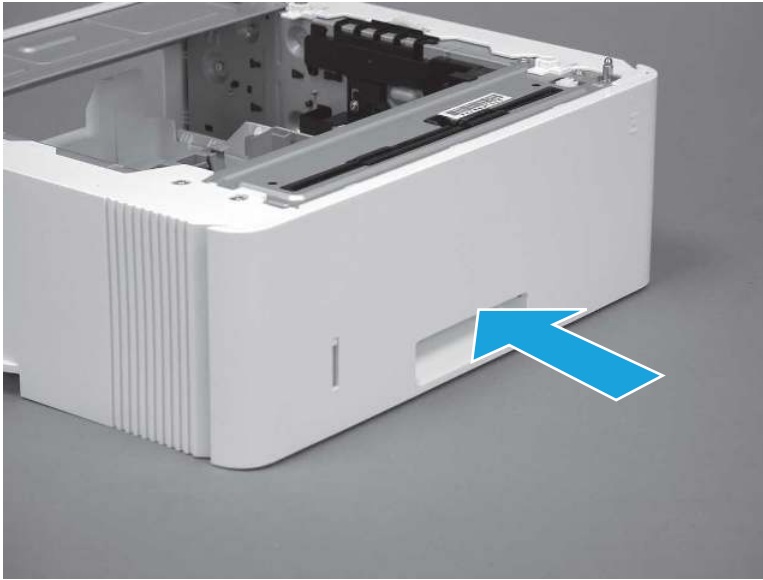
**Figure 2-39** Install the tray





2. Push the tray straight into the accessory to close it

**Figure 2-40** Close the tray




---

## 3 Theory of operation

Learn about the printer theory of operation.

### Document feeder / scanner


Learn about the printer document feeder and scanner components.

 **NOTE:** This section is for MFP printers only.

---

### Scanning and image capture system

Learn about the scanning and image capture system.

 **NOTE:** This section is for MFP printers only.

---

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

- **CIS scanner**

The CIS (contact image sensor) scanner captures an image using the printer's optical path. Red, green, and blue LEDs sequentially illuminate a small strip of the document (often called a raster line), and the optical system captures each color in a single row of CCD sensors that cover the entire page width. Because only one color is captured for each line per exposure, the three colors are recombined electronically to create the full color image. For monochromatic scans or copies, all three LEDs are illuminated to create a white light for the scan so the raster line can be captured in one exposure.

- **Mechanical drive system**

The drive system moves the CIS scanner along the document length to create the image. In this printer, the drive system consists of a small DC motor with an optical encoder, a drive belt, and a guide rod. The speed of the drive system is proportional to the scan resolution (300 ppi is much faster than 1200 ppi) and also proportional to the type of scan (color scans are slower than monochromatic scans).

- **Image processing system (formatter)**

The formatter processes the scanner data into either a copy or a scan to the computer. For copies, the image data is sent directly to the printer without being transmitted to the computer. Depending on user selections for the copy settings, the formatter enhances the scanner data significantly before sending it to the printer. Image data is captured at 300 ppi for copies and is user selectable for scans to the computer. Each pixel is represented by 8 bits for each of the three colors (256 levels for each color), for a total of 24 bits per pixel (24-bit color).

## Document feeder simplex operation

Learn about document feeder operation.

The document feeder will not function when the document feeder cover is open. The paper path is incomplete if the document feeder cover is lifted from the glass.

When the printer duplex scans from the document feeder, the paper moves through one time, because the document feeder has a contact image sensor (CIS) scanner for side two which is scanned simultaneously with side one.

The standard operation of the document feeder consists of the standby (paper loading) mode, pick, feed, and lift steps:

- **Standby (paper-loading) mode**

In standby mode, the lift plate is in the down position. When a document is loaded into the input tray, the paper-present sensor detects its presence.

When a copy/scan is initiated, the document feeder motor engages the gear train and raises the lift plate until the document makes contact with the pick roller. The document feeder then begins the pick, feed, and lower sequence.

- **Pick**

The pick roller rotates and moves one or more sheets forward into the document feeder where the sheets engage with the separation roller. The separation roller contacts the document feeder separation pad, which separates multiple sheets into a single sheet.

- **Feed**

The single sheet continues through the document feeder paper path (aided by the pre-scan rollers) until the leading edge of the page activates the top-of-form sensor. Activation of this sensor initiates the scan process, and the scanner acquires the image as the document moves over the document feeder glass. The post-scan rollers then eject the sheet into the output area. The pick and feed steps are repeated as long as paper is detected by the paper-present sensor.

- **Home**

When the top-of-form sensor detects the trailing edge of the last page, the last sheet is ejected and the motor turns on a sequence that rests the separation floor back down in standby mode, which allows it to detect when more media is loaded.

## Base printer

Learn about the base printer components.

## Basic operation

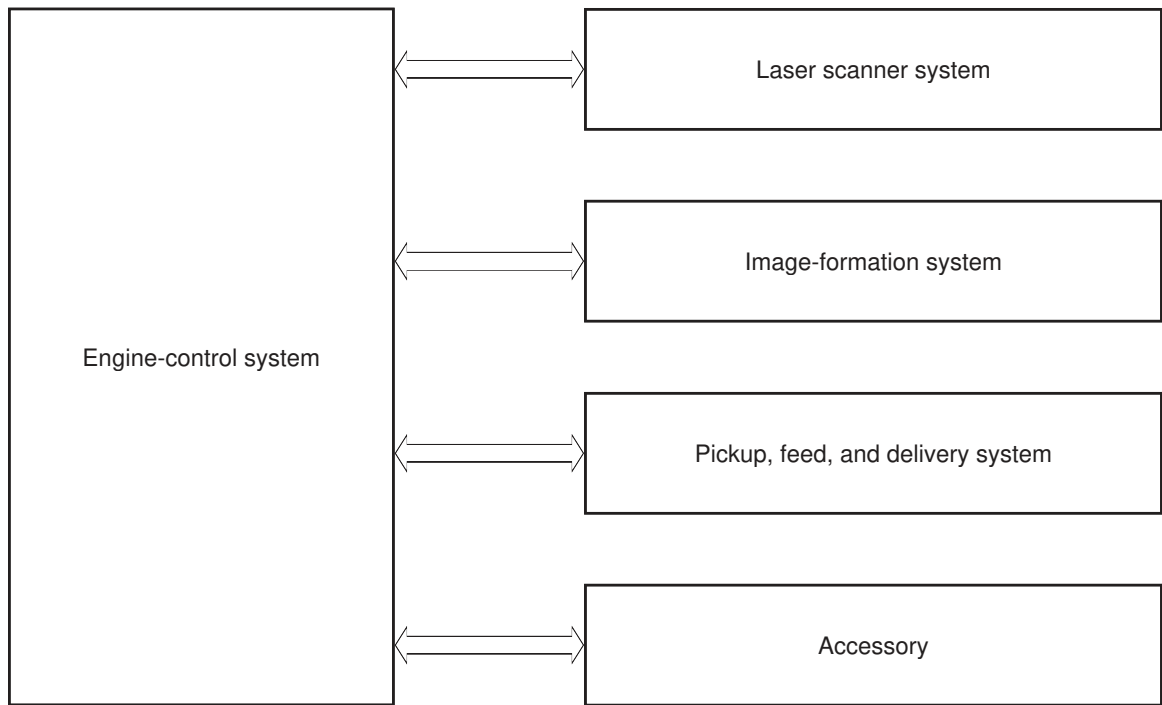
Learn about the basic operation of the printer.

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

The basic printer operation comprises the following systems:

- The engine-control system, which includes the high-voltage and low-voltage power supplies (HVPS and LVPS), fuser control circuits, and the DC controller printed circuit assembly (PCA)
- The laser/scanner system, which forms the latent image on the photosensitive drum
- The image-formation system, which transfers a toner image onto the paper
- The pickup, feed and delivery system, which uses a system of rollers and belts to transport the paper through the printer
- Accessory (optional paper feeders)

**Figure 3-1** Relationship between the main printer systems



## Sequence of operation

Learn about the printer sequence of operation.


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


**Table 3-1** Sequence of operation

Period	Duration	Description
Waiting	From the time the power is turned on, the door is closed, or when the printer exits sleep mode until the printer is ready for printing.	<ul style="list-style-type: none"> <li>• Heats the fuser film in the fuser</li> <li>• Detects the toner cartridge</li> <li>• Rotates and stops each motor</li> <li>• Rotates and stops each fan</li> <li>• Cleans the transfer roller</li> </ul>
Standby	From the end of the waiting sequence, the last rotation until the formatter receives a print command, or until the printer is turned off.	<ul style="list-style-type: none"> <li>• Is in the Ready state</li> <li>• Enters Sleep mode if the formatter sends the sleep command</li> <li>• Rotates and stops each fan</li> </ul>
Initial rotation	From the time the formatter receives a print command until the paper enters the paper path.	<ul style="list-style-type: none"> <li>• Rotates each motor</li> <li>• Rotates each fan</li> <li>• Activates the high-voltage power supply</li> <li>• Prepares the laser/scanner unit</li> <li>• Warms the fuser to the correct temperature</li> </ul>
Printing	From the time the first sheet of paper enters the paper path until the last sheet has passed through the fuser.	<ul style="list-style-type: none"> <li>• Forms the image on the photosensitive drums</li> <li>• Transfers the toner to the paper</li> <li>• Fuses the toner image onto the paper</li> </ul>
Last rotation	From the time the last sheet of paper exits the fuser until the motors stop rotating.	<ul style="list-style-type: none"> <li>• Stops each motor</li> <li>• Stops each fan</li> <li>• Moves the last printed sheet into the output bin</li> <li>• Stops the high-voltage power supply</li> <li>• Stops the laser/scanner unit</li> <li>• Turns the fuser heater off</li> <li>• If another print command is received, the printer enters the initial rotation period when the last rotation is complete.</li> </ul>

## Formatter-control system

Learn about how the formatter operates.

 **CAUTION:** Under **NO** circumstances should a formatter from a different printer be installed during the repair or troubleshooting processes.

 **IMPORTANT:** When a formatter PCA or DC controller is replaced a pairing operation must be completed to make the printer functional. For more information, see the formatter/DCC/ECU remove and replace procedures in the service manual or the service web topics.

The formatter performs the following functions:

- Controlling the sleep delay function
- Receives and processes print data from the various printer inputs
- Monitors control panel functions and relaying printer status information (through the control panel an bi-directional input/output)
- Develops and coordinates data placement and timing with the DC controller
- Stores font information
- Communicates with the host computer through the network or the bidirectional interface

The formatter receives a print job from the network or bidirectional interface and separates it into image information and instructions that control the printing process. The DC controller synchronizes the image formation system with the paper input and output systems, and then signals the formatter to send the print image data.

## Power management

Learn about printer power management.

Use the following power management settings to select power saving options:

Single function printer (SFP)

- Sleep delay
- Shutdown mode
- Disable shutdown

Multi function printer (MFP)

- Sleep mode
- Shutdown after sleep
- Disable shutdown


Power management conserves power after the printer has been idle for an adjustable length of time. When the printer is in sleep mode, the control-panel backlight is turned off, but the printer retains all printer settings, downloaded fonts, and macros. The default setting is a 1-minute idle time. The setting can be changed or turned off from the control-panel menus.

The printer exits sleep mode and enters the warm-up cycle when any of the following occurs.

- A print job, valid data, or a PML or PJJL command is received at the serial port.
- A print job is received via wireless or fax.
- The control panel is touched (button press or touchscreen touch depending on model).
- The power button is pressed for 3 seconds or less.
- A document is loaded in the document feeder (MFP only).
- An operational live network Ethernet cable or fax line is attached.

- Inserting a USB drive in either the front USB port or the USB port on the back of the device.
- Connecting a USB cable to an operating computer.
- Opening the cartridge (front) door or the rear door.

---

 **TIP:** Error messages override the sleep delay message. The printer enters sleep mode at the selected time, but the error message continues to appear.

---

#### Non-touchscreen control panels

1. At the control panel, press the **OK** button to access the **Setup** menu.
2. Open the following menus:
  - **Power Management**
  - **Sleep Delay**
3. Use the arrow keys to select the time for the **Sleep Delay**, and then press the **OK** button.

#### Touchscreen control panels

1. From the printer control panel, swipe down and then select the **Setup** icon.
2. Open the following menus:
  - **Power Management**
  - **Sleep Mode**
3. Set the time for the **Sleep Mode** function.

## Printer job language (PJM)

Learn about printer job language (PJM).

PJM is an integral part of printer configuration, in addition to the standard PCL and PostScript (PS). With standard cabling, the printer can use PJM to perform a variety of functions.

- **Dynamic I/O switching:** The printer can be configured with a host on each I/O by using dynamic I/O switching. Even when the printer is offline, it can receive data from more than one I/O simultaneously, until the I/O buffer is full.
- **Context-sensitive switching:** The printer can automatically recognize the personality (PS or PCL) of each job and configure itself to serve that personality.
- **Isolation of print environment settings from one print job to the next:** For example, if a print job is sent to the printer in landscape mode, the subsequent print jobs print in landscape only if they are formatted for landscape printing.

## Printer management language (PML)

Learn about printer management language (PML)

PML allows remote configuration of the printer and status read-back from the printer through the I/O ports.

## Control panel

Learn about the control panel.

The formatter sends and receives printer status and command data to and from the control panel.

## Walk-up USB

Learn about the walk-up USB function.

---

 **NOTE:** Touchscreen models only.


---

This printer features printing from a USB flash drive. This printer supports printing the following types of files from the USB flash drive.

- .pdf
- .jpg
- .prn and .PRN
- .pcl and .PCL
- ps and .PS
- doc and .docx
- .ppt and .pptx

When a USB flash drive is inserted into the front of the printer, the control panel will display the [USB Flash Drive menu](#). The files present on the USB flash drive can be accessed from the control panel.

---

 **NOTE:** The USB flash drive must be formatted using the FAT32 format. Drives formatted with NTFS will not work.


---

Any files in a supported format on the USB flash drive can be printed directly from the printer control panel. Pages also can be scanned and saved to the USB flash drive from the control panel.

## Wireless

Learn about the wireless function.

---

 **NOTE:** Wireless models only.

---

Wireless products contain a wireless card to enable 802.11b/g/n wireless communication.

---

## Low end data model (LEDm) overview

Learn about the low-end data model (LEDm).

The low-end data model (LEDm) provides one consistent data representation method and defines the dynamic and capabilities tickets shared between clients and devices, as well as the access protocol, event, security, and discovery methods.

## CPU

Learn about the printer microprocessor.


The formatter incorporates a 1200 MHz processor.



## Input/output (I/O)

Learn about printer I/O functionality.

---

 **NOTE:** Some of the following printer I/O functions are model specific. For example, not all printer models have a fax function.

---

### Universal serial bus (USB)

The printer includes a USB 2.0 connection.

### Universal serial bus (USB) hosts

The printer includes USB hosts for USB flash drive and job storage.


### 10/100/1000 networking

The printer includes a 10/100/1000 network (Ethernet) connection.

### Fax

The printer includes a fax phone line connection.

---


 **NOTE:** For some fax model printers, the telephone extension port is plugged and not operational.

---

### Walk-up USB

The port is located on or near the control panel.

---

 **NOTE:** Model specific feature.

---

### Wireless

Wireless products contain a wireless card to enable 802.11b/g/n wireless communication with dual band support for 2.4Ghz and 5 Ghz.

---


 **NOTE:** Wireless models only.

---

## Memory

Learn about printer memory functionality.

---


 **NOTE:** Some of the following printer memory functions are model specific. For example, not all printer models have Flash memory.

---

### Firmware

The formatter stores the printer firmware. A firmware upgrade process is used to overwrite and upgrade the firmware.

---

 **NOTE:** For more information about a specific printer model, see the *Printer information, configurations, and specifications* section in the service manual.

---

### Nonvolatile random access memory (NVRAM)

The printer uses nonvolatile memory (NVRAM) to store I/O and information about the print environment configuration. The contents of NVRAM are retained when the printer is turned off or disconnected.

## Flash memory

**NAND:** Stores fax memory.

## Random access memory

The printer uses the following RAM:

- SFP: 256 MB
- MFP: 512 MB

## HP Memory Enhancement technology (MEt)

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



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**NOTE:** MEt is available only in PCL mode; it is not functional when printing in PS mode.

---

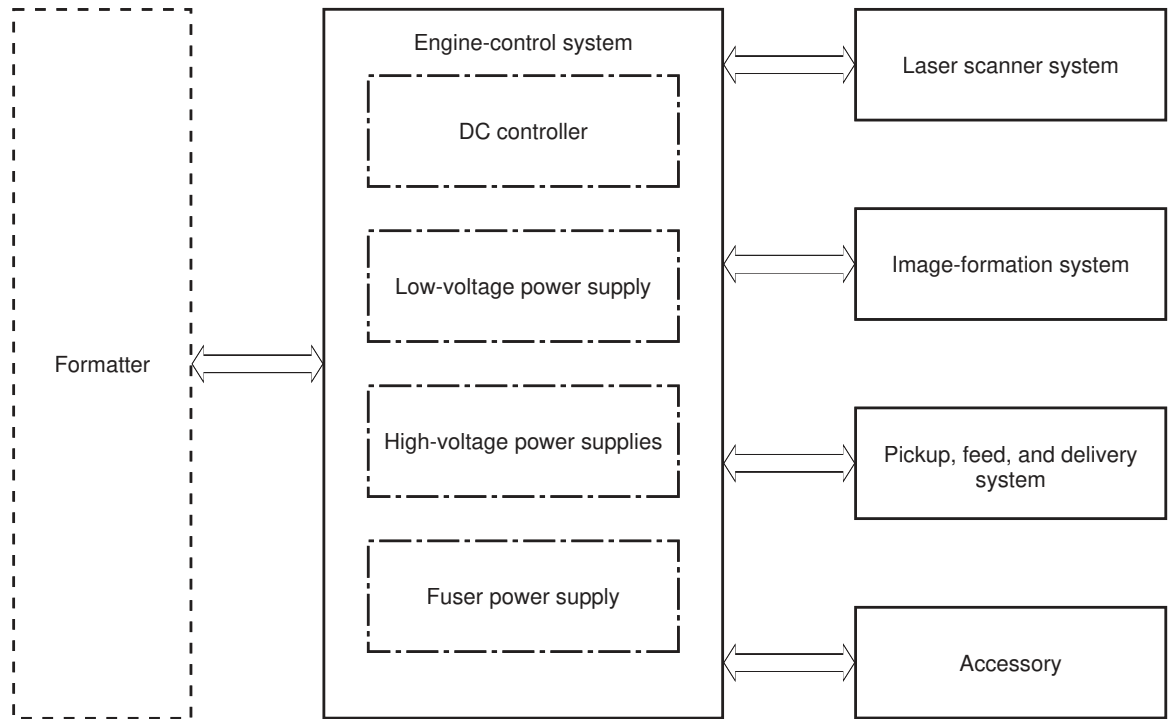
## Engine-control system

Learn about the printer engine control system.

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

- DC controller
- Low-voltage power supply
- High-voltage power supplies
- Fuser power supply

Figure 3-2 Engine-control system



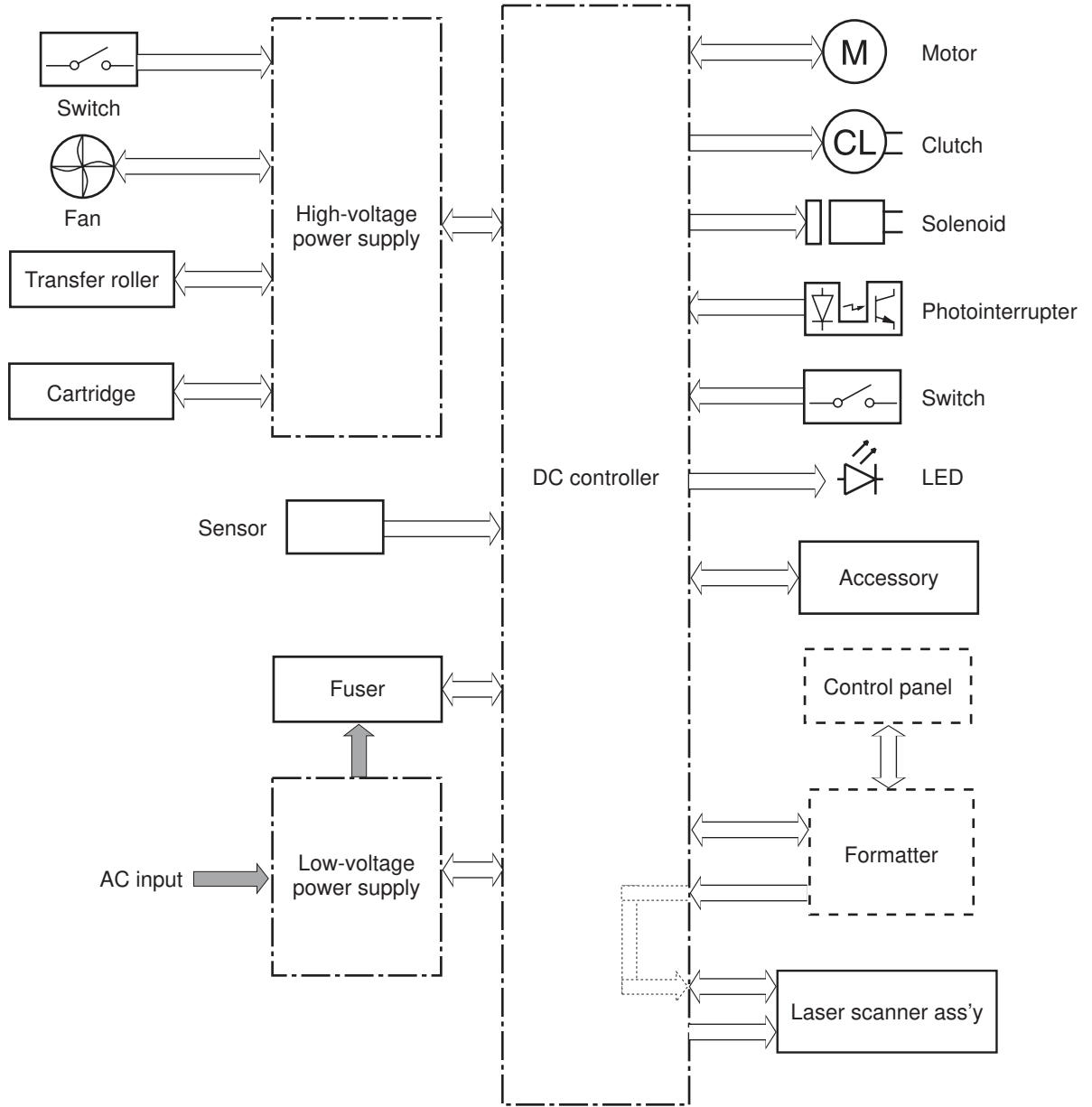
## DC controller

Learn about the DC controller.

**IMPORTANT:** When a formatter PCA or DC controller is replaced a pairing operation must be completed to make the printer functional. For more information, see the formatter/DCC/ECU remove and replace procedures in the service manual or the service web topics.

The DC controller controls the operation of the printer and its components. The DC controller starts the printer operation when the printer power is turned on and the power supply sends DC voltage to the DC controller. After the printer enters the standby period, the DC controller sends out various signals to operate motors, solenoids, and other printer components based on the print command and image data that the host computer sends.

**Figure 3-3 DC controller block diagram**



**Table 3-2 Printer electrical components**

Component type	Abbreviation	Component name
Motor	M1	Fuser motor
Motor	M3	Scanner motor
Fan	FM1	Main fan
Solenoid	SL1	Cassette pickup solenoid
Solenoid	SL2	Tray 1 (MP) tray pickup solenoid
Solenoid	SL3	Duplex switchback solenoid (duplex models only)
Clutch	CL1	Duplex re-pickup clutch (duplex models only)

**Table 3-2 Printer electrical components (continued)**

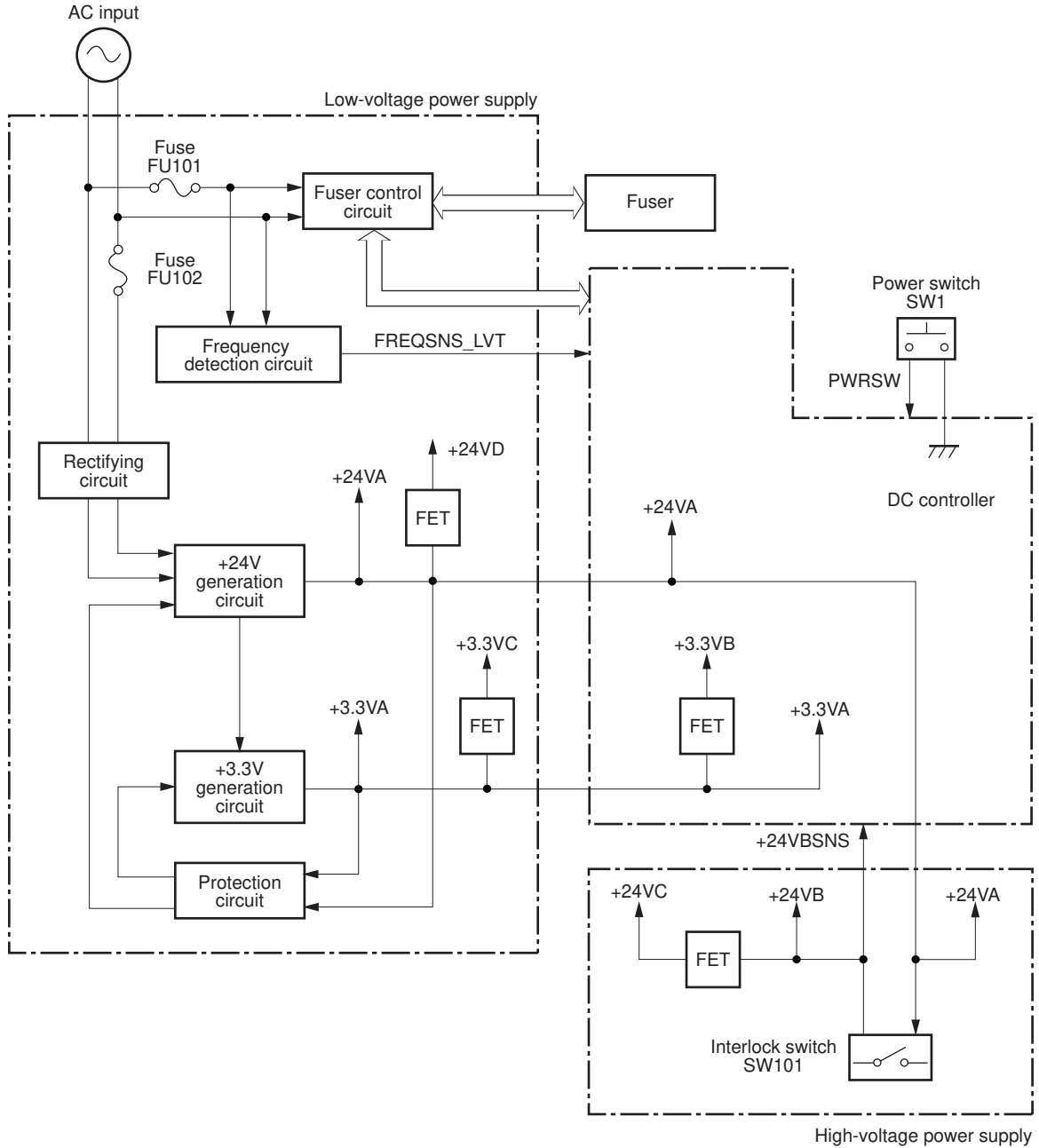
<b>Component type</b>	<b>Abbreviation</b>	<b>Component name</b>
Switch	SW1	Power switch
Switch	SW101	Cartridge (front) door switch
Photo interrupter	PS1a	Media width sensor
Photo interrupter	PS2b	Duplex feed sensor (duplex models only)
Photo interrupter	PS1	Cassette media out sensor
Photo interrupter	PS2	Top sensor
Photo interrupter	PS3	Tray 1 (MP) tray media out sensor
Photo interrupter	PS4	Output bin media-full sensor
Photo interrupter	PS13	Fuser output sensor
Sensor	TH1	Environment sensor
LED	LED1	Power supply LED1

## Low-voltage power supply

Learn about the low-voltage power supply (LVPS).

The low-voltage power-supply (LVPS) circuit converts the AC power from the wall receptacle into the DC voltage that the printer components use.

**Figure 3-4 Low-voltage power-supply circuit**



**Table 3-3 LVPS voltages**

DC power supply	Reference Item	Description
+24V	+24VA	Constantly supplied  <b>NOTE:</b> Becomes 4.5V during active OFF or inactive OFF.
+24V	+24VB	Stopped when cartridge door is opened. (SW101)  <b>NOTE:</b> Stopped during active OFF or inactive OFF.

**Table 3-3 LVPS voltages (continued)**

DC power supply	Reference item	Description
+24V	+24VC	Stopped when cartridge door is opened (SW101) <b>NOTE:</b> Stopped during active OFF or inactive OFF.
+24V	+24VD	Constantly supplied <b>NOTE:</b> Stopped during active OFF or inactive OFF.
+3.3V	+3.3VA	Constantly supplied
+3.3V	+3.3VB	Constantly supplied <b>NOTE:</b> Stopped during active OFF or inactive OFF.
+3.3V	CL1	Constantly supplied <b>NOTE:</b> Stopped during active OFF or inactive OFF.

### Over-current/over-voltage protection

Learn about low-voltage power supply over-current/over-voltage protection.

The low-voltage power supply has a protective function against overcurrent and overvoltage conditions to prevent failures in the power supply circuit. If an overcurrent or overvoltage event occurs, the system automatically cuts off the output voltage.

If the DC power is not being supplied from the low-voltage power supply, the protective function might have activated. In this case, turn off the power switch, and then unplug the power cord. Do not plug in the power cord or turn the power switch on again until the root cause is found.

In addition, two fuses in the low-voltage power supply protect against an overcurrent event. If an overcurrent event occurs in the AC line, the fuse blows and cuts off the power distribution.

### Safety

Learn about low-voltage power supply safety operation.

For personal safety, the printer interrupts +24VB and +24VC power when the cartridge door detection switch is turned off. This stops DC power supply to the high-voltage power supply (HVPS).

The remote switch control circuit turns on or off the printer power so that the AC power flows even the power switch is turned off. Unplug the printer power cord before disassembling the printer.

### Low-voltage power supply functions

Learn about low-voltage power supply functions.

The printer has the following low-voltage power supply functions.

**Table 3-4 Low-voltage power supply functions**

Failure detective function	Applied
Sleep mode	No
Power supply voltage detection	No
Automatic power OFF	No

**Table 3-4** Low-voltage power supply functions (continued)

<b>Failure detective function</b>	<b>Applied</b>
Automatic power ON/OFF	No
Active OFF	Yes
Inactive OFF	Yes
Network mode	No
Power switch illumination	Yes
Low-voltage power supply failure detection	Yes
Power save mode	No

## High-voltage power supply

Learn about the high-voltage power supply.

The DC controller controls the high-voltage power supply (HVPS) to generate biases. The high-voltage power supply delivers the high-voltage biases to the following image-formation components used to transfer toner during the image-formation process:

- Primary charging roller (in the toner cartridge)
- Developing roller (in the toner cartridge)
- Transfer roller
- Pressure roller

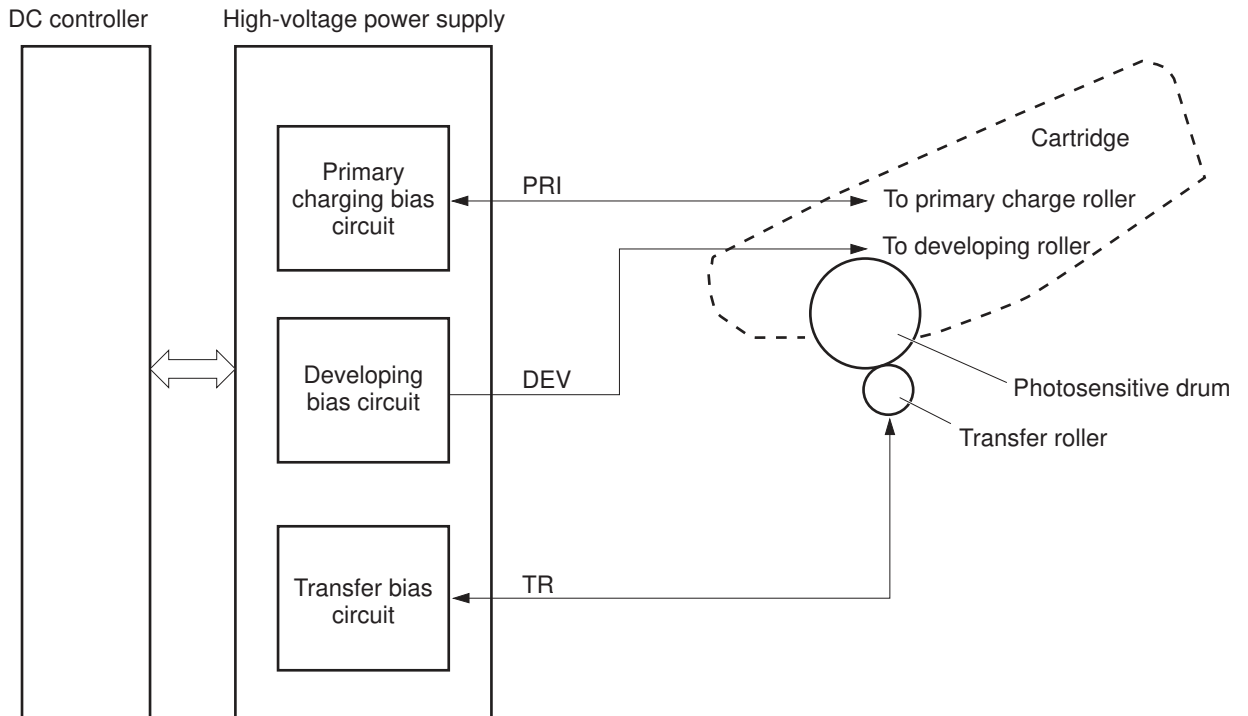
### High-voltage power supply circuits

Learn about high-voltage power supply circuits.

The high-voltage power supply contains the following separate circuits.



**Figure 3-5 High-voltage power supply circuits**



**Table 3-5 High-voltage power supply circuits**

Circuit	Description
Primary-charging-bias generation	The primary charging bias negatively charges the surface of the photosensitive drum to prepare for image formation.
Developing-bias generation	The developing bias adheres toner to an electrostatic latent image formed on the photosensitive drum.
Transfer-bias generation	The primary transfer bias transfers the toner from each photosensitive drum onto the page.

### Fuser bias

Learn about high-voltage power supply fuser bias.

The printer uses on-demand fusing. The fuser bias is DC positive for improved print quality. The fuser bias circuit is located in the high-voltage power supply, HVPS (T).

### Fuser control

Learn about fuser control functions.

The DC controller and components in the fuser perform the following functions related to fuser operation:

- Control fuser temperature
- Detect fuser failures
- Prevent excessive temperature rise

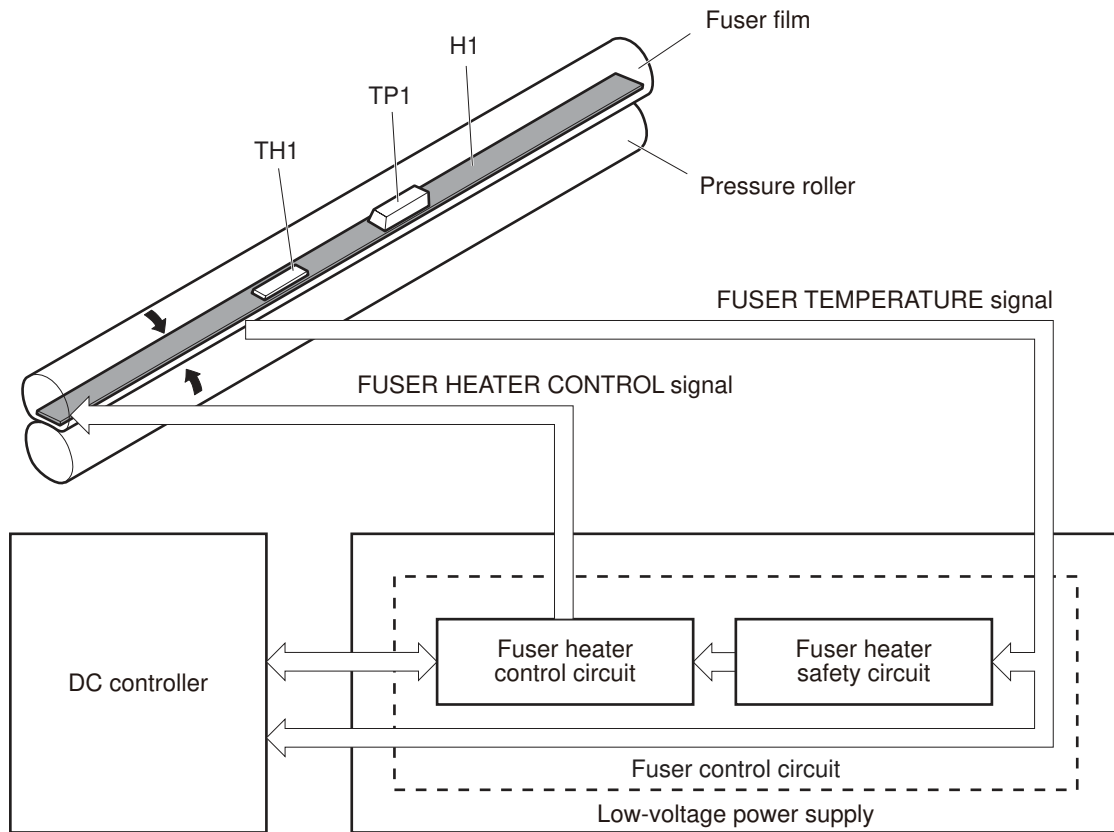
- Detect remaining life in the fuser
- Determine if the correct fuser is installed

### Fuser circuits

Learn about the fuser circuits.

The fuser heater control circuit and the fuser heater safety circuit control the fuser temperature according to commands from the DC controller. The fuser consists of the following major components.

**Figure 3-6 Fuser components**



**Table 3-6 Fuser components**

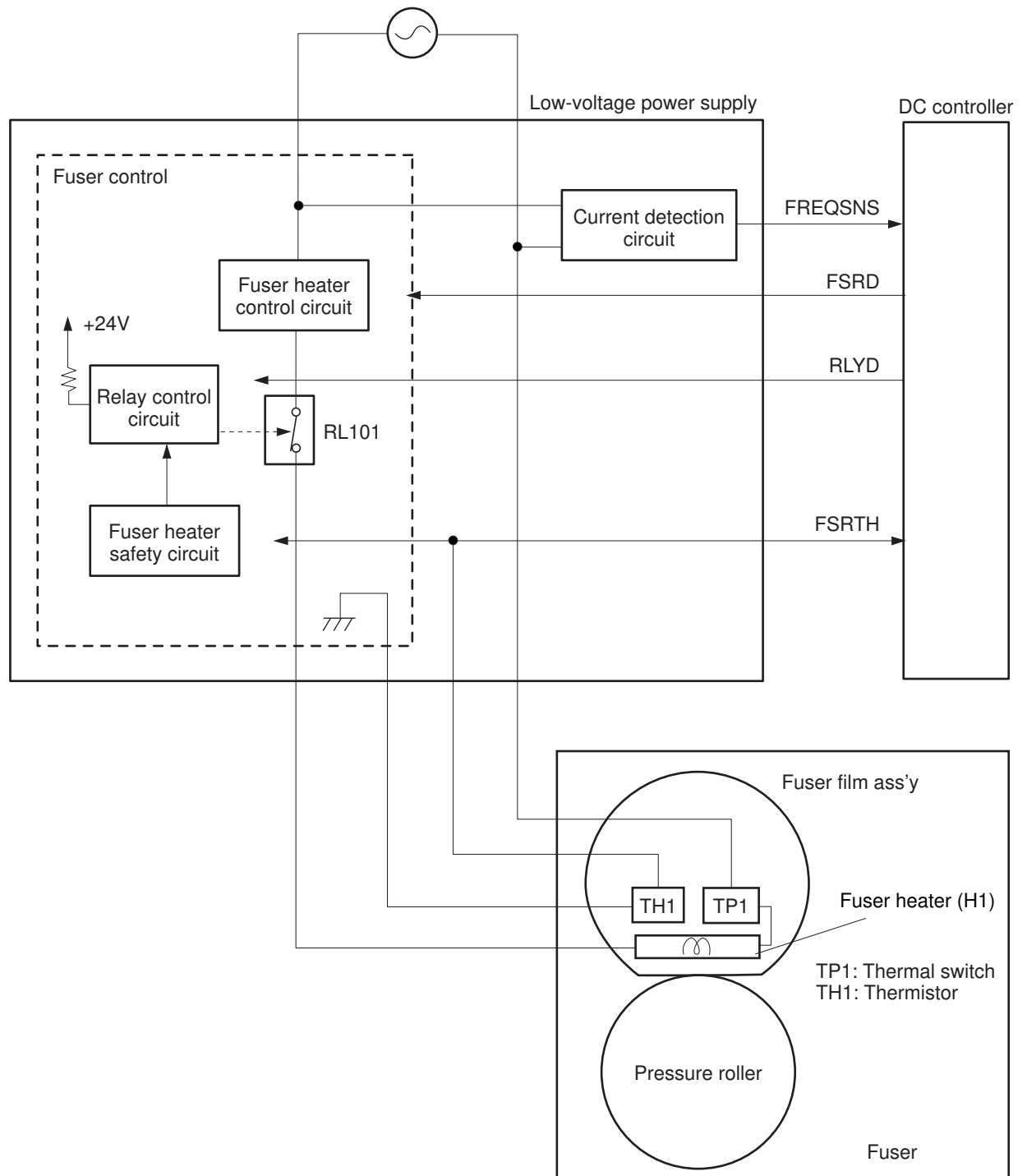
Component type	Abbreviation	Name	Function
Heaters	H1	Fuser main heater	Heats the center of the fuser film assembly
Thermistors (contact type)	TH1	Main thermistor	Detects the center temperature of the fuser heater
Thermoswitch (contact type)	TP1	Thermoswitch	Prevents an abnormal temperature rise in the fuser heater

### Fuser control functions

Learn about the fuser control functions.

The fuser uses the following control circuits.

**Figure 3-7 Fuser control**



**Table 3-7 Fuser control functions**

Failure detection function	Applied
Fuser temperature control	Yes
Fuser failure detection	Yes

**Table 3-7 Fuser control functions (continued)**

Failure detection function	Applied
Frequency detection circuit failure detection	Yes
Fuser pressure release mechanism failure detection	No
Fuser type discrepancy detection	No
Fuser type identification detection	Yes
Fuser presence detection	No
Fuser life detection	No
Relay failure detection	No
Pressure roller cleaning	Yes

## Fuser heater protection

Learn about fuser heater protection.

Fuser heater protection is a feature that detects excessive temperatures in the fuser and interrupts the power supply to the fuser heater.

The following three protective components prevent the fuser heater from excessive rising temperature:

- **DC controller:** When a thermistor or sub-thermistor detects a temperature above a certain threshold, the DC controller interrupts power to the specific heater.
- **Fuser-heater safety circuit:** The fuser heater safety circuit monitors the detected temperature of the sub thermistors.
- **Thermoswitch:** If the temperature in the heaters is abnormally high, and the temperature in the thermoswitch exceeds a specified value, the contact to the thermoswitch breaks.

## Engine laser/scanner system

Learn about the printer laser/scanner system.

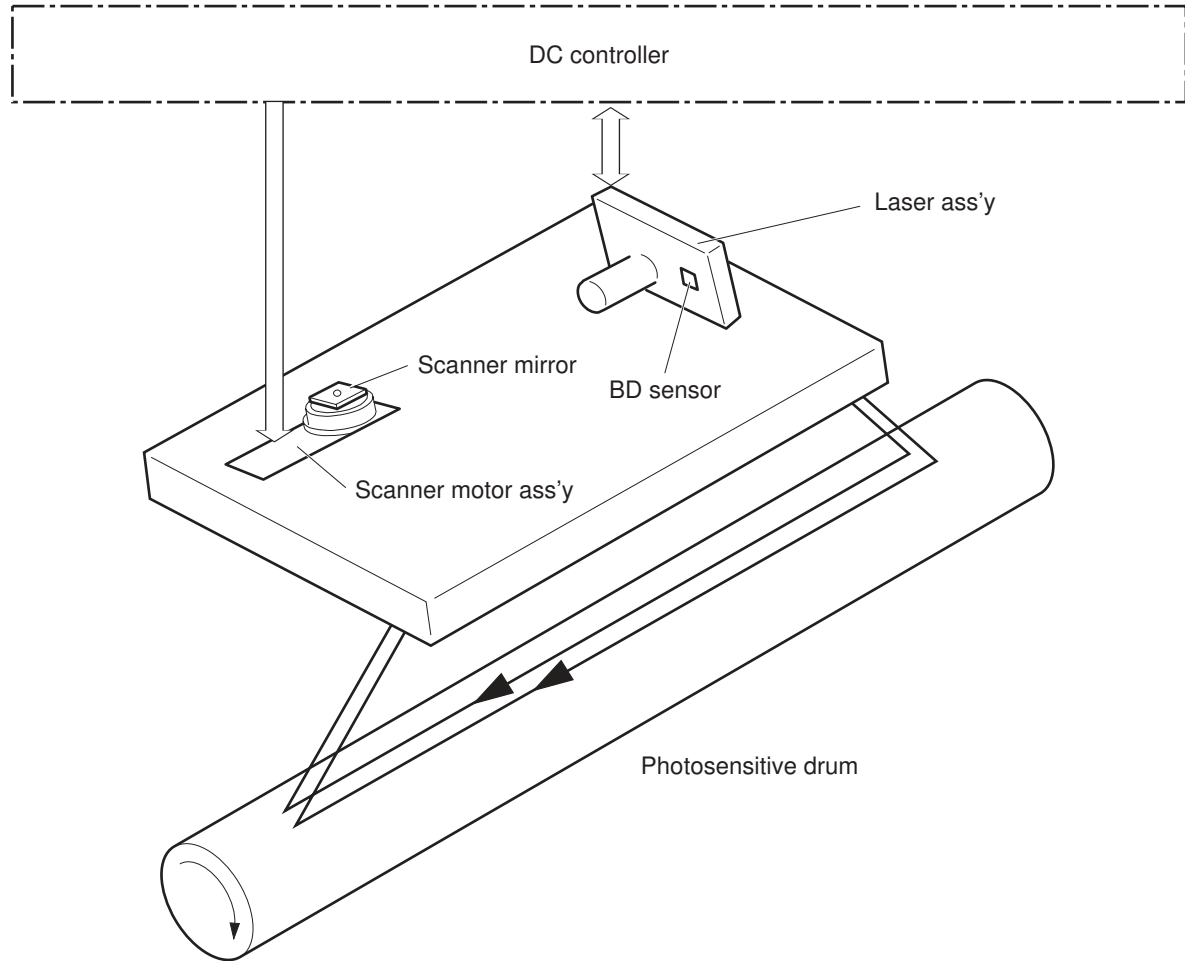
The laser/scanner system forms the latent electrostatic image on the photosensitive drum(s) inside the toner cartridge(s).

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

The main components of the laser/scanner system, which are controlled by signals sent from the DC controller, are:

- Laser assembly
- Scanner motor assembly
- Beam detect (BD) sensor
- Scanner mirror

**Figure 3-8 Laser/scanner system**



### Laser/scanner failure detection

Learn about laser/scanner failure detection.

The DC controller determines an optical unit failure and notifies the formatter of the error status for the following supported conditions.

**Table 3-8 Laser/scanner failure detection**

Failure detective function	Applied
<b>featureBeam detect (BD) failure detection:</b> A specified BD interval is not detected within a specified period during the scanner motor drive.	Yes
<b>Laser/scanner motor startup failure:</b> The scanner motor does not reach a specified rotation frequency within a specified period of time from when the laser/scanner starts up.	Yes
<b>Laser/scanner motor abnormal rotation:</b> The laser/scanner motor does not reach a specified rotational frequency within a specified period of time during a print operation.	Yes
<b>Laser scanner failure detection:</b> A specified laser intensity is not detected.	No

## Safety

Learn about laser/scanner safety operation.

The laser/scanner assembly has a mechanical laser shutter. For the safety of users and service technicians, the laser shutter interrupts the optical path of the laser/scanner assembly when the top door is opened (SW101).

## Image-formation process

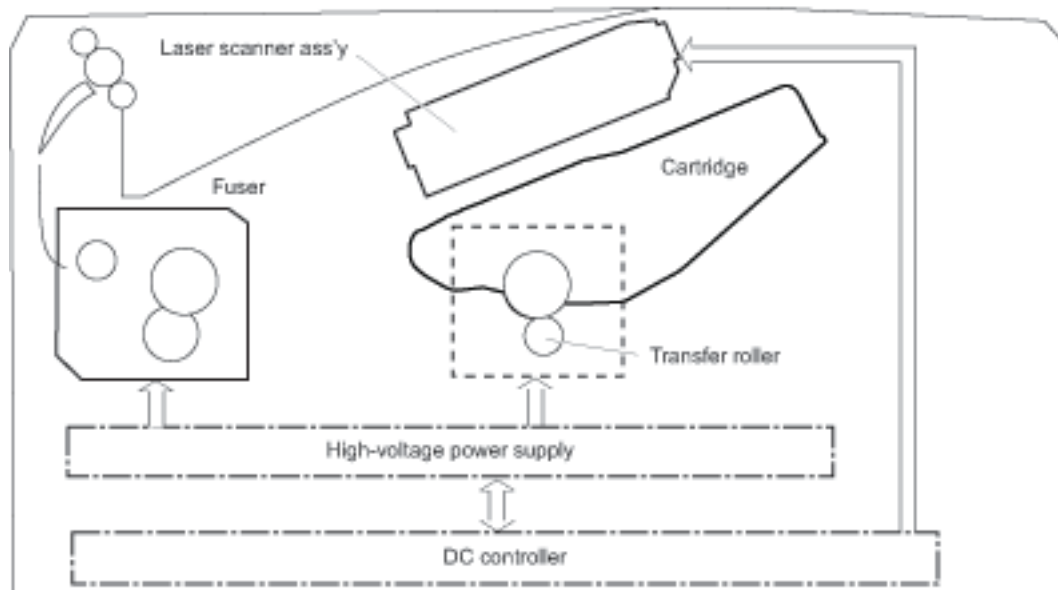
Learn about the image-formation process.

The image-formation system creates the printed image on the paper. The system consists of the following components:

- Toner cartridge
- Transfer roller
- Fuser
- Laser/scanner
- High-voltage power supply

The DC Controller controls the internal components of the image formation system (according to commands received from the formatter) to form the toner image on the photosensitive drum surface. The toner image is then transferred to the print media and fused.

**Figure 3-9** Image-formation system

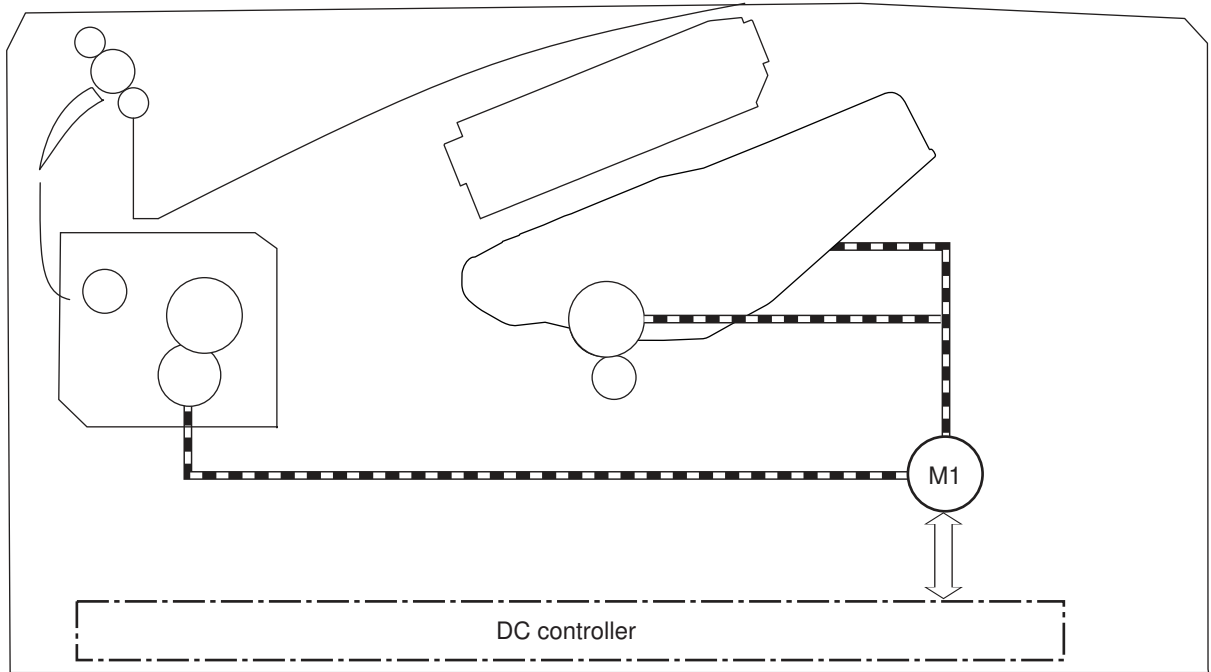


The fuser motor (M1) drives the following image formation components:

- Photosensitive drum
- Developing roller (located in the toner cartridge)

- Primary charging roller (follows the photosensitive drum; located in the toner cartridge)
- Transfer roller (follows the photosensitive drum)
- Pressure roller
- Fuser film (follows the pressure roller)

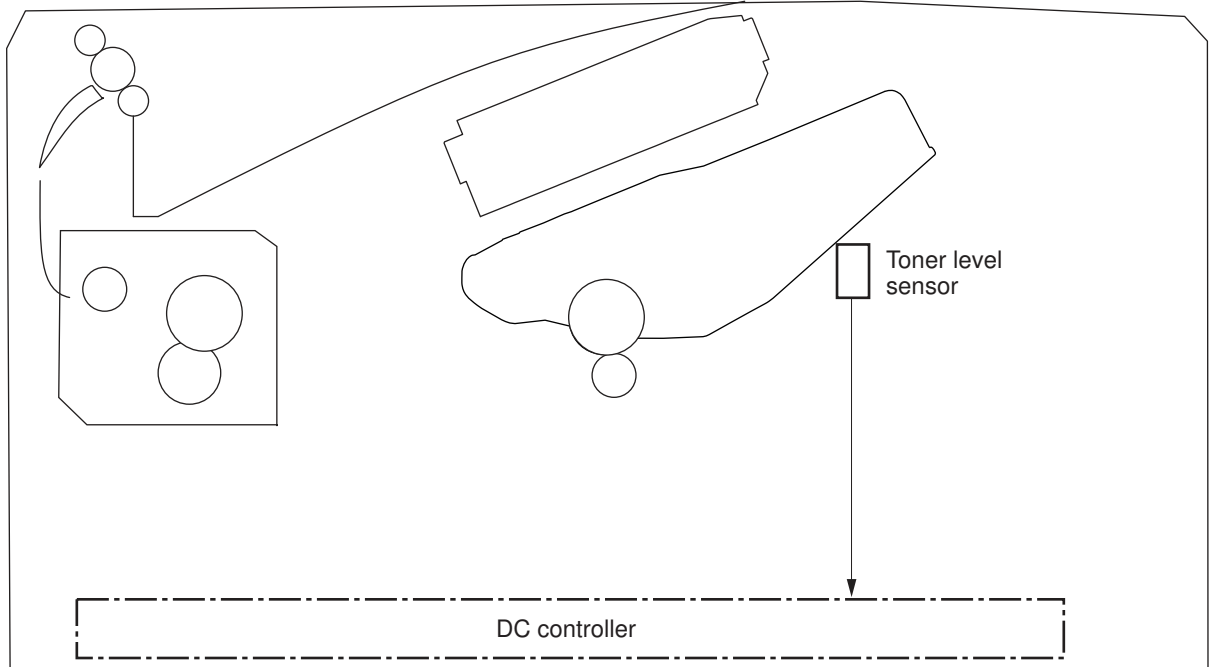
**Figure 3-10 Fuser motor (M1) and image formation components**



Abbreviation	Component
M1	Fuser motor

The following figure shows the toner-level sensor for the image-formation system.

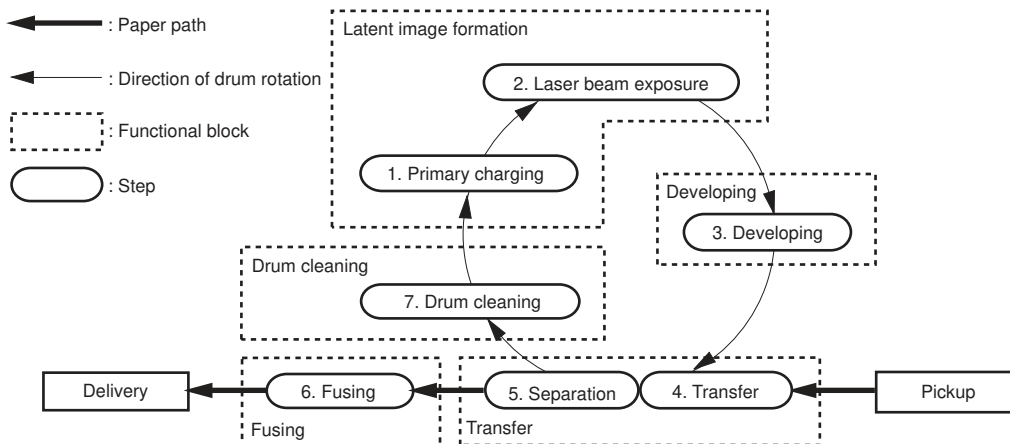
**Figure 3-11 Toner-level sensor**



Abbreviation	Component
NA	Toner-level sensor

The image-formation process consists of seven steps divided into five functional blocks.

**Figure 3-12 Image-formation process overview**



**Table 3-9 Image formation process**

Functional block	Step	Description
Latent image formation	1. Primary charging	An invisible latent image forms on the surface of the photosensitive drum.
Latent image formation	2. Laser-beam exposure	An invisible latent image forms on the surface of the photosensitive drum.



**Table 3-9 Image formation process (continued)**

Functional block	Step	Description
Development	3. Development	Toner adheres to the electrostatic latent image on the photosensitive drum.
Transfer	4. Transfer	The toner image transfers to the paper.
Transfer	5. Separation	The toner image transfers to the paper.
Fusing	6. Fusing	The toner fuses to the paper to make a permanent image.
Drum cleaning	7. Drum cleaning	Residual toner is removed from the drum.

### Step 1: Primary charging

Learn about the image formation primary charging step.

To prepare for latent image formation, the surface of the photosensitive drum is charged with a uniform negative charge. The primary charging roller receives the primary charging bias, and then the roller charges the drum by direct contact.

**Figure 3-13 Primary charging**

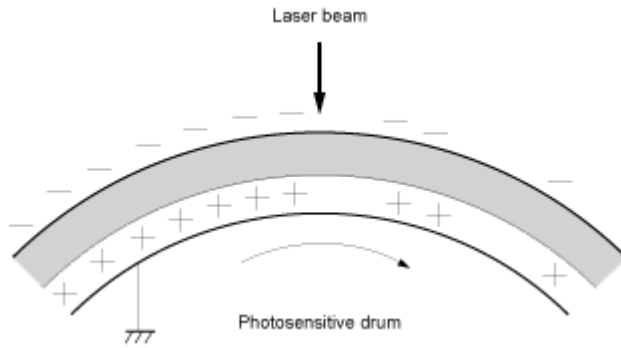


### Step 2: Laser-beam exposure

Learn about the image formation laser-beam exposure step.

The laser beam strikes the photosensitive drum to neutralize the negative charge on the portions of the drum surface where the image will form. An electrostatic latent image forms where the negative charge was neutralized. The neutralized areas on the drum are ready to accept toner.

**Figure 3-14 Laser-beam exposure**

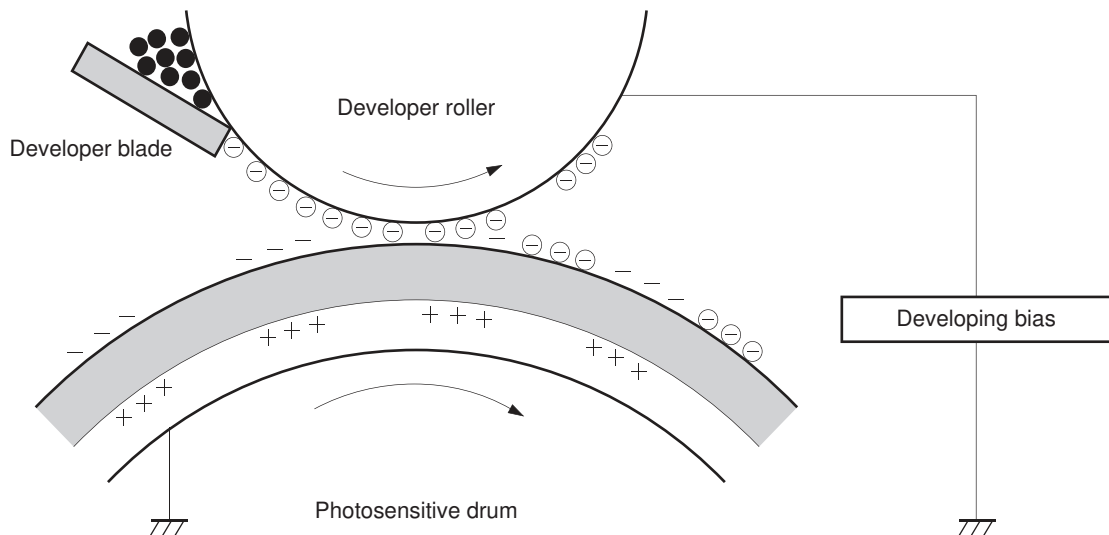


**Step 3: Development**

Learn about the image formation development step.

A developing bias is applied to the developing roller. The toner acquires a negative charge as a result of the friction from the developing roller rotating against the developing blade. Because the negatively charged surface of the photosensitive drums were neutralized where they have been struck by the laser beam, the toner adheres to those areas on the drums. The latent image becomes visible on the surface of the drum.

**Figure 3-15 Development**

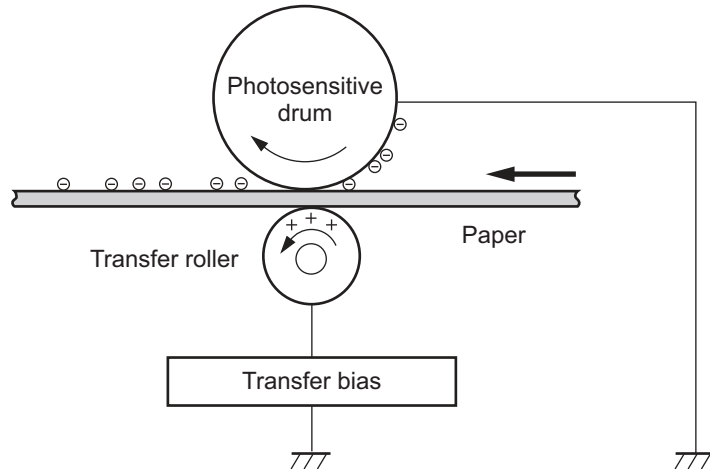


**Step 4: Primary transfer**

Learn about the image formation transfer step.

The transfer bias is applied to the transfer roller to give the paper a positive charge. The positively charged paper attracts the negatively charged toner from the photosensitive drum surface.

Figure 3-16 Transfer

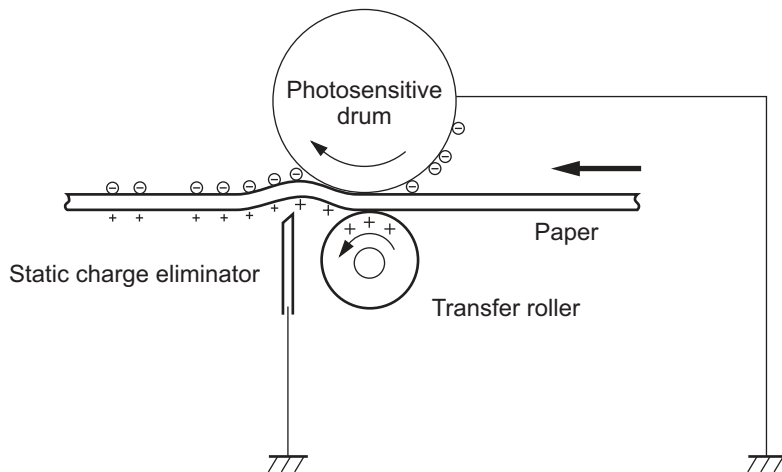


### Step 6: Separation

Learn about the image formation separation step.

The elasticity of the paper and the curvature of the photosensitive drum cause the paper to separate from the drum surface. The static charge eliminator reduces back side static discharge of the paper for stable paper feeding and image quality.

Figure 3-17 Separation

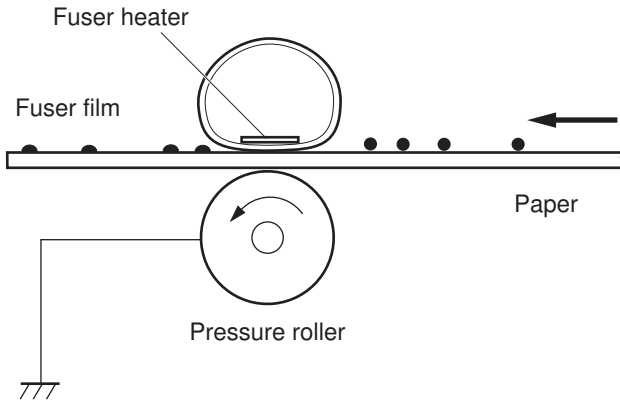


### Step 7: Fusing

Learn about the image formation fusing step.

The printer uses an on-demand fusing method to adhere the toner image onto the page. As the page passes through the heated and pressurized rollers in the fuser the toner melts onto the page. The toner image is now permanently fused to the page. A fusing bias applied to the pressure roller improves image quality.

**Figure 3-18 Fusing**

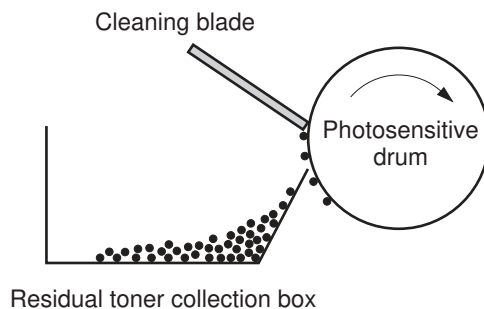


### Step 8: Drum cleaning

Learn about the image formation drum cleaning step.

The cleaning blade scrapes the residual toner off the surface of the photosensitive drum and deposits it in the toner collection portion of the cartridge or in an external toner collection unit (TCU). The drum is now clear and ready for the next image-formation process.

**Figure 3-19 Drum cleaning**



### Toner cartridge

Learn about the toner cartridge.

The following sections discuss the printer toner cartridge.

### Design

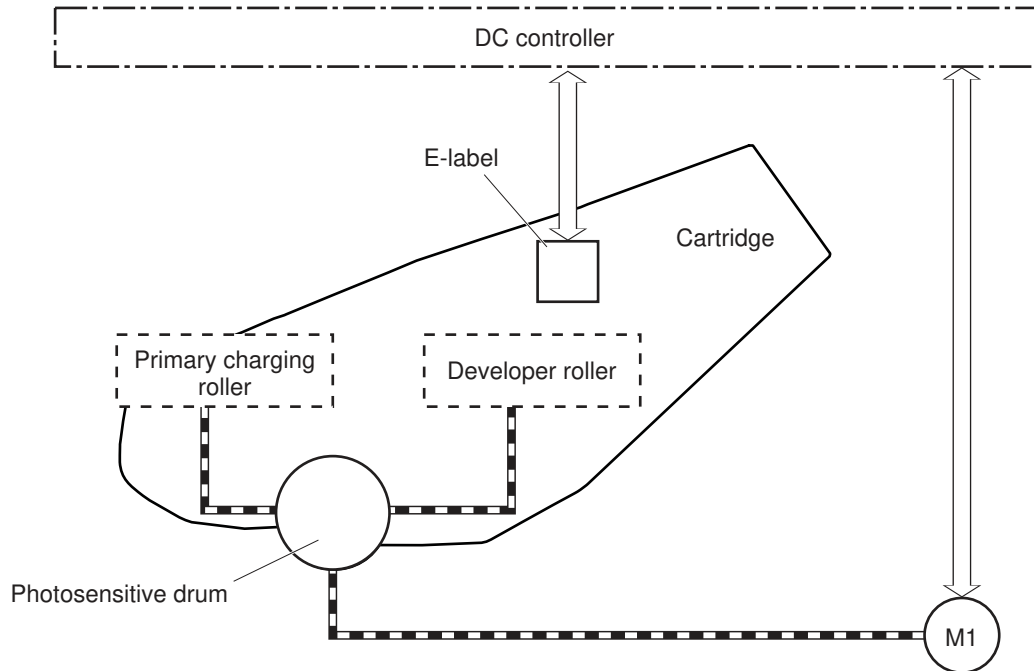
Learn about toner cartridge design features.

The toner cartridge is filled with toner and consists of the following components:

- Photosensitive drum
- Developer
- Primary-charging roller
- Memory chip

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

**Figure 3-20** Toner cartridge system



**Table 3-10** Toner cartridge functions

Function	Applied
Toner cartridge presence detection	Yes
Toner level detection	Yes
Toner cartridge life detection	Yes
Toner cartridge mis-installation detection	No
Drum discharge	No
Transfer cleaning	Yes

### Memory chip

Learn about the toner cartridge memory chip.

The memory chip is non-volatile memory that stores information about the usage of the toner cartridge and helps protect the customer from counterfeit cartridges. This chip is also used to detect the presence of a cartridge within the printer or when a cartridge is installed in the wrong slot. The printer reads and writes the data in the memory chip.

### Toner level and cartridge life detection

Learn about the toner cartridge toner level and life detection functions.

**Toner level detection:** The DC controller detects the remaining toner in a cartridge by the optical detection method and then notifies the formatter of the remaining toner level.

**Cartridge life detection:** The DC controller detects the cartridge life by monitoring the total operating time or remaining toner level of the toner cartridge. The DC controller determines a cartridge end of life

and notifies the formatter when total operating time of the cartridge reaches a specified time or the cartridge runs out of toner.

## Dynamic security

Learn about dynamic-security-enabled printers.



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**NOTE:** All printer models might not support the Dynamic security feature.

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Certain HP printers use cartridges that have security chips or electronic circuitry. Cartridges using a non-HP chip or modified or non-HP circuitry\* might not work. And, those that work today might not work in the future.

As is standard in the printing business, HP has a process for authenticating cartridges. HP continues to use security measures to protect the quality of our customer experiences, maintain the integrity of our printing systems, and protect our intellectual property. These measures include authentication methods that change periodically and might prevent some third-party supplies from working now or in the future. HP printers and original HP cartridges deliver the best quality, security and reliability. When cartridges are cloned or counterfeited, the customer is exposed to quality and potential security risks, compromising the printing experience.

**\*Non-HP Chips and modified or non-HP electronic circuitry** are not produced or validated by HP. HP cannot guarantee that these chips or circuitry will work in your printer now or in the future. If you are using non-original HP cartridges, please check with your supplier to ensure your cartridge has an original HP security chip or unmodified HP electronic circuitry.

## Input devices

Learn about the input devices.

### Tray 3

Learn about the paper feeder(optional Tray 3).

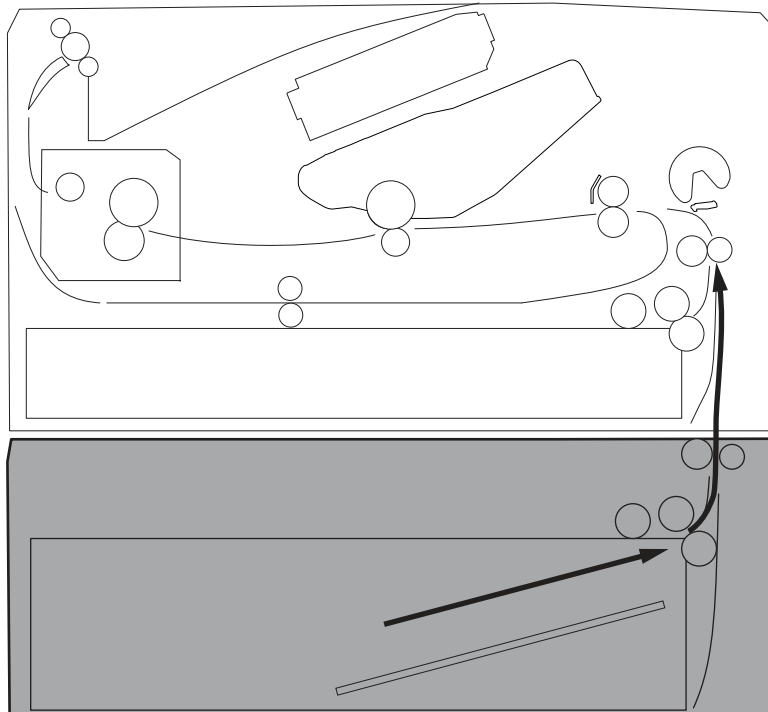
The 550-sheet paper feeder is optionally installed at bottom of the printer. It picks up the print media and feeds it to the printer. The paper DC controller controls the operational sequence of the paper feeder.

### Paper path

Learn about the Tray 3 paper path.

The figure below shows the optional Tray 3 paper path.

**Figure 3-21** Optional Tray 3 paper path

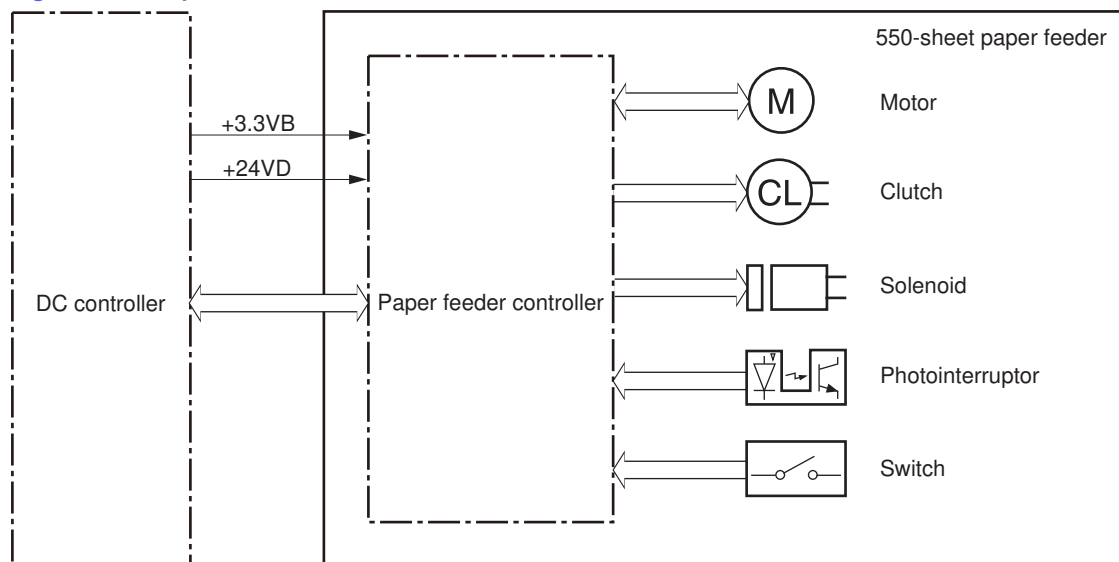


**Paper feeder control**

Learn about the paper feeder controller.

The figure below shows the paper feeder controller block diagram. The table in this topic describes the paper feeder electrical components. The paper feeder controller controls the operational sequence of the paper feeder.

**Figure 3-22** Paper feeder controller




**Table 3-11** Electrical component list, paper feeder

Component type	Abbreviation	Component name
Motor	M5	Lifter motor
Solenoid	SL4	Cassette pickup solenoid
Clutch	CL2	Feed clutch
Switch	SW3	Cassette detection switch
Photo interrupter	PS460	Media surface sensor
Photo interrupter	PS461	Cassette media out sensor

### Motor control

Learn about the Tray 3 motor control.

The paper feeder uses one motor for the cassette lift-up operation.

 **NOTE:** The paper feeder does not detect motor failures.

**Table 3-12** Motor, paper feeder (Tray 3)

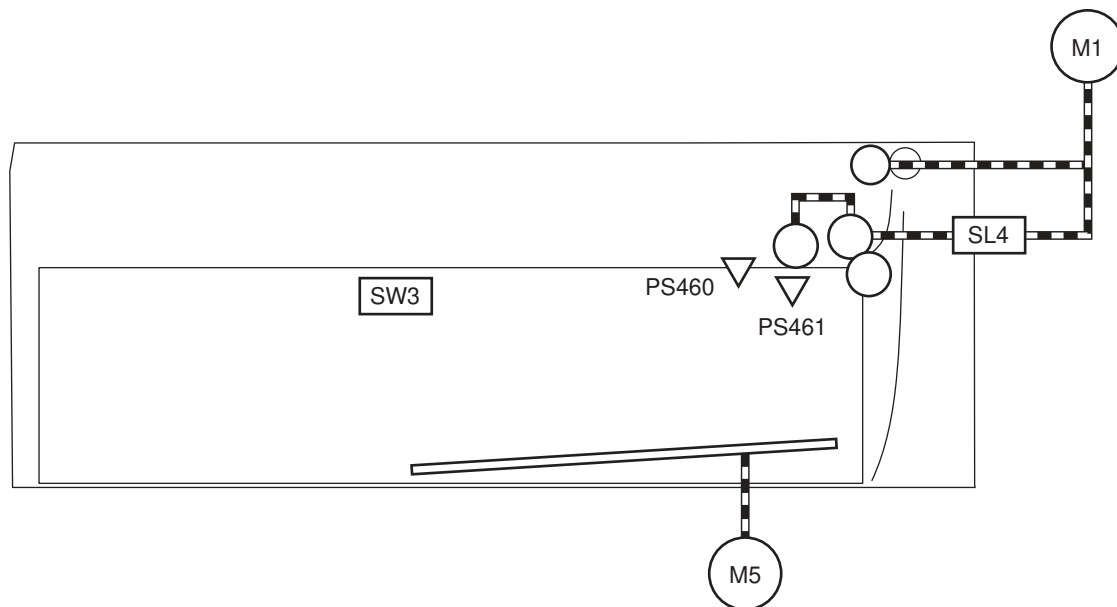
Abbreviation	Component name	Components driven
M5	Lifter motor	Lifts up the cassette

### Electrical components, pickup and feed

Learn about the Tray 3 electrical components.

The figure below shows the paper feeder electrical components. The table in this section describes the electrical components.

**Figure 3-23** Electrical components, pickup and feed





**Table 3-13** Electrical components, pickup and feed (Tray 3)

Abbreviation	Component name
M1	Fuser motor <b>NOTE:</b> This motor is located in the printer.
M5	Lifter motor
SL4	Cassette pickup solenoid
SW3	Cassette detection switch
PS460	Media surface sensor
PS461	Cassette media out sensor

### Other functions

Learn about the Tray 3 functions.

The paper feeder has the following pickup and feed functions.

**Table 3-14** Other functions, paper feeder (Tray 3)

Function	Applied
Cassette lift-up control	Yes
Cassette presence detection	Yes
Cassette media size detection	No
Cassette media stack surface detection	Yes
Cassette media out detection	Yes
Cassette media level detection	No
Multiple-feed prevention	Yes
Automatic delivery	Yes

### Jam detection

Learn about the Tray 3 jam detection.

The DC controller in the printer detects jams during the paper feeder pickup and feed operation.

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# 4 Solve problems

Learn about solving printer problems.

## How to search for printer documentation

The CPMD, error codes, and other support documentation for each printer is available on the HP portals.

For HP internal access to WISE, go to [WISE](#).

For HP channel partners access WISE, see [Accessing WISE for HP channel partners \(HP Partner Portal\) on page 90](#) or [Accessing WISE for HP channel partners \(CSDP\) on page 89](#).

WISE is available to call agents, service technicians, and HP internal users. The level of detail available depends on your access credentials. To learn how to find support content in WISE, [watch the video here](#).

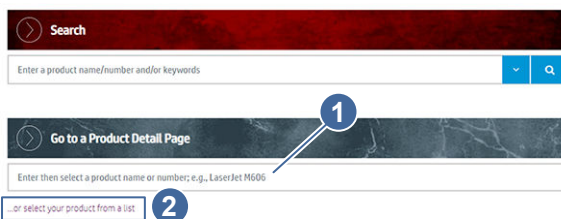
## How to search WISE for printer information and documentation

These instructions are for HP internal use by call agents, service technicians, and other internal users.

To learn how to find support content in WISE, watch the video here: [Finding Error Code and Control Panel Message Document in WISE](#).



**TIP:** The Product Detail Page (PDP) is available from the WISE home page. Enter, and then select a product name or number in the **Go to a Product Detail Page** area (callout 1), or select the **...or select your product from a list** item (callout 2) on the WISE home page.



Many types of printer documentation and information are available on WISE. This section details methods for finding error code descriptions and solutions.



**TIP:** To view a list of control panel message documents (CPMD) per printer, search for the following topic in **WISE**: HP LaserJet, OfficeJet, PageWide, ScanJet Enterprise - Control panel message document (CPMD) list or click the link below.

- [HP LaserJet, HP OfficeJet, HP PageWide, HP ScanJet - Control panel messages document \(CPMD\), Service manual, and Service cost data list](#)

Use one of the following methods to search for CPMD error code information.

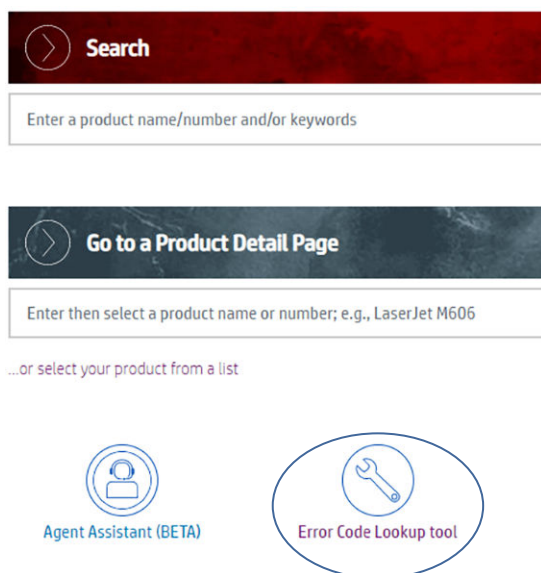
- [Method 1: Use the WISE home page Error Code Lookup tool on page 84](#)
- [Method 2: Search for error codes using the WISE search function on page 85](#)
- [Method 3: Search for error codes using the Product Detail Page on page 87](#)

## Method 1: Use the WISE home page Error Code Lookup tool

Use the WISE Error Code Lookup tool to find error code troubleshooting procedures using the following steps.

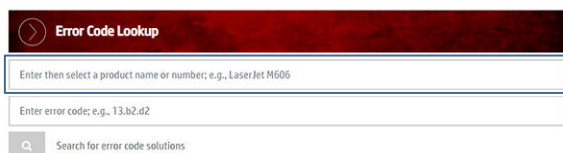
1. On the WISE home page, click the **Error Code Lookup tool** icon.

**Figure 4-1** WISE Error Code Lookup tool icon



2. Enter a printer model number (for example, M606) in the **Error Code Lookup** dialog box.

**Figure 4-2** WISE Error Code Lookup tool dialog box

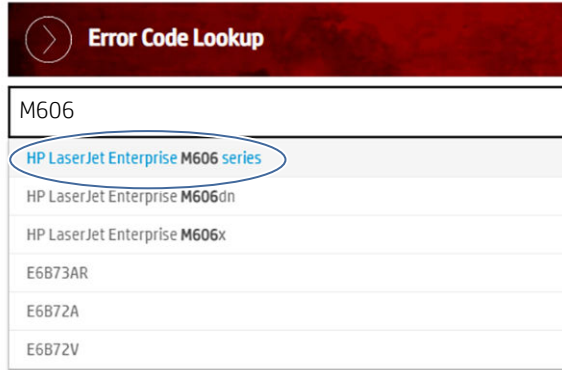


3. A drop-down list appears. Click on the full printer series name (for example, HP LaserJet Enterprise M606 series) in the list.



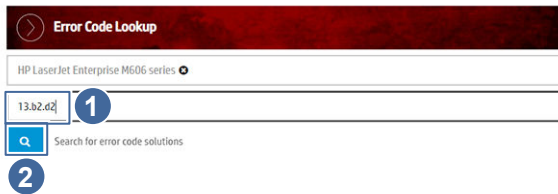
**NOTE:** Selecting the **series** item from the drop-down list is recommended for the most accurate search return.

**Figure 4-3** WISE Error Code Lookup tool drop-down list



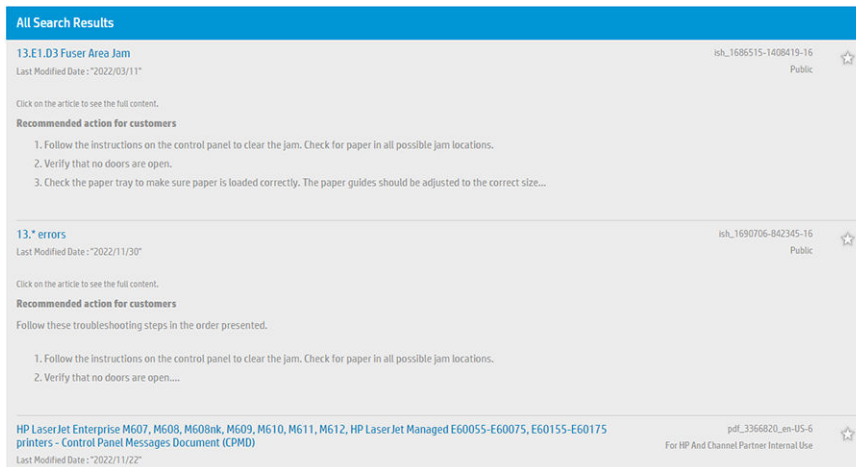
4. Type the error code (for example, 13.b2.d2) in the **Error Code Lookup** keyword field, and then select the search icon.

**Figure 4-4** WISE Error Code Lookup tool search



5. The error code troubleshooting content displays in the **All Search Results** area.

**Figure 4-5** WISE Search results

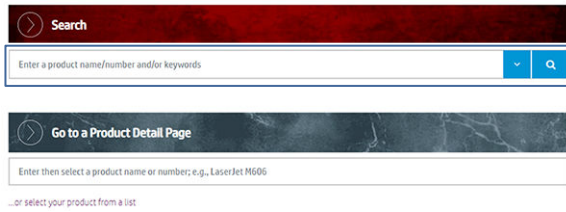


## Method 2: Search for error codes using the WISE search function

Use the WISE search function to find error code troubleshooting procedures using the following steps.

1. On the WISE home page, enter a printer model number (for example, M606) in the **Search** dialog box.

**Figure 4-6** WISE Search dialog box

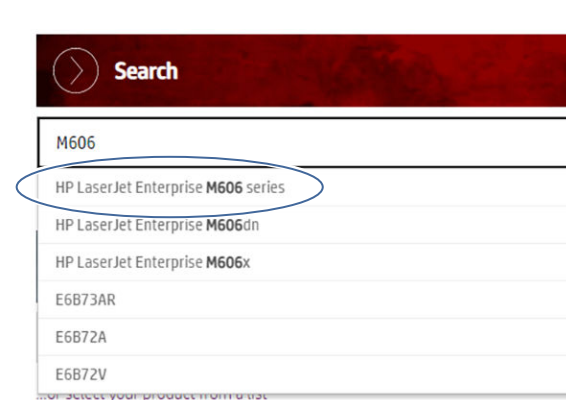


2. A drop-down list appears. Click on the full printer series name (for example, HP LaserJet Enterprise M606 series) in the list.



**NOTE:** Selecting the **series** item from the drop-down list is recommended for the most accurate search return.

**Figure 4-7** WISE Search drop-down list



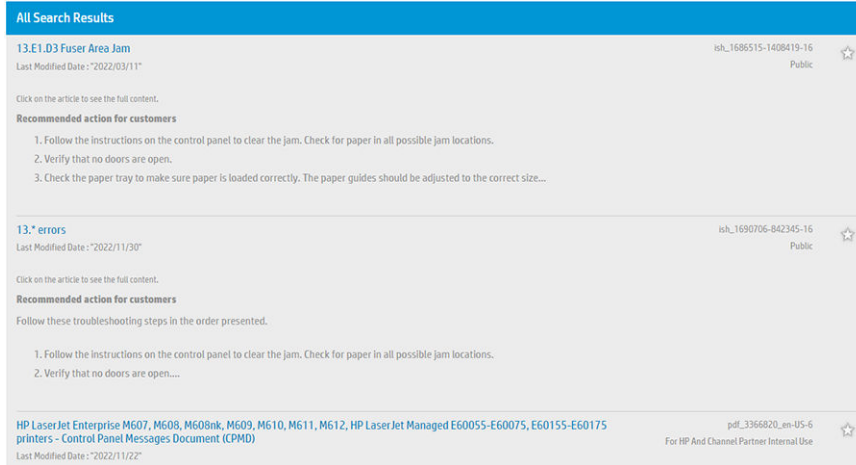
3. Type the error code (for example, 13.E1.D3) in the **Search** keyword field, and then select the search icon.

**Figure 4-8** WISE Search



4. The error code troubleshooting content displays in the **All Search Results** area.

**Figure 4-9 WISE Search results**



### Method 3: Search for error codes using the Product Detail Page

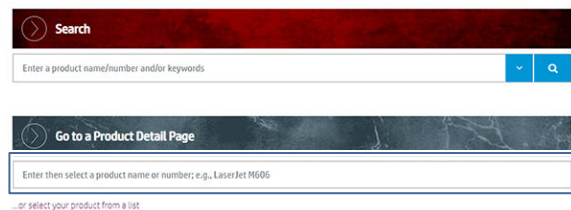
Use the WISE Product Detail Page (PDP) to find error code troubleshooting procedures using the following steps.

1. On the WISE home page, enter a printer model number (for example, M606) in the **Go to a Product Detail page** dialog box.



**TIP:** To find a PDP from a list of products by product type, select the **...or select your product from a list** item just below the dialog box.

**Figure 4-10 WISE PDP dialog box**

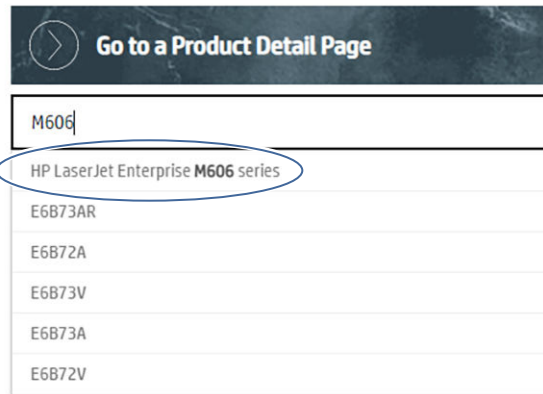


2. A drop-down list appears. Click on the full printer series name (for example, HP LaserJet Enterprise M606 series) in the list.



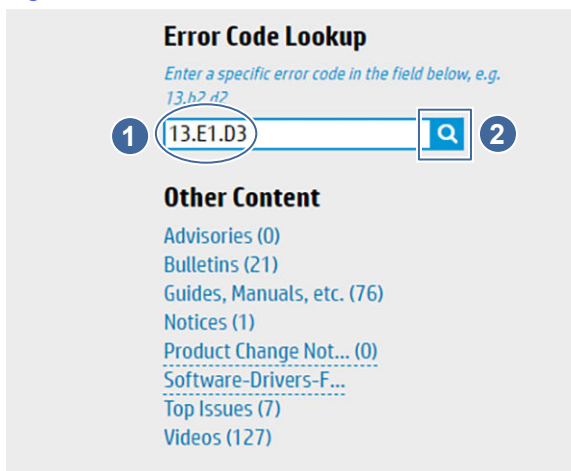
**NOTE:** Selecting the **series** item from the drop-down list is recommended for the most accurate search return.

Figure 4-11 WISE PDP drop-down list



3. Type the error code (for example, 13.E1.D3) in the **Error Code Lookup** field, and then select the search icon.

Figure 4-12 WISE PDP search



4. The error code troubleshooting content displays in the **All Search Results** area.

Figure 4-13 WISE PDP search results



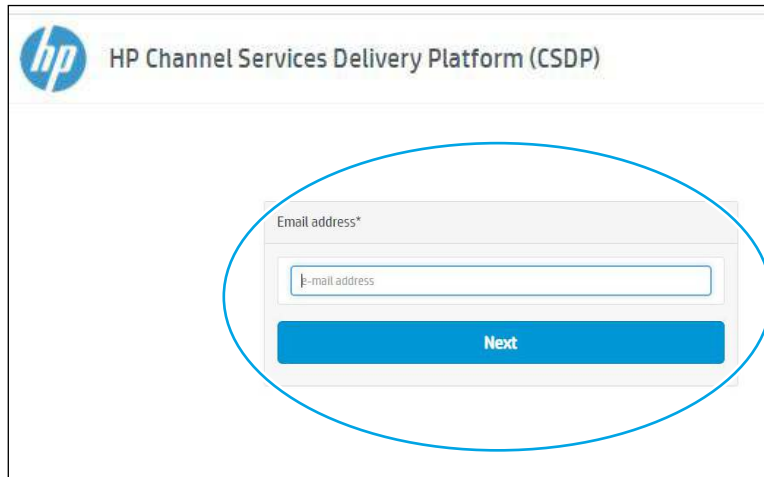
## Accessing WISE for HP channel partners (CSDP)

Learn how to access WISE by accessing the HP Channel Services Delivery Platform (CSDP) if you are an HP Channel Partner.

**IMPORTANT:** A Partner Admin must requested access, via the CSDP portal, to create a new user before you can sign into the CDSP portal.

1. Sign-in to the CSDP portal (click [csdp.hp.com](https://csdp.hp.com) to access the sign-in page).

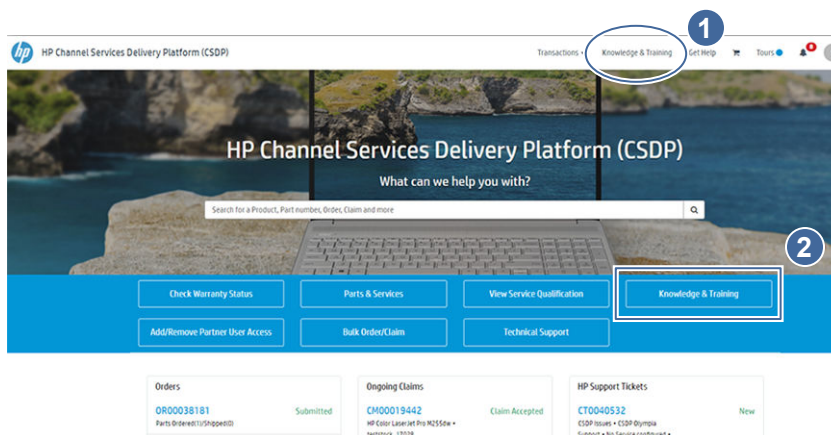
Figure 4-14 CSDP sign-in page



2. On the CSDP home page, click the **Knowledge and Training** item.

**TIP:** Use the **Knowledge and Training** item at the top of the CSDP home page (callout 1), or the **Knowledge and Training** action icon (callout 2).

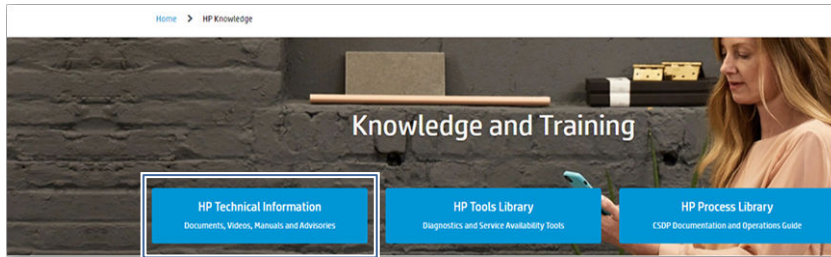
Figure 4-15 CSDP portal home page





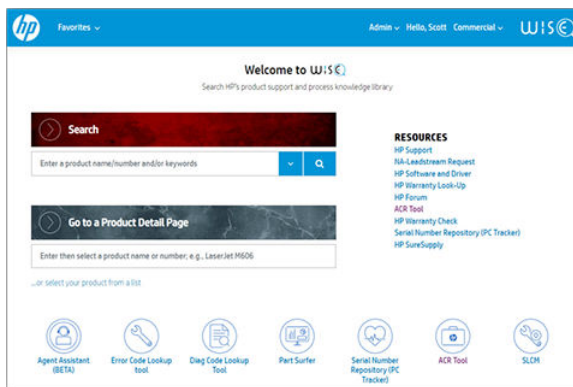
3. Select **HP Technical Documentation** on the **Knowledge and Training** page to open the WISE portal home page.

**Figure 4-16** CSDP portal HP Knowledge and Training page



4. Use the WISE portal to search for printer information.

**Figure 4-17** WISE portal home page



## Accessing WISE for HP channel partners (HP Partner Portal)

Learn how to access WISE by accessing the HP Partner Portal if you are an HP Channel Partner.



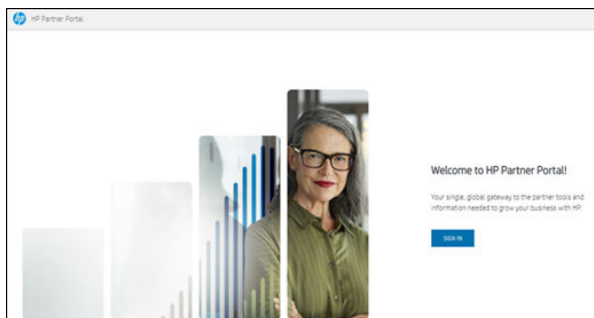
**NOTE:** If this is your first visit to the HP Partner Portal, you will be asked to create an account. Follow the setup directions using your HP Partner credentials.



[View a video of how to access WISE for HP channel partners](#)

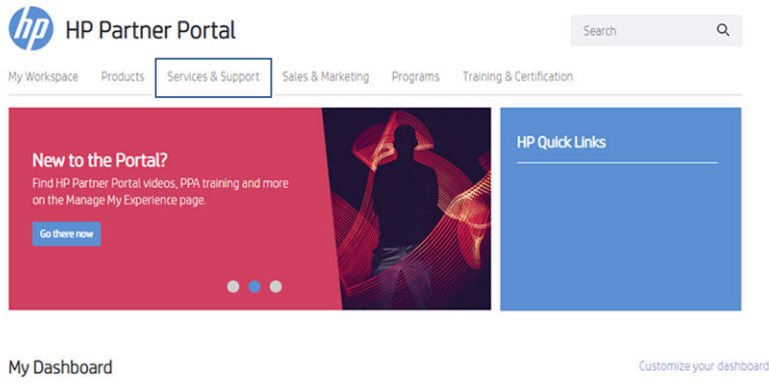
1. Sign-in to the HP Partner Portal (click <https://partner.hp.com> to access the sign-in page).

**Figure 4-18** HP Partner Portal sign-in page



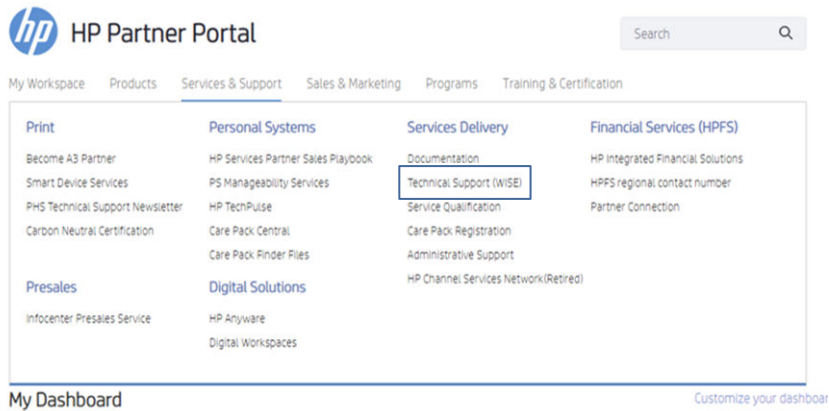
2. On the HP Partner Portal home page, click the **Services & Support** item.

**Figure 4-19** HP Partner Portal home page



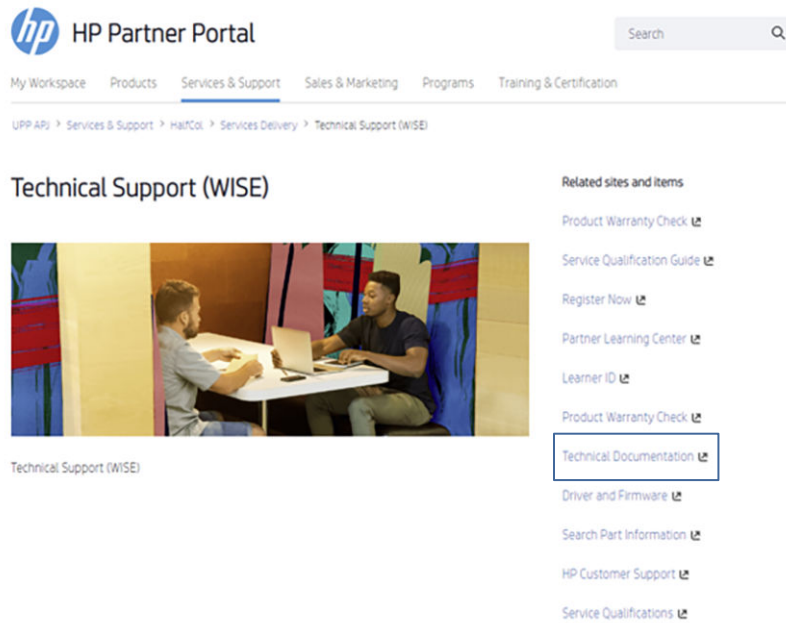
3. Select the **Technical Support (WISE)** item.

**Figure 4-20** HP Partner Portal Service & Support page



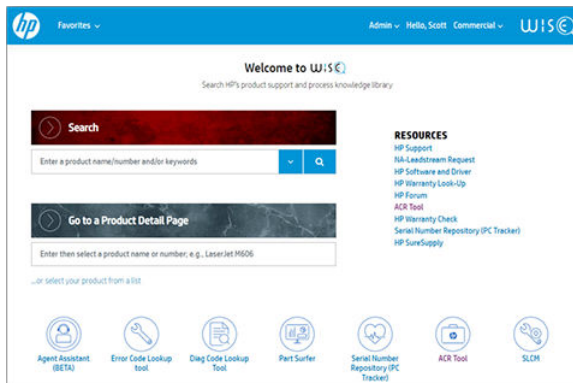
4. Select the **Technical Documentation** item.

**Figure 4-21 HP Partner Portal Technical Support (WISE)page**



5. Use the WISE portal to search for printer information.

**Figure 4-22 WISE portal home page**



## Determine the problem source


When the printer malfunctions or encounters an unexpected situation, the printer control panel alerts the user to the situation.


This section contains a pre-troubleshooting checklist and a troubleshooting flow chart to filter out many possible causes of the problem.

- Use the pre-troubleshooting check list to gather information about the problem from the customer.
- Use the troubleshooting flowchart to pinpoint the root cause of hardware malfunctions. The flowchart guides you to the section of this chapter that contains steps for correcting the malfunction.

Before beginning any troubleshooting procedure, check the following issues:

- Are supply items within their rated life?
- Does the configuration page reveal any configuration errors?

 **NOTE:** To print a configuration page using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

 **NOTE:** The customer is responsible for checking supplies and for using supplies that are in good condition.

## Pre-troubleshooting checklist

The following table includes basic questions to ask the customer to quickly help define the problem(s).

**Table 4-1 Pre-troubleshooting checklist**

General topic	Questions
Environment	<ul style="list-style-type: none"> <li>• Is the printer installed on a solid, level surface (+/- 1°)?</li> <li>• Is the power-supply voltage within <math>\pm 10</math> volts of the specified power source?</li> <li>• Is the power-supply plug inserted in the printer and the wall outlet (not a surge protector)?</li> <li>• Is the operating environment within the specified parameters?</li> <li>• Is the printer exposed to ammonia gas, such as that produced by diazo copiers or office cleaning materials?</li> </ul> <p><b>NOTE:</b> Diazo copiers produce ammonia gas as part of the copying processes. Ammonia gas (from cleaning supplies or a diazo copier) can have an adverse effect on some printer components (for example, the toner cartridge or cartridges OPC).</p> <ul style="list-style-type: none"> <li>• Is the printer exposed to direct sunlight?</li> <li>• Is the printer exposed to an air conditioning or heating vent that can cause temperature fluctuations?</li> </ul>
Media	<ul style="list-style-type: none"> <li>• Does the customer use only supported media?</li> <li>• Is the media in good condition (no curls, folds, or distortion)?</li> <li>• Is the media stored correctly and within environmental limits?</li> </ul>
Input trays	<ul style="list-style-type: none"> <li>• Is the amount of media in the tray within specifications?</li> <li>• Is the media correctly placed in the tray?</li> <li>• Are the paper guides aligned with the stack (no gaps in the stack or excessive pressure causing the stack to bow)?</li> <li>• Is the tray (or trays) correctly installed in the printer?</li> </ul>
Toner cartridge	<ul style="list-style-type: none"> <li>• Is the toner cartridge (or cartridges) installed correctly?</li> </ul> <p><b>NOTE:</b> If country/region specific toner cartridges are available for the printer, make sure the correct cartridge is installed.</p>

**Table 4-1 Pre-troubleshooting checklist (continued)**

General topic	Questions
Transfer unit and fuser	<ul style="list-style-type: none"><li>• Are the transfer unit and fuser installed correctly?</li></ul> <p><b>NOTE:</b> For printers with an intermediate transfer belt (ITB), is the ITB installed correctly and fully seated. If a replacement ITB was installed, was all of the packing materials removed?</p>
Covers	<ul style="list-style-type: none"><li>• Is the toner cartridge door closed?</li></ul>
Condensation	<ul style="list-style-type: none"><li>• Does condensation occur following a temperature change (particularly in winter following cold storage)? If so, wipe affected parts dry or leave the printer on for 10 to 20 minutes.</li><li>• Was a toner cartridge (or cartridges) opened soon after being moved from a cold to a warm room? If so, allow the toner cartridge (or cartridges) to sit at room temperature for 1 to 2 hours.</li></ul>
Miscellaneous	<ul style="list-style-type: none"><li>• Check for and remove any non-HP components (toner cartridges, memory modules, and EIO cards) from the printer.</li><li>• Remove the printer from the network and ensure that the failure is associated with the printer before beginning troubleshooting.</li><li>• For any color print-quality issues (color printers only), calibrate the printer, and then print a diagnostics page to verify print quality.</li></ul>

## Troubleshooting flowchart

This flowchart highlights the general processes to follow to quickly isolate and solve printer hardware problems.

Each row depicts a major troubleshooting step. Follow a “yes” answer to a question to proceed to the next major step. A “no” answer indicates that more testing is needed. Go to the appropriate section in this chapter and follow the instructions there. After completing the instructions, go to the next major step in this troubleshooting flowchart.



**NOTE:** For solutions that require printing a page, see the following.

To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

**Table 4-2 Troubleshooting flowchart**

Step	Question	Action
1 Power on	Is the printer on and does a readable message display?	

**Table 4-2 Troubleshooting flowchart (continued)**

Step	Question		Action
	Yes ↓	No →	<p>Basic printer functions should start up when the printer is connected into an electrical outlet and the power switch is pushed to the on position.</p> <p>During normal operation cooling fans and/or motors should be operating. Place a hand over fan intake or exhaust vents to determine if the fan or fans are spinning. Lean close to the printer to hear motors rotating.</p> <p>If fans and/or motors are operating, the dc side of the power supply is functioning.</p> <p>Always make sure that the printer is plugged into a known-functioning wall receptacle. Remove power strips and plug the printer directly into a wall receptacle.</p> <p>After the control panel display is functional, see step 2.</p>
<p><b>2</b></p> <p><b>Control panel messages</b></p>	<p>Does the message <b>Ready</b> display on the control panel?</p>		
	Yes ↓	No →	<p>After the errors have been corrected, go to step 3.</p> <p>Use the control panel message document (CPMD) section in this manual to correct any displayed error messages.</p>
<p><b>3</b></p> <p><b>Event log</b></p>	<p>Open the <a href="#">Troubleshooting</a> menu and print an event log to see the history of errors with this printer.</p> <p>Does the event log print?</p>		
	Yes ↓	No →	<p>If the event log does not print, check for error messages.</p> <p>If paper jams inside the printer, see the jams section of the printer service manual.</p> <p>If error messages display on the control panel when trying to print an event log, see the control panel message document (CPMD) section of this manual.</p> <p>After successfully printing and evaluating the event log, see step 4.</p>
<p><b>4</b></p> <p><b>Information pages</b></p>	<p>Open the <a href="#">Reports</a> menu and print the configuration pages to verify that all the accessories are installed.</p> <p>Are all the accessories installed?</p>		

**Table 4-2 Troubleshooting flowchart (continued)**

Step	Question		Action
	Yes ↓	No →	<p>If accessories that are installed are not listed on the configuration page, remove the accessory and reinstall it.</p> <p>Make sure that the most recent firmware is installed. See the firmware upgrade section of this manual for more information.</p> <p>After evaluating the configuration pages, see step 5.</p>
<b>5</b> <b>Print quality</b>	Does the print quality meet the customer's requirements?		<p>Compare the images with the sample defects in the Image-quality troubleshooting section of this manual.</p> <p>Solve print-quality and copy-quality issues as needed.</p> <p>After the print quality is acceptable, see step 6.</p>
	Yes ↓	No →	
<b>6</b> <b>Interface</b>	Can the customer print successfully from the host computer?		<p>Verify that all I/O cables are connected correctly and that a valid IP address is listed on the HP Jetdirect configuration page.</p> <p>If error messages display on the control panel or appear in the event log, see the control-panel message document (CPMD) section of this manual.</p> <p>When the customer can print from the host computer, this is the end of the troubleshooting process.</p>
	Yes. This is the end of the troubleshooting process.	No →	

## Upgrade the firmware

Learn about printer firmware upgrades.

HP offers periodic printer updates, new Web Services apps, and new features to existing Web Services apps. Follow these steps to update the firmware for a single printer. When you update the firmware, Web Service apps automatically update.

There are two supported methods to perform a firmware update on this printer. Use only one of the following methods to update the printer firmware.

### Method one: Update the firmware using the control panel

Learn how to perform a firmware update from the control panel.

Use these steps to load the firmware from the control panel (for network-connected printers only), and/or set the printer to automatically load future firmware updates. For USB-connected printers, use method two.



1. Make sure the printer is connected to a wired (Ethernet) or wireless network with an active Internet connection.



---

**NOTE:** The printer must be connected to the internet to update the firmware via a network connection.

---

2. From the Home screen on the printer control panel swipe down to gain access to the home screen dash board, and then touch **Setup** menu.
  - For touchscreen control panels, touch the **Setup** button .
  - For 2 line control panels, press **OK**, and then use the left or the right arrow buttons  to scroll through the menus.

3. Scroll to and open the **Printer Maintenance** menu, and then open the **Update the printer** menu.



---

**NOTE:** If the **Update the printer** option is not listed, use method two.

---



4. Check for updates.
  - For touchscreen control panels, touch **Check for Updates Now**.
  - For 2-line display control panels, select **Check Now**.



---

**NOTE:** The printer automatically checks for an update, and if a newer version is detected, the update process automatically starts.

---

5. Set the printer to automatically update the firmware when updates become available.
  - a. For touchscreen control panels swipe down to gain access to the home screen dash board, and then touch the **Setup** button .
  - b. For 2 line control panels, use the left or the right arrow buttons  to scroll through the menus.
  - c. Scroll to and open the **Setup** menu, open the **Printer Maintenance** menu, and then scroll to **Update the printer** menu, then select **Printer Update Options**, and then choose from the following options:
    - **Install Automatically**
    - **Alert me when available**
    - **Do not check**
  - d. Set the printer to automatically update the firmware.
    - For touchscreen control panels, set the **Mange Updates** option to **Allow Updates** and select **OK**, and then set the **Check automatically** option to **ON**.
    - For 2-line control panels, set the **Mange Updates** then select **Allow Updates** option to **YESS**, and then set the Automatic Check option to **ON**.

## Method two: Update the firmware using the Firmware Update Utility

Learn how to perform a firmware update using the firmware utility.



Use these steps to manually download and install the Firmware Update Utility from HP.com.



**NOTE:** This method is the only firmware update option available for printers connected to the computer via a USB cable. It also works for printers connected to a network.

1. Go to [www.hp.com/support](http://www.hp.com/support), click the **Drivers & Software** link, type the printer name in the search field, press the **ENTER** button, and then select the printer from the list of search results.
2. Select the operating system.
3. Under the **Firmware** section, locate the **Firmware Update Utility**.
4. Click **Download**, click **Run**, and then click **Run** again.
5. When the utility launches, select the printer from the drop-down list, and then click **Send Firmware**.



**NOTE:** To print a configuration page to verify the installed firmware version before or after the update process, click **Print Config**.



**NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

6. Follow the on-screen instructions to complete the installation, and then click the **Exit** button to close the utility.

## Comprehensive list of troubleshooting tools

Learn about the printer troubleshooting tools.

### Engine test

Learn about troubleshooting the printer using the engine test diagnostic.



**NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

When the engine test is performed, a test page with lines prints if the engine is functioning correctly.



**NOTE:** Depending on printer models, either a simplex engine test page, a duplex engine test page, or both simplex and duplex engine test pages might be available.

Depress and hold the cartridge door release button, and then open and close the cartridge door three times within a three second time period to print a simplex engine test page. Open and close the door four times within a three second period to print a duplex engine test page.




### Control panel diagnostics

Learn about troubleshooting control panel problems.




The printer includes diagnostic tests for the control panel. This mode allows for troubleshooting issues with the LEDs (2-line control panels), display, and the buttons.

Open the service menu (2-line control panels)

1. At the printer control panel, press the **OK** button.

2. Press the return arrow button , then press the cancel button  followed by pressing the return arrow button  twice.
3. Press the **OK** button, and then use the right and left arrow buttons to navigate to the **Service** menu, and then press the button **OK**.
4. Use the right and left arrow buttons to navigate to the **Service Test** menu, and then press the button **OK**.
5. Use the right and left arrow buttons to navigate to the **Test LEDs** menu, and then press the button **OK**.

Open the service menu (touchscreen control panels)


1. At the printer control panel, press the home button , then press the return arrow button , and then press the home button  twice.
2. Navigate to the **Service** menu, and then touch it to access the service menu.
3. Navigate to the **Service Test** menu, , and then touch it to access the service menu.
4. Touch the **Test Display** item.

Choose from the following tests:

- **Test LEDs:** Test the LED lights on 2-line control panels. The touchscreen control panels do not have LEDs.
- **Test Display:** Test the control panel display.
- **Test Keys:** Test the control panel buttons.

## Print Settings menu

Learn about the control-panel Print Settings menu

 **NOTE:** Not available for the 2-line control panel.

An asterisk (\*) indicates the default setting.

**Table 4-3** Print Settings menu

Menu Item	Menu Item	Description
Personality	Automatic* PCL 5 only PCL 6 only PS only	Use the radio button to select the printer's personality
Copies		Use your finger to swipe and set the default number of copies when a print job is initiated (default is 1). When finished, touch <b>Done</b> to save settings.
Duplex	Disable Long edge portrait* Short edge portrait	Use the radio button to select default duplex orientation for print jobs. <b>NOTE:</b> Only available on duplex models.

**Table 4-3 Print Settings menu (continued)**

Menu Item	Menu Item	Description
PCL Settings	Form length Append CR to LF	
PCL Settings	Orientation Portrait* Landscape	Use the radio button to select default orientation for the print job.
PCL Settings	Font Number	Use your finger to swipe and set the default <b>Font Number</b> for a print job. When finished, touch <b>Done</b> to save the settings.
PCL Settings	Font Pitch	Use your finger to swipe and set the default <b>Font Pitch</b> for a print job. When finished, touch <b>Done</b> to save the settings.
PCL Settings	Font Point Size	Use your finger to swipe and set the default <b>Font Point Size</b> for a print job. When finished, touch <b>Done</b> to save the settings.
PCL Settings	Symbol Set	Use the radio button to select from a list of available symbol sets.
PCL Settings	Append CR to LF Off* On	Use the radio button to enable or disable this item.
Print PS Error		If a PS error occurs, the printer will print the PS error.

## LED Diagnostics (formatter)

Learn about troubleshooting the printer using formatter LEDs.

### Network LEDs (network models only)

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

For link failures, check all of the network cable connections. In addition, you can try to manually configure the network card link speed setting by using the printer control-panel.

Change the Link Speed setting on an LCD control panel

1. At the printer control panel, press the **OK** button to open the menus.
2. Select the **Setup** menu, and then press the **OK** button.
3. Select the **Ethernet** menu, and then press the **OK** button.
4. Select the **Link Speed** menu, and then press the **OK** button.

Change the Link Speed setting on a touchscreen control panel

1. From the For touchscreen control panels, touch the **Setup** button .
2. Scroll to, and then touch the **Network Setup** menu.

3. Scroll to, and then touch the [Link Speed](#) item.
4. Touch the appropriate link speed.

## Control panel LEDs

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

**Table 4-4** Control panel LEDs

Printer state	Ready light state	Attention light state
Initializing	Blinking	Blinking
Ready	On	Off
Receiving data/processing job or canceling job	Blinking	Off
Error message	Off	Blinking

## Diagrams: Block diagrams

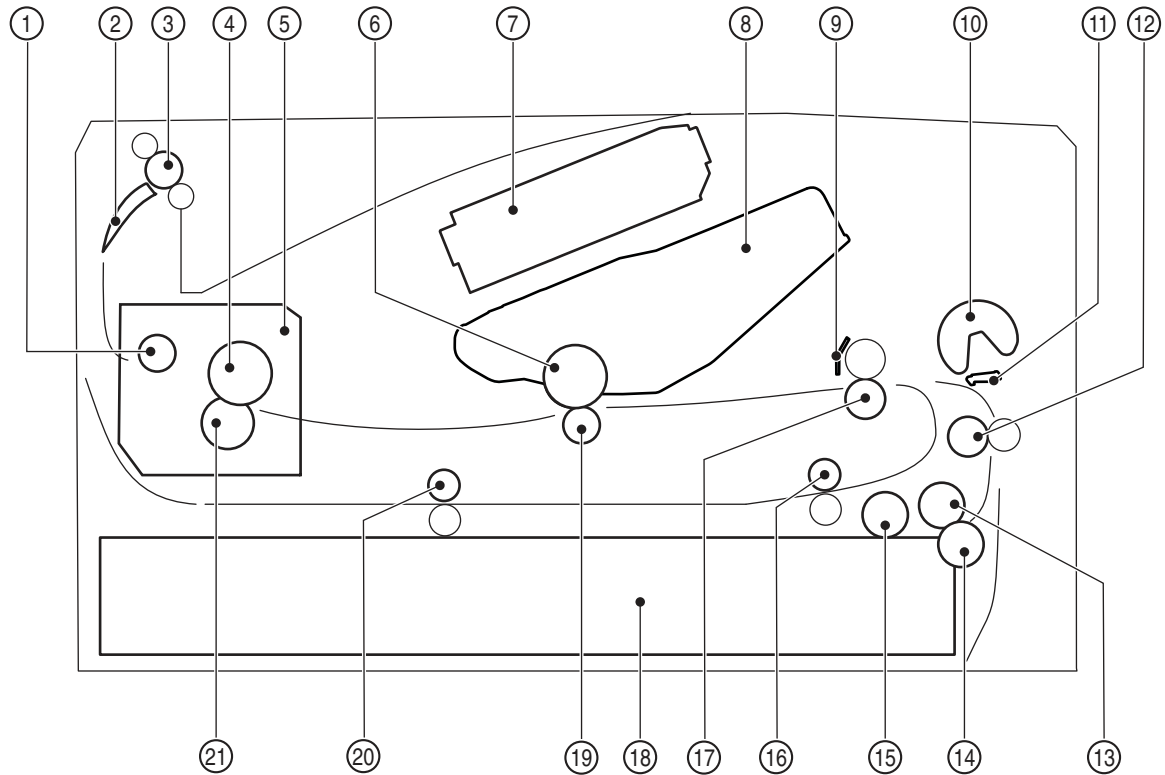
View block diagrams for the printer.

## Cross section diagrams

View printer and paper feeder cross section diagrams.

## Cross-sectional view of the printer

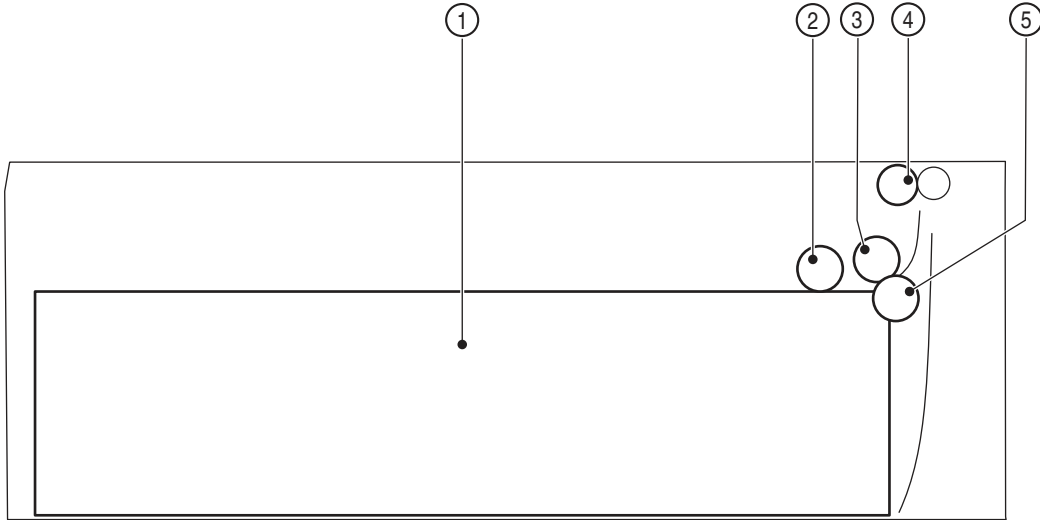
**Figure 4-23** Cross-sectional view of the printer



Item	Description	Item	Description
1	Fuser output roller	12	Feed roller
2	Duplex flapper	13	Tray 2 feed roller
3	Output roller	14	Tray 2 separation roller
4	Fuser film	15	Tray 2 pickup roller
5	Fuser	16	Duplex re-pickup roller
6	Photosensitive drum	17	Registration roller
7	Laser scanner assembly	18	Tray 2
8	Toner cartridge	19	Transfer roller
9	Registration shutter	20	Duplex feed roller
10	Tray 1 pickup roller	21	Pressure roller
11	Tray 1 separation pad		

**Cross-sectional view of the 550-sheet paper feeder**

**Figure 4-24** Cross-sectional view of the 550-sheet paper feeder



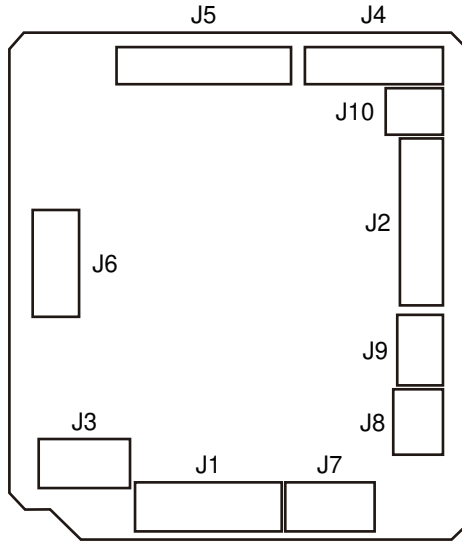
Item	Description
1	Tray 3
2	Tray 3 pickup roller
3	Tray 3 feed roller
4	Feed roller
5	Tray 3 separation roller

### Printed circuit assembly (PCA) connector locations

View printed circuit assembly (PCA) diagrams.

### DC controller PCA connections

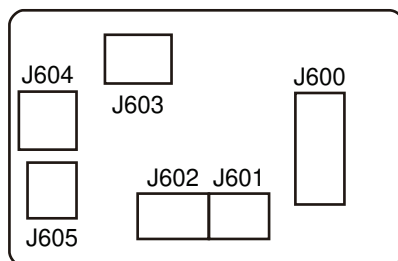
**Figure 4-25 DC controller PCA connections**



Item	Description	Item	Description
J1	Low-voltage power supply assembly	J6	Thermistor
J2	High-voltage power supply PCA	J7	Media-width sensor
J3	Formatter	J7	Duplex feed sensor
J4	Laser assembly	J7	TOP sensor
J5	Connector PCA	J8	Cassette media out sensor
J6	Output bin media-full sensor	J9	Multipurpose tray media out sensor
J6	Fuser output sensor	J10	Memory tag (E-label)
J6	Loop sensor		

### 1x550-sheet paper feeder PCA connectors

**Figure 4-26 1x550-sheet paper feeder PCA connectors**



Item	Description
1	Tray 3
2	Tray 3 pickup roller
3	Tray 3 feed roller

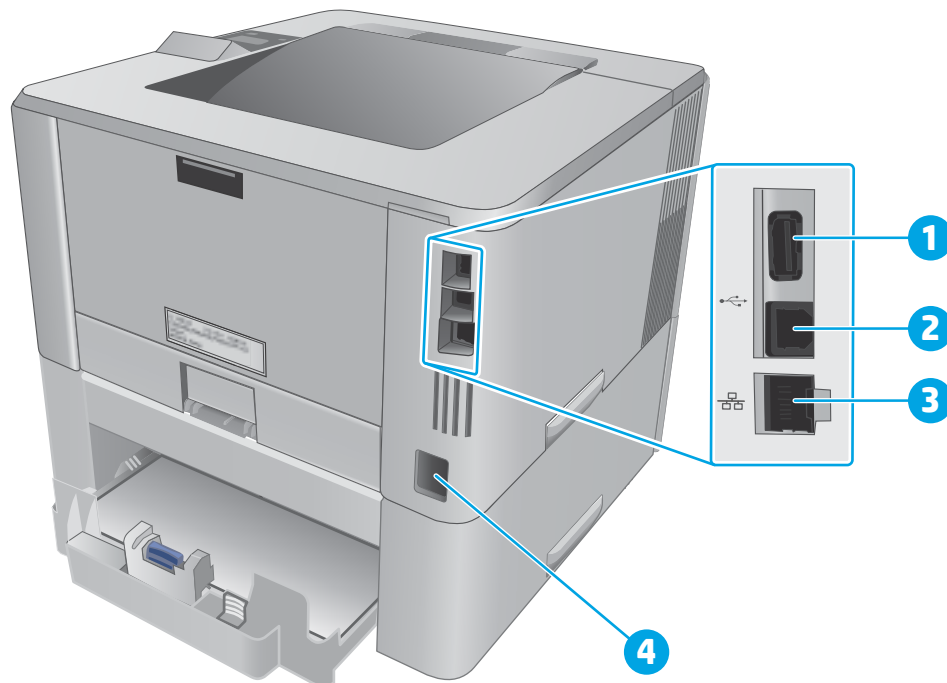
Item	Description
4	Feed roller
5	Tray 3 separation roller

## Diagrams: External plug and port locations

View printer external plugs and ports diagrams.

### External plug and port locations (SFP)

**Figure 4-27** External plug and port locations (SFP)

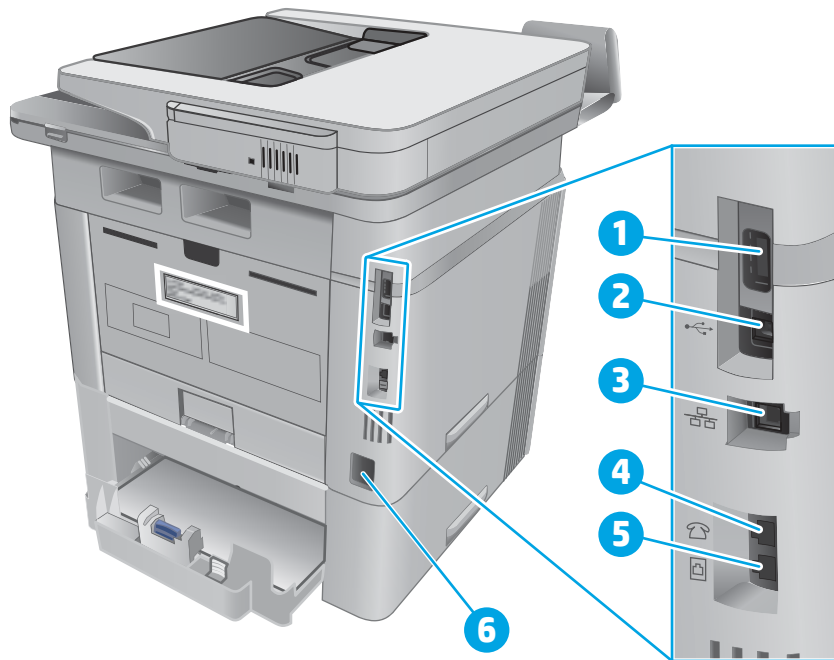


Item	Description
1	USB port (for job storage and private printing)
2	USB interface port
3	Ethernet port
4	Power connection

### External plug and port locations (MFP)



**Figure 4-28** External plug and port locations (MFP)



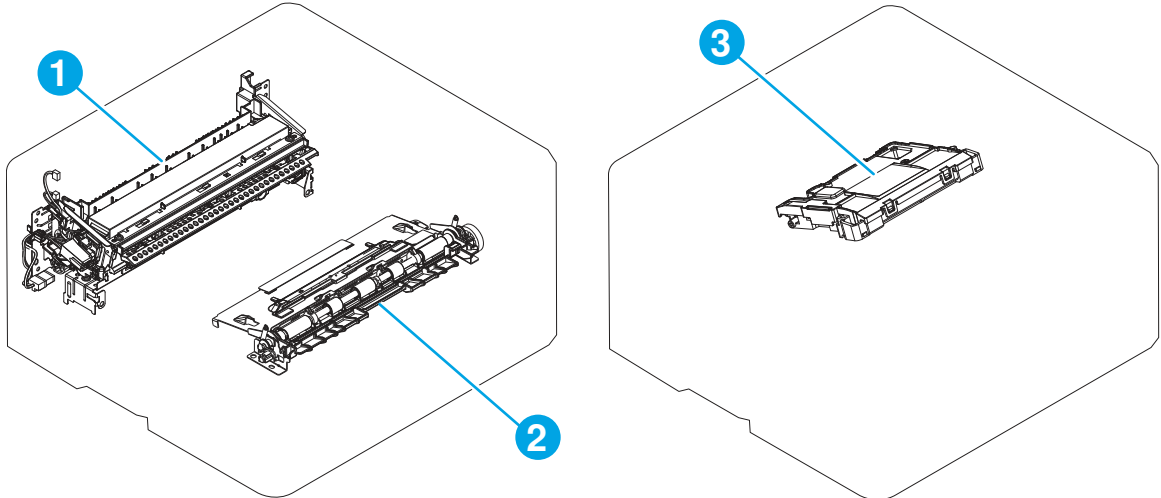
Item	Description
1	USB port (for job storage and private printing)
2	USB interface port
3	Ethernet port
4	Telephone "line out" port (this port is covered by a plug and is inactive)
5	Fax "line in" port (for attaching the fax phone line to the printer)
6	Power connection

## Diagrams: Major component locations

View printer major component locations diagrams.

### Major components (base printer)

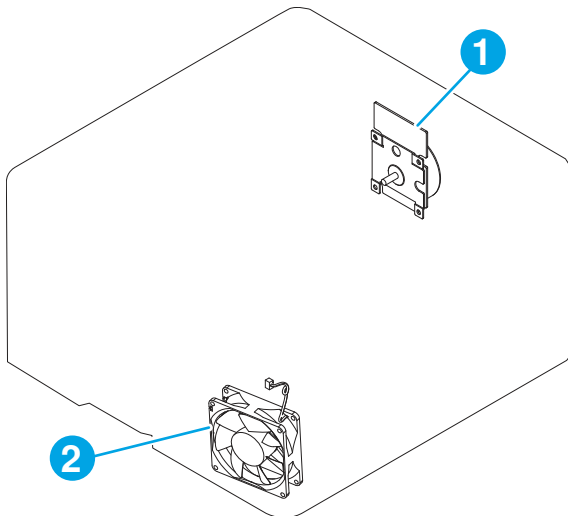
**Figure 4-29 Major components (base printer)**



Item	Description
1	Fuser
2	Registration assembly
3	Laser/scanner assembly

**Motors and fans (base printer)**

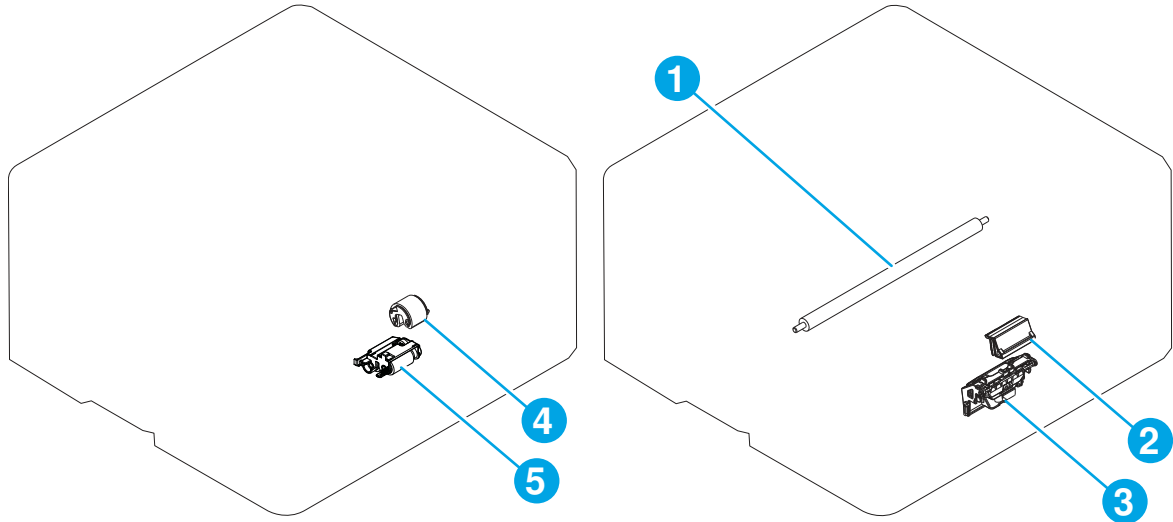
**Figure 4-30 Motors and fans (base printer)**



Item	Description
1	Fuser motor (M1)
2	Main fan (FM1)

**Rollers and pads (base printer)**

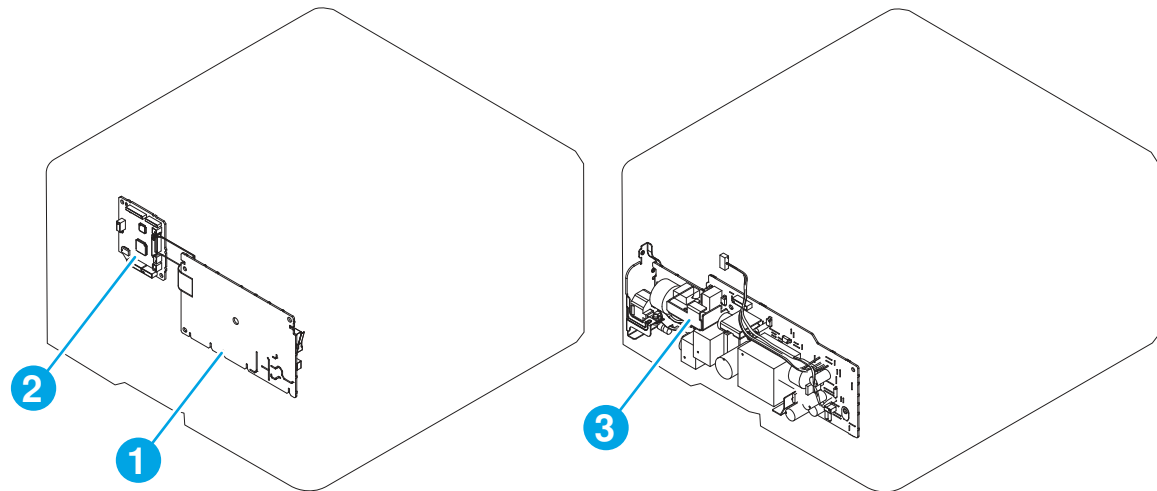
**Figure 4-31** Rollers and pads (base printer)



Item	Description
1	Transfer roller
2	Tray 1 separation pad
3	Separation roller assembly
4	Tray 1 pickup roller
5	Pickup roller assembly

### PCAs (base printer)

**Figure 4-32** PCAs (base printer)



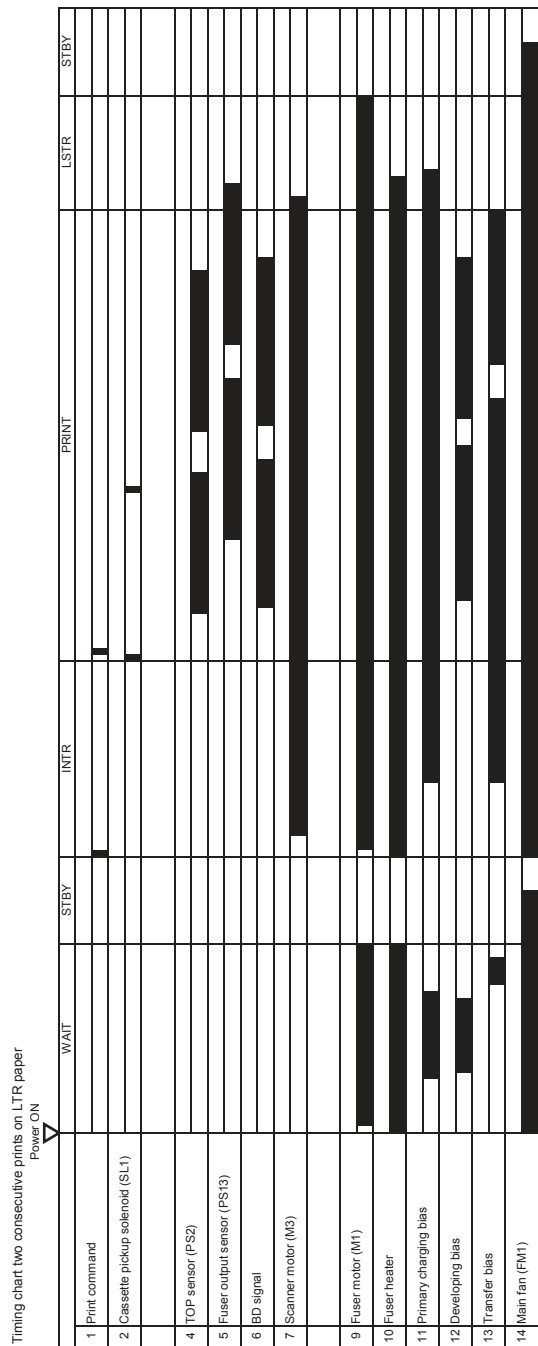
Item	Description
1	High-voltage power supply assembly
2	DC controller PCA
3	Low-voltage power supply assembly

Item	Description
Not shown	Formatter PCA (located in front of the DC controller)
Not shown	Fax PCA (located below the formatter PCA)

## Diagrams: General timing chart

View the printer timing chart diagram.

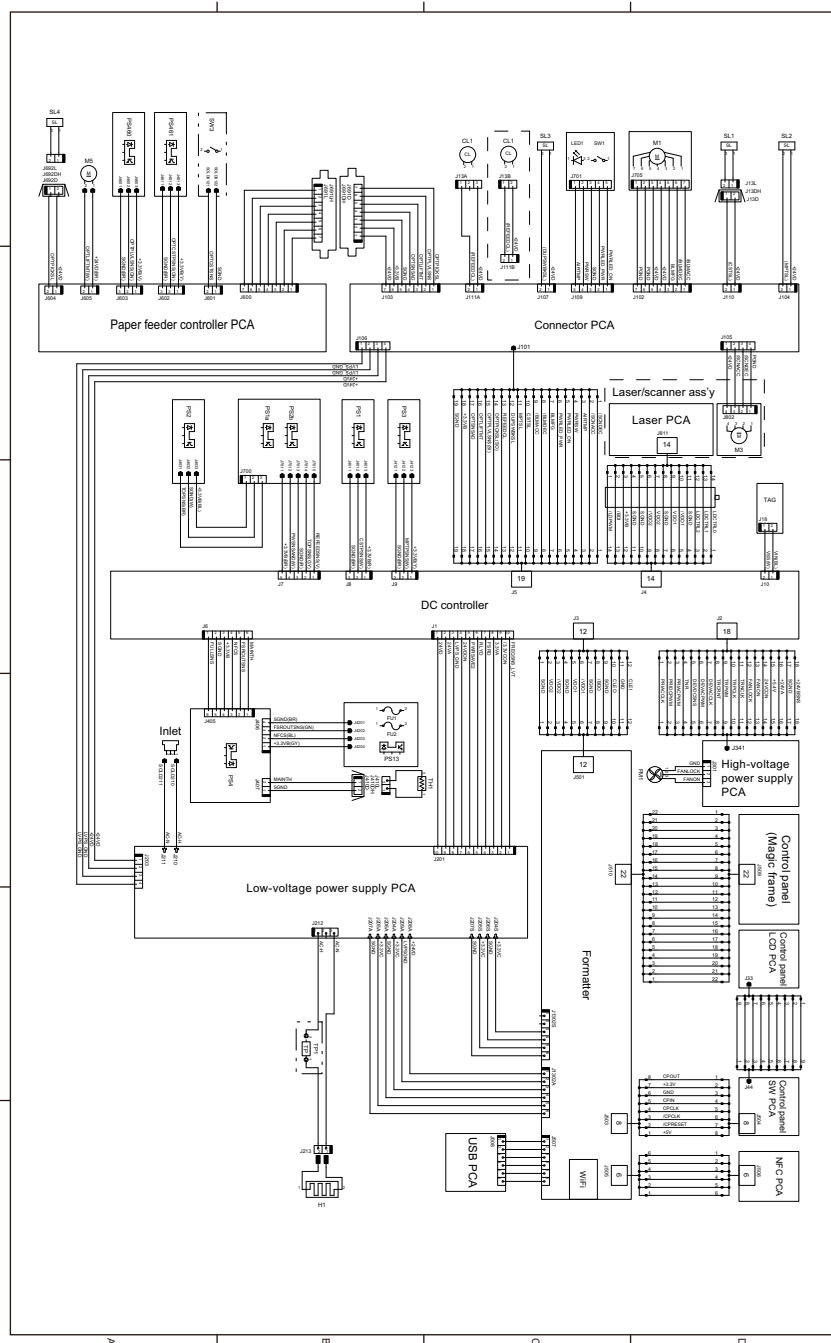
Figure 4-33 Timing chart



## Diagrams: General circuit diagrams

View the printer circuit diagram.

Figure 4-34 General circuit diagram (base printer)



## Print a cleaning page

Learn about printing a cleaning page.

## Clean the paper path


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

Clean the paper path (LCD control panel)

1. To clean the paper path, press **OK** > **Setup** > **Printer maintenance** > **Print Quality Tools** > **Cleaning Page** > , and then press the **OK** button.
2. Load plain paper in Tray 1, and then press the **OK** button to start the cleaning process.

Wait until the process is complete. Discard the page that prints.

Clean the paper path (touchscreen control panel)

1. Pull down the dashboard and then press the Setup button .
2. Open the following menus:
  - [Printer Maintenance](#)
  - [Print Quality Tools](#)
  - [Cleaning Page](#)


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

4. Touch the **OK** button to begin the cleaning process.

Wait until the process is complete. Discard the page that prints.

## Setup menus

Learn about the control-panel menus.

To open this menu, either press the **OK** button (2-line control panels) or touch the Setup button  (touchscreen control panels).

## Preferences menu

Learn about the control-panel Preferences menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-5** Preferences menu

Menu Item	Description
<a href="#">Date and Time</a>	Use <a href="#">Date and Time</a> to set the date and time on the printer. <b>NOTE:</b> <a href="#">Date and Time</a> is only available on MFPs with Fax.
<a href="#">Language</a>	Use <a href="#">Language</a> to set the language on the printer.
<a href="#">Country/Region</a>	The <a href="#">Country/Region</a> sets the country/region on the printer.
<a href="#">Keyboard</a>	Select the <a href="#">Keyboard</a> setting from the list of available options. This option is selecting how the keyboard is shown. The default is QWERTY. Other choices are AZERTY, QWERTZ and ABC. <b>NOTE:</b> Only available on touchscreen models.

**Table 4-5 Preferences menu (continued)**

Menu Item	Description
Sound Effects Volume	<a href="#">Sound Effects Volume</a> sets the sound effects volume. Use and set the sound effects volume by touching the slider to the loudness you desire.
Screen Brightness	<a href="#">Screen Brightness</a> sets the screen brightness on the printer. Use and set the brightness by touching the slider to brightness you desire. <b>NOTE:</b> Only available on touchscreen models.
Continuable Events	<a href="#">Continuable Events</a> allows the printer to continue printing when an event appears on the <ul style="list-style-type: none"><li>• <a href="#">Manual*</a></li><li>• <a href="#">Auto Continue</a></li></ul> <b>NOTE:</b> Only available on touchscreen models.
<a href="#">Store Anonymous Usage Information</a> <a href="#">Store Usage Information</a> (2-line control panels only)	Use the radio button to enable or disable the <a href="#">Store Anonymous Usage Information</a> setting. The HP cartridges used with the printer contain a memory chip that assists in the operation of the printer. In addition, this memory chip stores a limited set of anonymous information about the usage of the printer, which might include the following: <ul style="list-style-type: none"><li>• Data when the cartridge was first installed</li><li>• Data when the cartridge was last used</li><li>• Number of pages printed using the cartridge</li><li>• Page coverage</li><li>• Frequency of printing</li><li>• Printing models used</li><li>• Any printing errors that might have occurred</li><li>• Printer model</li></ul> This information helps HP design future printers to meet our customer's printing needs. The data collected from the cartridge memory chip does not contain information that can be used to identify a customer or use of the cartridge or their printer. For more information, see the documentation provided with the printer. If you are concerned about providing this anonymous information, click <a href="#">Off</a> to turn off the memory chip's ability to collect the printer's usage information. <b>NOTE:</b> Only available on touchscreen models. For 2-line control panel display models <a href="#">Store Usage</a> , only allows the user to decide whether or not to send the Anonymous Usage Information from the previous menu.

## Network Setup menu

Learn about the control-panel Network Setup menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-6 Network setup menu**

Menu Item	Sub-menu item	Description
Wireless Menu Settings (wireless models only)	Wireless	Select to enable or disable <a href="#">Wireless</a> .  <b>NOTE:</b> Only available on touchscreen models.
Wireless Menu Settings (wireless models only)	Print Start Guide	Prints the start guide.
Wireless Menu Settings (wireless models only)	Wireless Setup Wizard	Guides you through the steps to set up the printer on a wireless network.
Wireless Menu Settings (wireless models only)	Wi-Fi Protected Setup	If your wireless router supports this feature, use this method to set up the printer on a wireless network. This is the simplest method.
Wireless Menu Settings (wireless models only)	View Wireless Details	Displays IP address, Signal, Network Name, Channel, MAC address, Host Name, Bonjour Name, Subnet Mask Gateway.  <b>NOTE:</b> Only available on touchscreen models.
Wireless Menu Settings (wireless models only)	Print Wireless Test Report	Prints the wireless test report.
Wireless Menu Settings (wireless models only)	IP Settings	For touchscreen models only: <ul style="list-style-type: none"> <li>• <a href="#">Automatic</a></li> <li>• <a href="#">Manual</a></li> </ul> For 2-line display models only: <ul style="list-style-type: none"> <li>• <a href="#">DHCP</a></li> <li>• <a href="#">BOOTP</a></li> <li>• <a href="#">Auto-IP</a></li> <li>• <a href="#">Manual (static)</a></li> </ul>
Wireless Menu Settings (wireless models only)	5 GHz Band Frequency	Allow the user to enable the ability to find and connect to 5GHz wireless networks.
Wireless Menu Settings (wireless models only)	Ethernet Settings	<a href="#">View Ethernet Details</a>



**Table 4-6 Network setup menu (continued)**

Menu Item	Sub-menu Item	Description
Wireless Menu Settings (wireless models only)	IP Settings	For touchscreen models only: <ul style="list-style-type: none"> <li>• <a href="#">Automatic</a></li> <li>• <a href="#">Manual</a></li> </ul> <p><b>Automatic:</b> The printer automatically configures all the TCP/IP settings via DHCP, BootP or AutoIP.</p> <p><b>Manual:</b> You can manually configure the IP address, subnet mask, and default gateway. The control panel prompts you to specify values for each address section. As each address is completed, the printer prompts for address confirmation before moving to the next one. After all three addresses are set, the network reinitializes.</p> <p>For 2-line display models only:</p> <ul style="list-style-type: none"> <li>• <a href="#">DHCP</a></li> <li>• <a href="#">BOOTP</a></li> <li>• <a href="#">Auto-IP</a></li> <li>• <a href="#">Manual (static)</a></li> </ul>
		<p><a href="#">Link Speed</a></p> <ul style="list-style-type: none"> <li><a href="#">Automatic*</a></li> <li><a href="#">10T Full</a></li> <li><a href="#">10T Half</a></li> <li><a href="#">100TX Full</a></li> <li><a href="#">100TX Half</a></li> <li><a href="#">1000T Full</a></li> </ul>
<a href="#">General Settings</a>	<a href="#">Show IP Address</a>	<p>Show IP address.</p> <p><b>NOTE:</b> Available on 2-line display models only.</p> <p>To view IP address on touchscreen control panels, open the <a href="#">Dashboard</a> from the Home screen.</p>
<a href="#">General Settings</a>	<a href="#">Proxy Settings</a>	<p>Enter proxy information (<a href="#">On</a> or <a href="#">Off</a>).</p> <p><b>NOTE:</b> Only available on touchscreen models.</p>
<a href="#">General Settings</a>	<a href="#">Host Name</a>	<p>Enter host name.</p> <p><b>NOTE:</b> Only available on touchscreen models.</p>
<a href="#">General Settings</a>	<a href="#">Bonjour Name</a>	<p>Enter bonjour name (<a href="#">Change</a> or <a href="#">Ok</a>).</p> <p><b>NOTE:</b> Only available on touchscreen models.</p>
<a href="#">General Settings</a>	<a href="#">IPv6</a>	Use the radio button to turn IPv6 on or off.
<a href="#">General Settings</a>	<a href="#">Legacy Default IP</a>	<p>Enables the printer to use to connect the printer to the network using legacy default IP (<a href="#">Yes</a> or <a href="#">No</a>).</p> <p><b>NOTE:</b> Only available on touchscreen models.</p>

**Table 4-6 Network setup menu (continued)**

Menu Item	Sub-menu item	Description
Security	Disable Access Control List	Access Control List (ACL) allows the user to specify which IPv4 addresses on their network are allowed access to the device. If the list is empty, then any system is allowed access.
Security	Reset 802.1X Settings (wireless models only)	Reset the security settings to the factory-set default values.
Security	802.1x (wireless models only)	Enable or disable the 802.1x wireless authentication protocol.
Print network configuration		Prints the current network configuration and settings.
Restore Network Settings		Resets all network configurations to their factory defaults.

## Wi-Fi Direct menu (wireless models only)

Learn about the control-panel Wi-Fi Direct menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-7 Wi-Fi Direct menu**

Menu Item	Sub-menu item	Description
Wi-Fi direct	Wi-Fi Direct Status	Allows user to turn WiFi Direct on or off.  <b>NOTE:</b> Only available on touchscreen models.
Wi-Fi direct	Connection Method	Specify the Wi-Fi Direct connection method. <ul style="list-style-type: none"> <li>Automatic</li> <li>Manual</li> </ul>
Wi-Fi direct	Print Wi-Fi Direct Guide	Prints the wi-fi direct guide.  <b>NOTE:</b> Not available on the 2.7 inch and 4 inch control panels models.
Wi-Fi direct	Wi-Fi Direct Name	Manage the printers Wi-Fi Direct settings. Use the radio button to enable or disable this feature.  <b>NOTE:</b> Not available on the 2.7 inch and 4 inch control panels models.
Wi-Fi direct	Wi-Fi Direct Password	Ask user to input wi-fi password.  <b>NOTE:</b> Not available on the 2.7 inch and 4 inch control panels models.

## Bluetooth low energy menu

Learn about the control-panel Bluetooth low energy menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-8 Bluetooth low energy menu**

Menu Item	Description
Bluetooth Low Energy	Use the radio button or select On/Off to enable or disable this feature.

## Tray Management menu

Learn about the control-panel Tray Management menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-9 Tray Management menu**

Menu Item	Sub-menu Item	Description
Tray Assignment	Copy	Allows the user to configure copy tray settings.  <b>NOTE:</b> Not available on 2-line display models.
		<b>NOTE:</b> Only available on AiO models.
Tray Assignment	Fax Printing	Allows the user to configure fax printing tray settings.  <b>NOTE:</b> Only available on AiO models.
Tray Assignment	USB Printing	Enabling Web services will allow HP to collect serial number and locations as part of the printer setup process.  The printer will display the email address.
Tray Assignment	Default Paper Size	Sets the size for printing internal reports, faxes, or any print job that does not specify a size.  <ul style="list-style-type: none"> <li>• Letter</li> <li>• A4</li> <li>• Legal</li> </ul> <b>NOTE:</b> The default setting is determined by the choice of location during the initial printer setup.
Tray Assignment	Default Paper Type	Sets the type for printing internal reports, faxes, or any print job that does not specify a type.  List available paper types.
Paper Out Action	Auto Continue Timeout	Determines how the printer reacts when a print job requires paper size or type that is unavailable or when the tray is empty.  <ul style="list-style-type: none"> <li>• Immediate</li> <li>• Wait Forever</li> <li>• 5 minutes</li> <li>• 10 minutes</li> <li>• 20 minutes</li> <li>• 30 minutes</li> <li>• 45 minutes</li> <li>• 1 hour</li> </ul>

**Table 4-9** Tray Management menu (continued)

Menu Item	Sub-menu Item	Description
Paper Out Action	Auto Continue Action	<p>Determines how the printer reacts when a print job requires paper size or type that is unavailable or when the tray is empty.</p> <ul style="list-style-type: none"> <li>• <b>Cancel:</b> Automatically cancel the print job after a specified delay.</li> <li>• <b>Override:</b> Print on a different size paper after a specified delay.</li> </ul>
Image Adjust	Tray 1	<p><b>X1 shift:</b> Registration of the image on the paper from side to side, as the paper lies in the tray. For duplex models, this side is the second side (Back) of the paper.</p> <p><b>X2 shift:</b> Registration of the image on the paper from side to side, as the paper lies in the tray for the first side (front) of a duplexed page. This item appears only on duplex models.</p> <p><b>NOTE:</b> Set X1 shift first</p> <p><b>Y1 shift:</b> Registration of the image on the paper from top to bottom as the paper lies in the tray.</p> <p><b>Y2 shift:</b> Registration of the image on the paper from top to bottom as the paper lies in the tray.</p>
Image Adjust	Tray 2	<p><b>X1 shift:</b> Registration of the image on the paper from side to side, as the paper lies in the tray. For duplex models, this side is the second side (Back) of the paper.</p> <p><b>X2 shift:</b> Registration of the image on the paper from side to side, as the paper lies in the tray for the first side (front) of a duplexed page. This item appears only on duplex models.</p> <p><b>NOTE:</b> Set X1 shift first</p> <p><b>Y1 shift:</b> Registration of the image on the paper from top to bottom as the paper lies in the tray.</p> <p><b>Y2 shift:</b> Registration of the image on the paper from top to bottom as the paper lies in the tray.</p>
Image Adjust	Tray 3 (only available if tray 3 is installed)	<p><b>X1 shift:</b> Registration of the image on the paper from side to side, as the paper lies in the tray. For duplex models, this side is the second side (Back) of the paper.</p> <p><b>X2 shift:</b> Registration of the image on the paper from side to side, as the paper lies in the tray for the first side (front) of a duplexed page. This item appears only on duplex models.</p> <p><b>NOTE:</b> Set X1 shift first</p> <p><b>Y1 shift:</b> Registration of the image on the paper from top to bottom as the paper lies in the tray.</p>
Paper Size/Type Prompt	Display	Prompts the user to select paper type and size for the tray.
Paper Size/Type Prompt	Do not display	Does not prompt the user to select paper type and size.
Alternate Letterhead Mode		Use a radio button to enable or disable this feature.
Alternate Letterhead Mode	Default Paper Size	<p>Prompts the user to select the default paper size for alternate letterhead mode</p> <p><b>NOTE:</b> Not available on the 2.7 inch and 4 inch control panels models.</p>

**Table 4-9** Tray Management menu (continued)

Menu Item	Sub-menu Item	Description
Alternate Letterhead Mode	Default Paper Type	Prompts the user to select the default paper type for alternate letterhead mode.  <b>NOTE:</b> Not available on the 2.7 inch and 4 inch control panels models.

## Paper Setup menu

Learn about the control-panel Paper Setup menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-10** Paper Setup menu

Menu Item	Sub-menu Item	Description
Tray 1	Paper size	List of available paper sizes.
Tray 1	Paper type	List of available paper sizes.
Tray 2	Paper size	List of available paper sizes.
Tray 2	Paper type	List of available paper sizes.
Tray 3	Paper size	List of available paper sizes.
Tray 3	Paper type	List of available paper sizes.

## Supply Settings menu

Learn about the control-panel Supply Settings menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-11** Supply Settings menu

Menu Item	Sub-menu item	Description
Black cartridge	Very low setting	<b>Stop:</b> The printer stops printing until the print cartridge is replaced.  <b>Prompt:</b> The printer stops printing and prompts user to replace print cartridge. You can acknowledge the prompt and continue printing.  <b>Continue:</b> The printer alerts the user the print cartridge is very low, but it continues printing.
Black cartridge	Low threshold	Enter a percentage for the low threshold setting.
Store Usage Data	On supplies Not on supplies	Select where to store the printer's usage data, either on the supplies or not on the supplies.
Cartridge Policy	Off Authorize HP	Use the <a href="#">Cartridge Policy</a> feature to allow only genuine HP cartridges to be used with this printer. When someone attempts to install a cartridge that is not a genuine HP cartridge, the printer control panel displays a message informing that the cartridge is unauthorized, and it displays information explaining how to proceed.

**Table 4-11 Supply Settings menu (continued)**

Menu Item	Sub-menu Item	Description
Cartridge Protection	Off  Protect cartridges	Use the <a href="#">Cartridge Protection</a> feature to permanently associate toner cartridge with a specified printer so they cannot be used in other printers. When someone attempts to transfer a protected cartridge from the original printer into another printer, that printer will not print. The printer control panel displays a message informing that the cartridge is protected, and it displays information explaining how to proceed.  After selecting <a href="#">Protect cartridges</a> , when the printer prompts to confirm, select <a href="#">Continue</a> to enable the feature.  <b>NOTE:</b> After enabling cartridge protection for the printer, all subsequent toner cartridges installed in the printer are automatically and permanently protected. To avoid protecting a new cartridge, disable the feature before installing the new cartridge. To disable the feature, select <a href="#">Cancel</a> rather than <a href="#">Continue</a> in this step.

## Printer maintenance menu

Learn about the control-panel Printer maintenance menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-12 Printer maintenance menu**

Menu Item	Sub-menu item	Description
Print Quality Tools	Print a demo page	Prints a page that demonstrates print quality.
Print Quality Tools	Print Quality	Prints a page that helps solve problems with print quality.
Print Quality Tools	Cleaning Page	Cleans the printer when specs or other marks appear on printed output. The cleaning process removes dust and excess toner from the paper path.  When selected, the printer prompts the user to load plain letter or A4 paper in Tray 1. Touch the OK button to begin the cleaning process. Wait until the process completes. Discard the page that prints.
Print Quality Tools	Jam Recovery  Automatic  On  Off	<b>Automatic:</b> The printer automatically turns jam recovery on when sufficient memory is available.  <b>On:</b> The printer reprints any page involved in a jam. Additional memory is allocated to store the last few pages printed. This might cause overall printer performance to suffer.  <b>Off:</b> The printer does not reprint any page that was involved in a paper jam. Because no memory is used to store the most recent pages, performance is optimal.
Print Quality Tools	Less Paper Curl  On  Off	When printed pages are consistently curled, this option sets the printer to a mode that reduces curl. Use the slider icon to enable or disable this feature.
Troubleshooting	Event Logs	Prints a list of the last 50 events and errors that happened on the printer.

**Table 4-12 Printer maintenance menu (continued)**

Menu Item	Sub-menu Item	Description
Troubleshooting	Fax	<p><b>Print Fax Trace</b></p> <p>Prints a fax trace.</p> <p><b>NOTE:</b> Only available on fax models.</p>
Troubleshooting	Event Logs	<p>This will show a list on the display of the event logs. On a touch screen display there is also an option to print the list of events.</p> <p>On a 2-line display there are 2 menu items:</p> <ul style="list-style-type: none"> <li>• <a href="#">Print All</a></li> <li>• <a href="#">Event Log List</a></li> </ul> <p><b>NOTE:</b> Only available on fax models.</p>
Update the Printer		<p>If selecting <a href="#">Update the Printer</a> allows the user to do the following:</p> <ul style="list-style-type: none"> <li>• <a href="#">Check for Printer Update Now</a></li> <li>• <a href="#">Printer Update Options</a> allows the user to turn <a href="#">Auto Update</a> off or on.</li> <li>• <a href="#">Manage Updates</a> allows updates (yes or no) and or <a href="#">Allow Downgrades</a> (yes or no)</li> </ul>
Restore	<a href="#">Restore Network Settings</a>	Resets all network configurations to their factory defaults.
Restore	<a href="#">Restore Factory Defaults</a>	Resets all settings to factory defaults values.
Restore	<a href="#">Cold Reset</a>	Resets all settings to factory defaults values.
Restore	<a href="#">Printer Supply Region Reset</a>	<p>There are three regional sets of cartridges, US/ROW, EMEA, and AP. Each time a cartridge is inserted into the printer it reads the region of the cartridge and sets the device to that region. If the customer buys a cartridge from another region that does not match the printers region then the printer region will need to be reset from this menu.</p> <p><b>NOTE:</b> Only available on 4 inch control panels models.</p>

## Print Settings menu

Learn about the control-panel Print Settings menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-13 Print Settings menu**

Menu Item	Sub-menu Item	Description
Personality	<p><a href="#">Automatic*</a></p> <ul style="list-style-type: none"> <li>• <a href="#">PCL 5 only</a></li> <li>• <a href="#">PCL 6 only</a></li> <li>• <a href="#">PS only</a></li> </ul>	Use the radio button to select the printer personality.

**Table 4-13 Print Settings menu (continued)**

Menu Item	Sub-menu Item	Description
Copies		Use your finger to swipe and set the default number of copies when a print job is initiated (default is 1). When finished, touch <a href="#">Done</a> to save settings.
Duplex	Disable Long edge portrait* Short edge portrait	Use the radio button to select default duplex orientation for print jobs.
PCL Settings	Form length Append CR to LF	Use your finger to swipe and select the default form length for a print job. When finished touch <a href="#">Done</a> to save the settings.
PCL Settings	Orientation Portrait* Landscape	Use the radio button to select default orientation for print jobs.
PCL Settings	Font Number	Use your finger to swipe and set the default <a href="#">Font Number</a> for a print job. When finished, touch <a href="#">Done</a> to save the settings.
PCL Settings	Font Pitch	Use your finger to swipe and set the default <a href="#">Font Pitch</a> for a print job. When finished, touch <a href="#">Done</a> to save the settings.
PCL Settings	Font Point Size	Use your finger to swipe and set the default <a href="#">Font Point Size</a> for a print job. When finished, touch <a href="#">Done</a> to save the settings.
PCL Settings	Symbol Set	Use the radio button to select from a list of available symbol sets.
PCL Settings	Append CR to LF Off* On	Use the radio button to enable or disable this item.
Print PS Error		If a PS error occurs, the printer will print the PS error.

## Power Management menu

Learn about the control-panel Power Management menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-14 Power Management menu**

Menu Item	Sub-menu Item	Description
Sleep Mode	After 1 minute* After 5 minute After 15 minute After 30 minute After 1 hour	Use the radio buttons to set the amount of printer inactive time before the printer enters <a href="#">Sleep Mode</a> .



**Table 4-14 Power Management menu (continued)**

Menu Item	Sub-menu Item	Description
Shutdown after Sleep	1 hour	Set the amount of time of elapsed time before the printer turns itself off.  <b>NOTE:</b> Available on 2-line display models.
	2 hours	
	3 hours	
	4 hours	
	5 hours	
	6 hours	
	7 hours	
	8 hours	
Shutdown Mode	1 hour	Set the amount of time of elapsed time before the printer turns itself off.  <b>NOTE:</b> Available on 2.7 inch and 4 inch control panel models.
	2 hours	
	3 hours	
	4 hours	
	5 hours	
	6 hours	
	7 hours	
	8 hours	
Disable Shutdown	Do not disable (touchscreen control panel)	Select whether or not the printer delays shutting down after the user presses the power button.
	Never (2-line LCD control panel)	<b>Do not disable</b> or <b>Never:</b> The printer shuts down
	When ports are active	<b>When ports are active:</b> the printer waits until there is no I/O port activity before shutting down.

## Reports menu

Learn about the control-panel Reports menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-15 Reports menu**

Menu Item	Description
Fax Reports (fax models only)	<ul style="list-style-type: none"> <li>• Last transaction log</li> <li>• Last 30 transaction fax logs</li> <li>• Caller ID report</li> <li>• Junk fax report</li> </ul>
Menu Structure	Prints a control-panel menu layout map.
Printer Configuration Report	Prints a list of the printer settings

**Table 4-15 Reports menu (continued)**

Menu Item	Description
Printer Status Report	Prints the printer status report. Includes the following information: <ul style="list-style-type: none"><li data-bbox="679 310 916 331">• Product Information</li><li data-bbox="679 359 948 380">• Print usage information</li><li data-bbox="679 407 887 428">• Hardware events</li><li data-bbox="679 455 868 476">• System events</li><li data-bbox="679 504 932 525">• Additional Assistance</li><li data-bbox="679 552 932 573">• Wireless network test</li><li data-bbox="679 600 927 621">• Connectivity settings</li></ul>
Supplies Status Page	Prints the toner cartridge status. Includes the following information: <ul style="list-style-type: none"><li data-bbox="679 701 1007 722">• Approximate pages remaining</li><li data-bbox="679 749 836 770">• Supply level</li><li data-bbox="679 798 852 819">• Serial number</li><li data-bbox="679 846 963 867">• Number of pages printed</li><li data-bbox="679 894 868 915">• First install date</li><li data-bbox="679 942 868 963">• Last used date</li></ul>
Web Access Test Report	Verifies web access is available. Includes the following information: <ul style="list-style-type: none"><li data-bbox="679 1047 804 1068">• Solution</li><li data-bbox="679 1096 900 1117">• Diagnostics results</li><li data-bbox="679 1144 932 1165">• Current configuration</li></ul>
Usage Page	Prints the number of pages printed, faxed, copied, and scanned by the printer. (Specific items reported are model dependent.)

**Table 4-15 Reports menu (continued)**

Menu Item	Description
<a href="#">Network Configuration Page</a>	<p>Prints the network configuration pages. Includes information:</p> <ul style="list-style-type: none"> <li>• Network hardware configuration</li> <li>• General information</li> <li>• 802.3 Wired</li> <li>• 802.11 Wireless (wireless models only)</li> <li>• Wi-Fi Direct (wireless models only) <ul style="list-style-type: none"> <li>– IPv4</li> <li>– IPv6</li> </ul> </li> <li>• Port 9100</li> <li>• LPD</li> <li>• Bonjour</li> <li>• SLP</li> <li>• Microsoft Web Services</li> <li>• SNMP</li> <li>• IPP</li> <li>• IPPS</li> <li>• Proxy Settings</li> </ul>
<a href="#">Wireless Test Report</a>	<p>Prints the wireless test report. Includes information: (wireless models only):</p> <ul style="list-style-type: none"> <li>• Solution</li> <li>• Diagnostics results</li> <li>• Current configuration</li> </ul>
<a href="#">Job Log</a>	Displays a list of the most recent print jobs.
<a href="#">Web Services Summary</a>	<b>NOTE:</b> Prints web services summary page. (available on 2-line display models)
<a href="#">PCL Font List</a>	Prints a list of all installed PCL 5 fonts.
<a href="#">PCL6 Font List</a>	Prints a list of all installed PCL 6 fonts.

### Fax Setup menu (fax models only)

Learn about the control-panel Fax Setup menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-16 Fax Setup menu**

Menu item	Sub-menu item	Sub-menu item	Description
<a href="#">Setup Wizard</a>			This is a tool for configuring the fax settings. Follow the on screen prompts and select the appropriate response for each question.

**Table 4-16 Fax Setup menu (continued)**

Menu Item	Sub-menu Item	Sub-menu Item	Description
Setup Wizard	Preferences	Scan and Fax Method	Allows the printer to scan the entire document before dialing, and prints an image of the first page faxed on the confirmation page.
Setup Wizard	Preferences	Auto Answer	Sets the type of answer mode. Use toggle to enable or disable this feature.
Setup Wizard	Preferences	Auto Redial	Sets whether the printer should attempt to redial if the line is busy. <ul style="list-style-type: none"> <li>• <a href="#">Busy Redial</a></li> <li>• <a href="#">No Answer Redial</a></li> <li>• <a href="#">Connection Problem Redial</a></li> </ul>
Setup Wizard	Preferences	Automatic Reductions	Automatically reduces the size of the fax to fit the size of paper in tray.
Setup Wizard	Preferences	2-sided Fax Printing	Enables or disables the two-sided printing feature for multiple page faxes (duplex models only).
Setup Wizard	Preferences	Tray Selection	Select the tray where you want the faxes to print from for fax jobs.
Setup Wizard	Preferences	Stamping	Enables or disables the printer to print the date, time, sender's phone number, and page number on each page of an incoming fax.
Setup Wizard	Preferences	Dialing Prefix	Enables or disables whether a prefix number must be dialed when sending faxes from the printer. If the feature is turned on, the printer prompts the user for the number and then it automatically includes that number for every time a fax is sent.
Setup Wizard	Preferences	Fax Header	<a href="#">Enter your fax number</a>  Sets the identifying information that is sent to the receiving printer.  <a href="#">Enter company name</a>  Identifies the fax sender (optional).
Setup Wizard	Preferences	Error Correction Mode	The error correction mode allows the sending device to re-transmit data if it detects an error signal.
Setup Wizard	Preferences	Backup Fax Reception	Set up Backup Fax Reception. Depending on preference and security requirements, the user can set up the device to: <ul style="list-style-type: none"> <li>• Store all received faxes.</li> <li>• Store only faxes received while the printer is in an error condition.</li> <li>• Store none of the received faxes.</li> </ul>
Setup Wizard	Preferences	HP Digital Fax	Directs the user on how to setup <a href="#">HP Digital Fax</a> from the software and will print out instructions on how to setup <a href="#">HP Digital Fax</a> .
Setup Wizard	Preferences	Fax Forwarding	Enables or disables fax forwarding.
Setup Wizard	Preferences	Junk Fax Blocking	Enables or disables fax junk blocking for incoming junk faxes.

**Table 4-16 Fax Setup menu (continued)**

Menu Item	Sub-menu Item	Sub-menu Item	Description
Setup Wizard	Preferences	Distinctive Ring	<p>If you have distinctive ring phone service, use this item to configure how the printer responds to incoming calls.</p> <ul style="list-style-type: none"> <li>• Ring pattern detection</li> <li>• All standard rings*: The printer answers any calls that come through the telephone line.</li> <li>• Single: The printer answers any calls that produce a single ring pattern.</li> <li>• Double: The printer answers any calls that produce a double ring pattern.</li> <li>• Triple: The printer answers any calls that produce a triple ring pattern.</li> <li>• Double and triple: The printer answers any calls that produce a double and triple ring pattern.</li> </ul>
Setup Wizard	Preferences	Rings to answer	<p>Sets the number of rings that must occur before the fax modem answers. The default setting is five.</p>
Setup Wizard	Preferences	Fax Volume	<p>Sets the volume for incoming faxes.</p> <ul style="list-style-type: none"> <li>• Soft*</li> <li>• Loud</li> <li>• Off</li> </ul>
Setup Wizard	Preferences	Dial Type	<p>Sets whether the printer should use tone or pulse dialing.</p> <ul style="list-style-type: none"> <li>• Tone*</li> <li>• Pulse</li> </ul>
Setup Wizard	Preferences	Speed	<p>Sets the allowed fax communication speed.</p> <ul style="list-style-type: none"> <li>• Fast (33600 bps)</li> <li>• Medium (14400 bps)</li> <li>• Slow (9600 bps)</li> </ul>
Setup Wizard	Preferences	Confirm Fax Number	<p>Confirm a fax number by entering it a second time.</p> <ul style="list-style-type: none"> <li>• On*</li> <li>• Off</li> </ul>
Setup Wizard	Preferences	Billing Code	<p>Enables the use of billing codes when set to On. A prompt appears for the billing code for an outgoing fax.</p>
Setup Wizard	Preferences	Restore Settings	<p>Restores settings to factory default settings.</p>
Setup Wizard	Tools	Run Fax Test	<p>Performs a fax test to verify that the phone cord is connected to the correct outlet and that there is a signal on the phone line. A fax test report is printed indicating the results.</p>
Setup Wizard	Tools	Clear Fax Logs/Memory	<p>Clears all faxes in logs and memory.</p>
Setup Wizard	Reports	Fax Confirmation	<p>Sets whether the printer prints a confirmation report after a successful fax job.</p>

**Table 4-16 Fax Setup menu (continued)**

Menu Item	Sub-menu Item	Sub-menu Item	Description
Setup Wizard	Reports	Fax Error Reports	Sets whether the printer prints a report after a failed fax.
Setup Wizard	Reports	Print Fax Reports	Prints all fax related reports.

## Security menu

Learn about the control-panel Security menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-17 Security menu**

Menu Item	Description
Device Announcement Agent	Use the radio button or select On/Off to enable or disable this feature.  When enabled at the device, a special device announcement agent locates the Security Manager server and request a secure communication. Allows for automatic device configuration.

## Function specific menus

Learn about the control-panel menus.

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

## USB menu

Learn about the control-panel USB menu.

Open this menu by touching the **USB** button (touchscreen control panel models only). The following file types are supported:

- .pdf
- .ppt and .pptx
- .jpg
- .doc and .docx
- .prn and .PRN
- .xls and .xlsxTable

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-18 USB menu**

Menu Item	Description
Print Documents	<p>Prints documents stored on the USB flash drive. Use the arrow buttons to scroll through the documents. Touch the names of documents to print.</p> <p>Touch the summary screen to change settings such as the number of copies, the paper size, or the paper type.</p> <p>Touch the <a href="#">Print</a> button to print the documents</p>
View and Print Photos	<p>Previews photos on the USB flash drive. Use the arrow buttons to scroll through the photos. Touch the preview image for each photo to print. Adjust the settings and save the changes as the new default settings. To print the photos, touch the <a href="#">Print</a> button.</p>
Scan to USB Drive	<p>Scans a document and stores it as a .PDF file or .JPEG image on the USB flash drive.</p>

## Fax menu (fax models only)

Learn about the control-panel Fax menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-19 Fax menu**

Menu Item	Sub-menu Item	Sub-menu Item	Description
Send Now			Sends fax immediately.
Send Later			Allows a fax to be sent at a later time and date.
Fax Setup	Setup Wizard		<p>Assist the user in setting up the fax features.</p> <p>This is a tool for configuring the fax settings. Follow the on screen prompts and select the appropriate response for each question.</p>
Fax Setup	Preferences	Scan and Fax Method	<p>Use radio button to enable or disable this feature.</p> <p>Allows the printer to scan the entire document before dialing, and prints an image of the first page faxed on the confirmation page.</p>
Fax Setup	Preferences	Auto Answer	<p>Use radio button to enable or disable this feature.</p> <p>Sets the type of answer mode. Use toggle to enable or disable this feature.</p>
Fax Setup	Preferences	Auto Redial	<p>Use radio button to enable or disable this feature.</p> <p>Sets whether the printer should attempt to redial if the line is busy.</p> <ul style="list-style-type: none"> <li>• <a href="#">Busy Redial</a></li> <li>• <a href="#">No Answer Redial</a></li> <li>• <a href="#">Connection Problem Redial</a></li> </ul>
Fax Setup	Preferences	Automatic Reductions	<p>Use radio button to enable or disable this feature.</p> <p>Automatically reduces the size of the fax to fit the size of paper in tray.</p>

**Table 4-19 Fax menu (continued)**

Menu Item	Sub-menu Item	Sub-menu Item	Description
Fax Setup	Preferences	2-sided Fax Printing	Use radio button to enable or disable this feature.  Enables or disables the two-sided printing feature for multiple page faxes (duplex models only).
Fax Setup	Preferences	Tray Selection	Select the tray where you want the faxes to print from for fax jobs.  <ul style="list-style-type: none"> <li>Automatically selects</li> <li>Tray 1</li> <li>Tray 2</li> <li>Tray 3 (optional)</li> </ul>
Fax Setup	Preferences	Stamping	Use radio button to enable or disable this feature.  Enables or disables the printer to print the date, time, sender's phone number, and page number on each page of an incoming fax.
Fax Setup	Preferences	Dialing Prefix	Enables or disables whether a prefix number must be dialed when sending faxes from the printer. If the feature is turned on, the printer prompts the user for the number and then it automatically includes that number for every time a fax is sent.  <ul style="list-style-type: none"> <li>On</li> <li>Off</li> </ul>
Fax Setup	Preferences	Fax Header	Allows the user to customize fax header.  Enter your fax number  Sets the identifying information that is sent to the receiving printer.  Enter company name  Identifies the fax sender (optional).
Fax Setup	Preferences	Error Correction Mode	Use radio button to enable or disable this feature.  The error correction mode allows the sending device to re-transmit data if it detects an error signal.
Fax Setup	Preferences	Backup Fax Reception	Set up Backup Fax Reception. Depending on preference and security requirements, the user can set up the device to:  <ul style="list-style-type: none"> <li>Store all received faxes.</li> <li>Store only faxes received while the printer is in an error condition.</li> <li>Store none of the received faxes.</li> <li>On</li> <li>Off</li> </ul>
Fax Setup	Preferences	HP Digital Fax	Directs the user on how to setup <a href="#">HP Digital Fax</a> from the software and will print out instructions on how to setup <a href="#">HP Digital Fax</a> .



**Table 4-19 Fax menu (continued)**

Menu Item	Sub-menu Item	Sub-menu Item	Description
Fax Setup	Preferences	Fax Forwarding	Enables or disables fax forwarding. <ul style="list-style-type: none"> <li>On</li> <li>Off</li> </ul>
Fax Setup	Preferences	Junk Fax Blocking	Enables or disables fax junk blocking for incoming junk faxes.  Allows the user to create a list of phone numbers they want to block
Fax Setup	Preferences	Distinctive Ring	If you have distinctive ring phone service, use this item to configure how the printer responds to incoming calls. <ul style="list-style-type: none"> <li>Ring pattern detection</li> <li>All standard rings*: The printer answers any calls that come through the telephone line.</li> <li>Single: The printer answers any calls that produce a single ring pattern.</li> <li>Double: The printer answers any calls that produce a double ring pattern.</li> <li>Triple: The printer answers any calls that produce a triple ring pattern.</li> <li>Double and triple: The printer answers any calls that produce a double and triple ring pattern.</li> </ul>
Fax Setup	Preferences	Rings to answer	Sets the number of rings that must occur before the fax modem answers. The default setting is five.
Fax Setup	Preferences	Fax Volume	Sets the volume for incoming faxes. <ul style="list-style-type: none"> <li>Soft*</li> <li>Loud</li> <li>Off</li> </ul>
Fax Setup	Preferences	Dial Type	Sets whether the printer should use tone or pulse dialing. <ul style="list-style-type: none"> <li>Tone*</li> <li>Pulse</li> </ul>
Fax Setup	Preferences	Speed	Sets the allowed fax communication speed. <ul style="list-style-type: none"> <li>Fast (33600 bps)</li> <li>Medium (14400 bps)</li> <li>Slow (9600 bps)</li> </ul>
Fax Setup	Preferences	Confirm Fax Number	Use the radio button to enable or disable this feature.  Confirm a fax number by entering it a second time. <ul style="list-style-type: none"> <li>On*</li> <li>Off</li> </ul>

**Table 4-19 Fax menu (continued)**

Menu Item	Sub-menu Item	Sub-menu Item	Description
Billing Code			Provides a list of billing codes that have been used for outgoing faxes. This report shows how many sent faxes were billed to each code.
Reprint			Reprint faxes if a cartridge runs out of ink or the printer experiences other errors while printing faxes.
Print Phone Book		Run Fax Test	Prints a list of the speed dials that have been set up for this printer.

## Copy menu

Learn about the control-panel Copy menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-20 Copy menu**

Menu Item	Sub-menu Item	Sub-menu Item	Description
ID Card			Copies both sides of identification cards, or other small-size documents, onto the same side of one sheet of paper  <b>NOTE:</b> This item is available from the main <a href="#">Copy</a> screen. You do not need to touch the Settings button to access it.
Number of Copies	(1-99)		Specifies the number of copies.
Number of Copies	2-sided Copying	1-1 sided 1-2 sided (duplex models only) 2-1 sided 2-2 sided (duplex models only)	Specifies whether originals are one-sided or two-sided and whether copies should be one-sided or two-sided.  <b>NOTE:</b> This menu option is also available under the main Copy menu
Number of Copies	2-sided format		<b>NOTE:</b> Will be grayed out if 2-sided is turned off.
Resize	Legal to Letter=72% A4 to Letter=91% Letter to A4=94% Full Page=91% Fit to Page 2 Pages per Sheet None* Custom: 25 to 400%		
Original Size	Provides a list of available paper sizes.		Specifies the paper size.  <b>NOTE:</b> The default paper size setting is determined by the choice of location during the initial printer setup.

**Table 4-20 Copy menu (continued)**

Menu Item	Sub-menu Item	Sub-menu Item	Description
Tray Selection	Auto Select		Specifies the tray to be used for the copy job.
	Tray 1		
	Tray 2		
Quality	Best		Sets in image quality settings for copies.
	Normal*		
	Draft		
Lighter/Darker			Adjust the this setting to increase or decrease the difference between the lightest and darkest color on the page
Enhancements	None*		Specifies the type of content in the original document, so the copy is the best match for the original
	Mixed		
	Text		
	Photo		
Binding Margin	On		Creates a larger left margin to allow for binding the pages or inserting them in a binder. The document is scaled accordingly
	Off		
Save Current Settings			Saves any changes you have made to this menu as new defaults.
Restore Factory Defaults			Restores the factory defaults for this menu
Preview			Touch to preview copy.
			This allows the user to preview the current copy job.

## Scan menu (MFP only)

Learn about the control-panel Scan menu.

In the following table, asterisks (\*) indicate the factory default setting.

**Table 4-21 Scan menu**

Menu Item	Description
Scan to USB Drive	Scans a document and stores it as a .PDF file or .JPEG image on the USB flash drive.
Scan to Network Folder	Scans a document to a network folder.
Scan to E-mail	Scans a document and sends as an email attachment.
Scan to SharePoint	Scans to a SharePoint.
	<b>NOTE:</b> SharePoint 365 is not supported.
Scan to Computer	Scans to a local computer or remote computer.

## Hidden menus

Learn about the control-panel menus.

The printer features hidden menus for Service and Enable/Disable. To open these menus, touch the button for that function on the control panel.

## Support menu

Learn about the control-panel Support menu.

- **2-line control panels:** At the printer control panel, press the Cancel button **X**, press the Return button **↶**, and then press the Cancel button **X** twice.

**Figure 4-35** 2-line control panel



- **Touchscreen control panels:** From the Home screen on the printer control panel, press the Return button **↶** four times.

Figure 4-36 Touchscreen control panel

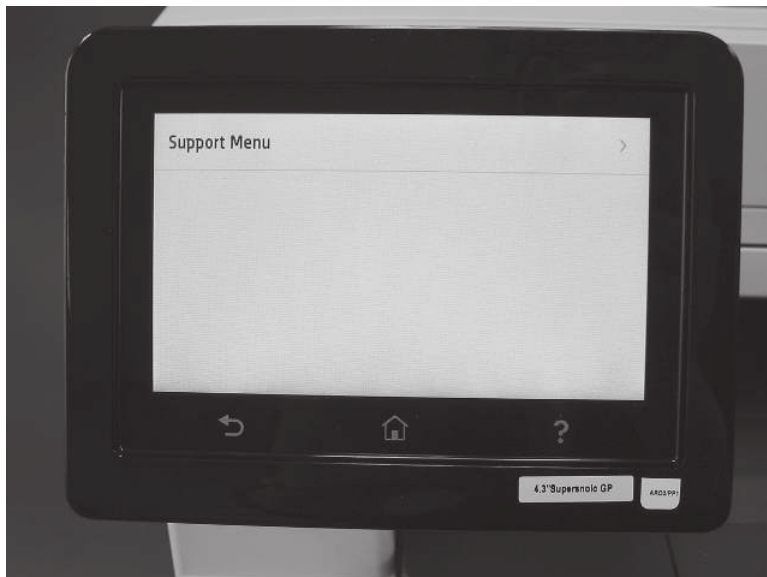


Table 4-22 Support menu

Menu Item	Secondary menu item	Description
Information Menu	Model number	Displays the products model number.
Information Menu	Serial number	Displays the products serial number.
Information Menu	Region/Language	Displays the products region/language settings.
Information Menu	Counters	Displays the products total page counts and cycles.
Information Menu	Firmware version	Displays the product firmware version.
Information Menu	Event log	Displays the products last five events. The user can cycle through each event.
Information Menu	Assert history	Displays the products last five asserts. The user can cycle through each assert.
Information Menu	Wireless Region (wireless models only)	Displays the region.  OK  Cancel
Resets Menu	Country and language reset	<ul style="list-style-type: none"> <li>Allows the country and language to be reset after the unit powers down.</li> <li>All user menu settings to default.</li> </ul>
Resets Menu	Partial reset	<ul style="list-style-type: none"> <li>All user menu settings to default.</li> <li>All telephony parameter values to default (fax models only).</li> <li>Initiate select country and language UI.</li> <li>Clear wireless settings to default (wireless models only).</li> </ul> <p>The items below are <b>not</b> cleared:</p> <ul style="list-style-type: none"> <li>Fax memory (fax models only)</li> <li>Device counters</li> </ul>

**Table 4-22 Support menu (continued)**

Menu Item	Secondary menu item	Description
Resets Menu	Semi-full reset	<p>All partial resets plus:</p> <ul style="list-style-type: none"> <li>• Clears fax journal information (fax models only).</li> <li>• Clears all speed dials/broadcast list (fax models only).</li> <li>• Clears personal header information (fax models only).</li> <li>• Clears instant Share settings.</li> <li>• Clears wireless settings (IP, SSID, WEP) (wireless models only).</li> <li>• Wireless settings are cleared on a Semi-full and Full resets (wireless models only).</li> <li>• Device counters are not cleared on Semi-full or Partial resets.</li> </ul>
System Configuration Menu	Hardware failure status	<p>Shows the status of the hardware failure. If user selects, the hardware failure status, it will be cleared.</p> <p>This function, Hardware/failure status, is needed so a support agent can instruct the customer to enter the Support Menu, then the Support System Configuration Menu, then select the Hardware Failure Status, and then clear the DSID_IDS_HW_FAILURE so the value can be set to zero.</p>
System Configuration Menu	Set boot mode to user mode	Sets the unit to user mode from manufacturing mode.
Fax Diagnostics Menu (MPF models only)	Run Fax Test	Executes the fax test.
Fax Diagnostics Menu (MPF models only)	Reset Fax Parameter	Resets the fax parameters (not just a specific one).
Fax Diagnostics Menu (MPF models only)	Change Fax Parameter	Allows for controlled changes to individual fax parameters.
Fax Diagnostics Menu (MPF models only)	Fax Parameter Report	Prints a complete list of all parameters including the number, current value, and defaults.
Fax Diagnostics Menu (MPF models only)	Fax Trace Report	Prints two reports, most recent and last fax trace with an error.
Fax Diagnostics Menu (MPF models only)	Fax Status Report	Prints fax status report.
Fax Diagnostics Menu (MPF models only)	Speaker Mode	Enable the speaker throughout fax transmission.
Fax Diagnostics Menu (MPF models only)	Ring Monitor	<ul style="list-style-type: none"> <li>• R = ring count and cadence.</li> <li>• XX Hz = 0 if attached phone is on-hook. 1 if attached phone is off-hook.</li> </ul>

**Table 4-22 Support menu (continued)**

Menu Item	Secondary menu item	Description
Fax Diagnostics Menu (MPF models only)	CNG Monitor	<ul style="list-style-type: none"> <li>f3 = counter increments if a frequency is detected inside tone while eavesdropping.</li> <li>f2 = counter increments if a frequency is detected in actual CNG tone.</li> <li>f1 = counter increments if a frequency is detected in CNG frequency range.</li> <li>Z = total CNG tones detected during a session.</li> </ul>
Fax Diagnostics Menu (MPF models only)	Signal Power	Signal power is displayed.
Connectivity Diagnostics Menu	Connectivity report	Prints a report that contains all the various connectivity settings.
Connectivity Diagnostics Menu	Wireless diagnostics test (wireless model only)	Performs the same wireless diagnostics test as in the Customer UI, through the front control panel of the printer. This diagnostic tool tests the wireless setup of the product.
Connectivity Diagnostics Menu	Capture NW trace	Captures a network trace and saves the trace in an encrypted format to a USB flash drive inserted into the front USB port. <ul style="list-style-type: none"> <li>5 minutes</li> <li>10 minutes</li> <li>30 minutes</li> <li>Stop</li> </ul>
Connectivity Diagnostics Menu	Print wireless metrics	Prints the wireless metric data report. <ul style="list-style-type: none"> <li>OK</li> <li>Cancel</li> </ul>
Reports Menu	OK Cancel	Allows the user to print any of the Tap reports that are supported by the platform. <b>NOTE:</b> Print Tap report number 4 to see a list of supported tap reports for these devices. Code = x
Reports Menu	Print mech button	Prints a complete list of all fax parameters including the number, current value, and defaults.
Reports Menu	Config page (MFP only)	Prints a T30 protocol history of the last fax transaction.
Reports Menu	Fax trace (MFP only)	Prints a summary of the device usage
Reports Menu	Counter report	
Scan Diagnostics Menu (MFP only)	Test scan motor	Subsystem test of the flatbed scan motor and scan drive mechanism. 

## Enable / Disable menu

Learn about the control-panel enable/disable menu.

- An Enable/Disable Menu can be accessed by a 4-key press sequence when the printer is in the ready state. The Enable/Disable is designed to be used for troubleshooting/testing purposes.

**2-line control panels:** At the printer control panel, press the Cancel button **X**, press the Return button **↶**, and then press the Cancel button **X** and then press the Return button **↶**.

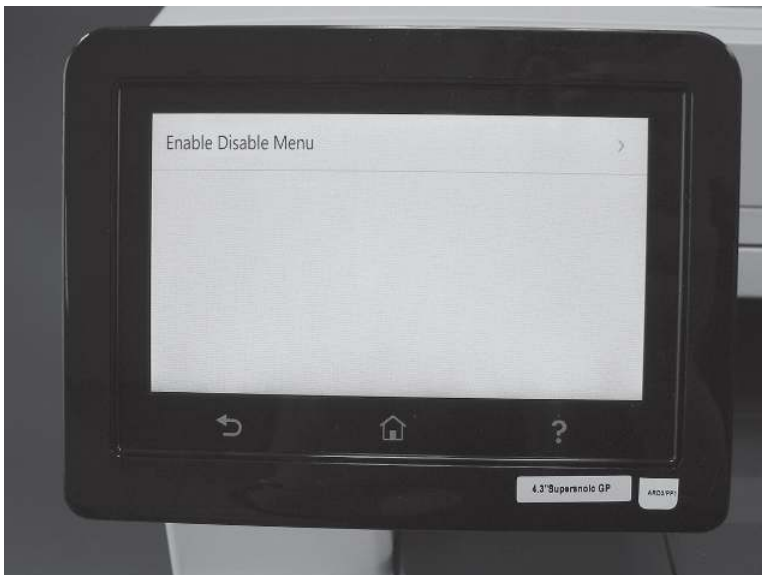
**Figure 4-37** 2-line control panel



- An Enable/Disable Menu can be accessed by a 4-key press sequence when the printer is in the ready state. The Enable/Disable is designed to be used for troubleshooting/testing purposes.

**Touchscreen control panels:** From the Home screen on the printer control panel, press the Home **🏠**, press the Return button **↶**, and then press the Home **🏠** and then press the Return button **↶**.

**Figure 4-38** Touchscreen control panel








**Table 4-23 Enable Disable Menu**

Menu Item	Secondary menu item	Description
Enable/Disable Menu	Ethernet	OK Cancel
Enable/Disable Menu	All wireless (wireless models only)	OK Cancel
Enable/Disable Menu	Wireless infrastructure (wireless models only)	OK Cancel
Enable/Disable Menu	Wireless access point (wireless models only)	OK Cancel
Enable/Disable Menu	Memory devices	OK Cancel
Enable/Disable Menu	Fax (MFP only)	OK Cancel
Enable/Disable Menu	Fax reprint (MFP only)	OK Cancel
Enable/Disable Menu	Copy (MFP only)	OK Cancel
Enable/Disable Menu	Digital send (MFP only)	OK Cancel
Enable/Disable Menu	HP web services (ePrint and Apps)	OK Cancel
Enable/Disable Menu	HP ePrint	OK Cancel
Enable/Disable Menu	Print Apps	OK Cancel
Enable/Disable Menu	Webscan (MFP only)	OK Cancel
Enable/Disable Menu	Usage data collection	OK Cancel
Enable/Disable Menu	Firmware update	OK Cancel
Enable/Disable Menu	Reset to factory defaults	OK Cancel




## Service menu

Learn about the control-panel Service menu.

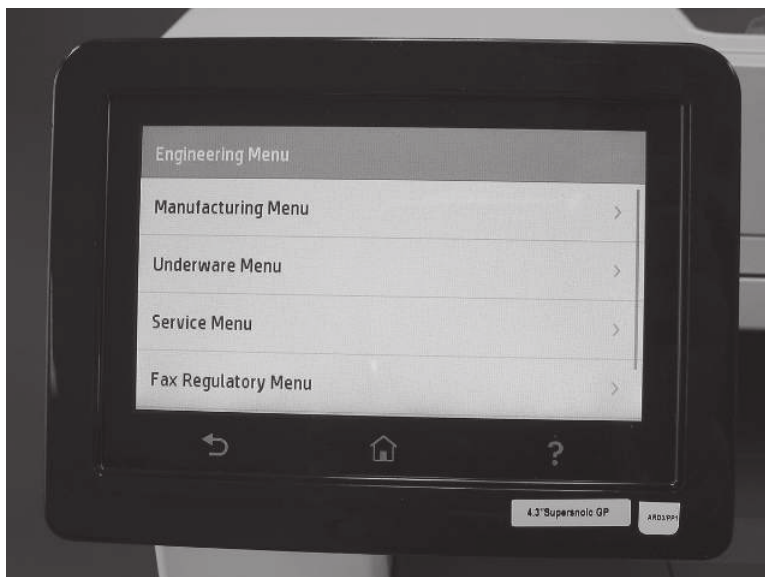
- **2-line control panels:** At the printer control panel, press the Return button , press the Cancel button , and then press the Return button  twice.

**Figure 4-39** 2-line control panel



- **Touchscreen control panels:** From the Home screen on the printer control panel, press the Home button , press the Return button , and then press the Home button  two times.

**Figure 4-40** Touchscreen control panel



**Table 4-24 Service menu**

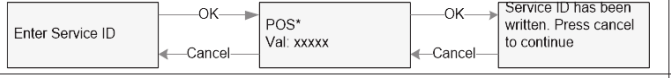
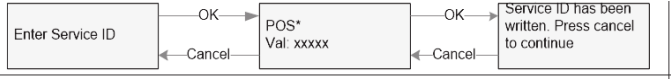
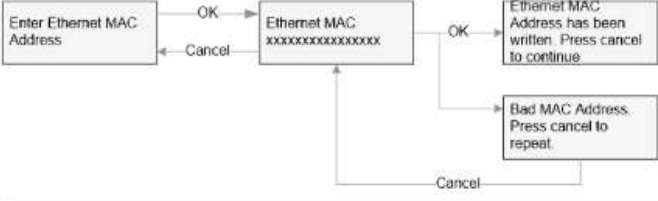
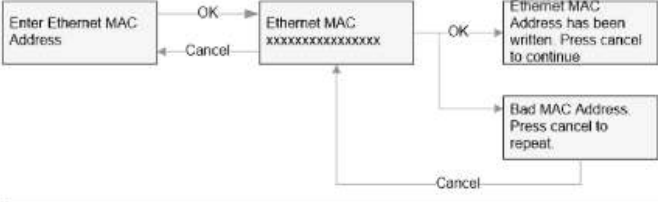
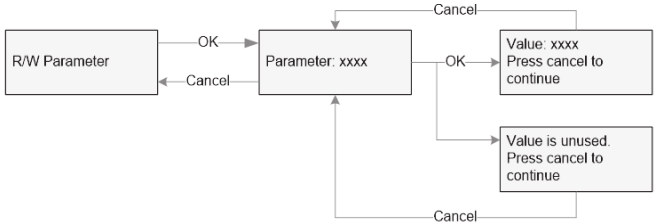
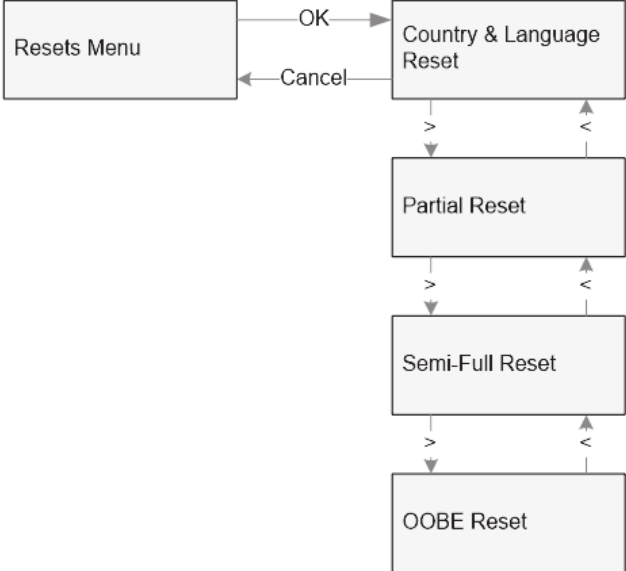
Menu Item	Secondary menu item	Description
System Configuration Menu	Enter serial number	<p>Allows a manual entry of the 10- digit product serial number. Service needs the ability to enter all ten characters.</p>  <pre> graph LR     A[Enter Service ID] -- OK --&gt; B[POS* Val: xxxxx]     B -- Cancel --&gt; A     B -- OK --&gt; C[Service ID has been written. Press cancel to continue]     B -- Cancel --&gt; A         </pre>
System Configuration Menu	Enter service ID	<p>Allows a manual entry of the 5-digit service ID (YYDDD).</p>  <pre> graph LR     A[Enter Service ID] -- OK --&gt; B[POS* Val: xxxxx]     B -- Cancel --&gt; A     B -- OK --&gt; C[Service ID has been written. Press cancel to continue]     B -- Cancel --&gt; A         </pre>
System Configuration Menu	Enter Ethernet MAC address	<p>Allows manual entry of the Ethernet MAC address.</p>  <pre> graph LR     A[Enter Ethernet MAC Address] -- OK --&gt; B[Ethernet MAC: xxxxxxxxxxxxxxxx]     B -- Cancel --&gt; A     B -- OK --&gt; C[Ethernet MAC Address has been written. Press cancel to continue]     B -- Bad MAC Address --&gt; D[Bad MAC Address. Press cancel to repeat.]     D -- Cancel --&gt; B         </pre>
System Configuration Menu	Enter wireless MAC address	<p>Displays the products total page counts and cycles.</p>  <pre> graph LR     A[Enter Ethernet MAC Address] -- OK --&gt; B[Ethernet MAC: xxxxxxxxxxxxxxxx]     B -- Cancel --&gt; A     B -- OK --&gt; C[Ethernet MAC Address has been written. Press cancel to continue]     B -- Bad MAC Address --&gt; D[Bad MAC Address. Press cancel to repeat.]     D -- Cancel --&gt; B         </pre> <p><b>NOTE:</b> Not applicable for products without wireless function.</p>
System Configuration Menu	R/W parameter	<p>Allows manual setting of any configurable parameters. Press OK will write the parameter; Cancel will not write the parameter.</p>  <pre> graph LR     A[R/W Parameter] -- OK --&gt; B[Parameter: xxx]     B -- Cancel --&gt; A     B -- OK --&gt; C[Value: xxx. Press cancel to continue]     B -- Value is unused --&gt; D[Value is unused. Press cancel to continue]     D -- Cancel --&gt; B         </pre>

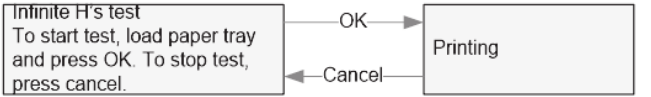

Table 4-24 Service menu (continued)

Menu Item	Secondary menu item	Description
Resets Menu	Country and language reset	<ul style="list-style-type: none"> <li>Allows the country and language to be reset after the unit powers down.</li> <li>All user menu settings to default.</li> </ul>  <p><b>NOTE:</b> When one of the resets is selected by pressing OK button, the device powers off and it will not power on unless the power button is pressed again. After it powers up it preforms the selected reset</p>
Resets Menu	Partial reset	<ul style="list-style-type: none"> <li>All user menu settings to default.</li> <li>All telephony parameter values to default (fax models only).</li> <li>Initiate select country and language UI.</li> </ul> <p>The items below are <b>not</b> cleared:</p> <ul style="list-style-type: none"> <li>Wireless settings (wireless models only).</li> <li>Fax memory (fax models only)</li> <li>Device counters</li> </ul>
Resets Menu	Semi-full reset	<p>All partial rests plus:</p> <ul style="list-style-type: none"> <li>Clears fax journal information (fax models only).</li> <li>Clears all speed dials/broadcast list (fax models only).</li> <li>Clears personal header information (fax models only).</li> <li>Clears wireless settings (IP, SSID, WEP) (wireless models only).</li> <li>Wireless settings are cleared on a Semi-full and Full resets (wireless models only).</li> <li>Device counters are not cleared on Semi-full or Partial resets.</li> </ul>

**Table 4-24 Service menu (continued)**

Menu Item	Secondary menu item	Description
Resets Menu	OOBE reset	<p>Sets the unit back to the factory default state.</p> <p><b>IMPORTANT:</b> The NVM values that are <b>never</b> reset:</p> <ul style="list-style-type: none"> <li>• Device unique calibration values</li> <li>• Serial number</li> <li>• Device setting (includes soft features)</li> </ul>
Special Reports	Print mech button tap	Allows a user to print any of the Tap reports that are supported by the platform.
Special Reports	Network security page	Prints a summary of the network related information.
Special Reports	Config page	Prints a complete list of all parameters including the number, current value, and defaults.
Special Reports	Fax trace (fax models only)	Prints a T30 protocol history of the last fax transactions.
Special Reports	Counter report	Prints a summary of device usage.
Service Test Menu	Test scan motor	<p>Subsystem test of the flatbed scan motor and scan drive mechanism.</p> <pre> graph LR     A[Test Scanner Motor] -- OK --&gt; B[Scan motor cycles? x]     B -- OK --&gt; C[Finished: X cycles. Press cancel to continue]     B -- Cancel --&gt; A     C -- Cancel --&gt; A     </pre>
Service Test Menu	Cont_adf_pick	<p>Continuous picking from the ADF.</p> <pre> graph LR     A[Count_adf_pick] -- OK --&gt; B[ADF benchrun]     B -- Cancel --&gt; A     </pre>
Service Test Menu	Test keys	<p>Interactive test of all front panel buttons.</p> <pre> graph LR     A[Test keys] -- OK --&gt; B[Loop through each button]     B -- OK --&gt; C[Test PASS Press cancel to exit]     B -- OK --&gt; D[Test FAILED Press cancel to exit]     B -- Cancel --&gt; A     C -- Cancel --&gt; A     D -- Cancel --&gt; A     </pre>
Service Test Menu	Test Display	<p>Subsystem functional test of all the CGD segments and the back light (not supported on the 2-line control panel).</p> <pre> graph LR     A[Test display] -- OK --&gt; B[A white screen will display]     B -- OK --&gt; C[A dark screen will display]     C -- OK --&gt; D[A red screen will display]     D -- OK --&gt; E[A green screen will display]     E -- OK --&gt; F[A blue screen will display]     F -- OK --&gt; G[White &amp; black horizontal lines will appear on display]     G -- OK --&gt; H[White &amp; black vertical lines will appear on display]     H -- OK --&gt; I[Multi-color vertical lines will appear on display]     I -- OK --&gt; J[Test passed Press Cancel to exit]     B -- Cancel --&gt; A     C -- Cancel --&gt; A     D -- Cancel --&gt; A     E -- Cancel --&gt; A     F -- Cancel --&gt; A     G -- Cancel --&gt; A     H -- Cancel --&gt; A     I -- Cancel --&gt; A     J -- Cancel --&gt; A     </pre>


**Table 4-24 Service menu (continued)**

Menu Item	Secondary menu item	Description
Service Test Menu	Infinite H's test	Subsystem test that prints continuous pages of the letter "H" in black.  
Service Test Menu	Test front USB Port	Test that verifies when a device is inserted in the front USB port that the device is recognized with a PASS or FAIL results.  

## Boot Screen menu

Learn about the control-panel Boot Screen menu.

- **2-line control panels:** With the printer power off, press and hold the **OK** button and the **Cancel** button **X**, and then turn the printer power on. Continue to hold the **OK** and **Cancel** button **X** for 5 seconds after the HP logo displays, and then release the buttons. Next, press the left arrow button **◀**, press the right arrow button **▶**, and then press the left arrow button **◀** twice.

 **NOTE:** The Boot menu displays **<MFG MODE>** on the control panel.

**Figure 4-41 2-line control panel**



- **Touchscreen control panels:** With the printer power off, press and hold the **Help** button **?**, and then turn the printer power on. Wait for the printer to initialize to a black screen. Press the **Return** button **↶**, press the **Help** button **?**, and then press the **Return** button **↶** twice.


 **NOTE:** The Boot menu will display on the control panel with a blue background.

Figure 4-42 Touchscreen control panel



Table 4-25 Boot Screen menu

Menu Item	Secondary menu item	Description
MFG		Set the device to manufacturing mode.
Reflash		Enters reflash mode.
Menu	Partial reset	<ul style="list-style-type: none"> <li>All user menu settings to default.</li> <li>All telephony parameter values to default (fax models only).</li> <li>Initiate select country and language UI.</li> </ul> <p>The items below are <b>not</b> cleared:</p> <ul style="list-style-type: none"> <li>Wireless settings (wireless models only).</li> <li>Fax memory (fax models only)</li> <li>Device counters</li> </ul>
Menu	Semi-reset	<p>All partial resets plus:</p> <ul style="list-style-type: none"> <li>Clears fax journal information (fax models only).</li> <li>Clears all speed dials/broadcast list (fax models only).</li> <li>Clears personal header information (fax models only).</li> <li>Clears wireless settings (IP, SSID, WEP) (wireless models only).</li> <li>Wireless settings are cleared on a Semi-full and Full resets (wireless models only).</li> <li>Device counters are <b>not</b> cleared on Semi-full or Partial resets.</li> </ul>

**Table 4-25** Boot Screen menu (continued)

Menu Item	Secondary menu item	Description
Menu	Full reset	Resets all menu settings to default. <ul style="list-style-type: none"> <li>• All telephony parameter values to default (fax models only).</li> <li>• Initiate select country and language UI</li> <li>• Clears fax memory (fax models only)</li> <li>• Clears fax journal information (fax models only).</li> <li>• Clears all speed dials/broadcast list (fax models only).</li> <li>• Clears personal header information (fax models only).</li> <li>• Clears junk fax numbers</li> <li>• Clears Instant Share settings</li> <li>• UVL Reset; clears the IP address, the SSID and any WEP settings.</li> <li>• Service ID set to all zero's</li> <li>• All counters set to zero</li> <li>• Clears stored error codes</li> <li>• Resets date and time offset</li> </ul>
Menu	OOBE reset	Sets the unit back to the factory defaults.
Menu	Forced user mode	
Menu	No print mech	
Menu	No scan mode	
Menu	No scan no mech	
Menu	Memory Init only	
Menu	Safe load	
Menu	No FW update	
Menu	Normal off W IO once	

## Power on troubleshooting

Learn about power on troubleshooting.

### Power-on checks

Learn about power-on checks.

The basic printer functions should start up when the printer is connected into an electrical outlet and the power switch is pushed to the on position. If the printer does not start, use the information in this section to isolate and solve the problem.



If the control panel display remains blank, random patterns display, or asterisks remain on the control panel display, perform power-on checks to find the cause of the problem.

## Power on troubleshooting overview

Learn about general power on troubleshooting.


During normal operation, a cooling fan begins to spin briefly after the printer power is turned on. Place a hand over the fan intake vents located on the right-side cover. When the fan is correctly operating, air passing into the printer is felt. Lean close to the printer to hear the fan operating. If the fan is operating, the dc side of the power supply is functioning.

After the fan is operating, the main motor turns on (unless the top cover is open, a jam condition is sensed, or the paper-path sensors are damaged). Visually and audibly determine that the main motor is turned on.

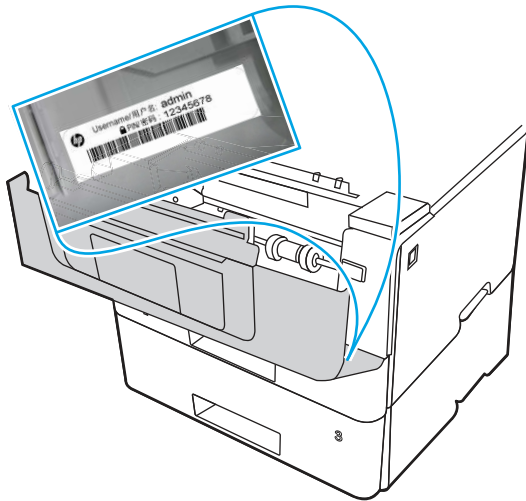
If the fan and main motor are operating correctly, the next troubleshooting step is to isolate print engine, formatter, and control panel problems. Perform an engine test. If the formatter is damaged, it might interfere with the engine test. If the engine-test page does not print, try removing the formatter, and then performing the engine test again. If the engine test is then successful, the problem is almost certainly with the formatter, the control panel, or the cable that connects them.

## Troubleshooting power-on or blank control panel problems


If the printer is not powering on correctly, use the following steps to begin troubleshooting the problem.

 **IMPORTANT:** Access to the Embedded Web Server (EWS) requires a personal identification number (PIN). The default PIN for this printer is located on a sticker inside the front door. Use this PIN to open the EWS when prompted.

The default PIN (password) can be changed in the EWS (**Settings** > **Security** > **Password Settings**).



1. Verify that power is available to the printer. If the printer is plugged into a surge protector or uninterruptible power supply (UPS), remove it. Plug the printer directly into a known operating wall receptacle (make sure that the wall receptacle provides the correct voltage and current for the printer).

 **NOTE:** Unplug any other devices on the same circuit that the printer is using.

2. Try another known operating wall receptacle and a different power cord.

3. To eliminate a thermal switch issue, unplug the power cord and leave it unplugged for over 20 minutes. Re-attach the power cord, and then turn the power on again.
4. During normal operation, a cooling fan or fans begin to spin briefly after the printer power is turned on. Place a hand over the cover vent or vents to feel air passing out of the printer. Lean close to the printer to hear the fan or fans operating. Look for illuminated lights on the control panel and formatter LEDs.



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**NOTE:** Operational fans, motors, and control-panel lights indicate the following:

- AC power is present at the printer.
  - The power supply is providing either or both 24 Vdc and 5 Vdc voltages.
  - The DC controller microprocessor is functioning.
- 
5. If the printer powers on, but the control panel is blank, make sure that the control-panel display wire harness or harnesses and flat flexible cable or cables (FFCs) are connected.



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**NOTE:** If the printer has frozen while in Sleep mode or Sleep delay, loading a document in the document feeder or pressing a control-panel button should cause the printer to wake up from Sleep mode or Sleep delay.

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If the control panel is not responding, or if it appears black or blank, try the following:

- a. Turn the printer power off, and then on again.
  - b. Verify that the system is correctly functioning by printing a test page. Does the test page print correctly?  
  
Is the printer HP Embedded Web Server (EWS) accessible?
  - c. Verify that the control panel is correctly functioning. If it is not, turn the printer off and reseal the control-panel assembly cable connections at the control-panel assembly and the formatter.
  - d. Try upgrading the firmware. If the firmware upgrade fails to resolve the problem, and the printer still freezes while in Sleep mode or Sleep delay, elevate the case.
  - e. If the error persists and the EWS functions correctly, replace the control-panel assembly.
6. If normal start-up noises are not heard, turn the printer off, and then remove any installed accessories.
  7. Turn the printer on, and then listen for start-up noises. If normal start-up noises are heard, the problem might be with an accessory.
  8. Perform an engine test.



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**NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

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9. If the engine test page prints, the print engine is operating normally. Replace the formatter. The **formatter and DC controller must be paired** by using a special HP Android application.



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**CAUTION:** Under **NO** circumstances should a formatter from a different printer be installed during the repair or troubleshooting processes. The formatter and the DC controller (DCC) are paired and


a replacement formatter (or DCC) requires using a special HP Android application to make them compatible.

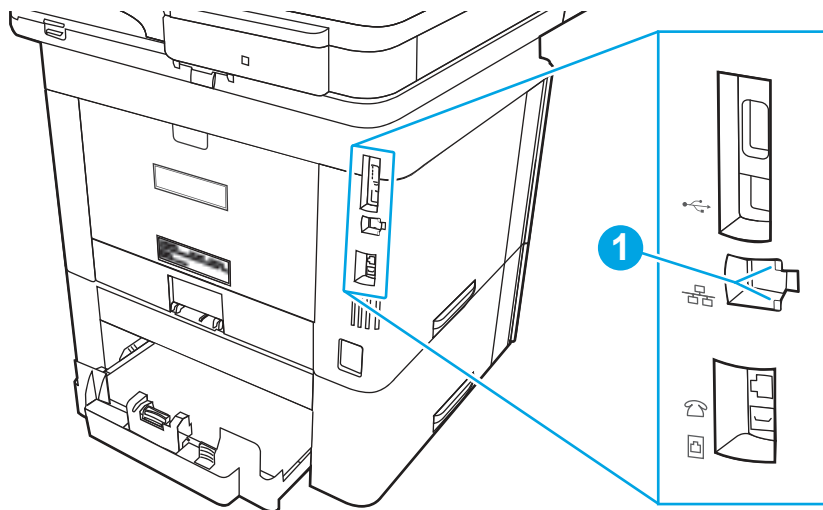
10. If after replacing the formatter normal start-up noises are still not heard, replace the DC controller. The **formatter and DC controller must be paired** by using a special HP Android application.
11. If the print engine appears to be correctly operating (the engine test page successfully printed) and the control panel is still blank, replace the power supply.

## Troubleshooting an unresponsive printer


If the printer powers up normally and the control panel displays correctly, but the printer appears unresponsive to print jobs, use the following steps to troubleshoot the issue.

1. The control panel should indicate a **Ready**, **Paused**, **Sleep mode on** or **Sleep delay on** status. If an error message displays, resolve the error. Resolve any supply issues.
2. For network connection errors, verify that the network port is active and that the cables are securely seated.
  - a. Check the network cable connections between the printer and the computer or network port. Make sure that the connections are secure.
  - b. Make sure that the cables are not faulty by trying different cables, if possible.
3. Check the network LEDs (callout 1) to see if they indicate any issues.


 **NOTE:** The figure below is representational only. Network LED location varies by printer.




**Table 4-26** Network LEDs

LED light pattern	Description
	Solid green light and flashing yellow light indicates a successful network connection.

**Table 4-26 Network LEDs (continued)**


LED light pattern	Description
	No lights on indicates a faulty network connection. Disconnect and reconnect the cable to the port. In the Network Settings Menu, verify the link settings and make sure that the port is enabled.

4. Use one of the following options to print a configuration page and printer status report.

 **NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).


#### 2-line control panels


- a. On the printer control panel, press the **OK** button to access the Main Menu, and then use the arrow buttons ◀▶ to navigate to the **Reports** menu, then select **OK** button.
- b. Use the arrow buttons ◀▶ to select one of the following.
  - **Printer Configuration Report**
  - **Printer Status Report.**

 **NOTE:** The **Printer status report** includes a System Events section with limited error code information.

To print an entire event code log: **Printer Maintenance > Troubleshooting > Event Log.**


#### Touchscreen control panels

- a. From the Home screen on the printer control panel, swipe down on the dash board, touch Setup icon , and then scroll through to open the **Reports** menu.
- b. Scroll to and then select one of the following.
  - **Printer Configuration Report**
  - **Printer Status Report.**

 **NOTE:** The **Printer status report** includes a System Events section with limited error code information.

To print an entire event code log: **Printer Maintenance > Troubleshooting > Event Log.**

5. Check to see if there is a newer version of the firmware available (find the currently installed version on the **Printer Status Report**). If there is, update the firmware.

 **NOTE:** If firmware updates are enabled on the printer, go to the control panel navigate to **Printer Maintenance > Update the Printer > Check Now**. If an update is available, the control panel will prompt you to install it or wait until later. If the latest firmware is already installed, a message appears stating the most current updates have been installed.

If the event log on the **Printer status report** shows a recent error, resolve the problem.

6. Verify that the correct print driver for this printer is installed. Check the program to make sure that the print driver for this printer is used. The print driver can be downloaded from [support.hp.com](http://support.hp.com).

7. Print a short document from a different program that has worked in the past. If this solution works, the problem is with the program. If this solution does not work (the document does not print), complete these steps:
  - a. Try printing the job from another computer that has the printer software installed.
  - b. If the printer is connected to the network, connect the printer directly to a host computer with a USB cable. Redirect the printer to the correct port, or reinstall the software (make sure to select the new connection type).

For more information about troubleshooting an unresponsive printer and about troubleshooting connectivity issues, see the "Performance and connectivity troubleshooting" section of the Service manual.

## Engine diagnostics

Learn about internal engine diagnostics that help in troubleshooting print quality, paper path, noise, assembly, and timing issues.

### Engine test

Learn about troubleshooting the printer using the engine test diagnostic.

When the engine test is performed, a test page with lines prints if the engine is functioning correctly.

With the printer in the Ready state, do one of the following.

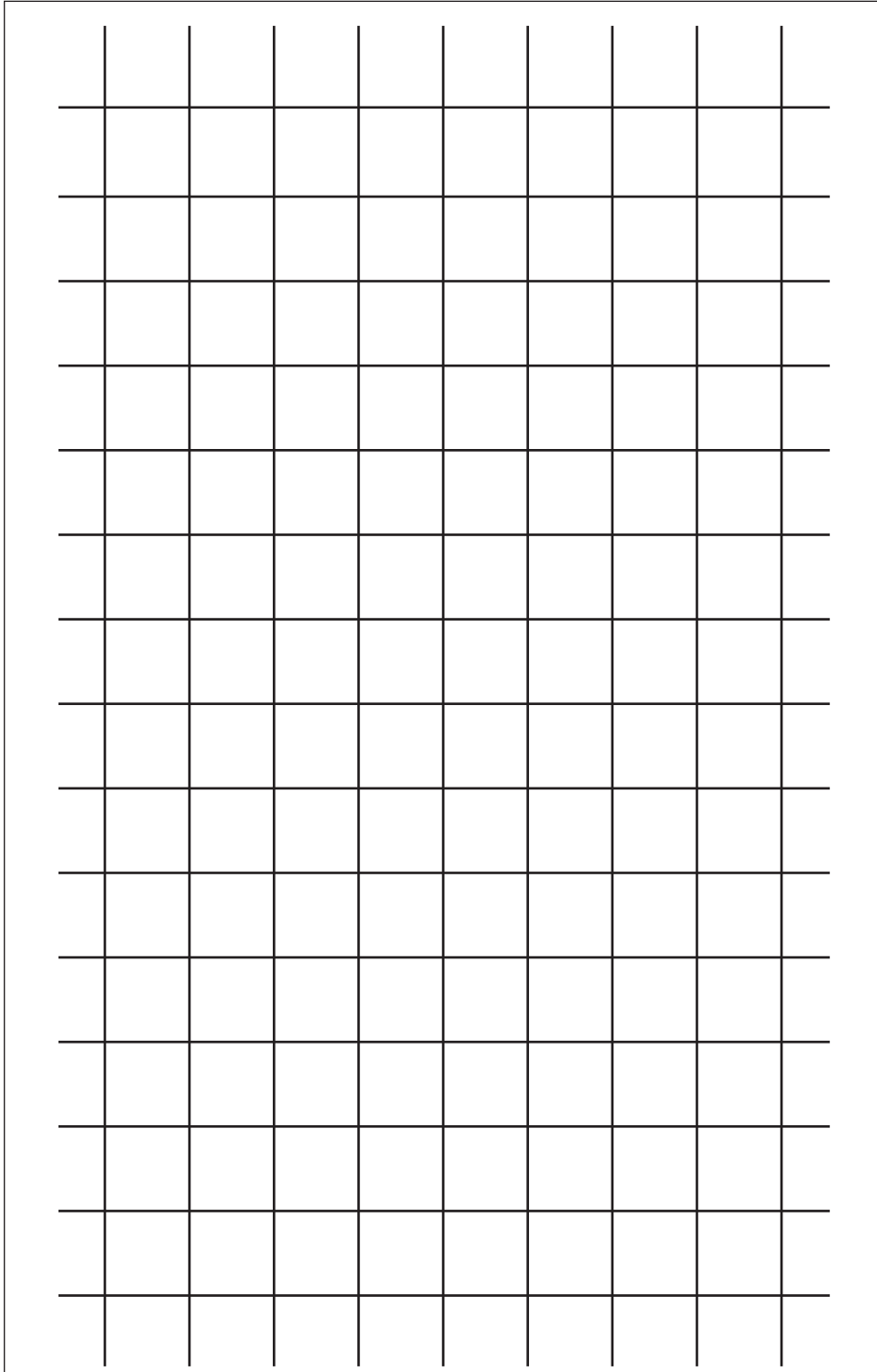
Simplex models

1. Open and close front door.
2. Open and close front door again within 1.5 seconds.
3. Repeat step 1 and step 2 four times. One sheet of the test pattern prints on the front of the page.

Duplex models

1. Open and close front door.
2. Open and close front door again within 1.5 seconds.
3. Repeat step 1 and step 2 five times. One sheet of the test pattern prints on the front and back of the page.

Figure 4-43 Engine test page



### LED Diagnostics (formatter)

Learn about troubleshooting the printer using formatter LEDs.

### Network LEDs (network models only)


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

For link failures, check all of the network cable connections. In addition, you can try to manually configure the network card link speed setting by using the printer control-panel.

Change the Link Speed setting on an LCD control panel

1. At the printer control panel, press the **OK** button to open the menus.
2. Select the **Setup** menu, and then press the **OK** button.
3. Select the **Ethernet** menu, and then press the **OK** button.
4. Select the **Link Speed** menu, and then press the **OK** button.

Change the Link Speed setting on a touchscreen control panel

1. From the For touchscreen control panels, touch the **Setup** button .
2. Scroll to, and then touch the **Network Setup** menu.
3. Scroll to, and then touch the **Link Speed** item.
4. Touch the appropriate link speed.

## Control panel LEDs

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

**Table 4-27** Control panel LEDs

Printer state	Ready light state	Attention light state
Initializing	Blinking	Blinking
Ready	On	Off
Receiving data/processing job or canceling job	Blinking	Off
Error message	Off	Blinking

## Use the solve problems checklist

If the printer is not correctly functioning, complete the steps (in the order given) in the following checklist.

If the printer fails a checklist step, follow the corresponding troubleshooting suggestions for that step. If a checklist step resolves the problem, skip the remaining checklist items.

1. Make sure that the printer is set up correctly.
  - a. Press the power button to turn on the printer or to deactivate the **Auto-Off** mode.
  - b. Check the power-cable connections.

- c. Make sure that the line voltage is correct for the printer power configuration. See the label that is on the printer for voltage requirements. If you are using a power strip and its voltage is not within specifications, plug the printer directly into the wall. If it is already plugged into the wall, try a different outlet.
- 2. Check the cable connections.
  - a. Check the cable connection between the printer and the computer. Make sure that the connection is secure.
  - b. Make sure that the cable itself is not faulty, by using a different cable if possible.
  - c. Check the network connection: Make sure that the network light is lit. The network light is next to the network port on the back of the printer.

If the printer remains unable to connect to the network, uninstall and then reinstall the printer. If the error persists, contact a network administrator.

- 3. Check to see if any messages appear on the control panel.
- 4. Make sure that the paper you are using meets specifications.
- 5. Make sure that the paper is loaded correctly in the input tray.
- 6. Make sure that the printer software is installed correctly.
- 7. Verify that you have installed the printer driver for this printer, and that you are selecting this printer from the list of available printers.
- 8. Print a configuration page.



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**NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

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- **2-line control panels:** On the printer control panel, press the **OK** button to access the Main Menu, and then use the arrow buttons ◀▶ to navigate to the **Reports** menu, then select **OK** button. Use the arrow buttons ◀▶ to navigate to and select **Configuration Report**.
- **Touchscreen control panels:** From the Home screen on the printer control panel, swipe down on the dash board, touch **Setup** icon ⚙, and then scroll through to open the **Reports** menu. Navigate to and select **Configuration Report**.

After printing the configuration page, check the following

- a. If the page does not print, verify that the input tray contains paper and that the paper is properly loaded.
- b. Make sure that each toner cartridge is installed correctly.
- c. If the page jams in the printer, clear the jam.
- d. If the print quality is unacceptable, complete the following steps:
  - Verify that the print settings are correct for the paper you are using.
  - Solve print-quality problems.



9. Print a small document from a different program that has printed in the past. If this solution works, then the problem is with the program you are using. If this solution does not work (the document does not print), complete these steps:
  - a. Try printing the job from another computer that has the printer software installed.
  - b. Check the cable connection. Direct the printer to the correct port, or reinstall the software, selecting the connection type you are using.

## Control panel messages document (CPMD)

Learn about the printer control panel messages document (CPMD).



**NOTE:** A complete CPMD is not included in this service manual.

[Click here to access the complete CPMD for this printer.](#)

## Error-code and control-panel-message troubleshooting overview

This section provides information on error codes and searching for information.

### Error codes (types and structure)

Error codes and control-panel messages display on the printer control panel to indicate the current printer status or situations that might require action. Error codes are numerical, or alphanumerical, and have a set structure with six characters (example: 13.WX.YZ).

- The first two characters are numeric and represent the system component that is causing the error. For example, in error code 10 . 22 . 15, **10 = Supplies** for HP LaserJets.
- The remaining four characters (W, X, Y, and Z values) further define the error.

HP LaserJet and HP PageWide Enterprise error codes are documented in the control panel message document (CPMD) for each printer.

The CPMD is a comprehensive list of error codes, diagnostic and troubleshooting steps to clear or resolve the error, and other helpful information such as service mode pins and part numbers.

The CPMD is continually updated and republished with the latest information for the following error codes.

**Table 4-28 ERROR CODES: The first two characters**

Error code	System Component	System Error Description
10.WX.YZ	Supplies (LaserJet)	Supply error or supply memory error.
11.WX.YZ	Real-time clock	Internal error with the clock on the formatter.
13.WX.YZ	Jam (LaserJet)	Paper jam or open door jam error.
15.WX.YZ	Jam (PageWide)	Paper jam or open door jam error.
17.WX.YZ	Supplies (PageWide)	Supply error or supply memory error.
20.WX.YZ	Printer memory	Insufficient memory or buffering error.
21.WX.YZ	Page	Page complexity causing a decompression error when trying to process job.
30.WX.YZ	Scanner	Flatbed scanner error occurring inside the unit.

**Table 4-28 ERROR CODES: The first two characters (continued)**


Error code	System Component	System Error Description
31.WX.YZ	Document feeder	Document feeder, scanner, or jam error.
32.WX.YZ	Backup, restore, or reset	Backup, restore, or reset notification or error.
33.WX.YZ	Security	Backup, Disk, EFI BIOS, Firmware integrity (SureStart), or Trusted Platform Module (TPM) notification or error.
40.WX.YZ	Input/Output (I/O)	Partition manager, secure erase, or USB accessory error.
41.WX.YZ	Fuser, Laser scanner, or Paper path	Miscellaneous error including general and misprint or mismatch errors typically involving (but not limited to) the fuser, the laser scanner, or the paper path.
42.WX.YZ	Firmware	Firmware failure involving the Event Log, Shell, System Manager, or other component.
44.WX.YZ	Firmware	Firmware failure involving a digital sending component.
45.WX.YZ	OXPd/Web Kit (PageWide)	Informational notifications involving the OXPd Web Kit (communications log).
46.WX.YZ	Engine (LaserJet)	Engine communication error.
47.WX.YZ	Firmware	Job parser or printer calibration error.
48.WX.YZ	Firmware	PJA job accounting, job management, or job pipeline error.
49.WX.YZ	Firmware	Firmware communication error.
50.WX.YZ	Fuser (LaserJet)	Fuser error.
51.WX.YZ	Laser scanner (LaserJet)	Laser scanner beam error.
52.WX.YZ	Laser scanner (LaserJet)	Laser scanner startup error.
54.WX.YZ	Sensor	Sensor error (not jam related).
55.WX.YZ	DC controller (LaserJet)	DC controller communication error.
56.WX.YZ	Paper handling (LaserJet)	Paper input/output or accessory error.
57.WX.YZ	Fan	Fan error.
58.WX.YZ	Sensor	Engine sensor failure.
59.WX.YZ	Motor (LaserJet)	Motor error.
60.WX.YZ	Tray motor error (LaserJet)	Tray lifting or pick up error.
61.WX.YZ	Engine (PageWide)	Print engine error with the 8-bit data package.
62.WX.YZ	System (LaserJet) Print bar (PageWide)	LaserJet internal system error. PageWide print system error.
63.WX.YZ	Engine (LaserJet)	General engine error (electrical, communication, etc.).
65.WX.YZ	Connector	Output accessory connection error.
66.WX.YZ	Output accessory	Output accessory error.

**Table 4-28 ERROR CODES: The first two characters (continued)**

Error code	System Component	System Error Description
67.WX.YZ	Input accessory	Input accessory connection error
69.WX.YZ	Duplexer	Duplexer error.
70.WX.YZ	DC controller (LaserJet)	DC controller firmware error.
76.WX.YZ	DC controller (LaserJet)	Power supply fluctuations causes formatter and DC controller communication issue and results them not to be in synchronization.
80.WX.YZ	Managed device	Embedded Jetdirect error.
81.WX.YZ	Near Field Communication (NFC)	Wireless, Bluetooth or internal EIO error.
82.WX.YZ	Memory (hard disk, EMMC, etc.)	Disk hardware error.
90.WX.YZ	Internal diagnostics	Internal test of systems (i.e. disk, CPB, display) or interconnection error.
98.WX.YZ	Hard disk	Hard disk partition error.
99.WX.YZ	Firmware installer	Remote Firmware Upgrade (RFU), firmware install (engine or accessory), or disk error.

### Print the menu map


To more easily navigate individual settings, print a report of the complete printer menus.

- **2-line control panels:** On the printer control panel, press the **OK** button to access the Main Menu, and then use the arrow buttons ◀▶ to navigate to the **Reports** menu, then select **OK** button. Use arrow buttons ◀▶ to navigate to and select **Menu Structure**.
- **Touchscreen control panels:** From the Home screen on the printer control panel, swipe down on the dash board, touch **Setup** icon , and then scroll through to open the **Reports** menu. Navigate to and select **Menu Structure**.

### Print the Printer Status Report (includes a partial event log)

Learn about the Printer Status Report.

The partial event log is located in the lower right-hand corner of the page.

- **2-line control panels:** On the printer control panel, press the **OK** button to access the Main Menu, and then use the arrow buttons ◀▶ to navigate to the **Reports** menu, then select **OK** button. Use arrow buttons ◀▶ to navigate to and select **Printer Status Report**.
- **Touchscreen control panels:** From the Home screen on the printer control panel, swipe down on the dash board, touch **Setup** icon , and then scroll through to open the **Reports** menu. Navigate to and select **Printer Status Report**.


### Print the event log

Learn about the event log.

The event log is a list of the last 50 events and errors that happened on the printer.

- **2-line control panels:** On the printer control panel, press the **OK** button to access the Main Menu, and then, then select **OK** button.

Use the arrow buttons ◀▶ to navigate to **Printer maintenance > Troubleshooting > Event Logs**.


- **Touchscreen control panels:** From the Home screen on the printer control panel, swipe down on the dash board, touch **Setup** icon , and then scroll through to and select the **Printer maintenance** menu.

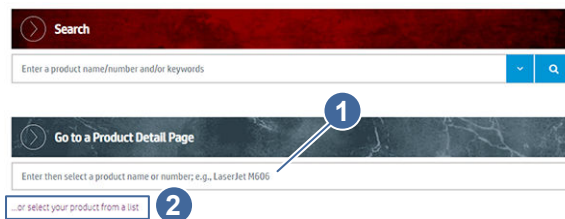
Navigate to **Printer maintenance > Troubleshooting > Event Logs**.

## How to search WISE for printer information and documentation


These instructions are for HP internal use by call agents, service technicians, and other internal users.

To learn how to find support content in WISE, watch the video here: [Finding Error Code and Control Panel Message Document in WISE](#).

-  **TIP:** The Product Detail Page (PDP) is available from the WISE home page. Enter, and then select a product name or number in the **Go to a Product Detail Page** area (callout 1), or select the **...or select your product from a list** item (callout 2) on the WISE home page.



Many types of printer documentation and information are available on WISE. This section details methods for finding error code descriptions and solutions.

-  **TIP:** To view a list of control panel message documents (CPMD) per printer, search for the following topic in **WISE**: **HP LaserJet, OfficeJet, PageWide, ScanJet Enterprise - Control panel message document (CPMD) list** or click the link below.

- [HP LaserJet, HP OfficeJet, HP PageWide, HP ScanJet - Control panel messages document \(CPMD\), Service manual, and Service cost data list](#)

Use one of the following methods to search for CPMD error code information.

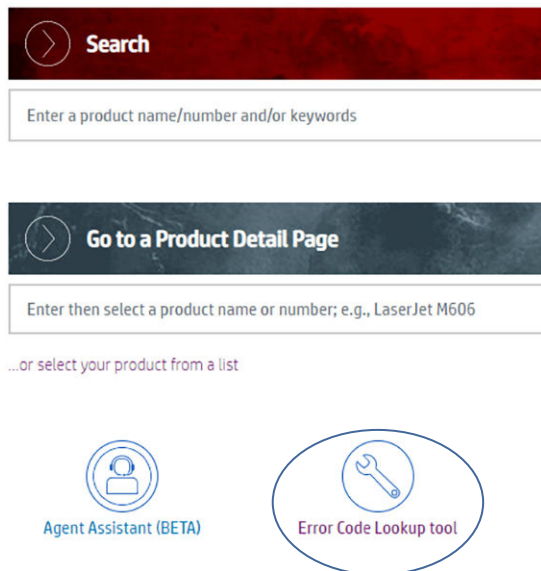
- [Method 1: Use the WISE home page Error Code Lookup tool on page 157](#)
- [Method 2: Search for error codes using the WISE search function on page 159](#)
- [Method 3: Search for error codes using the Product Detail Page on page 160](#)

### Method 1: Use the WISE home page Error Code Lookup tool

Use the WISE Error Code Lookup tool to find error code troubleshooting procedures using the following steps.

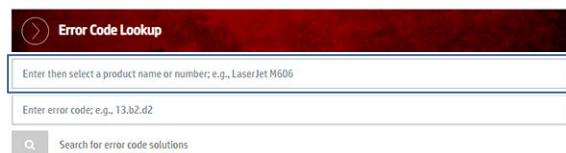
1. On the WISE home page, click the **Error Code Lookup tool** icon.

Figure 4-44 WISE Error Code Lookup tool icon



2. Enter a printer model number (for example, M606) in the **Error Code Lookup** dialog box.

Figure 4-45 WISE Error Code Lookup tool dialog box

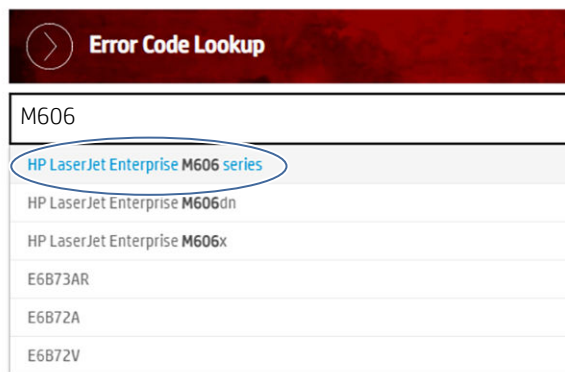


3. A drop-down list appears. Click on the full printer series name (for example, HP LaserJet Enterprise M606 series) in the list.



**NOTE:** Selecting the **series** item from the drop-down list is recommended for the most accurate search return.

Figure 4-46 WISE Error Code Lookup tool drop-down list



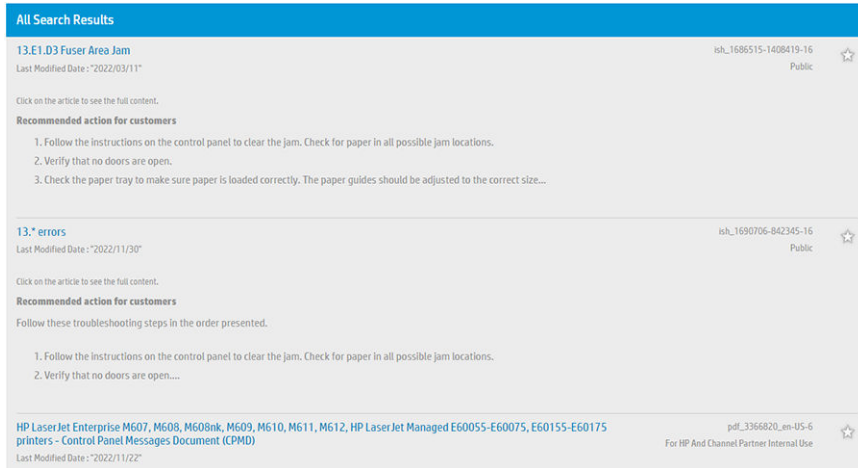
4. Type the error code (for example, 13.b2.d2) in the **Error Code Lookup** keyword field, and then select the search icon.

**Figure 4-47** WISE Error Code Lookup tool search



5. The error code troubleshooting content displays in the **All Search Results** area.

**Figure 4-48** WISE Search results

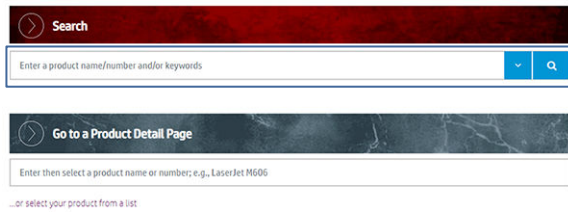


## Method 2: Search for error codes using the WISE search function

Use the WISE search function to find error code troubleshooting procedures using the following steps.

1. On the WISE home page, enter a printer model number (for example, M606) in the **Search** dialog box.

**Figure 4-49** WISE Search dialog box



2. A drop-down list appears. Click on the full printer series name (for example, HP LaserJet Enterprise M606 series) in the list.


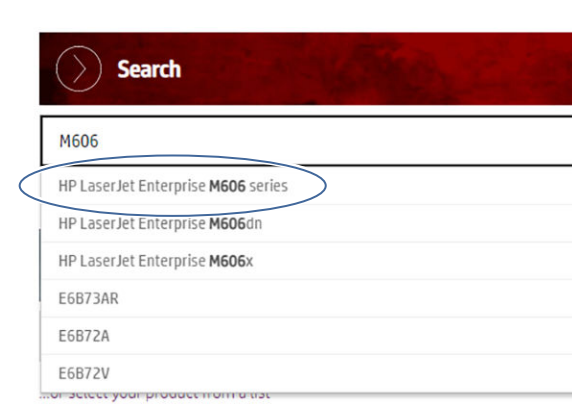
 **NOTE:** Selecting the **series** item from the drop-down list is recommended for the most accurate search return.

Figure 4-50 WISE Search drop-down list



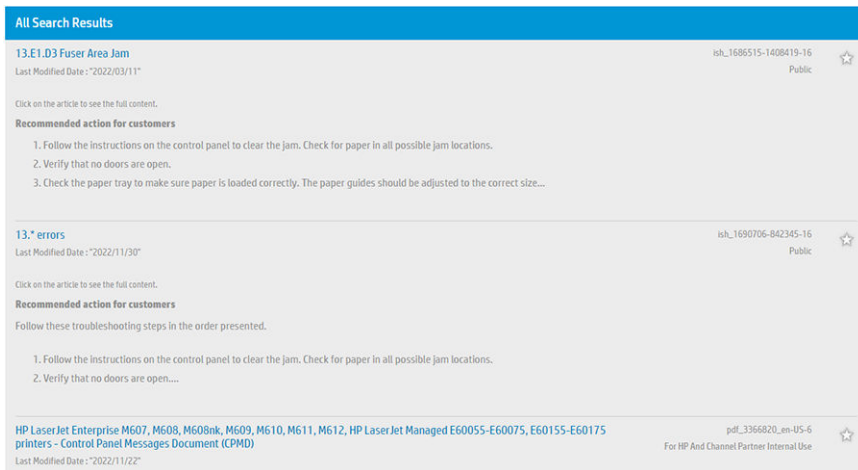
3. Type the error code (for example, 13.E1.D3) in the **Search** keyword field, and then select the search icon.

Figure 4-51 WISE Search



4. The error code troubleshooting content displays in the **All Search Results** area.


Figure 4-52 WISE Search results



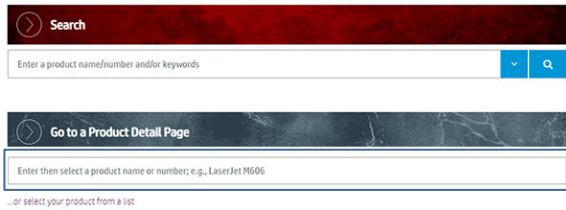
### Method 3: Search for error codes using the Product Detail Page

Use the WISE Product Detail Page (PDP) to find error code troubleshooting procedures using the following steps.


1. On the WISE home page, enter a printer model number (for example, M606) in the **Go to a Product Detail page** dialog box.

 **TIP:** To find a PDP from a list of products by product type, select the **...or select your product from a list** item just below the dialog box.

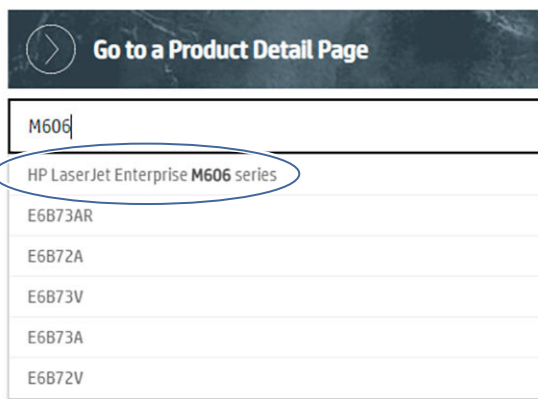
**Figure 4-53** WISE PDP dialog box



2. A drop-down list appears. Click on the full printer series name (for example, HP LaserJet Enterprise M606 series) in the list.

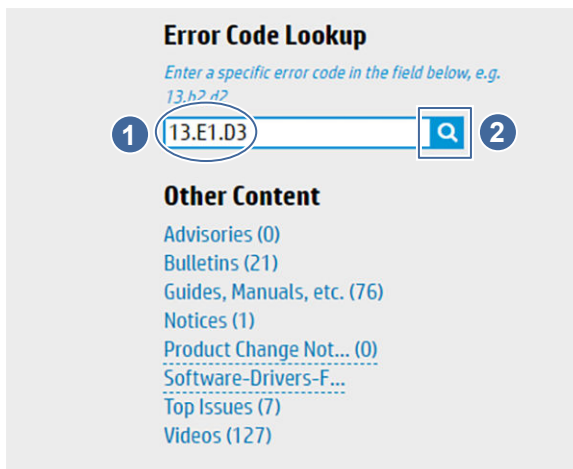
 **NOTE:** Selecting the **series** item from the drop-down list is recommended for the most accurate search return.

**Figure 4-54** WISE PDP drop-down list



3. Type the error code (for example, 13.E1.D3) in the **Error Code Lookup** field, and then select the search icon.

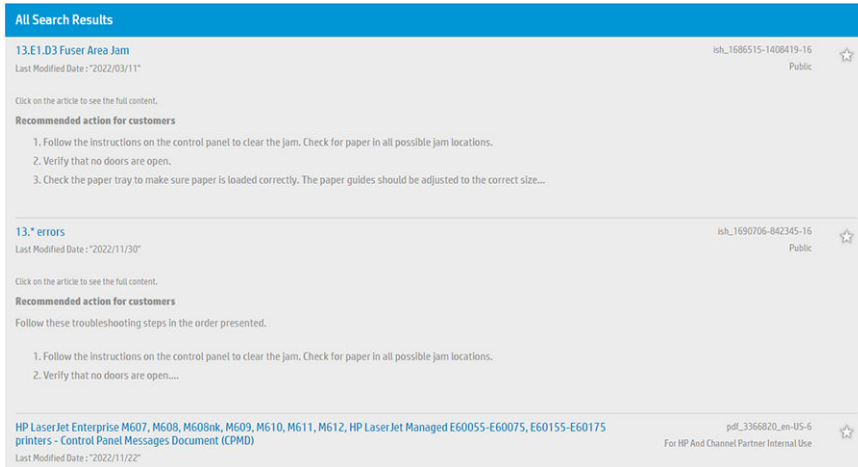
**Figure 4-55** WISE PDP search



4. The error code troubleshooting content displays in the **All Search Results** area.



Figure 4-56 WISE PDP search results

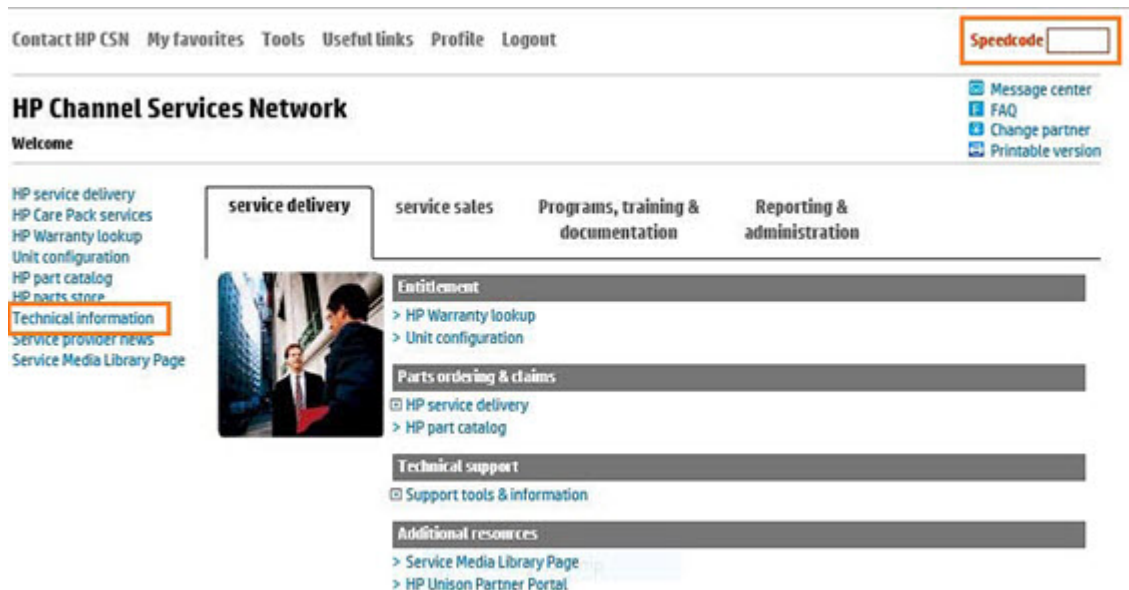


## How to search GCSN for printer documentation

These instructions are for internal use by HP Channel Partners.

To learn how to find support content in GCSN, [watch the video here: Finding Error Code and Control Panel Message Documents in GCSN](#) or follow these steps:

1. On the Home screen in GCSN, open **Technical information** using one of the following two methods:
  - Type `TINF` in the **Speedcode** field found in the upper right corner and press [Enter](#).
  - On the Home page, click **Technical information** in the left pane.



2. Under **Product Search**, select the **Type**, **Category**, **Family**, and **Series** that match your product model (leave the **Model** field as blank or the default).



**NOTE:** Make sure to log in to GCSN using your service-qualified credentials to access the most comprehensive content list available. To find out how to become service-qualified, contact your HP representative.

Figure 4-57 Sample product search criteria

Product Search Add Favorites

Type  
Printers and Multifunction

Category  
Multifunction and All-in-One

Family  
HP LaserJet MFP and All-in-One Products

Series  
HP Color LaserJet Enterprise MFP M682 series

Model  
Select a Model

- Click **Add Favorites** and then click **Add** to add the printer to your Favorites list and allow you to bypass the **Product Search** fields next time for that particular model (optional).

Product Search Add Favorites

Type  
Printers and Multifunction

Category  
Multifunction and All-in-One

Family  
HP LaserJet MFP and All-in-One Products

- Clear all of the high-level check boxes.

Select the appropriate check boxes for the document types you wish to review.

<input type="checkbox"/> Support Communications	<input type="checkbox"/> Manuals and Guides	<input type="checkbox"/> Support Information
<input type="checkbox"/> Customer Advisory	<input type="checkbox"/> Illustrated Parts Map	<input type="checkbox"/> ActionProcedureMap
<input type="checkbox"/> Customer Bulletin	<input type="checkbox"/> Install Guide	<input type="checkbox"/> CPMDMap
<input type="checkbox"/> Customer Notice	<input type="checkbox"/> Maintenance/Service Guide	<input type="checkbox"/> Support Information
<input type="checkbox"/> Customer Work Instruction (CSR)	<input type="checkbox"/> Parts Guide	<input type="checkbox"/> Top Issue (Note: If you are selecting top issue it will return only top issue documents)
<input type="checkbox"/> Product Change Notification	<input type="checkbox"/> QuickSpec	<input type="checkbox"/> Software Support & Drivers Information
<input type="checkbox"/> Security Bulletin	<input type="checkbox"/> Reference Manual	<input type="checkbox"/> Product Bulletin/QuickSpec
<input type="checkbox"/> Service Action Advisory	<input type="checkbox"/> Service Guide/Manual	<input type="checkbox"/> Buy Care Packs
<input type="checkbox"/> Service Advisory	<input type="checkbox"/> Technical Reference Guide	
<input type="checkbox"/> Service Bulletin	<input type="checkbox"/> Training Material	


- Select the check boxes for the document types for which you want to search.

 **NOTE:** Select only the high-level **Manuals and Guides** search option if you are not sure in which type of manual or guide the content might be listed.

Select the appropriate check boxes for the document types you wish to review.

<input type="checkbox"/> Support Communications	<input type="checkbox"/> Manuals and Guides	<input type="checkbox"/> Support Information
<input type="checkbox"/> Customer Advisory	<input type="checkbox"/> Illustrated Parts Map	<input type="checkbox"/> ActionProcedureMap
<input type="checkbox"/> Customer Bulletin	<input type="checkbox"/> Install Guide	<input checked="" type="checkbox"/> CPMDMap
<input type="checkbox"/> Customer Notice	<input checked="" type="checkbox"/> Maintenance/Service Guide	<input checked="" type="checkbox"/> Support Information
<input type="checkbox"/> Customer Work Instruction (CSR)	<input type="checkbox"/> Parts Guide	<input type="checkbox"/> Top Issue (Note: If you are selecting top issue it will return only top issue documents)
<input type="checkbox"/> Product Change Notification	<input type="checkbox"/> QuickSpec	<input type="checkbox"/> Software Support & Drivers Information
<input type="checkbox"/> Security Bulletin	<input type="checkbox"/> Reference Manual	<input type="checkbox"/> Product Bulletin/QuickSpec
<input type="checkbox"/> Service Action Advisory	<input checked="" type="checkbox"/> Service Guide/Manual	<input type="checkbox"/> Buy Care Packs
<input type="checkbox"/> Service Advisory	<input type="checkbox"/> Technical Reference Guide	
<input type="checkbox"/> Service Bulletin	<input type="checkbox"/> Training Material	
<input type="checkbox"/> Service Notice	<input type="checkbox"/> Troubleshooting Guide	
<input type="checkbox"/> Service Product Announcement	<input type="checkbox"/> Upgrade Manual	
<input type="checkbox"/> Service Program Announcement	<input checked="" type="checkbox"/> User Guide	
<input type="checkbox"/> Technical Work Instruction (TWI)	<input type="checkbox"/> Warranty Statement	
	<input type="checkbox"/> White Papers	

6. Select **Submit**.
7. If needed, click **Back To selection Criteria** and narrow your search (the maximum allowed search result is 100 documents).

 **NOTE:** Do not select the **Top Issue** option unless you only want to view top issues for that model. All other available content will be filtered out.

**Table 4-29** Information on WISE


Technical information type	Select this checkbox
CPMD	CPMD-Map
List of all CPMDs per product	Support Information
Installation Guide or Hardware Install Guide	Maintenance/Service Guide or Install Guide
Service cost document	Install Guide or Service Guide/Manual
Service guide or Service manual	Service Guide/Manual
Self-solve or troubleshooting document	Support Information
User manual or User guide	User Guide
Warranty and Legal Guide	Warranty Statement

## Printer service information

Last update: May 9, 2023

Service mode PIN number:

4001-4004, 4101-4104: The default PIN for this printer is located on a sticker adhered to the inside of the toner cartridge door.

 **NOTE:** When possible, always update the printer firmware to the latest available version at HP.com as part of the troubleshooting performed for any of the following errors.


If the default PIN has been changed, contact the printer administrator.

# Solve paper handling problems

Review the following information to solve paper handling problems.

## Clear paper jams (SFP)

Use the procedures in this section to clear jammed paper from the printer paper path.

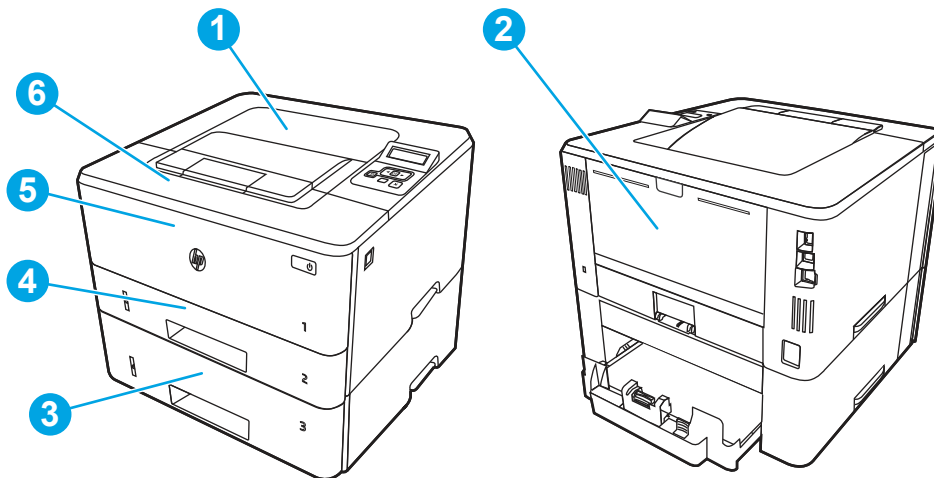
 **NOTE:** To avoid tearing the paper, pull the jammed paper out slowly and gently.

Figures in this section are representational only. The actual printer being serviced might look slightly different depending on the model and installed accessories.

## Paper jam locations

Jams can occur in these locations.

**Figure 4-58 Paper jam locations**



Number	Description
1	Output bin
2	Fuser area
3	Tray 3 (optional)
4	Tray 2 Duplexing area (remove Tray 2 for access)
5	Tray 1
6	Toner cartridge area (open the front door for access)

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

## Experiencing frequent or recurring paper jams?

Follow the steps to solve problems with frequent paper jams. If the first step does not resolve the problem continue with the next step until you have resolved the problem.



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**NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

---

1. If paper has jammed in the printer, clear the jam and then print a configuration page to test the printer.
2. Check that the tray is configured for the correct paper size and type on the printer control panel. Adjust paper settings if necessary.
  - a. Press the **OK** button to display the Home screen. Use the arrow buttons to navigate to **Setup**, and then press the **OK** button again.
  - b. Use the arrow buttons and the **OK** button to navigate to and open the **Paper setup** menu.
  - c. Select the tray from the list.
  - d. Select **Paper Type** and then select the type of paper that is in the tray.
  - e. Select **Paper Size** and then select the size of paper that is in the tray.
3. Turn the printer off, wait 30 seconds, and then turn it on again.
4. Print a cleaning page to remove excess toner from inside the printer.
  - a. On the printer control panel, press the **OK** button to display the Home screen. Use the arrow buttons to navigate to **Setup**, and then press the **OK** button again.
  - b. Use the arrow buttons and the **OK** button to navigate to and open the following menus:
    - i. **Printer Maintenance**
    - ii. **Print Quality Tools**
    - iii. **Cleaning Page**Press **OK**.
  - c. Load plain letter or A4 paper when you are prompted.  
Wait until the process is complete. Discard the page that prints.
5. Print a configuration page to test the printer.
  - a. On the printer control panel, press the **OK** button to display the Home screen. Use the arrow buttons to navigate to **Setup**, and then press the **OK** button again.
  - b. Use the arrow buttons and the **OK** button to navigate to and open the following menus:
    - i. **Reports**
    - ii. **Printer Configuration Report**

If none of these steps resolves the problem, the printer might need service. Contact HP customer support.

## 13.02 jam error tray 1

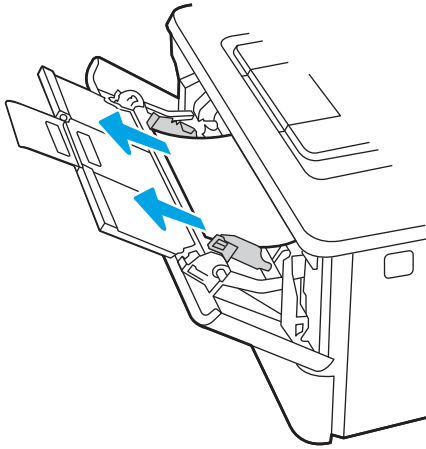
Use the following procedure to clear paper jams in Tray 1.

## Recommended action for customers

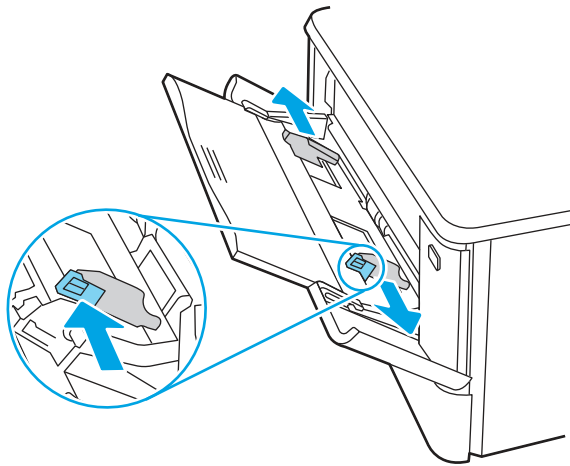
- 13.02 jam error in tray 1

 [View a video of how to clear a paper jam in tray 1](#)

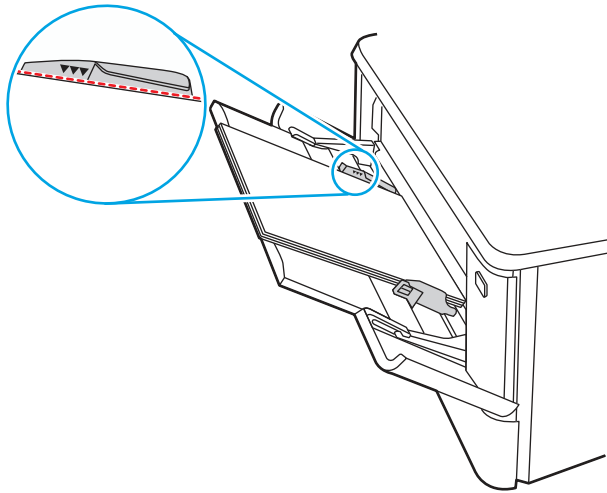
1. Slowly pull the jammed paper out of the printer.



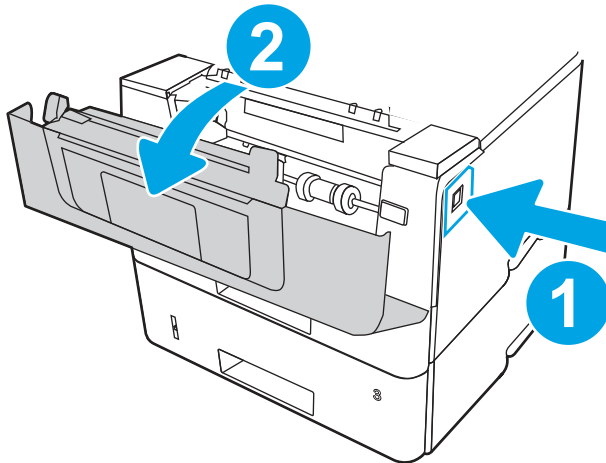
2. Adjust the paper guides to the correct paper size, then reload paper into the tray.



3. Ensure the tray is not overfilled. Paper should be below the 3 triangles in the following image.



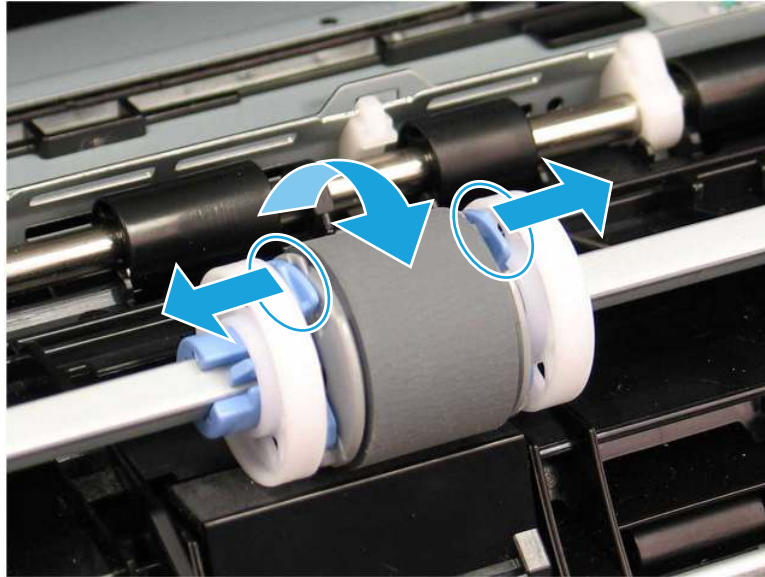
4. Ensure the type and quality of the paper being used meets the HP specifications for the printer.
5. If the error persists, clean the tray 1 pickup roller and separation pad.
  - a. Press the door-release button, and then open the toner-cartridge door





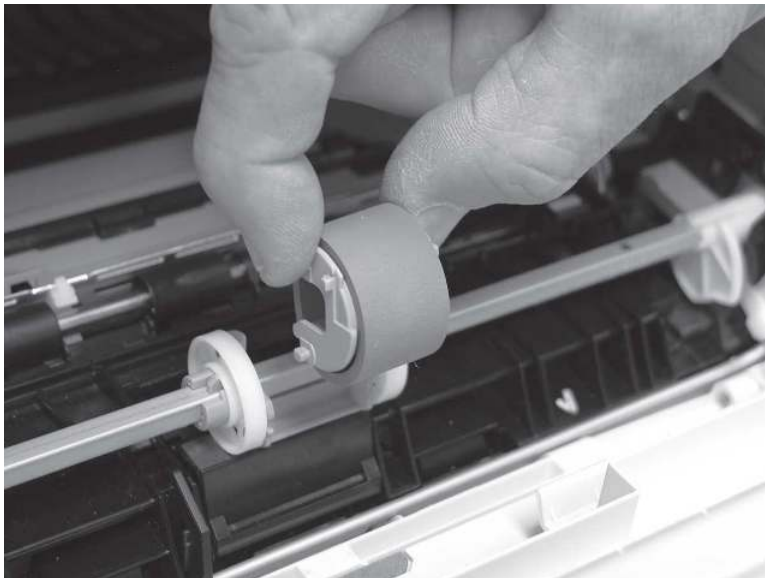
- b. To clean the roller thoroughly, release two tabs between the roller collar and roller, and then rotate the top of the roller out and away from the printer.

**Figure 4-59** Release the roller



- c. Remove the roller.

**Figure 4-60** Remove the roller

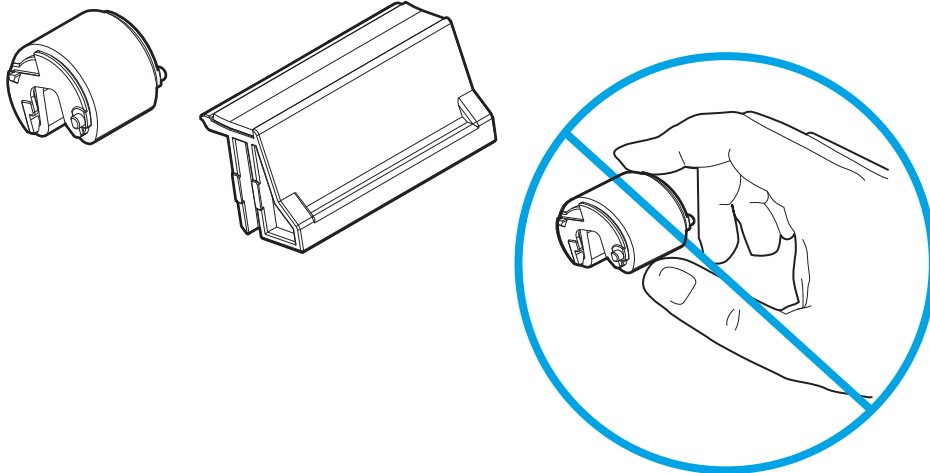


- d. With the Tray 1 roller removed the separation pad is accessible in the printer (it does not need to be removed to be cleaned).
- e. Use a damp, lint-free cloth to gently clean the rollers.

**CAUTION:** When handling the roller and/or pad, avoid touching the spongy surfaces. Skin oils and fingerprints on a roller surface can cause print-quality problems.

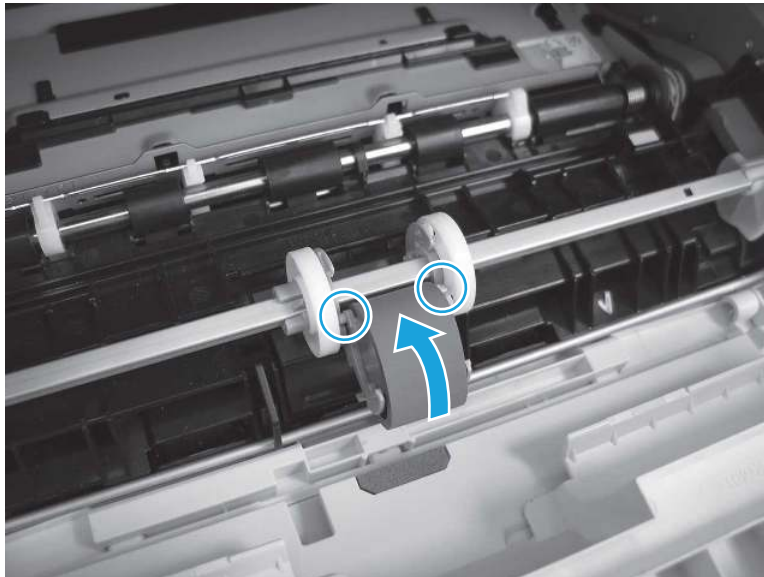


**Figure 4-61** Clean the roller and pad



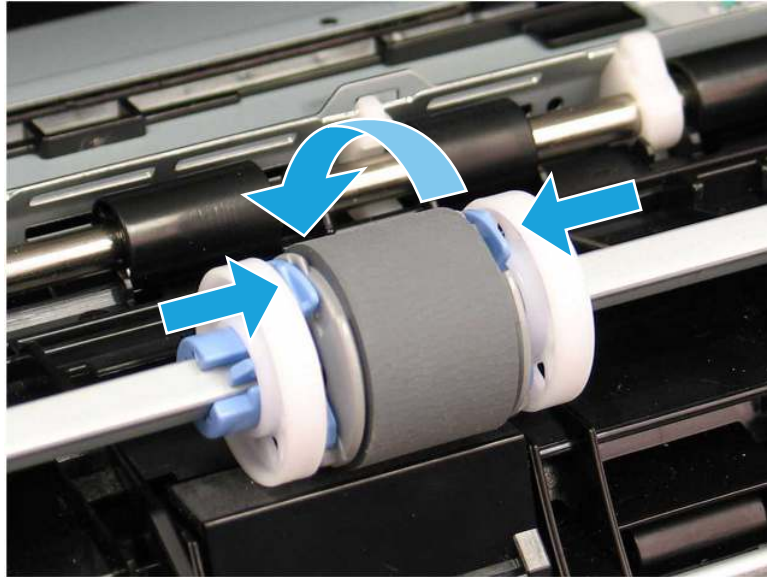
- f. Position the pickup roller with the pins in the provided slots on the holder, and then rotate the top of the roller up and toward the printer.

**Figure 4-62** Install the roller



- g. Continue to rotate the top of the roller toward the printer (callout 1), until two tabs (callout 2) snap into place.

**Figure 4-63 Engage two tabs**



- h. Close the toner-cartridge door.
6. Perform a test page from tray 1 to see if issue is resolved.
  7. If the error persists, contact your HP-authorized service or support provider, or contact customer support at [www.hp.com/go/contactHP](http://www.hp.com/go/contactHP).

### 13.03 jam error tray 2

Use the following procedure to check for paper in all possible jam locations related to Tray 2.

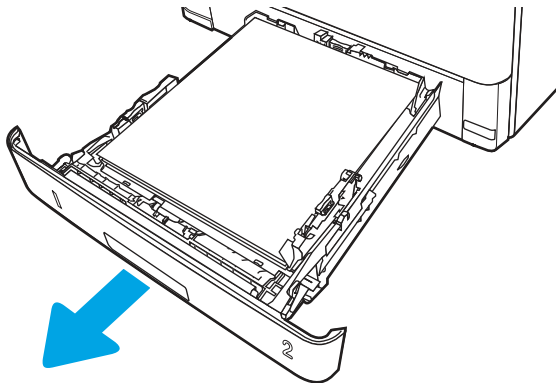
#### Recommended action for customers

- 13.03 jam error in tray 2

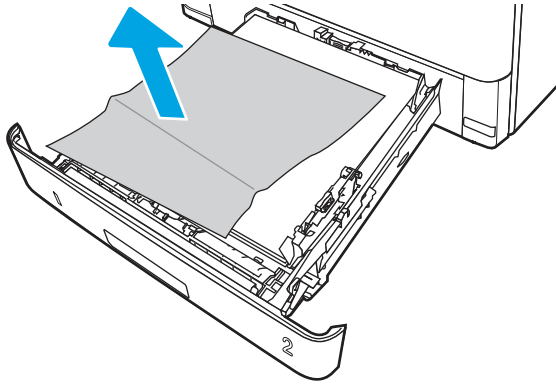
When a jam occurs, the control panel displays an animation that assists in clearing the jam.

 [View a video of how to clear a paper jam in tray 2](#)

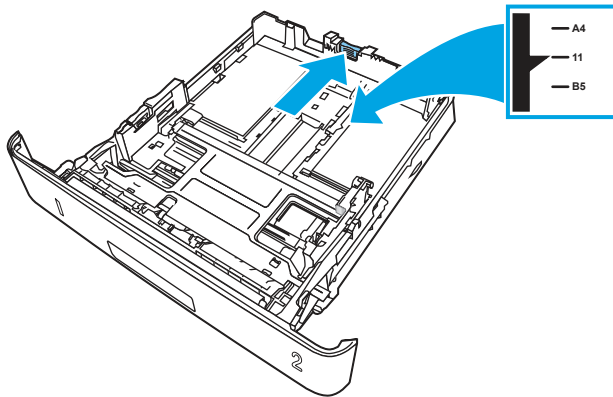
1. Remove the tray from the printer.



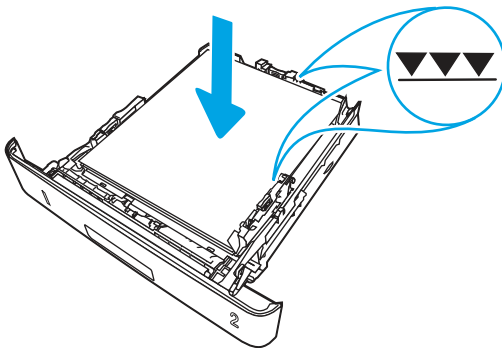
2. Remove the paper from the tray, and discard any damaged paper.



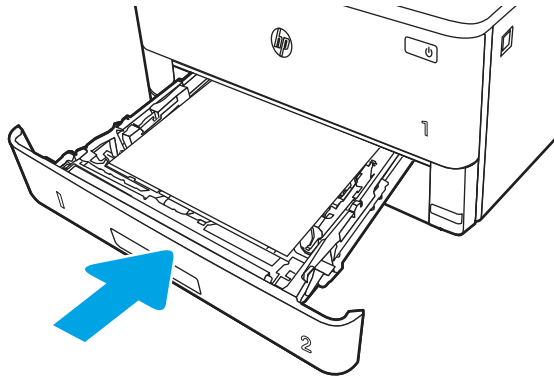
3. Verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.



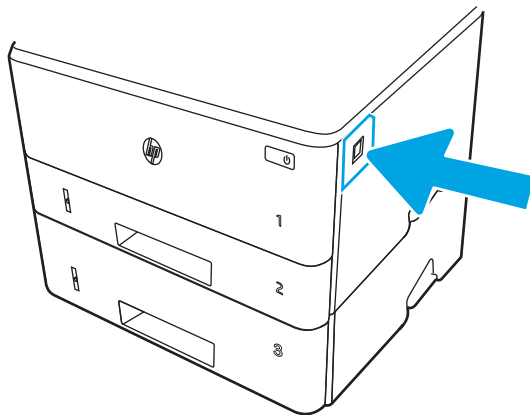
4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.



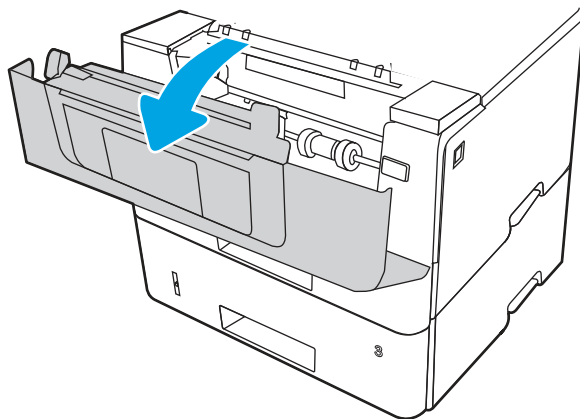
5. Reinsert and close the tray.



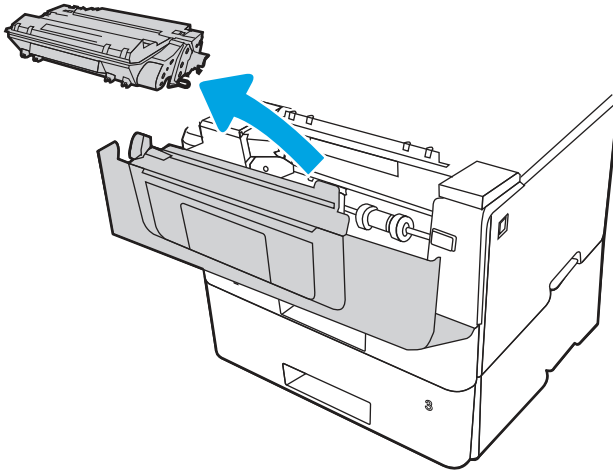
6. Press the front door release button.



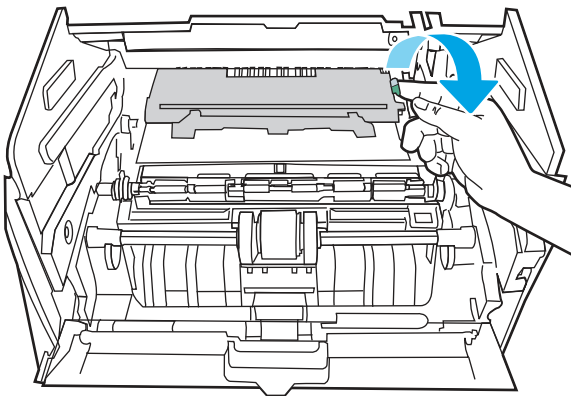
7. Open the front door.



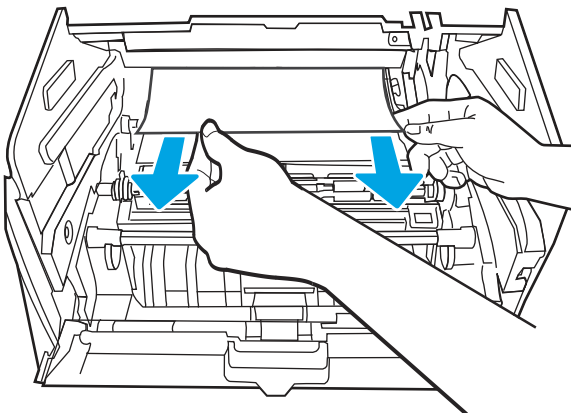
8. Remove the toner cartridge.



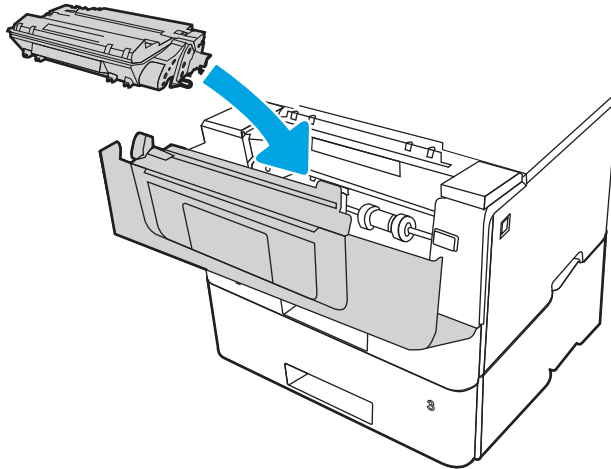
9. Lift the jam-access cover.



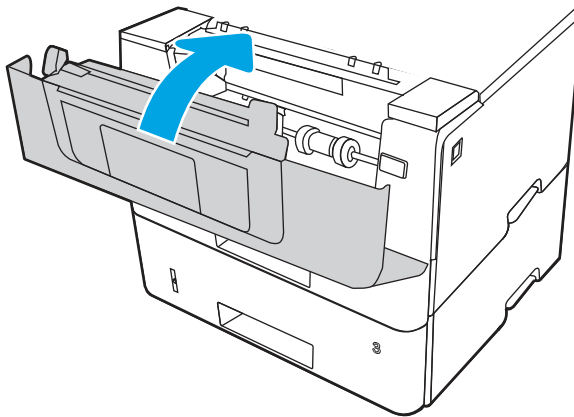
10. Remove any jammed paper.



11. Install the toner cartridge.




12. Close the front door.



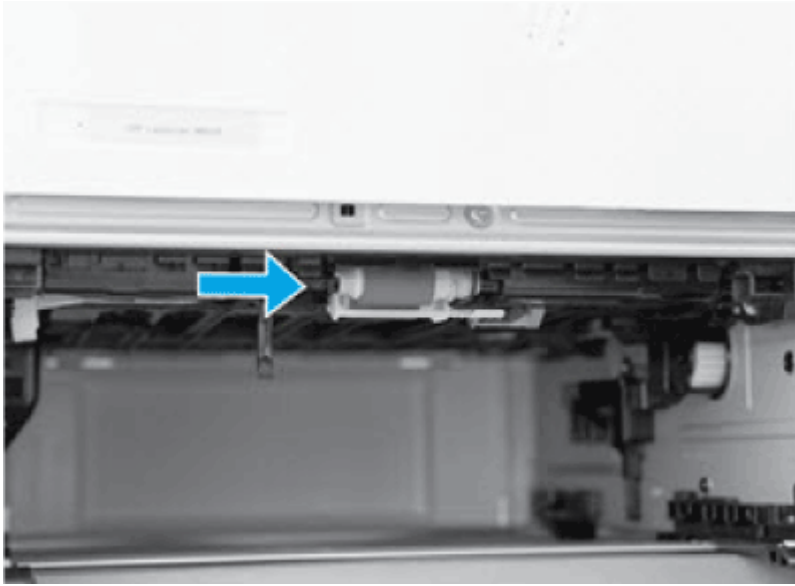
13. Ensure the type and quality of the paper being used meets the HP specifications for the printer.
14. If the error persists, clean the tray 2 pickup and feed rollers.

---

 **NOTE:** A SFP printer is shown in this section. However, the procedure is correct for all printer models.

---

- a. Remove tray 2 and locate the paper tray rollers.



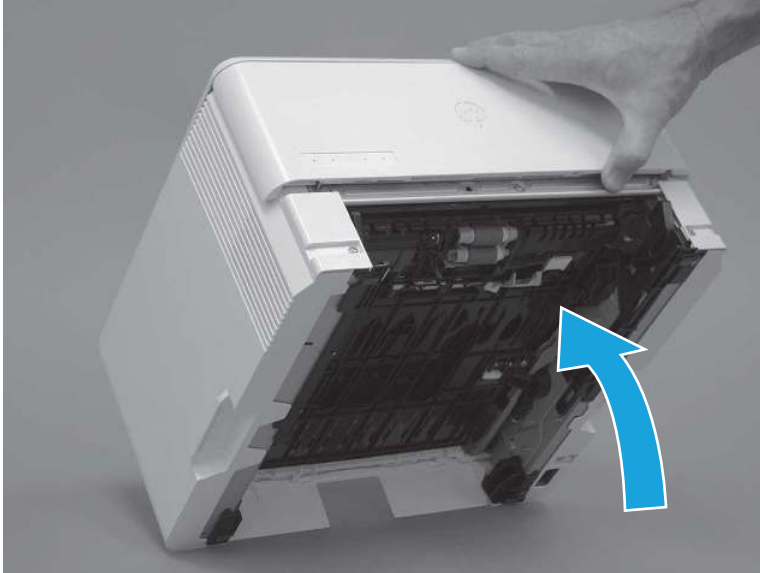
- b. Clean the rollers by gently wiping them with a damp, lint-free cloth.  
c. If needed for better access to the rollers, carefully rotate the printer backward.

---

⚠ **CAUTION:** To avoid damage to the rear cassette cover, keep it in the closed position

---

**Figure 4-64** Tilt the printer backward



- d. Continue rotate the printer backward until it rests on the rear cover, bottom-side face forward.

---

⚠ **CAUTION: MFP printers only:** The document feeder is not captive and can unexpectedly open when the printer is tilted backward.

---

**Figure 4-65** Place the printer bottom-side face forward



- e. Use a damp, lint-free cloth to gently clean the rollers by wiping them with a back and forth motion.

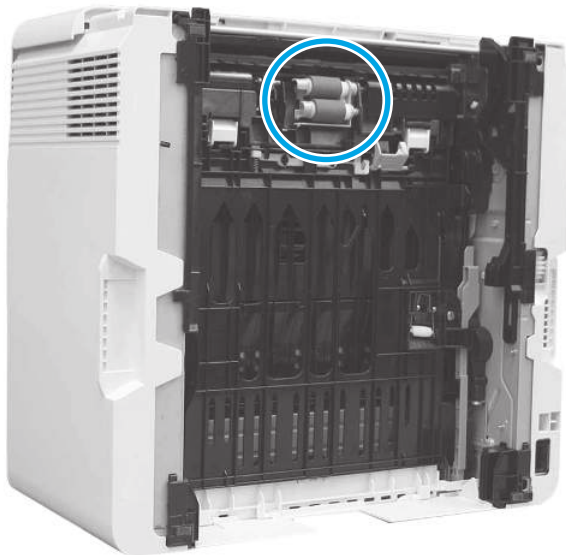


**NOTE:** The roller in the tray (cassette) can be cleaned without removing it from the tray.



**CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

**Figure 4-66** Clean the rollers



- f. Carefully rotate the printer forward to position it back on its base. Reinstall the tray 2 paper tray.
15. Perform a test print from tray 2 to see if the issue is resolved.



16. If the error persists, contact your HP-authorized service or support provider, or contact customer support at [www.hp.com/go/contactHP](http://www.hp.com/go/contactHP).

### 13.04 jam error tray 3

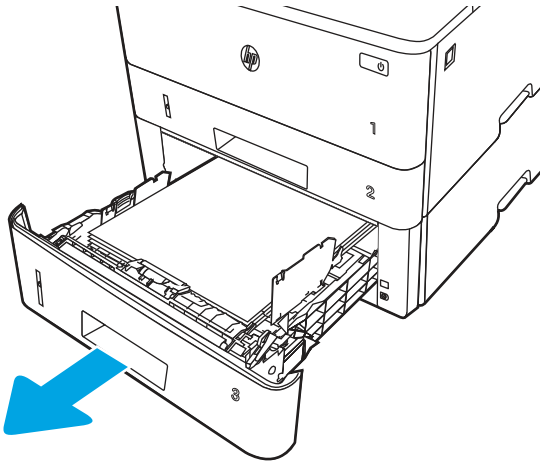
Use the following procedure to check for paper in all possible jam locations related to Tray 3.

#### Recommended action for customers

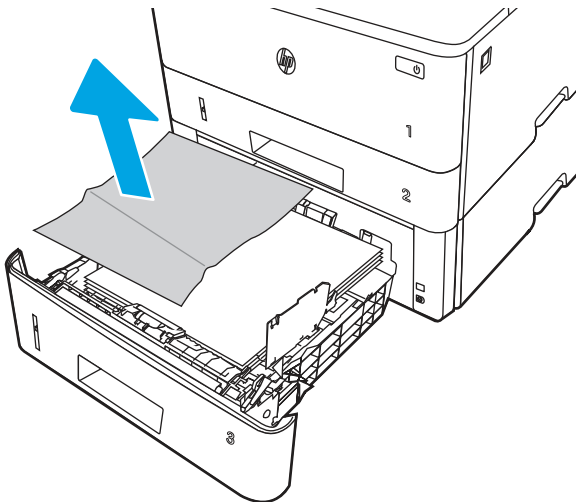
- 13.04 jam error in tray 3

 [View a video of how to clear a paper jam in tray 3](#)

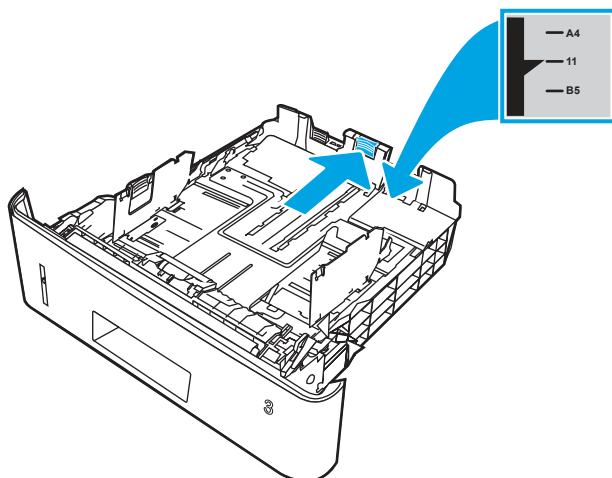
1. Remove the tray from the printer.



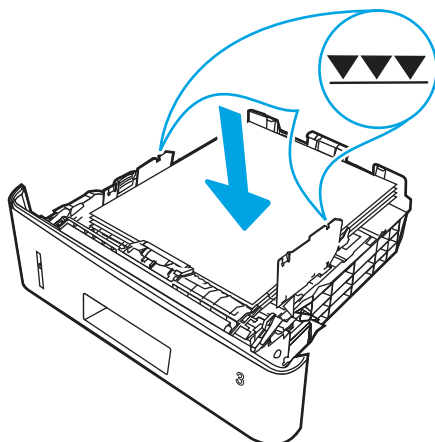
2. Remove the paper from the tray, and discard any damaged paper.



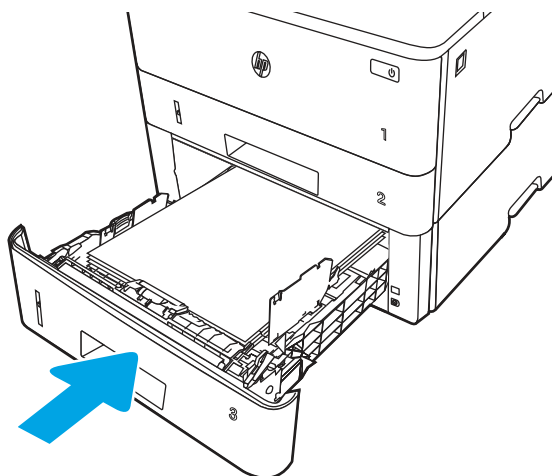
3. Verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.



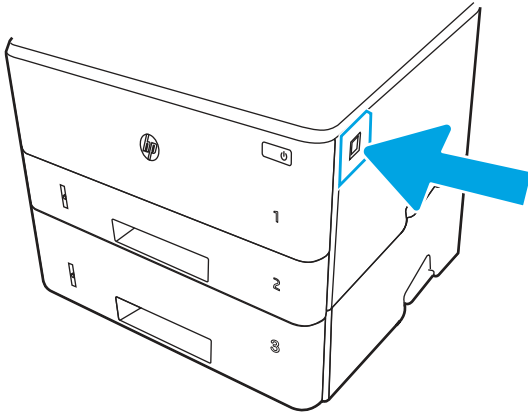
4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.



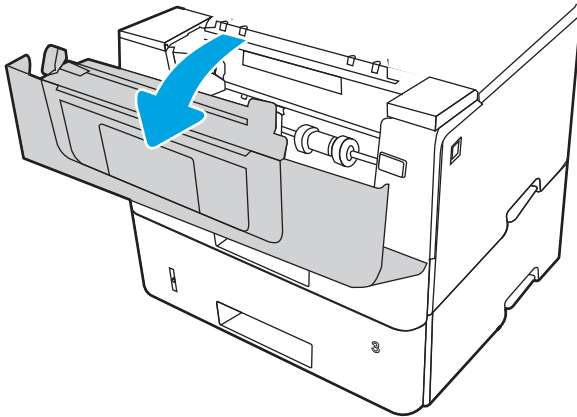
5. Reinsert and close the tray.



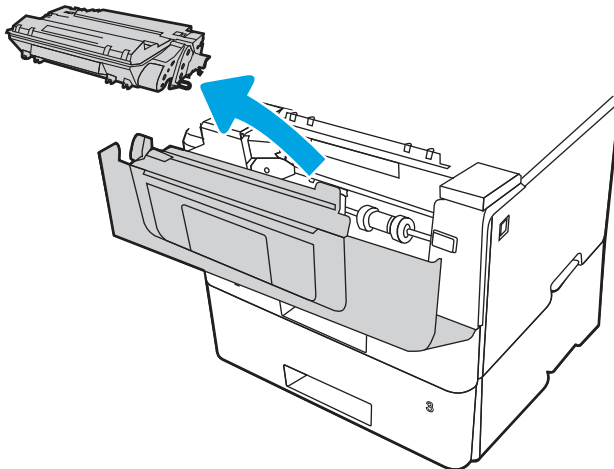
6. Press the front door release button.



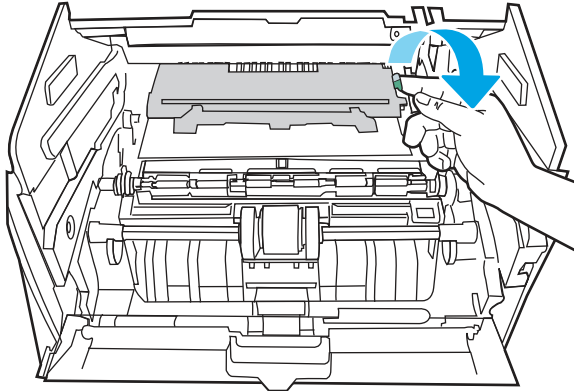
7. Open the front door.



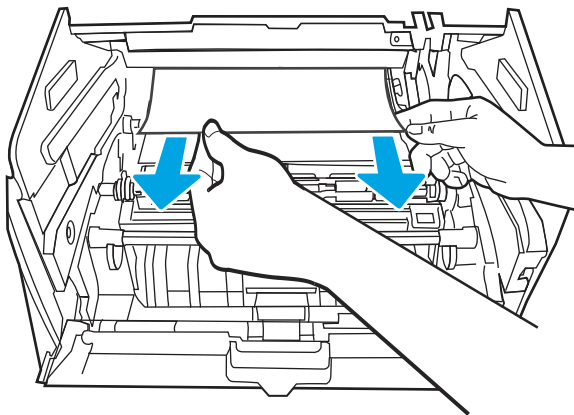
8. Remove the toner cartridge.



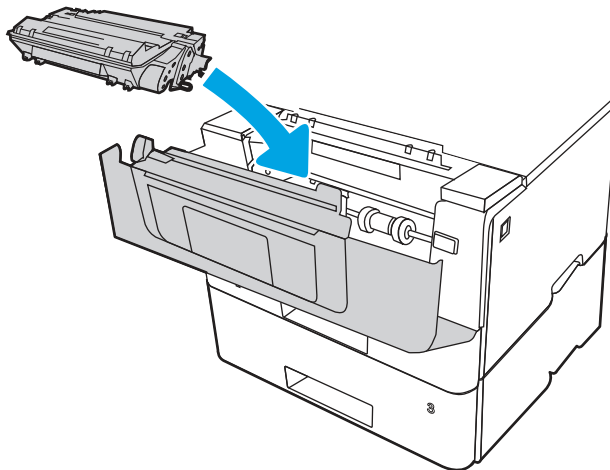
9. Lift the jam-access cover.



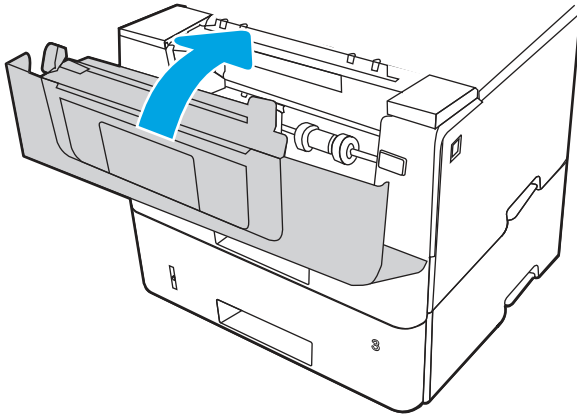
10. Remove any jammed paper.



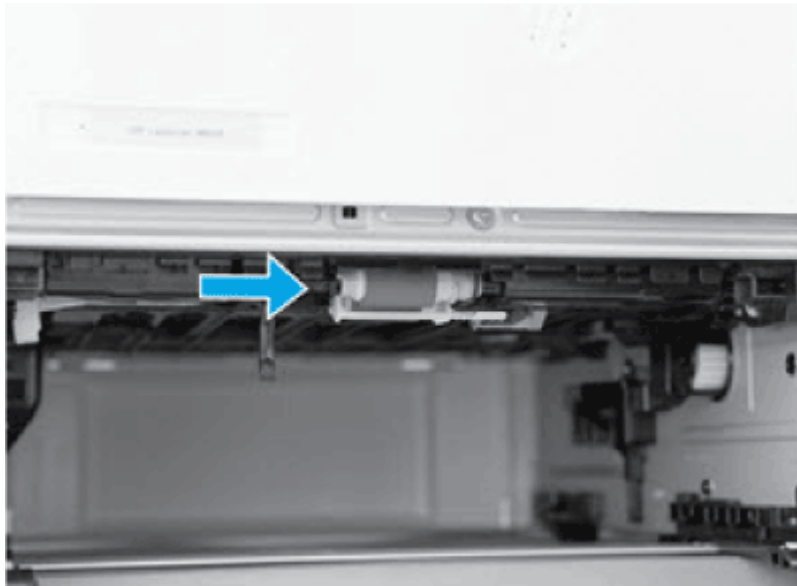
11. Install the toner cartridge.



12. Close the front door.



13. If the error persists, ensure the type and quality of the paper being used meets the HP specifications for the printer.
14. If the error persists, clean the tray 3 pickup and feed rollers.
  - a. Remove tray 3 and locate the paper tray rollers.



- b. Clean the rollers by gently wiping them with a damp, lint-free cloth.
15. Perform a test print from tray 3 to see if the issue is resolved.
16. If the error persists, contact your HP-authorized service or support provider, or contact customer support at [www.hp.com/go/contactHP](http://www.hp.com/go/contactHP).

### 13.08, 13.09 jam error in the toner cartridge or fuser area

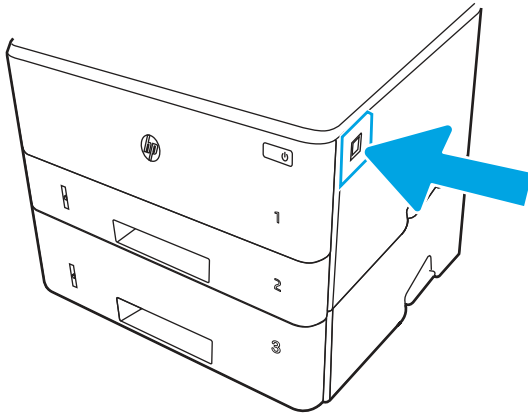
Use the following procedure to check for paper in all possible jam locations in the toner cartridge or fuser area.

#### Recommended action for customers

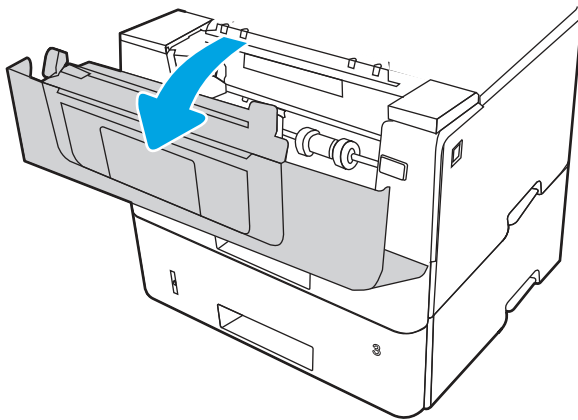
- 13.08, 13.09 jam error in toner cartridge or fuser area

 [View a video of how to clear a paper jam in the toner cartridge or fuser area](#)

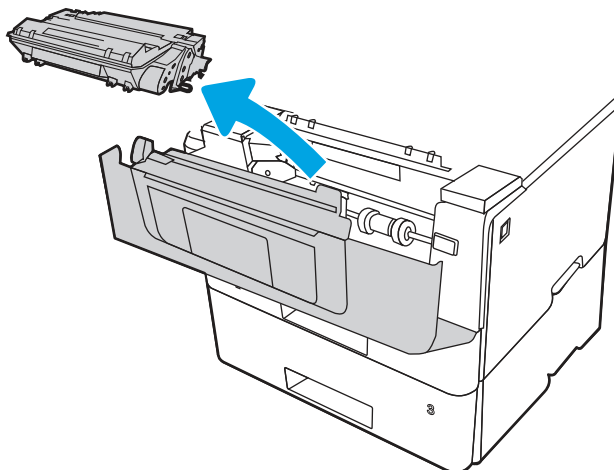
1. Press the front door release button.



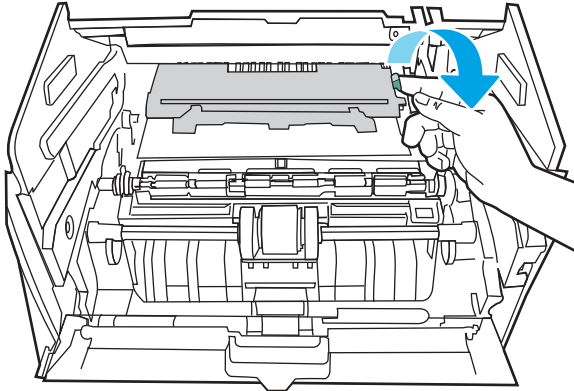
2. Open the front door.



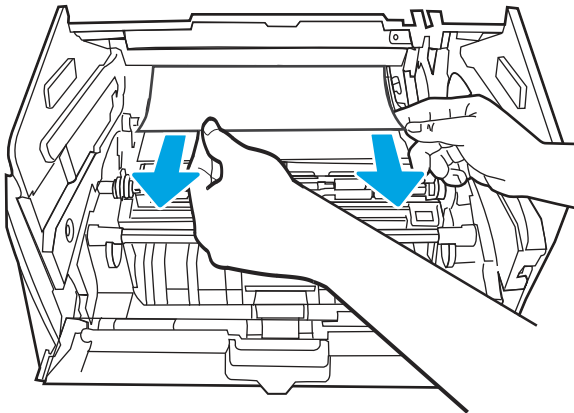
3. Remove the toner cartridge.



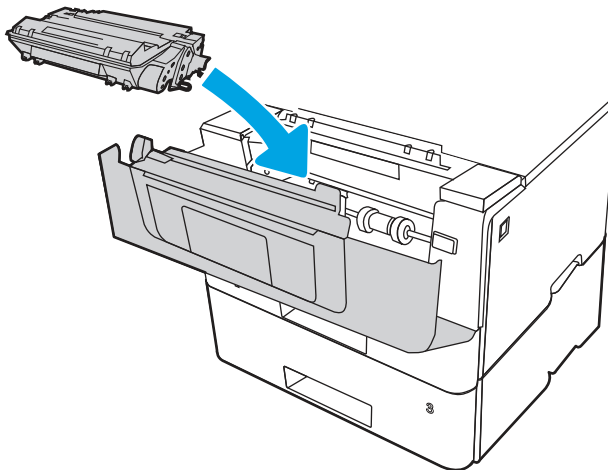
4. Lift the jam-access cover.



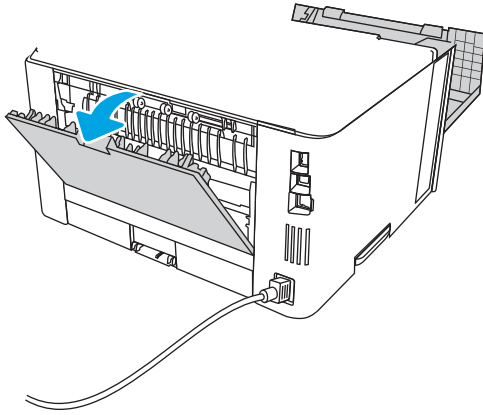
5. Remove any jammed paper.





6. Install the toner cartridge.



7. Open the front door and the rear door.

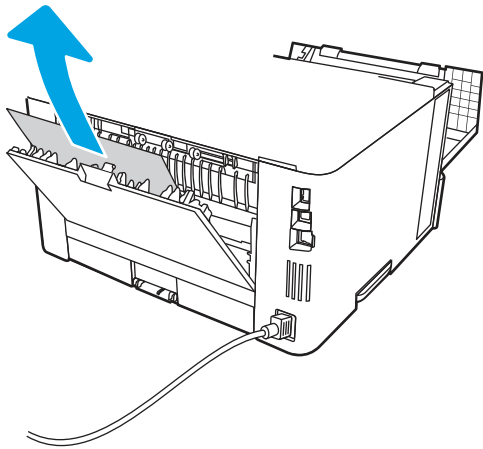


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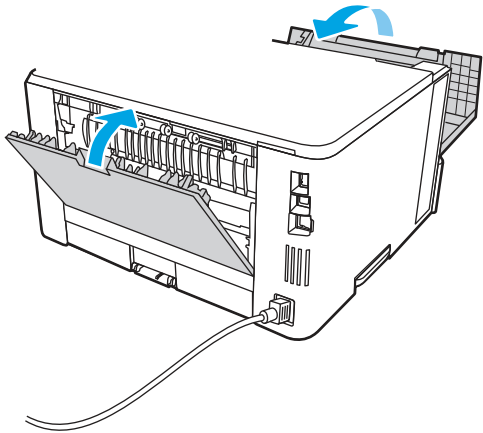
 **CAUTION:**  The fuser can be hot while the printer is in use. Wait for the fuser to cool before handling it.

---

8. If jammed paper is visible, remove any jammed paper from the rear door area.

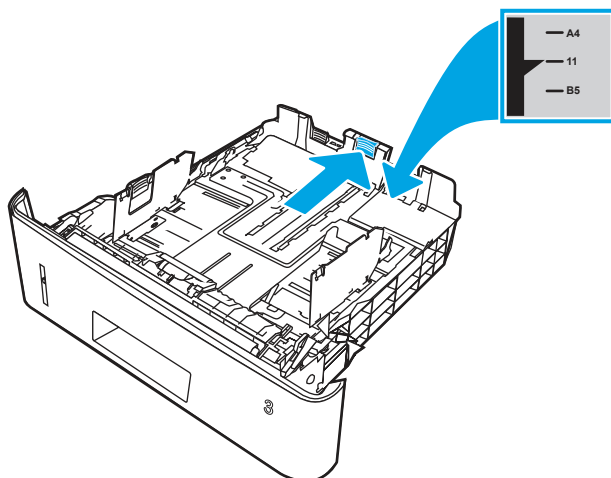


9. Close the rear door and the front door.

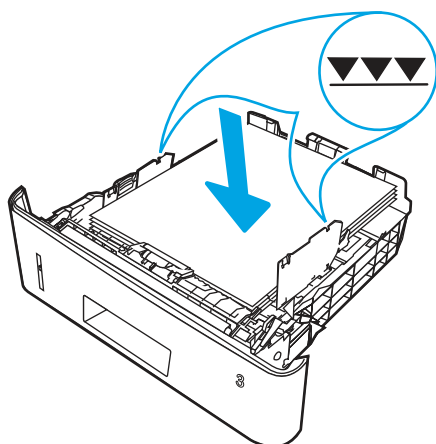




10. If the error persists, verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.



11. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.




12. If the error persists, contact your HP-authorized service or support provider, or contact customer support at [www.hp.com/go/contactHP](http://www.hp.com/go/contactHP).

### 13.10, 13.11, 13.13 jam error in the output bin

Use the following procedure to check for paper in all possible jam locations related to the output bin.

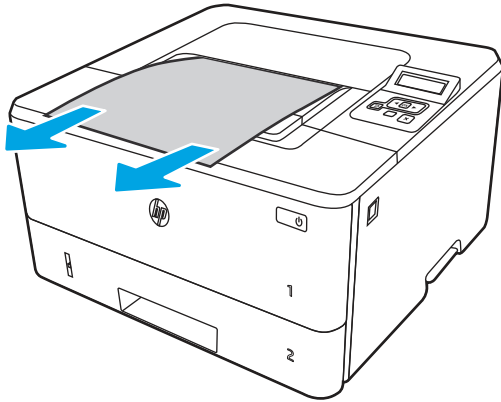
#### Recommended action for customers

- 13.10, 13.11, 13.13 jam error in the output bin

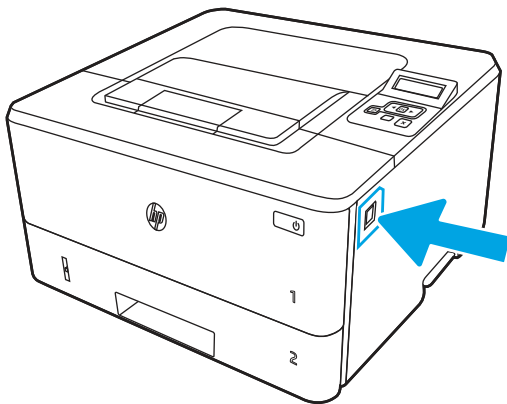
 **NOTE:** Although the jam reports as an output bin jam the paper might be jammed in the rear door.

 [View a video of how to clear a paper jam in the output bin](#)

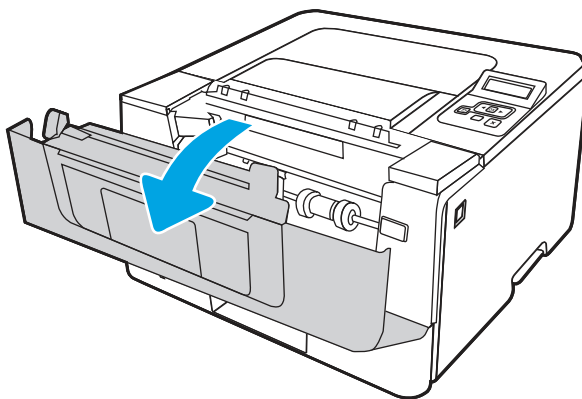
1. If paper is visible in the output bin, grasp the leading edge and remove it.



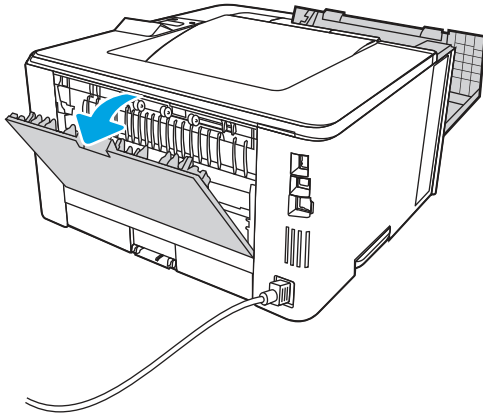
2. Press the front door release button.



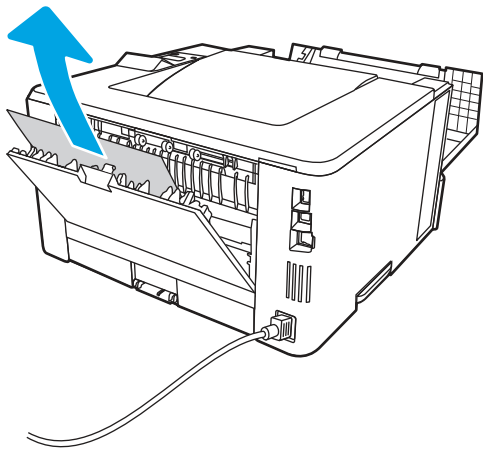
3. Open the front door.



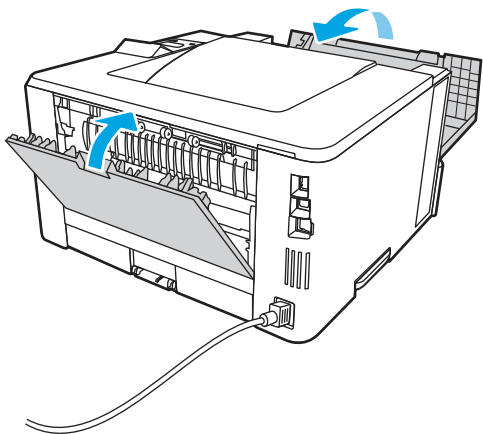
4. Open the rear door.



5. Remove any jammed paper from the rear door area.



6. Close the rear door and the front door.



### 13.14, 13.15 jam error in the duplexer

Use the following procedure to check for paper in all possible jam locations in the automatic duplexer.

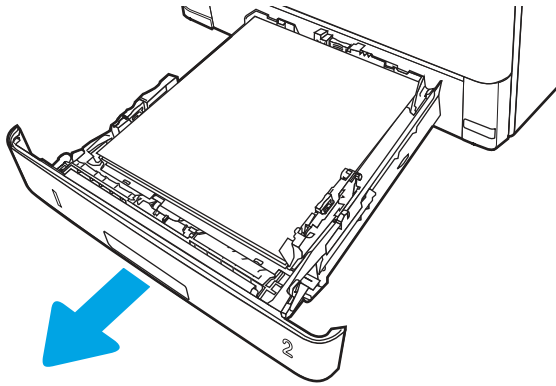
#### Recommended action for customers

When a jam occurs, the control panel displays an animation that assists in clearing the jam.

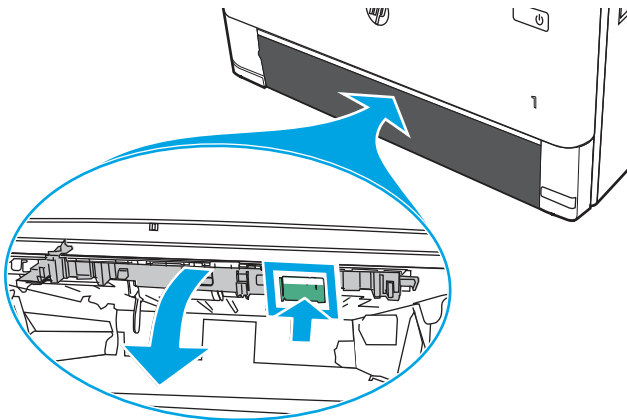
- **13.14, 13.15 jam error in the duplexer**

 [View a video of how to clear a paper jam in the duplexer](#)

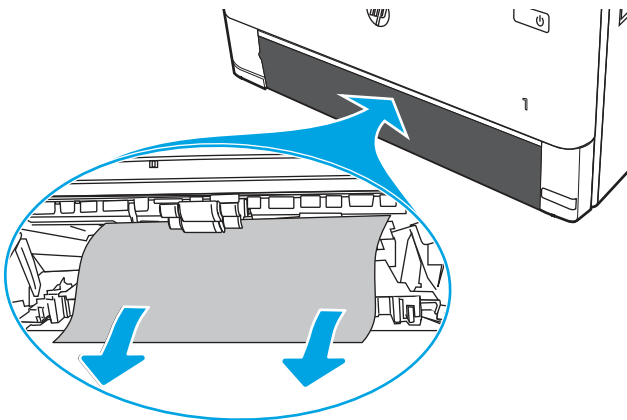
1. Completely remove Tray 2 from the printer.



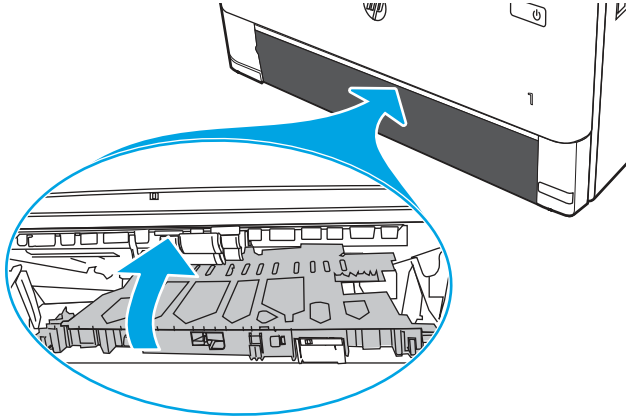
2. Push the green button to release the duplex pan.



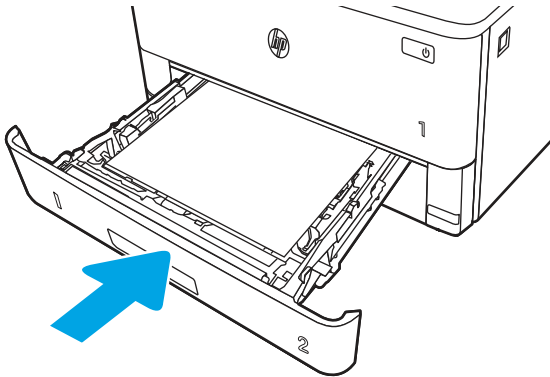
3. Remove any jammed paper.



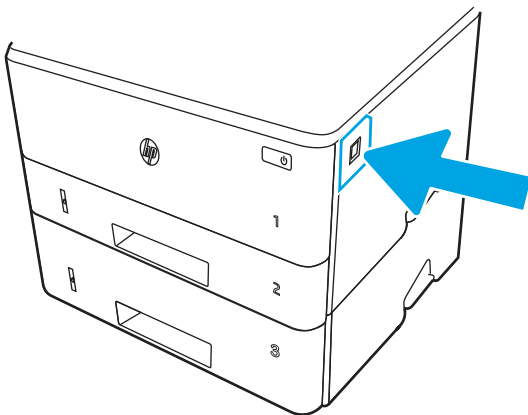
4. Close the duplex pan.



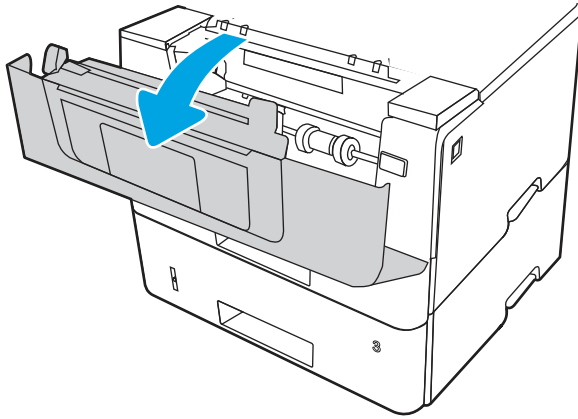
5. Reinsert Tray 2.



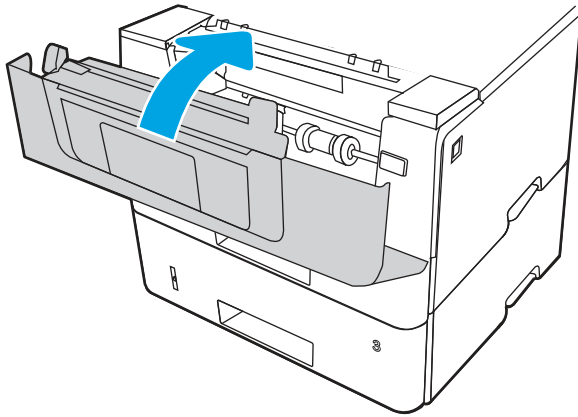
6. Press the front door release button.



7. Open the front door.




8. Close the front door.



## Clear paper jams (MFP)

Use the procedures in this section to clear jammed paper from the printer paper path.

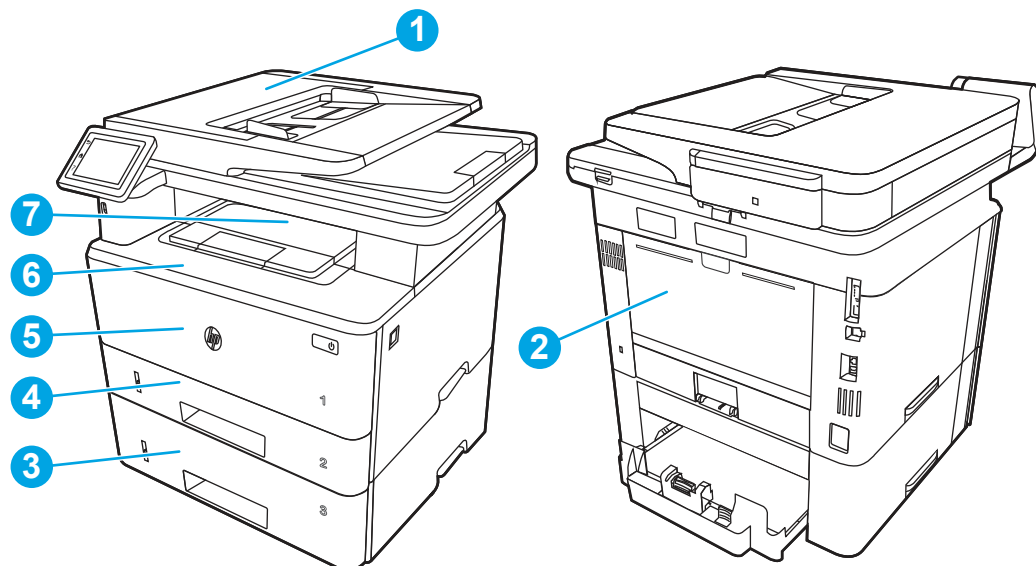
 **NOTE:** To avoid tearing the paper, pull the jammed paper out slowly and gently.

Figures in this section are representational only. The actual printer being serviced might look slightly different depending on the model and installed accessories.

## Paper jam locations

Jams can occur in these locations.

Figure 4-67 Paper jam locations





Number	Description
1	Document feeder
2	Fuser area
3	Tray 3 (optional)
4	Tray 2 Duplexing area (remove Tray 2 for access)
5	Tray 1
6	Toner cartridge area (open the front door for access)
7	Output bin



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

### Experiencing frequent or recurring paper jams?

Follow the steps to solve problems with frequent paper jams. If the first step does not resolve the problem continue with the next step until you have resolved the problem.

 **NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

1. If paper has jammed in the printer, clear the jam and then print a configuration page to test the printer.
2. Check that the tray is configured for the correct paper size and type on the printer control panel. Adjust paper settings if necessary.
  - a. From the Home screen on the printer control panel, swipe the tab at the top of the screen downward to open the Dashboard, and then touch the Setup icon .
  - b. Touch [Paper setup](#).

- c. Select the tray from the list.
      - d. Select [Paper Type](#), and then select the type of paper that is in the tray.
      - e. Select [Paper Size](#), and then select the size of paper that is in the tray.
  3. Turn the printer off, wait 30 seconds, and then turn it on again.
  4. Print a cleaning page to remove excess toner from inside the printer:
    - a. From the Home screen on the printer control panel, swipe the tab at the top of the screen downward to open the Dashboard, and then touch the Setup icon .
    - b. Open the following menus:
      - i. [Printer Maintenance](#)
      - ii. [Print Quality Tools](#)
      - iii. [Cleaning Page](#)
  5. Print a configuration page to test the printer:
    - a. From the Home screen on the printer control panel, swipe the tab at the top of the screen downward to open the Dashboard, and then touch the Setup icon .
    - b. Open the following menus:
      - i. [Reports](#)
      - ii. [Printer Configuration Report](#)

If none of these steps resolves the problem, the printer might need service. Contact HP customer support.

### 31.13 jam error in the document feeder

Use the following procedure to check for paper in all possible jam locations related to the document feeder.

#### Recommended action for customers

When a jam occurs, the control panel displays an animation that assists in clearing the jam.

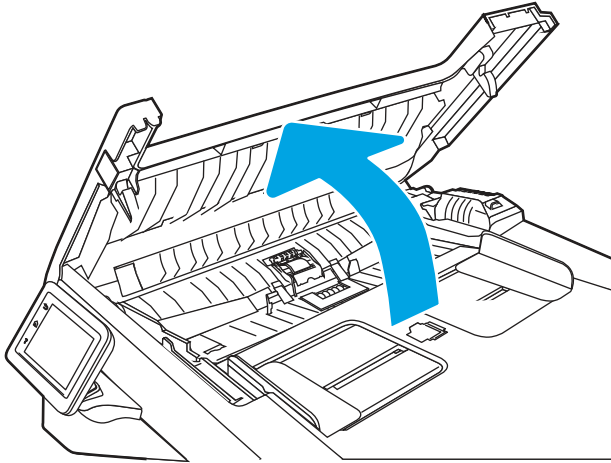
- **Document feeder job error, pick error.**



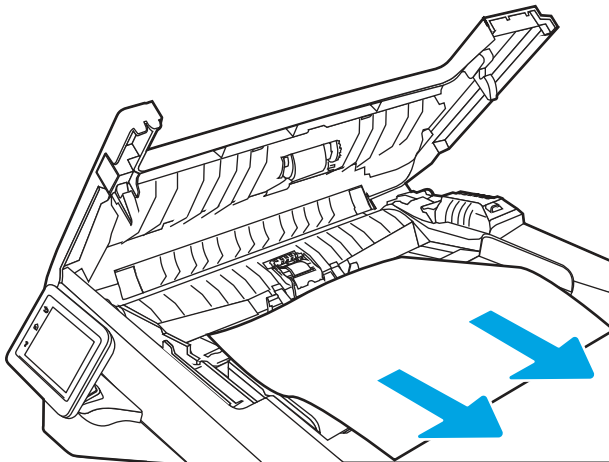
[View a video of how to clear a paper jam in the document feeder](#)



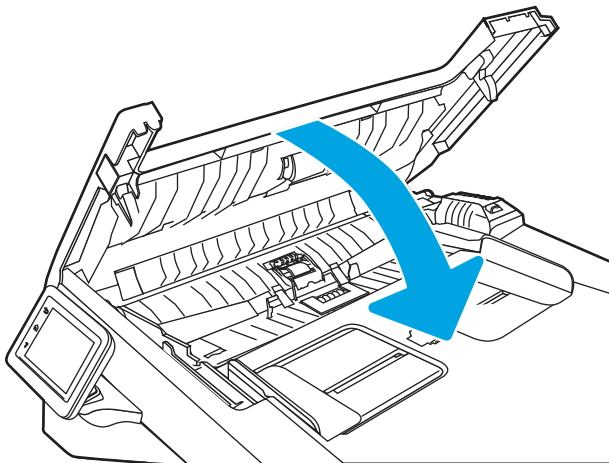
1. Open the document feeder cover.



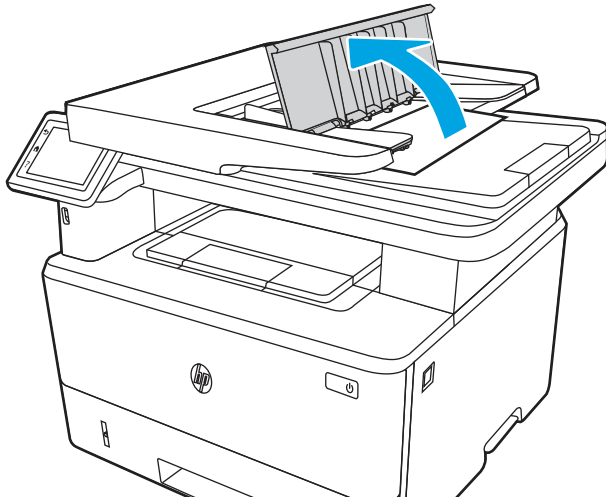
2. Gently pull the jammed paper out.



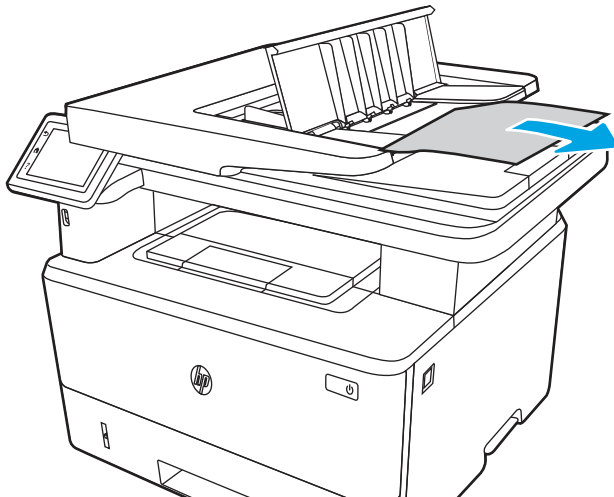
3. Close the document feeder cover. Make sure it is completely closed.



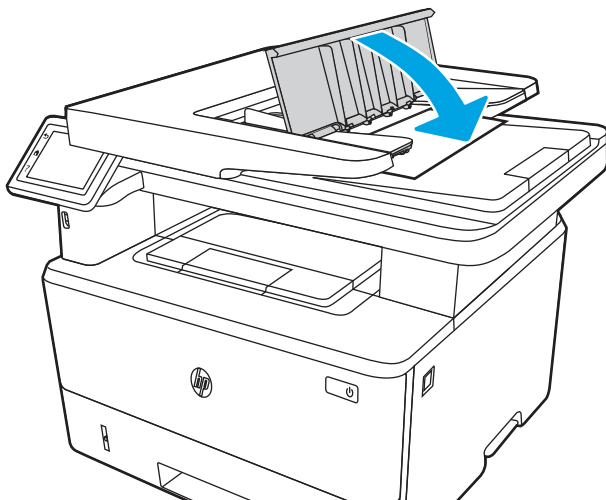
4. Open the document feeder tray cover.



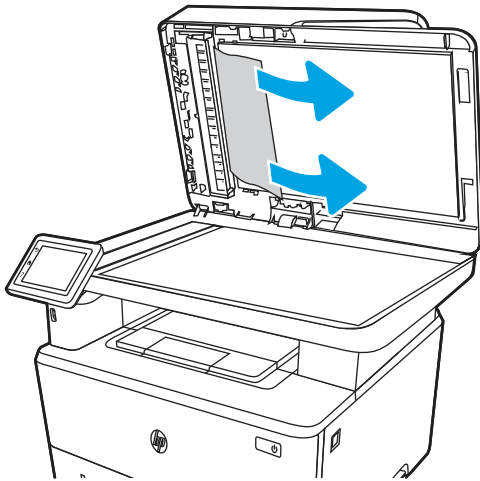
5. Gently pull the jammed paper out.



6. Close the document feeder tray cover.

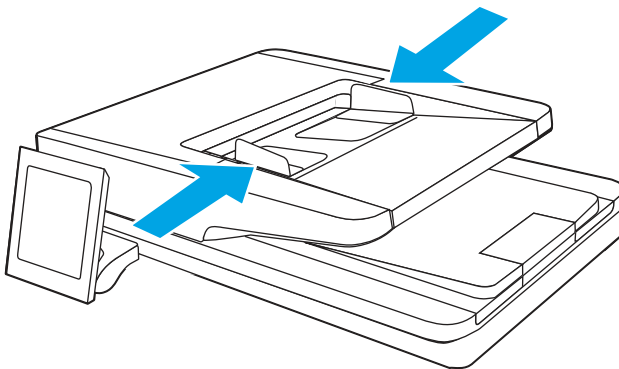


7. Open the scanner lid. If paper is jammed in the scanner lid, gently pull it out, and then close the scanner lid.





8. Ensure that the input tray is not overloaded and that the tray guides are set to the correct size. Make sure that the paper stack is correctly aligned at the center of the input tray when paper is loaded in the tray. The correct position of the loaded paper is parallel with the direction of travel into the document feeder paper path.

**Figure 4-68** Set the ADF guides



---

 **NOTE:** To avoid jams, make sure the guides in the document feeder input tray are adjusted correctly. Remove all staples, paper clips, or tape from original documents.

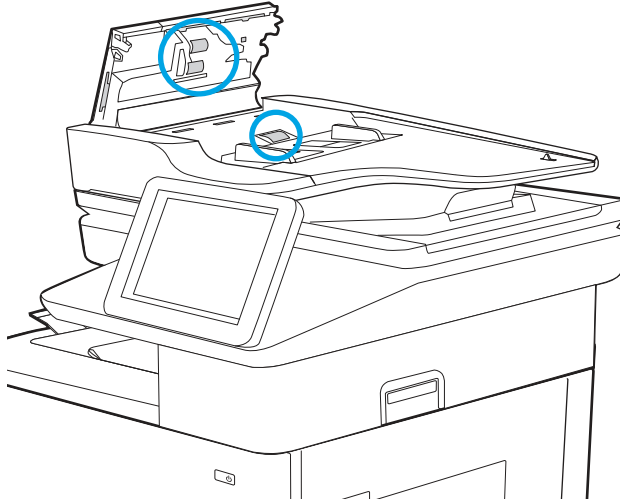
 **NOTE:** Original documents that are printed on heavy, glossy paper can jam more frequently than originals that are printed on plain paper.

---


9. Open the document feeder and check and clean the Document Feeder Kit rollers and separation pad by removing any visible lint or dust from each of the feed rollers and the separation pad using

a clean lint-free cloth moistened with warm water. View the [How to clean the pick rollers in HP LaserJet and PageWide printers](#) for detailed instructions.

**Figure 4-69 Clean the document feeder rollers**




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 **NOTE:** Lift up the roller assembly to access and clean the second roller

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10. If the error persists, contact your HP-authorized service or support provider, or contact customer support at [www.hp.com/go/contactHP](http://www.hp.com/go/contactHP).

---

 **NOTE:** To avoid jams, make sure the guides in the document feeder input tray are adjusted tightly against the document. Remove all staples and paper clips from original documents.

 **NOTE:** Original documents that are printed on heavy, glossy paper can jam more frequently than originals that are printed on plain paper.

---

## 13.02 jam error tray 1

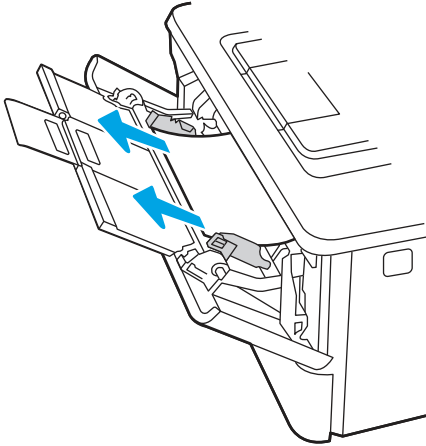
Use the following procedure to clear paper jams in Tray 1.

### Recommended action for customers

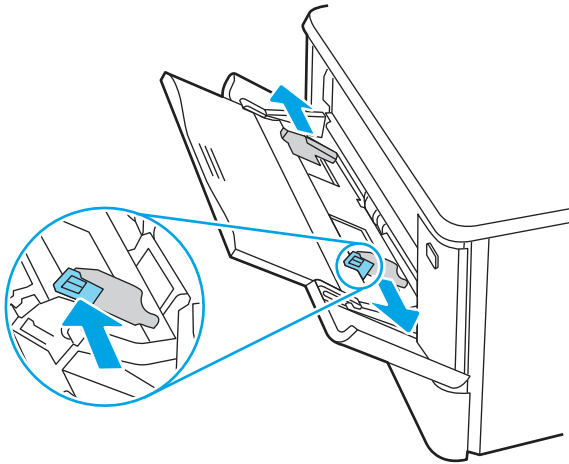
- 13.02 jam error in tray 1

 [View a video of how to clear a paper jam in tray 1](#)

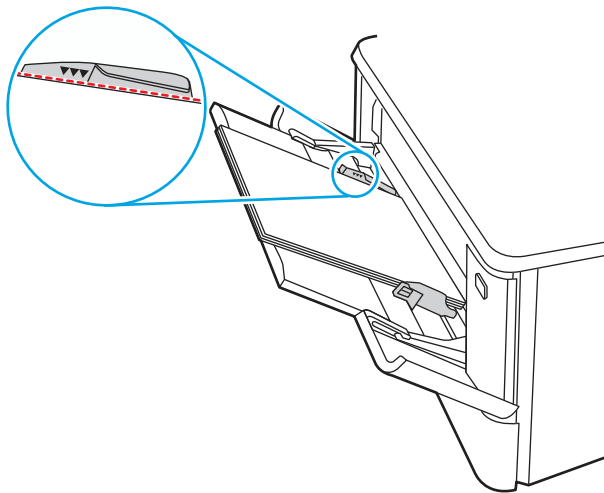
1. Slowly pull the jammed paper out of the printer.



2. Adjust the paper guides to the correct paper size, then reload paper into the tray.

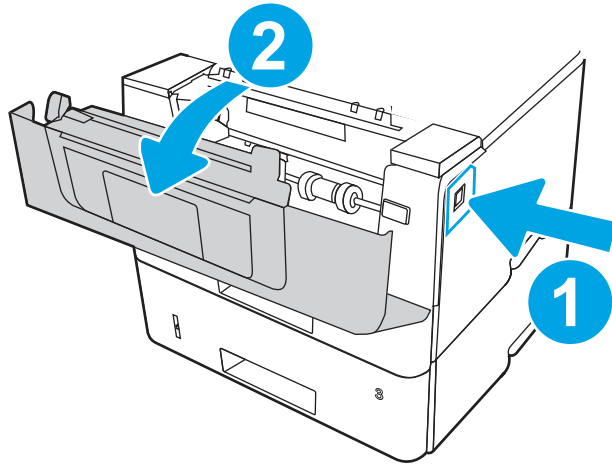


3. Ensure the tray is not overfilled. Paper should be below the 3 triangles in the following image.



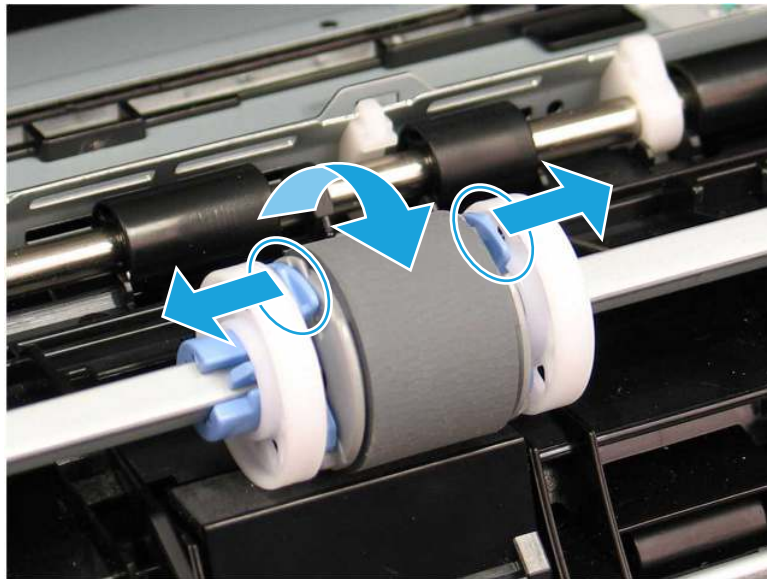
4. Ensure the type and quality of the paper being used meets the HP specifications for the printer.

5. If the error persists, clean the tray 1 pickup roller and separation pad.
  - a. Press the door-release button, and then open the toner-cartridge door



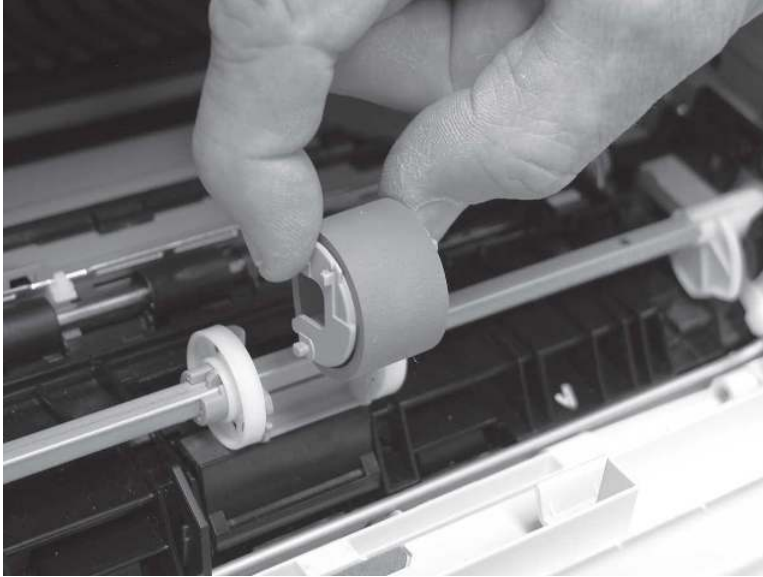
- b. To clean the roller thoroughly, release two tabs between the roller collar and roller, and then rotate the top of the roller out and away from the printer.

**Figure 4-70** Release the roller



- c. Remove the roller.

**Figure 4-71** Remove the roller



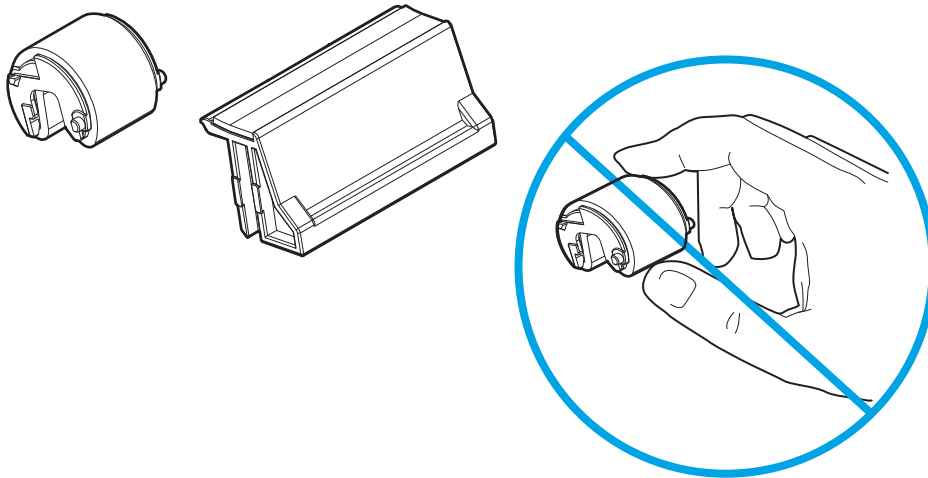
- d. With the Tray 1 roller removed the separation pad is accessible in the printer (it does not need to be removed to be cleaned).
- e. Use a damp, lint-free cloth to gently clean the rollers.

---

**CAUTION:** When handling the roller and/or pad, avoid touching the spongy surfaces. Skin oils and fingerprints on a roller surface can cause print-quality problems.

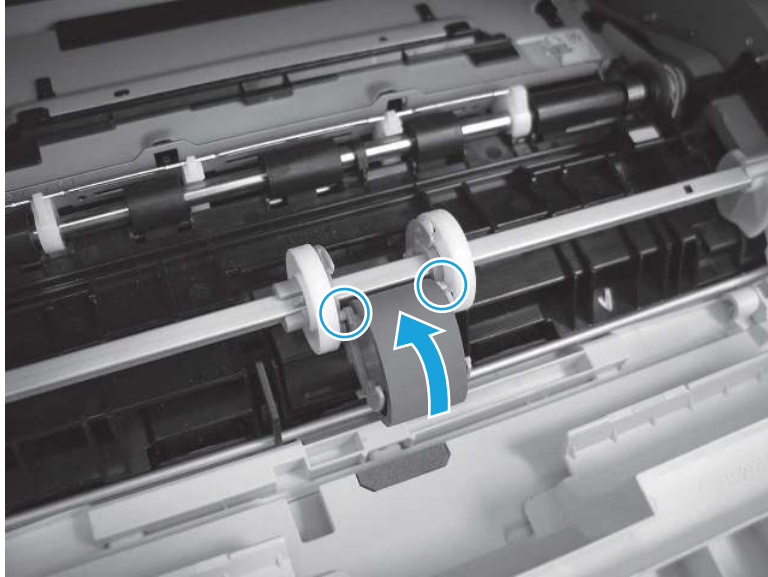
---

**Figure 4-72** Clean the roller and pad



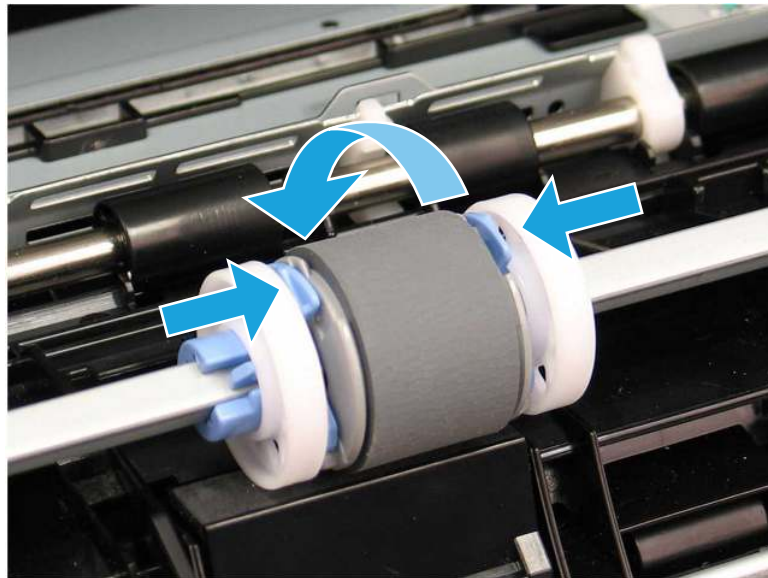
- f. Position the pickup roller with the pins in the provided slots on the holder, and then rotate the top of the roller up and toward the printer.

**Figure 4-73** Install the roller



- g. Continue to rotate the top of the roller toward the printer (callout 1), until two tabs (callout 2) snap into place.

**Figure 4-74** Engage two tabs



- h. Close the toner-cartridge door.
6. Perform a test page from tray 1 to see if issue is resolved.
  7. If the error persists, contact your HP-authorized service or support provider, or contact customer support at [www.hp.com/go/contactHP](http://www.hp.com/go/contactHP).



## 13.03 jam error tray 2

Use the following procedure to check for paper in all possible jam locations related to Tray 2.

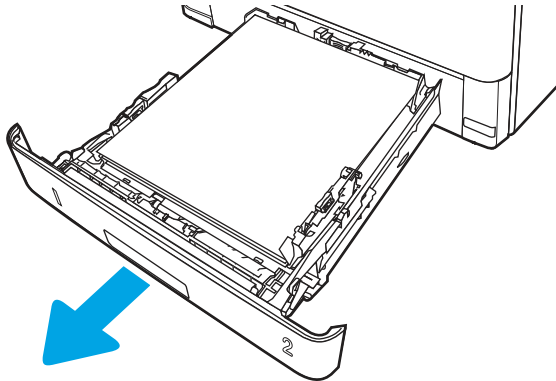
### Recommended action for customers

- **13.03 jam error in tray 2**

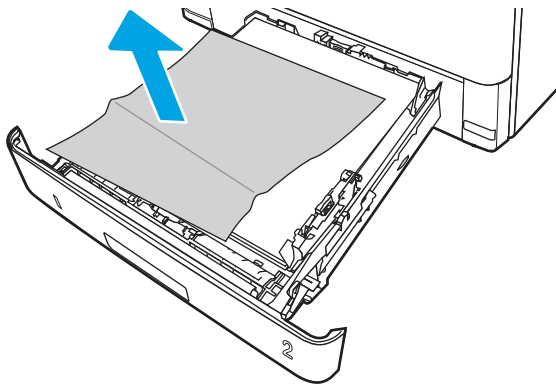
When a jam occurs, the control panel displays an animation that assists in clearing the jam.

 [View a video of how to clear a paper jam in tray 2](#)

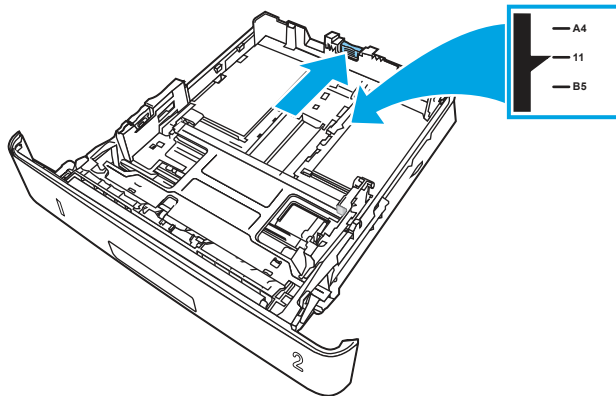
1. Remove the tray from the printer.



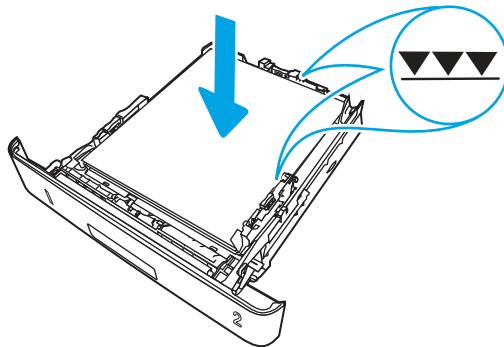
2. Remove the paper from the tray, and discard any damaged paper.



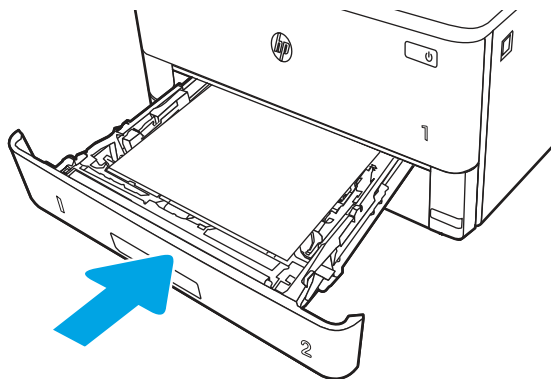
3. Verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.



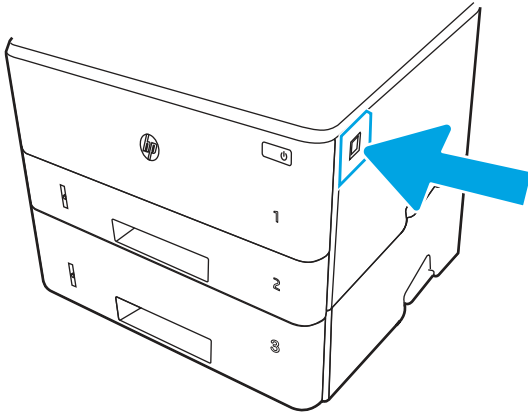
4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.



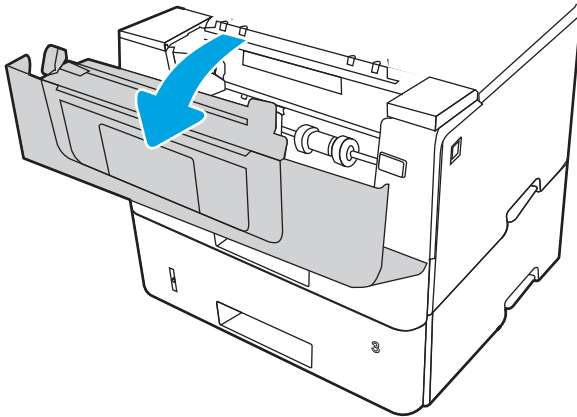
5. Reinsert and close the tray.



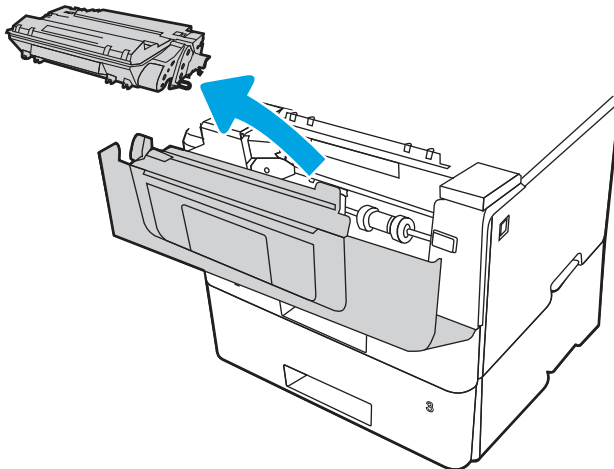
6. Press the front door release button.



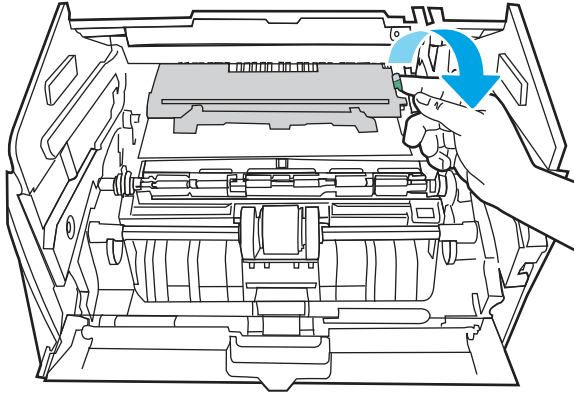
7. Open the front door.



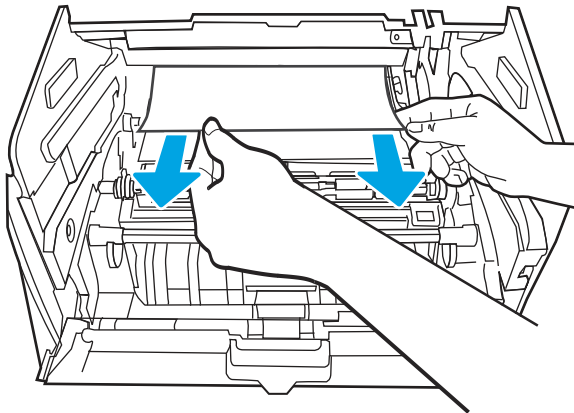
8. Remove the toner cartridge.



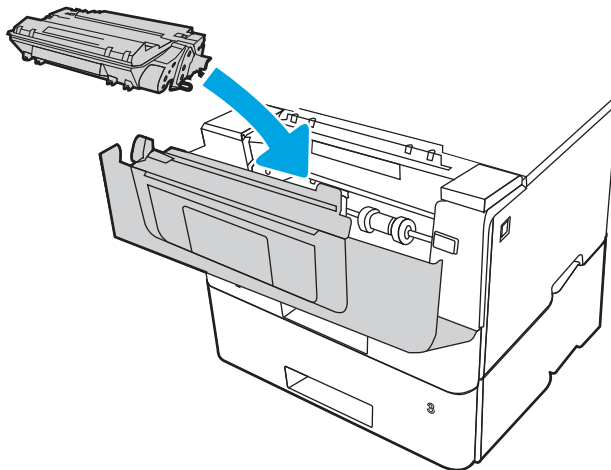
9. Lift the jam-access cover.



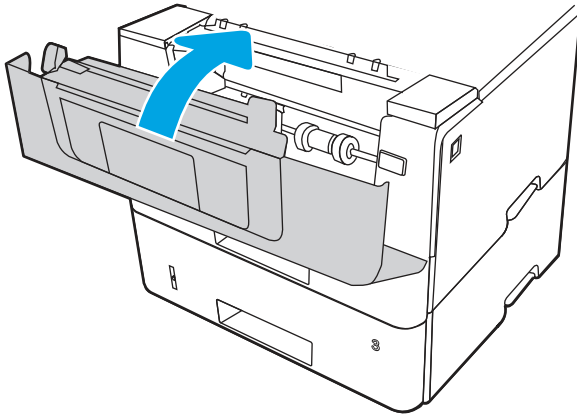
10. Remove any jammed paper.



11. Install the toner cartridge.



12. Close the front door.

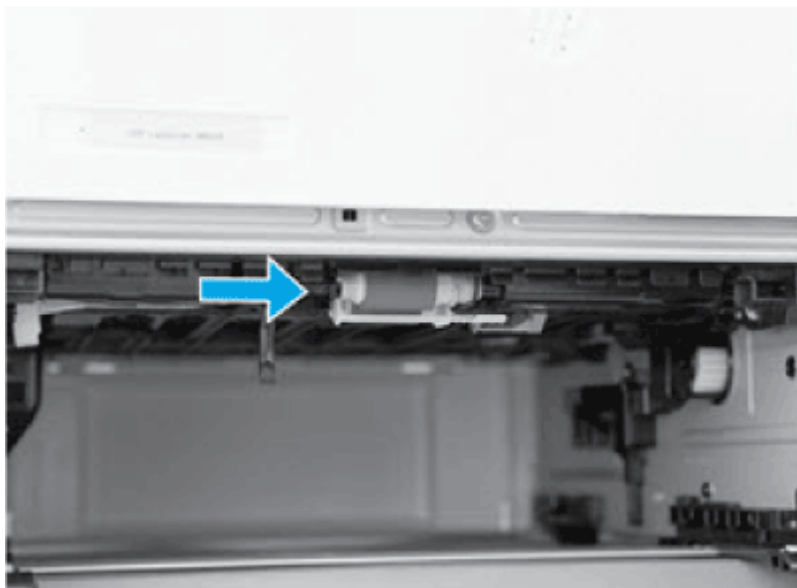


13. Ensure the type and quality of the paper being used meets the HP specifications for the printer.
14. If the error persists, clean the tray 2 pickup and feed rollers.



**NOTE:** A SFP printer is shown in this section. However, the procedure is correct for all printer models.

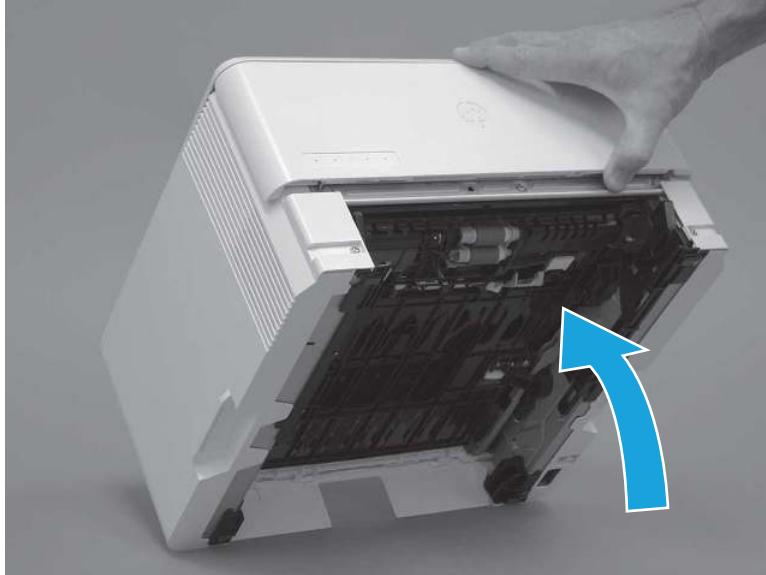
- a. Remove tray 2 and locate the paper tray rollers.



- b. Clean the rollers by gently wiping them with a damp, lint-free cloth.
- c. If needed for better access to the rollers, carefully rotate the printer backward.

**CAUTION:** To avoid damage to the rear cassette cover, keep it in the closed position

Figure 4-75 Tilt the printer backward



- d. Continue rotate the printer backward until it rests on the rear cover, bottom-side face forward.

---

**⚠ CAUTION:** **MFP printers only:** The document feeder is not captive and can unexpectedly open when the printer is tilted backward.

---

Figure 4-76 Place the printer bottom-side face forward



- e. Use a damp, lint-free cloth to gently clean the rollers by wiping them with a back and forth motion.

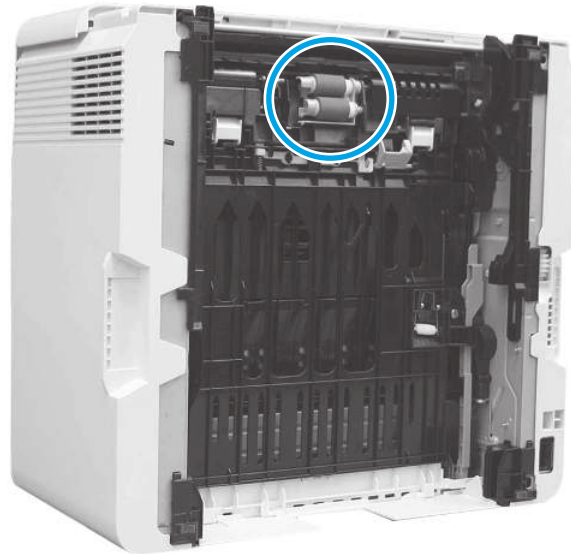
---

**📝 NOTE:** The roller in the tray (cassette) can be cleaned without removing it from the tray.

**⚠ CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

---

Figure 4-77 Clean the rollers



- f. Carefully rotate the printer forward to position it back on its base. Reinstall the tray 2 paper tray.
15. Perform a test print from tray 2 to see if the issue is resolved.
16. If the error persists, contact your HP-authorized service or support provider, or contact customer support at [www.hp.com/go/contactHP](http://www.hp.com/go/contactHP).

### 13.04 jam error tray 3

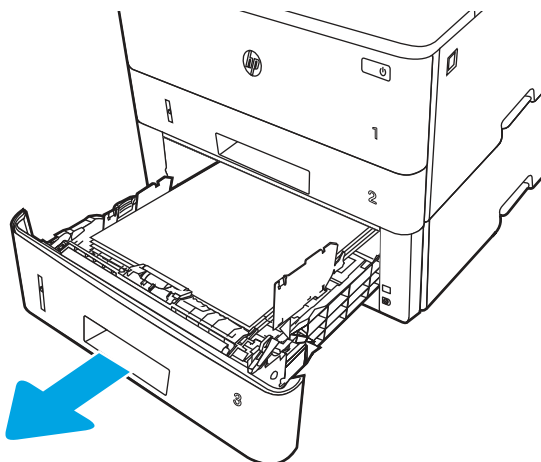
Use the following procedure to check for paper in all possible jam locations related to Tray 3.

#### Recommended action for customers

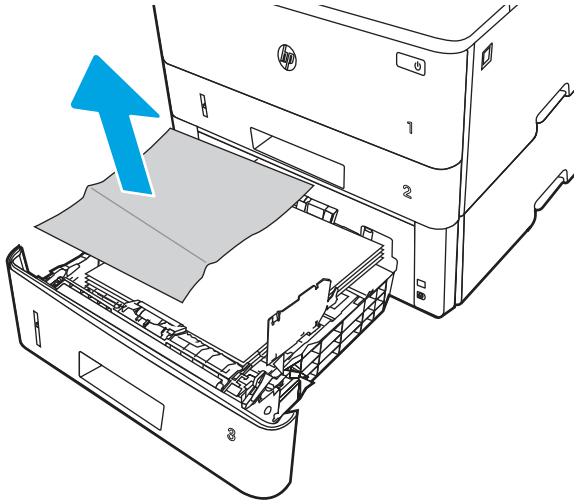
- 13.04 jam error in tray 3

 [View a video of how to clear a paper jam in tray 3](#)

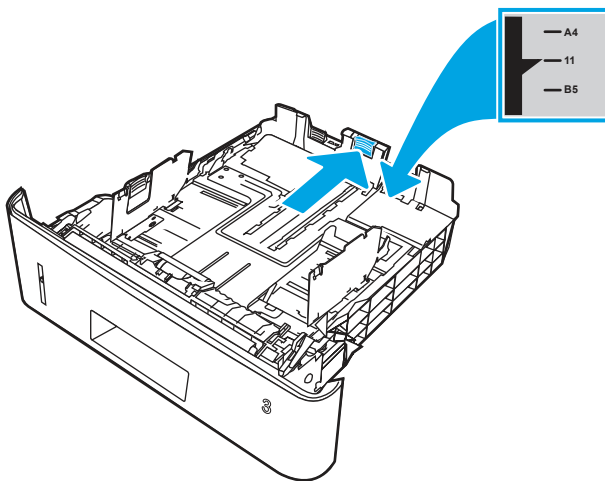
1. Remove the tray from the printer.



2. Remove the paper from the tray, and discard any damaged paper.

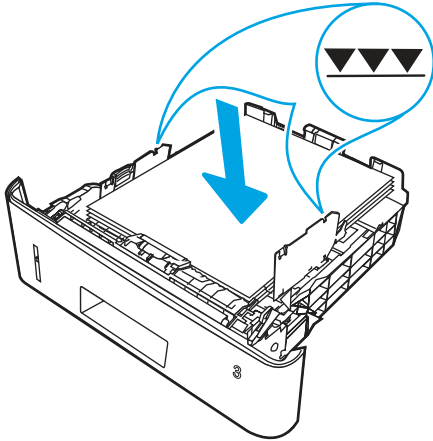


3. Verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.

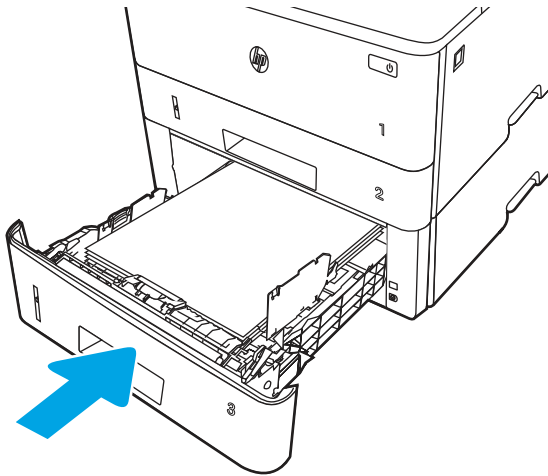




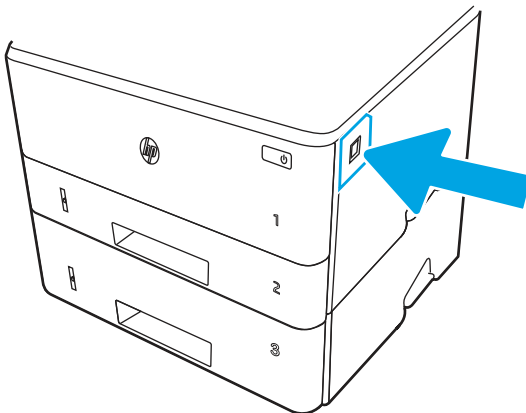
4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.



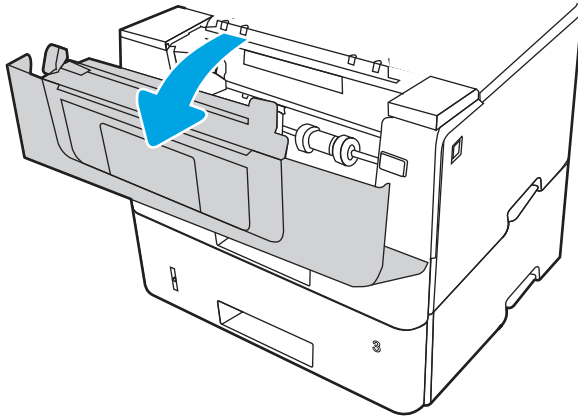
5. Reinsert and close the tray.



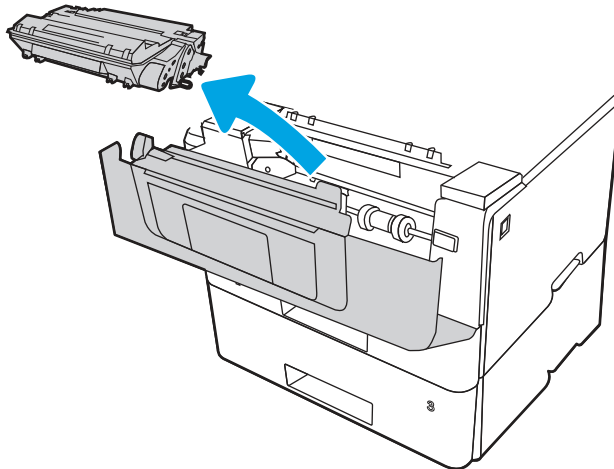
6. Press the front door release button.



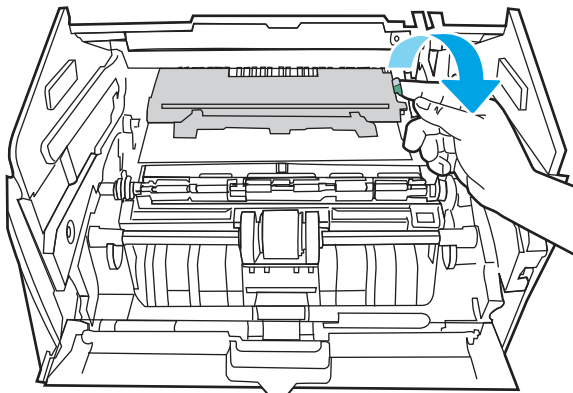
7. Open the front door.



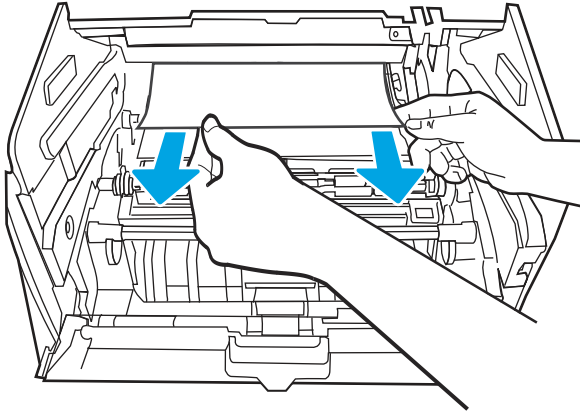
8. Remove the toner cartridge.



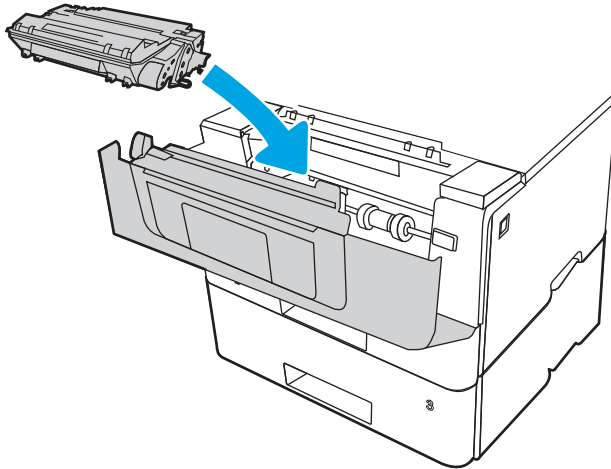
9. Lift the jam-access cover.



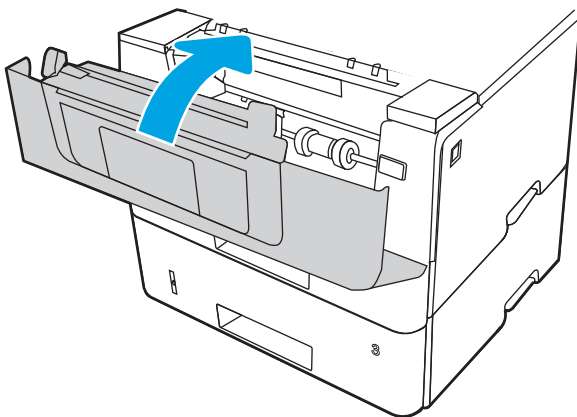
10. Remove any jammed paper.



11. Install the toner cartridge.

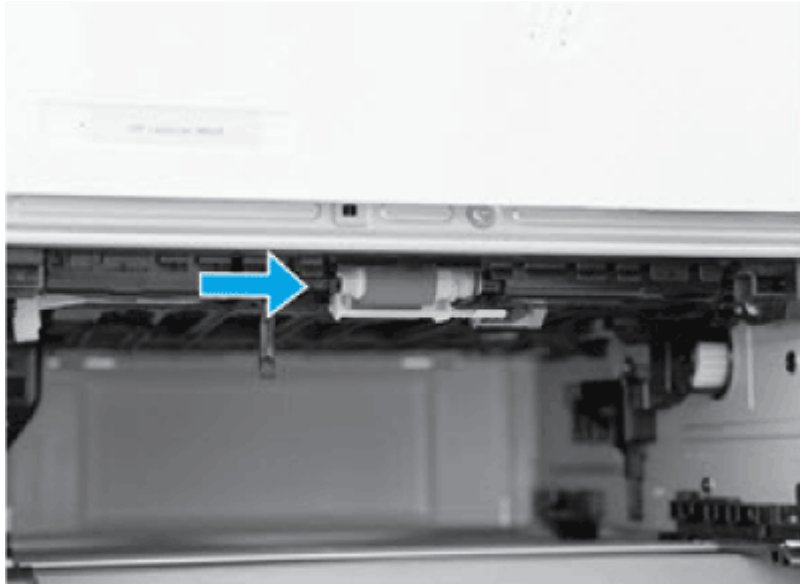


12. Close the front door.



13. If the error persists, ensure the type and quality of the paper being used meets the HP specifications for the printer.
14. If the error persists, clean the tray 3 pickup and feed rollers.

- a. Remove tray 3 and locate the paper tray rollers.



- b. Clean the rollers by gently wiping them with a damp, lint-free cloth.
15. Perform a test print from tray 3 to see if the issue is resolved.
  16. If the error persists, contact your HP-authorized service or support provider, or contact customer support at [www.hp.com/go/contactHP](http://www.hp.com/go/contactHP).

### 13.08, 13.09 jam error in the toner cartridge or fuser area

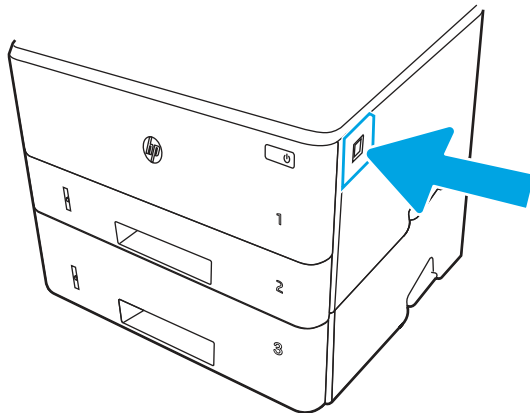
Use the following procedure to check for paper in all possible jam locations in the toner cartridge or fuser area.

#### Recommended action for customers

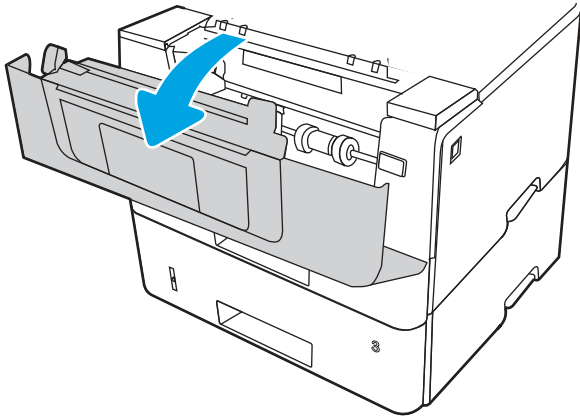
- 13.08, 13.09 jam error in toner cartridge or fuser area

 [View a video of how to clear a paper jam in the toner cartridge or fuser area](#)

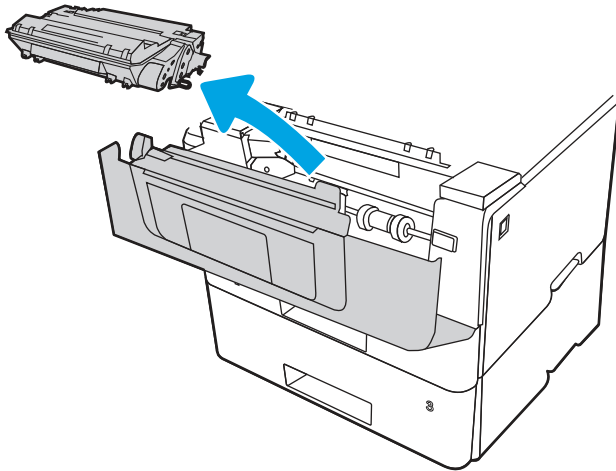
1. Press the front door release button.



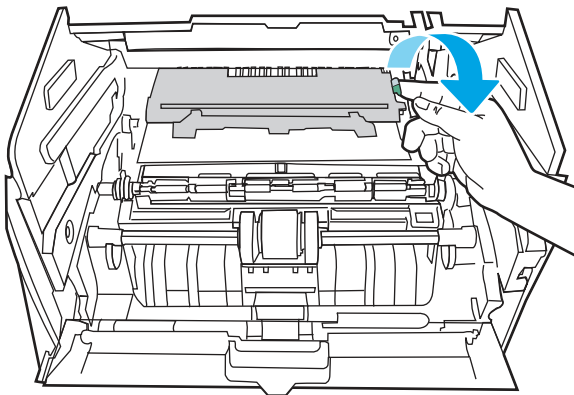
2. Open the front door.



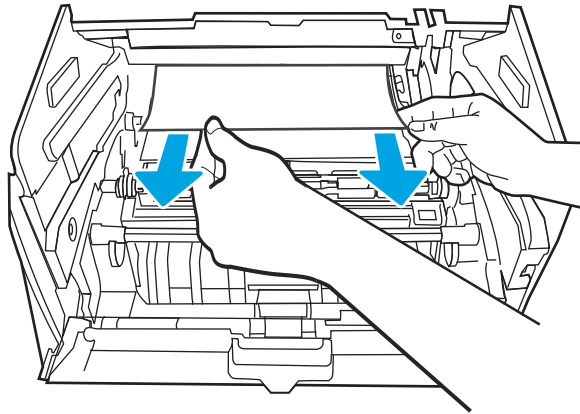
3. Remove the toner cartridge.



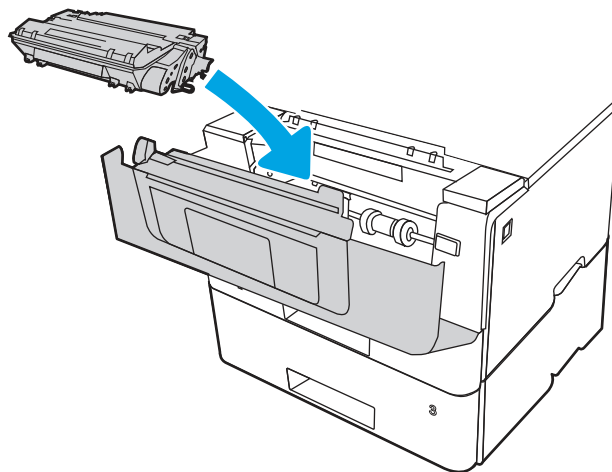
4. Lift the jam-access cover.



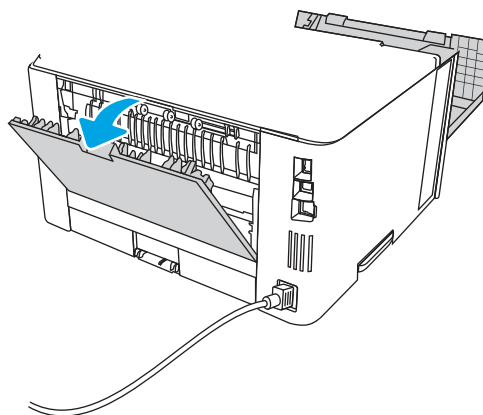
5. Remove any jammed paper.





6. Install the toner cartridge.



7. Open the front door and the rear door.

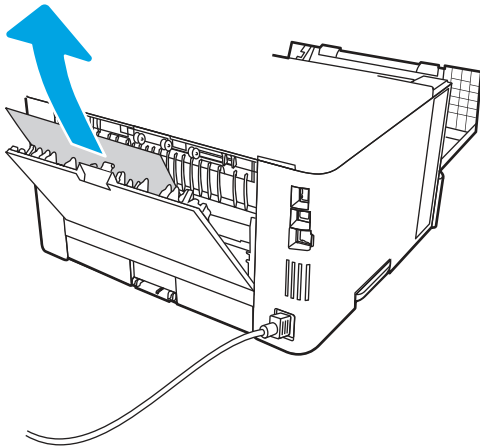


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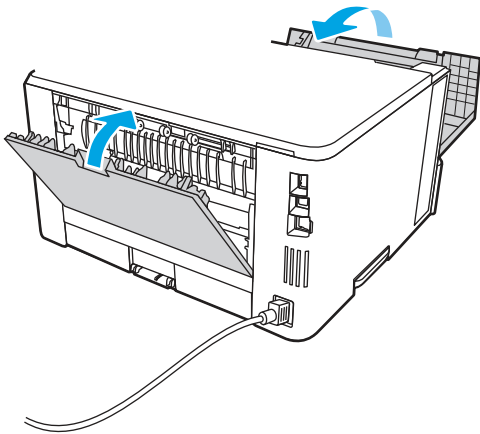
 **CAUTION:**  The fuser can be hot while the printer is in use. Wait for the fuser to cool before handling it.

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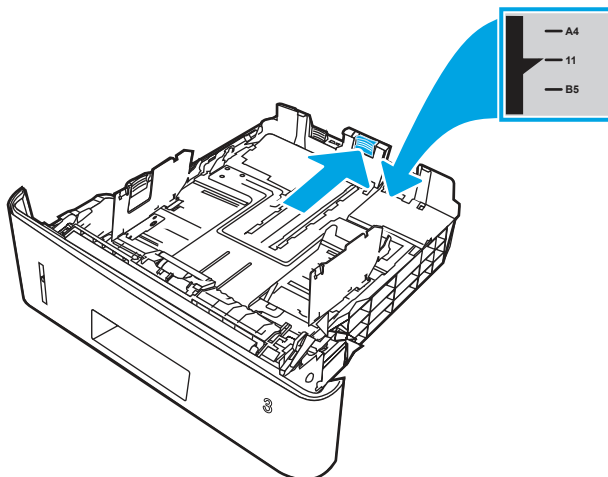
8. If jammed paper is visible, remove any jammed paper from the rear door area.



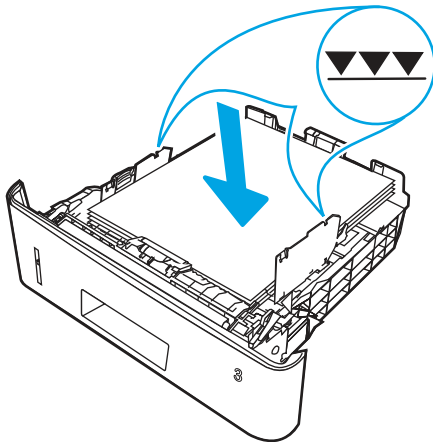
9. Close the rear door and the front door.



10. If the error persists, verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.



11. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.



12. If the error persists, contact your HP-authorized service or support provider, or contact customer support at [www.hp.com/go/contactHP](http://www.hp.com/go/contactHP).

### 13.10, 13.11, 13.13 jam error in the output bin

Use the following procedure to check for paper in all possible jam locations related to the output bin.

#### Recommended action for customers

When a jam occurs, the control panel displays an animation that assists in clearing the jam.

- **Paper is jammed in the output bin**

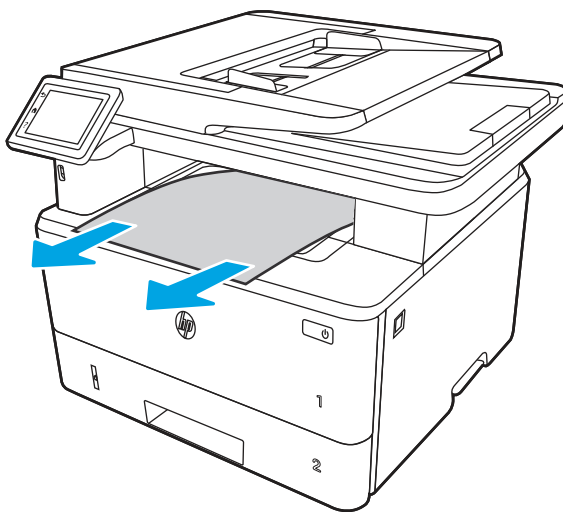


**NOTE:** Although the jam reports as an output bin jam the paper might be jammed in the rear door.



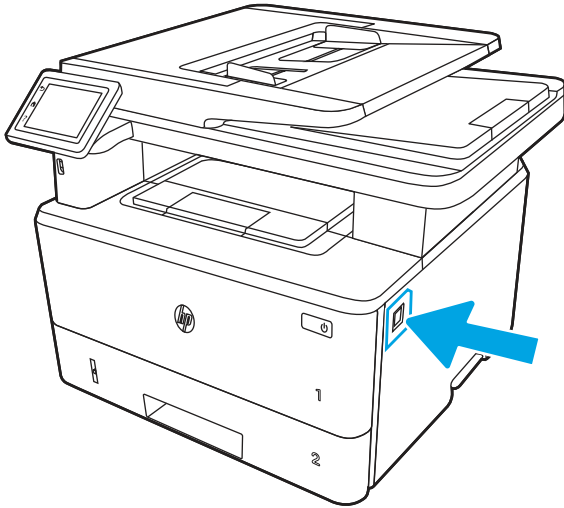
[View a video of how to clear a paper jam in the output bin](#)

1. If paper is visible in the output bin, grasp the leading edge and remove it.

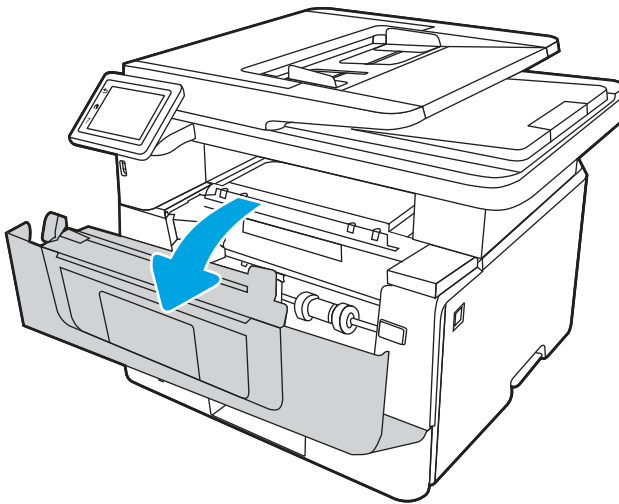




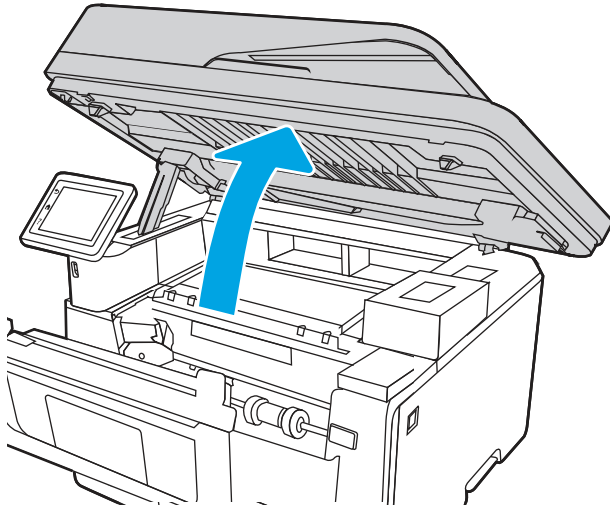
2. Press the front door release button.



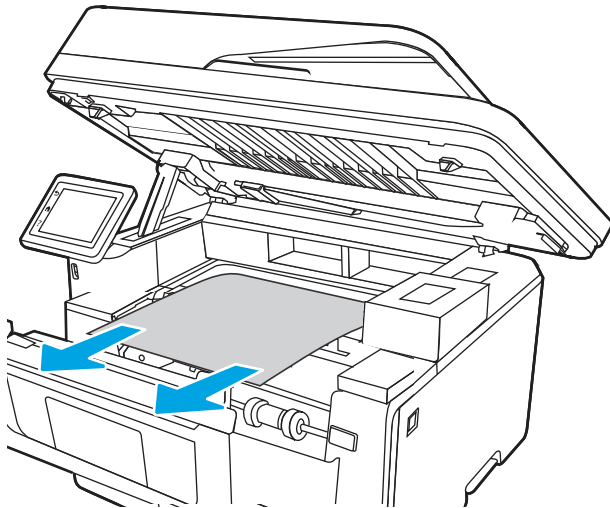
3. Open the front door.



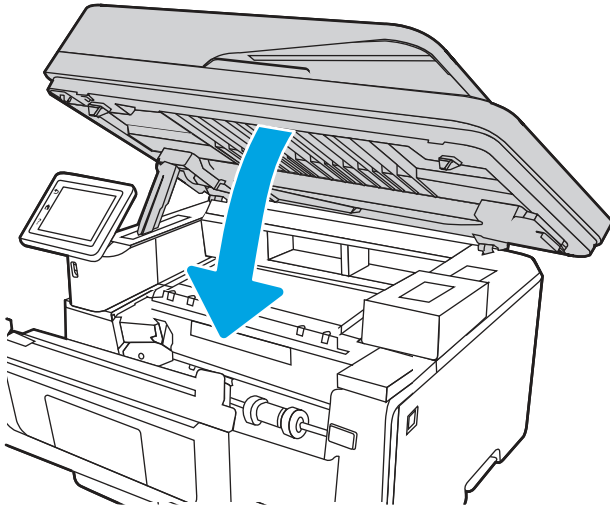
4. Lift the scanner assembly.



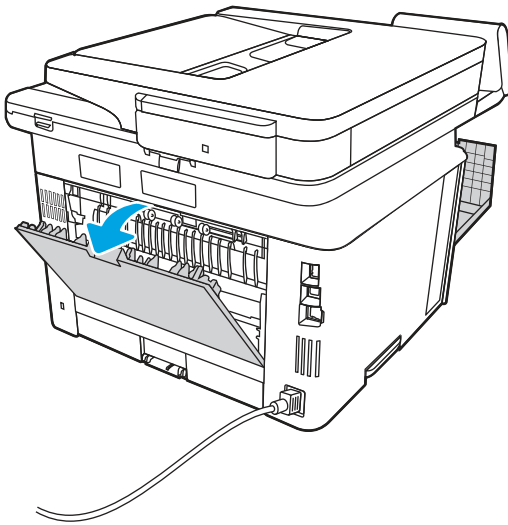
5. Remove any jammed paper.



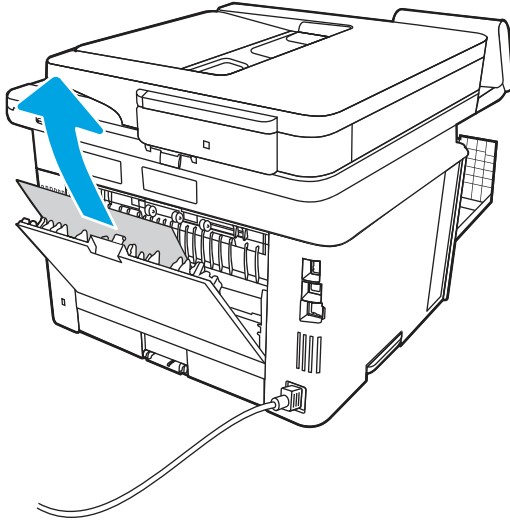
6. Close the scanner assembly.



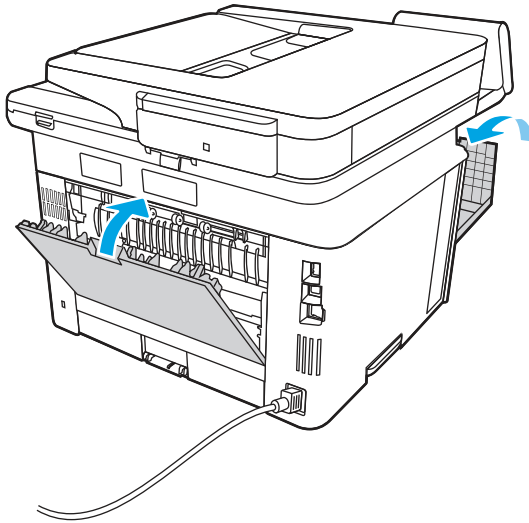
7. Open the rear door.



8. Remove any jammed paper from the rear door area.



9. Close the rear door and the front door.



### 13.14, 13.15 jam error in the duplexer

Use the following procedure to check for paper in all possible jam locations in the automatic duplexer.

#### Recommended action for customers

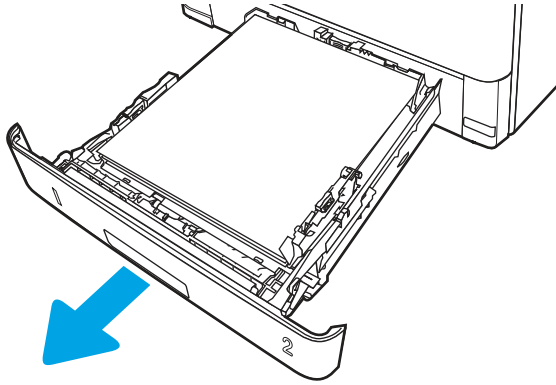
When a jam occurs, the control panel displays an animation that assists in clearing the jam.

- 13.14, 13.15 jam error in the duplexer

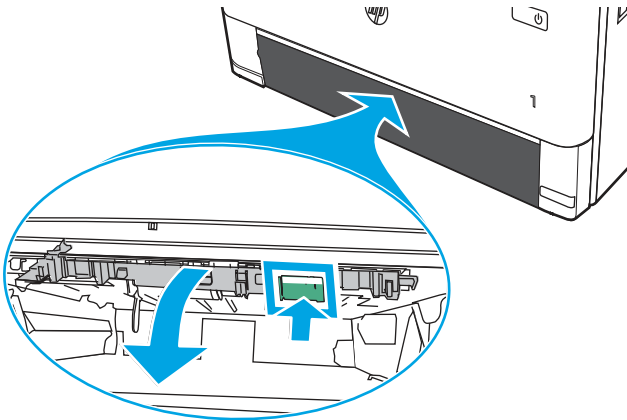


[View a video of how to clear a paper jam in the duplexer](#)

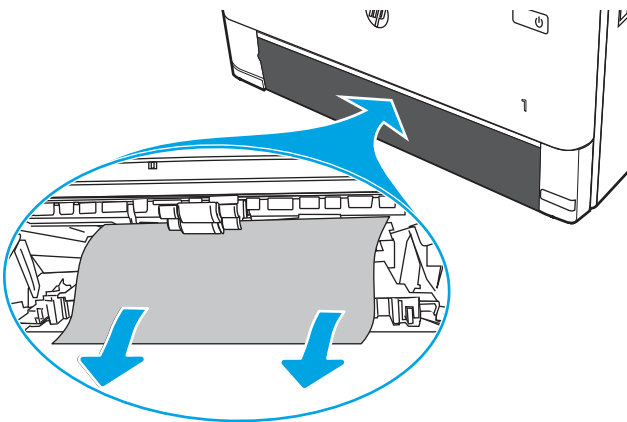
1. Completely remove Tray 2 from the printer.



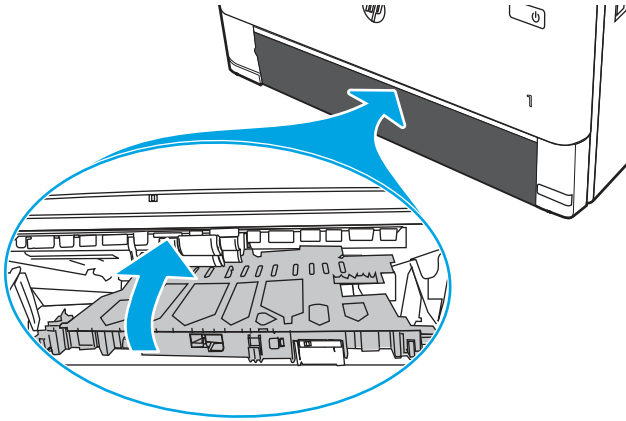
2. Push the green button to release the duplex pan.



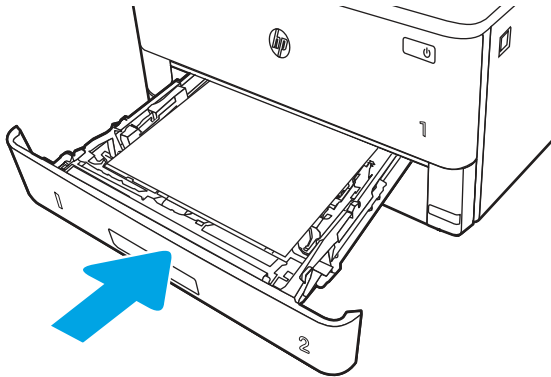
3. Remove any jammed paper.



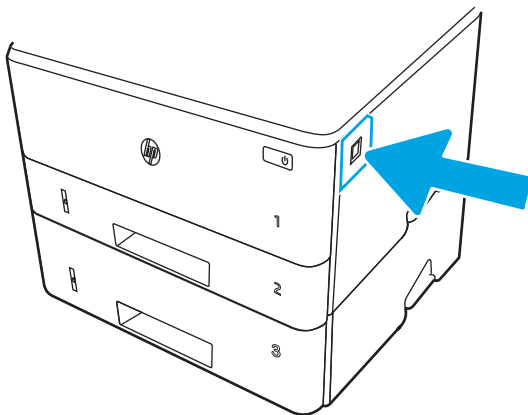
4. Close the duplex pan.



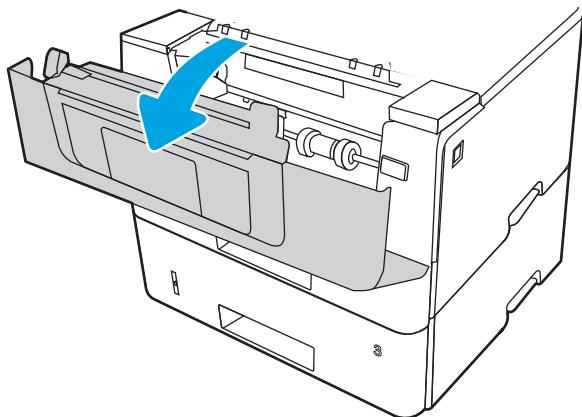
5. Reinsert Tray 2.



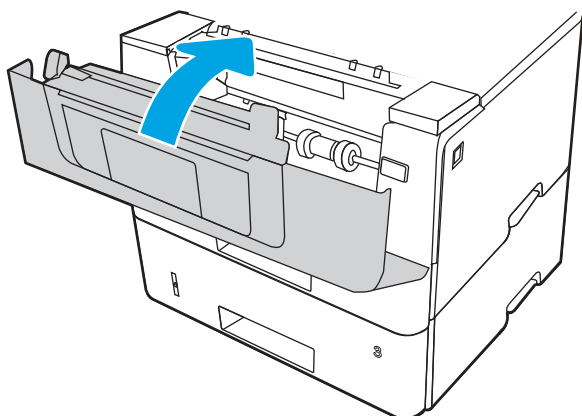
6. Press the front door release button.



7. Open the front door.




8. Close the front door.



## Printer feeds incorrect page size

Review the following information when the printer feeds an incorrect page size.


 **NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

**Table 4-30** Printer feeds incorrect page size

Cause	Solution
The correct size paper is not loaded in the tray.	Load the correct size paper in the tray.
The correct size paper is not selected in the software program or printer driver.	Confirm that the settings in the software program and printer driver are correct, because the software program settings override the printer driver and control panel settings, and the printer driver settings override the control panel settings.
The correct size paper for the tray is not selected in the printer control panel.	From the control panel, select the correct size paper for the tray.
The paper size is not configured correctly for the tray.	Print a configuration page to determine the paper size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the paper guides are touching the paper.

## Printer pulls from incorrect tray

Review the following information when the printer pulls from an incorrect tray.

 **NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

**Table 4-31 Printer pulls from incorrect tray**

Cause	Solution
A driver for a different printer is in use.	Use a driver for this printer.
The specified tray is empty.	Load paper in the specified tray.
The paper size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the paper size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the guides are touching the paper.

## Printer will not duplex or duplexes incorrectly (duplex models)


Review the following information when the printer will not duplex or duplexes incorrectly.

**Table 4-32 Printer will not duplex (print 2-sided jobs) or duplexes incorrectly**

Cause	Solution
The duplex job is trying to use unsupported paper.	Verify that the paper is supported for duplex printing.
The printer driver is not set up for duplex printing.	Set up the printer driver to enable duplex printing.
The first page is printing on the back of preprinted forms or letterhead.	Load preprinted forms and letterhead in Tray 1 with the letterhead or printed side down, with the top of the page leading into the printer. For Tray 2-X, load the paper printed side up with the top of the page toward the right of the printer.
The printer model does not support automatic 2-sided printing.	The printer model does not support automatic 2-sided printing.

## Paper does not feed from Tray 2-X

Review the following information when the paper does not feed from Tray 2-X.

 **NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

**Table 4-33 Paper does not feed from Tray 2-X**

Cause	Solution
The correct size paper is not loaded.	Load the correct size paper.
The input tray is empty.	Load paper in the input tray.



**Table 4-33 Paper does not feed from Tray 2-X (continued)**

Cause	Solution
The correct paper type for the input tray is not selected in the printer control panel.	From the printer control panel, select the correct paper type for the input tray. Trays configured for a paper type with a specific weight range will not match a print job that specifies an exact weight, even if the specified weight is within the weight range.
Paper from a previous jam has not been completely removed.	Open the printer and remove any paper in the paper path. Closely inspect the fuser area for jams.
None of the optional trays appear as input tray options.	The optional trays only display as available if they are installed. Verify that any optional trays are correctly installed. Verify that the printer driver has been configured to recognize the optional trays.
An optional tray is incorrectly installed.	Print a configuration page to confirm that the optional tray is installed. If not, verify that the tray is correctly attached to the printer.
The paper size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the paper size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the guides are touching the paper.

## Output is curled or wrinkled

Review the following information when the output is curled or wrinkled.

**Table 4-34 Output is curled or wrinkled**

Cause	Solution
Paper does not meet the specifications for this printer.	Use only paper that meets the HP paper specifications for this printer. Non-recycled, 75 g/m <sup>2</sup> (20 lb) paper is optimal for office use.
The correct paper type for the input tray is not selected in the printer control panel.	From the printer control panel, select the correct paper type for the input tray. Trays configured for a paper type with a specific weight range will not match a print job that specifies an exact weight, even if the specified weight is within the weight range.
Paper is damaged or in poor condition.	Remove paper from the input tray and load paper that is in good condition.
The printer is operating in an excessively humid environment.	Verify that the printing environment is within humidity specifications.
The print job consist of large, solid-filled areas.	Large, solid-filled areas can cause excessive curl. Try using a different pattern.
Paper used was not stored correctly and might have absorbed moisture.	Remove paper and replace it with paper from a fresh, unopened package. Store paper in a plastic bag to protect it from humidity.
Paper has poorly cut edges.	Remove paper, flex it, rotate it 180 degrees or turn it over, and then reload it into the input tray. Do not fan paper. If the problem persists, replace the paper.
The specific paper type was not configured for the tray or selected in the software.	Configure the software for the paper (see the software documentation). Configure the tray for the paper.
The paper has previously been used for a print job.	Do not re-use paper.

## The printer does not pick up paper

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



**NOTE:** Tray 1 and Tray 2 are optimal for paper pickup when using special paper or media other than 20lb plain paper. For Tray 1 and Tray 2 the printer increases the number of attempts to pick up a page, which increases the reliability of successfully picking the page from the tray and decreases the possibility of a mispick jam.

HP recommends using Tray 1 or Tray 2 if the printer is experiencing excessive or reoccurring jams from trays other than Tray 1 and Tray 2, or for print jobs that require media other than 20lb plain paper.

1. Open the printer and remove any jammed sheets of paper.
2. Load the tray with the correct size of paper for the job.
3. Make sure the paper size and type are set correctly on the printer control panel.
4. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray.
5. Check the printer control panel to see if the printer is waiting for an acknowledgment to the feed the paper manually prompt. Load paper, and continue.
6. The rollers above the tray might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.

## The printer picks up multiple sheets of paper

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

1. Remove the stack of paper from the tray and flex it, rotate it 180 degrees, and flip it over. *Do not fan the paper.* Return the stack of paper to the tray.
2. Use only paper that meets HP specifications for this printer.
3. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.
4. Make sure the tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.
5. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray.
6. Make sure the printing environment is within recommended specifications.
7. The tray pick and/or feed rollers might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.

## The document feeder jams, skews, or picks up multiple sheets of paper (MFP)

Learn about MFP document feeder paper handling problems.

Review the following information when the document feeder jams, skews, or picks up multiple sheets of paper.

- Check to see if there are areas on the page that might have had staples removed. This can cause jams and/or mispicks.
- The original might have something on it, such as staples or self-adhesive notes that must be removed.
- Check that all rollers are in place and correctly installed.
- Make sure that the top document-feeder cover is closed.
- The pages might not be placed correctly. Straighten the pages and adjust the paper guides to center the stack.
- The paper guides must be touching the sides of the paper stack to work correctly. Make sure that the paper stack is straight, and the guides are against the paper stack.
- The document feeder input tray or output bin might contain more than the maximum number of pages. Make sure the paper stack fits below the guides in the input tray and remove pages from the output bin.
- Verify that there are no pieces of paper, staples, paper clips, or other debris in the paper path.
- Clean the document-feeder rollers and the separation pad. Use compressed air or a clean, lint-free cloth moistened with warm water. If misfeeds still occur, replace the rollers.
- Use the control panel menus to check the status of the document-feeder kit and replace it if necessary.

## Paper does not feed automatically

Review the following information when the paper does not feed automatically.



**NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

**Table 4-35 Paper does not feed automatically**

Cause	Solution
Manual feed is selected in the software program.	Load Tray 1 with paper, or, if the paper is loaded, press the <b>OK</b> button.
The correct size paper is not loaded.	Load the correct size paper.
The input tray is empty.	Load paper into the input tray.
Paper from a previous jam has not been completely removed.	Open the printer and remove any paper in the paper path.
The paper size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the paper size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the rear and width paper guides are touching the paper.

## Image-quality troubleshooting

Learn about image-quality troubleshooting.

Use the information in this topic to troubleshoot and resolve image-quality (what you see on the final printed page) problems including copy-quality, print-quality, and color problems (color printers only).

Various printer hardware problems can cause image-quality defects. This topic is a guide to the steps used to isolate the specific areas of the printer that are causing image-quality defects on the printed page, and to provide solutions to resolve those image-quality defects.

Image-quality problems are defined as:

- **Print-quality (PQ) problems:** PQ problems are associated with the print engine (printer base) of an MFP printer (single function non MFP image-quality problems are always PQ defects). PQ defects appear on pages that are **printed** by the print engine and not fed through an integrated scanner assembly (ISA).
- **Copy-quality (CQ) problems:** CQ problems are associated with the integrated-scanner assembly (ISA) portion of an MFP printer. CQ defects appear on pages that are **copied** using the document feeder or flatbed glass.


If the print defect is already known to be a PQ or CQ problem, skip to the appropriate troubleshooting topic listed below. Otherwise, follow the steps in the next section below to get started troubleshooting image-quality problems.

- **Print-quality (PQ) problems:** See [Print-quality troubleshooting on page 229](#).
- **Copy-quality (CQ) problems:** See [Copy-quality troubleshooting on page 244](#).

## Get started troubleshooting image-quality problems

Print a demonstration page to identify the defect as a PQ (print engine ) or CQ (ISA) problem.

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 **NOTE:** If the image defect appears on the printed demonstration page, the issue is a print-quality (PQ) problem (associated with the print engine and not the document feeder or flatbed glass) and not a CQ problem.

---

Make sure that the demonstration page is printed on **plain paper**.

Enterprise printers

1. Select **Reports > Other pages**.
2. Select [Demonstration Page](#).

Pro printers

1. At the printer, scroll to or select [Setup](#).
2. Go to [Reports](#), and then select [Demonstration Page](#).


Does the demonstration page show any image-quality defects?

- **Yes:** If defects appear on the printed demonstration page the issue is PQ related. See [Print-quality troubleshooting on page 229](#).
- **No:** If defects does not appear on the printed demonstration page the issue is CQ related. See [Copy-quality troubleshooting on page 244](#).

## Print-quality troubleshooting

Learn about the print-quality troubleshooting.

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 **NOTE:** Print-quality (PQ) problems are associated with the print engine (printer base) of an MFP printer (single function non MFP image-quality problems are always PQ defects). PQ defects appear on pages that are **printed** by the print engine and not feed through an integrated scanner assembly (ISA).

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## Repetitive image defect ruler


Review the following information about a repetitive image defect ruler.

When troubleshooting the source of some print image defects, one solution is to identify if it is a repetitive defect (does the print quality defect appear multiple times on the printed page?). If this is the case, use a ruler to measure occurrences of repetitive image defects to help solve image-quality problems. For more information, see Using a ruler to measure between repetitive defects.


Use a ruler to measure occurrences of repetitive image defects to help solve image-quality problems. Place the ruler next to the first occurrence of the defect on the page. Find the distance between identical defects and use the table below to identify the component that is causing the defect.

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 **CAUTION:** Do not use solvents or oils to clean rollers. Instead, rub the roller with a lint-free cloth. If dirt is difficult to remove, rub the roller with a lint-free cloth that has been dampened with water.

 **NOTE:** The primary charging roller, photosensitive drum, and developer roller cannot be cleaned because they are internal assemblies in the toner cartridge or imaging drum. If one of these assemblies is causing the defect, replace the toner cartridge.

The primary fuser sleeve unit or pressure roller cannot be cleaned because they are internal assemblies in the fuser. If one of these assemblies is causing the defect, replace the fuse

 **TIP:** To make a printer specific repetitive defect ruler, use a metric ruler to transfer the measurements in the table below to a transparency or the edge of a piece of paper—clearly label each ruler mark with the associated defective assembly.

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**Table 4-36** Repetitive defects


Assembly	Distance between defects
Primary charging roller	28 mm (1.10 in)
Developer roller	31 mm (1.22 in)
Transfer roller	39 mm (1.54 in)
Registration roller	43 mm (1.69 in)
Cassette separation roller	44 mm (1.73 in)
Cassette pickup or feed roller	50 mm (1.97 in)
Fuser film	57 mm (2.24 in)
Pressure roller	63 mm (2.48 in)
Photosensitive drum	75 mm (2.95 in)


## Use a ruler to measure between repetitive defects

The figures in this section show color repetitive defect pages. However, the process for measuring repetitive defects is valid for mono pages.

1. Identify a repetitive defect on the page.

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 **TIP:** Print a cleaning page to see if that resolves the defect.

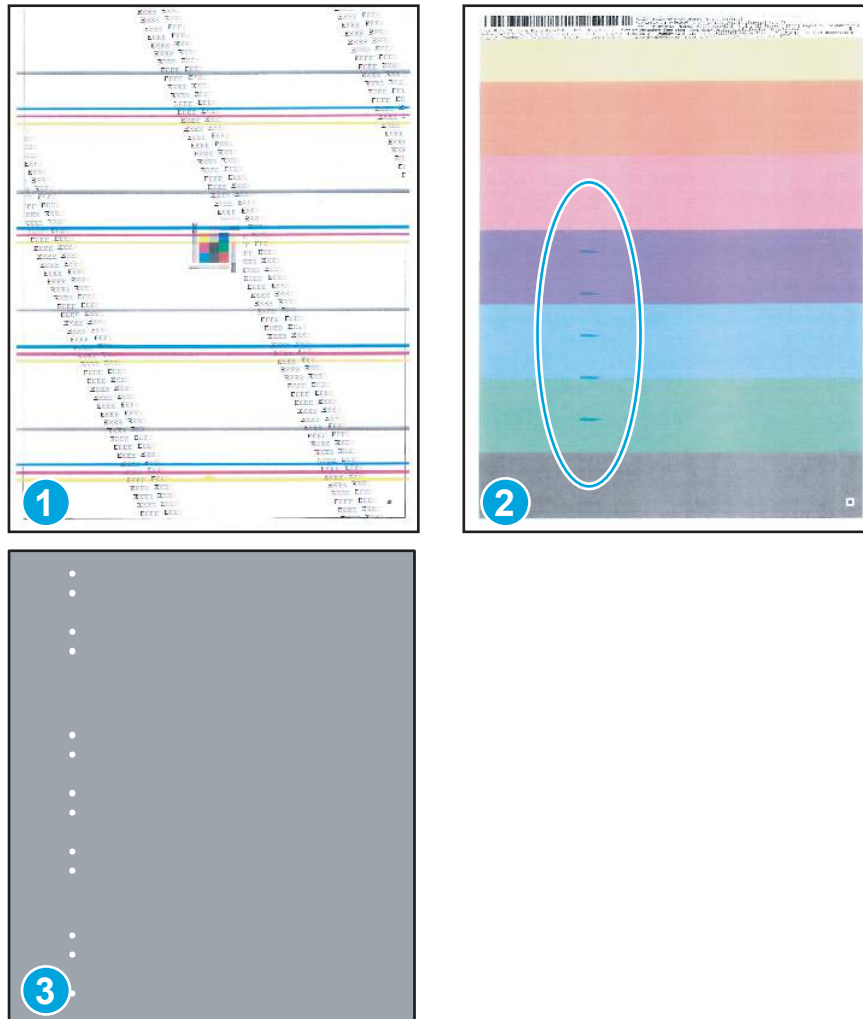
 **NOTE:** Some printers allow loading Letter and A4 media in short-edge-first or long-edge-first orientation in the paper trays. When measuring repetitive defects, make sure to place the ruler at the leading edge of the page. This is the edge of the page that feeds into the printer first.

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The example pages below show the following types of repetitive defects.

- Lines (callout 1)
- Smudges (callout 2)
- Dots or spots (callout 3)

**Figure 4-78** Examples of repetitive defects

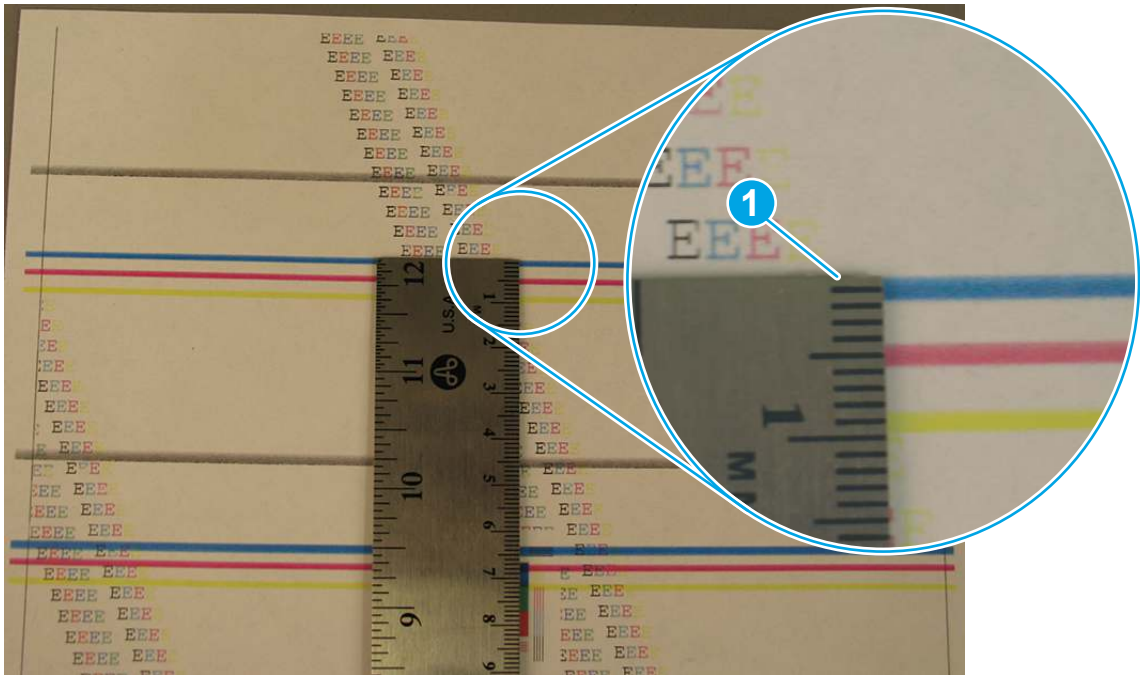


 **NOTE:** These are examples only, other types of repetitive defects might appear on a page.

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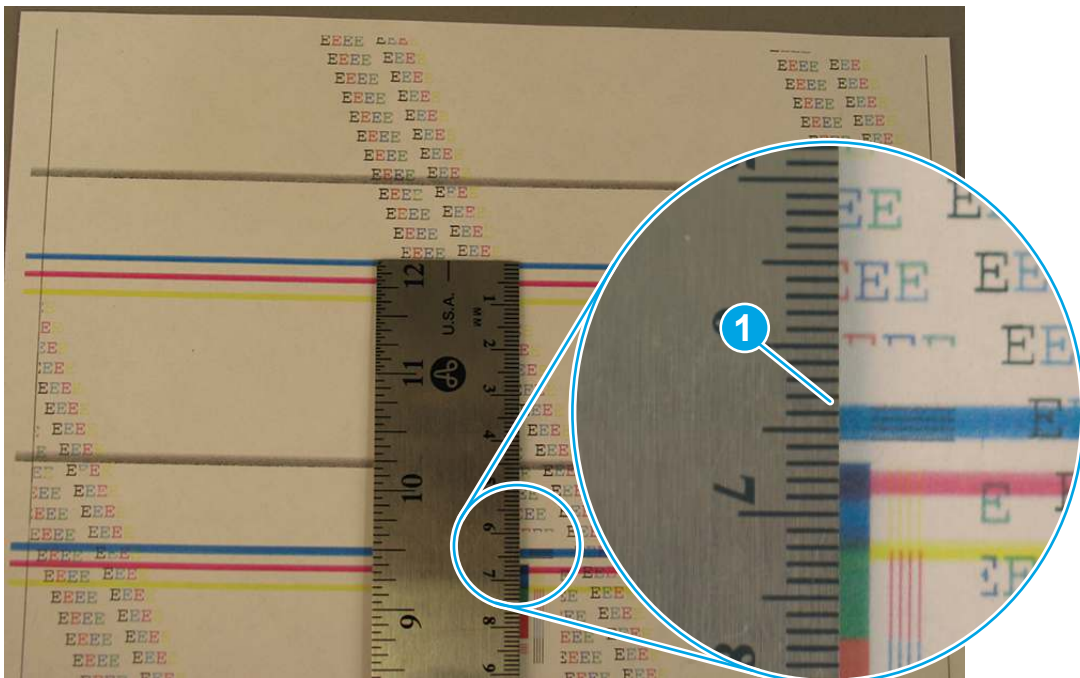
2. Position a metric ruler on the page with the “zero” ruler mark at one occurrence of the defect (callout 1).

**Figure 4-79** Place the ruler on the page




3. Locate the next occurrence of the defect (callout 1).

**Figure 4-80** Locate the next repetitive defect

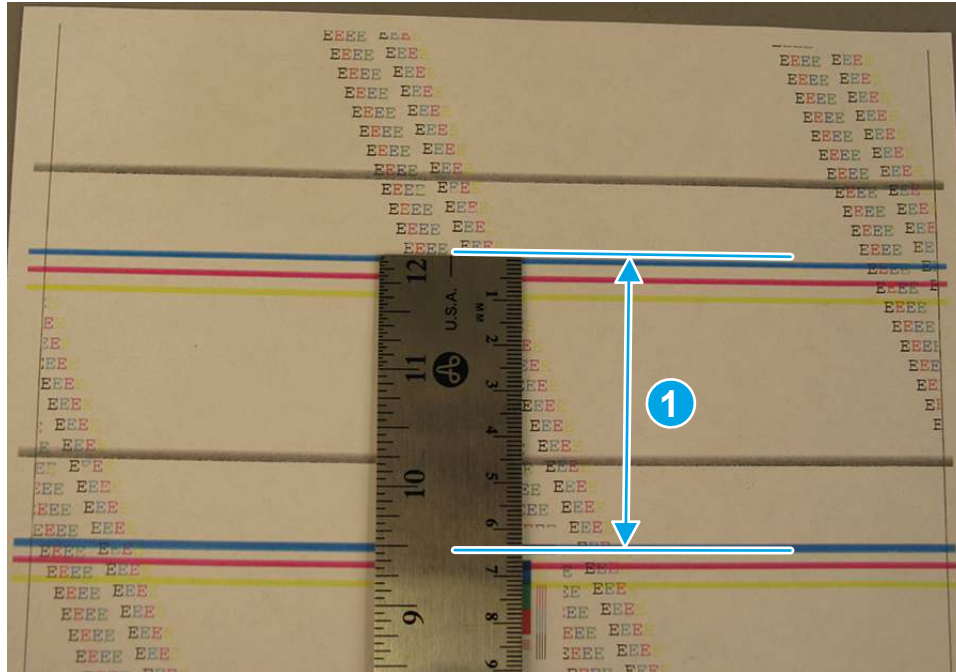




4. Measure the distance (in millimeters) between the two occurrences (callout 1), and then use the Repetitive defects table to determine the defective assembly.

 **TIP:** Always measure from and to the same point on the defects. For example, if the ruler is “zeroed” at the top edge of a defect, measure to the top edge of the next occurrence of that defect.

**Figure 4-81 Determine the defective assembly**



### Print from a different software program

Try printing from a different software program.

If the page prints correctly, the problem is with the software program from which you were printing.

### Check the paper-type setting for the print job

Check the paper type setting when printing from a software program and the printed pages have smears, fuzzy or dark print, curled paper, scattered dots of toner, loose toner, or small areas of missing toner.

### Check the paper type setting on the control panel

Check the paper type setting on the printer control panel, and change the setting as needed.

1. On the printer control panel, press the **OK** button.
2. Open the following menus:
  - **Setup**
  - **Paper Setup**
3. Select the tray from the list.
4. Select **Paper Type** and then select the type of paper that is in the tray.



## Check the paper type setting (Windows)

Check the paper type setting for Windows, and change the setting as needed.



**NOTE:** The print driver settings will override any control panel settings.

1. From the software program, select the **Print** option.
2. Select the printer, and then click the **Properties** or **Preferences** button.
3. Click the **Paper/Quality** tab.
4. From the **Paper Type** drop-down list, click the **More...** option.
5. Expand the list of **Type is:** options.
6. Expand the category of paper types that best describes your paper.
7. Select the option for the type of paper you are using, and click the **OK** button.
8. Click the **OK** button to close the **Document Properties** dialog box. In the **Print** dialog box, click the **OK** button to print the job.

## Check the paper type setting (macOS)

Check the paper type setting for macOS, and change the setting as needed.


1. Click the **File** menu, and then click the **Print** option.
2. In the **Printer** menu, select the printer.
3. Click **Show Details** or **Copies & Pages**.
4. Open the menus drop-down list, and then click the **Paper/Quality** menu.
5. Select a type from the **Media Type** drop-down list.
6. Click the **Print** button.

## Check toner-cartridge status

Follow these steps to check the estimated life remaining in the toner cartridges and if applicable, the status of other replaceable maintenance parts.

### Step one: Print the Supplies Status Page

The supplies status page indicates the cartridge status.

1. Do one of the following:
  - **2-line control panels:** On the printer control panel, press the **OK** button to access the Main Menu, and then, then select **OK** button.  
  
Use the arrow buttons ◀▶ to navigate to **Reports > Supplies Status Page**.
  - **Touchscreen control panels:** From the Home screen on the printer control panel, swipe down on the dash board, touch **Setup** icon , and then scroll through to and select the **Reports** menu.  
  
Navigate to **Reports > Supplies Status Page**.

2. Use the [Supplies Status Page](#) to determine the following toner cartridge information:
  - Approximate pages remaining
  - Supply level
  - Number of pages printed

### Step two: Check supplies status

Check the supplies status report as follows.

1. Look at the supplies status report to check the percent of life remaining for the toner cartridges and, if applicable, the status of other replaceable maintenance parts.

Print quality problems can occur when using a toner cartridge that is at its estimated end of life. The supplies status page indicates when a supply level is very low. After an HP supply has reached the very low threshold, HP's premium protection warranty on that supply has ended.

The toner cartridge does not need to be replaced now unless the print quality is no longer acceptable. Consider having a replacement available to install when print quality is no longer acceptable.

If you determine that you need to replace a toner cartridge or other replaceable maintenance parts, the supplies status page lists the genuine HP part numbers.

2. Check to see if you are using a genuine HP cartridge.

A genuine HP toner cartridge has the word "HP" on it, or has the HP logo on it. For more information on identifying HP cartridges go to [www.hp.com/go/learnaboutsupplies](http://www.hp.com/go/learnaboutsupplies).

### Print a cleaning page

Learn about printing a cleaning page.

#### Clean the paper path


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

Clean the paper path (LCD control panel)

1. To clean the paper path, press **OK > Setup > Printer maintenance > Print Quality Tools > Cleaning Page >**, and then press the **OK** button.
2. Load plain paper in Tray 1, and then press the **OK** button to start the cleaning process.

Wait until the process is complete. Discard the page that prints.

Clean the paper path (touchscreen control panel)

1. Pull down the dashboard and then press the Setup button .
2. Open the following menus:
  - [Printer Maintenance](#)
  - [Print Quality Tools](#)
  - [Cleaning Page](#)

3. Load plain letter or A4 paper when you are prompted.
4. Touch the **OK** button to begin the cleaning process.

Wait until the process is complete. Discard the page that prints.

## Check paper and the printing environment

Use the following information to check the paper selection and the printing environment.

### Step one: Use paper that meets HP specifications

Some print-quality problems arise from using paper that does not meet HP specifications.

- Always use a paper type and weight that this printer supports.
- Use paper that is of good quality and free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, voids, staples, and curled or bent edges.
- Use paper that has not been previously printed on.
- Use paper that does not contain metallic material, such as glitter.
- Use paper that is designed for use in laser printers. Do not use paper that is designed only for use in Inkjet printers.
- Use paper that is not too rough. Using smoother paper generally results in better print quality.

### Step two: Check the environment

The environment can directly affect print quality and is a common cause of print-quality or paper-feeding issues. Try the following solutions:

- Move the printer away from drafty locations, such as open windows or doors, or air-conditioning vents.
- Make sure the printer is not exposed to temperatures or humidity outside of printer specifications.
- Do not place the printer in a confined space, such as a cabinet.
- Place the printer on a sturdy, level surface.
- Remove anything that is blocking the vents on the printer. The printer requires good air flow on all sides, including the top.
- Protect the printer from airborne debris, dust, steam, grease, or other elements that can leave residue inside the printer.

## Try a different print driver

Try a different print driver when printing from a software program and the printed pages have unexpected lines in graphics, missing text, missing graphics, incorrect formatting, or substituted fonts.

Download a different print driver from the HP support Web site: [www.hp.com/support/lj4001-4004](http://www.hp.com/support/lj4001-4004) or [www.hp.com/support/lj4001-4004plus](http://www.hp.com/support/lj4001-4004plus) or [www.hp.com/support/ljmf4101-4104](http://www.hp.com/support/ljmf4101-4104) or [www.hp.com/support/ljmf4101-4104plus](http://www.hp.com/support/ljmf4101-4104plus).

## Troubleshoot image defects

Review examples of image defects and steps to resolve these defects.

**Table 4-37 Image defects table quick reference**



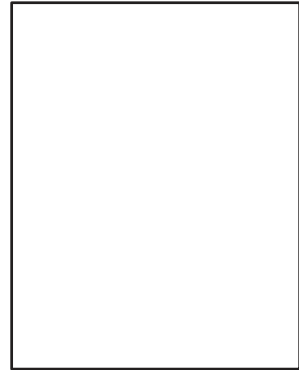

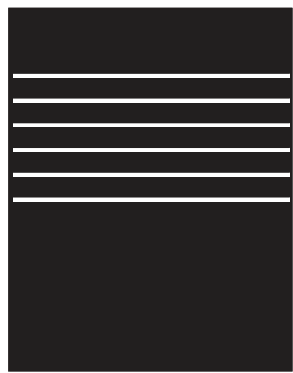

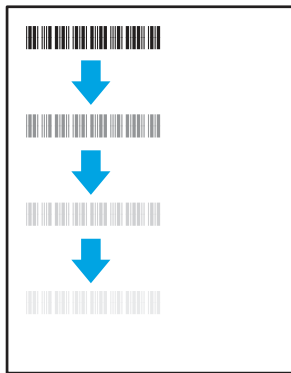



Sample	Description	Possible solutions
<p data-bbox="272 260 587 289"><a href="#">Table 4-44 Light print on page 242</a></p> 	<p data-bbox="676 260 1066 310"><a href="#">Table 4-42 Gray background or dark print on page 241</a></p> 	<p data-bbox="1075 260 1474 310"><a href="#">Table 4-40 Blank page – No print on page 239</a></p> 
<p data-bbox="272 737 587 766"><a href="#">Table 4-39 Black page on page 239</a></p> 	<p data-bbox="676 737 1066 766"><a href="#">Table 4-38 Banding defects on page 238</a></p> 	<p data-bbox="1075 737 1474 766"><a href="#">Table 4-46 Streak defects on page 243</a></p> 
<p data-bbox="272 1325 587 1375"><a href="#">Table 4-41 Fixing/fuser defects on page 240</a></p> 	<p data-bbox="676 1325 1066 1375"><a href="#">Table 4-43 Image placement defects on page 241</a></p> 	<p data-bbox="1075 1325 1474 1354"><a href="#">Table 4-45 Output defects on page 242</a></p> 


Image defects, no matter the cause, can often be resolved using the same steps. Use the following steps as a starting point for solving image defect issues.

1. Reprint the document. Print quality defects can be intermittent in nature or can go away completely with continued printing.
2. Check the condition of the cartridge or cartridges. If a cartridge is in a **Very Low** state (it has passed the rated life), replace the cartridge.
3. Make sure that the driver and tray print mode settings match the media that is loaded in the tray. Try using a different ream of media or a different tray. Try using a different print mode.
4. Make sure that the printer is within the supported operating temperature/humidity range.
5. Make sure that the paper type, size, and weight are supported by the printer. See [support.hp.com](http://support.hp.com) for a list of the supported paper sizes and types for the printer.


 **NOTE:** The term “fusing” refers to the part of the printing process where toner is affixed to paper.

The following examples depict letter-size paper that has passed through the printer short edge first.


**Table 4-38 Banding defects**

Sample	Description	Possible solutions
	<p>Dark or light lines which repeat down the length of the page, and are wide-pitch and/or impulse bands. They might be sharp or soft in nature. The defect displays only in areas of fill, not in text or sections with no printed content.</p>	<ol style="list-style-type: none"> <li>1. Reprint the document.</li> <li>2. Try printing from another tray.</li> <li>3. Replace the cartridge.</li> <li>4. Use a different paper type.</li> <li>5. <b>Enterprise models only:</b> From the Home screen on the printer control panel, go to the <a href="#">Adjust Paper Types</a> menu, and then choose a print mode that is designed for a slightly heavier media than what you are using. This slows the print speed and might improve the print quality.</li> <li>6. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>

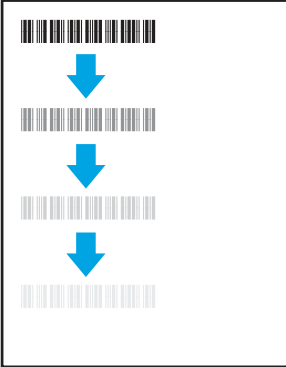
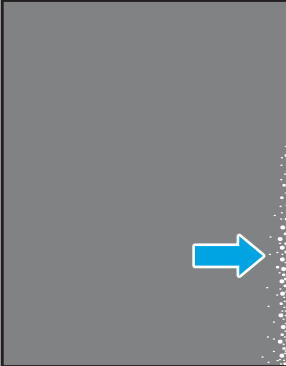
**Table 4-39 Black page**

Sample	Description	Possible solutions
	The entire printed page is black.	<ol style="list-style-type: none"><li>1. Visually inspect the cartridge to check for damage.</li><li>2. Make sure that the cartridge is installed correctly.</li><li>3. Replace the cartridge.</li><li>4. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li></ol>


**Table 4-40 Blank page – No print**

Sample	Description	Possible solutions
	The page is completely blank and contains no printed content.	<ol style="list-style-type: none"><li>1. Make sure that the cartridges are genuine HP cartridges.</li><li>2. Make sure that the cartridge is installed correctly.</li><li>3. Print with a different cartridge.</li><li>4. Check the paper type in the paper tray and adjust the printer settings to match. If necessary, select a lighter paper type.</li><li>5. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li></ol>

**Table 4-41** Fixing/fuser defects

Sample	Description	Possible solutions
 <p>The image shows a vertical sequence of four identical barcodes. Each barcode is positioned slightly lower and to the right of the one above it. Three blue downward-pointing arrows are placed between the barcodes, indicating the downward progression of the repeated image.</p>	<p>Slight shadows or offsets of the image are repeated down the page. The repeated image might fade with each recurrence.</p>	<ol style="list-style-type: none"> <li>1. Reprint the document.</li> <li>2. Check the paper type in the paper tray and adjust the printer settings to match. If necessary, select a lighter weight paper type.</li> <li>3. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>
 <p>The image shows a solid dark gray rectangular area. On the right edge, there is a vertical strip of white speckles representing toner that has rubbed off. A blue arrow points from the center of the gray area towards this speckled edge.</p>	<p>Toner rubs off along either edge of the page. This defect is more common at the edges of high-coverage jobs, and on light media types, but can occur anywhere on the page.</p>	<ol style="list-style-type: none"> <li>1. Reprint the document.</li> <li>2. Check the paper type in the paper tray and adjust the printer settings to match. If necessary, select a heavier paper type.</li> <li>3. <b>Enterprise models only:</b> From the printer control panel, go to the <a href="#">Edge-to-Edge</a> menu and then select <a href="#">Normal</a>. Reprint the document.</li> <li>4. <b>Enterprise models only:</b> From the printer control panel, select <a href="#">Auto Include Margins</a> and then reprint the document.</li> <li>5. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>

**Table 4-42** Gray background or dark print

Sample	Description	Possible solutions
	<p>The image or text is darker than expected and/or the background is gray.</p>	<ol style="list-style-type: none"> <li>1. Make sure that the paper in the trays has not already been run through the printer.</li> <li>2. Use a different paper type.</li> <li>3. Reprint the document.</li> <li>4. <b>Mono models only:</b> From the Home screen on the printer control panel, go to the <a href="#">Adjust Toner Density</a> menu, and then adjust the toner density to a lower level.</li> <li>5. Make sure that the printer is within the supported operating temperature and humidity range.</li> <li>6. Replace the cartridge.</li> <li>7. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>

**Table 4-43** Image placement defects


Sample	Description	Possible solutions
	<p>The image is not centered, or is skewed on the page. The defect occurs when the paper is not positioned properly as it is pulled from the tray and moves through the paper path.</p>	<ol style="list-style-type: none"> <li>1. Reprint the document.</li> <li>2. Remove the paper and then reload the tray. Make sure that all the paper edges are even on all sides.</li> <li>3. Make sure that the top of the paper stack is below the tray-full indicator. Do not overfill the tray.</li> <li>4. Make sure that the paper guides are adjusted to the correct size for the paper. Do not adjust the paper guides tightly against the paper stack. Adjust them to the indentations or markings in the tray.</li> <li>5. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>



Table 4-44 Light print


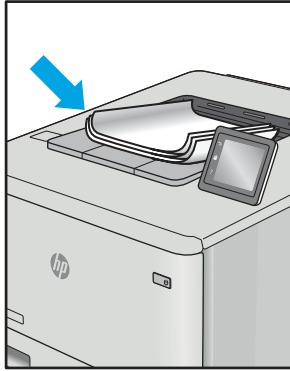
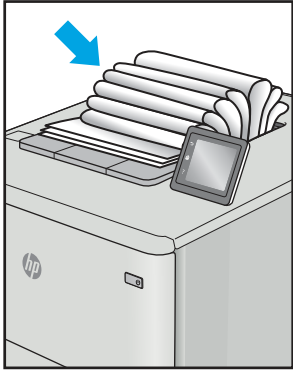
Sample	Description	Possible solutions
	<p>The printed content is light or faded on the entire page.</p>	<ol style="list-style-type: none"> <li>1. Reprint the document.</li> <li>2. Remove the cartridge, and then shake it to redistribute the toner. Reinsert the toner cartridges into the printer and close the cover. For a graphical representation of this procedure, see <i>Replace the toner cartridges</i>.</li> <li>3. <b>Mono models only:</b> Make sure that the EconoMode setting is disabled, both at the printer control panel and in the print driver.</li> <li>4. Make sure that the cartridge is installed correctly.</li> <li>5. Print a Supplies Status Page and check the life and usage of the cartridge.</li> <li>6. Replace the cartridge.</li> <li>7. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>

Table 4-45 Output defects

Sample	Description	Possible solutions
	<p>Printed pages have curled edges. The curled edge can be along the short or long side of the paper. Two types of curl are possible:</p> <ul style="list-style-type: none"> <li>• <b>Positive curl:</b> The paper curls toward the printed side. The defect occurs in dry environments or when printing high-coverage pages.</li> <li>• <b>Negative curl:</b> The paper curls away from the printed side. The defect occurs in high-humidity environments or when printing low-coverage pages.</li> </ul>	<ol style="list-style-type: none"> <li>1. Reprint the document.</li> <li>2. <b>Positive curl:</b> From the printer control panel, select a heavier paper type. The heavier paper type creates a higher temperature for printing. <b>Negative curl:</b> From the printer control panel, select a lighter paper type. The lighter paper type creates a lower temperature for printing. Try storing the paper in a dry environment prior to use, or use freshly opened paper.</li> <li>3. Print in duplex mode.</li> <li>4. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>

**Table 4-45 Output defects (continued)**

Sample	Description	Possible solutions
	<p>The paper does not stack well in the output tray. The stack might be uneven, skewed, or the pages might be pushed out of the tray and onto the floor. Any of the following conditions can cause this defect:</p> <ul style="list-style-type: none"> <li>• Extreme paper curl</li> <li>• The paper in the tray is wrinkled or deformed</li> <li>• The paper is a non-standard paper type, such as envelopes</li> <li>• The output tray is too full</li> </ul>	<ol style="list-style-type: none"> <li>1. Reprint the document.</li> <li>2. Extend the output bin extension.</li> <li>3. If the defect is caused by extreme paper curl, refer to the troubleshooting steps for "Output curl."</li> <li>4. Use a different paper type.</li> <li>5. Use freshly opened paper.</li> <li>6. Remove the paper from the output tray before the tray gets too full.</li> <li>7. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>

**Table 4-46 Streak defects**

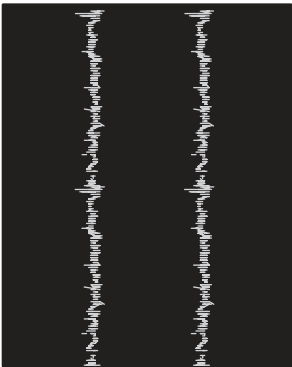
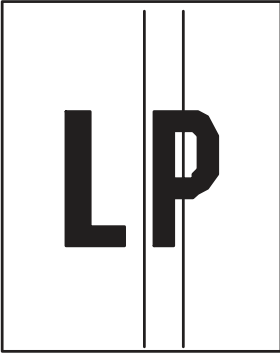

Sample	Description	Possible solutions
	<p>Light vertical streaks that usually span the length of the page. The defect displays only in areas of fill, not in text or sections with no printed content.</p>	<ol style="list-style-type: none"> <li>1. Reprint the document.</li> <li>2. Remove the cartridge, and then shake it to redistribute the toner. Reinsert the toner cartridges into the printer and close the cover. For a graphical representation of this procedure, see <i>Replace the toner cartridges</i>.</li> <li>3. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol> <p><b>NOTE:</b> Both light and dark vertical streaks can occur when the printing environment is outside the specified range for temperature or humidity. Refer to your printer's environmental specifications for allowable temperature and humidity levels.</p>

Table 4-46 Streak defects (continued)

Sample	Description	Possible solutions
	Dark vertical lines which occur down the length of the page. The defect might occur anywhere on the page, in areas of fill or in sections with no printed content.	<ol style="list-style-type: none"><li>1. Reprint the document.</li><li>2. Remove the cartridge, and then shake it to redistribute the toner. Reinsert the toner cartridges into the printer and close the cover. For a graphical representation of this procedure, see <i>Replace the toner cartridges</i>.</li><li>3. Print a cleaning page.</li><li>4. Check the toner level in the cartridge.</li><li>5. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li></ol>


## Copy-quality troubleshooting

Learn about copy-quality troubleshooting.

 **NOTE:** Copy-quality (CQ) problems are associated with the integrated-scanner assembly (ISA) portion of an MFP printer. CQ defects appear on pages that are **copied** using the document feeder or flatbed glass.

### Identify the location and type of the CQ problem

Resolving CQ problems involves isolating the defect to the document feeder or flatbed glass. Comparing printed output between the document feeder and the flatbed glass might determine the ISA location that is causing the CQ defect.

 **NOTE:** If a CQ defect appears on printed output from both the document feeder **and** the flatbed glass, carefully inspect the original source for a print-quality (PQ) problem.

#### Document feeder isolation test

1. Mark a printed page in a way that clearly identifies it as the source document used in this isolation procedure.
2. Place the source page in the document feeder, and then make a copy.
3. Mark the copied output page to clearly identify it as output from the document feeder.
4. Compare the original and copied pages. Defects appearing on the copied page are caused by a problem in the document feeder.

#### Flatbed isolation test

1. Mark a printed page in a way that clearly identifies it as the source document used in this isolation procedure.
2. Place the source page on the flatbed glass, and then make a copy.
3. Mark the copied output page to clearly identify it as output from the flatbed.

4. Compare the original and copied pages. Defects appearing on the copied page are caused by a problem in the flatbed.

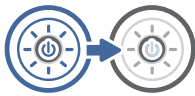
## Check the scanner glass for dirt and smudges

Learn about solving copy-quality debris problems.

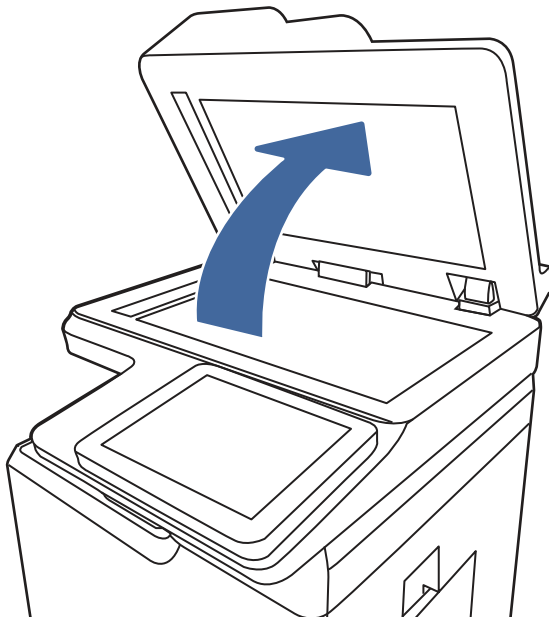
Over time, specks of debris might collect on the scanner glass and document feeder white plastic backing, which might cause print defects. Use the following procedure to clean the scanner if the printed pages have streaks, unwanted lines, black dots, poor print quality, or unclear text.

 [View a video of cleaning the document feeder glass and flatbed glass.](#)

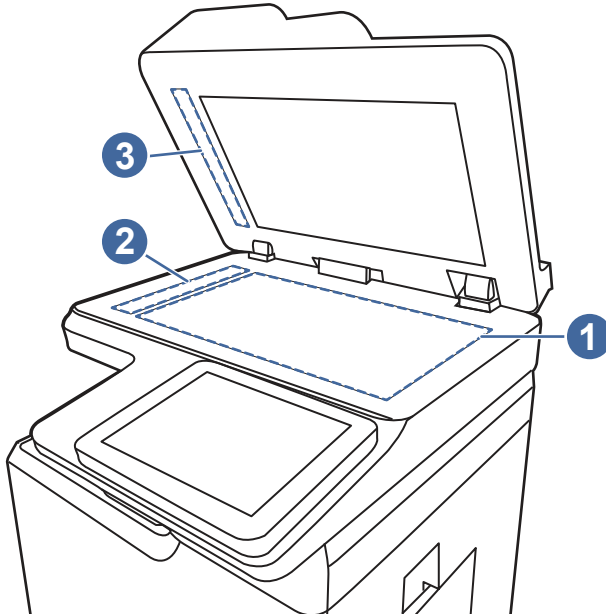
1. Press the power button to turn the printer off, and then disconnect the power cable from the electrical outlet.



2. Open the scanner lid.



3. Clean the scanner glass (callout 1) and the document feeder strips (callout 2, callout 3) with a soft cloth or sponge that has been moistened with nonabrasive glass cleaner.



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

**📝 NOTE:** If you are having trouble with streaks on copies when you are using the document feeder, be sure to clean the small strips of glass on the left side of the scanner (callout 2, callout 3).

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4. Dry the glass and white plastic parts with a chamois or a cellulose sponge to prevent spotting.
5. Connect the power cable to an outlet, and then press the power button to turn the printer on.



## Vertical lines, bands, or streaks

Learn about vertical lines, bands, or streaks copy-quality problems.

Vertical lines or streaks appear on copies and/or scans in the same direction that the paper feeds when copying and/or scanning from the document feeder. Lines or streaks might be visible on the front and/or the back side of the page. Copies and/or scans from the flatbed glass look normal. Printouts also look normal.

The line or streak might be black or in color, and can also be present on fax or digital send output (for example, when using [Scan to folder](#) or [Scan to email](#) features).

---

**📝 NOTE:** HP has determined that **99%** of all lines and streaks on copies made by feeding the original documents through the document feeder are caused by **debris on the document feeder glass strip**. Even small specks can cause the light reflected off the original to be distorted, resulting in a line, streak, or smudge on copies or scans made from the document feeder.

---

Even if the document feeder glass strip and/or flatbed glass has been wiped clean, the defect might persist. Persistent vertical lines, bands, or streaks when copying from the document feeder might mean that the debris causing the print quality are not readily visible and cannot be removed with a quick cleaning.

Use the procedures below to resolve persistent lines, bands, or streak copy-quality (CQ) problems.

### Locate debris and thoroughly clean the document feeder glass


1. Place a blank sheet of paper in the document feeder and mark an **X** in the lower right corner as shown.

**Figure 4-82** Load the document feeder



2. Press the **Start** button to make a copy of the blank page.
3. Place the copied paper face-up on the flatbed glass with the **X** located as shown.

---

 **NOTE:** Make sure the upper left corner of the copy is aligned with the upper left corner of the flatbed glass.

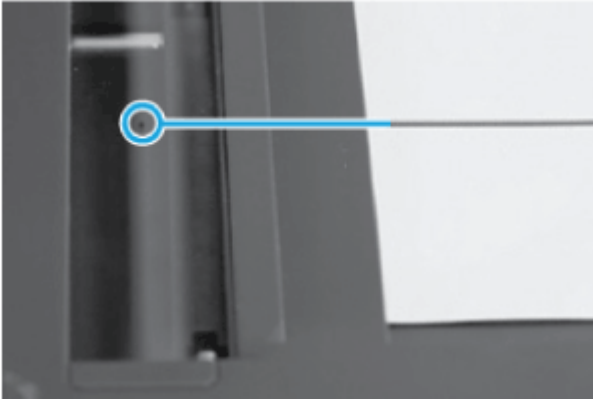
---

**Figure 4-83** Place the copy on the flatbed



4. Follow the line or streak on the paper to the area on the document feeder glass that is causing the CQ problem.

**Figure 4-84** Identify the CQ defect location



5. Use a fingernail to loosen any stubborn debris.

---

**⚠ WARNING!** Use only a fingernail. Other objects can scratch the document feeder glass.

---

Clean this specific area again (with a lint-free cloth dampened with water), and then dry the glass with a soft, lint-free cloth.

**Figure 4-85** Clean the glass



6. Make another copy or scan to determine if the defect is gone.

### **Clean the duplex scanner glass (model specific)**

---

**📝 NOTE:** Not all MFP printers use a background selector for duplex printing.

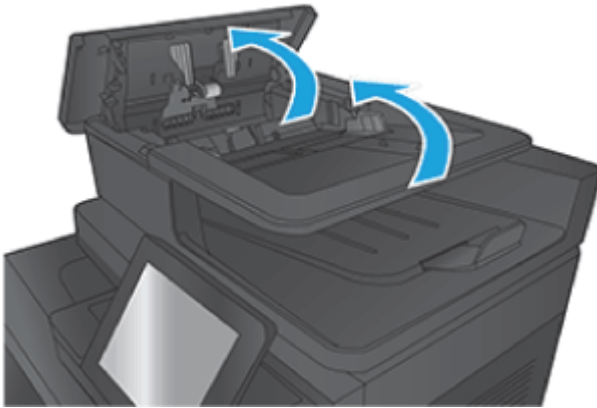
---

If a *Side 2 Background Selector* cannot be located for the printer (it might not include one) skip this procedure.

---

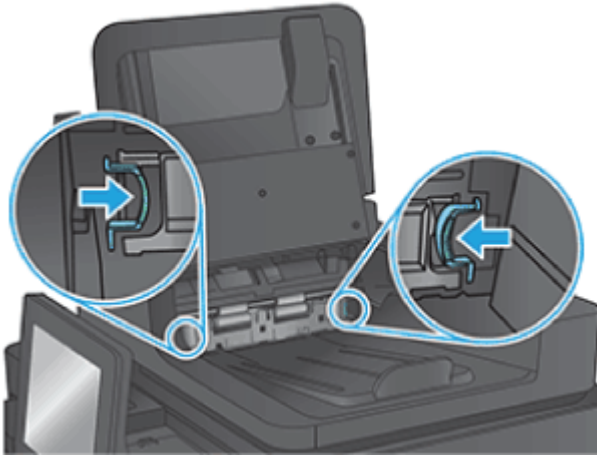
1. Release the latch and open the document feeder jam-access door.

**Figure 4-86** Open the jam-access door



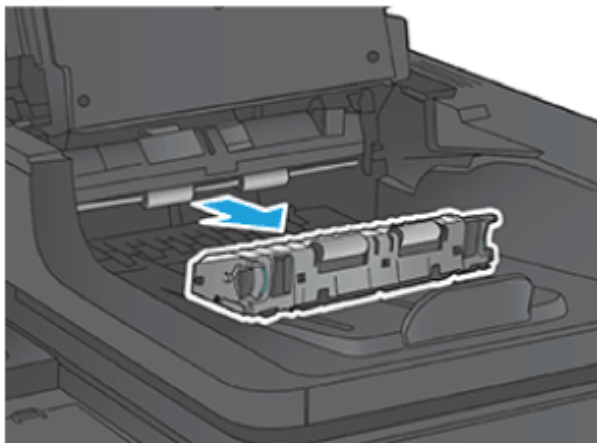
2. Unlock the Side 2 Background Selector by pressing and holding both green tabs inward towards each other.

**Figure 4-87** Release the Side 2 Background Selector



3. While holding the green tabs, pull out and remove the Side 2 Background Selector.

**Figure 4-88** Remove the Side 2 Background Selector



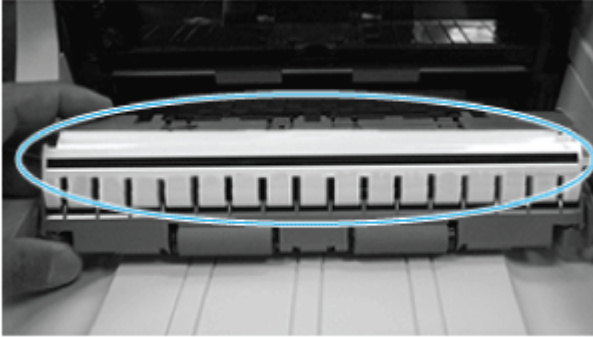


4. Rotate the top to reveal the white and black backside reflector (circled in blue).



**NOTE:** If the white and black areas do not come clean, wipe the surface thoroughly with a damp cloth again. Dry the area with a soft, dry cloth to prevent spotting.

**Figure 4-89** Locate the backside reflector



5. With the background selector removed from the document feeder, clean the inside of the scan module.
6. In the back area from where the background selector was removed, locate the Side 2 Scan Module glass found under the top area.



**NOTE:** The glass surface of the Side 2 Scan module sits horizontally flat and might not be easily viewable.

7. Use a soft, lint-free cloth moistened with water and apply pressure upwards behind the rollers to clean the Side 2 Scan Module Glass, making sure to that the entire width of the glass is cleaned from left to right.



**NOTE:** If needed, lens cleaner or non-abrasive glass cleaner can be applied to the cloth before cleaning the glass. Spray only onto the cloth and not directly onto the glass or device. Do not spray water or glass cleaner on the glass as it can seep under it and possibly damage the printer. Do not use abrasives, acetone, benzene, ethyl alcohol, or carbon tetrachloride on the glass; these can damage it and/or leave residue on the glass resulting in degraded copy/scan quality.

8. Reverse the removal steps to reinstall the Side 2 Background Selector.
9. Make another copy or scan to determine if the defect is gone.

## Modify printer settings to improve scan or copy quality

Learn about printer settings to improve scan or copy quality.

Optimize printer settings to potentially improve scan or copy quality.

### Image Adjustment settings

From the printer Home screen: **Copy > Settings**

Select from the following items.

- **Quality:** Sets in image quality settings for copies.
  - Best
  - Normal (default)
  - Draft
- **Lighter/Darker:** Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page.
- **Enhancements:** Specifies the type of content in the original document, so the copy is the best match for the original.
  - None (default)
  - Mixed
  - Text
  - Photo

## Performance and connectivity troubleshooting

Learn about performance and connectivity troubleshooting.

### Solve fax or email problems

Learn about solving fax and email problems.

Fax or email troubleshooting information is not provided in this service manual. The most current information is available in WISE. Search using model number then use "fax troubleshooting" as the search term.

For HP Channel partners, open the HP Partner First Portal located at <https://partner.hp.com>, and then do the following:

1. Select the **Services & Support** tab, and then select **Technical Support**.
2. Select **Technical Documentation**.
3. You will be taken to the WISE portal.

For HP service personnel, go to one of the following Web-based Interactive Search Engines (WISE) sites:

#### Americas (AMS)

- [WISE - English](#)
- [WISE - Spanish](#)
- [WISE - Portuguese](#)
- [WISE - French](#)

#### Asia Pacific / Japan (APJ)

- [WISE - English](#)

- [WISE - Japanese](#)
- [WISE - Korean](#)
- [WISE - Chinese \(simplified\)](#)
- [WISE - Chinese \(traditional\)](#)
- [WISE - Thai](#)

**Europe / Middle East / Africa (EMEA)**

- [WISE - English](#)

## Solve performance problems

Review the following information and procedures to solve performance problems.



**NOTE:** Tray 1 and Tray 2 are optimal for paper pickup when using special paper or media other than 75-80gsm (20lb) plain paper. For Tray 1 and Tray 2 the printer increases the number of attempts to pick up a page, which increases the reliability of successfully picking the page from the tray and decreases the possibility of a mis-pick jam.

HP recommends using Tray 1 or Tray 2 if the printer is experiencing excessive or reoccurring jams from trays other than Tray 1 and Tray 2, or for print jobs that require media other than 75-80gsm (20lb) plain paper.

## Factors affecting print performance

Review the following information about factors affecting print performance.



**NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

**Table 4-47 Solve performance problems**

Problem	Cause	Solution
Pages print but are totally blank.	The document might contain blank pages.	Check the original document to see if content is present on all of the pages.
Pages print but are totally blank.	The printer might be malfunctioning.	To check the printer, print a Configuration page.
Pages print but are totally blank.	Make sure that the printer is not feeding multiple pages (especially if very thin paper is used).	Make sure that the paper meets HP specifications for this printer.  For a complete list of specific HP-brand paper that this printer supports, go to <a href="http://www.hp.com/support/lj4001-4004">www.hp.com/support/lj4001-4004</a> or <a href="http://www.hp.com/support/lj4001-4004plus">www.hp.com/support/lj4001-4004plus</a> or <a href="http://www.hp.com/support/ljmf4101-4104">www.hp.com/support/ljmf4101-4104</a> or <a href="http://www.hp.com/support/ljmf4101-4104plus">www.hp.com/support/ljmf4101-4104plus</a> .
Pages print very slowly.  <b>NOTE:</b> Some software programs process print jobs slowly.	Heavier paper types can slow the print job.	Print on a different type of paper.

**Table 4-47 Solve performance problems (continued)**

Problem	Cause	Solution
Pages print very slowly. <b>NOTE:</b> Some software programs process print jobs slowly.	Complex pages can print slowly.	Proper fusing might require a slower print speed to ensure the best print quality.
Pages print very slowly. <b>NOTE:</b> Some software programs process print jobs slowly.	Large batches, narrow paper, and special paper such as gloss, transparency, cardstock, and HP Tough Paper can slow the print job.	Print in smaller batches, on a different type of paper, or on a different size of paper.
Pages did not print.	The printer might not be pulling paper correctly.	Make sure paper is loaded in the tray correctly.
Pages did not print.	The paper is jamming in the printer.	Clear the jam.
Pages did not print.	The USB cable might be defective or incorrectly connected.	<ul style="list-style-type: none"><li>• Disconnect the USB cable at both ends and reconnect it.</li><li>• Try printing a job that has printed in the past.</li><li>• Try using a different USB cable.</li></ul>
Pages did not print.	Other devices are running on the host computer.	The printer might not share a USB port. If an external hard drive or network switchbox is connected to the same port as the printer, the other device might be interfering with the printer. To connect and use the printer, disconnect the other device or use two USB ports on the host computer.
Pages did not print.	The print job might not have arrived at the printer.	Check the printer status queue. Also, the <a href="#">Printing</a> message should appear on the control panel display.

## Print speeds

Print speed is the number of pages that print in one minute. Print speed depends on different engine-process speeds or operational pauses between printed pages during normal printer operation. Factors that determine the print speed of the printer include the following:

- Page formatting time

The printer must pause for each page to be formatted before it prints. Complex pages take more time to format, resulting in reduced print speed. However, most jobs print at full engine speed.

- Media size

Legal-size media reduces print speed because it is longer than the standard Letter- or A4-size media. A reduce print speed is used when printing on narrow media to prevent the edges of the fuser from overheating.

- Media mode

Some media types require a reduced print speed to achieve maximum print quality on that media. For example, glossy, heavy, and specialty media (for example, envelopes or photos) require a reduced print speed. To maximize the print speed for special media types, make sure that the correct media type in the print driver is selected.

- Printer temperature

To prevent printer damage, print speed is reduced if the printer reaches a specific internal temperature (thermal slow down). The starting temperature of the printer, ambient environment temperature, and the print job size effect the number of pages that can be printed before the printer reduces the print speed. Thermal slow down reduces print speed by printing four pages and then pausing for an amount of time before printing continues.

- Other print speed reduction factors

Other factors (especially during large print jobs) that can cause reduced print speeds include:

- Density control sequence; occurs every 150 pages and takes about 120 seconds

## The printer does not print

If the printer does not print at all, try the following solutions.



**NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

1. Make sure the printer is turned on and that the control panel indicates it is ready.
  - If the control panel does not indicate the printer is ready, turn the printer off and then on again.
  - If the control panel indicates the printer is ready, try sending the job again.
2. If the control panel indicates the printer has an error, resolve the error and then try sending the job again.
3. Make sure the cables are all connected correctly. If the printer is connected to a network, check the following items:
  - Check the bottom LED next to the network connection on the printer. If the network is active, the light is green.
  - Make sure that a network cable and not a phone cord is used to connect to the network.
  - Make sure the network router, hub, or switch is turned on and that it is working correctly.
4. Install the HP software for the printer. Using generic printer drivers can cause delays clearing jobs from the print queue.
5. From the list of printers on your computer, right-click the name of this product, click **Properties**, and open the **Ports** tab.
  - If a network cable is used to connect to the network, make sure the printer name listed on the **Ports** tab matches the one on the printer configuration page.
  - If a USB cable is used, and the printer is connected to a wireless network, make sure the box is checked next to **Virtual printer port for USB**.
6. If a personal firewall system on the computer is used, it might be blocking communication with the printer. Try temporarily disabling the firewall to see if it is the source of the problem.
7. If the host computer or the printer is connected to a wireless network, low signal quality or interference might be delaying print jobs.

## The printer prints slowly

If the printer prints, but it seems slow, try the following solutions.

1. Make sure the computer meets the minimum specifications for this printer. For a list of specifications, go to this Web site: [www.hp.com/support/lj4001-4004](http://www.hp.com/support/lj4001-4004) or [www.hp.com/support/lj4001-4004plus](http://www.hp.com/support/lj4001-4004plus) or [www.hp.com/support/ljmfp4101-4104](http://www.hp.com/support/ljmfp4101-4104) or [www.hp.com/support/ljmfp4101-4104plus](http://www.hp.com/support/ljmfp4101-4104plus).
2. When the printer is configured to print on some paper types, such as heavy paper, the printer prints more slowly so it can correctly fuse the toner to the paper. If the paper type setting is not correct for the type of paper you are using, change the setting to the correct paper type.
3. If the host computer or the printer is connected to a wireless network, low signal quality or interference might be delaying print jobs.

## Solve wired network problems

Review the following information and procedures to solve wired network problems.

### Introduction

Learn about solving wired network problems.

Certain types of problems can indicate there is a network communication problem. These problems include the following issues:

- The periodic loss of ability to communicate with the printer
- The printer cannot be found during driver installation
- A periodic failure to print

Check the items in this topic to verify that the printer is communicating with the network. Before beginning, print a configuration page from the printer control panel and locate the printer IP address that is listed on this page.



**NOTE:** To print using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

### Poor physical connection

Use the following procedure when the printer has a poor physical connection.

1. Verify that the printer is attached to the correct network port using a cable of the correct length.
2. Verify that cable connections are secure.
3. Look at the network port connection on the back of the printer, and verify that the amber activity light and the green link-status light are lit.
4. If the problem continues, try a different cable or port on the hub.

### The computer is using the incorrect IP address for the printer

Use the following procedure when the computer is using the incorrect IP address for the printer.

1. Open the printer properties and click the **Ports** tab. Verify that the current IP address for the printer is selected. The printer IP address is listed on the printer configuration page.



**NOTE:** To print a configuration page using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

2. If you installed the printer using the HP standard TCP/IP port, select the box labeled **Always print to this printer, even if its IP address changes**.
3. If you installed the printer using a Microsoft standard TCP/IP port, use the hostname instead of the IP address.
4. If the IP address is correct, delete the printer and then add it again.

### The computer is unable to communicate with the printer

Use the following procedure when the computer is unable to communicate with the printer.

1. Test network communication by pinging the network.
  - a. Open a command-line prompt on your computer.
    - For Windows, click **Start**, click **Run**, type `cmd`, and then press **Enter**.
    - For macOS, go to **Applications**, then **Utilities**, and open **Terminal**.
  - b. Type `ping` followed by the IP address for your printer.
  - c. If the window displays round-trip times, the network is working.
2. If the ping command failed, verify that the network hubs are on, and then verify that the network settings, the printer, and the computer are all configured for the same network.

### The printer is using incorrect link and duplex settings for the network

HP recommends leaving these settings in automatic mode (the default setting). If you change these settings, you must also change them for your network.

### New software programs might be causing compatibility problems

Verify that any new software programs are correctly installed and that they use the correct print driver.

### The computer or workstation might be set up incorrectly

Use the following procedure when the computer or workstation might be set up incorrectly.

1. Check the network drivers, print drivers, and the network redirection settings.
2. Verify that the operating system is configured correctly.

### The printer is disabled, or other network settings are incorrect

Use the following procedure when the printer is disabled, or other network settings are incorrect.

1. Review the configuration page to check the status of the network protocol. Enable it if necessary.



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**NOTE:** To print a configuration page using an HP Plus printer, the printer must have genuine original HP toner cartridges installed, must have an ongoing internet connection and an active HP Plus account (for more information, go to [hp.com/plus](http://hp.com/plus)).

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2. Reconfigure the network settings if necessary.



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# 5 Removal and replacement

When servicing the printer, several items must be considered to ensure a successful repair and to avoid damage to the printer or personal injury. Learn about these considerations and find detailed instructions for removing and replacing printer parts.

## Customer self-repair (CSR) A parts and accessories

Customer self-repair (CSR) A parts are parts that a customer replaces without assistance from a field technician. These parts can be replaced without the use of any tools.

### Customer-replaceable units

Learn about customer-replaceable parts removal and replacement.

### Internal parts and assemblies

Learn how to remove and replace the printer internal parts and assemblies.

#### Removal and replacement: RM2-5392-010CN 250-sheet paper input tray

Learn how to remove and replace the Tray 2 cassette.



[View a video of how to remove and replace the Tray 2 cassette.](#)

Mean time to repair: 2 minutes

Service level: CSR A

#### Before performing service

##### Turn the printer power off

- Disconnect the power cable.

---

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

---

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-1** Part information

Part number	Part description
RM2-5392-010CN	Tray 2

## Required tools

- No special tools are required to remove or install this assembly.

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-1** Remove the tray



### 2. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>


2. Unpack the replacement part from the packaging.



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

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


 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---

3. To install an assembly, reverse the removal steps.

---

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

---

### 3. Install Tray 2

Follow these steps to install Tray 2.

- Slide the tray straight into the printer to install it.

**Figure 5-2** Install the tray



### Removal and replacement: RM2-5413-000CN optional Tray 3 cassette

Learn how to remove and replace the Tray 3 cassette.

 [View a video of how to remove and replace the Tray 3 cassette.](#)

Mean time to repair: 2 minutes

Service level: CSR A

#### Before performing service

**Turn the printer power off**

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-2** Part information

Part number	Part description
RM2-5413-000CN	Tray 3

## Required tools

- No special tools are required to remove or install this assembly.

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

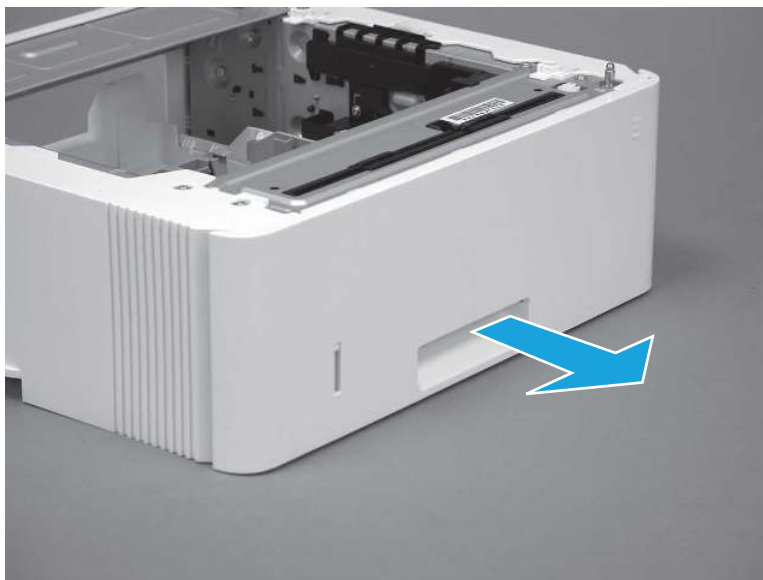
Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

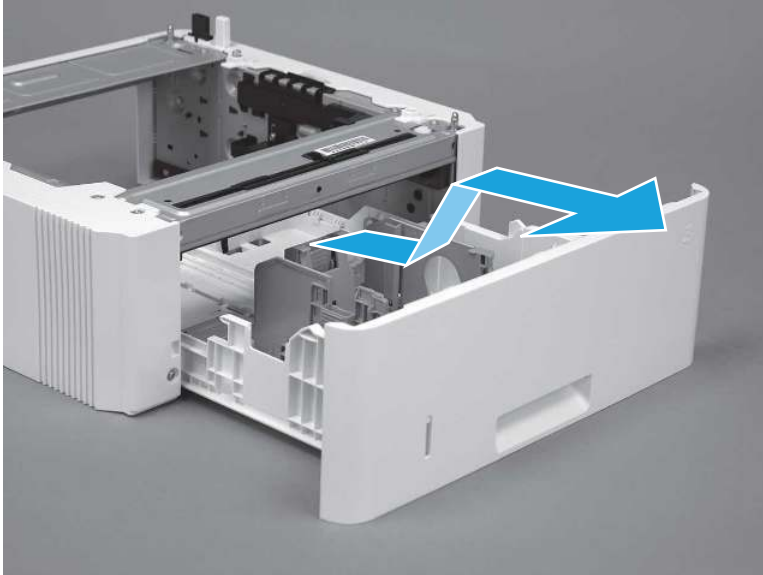
1. Pull the tray straight out of the printer until it stops.

**Figure 5-3** Pull the tray out of the printer



2. Slightly lift up on the front of the tray to release it, and then continue to pull the tray out of the accessory to remove it.

**Figure 5-4 Release and remove the tray**



## 2. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



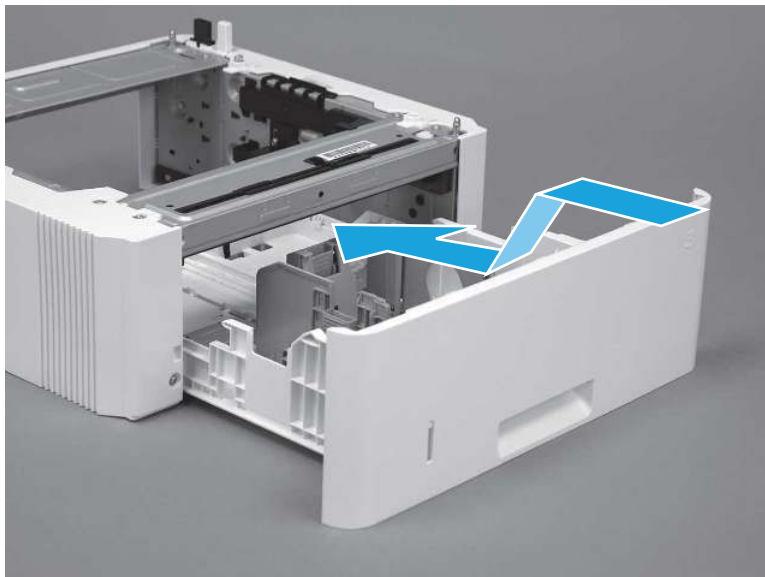
**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### 3. Install optional Tray 3

Follow these steps to install optional Tray 3.

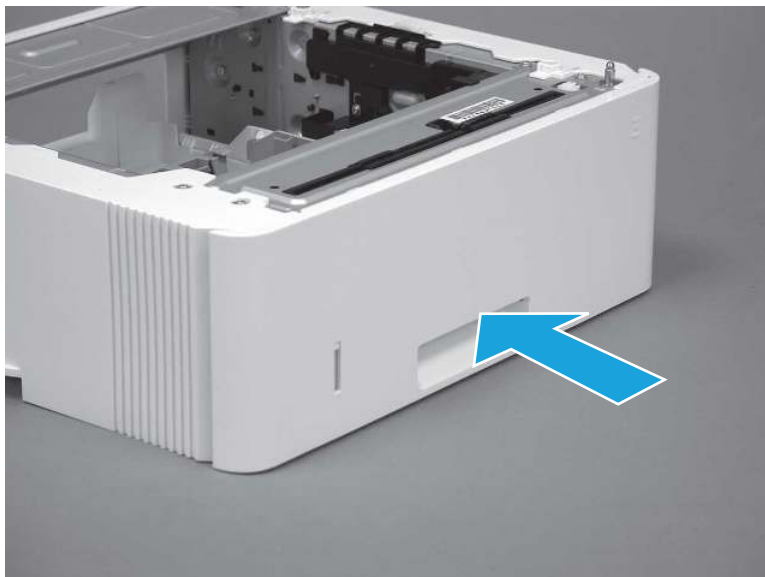
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-5** Install the tray



2. Push the tray straight into the accessory to close it

**Figure 5-6** Close the tray



#### Removal and replacement: 3PZ15-67966 multipurpose tray roller

Learn how to remove and replace the Tray 1 roller.

 [View a video of how to remove and replace the Tray 1 roller.](#)

Mean time to repair: 2 minutes

Service level: CSR A

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-3** Part information

Part number	Part description
3PZ15-67967	Tray 1 Pickup Roller

## Required tools

- No special tools are required to remove or install this assembly.

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove the roller

Follow these steps to remove the roller.

An MFP printer is shown in this section. However, the procedure is correct for all printer models.

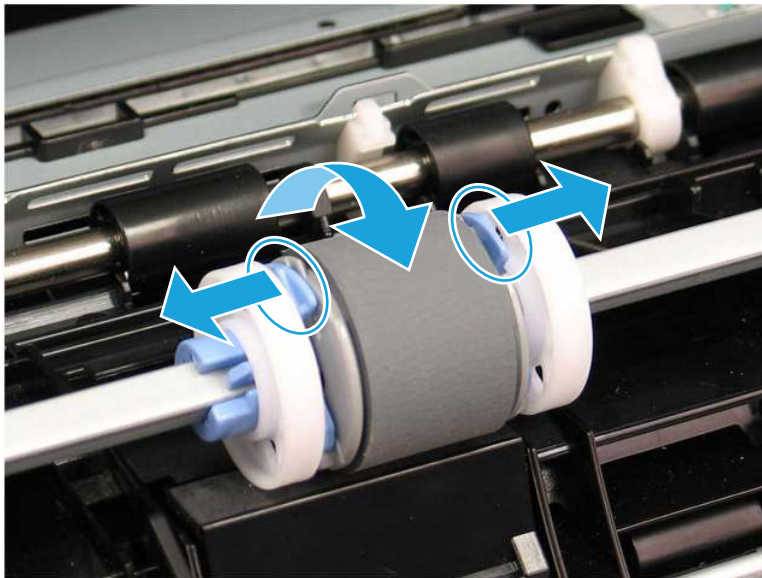
1. Press the door-release button, and then open the toner-cartridge door

**Figure 5-7** Open the toner-cartridge door



2. Release two tabs between the roller collar and roller, and then rotate the top of the roller out and away from the printer.

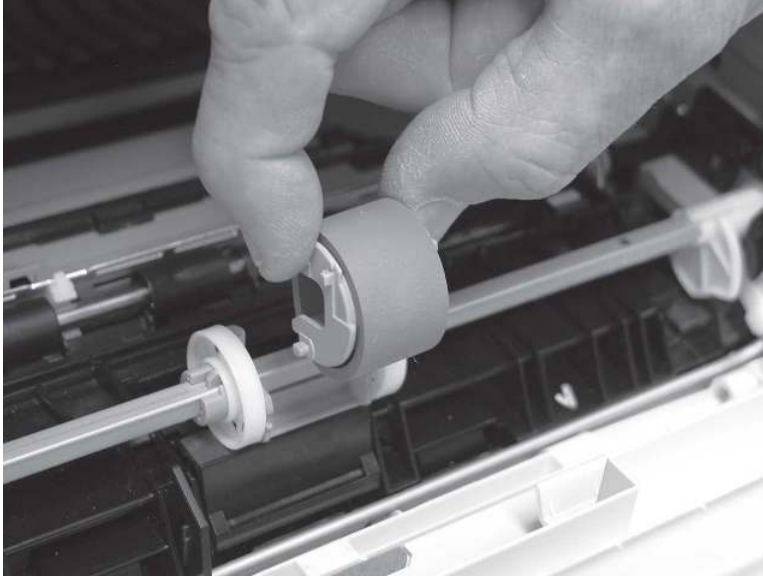
**Figure 5-8** Release the roller





3. Remove the roller.

**Figure 5-9 Remove the roller**



## 2. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### 3. Install the roller

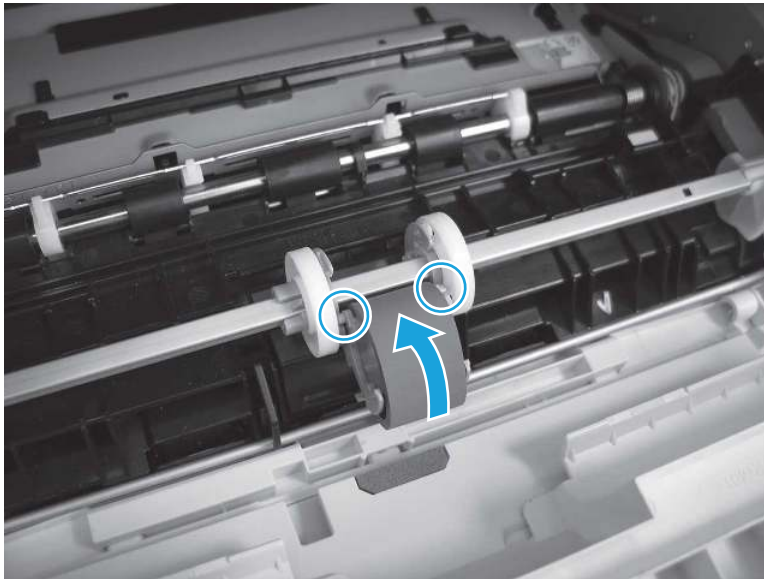
Follow these steps to install the roller.

- ⚠ CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

An MFP printer is shown in this section. However, the procedure is correct for all printer models.

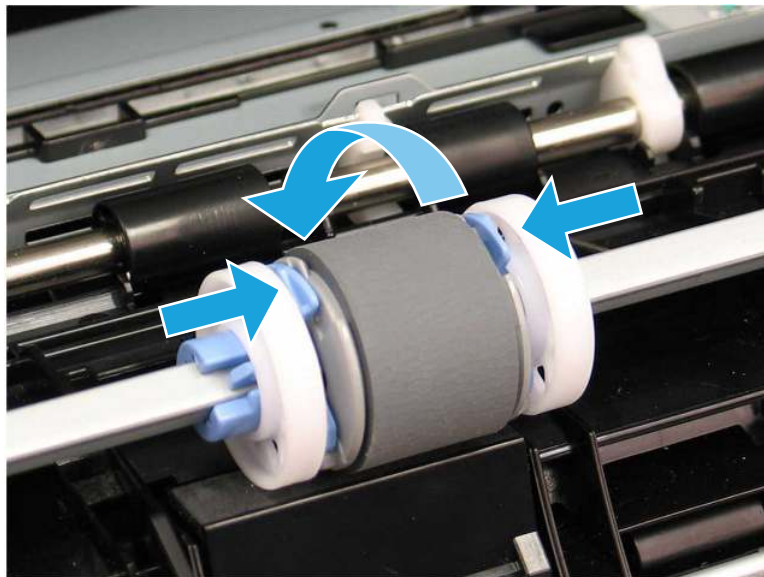
1. Position the pickup roller with the pins in the provided slots on the holder, and then rotate the top of the roller up and toward the printer.

**Figure 5-10** Install the roller



2. Continue to rotate the top of the roller toward the printer (callout 1), until two tabs (callout 2) snap into place.

**Figure 5-11** Engage two tabs



3. Close the toner-cartridge door

**Figure 5-12** Close the toner-cartridge door



### Removal and replacement: 3PZ15-67965 Tray 2 paper pickup roller assembly

Learn how to remove and replace the Tray 2 pickup roller.

 [View a video of how to remove and replace the Tray 2 pickup roller.](#)


Mean time to repair: 2 minutes


Service level: CSR A

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

 **IMPORTANT:** The originally installed Tray 2 pickup roller might look different than what is included in the kit below (3PZ15-67966). However, the roller supplied in the kit is correct for the 4001-4004 and 4101-4104 printers.

For more information, see [Additional information on page 269](#) in this topic.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-4** Part information

Part number	Part description
3PZ15-67966	Tray pickup roller assembly (Tray 2)

## Required tools

- No special tools are required to remove or install this assembly.

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

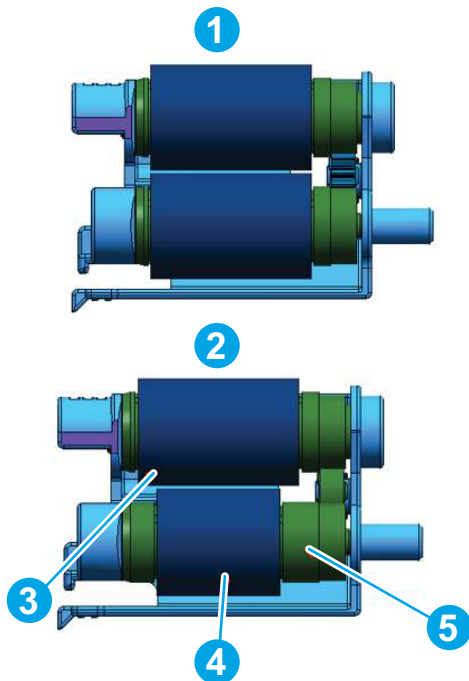
## Post service test

Print any pages necessary to make sure the printer is functioning correctly.

## Additional information

The following figure and table describe the design differences for the Tray2 pickup roller assembly.

**Figure 5-13** Tray 2 pickup roller



**Table 5-5** Tray 2 pickup roller differences

Item	Description
1	<b>Tray 2 pickup roller:</b> Included in kit 3PZ15-67966.
2	<b>Tray 2 pickup roller:</b> Installed in 4001-4004 and 4101-4104 printers during manufacturing.
3	<b>Feed roller:</b> Rubber reduction in width (0.33mm).
4	<b>Pick roller:</b> Rubber reduction in width.
5	<b>Pick core:</b> Thrust decision changes to accommodate rubber width reductions.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-14** Remove the tray



## 2. Remove the pickup roller assembly (Tray 2)

Follow these steps to remove the pickup roller assembly (Tray 2).


---

 **NOTE:** A SFP printer is shown in this section. However, the procedure is correct for all printer models.

---

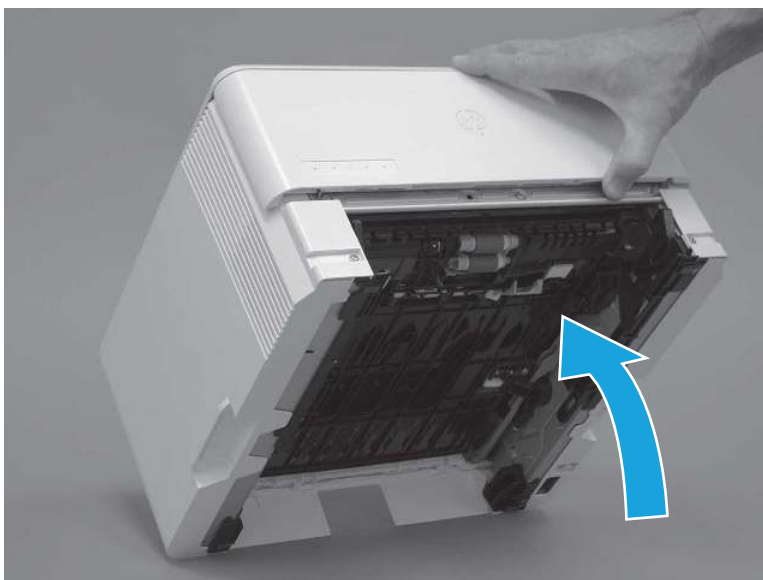
1. Carefully rotate the printer backward.

---

 **CAUTION:** To avoid damage to the rear cassette cover, keep it in the closed position

---

**Figure 5-15** Tilt the printer backward



2. Continue rotate the printer backward until it rests on the rear cover, bottom-side face forward.

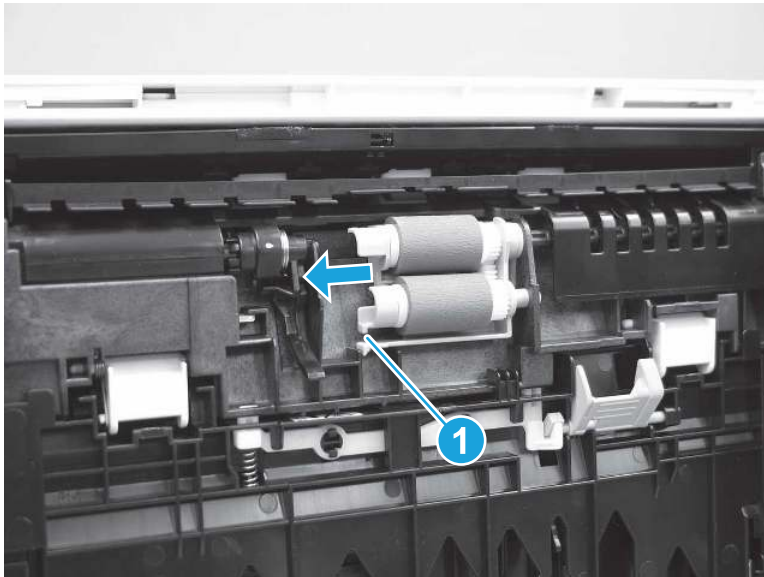
**⚠ CAUTION:** **MFP printers only:** The document feeder is not captive and can unexpectedly open when the printer is tilted backward.

**Figure 5-16** Place the printer bottom-side face forward



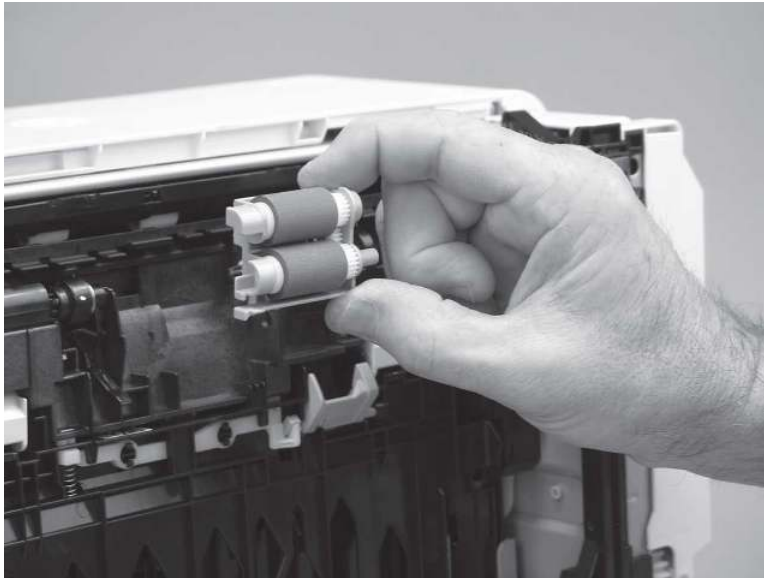
3. Release one tab (callout 1), and then slide the roller holder toward the left side of the printer to release it.

**Figure 5-17** Release one tab



4. Remove the roller assembly.

**Figure 5-18** Remove the roller assembly



### 3. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.



#### 4. Install the pickup roller assembly (Tray 2)

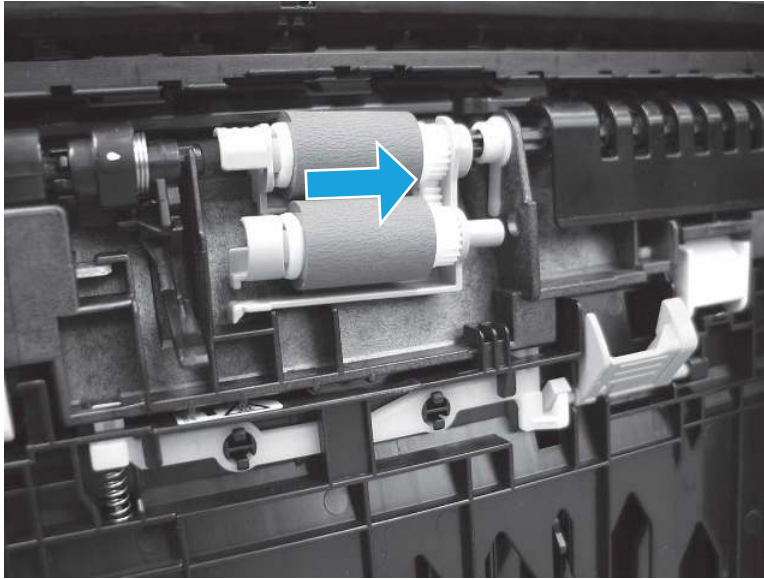
Follow these steps to install the pickup roller assembly (Tray 2).

**⚠ CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

**📝 NOTE:** A SFP printer is shown in this section. However, the procedure is correct for all printer models.

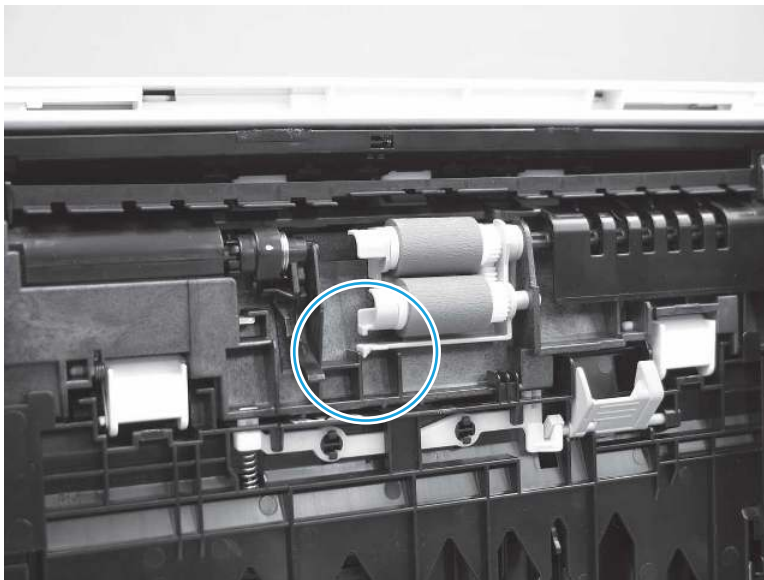
1. Position the roller holder assembly in the printer as shown, and then slide it toward the right side of the printer.

**Figure 5-19** Install the roller holder



2. Make sure that the tab snaps into place.

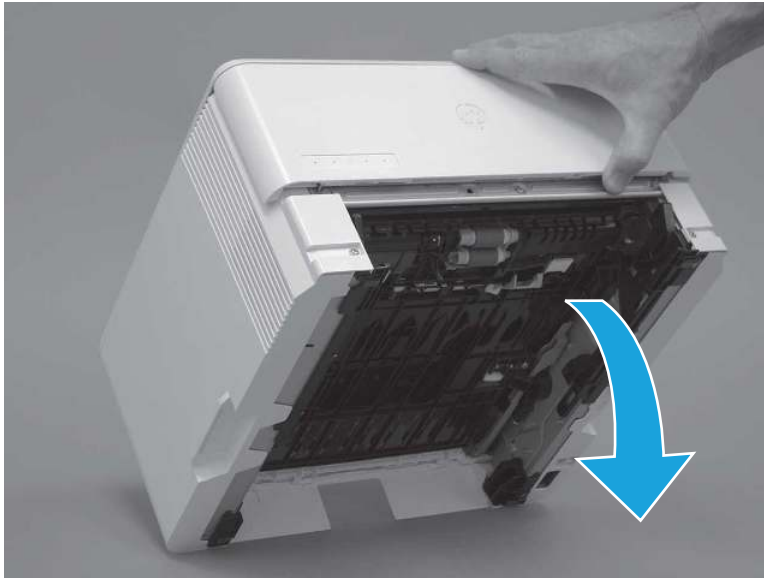
**Figure 5-20** Check the tab





- Carefully rotate the printer forward.

**Figure 5-21** Rotate the printer forward



- Continue rotate the printer forward until it rests in the operational position.

**Figure 5-22** Place the printer in the operational position



## 5. Install Tray 2

Follow these steps to install Tray 2.

- Slide the tray straight into the printer to install it.

**Figure 5-23** Install the tray



#### Removal and replacement: 3PZ15-67964 Tray 2 separation roller assembly

Learn how to remove and replace the Tray 2 separation roller.



[View a video of how to remove and replace the Tray 2 separation roller.](#)

Mean time to repair: 2 minutes

Service level: CSR A

#### Before performing service

##### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-6** Part information

Part number	Part description
3PZ15-67964	Separation assembly (Tray 2)

#### Required tools

- No special tools are required to remove or install this assembly.

#### After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Print any pages necessary to make sure the printer is functioning correctly.

#### 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-24** Remove the tray



#### 2. Remove the separation pad roller assembly (Tray 2)

Follow these steps to remove the separation pad roller assembly (Tray 2).

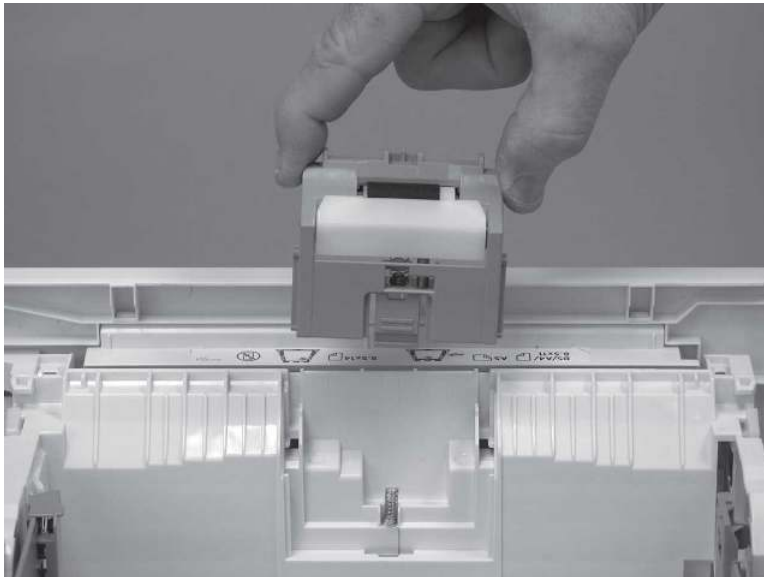
1. Press the locking lever (callout 1), and then pull the separation roller assembly straight up to release it.

**Figure 5-25 Release the assembly**



2. Remove the assembly.

**Figure 5-26 Remove the assembly**



### 3. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.

---


**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

**IMPORTANT:**  Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

**NOTE:**  If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---

3. To install an assembly, reverse the removal steps.

**NOTE:**  When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

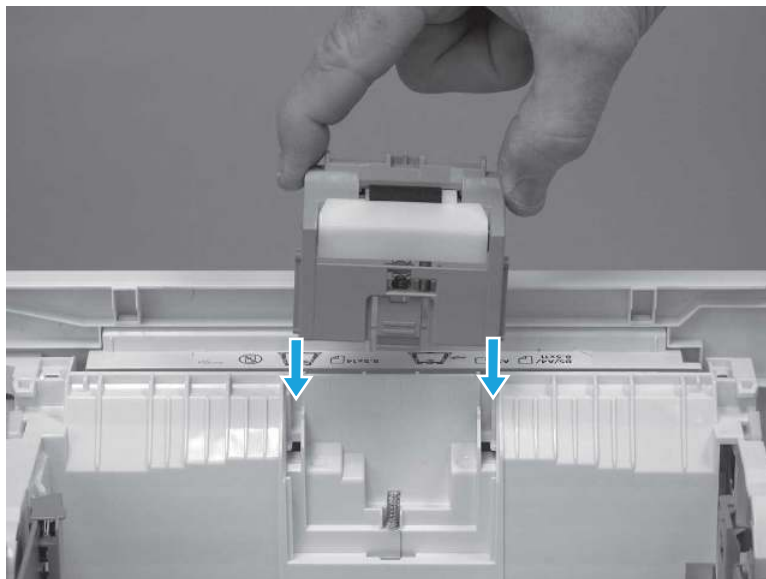
---

#### 4. Install the separation pad roller assembly (Tray 2)

Follow these steps to install the separation pad roller assembly (Tray 2).

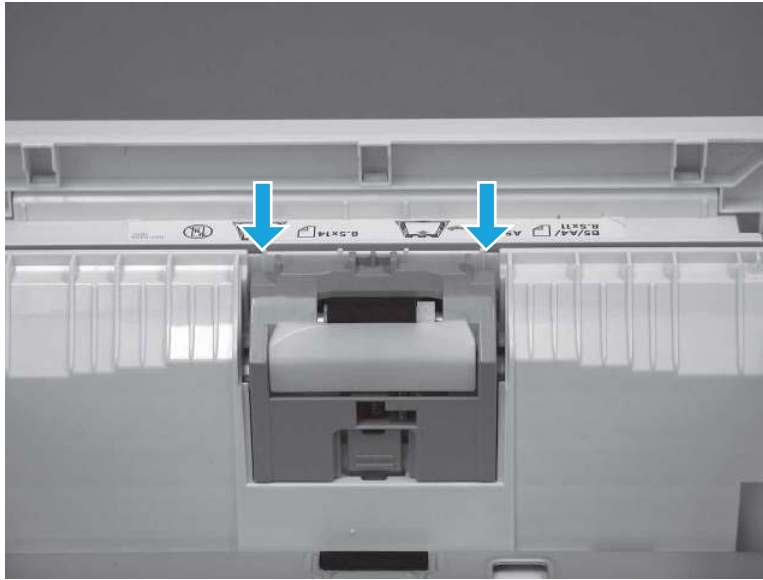
1. Install the assembly in the slots in the cassette.

**Figure 5-27** Install the assembly (1 of 2)



2. Push the separation roller assembly straight down until it snaps into place.

**Figure 5-28** Install the assembly (2 of 2)



## 5. Install Tray 2

Follow these steps to install Tray 2.

- Slide the tray straight into the printer to install it.

**Figure 5-29** Install the tray



## Removal and replacement: 3PZ15-67968 optional Tray 3 paper pickup roller assembly

Learn how to remove and replace the Tray 3 pickup roller.

 [View a video of how to remove and replace the Tray 3 pickup roller.](#)

Mean time to repair: 2 minutes

Service level: CSR A

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-7** Part information

Part number	Part description
3PZ15-67968	Tray pickup roller assembly (optional Tray 3)

## Required tools

- No special tools are required to remove or install this assembly.

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

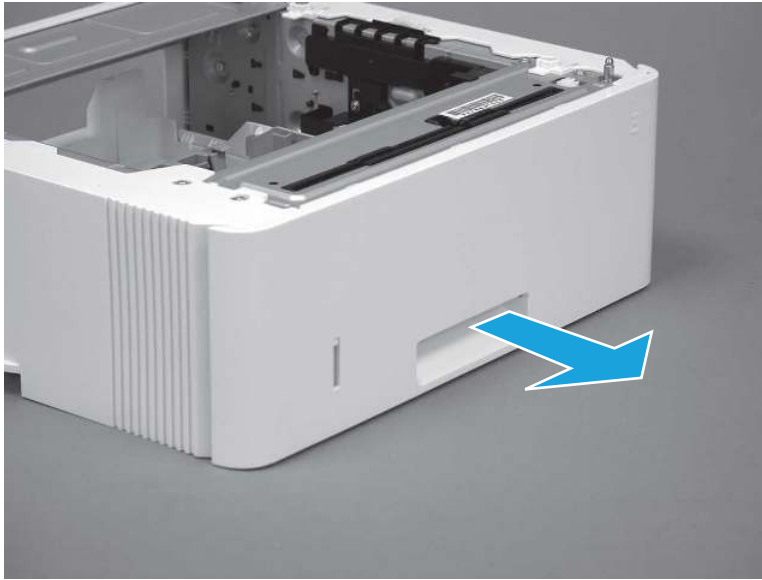
Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

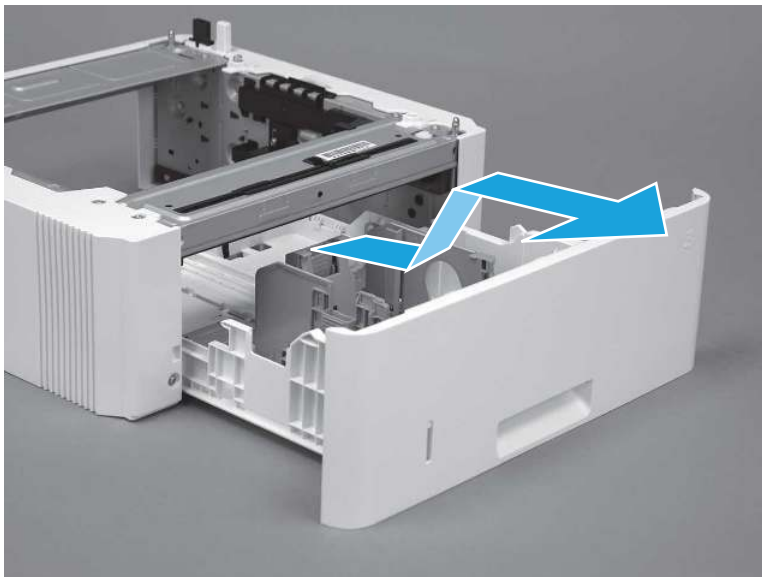
1. Pull the tray straight out of the printer until it stops.

**Figure 5-30 Pull the tray out of the printer**



2. Slightly lift up on the front of the tray to release it, and then continue to pull the tray out of the accessory to remove it.

**Figure 5-31 Release and remove the tray**



## 2. Remove the pickup roller assembly (optional Tray 3)

Follow these steps to remove the pickup roller assembly (optional Tray 3).



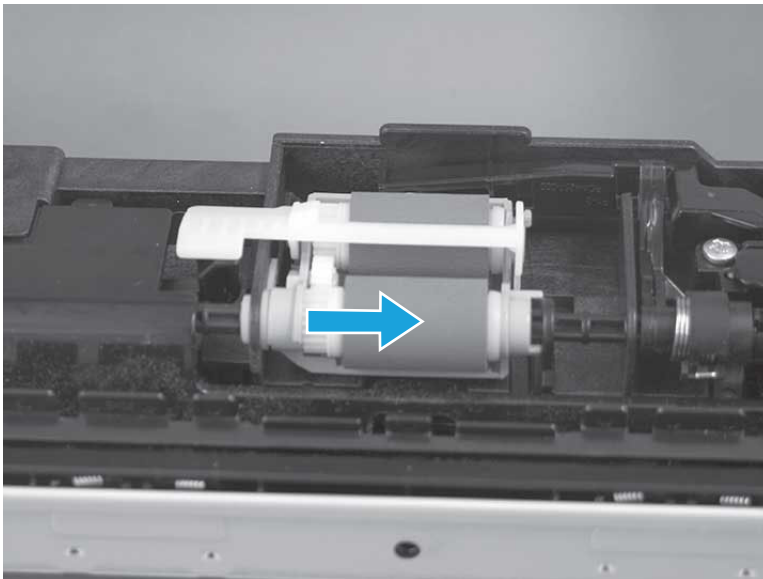
1. Carefully turn the accessory over to expose the roller assembly.

**Figure 5-32** Turn the accessory over



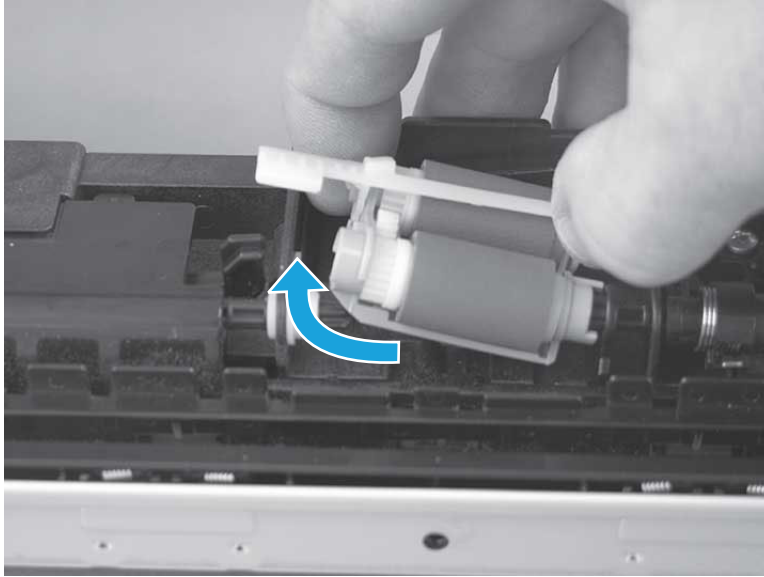
2. Slide the roller holder to the right to compress the spring-loaded shaft and release the assembly.

**Figure 5-33** Release the roller assembly



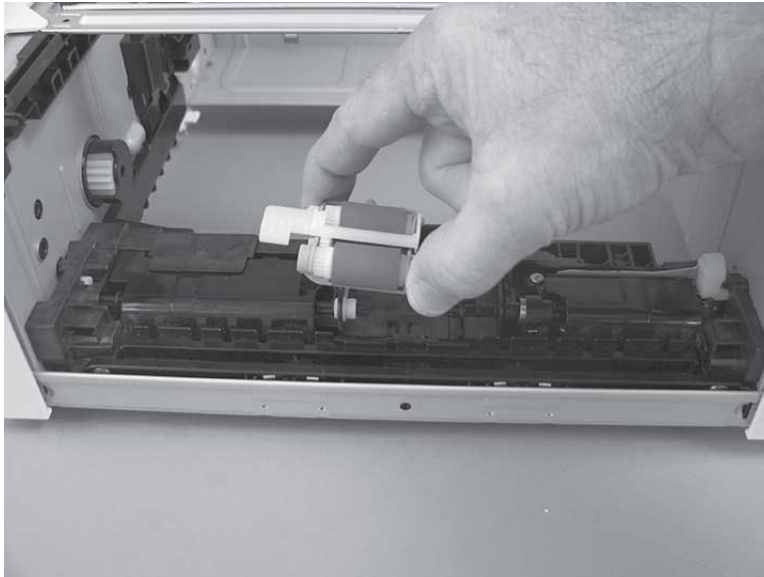
3. Rotate the end of the assembly up and away from the accessory.

**Figure 5-34** Rotate the assembly up



4. Remove the roller assembly.

**Figure 5-35** Remove the roller assembly



### 3. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.


1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>


2. Unpack the replacement part from the packaging.

**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

**IMPORTANT:**  Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.


**NOTE:**  If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.


**NOTE:**  When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

#### 4. Install the pickup roller assembly (optional Tray 3)

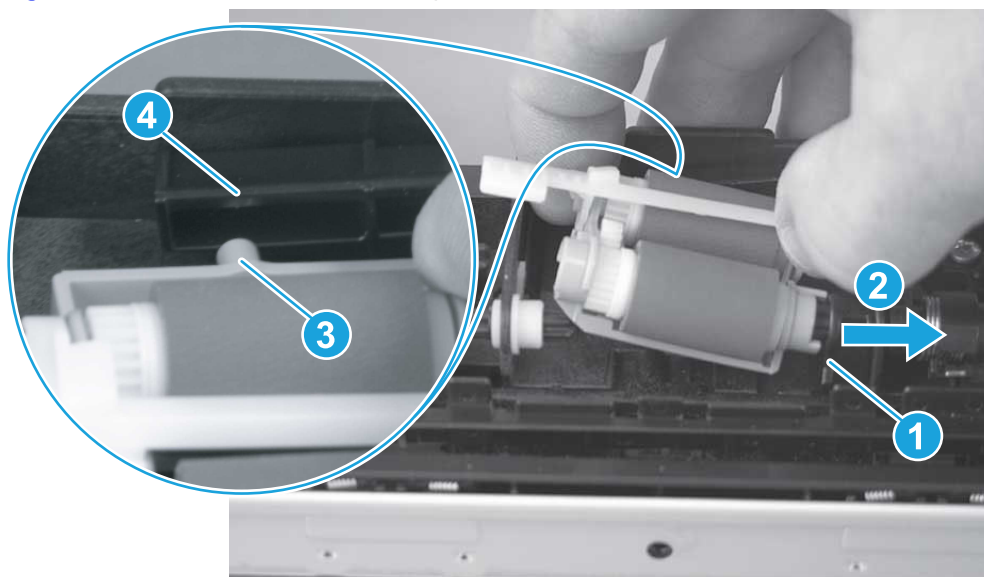
Follow these steps to install the pickup roller assembly (optional Tray 3).

**CAUTION:**  Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

1. Install the right end of the assembly on the spring-loaded shaft (callout 1), and then slide it to the right to compress the shaft (callout 2).

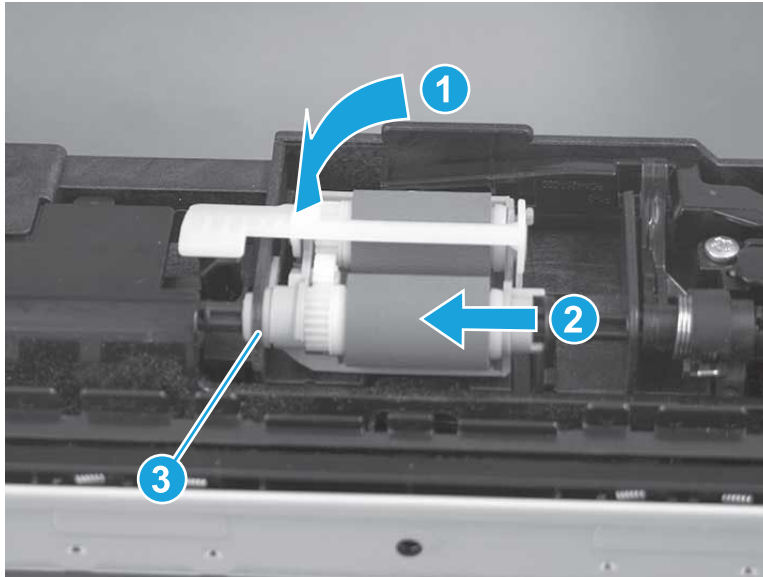
**IMPORTANT:**  Make sure that the pin on the back of the holder (callout 3) is inserted in the slot (callout 4) in the lever arm. If the pin is not correctly installed, the accessory will not pick paper.

**Figure 5-36** Install the roller assembly




2. Rotate the left end of the assembly down and into place (callout 1), and then slide the assembly to the left (callout 2) to engage the drive end of the assembly with the drive shaft (callout 3).

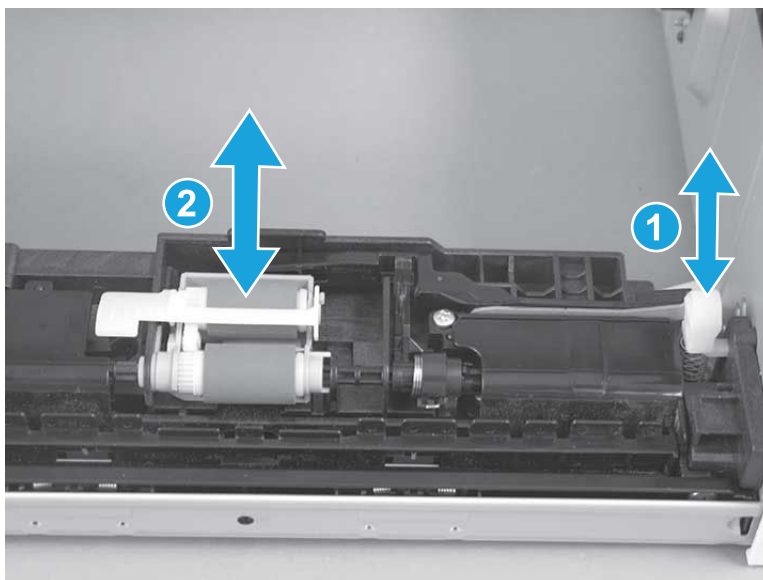
**Figure 5-37 Engage the assembly**



3. Push down and then release the tray-roller actuator (callout 1) and observe the roller assembly. It should move up and down (callout 2) in response to the actuator.

 **NOTE:** If it does not, remove the roller assembly and reinstall it making sure that the pin on the back of the assembly is in the lever arm. See the previous steps in this section.

**Figure 5-38 Check the installation**

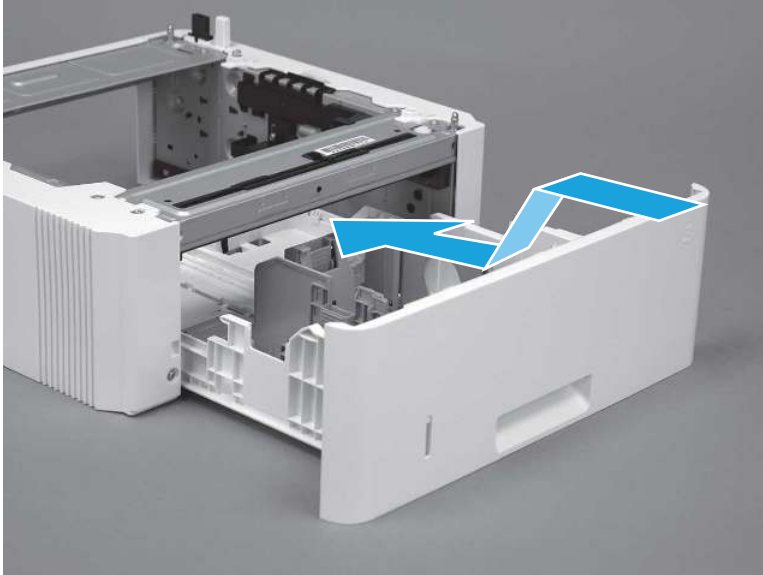


## 5. Install optional Tray 3

Follow these steps to install optional Tray 3.

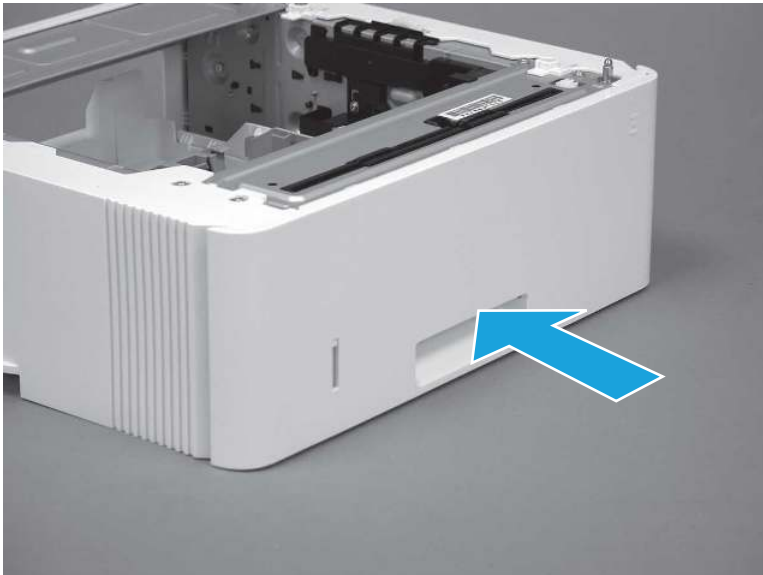
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-39** Install the tray



2. Push the tray straight into the accessory to close it

**Figure 5-40** Close the tray



#### Removal and replacement: 3PZ15-67967 optional Tray 3 separation roller assembly

Learn how to remove and replace the Tray 3 separation roller.

 [View a video of how to remove and replace the Tray 3 separation roller.](#)

Mean time to repair: 2 minutes

Service level: CSR A

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-8** Part Information

Part number	Part description
3PZ15-67967	Tray 3 Separation Pad

## Required tools

- No special tools are required to remove or install this assembly.

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

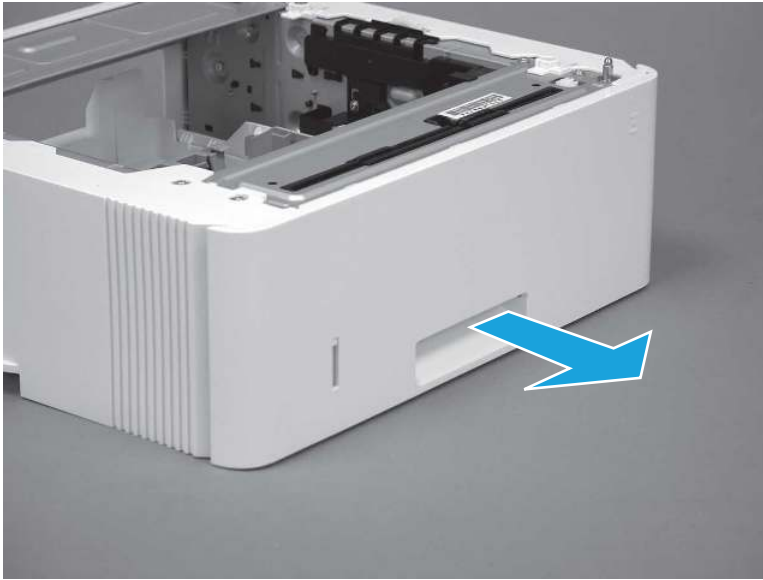
Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

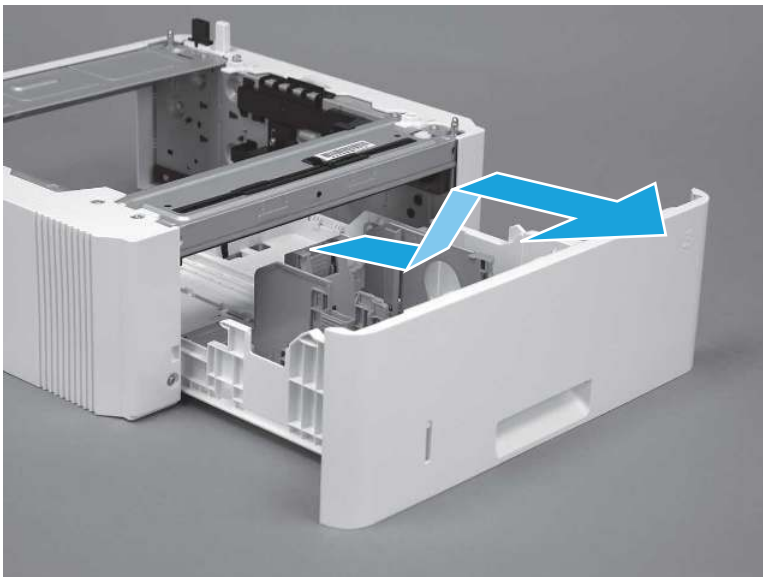
1. Pull the tray straight out of the printer until it stops.

**Figure 5-41 Pull the tray out of the printer**



2. Slightly lift up on the front of the tray to release it, and then continue to pull the tray out of the accessory to remove it.

**Figure 5-42 Release and remove the tray**



## 2. Remove the separation roller assembly (optional Tray 3)

Follow these steps to remove the separation roller assembly (optional Tray 3).

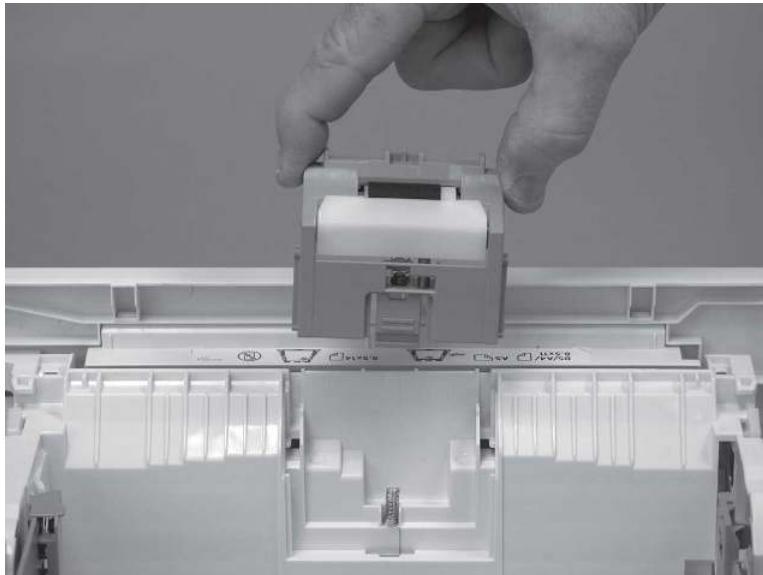
1. Press the locking lever (callout 1), and then pull the separation roller assembly straight up to release it.

**Figure 5-43** Release the assembly



2. Remove the assembly.

**Figure 5-44** Remove the assembly



### 3. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>




2. Unpack the replacement part from the packaging.

---


**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

**IMPORTANT:**  Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

**NOTE:**  If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---

3. To install an assembly, reverse the removal steps.

**NOTE:**  When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

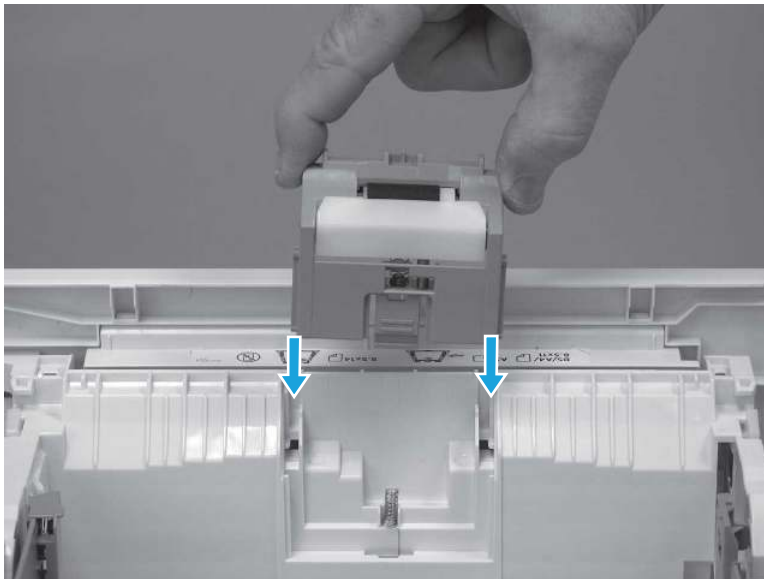
---

#### 4. Install the separation pad roller assembly (optional Tray 3)

Follow these steps to install the separation pad roller assembly (optional Tray 3).

1. Install the assembly in the slots in the cassette.

**Figure 5-45** Install the assembly (1 of 2)



2. Push the separation roller assembly straight down until it snaps into place.

**Figure 5-46** Install the assembly (2 of 2)

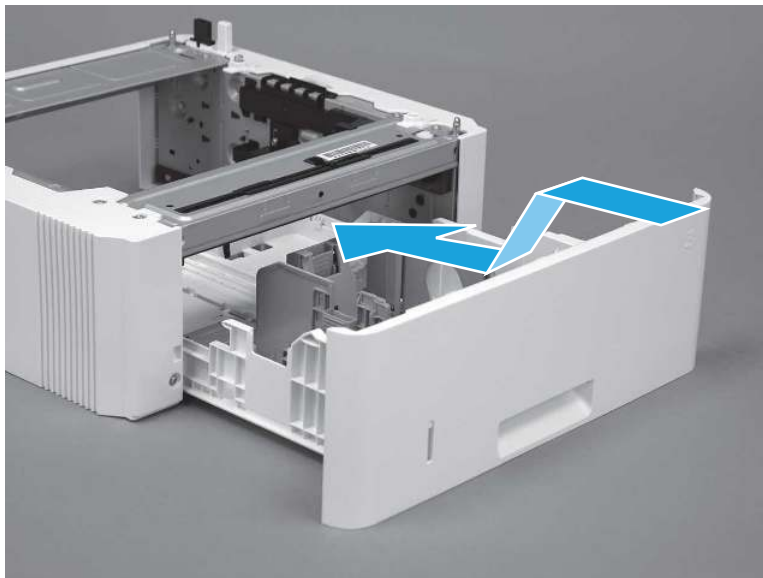


### 5. Install optional Tray 3

Follow these steps to install optional Tray 3.

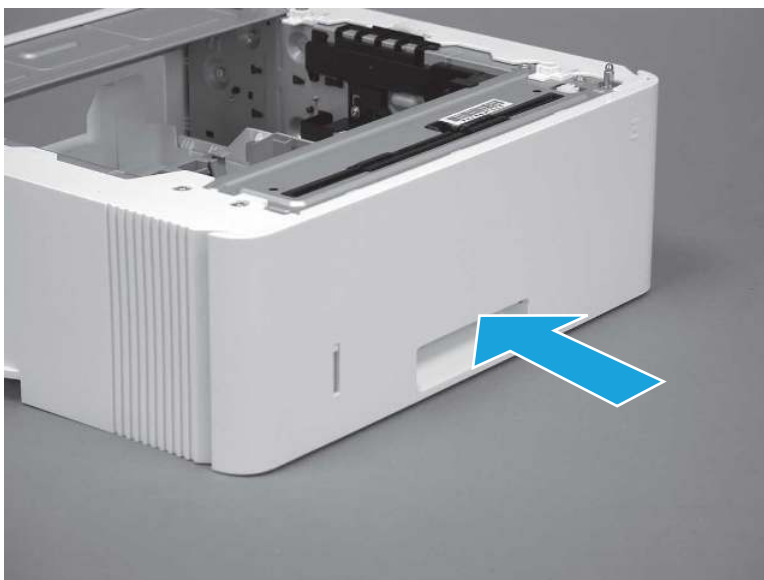
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-47** Install the tray



2. Push the tray straight into the accessory to close it

**Figure 5-48** Close the tray



## Document feeder / scanner

Learn about document feeder and scanner parts removal and replacement.

### Field-replaceable units (FRUs)

Learn about FRU parts removal and replacement.


### Covers, panels, and doors

Learn about covers, panels, and doors removal and replacement.

#### Removal and replacement: ADF top cover (with rollers)

Learn about document feeder top cover removal and replacement.

---

 **NOTE:** The figures in this topic show a printer other than the HP LaserJet 4101-4104 models. However, the procedure is correct for removing the ADF top cover (with rollers).

---

Mean time to repair: 5 minutes


Service level: Easy

#### Before performing service

##### Turn the printer power off

- Disconnect the power cable.

---

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

---

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-9** Part information

Part number	Part description
W1A77-67903	ADF top cover assembly (includes rollers)

## Required tools

- Small flat-blade screwdriver

## After performing service

### Turn the printer power on


- Connect the power cable.
- Use the power switch to turn the power on.


## Post service test

Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove the document feeder top cover

Follow the procedure below to remove and replace the document feeder top cover.

 **IMPORTANT:** The figures in this topic show a printer other than the HP LaserJet 4101-4104 models. However, the procedure is correct for removing the ADF top cover (with rollers).

 **NOTE:** The document feeder top cover includes the rollers.

1. Open the document feeder top cover.

**Figure 5-49** Open the cover



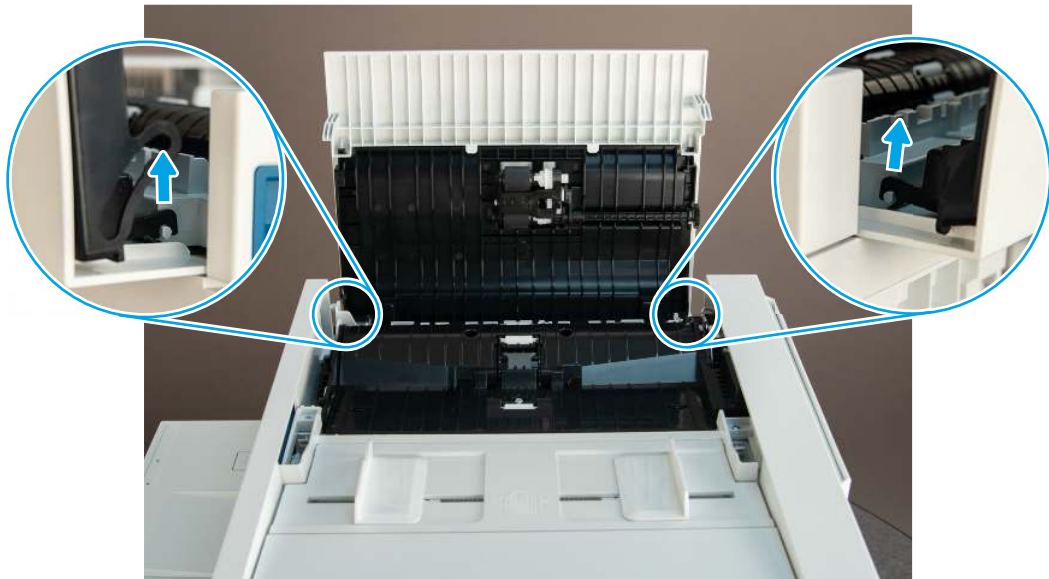
2. Release the cover retainer clip.

**Figure 5-50** Release the clip



3. Pull straight up on each hinge clip to release them.

**Figure 5-51** Release the hinge clips



4. Remove the document feeder cover.

**Figure 5-52 Remove the cover**



## 2. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Internal parts and assemblies

Learn how to remove and replace the printer internal parts and assemblies.

### Removal and replacement: ISA lift assembly and slider pin (MFP)

Learn how to remove and replace the integrated scanner assembly (ISA) lift assembly and slider pin.



[View a video of how to remove and replace the ISA lift assembly and slider pin.](#)

Mean time to repair: 4 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-10** Part information

Part number	Part description
B3Q10-60128	ISA lift assembly
B3Q10-40041	ISA lift slider pin

### Required tools

- Small flat-blade screwdriver

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

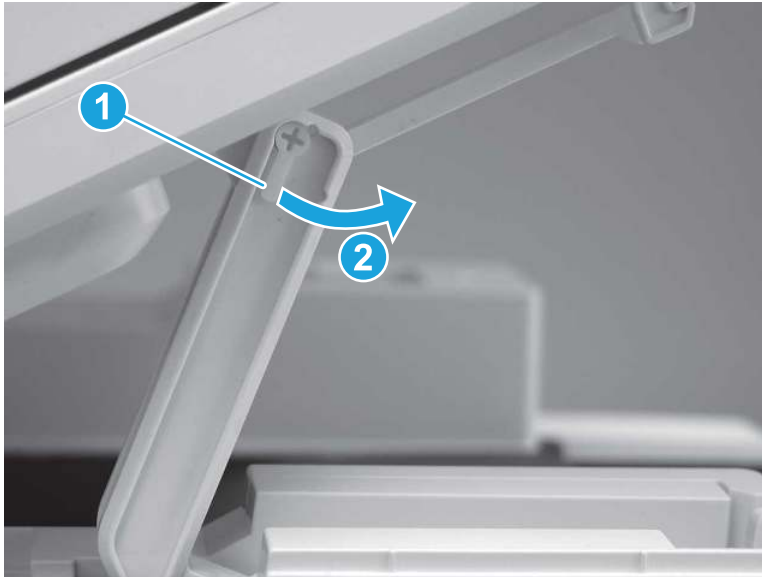
Make sure that toner ISA correctly opens and closes.

#### 1. Remove the slider pin and ISA lift assembly (MFP only)

Follow these steps to remove the slider pin and ISA lift assembly (MFP only).


1. open the ISA, release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-53** Release one tab and rotate the slider pin



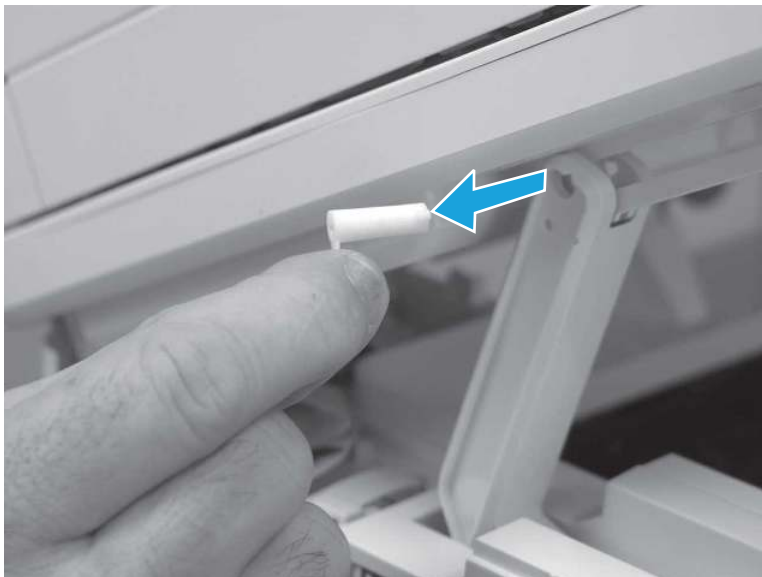
2. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.


---

**Figure 5-54** Remove the slider pin




3. Move the ISA out of the way, and then lower the support arm to the closed position.

---

 **CAUTION:** The ISA hinges are not captive in the top cover mounting bosses. Do not allow the ISA to slip off of the top cover.

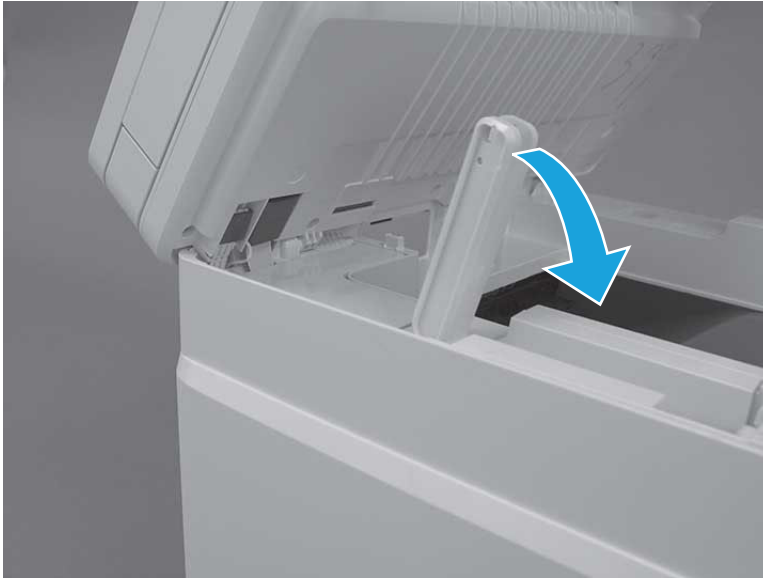
---




 **Reinstallation tip:** If the replacement lift assembly is in the closed position, place it in the open position.

---

**Figure 5-55** Lower the support arm

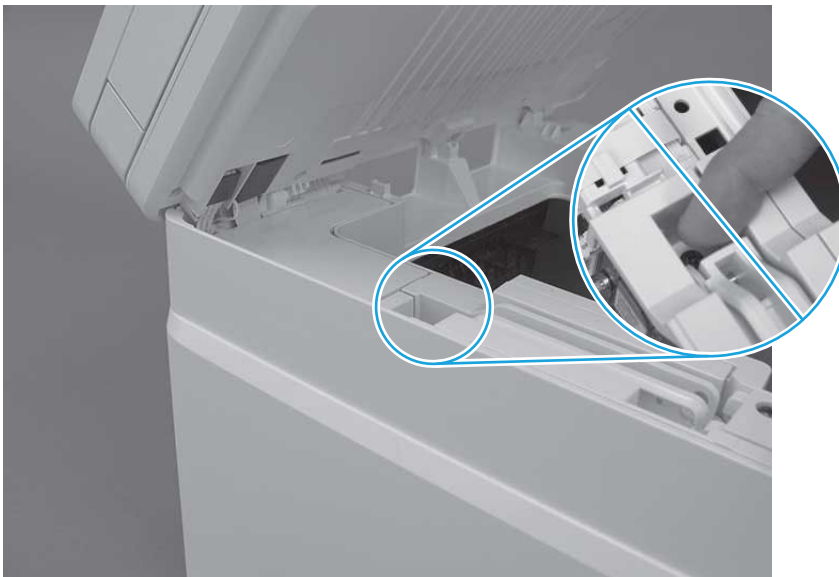


4. Before proceeding take note of the following.

 **CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

---

**Figure 5-56** Before proceeding take note



5. Remove one screw (callout 1).

**Figure 5-57** Remove one screw



6. Remove the support arm.

**Figure 5-58** Remove the support arm



## 2. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.



1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>


## 2. Unpack the replacement part from the packaging.

 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

## 3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### Removal and replacement: Scanner glass Mylar

Learn about scanner glass Mylar removal and replacement.


Mean time to repair: 35 minutes

Service level: Difficult

#### Before performing service

##### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-11 Part information**

Part number	Part description
B3Q10-40048	Holder-Mylar
B3Q10-00060	Mylar-ramp

#### Required tools

- Small flat-blade screwdriver
- Clean room/booth (recommended)
- Ionizer fan (recommended)

## After performing service

### Turn the printer power on


- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove the Mylar holder

Follow the procedure below to remove the Mylar holder.

 **NOTE:** HP recommends using a clean room/booth for this procedure.

1. Place a piece of tape on the blade of a screwdriver (callout 1) to avoid scratches while working.

**Figure 5-59** Prepare a screwdriver



2. To remove the Mylar holder from the bezel area, do the following:
  - a. Use the prepared screwdriver in the two circled areas shown below to carefully release the Mylar holder.

Figure 5-60 Release the Mylar holder



- b. Remove the Mylar holder.

Figure 5-61 Remove the Mylar holder



- 3. Use sticky tape to clean any left over adhesive residue from the area (callout 1).



**NOTE:** Do not use alcohol or chemical adhesive remover which might damage the white calibration label.

Make sure that the area (callout 1) is free of dust and foreign materials. Clean this area by using a lint-free cloth or cotton ball.

Always keep an ionizer fan (if available) blowing towards to the sticking area (callout 2).

---

**Figure 5-62** Remove adhesive residue



## 2. Install the Mylar

Follow the procedure below to install the Mylar.

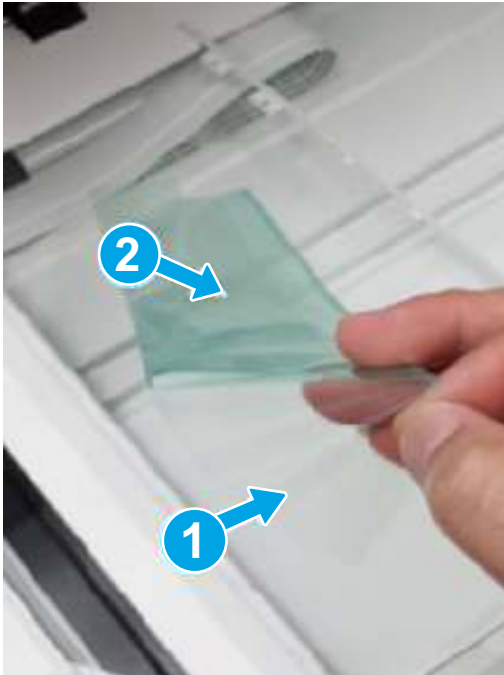


**NOTE:** HP recommends using a clean room/booth for this procedure.

---


1. Remove the protective film backing (callout 1) to expose the adhesive side of the Mylar (callout 2).

**Figure 5-63** Remove the protective film (bottom)



2. Align the Mylar with the edge of the ramp, and then press the apex downward and press the vertical area towards the left.

---

 **NOTE:** Make sure that the Mylar is vertically registered against the bezel wall.

---

**Figure 5-64** Registrar the Mylar



3. Use a finger to firmly press on the ramp area and slide it along the Mylar to make sure that the adhesive side is securely fastened to the ramp.

- **Callout 1 (incorrect installation):** Bubbles present in the adhesive area.



- **Callout 2 (correct installation):** No bubbles present in the adhesive area.

**Figure 5-65** Install the Mylar



4. Press down on the upper and lower edges of the Mylar where the adhesive is present (as well as all other adhesive surfaces) to make sure the Mylar is securely adhered to the ramp.

**Figure 5-66** Check the install of the Mylar



5. Firmly press the areas indicated with arrows in the figure below to make sure that the Mylar is secured to the plastic wall.


 **NOTE:** There should be no gap between the overhanging Mylar and the plastic wall (callout 1).



Figure 5-67 Check the Mylar overhang

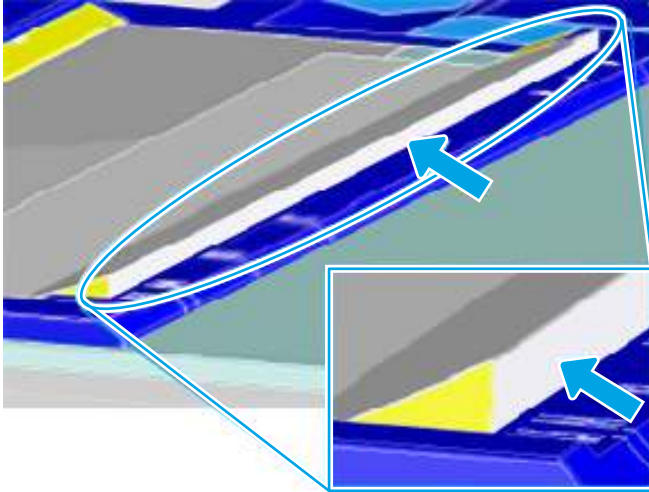
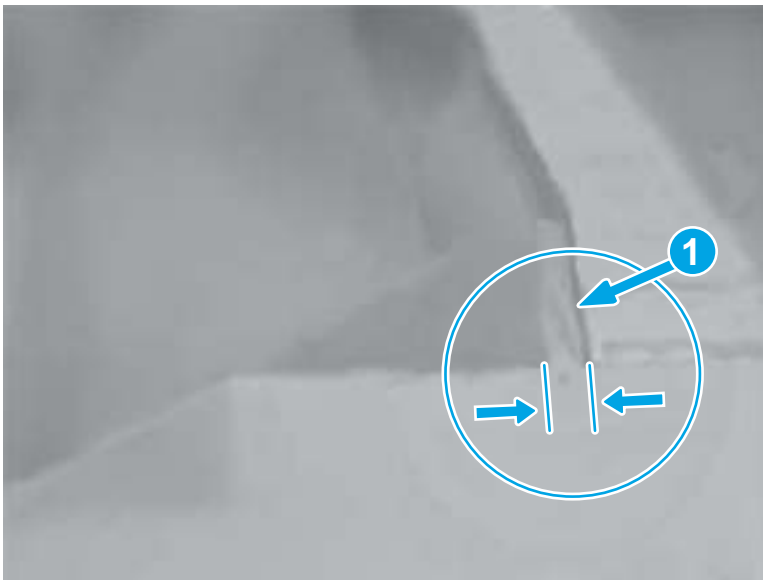


Figure 5-68 Incorrect Mylar overhang (Mylar and wall gap)



6. Remove the protective film from the top of the Mylar.

**Figure 5-69** Remove the protective film (top)



7. Reinstall the Mylar holder in the bezel and firmly push in to make sure it is firmly seated.

**Figure 5-70** Reinstall the Mylar holder



8. To check the installation, do the following:
  - a. Open and close the cover to make sure that the Mylar does not make any noise.
  - b. Check the Mylar for wrinkles or waves (not allowed).

- c. The Mylar must rest flat against the ADF glass - No rainbows are allowed in the critical areas. For more information, see [Inspect the Mylar on page 308](#).
- d. Clean the Mylar with a lint free cloth.

**Figure 5-71** Check the installation




### 3. Inspect the Mylar

Follow the procedure below to verify that the Mylar is correctly installed.

1. Before proceeding, use the figures below to learn about identifying Mylar rainbows.

---

 **TIP:** A common cause of rainbows is not thoroughly cleaning the ADF glass prior to adhering the Mylar.

---

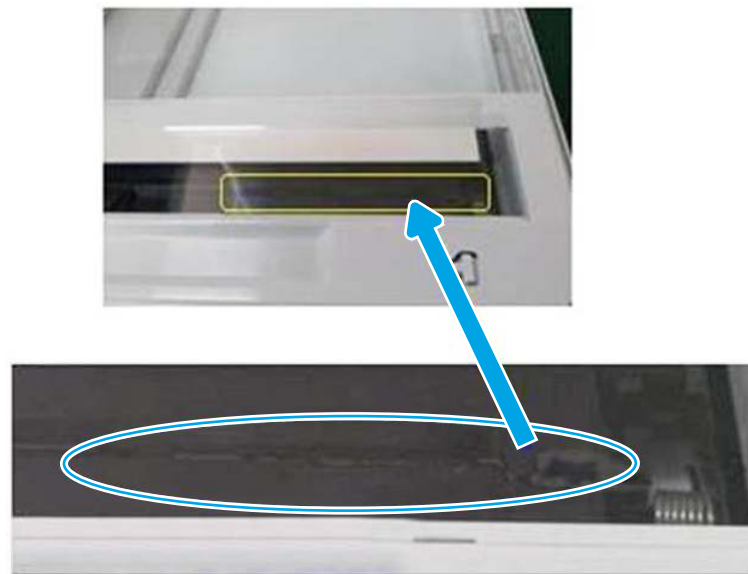
- Rainbows appear as discolored areas between the Mylar and the ADF glass.

Figure 5-72 Rainbows (1 of 2)



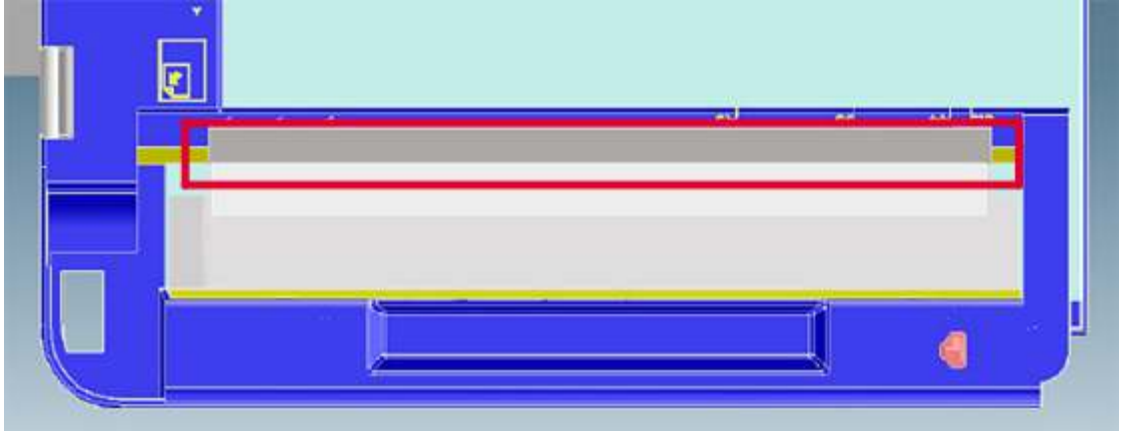
- This image shows a rainbow (discoloration) along the ADF glass.

Figure 5-73 Rainbows (2 of 2)



2. Minimize bubbles (no more than 30% of the surface area) along the entire length of the Mylar.
  - This image shows the area where a minimal amount of bubbles are allowed.

Figure 5-74 Minimize bubbles



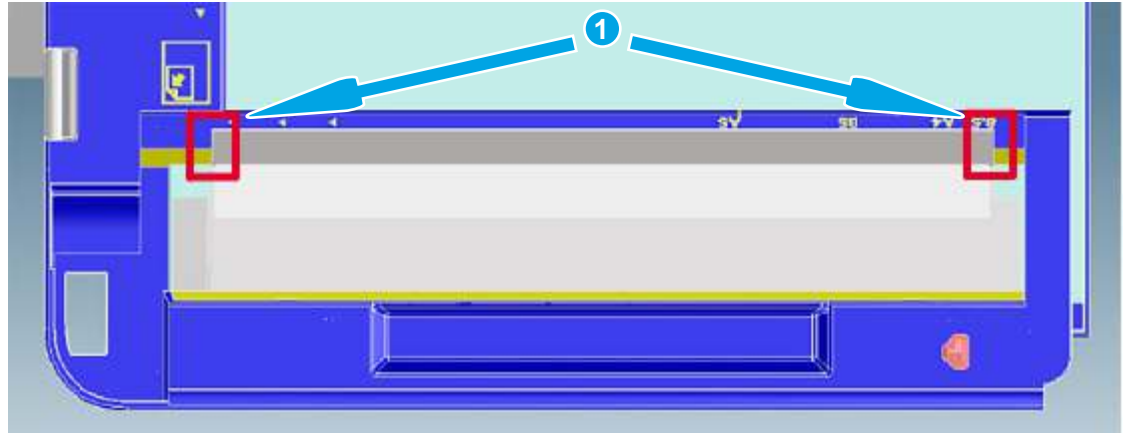
- Bubbles are present under the adhered Mylar (callout 1; **incorrect installation**).
- No bubbles are present under the adhered Mylar (callout 2; **correct installation**).

Figure 5-75 Incorrect/correct Mylar installation



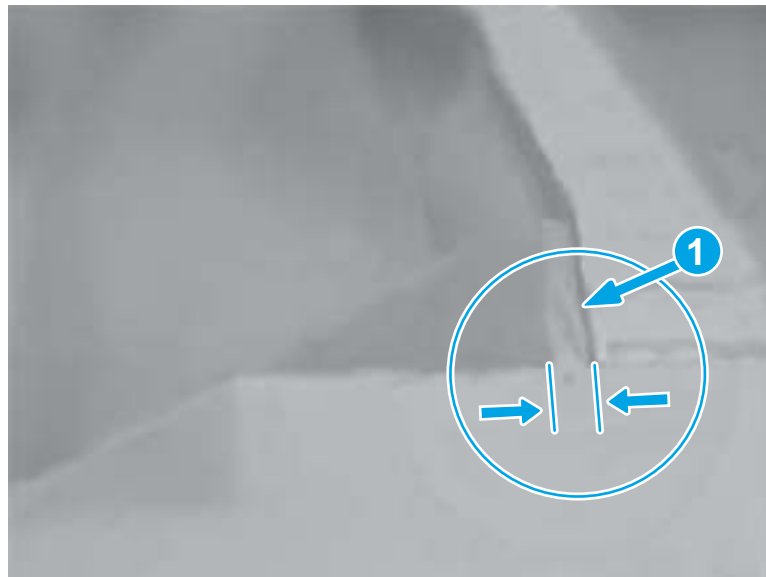
3. The Mylar should not overhang the ramp.
  - This image shows the areas to check for Mylar overhang.

Figure 5-76 Mylar overhang areas



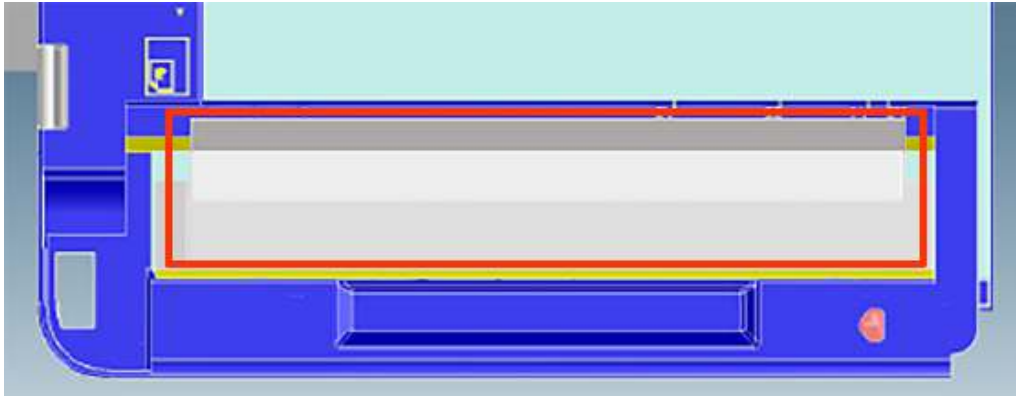
- Verify that there is no gap or overhang (callout 1). This check is first made during Mylar installation, However, make sure to do a final verification check now.

Figure 5-77 Mylar overhang



4. The Mylar must rest flat on the SDF glass. Do a final check for obvious wrinkles or waves before proceeding to the next step.

**Figure 5-78** Final check for waves and wrinkles



#### 4. Testing and validation

Follow the procedure below to test and validate the Mylar installation.

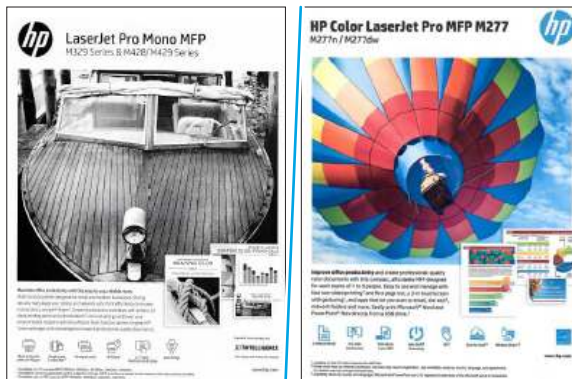
- To test and validate the installation, do the following:
  - a. Print a demo page, and then use the page for an ADF copy/scan print job.
    - Make sure that the page passes through the document feeder without jamming.
    - Make sure that the output page does not have any abnormal print-quality problems.
  - b. Using plain white paper, perform an ADF copy/scan print job.
    - Make sure that the output page does not have any print-quality problems.

For example, if vertical lines appear on the output page, the Mylar was contaminated during installation. Small particles or debris was trapped under the Mylar when it was adhered to the ramp.

- **Print-quality issues:** Remove and then replace the Mylar.

**No print-quality issues:** Installation is complete.

**Figure 5-79** Test and validate the installation with a demo page



## Whole-unit replacement (WUR)

Learn about WUR parts removal and replacement.

## Integrated scanner assembly (WUR)

Learn about integrated scanner assembly (ISA) whole-unit replacement.

### Removal and replacement: Integrated scanner assembly (MFP)

Learn how to remove and replace the integrated scanner assembly (ISA).



[View a video of how to remove and replace the ISA.](#)

Mean time to repair: 22 minutes

Service level: Medium

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

---

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).



**NOTE:** The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

---

**Table 5-12 Part information**

Part number	Part description
W1A73-60113	Assy-duplex GSO (ISA/ADF assembly) (Integrated scanner assembly, duplex)

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner toner-cartridge door correctly opens and closes.



Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-80** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

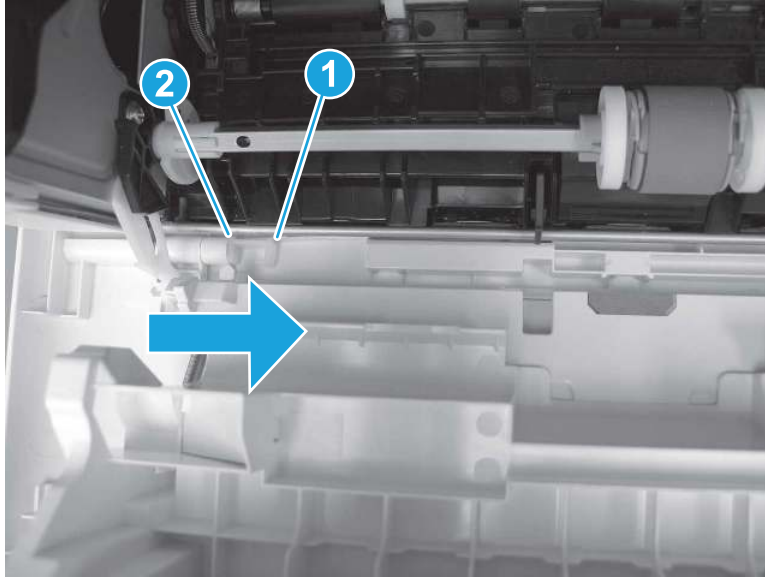
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

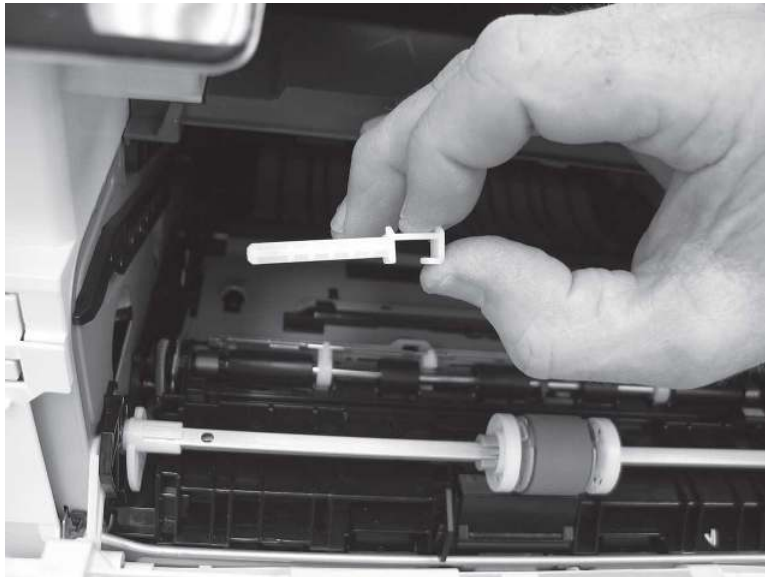
---

**Figure 5-81** Release the support shaft



2. Remove the support shaft.

**Figure 5-82** Remove the support shaft



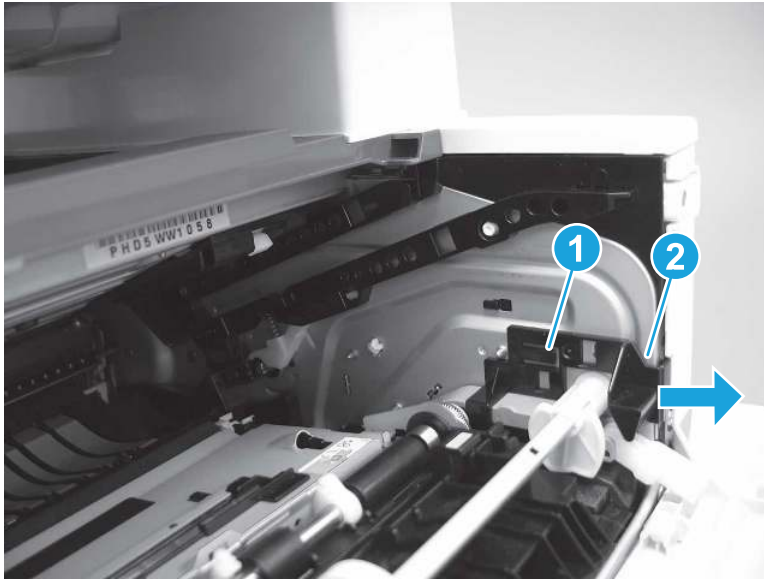
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

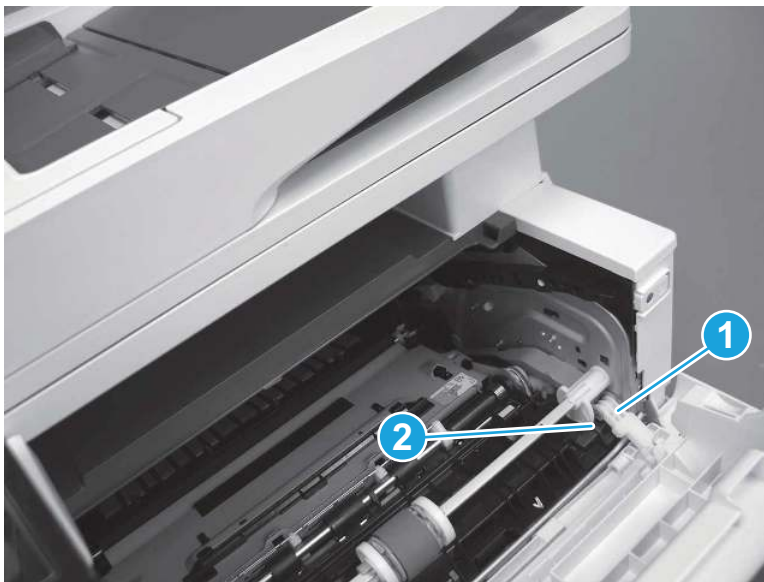
---

**Figure 5-83 Remove the guide**



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-84 Release the pressure-release link**



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

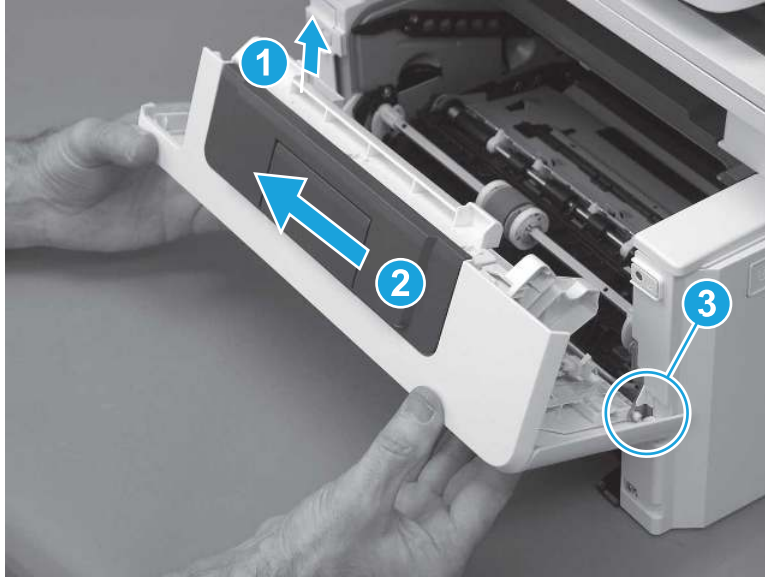
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

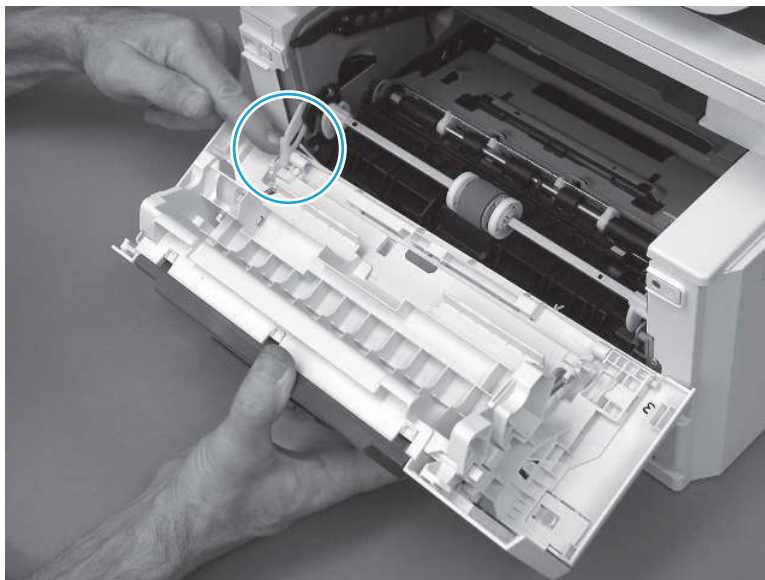
---

**Figure 5-85** Release the door



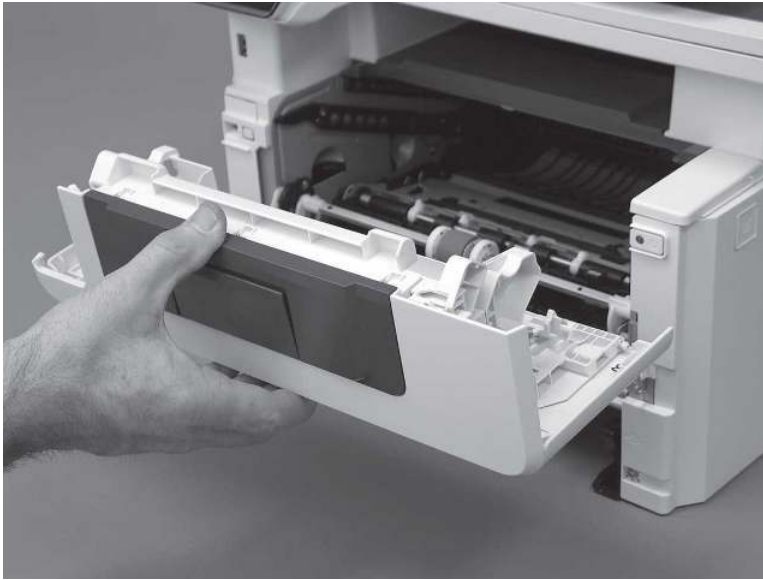
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-86** Release the left-side retainer arm



7. Remove the door.

**Figure 5-87** Remove the door



### 3. Remove the left cover

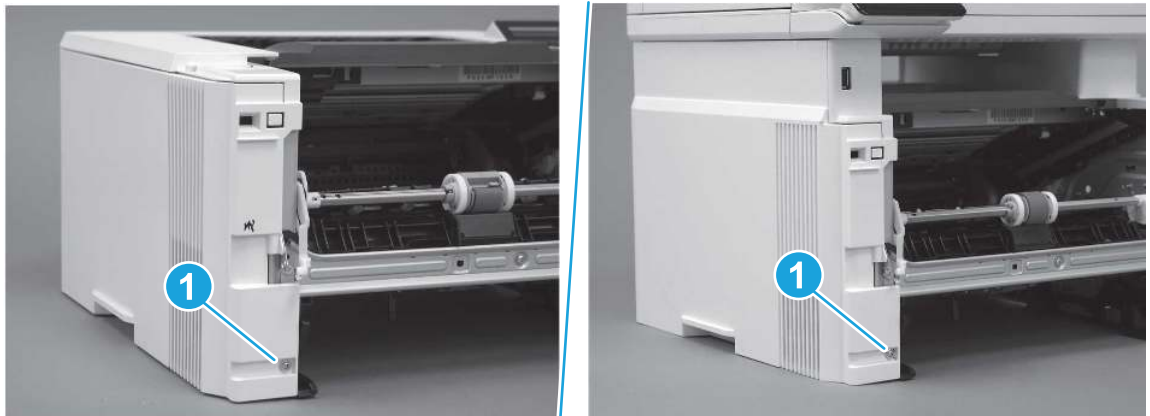
Follow these steps to remove the left cover.



**NOTE:** If installed, the rear USB cover and network cover must be removed.

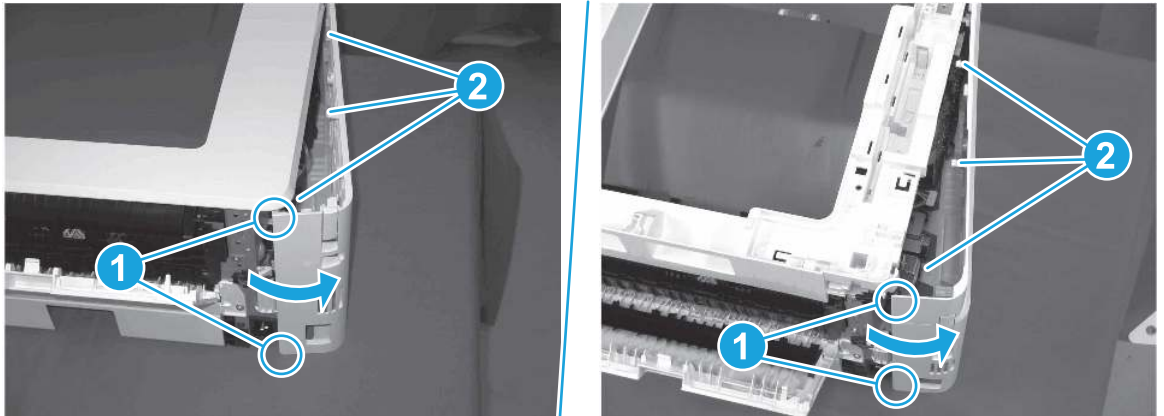
1. Remove one screw (callout 1).

**Figure 5-88** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

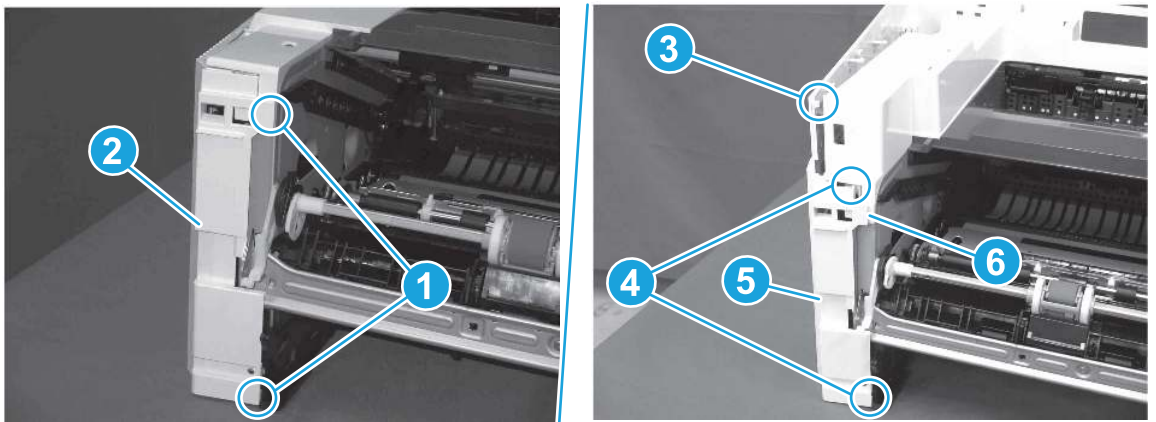
**Figure 5-89 Release two bosses and three tabs**



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-90 Remove the cover**



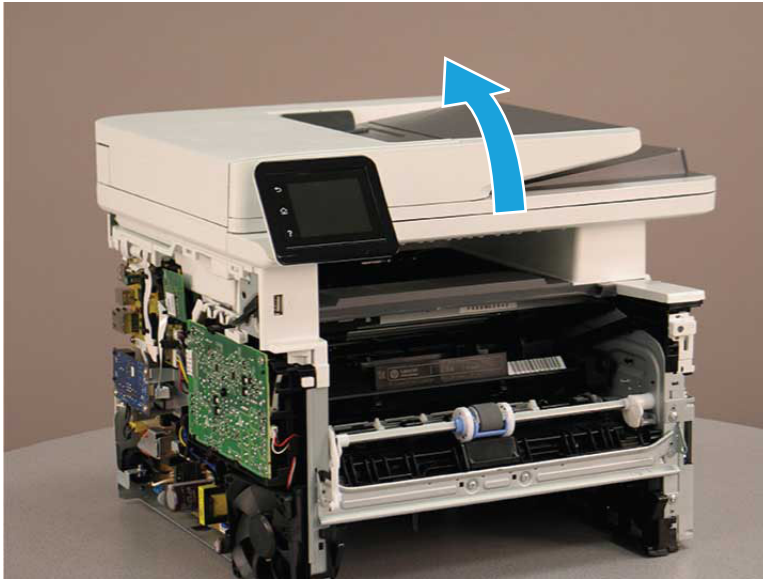
#### 4. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).



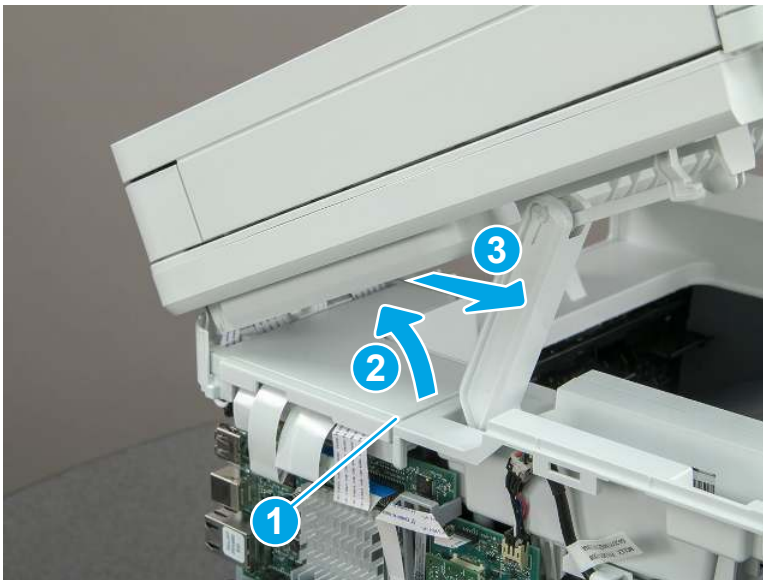
1. If the ISA is not already raised, raise it now.

**Figure 5-91** Raise the ISA




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-92** Remove the ISA FFC cover




#### 5. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

**Figure 5-93** Disconnect three FFCs



2. Release the tape (callout 1) that holds the flat cables to the top cover.

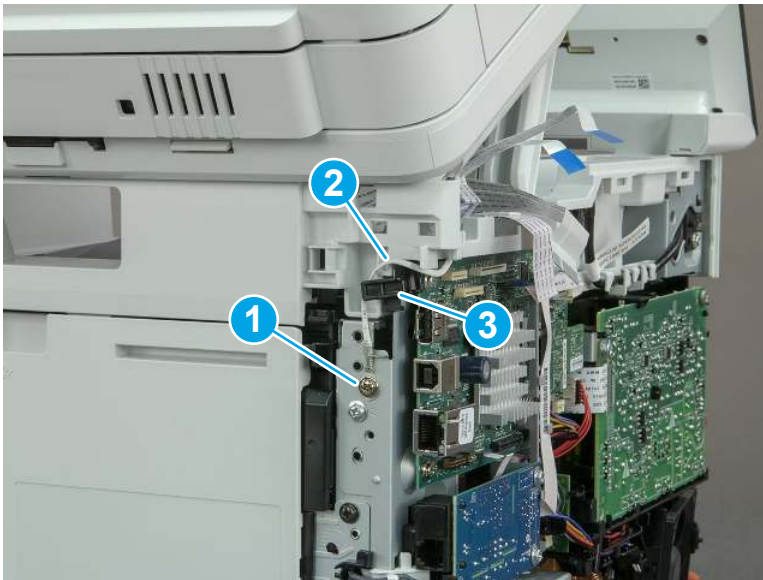
**Figure 5-94** Release the tape





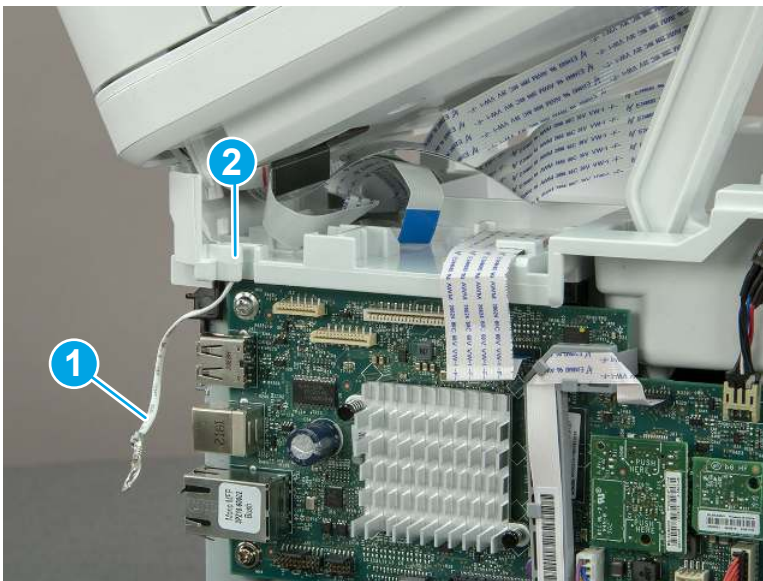
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-95 Release the ground wire**



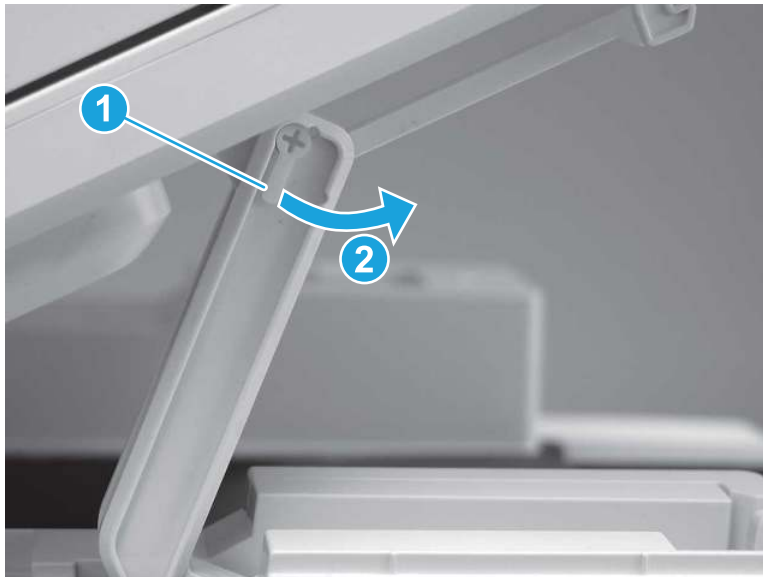
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-96 Release the ground wire**




5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-97** Release one tab and rotate the slider pin



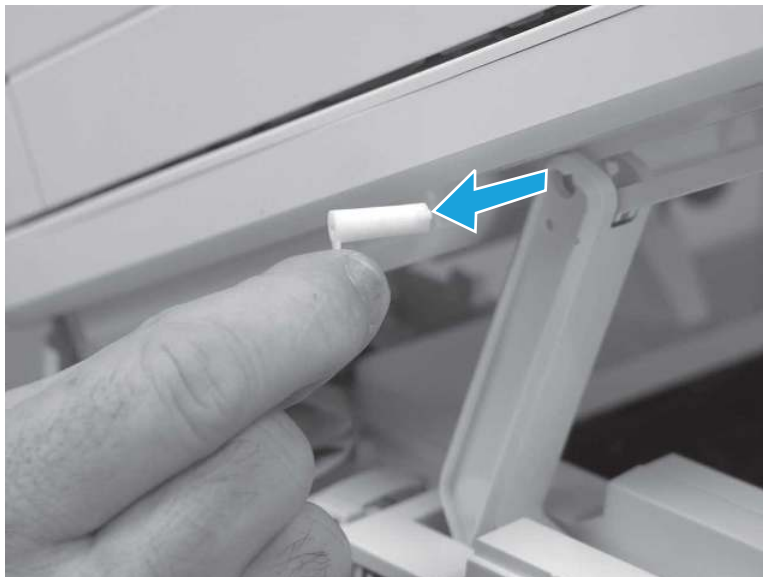
6. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

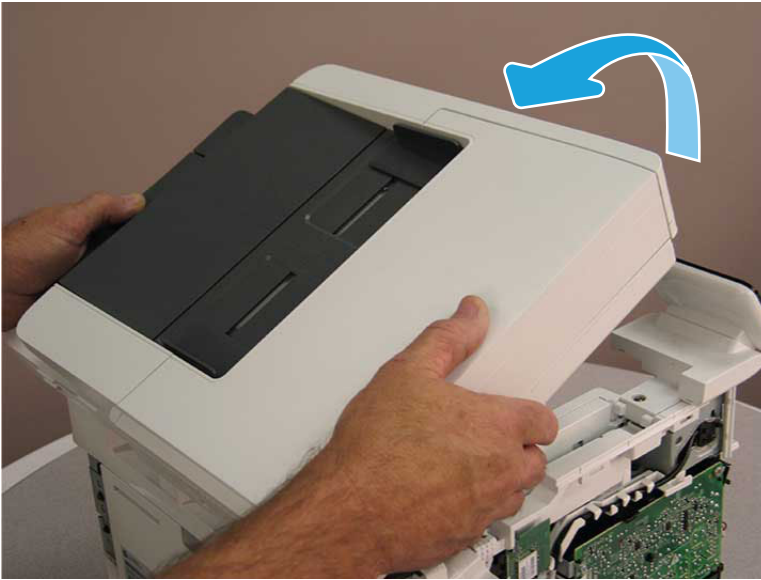
---

**Figure 5-98** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-99** Rotate the ISA towards the rear of the printer



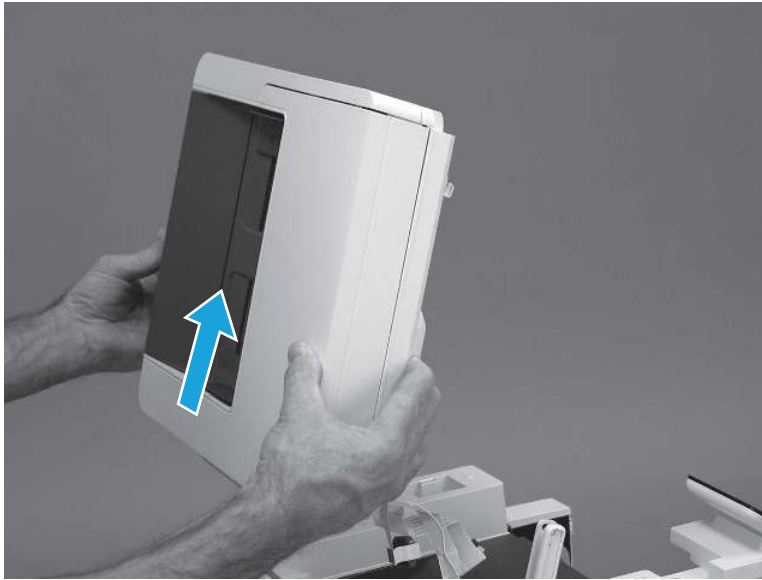
8. Slide the ISA as shown to release it.

**Figure 5-100** Release the ISA



9. Remove the ISA.

**Figure 5-101 Remove the ISA**



## 6. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

# Base printer

Learn about base printer parts removal and replacement.

## Field-replaceable units (FRUs)

Learn about FRU parts removal and replacement.

## Covers, panels, and doors

Learn about covers, panels, and doors removal and replacement.

## Removal and replacement: Damper sheets

Learn how to remove and replace the damper sheets.

 [View a video of how to remove and replace the damper sheets.](#)

Mean time to repair: 2 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-13** Part information

Part number	Part description
RC2-6075-000CN	Duplexer sheet damper

### Required tools

- No special tools are required to remove or install this assembly.

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.


### Post service test

No post service test is available for this assembly.

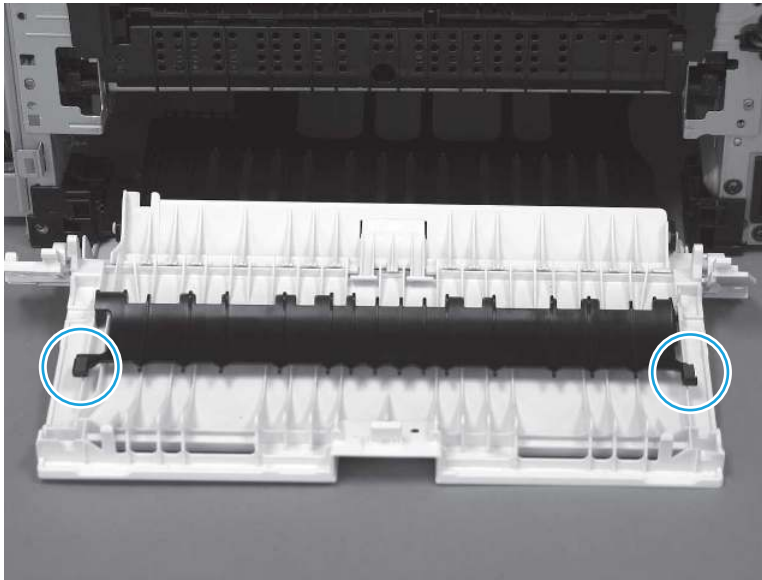
## 1. Remove the damper sheets

Follow these steps to remove the damper sheets.

- Remove the damper sheets from the rear cover.

 **Reinstallation tip:** Make sure that all of the residual adhesive is removed from the rear cover damper sheet area. Residual adhesive can cause the replacement sheets to not adhere properly to the door.

**Figure 5-102 Remove the damper sheets**



## 2. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Rear USB and network covers

Learn how to remove and replace the rear USB and network covers.

Mean time to repair: 1 minute

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-14** Part information

Part number	Part description
RC4-3298-000CN	Rear USB cover (SFP)
RC4-3299-000CN	Rear USB cover (MFP)
RC4-2907-000CN	Network cover assembly (network models)

### Required tools

- No special tools are required to remove or install this assembly.

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

No post service test is available for this assembly.

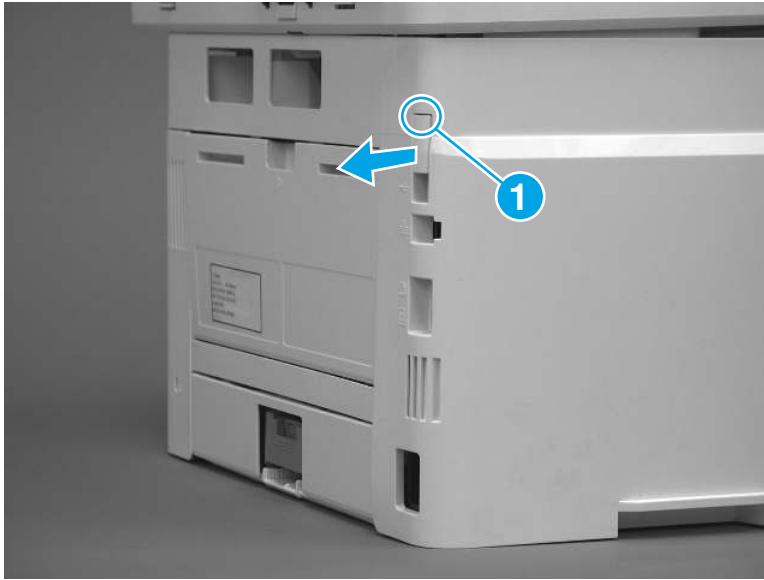
## 1. Remove the rear USB and network covers

Follow these steps to remove the rear USB and network covers.



1. Use a finger to release two tabs (callout 1), and then pull the cover straight off of the printer.

**Figure 5-103** Pull the cover straight off



2. Remove the cover.

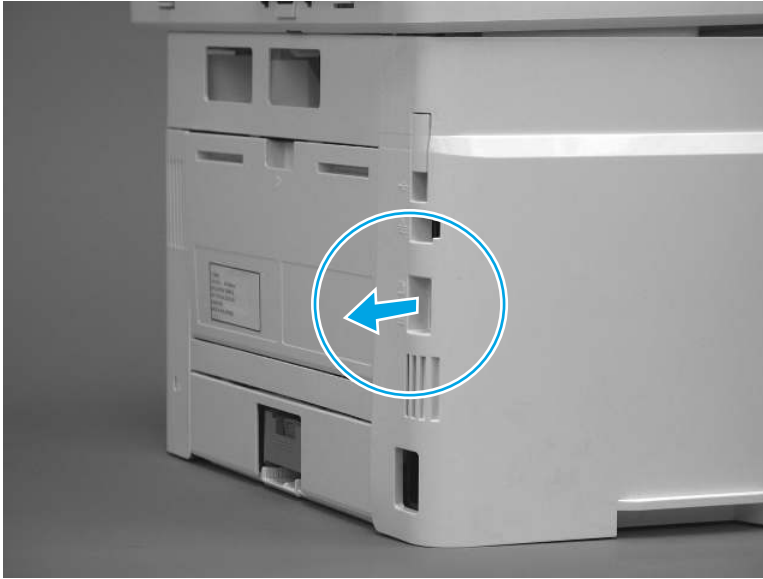
**Figure 5-104** Remove the rear USB cover





3. **Network models only:** Grasp the network cover, and then pull the cover straight off of the printer.

**Figure 5-105** Remove the network cover



## 2. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: ISA lift assembly and slider pin (MFP)

Learn how to remove and replace the integrated scanner assembly (ISA) lift assembly and slider pin.



[View a video of how to remove and replace the ISA lift assembly and slider pin.](#)

Mean time to repair: 4 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-15 Part Information**

Part number	Part description
B3Q10-60128	ISA lift assembly
B3Q10-40041	ISA lift slider pin

### Required tools

- Small flat-blade screwdriver

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner ISA correctly opens and closes.

#### 1. Remove the support shaft

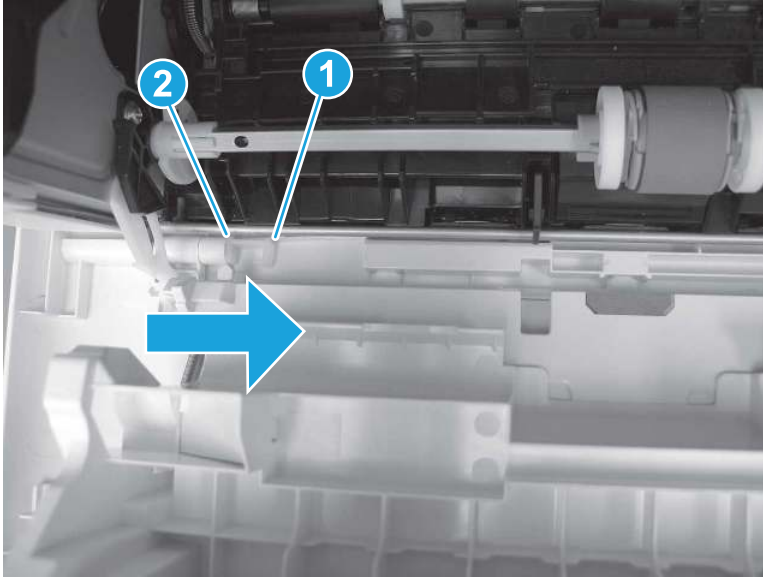
Follow these steps to remove the support shaft.

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

**💡 TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

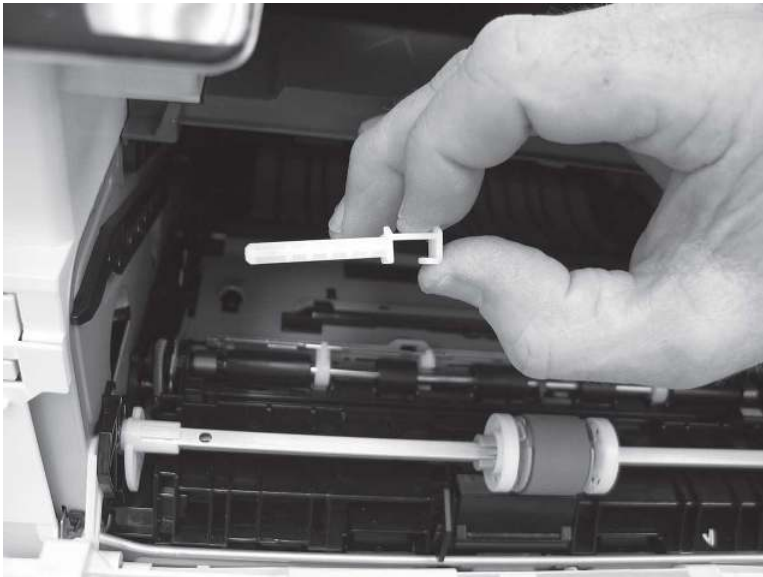
**💡 Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

**Figure 5-106** Release the support shaft



2. Remove the support shaft.

**Figure 5-107** Remove the support shaft



## 2. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.



1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>


## 2. Unpack the replacement part from the packaging.

 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

## 3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### Removal and replacement: Cartridge door assembly

Learn how to remove and replace the cartridge door assembly.



[View a video of how to remove and replace the cartridge door assembly.](#)


Mean time to repair: 6 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-16 Part information**

Part number	Part description
RM2-4714-000CN	Cartridge door assembly (SFP)
RM2-4715-000CN	Cartridge door assembly (MFP)

### Required tools

- Small flat-blade screwdriver

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.


### Post service test

Make sure that toner-cartridge door correctly opens and closes.

#### 1. Remove the cartridge door assembly


Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

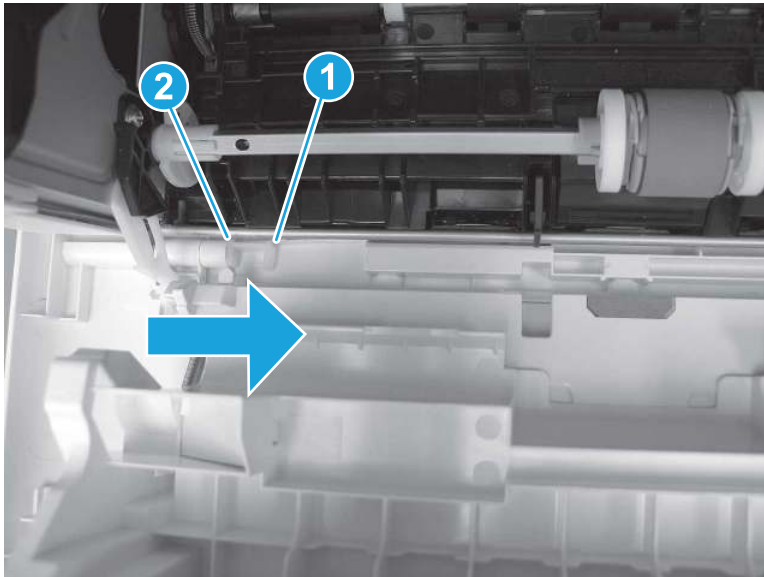
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

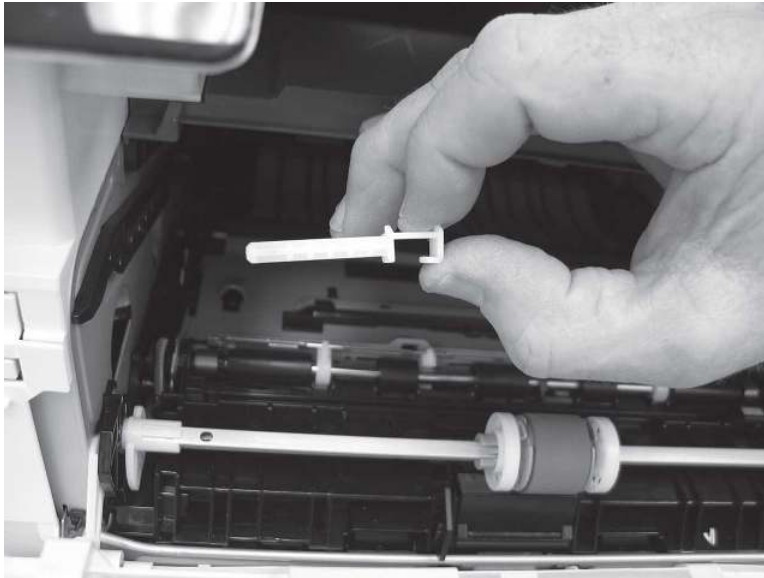
---

**Figure 5-108** Release the support shaft



2. Remove the support shaft.

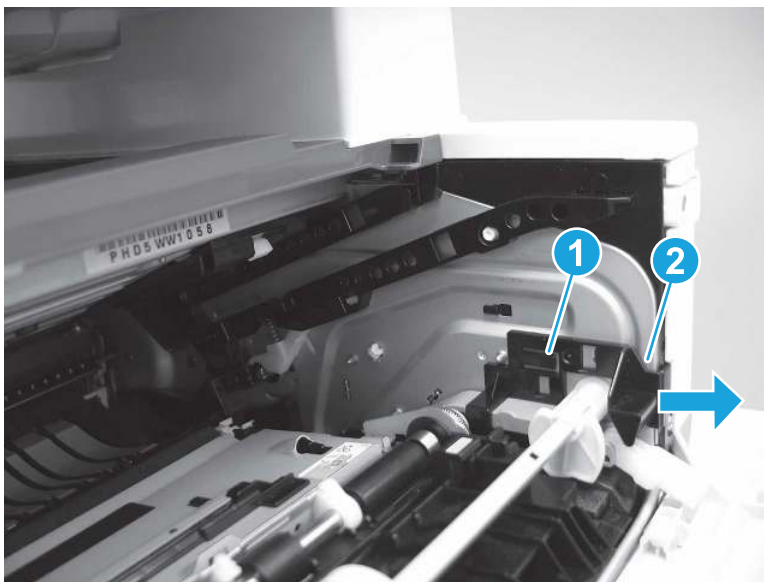
**Figure 5-109** Remove the support shaft



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

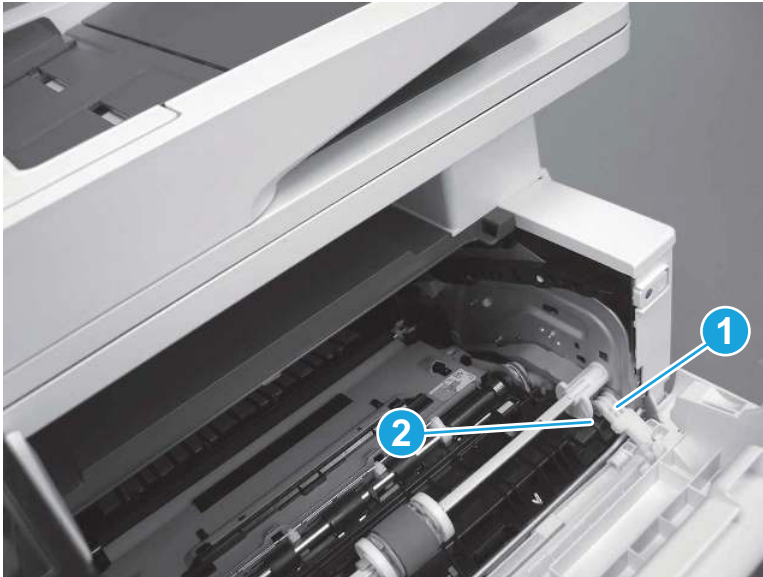
**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

**Figure 5-110** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-111** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

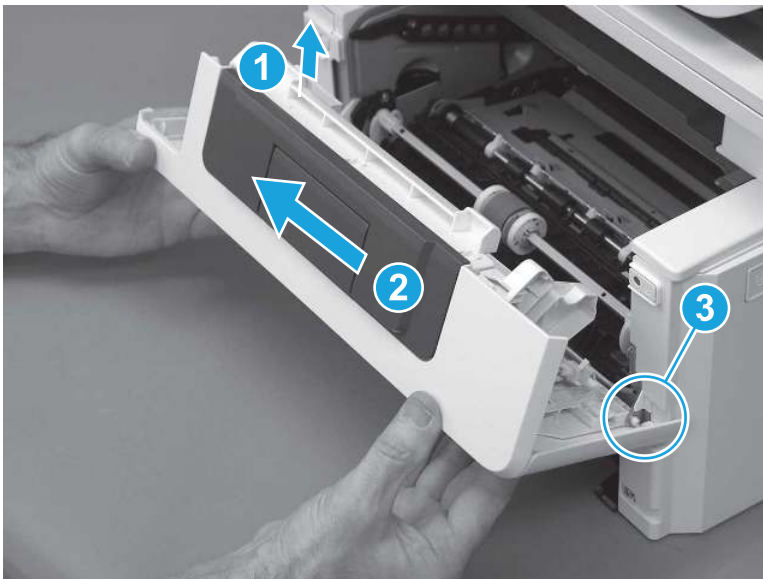
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

---

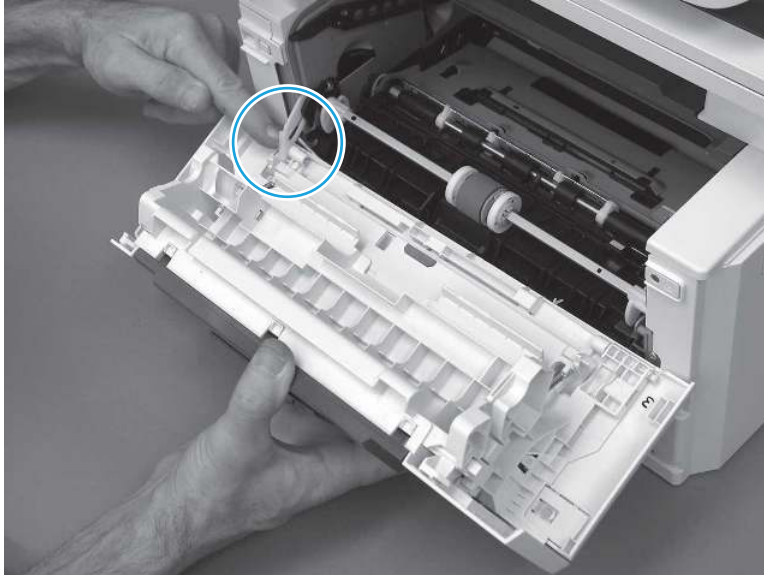
**Figure 5-112** Release the door





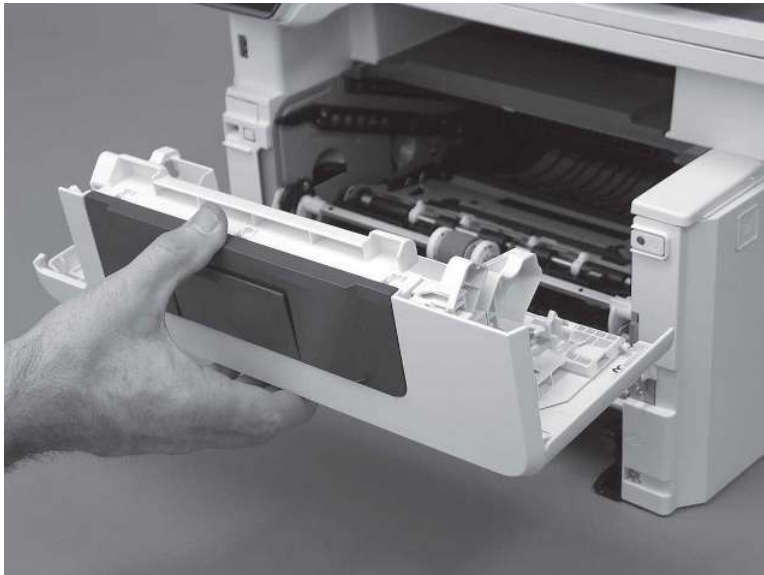
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-113 Release the left-side retainer arm**



7. Remove the door.

**Figure 5-114 Remove the door**



## 2. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>




2. Unpack the replacement part from the packaging.

---


 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

---

### Removal and replacement: Pressure-release link

Learn how to remove and replace the pressure-release link arm.

 [View a video of how to remove and replace the pressure release link arm.](#)

Mean time to repair: 8 minutes


Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

---

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-17 Part Information**

Part number	Part description
RC4-4479-000CN	Link, pressure release

### Required tools

- Small flat-blade screwdriver

### After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.


### Post service test

Make sure that toner toner-cartridge door correctly opens and closes.

#### 1. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.

---


 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

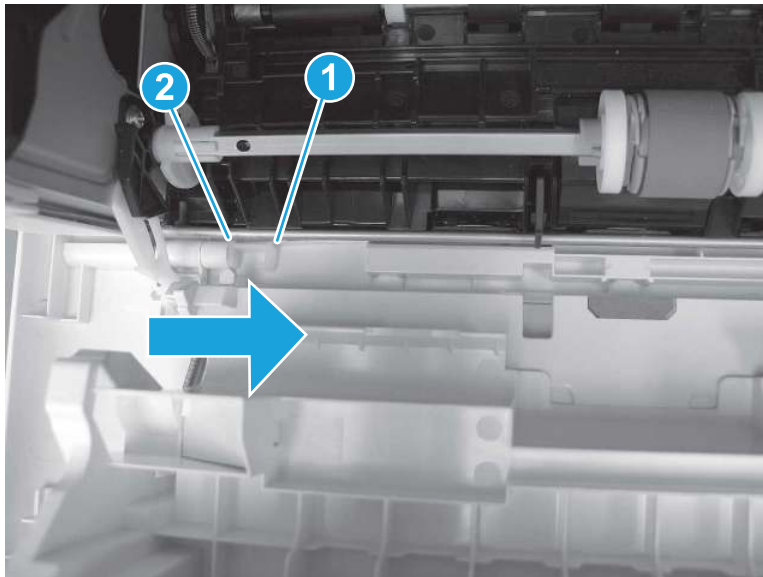
---

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

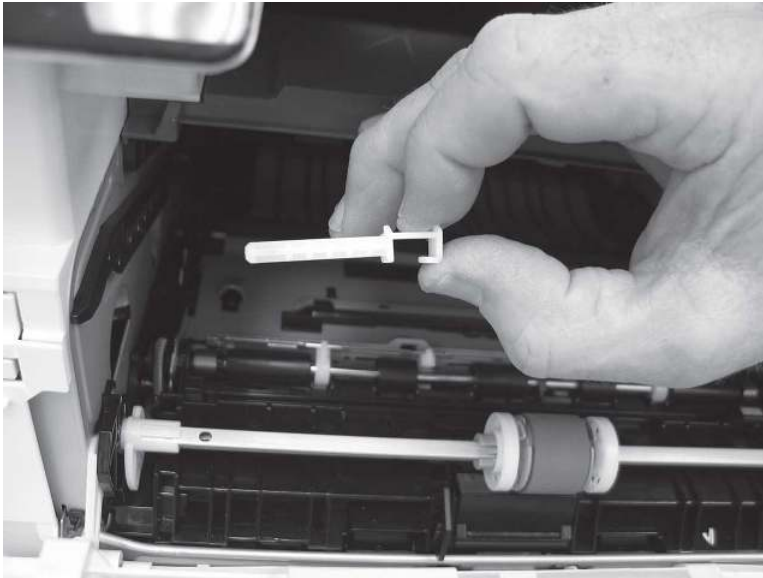
---

**Figure 5-115** Release the support shaft



2. Remove the support shaft.

**Figure 5-116** Remove the support shaft



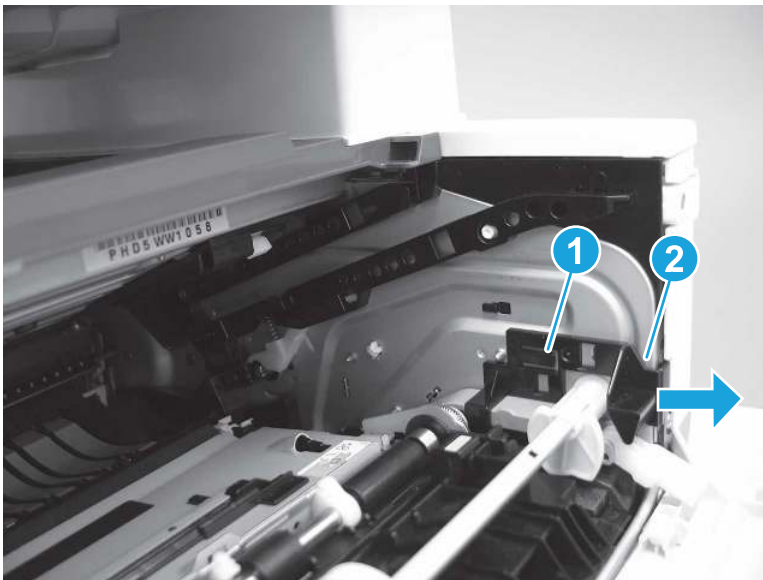
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

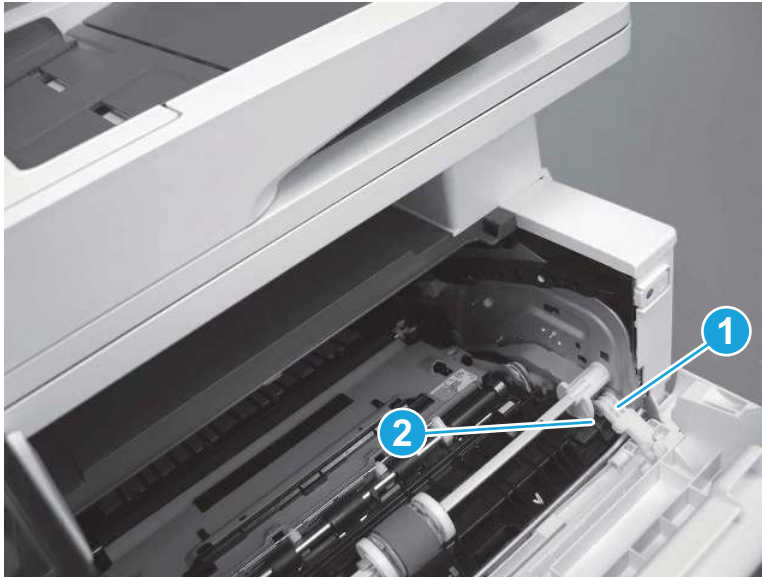
---

**Figure 5-117** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-118** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

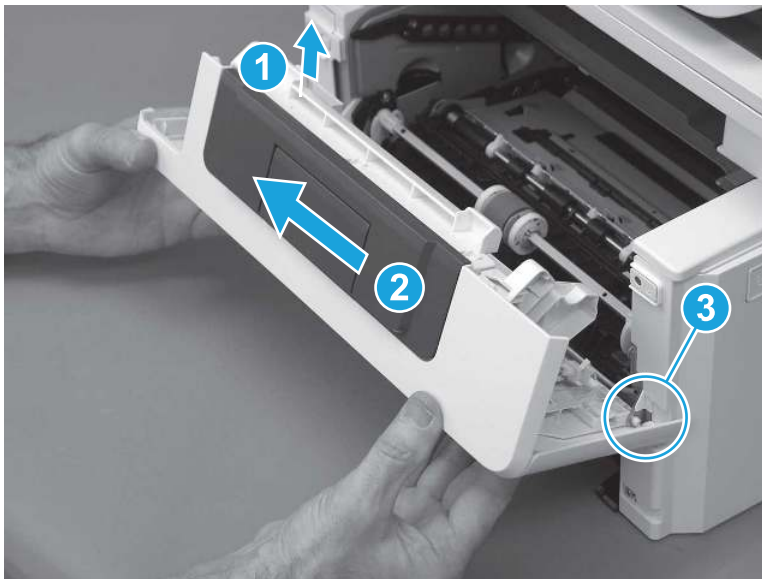
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

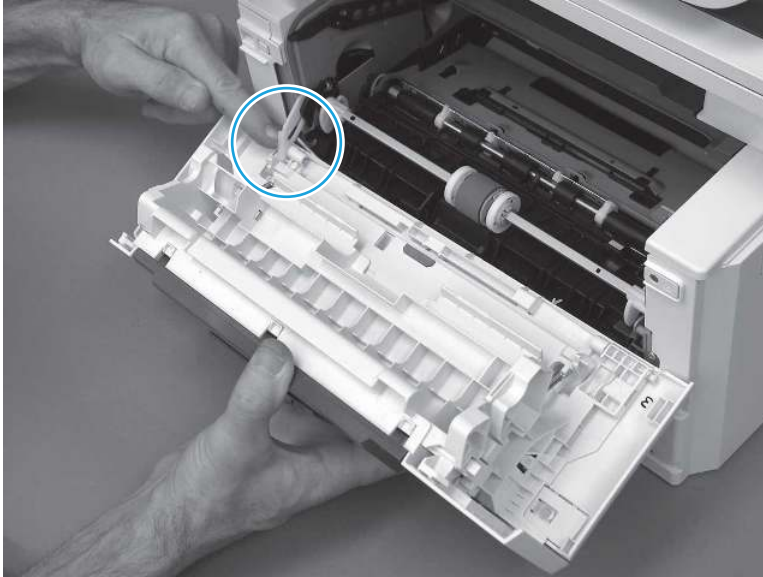
---

**Figure 5-119** Release the door



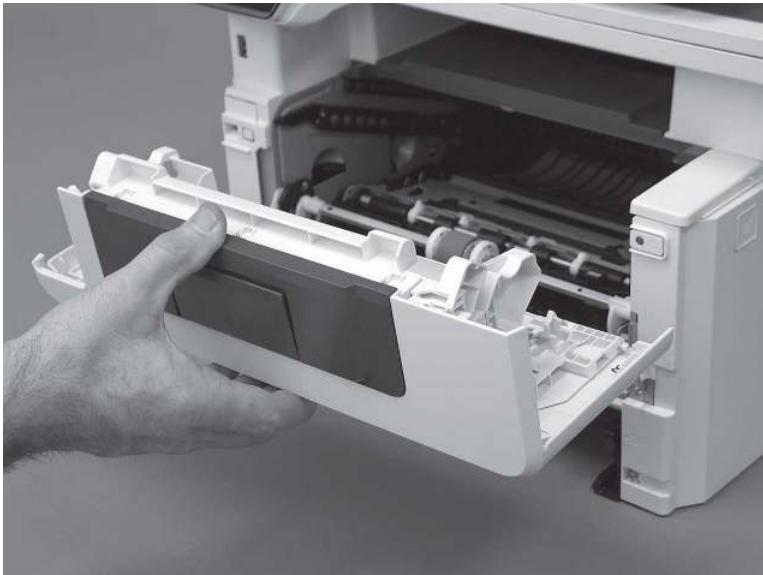
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-120** Release the left-side retainer arm



7. Remove the door.

**Figure 5-121** Remove the door

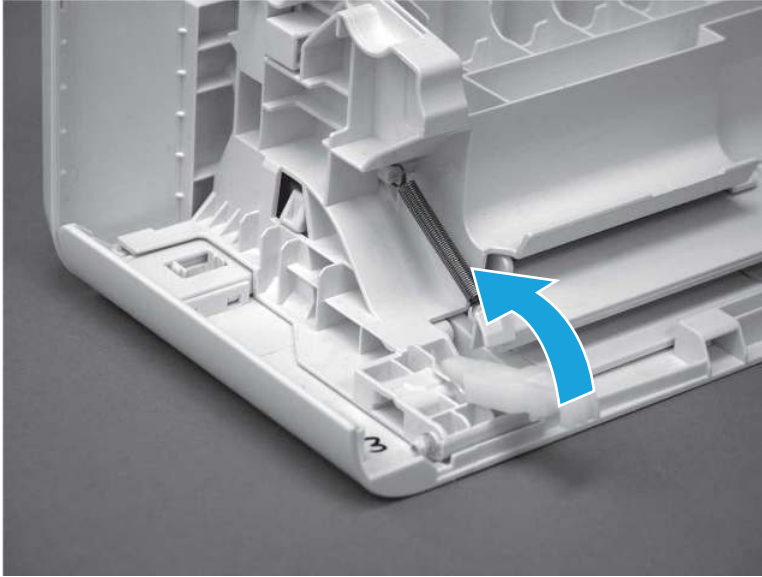


## 2. Remove the pressure-release link

Follow these steps to remove the pressure-release link.

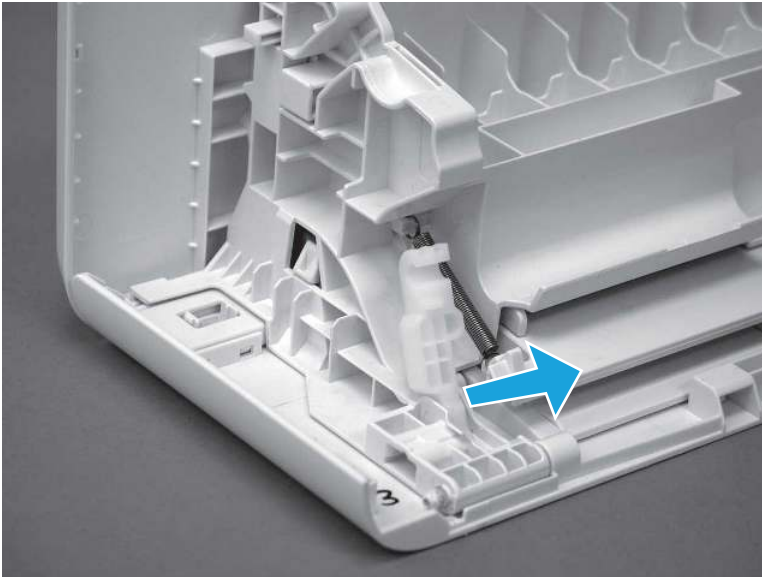
1. Rotate the pressure-release link until the keyed portion of the pin aligns with the slot in the holder.

**Figure 5-122 Release the pressure-release link**



2. Remove the pressure-release link.

**Figure 5-123 Remove the pressure-release link**



### 3. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>




2. Unpack the replacement part from the packaging.

---


 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

---

## Removal and replacement: Left cover

Learn how to remove and replace the left cover.

 [View a video of how to remove and replace the left cover.](#)

Mean time to repair: 9 minutes


Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

---

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-18 Part information**

Part number	Part description
RL2-0673-000CN	Cover, left (SFP)
RL2-0674-000CN	Cover, left (MFP)

### Required tools

- Small flat-blade screwdriver

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

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-124** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

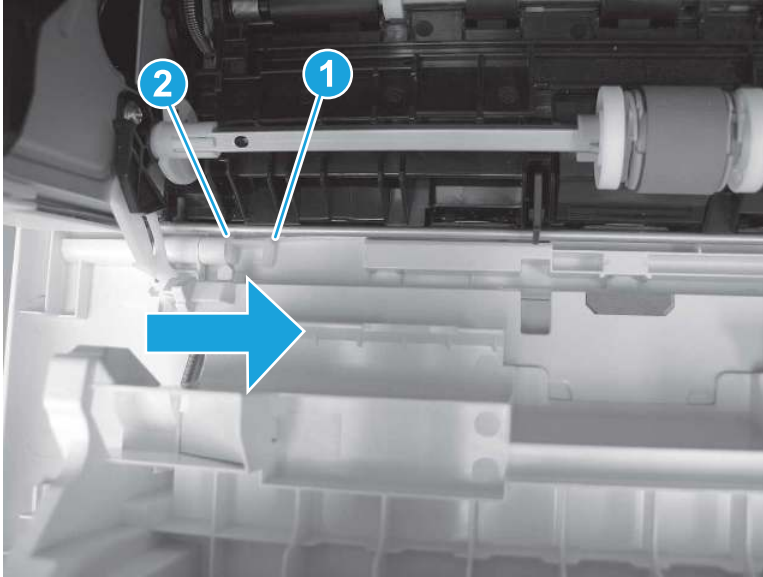
 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

---

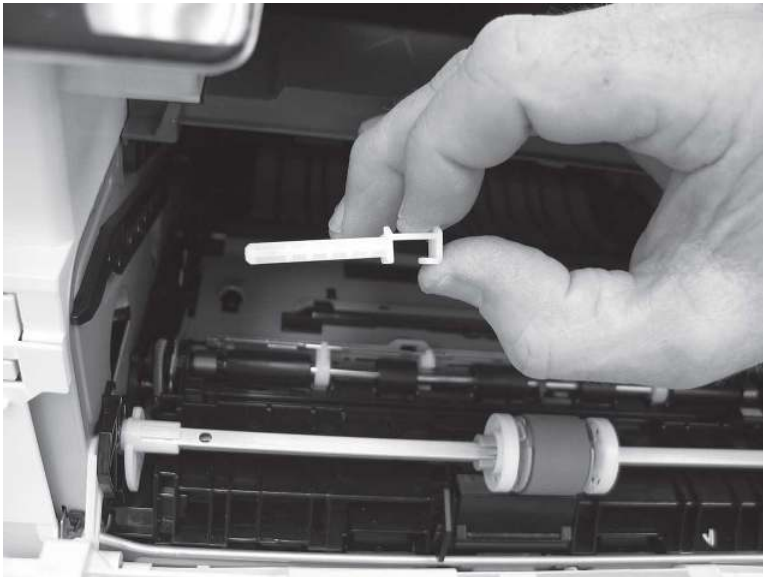


**Figure 5-125** Release the support shaft



2. Remove the support shaft.

**Figure 5-126** Remove the support shaft



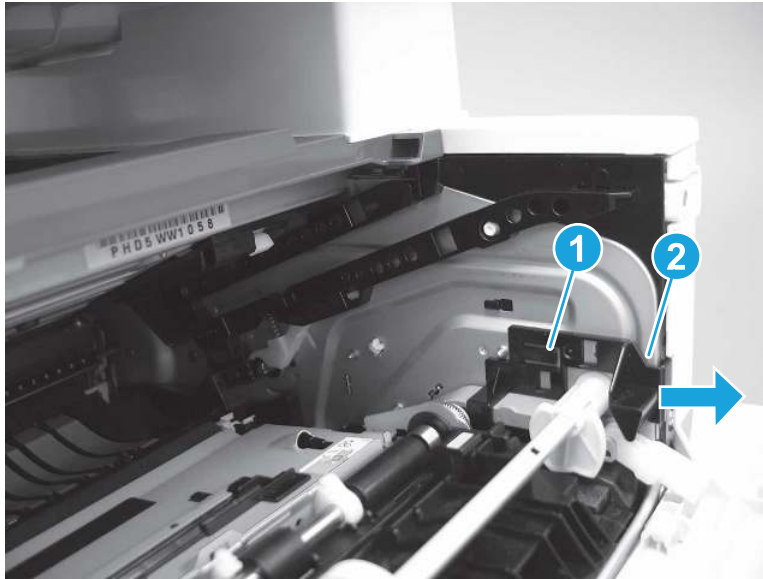
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

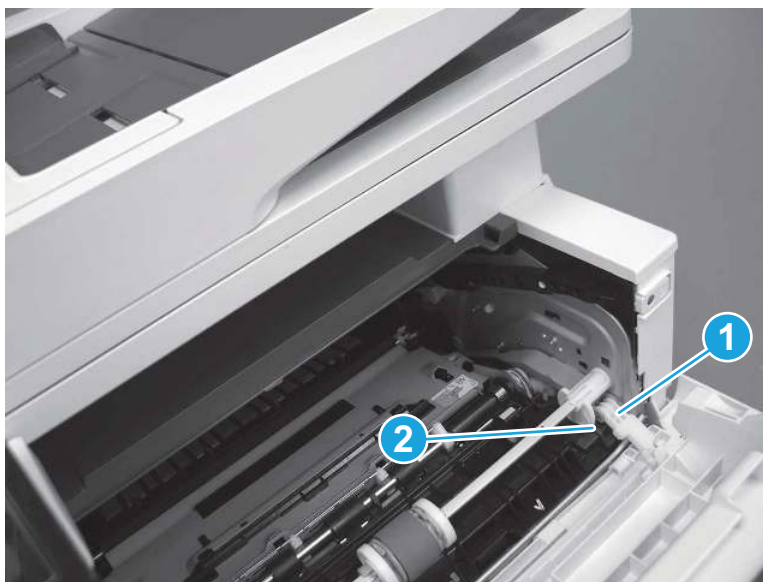
---

**Figure 5-127** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-128** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

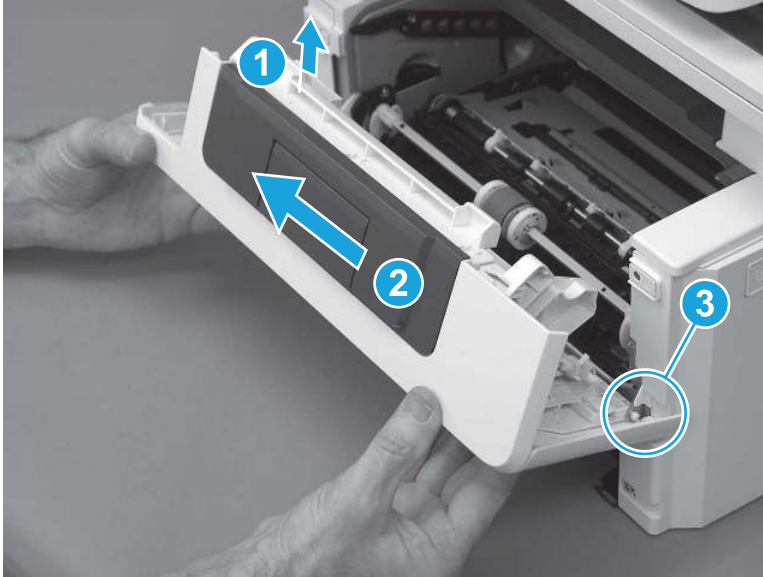
---

**CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

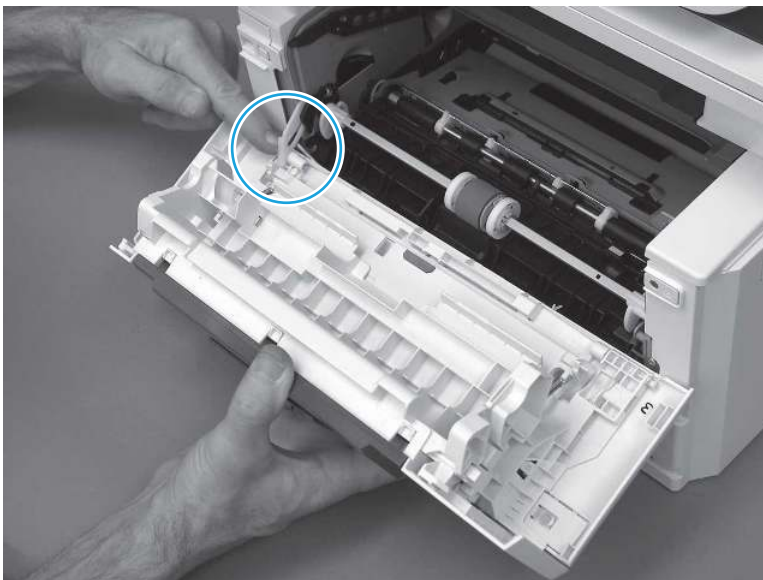
---

**Figure 5-129** Release the door



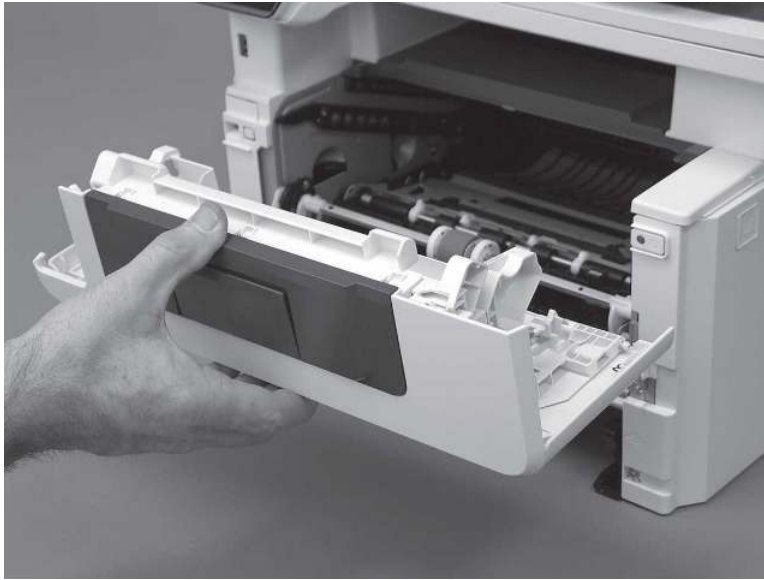
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-130** Release the left-side retainer arm



7. Remove the door.


**Figure 5-131** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

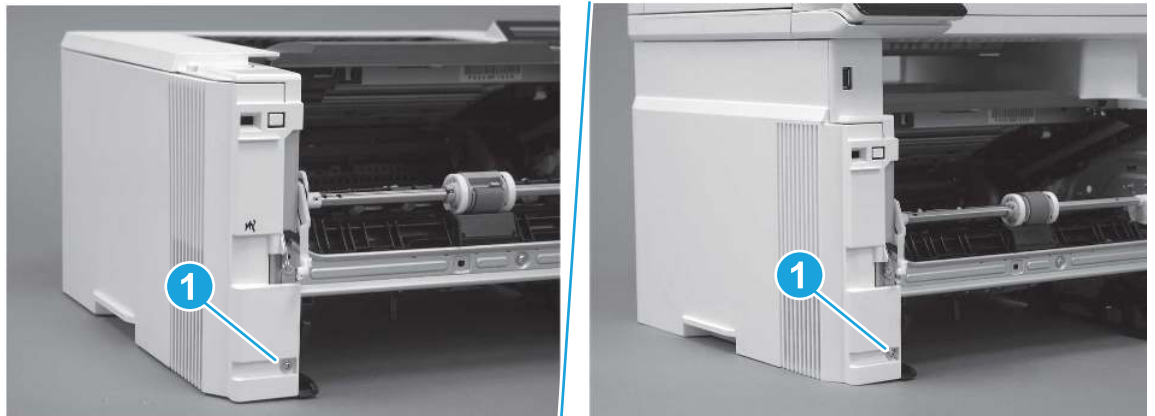
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

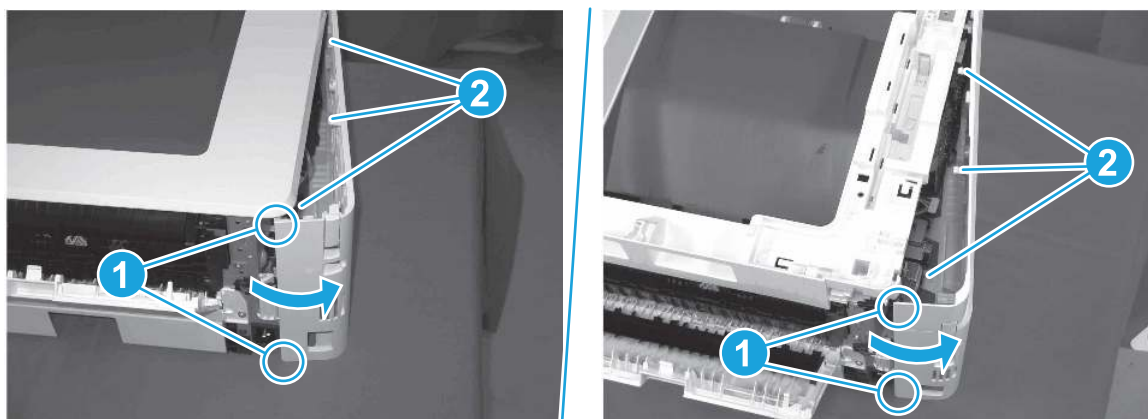
1. Remove one screw (callout 1).

**Figure 5-132** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

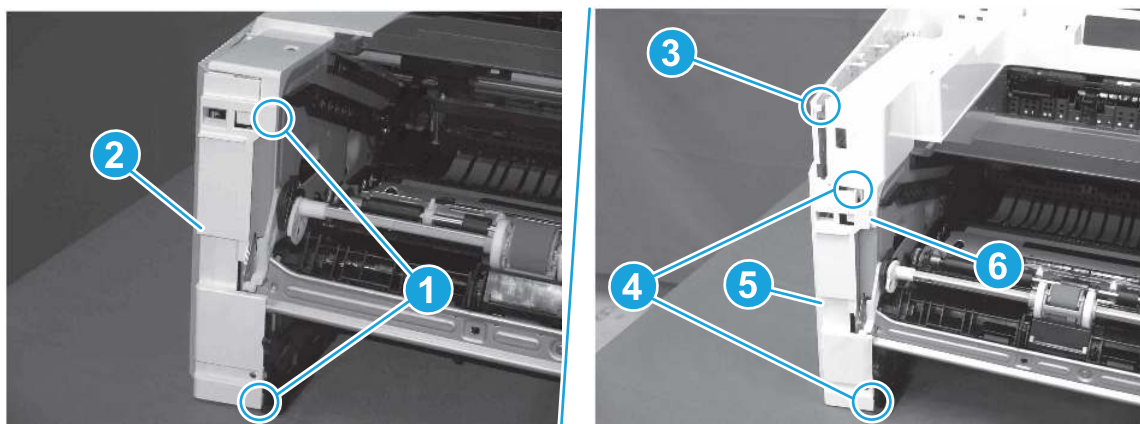
**Figure 5-133** Release two bosses and three tabs



3. At the front of the printer, do one of the following:
  - **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
  - **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-134** Remove the cover



#### 4. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>


2. Unpack the replacement part from the packaging.




**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch

the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Right cover

Learn how to remove and replace the right cover.

 [View a video of how to remove and replace the right cover.](#)


Mean time to repair: 9 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-19** Part information

Part number	Part description
RM2-5434-000CN	Cover, right

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.



- Use the power switch to turn the power on.

## Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

### 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-135** Remove the tray



### 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.

---


 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

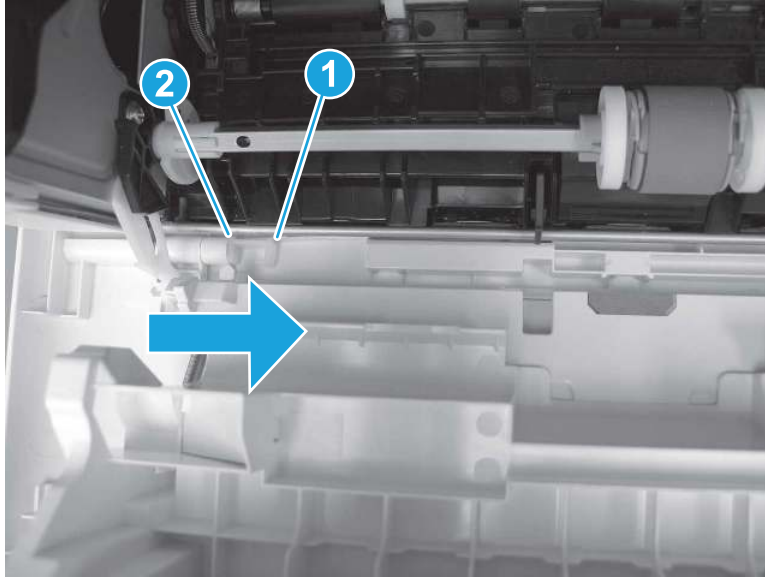
---

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

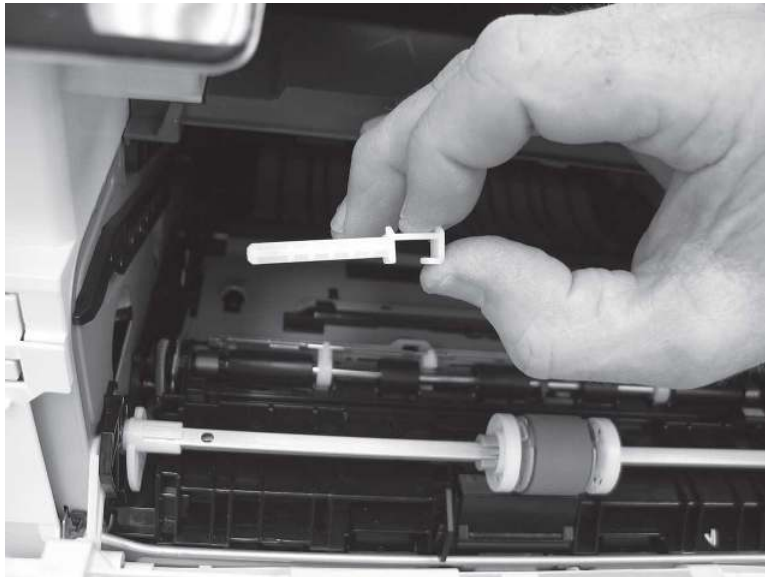
---

**Figure 5-136** Release the support shaft



2. Remove the support shaft.

**Figure 5-137** Remove the support shaft



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

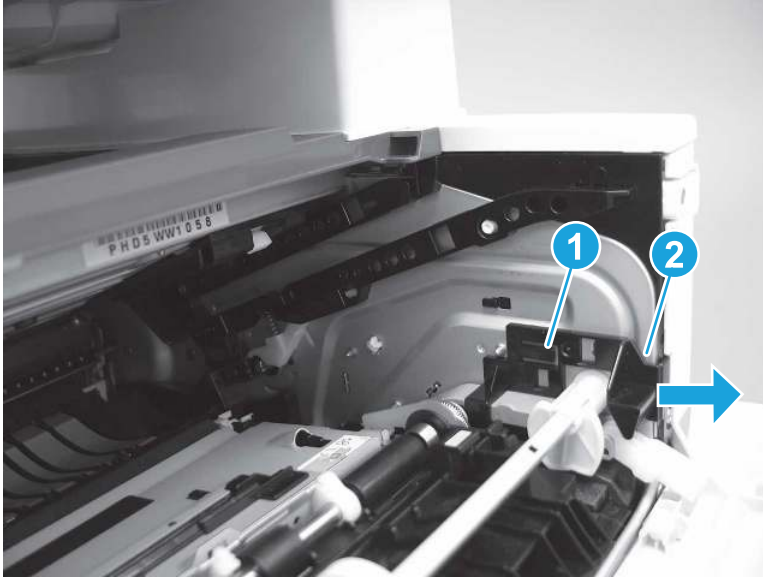
---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

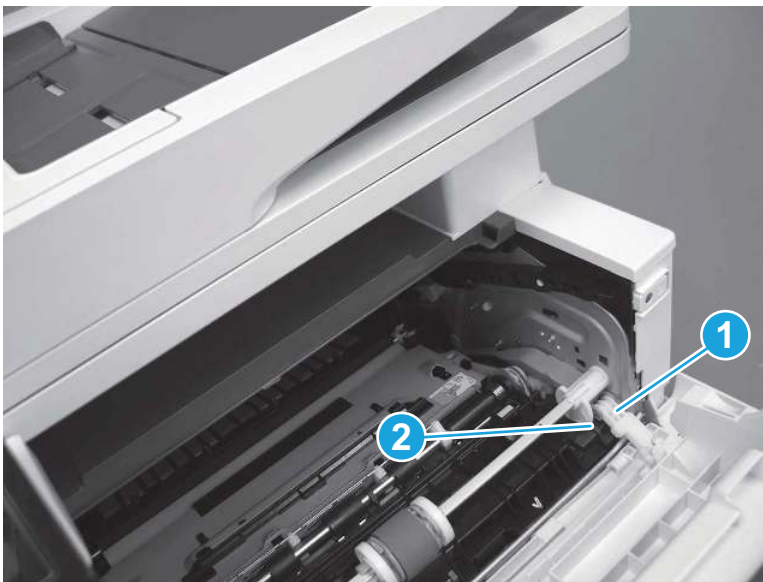


**Figure 5-138** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-139** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

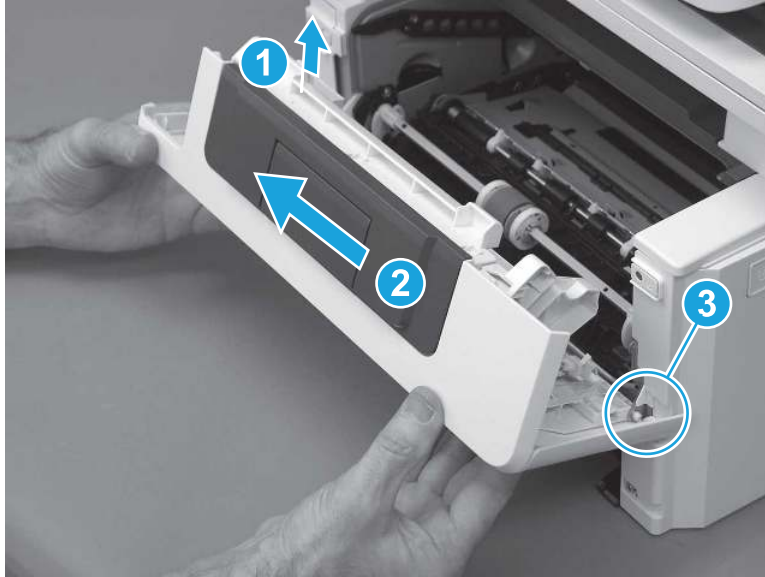
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

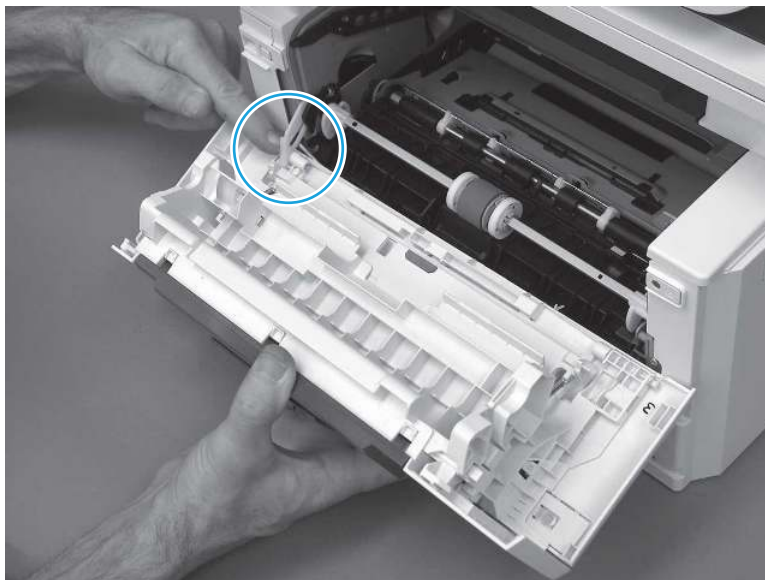
---

**Figure 5-140** Release the door



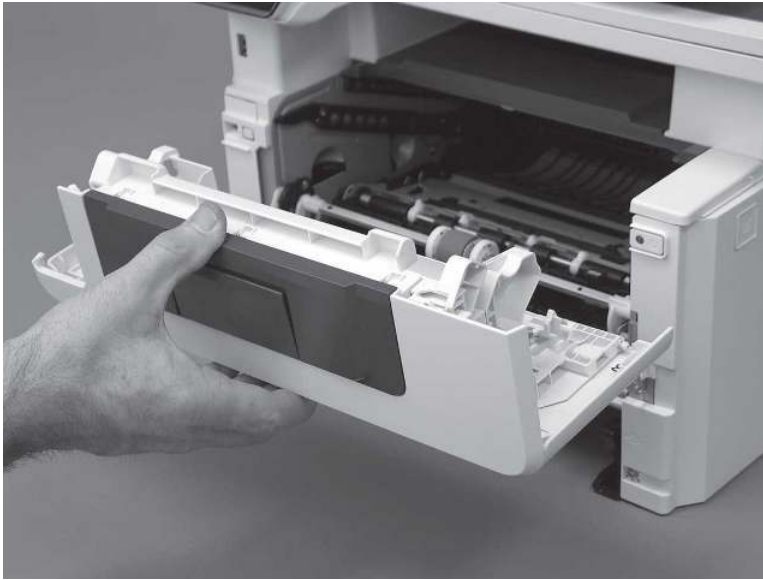
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-141** Release the left-side retainer arm



7. Remove the door.


**Figure 5-142** Remove the door



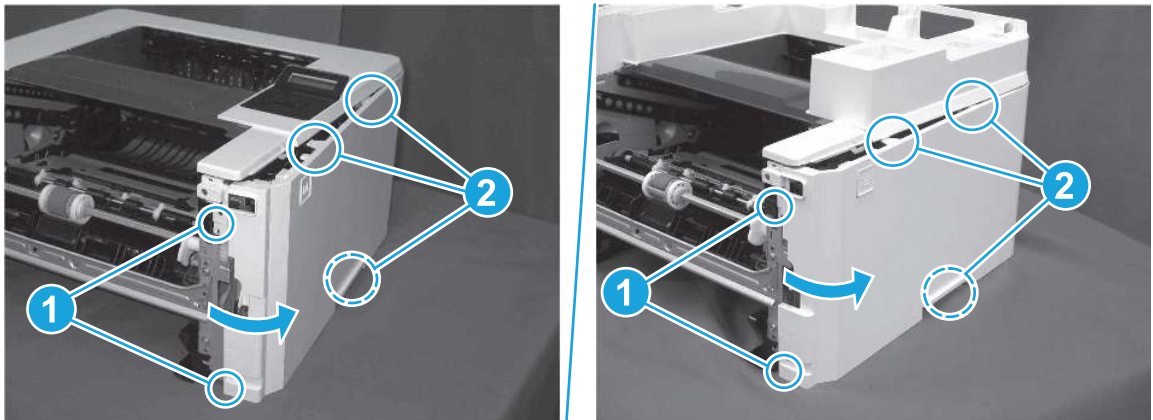
### 3. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

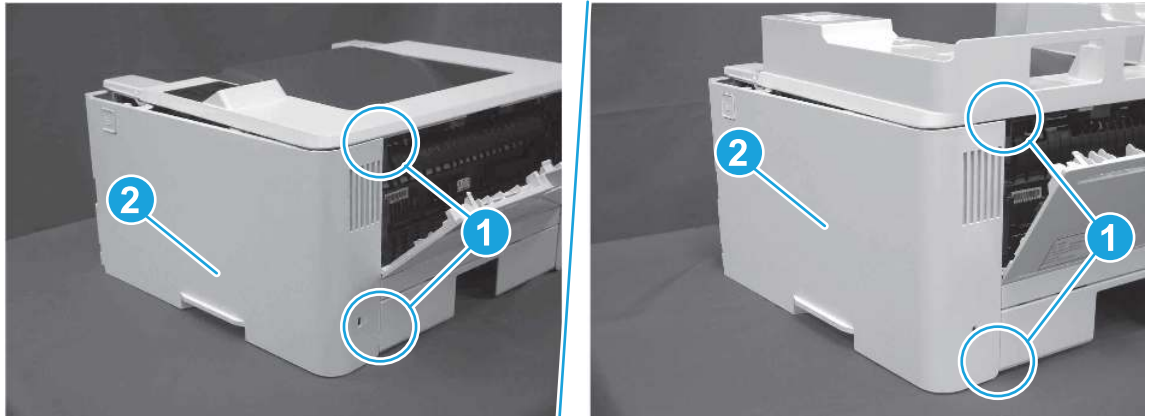
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

**Figure 5-143** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-144 Remove the cover**



#### 4. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

#### Removal and replacement: Rear door assembly

Learn how to remove and replace the rear door assembly.



[View a video of how to remove and replace the rear door assembly.](#)

Mean time to repair: 13 minutes

Service level: Easy

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-20** Part information

Part number	Part description
RM2-5405-000CN	Rear door assembly (duplex) (MFP/SFP)
RM2-5430-000CN	Rear door assembly (simplex) (SFP)

## Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

### 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-145 Remove the tray**



## 2. Remove the cartridge door assembly


Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

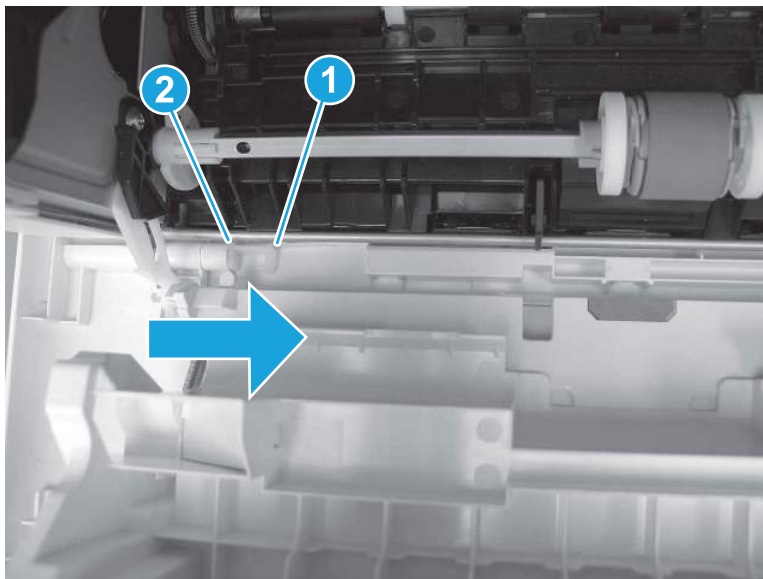
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

---

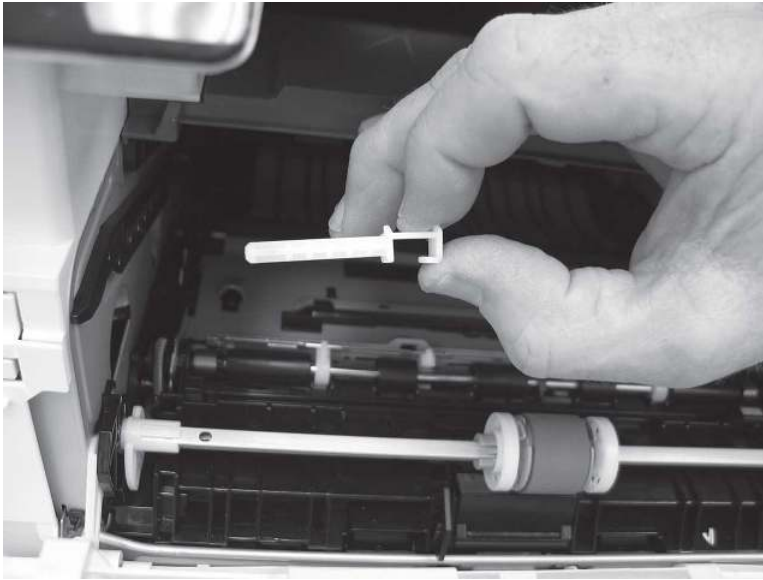
**Figure 5-146 Release the support shaft**





2. Remove the support shaft.

**Figure 5-147** Remove the support shaft



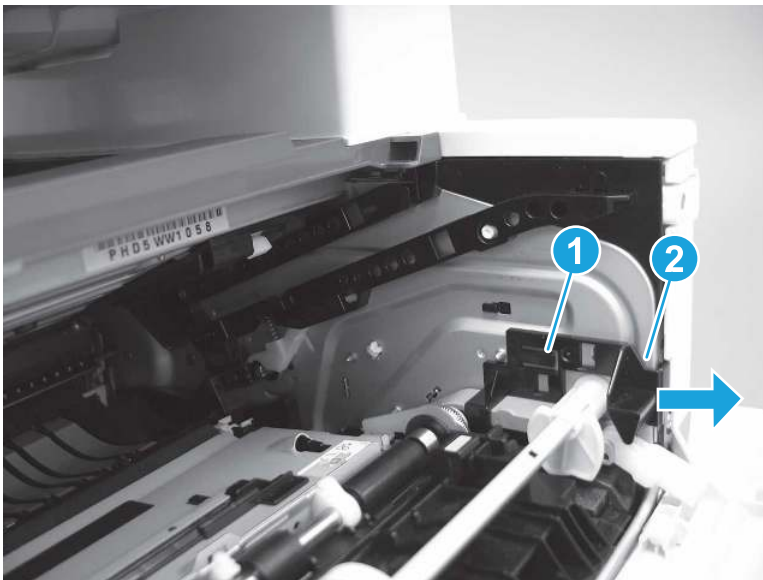
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

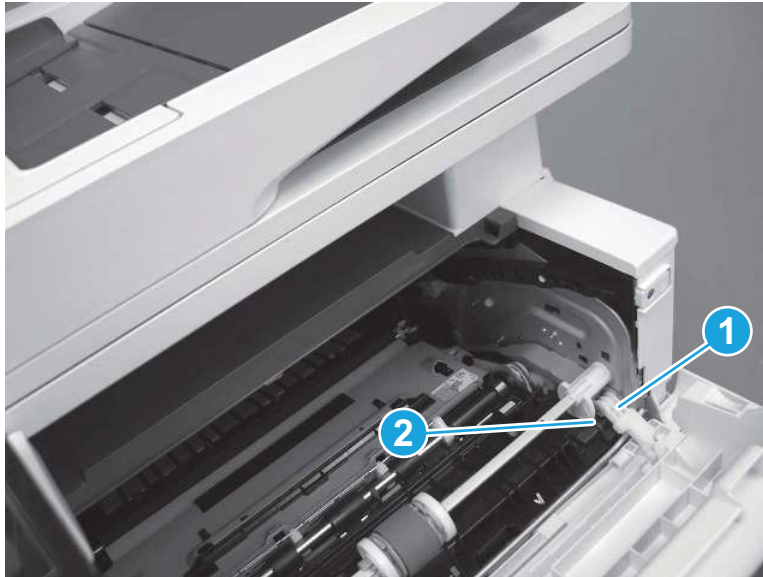
---

**Figure 5-148** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-149** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

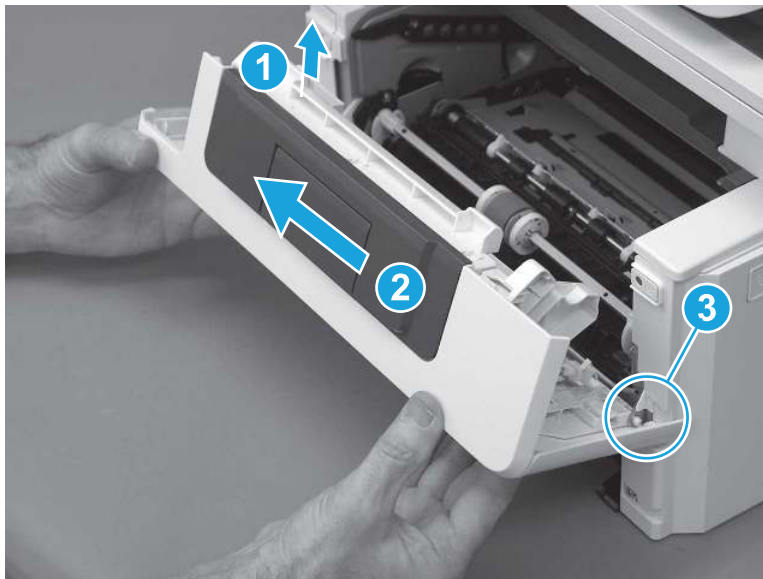
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

---

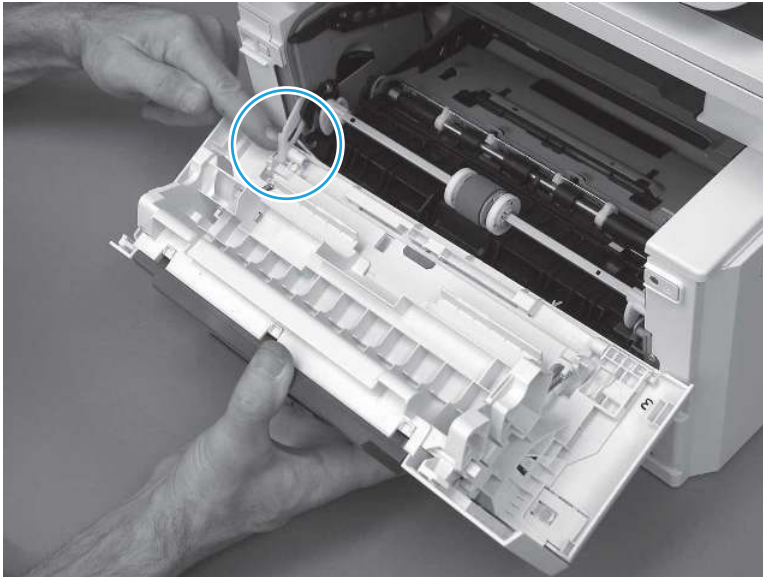
**Figure 5-150** Release the door





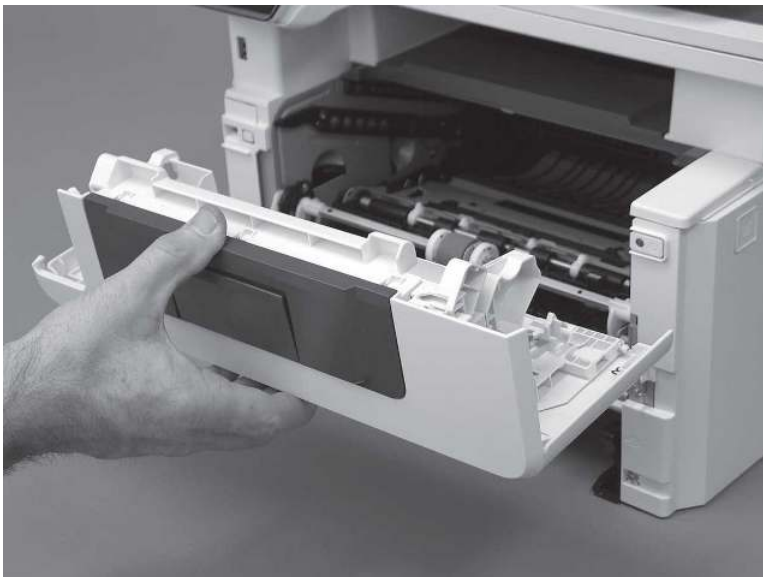
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-151** Release the left-side retainer arm



7. Remove the door.


**Figure 5-152** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

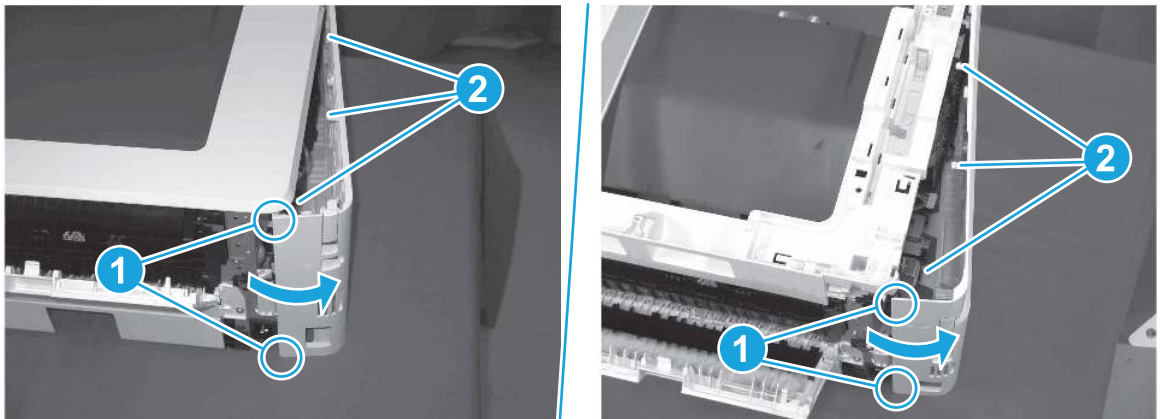
1. Remove one screw (callout 1).

**Figure 5-153 Remove one screw**



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-154 Release two bosses and three tabs**

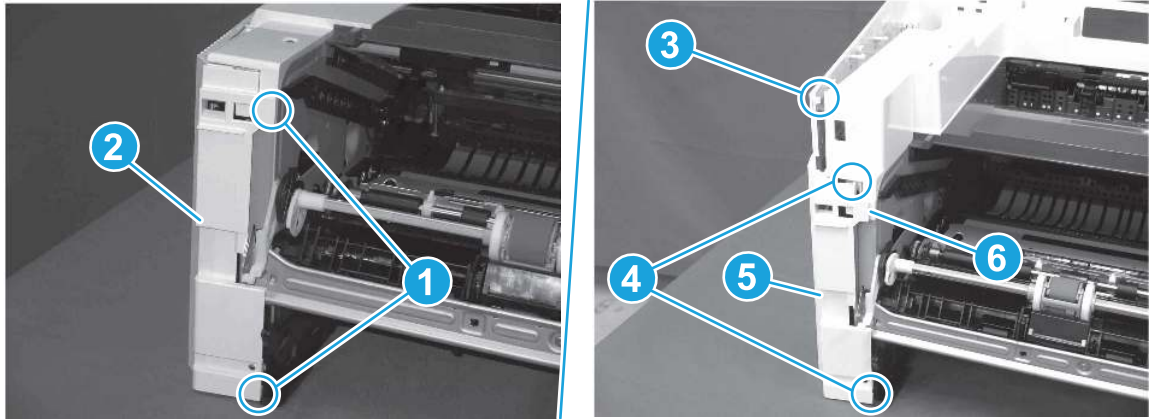


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

Figure 5-155 Remove the cover



#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).


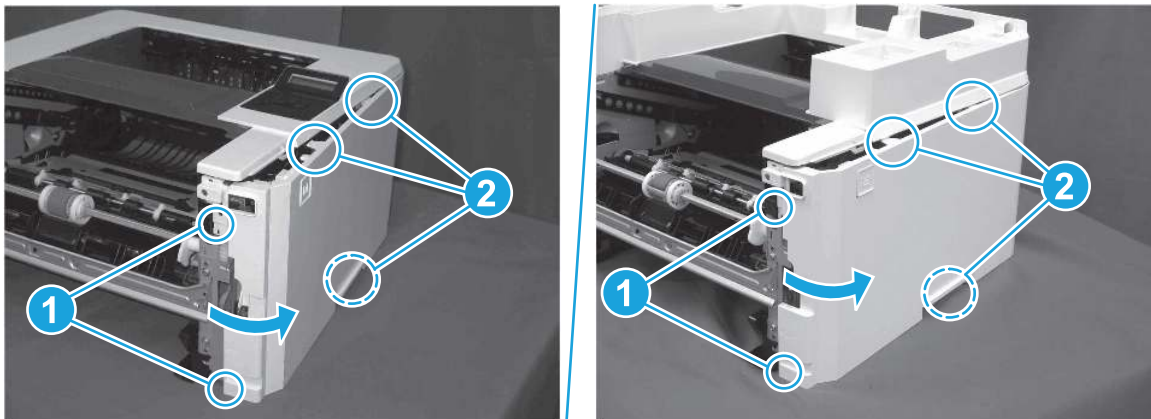
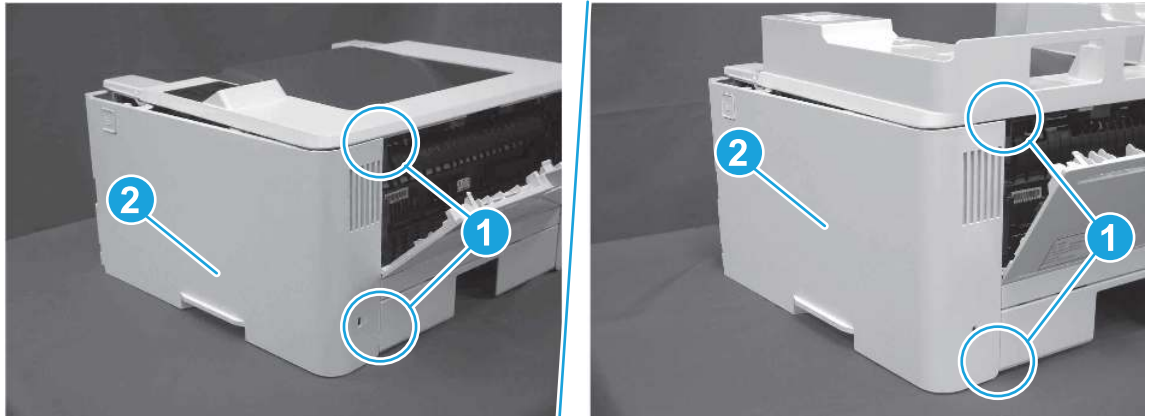
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-156 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-157 Remove the cover**




### 5. Remove the rear door assembly

Follow these steps to remove the rear door assembly.

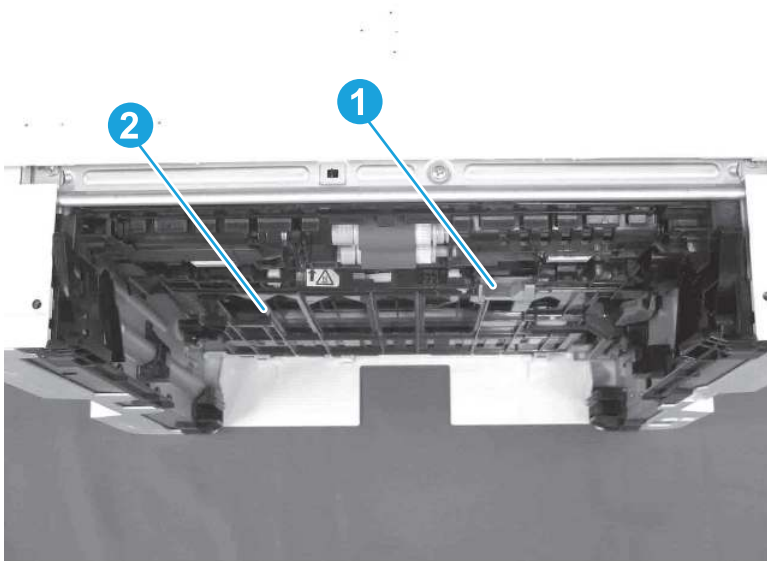
1. Inside the Tray 2 cavity, press the green jam access lever (callout 1), and then lower the duplex feed assembly (callout 2).

---

 **Reinstallation tip:** Reach in from the front of the Tray 2 cavity and raise the feed assembly to the up and locked position so that the rear cover will fit flat against the chassis.


---

**Figure 5-158 Lower the duplex feed assembly**



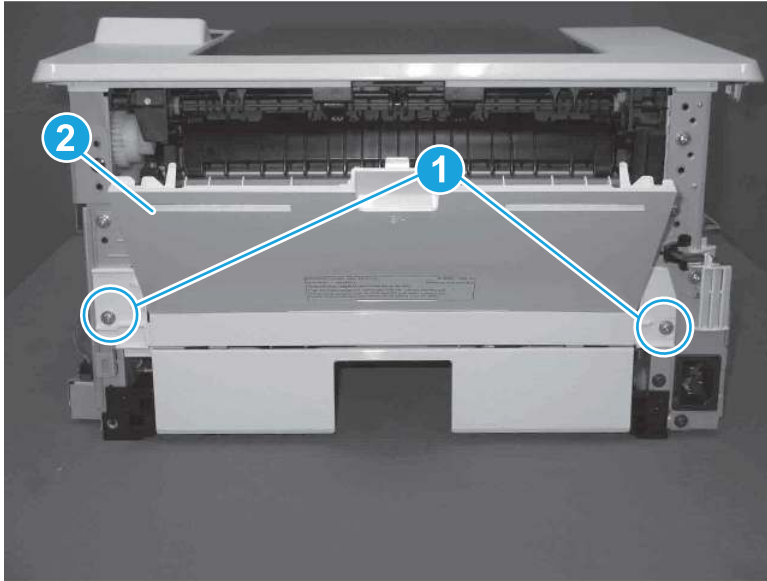
2. At the rear of the printer, remove two screws (callout 1), and then remove the rear door assembly (callout 2).

---

 **Reinstallation tip:** Slide the duplex tray into the Tray 2 cavity.

---

**Figure 5-159** Remove the door assembly



## 6. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Cassette rear cover

Learn how to remove and replace the cassette rear cover.



[View a video of how to remove and replace the cassette rear cover.](#)

Mean time to repair: 14 minutes

Service level: Easy

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-21** Part information

Part number	Part description
RC4-3082-000CN	Cover, cassette rear

## Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.



- Pull the tray straight out of the printer to remove it.


**Figure 5-160** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

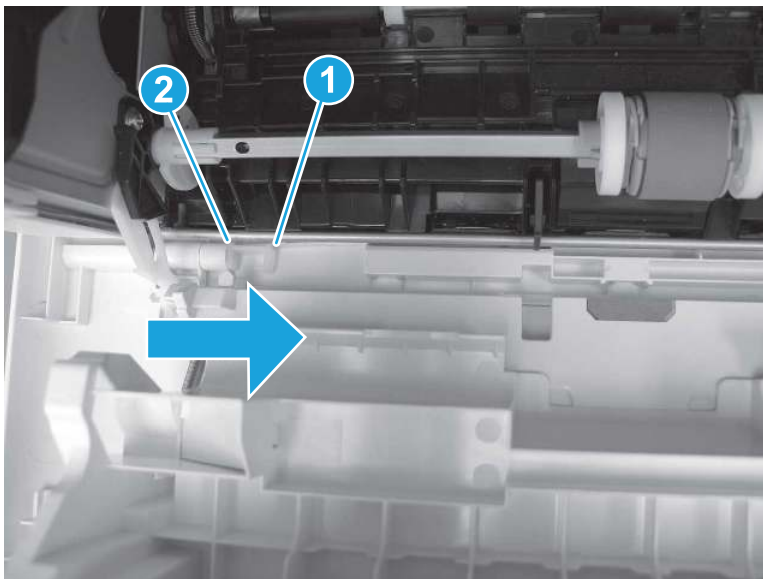
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

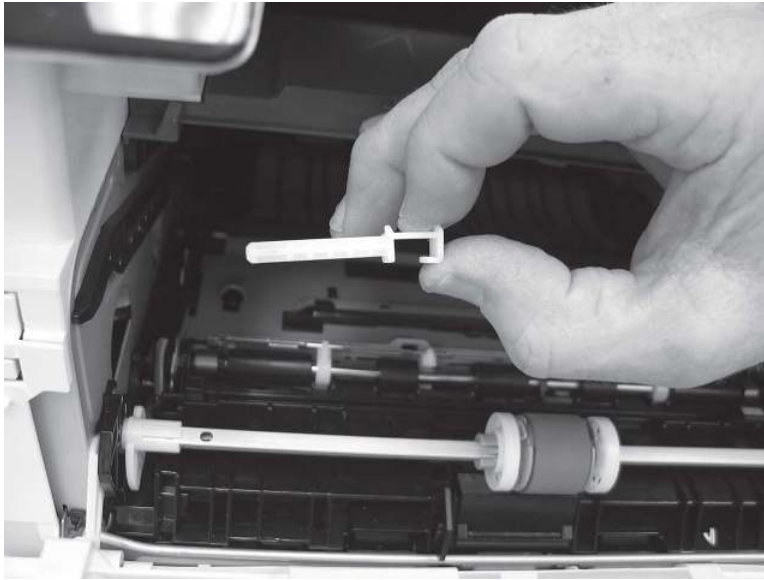
---

**Figure 5-161** Release the support shaft



2. Remove the support shaft.

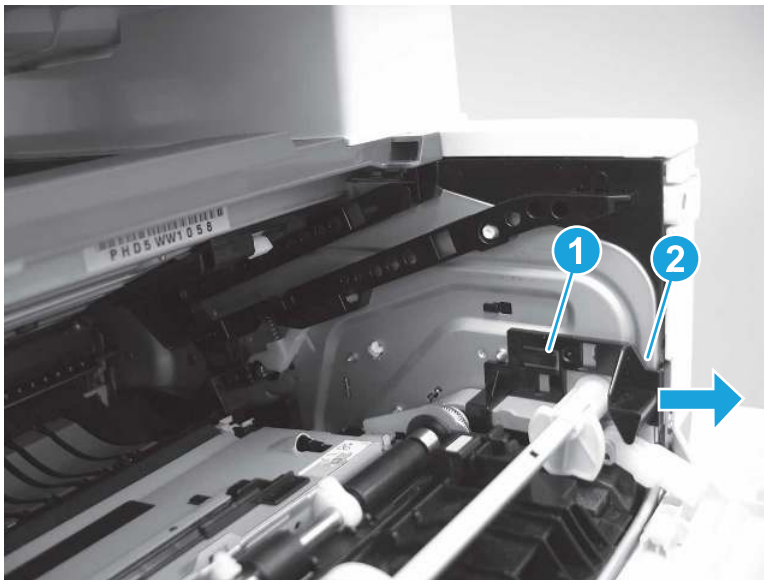
**Figure 5-162 Remove the support shaft**



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

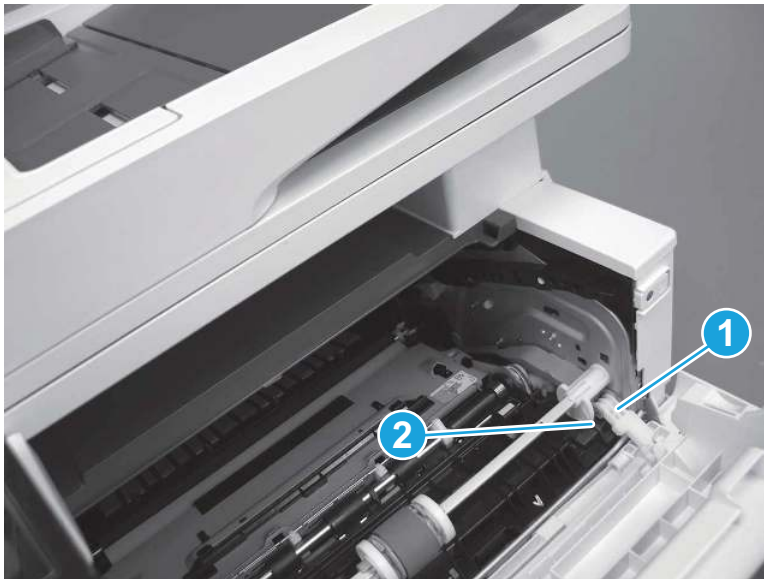
**Figure 5-163 Remove the guide**





4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-164** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

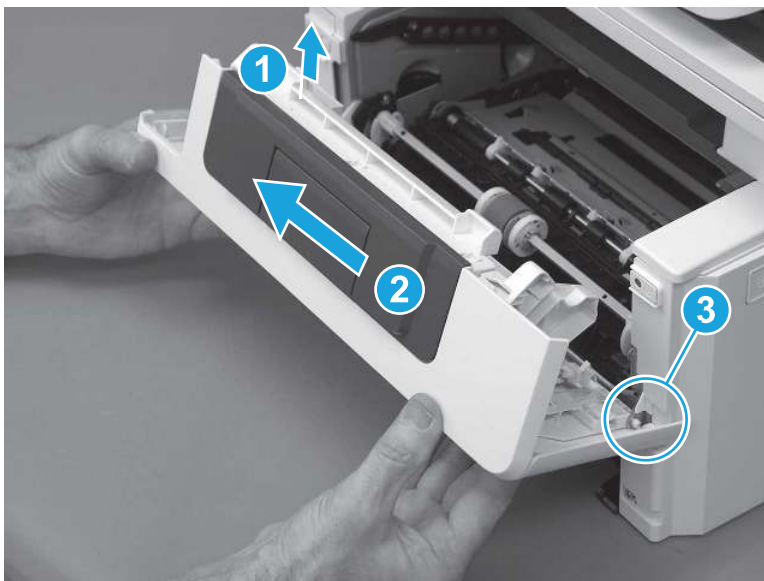
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

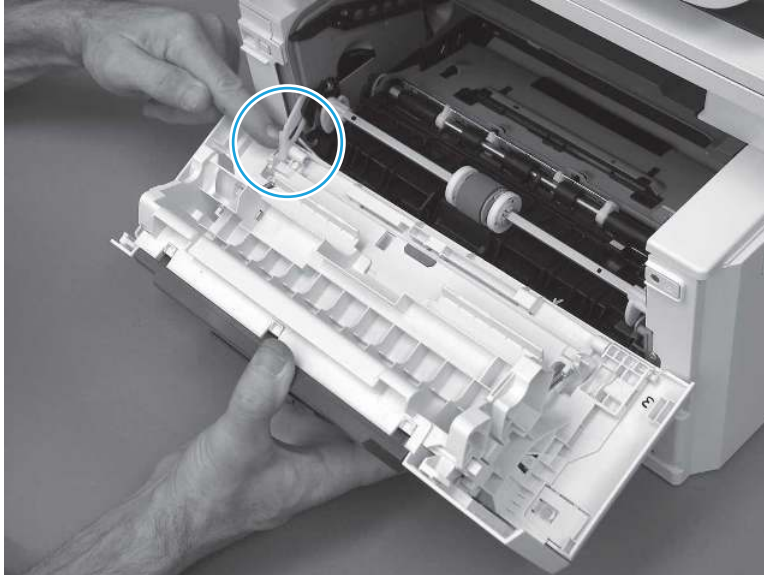
---

**Figure 5-165** Release the door



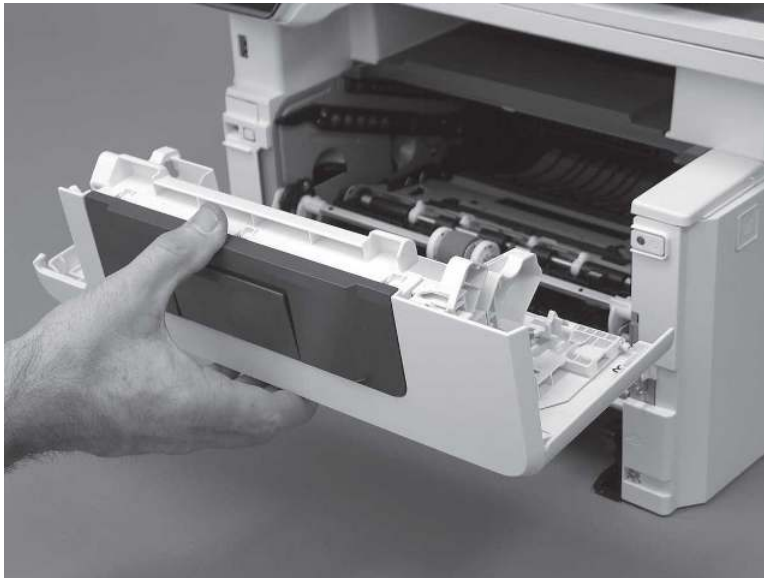
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-166** Release the left-side retainer arm



7. Remove the door.


**Figure 5-167** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

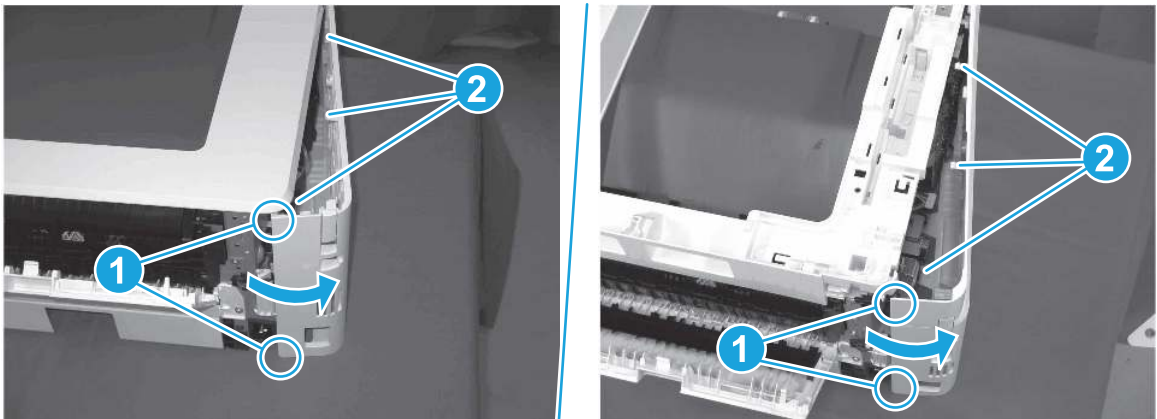
1. Remove one screw (callout 1).

**Figure 5-168** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-169** Release two bosses and three tabs

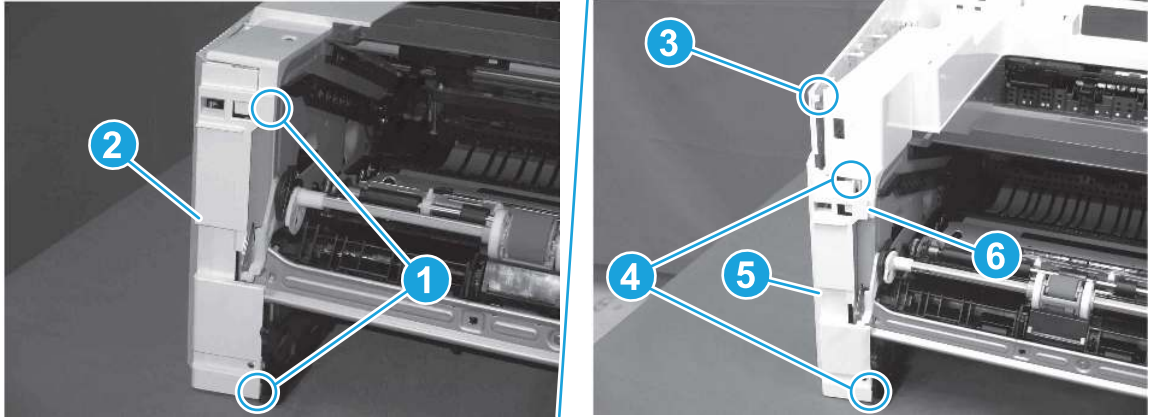


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

Figure 5-170 Remove the cover



#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).


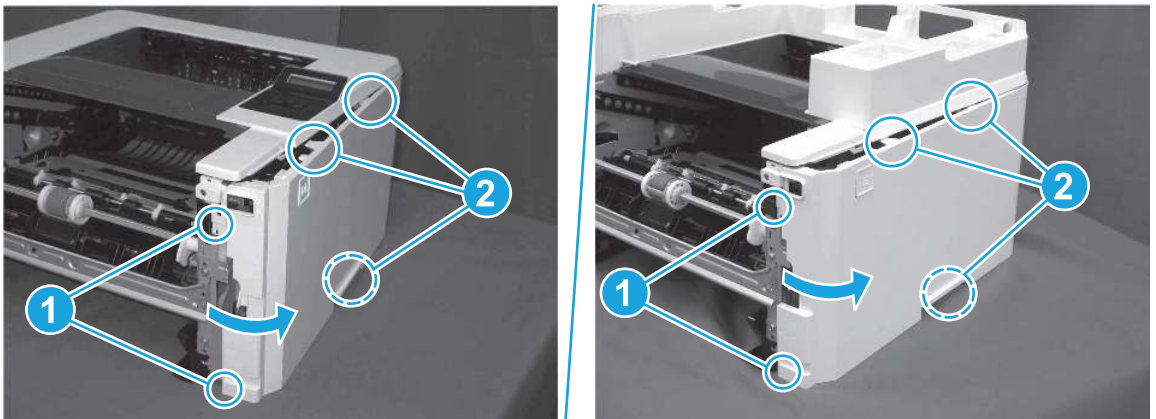
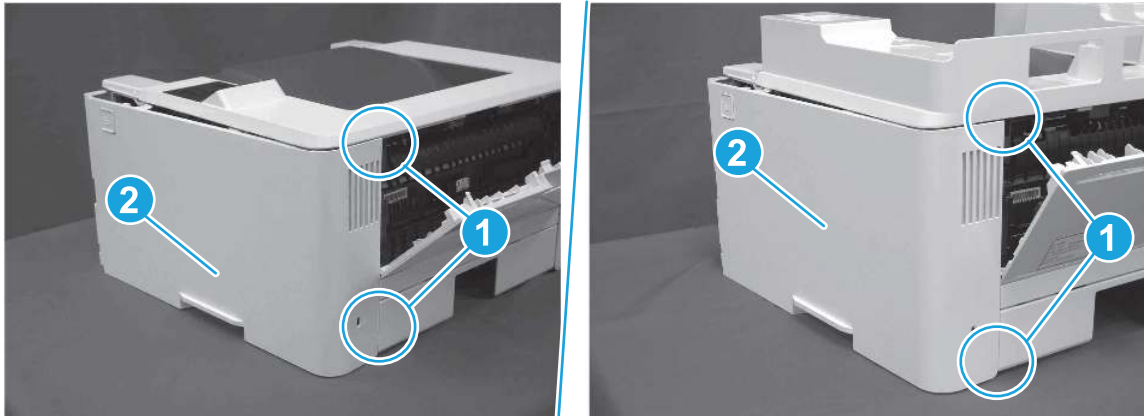
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-171 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-172 Remove the cover**




### 5. Remove the rear door assembly

Follow these steps to remove the rear door assembly.

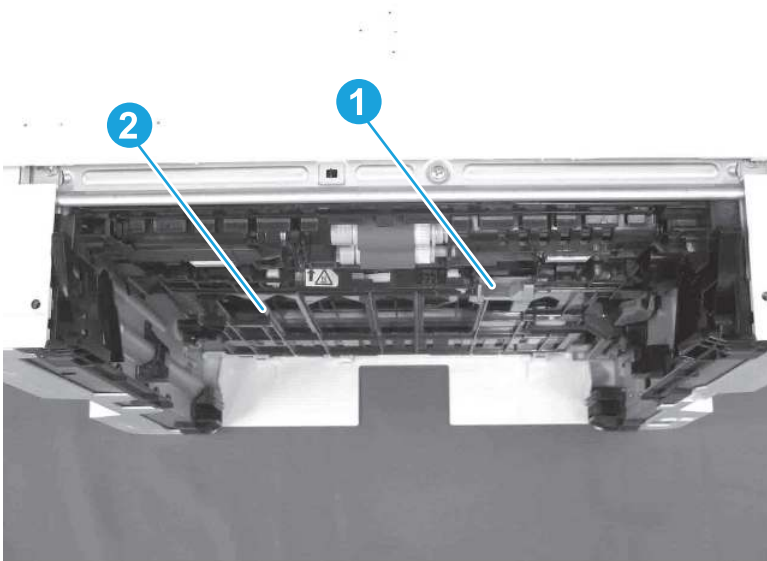
1. Inside the Tray 2 cavity, press the green jam access lever (callout 1), and then lower the duplex feed assembly (callout 2).

---

 **Reinstallation tip:** Reach in from the front of the Tray 2 cavity and raise the feed assembly to the up and locked position so that the rear cover will fit flat against the chassis.


---

**Figure 5-173 Lower the duplex feed assembly**



2. At the rear of the printer, remove two screws (callout 1), and then remove the rear door assembly (callout 2).

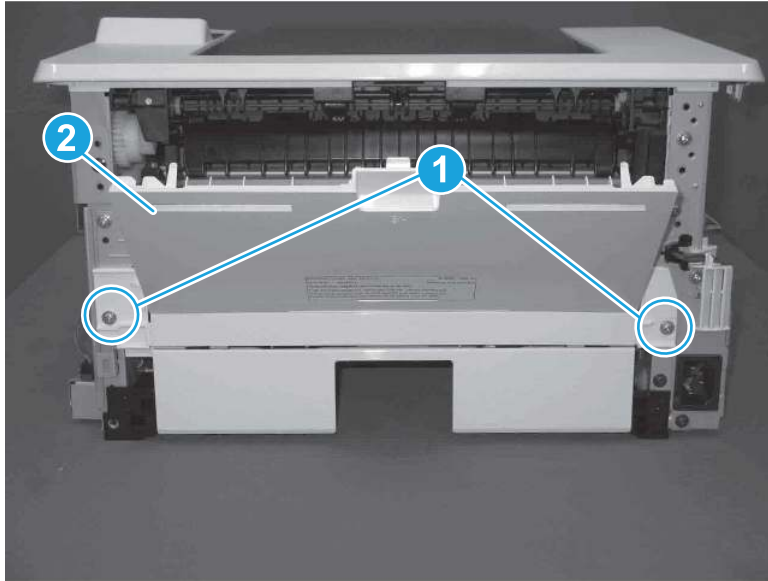
---

 **Reinstallation tip:** Slide the duplex tray into the Tray 2 cavity.

---




**Figure 5-174 Remove the door assembly**



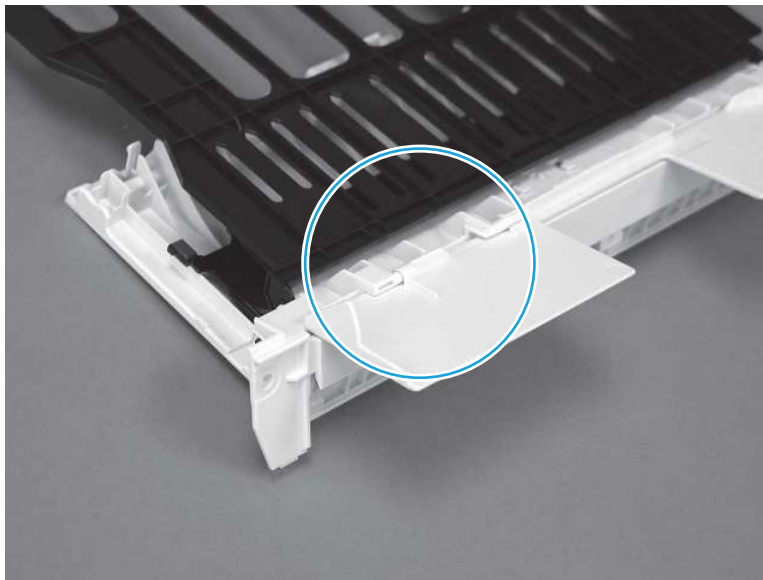
## 6. Remove the cassette rear cover

Follow these steps to remove the cassette rear cover.


 **NOTE:** The figures in this procedure show a duplex rear cover assembly. However, the procedure is valid for a simplex (not all printers have simplex models) rear cover.

1. Locate the left-side hinge retainer (callout 1).

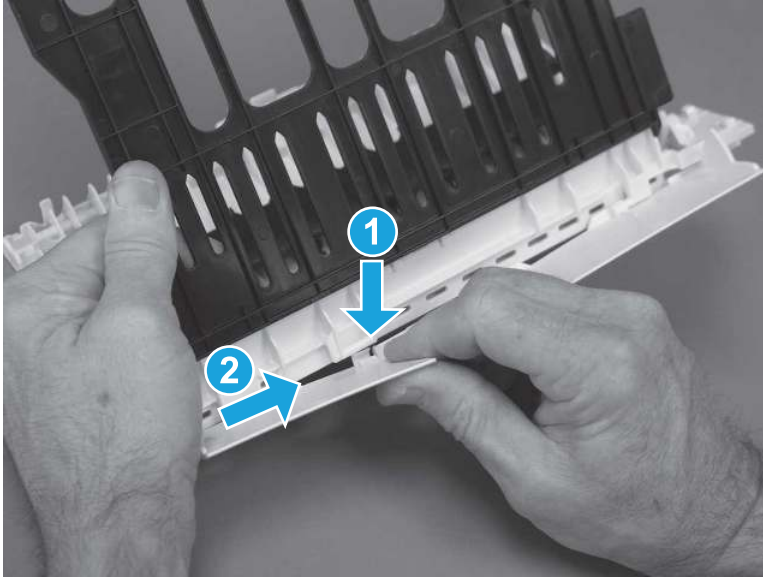
**Figure 5-175 Locate the hinge retainer**



2. Carefully flex the cover to release the retainer (callout 1), and the left-side hinge pin (callout 2).

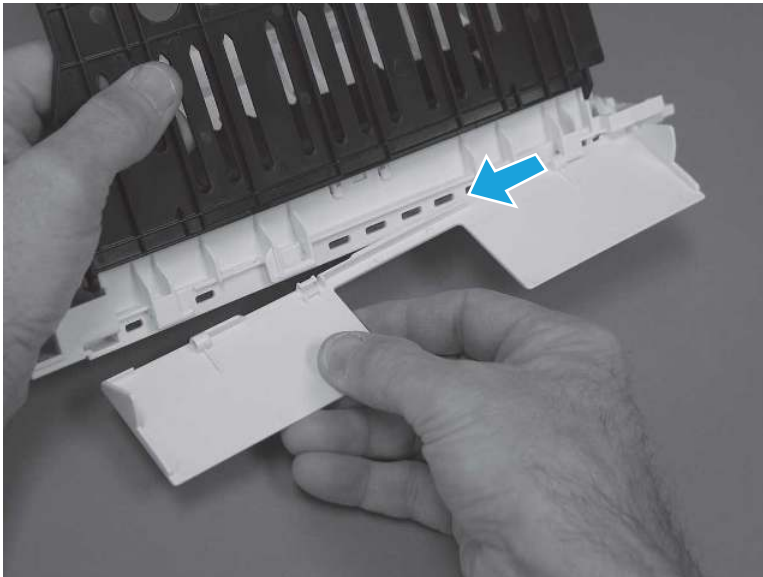
 **Reinstallation tip:** When the cover is correctly installed, it moves freely on the hinge pins.

**Figure 5-176** Release the retainer and the hinge pin



3. Remove the cover.

**Figure 5-177** Remove the cover



## 7. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.



1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>


## 2. Unpack the replacement part from the packaging.

 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

## 3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### Removal and replacement: Top cover (MFP)

Learn how to remove and replace the top cover (MFP).

 [View a video of how to remove and replace the top cover.](#)


Mean time to repair: 36 minutes

Service level: Medium

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-22 Part information**

Part number	Part description
RC4-3207-000CN	Cover, top (MFP)

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length



## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-178** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.



---

**NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).



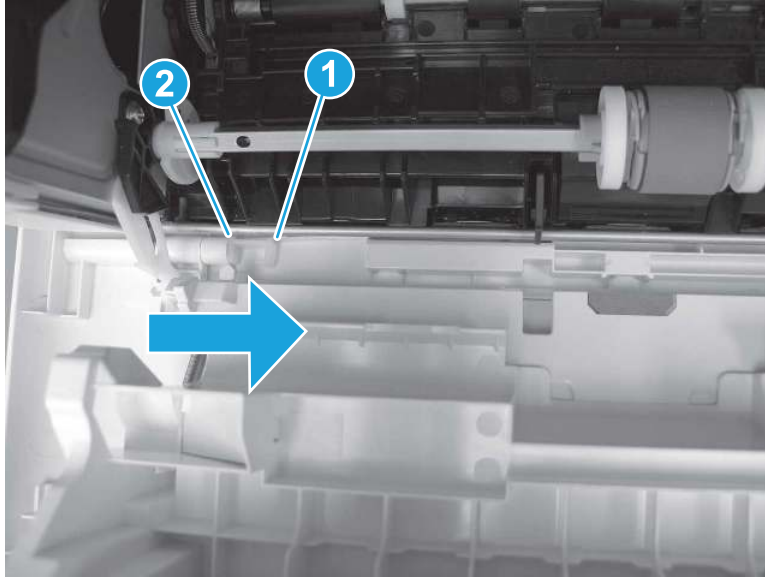
**TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.



**Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

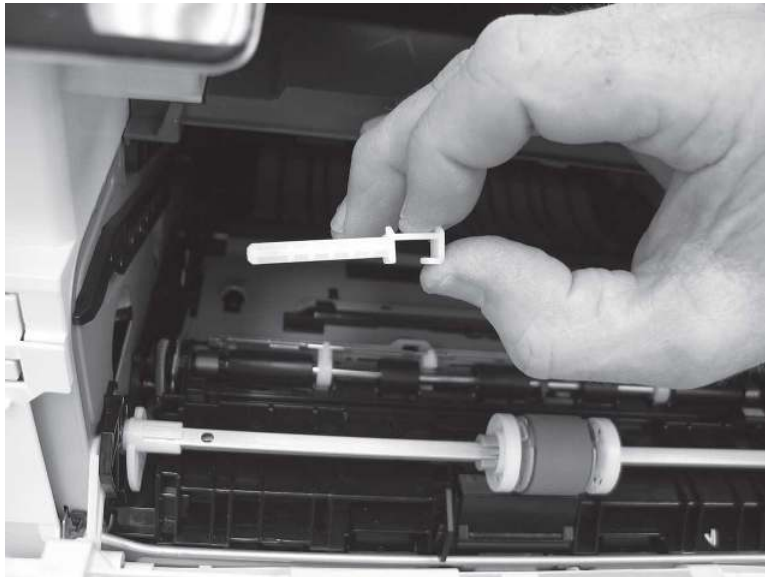
---

**Figure 5-179** Release the support shaft



2. Remove the support shaft.

**Figure 5-180** Remove the support shaft



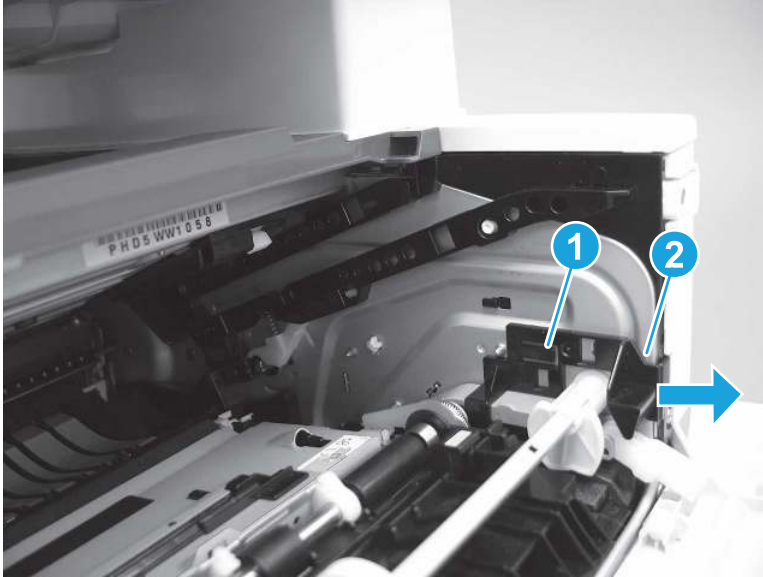
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

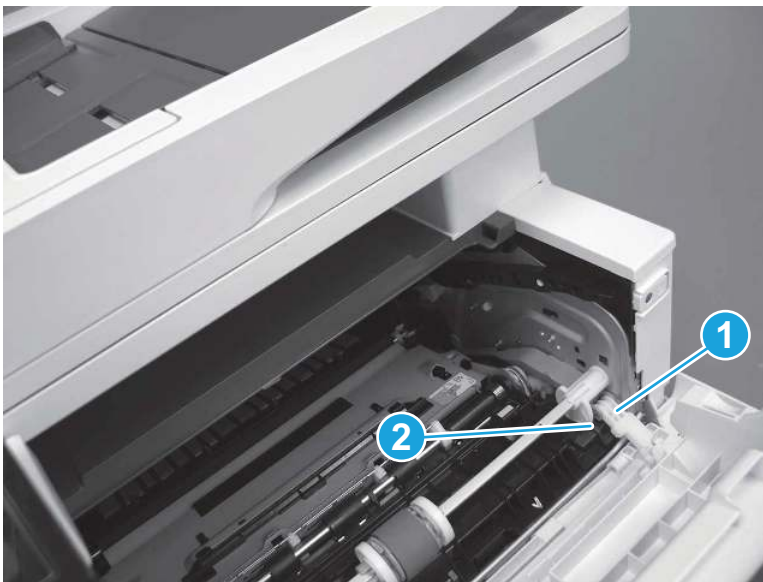
---

**Figure 5-181** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-182** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

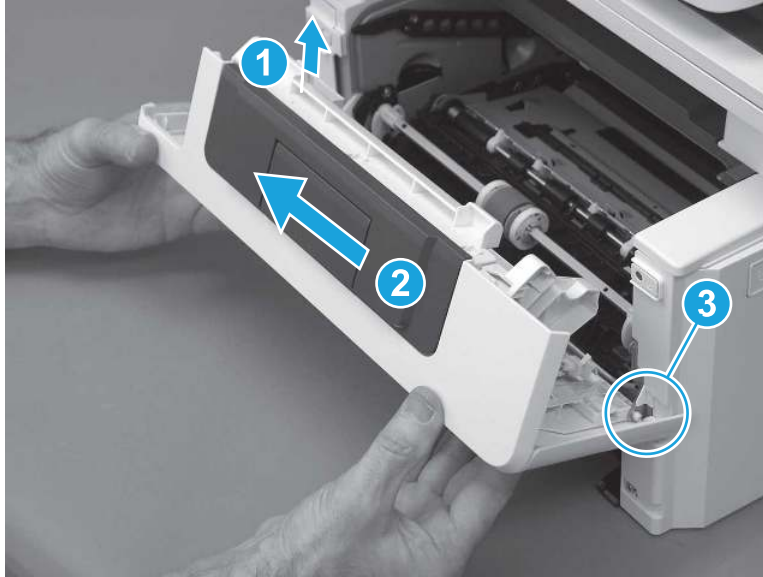
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

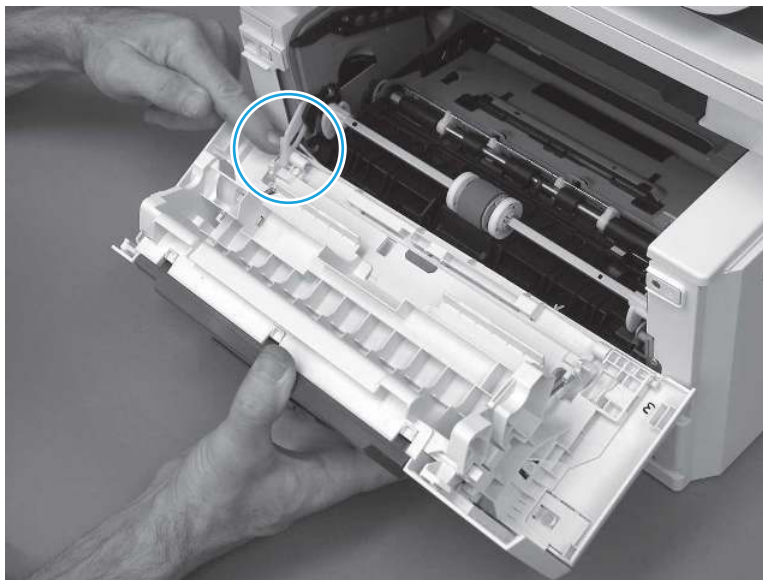
---

**Figure 5-183** Release the door



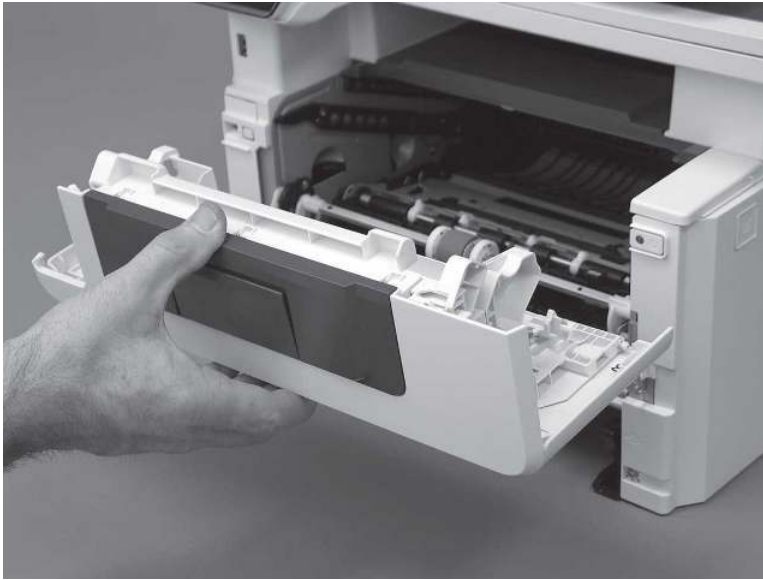
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-184** Release the left-side retainer arm



7. Remove the door.

**Figure 5-185** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

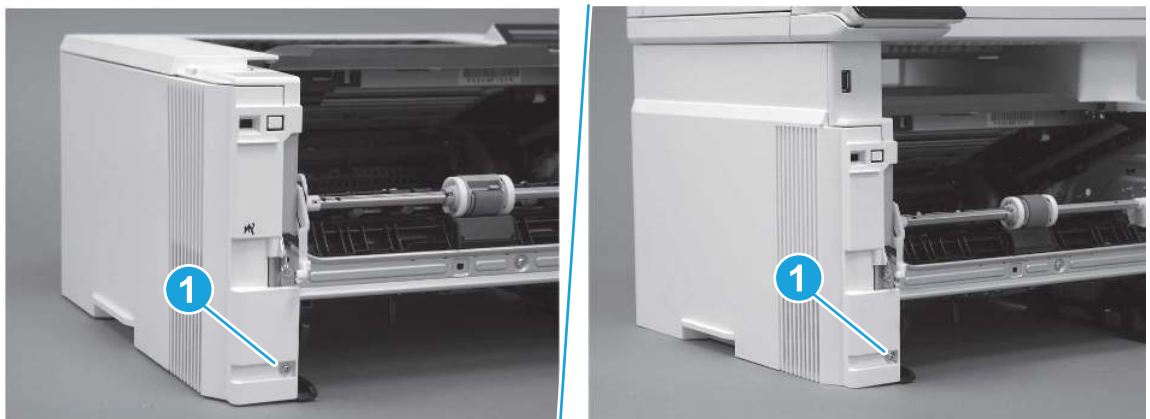
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

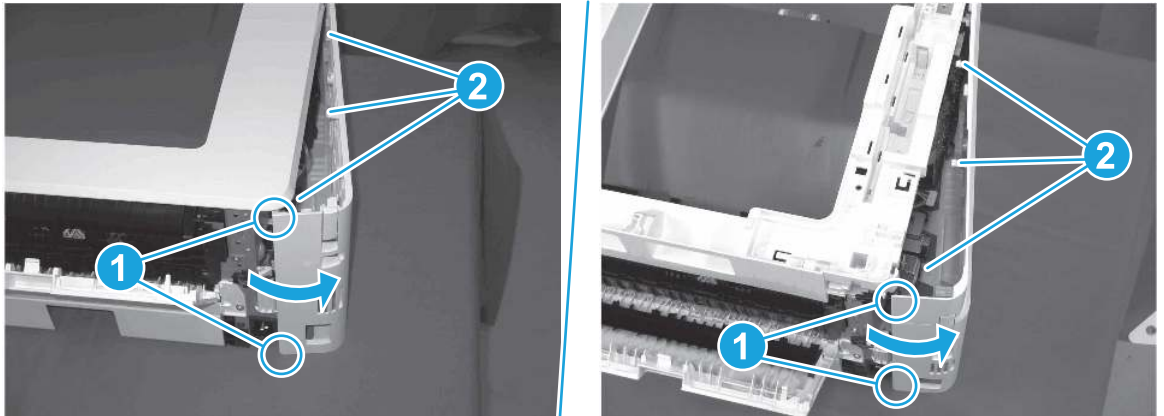
1. Remove one screw (callout 1).

**Figure 5-186** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

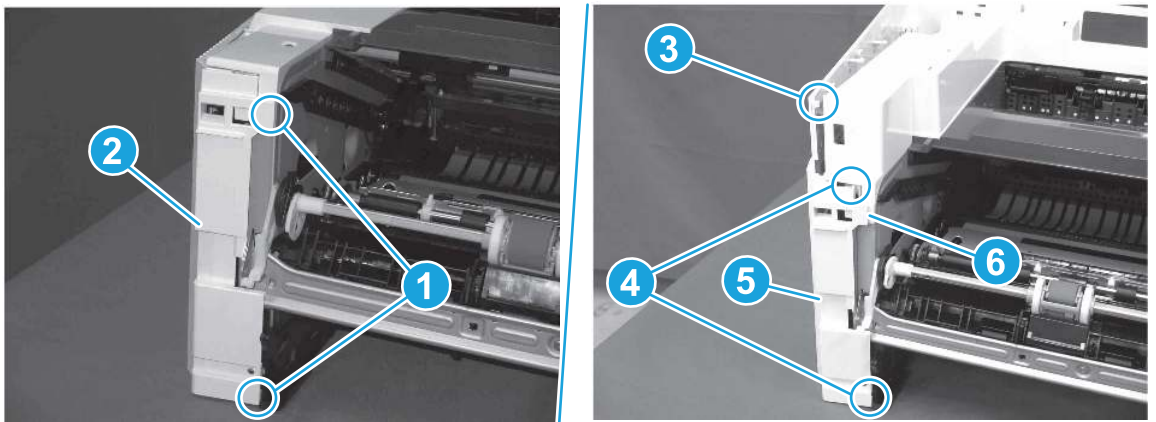
**Figure 5-187 Release two bosses and three tabs**



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-188 Remove the cover**



#### 4. Remove the right cover

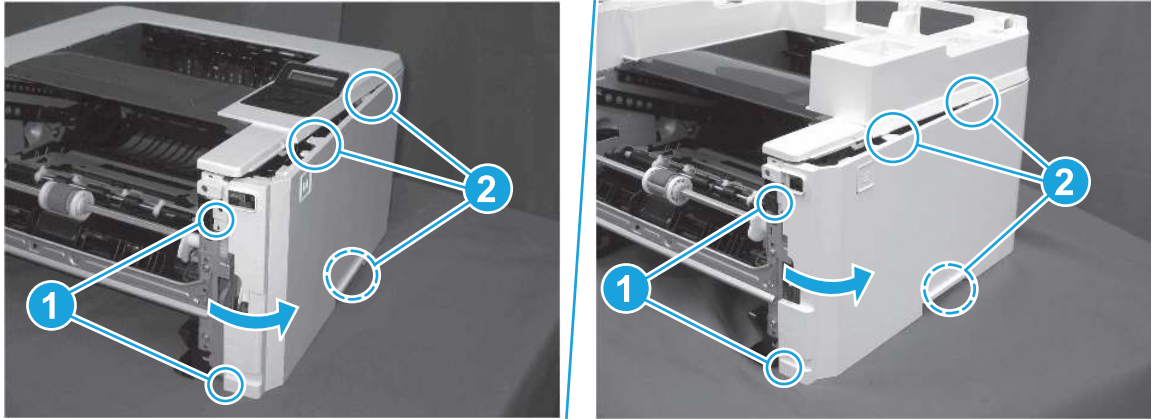
Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

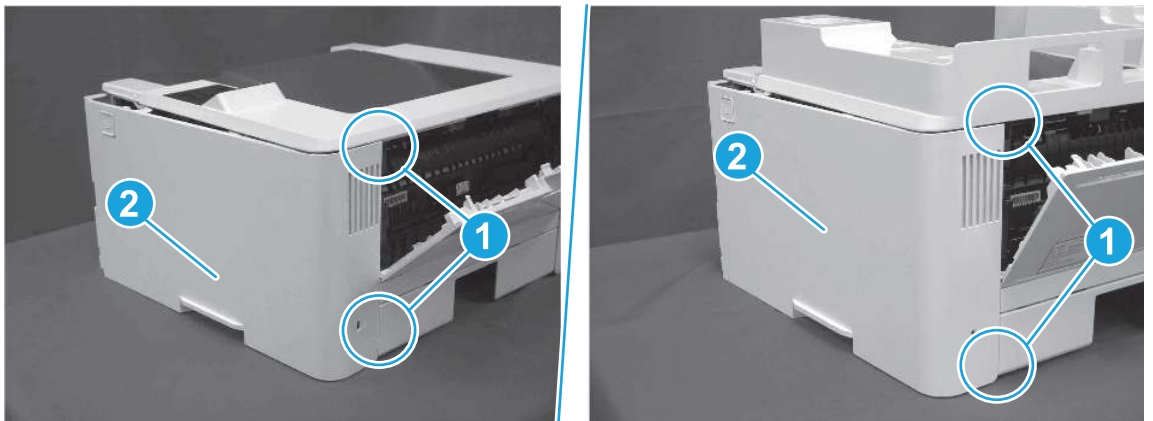


**Figure 5-189** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-190** Remove the cover

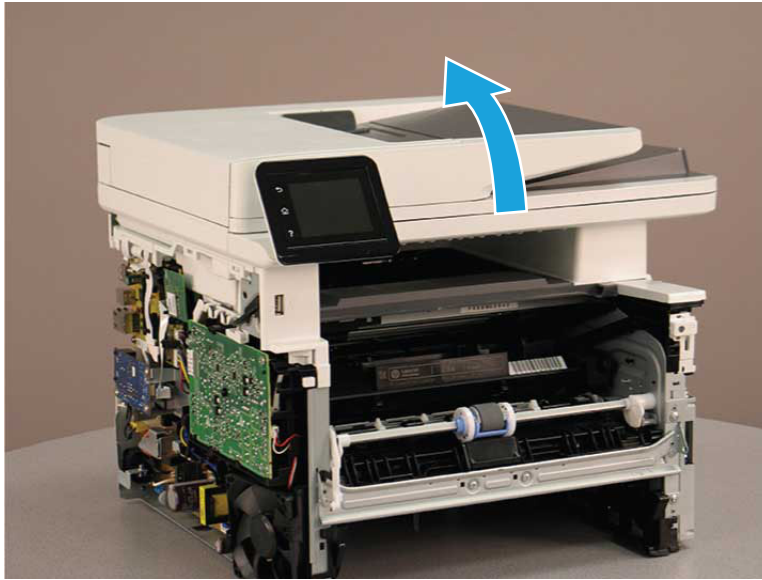


**5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)**

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

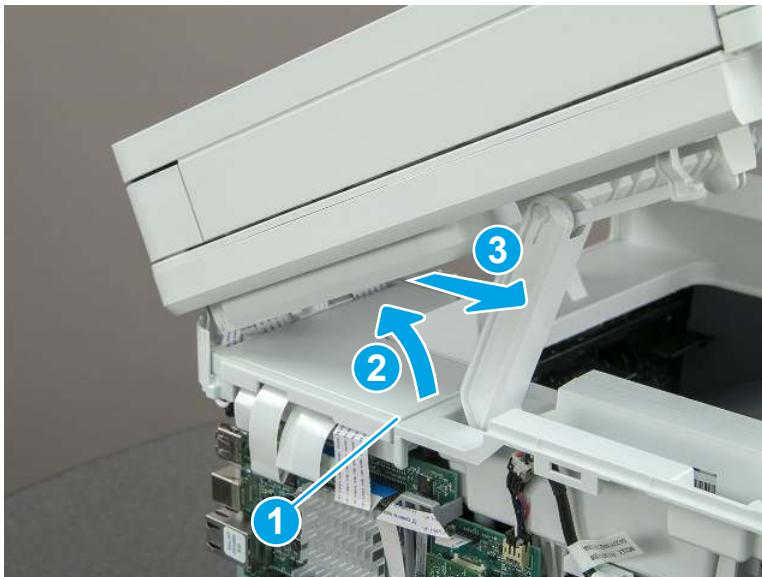
1. If the ISA is not already raised, raise it now.

**Figure 5-191** Raise the ISA




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-192** Remove the ISA FFC cover




## 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.



**Figure 5-193** Disconnect three FFCs



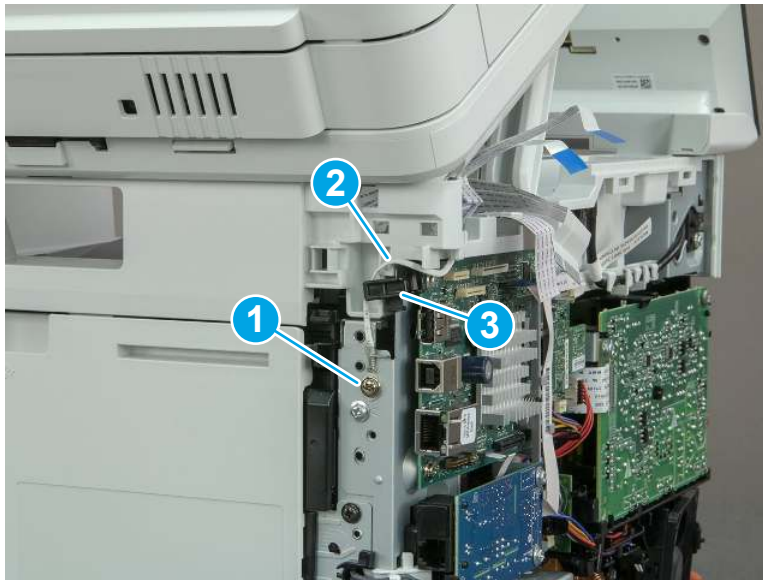
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-194** Release the tape



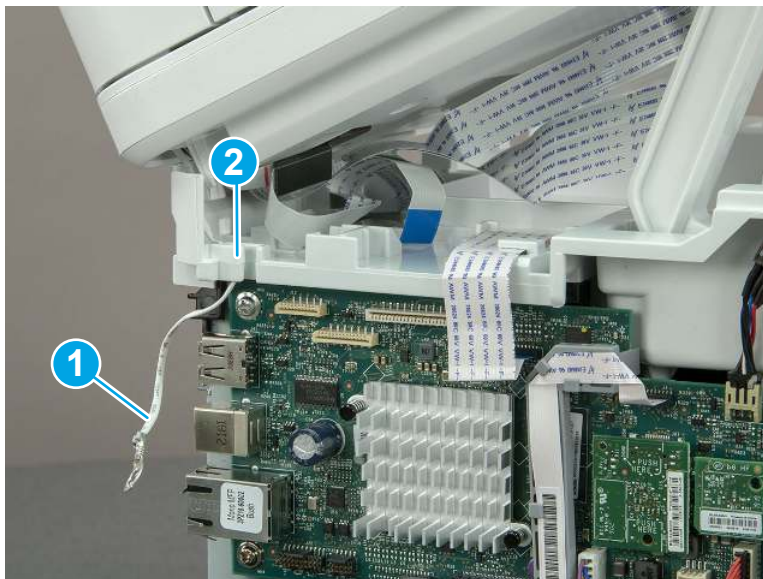
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-195 Release the ground wire**



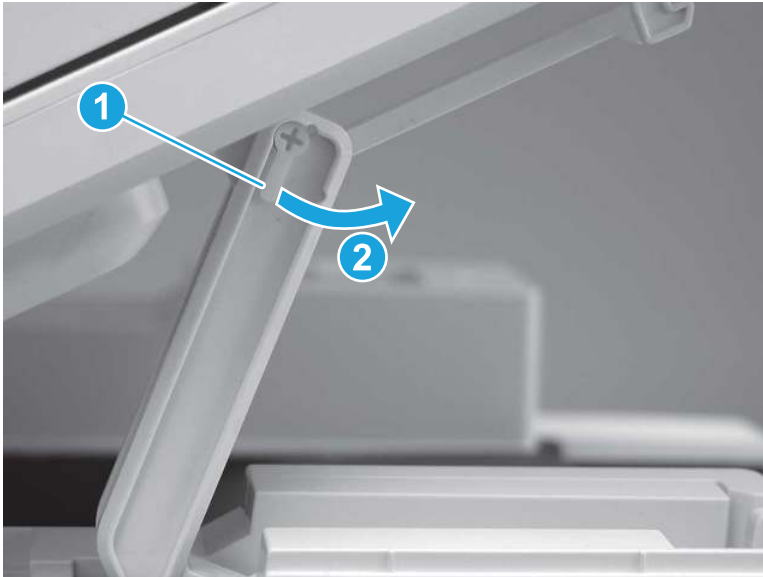
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-196 Release the ground wire**



5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-197** Release one tab and rotate the slider pin

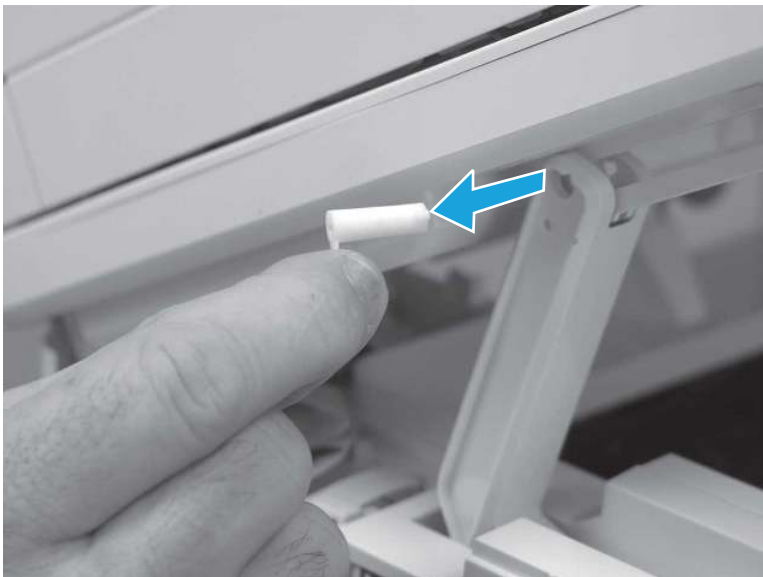


6. Remove the slider pin.



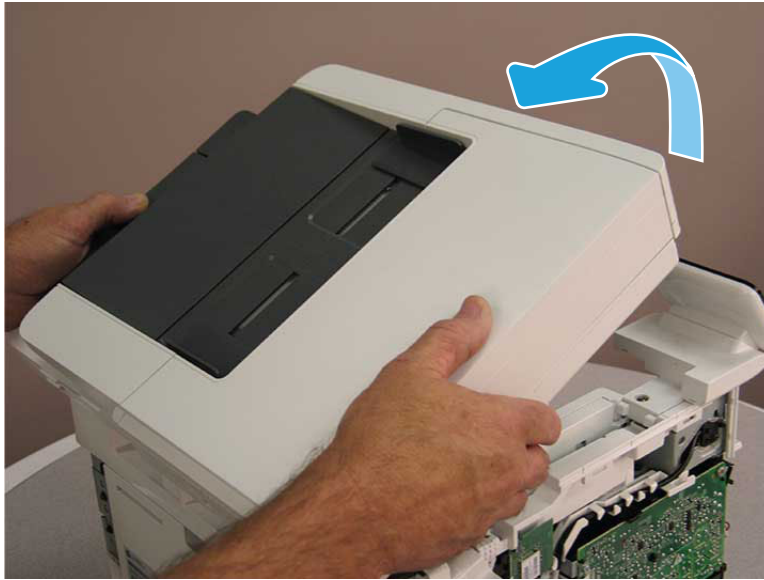
**Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

**Figure 5-198** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-199** Rotate the ISA towards the rear of the printer



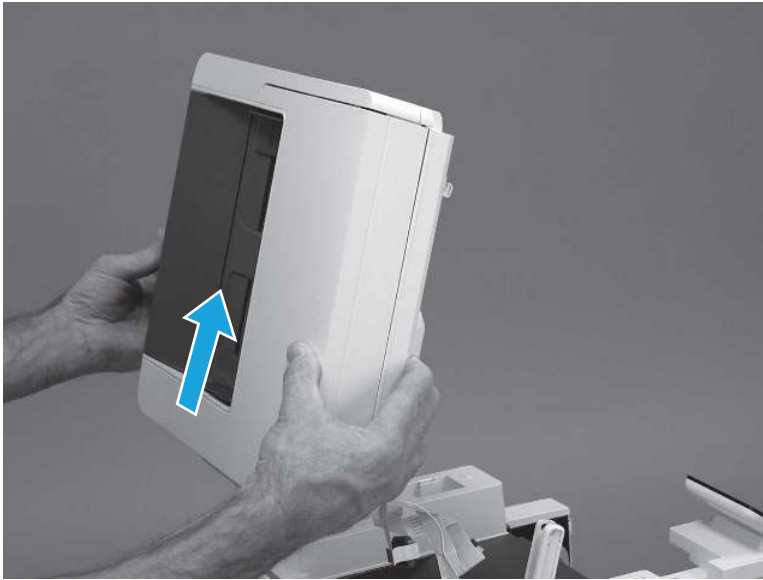
8. Slide the ISA as shown to release it.

**Figure 5-200** Release the ISA



9. Remove the ISA.

**Figure 5-201** Remove the ISA

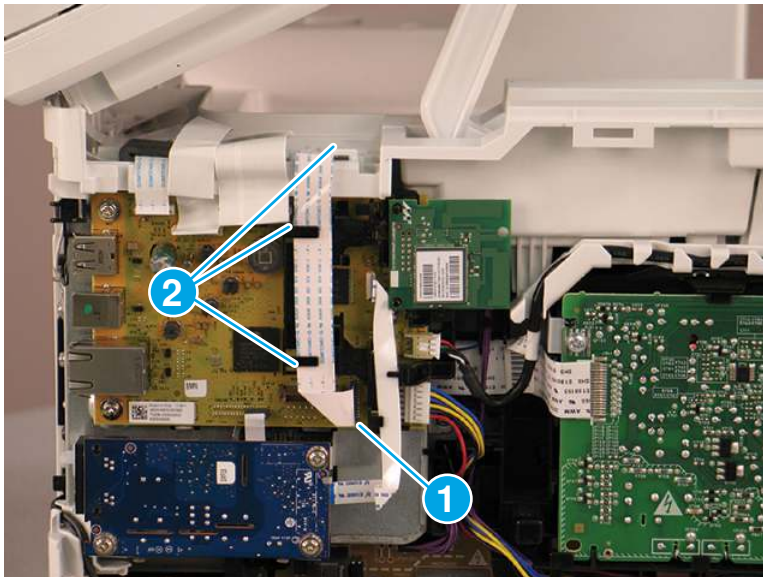


#### 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-202** Disconnect one connector





2. Remove one screw (callout 1).

**Figure 5-203** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-204** Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-205** Remove the cover



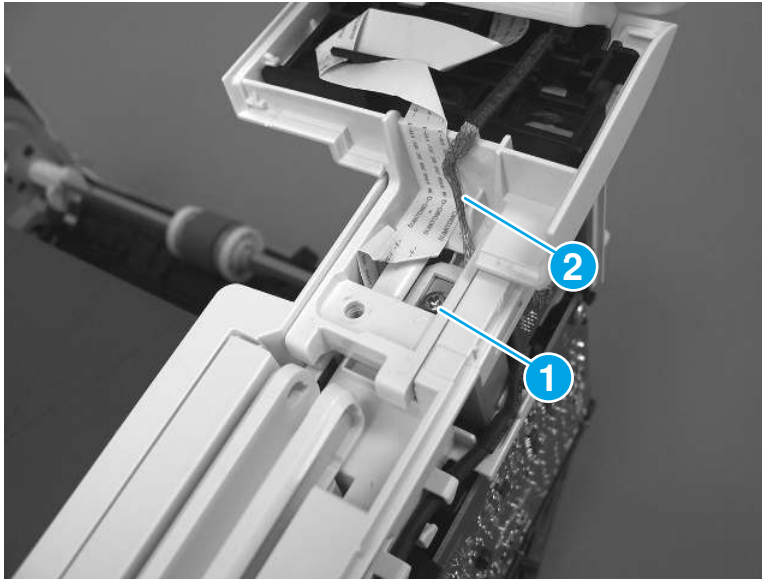
5. Remove the control-panel mount cover.

**Figure 5-206** Remove the cover



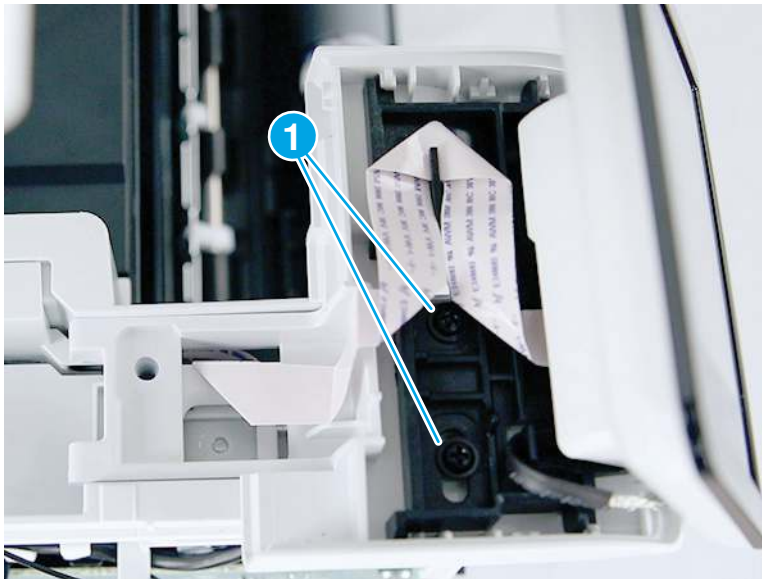
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-207 Remove one screw**



7. Move the FFC out of the way, and then remove two screws (callout 1).

**Figure 5-208 Remove two screws**

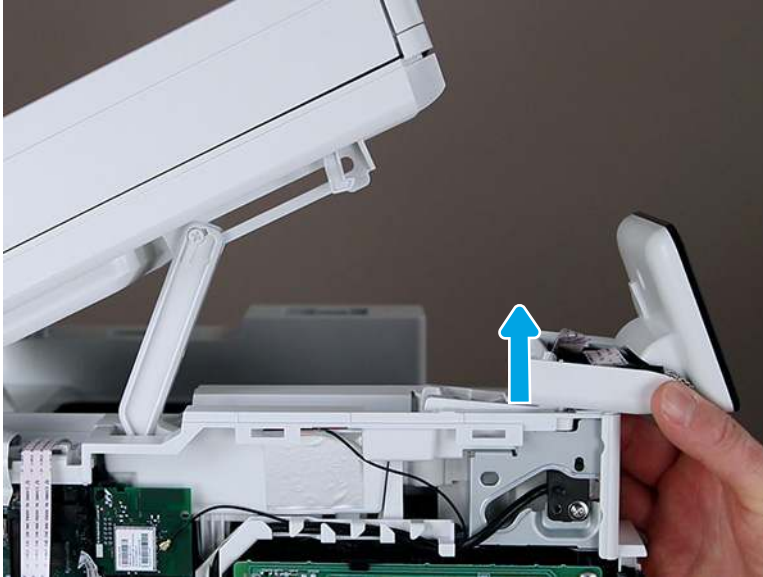


8. Slightly lift up the control-panel assembly to separate it from the top cover.

**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

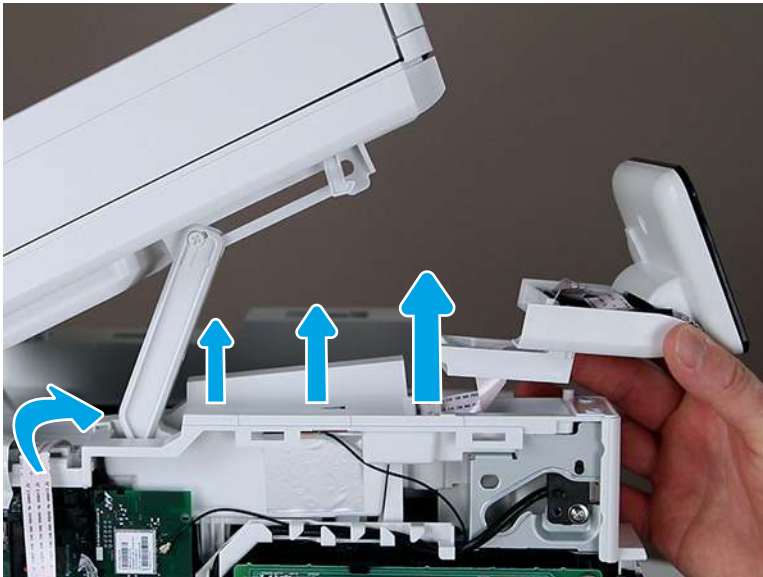


**Figure 5-209** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-210** Remove the control-panel assembly

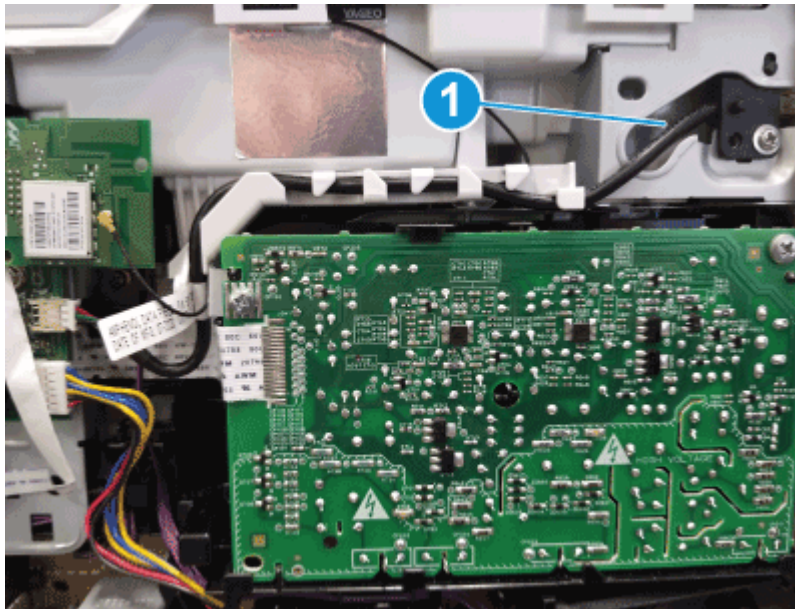


### 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

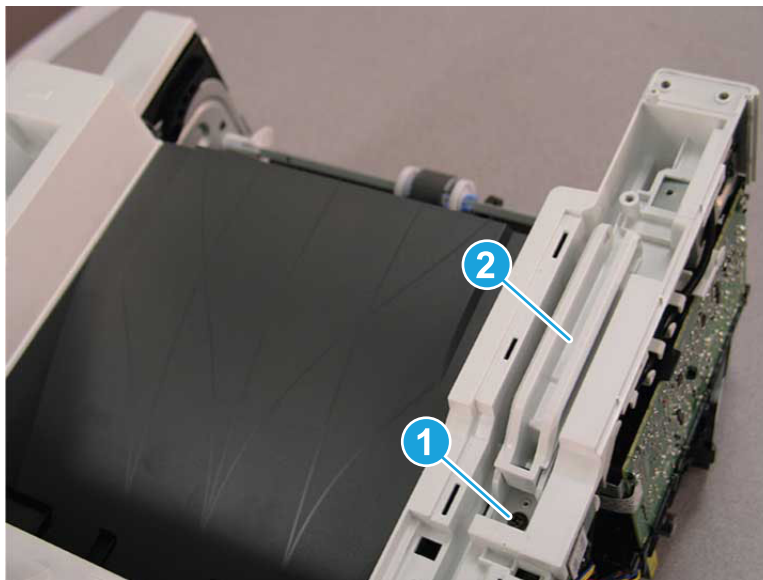
**Figure 5-211** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

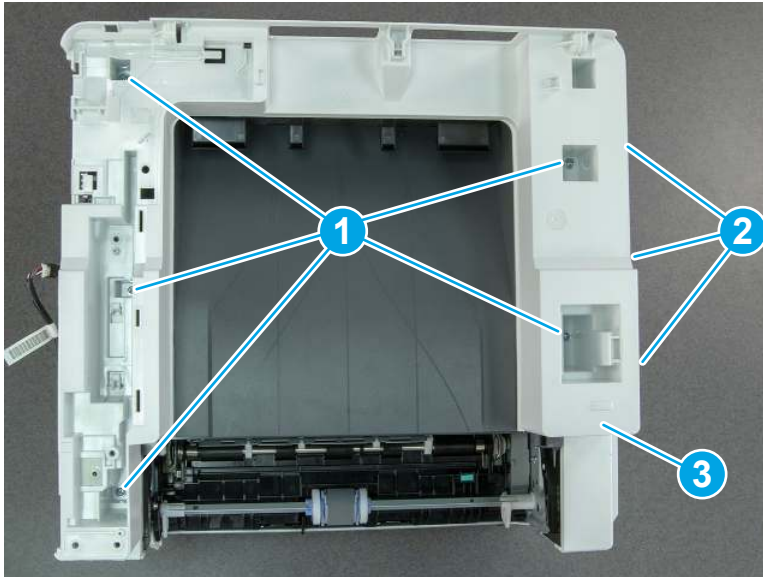
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-212** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-213** Remove the top cover



## 9. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Top cover (SFP)

Learn how to remove and replace the top cover.



[View a video of how to remove and replace the top cover.](#)

Mean time to repair: 14 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-23 Part Information**

Part number	Part description
RC4-2956-000CN	Cover, top (SFP)

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-214** Remove the tray



## 2. Remove the cartridge door assembly


Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

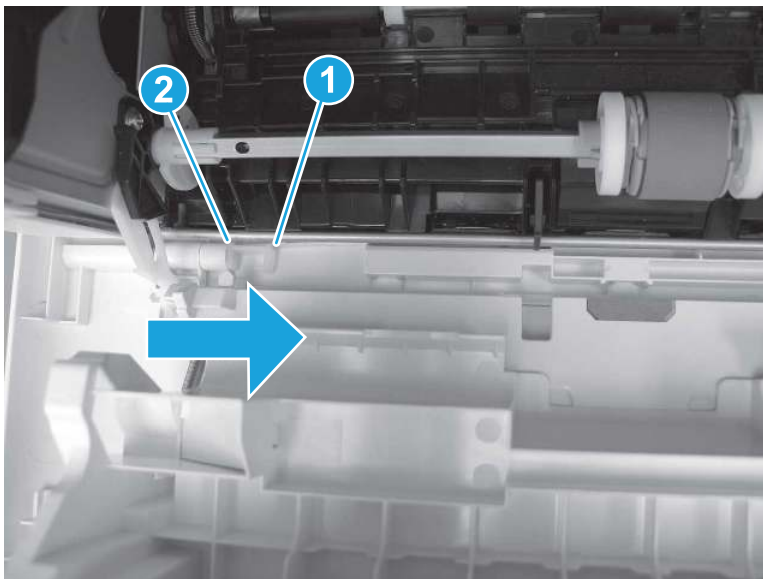
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

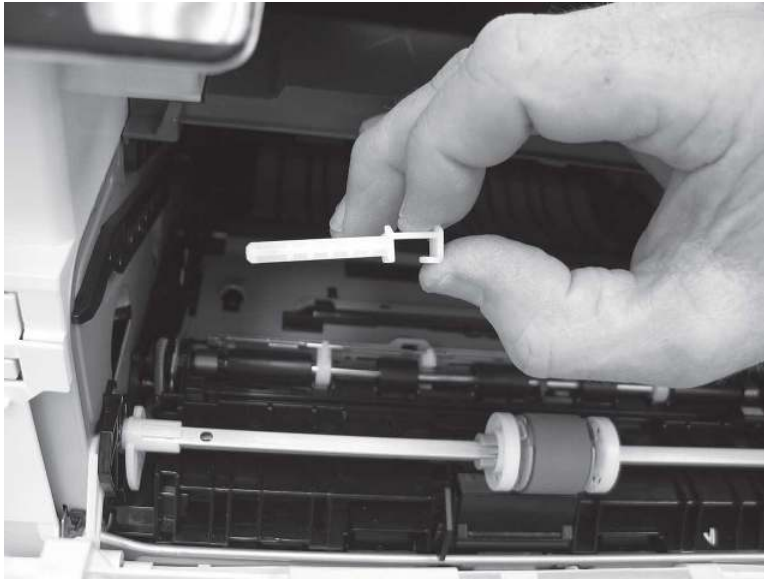
---

**Figure 5-215** Release the support shaft



2. Remove the support shaft.

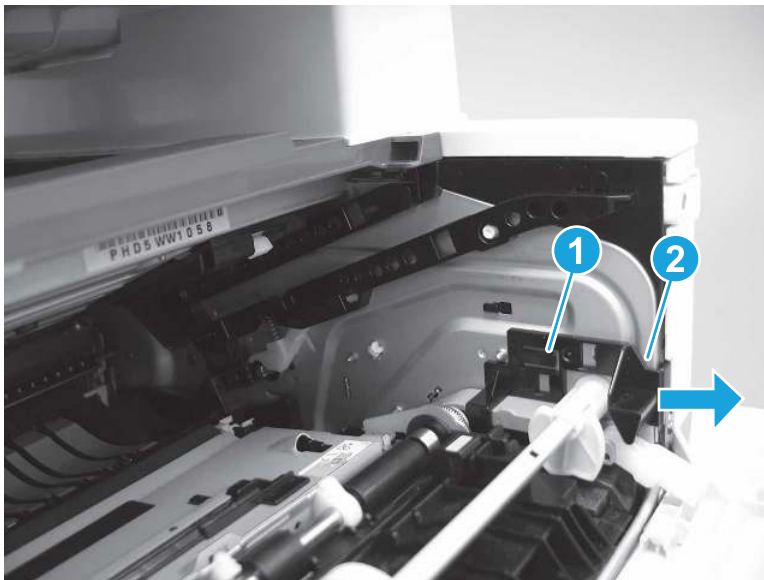
**Figure 5-216** Remove the support shaft



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

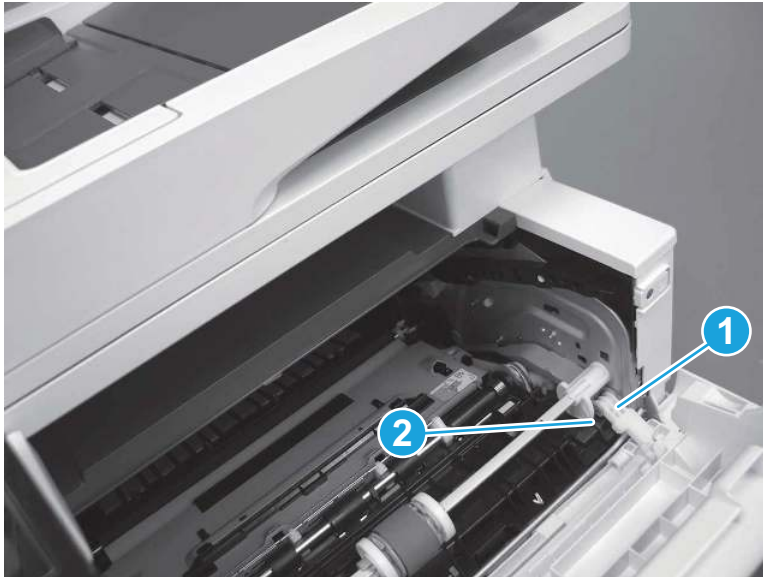
**Figure 5-217** Remove the guide





4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-218** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

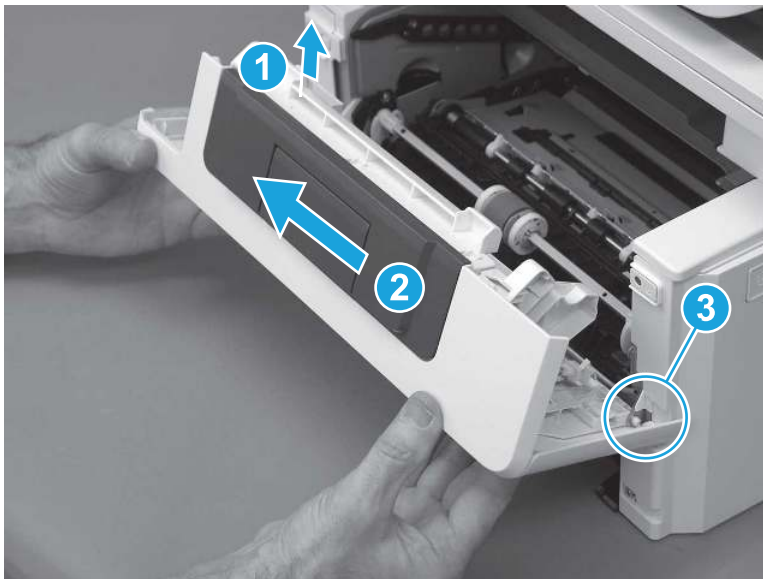
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

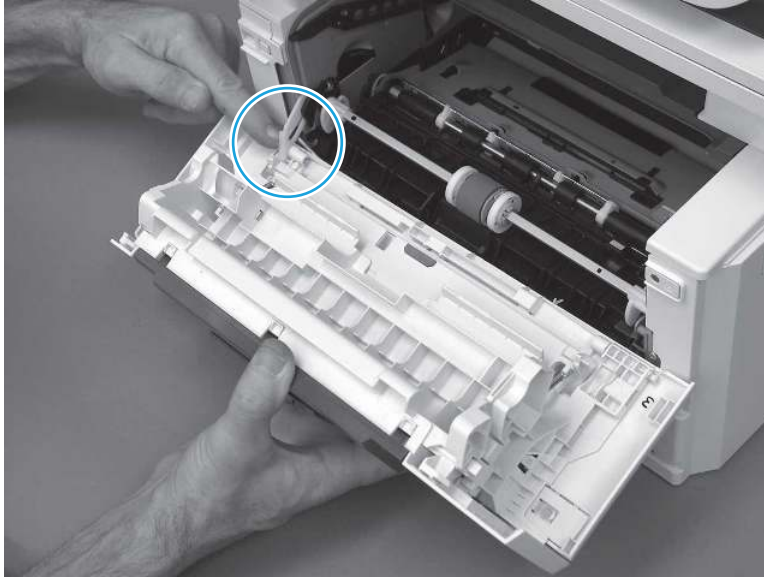
---

**Figure 5-219** Release the door



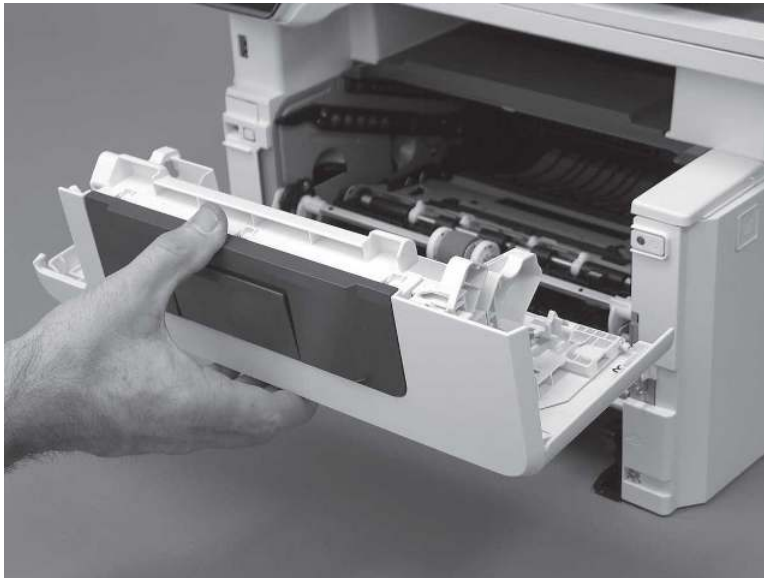
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-220** Release the left-side retainer arm



7. Remove the door.


**Figure 5-221** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

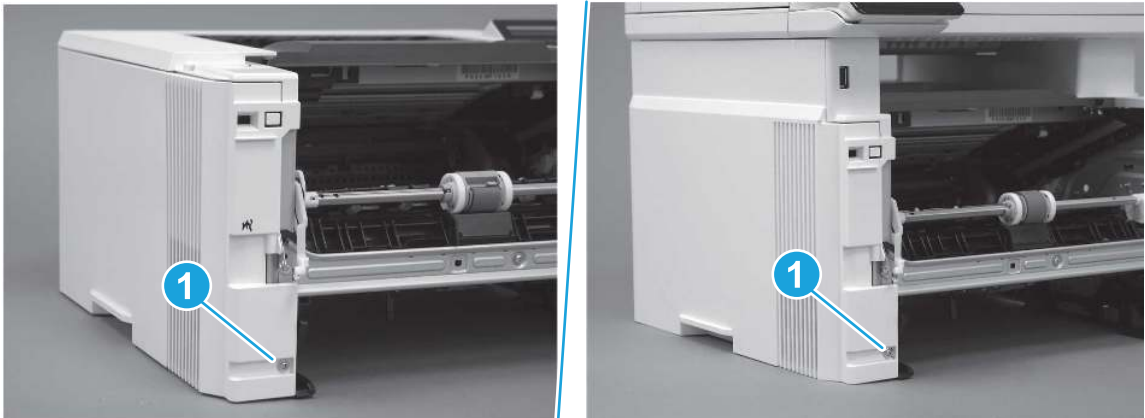
 **NOTE:** If installed, the rear USB cover and network cover must be removed.

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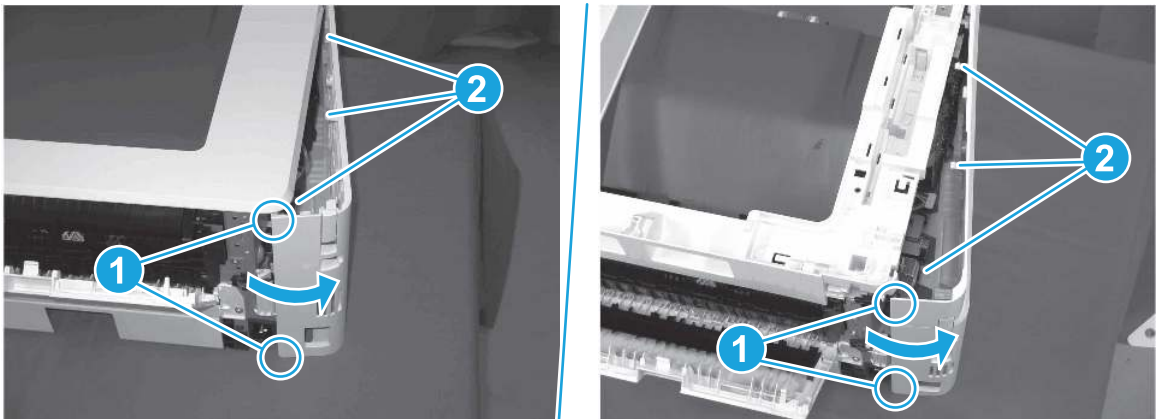
1. Remove one screw (callout 1).

**Figure 5-222 Remove one screw**



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-223 Release two bosses and three tabs**

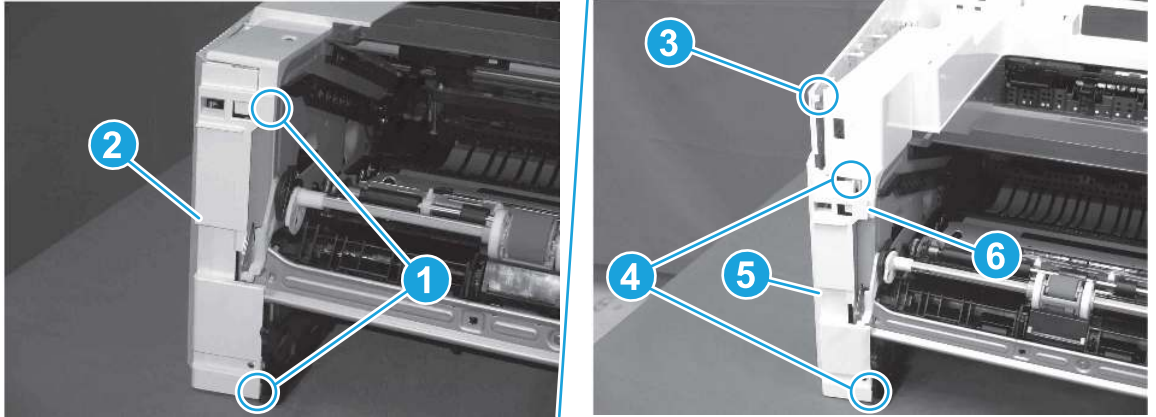


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

Figure 5-224 Remove the cover



#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).


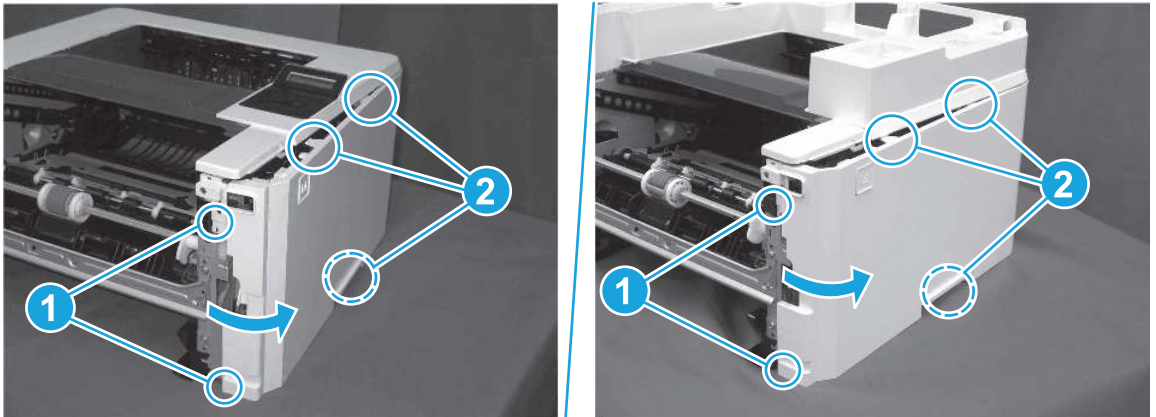
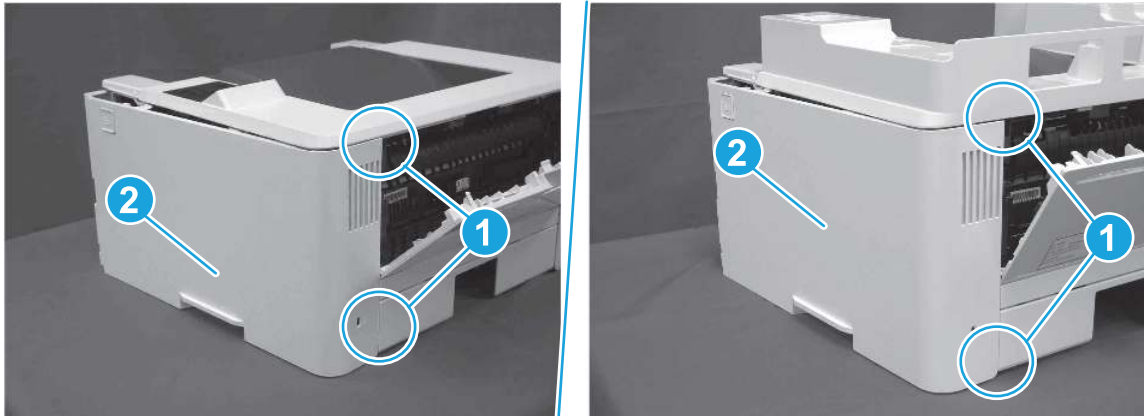
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-225 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-226** Remove the cover



#### 5. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

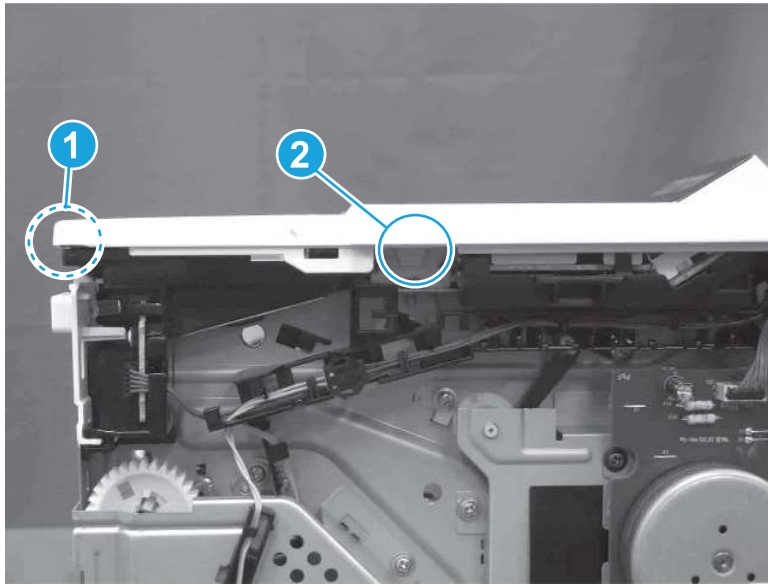
1. Remove one screw.

**Figure 5-227** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-228** Release one boss and one tab



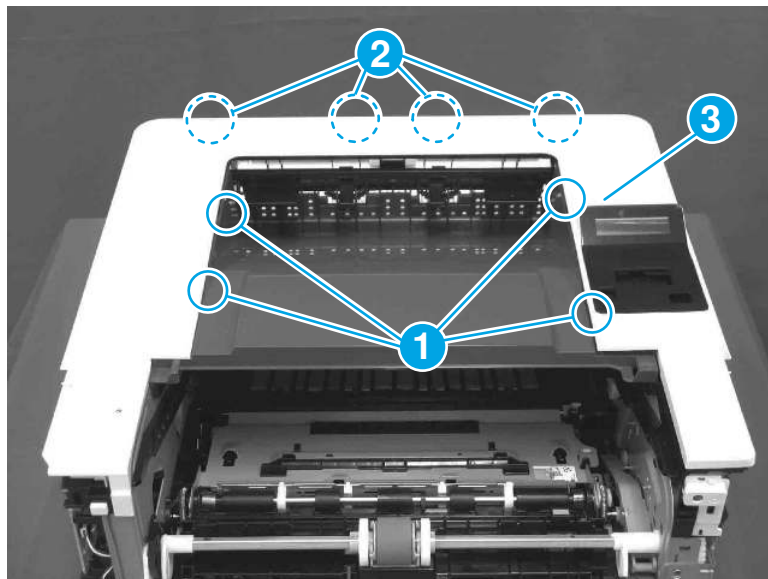
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

**Figure 5-229** Remove the cover




## 6. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.



1. Dispose of the defective part.


---


 **NOTE:** HP recommends responsible disposal of the defective part.

---

2. Unpack the replacement part from the packaging.


 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

---

### Removal and replacement: 2-line LCD operator and indication covers (SFP)

Learn how to remove and replace the keypad and indication covers.


Mean time to repair: 16 minutes

Service level: Medium

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

---

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-24** Part information

Part number	Part description
RC4-3312-000CN	Two line LCD operation cover (non-wireless models)
RC4-3322-000CN	Two line LCD operation cover (wireless models)
RL2-0675-000CN	Cover, 2 line LCD indication

### Required tools

- Small flat-blade screwdriver

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

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-230** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.



---

**NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).



---

**TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

---

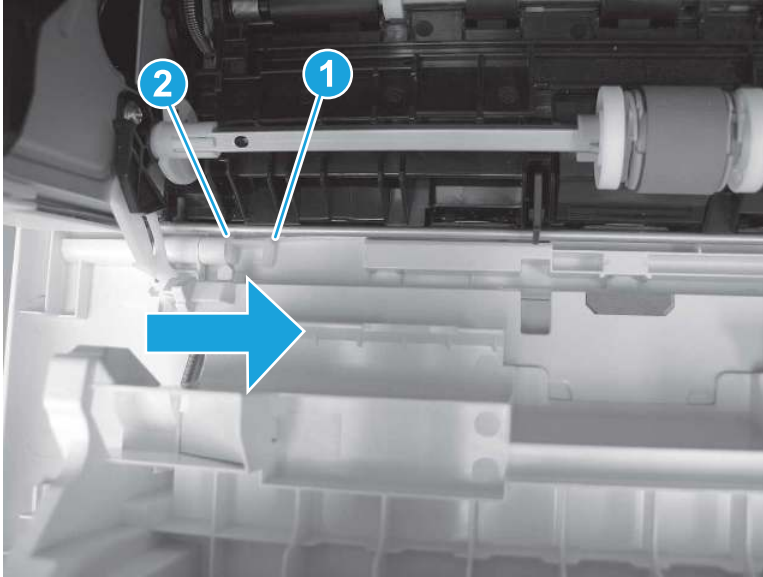


**Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

---

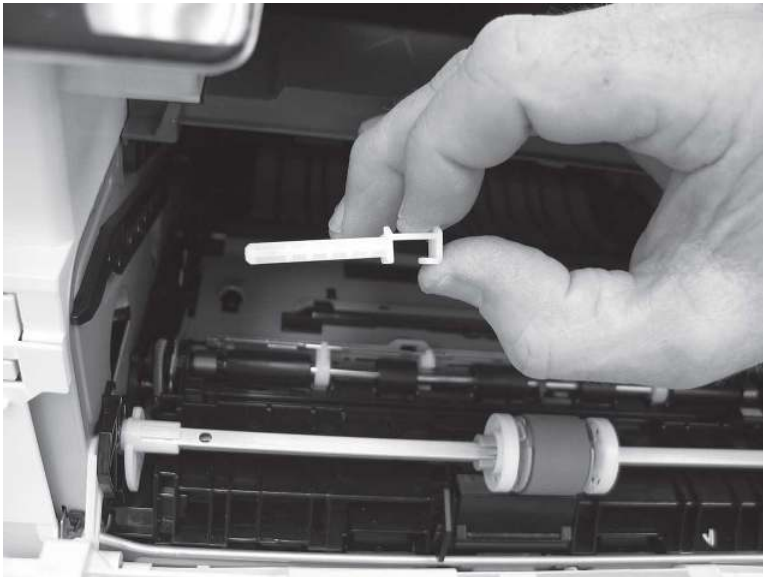


**Figure 5-231** Release the support shaft



2. Remove the support shaft.

**Figure 5-232** Remove the support shaft



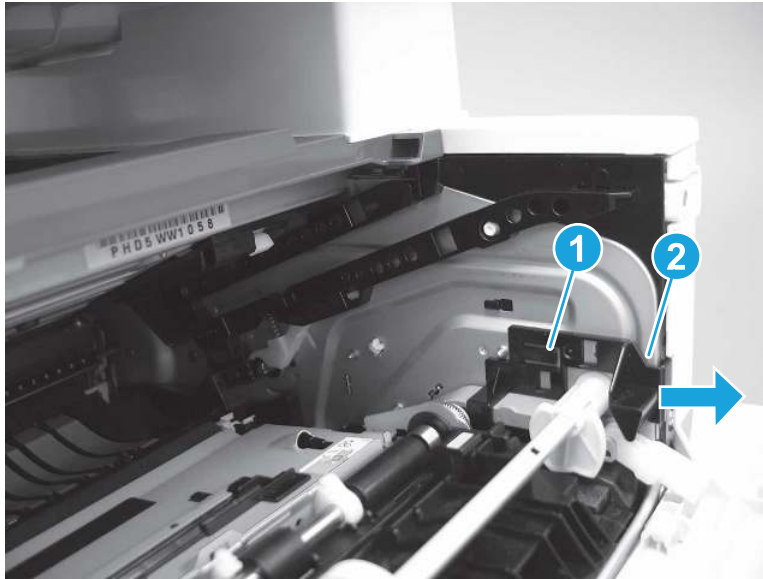
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

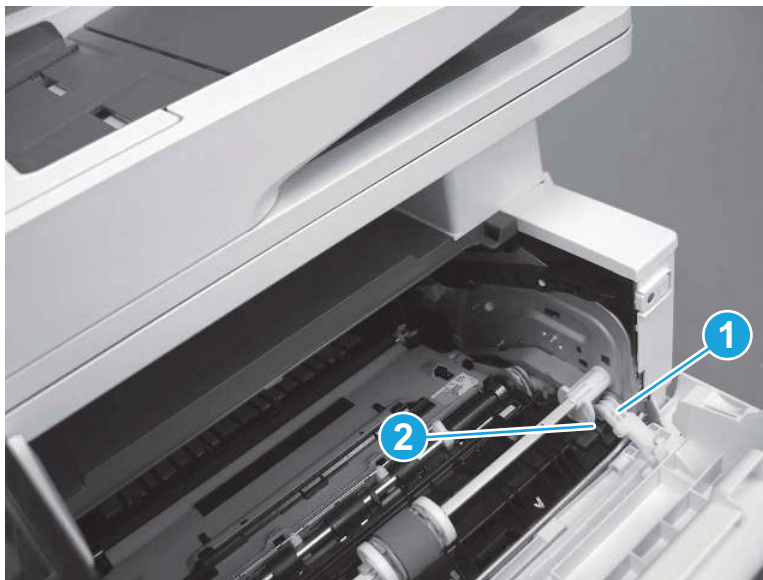
---

**Figure 5-233** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-234** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

---

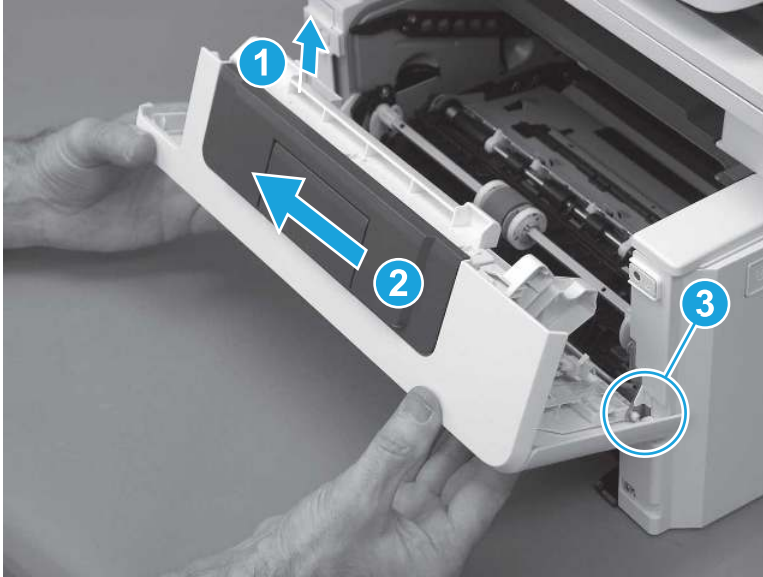
**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

---

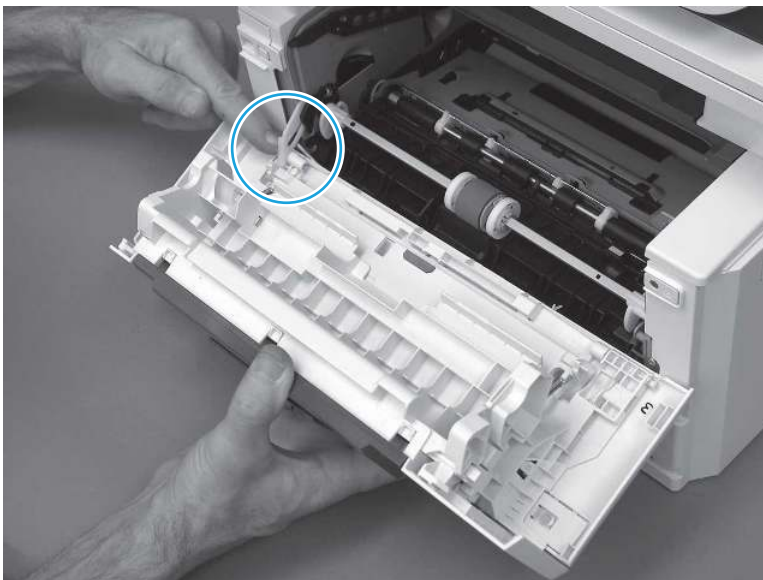


**Figure 5-235** Release the door



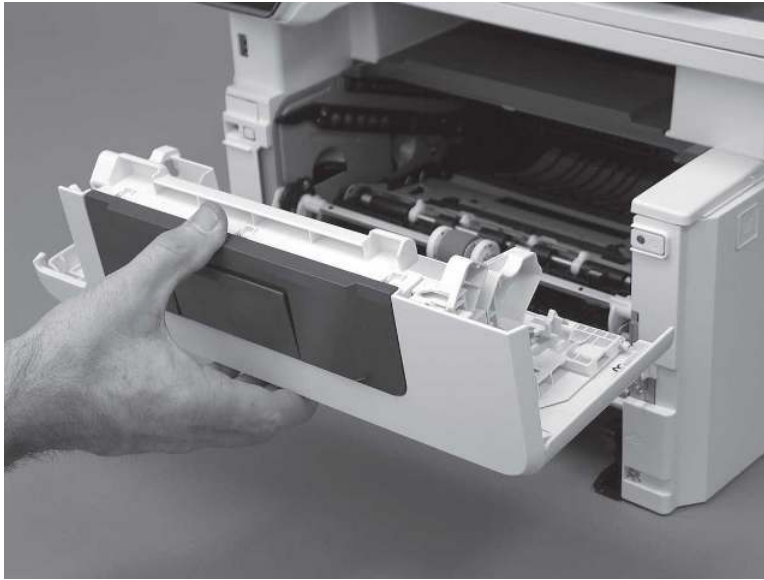
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-236** Release the left-side retainer arm



7. Remove the door.

**Figure 5-237** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

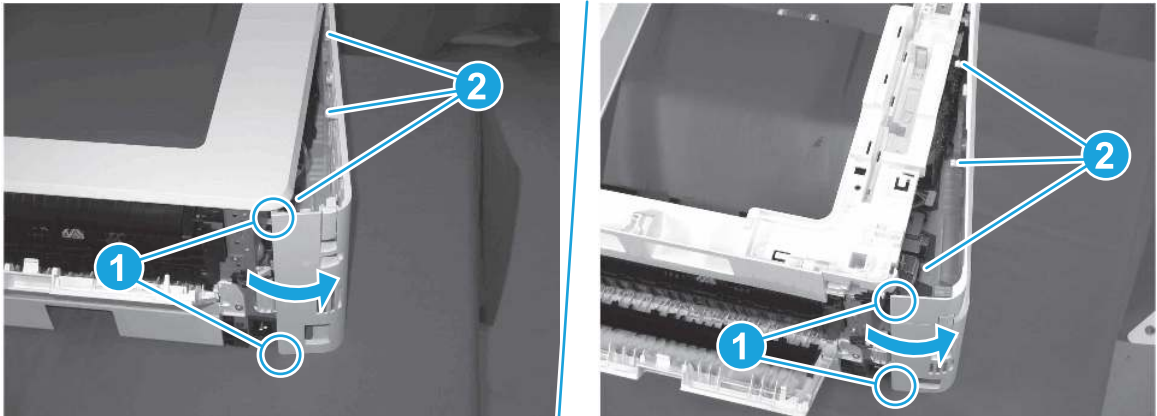
1. Remove one screw (callout 1).

**Figure 5-238** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

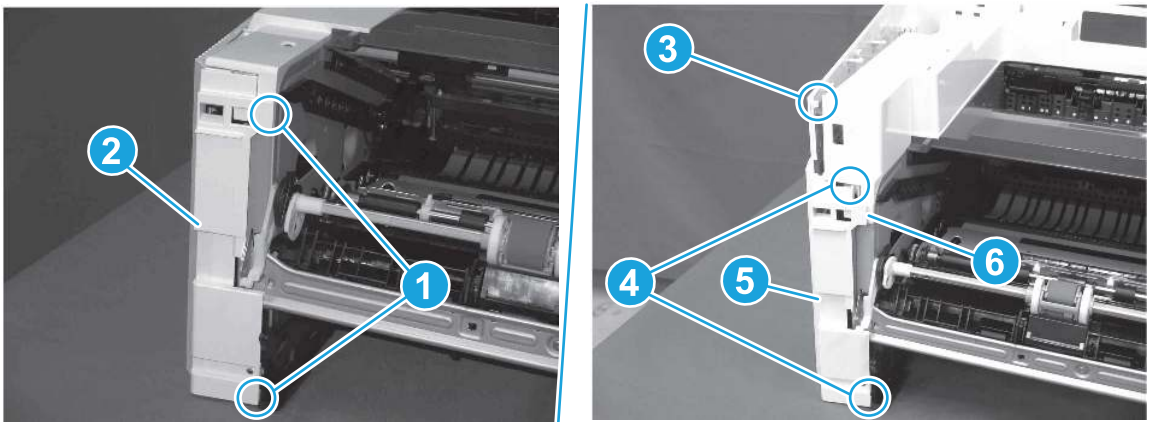
**Figure 5-239** Release two bosses and three tabs



3. At the front of the printer, do one of the following:
  - **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
  - **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-240** Remove the cover



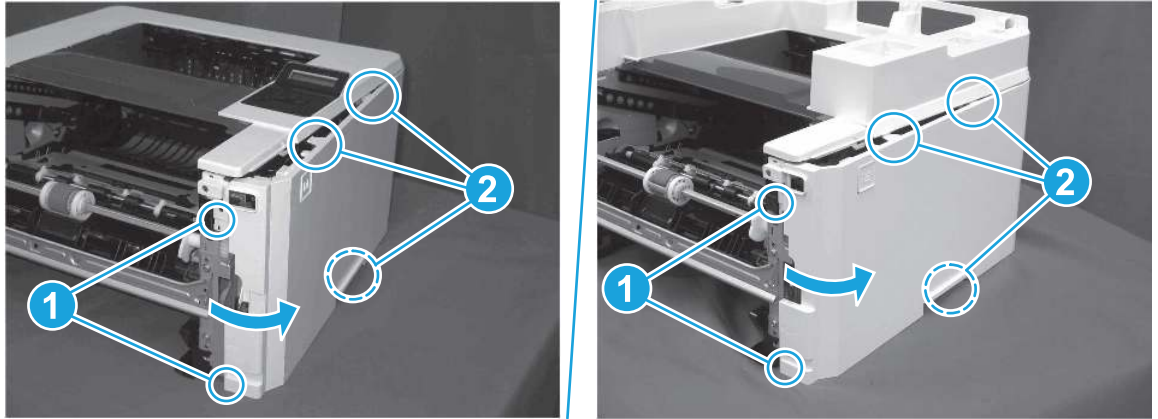
#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

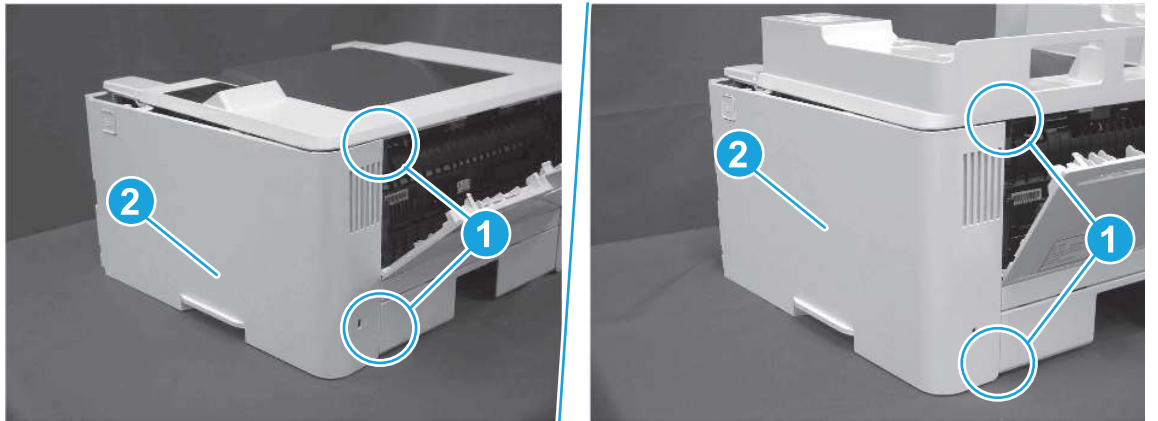
**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-241 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-242 Remove the cover



### 5. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

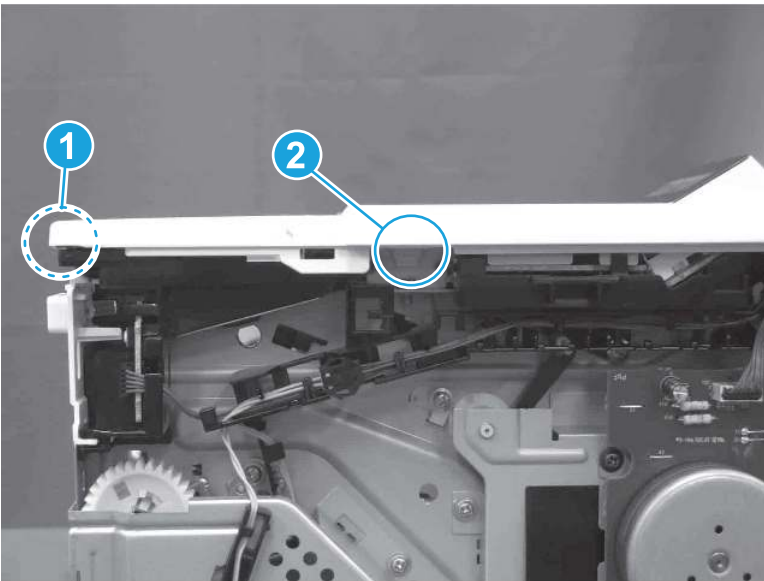
1. Remove one screw.

**Figure 5-243** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-244** Release one boss and one tab



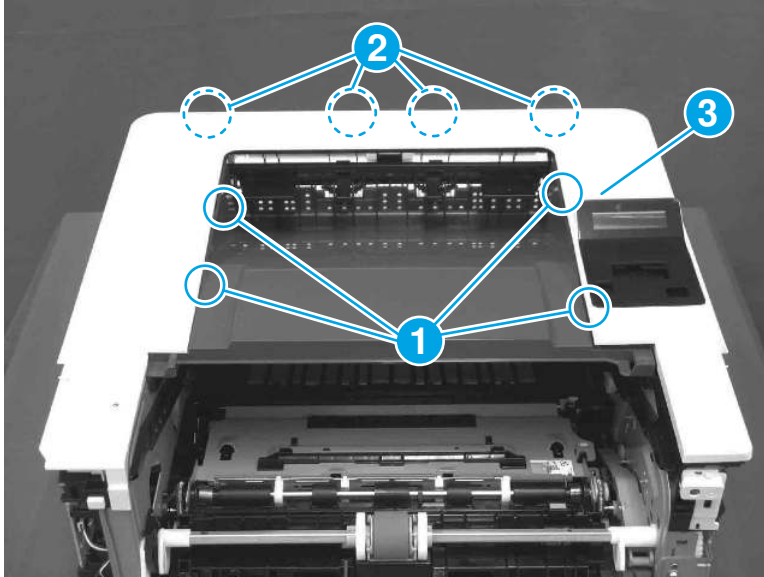
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

Figure 5-245 Remove the cover




#### 6. Remove the 2-line LCD operator and indication covers

Follow these steps to remove the operation cover and indication cover.

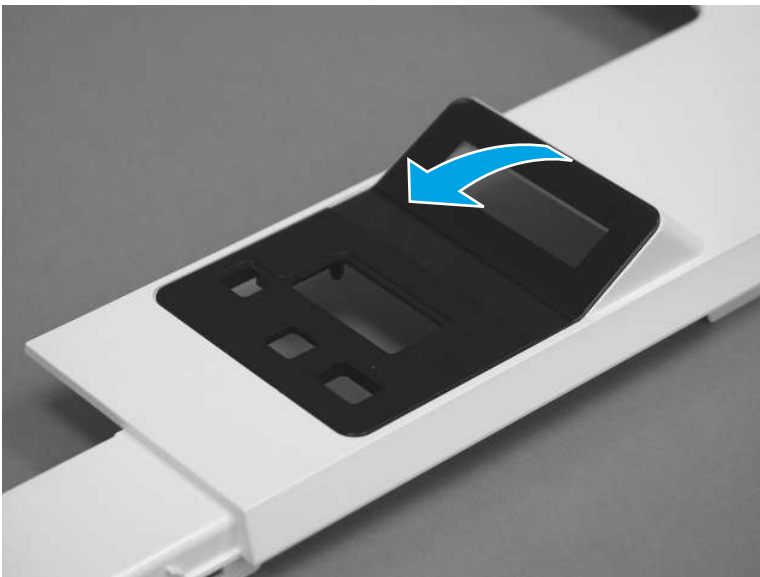
1. Rotate the top edge of the operator cover away from the printer to release it.

---

 **Reinstallation tip:** Use two-sided tape to secure the upper edge of the operator cover to the top cover.

---

Figure 5-246 Rotate the top edge of the operator cover





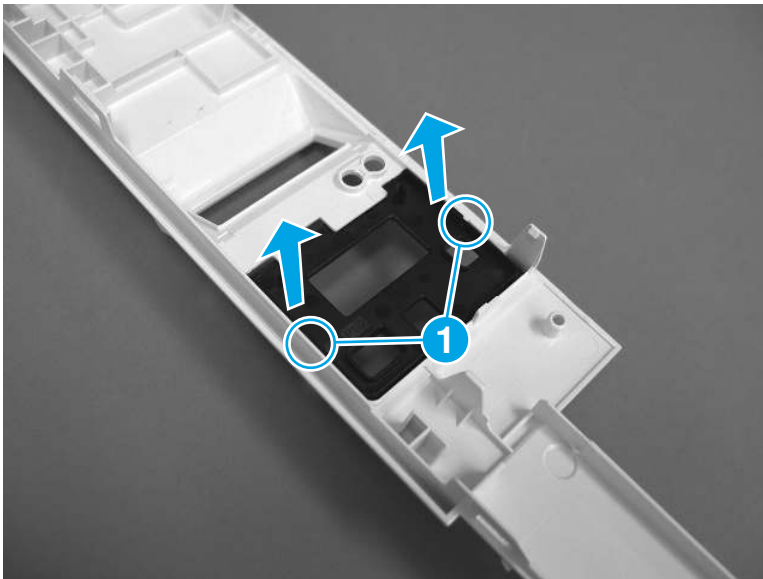
2. Remove the operator cover.

**Figure 5-247** Remove the cover



3. Turn the top cover over, release two tabs (callout 1), and then remove the indication cover

**Figure 5-248** Remove the cover



## 7. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.



1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>


## 2. Unpack the replacement part from the packaging.

 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

## 3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### Removal and replacement: Paper delivery tray (output bin)

Learn how to remove and replace the paper delivery tray (output bin).

 [View a video of how to remove and replace the SFP output bin.](#)

 [View a video of how to remove and replace the MFP output bin.](#)


Mean time to repair: 16 minutes SFP, 38 minutes MFP

Service level: Medium for SFP and MFP

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-25** Part information

Part number	Part description
RC6-2515-000CN	Tray, paper delivery (MFP/SFP - no WiFi)
RM2-4699-000CN	Tray, paper delivery (SFP - WiFi)

### Required tools



- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

#### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-249** Remove the tray



### 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.




**NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

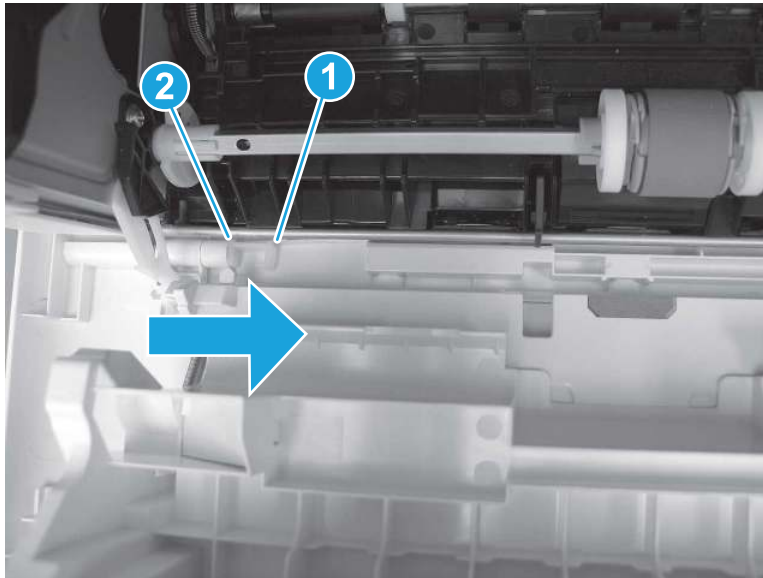


**TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

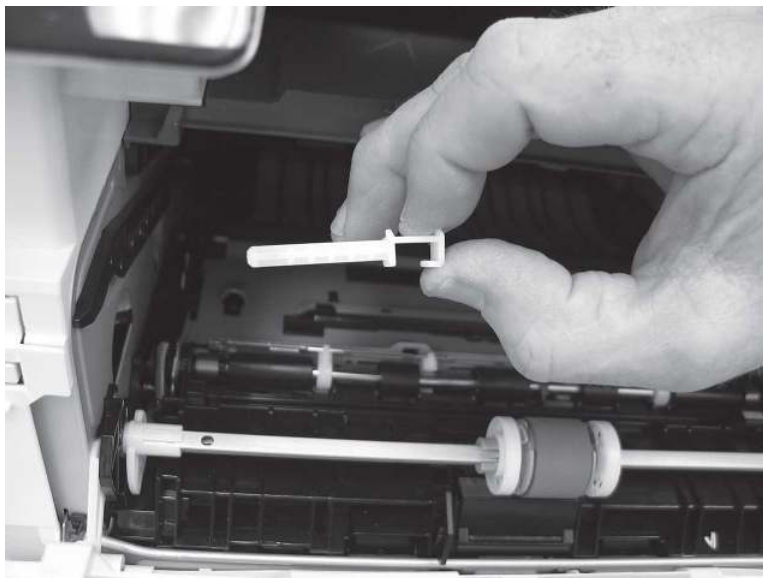
---

**Figure 5-250** Release the support shaft




2. Remove the support shaft.

**Figure 5-251** Remove the support shaft

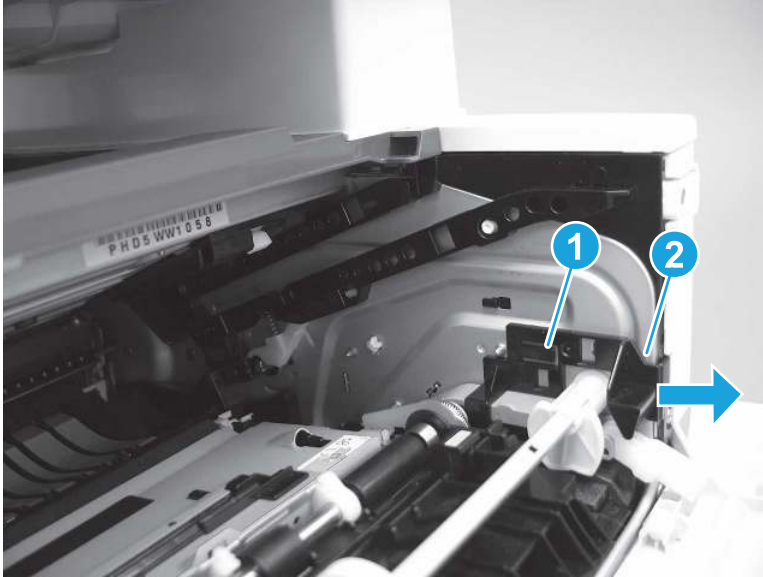


3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

 **CAUTION:** Be careful, the tab (callout 1) can be easily broken.

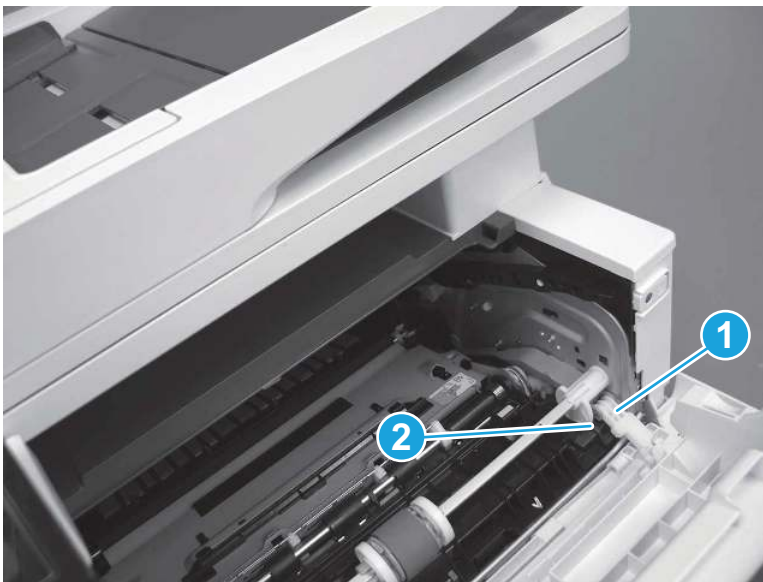
---

**Figure 5-252** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-253** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

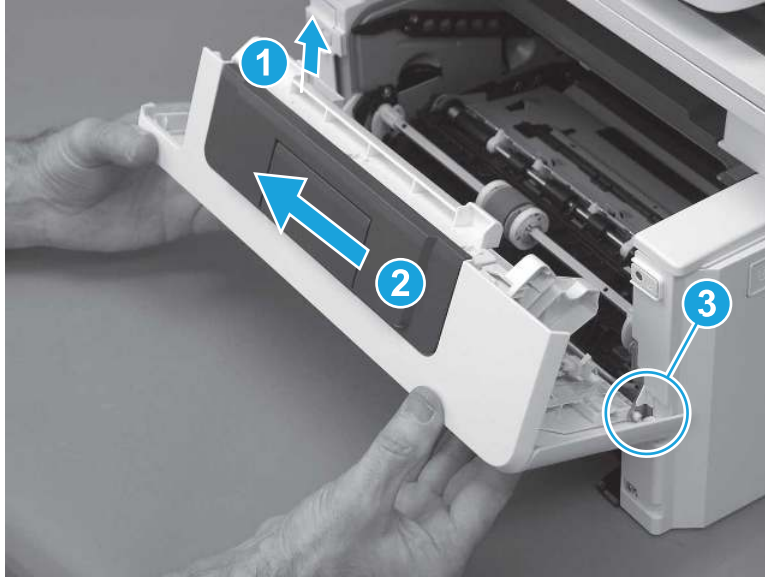
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

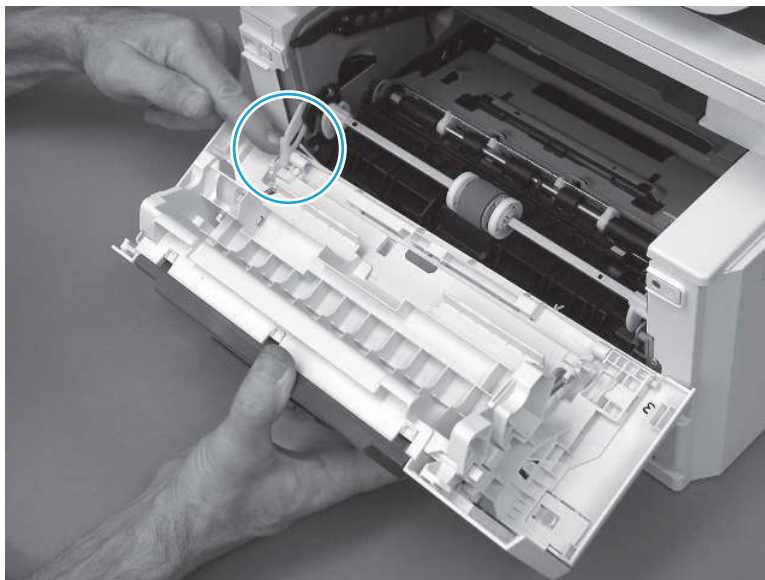
---

**Figure 5-254** Release the door



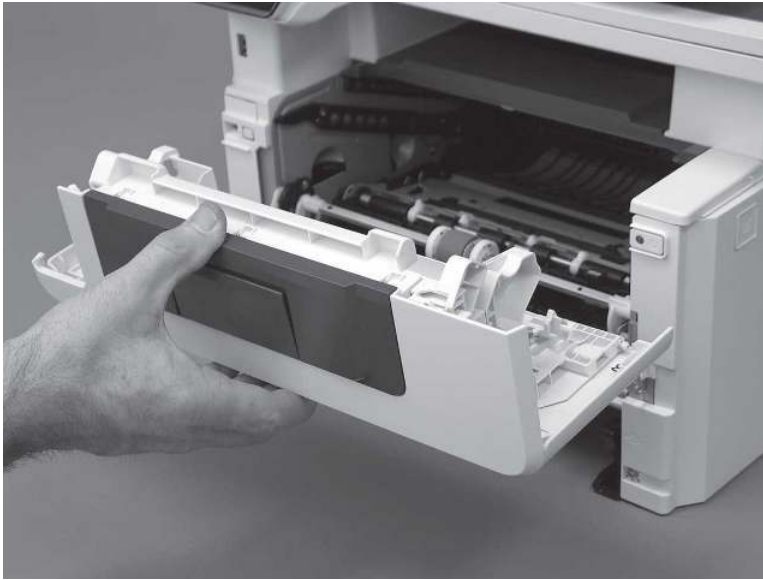
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-255** Release the left-side retainer arm



7. Remove the door.

**Figure 5-256** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

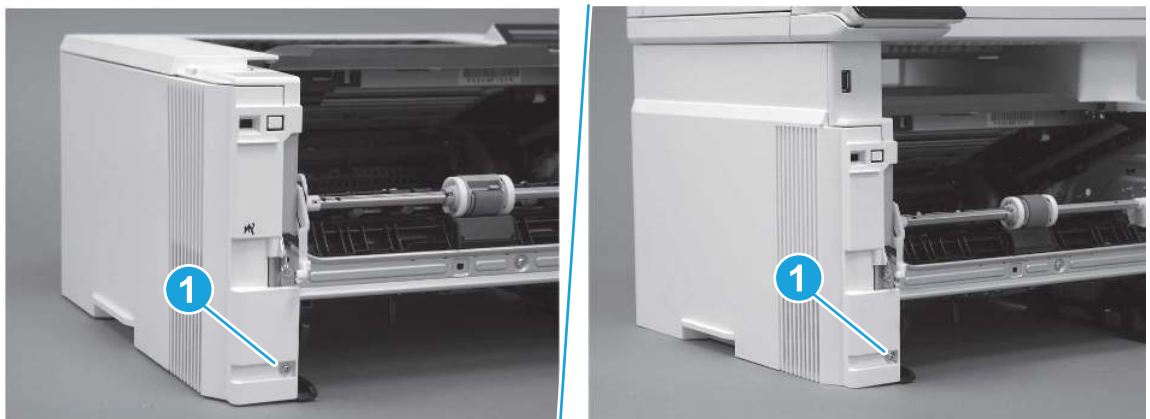
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

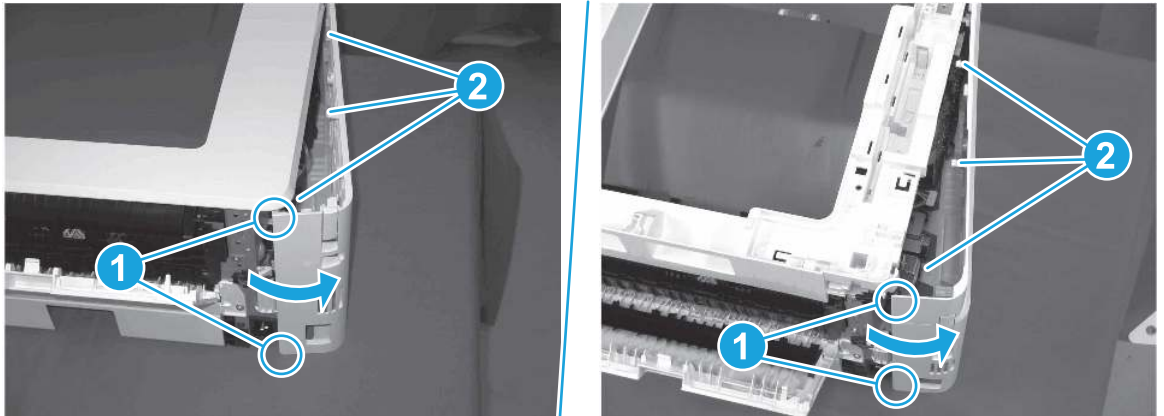
1. Remove one screw (callout 1).

**Figure 5-257** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

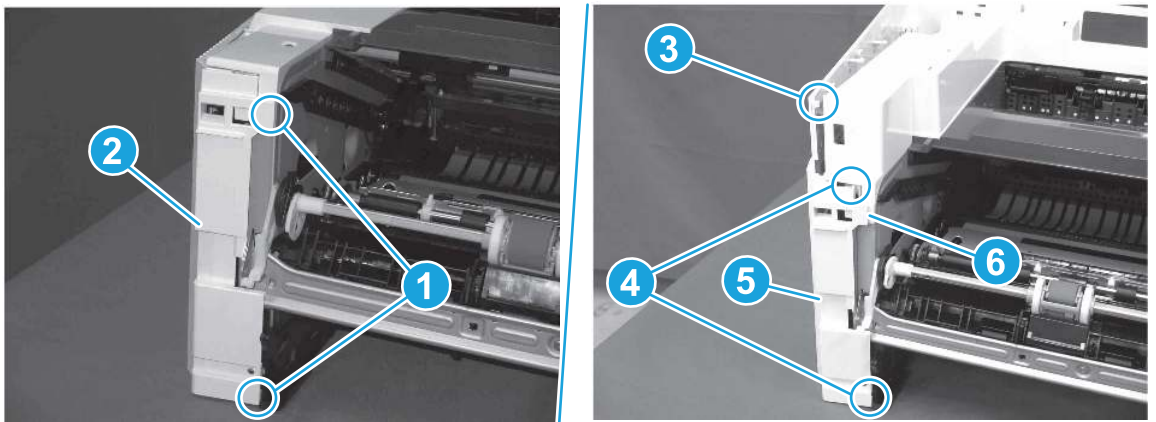
**Figure 5-258** Release two bosses and three tabs



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-259** Remove the cover



#### 4. Remove the right cover

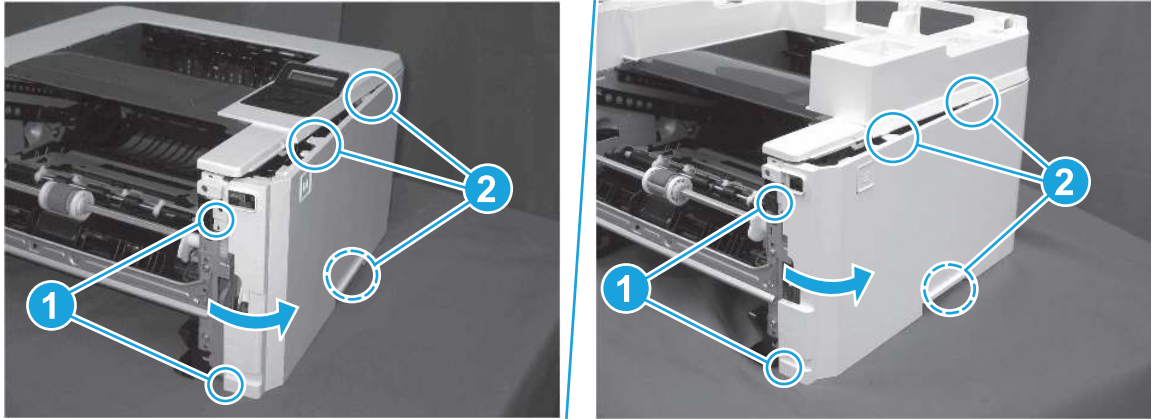
Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

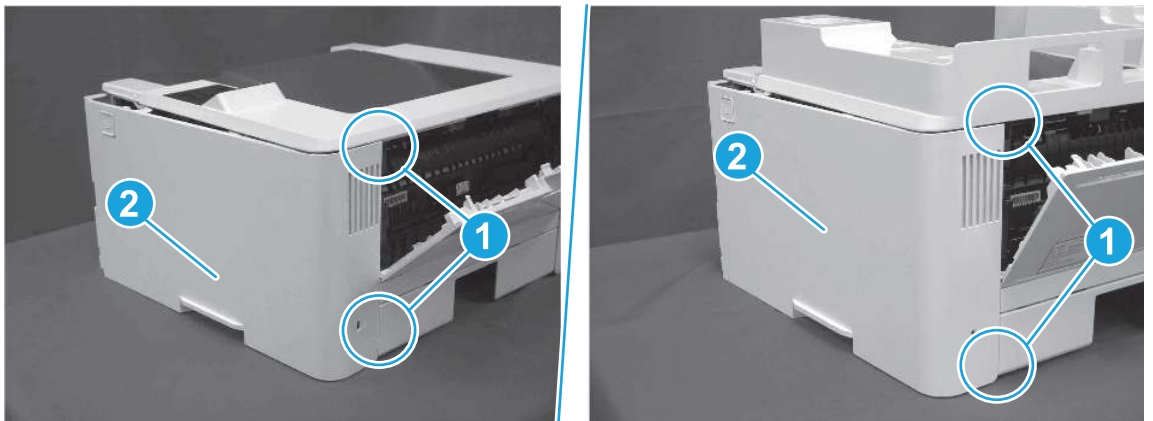


**Figure 5-260** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-261** Remove the cover

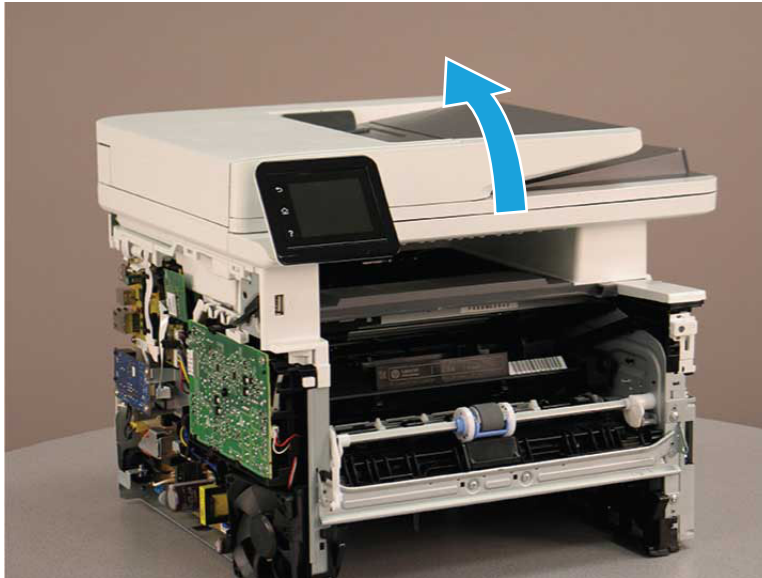


**5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)**

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

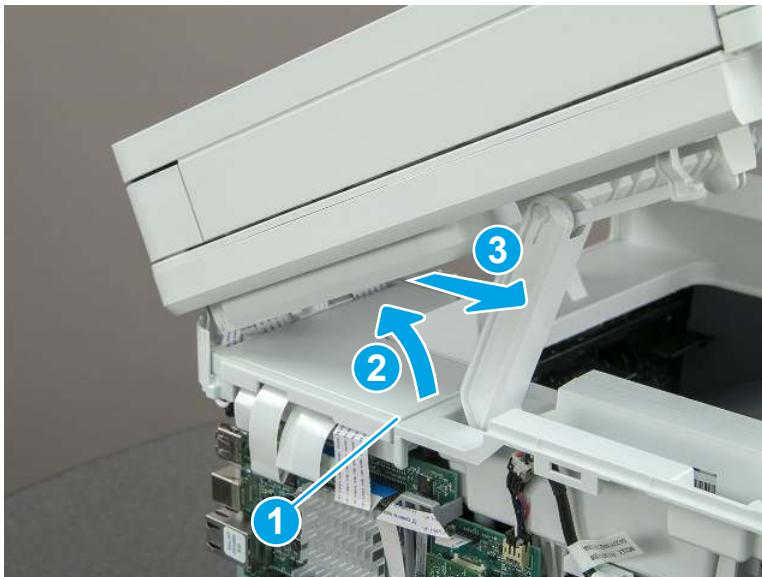
1. If the ISA is not already raised, raise it now.

**Figure 5-262** Raise the ISA




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-263** Remove the ISA FFC cover




## 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.



**Figure 5-264** Disconnect three FFCs



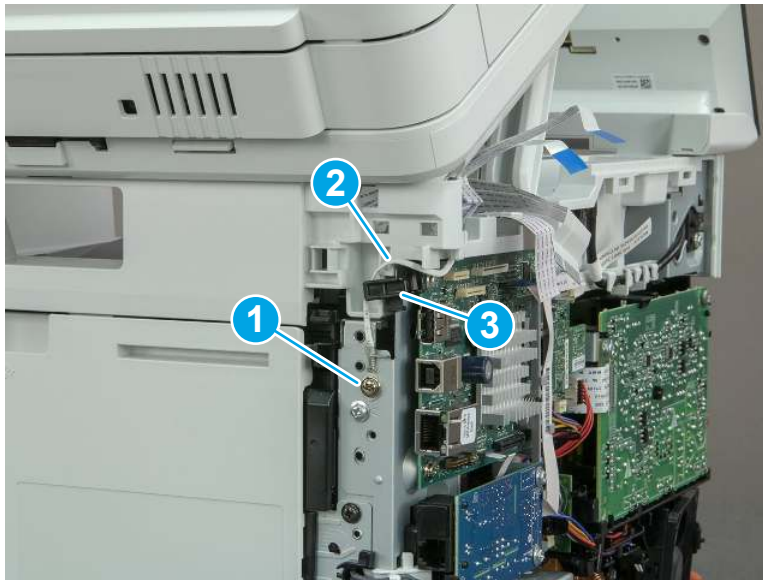
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-265** Release the tape



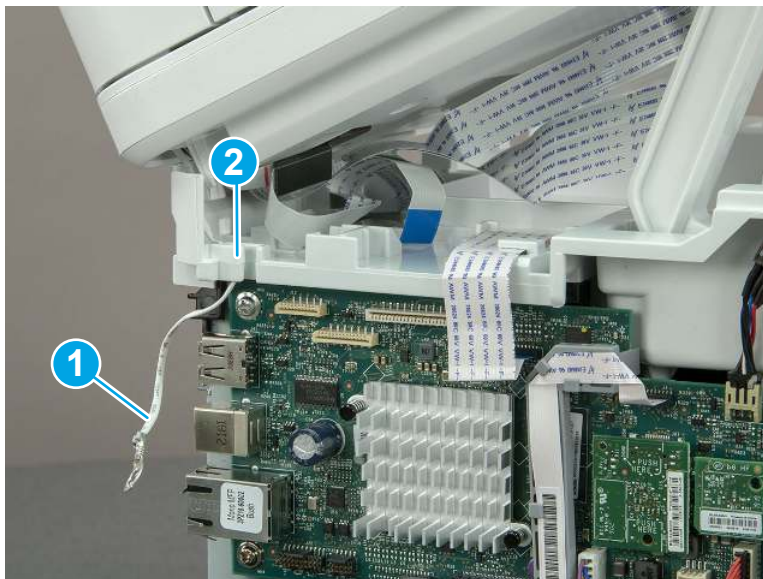
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-266** Release the ground wire



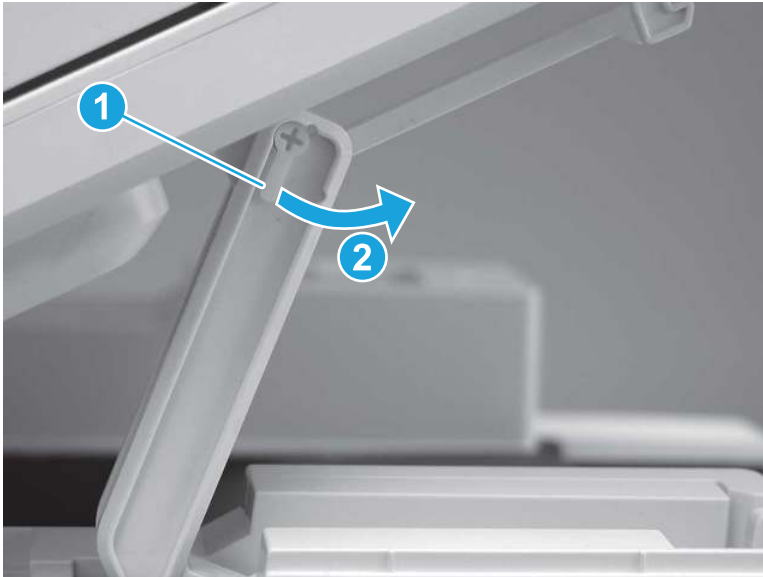
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-267** Release the ground wire




5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-268** Release one tab and rotate the slider pin



6. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

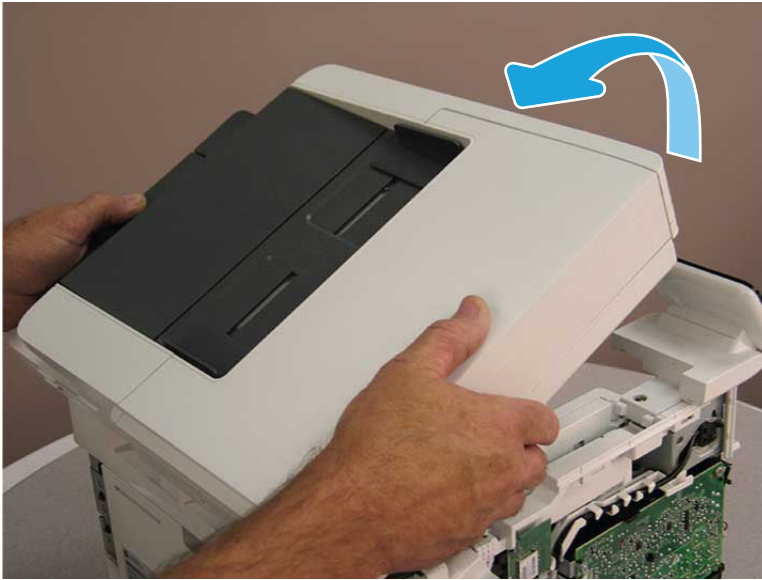
---

**Figure 5-269** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-270** Rotate the ISA towards the rear of the printer



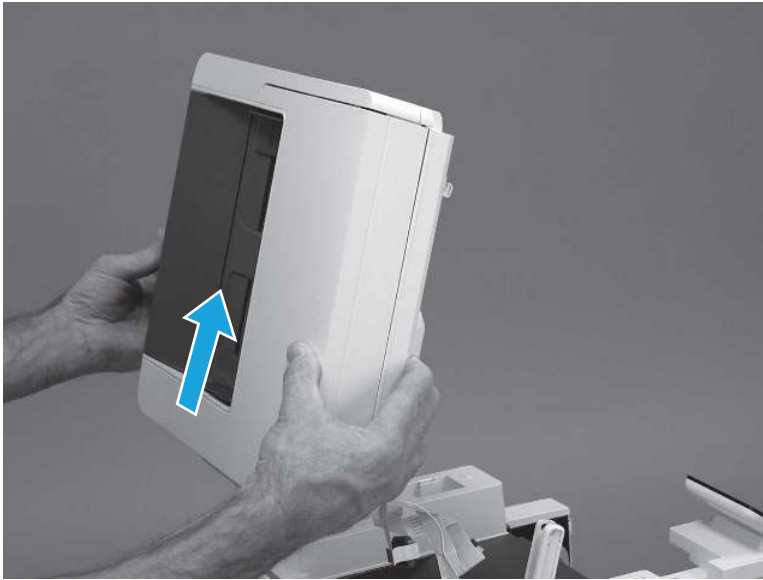
8. Slide the ISA as shown to release it.

**Figure 5-271** Release the ISA



9. Remove the ISA.

**Figure 5-272** Remove the ISA

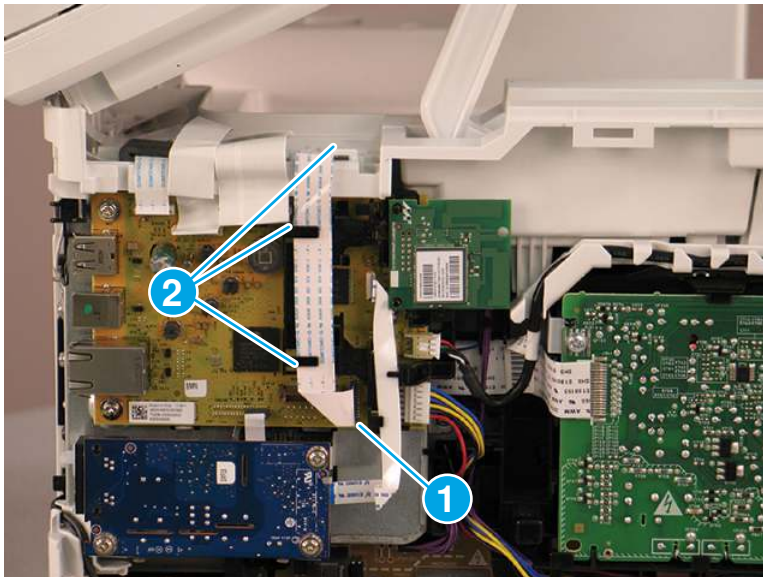


#### 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-273** Disconnect one connector





2. Remove one screw (callout 1).

**Figure 5-274** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-275** Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-276** Remove the cover



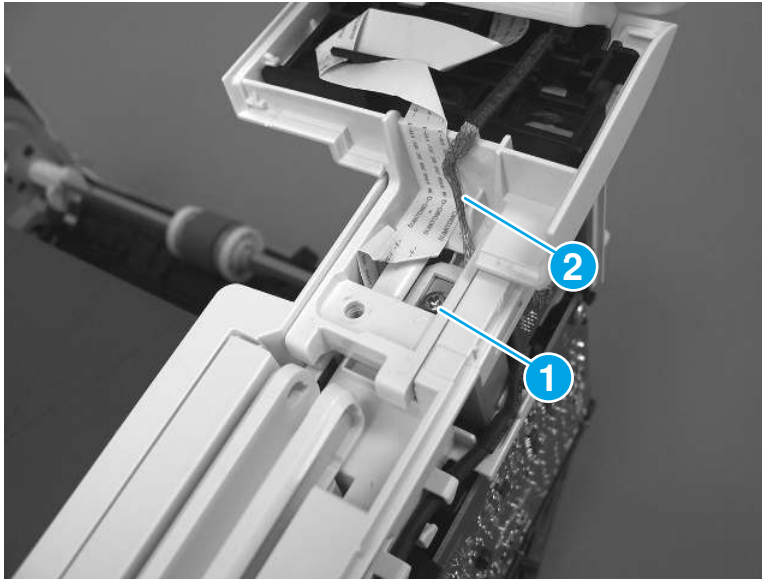
5. Remove the control-panel mount cover.

**Figure 5-277** Remove the cover



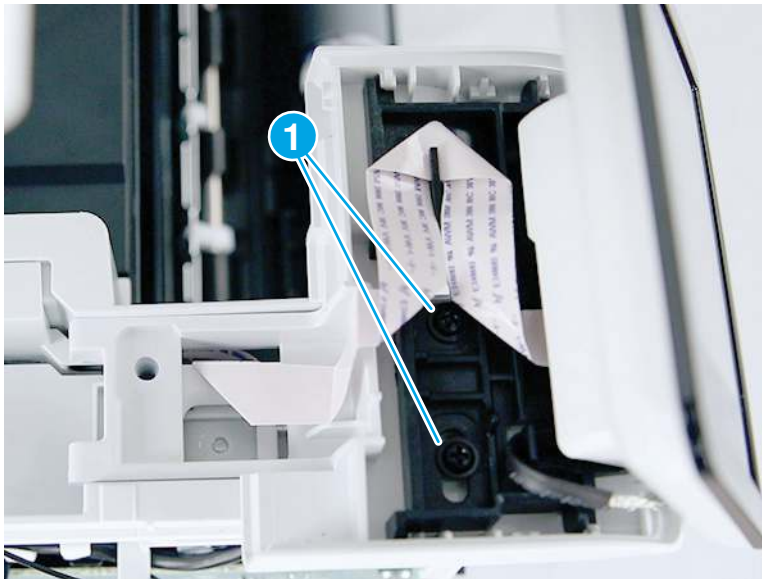
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-278** Remove one screw



7. Move the FFC out of the way, and then remove two screws (callout 1).

**Figure 5-279** Remove two screws

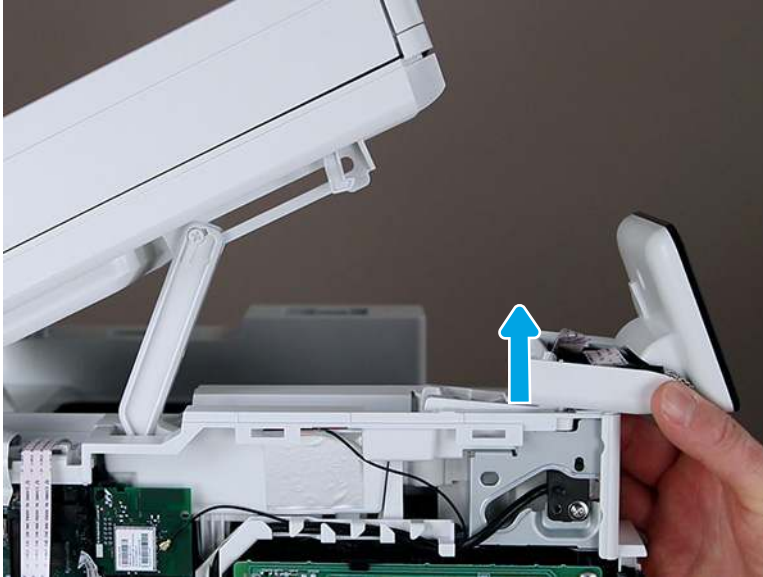


8. Slightly lift up the control-panel assembly to separate it from the top cover.

**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

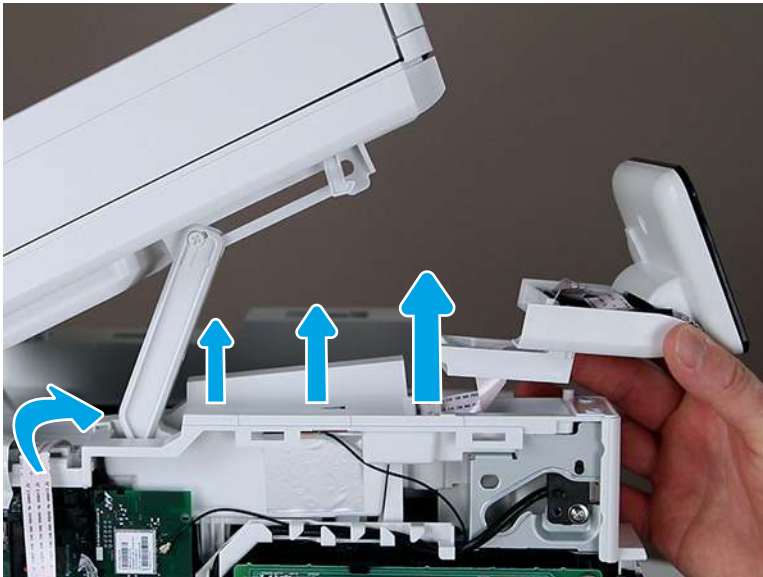


**Figure 5-280** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-281** Remove the control-panel assembly

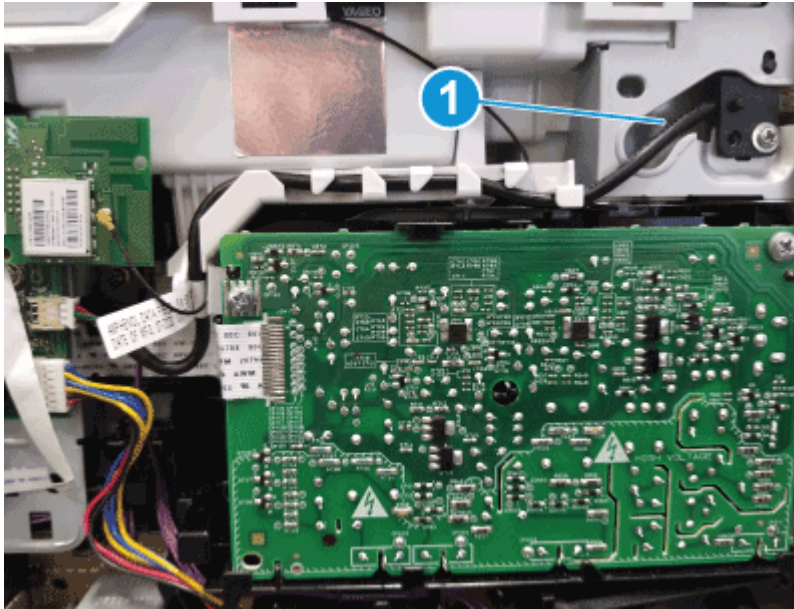


## 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

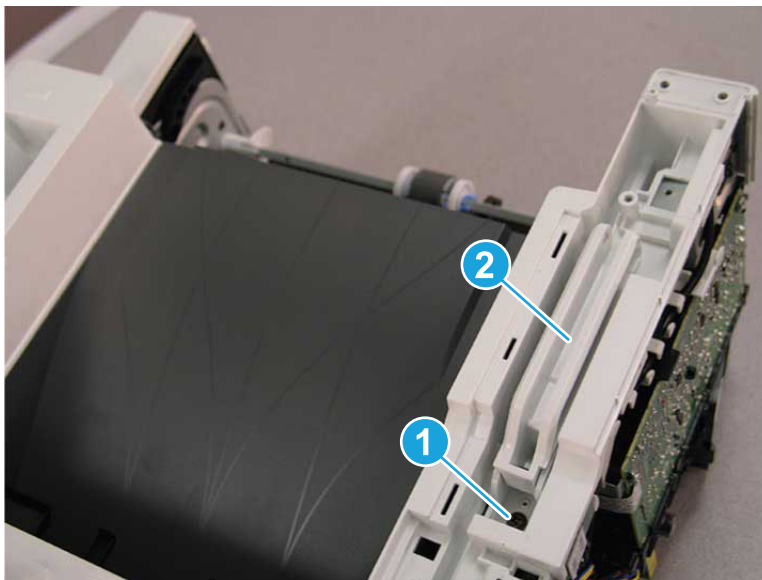
**Figure 5-282** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

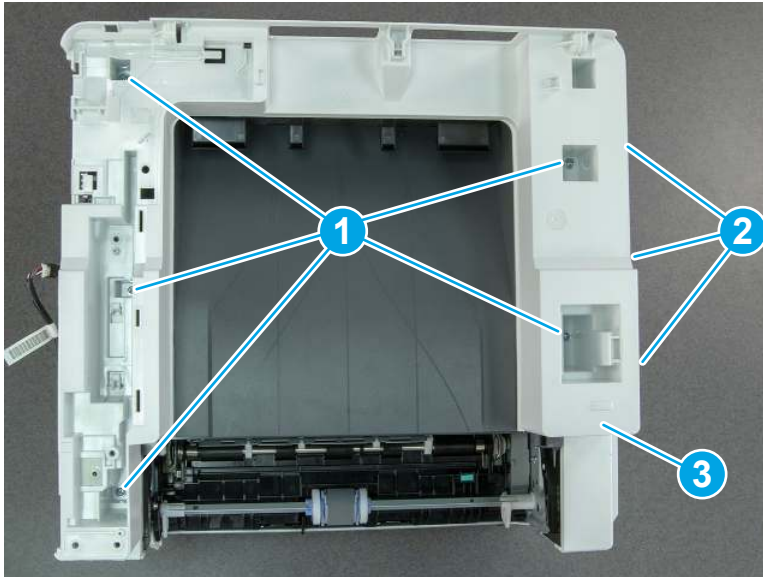
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-283** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-284** Remove the top cover



#### 9. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

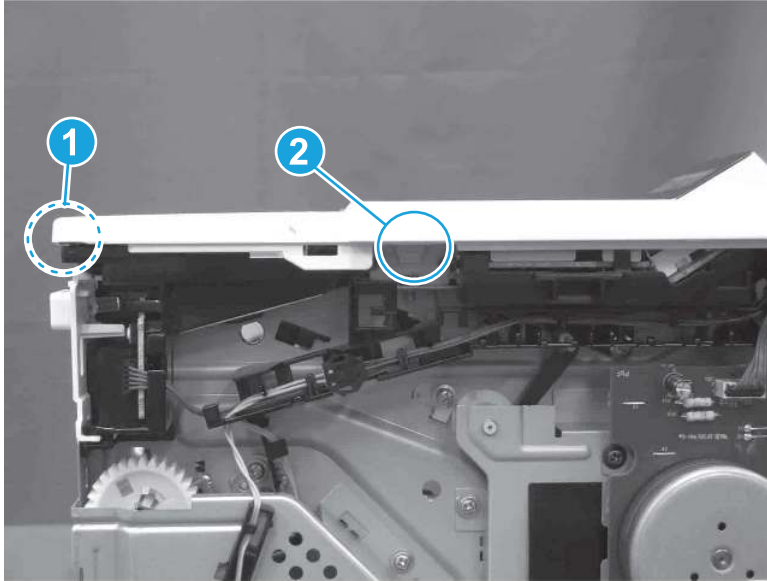
1. Remove one screw.

**Figure 5-285** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-286** Release one boss and one tab



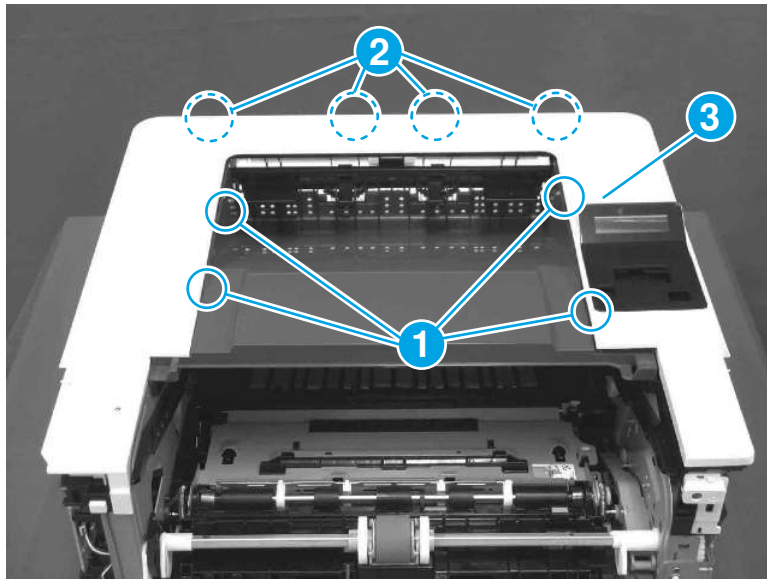
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---


**Figure 5-287** Remove the cover



## 10. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

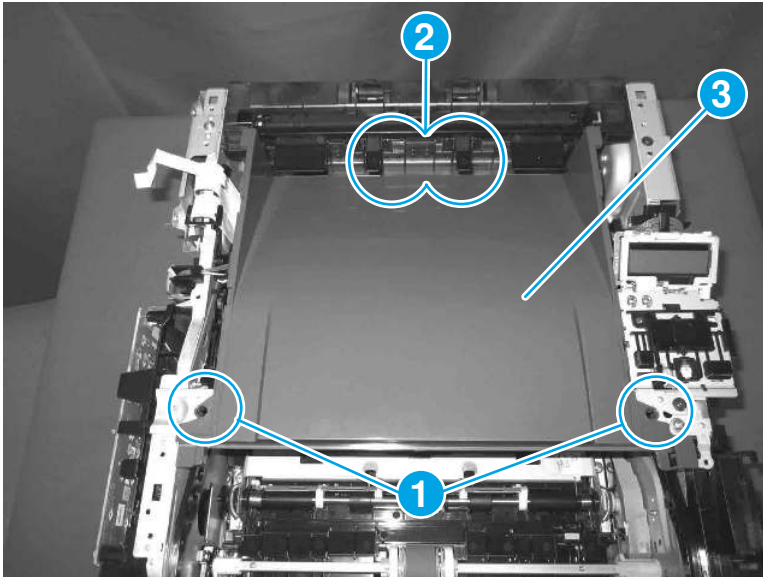
---

 **NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

---

- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-288 Remove the cover



## 11. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.



## Internal parts and assemblies

Learn how to remove and replace the printer internal parts and assemblies.

### Removal and replacement: Fuser

Learn how to remove and replace the fuser.



[View a video of how to remove and replace the fuser.](#)

Mean time to repair: 20 minutes

Service level: Medium

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-26** Part information

Part number	Part description
RM2-4696-000CN	Fuser assembly (110-127V)
RM2-4697-000CN	Fuser assembly (220-240V)

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-289 Remove the tray**



## 2. Remove the cartridge door assembly


Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

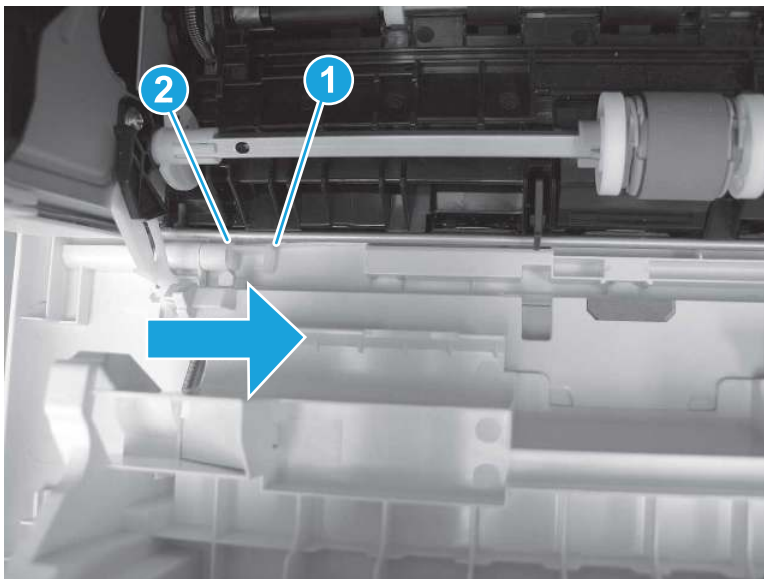
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

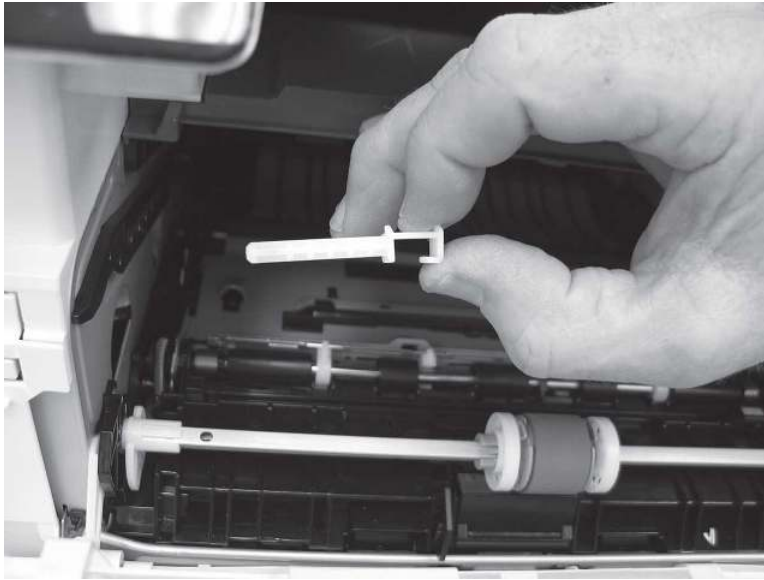
---

**Figure 5-290 Release the support shaft**



2. Remove the support shaft.

**Figure 5-291** Remove the support shaft



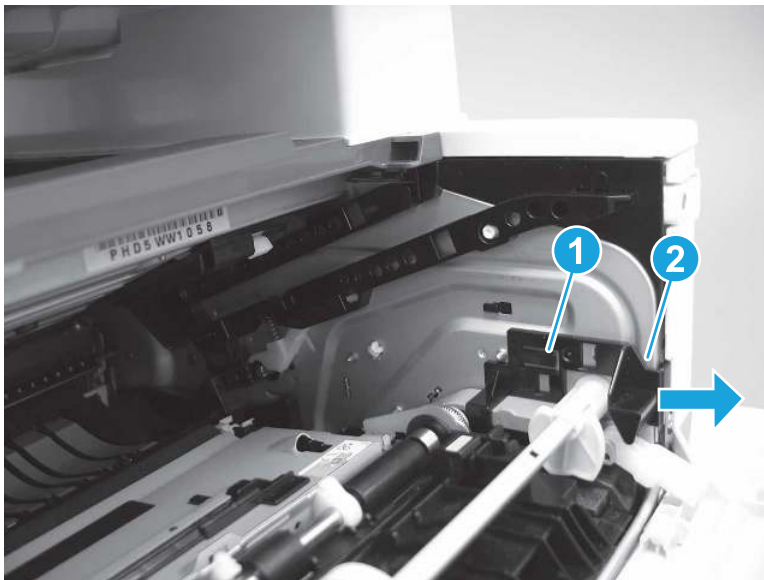
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

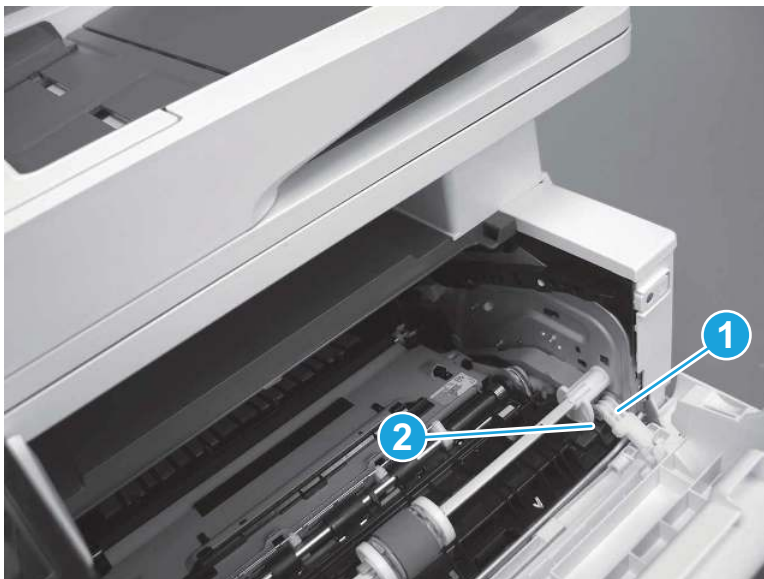
**Figure 5-292** Remove the guide





4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-293 Release the pressure-release link**



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

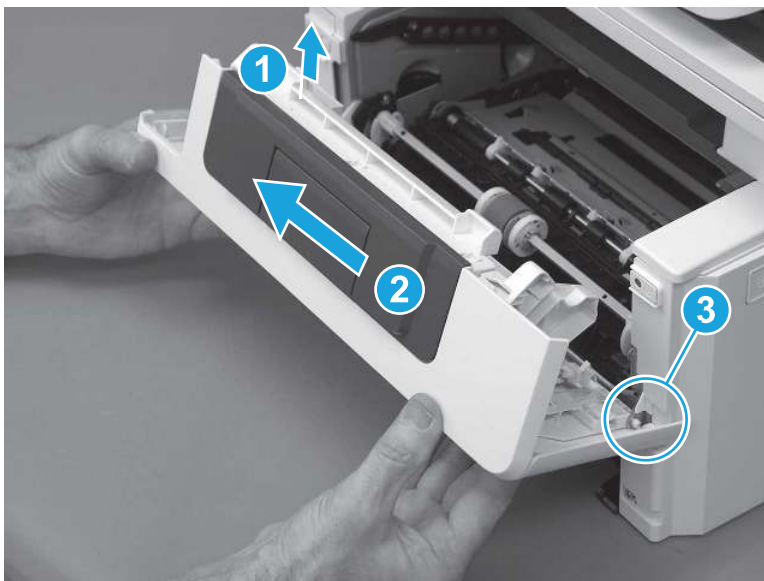
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

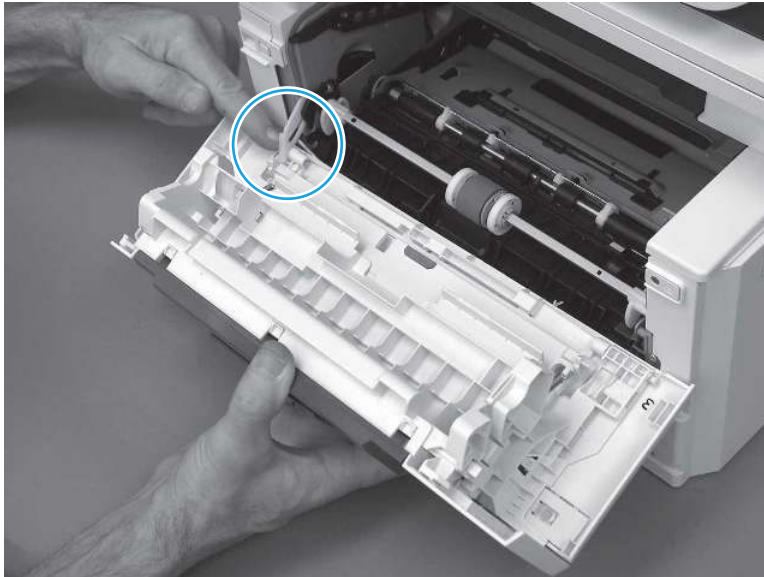
---

**Figure 5-294 Release the door**



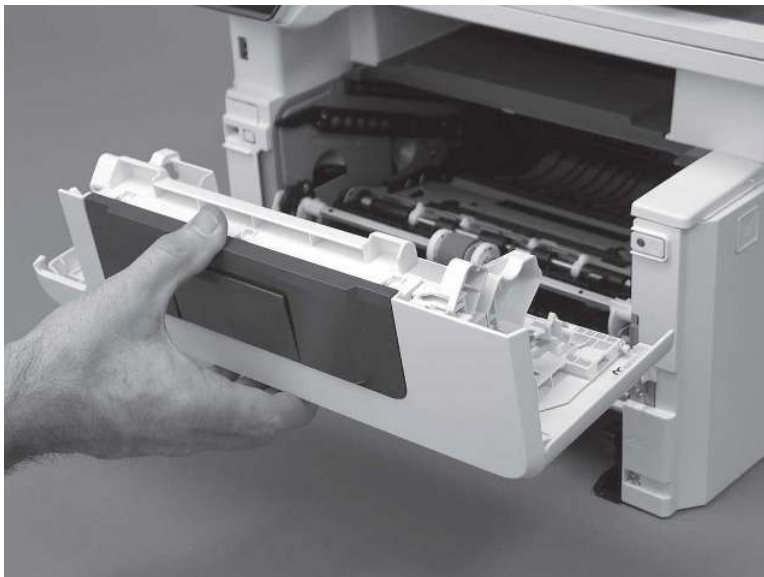
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-295** Release the left-side retainer arm



7. Remove the door.


**Figure 5-296** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

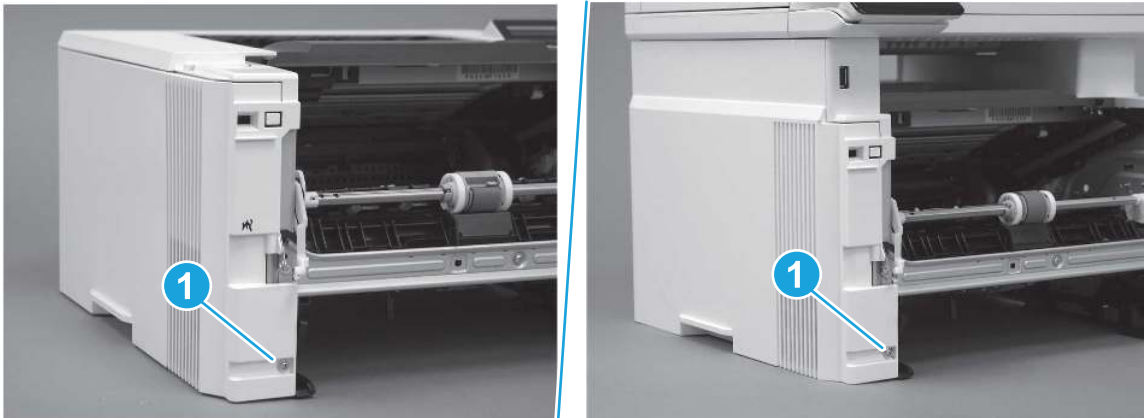
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

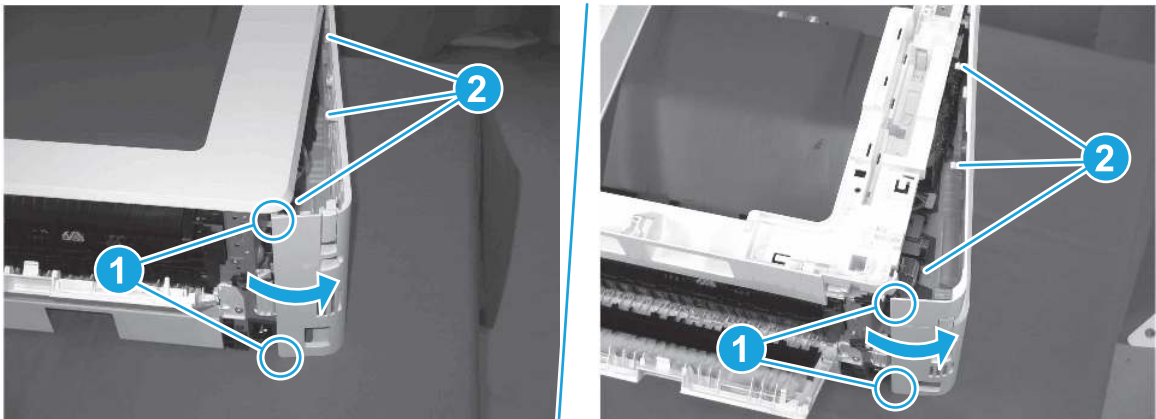
1. Remove one screw (callout 1).

**Figure 5-297** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-298** Release two bosses and three tabs

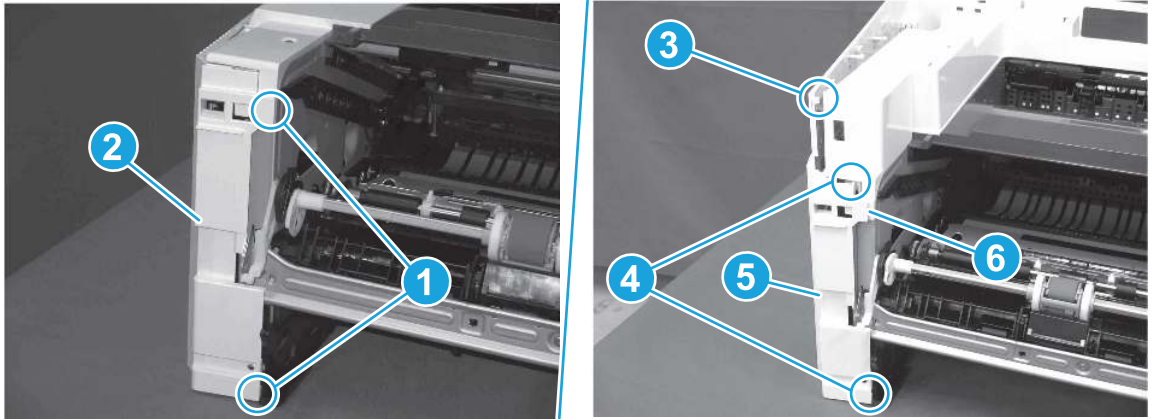


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

Figure 5-299 Remove the cover



#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).


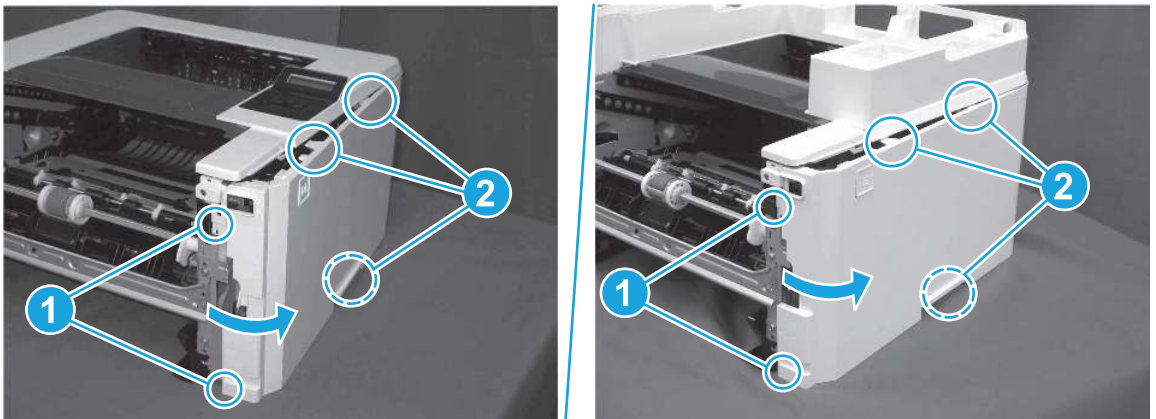
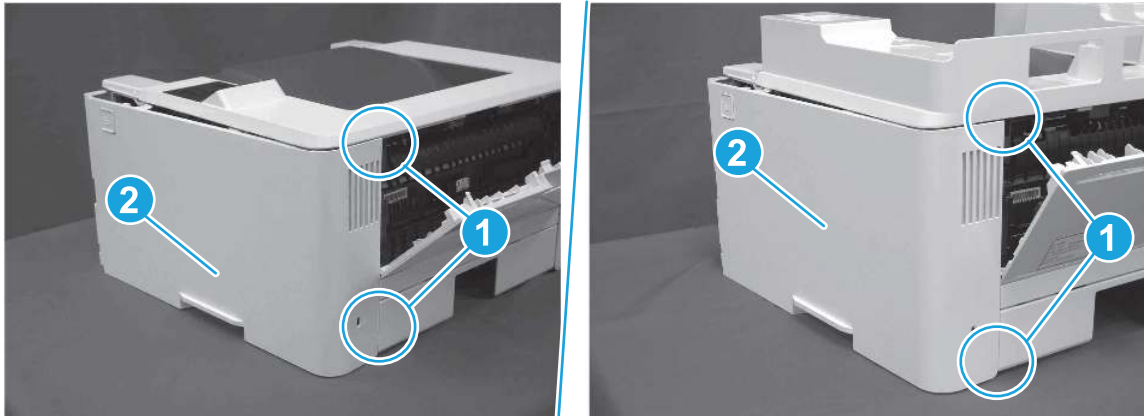
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-300 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-301 Remove the cover**




### 5. Remove the rear door assembly

Follow these steps to remove the rear door assembly.

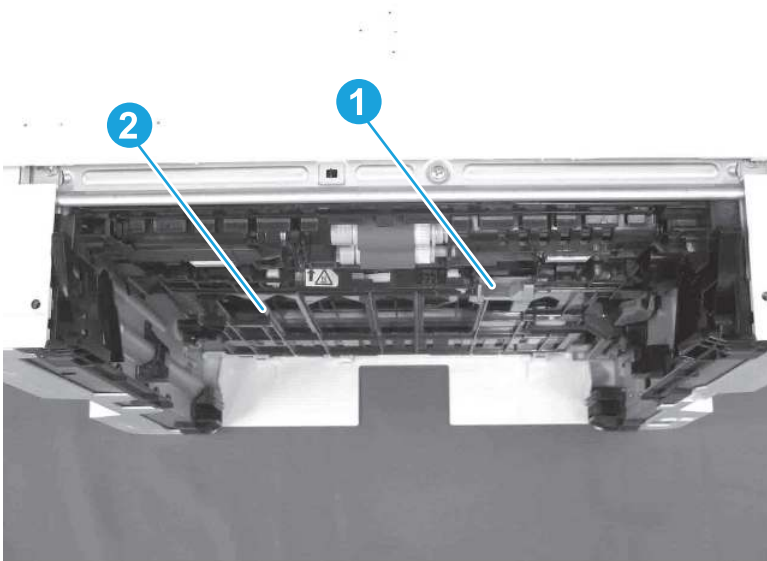
1. Inside the Tray 2 cavity, press the green jam access lever (callout 1), and then lower the duplex feed assembly (callout 2).

---

 **Reinstallation tip:** Reach in from the front of the Tray 2 cavity and raise the feed assembly to the up and locked position so that the rear cover will fit flat against the chassis.


---

**Figure 5-302 Lower the duplex feed assembly**



2. At the rear of the printer, remove two screws (callout 1), and then remove the rear door assembly (callout 2).

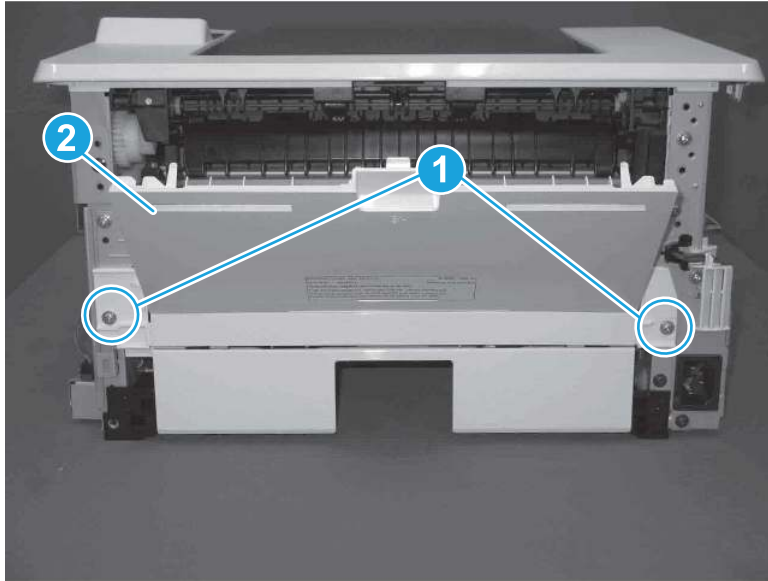
---

 **Reinstallation tip:** Slide the duplex tray into the Tray 2 cavity.

---



**Figure 5-303** Remove the door assembly

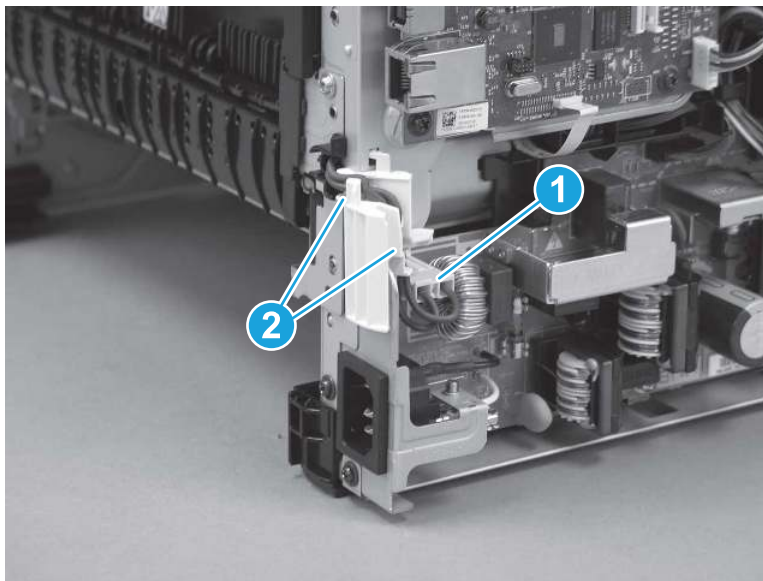


## 6. Remove the fuser

Follow these steps to remove the fuser.

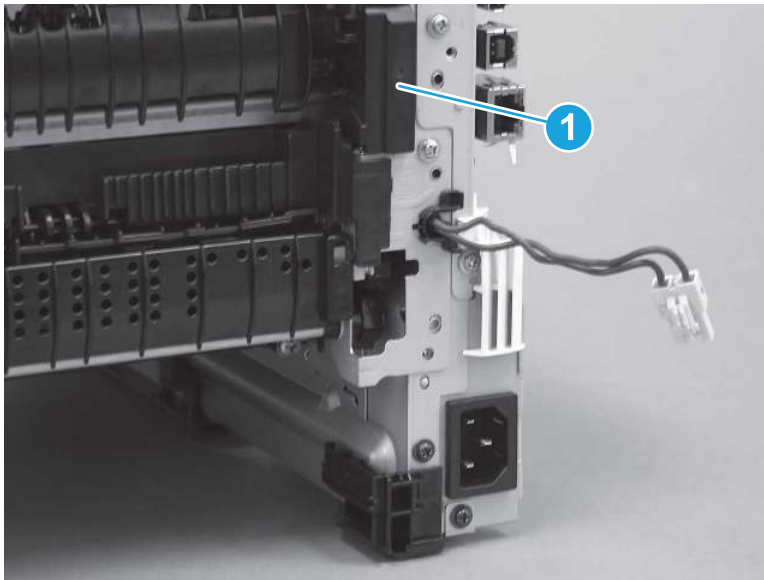
1. Disconnect one connector (callout 1), and then release the wire harness from the guide (callout 2).

**Figure 5-304** Disconnect one connector



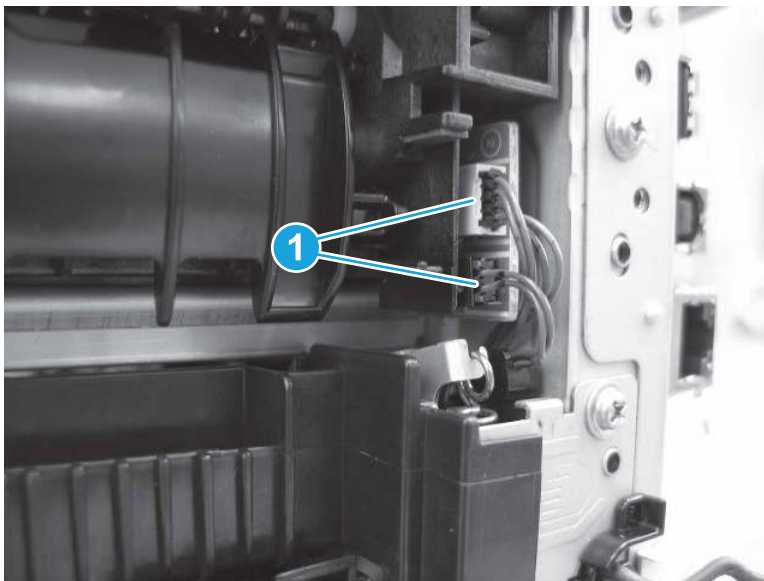
2. Pull the upper connector cover (callout 1) straight off of the printer to remove it.

**Figure 5-305** Remove the cover



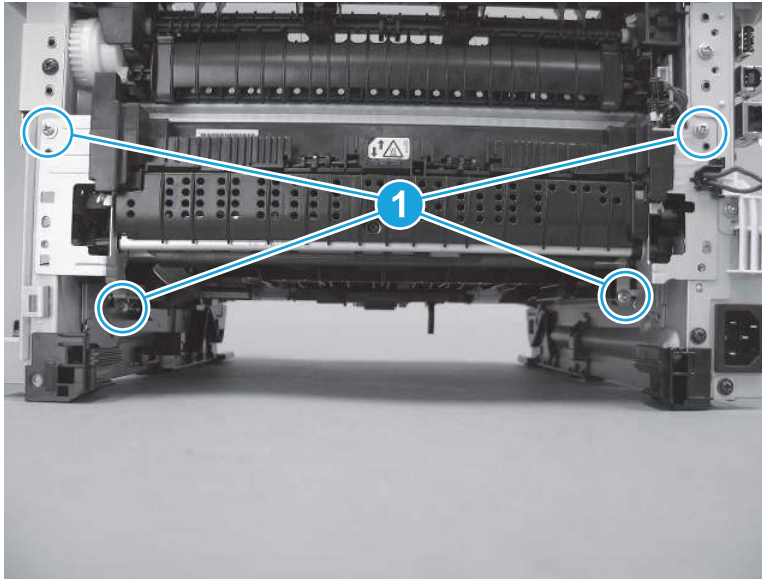
3. Disconnect two connectors (callout 1).

**Figure 5-306** Disconnect two connectors




4. Remove four screws (callout 1).

**Figure 5-307** Remove four screws



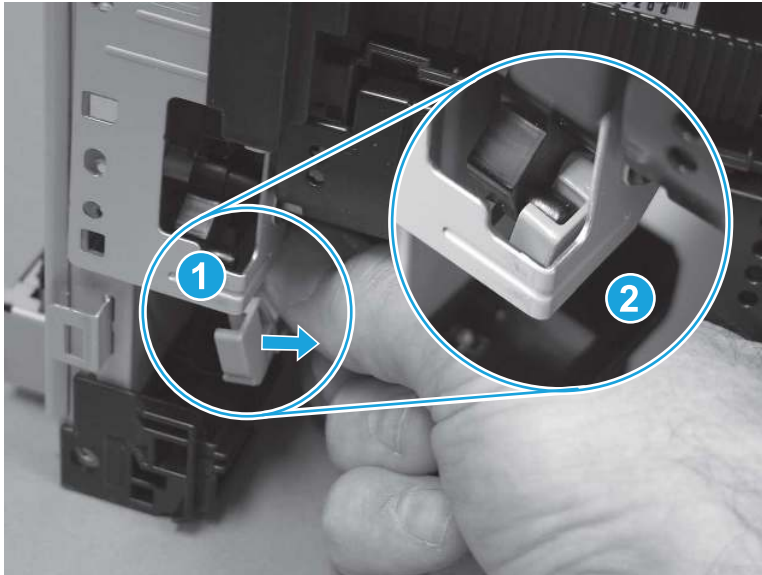
5. Pull the pressure-release link arm (callout 1) to release it from the fuser.

---

 **Reinstallation tip:** When the fuser is installed, make sure that the pressure-release arm is correctly connected to the fuser (callout 2)

---

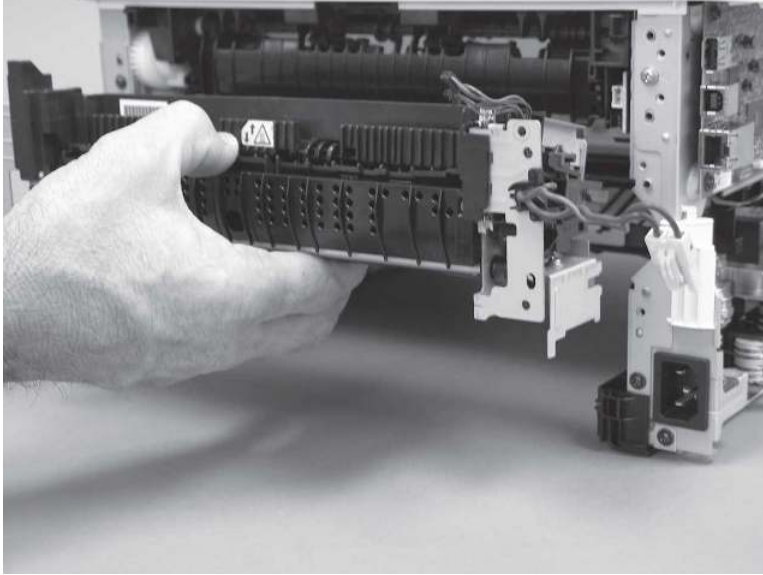
**Figure 5-308** Release the pressure-release arm





6. Slide the fuser straight out of the printer to remove it.

**Figure 5-309 Remove the fuser**



## 7. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Registration assembly

Learn how to remove and replace the registration assembly.



[View a video of how to remove and replace the SFP registration assembly.](#)



[View a video of how to remove and replace the MFP registration assembly.](#)

Mean time to repair: 30 minutes SFP, 50 minutes MFP

Service level: Medium SFP, Difficult MFP

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-27** Part information

Part number	Part description
RM2-2577-000CN	Registration assembly

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-310** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

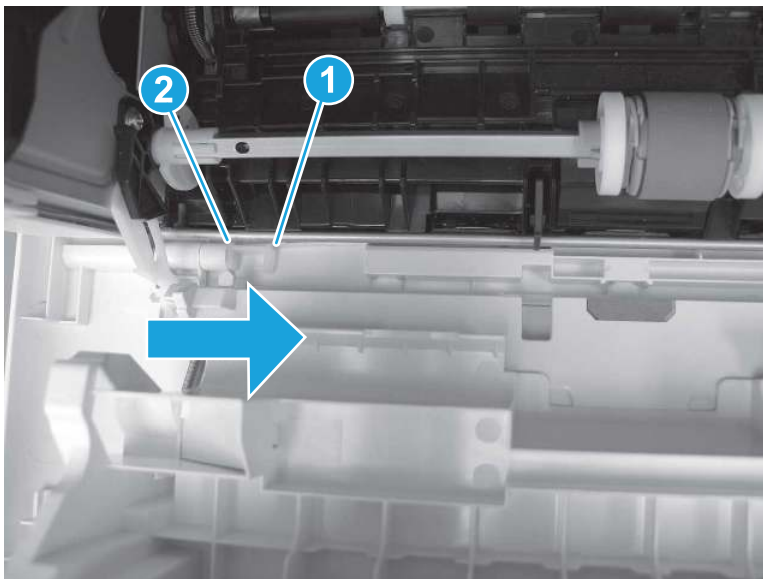
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

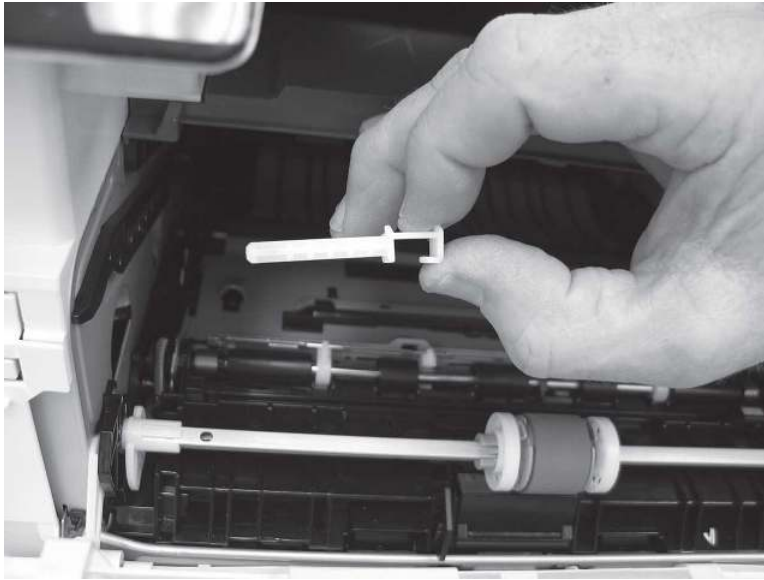
---

**Figure 5-311** Release the support shaft



2. Remove the support shaft.

**Figure 5-312** Remove the support shaft



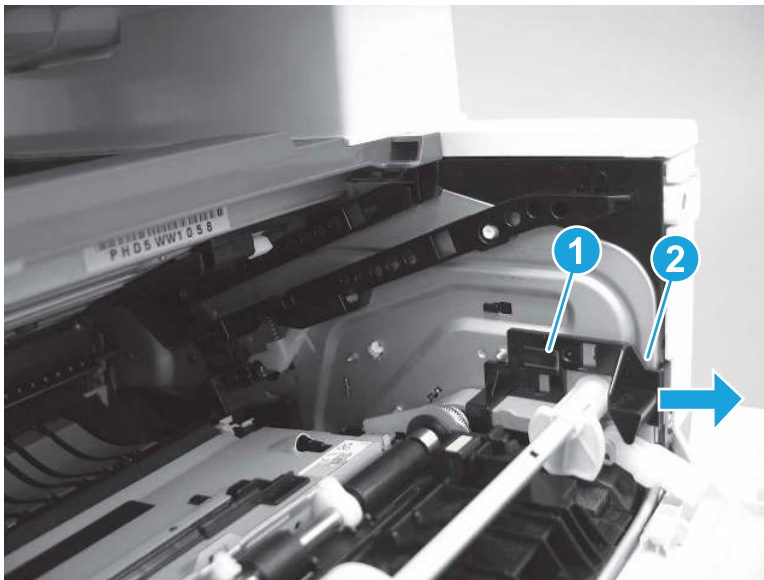
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

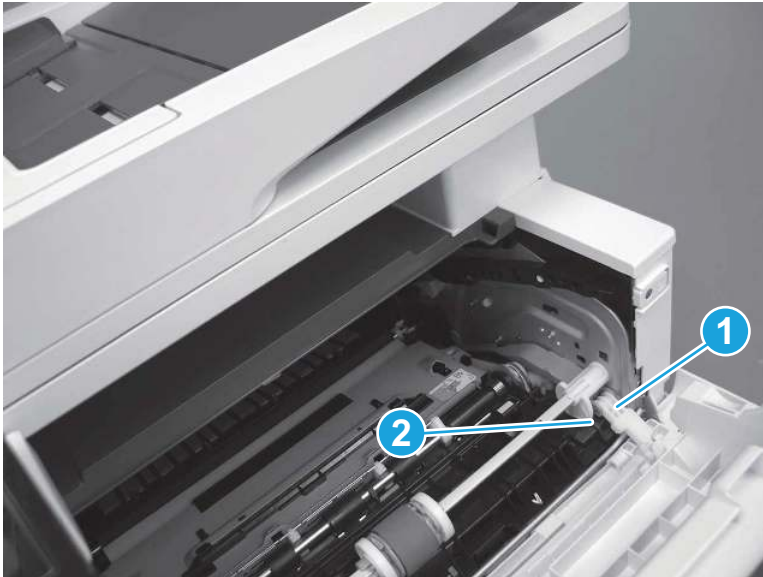
---

**Figure 5-313** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-314** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

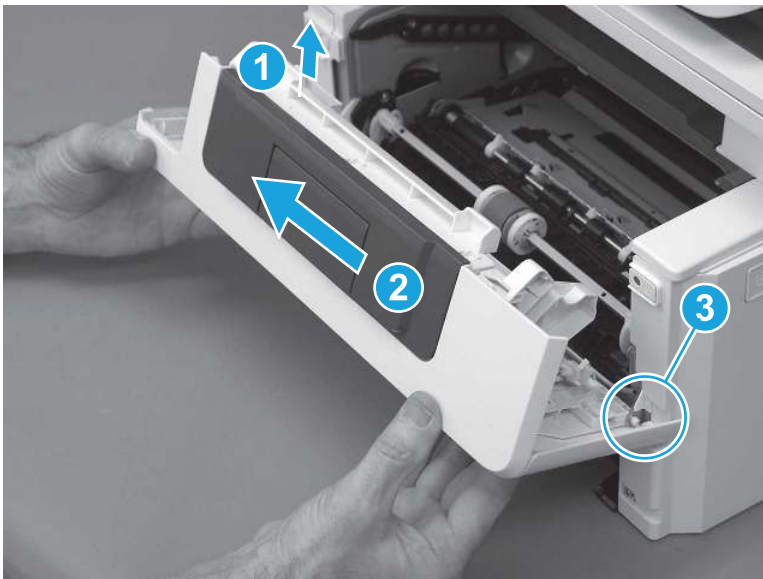
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

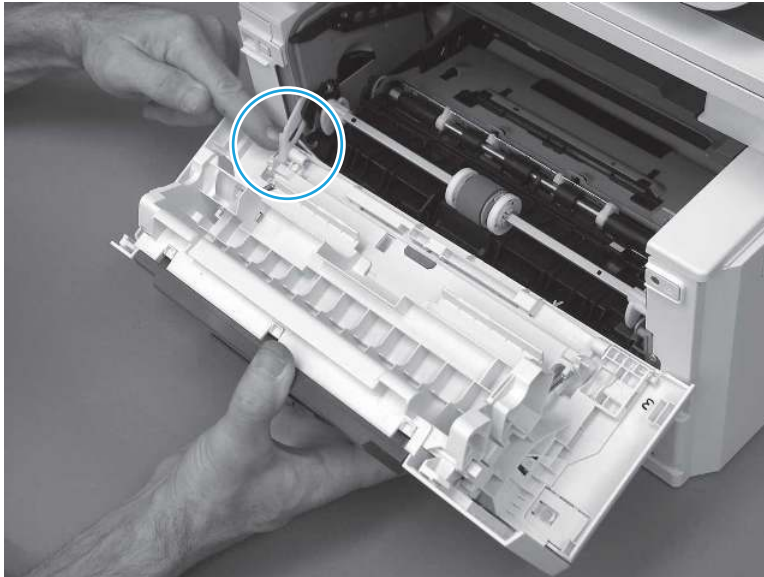
---

**Figure 5-315** Release the door



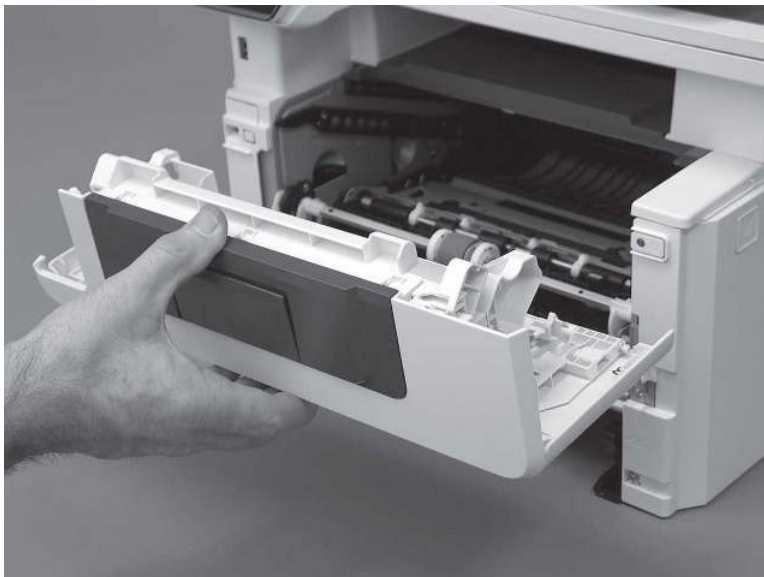
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-316** Release the left-side retainer arm



7. Remove the door.


**Figure 5-317** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---



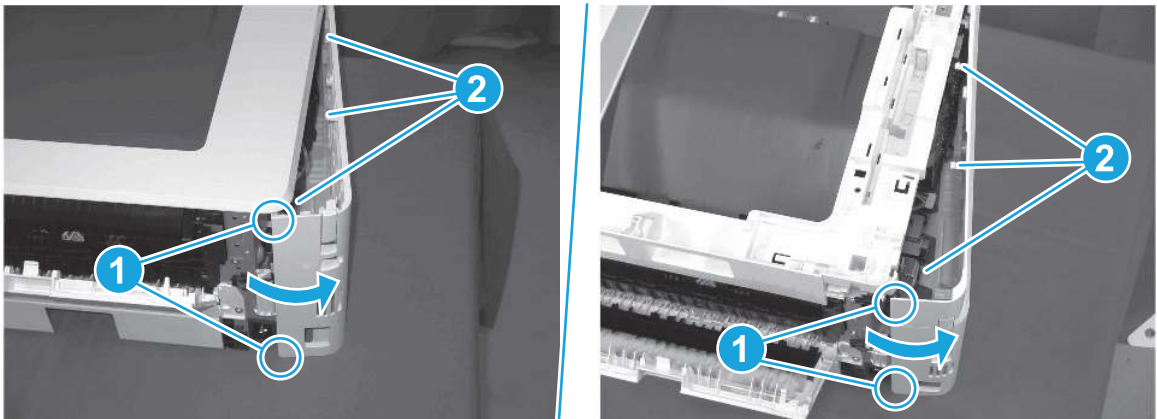
1. Remove one screw (callout 1).

**Figure 5-318** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-319** Release two bosses and three tabs

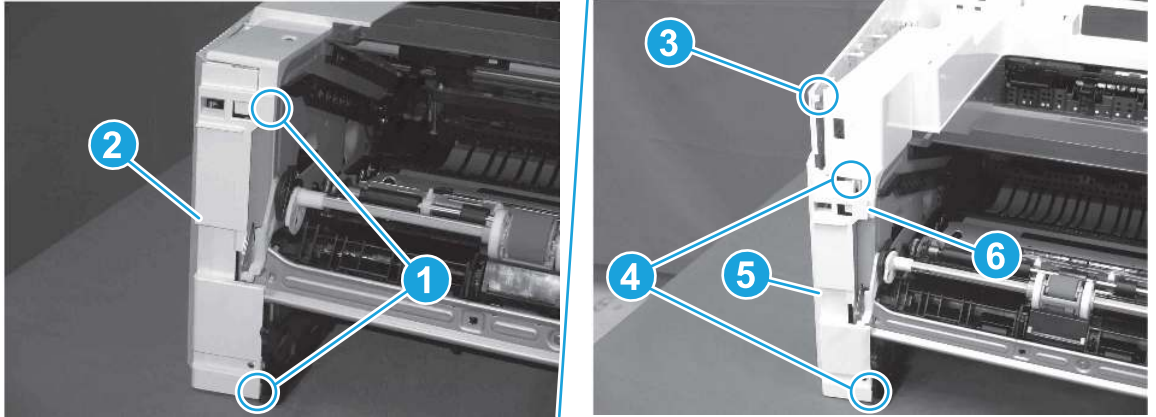


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

Figure 5-320 Remove the cover



#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).


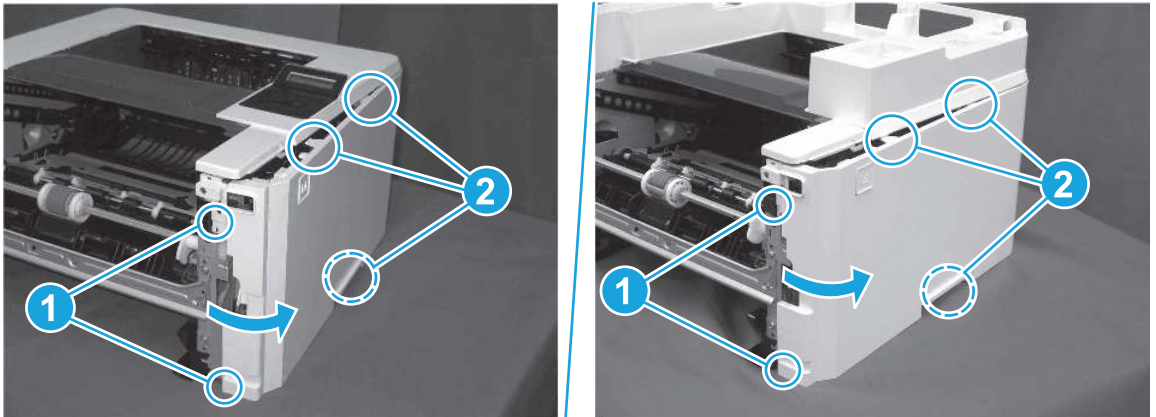
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

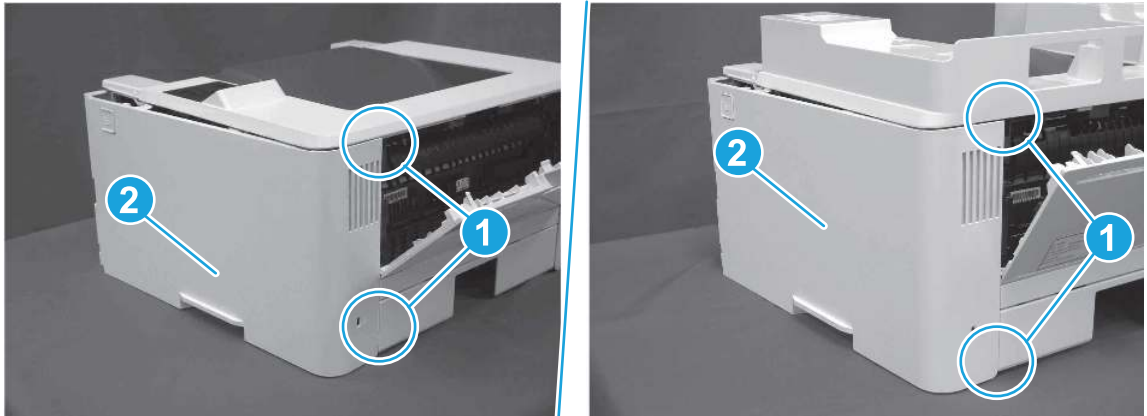
Figure 5-321 Release two bosses and three tabs





2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-322 Remove the cover**

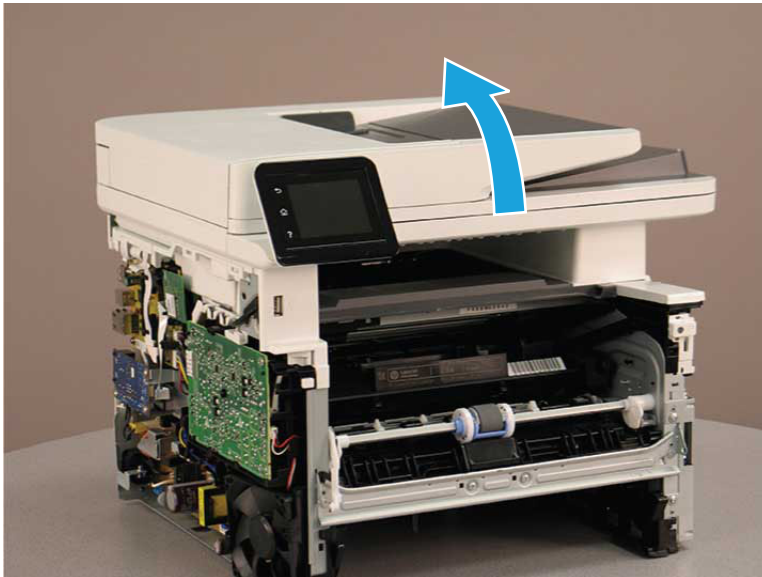


#### 5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

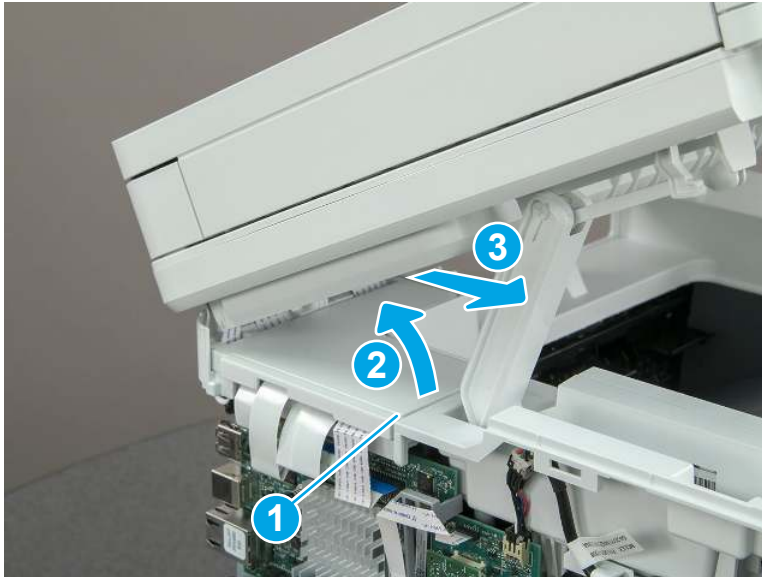
1. If the ISA is not already raised, raise it now.

**Figure 5-323 Raise the ISA**




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-324** Remove the ISA FFC cover




#### 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

**Figure 5-325** Disconnect three FFCs



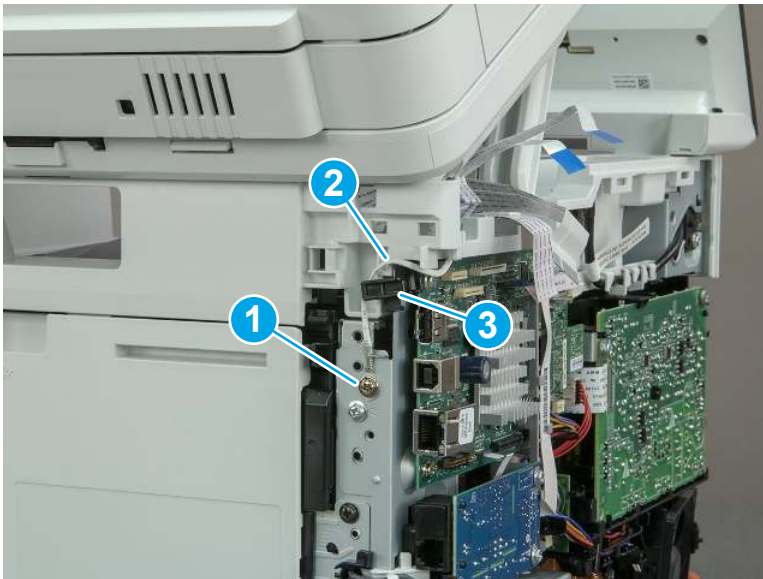
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-326** Release the tape



3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-327** Release the ground wire



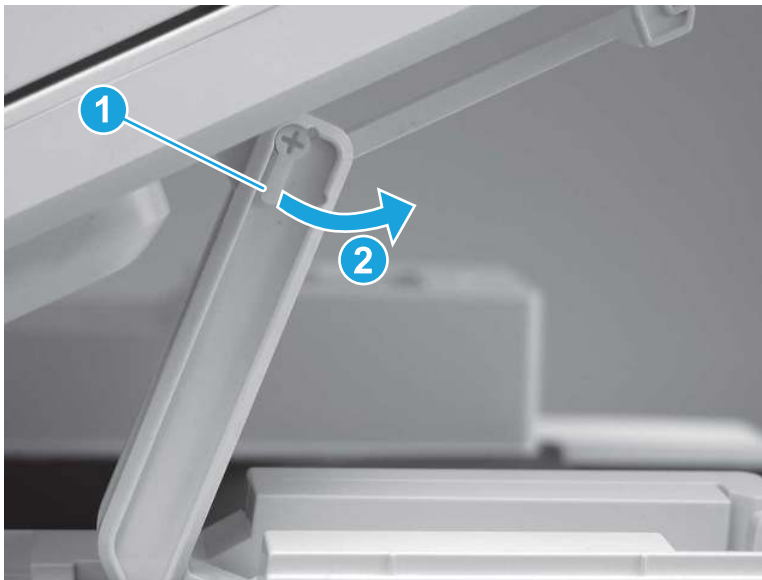
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-328** Release the ground wire




5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-329** Release one tab and rotate the slider pin



6. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

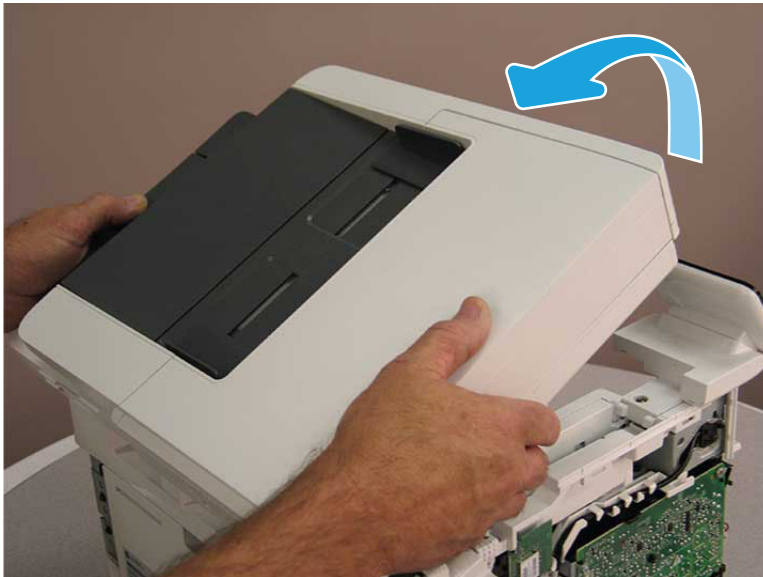
---

**Figure 5-330** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-331** Rotate the ISA towards the rear of the printer





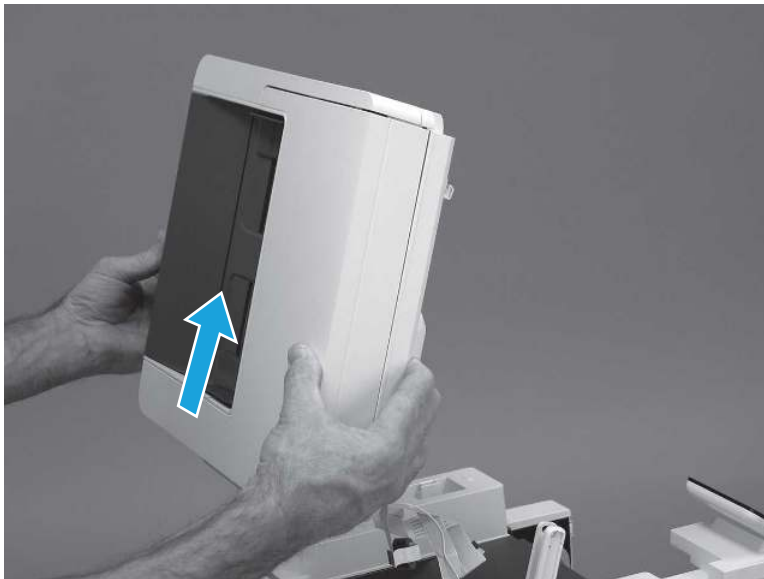
8. Slide the ISA as shown to release it.

**Figure 5-332** Release the ISA



9. Remove the ISA.

**Figure 5-333** Remove the ISA

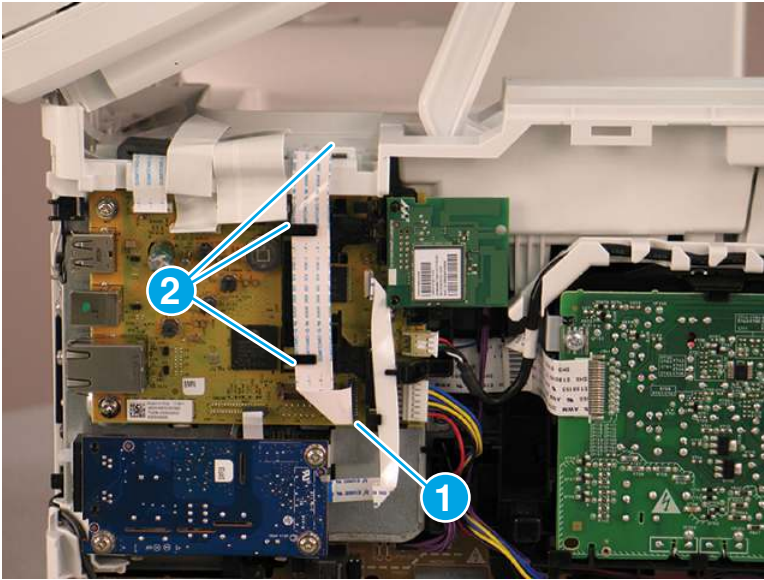


## 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-334** Disconnect one connector



2. Remove one screw (callout 1).

**Figure 5-335** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-336 Release two tabs**



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-337 Remove the cover**





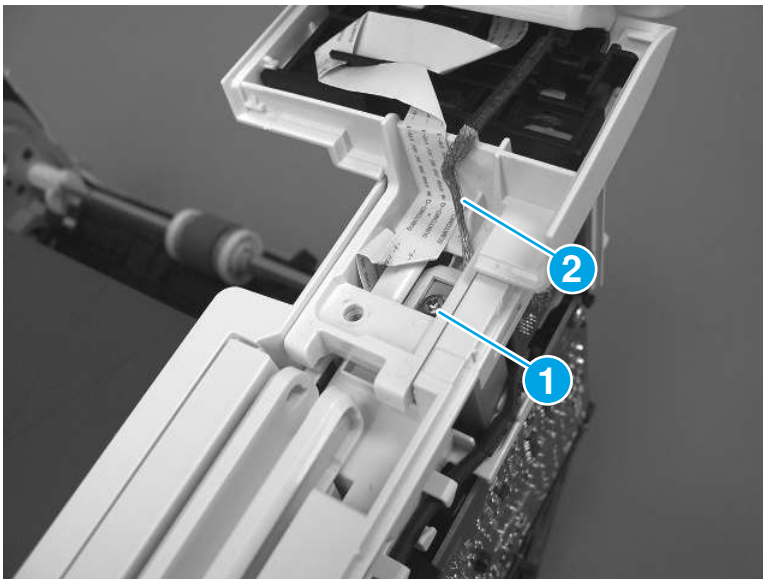
5. Remove the control-panel mount cover.

**Figure 5-338** Remove the cover



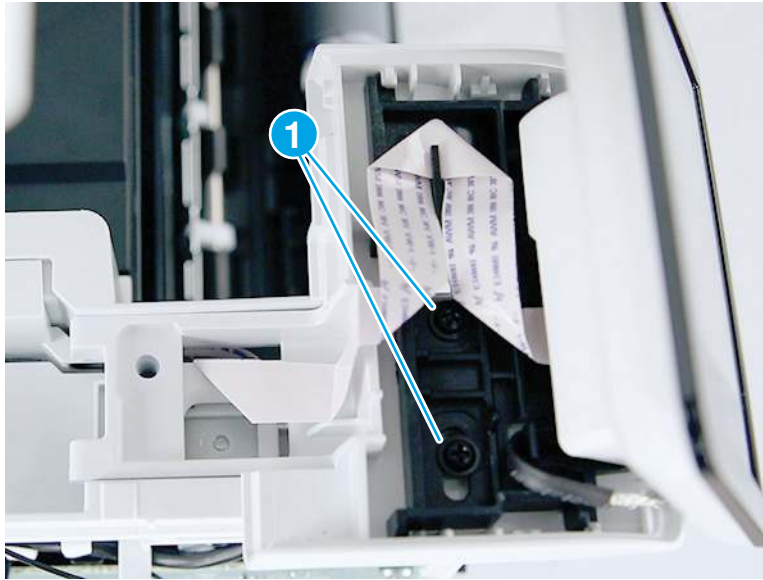
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-339** Remove one screw



7. Move the FFC out of the way, and then remove two screws (callout 1).

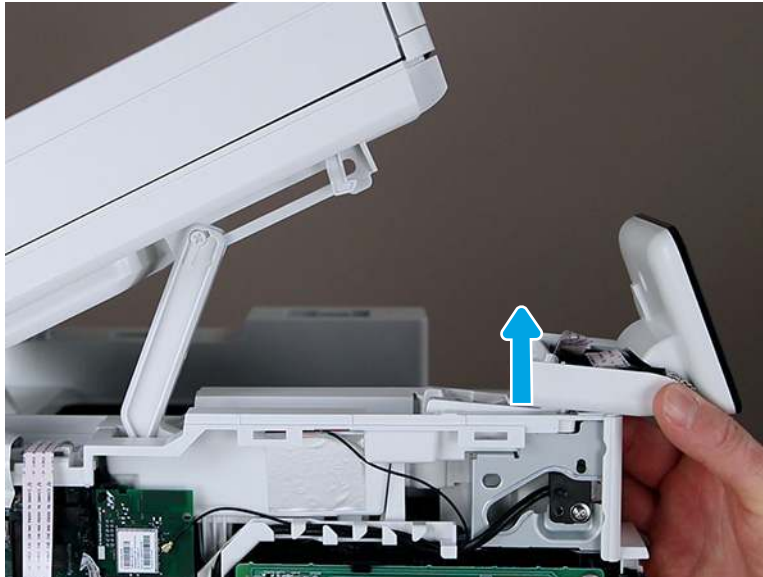
**Figure 5-340** Remove two screws



8. Slightly lift up the control-panel assembly to separate it from the top cover.

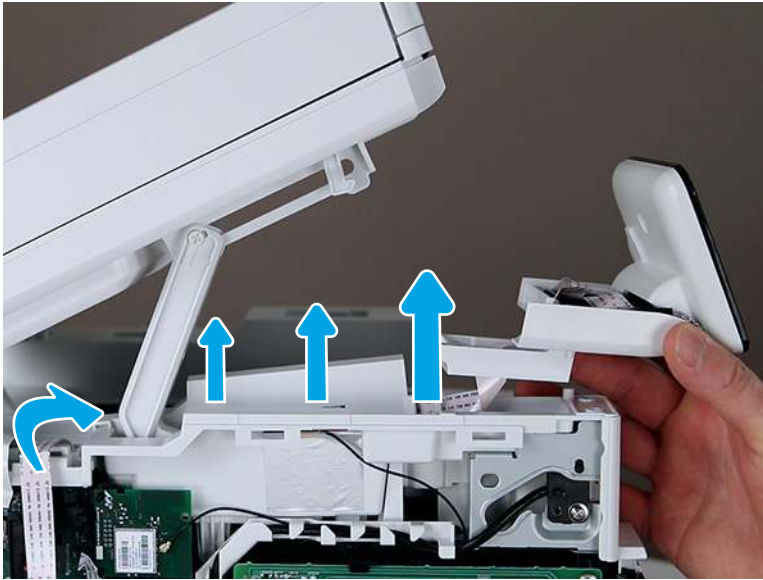
**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

**Figure 5-341** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-342** Remove the control-panel assembly

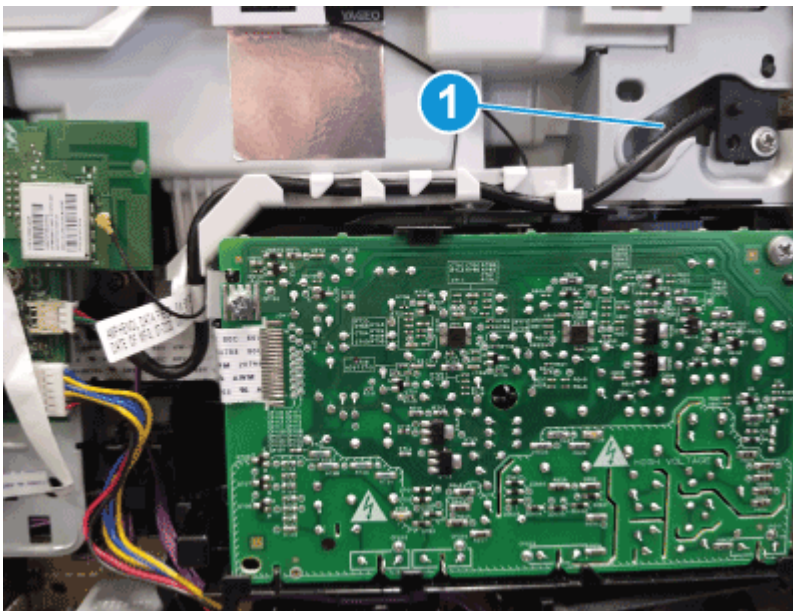


#### 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

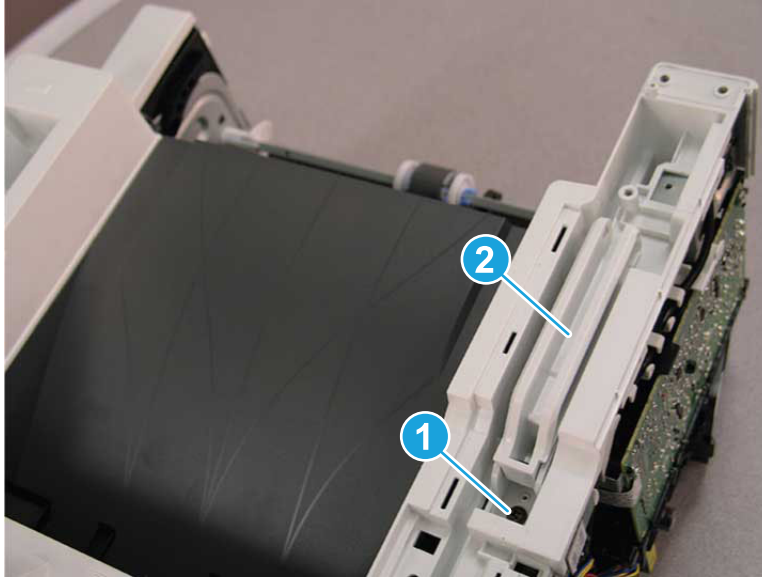
**Figure 5-343** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

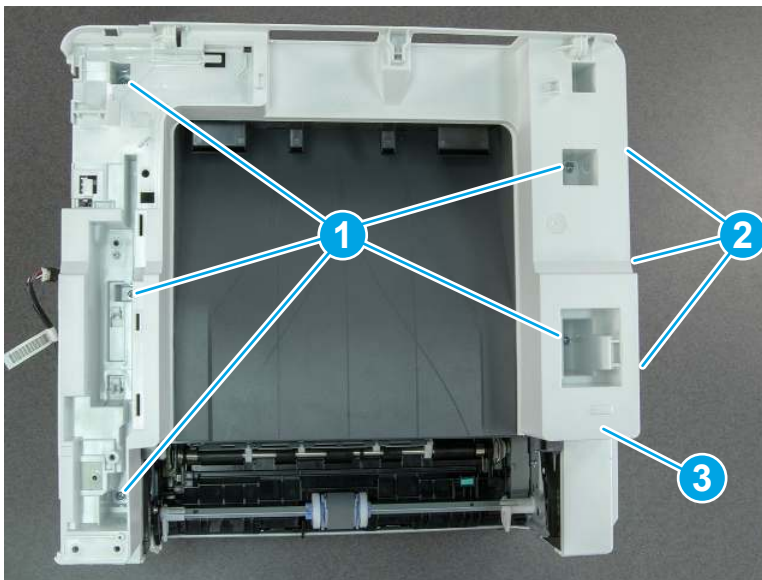
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

Figure 5-344 Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

Figure 5-345 Remove the top cover



### 9. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

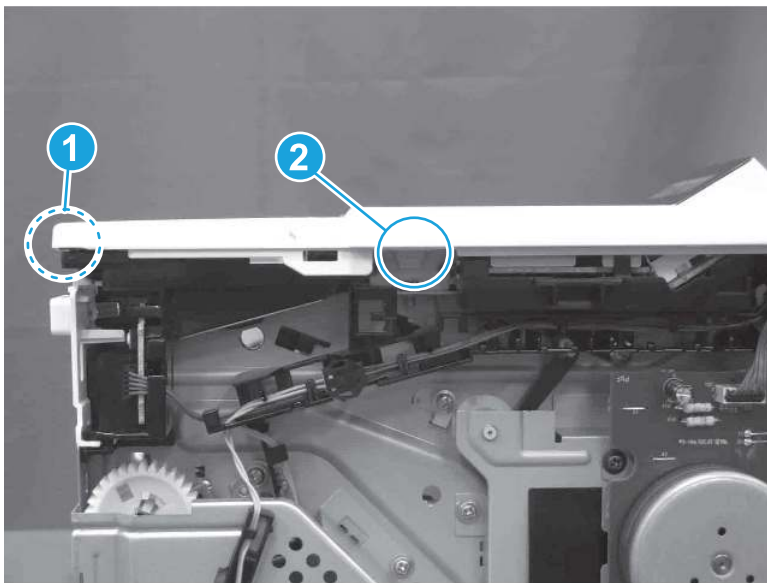
1. Remove one screw.

**Figure 5-346** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-347** Release one boss and one tab



3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

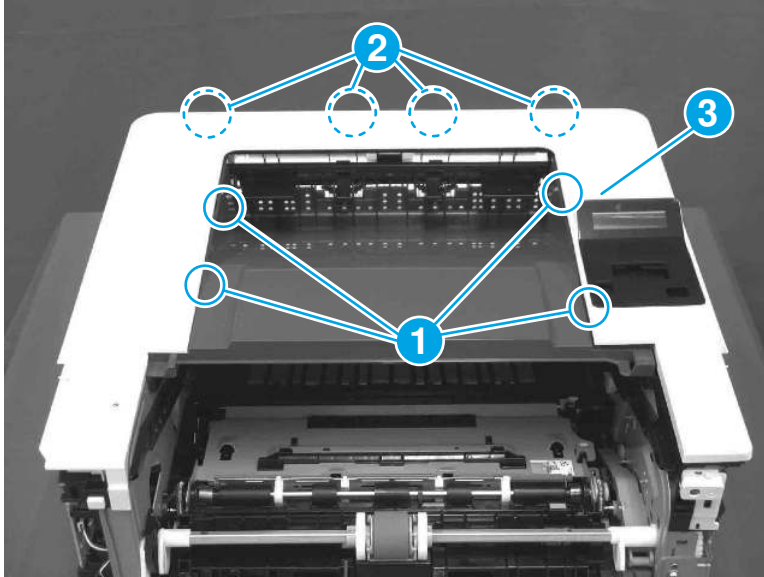
---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---




Figure 5-348 Remove the cover



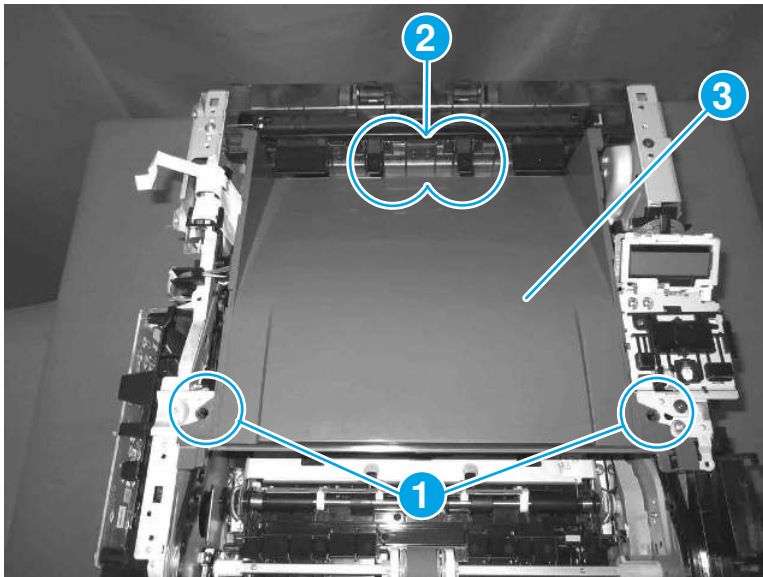
#### 10. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

 **NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-349 Remove the cover

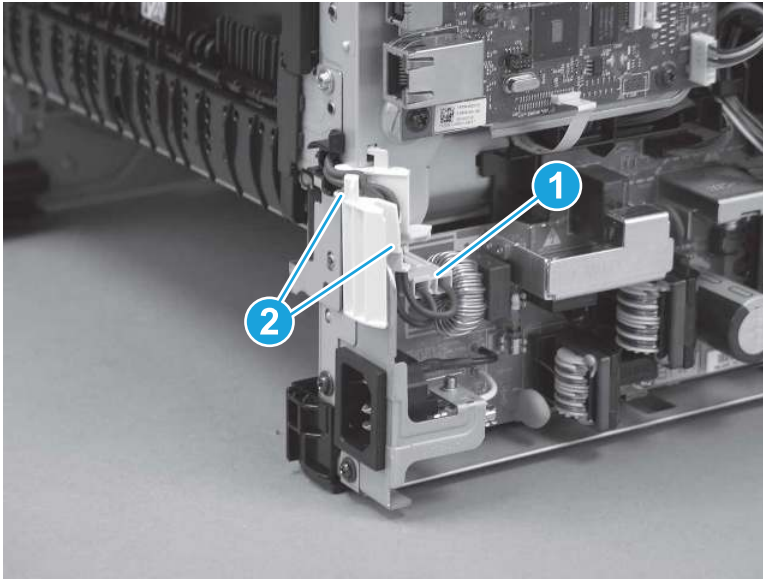


#### 11. Remove the fuser

Follow these steps to remove the fuser.

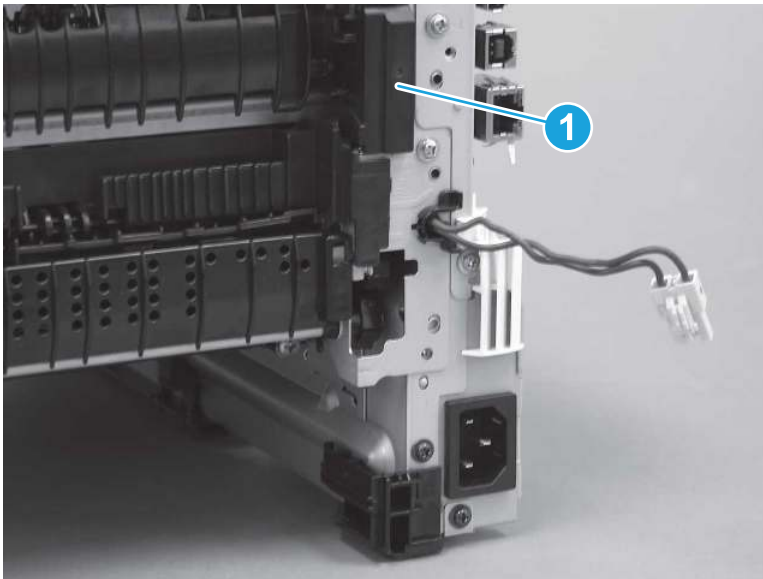
1. Disconnect one connector (callout 1), and then release the wire harness from the guide (callout 2).

**Figure 5-350** Disconnect one connector



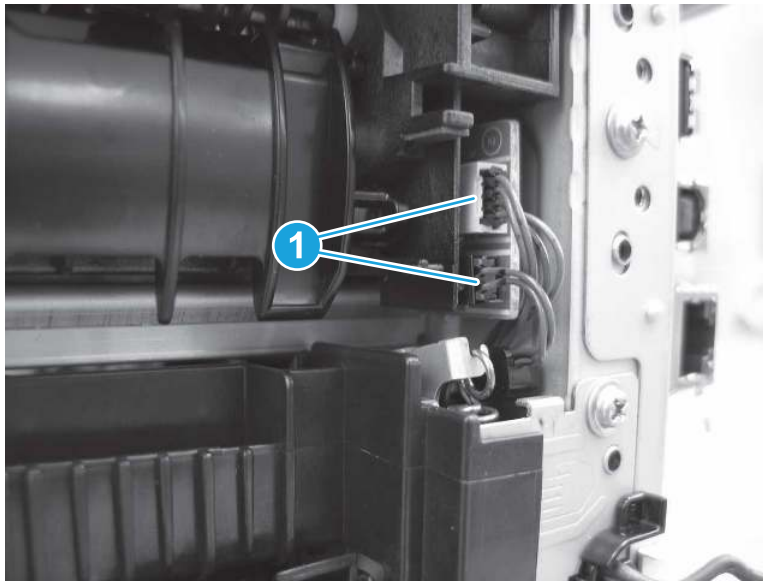
2. Pull the upper connector cover (callout 1) straight off of the printer to remove it.

**Figure 5-351** Remove the cover



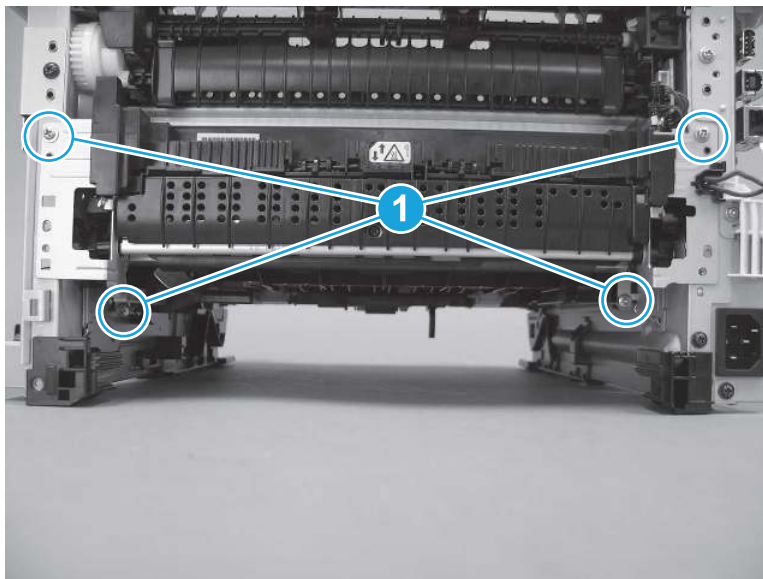
3. Disconnect two connectors (callout 1).

**Figure 5-352** Disconnect two connectors




4. Remove four screws (callout 1).

**Figure 5-353** Remove four screws



5. Pull the pressure-release link arm (callout 1) to release it from the fuser.

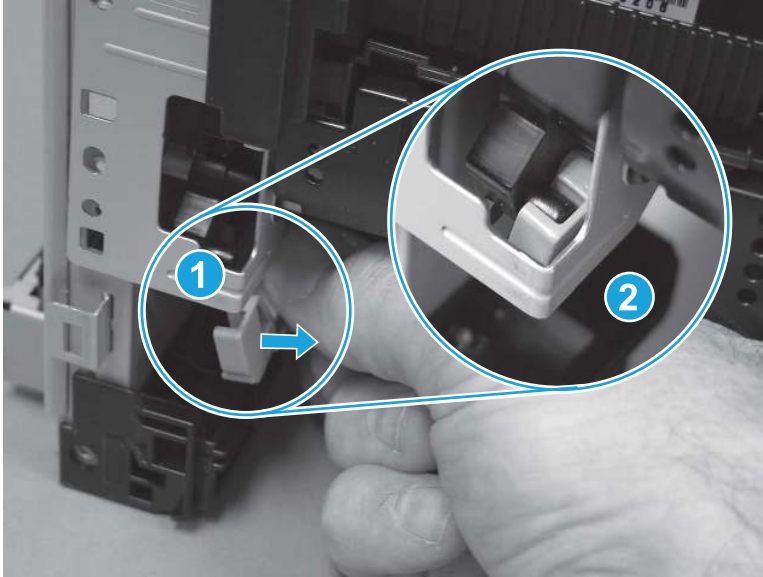
---

 **Reinstallation tip:** When the fuser is installed, make sure that the pressure-release arm is correctly connected to the fuser (callout 2)

---

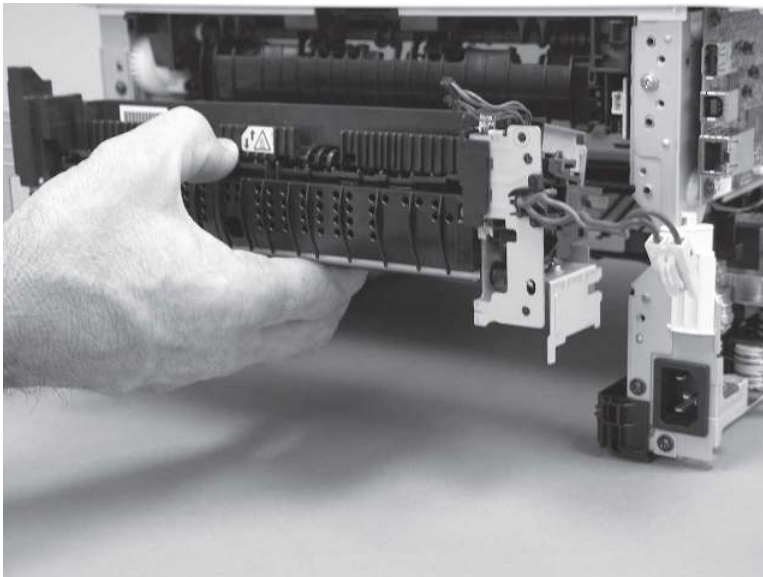


**Figure 5-354** Release the pressure-release arm



6. Slide the fuser straight out of the printer to remove it.

**Figure 5-355** Remove the fuser

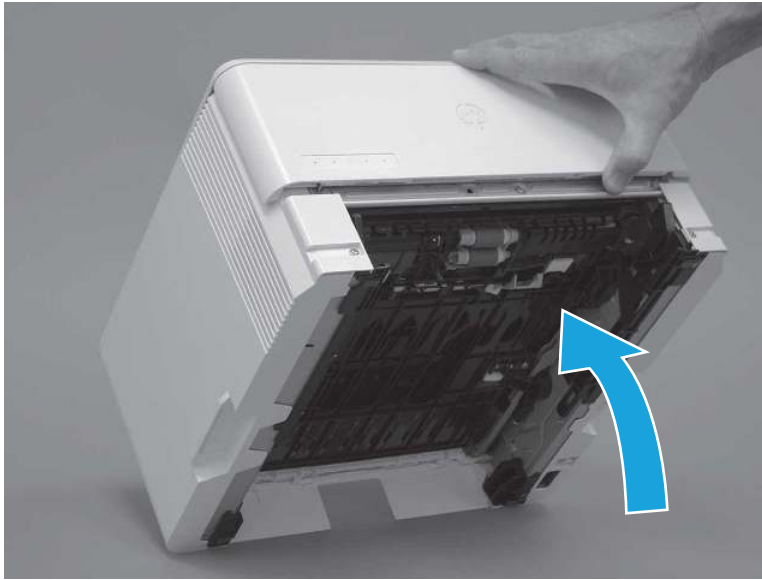


## 12. Remove the registration assembly

Follow these steps to remove the registration assembly.

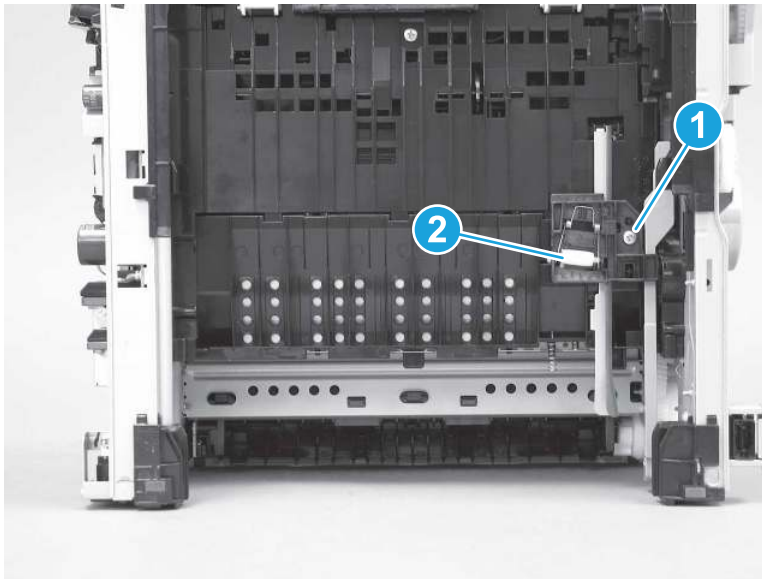
1. Carefully rotate the printer backward until it rests on the rear side, bottom-side face forward.

**Figure 5-356** Place the printer bottom-side face forward



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

**Figure 5-357** Remove one screw and the guide

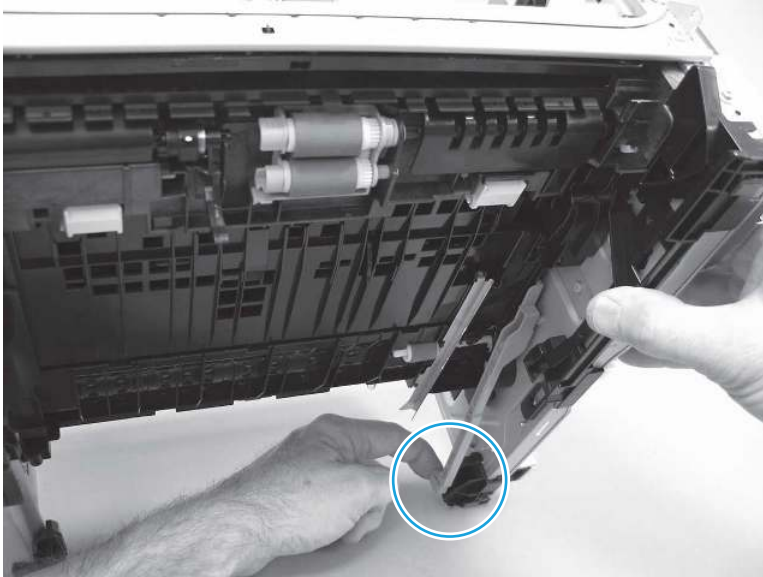


3. Move the end of pressure-release link arm out of the way.



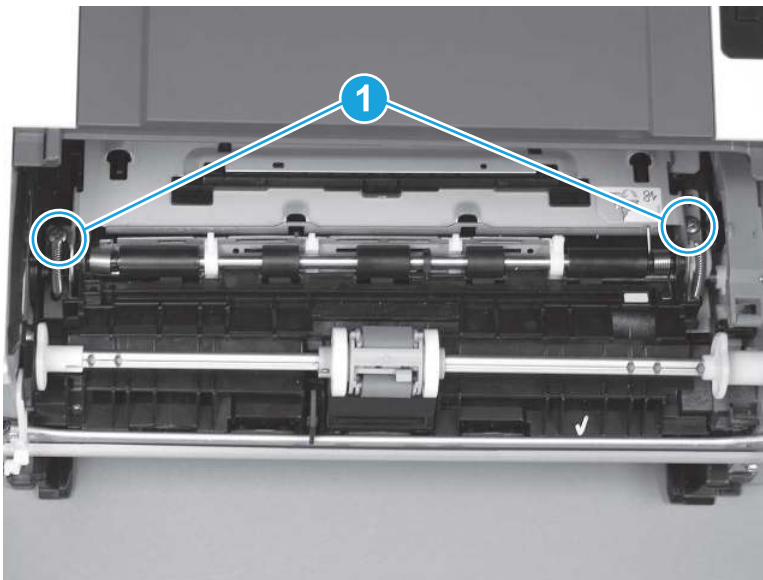
**NOTE:** Doing this makes the other end of the pressure-release arm easier to move out of the way of the later in this procedure.

**Figure 5-358** Move the link arm out of the way



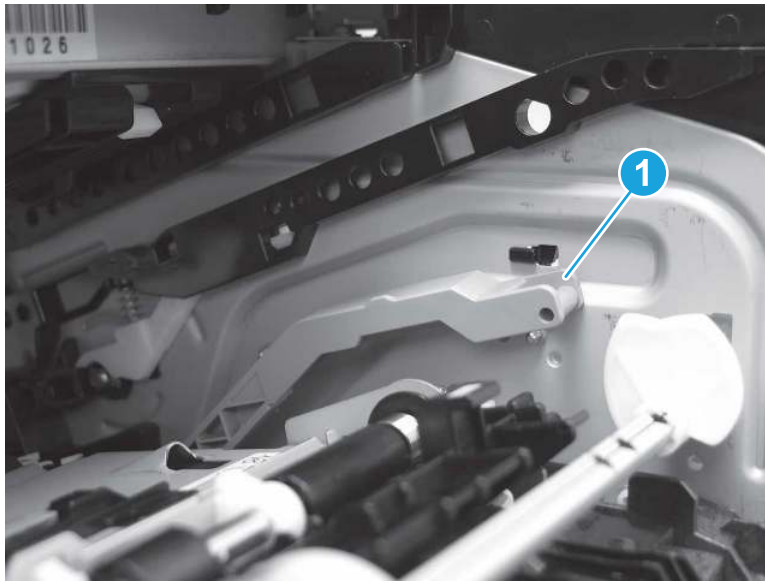
4. Place the printer with the bottom side down, look inside the toner-cartridge cavity, and then remove two screws (callout 1).

**Figure 5-359** Remove two screws



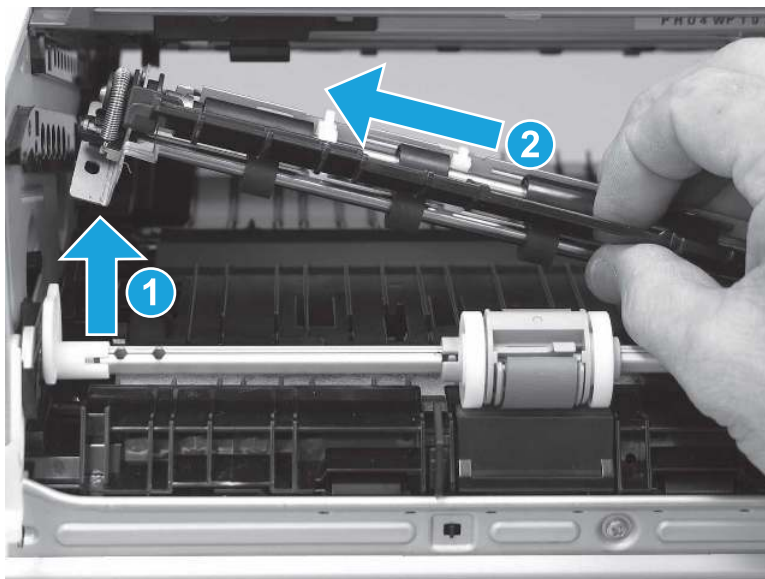
5. Move the end of pressure-release link arm (callout 1) out of the way.

**Figure 5-360** Move the pressure-release arm out of the way



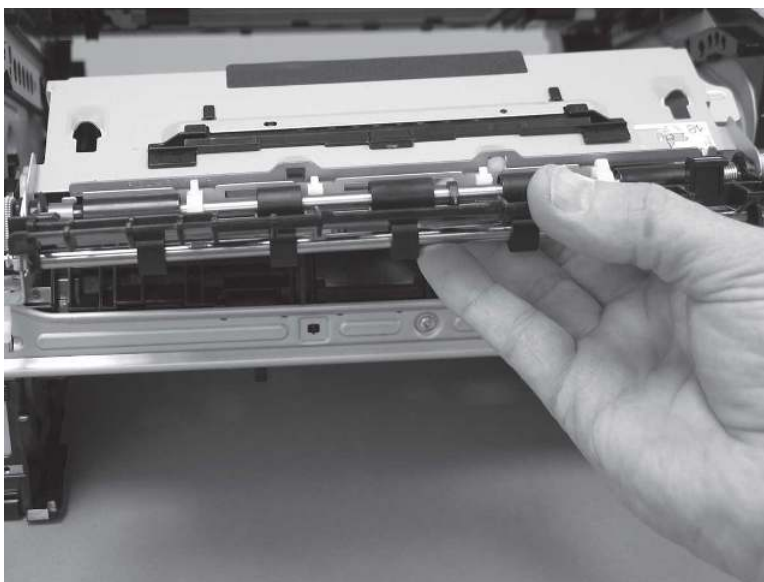
6. Rotate the left end of the registration up and out of the printer (callout 1), and then slide it to the left to release the gear end of the assembly (callout 2).

**Figure 5-361** Release the assembly



7. Remove the assembly.

**Figure 5-362 Remove the assembly**



### 13. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Main motor (M1)

Learn how to remove and replace the main motor (M1).



[View a video of how to remove and replace the main motor.](#)

Mean time to repair: 12 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-28 Part Information**

Part number	Part description
RM2-9531-000CN	Assembly, main motor

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.




- Pull the tray straight out of the printer to remove it.

**Figure 5-363 Remove the tray**




## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.

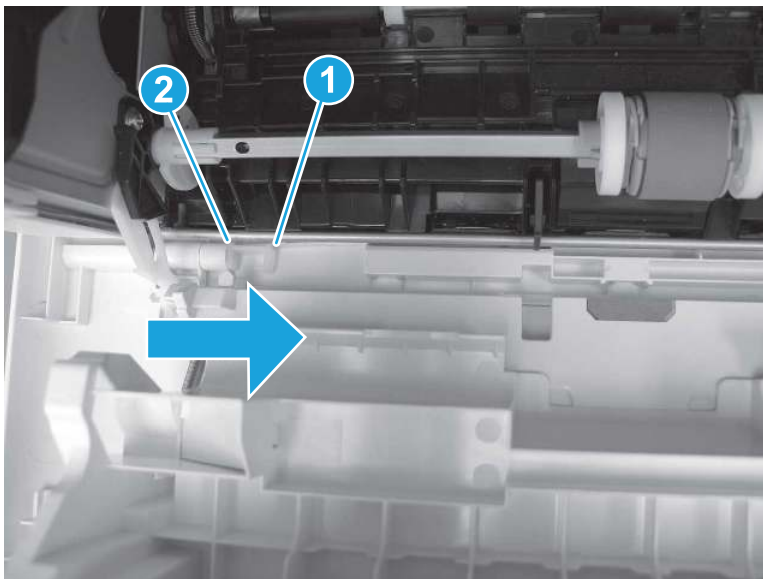
 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

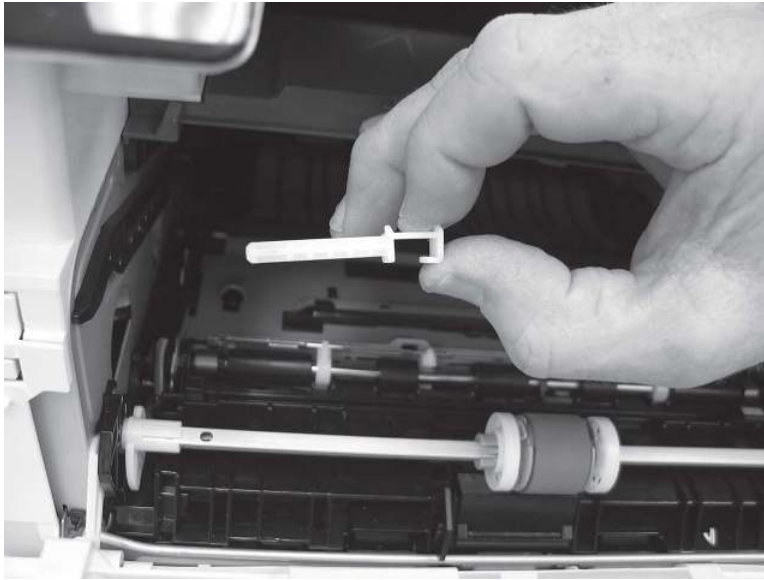
 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

**Figure 5-364 Release the support shaft**



2. Remove the support shaft.

**Figure 5-365** Remove the support shaft



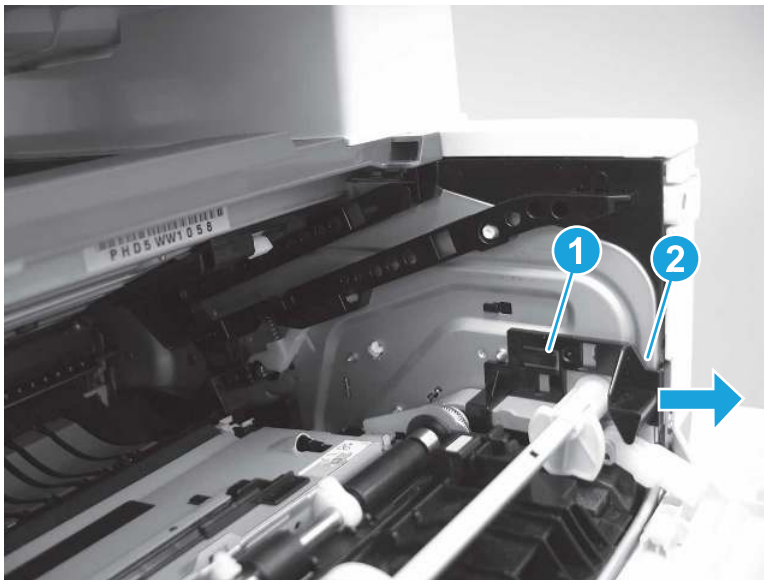
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

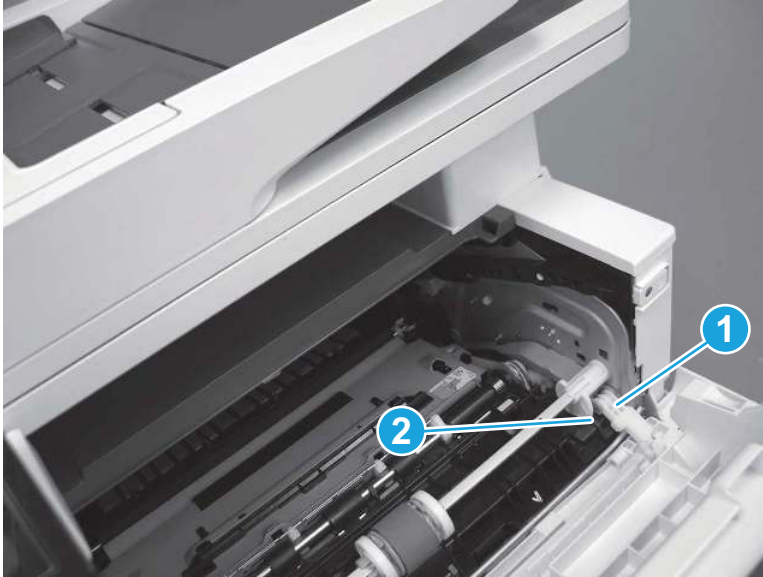
**Figure 5-366** Remove the guide





4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-367** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

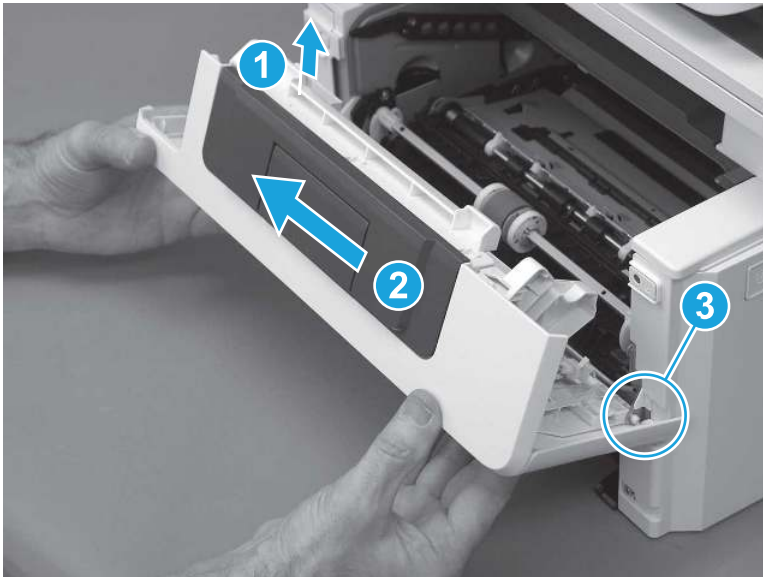
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

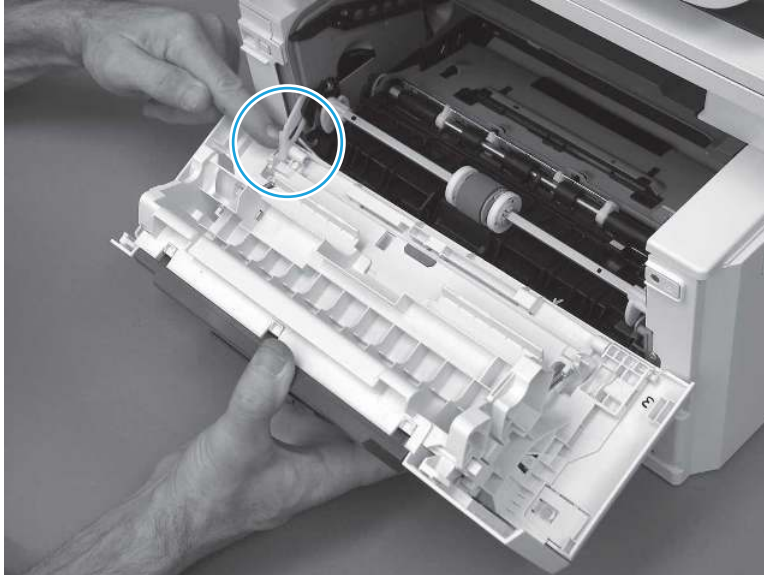
---

**Figure 5-368** Release the door



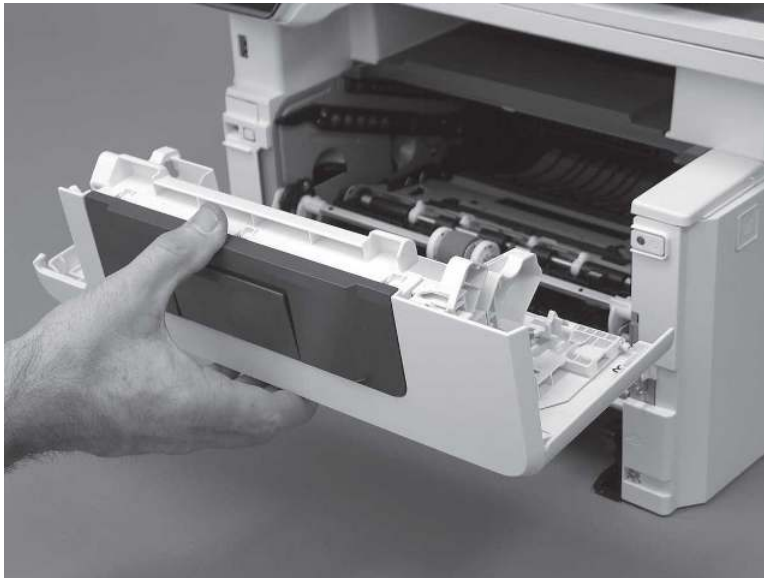
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-369** Release the left-side retainer arm



7. Remove the door.


**Figure 5-370** Remove the door



### 3. Remove the right cover

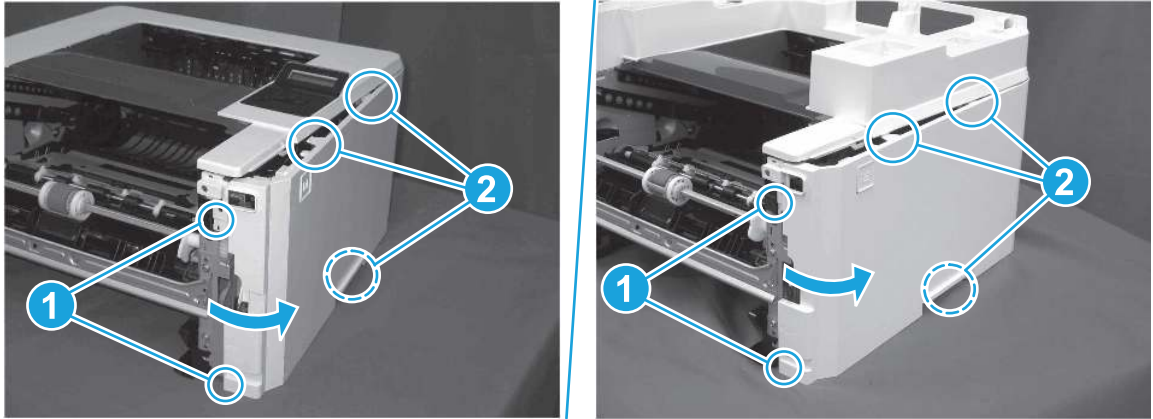
Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

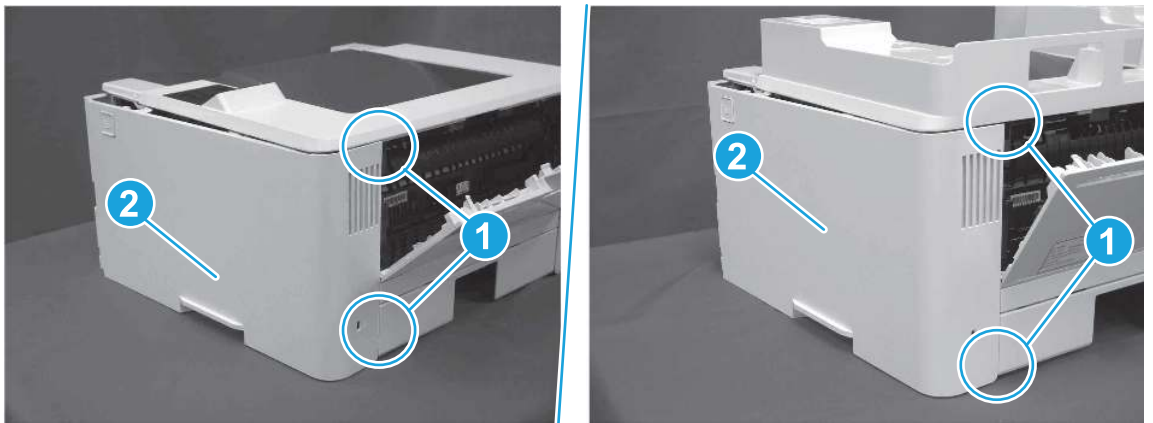
---

**Figure 5-371** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-372** Remove the cover



#### 4. Remove the main motor (M1)

Follow these steps to remove the main motor (M1).

- Disconnect one connector (callout 5), remove four screws (callout 1 to callout 4), and then remove the main motor (M1).


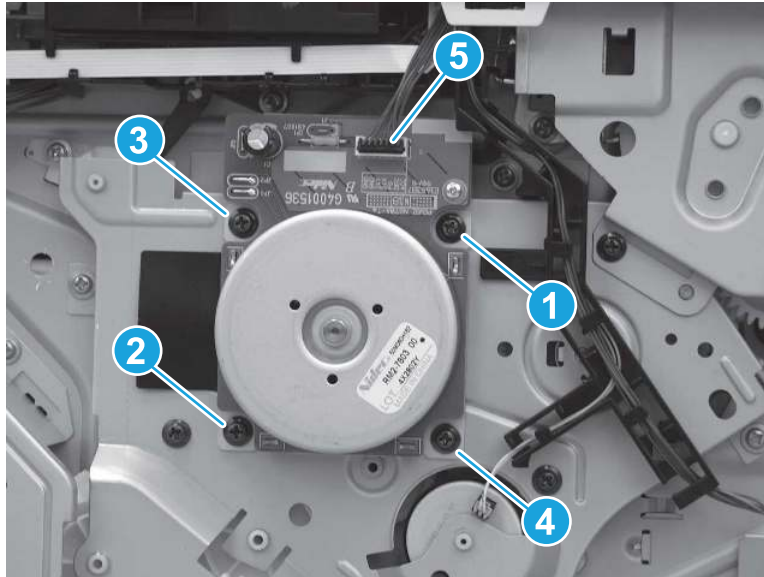
 **Reinstallation tip:** When the motor is installed, make sure that the screws are installed in the order (callout 1 - 4).

Figure 5-373 Remove the motor



## 5. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Power switch printed circuit assembly

Learn how to remove and replace the power switch printed circuit assembly (PCA).



[View a video of how to remove and replace the power switch.](#)

Mean time to repair: 12 minutes

Service level: Easy

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-29** Part information

Part number	Part description
RM2-8506-000CN	Power switch PC board assembly

## Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

### 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-374** Remove the tray



## 2. Remove the cartridge door assembly


Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

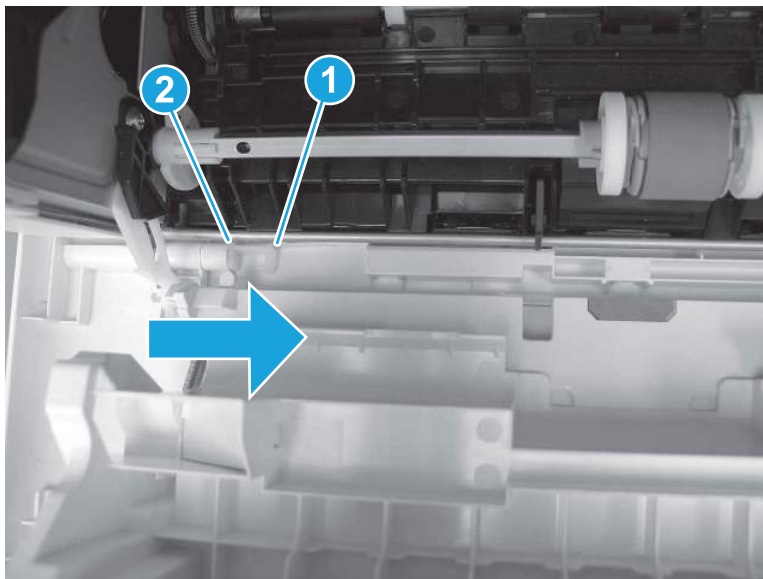
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

---

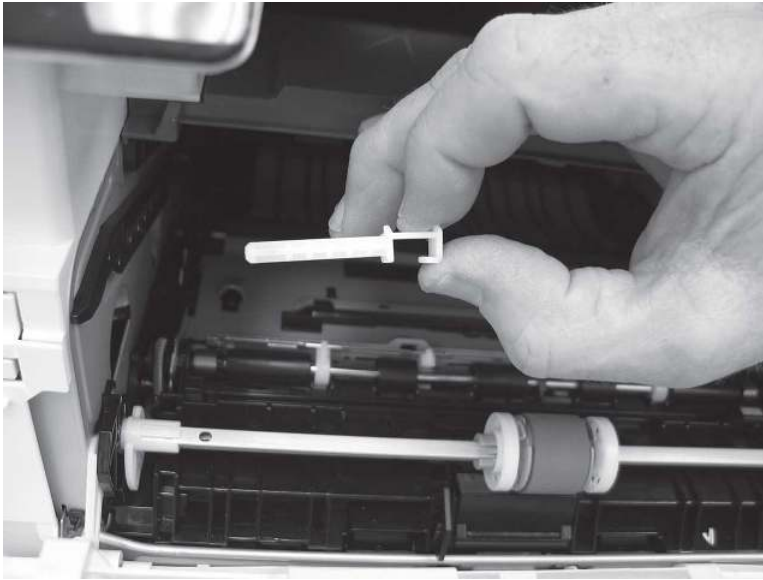
**Figure 5-375** Release the support shaft





2. Remove the support shaft.

**Figure 5-376** Remove the support shaft



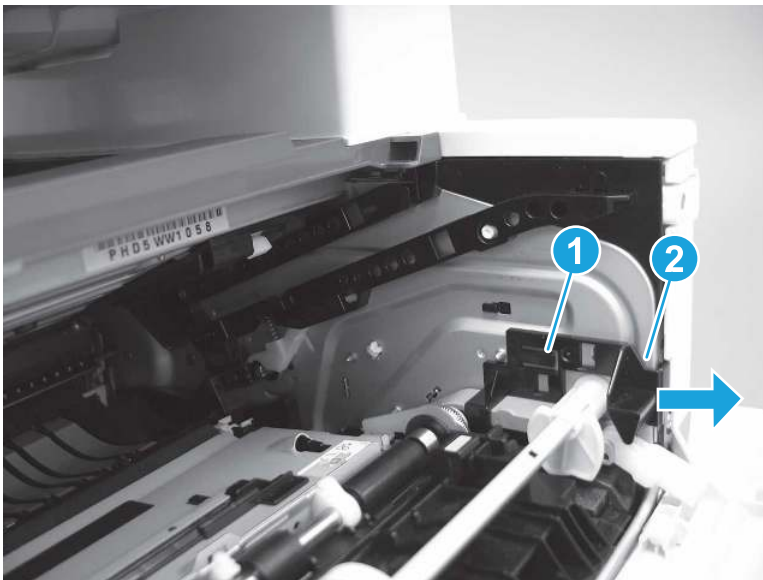
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

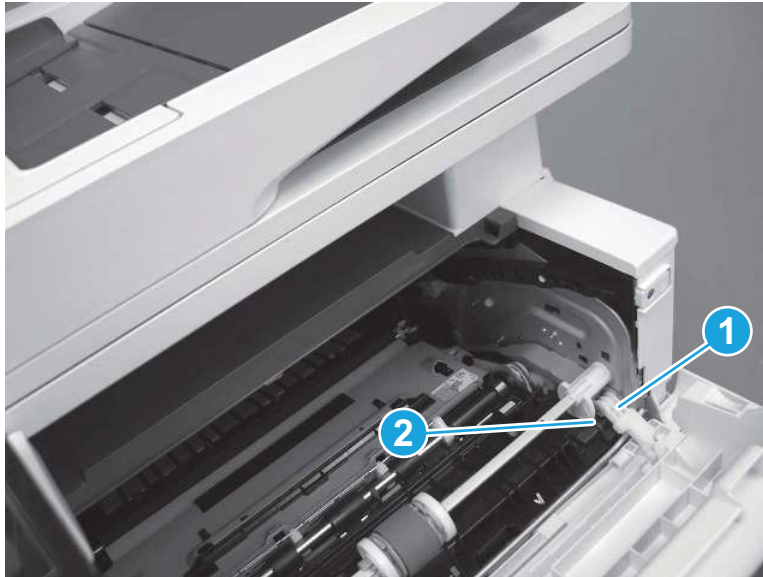
---

**Figure 5-377** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-378** Release the pressure-release link

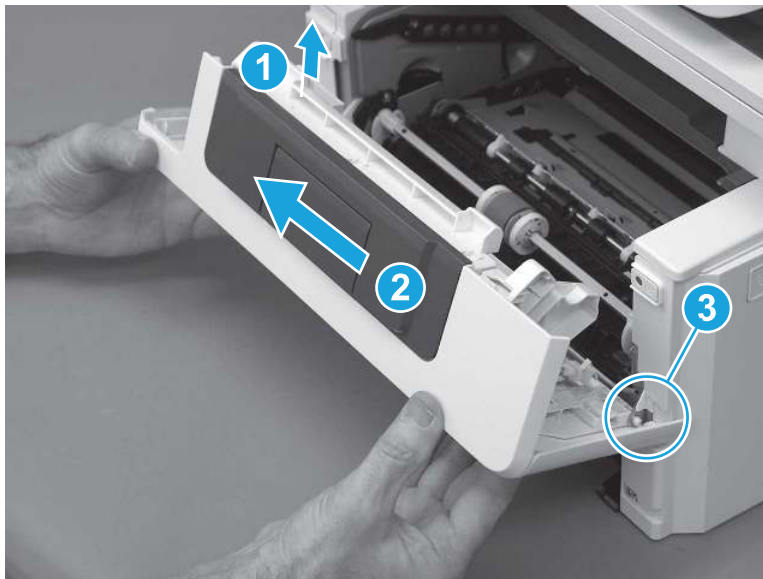


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

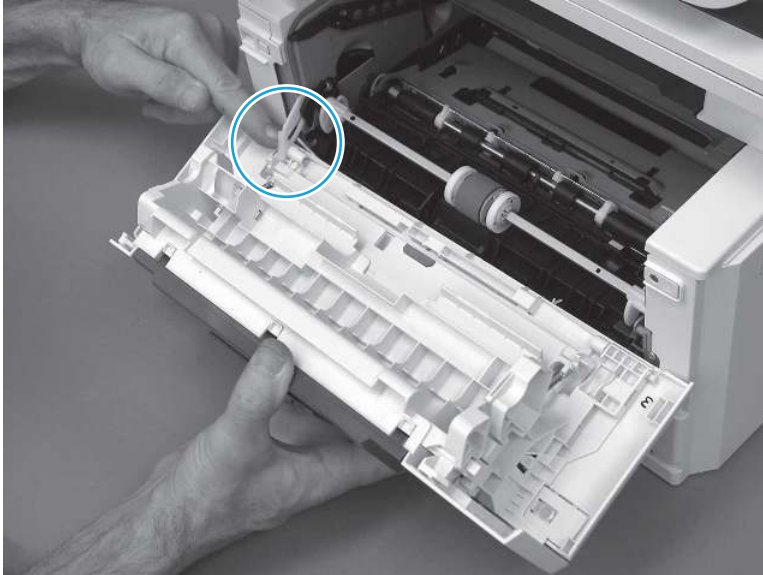
**Figure 5-379** Release the door





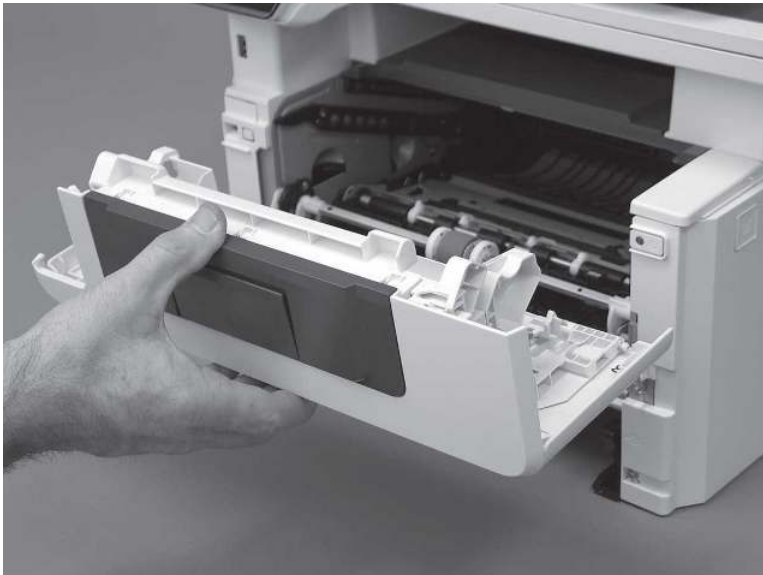
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-380** Release the left-side retainer arm



7. Remove the door.

**Figure 5-381** Remove the door



### 3. Remove the right cover

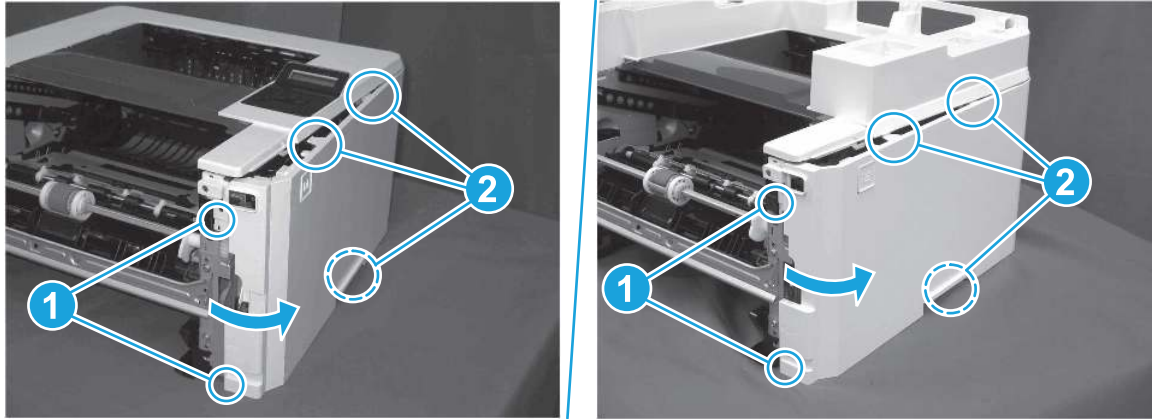
Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).



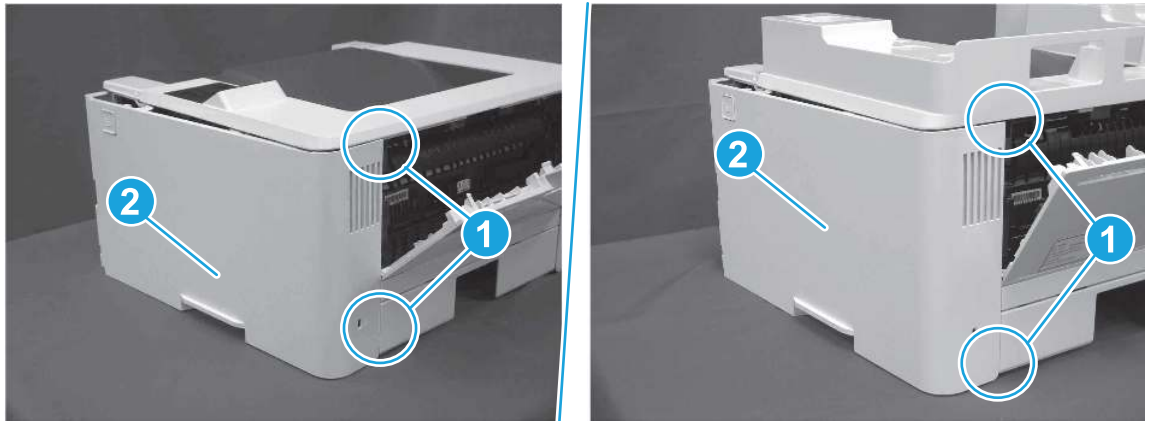
**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

**Figure 5-382** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-383** Remove the cover

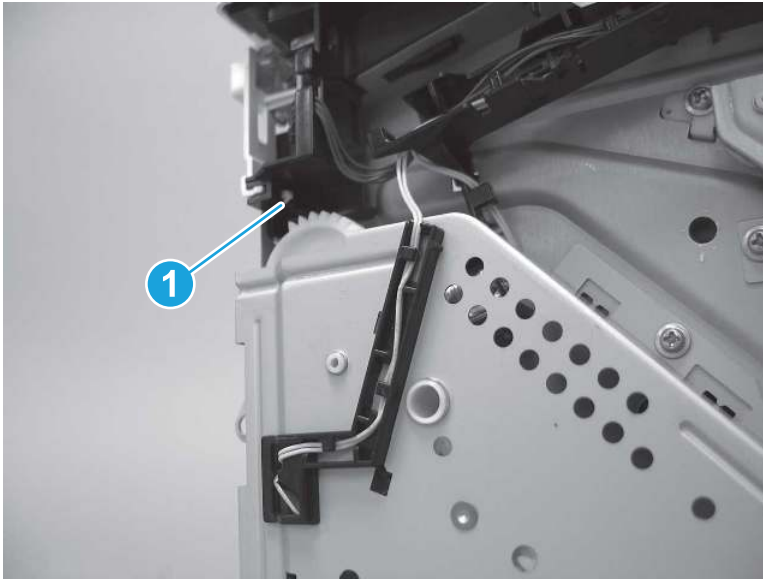


#### 4. Remove the power switch PCA

Follow these steps to remove the power switch PCA.

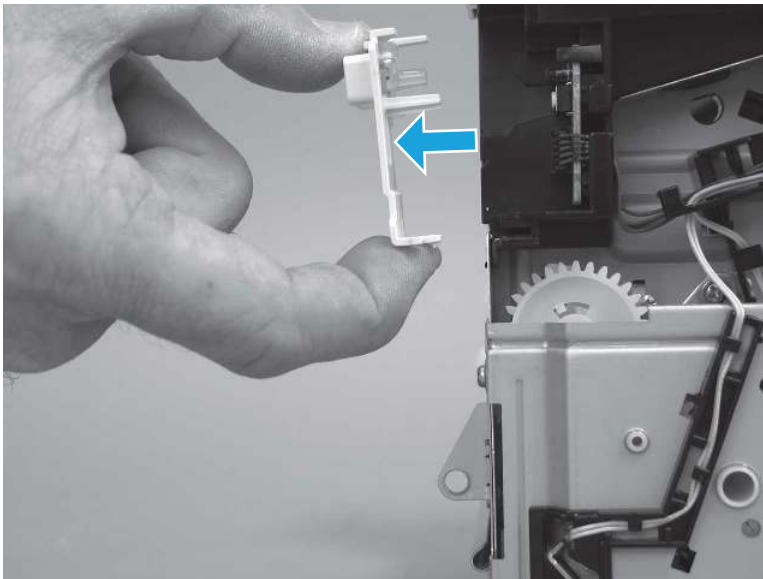
1. Release one tab (callout 1).

**Figure 5-384** Release one tab



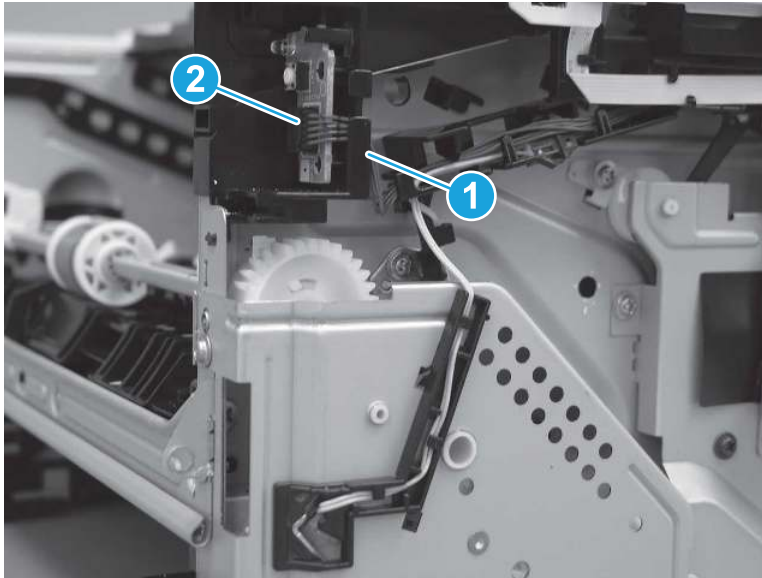
2. Remove the switch lever.

**Figure 5-385** Remove the switch lever



3. Release the wire harness from the guide (callout 1), and then disconnect one connector (callout 2).

**Figure 5-386 Disconnect one connector**

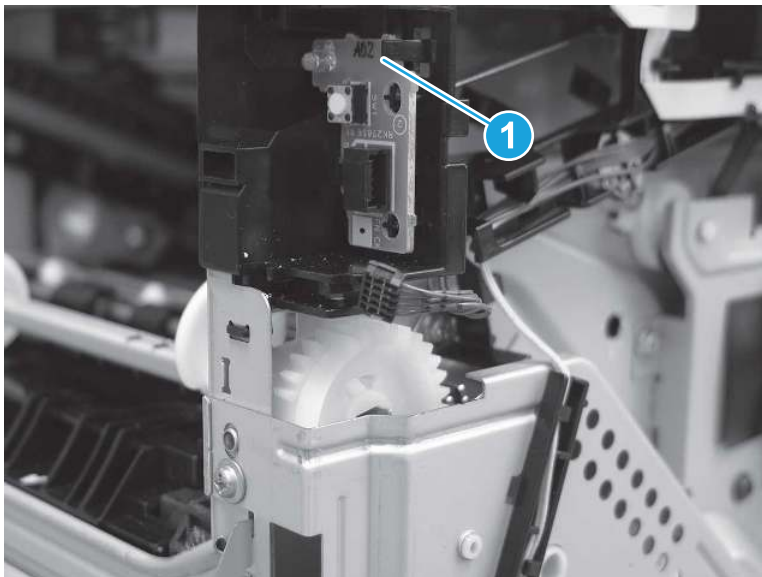


4. Release one tab (callout 1), and then remove the power switch PCA.

**CAUTION:** Do not damage the tab (callout 1) when releasing the it. The tab must snap over the PCA when it is reinstalled.

**Reinstallation tip:** The PCA must be securely installed in the holder. Make sure that the tab on the holder snaps in place over the edge of the PCA, and that the two alignment pins are installed in the holes on the PCA.

**Figure 5-387 Release one tab and remove the PCA**



## 5. Unpack the replacement assembly



Follow these steps to unpack the replacement assembly.


1. Dispose of the defective part.


 **NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>


2. Unpack the replacement part from the packaging.

 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Fax PCA and cable (MFP)

Learn how to remove and replace the fax printed circuit assembly (PCA).

 [View a video of how to remove and replace the fax PCA and cable.](#)


Mean time to repair: 12 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-30** Part information

Part number	Part description
W1A78-67906	Fax PCA kit (USA)
W1A78-67907	Fax PCA kit (EURO)

**Table 5-30** Part information (continued)

Part number	Part description
W1A78-67908	Fax PCA kit (Brazil)
W1A78-67909	Fax PCA kit (Philippines)

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner toner-cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

If possible, send a fax to the printer.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-388** Remove the tray






## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.

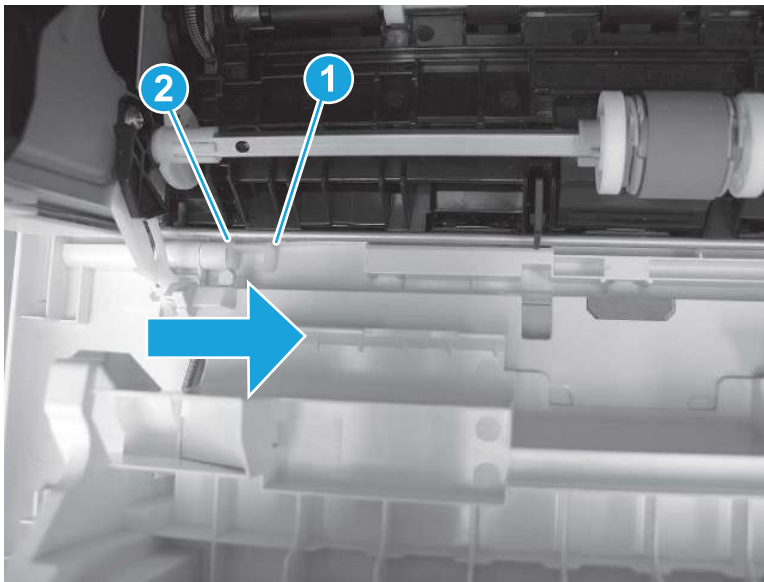
 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

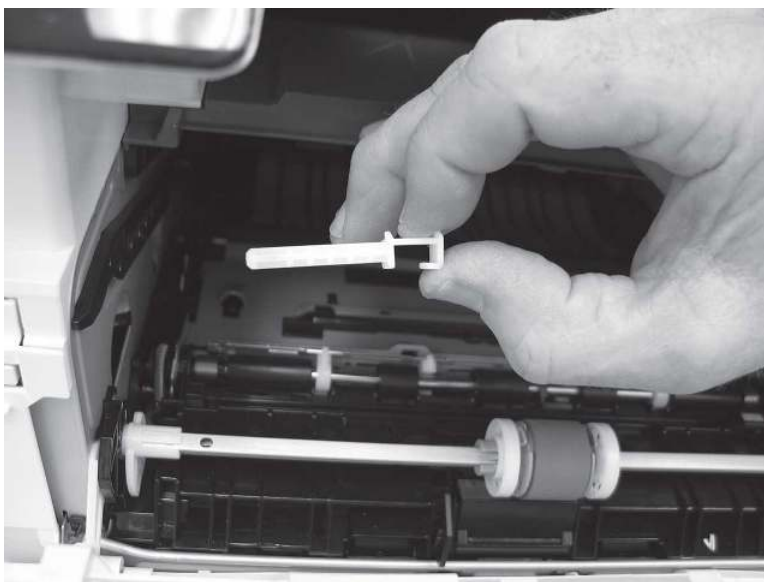
 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

**Figure 5-389** Release the support shaft



2. Remove the support shaft.

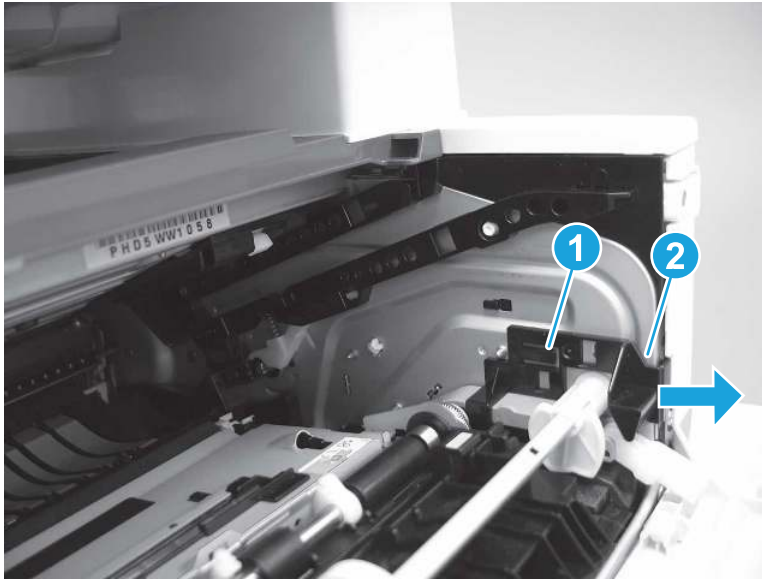
**Figure 5-390** Remove the support shaft



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

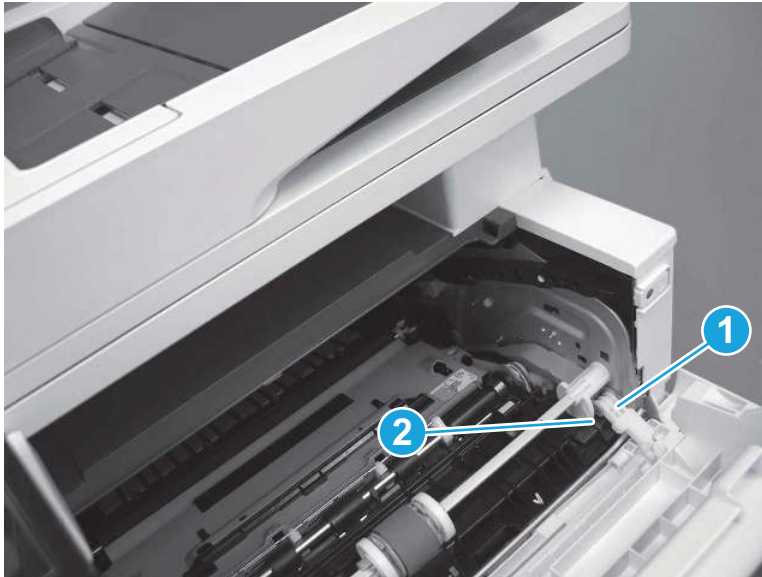
**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

**Figure 5-391 Remove the guide**



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.


**Figure 5-392 Release the pressure-release link**



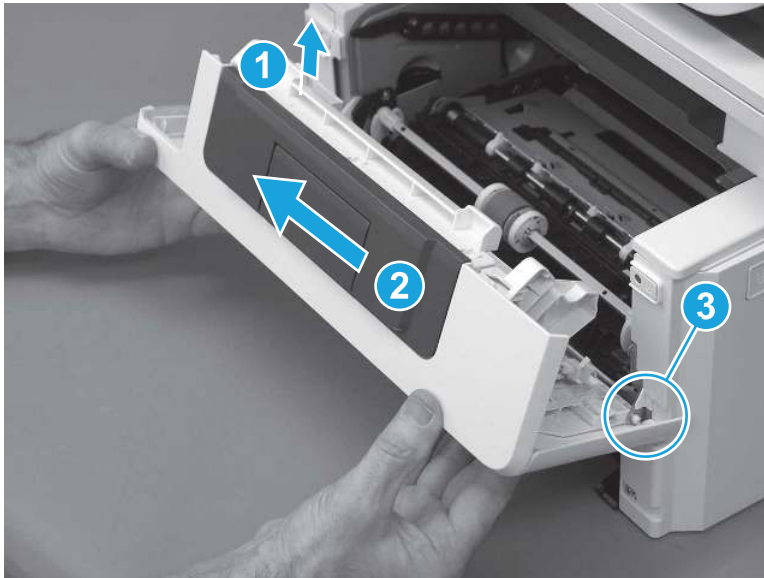
5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.



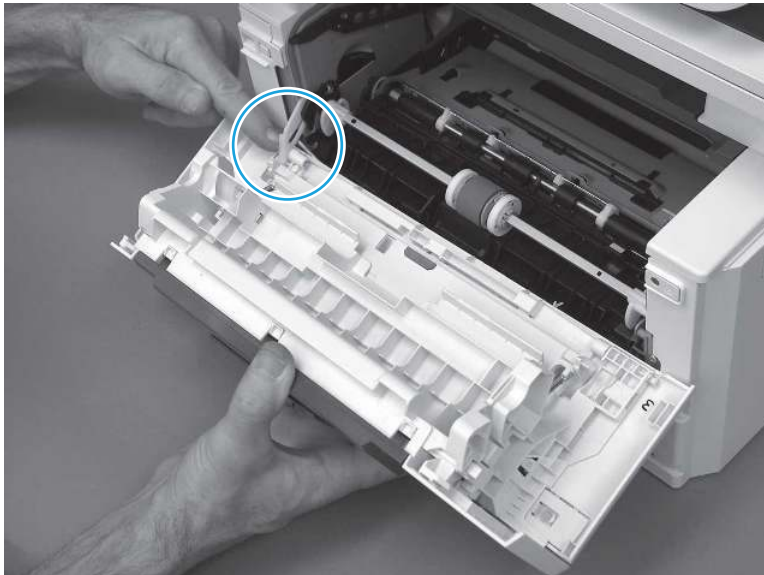
 **Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-393** Release the door



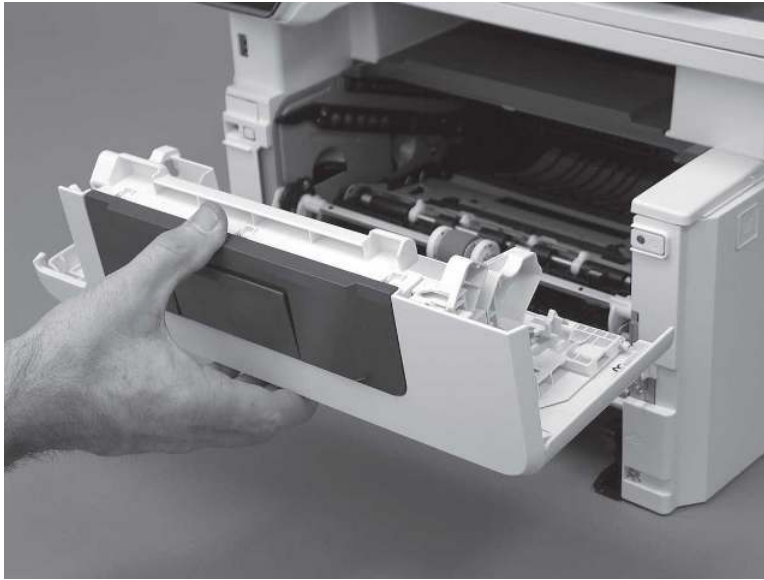
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-394** Release the left-side retainer arm



7. Remove the door.

**Figure 5-395** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

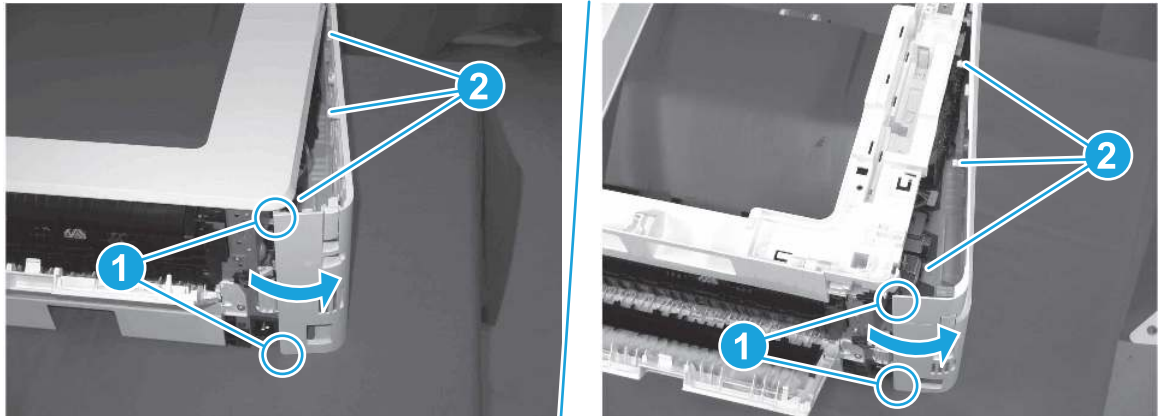
1. Remove one screw (callout 1).

**Figure 5-396** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-397** Release two bosses and three tabs

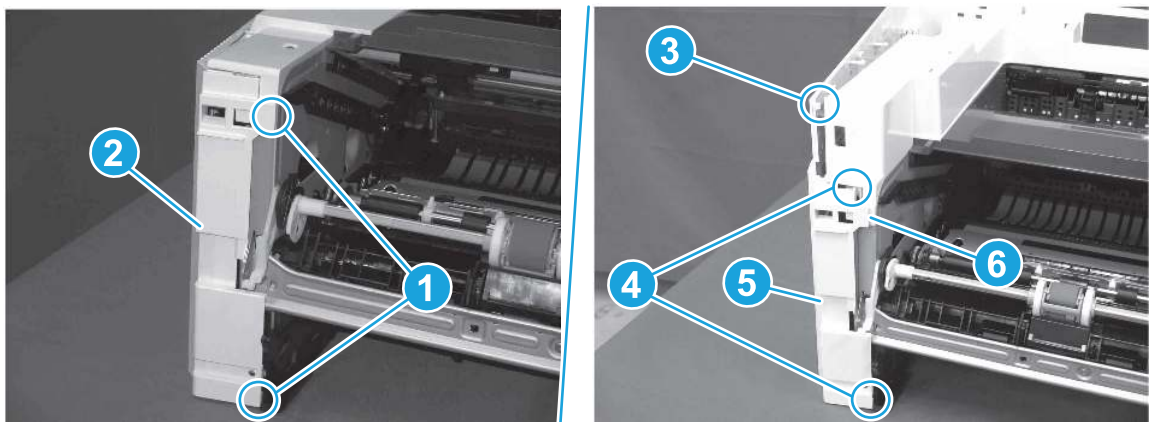


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-398** Remove the cover

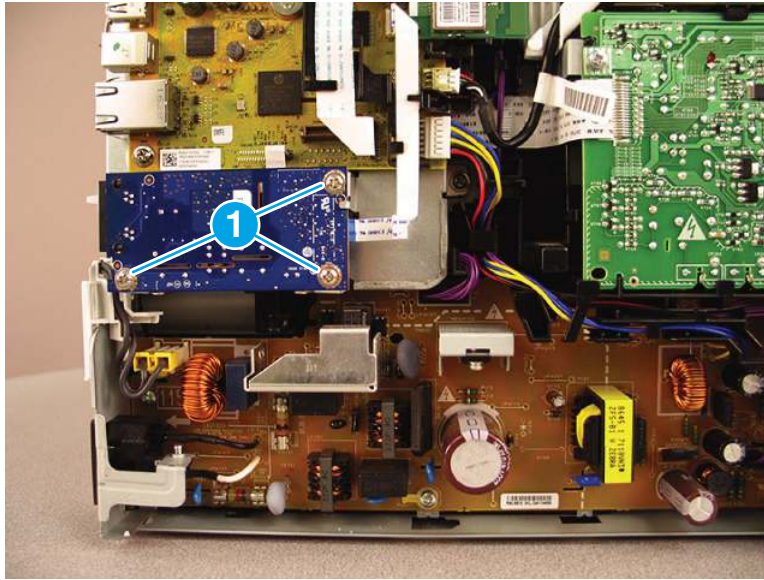


#### 4. Remove the fax PCA and cable (Fax models only)

Follow these steps to remove the fax PCA and cable (Fax models only).

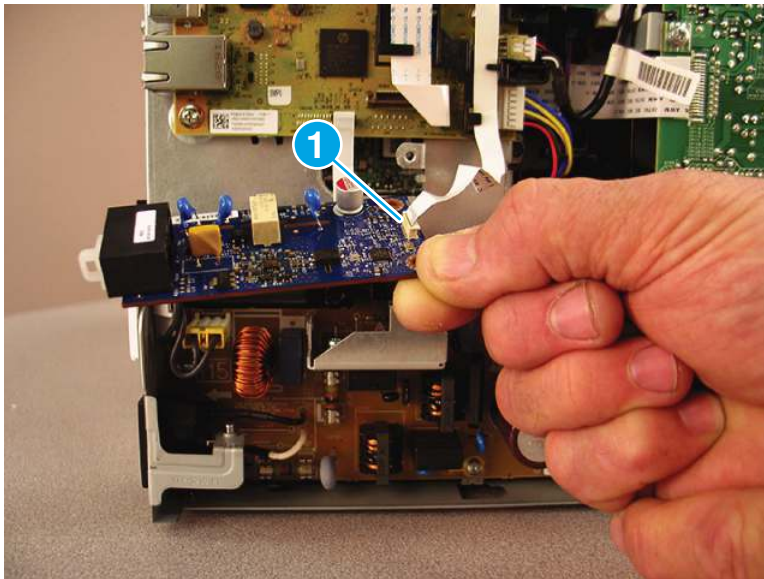
1. Remove three screws (callout 1).

**Figure 5-399** Remove three screws



2. Disconnect one FFC (callout 1), and then remove the fax PCA.

**Figure 5-400** Remove the PCA



## 5. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.






**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.

---


 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

---

### Removal and replacement: USB port and cable (MFP)

Learn how to remove and replace the USB port and cable.

Mean time to repair: 11 minutes


Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

---

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-31** Part information

Part number	Part description
5851-7008	USB A F panel mount to WTB 250mm (MFP)  <b>NOTE:</b> This is the USB port and cable located at the front of the printer under the control panel.

---

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length



## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner toner-cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print a job from the walkup USB PCA.

## Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-401** Remove the tray



## Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

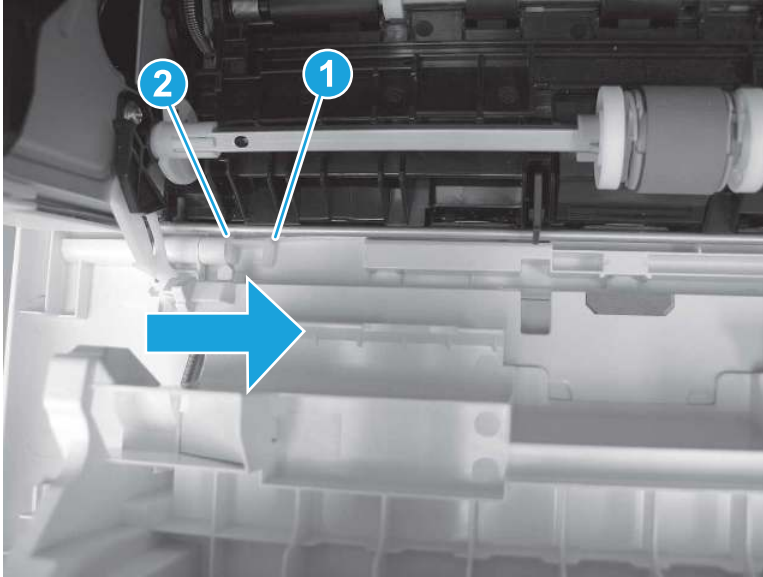
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

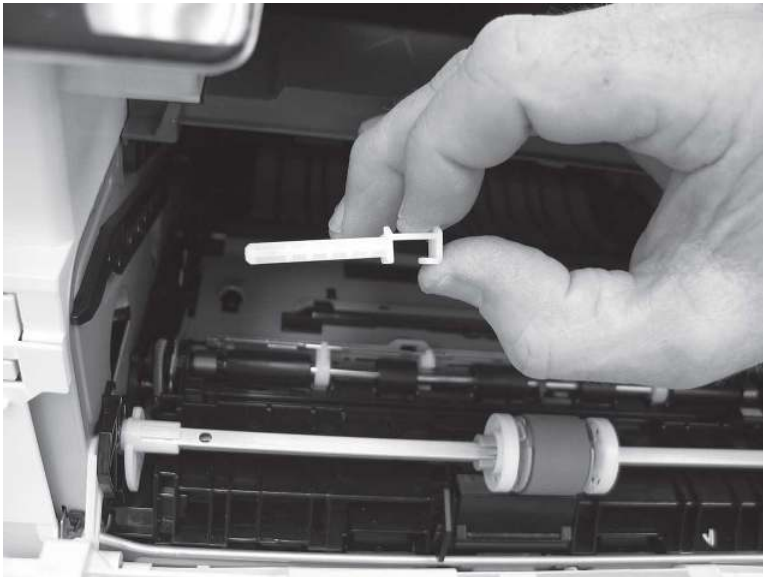
---

**Figure 5-402** Release the support shaft



2. Remove the support shaft.

**Figure 5-403** Remove the support shaft



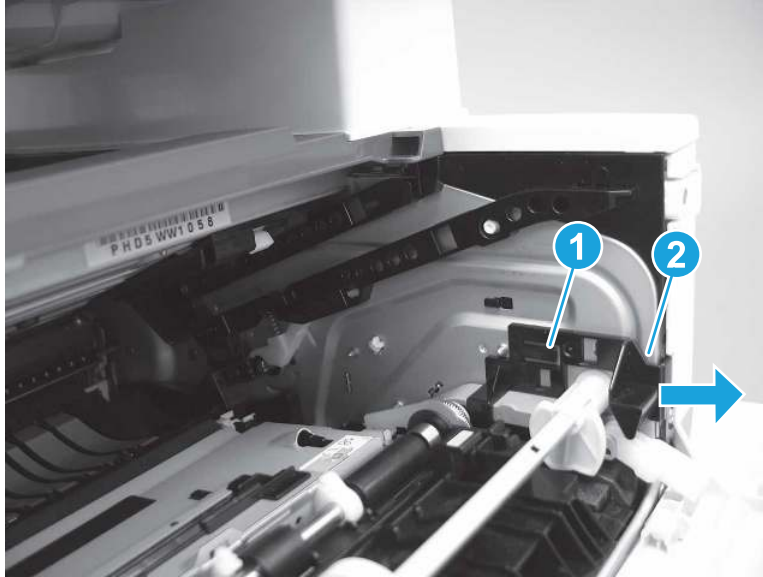
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

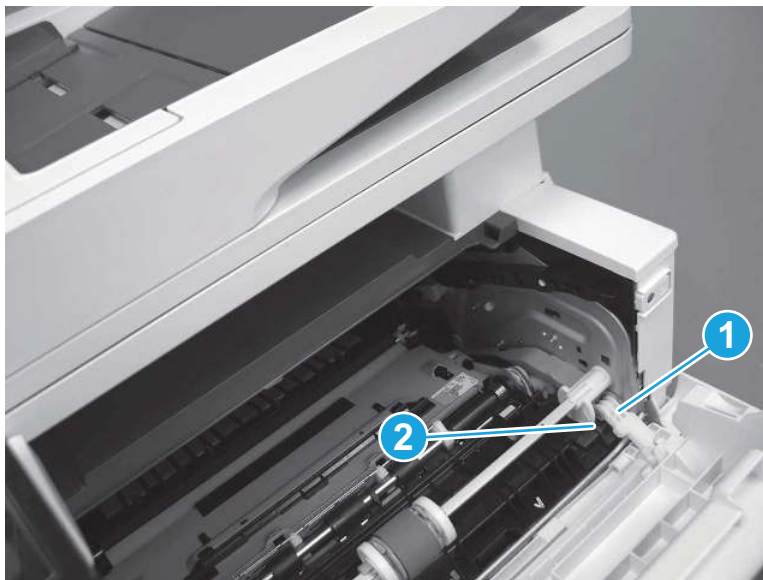
---

**Figure 5-404** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-405** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

---

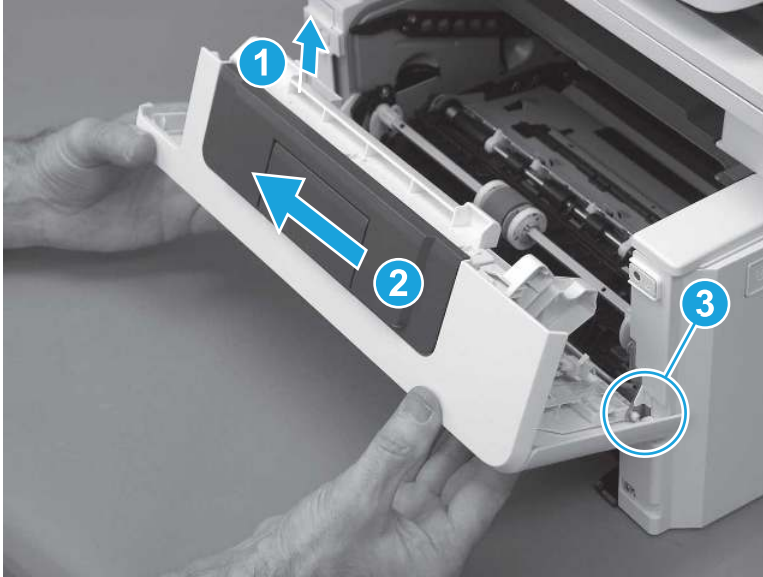
**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

---

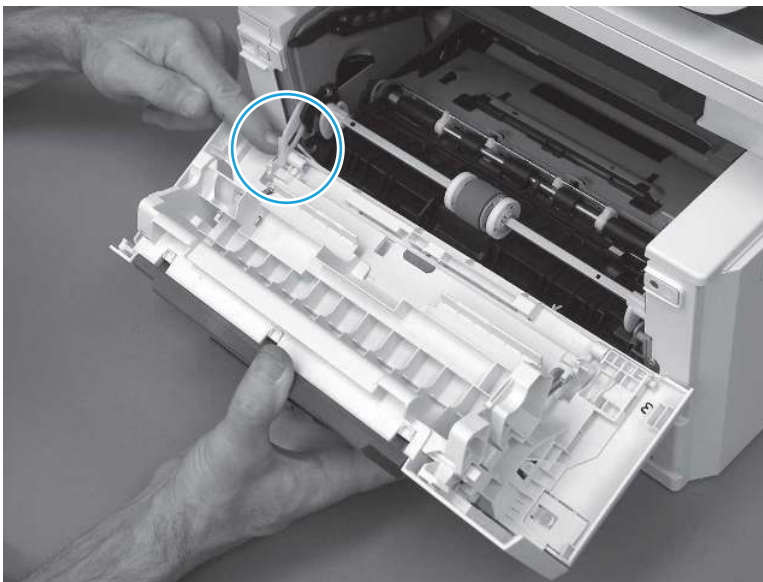


**Figure 5-406** Release the door



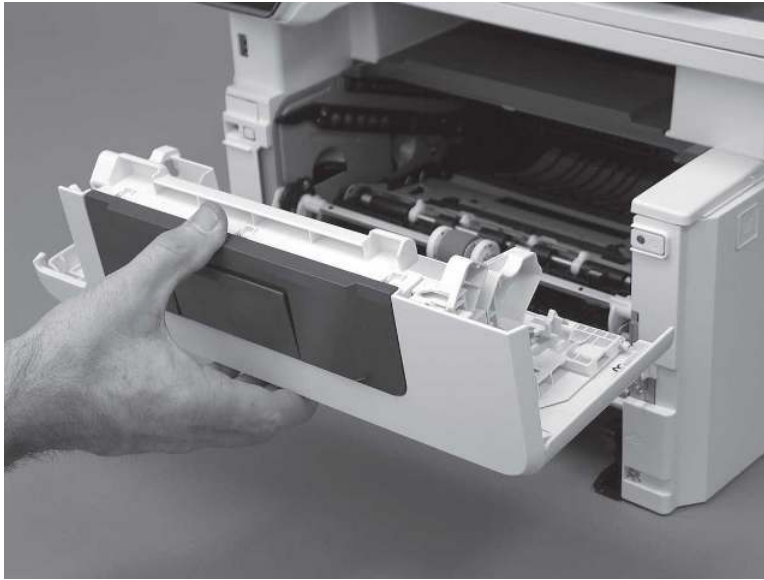
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-407** Release the left-side retainer arm



7. Remove the door.

**Figure 5-408** Remove the door



### Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

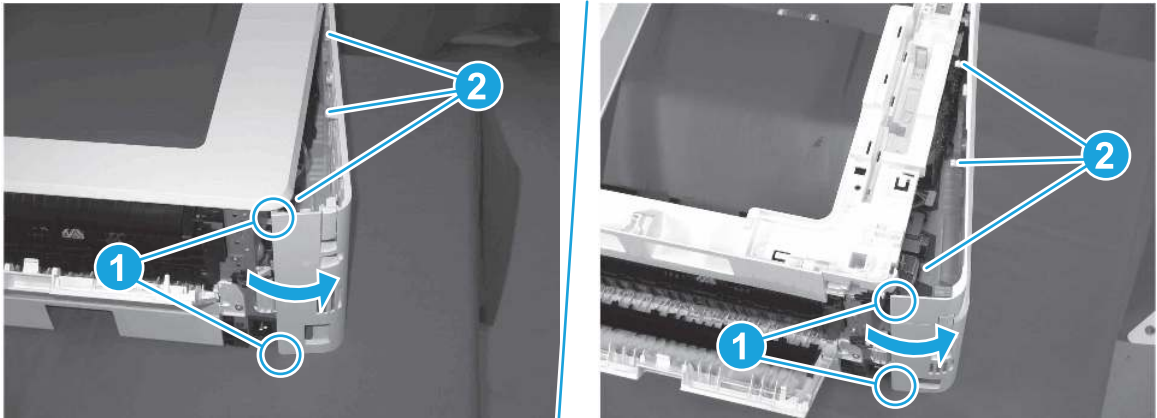
1. Remove one screw (callout 1).

**Figure 5-409** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

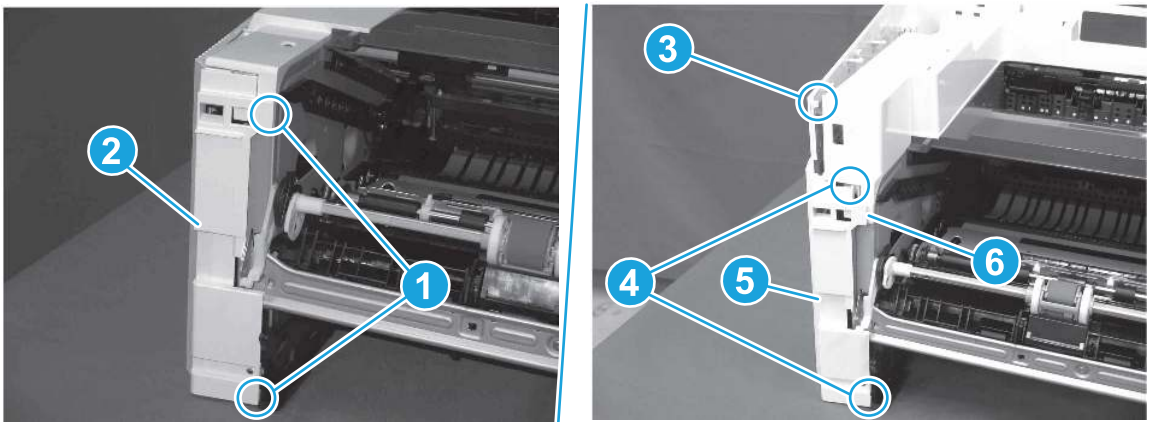
**Figure 5-410** Release two bosses and three tabs



3. At the front of the printer, do one of the following:
  - **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
  - **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-411** Remove the cover



### Remove the USB port and cable (MFP)

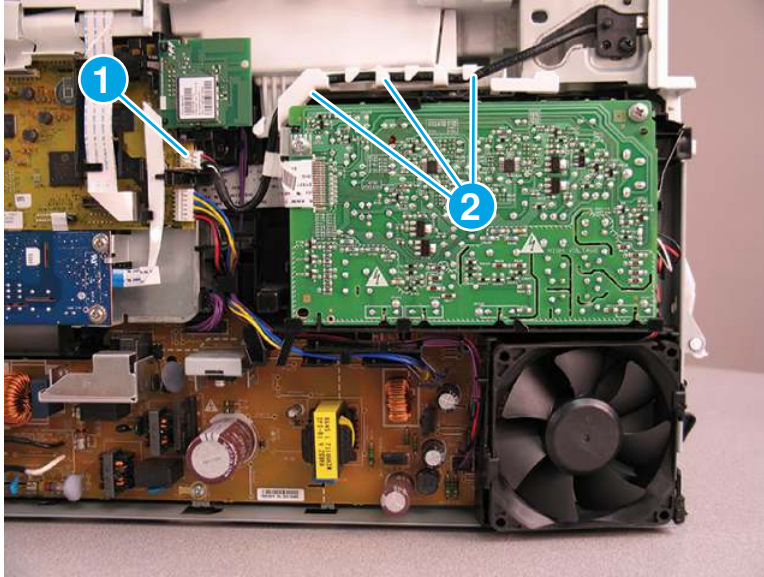
Follow these steps to remove the USB port and cable (MFP).

1. Disconnect one connector (callout 1), and then release the USB mute cable from the guide (callout 2).

**NOTE:** **4101-4104 wireless models only:** The wireless PCA antenna is installed in the same guide as the USB mute cable (callout 2). The antenna might need to be removed to access the USB mute cable and remove it.

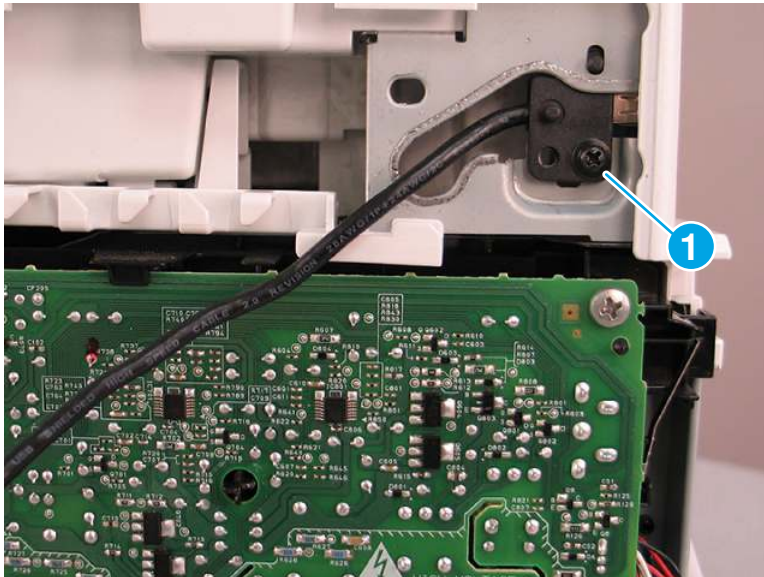
Do not damage the antenna when removing it. Make sure that the antenna is reinstalled in the guide when servicing is complete.

Figure 5-412 Disconnect one connector



2. Remove one screw (callout 1).

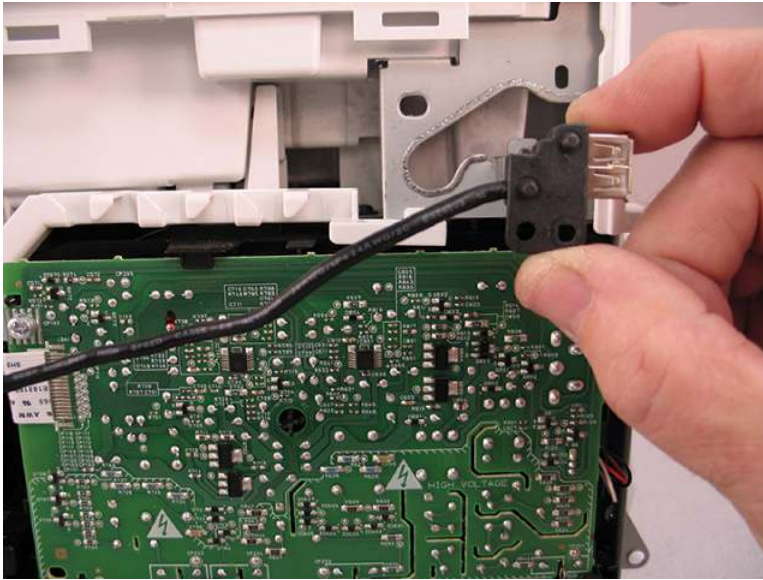
Figure 5-413 Remove one screw





3. Remove the mute USB PCA.

**Figure 5-414** Remove the mute USB PCA



### Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Wireless PCA

Learn how to remove and replace the wireless PCA.

Mean time to repair: 11 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-32 Part information**

Part number	Part description
0960-4025	Wireless module (Ultra)
W1A30-40001	Bracket-WiFi

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner toner-cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print a job from the walkup USB PCA.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-415** Remove the tray



## 2. Remove the cartridge door assembly


Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

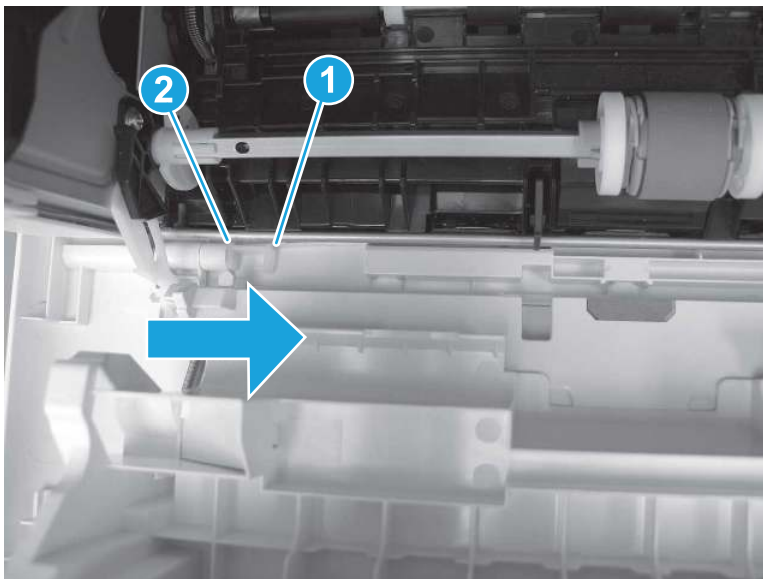
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

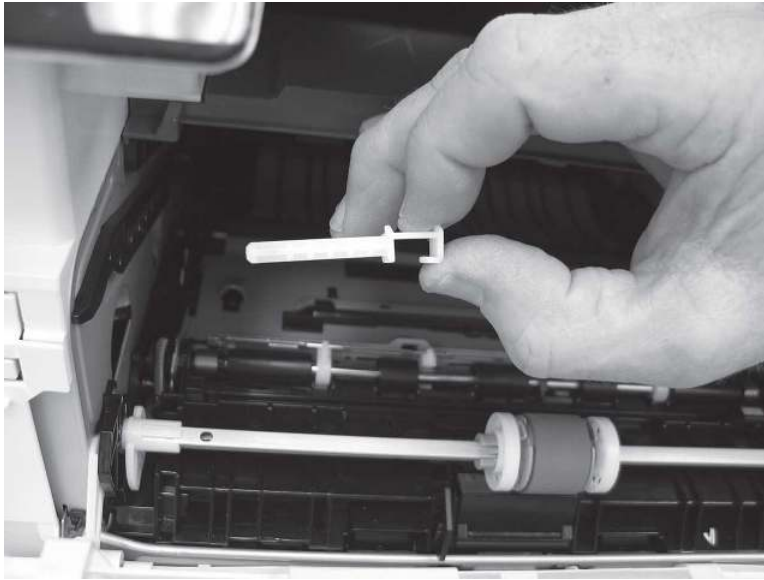
---

**Figure 5-416** Release the support shaft



2. Remove the support shaft.

**Figure 5-417** Remove the support shaft



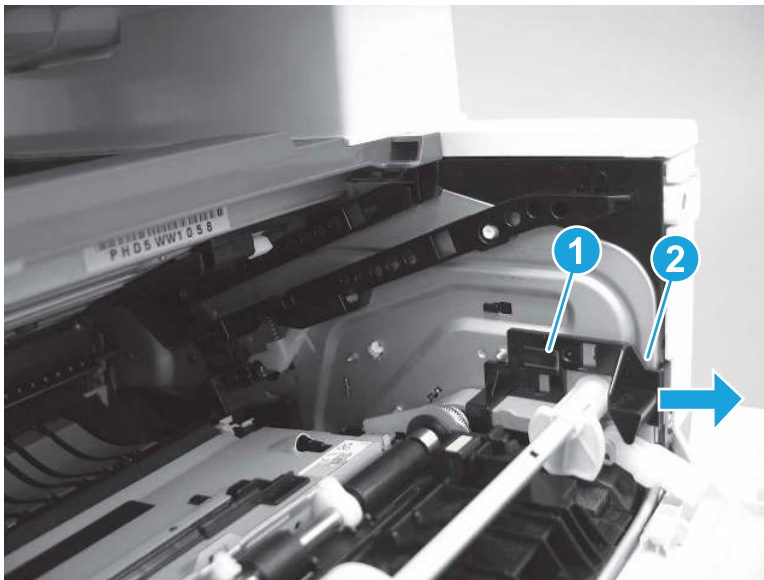
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

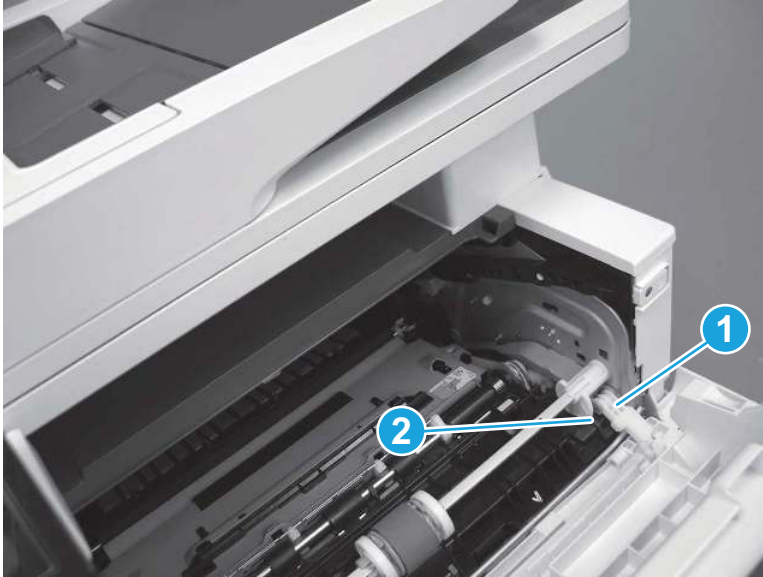
**Figure 5-418** Remove the guide





4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-419** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

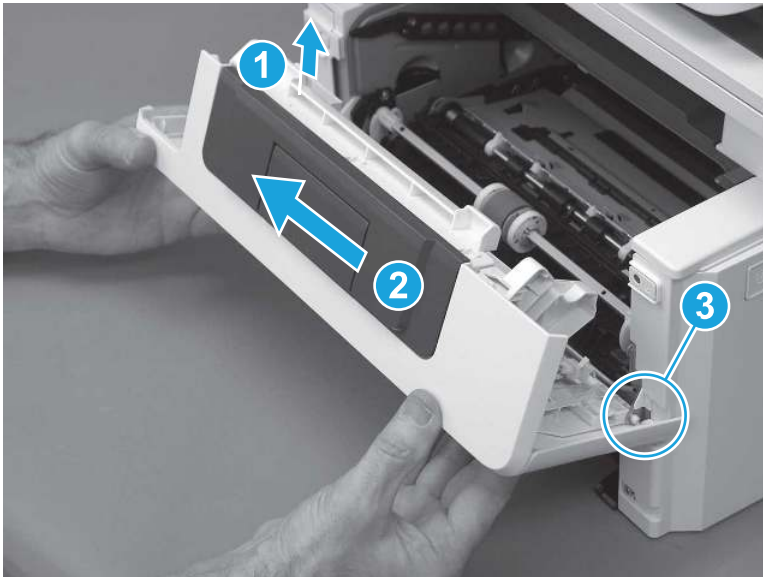
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

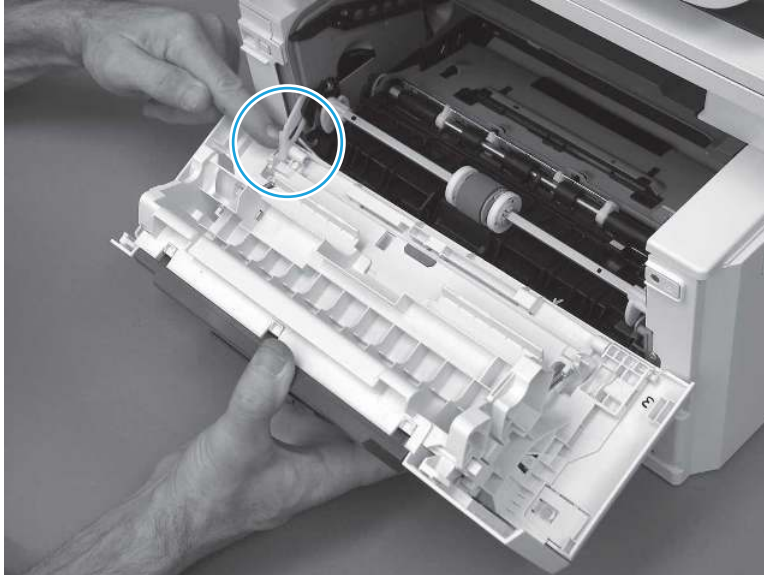
---

**Figure 5-420** Release the door



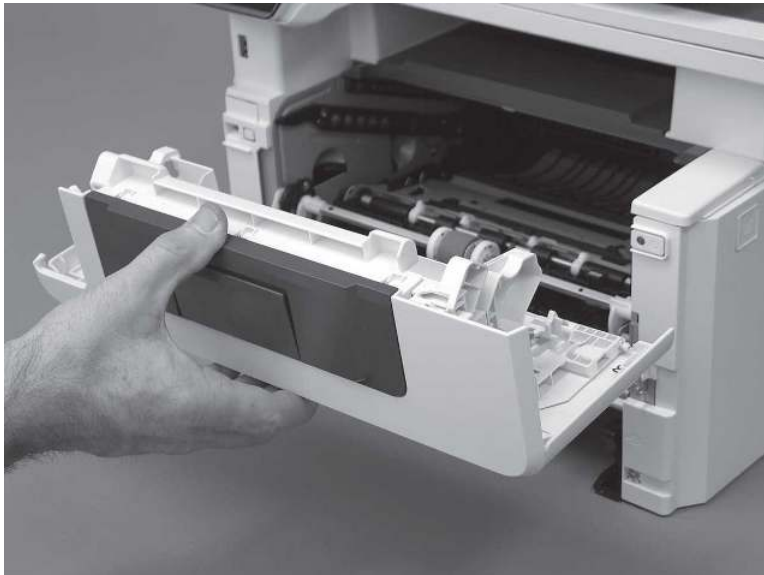
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-421** Release the left-side retainer arm



7. Remove the door.


**Figure 5-422** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

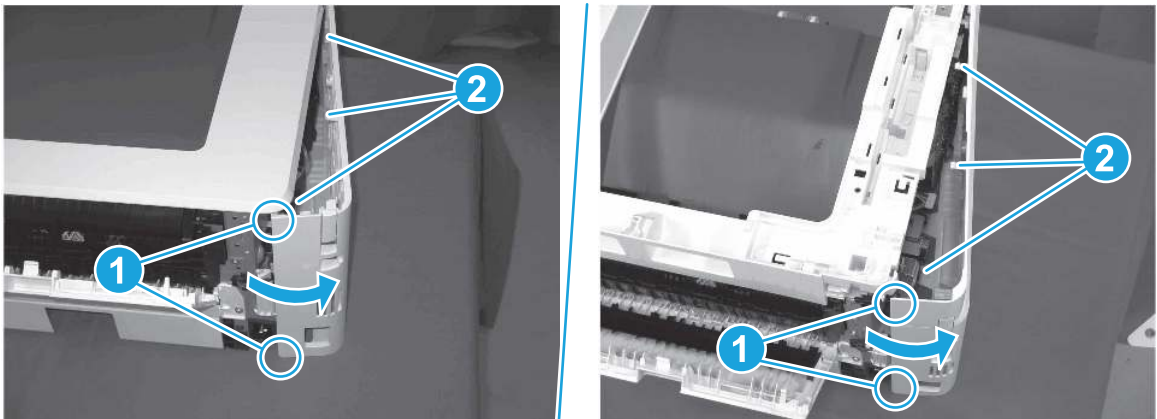
1. Remove one screw (callout 1).

**Figure 5-423 Remove one screw**



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-424 Release two bosses and three tabs**

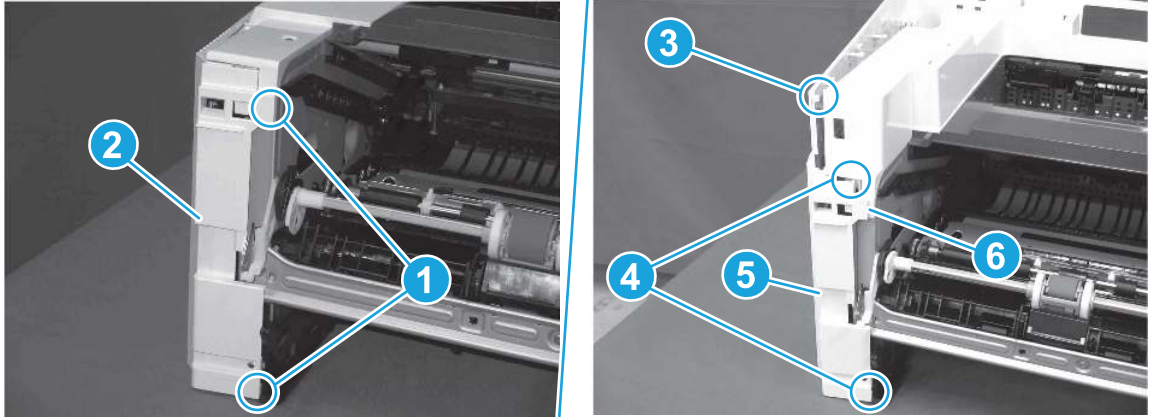


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

Figure 5-425 Remove the cover




#### 4. Remove the wireless PCA

Follow these steps to remove the wireless PCA.

1. Do one of the following:

- **SFP only:** Release two tabs (callout 1).

 **NOTE:** Disconnect the WiFi antenna (callout 2) before releasing the tabs.

- **MFP only:** Release one tab (callout 3).


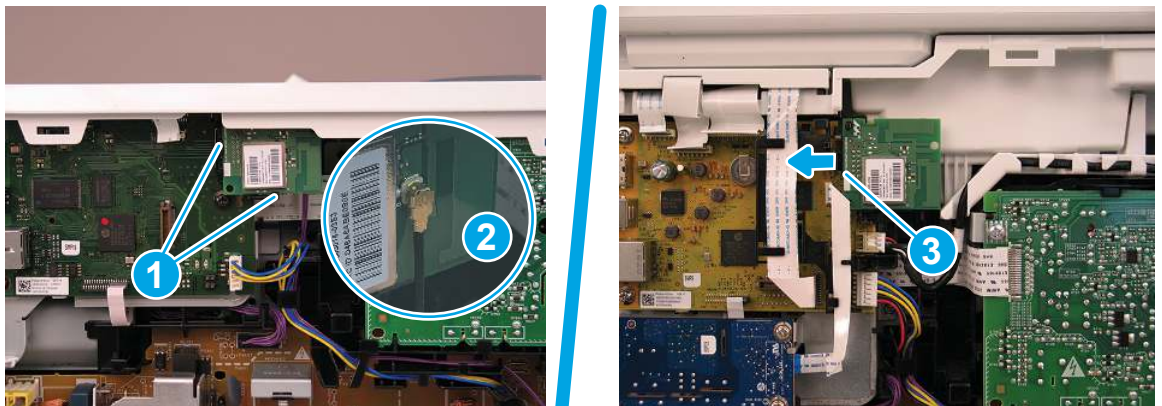
 **TIP:** Push the tab to the left to release it.

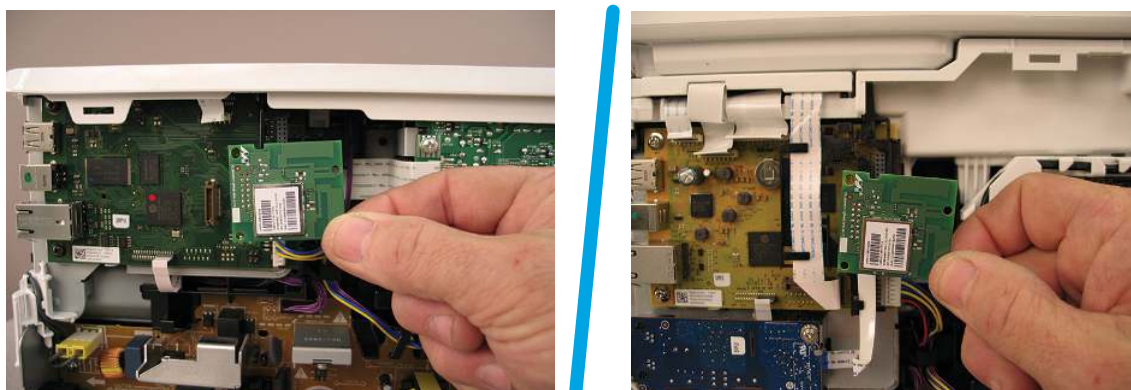
Figure 5-426 Release one or two tabs





2. Carefully pull the wireless PCA straight off of the formatter PCA to remove it.

**Figure 5-427 Remove the wireless PCA**



## 5. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Formatter PCA

Learn how to remove and replace the formatter printed circuit assembly (PCA).



[View a video of how to remove and replace the formatter PCA.](#)

Mean time to repair: 14 minutes

Service level: Easy

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

**⚠ CAUTION:** Under **NO** circumstances should a formatter from a different printer be installed during the repair or troubleshooting processes. The formatter and the DC controller (DCC) are paired and a **replacement** formatter (or DCC) requires using a special HP Android application to make them compatible.

**Replacement formatter installations only:** *DO NOT* skip this step. See [HP Onsite Repair Application on page 527](#) for information about how to pair a formatter and DC controller.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-33 Part information (1 of 2)**

Part number	Part description	Part number	Part description
<b>2Z599-67002</b>	Formatter PCA 4001n/4001ne	<b>2Z609-67002</b>	Formatter PCA 4003dn
<b>2Z600-67002</b>	Formatter PCA 4001dn/4001dne	<b>2Z610-67002</b>	Formatter PCA 4003dw
<b>2Z601-67002</b>	Formatter PCA 4001dw/4001dwe	<b>2Z611-67002</b>	Formatter PCA 4003n
<b>2Z605-67002</b>	Formatter PCA 4002dn/4002dne	<b>2Z613-67002</b>	Formatter PCA 4004d
<b>2Z606-67002</b>	Formatter PCA 4002dw/4002dwe	<b>2Z614-67002</b>	Formatter PCA 4004dn
<b>2Z607-67002</b>	Formatter PCA 4002d	<b>2Z615-67002</b>	Formatter PCA 4004dw

**Table 5-34 Part information (2 of 2)**

Part number	Part description	Part number	Part description
<b>2Z618-67002</b>	Formatter PCA 4101fdn/4101fdne	<b>2Z627-67002</b>	Formatter PCA 4103dw
<b>2Z619-67002</b>	Formatter PCA 4101fdw/4101fdwe	<b>2Z628-67002</b>	Formatter PCA 4103fdn
<b>2Z620-67002</b>	Formatter PCA 4101dw/4101dwe	<b>2Z629-67002</b>	Formatter PCA 4103fdw
<b>2Z622-67002</b>	Formatter PCA 4102dw/4102dwe	<b>2Z632-67002</b>	Formatter PCA 4104dw
<b>2Z623-67002</b>	Formatter PCA 4102fdn	<b>2Z633-67002</b>	Formatter PCA 4104fdn
<b>2Z624-67002</b>	Formatter PCA 4102fdw/4102fdwe	<b>2Z634-67002</b>	Formatter PCA 4104fdw

## Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner toner-cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-428** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.



---

**NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).



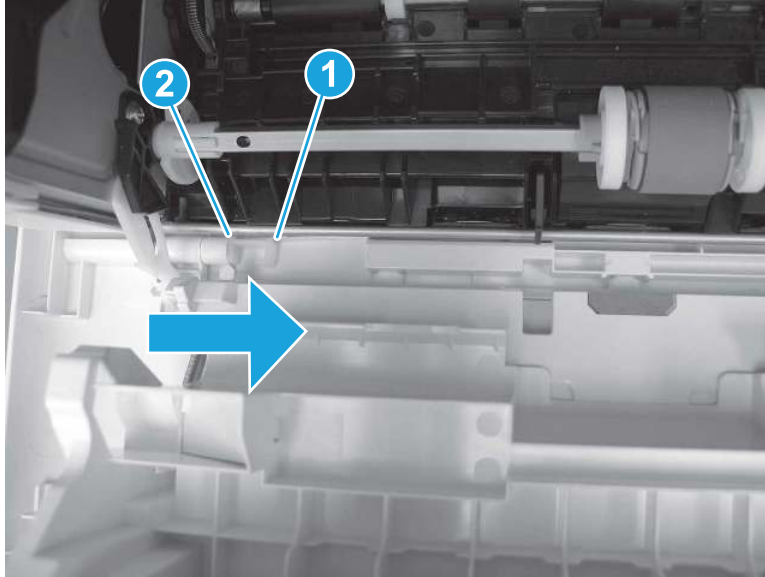
**TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.



**Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

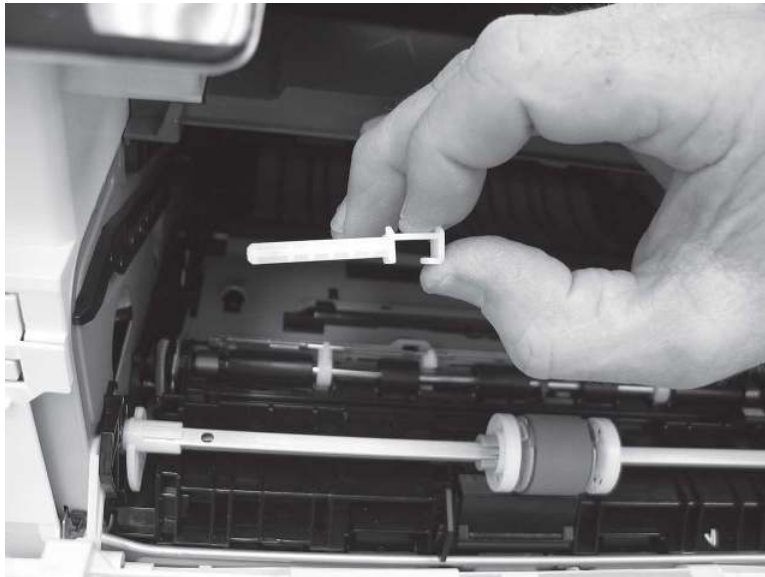
---

**Figure 5-429** Release the support shaft



2. Remove the support shaft.

**Figure 5-430** Remove the support shaft



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

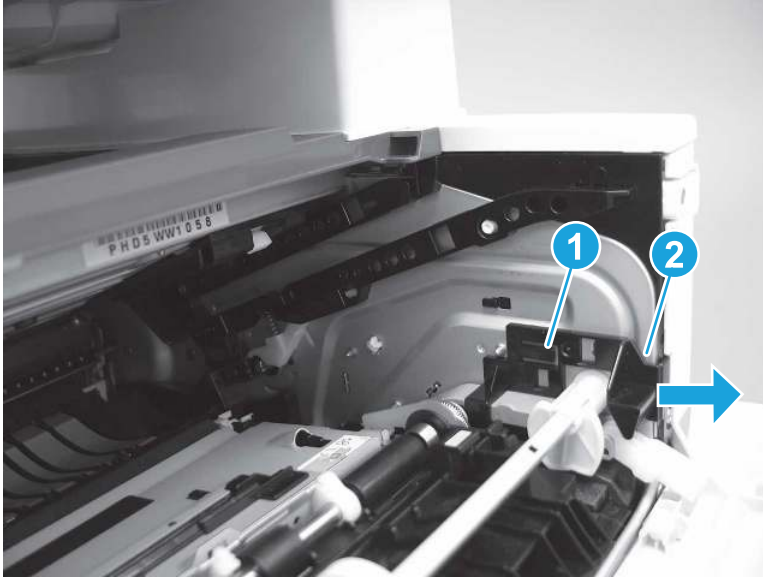
---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

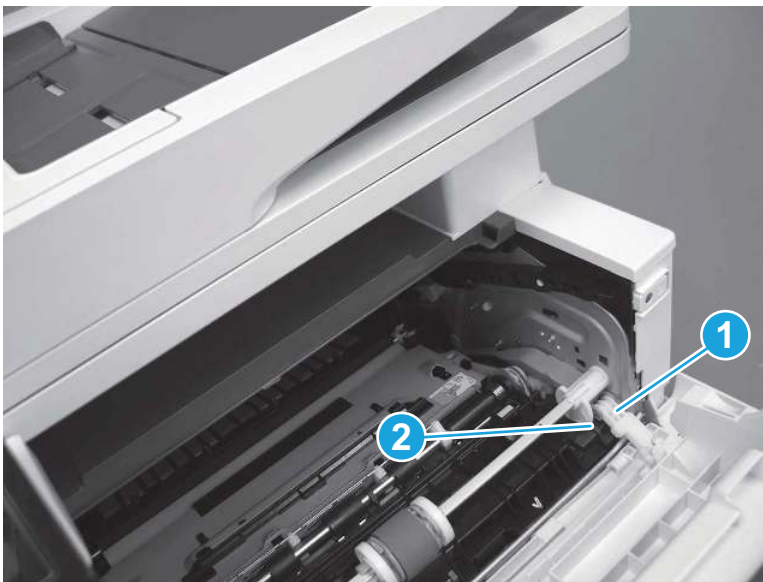


**Figure 5-431** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-432** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

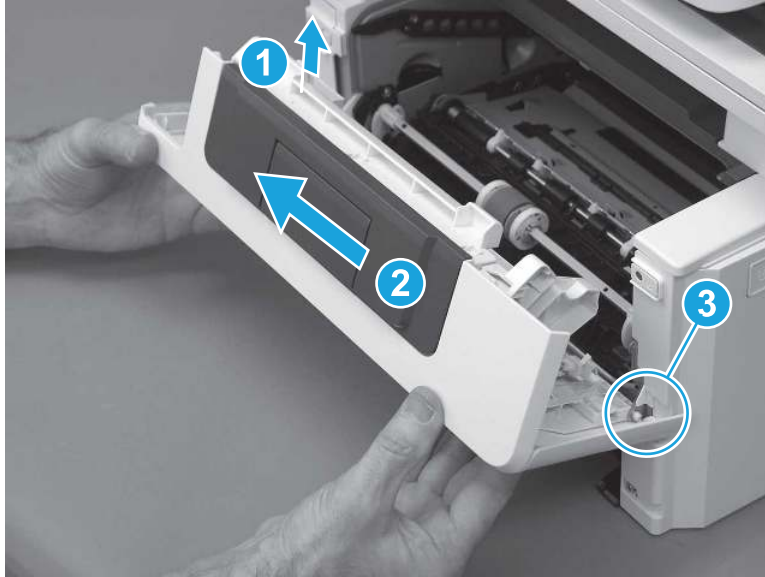
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

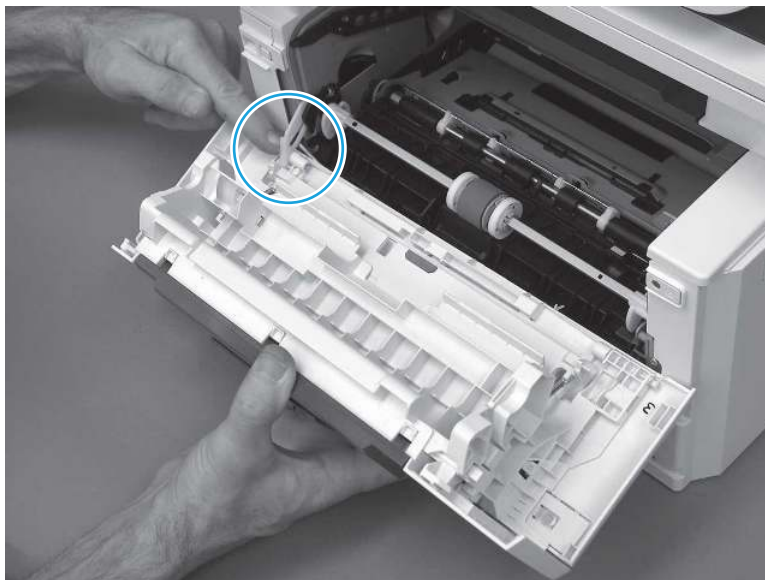
---

**Figure 5-433** Release the door



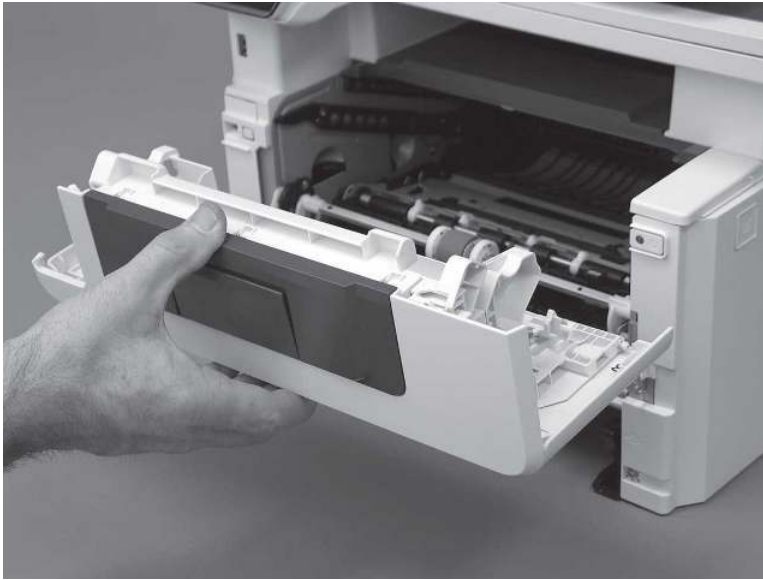
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-434** Release the left-side retainer arm



7. Remove the door.


**Figure 5-435** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

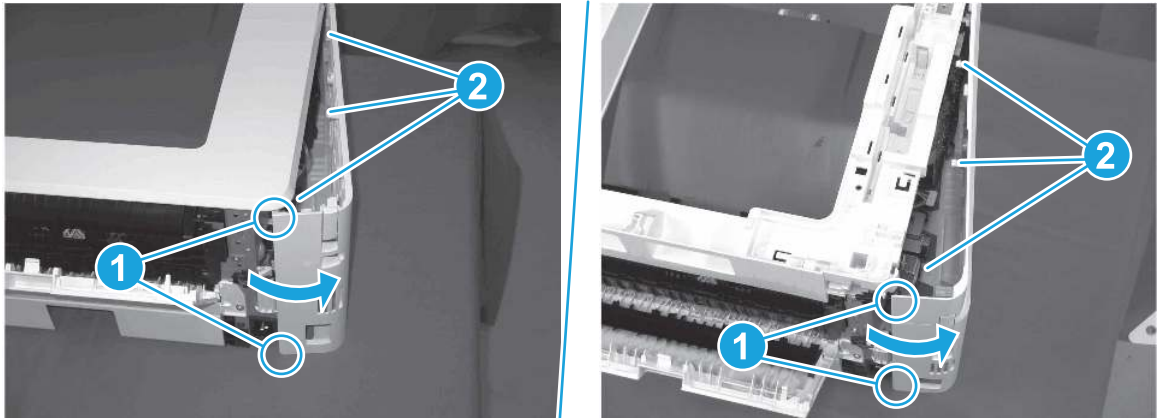
1. Remove one screw (callout 1).

**Figure 5-436** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

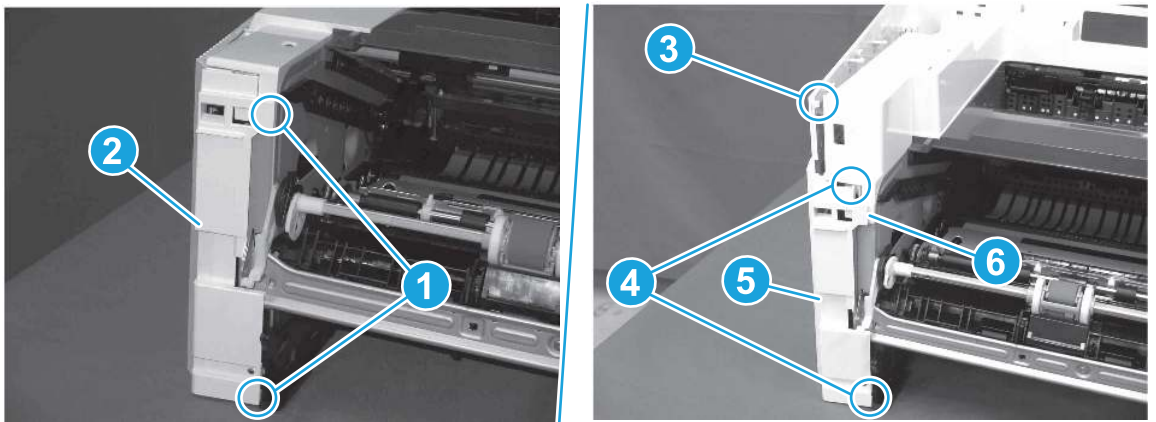
**Figure 5-437** Release two bosses and three tabs



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-438** Remove the cover



#### 4. Remove the formatter PCA


Follow these steps to remove the formatter PCA.

**CAUTION:** Under **NO** circumstances should a formatter from a different printer be installed during the repair or troubleshooting processes. The formatter and the DC controller (DCC) are paired and a **replacement** formatter (or DCC) requires using a special HP Android application to make them compatible.

**Replacement formatter installations only:** *DO NOT* skip this step. See [HP Onsite Repair Application on page 527](#) for information about how to pair a formatter and DC controller.

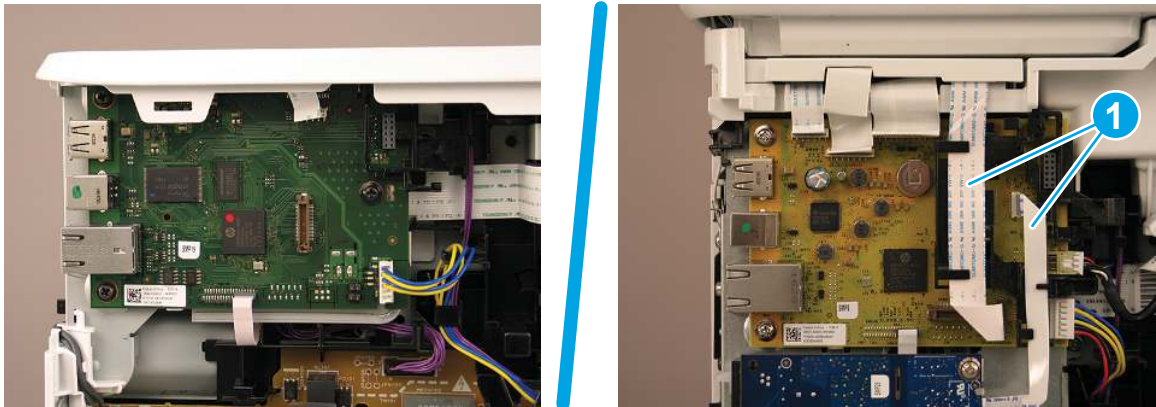


1. Disconnect all of the connectors and flat-flexible cables (FFCs).


 **IMPORTANT:** Take note of any empty connectors before removing the formatter PCA.

 **NOTE:** **MFP only:** Release two flat-flexible cables (FFCs) from the guides (callout 1).

**Figure 5-439** Disconnect all of the connectors and FFCs

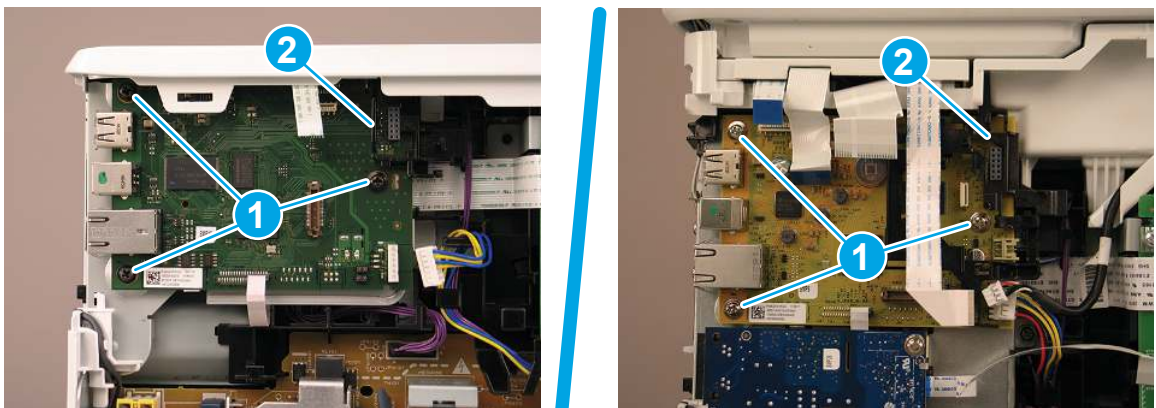


2. Remove three screws (callout 1), and then remove the formatter PCA.

 **Reinstallation tip:** If a replacement formatter is installed and the printer is a wireless model, make sure that the wireless PCA mounting holder ( callout 2) is transferred to the replacement formatter.

If the formatter PCA thermal pad on the back side of the PCA is broken or damaged, replace the pad (5851-6550).


**Figure 5-440** Remove the formatter PCA



## 5. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.


1. Dispose of the defective part.


 **NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.

---


**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

**IMPORTANT:**  Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

**NOTE:**  If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---

3. To install an assembly, reverse the removal steps.

**NOTE:**  When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

---


## 6. HP Onsite Repair Application

This topic describes the steps to pair a formatter and DC controller (DCC) / Engine controller unit (ECU).

When a formatter or DCC/ECU is replaced a pairing operation must be completed to make the printer functional. Use the HP Onsite Repair Application (App) to complete this procedure.

---

**CAUTION:**  Only install a new (unpaired) **Service Formatter PCA** or **Service DC controller (DCC) / Engine controller unit (ECU)** when a replacement PCA is required.

**IMPORTANT:**  If both a formatter **and** DCC/ECU need to be replaced, they must be installed and paired sequentially (one at a time). Do not replace both PCAs at the same time. Always replace one PCA, perform the pairing operation, and then replace and pair the second PCA.

---

To use the HP Onsite Repair App, first review the following:

- [Hardware requirements for using the HP Onsite Repair App on page 527](#)
- [Create an HP Onsite Repair App account or sign-in on page 528](#)

### Hardware requirements for using the HP Onsite Repair App

The repair application has the following hardware requirements:


- Android device (Android OS 7.1 or later)



- Internet access



- USB OTG cable

 **IMPORTANT:** Make sure that the OTG cable connector fits the Android device USB connector.

- Android device connector (Micro-USB or Type-C; callout 1)
- Type-A USB printer cable connector (callout 2)




- Standard A-B USB printer cable



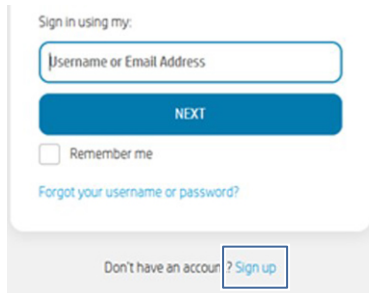
## Create an HP Onsite Repair App account or sign-in

The HP Onsite Repair App requires an HPID account.

1. If you do not already have an HPID account, create one now.

 **NOTE:** If you already have an HPID account, skip this step and go to **Step 2**.

- a. Open the HP Onsite Repair App, and then select the [Sign up](#) item.



Sign in using my:

Username or Email Address

NEXT

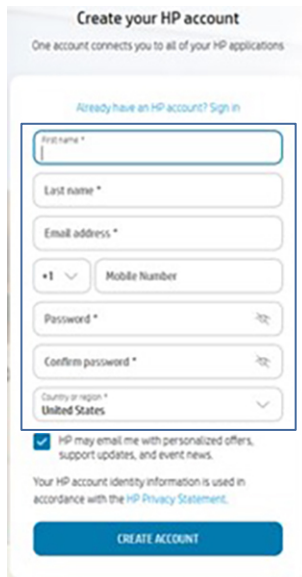
Remember me

[Forgot your username or password?](#)

Don't have an account? [Sign up](#)

b. On the [Sign up](#) screen, type in the following account information:

- First and last name
- Email address (no need to pre-register your email account)
- Mobile phone number
- Password and password confirmation
- Change the default country or region if necessary



Create your HP account

One account connects you to all of your HP applications

[Already have an HP account? Sign in](#)

First name \*

Last name \*

Email address \*

+1 Mobile Number

Password \*

Confirm password \*

Country or region \*  
United States

HP may email me with personalized offers, support updates, and event news.

Your HP account identity information is used in accordance with the [HP Privacy Statement](#).

CREATE ACCOUNT

c. Select the [CREATE ACCOUNT](#) button to create the user account.



**Create your HP account**  
One account connects you to all of your HP applications

Already have an HP account? Sign in

First name \*

Last name \*

Email address \*

+1 Mobile number

Password \*

Confirm password \*

Country or region \*  
United States

HP may email me with personalized offers, support updates, and event news.

Your HP account identity information is used in accordance with the [HP Privacy Statement](#).

CREATE ACCOUNT

2. Open the HP Onsite Repair App, and then do the following:
  - a. At the sign-in screen, enter your user-name or email address, and then select the **NEXT** button.

Sign in using my:

Username or Email Address

NEXT

Remember me

[Forgot your username or password?](#)

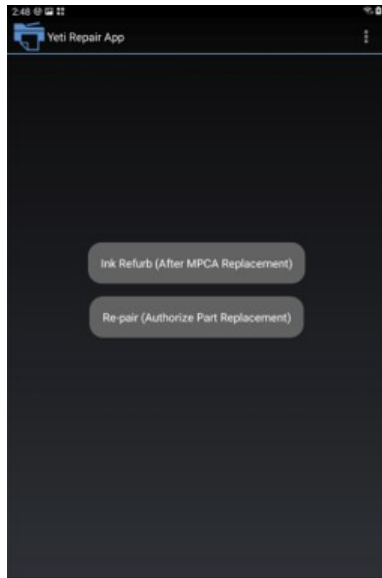
Don't have an account? [Sign up](#)

- b. From the HP Onsite Repair App operations screen, you can begin the formatter and DCC/ECU pairing process.

The app can only perform a formatter and DCC/ECU pairing operation. There is no need for disassociating the printer from the HP account as the customer receives the same printer back after servicing.

**IMPORTANT:** If the printer was previously setup and claimed on the HP portal (on-boarded), a printer user or administrator must complete the on-boarding process again. Previous on-board information is not retained when using the HP Onsite Repair App to pair a formatter and DCC/ECU.

On-boarding is optional and only needed if the printer was previously on-boarded.



### Step 1 - HP Onsite Repair App: Pairing type identification

Follow these steps to identify the type of formatter and DCC / ECU pairing required.

**CAUTION:** Only install a new (unpaired) **Service Formatter PCA** or **Service DC controller (DCC) / Engine controller unit (ECU)** when a replacement PCA is required.

For a replacement assembly, do not install a previously used (paired) PCA.

1. Use the instructions in the printer *Service Manual* to remove and replace either the formatter or DCC/ECU.

**IMPORTANT:** If both a formatter **and** DCC/ECU need to be replaced, they must be installed and paired sequentially (one at a time). Do not replace both PCAs at the same time. Always replace one PCA, perform the pairing operation, and then replace and pair the second PCA.

2. Do one of the following:

- **Formatter replacement**

- a. The message **Initializing**, a **Language** prompt, or [hpsmart.com/setup](https://hpsmart.com/setup) appears on the control-panel display.

**NOTE:** If an error message appears, make sure that the replacement formatter is an unused brand-new **Service Formatter PCA**.

Do not install replacement previously used PCAs (paired) in this printer.

- b. Go to *Step 2 - HP Onsite Repair APP: Prepare a formatter for pairing*.

- **DCC/ECU replacement**

- a. The message **Ready** appears on the control-panel display. However, the repair process is **not** complete.

**NOTE:** If an error message appears, make sure that the replacement DCC/ECU is an unused brand-new **Service DC controller (DCC) / Engine controller unit (ECU)**.


Do not install replacement previously used PCAs (paired) in this printer.


---

- b. Go to ***Step 3 - HP Onsite Repair App: Pairing operation.***

## Step 2 - HP Onsite Repair App: Prepare a formatter for pairing


Follow these steps to prepare a formatter for pairing.

 **IMPORTANT:** If both a formatter **and** DCC/ECU need to be replaced, they must be installed and paired sequentially (one at a time). Do not replace both PCAs at the same time. Always replace one PCA, perform the pairing operation, and then replace and pair the second PCA.

 **NOTE:** If a formatter is **not** being paired, skip this step. Go to ***Step 3 - HP Onsite App: Pairing operation.***

---

1. When a replacement formatter is installed, the printer serial number must be configured on the formatter before pairing.
  - a. Use the printer serial number found on a label adhered to the printer.
  - b. Use the control panel to access the **Service Menu > System Configuration > Serial Number** menus.

 **NOTE:** Detailed instructions by printer type are provided below.

---

2. Configure the printer serial number on the replacement formatter:

- **SFP**

- a. At the control panel, press the **Return** button once, press the **Cancel** button once, and then press the **Return** button twice.
- b. Use the left arrow button to navigate to **Engineering Menu - Service Menu**, and then press the **OK** button.
- c. When **System Configuration** appears on the display, press the **OK** button.
- d. When **Enter Serial Number** appears on the display, press the **OK** button.
- e. Use the left arrow, right arrow, and **Return** buttons to enter the printer serial number.

 **NOTE:** Use the printer serial number found on a label adhered to the printer.

---

- f. When the serial number is correctly entered, press the **OK** button.
- g. Turn the printer power off, and then back on again to save the restored serial number.

- **MFP**

- a. From the control-panel Home screen, swipe down to access the printer dashboard.
- b. Select the **Setting > Preference > Date and Time** menus. Set the correct date and time, and then return to the Home screen.
- c. From the control-panel Home screen, press the **Home** button once, press the **Return** button once, and then press the **Home** button twice.
- d. Select the **Service** menu, select the **System Configuration** menu, and then press the **OK** button.

- e. When **Enter Serial Number** appears on the display, press the **OK** button.
- f. Use the up arrow and down arrow buttons to change the displayed character. Use the right arrow button to move the cursor to the next character.
- g. When the serial number is correctly entered, press the **OK** button.
- h. Turn the printer power off, and then back on again to save the restored serial number.

### Step 3 - HP Onsite Repair App: Pairing operation

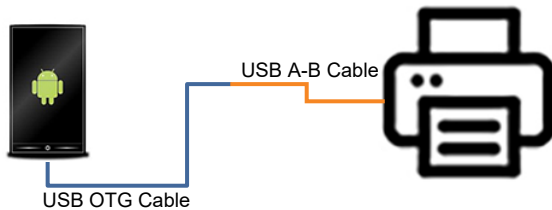
Follow these steps to complete the pairing operation.

**IMPORTANT:** If both a formatter **and** DCC/ECU need to be replaced, they must be installed and paired sequentially (one at a time). Do not replace both PCAs at the same time. Always replace one PCA, perform the pairing operation, and then replace and pair the second PCA.

1. Use a USB OTG cable (Micro-USB or Type-C) and a standard A-B USB cable to connect an Android device to the printer.

**NOTE:** Verify that the Android device is connected to the internet.

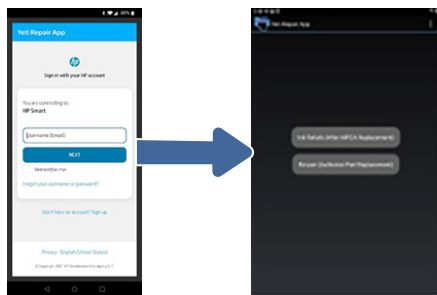
**Figure 5-441** Android to printer connection



2. Open and log into the HP Onsite Repair App, and then select the **Re-pair (Authorized Parts Replacement)** button.

**NOTE:** For more information about logging into the app, or how to create a new account, see *Create an HP Onsite Repair App account or sign-in*.

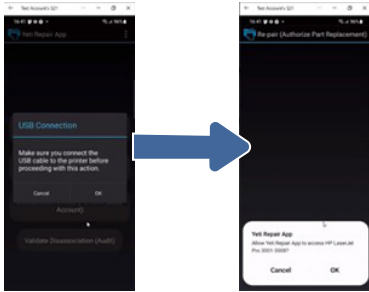
**Figure 5-442** Log in and select Re-pair



3. Select the **OK** button to confirm the Android device is connected to the printer, and then select the **OK** button to continue the operation.

**NOTE:** Make sure that the Android device is correctly connected to the printer using the OTG and A-B USB cables.

**Figure 5-443** Select OK to confirm and continue

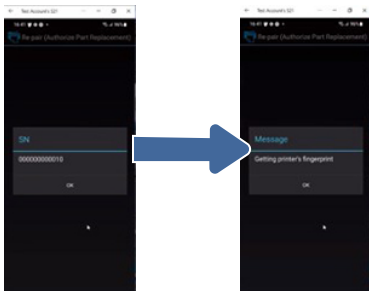


4. Select the **OK** button to confirm the displayed printer serial number, and then select the **OK** button to retrieve the printer *Fingerprint*.



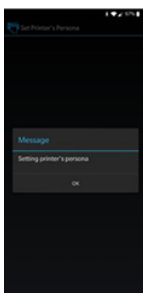
**NOTE:** Make sure that the displayed serial number matches the serial number printed on the label adhered to the printer.

**Figure 5-444** Select OK to accept the printer serial number and Fingerprint



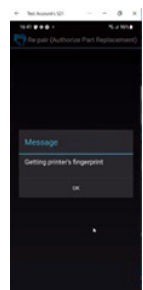
5. Select the **OK** button to send a Repair Authorization Request to the HP Stratus Cloud on the internet and retrieve the printer *Persona*.

**Figure 5-445** Select OK to retrieve the printer Persona




6. Select the **OK** button to retrieve the printer *Fingerprint*.

**Figure 5-446** Select OK to retrieve the printer Fingerprint

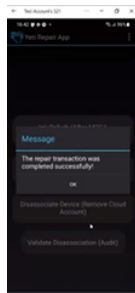


7. The message **The repair transaction was completed successfully** appears when the formatter and DCC/ECU pairing operation is complete. Select the **OK** button to send a Repair Acknowledgment Request to the HP Stratus Cloud on the internet.

 **IMPORTANT:** If the printer was previously setup and claimed on the HP portal (on-boarded), a printer user or administrator must complete the on-boarding process again. Previous on-board information is not retained when using the HP Onsite Repair App to pair a formatter and DCC/ECU.

On-boarding is optional and only needed if the printer was previously on-boarded.

**Figure 5-447** Select OK to acknowledge the pairing



## Removal and replacement: Fan (FM1)

Learn how to remove and replace the fan (FM1).

 [View a video of how to remove and replace the fan.](#)


Mean time to repair: 11 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-35** Part information

Part number	Part description
RK2-1378-010CN	Fan

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner toner-cartridge door correctly opens and closes.

Listen for the fan to rotate when the printer power is turned on.

Make sure that the printer initializes to a **Ready** state.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-448** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.



---

**NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).



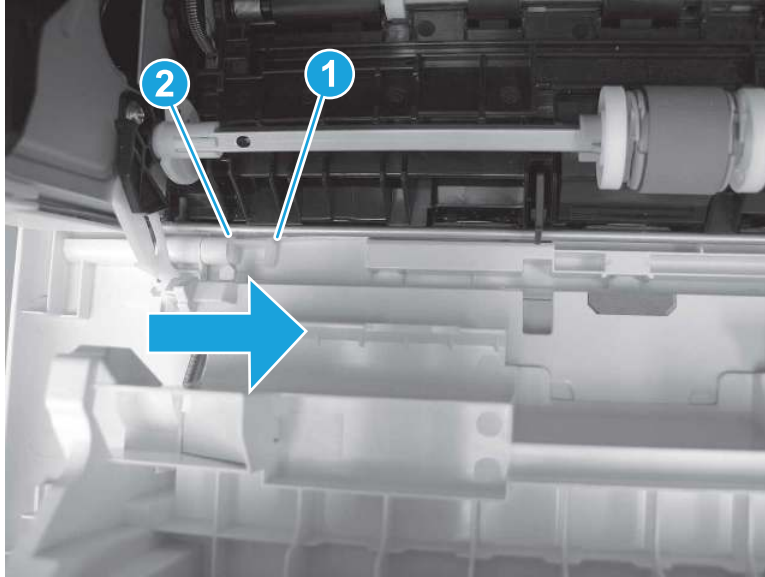
**TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.



**Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

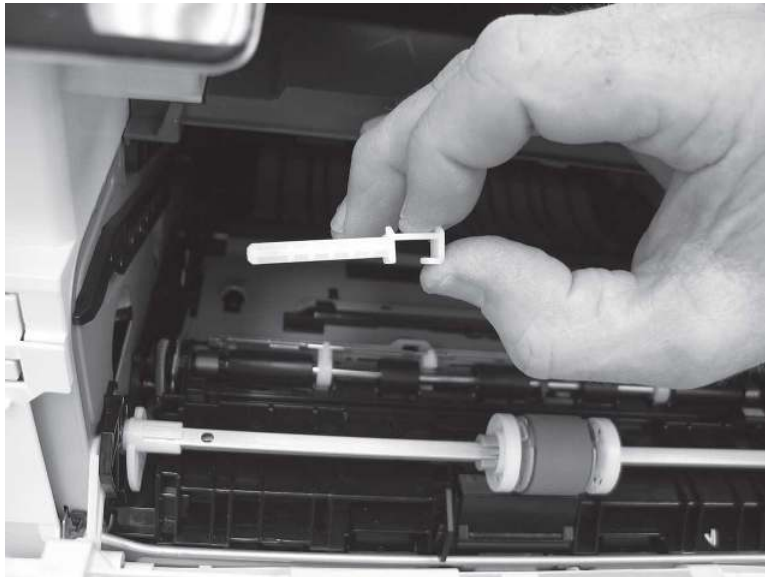
---

Figure 5-449 Release the support shaft



2. Remove the support shaft.

Figure 5-450 Remove the support shaft



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

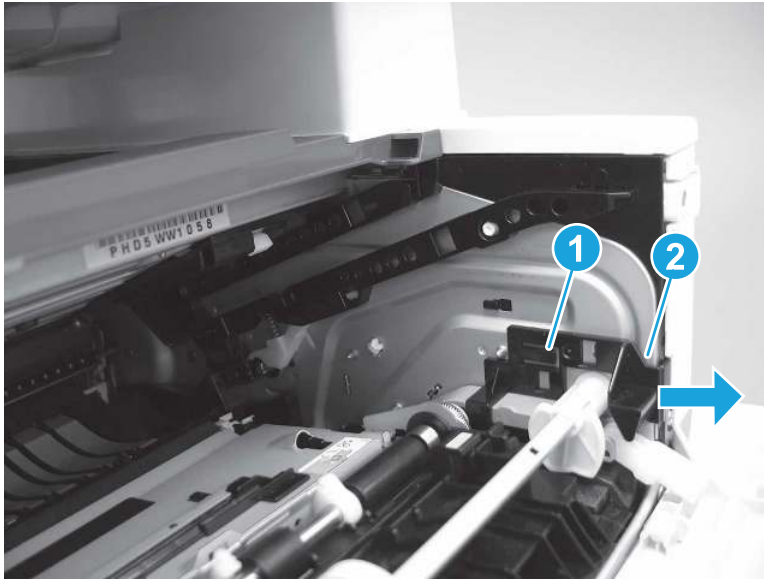
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**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

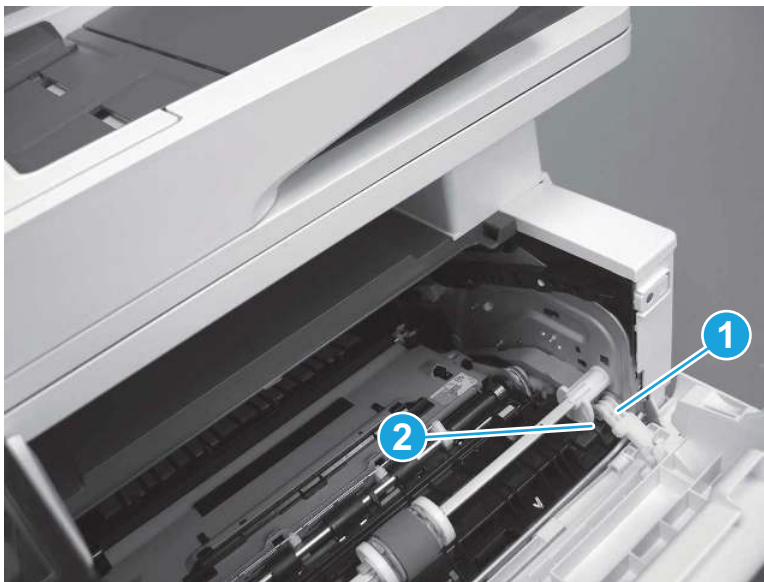


**Figure 5-451** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-452** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

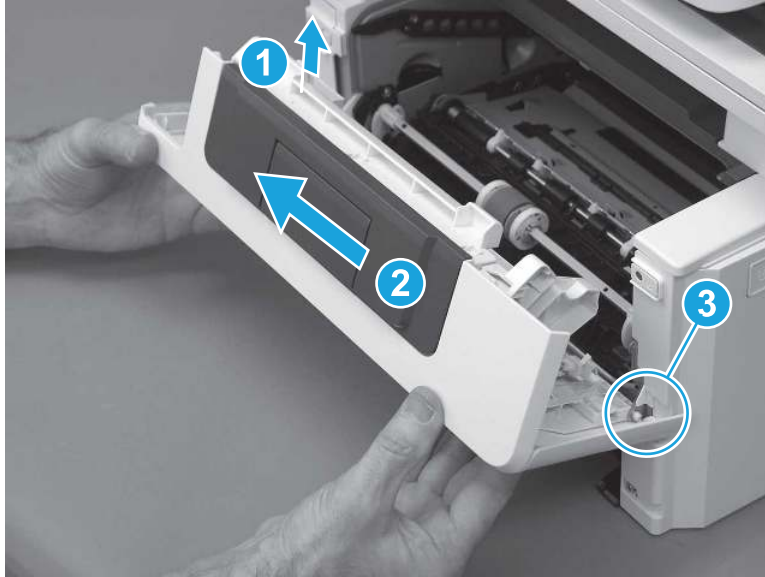
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

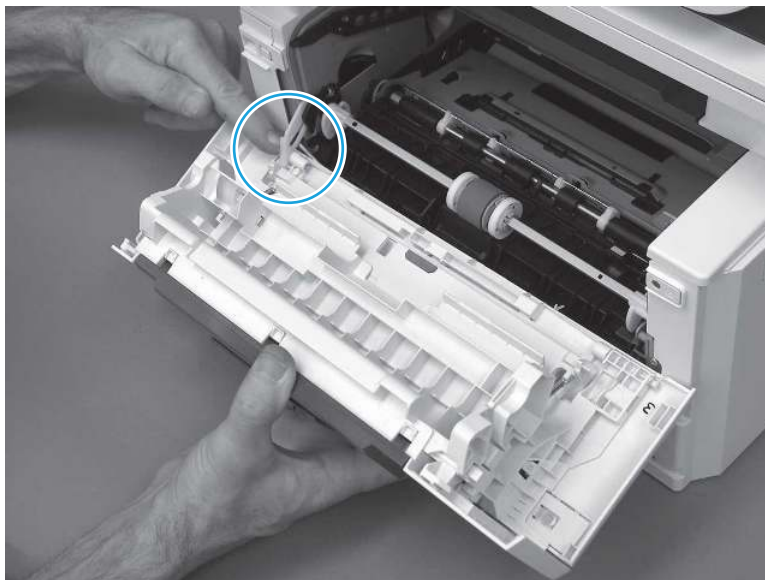
---

**Figure 5-453** Release the door



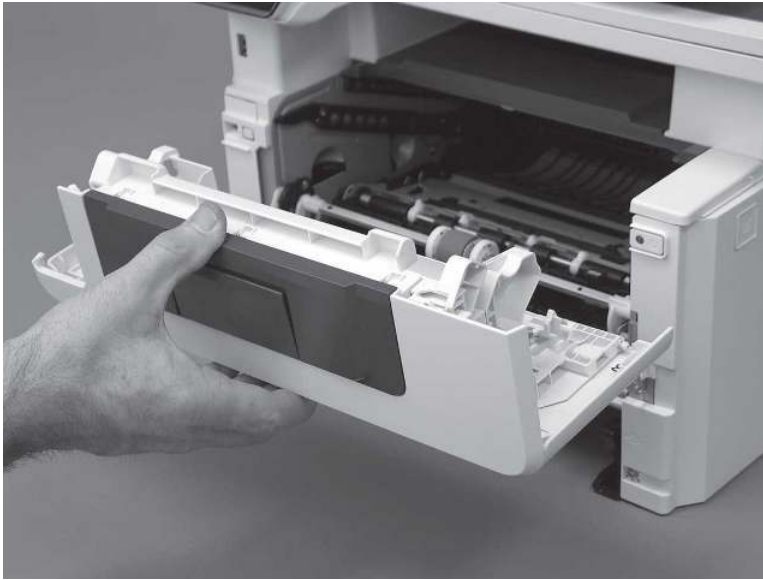
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-454** Release the left-side retainer arm



7. Remove the door.

**Figure 5-455** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

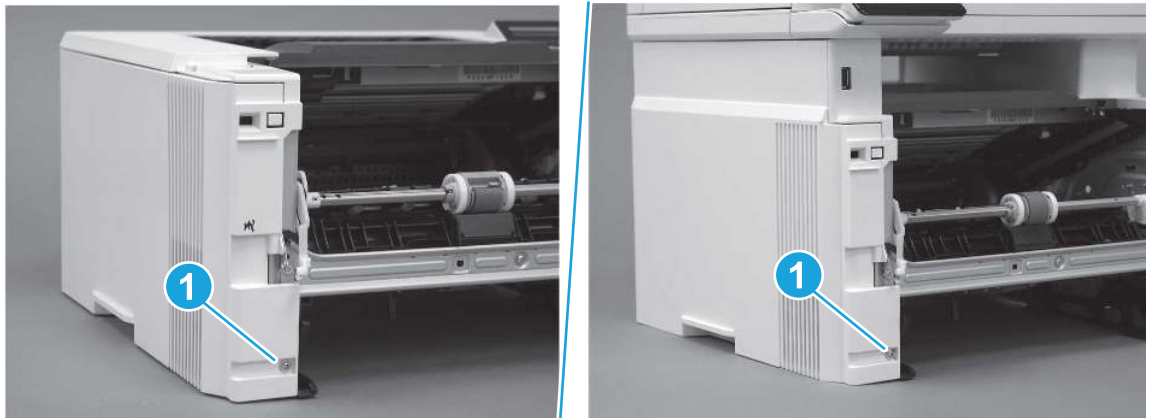
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

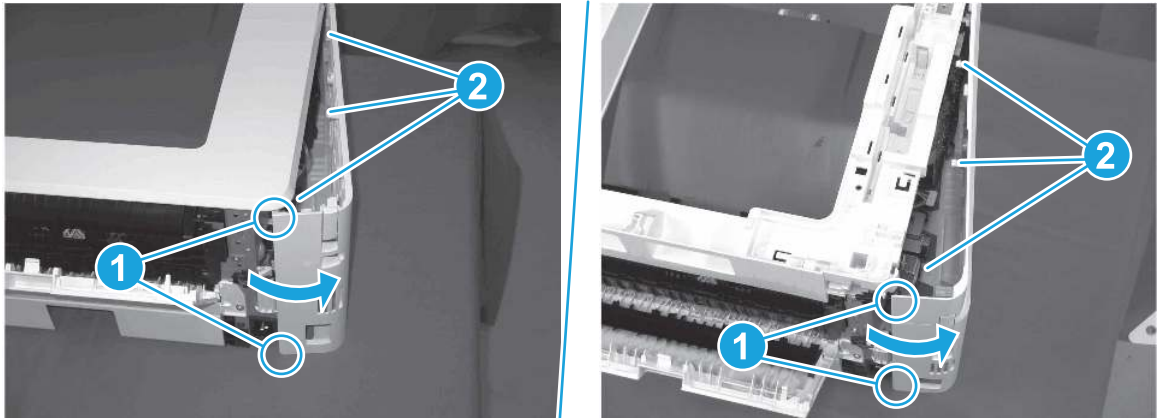
1. Remove one screw (callout 1).

**Figure 5-456** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

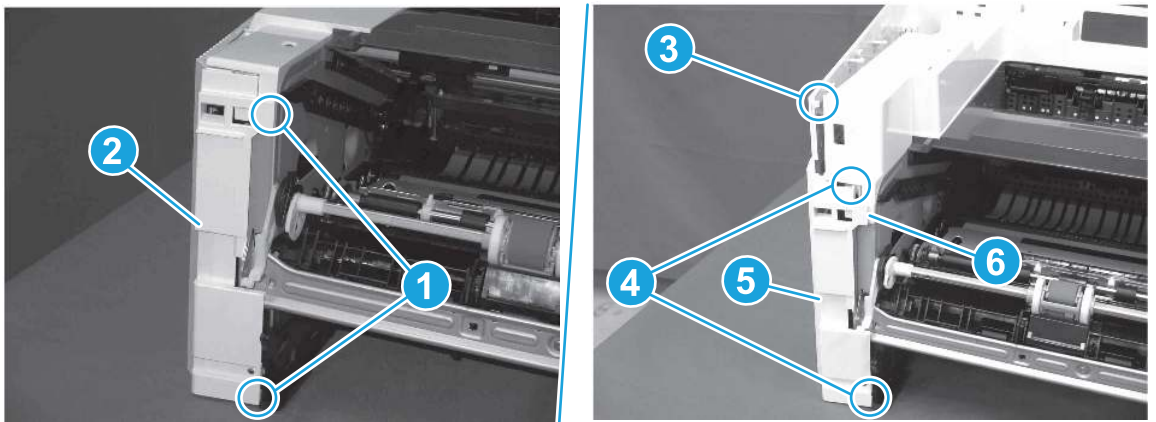
**Figure 5-457** Release two bosses and three tabs



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-458** Remove the cover

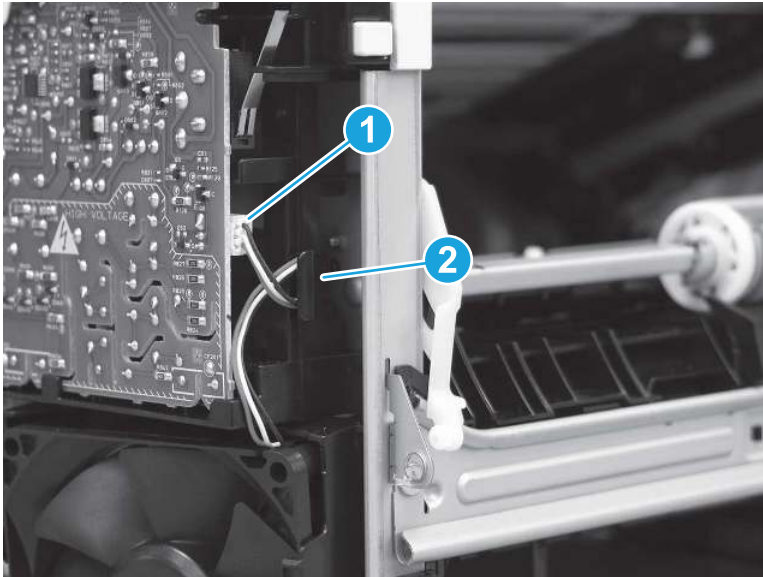


#### 4. Remove the fan (FM1)

Follow these steps to remove the fan (FM1).

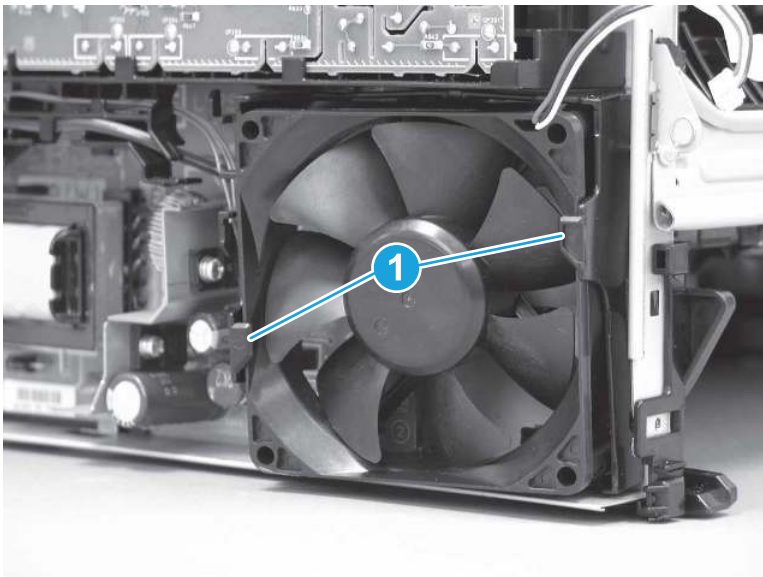
1. Disconnect one connector (callout 1), and then release the wire harness from the retainer (callout 2).

**Figure 5-459 Disconnect one connector**



2. Release two tabs (callout 1).

**Figure 5-460 Release two tabs**



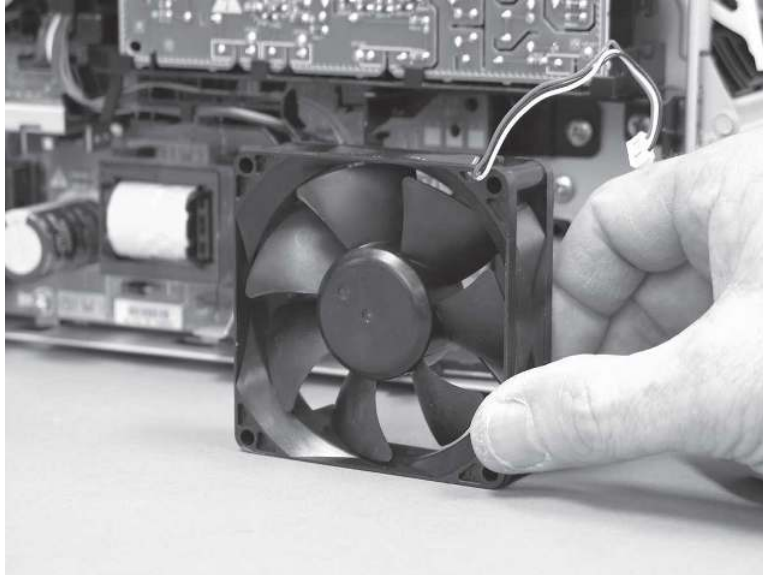
3. Remove the fan.



**Reinstallation tip:** The fan must be correctly installed so that air is drawn into the printer. Make sure that the two arrows embossed on the right-side of the fan body—which indicate air flow direction—face upward and into the printer.



Figure 5-461 Remove the fan



## 5. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Fan holder (FM1)

Learn how to remove and replace the fan holder (FM1).



[View a video of how to remove and replace the fan holder.](#)

Mean time to repair: 13 minutes

Service level: Easy

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-36** Part information

Part number	Part description
RC4-2891-000CN	Duct, fan (FM1)

## Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Make sure that toner toner-cartridge door correctly opens and closes.

Listen for the fan to rotate when the printer power is turned on.

Make sure that the printer initializes to a **Ready** state.

### 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-462** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

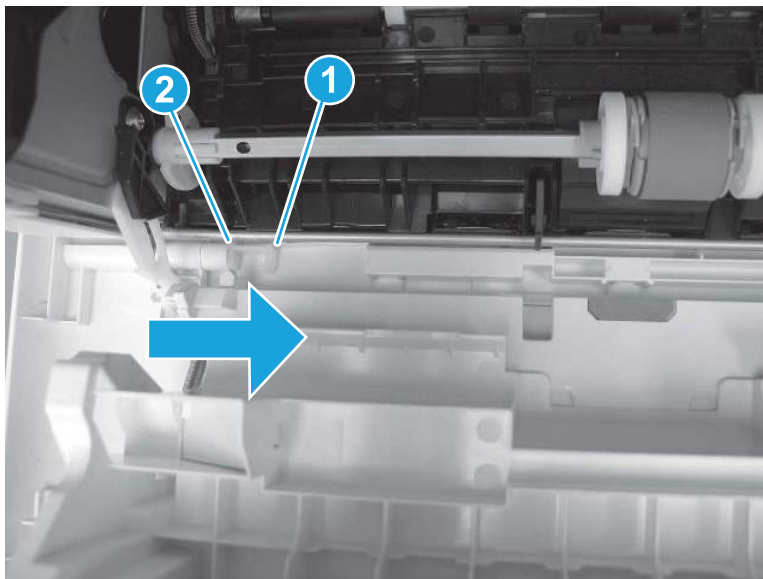
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

---

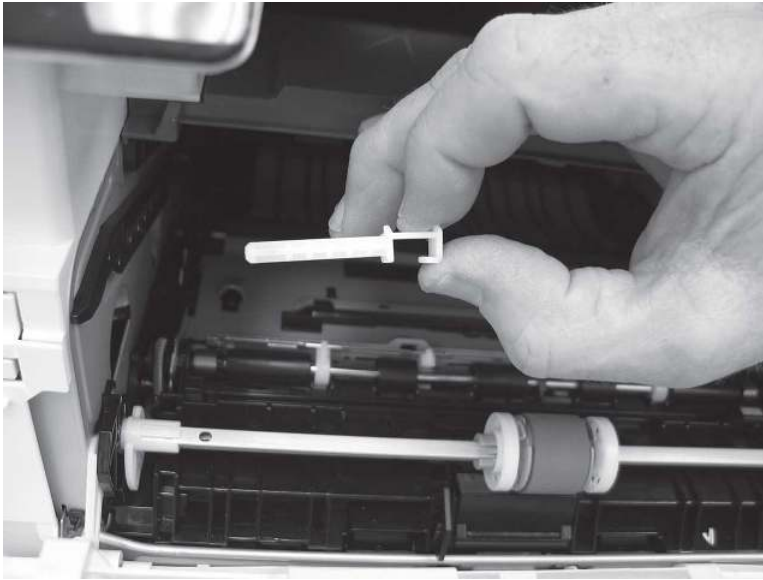
**Figure 5-463** Release the support shaft





2. Remove the support shaft.

**Figure 5-464** Remove the support shaft



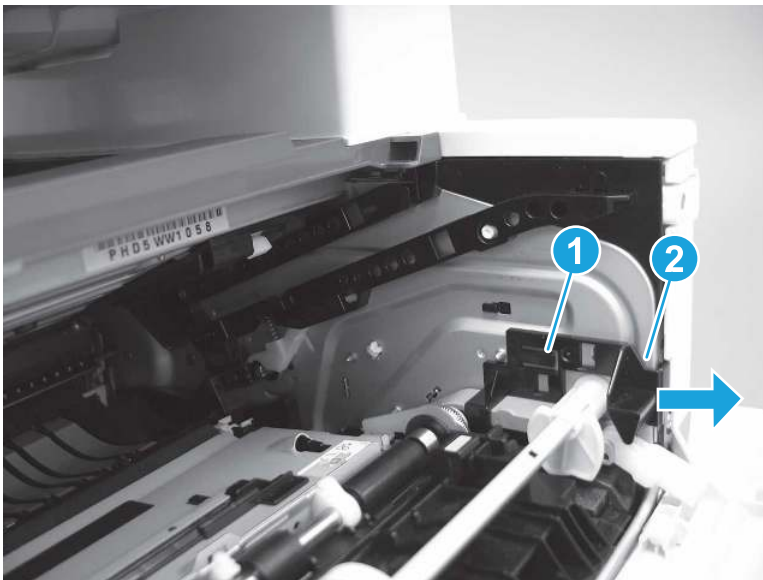
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

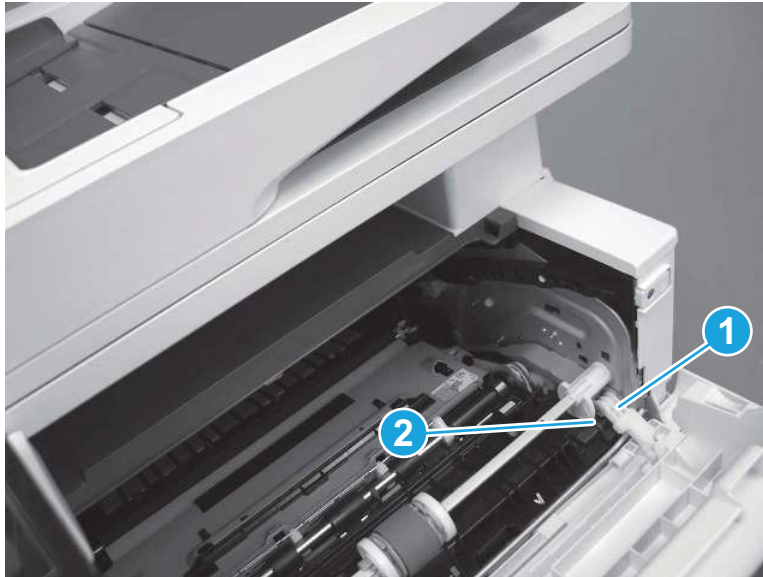
---

**Figure 5-465** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-466** Release the pressure-release link

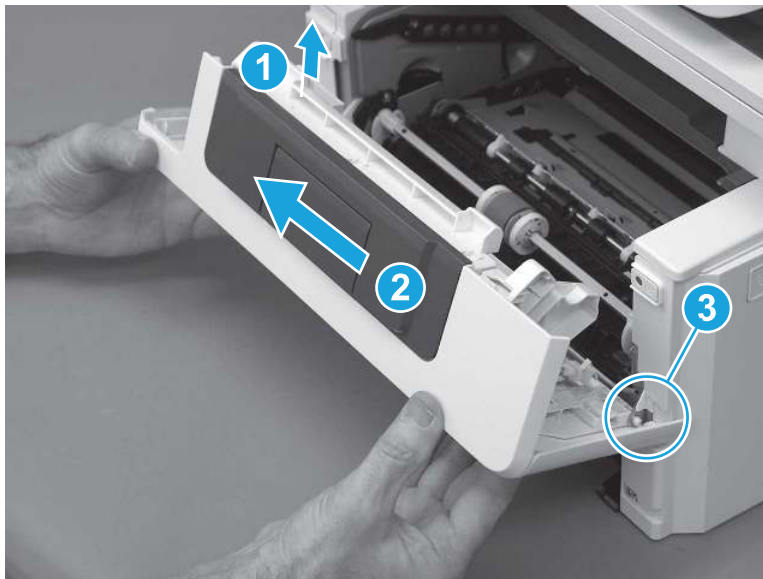


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

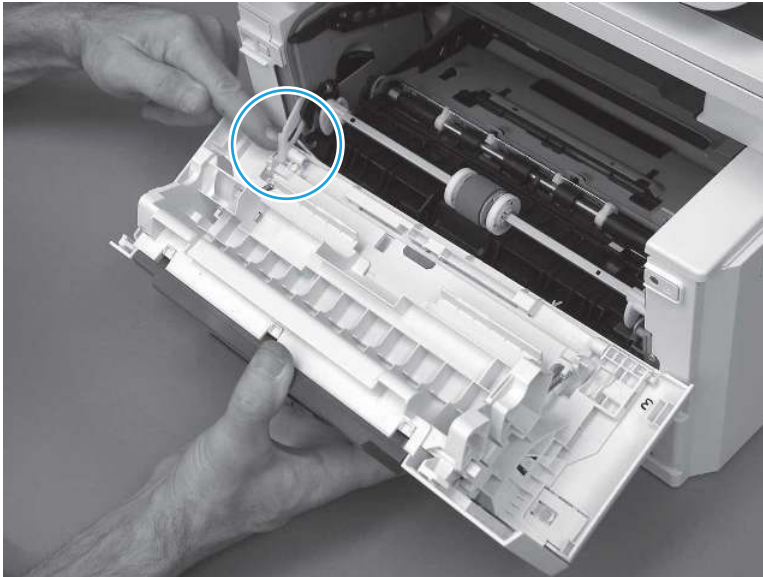
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-467** Release the door



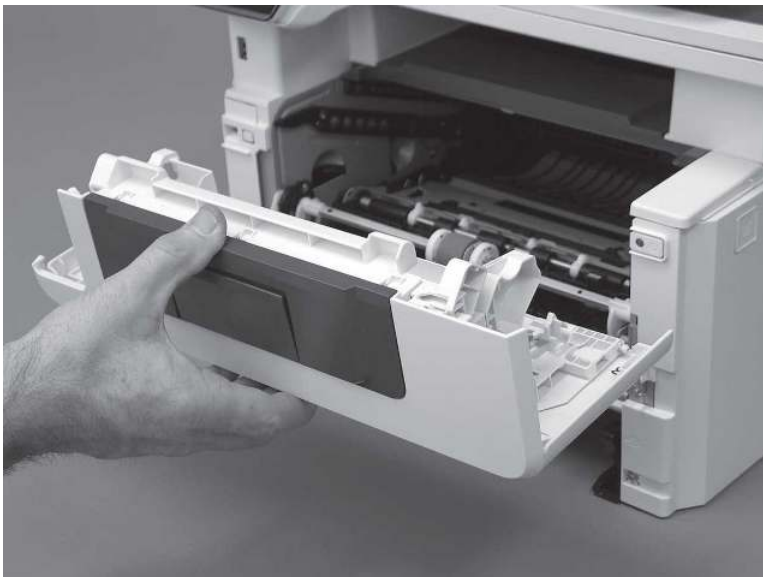
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-468** Release the left-side retainer arm



7. Remove the door.


**Figure 5-469** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

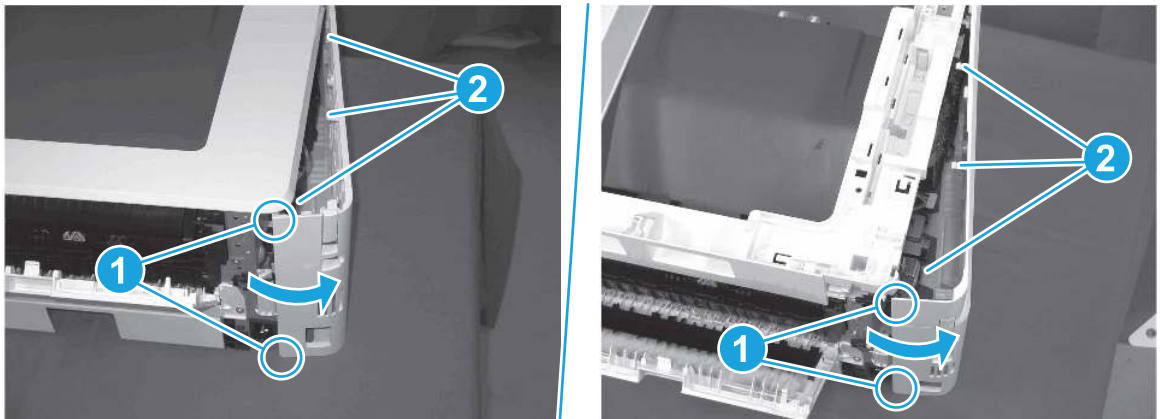
1. Remove one screw (callout 1).

**Figure 5-470 Remove one screw**



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-471 Release two bosses and three tabs**

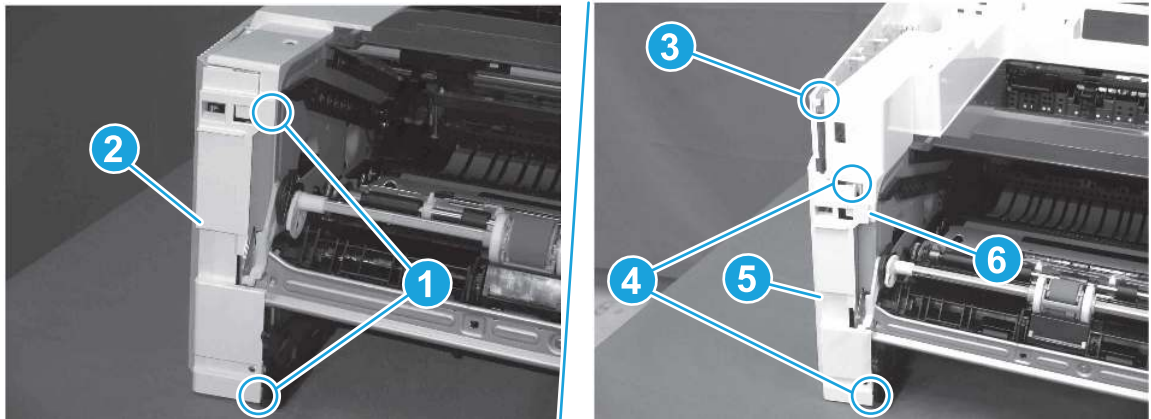


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-472** Remove the cover

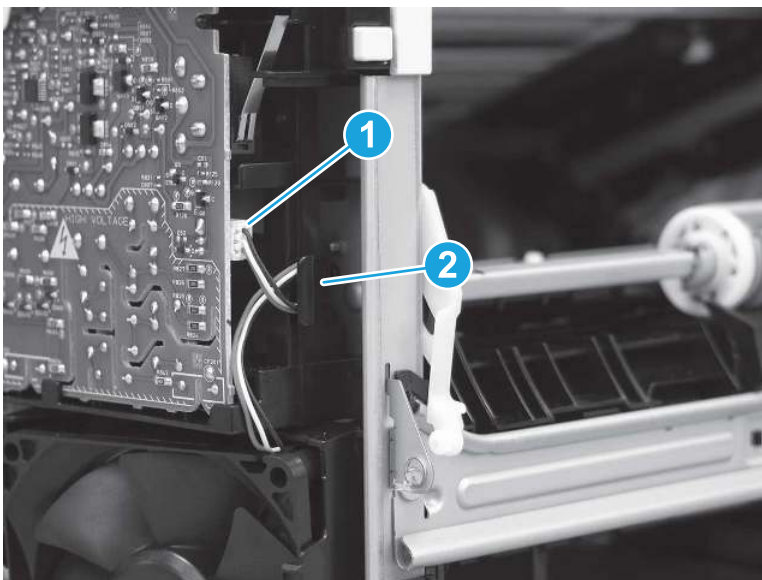


#### 4. Remove the fan (FM1)

Follow these steps to remove the fan (FM1).

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

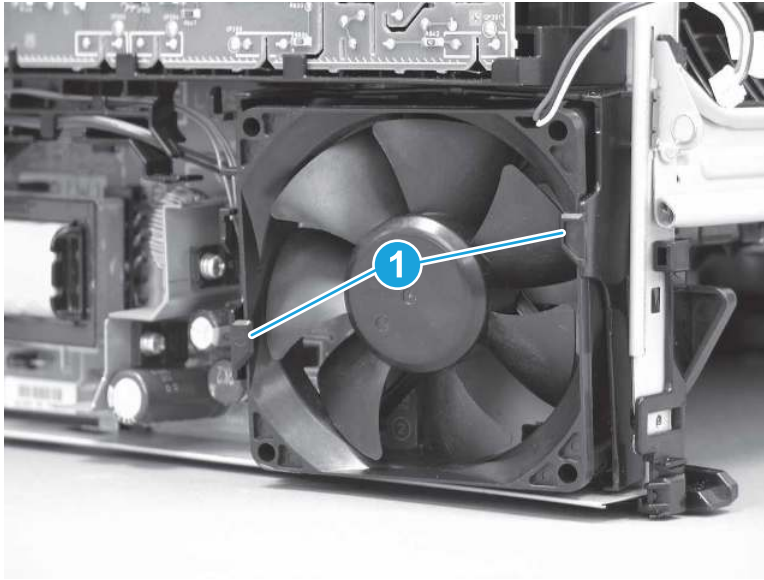
**Figure 5-473** Disconnect one connector






2. Release two tabs (callout 1).

**Figure 5-474** Release two tabs



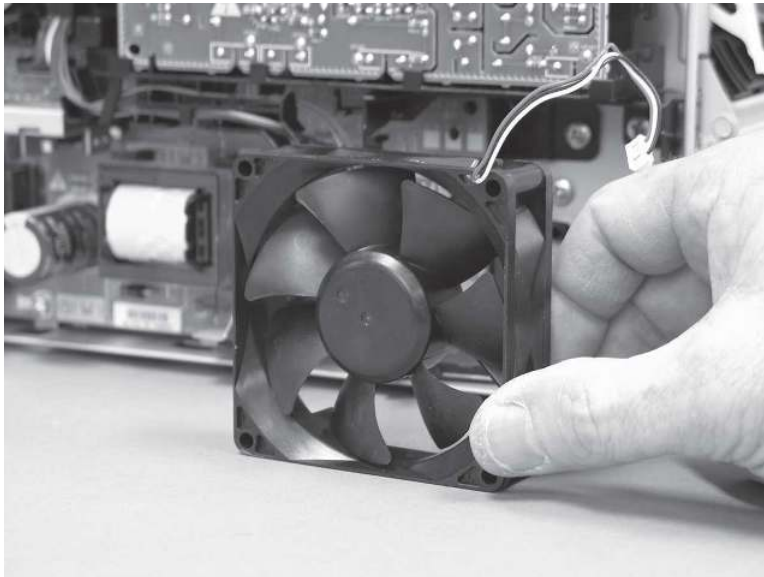
3. Remove the fan.

---

 **Reinstallation tip:** The fan must be correctly installed so that air is drawn into the printer. Make sure that the two arrows embossed on the right-side of the fan body—which indicate air flow direction—face upward and into the printer.

---

**Figure 5-475** Remove the fan





## 5. Remove the fan holder (FM1)

Follow these steps to remove the fan holder (FM1).

1. Release one wire harness from the retainers (SFP shown; callout 1) on the fan holder.

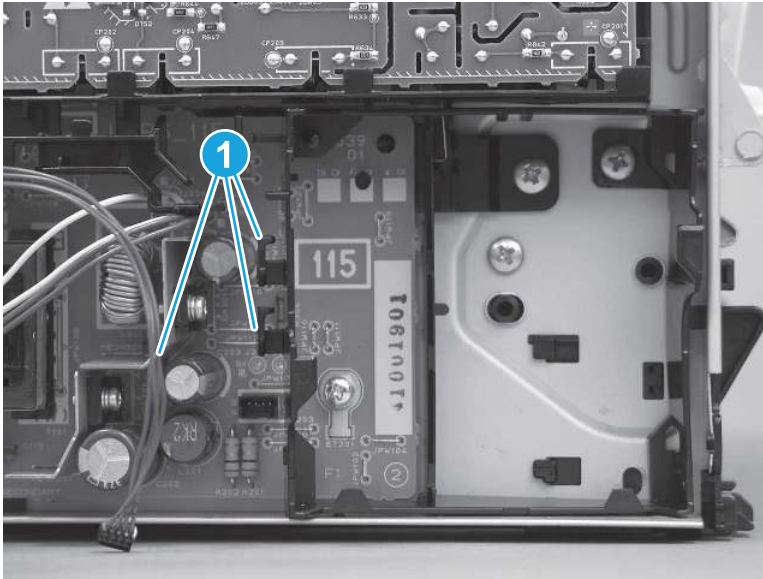
---

 **NOTE:** The MFP has two wire harnesses in the retainers.

 **TIP:** It might be easier to release the wire harness by first disconnecting the connector.

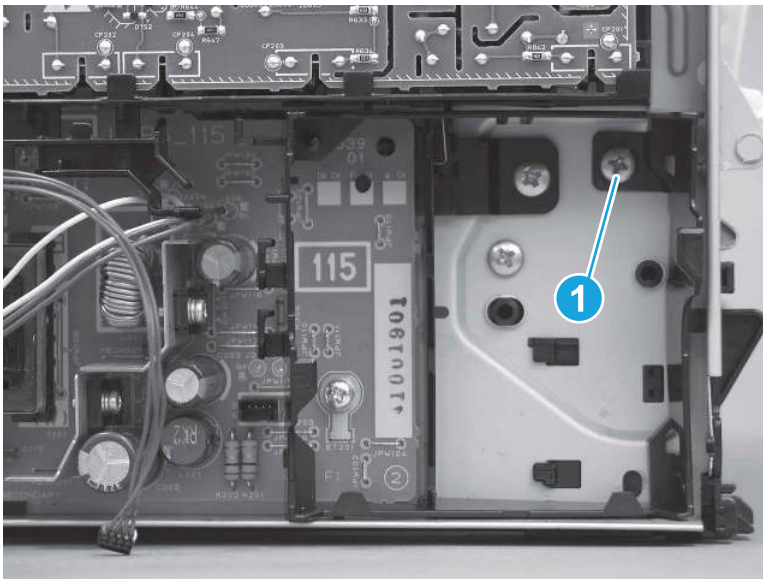
---

**Figure 5-476** Release the wire harness (SFP shown)




2. Remove one screw (callout 1).

**Figure 5-477** Remove one screw

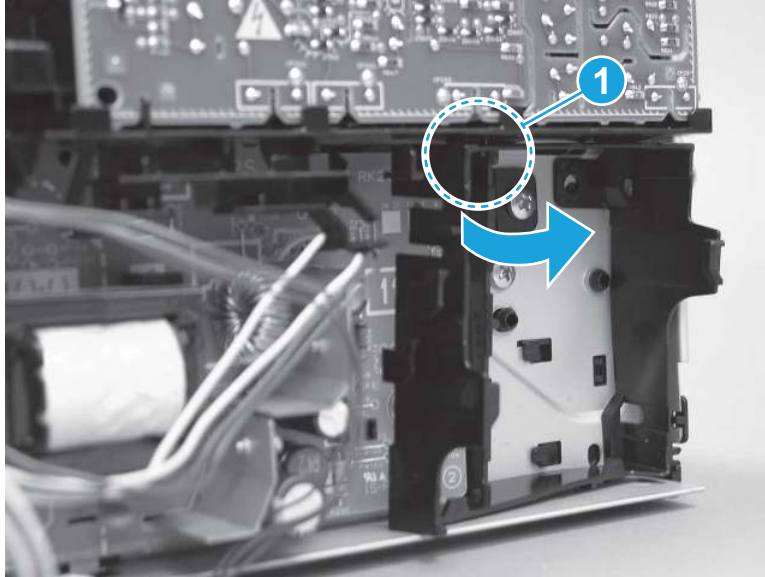


3. Release one tab at the top-left side of the fan holder (callout 1), and then rotate the top-left side corner of the holder away from the printer.

 **TIP:** Use a flat-blade screwdriver to slightly flex the top of the holder down to make it easier to engage this tab.

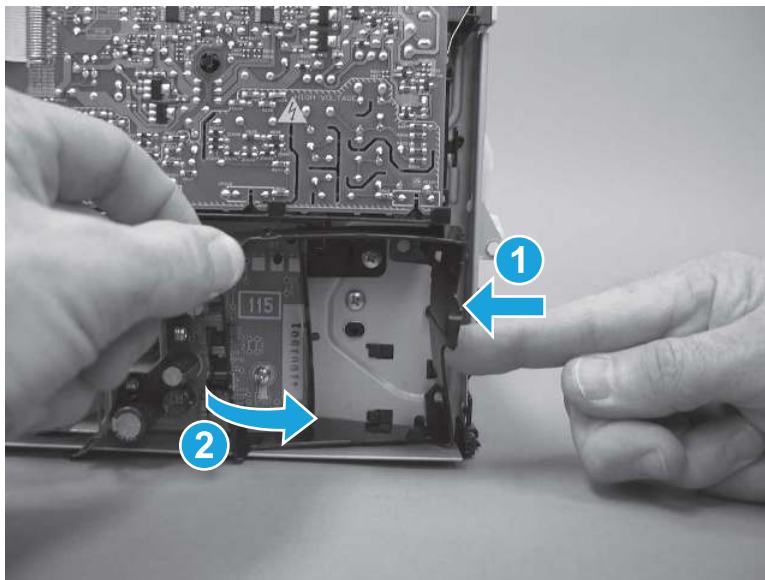
---

Figure 5-478 Release one tab



4. Slightly flex the right side of the holder to release one tab (callout 1), and then rotate the top of the holder away from the printer (callout 2).

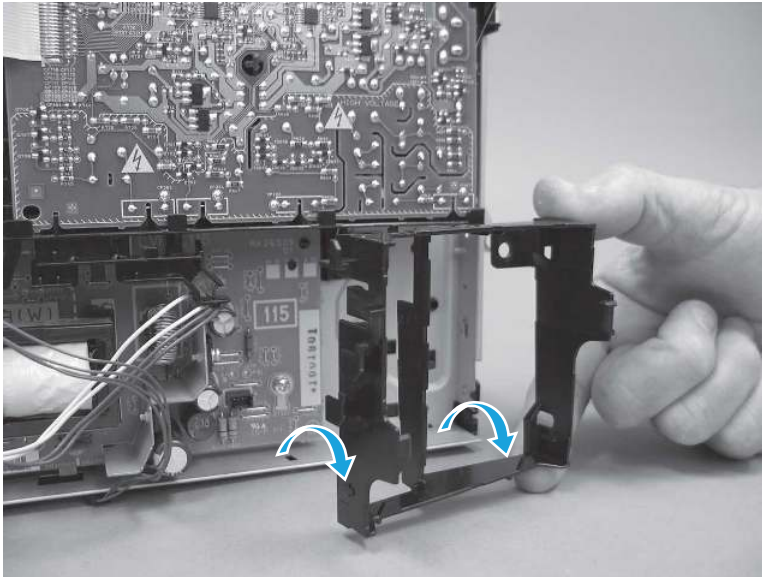
Figure 5-479 Release one tab





5. Lift the holder up to release two alignment tabs on the bottom of the holder, and then remove the holder.

**Figure 5-480 Remove the holder**



## 6. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Laser scanner assembly

Learn how to remove and replace the laser scanner assembly.



[View a video of how to remove and replace the SFP laser scanner assembly.](#)



[View a video of how to remove and replace the MFP laser scanner assembly.](#)

Mean time to repair: 18 minutes SFP, 40 minutes MFP

Service level: Medium SFP, Medium MFP

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-37** Part information

Part number	Part description
RM2-4862-000CN	Laser scanner assembly

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-481** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

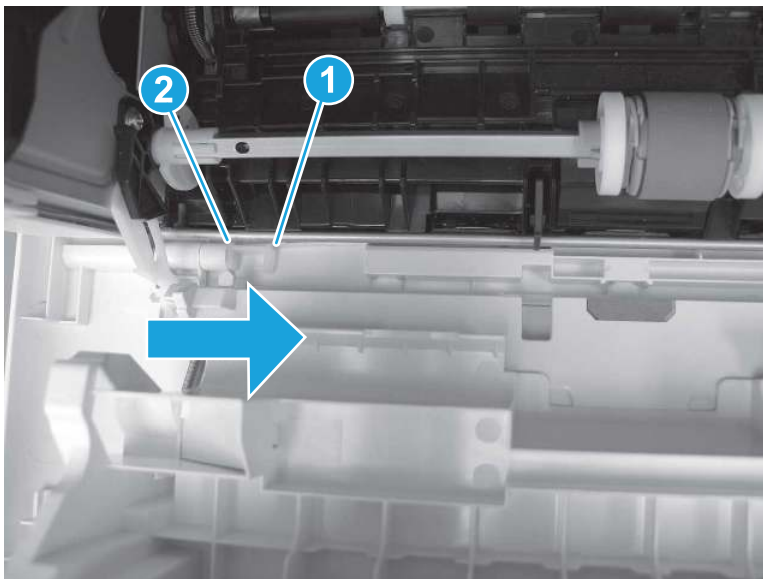
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

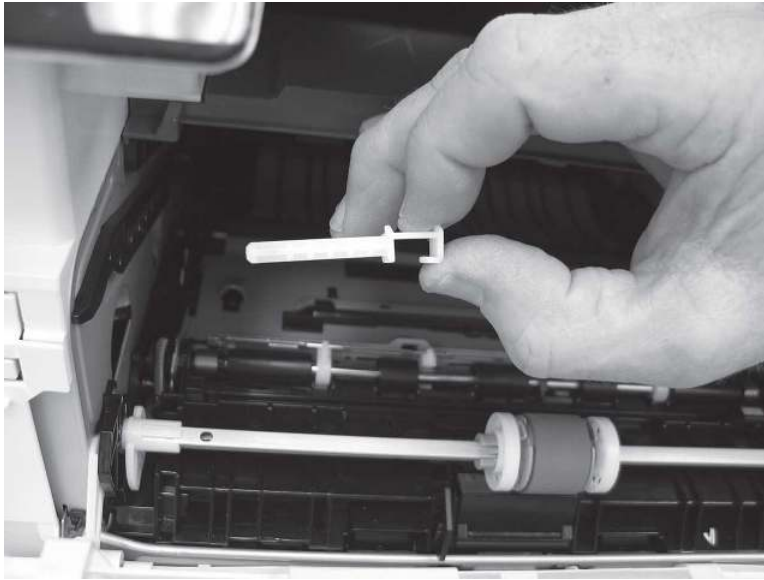
---

**Figure 5-482** Release the support shaft



2. Remove the support shaft.

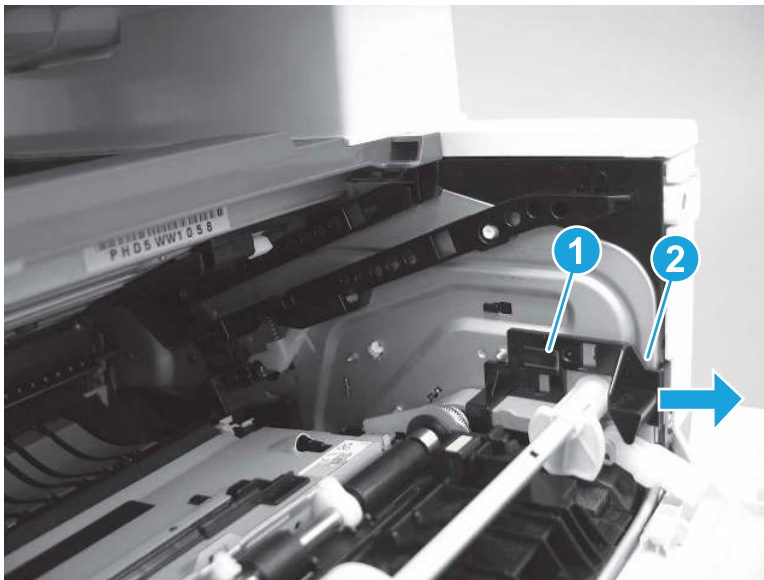
**Figure 5-483** Remove the support shaft



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

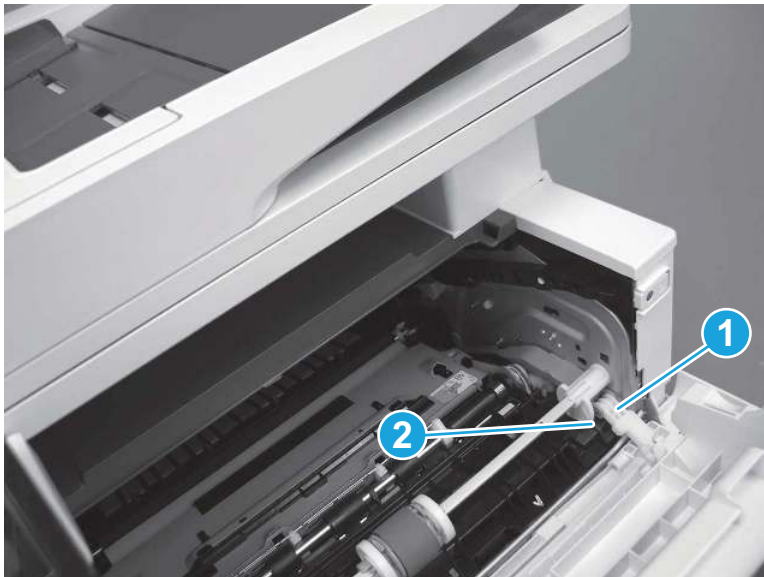
**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

**Figure 5-484** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-485 Release the pressure-release link**



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

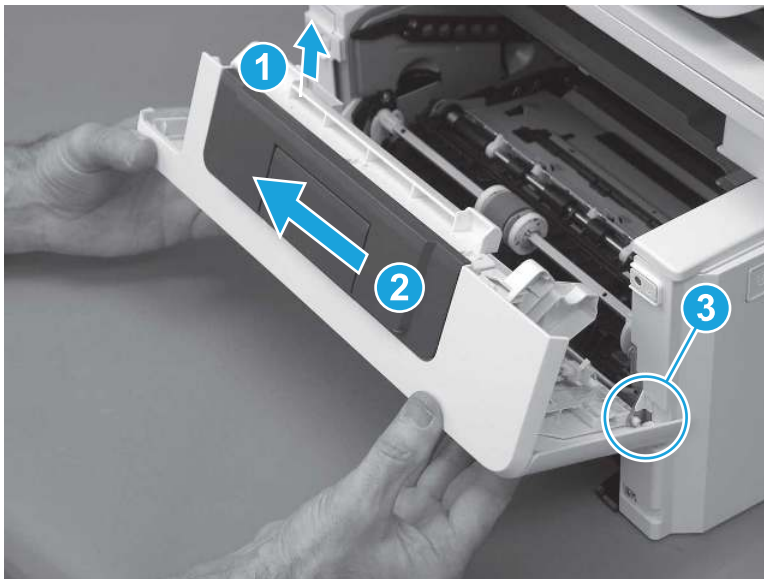
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

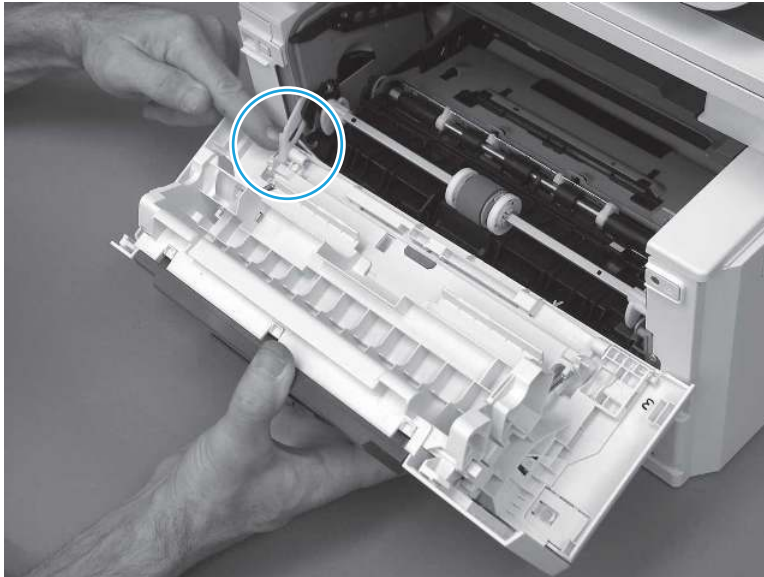
---

**Figure 5-486 Release the door**



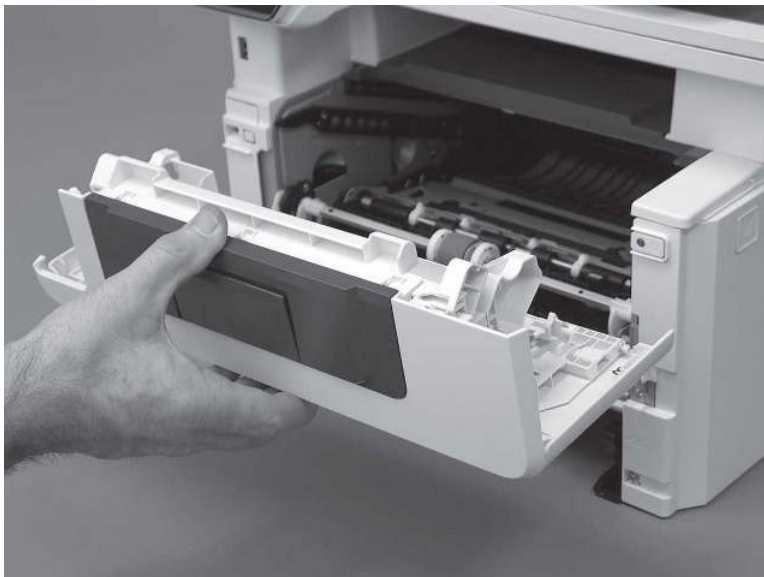
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-487** Release the left-side retainer arm



7. Remove the door.


**Figure 5-488** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---



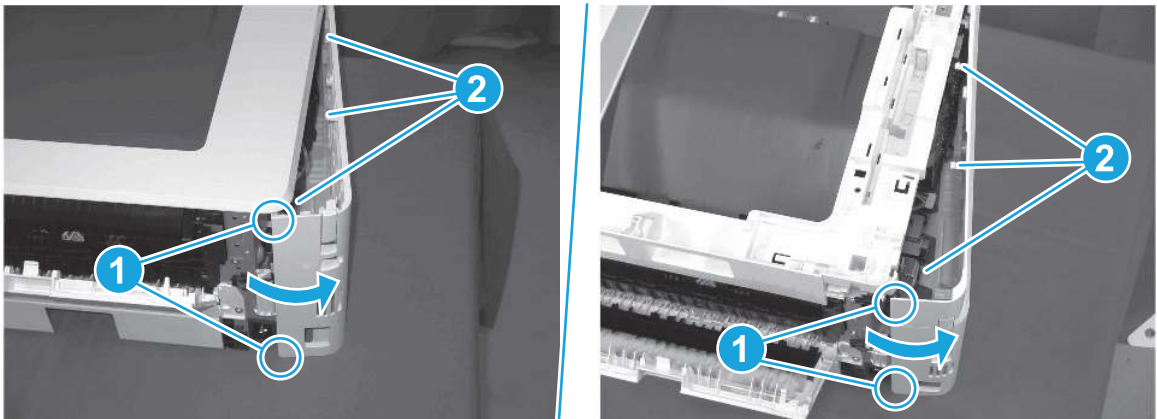
1. Remove one screw (callout 1).

**Figure 5-489 Remove one screw**



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-490 Release two bosses and three tabs**

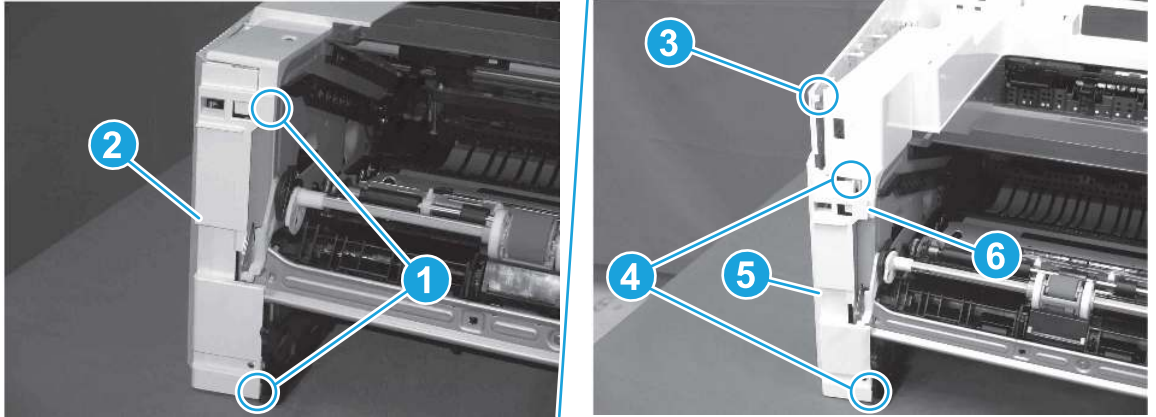


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

Figure 5-491 Remove the cover



#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).


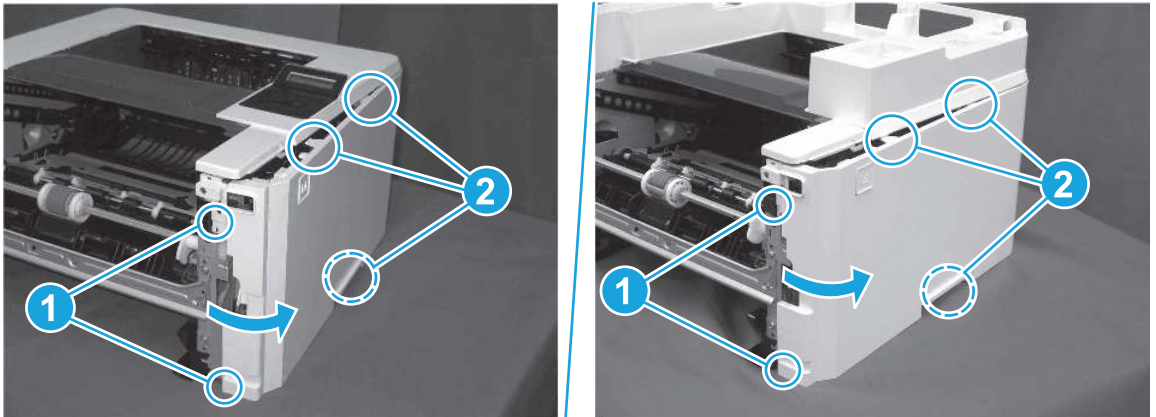
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

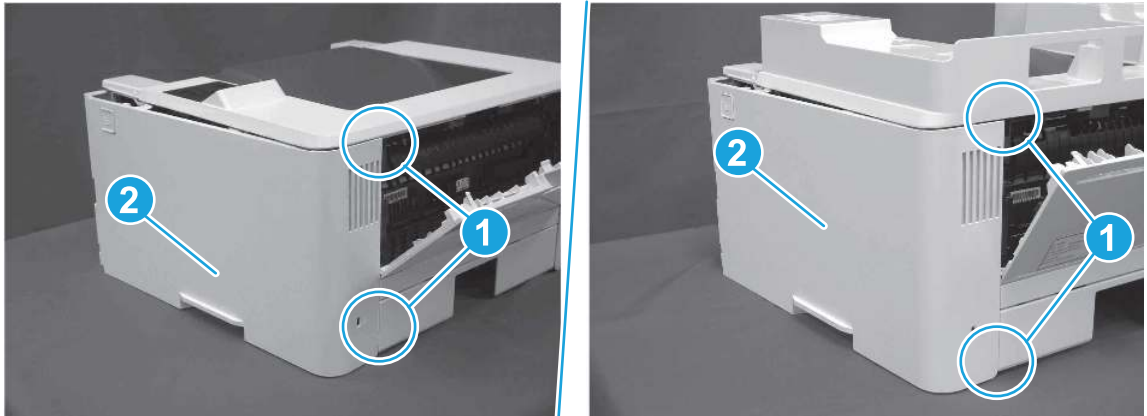
Figure 5-492 Release two bosses and three tabs





2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-493 Remove the cover**

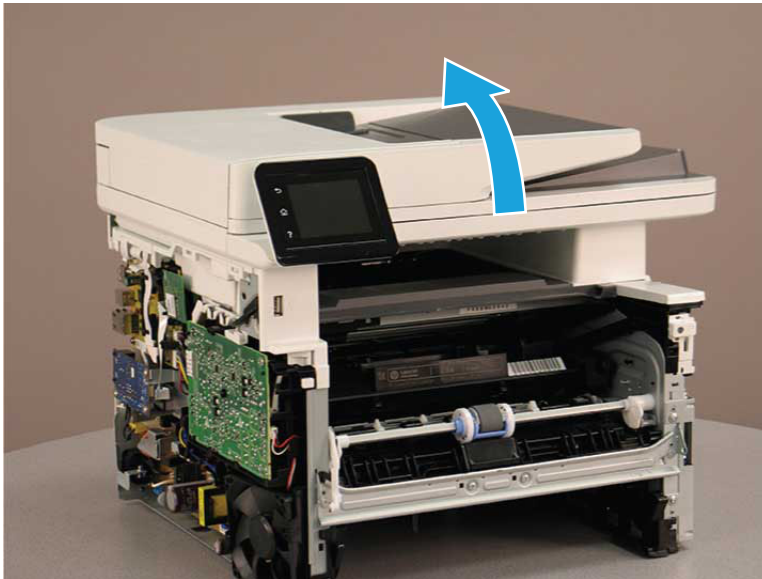


#### 5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

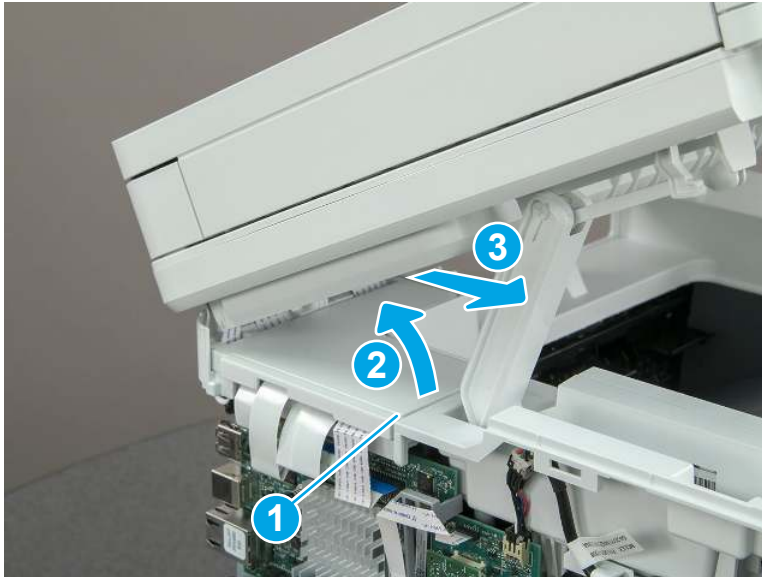
1. If the ISA is not already raised, raise it now.

**Figure 5-494 Raise the ISA**




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-495** Remove the ISA FFC cover




#### 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

**Figure 5-496** Disconnect three FFCs



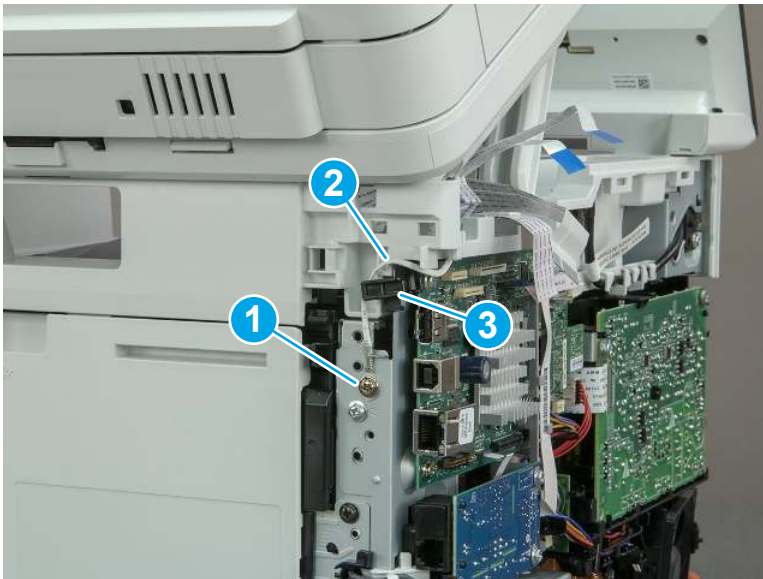
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-497** Release the tape



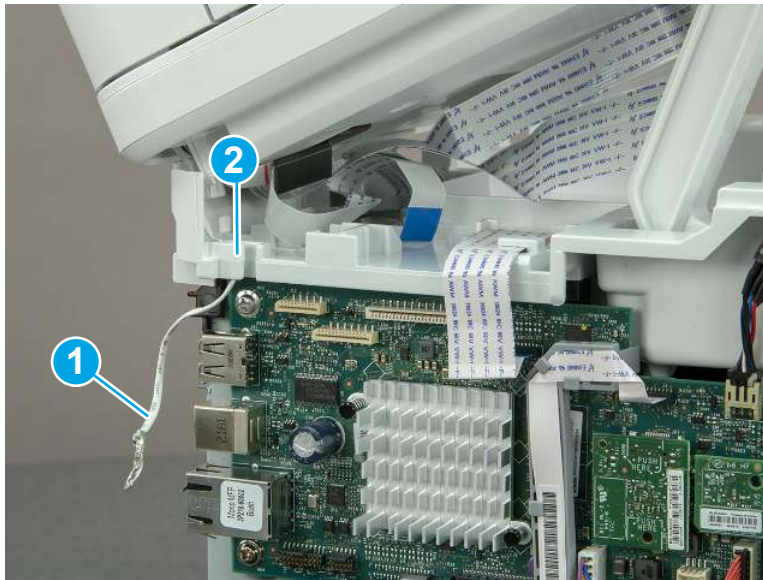
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-498** Release the ground wire



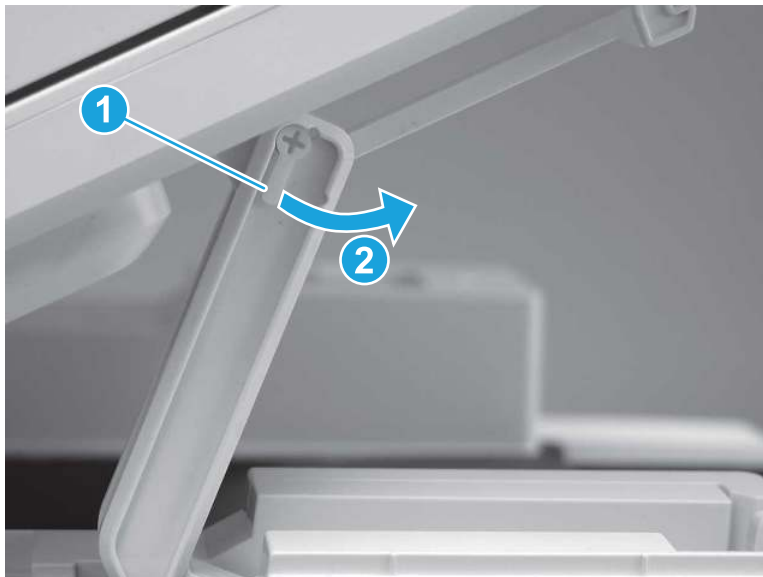
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-499** Release the ground wire




5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-500** Release one tab and rotate the slider pin



6. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

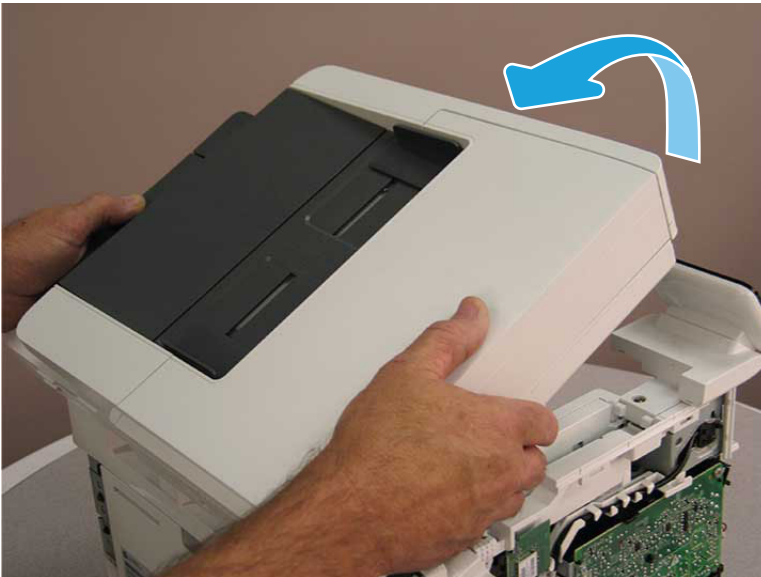
---

**Figure 5-501** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-502** Rotate the ISA towards the rear of the printer





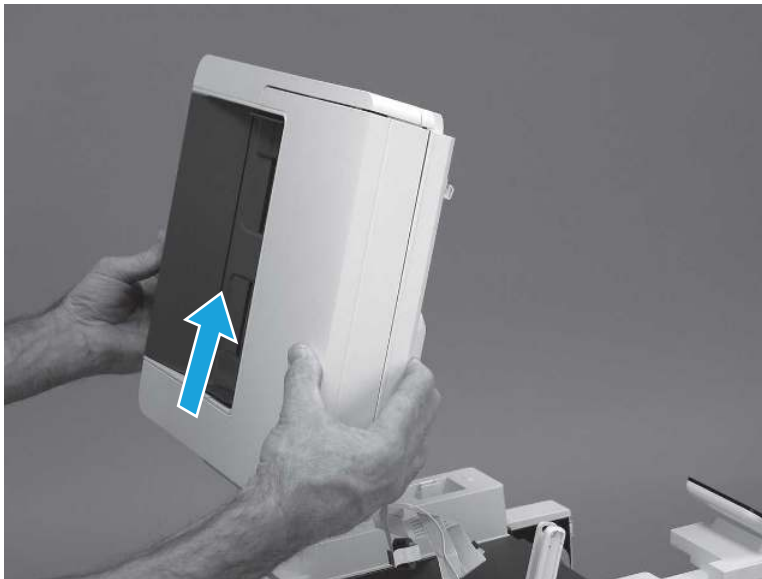
8. Slide the ISA as shown to release it.

**Figure 5-503 Release the ISA**



9. Remove the ISA.

**Figure 5-504 Remove the ISA**

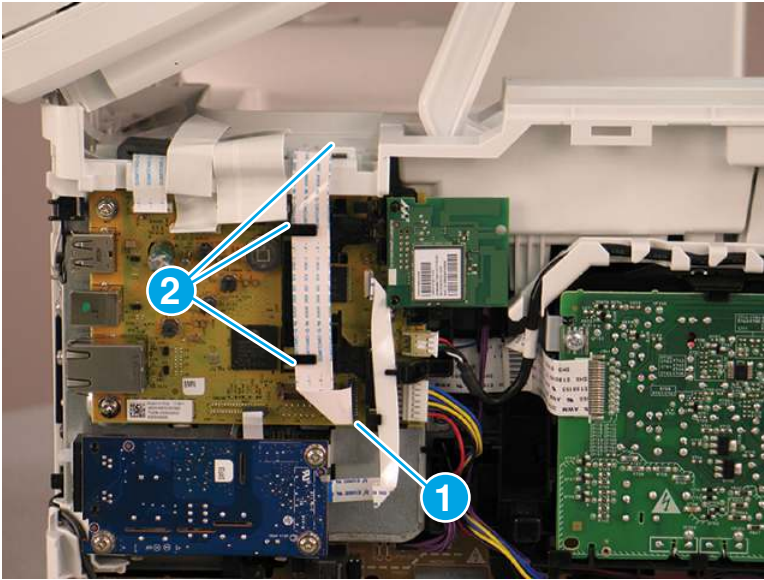


## 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-505** Disconnect one connector



2. Remove one screw (callout 1).

**Figure 5-506** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-507 Release two tabs**



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-508 Remove the cover**





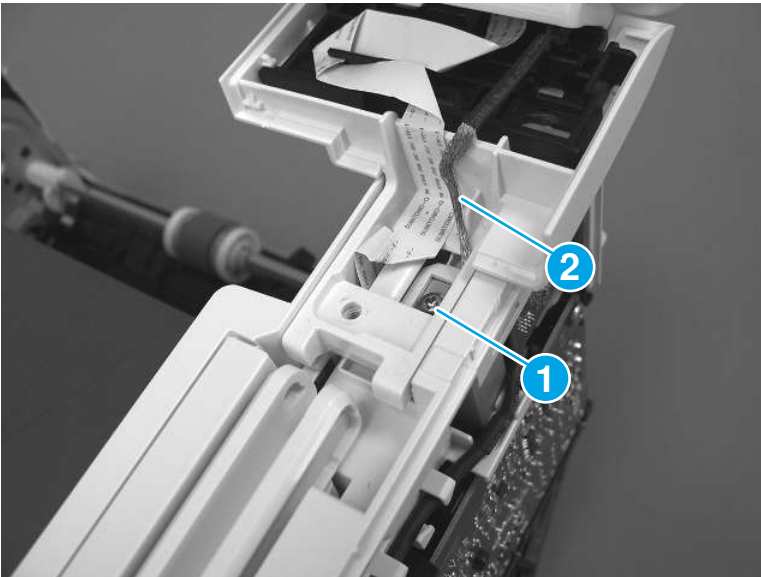
5. Remove the control-panel mount cover.

**Figure 5-509** Remove the cover



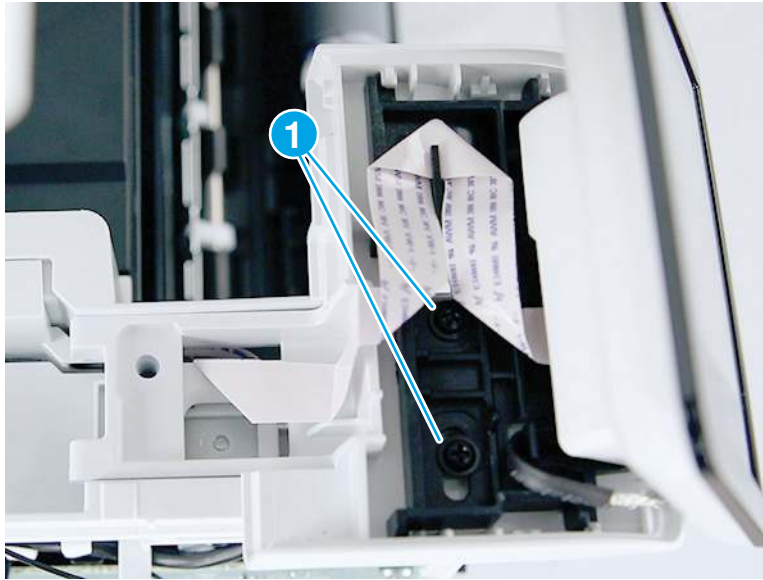
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-510** Remove one screw



7. Move the FFC out of the way, and then remove two screws (callout 1).

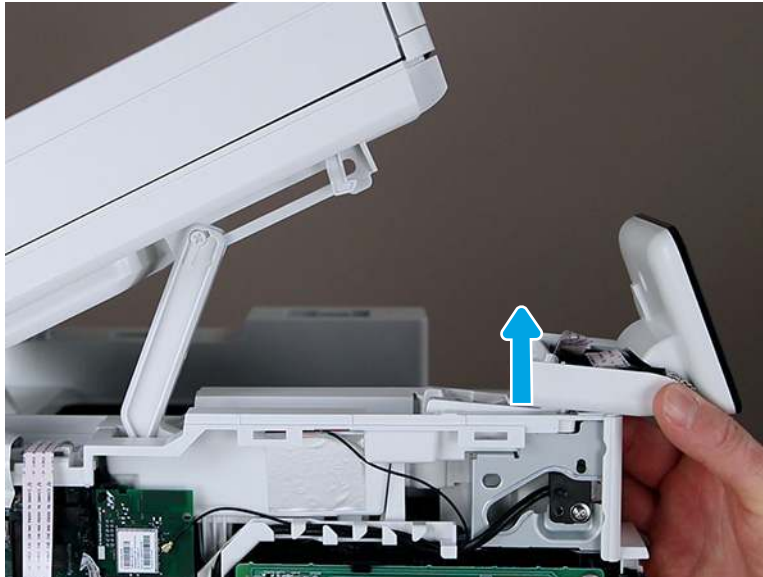
**Figure 5-511** Remove two screws



8. Slightly lift up the control-panel assembly to separate it from the top cover.

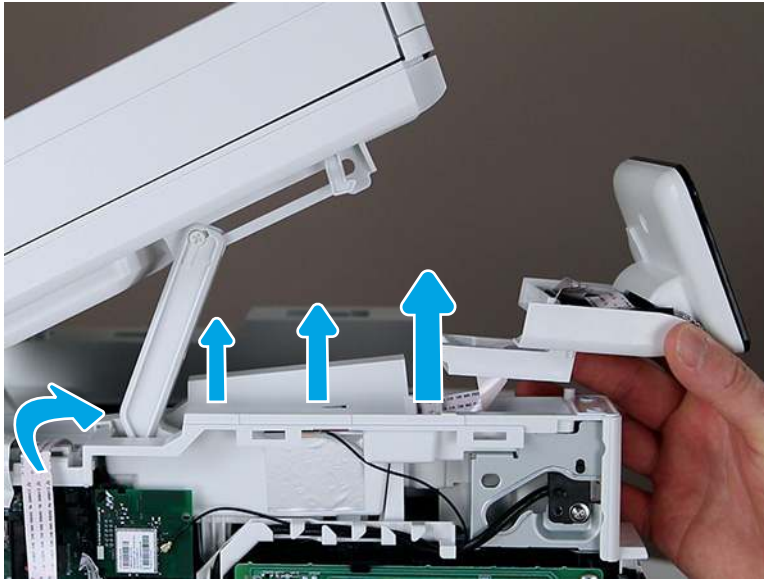
**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

**Figure 5-512** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-513** Remove the control-panel assembly

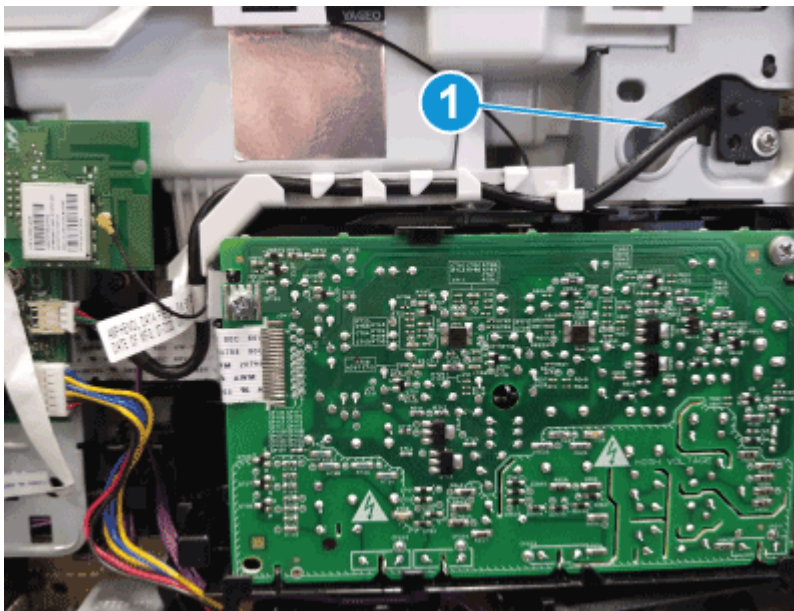


#### 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

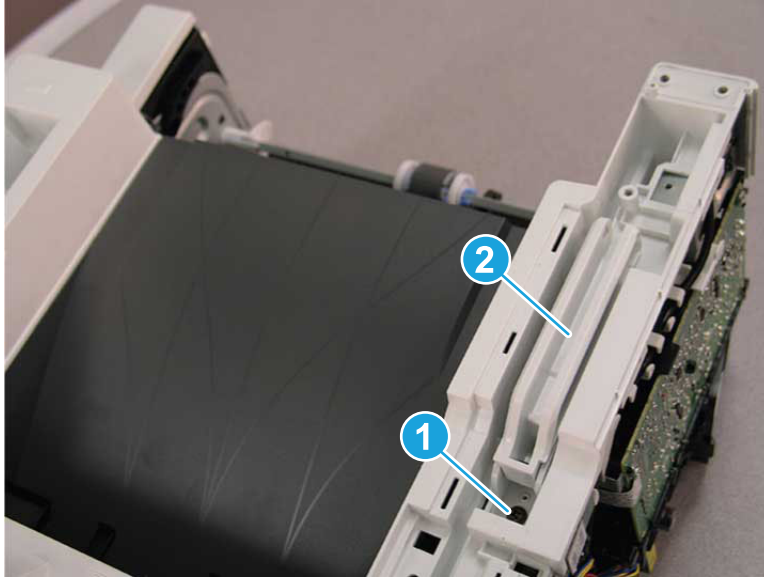
**Figure 5-514** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

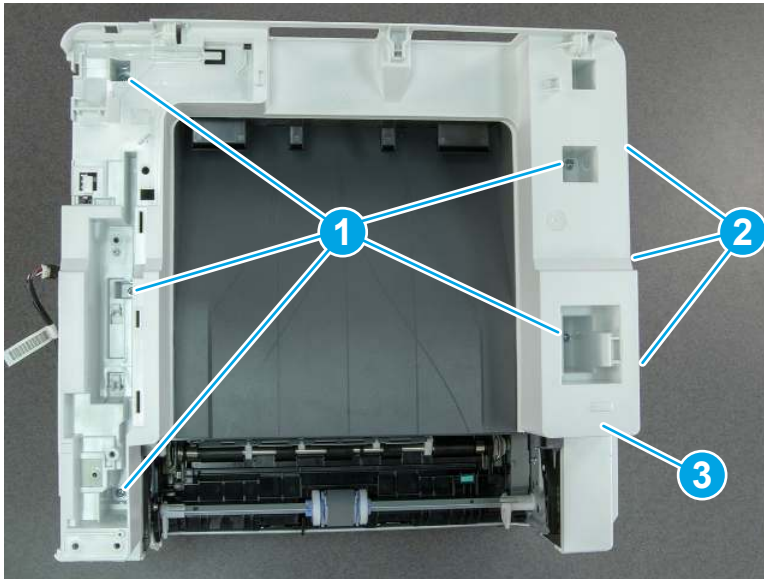
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-515** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-516** Remove the top cover



**9. Remove the top cover (SFP only)**

Follow these steps to remove the top cover (SFP only).

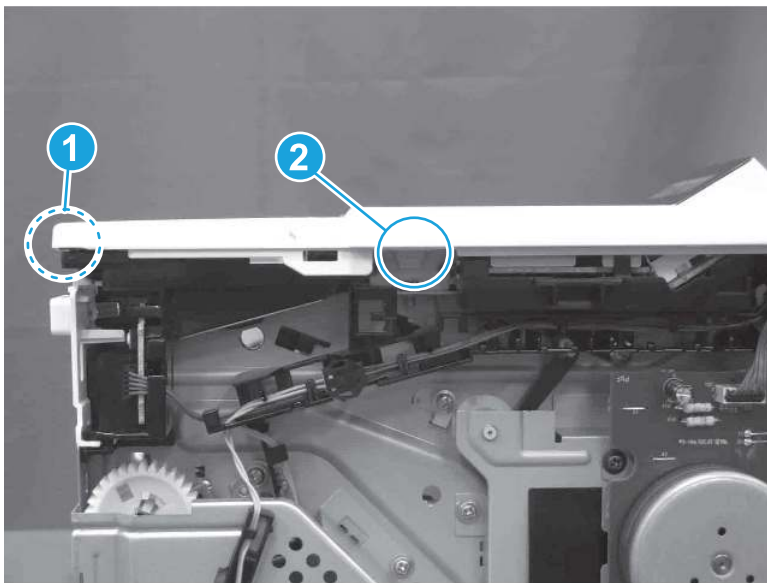
1. Remove one screw.

**Figure 5-517** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-518** Release one boss and one tab



3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

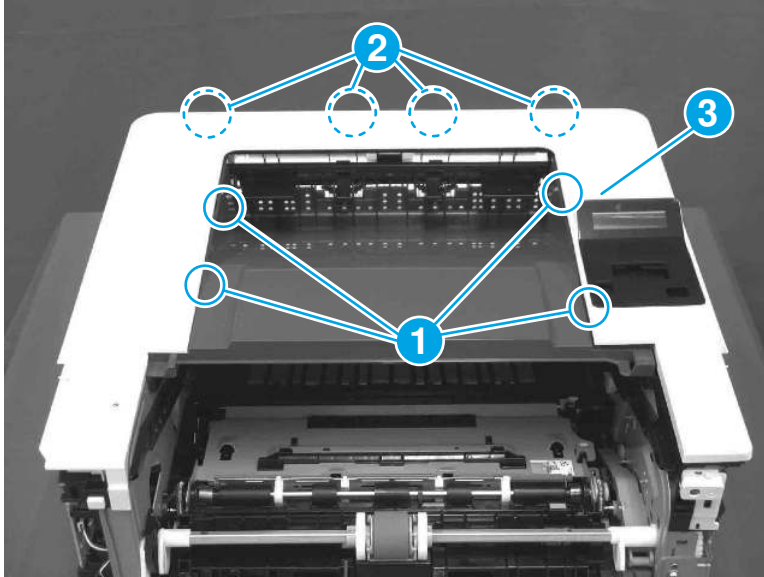
---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---




Figure 5-519 Remove the cover



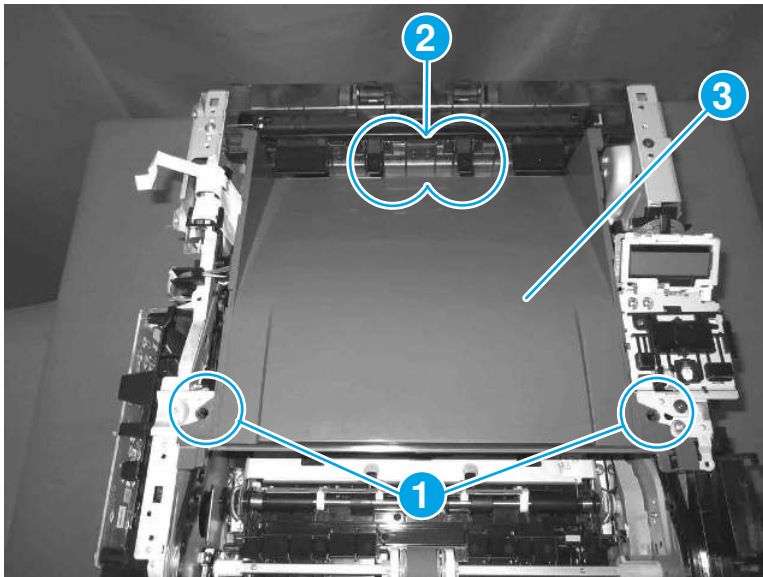
#### 10. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

 **NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-520 Remove the cover



#### 11. Remove the laser scanner assembly

Follow these steps to remove the laser scanner assembly.

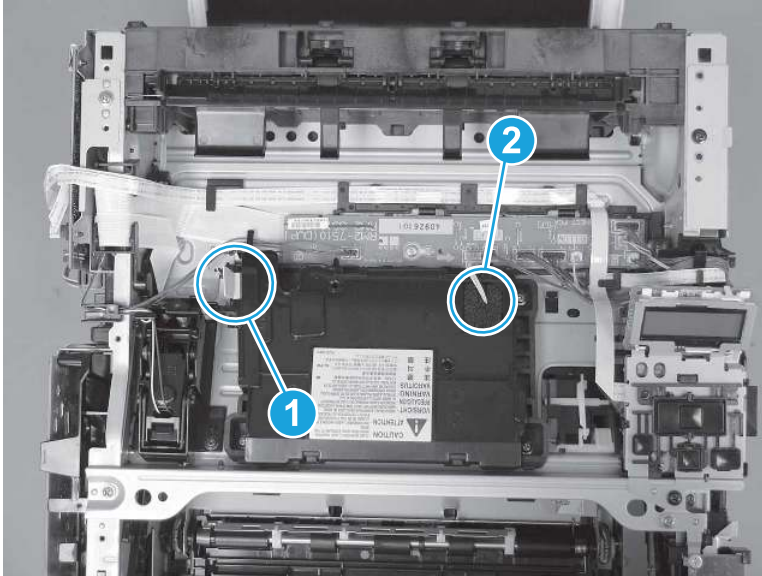
A SFP printer is shown in this section. However, the procedure is correct for all printer models.

1. Disconnect one flat-flexible cable (FFC) (callout 1), and one connector (callout 2).



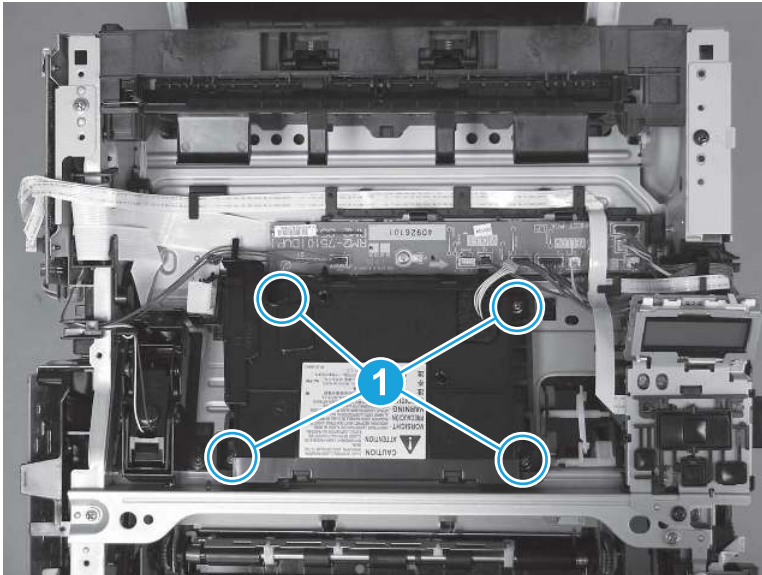
**Reinstallation tip:** Transfer the antistatic foam pad (callout 2) from the discarded laser/scanner assembly to the replacement assembly.

**Figure 5-521** Disconnect one FFC and one connector



2. Remove four screws (callout 1), and then remove the laser scanner assembly.

**Figure 5-522** Remove the laser scanner



## 12. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.



1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.




2. Unpack the replacement part from the packaging.

 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### Removal and replacement: Sheet-metal formatter bracket and formatter PCA

Learn how to remove and replace the formatter bracket.


Mean time to repair: 21 minutes SFP, 43 minutes MFP

Service level: Medium SFP, Medium MFP

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-38 Part information**

Part number	Part description
Not orderable	Sheet-metal formatter bracket

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner toner-cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-523** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.



---

**NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).



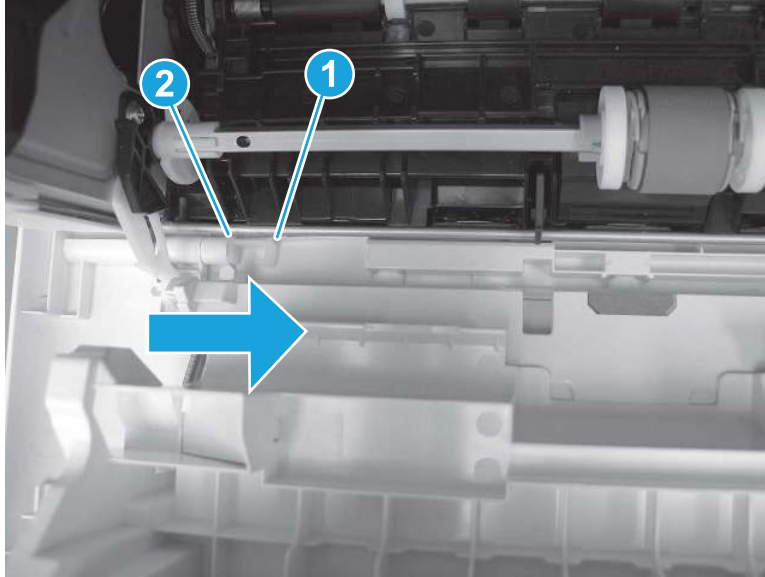
**TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.



**Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

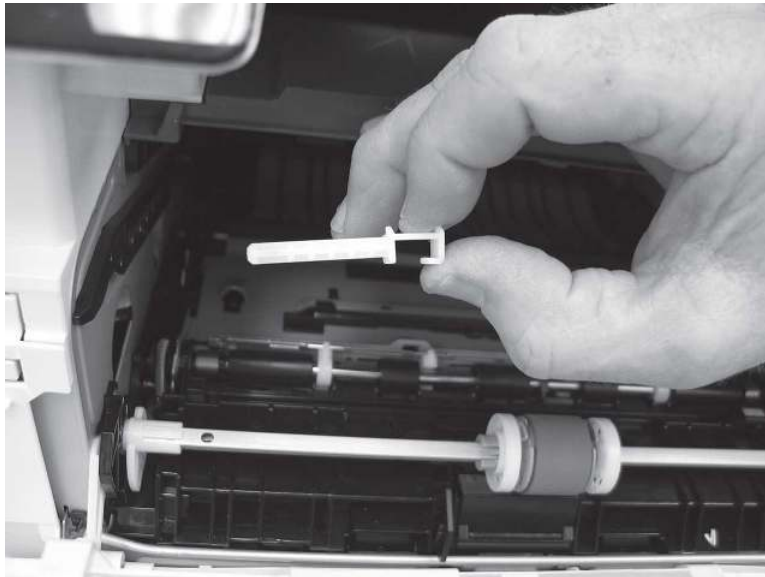
---

Figure 5-524 Release the support shaft



2. Remove the support shaft.

Figure 5-525 Remove the support shaft



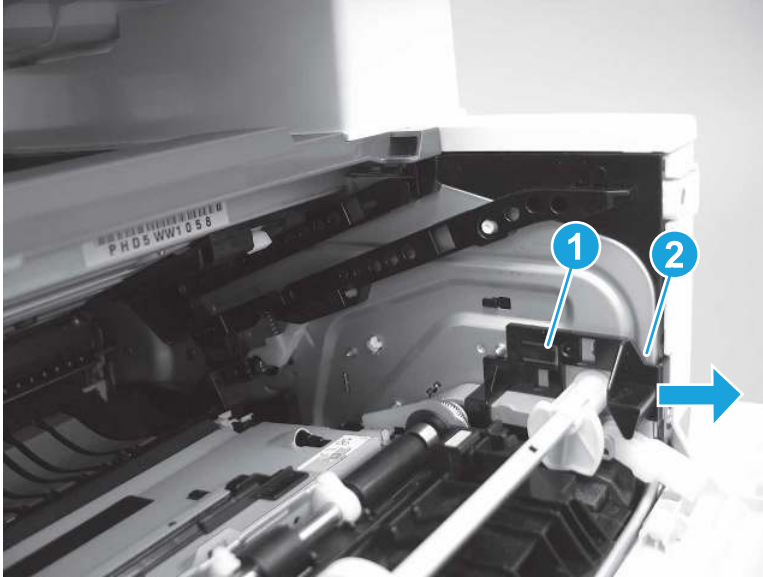
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

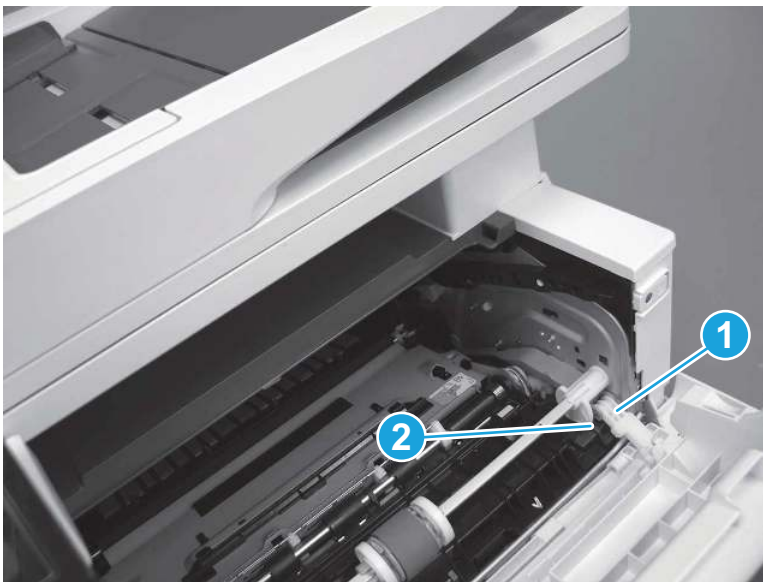
---

**Figure 5-526** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-527** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

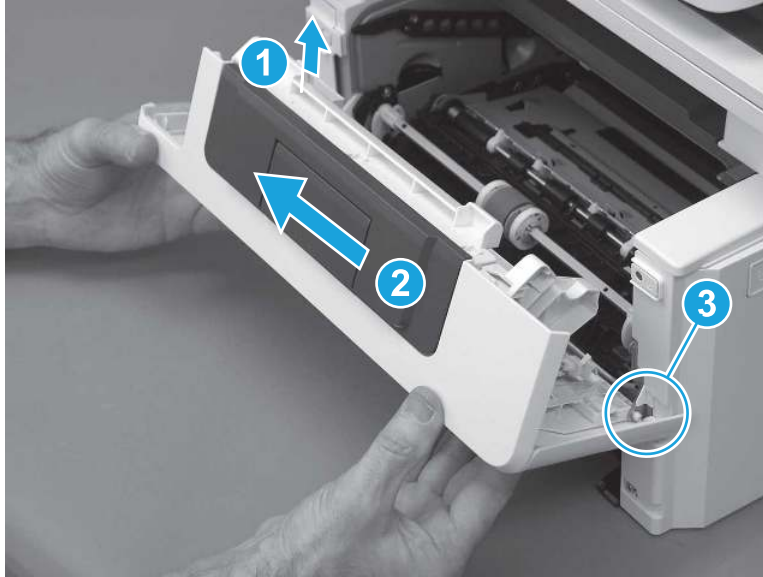
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

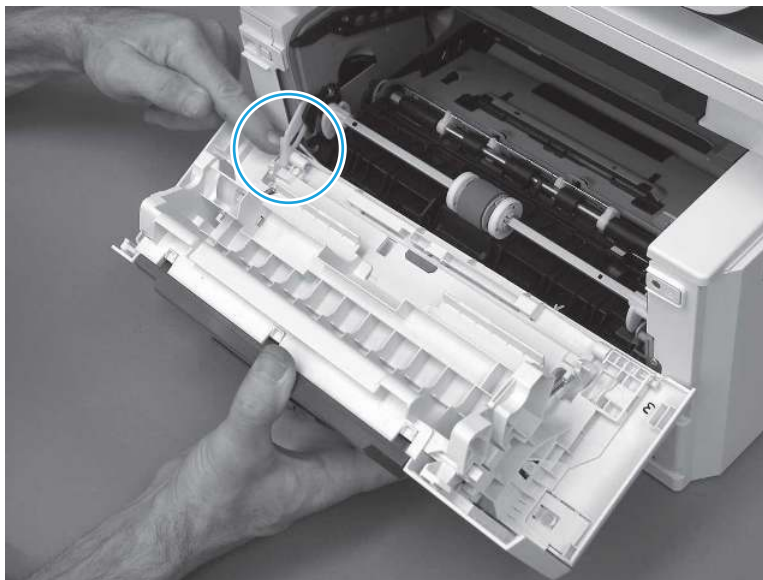
---

**Figure 5-528** Release the door



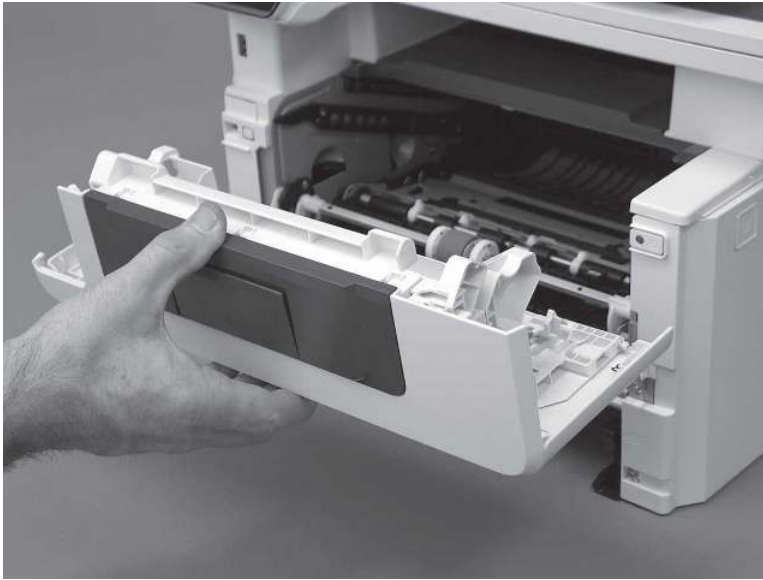
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-529** Release the left-side retainer arm



7. Remove the door.

**Figure 5-530** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

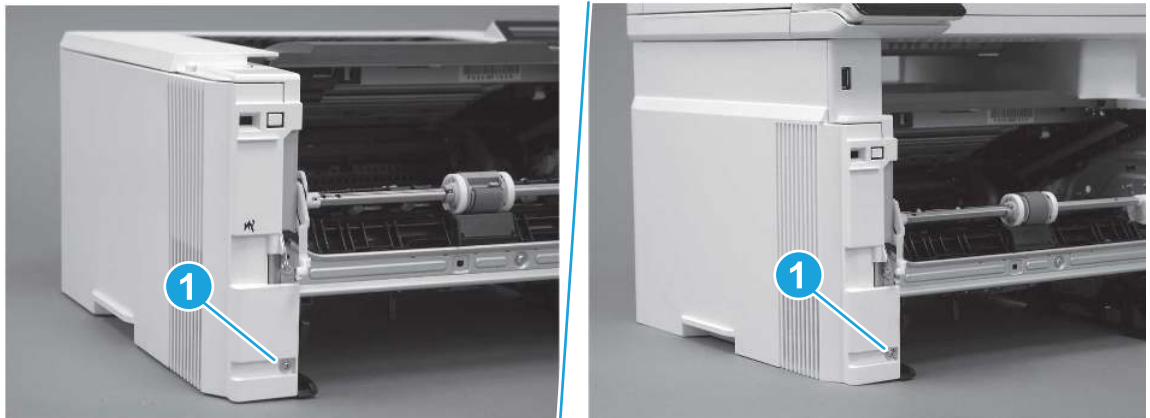
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

1. Remove one screw (callout 1).

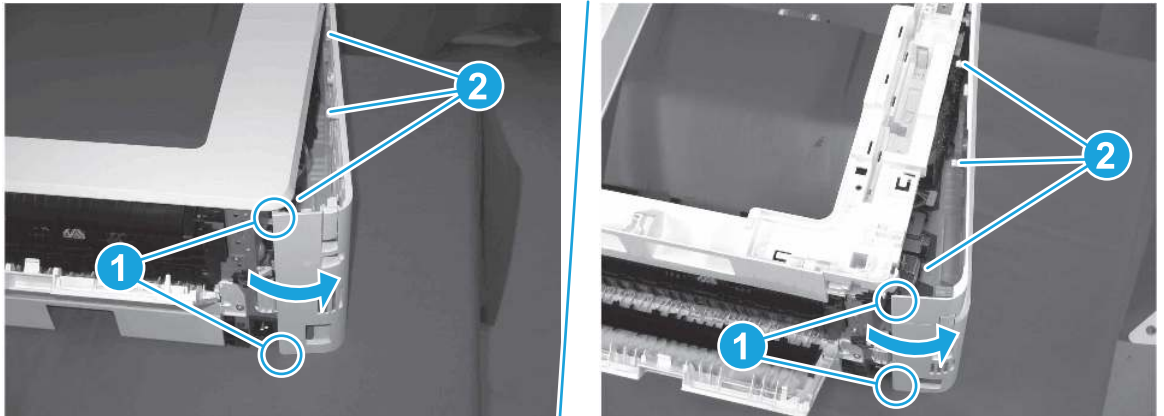
**Figure 5-531** Remove one screw





2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

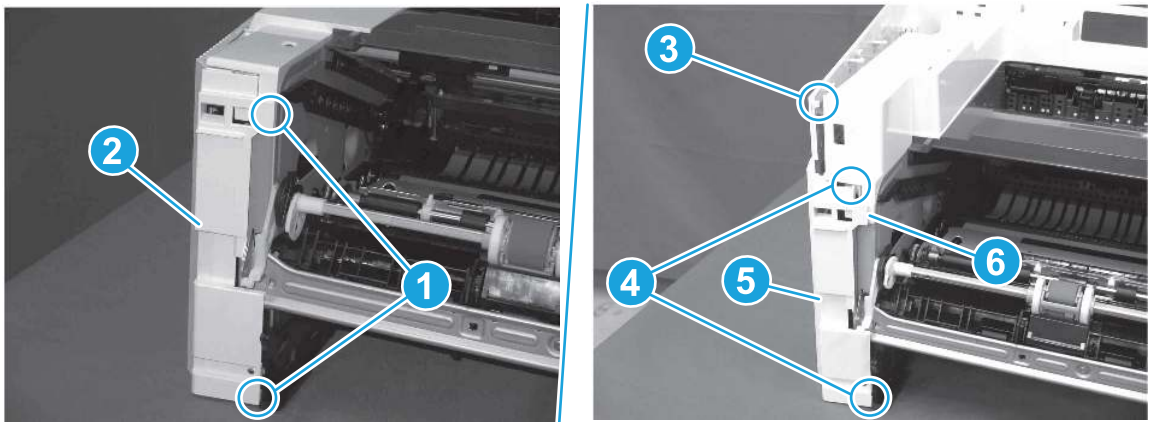
**Figure 5-532** Release two bosses and three tabs



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-533** Remove the cover



#### 4. Remove the right cover

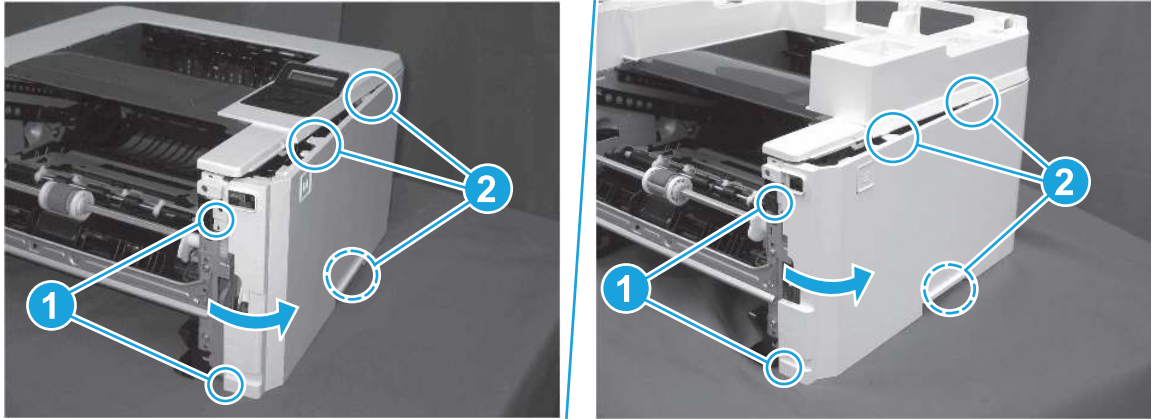
Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

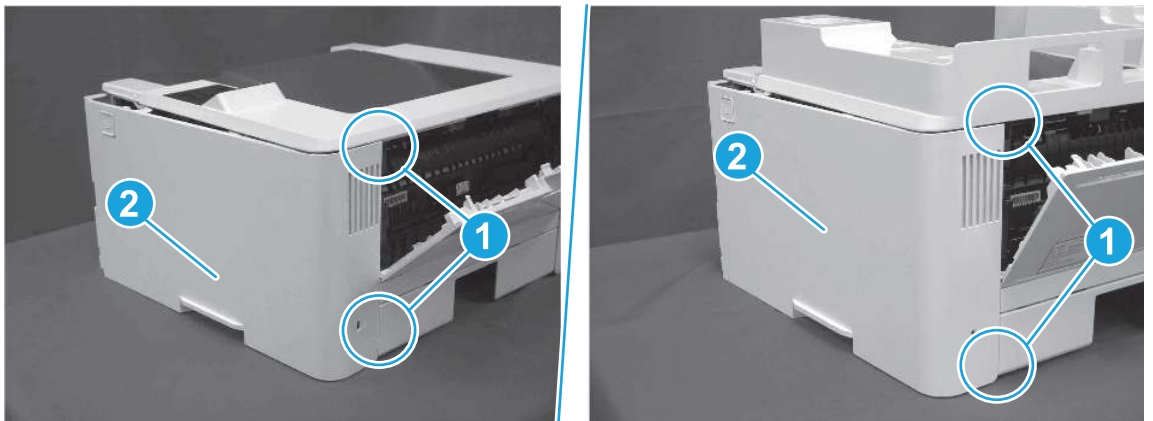


**Figure 5-534** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-535** Remove the cover

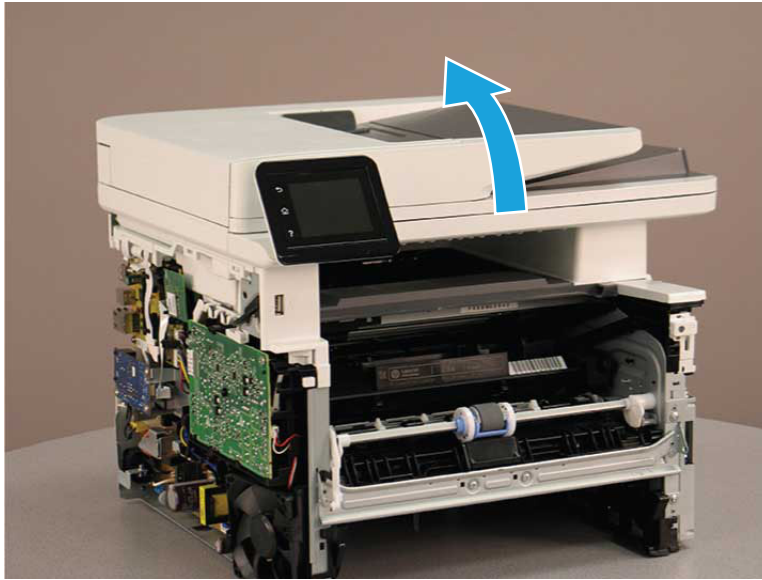


**5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)**

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

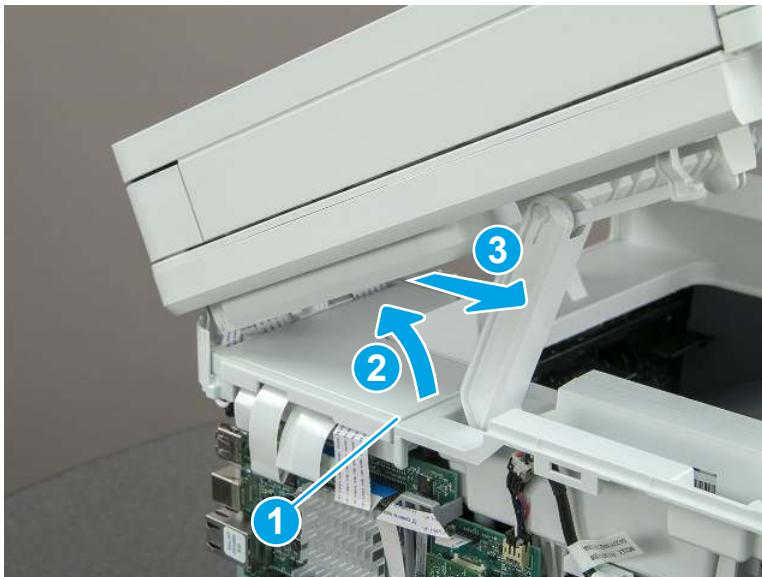
1. If the ISA is not already raised, raise it now.

**Figure 5-536** Raise the ISA




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-537** Remove the ISA FFC cover




## 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

**Figure 5-538** Disconnect three FFCs



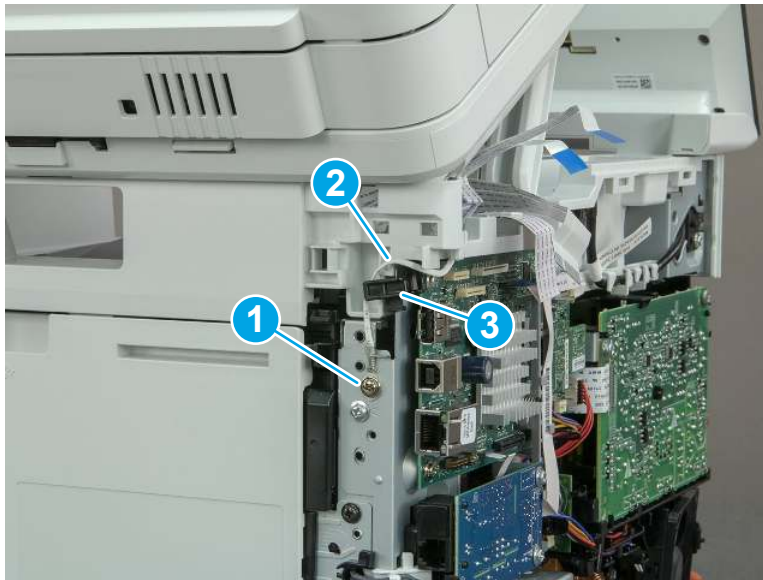
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-539** Release the tape



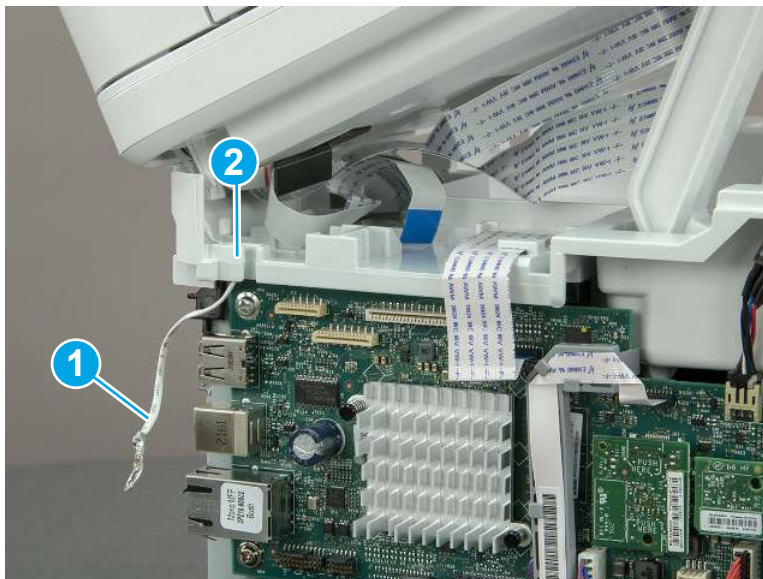
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-540** Release the ground wire



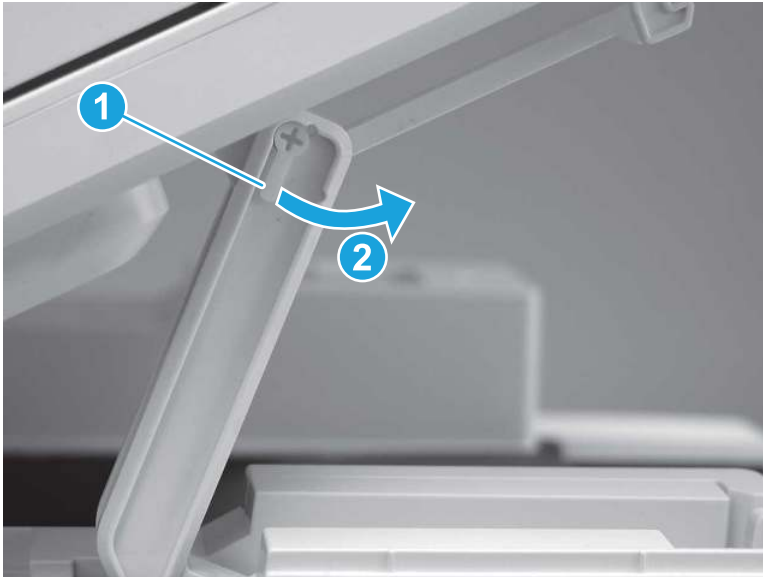
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-541** Release the ground wire



5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-542** Release one tab and rotate the slider pin

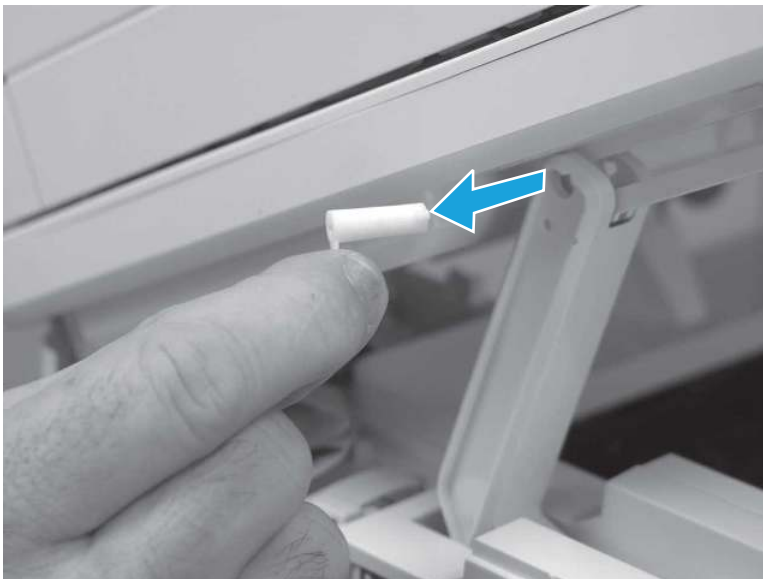


6. Remove the slider pin.



**Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

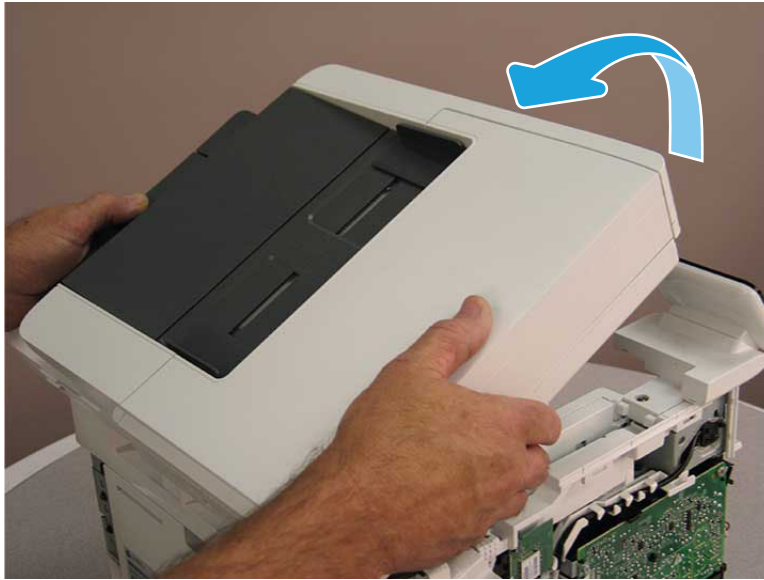
**Figure 5-543** Remove the slider pin





7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-544** Rotate the ISA towards the rear of the printer



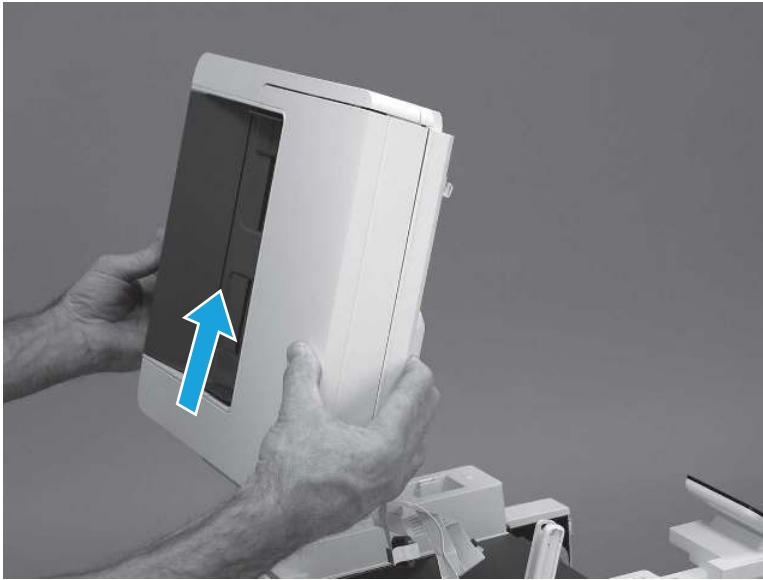
8. Slide the ISA as shown to release it.

**Figure 5-545** Release the ISA



9. Remove the ISA.

**Figure 5-546 Remove the ISA**

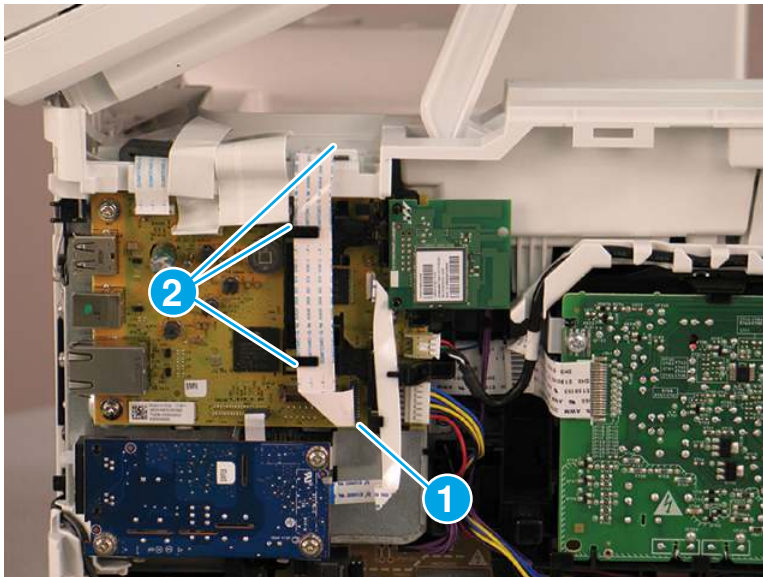


#### 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-547 Disconnect one connector**





2. Remove one screw (callout 1).

**Figure 5-548** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-549** Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-550** Remove the cover



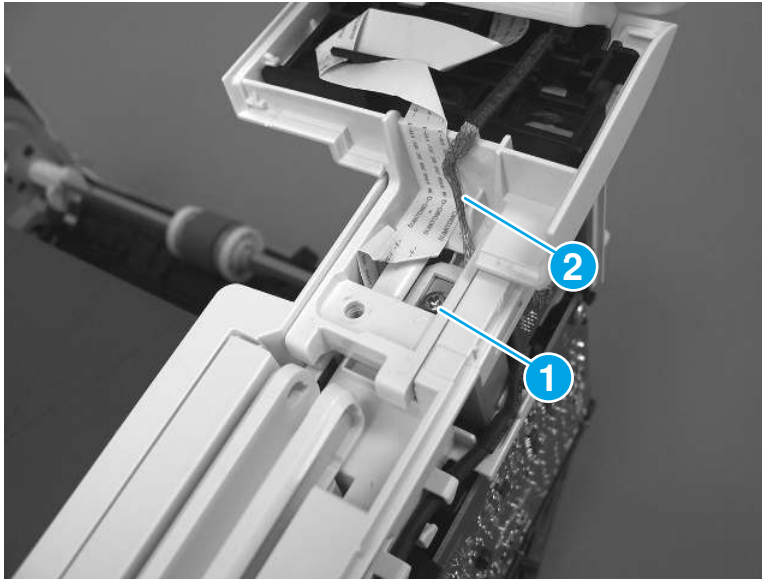
5. Remove the control-panel mount cover.

**Figure 5-551** Remove the cover



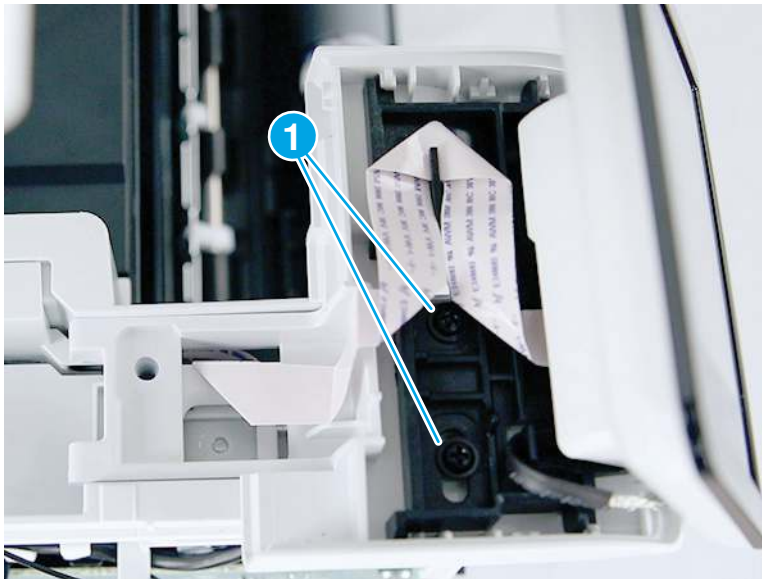
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-552** Remove one screw



7. Move the FFC out of the way, and then remove two screws (callout 1).

**Figure 5-553** Remove two screws



8. Slightly lift up the control-panel assembly to separate it from the top cover.

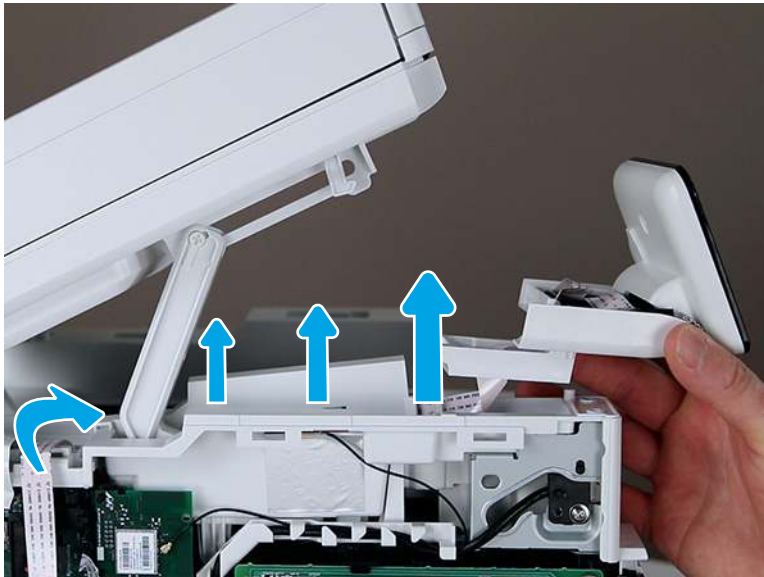
**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

**Figure 5-554** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-555** Remove the control-panel assembly

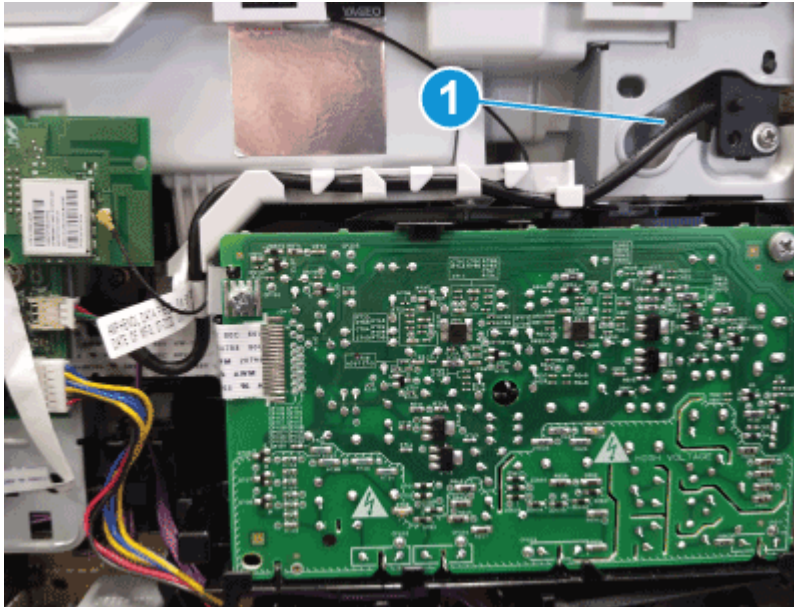


## 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

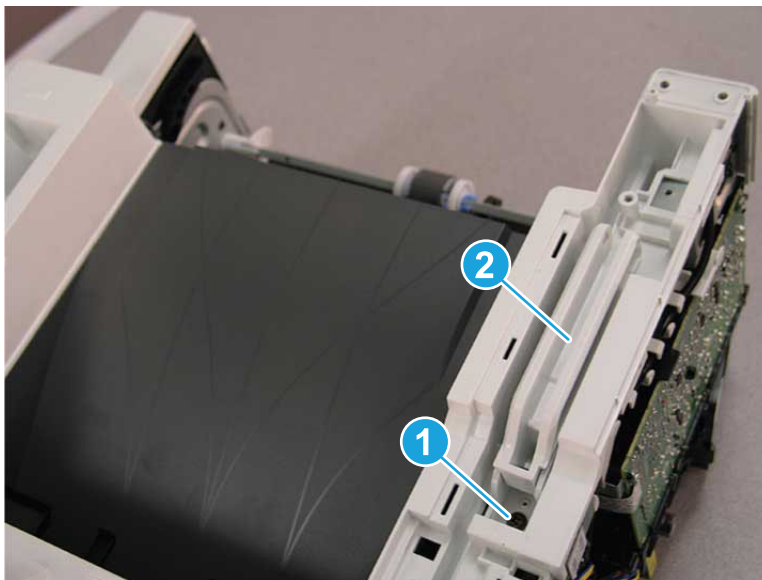
**Figure 5-556** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

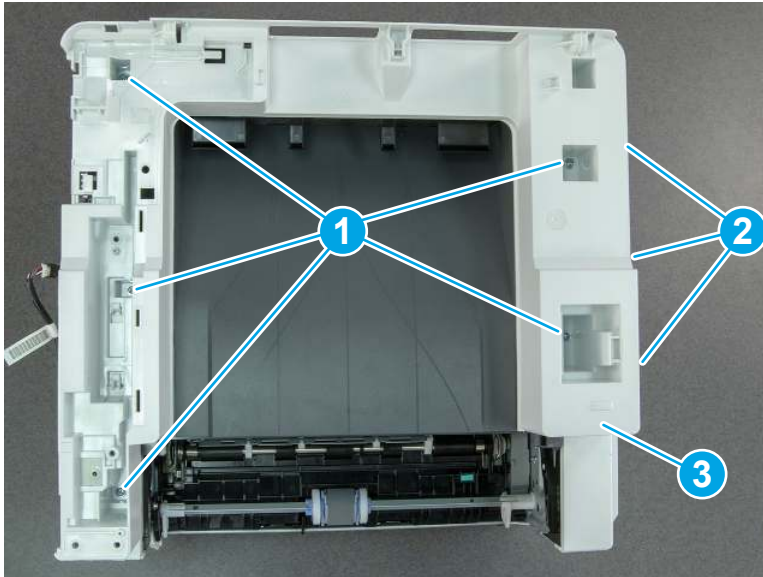
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-557** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-558** Remove the top cover



#### 9. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

1. Remove one screw.

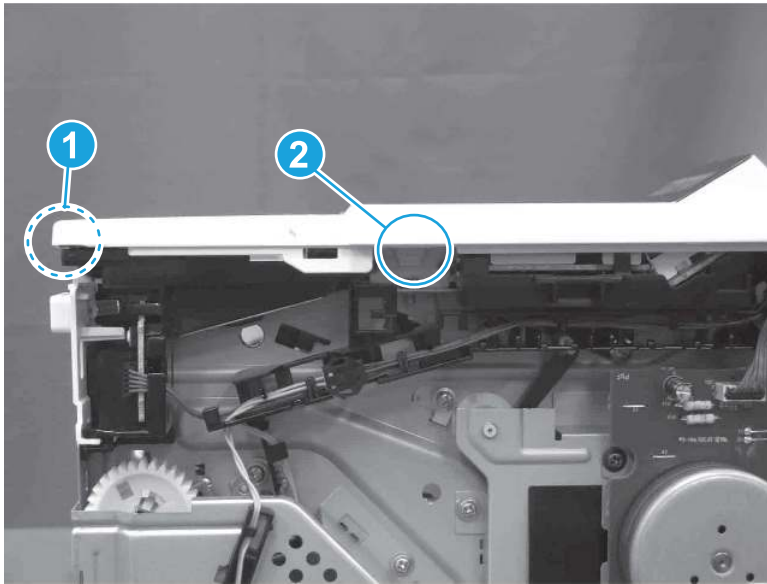
**Figure 5-559** Remove one screw






2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-560** Release one boss and one tab



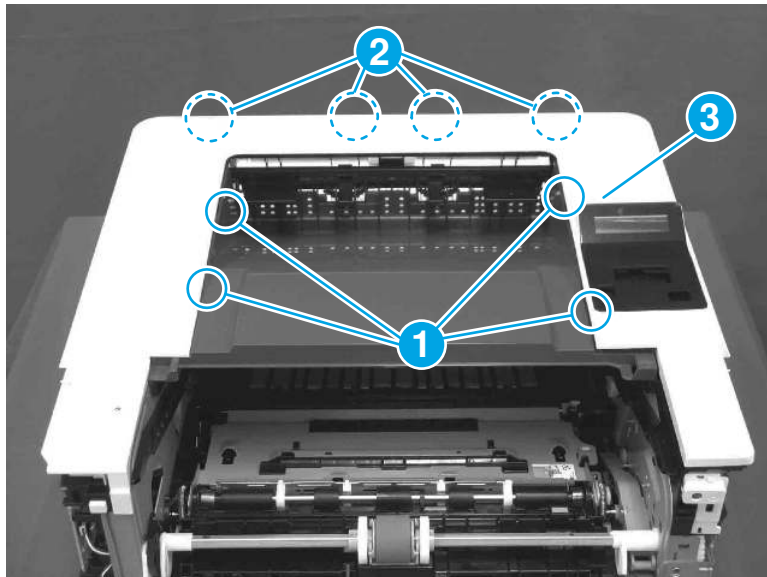
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

**Figure 5-561** Remove the cover




## 10. Remove the sheet-metal formatter bracket and formatter PCA

Follow these steps to remove the formatter bracket.




1. Do one of the following:

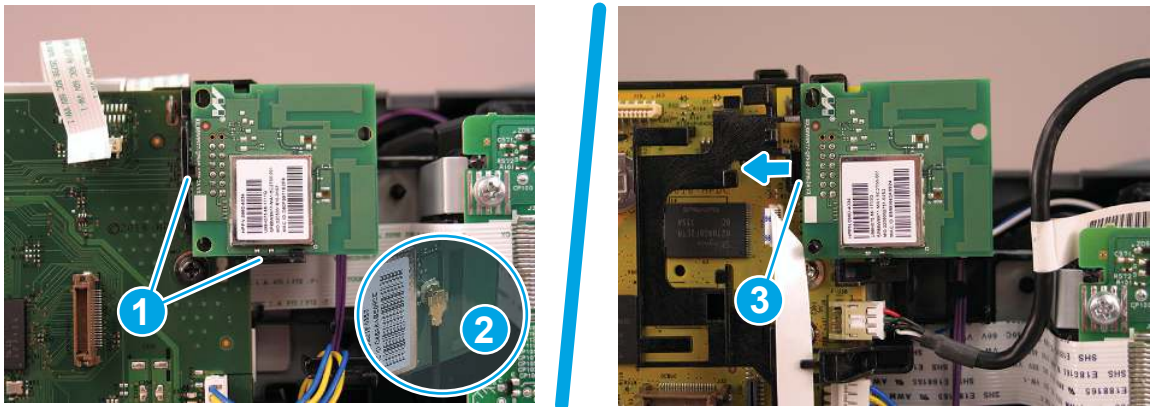
- **SFP only:** Release two tabs (callout 1), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **NOTE:** Disconnect the WiFi antenna (callout 2) before releasing the tabs.

- **MFP only:** Release one tab (callout 3), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **TIP:** Push the tab to the left to release it.

**Figure 5-562 Remove the wireless PCA**

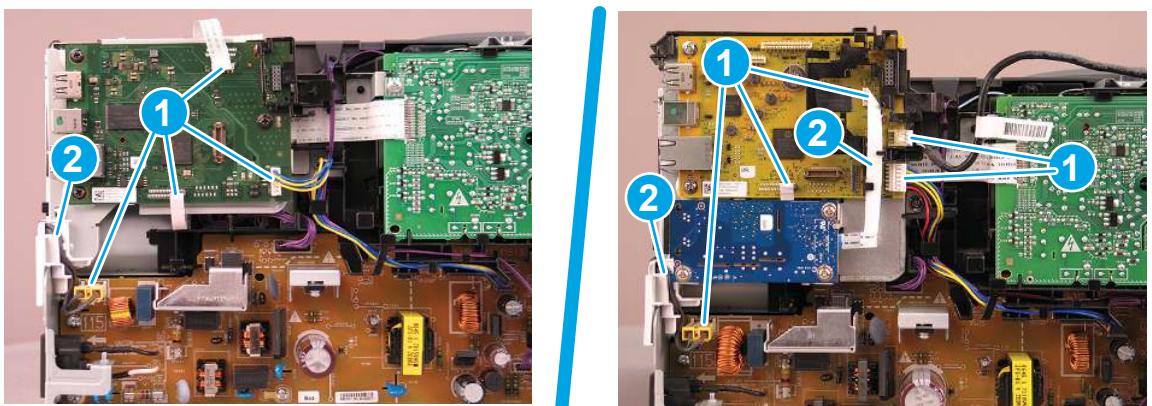


2. Do one of the following:

- **SFP only:** Disconnect the connectors (callout 1), and then release one wire harness (callout 2) from the guide.

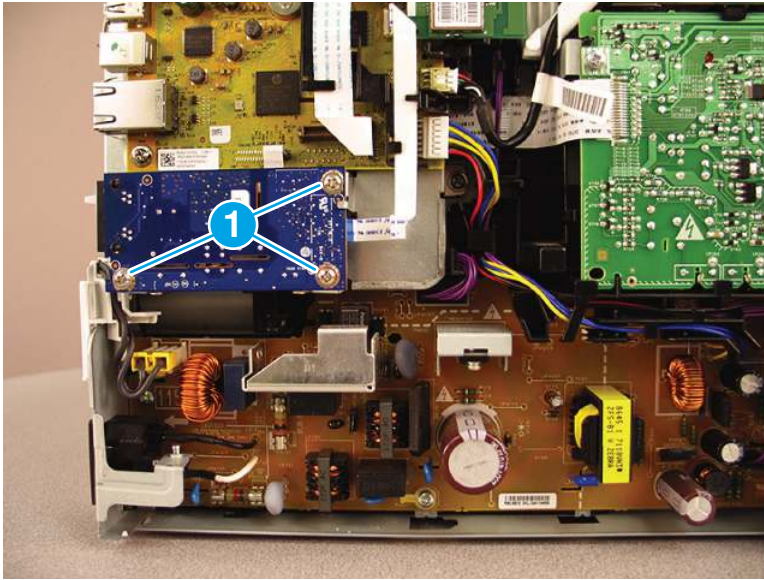
- **MFP only:** Disconnect the connectors (callout 1), and then release one wire harness and one FFC (callout 2) from the guides.

**Figure 5-563 Disconnect the connectors**



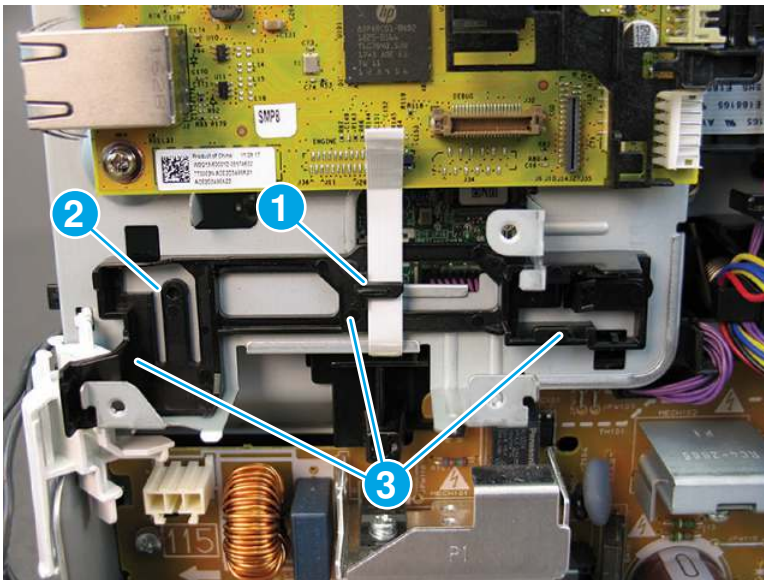
3. **MFP fax models only:** Remove three screws (callout 1), and then remove the fax PCA.

**Figure 5-564** Remove the fax PCA



4. **MFP only:** Release the FFC from the guide (callout 1), release one tab (callout 2), and then remove the FFC guide (callout 3).

**Figure 5-565** Remove the FFC guide

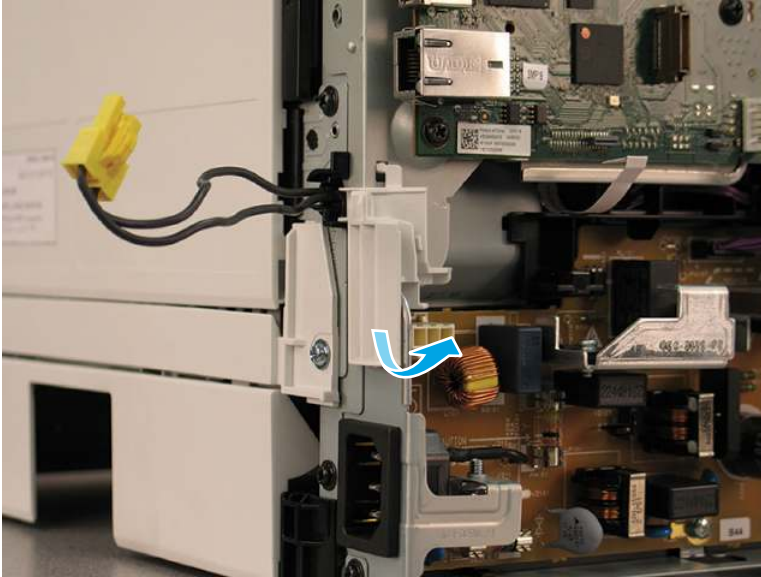


5. Remove one guide.



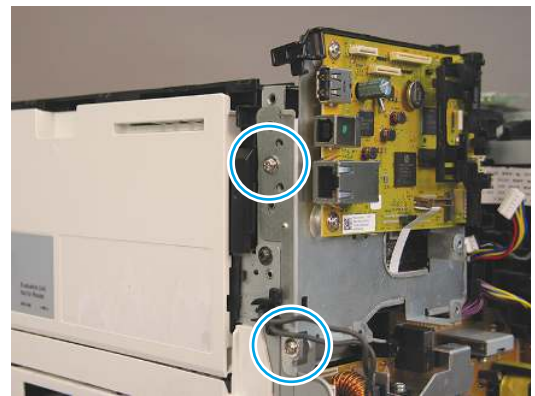
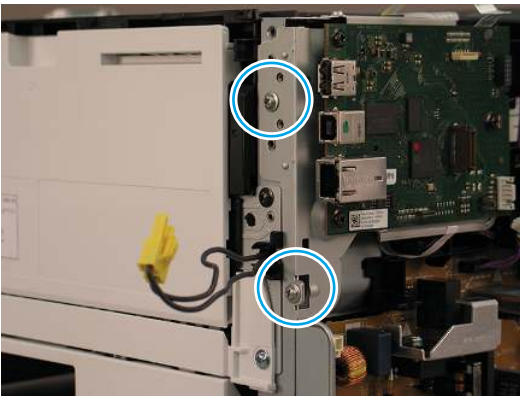
**NOTE:** A SFP printer is shown in the figure. However, the guide is identical for an MFP printer

**Figure 5-566** Remove the guide



6. Remove two screws.

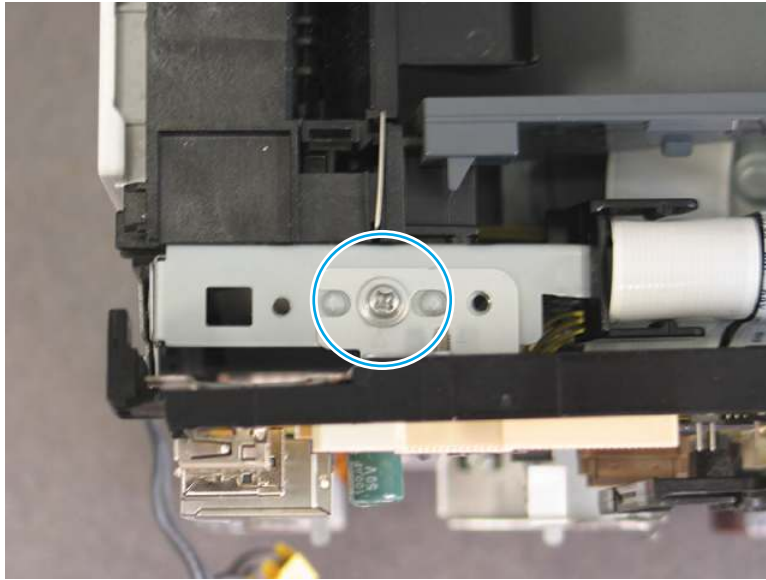
**Figure 5-567** Remove two screws





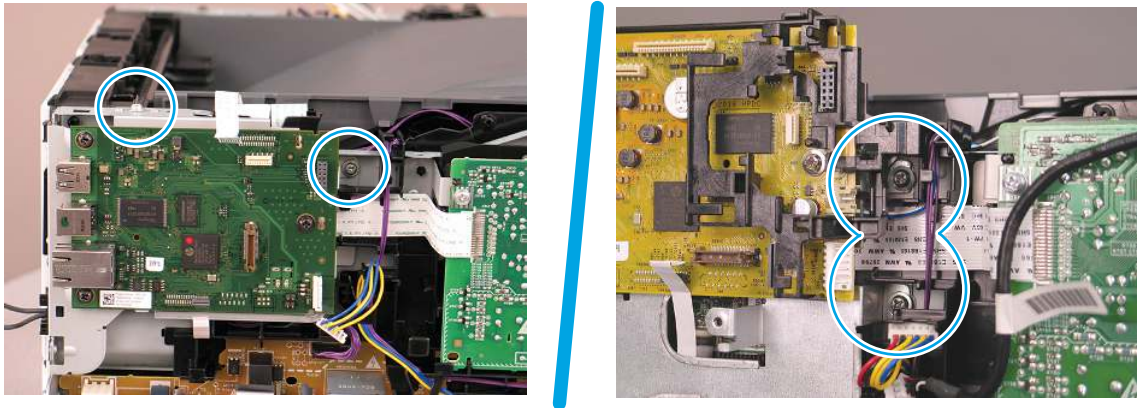
7. **MFP only:** Remove one screw.

**Figure 5-568** Remove one screw



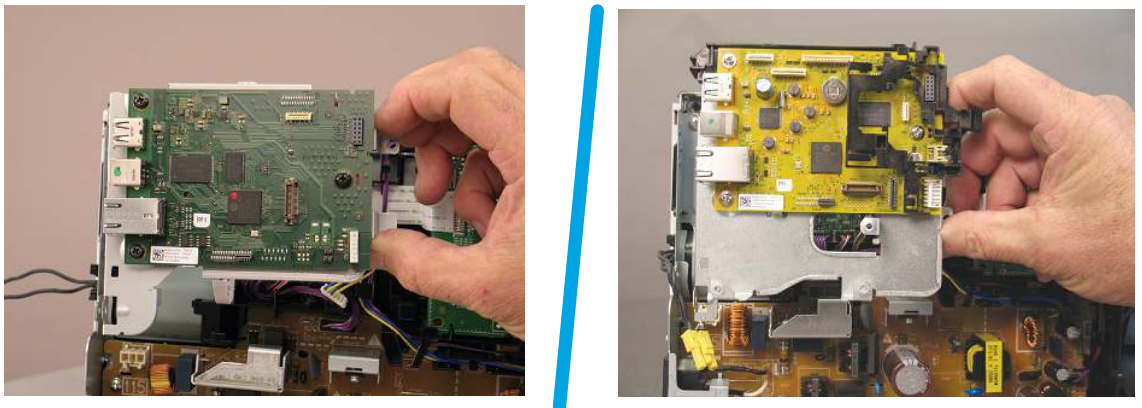
8. Support the formatter and bracket, and then remove two screws.

**Figure 5-569** Remove two screws



9. Remove the sheet-metal bracket and formatter PCA.

**Figure 5-570** Remove the bracket



## Removal and replacement: Control panel flat-flexible cable (SFP)

Learn how to remove and replace the control panel flat-flexible cable (FFC).

Mean time to repair: 16 minutes

Service level: Easy

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-39** Part information

Part number	Part description
RK2-6942-000CN	Control panel assembly FFC

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner toner-cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-571 Remove the tray**



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

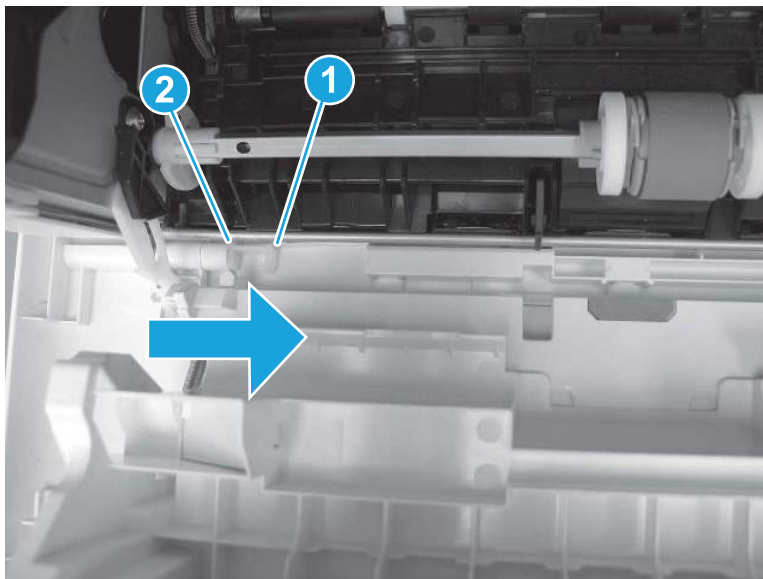
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

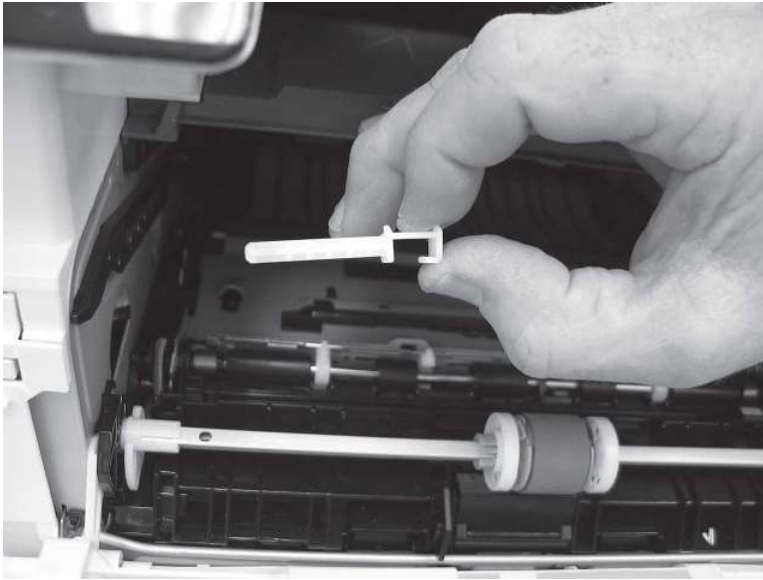
---

**Figure 5-572 Release the support shaft**



2. Remove the support shaft.

**Figure 5-573** Remove the support shaft



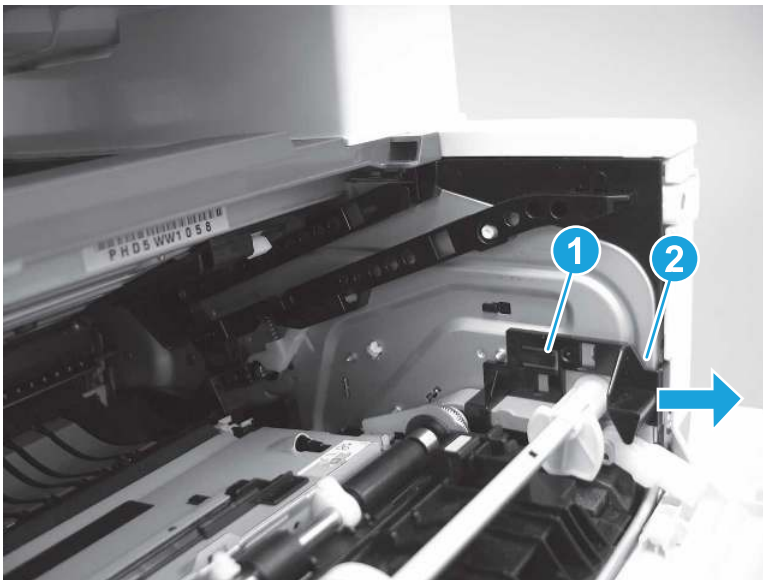
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

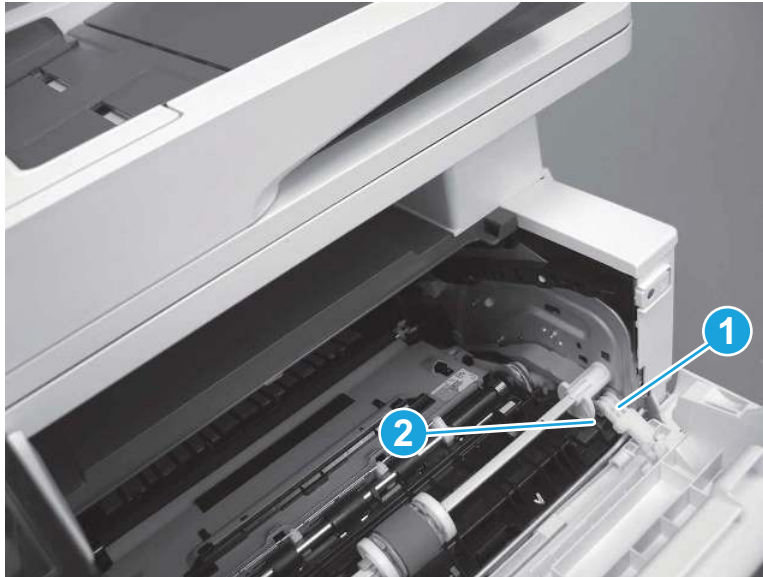
**Figure 5-574** Remove the guide





4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-575 Release the pressure-release link**

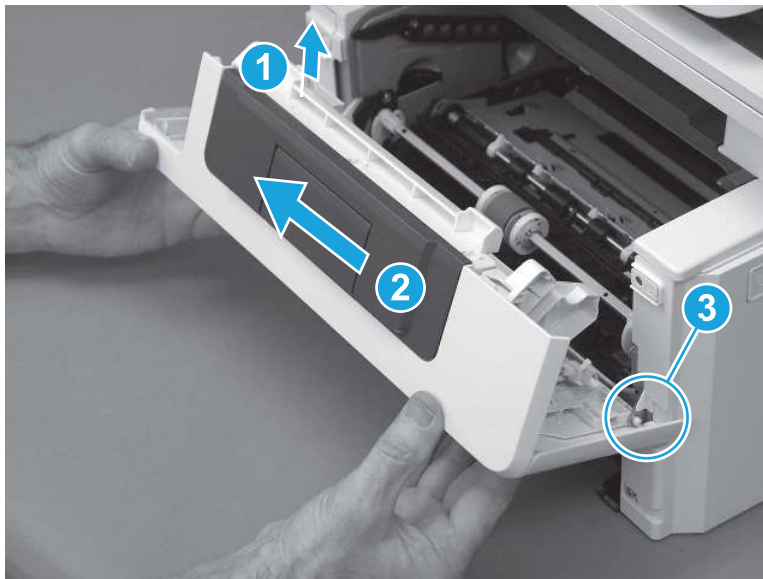


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

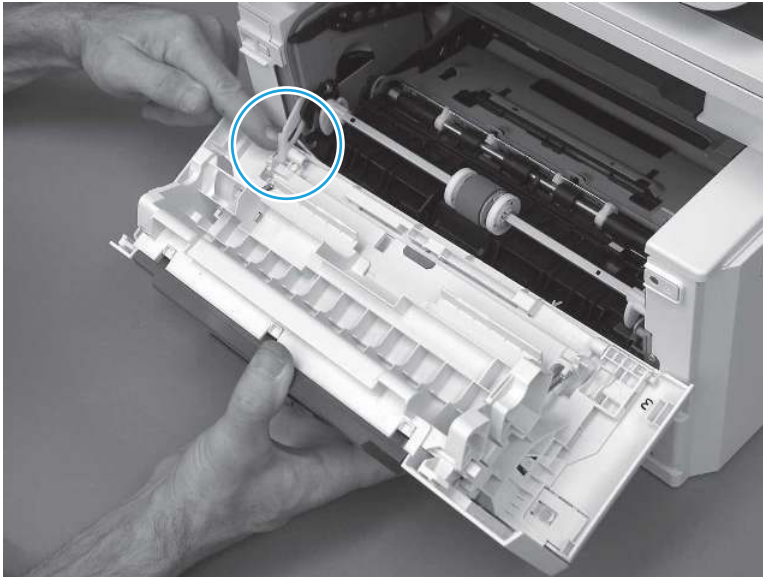
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-576 Release the door**



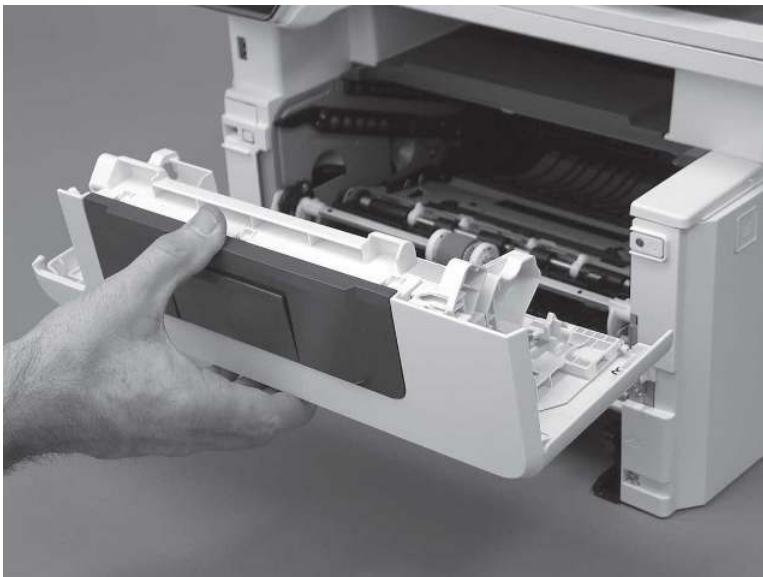
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-577** Release the left-side retainer arm



7. Remove the door.


**Figure 5-578** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

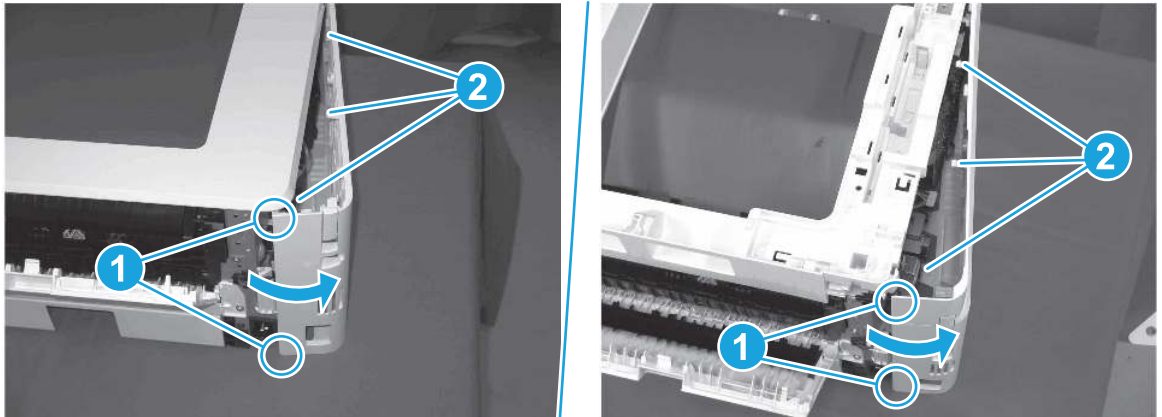
1. Remove one screw (callout 1).

**Figure 5-579** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-580** Release two bosses and three tabs

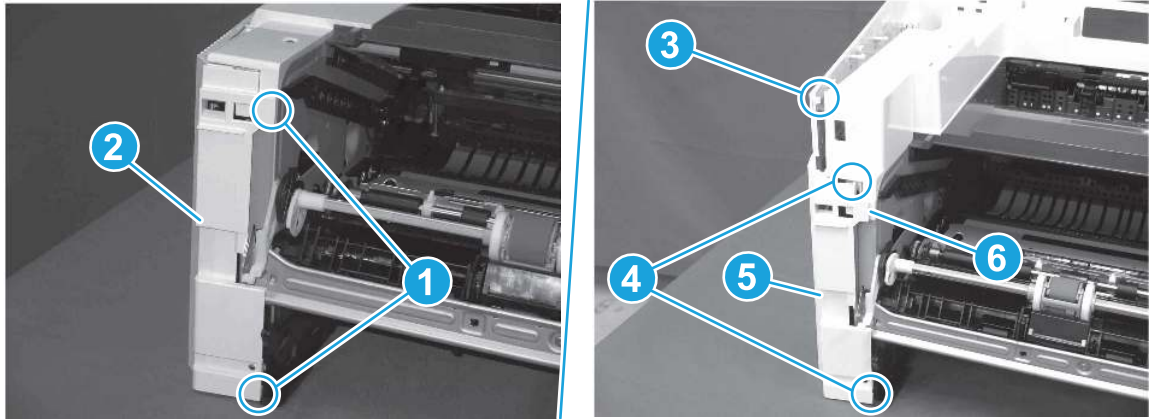


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

Figure 5-581 Remove the cover



#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).


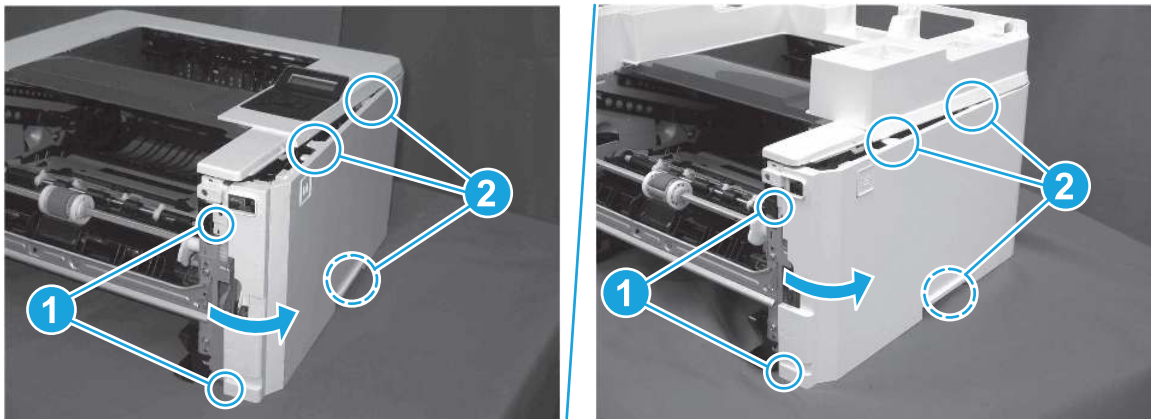
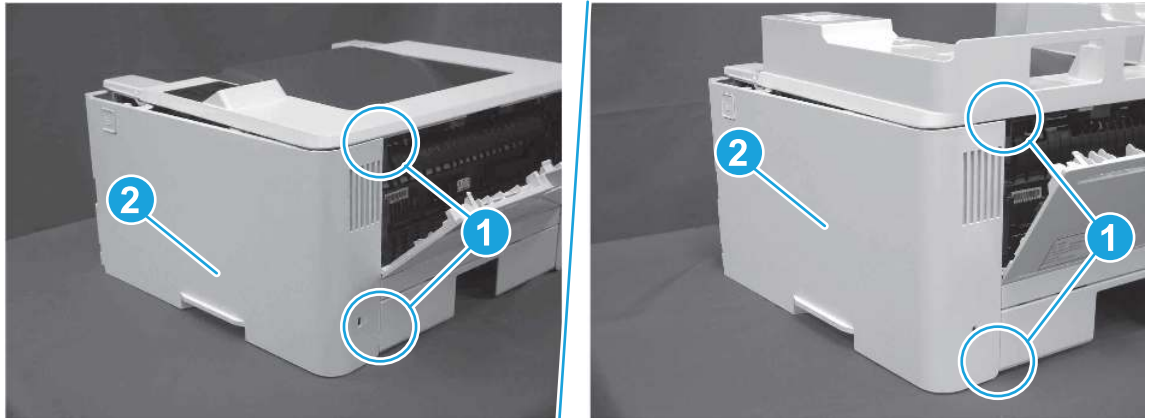
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-582 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-583 Remove the cover**



### 5. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

1. Remove one screw.

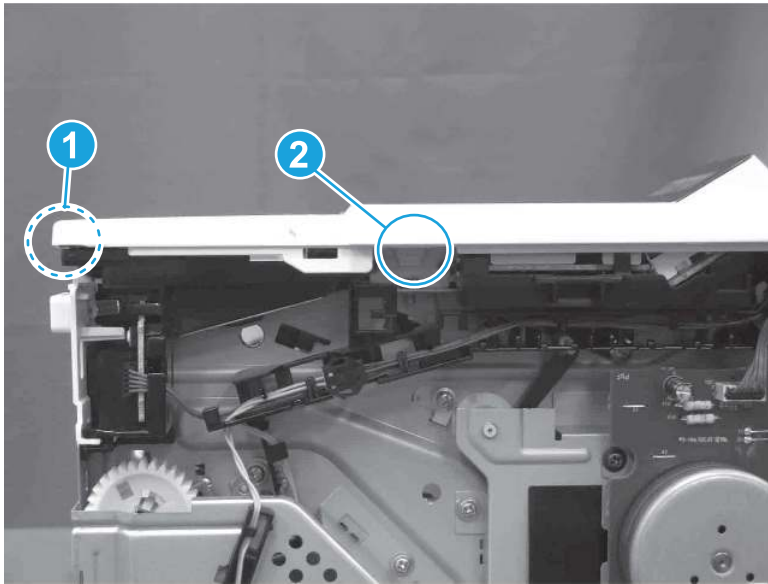
**Figure 5-584 Remove one screw**






2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-585** Release one boss and one tab



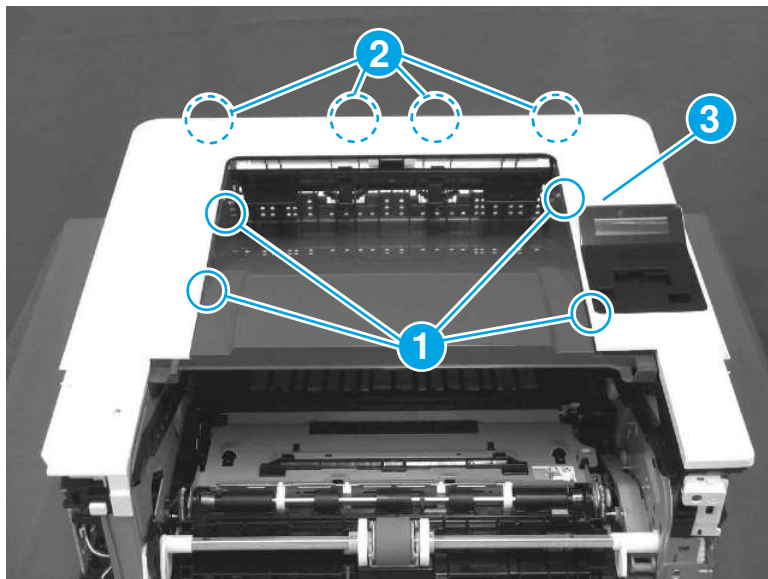
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---


**Figure 5-586** Remove the cover



## 6. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

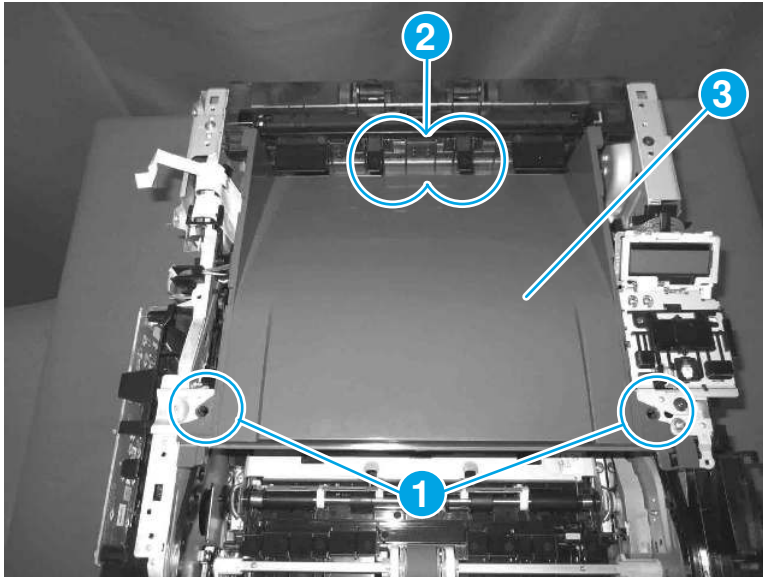
---

 **NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

---

- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).

**Figure 5-587 Remove the cover**

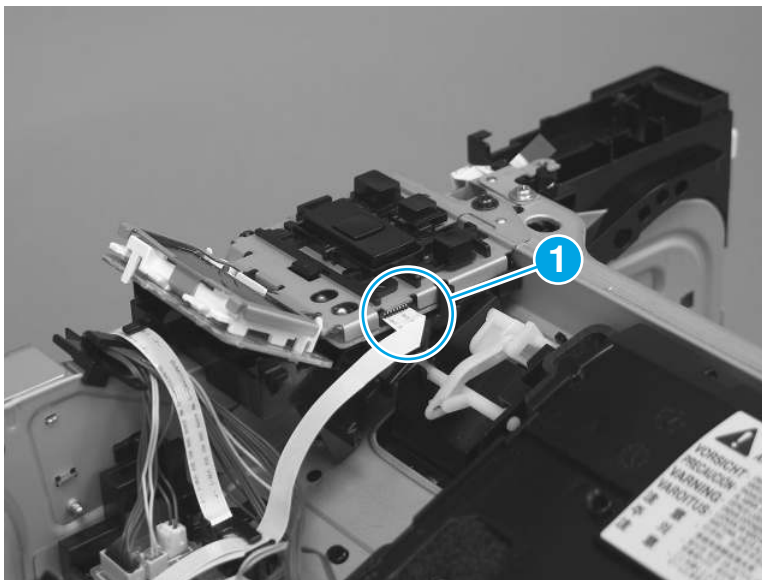


### 7. Remove the control panel FFC (SFP)

Follow these steps to remove the control panel FFC (SFP).

1. Disconnect the FFC from the control panel (callout 1).

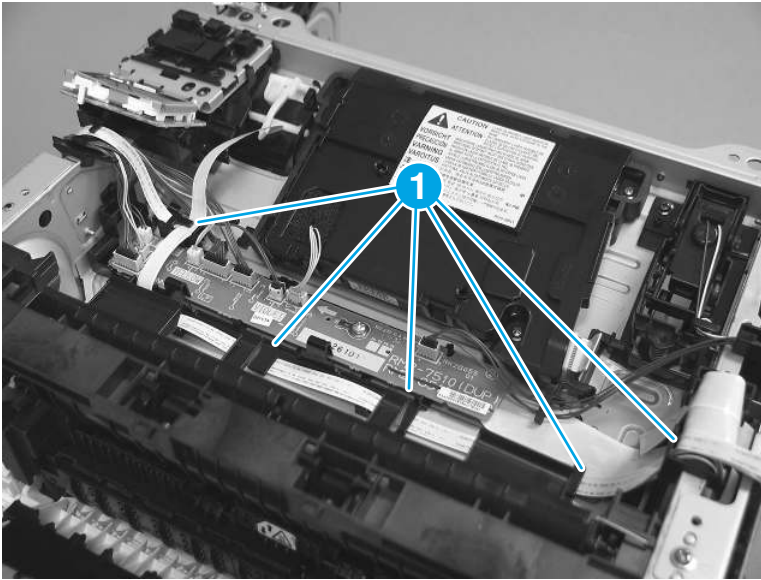
**Figure 5-588 Disconnect the FFC**





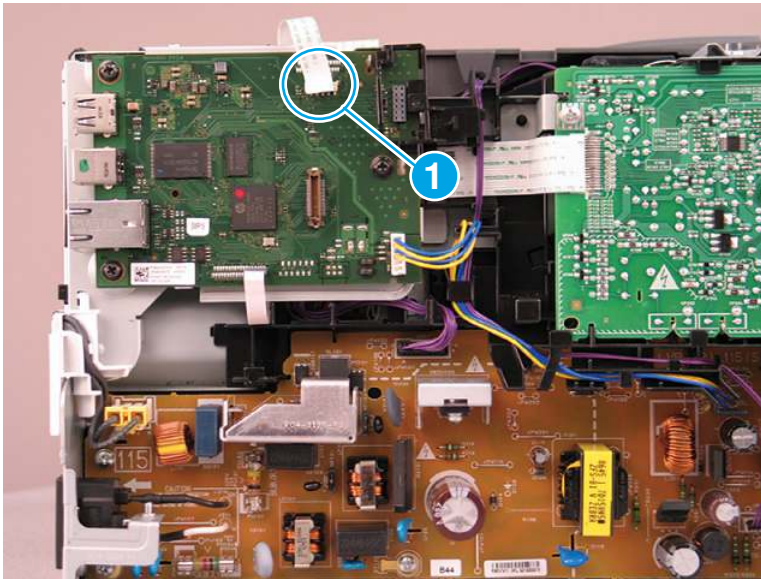
2. Release the FFC from the guide (callout 1).

**Figure 5-589** Release the FFC from the guide



3. Disconnect one FFC (callout 1), and then remove the FFC.

**Figure 5-590** Remove the FFC



## 8. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.



1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>


2. Unpack the replacement part from the packaging.

 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Formatter FFC

Learn how to remove and replace the formatter flat-flexible cable (FFC).



[View a video of how to remove and replace the SFP formatter FFC.](#)



[View a video of how to remove and replace the MFP formatter FFC.](#)


Mean time to repair: 25 minutes SFP, 52 MFP

Service level: Medium SFP, Difficult MFP

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-40** Part information

Part number	Part description
RK2-6920-000CN	Cable, flexible flat Frmtr to DCC (SFP)
RK2-6931-000CN	Cable, flexible flat Frmtr to DCC (MFP)

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length
- – Socket screwdriver 5.5 mm (.216 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-591** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.

---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.


---

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

---

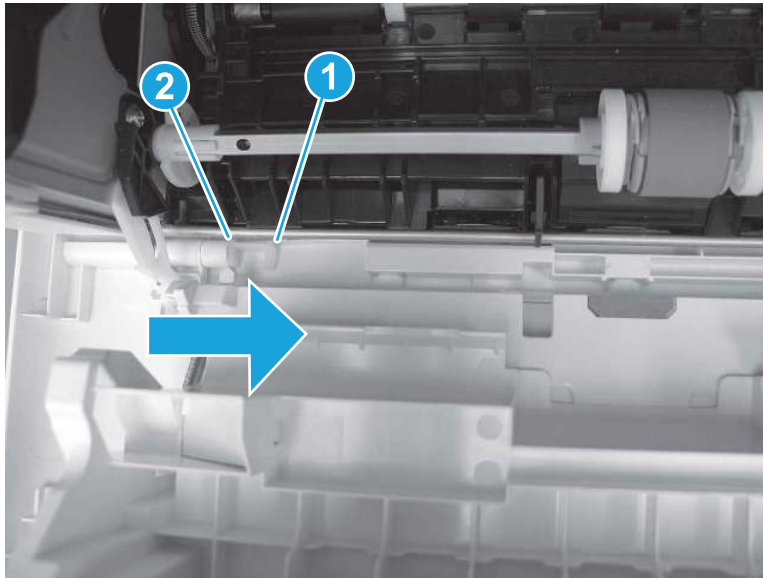
 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

---

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

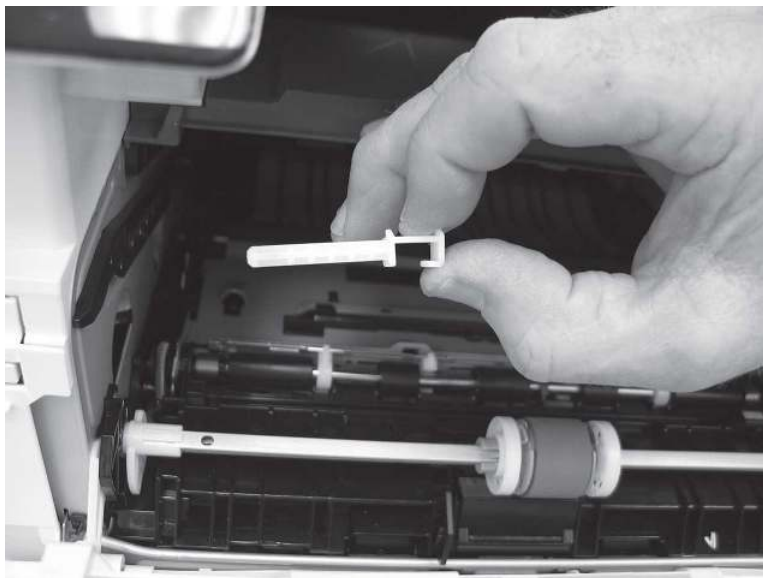
---

**Figure 5-592** Release the support shaft




2. Remove the support shaft.

**Figure 5-593** Remove the support shaft

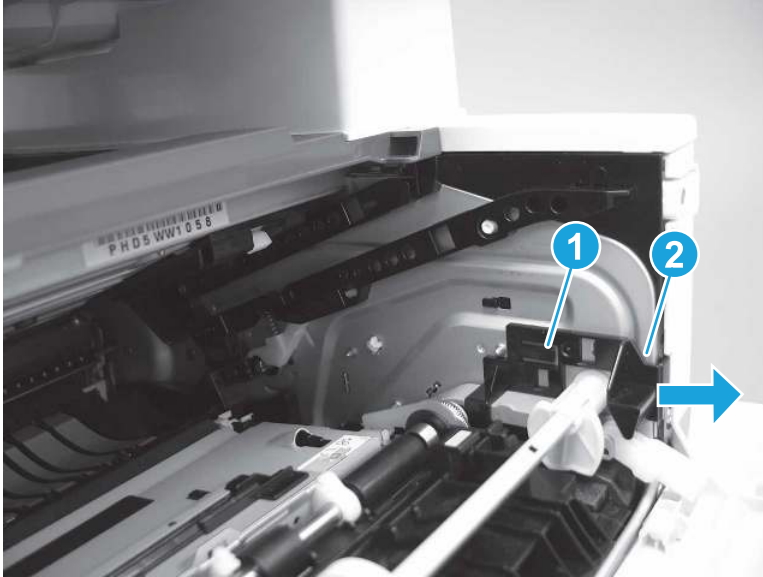


3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

 **CAUTION:** Be careful, the tab (callout 1) can be easily broken.

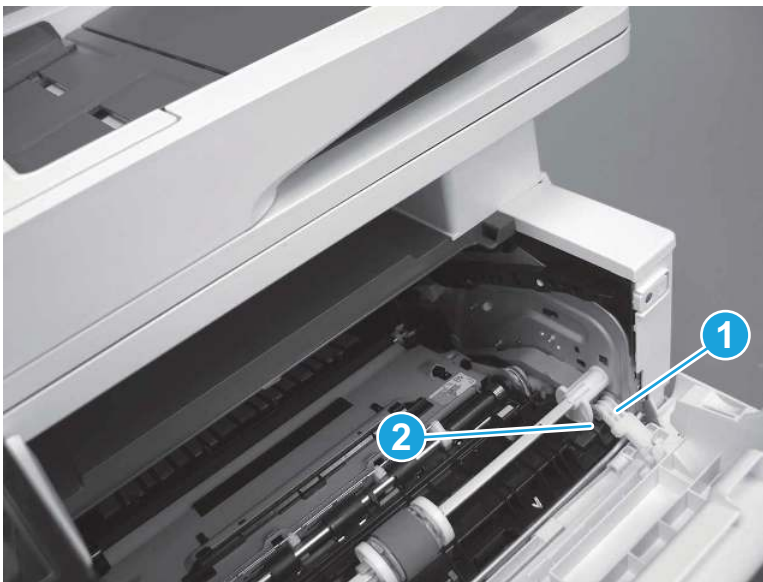
---

**Figure 5-594 Remove the guide**



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-595 Release the pressure-release link**



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

---

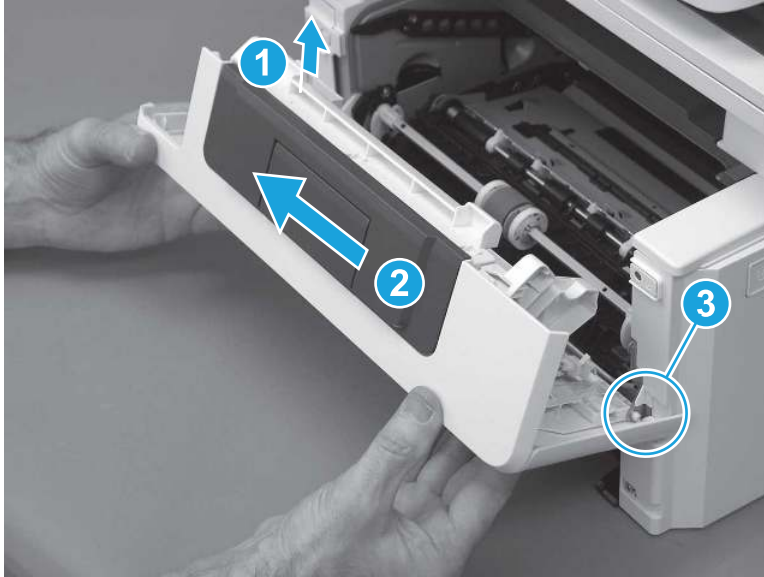
**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

---

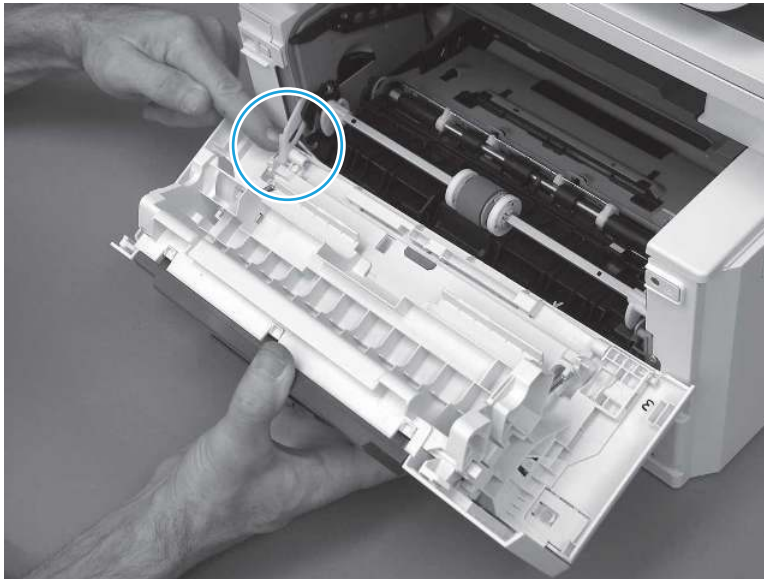


**Figure 5-596** Release the door



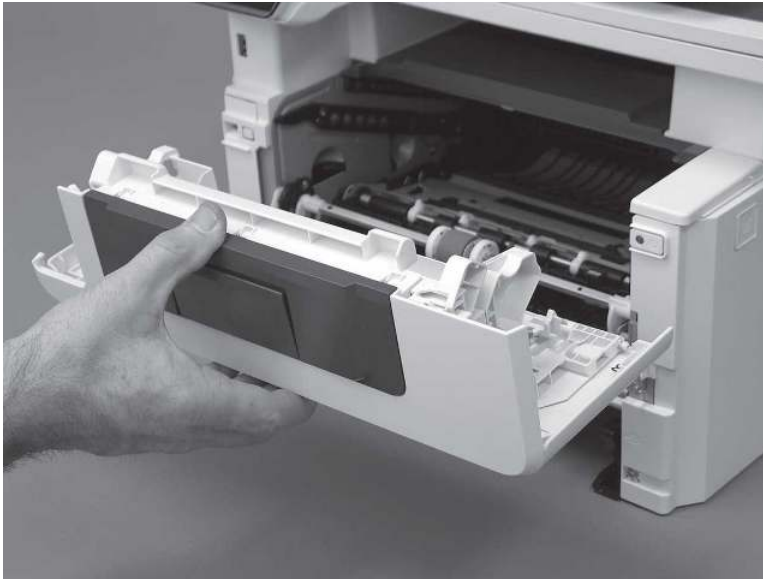
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-597** Release the left-side retainer arm



7. Remove the door.

**Figure 5-598** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

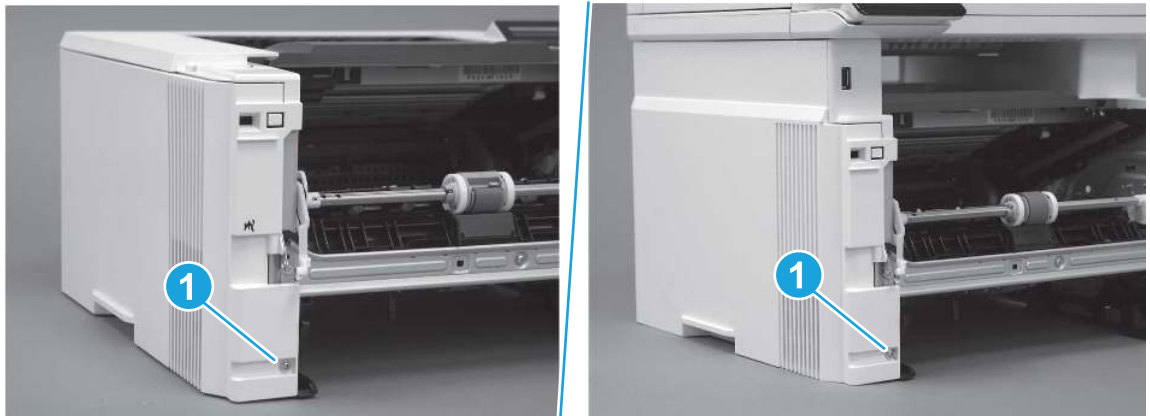
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

1. Remove one screw (callout 1).

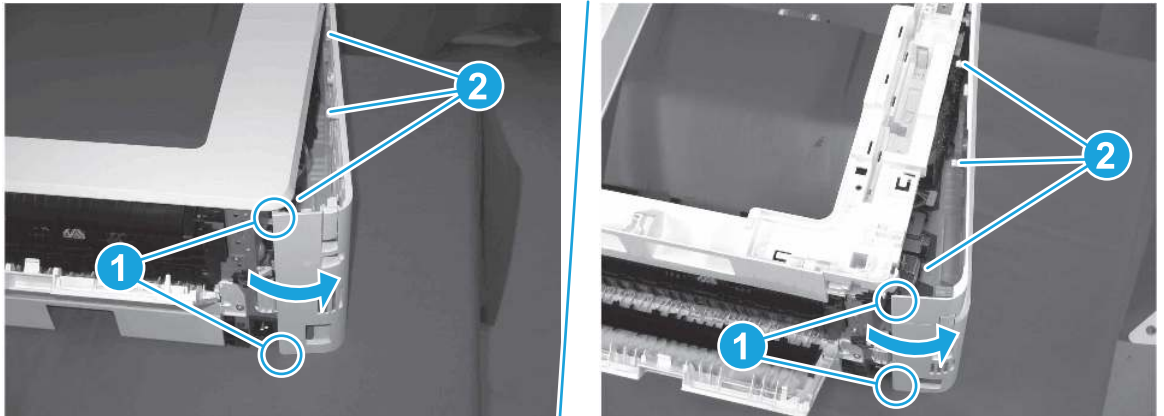
**Figure 5-599** Remove one screw





2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

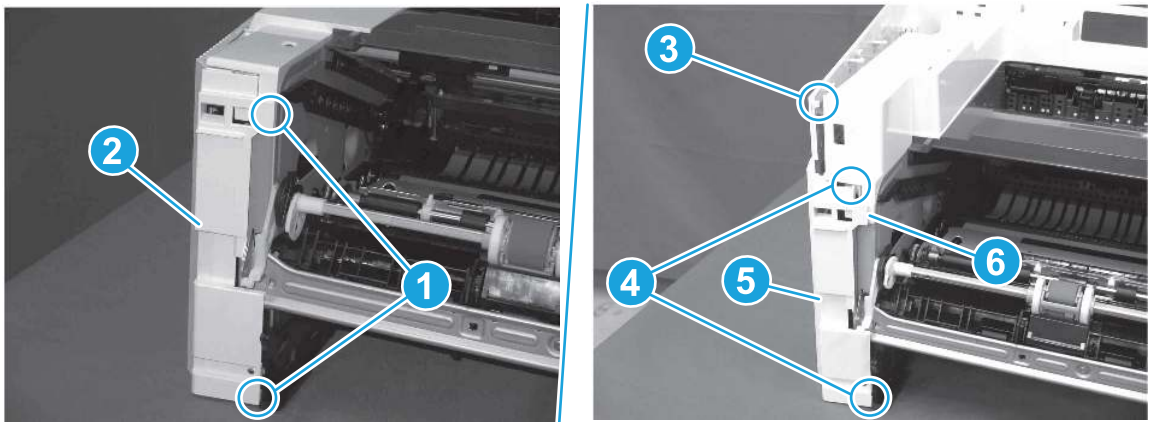
**Figure 5-600 Release two bosses and three tabs**



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-601 Remove the cover**



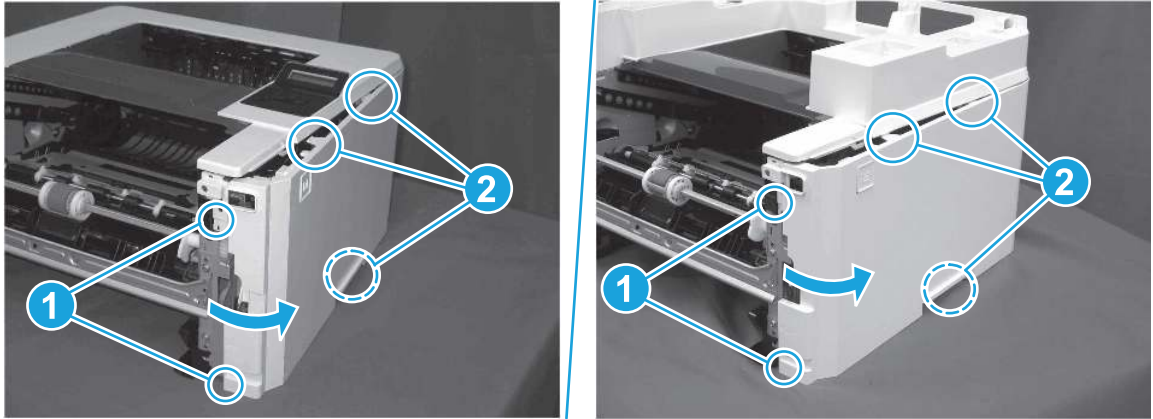
#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

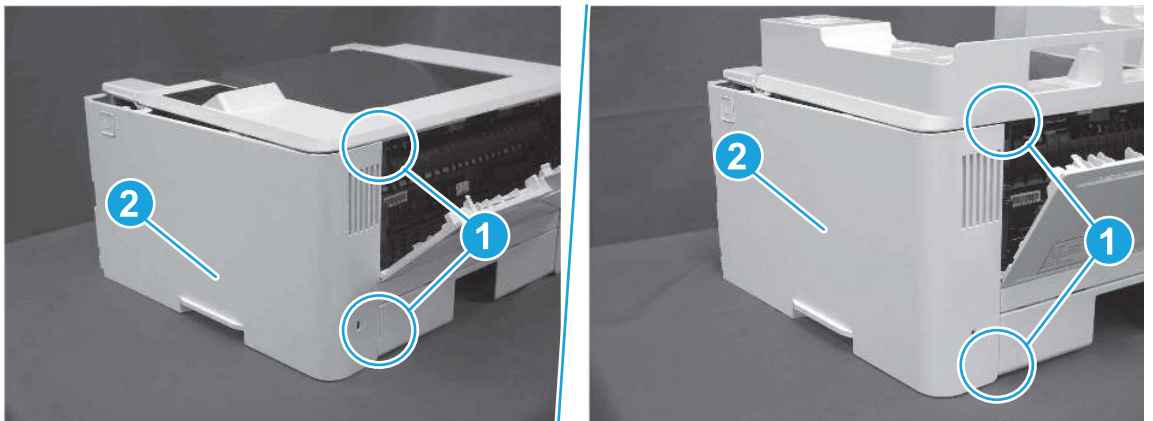
**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

**Figure 5-602 Release two bosses and three tabs**



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-603 Remove the cover**

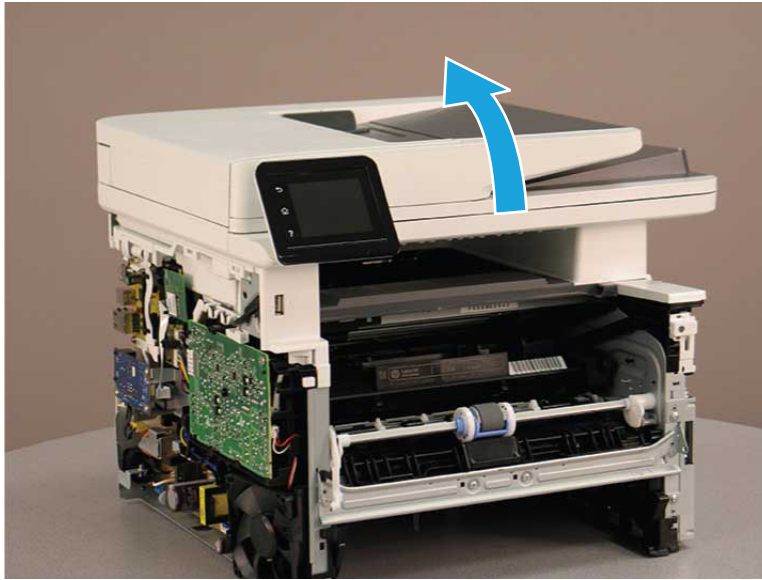


**5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)**

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

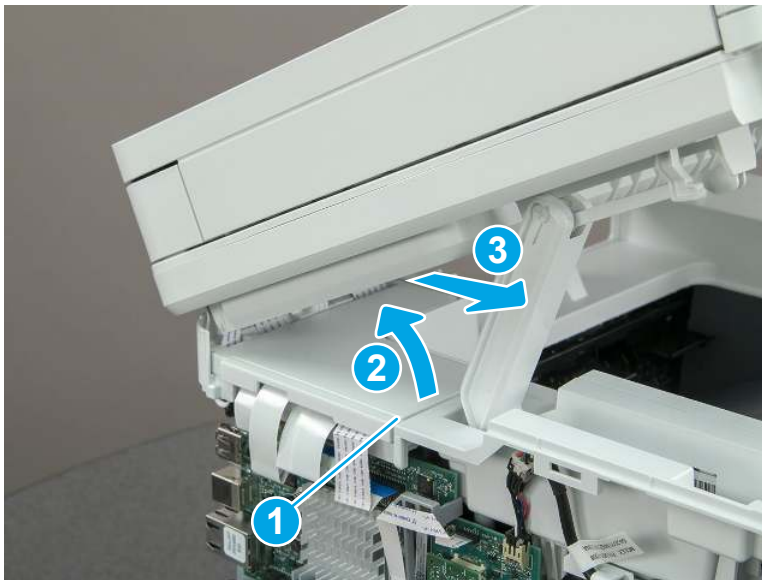
1. If the ISA is not already raised, raise it now.

**Figure 5-604 Raise the ISA**




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-605 Remove the ISA FFC cover**




## 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

**Figure 5-606** Disconnect three FFCs



2. Release the tape (callout 1) that holds the flat cables to the top cover.

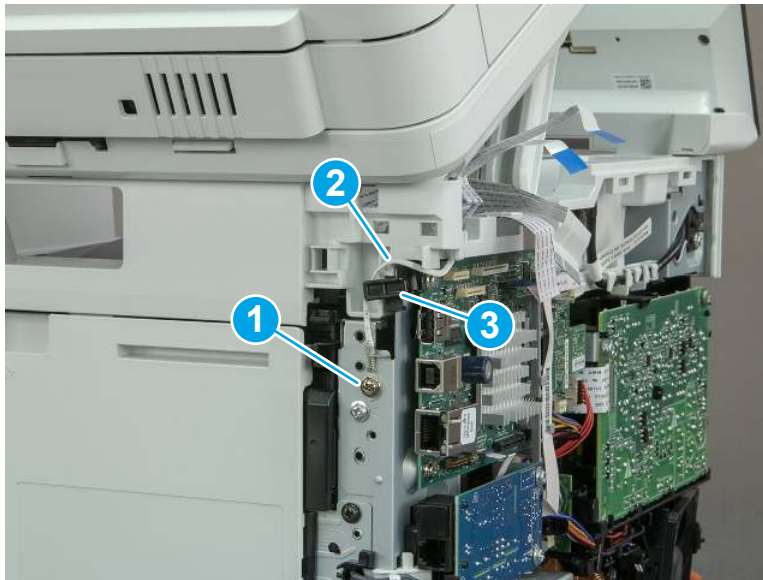
**Figure 5-607** Release the tape





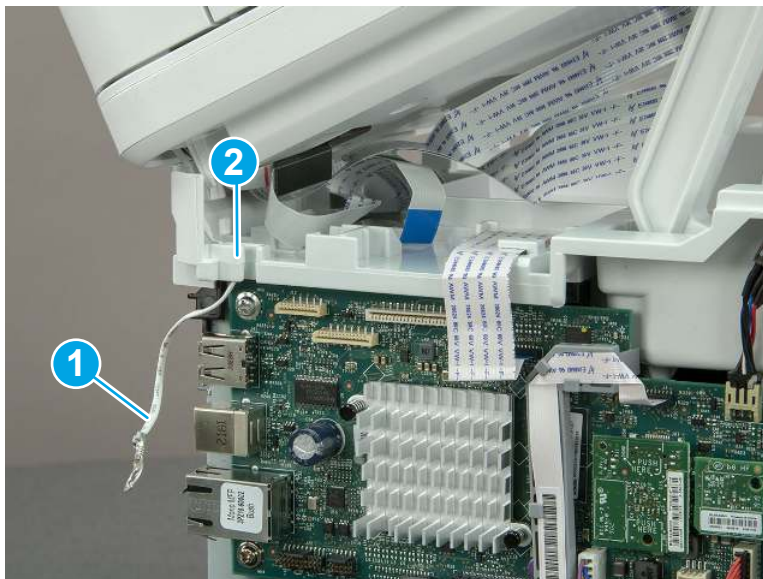
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-608** Release the ground wire



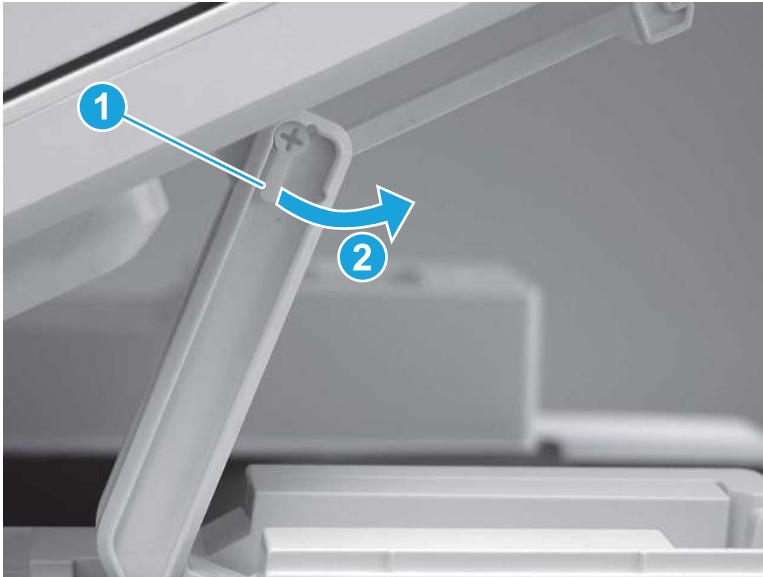
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-609** Release the ground wire



5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-610** Release one tab and rotate the slider pin



6. Remove the slider pin.



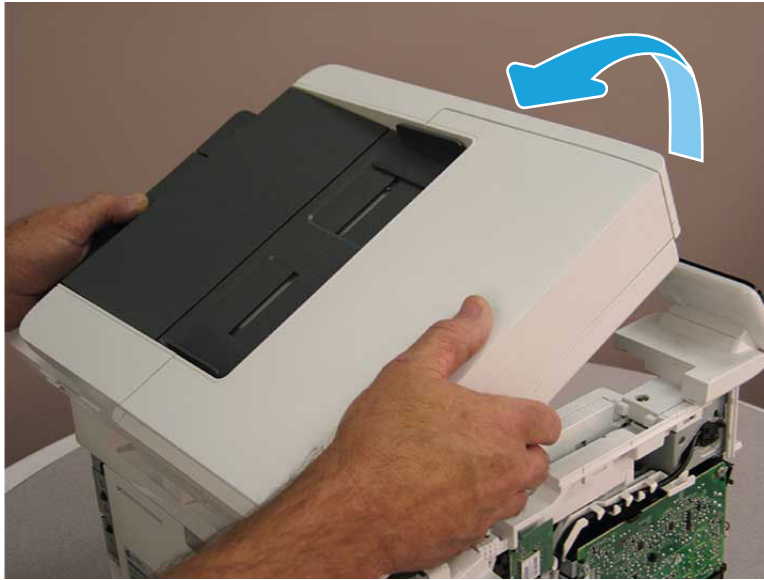
**Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

**Figure 5-611** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-612** Rotate the ISA towards the rear of the printer



8. Slide the ISA as shown to release it.

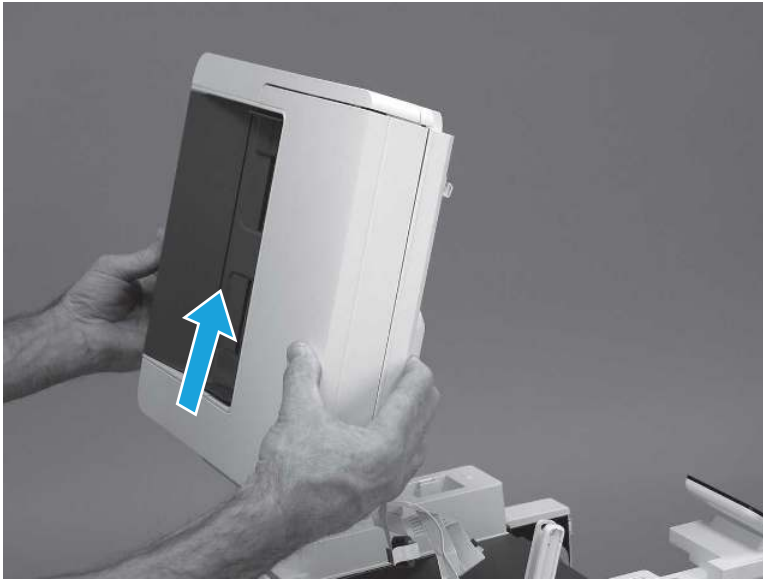
**Figure 5-613** Release the ISA





9. Remove the ISA.

**Figure 5-614** Remove the ISA

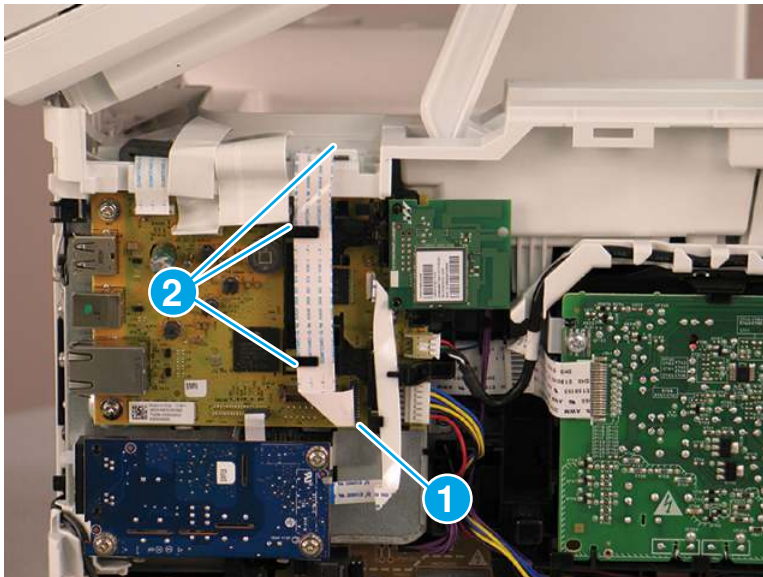


#### 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-615** Disconnect one connector



2. Remove one screw (callout 1).

**Figure 5-616 Remove one screw**



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-617 Release two tabs**



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-618** Remove the cover



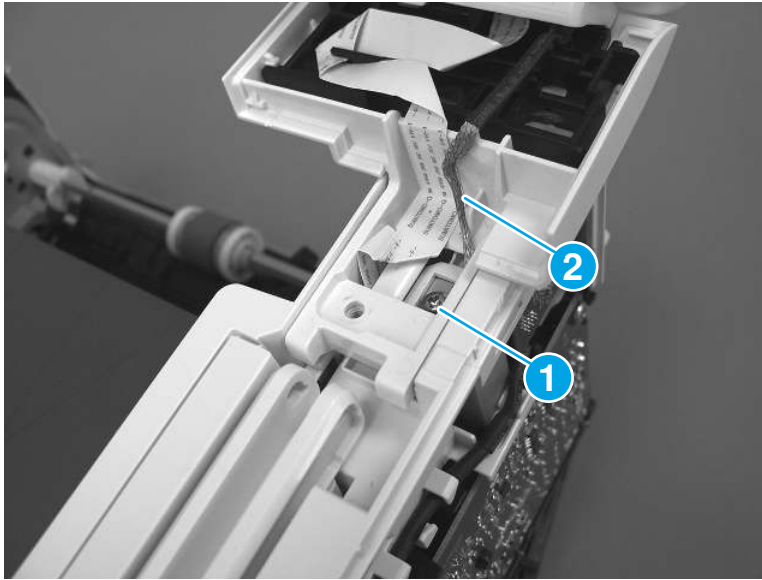
5. Remove the control-panel mount cover.

**Figure 5-619** Remove the cover



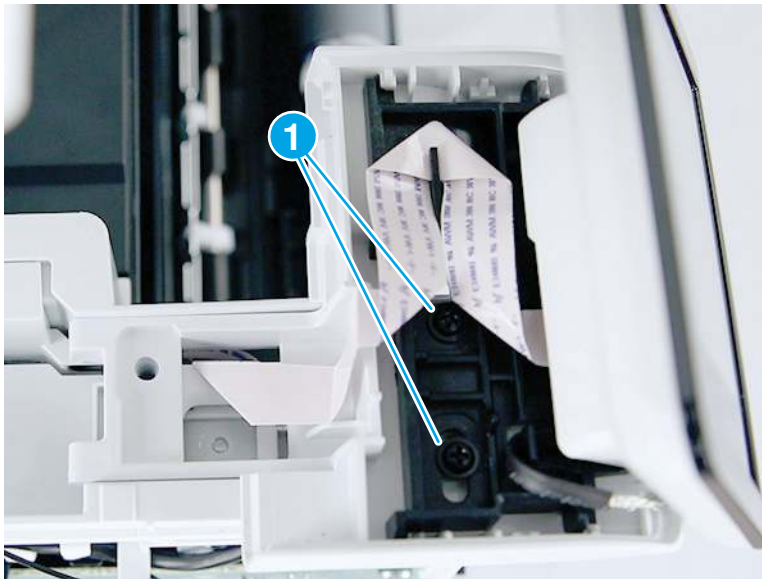
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-620 Remove one screw**



7. Move the FFC out of the way, and then remove two screws (callout 1).

**Figure 5-621 Remove two screws**



8. Slightly lift up the control-panel assembly to separate it from the top cover.

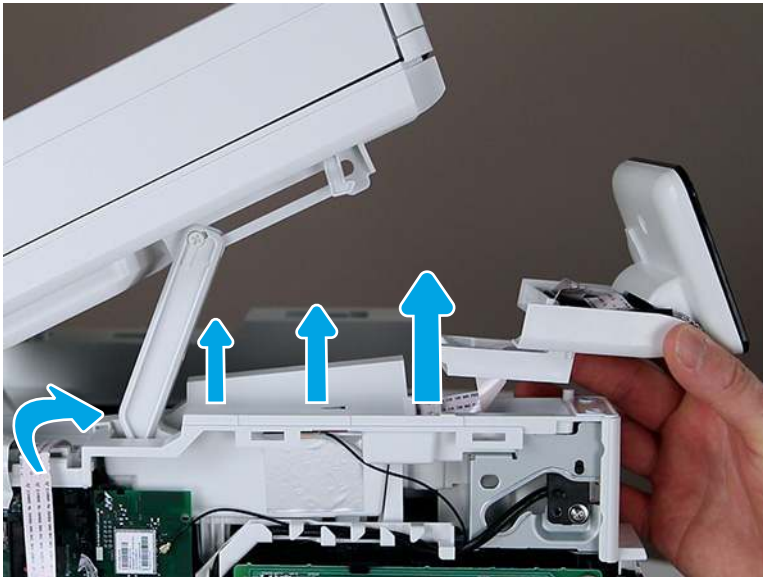
**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

**Figure 5-622** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-623** Remove the control-panel assembly



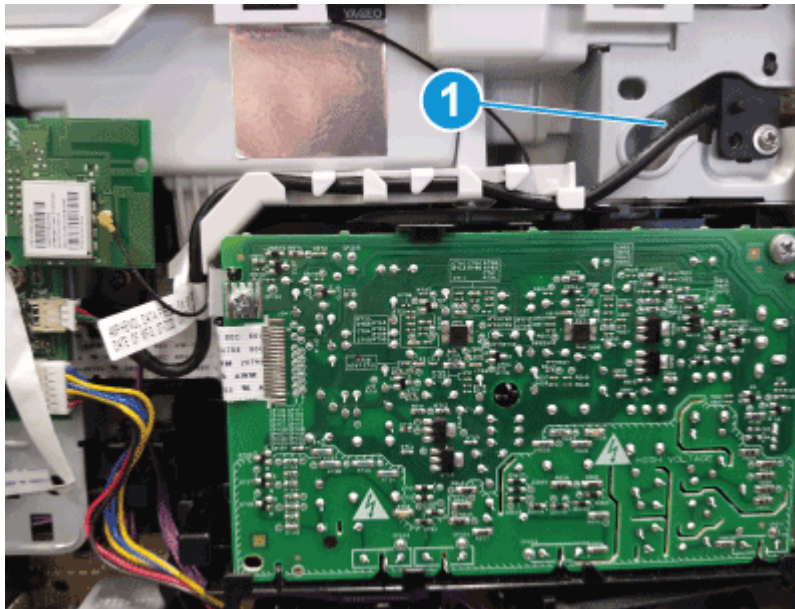
## 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).



1. Release the USB cable (callout 1) from the cable guide.

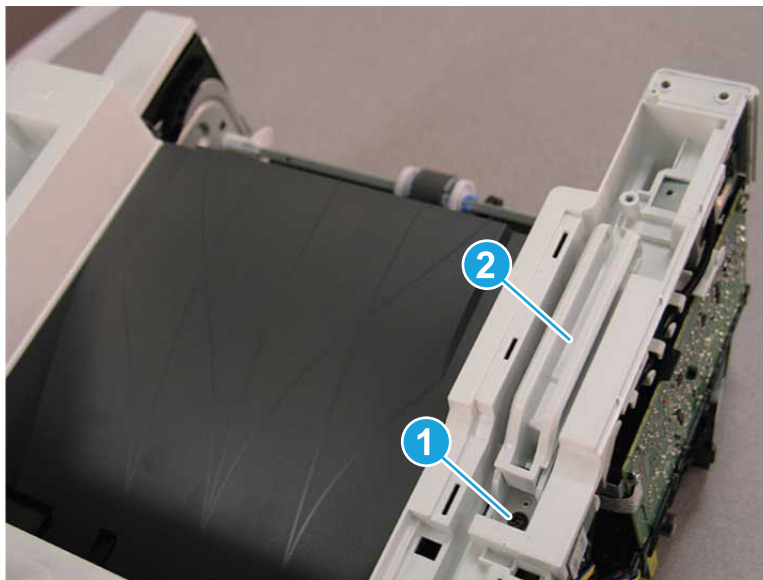
**Figure 5-624** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

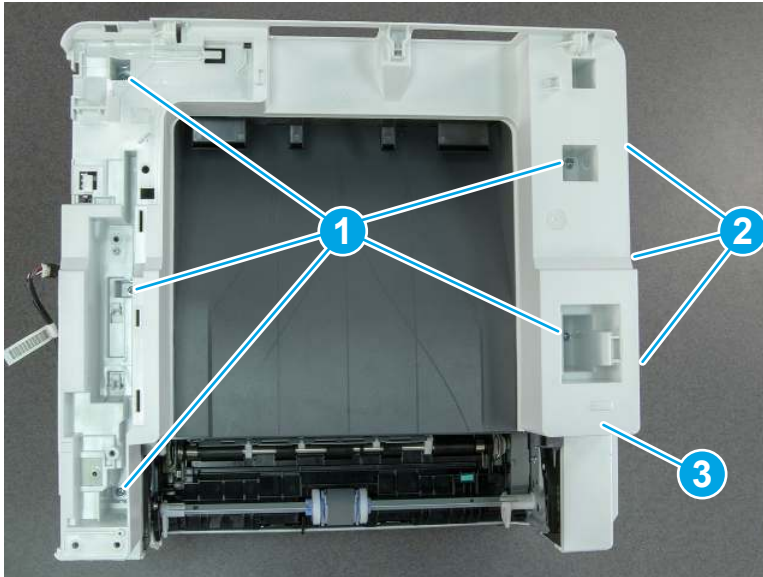
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-625** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-626** Remove the top cover



#### 9. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

1. Remove one screw.

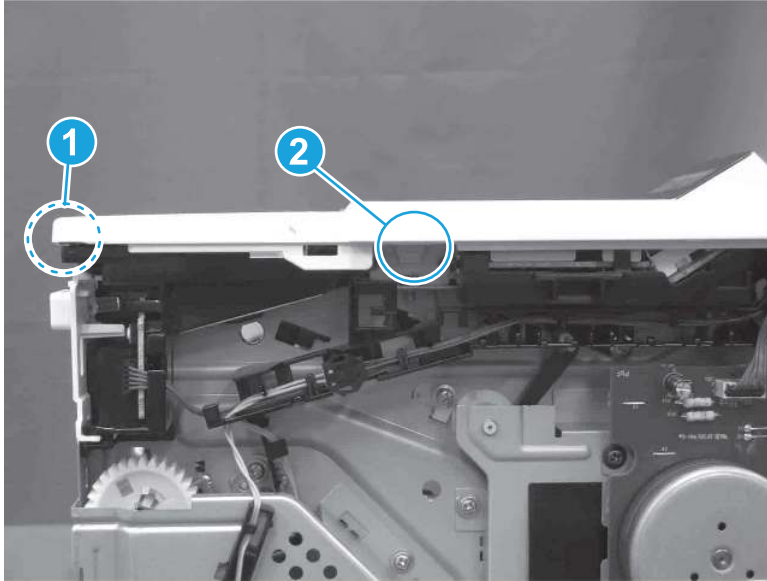
**Figure 5-627** Remove one screw






2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-628** Release one boss and one tab



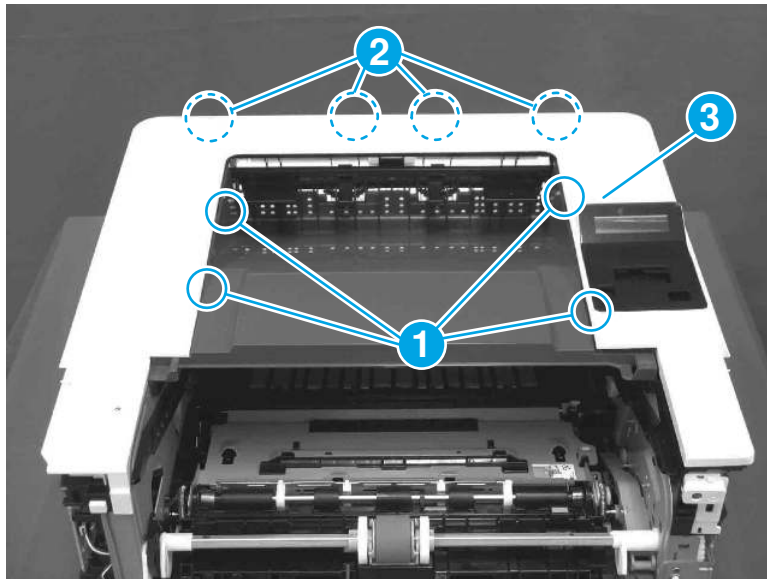
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

**Figure 5-629** Remove the cover




## 10. Remove the sheet-metal formatter bracket and formatter PCA


Follow these steps to remove the formatter bracket.

1. Do one of the following:

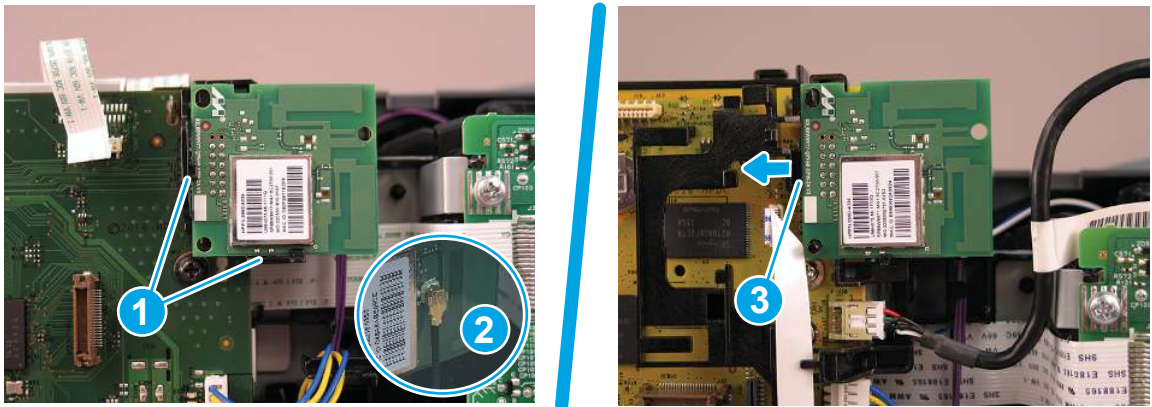
- **SFP only:** Release two tabs (callout 1), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **NOTE:** Disconnect the WiFi antenna (callout 2) before releasing the tabs.

- **MFP only:** Release one tab (callout 3), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **TIP:** Push the tab to the left to release it.

**Figure 5-630 Remove the wireless PCA**

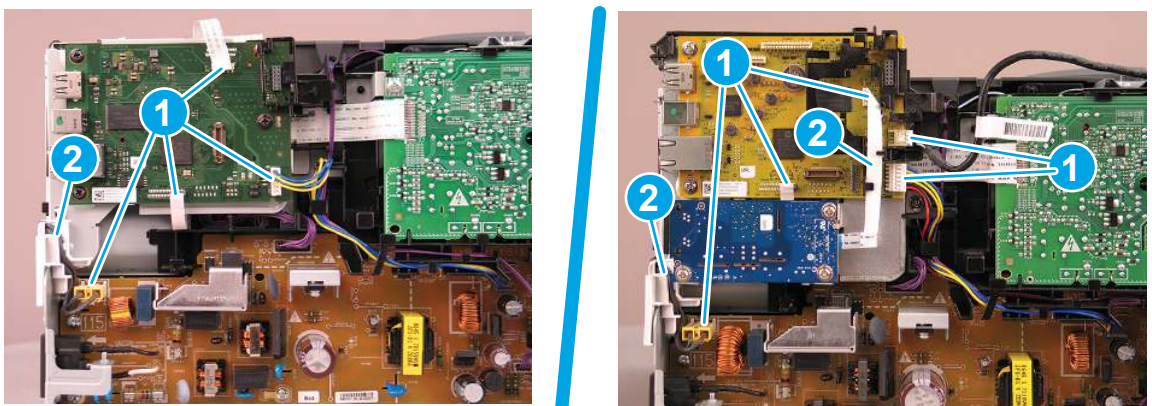


2. Do one of the following:

- **SFP only:** Disconnect the connectors (callout 1), and then release one wire harness (callout 2) from the guide.

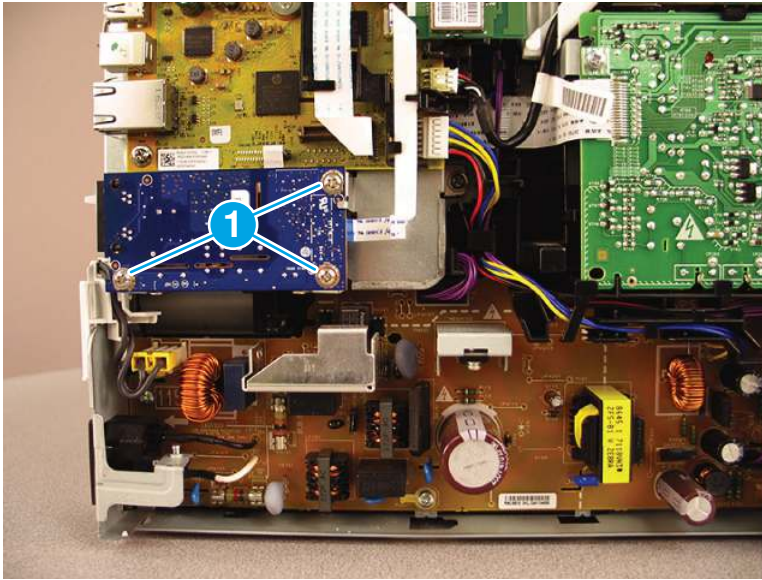
- **MFP only:** Disconnect the connectors (callout 1), and then release one wire harness and one FFC (callout 2) from the guides.

**Figure 5-631 Disconnect the connectors**



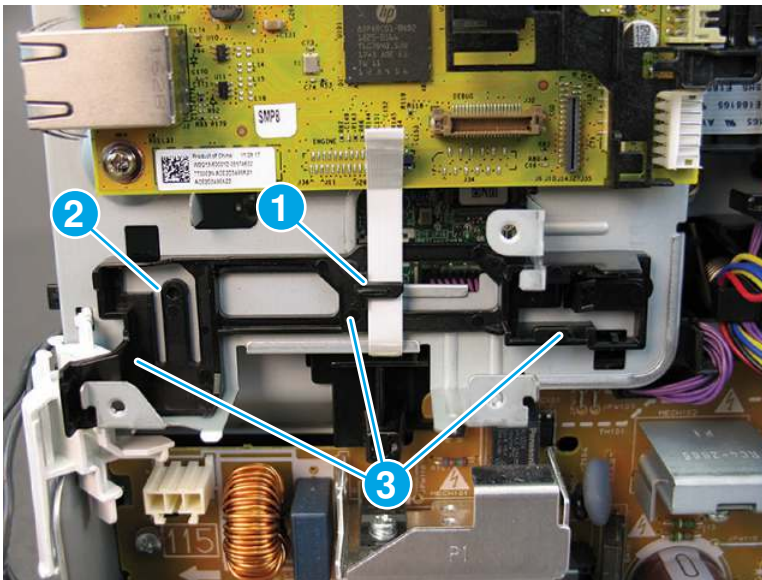
3. **MFP fax models only:** Remove three screws (callout 1), and then remove the fax PCA.

**Figure 5-632** Remove the fax PCA



4. **MFP only:** Release the FFC from the guide (callout 1), release one tab (callout 2), and then remove the FFC guide (callout 3).

**Figure 5-633** Remove the FFC guide



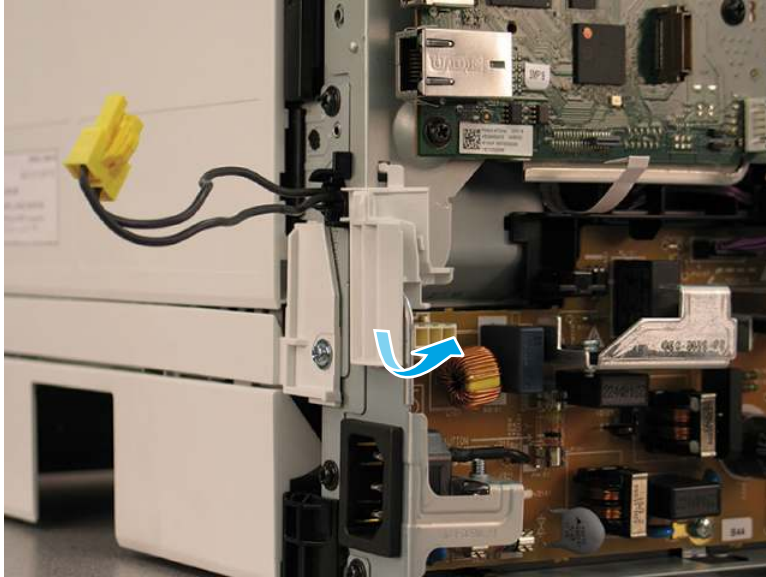
5. Remove one guide.



**NOTE:** A SFP printer is shown in the figure. However, the guide is identical for an MFP printer

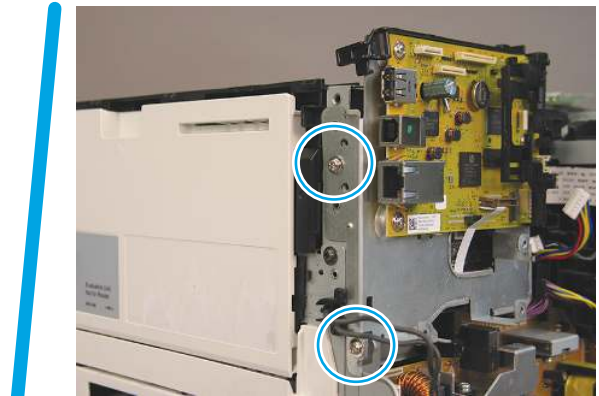


**Figure 5-634** Remove the guide



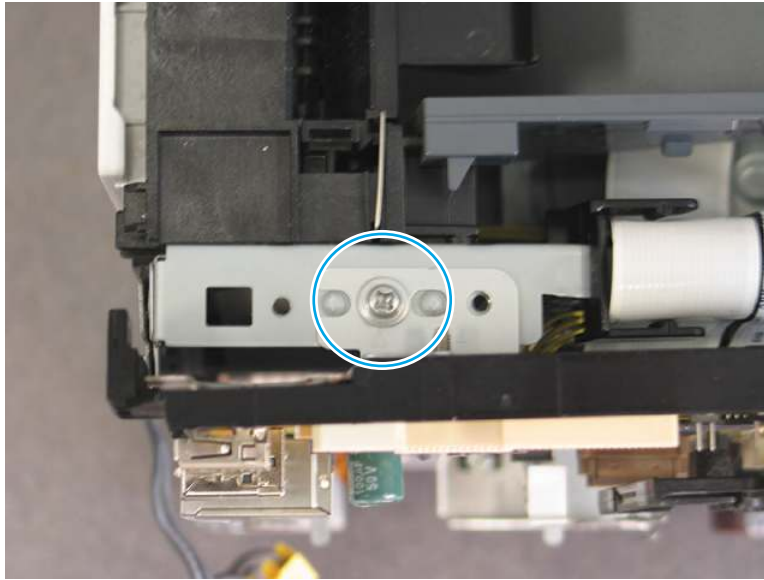
6. Remove two screws.

**Figure 5-635** Remove two screws



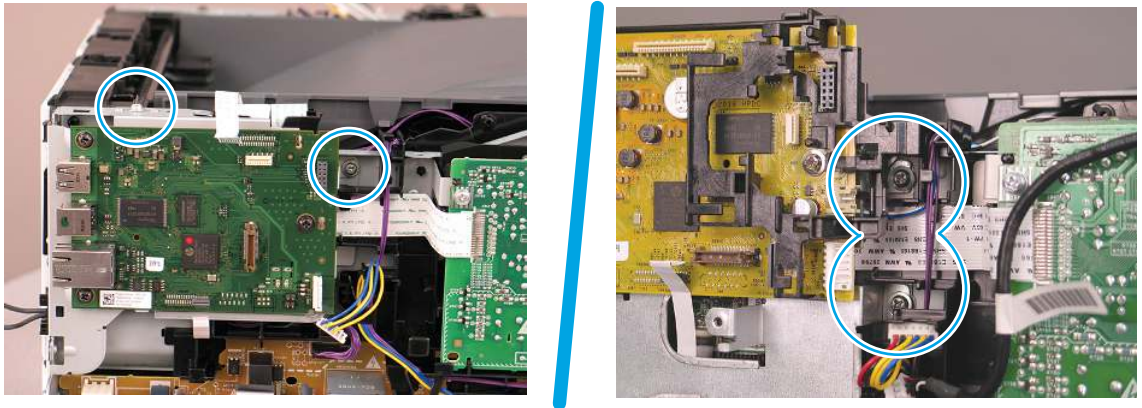
7. **MFP only:** Remove one screw.

**Figure 5-636** Remove one screw



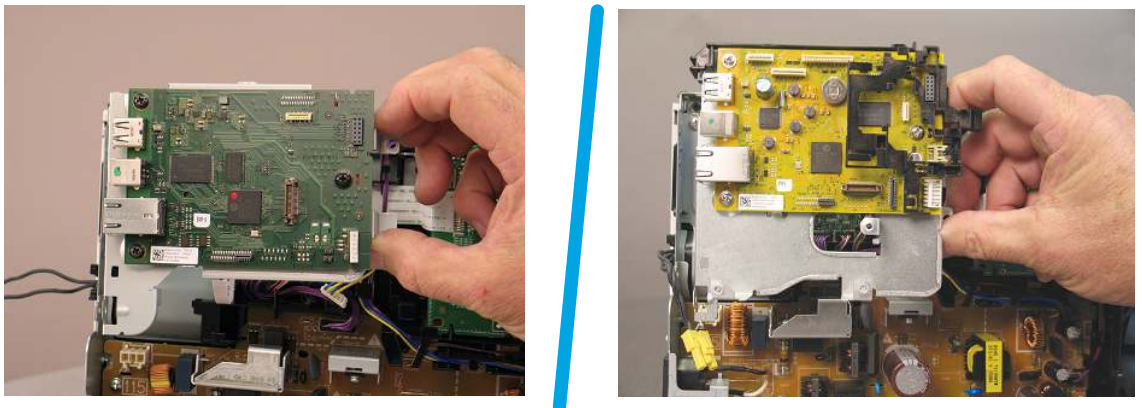
8. Support the formatter and bracket, and then remove two screws.

**Figure 5-637** Remove two screws



9. Remove the sheet-metal bracket and formatter PCA.

**Figure 5-638** Remove the bracket



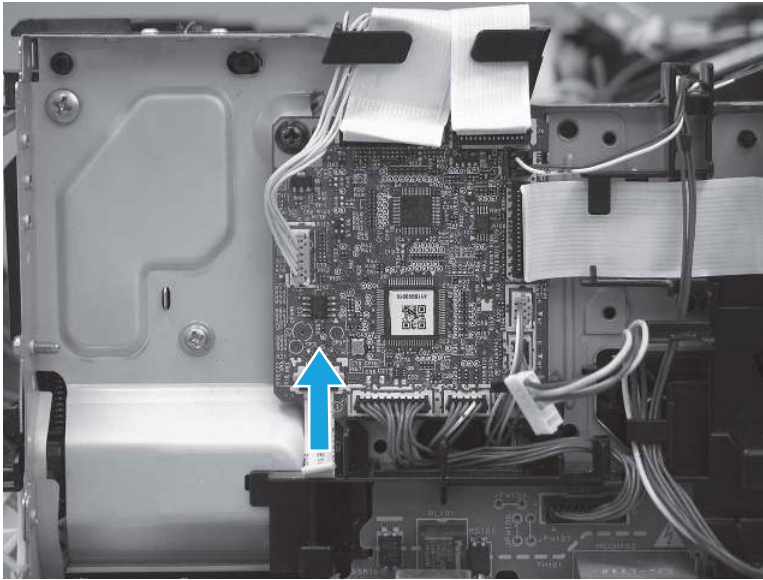
## 11. Remove the formatter FFC

Follow these steps to remove the formatter FFC.

1. Carefully pull up on the FFC (callout 1) to release it from the guide—the FFC is attached to the guide with two-sided tape.

**⚠ CAUTION:** The FFC is still attached to the DC controller. Do not attempt to completely remove the FFC.

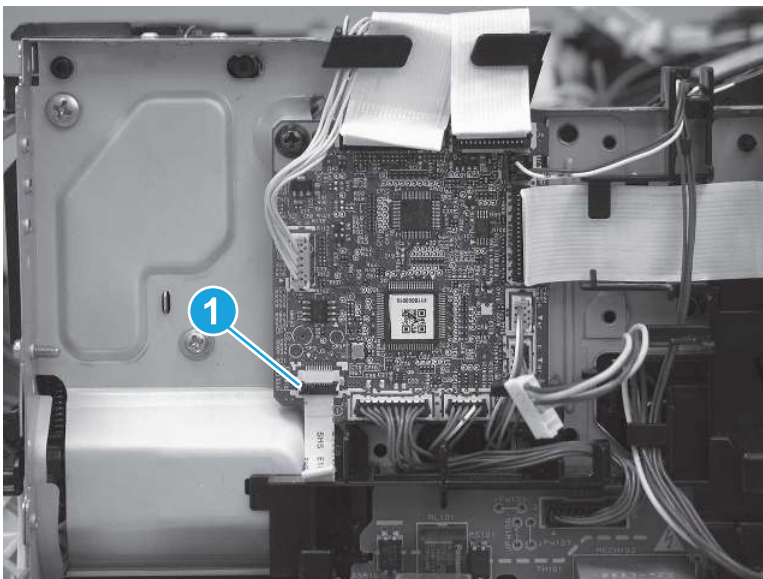
**Figure 5-639** Release the FFC



2. Disconnect and remove the formatter FFC (callout 1).

**📎 IMPORTANT:** The FFC connector (callout 2) is a Zero Insertion Force (ZIF) connector that uses a hinged retainer to secure the FFC. The hinged retainer must be opened to release the FFC.

**Figure 5-640** Disconnect and remove the formatter FFC



## 12. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### Removal and replacement: DC controller

Learn how to remove and replace the DC controller (DCC).



[View a video of how to remove and replace the SFP DCC.](#)



[View a video of how to remove and replace the MFP DCC.](#)

Mean time to repair: 31 minutes SFP, 58 minutes MFP

Service level: Medium SFP, Difficult MFP

#### Before performing service

##### Turn the printer power off

- Disconnect the power cable.



**WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.



**CAUTION:** **Replacement DC controller installations only:** *DO NOT* skip this step. See [HP Onsite Repair Application on page 527](#) for information about how to pair a formatter and DC controller.



Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-41 Part information**

Part number	Part description
RM3-8532-000CN	DC controller

## Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-641 Remove the tray**





## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.

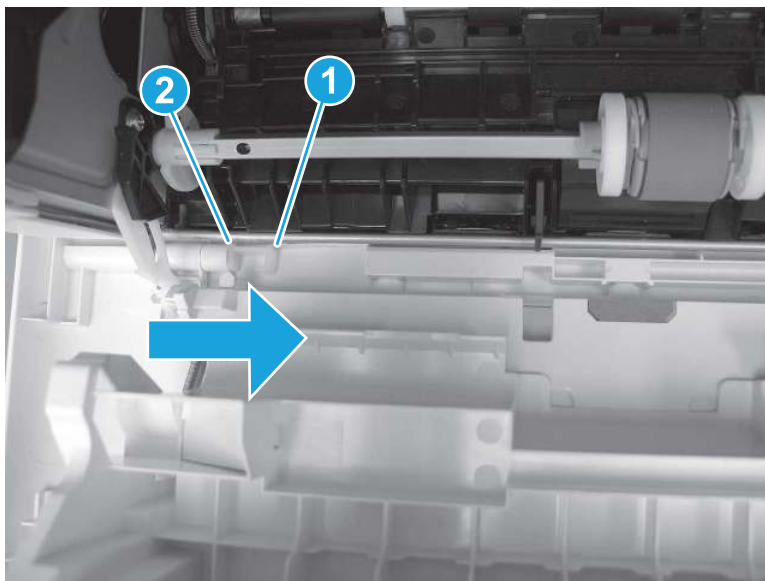
 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

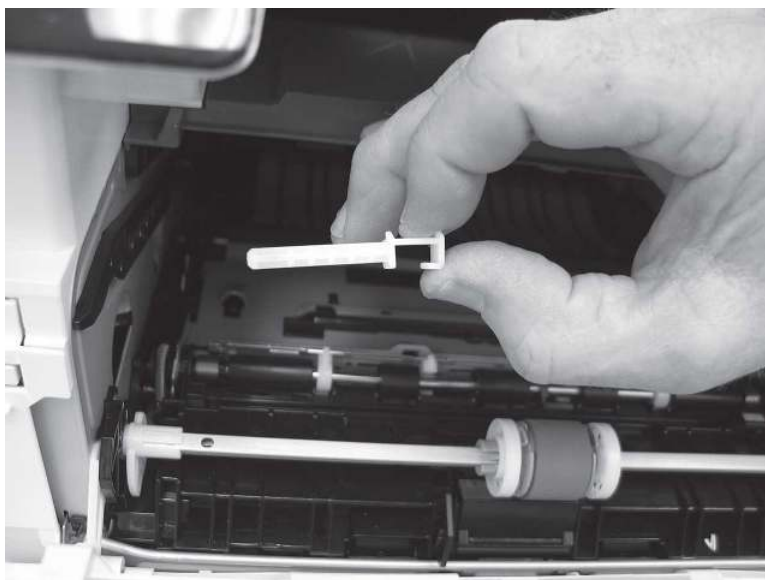
 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

**Figure 5-642** Release the support shaft



2. Remove the support shaft.

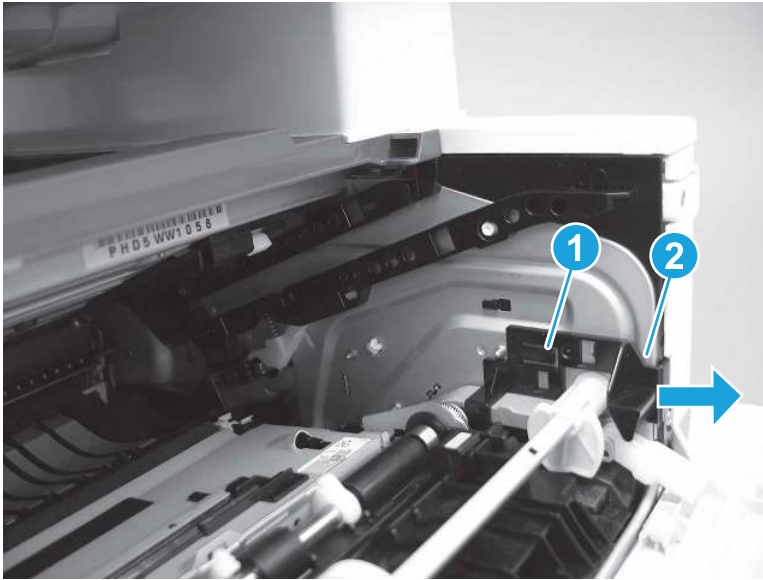
**Figure 5-643** Remove the support shaft



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

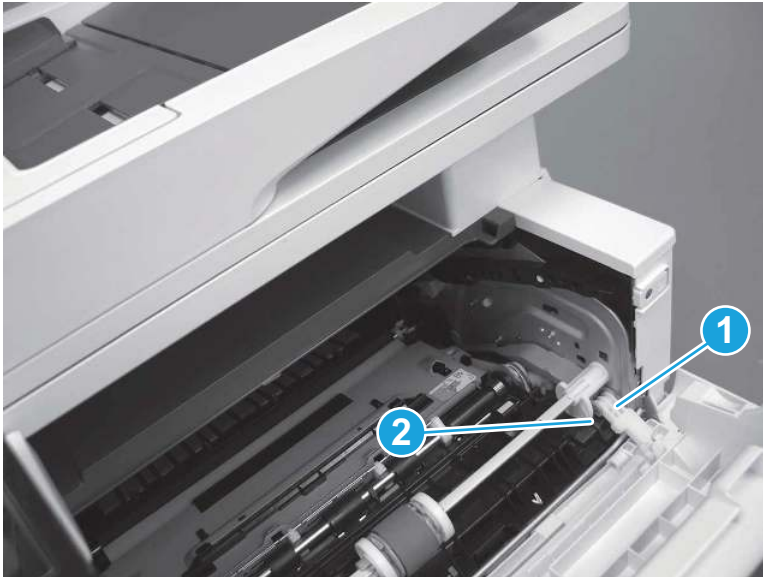
**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

**Figure 5-644 Remove the guide**




4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-645 Release the pressure-release link**

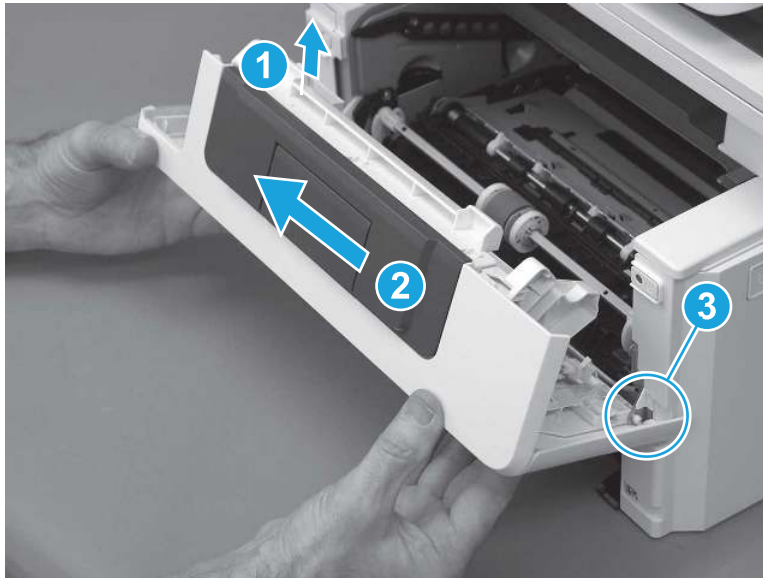


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

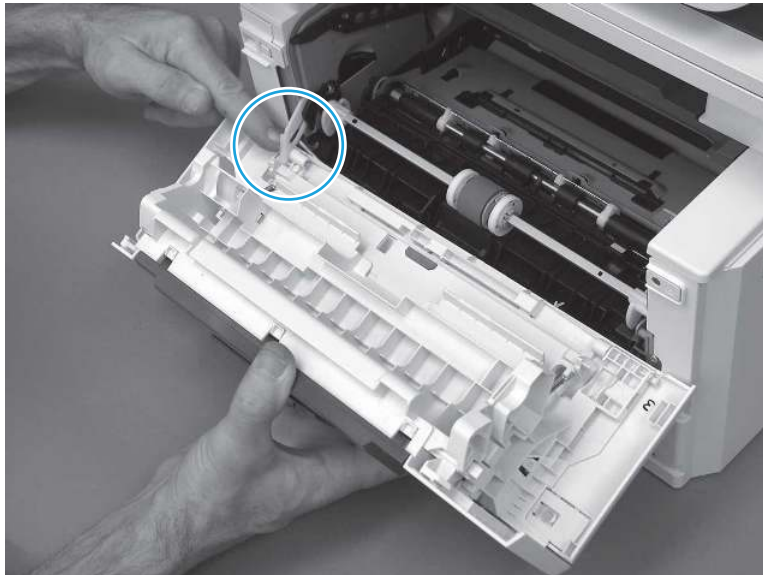
 **Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-646** Release the door



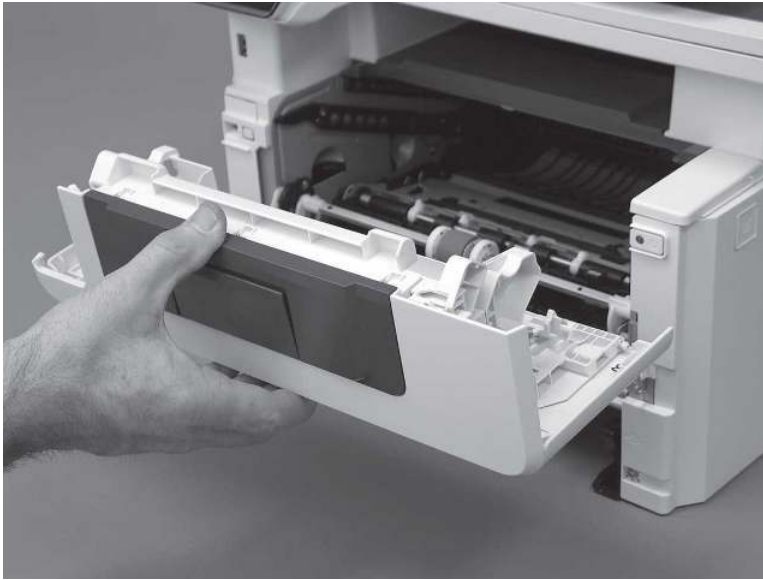
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-647** Release the left-side retainer arm



7. Remove the door.

**Figure 5-648** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

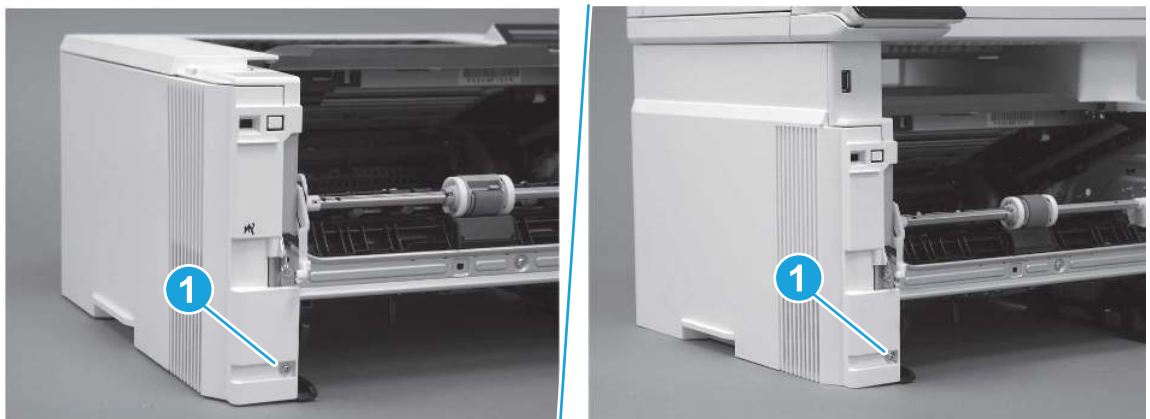
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 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

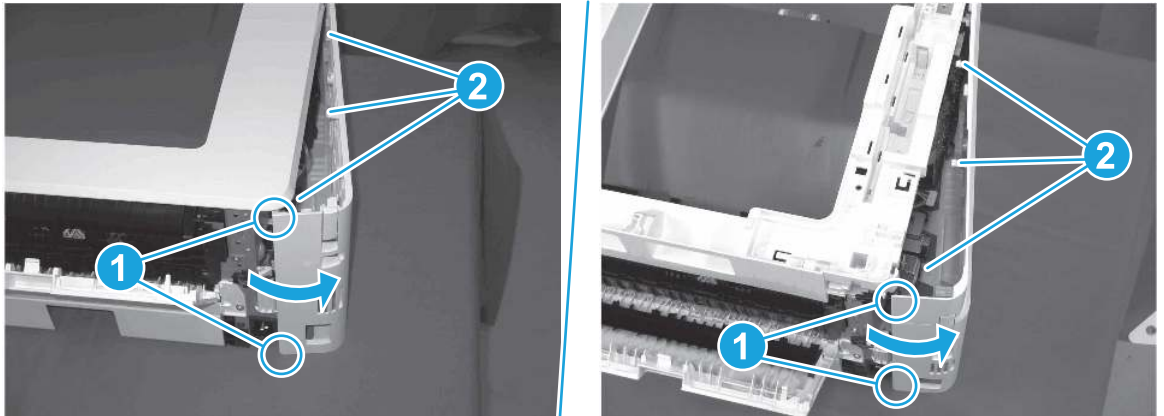
1. Remove one screw (callout 1).

**Figure 5-649** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

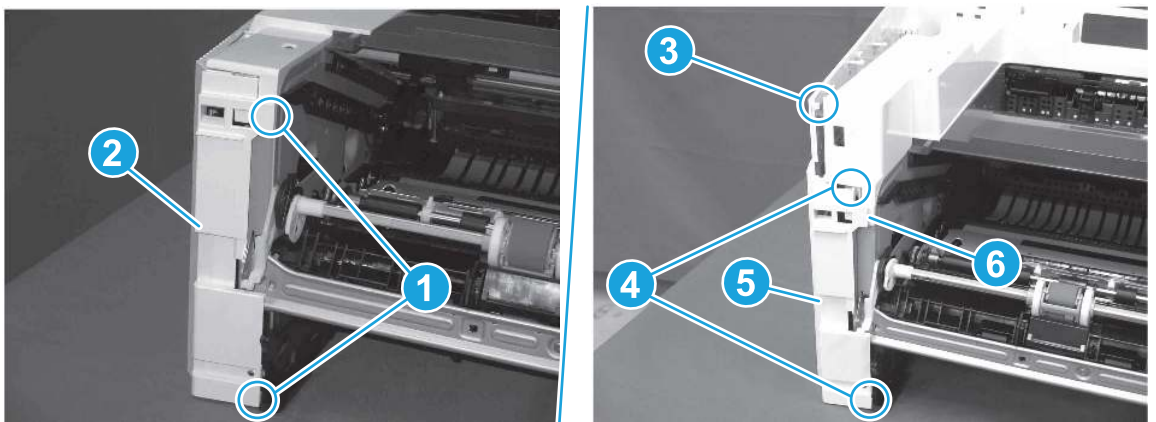
**Figure 5-650** Release two bosses and three tabs



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-651** Remove the cover



#### 4. Remove the right cover

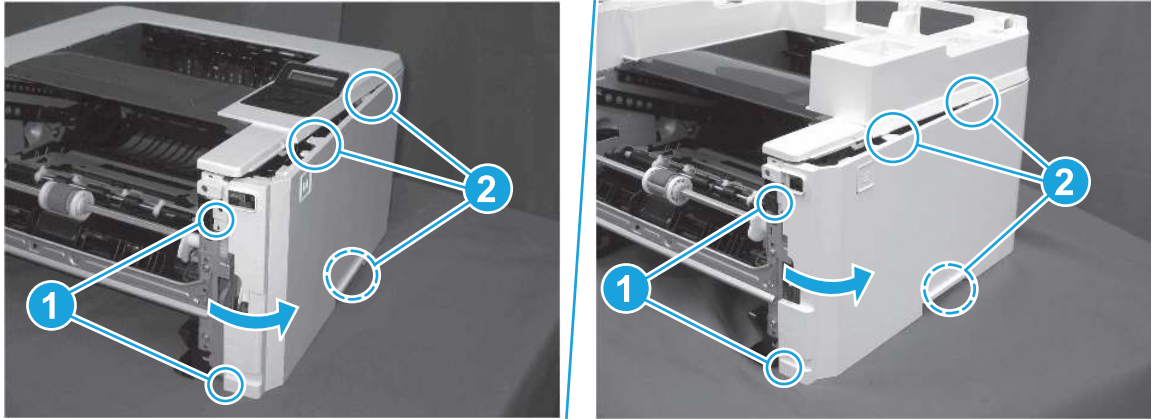
Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

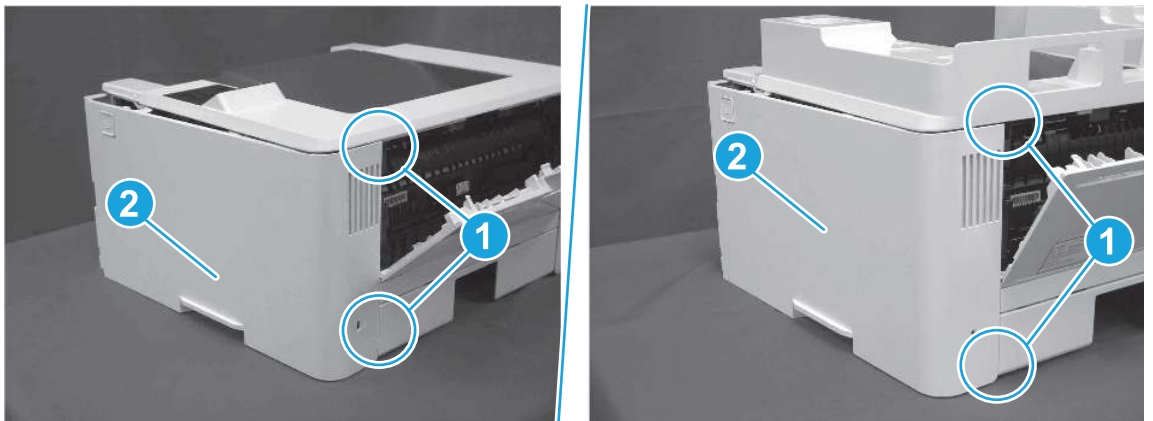


**Figure 5-652** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-653** Remove the cover



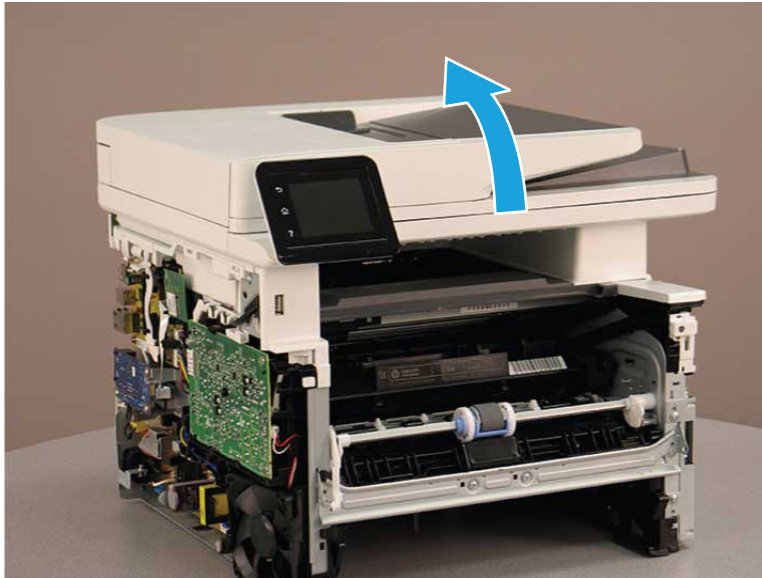
**5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)**

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).



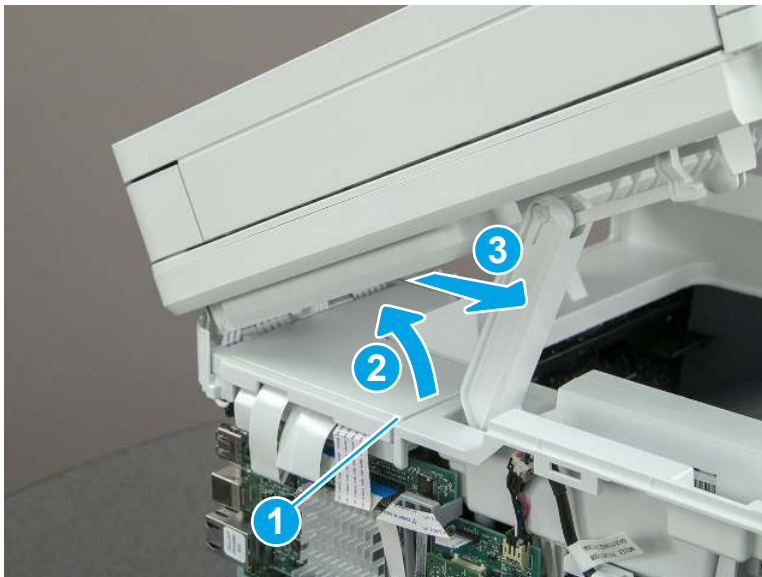
1. If the ISA is not already raised, raise it now.

**Figure 5-654 Raise the ISA**




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-655 Remove the ISA FFC cover**




## 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

**Figure 5-656** Disconnect three FFCs



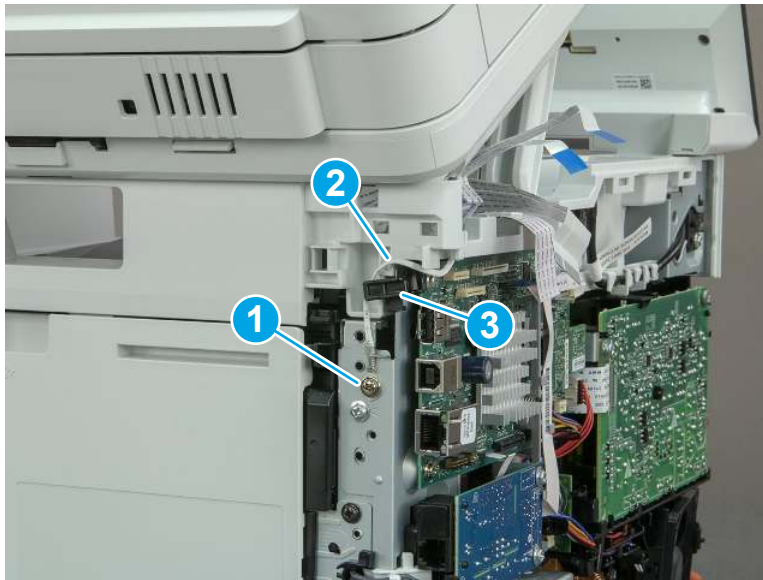
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-657** Release the tape



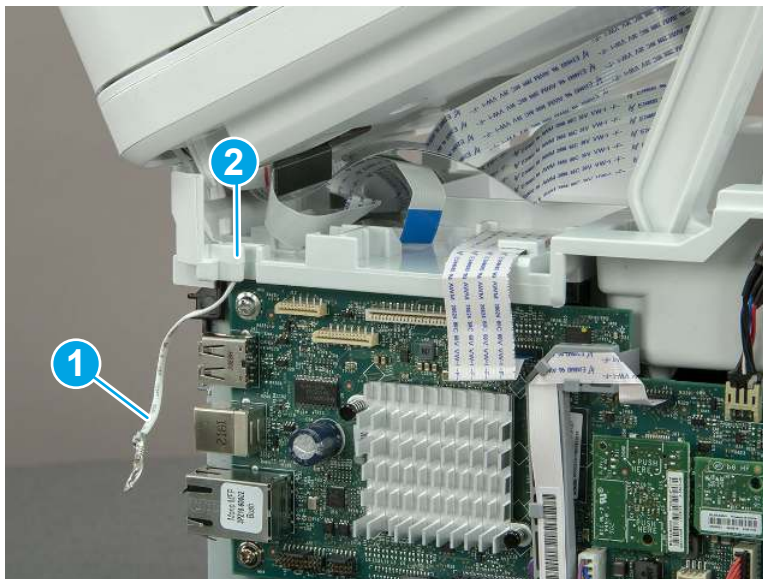
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-658** Release the ground wire



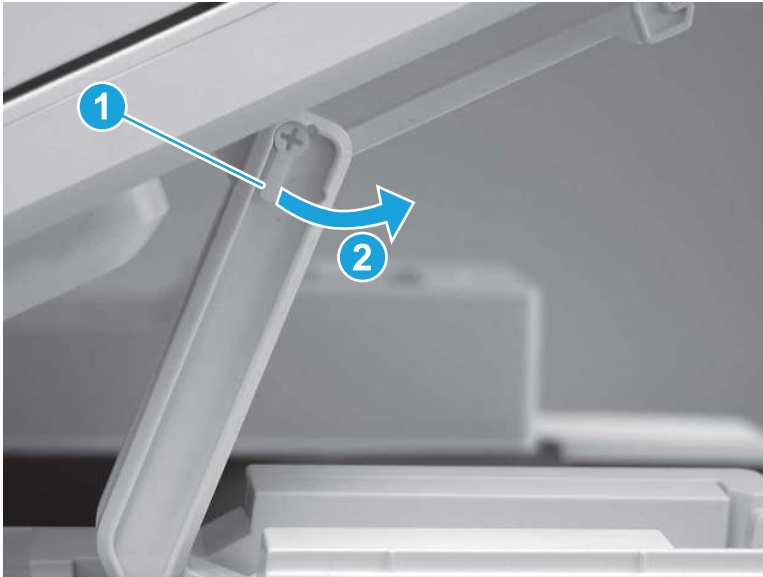
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-659** Release the ground wire



5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-660** Release one tab and rotate the slider pin

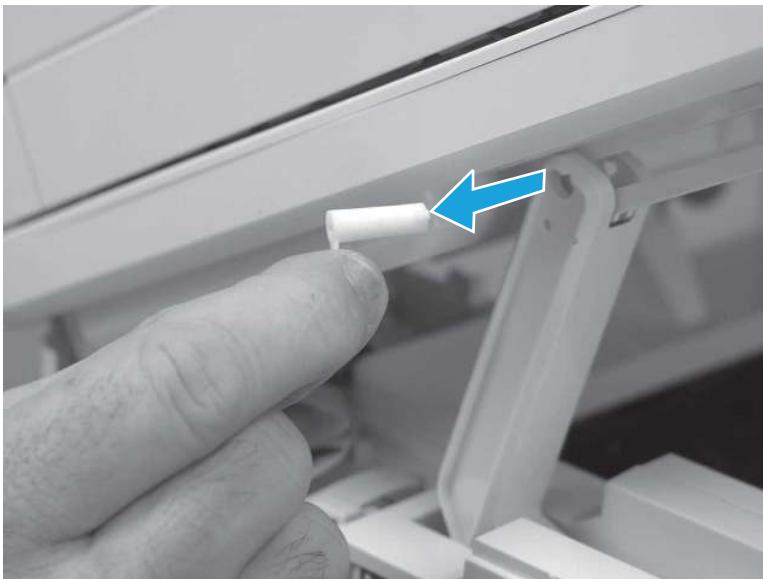


6. Remove the slider pin.



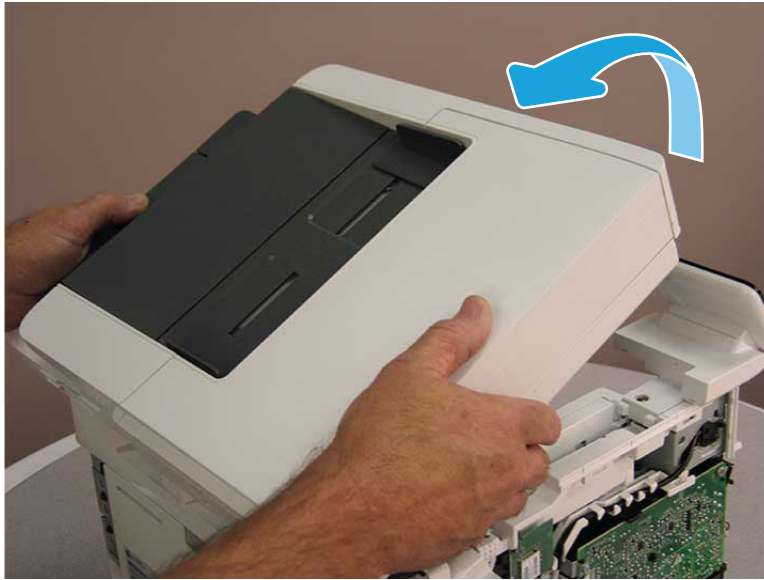
**Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

**Figure 5-661** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-662** Rotate the ISA towards the rear of the printer



8. Slide the ISA as shown to release it.

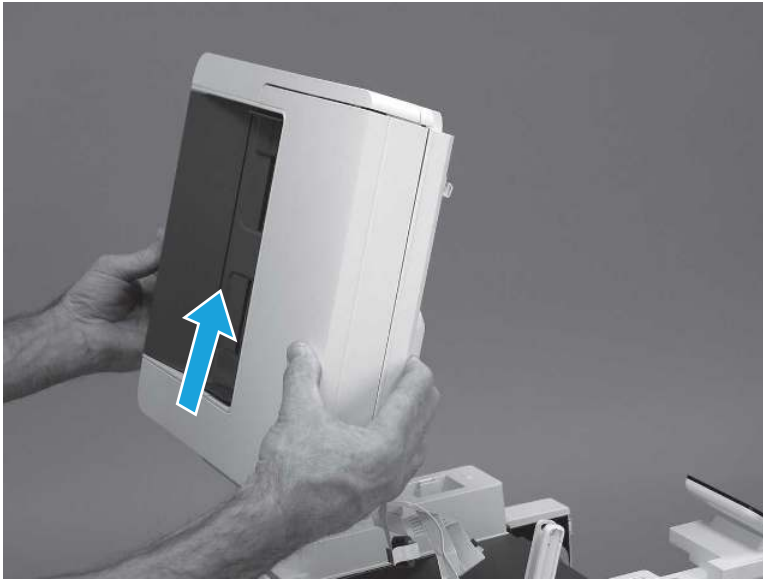
**Figure 5-663** Release the ISA





9. Remove the ISA.

**Figure 5-664** Remove the ISA

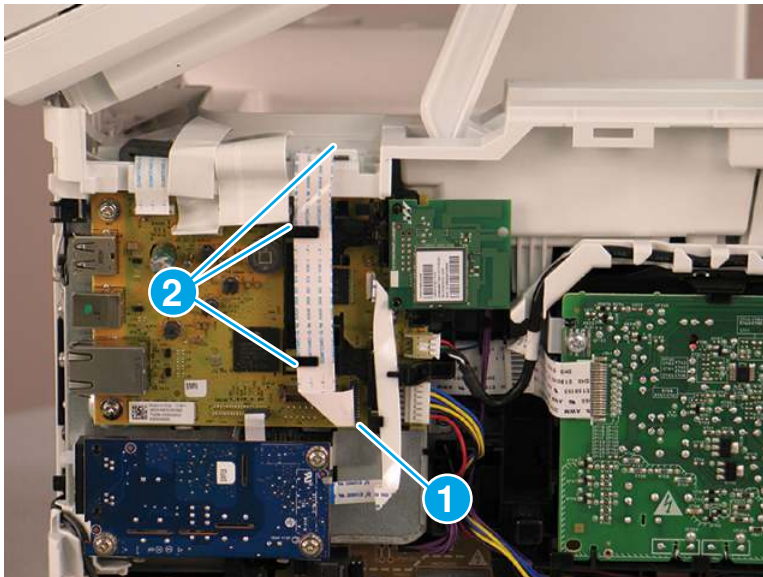


#### 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-665** Disconnect one connector



2. Remove one screw (callout 1).

**Figure 5-666** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-667** Release two tabs





4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-668** Remove the cover



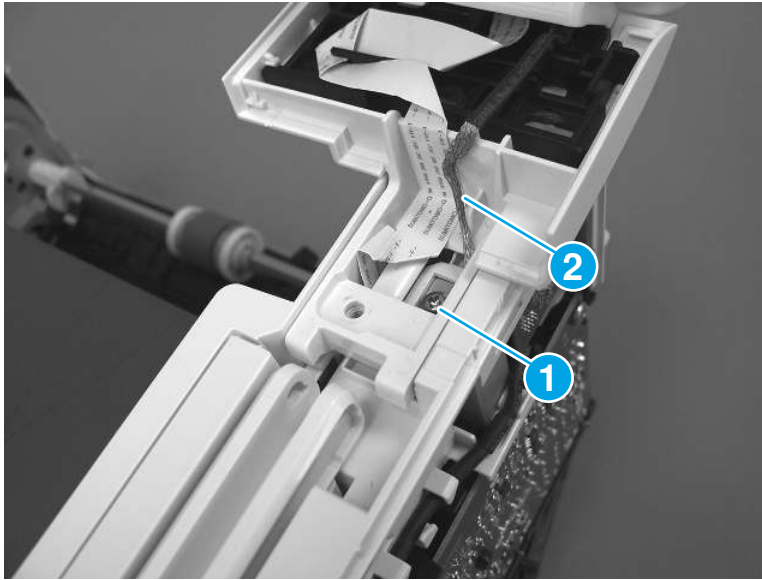
5. Remove the control-panel mount cover.

**Figure 5-669** Remove the cover



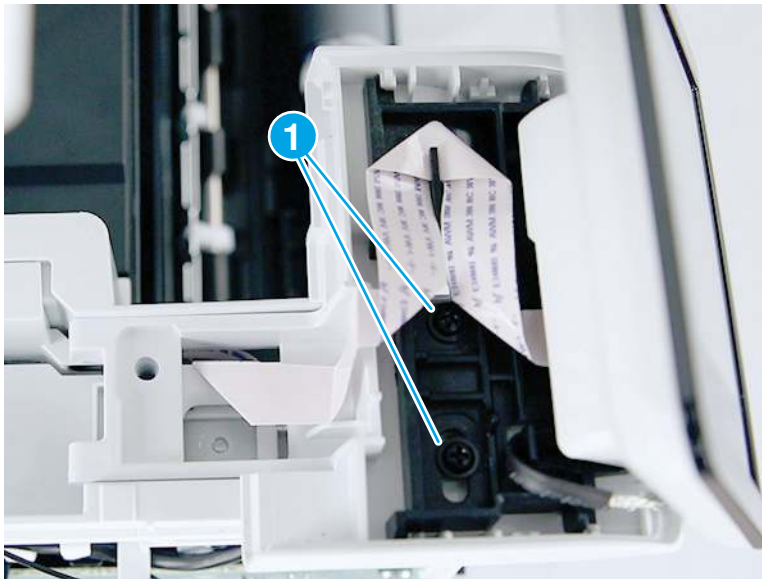
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-670 Remove one screw**



7. Move the FFC out of the way, and then remove two screws (callout 1).

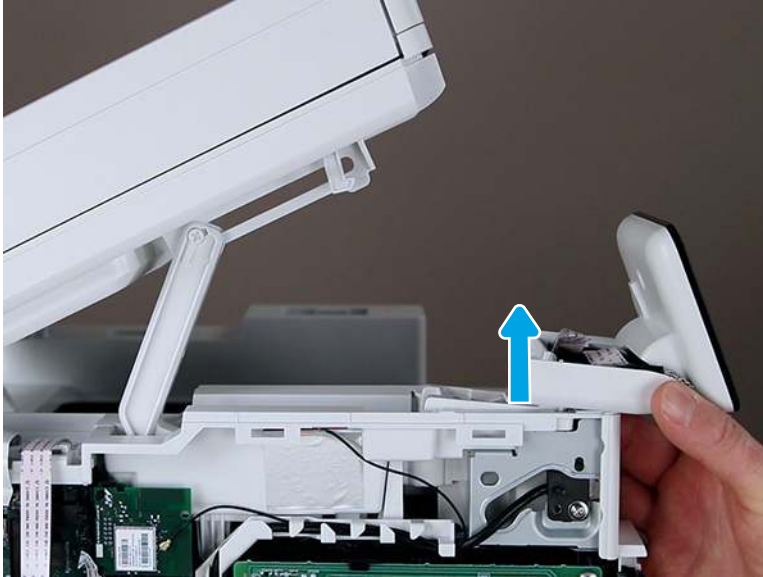
**Figure 5-671 Remove two screws**



8. Slightly lift up the control-panel assembly to separate it from the top cover.

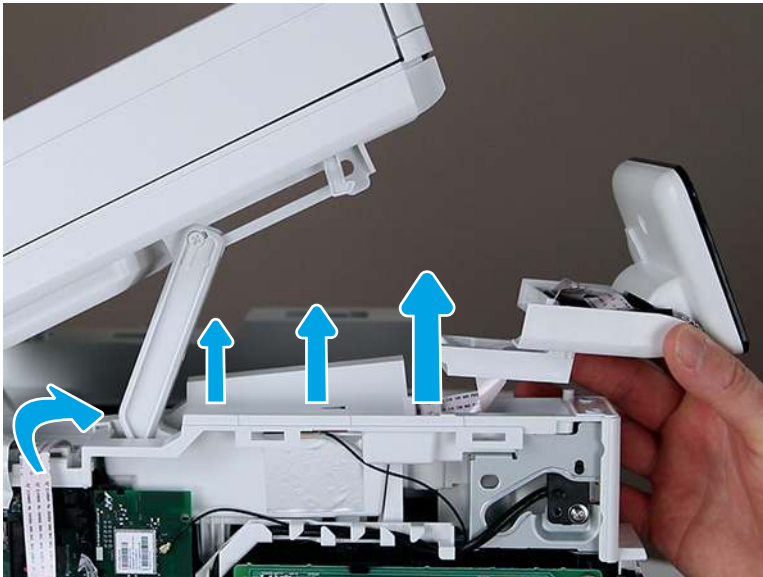
**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

**Figure 5-672** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-673** Remove the control-panel assembly

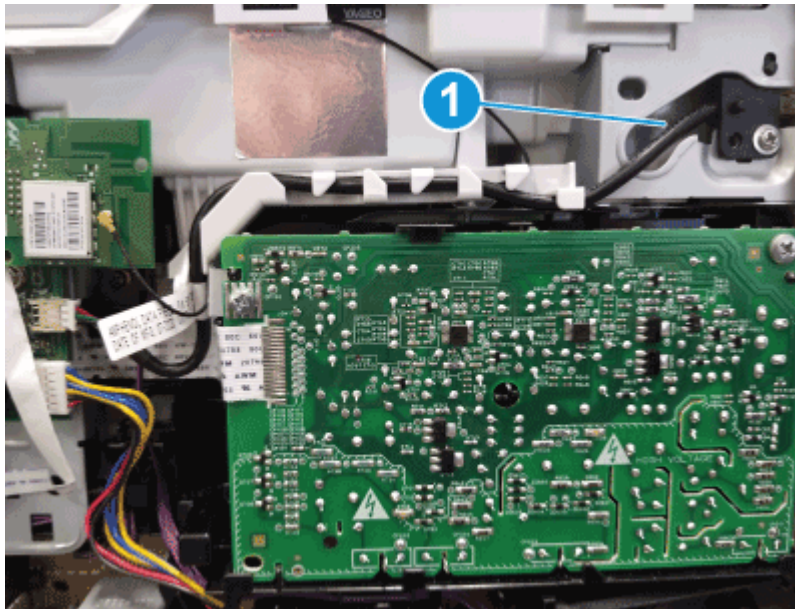


## 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

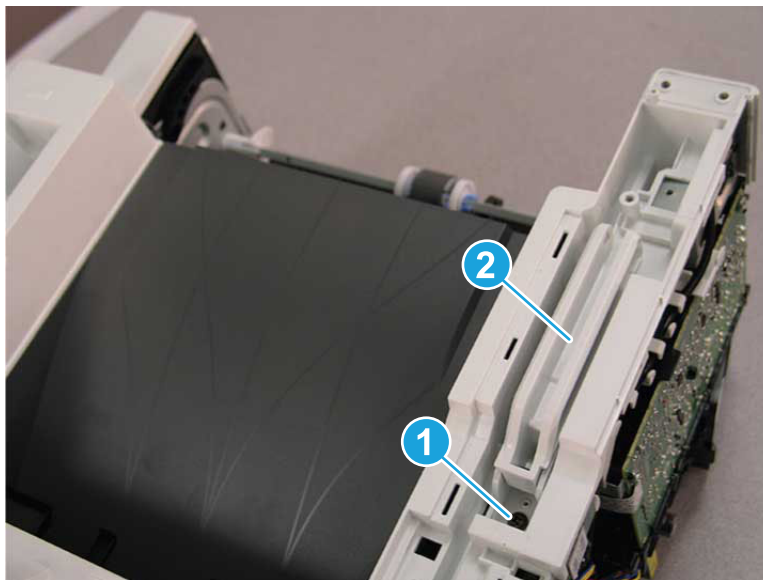
**Figure 5-674** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

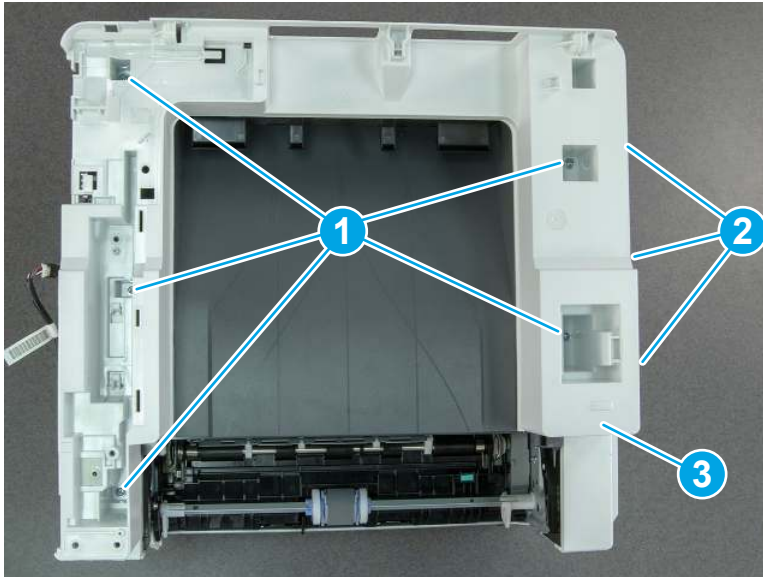
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-675** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-676** Remove the top cover



#### 9. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

1. Remove one screw.

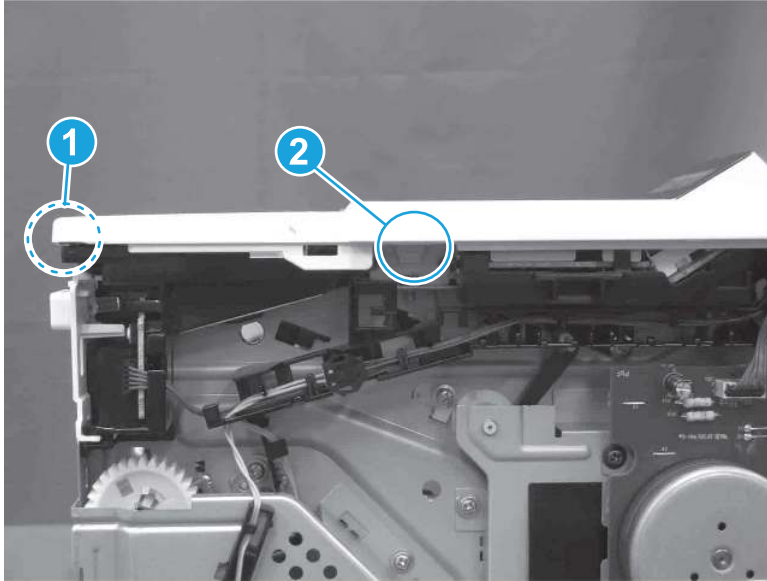
**Figure 5-677** Remove one screw






2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-678** Release one boss and one tab



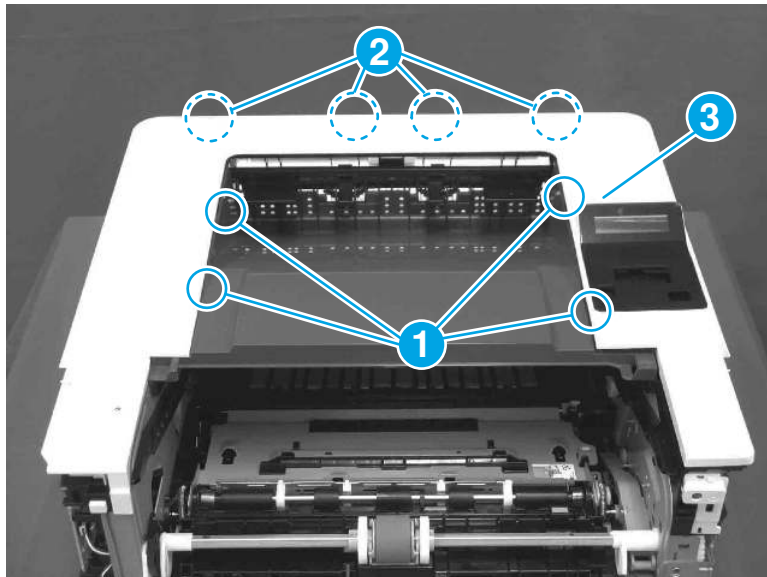
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---


**Figure 5-679** Remove the cover



## 10. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

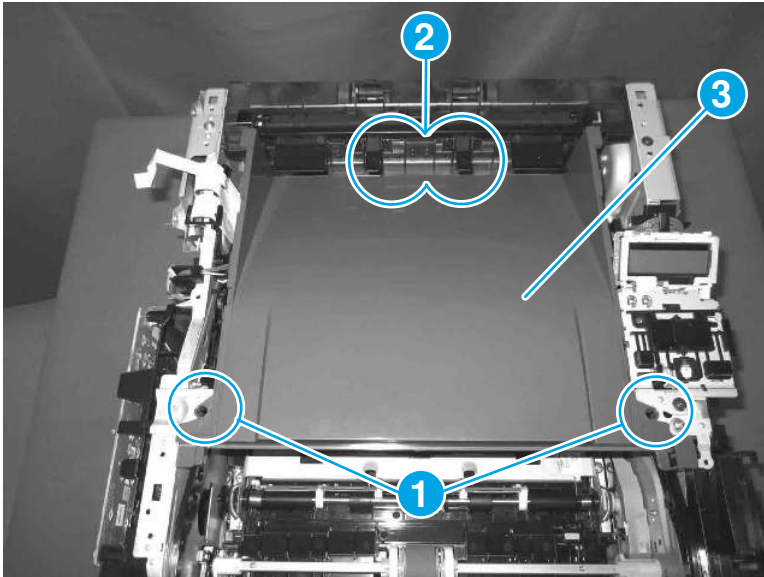
---

 **NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

---

- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).


**Figure 5-680 Remove the cover**




### 11. Remove the sheet-metal formatter bracket and formatter PCA

Follow these steps to remove the formatter bracket.

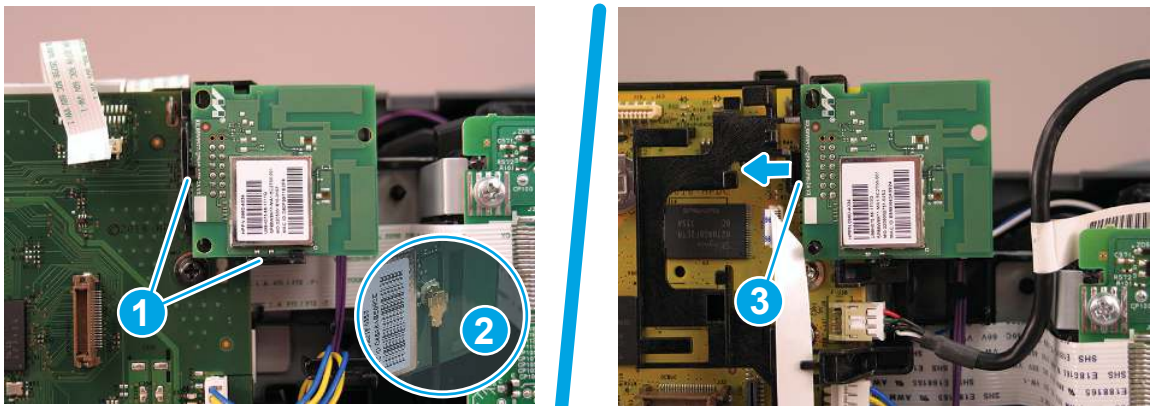
1. Do one of the following:
  - **SFP only:** Release two tabs (callout 1), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **NOTE:** Disconnect the WiFi antenna (callout 2) before releasing the tabs.

- **MFP only:** Release one tab (callout 3), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **TIP:** Push the tab to the left to release it.

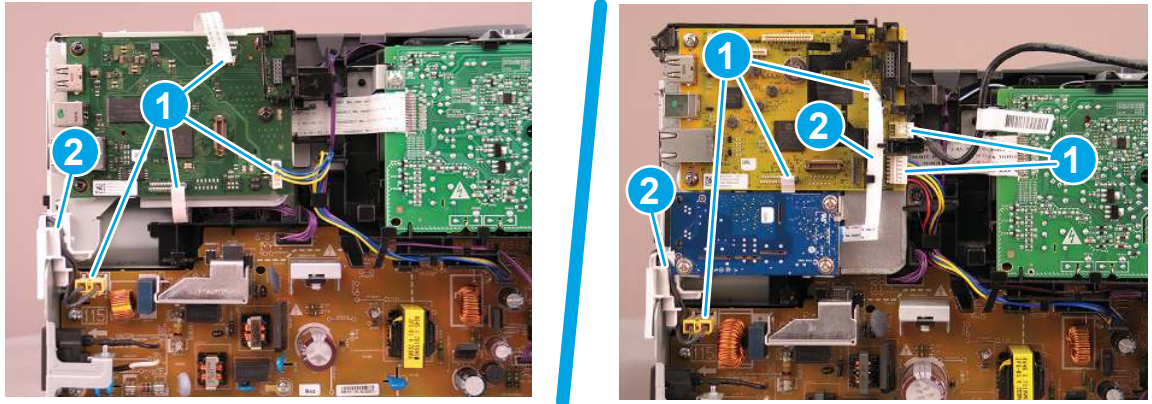
**Figure 5-681 Remove the wireless PCA**





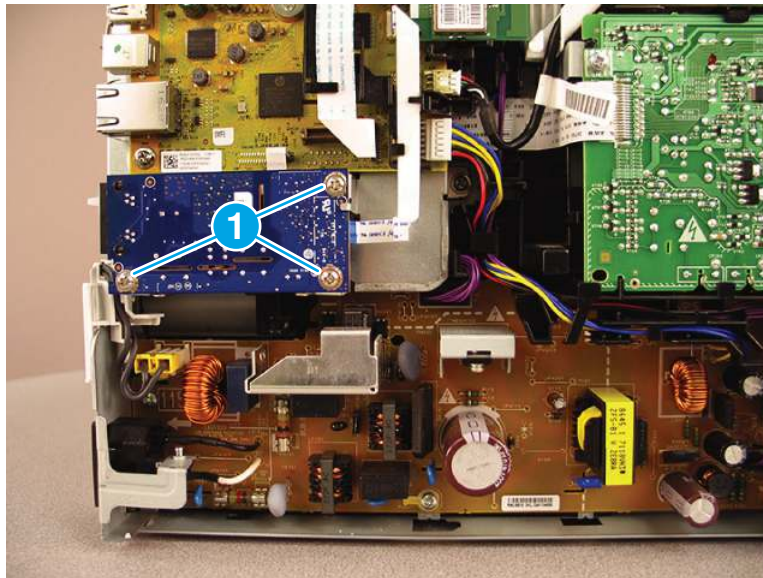
2. Do one of the following:
  - **SFP only:** Disconnect the connectors (callout 1), and then release one wire harness (callout 2) from the guide.
  - **MFP only:** Disconnect the connectors (callout 1), and then release one wire harness and one FFC (callout 2) from the guides.

**Figure 5-682** Disconnect the connectors



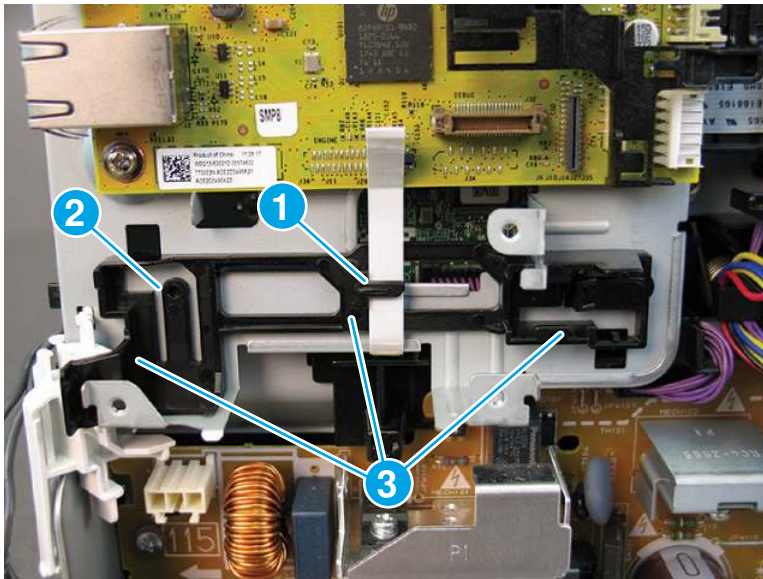
3. **MFP fax models only:** Remove three screws (callout 1), and then remove the fax PCA.

**Figure 5-683** Remove the fax PCA



4. **MFP only:** Release the FFC from the guide (callout 1), release one tab (callout 2), and then remove the FFC guide (callout 3).

**Figure 5-684** Remove the FFC guide

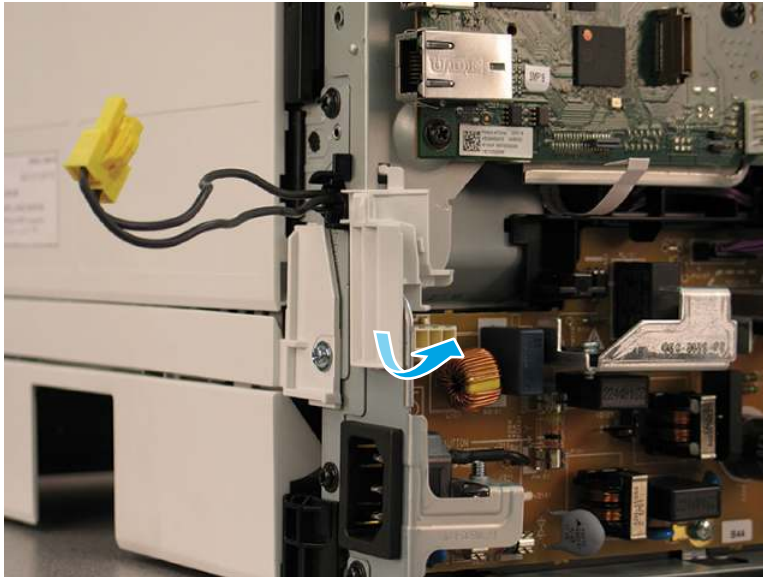


5. Remove one guide.



**NOTE:** A SFP printer is shown in the figure. However, the guide is identical for an MFP printer

**Figure 5-685** Remove the guide



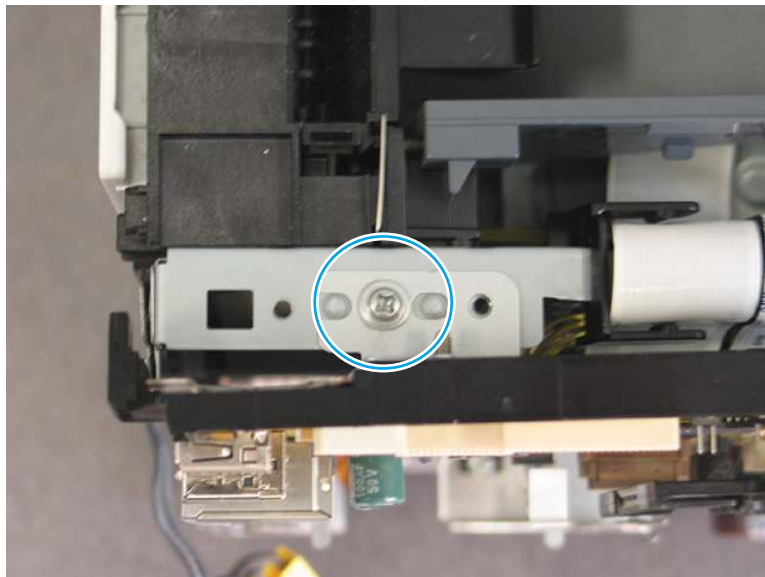
6. Remove two screws.

**Figure 5-686** Remove two screws



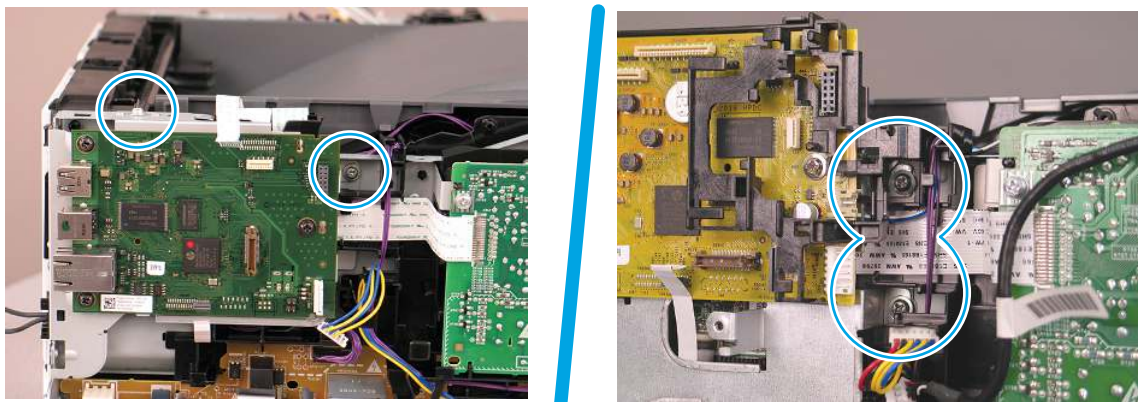
7. MFP only: Remove one screw.

**Figure 5-687** Remove one screw



8. Support the formatter and bracket, and then remove two screws.

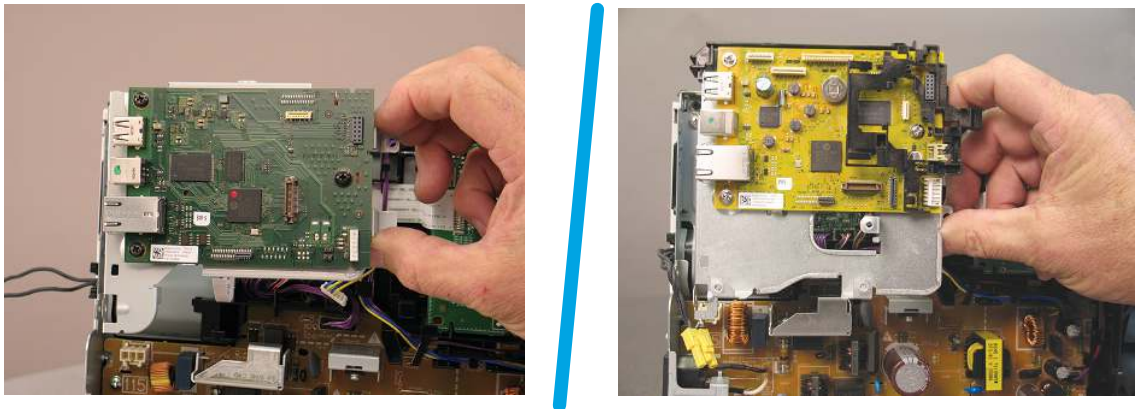
**Figure 5-688** Remove two screws





9. Remove the sheet-metal bracket and formatter PCA.

**Figure 5-689 Remove the bracket**



## 12. Remove the DC controller

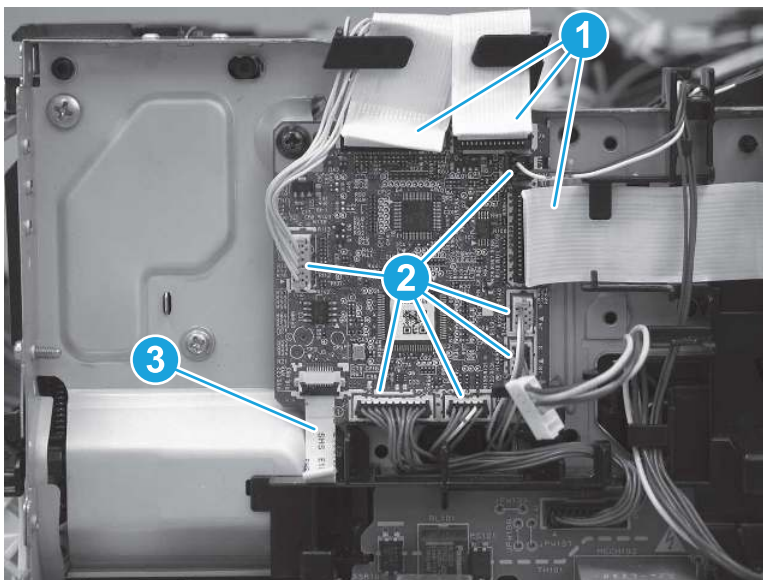
Follow these steps to remove the DC controller.

- CAUTION:** Replacement DC controller installations only: *DO NOT* skip this step. See [HP Onsite Repair Application on page 527](#) for information about how to pair a formatter and DC controller.

1. Disconnect three FFCs (callout 1), and six connectors (callout 2).

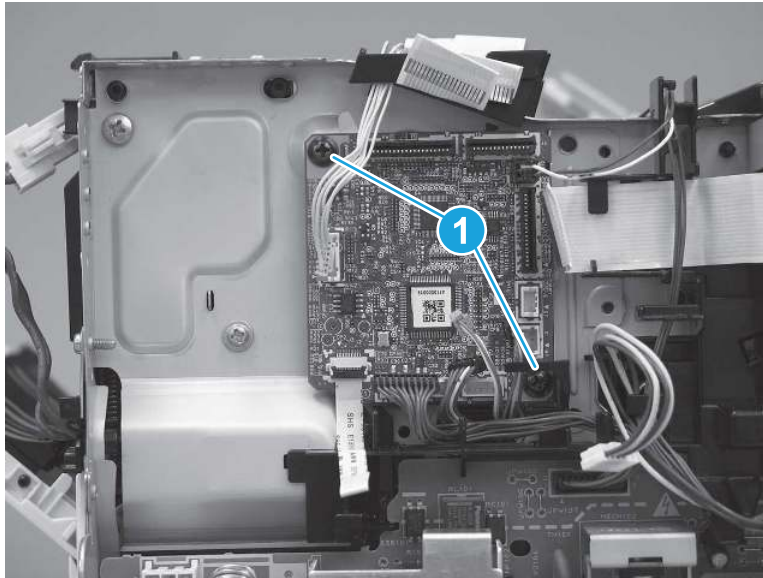
- IMPORTANT:** One FFC (callout 3) is fastened to the guide with two sided tape. This FFC is removed later in this procedure

**Figure 5-690 Disconnect three FFCs and six connectors**



2. Remove two screws (callout 1).

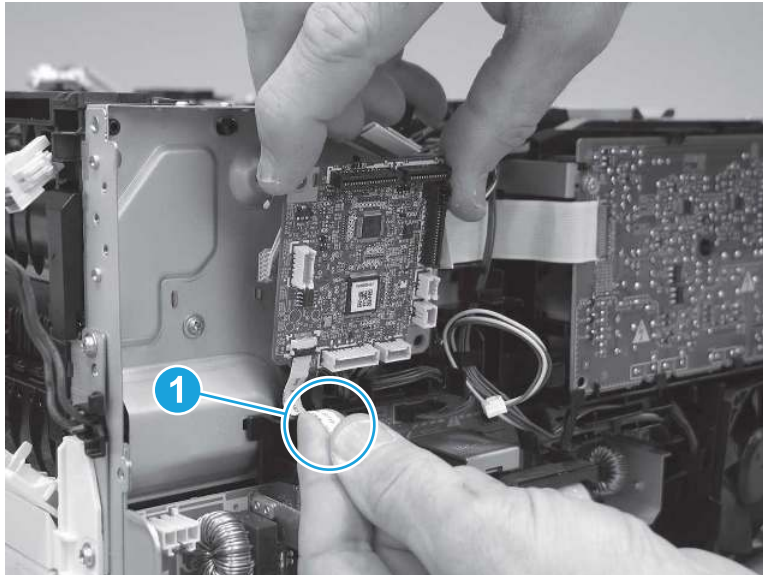
**Figure 5-691 Remove two screws**



3. Separate the DC controller from the printer.

**CAUTION:** Carefully pull up on the FFC (callout 1) to release it from the guide, and then remove the DC controller.

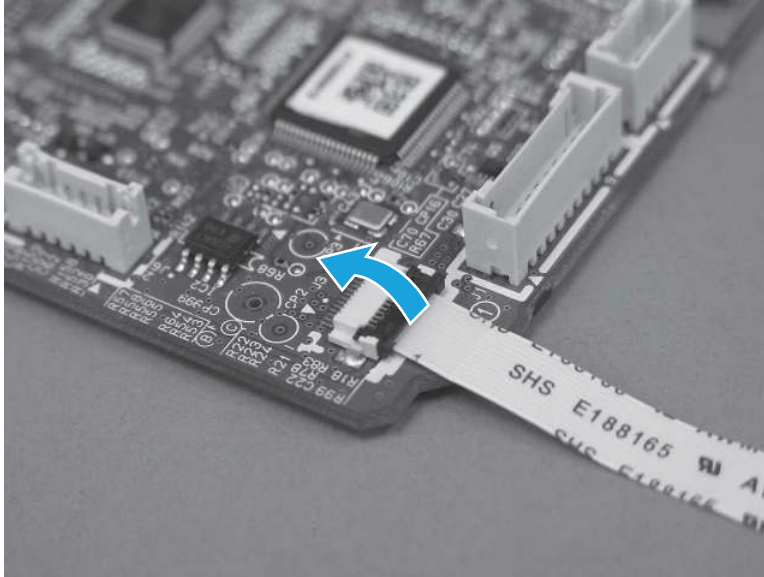
**Figure 5-692 Remove the DC controller**



4. Disconnect and remove one FFC, and then install this FFC on the replacement DC controller.

**IMPORTANT:** The FFC connector is a Zero Insertion Force (ZIF) connector that uses a hinged retainer to secure the FFC. The hinged retainer must be opened to release the FFC.

Figure 5-693 Remove the FFC



### 13. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### 14. HP Onsite Repair Application

This topic describes the steps to pair a formatter and DC controller (DCC) / Engine controller unit (ECU).

When a formatter or DCC/ECU is replaced a pairing operation must be completed to make the printer functional. Use the HP Onsite Repair Application (App) to complete this procedure.

---

**CAUTION:** Only install a new (unpaired) **Service Formatter PCA** or **Service DC controller (DCC) / Engine controller unit (ECU)** when a replacement PCA is required.

**IMPORTANT:** If both a formatter **and** DCC/ECU need to be replaced, they must be installed and paired sequentially (one at a time). Do not replace both PCAs at the same time. Always replace one PCA, perform the pairing operation, and then replace and pair the second PCA.

---

To use the HP Onsite Repair App, first review the following:

- [Hardware requirements for using the HP Onsite Repair App on page 667](#)
- [Create an HP Onsite Repair App account or sign-in on page 668](#)

### Hardware requirements for using the HP Onsite Repair App

The repair application has the following hardware requirements:

- Android device (Android OS 7.1 or later)



- Internet access



- USB OTG cable

---

**IMPORTANT:** Make sure that the OTG cable connector fits the Android device USB connector.

---

- Android device connector (Micro-USB or Type-C; callout 1)
- Type-A USB printer cable connector (callout 2)





- Standard A-B USB printer cable



## Create an HP Onsite Repair App account or sign-in

The HP Onsite Repair App requires an HPID account.

1. If you do not already have an HPID account, create one now.



**NOTE:** If you already have an HPID account, skip this step and go to **Step 2**.

- a. Open the HP Onsite Repair App, and then select the [Sign up](#) item.

- b. On the [Sign up](#) screen, type in the following account information:
  - First and last name
  - Email address (no need to pre-register your email account)
  - Mobile phone number
  - Password and password confirmation
  - Change the default country or region if necessary

**Create your HP account**  
One account connects you to all of your HP applications

Already have an HP account? Sign in

First name \*

Last name \*

Email address \*

+1 Mobile Number

Password \*

Confirm password \*

Country or region \*  
United States

HP may email me with personalized offers, support updates, and event news.

Your HP account identity information is used in accordance with the [HP Privacy Statement](#).

**CREATE ACCOUNT**

- c. Select the **CREATE ACCOUNT** button to create the user account.

**Create your HP account**  
One account connects you to all of your HP applications

Already have an HP account? Sign in

First name \*

Last name \*

Email address \*

+1 Mobile Number

Password \*

Confirm password \*

Country or region \*  
United States

HP may email me with personalized offers, support updates, and event news.

Your HP account identity information is used in accordance with the [HP Privacy Statement](#).

**CREATE ACCOUNT**

2. Open the HP Onsite Repair App, and then do the following:

- a. At the sign-in screen, enter your user-name or email address, and then select the **NEXT** button.

Sign in using my:

Username or Email Address

**NEXT**


Remember me

[Forgot your username or password?](#)

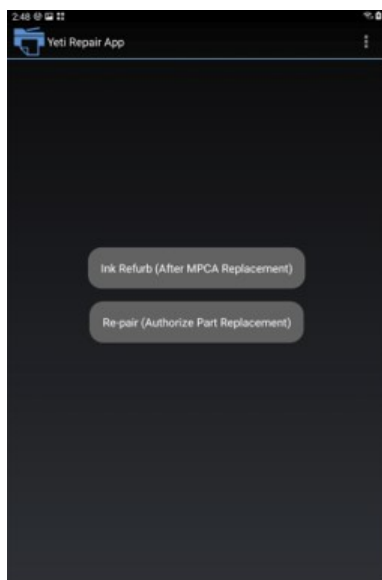
Don't have an account? [Sign up](#)

- b. From the HP Onsite Repair App operations screen, you can begin the formatter and DCC/ECU pairing process.

The app can only perform a formatter and DCC/ECU pairing operation. There is no need for disassociating the printer from the HP account as the customer receives the same printer back after servicing.

 **IMPORTANT:** If the printer was previously setup and claimed on the HP portal (on-boarded), a printer user or administrator must complete the on-boarding process again. Previous on-board information is not retained when using the HP Onsite Repair App to pair a formatter and DCC/ECU.

On-boarding is optional and only needed if the printer was previously on-boarded.




### Step 1 - HP Onsite Repair App: Pairing type identification

Follow these steps to identify the type of formatter and DCC / ECU pairing required.

 **CAUTION:** Only install a new (unpaired) **Service Formatter PCA** or **Service DC controller (DCC) / Engine controller unit (ECU)** when a replacement PCA is required.

For a replacement assembly, do not install a previously used (paired) PCA.


1. Use the instructions in the printer *Service Manual* to remove and replace either the formatter or DCC/ECU.

 **IMPORTANT:** If both a formatter **and** DCC/ECU need to be replaced, they must be installed and paired sequentially (one at a time). Do not replace both PCAs at the same time. Always replace one PCA, perform the pairing operation, and then replace and pair the second PCA.

2. Do one of the following:

- **Formatter replacement**

- a. The message **Initializing**, a **Language** prompt, or [hpsmart.com/setup](https://hpsmart.com/setup) appears on the control-panel display.

 **NOTE:** If an error message appears, make sure that the replacement formatter is an unused brand-new **Service Formatter PCA**.


Do not install replacement previously used PCAs (paired) in this printer.

---

b. Go to *Step 2 - HP Onsite Repair APP: Prepare a formatter for pairing*.

- **DCC/ECU replacement**

a. The message **Ready** appears on the control-panel display. However, the repair process is **not** complete.

 **NOTE:** If an error message appears, make sure that the replacement DCC/ECU is an unused brand-new **Service DC controller (DCC) / Engine controller unit (ECU)**.


Do not install replacement previously used PCAs (paired) in this printer.


---

b. Go to *Step 3 - HP Onsite Repair App: Pairing operation*.

## Step 2 - HP Onsite Repair App: Prepare a formatter for pairing

Follow these steps to prepare a formatter for pairing.

 **IMPORTANT:** If both a formatter **and** DCC/ECU need to be replaced, they must be installed and paired sequentially (one at a time). Do not replace both PCAs at the same time. Always replace one PCA, perform the pairing operation, and then replace and pair the second PCA.


 **NOTE:** If a formatter is **not** being paired, skip this step. Go to *Step 3 - HP Onsite App: Pairing operation*.

---

1. When a replacement formatter is installed, the printer serial number must be configured on the formatter before pairing.

a. Use the printer serial number found on a label adhered to the printer.

b. Use the control panel to access the **Service Menu > System Configuration > Serial Number** menus.

 **NOTE:** Detailed instructions by printer type are provided below.

---

2. Configure the printer serial number on the replacement formatter:

- **SFP**

a. At the control panel, press the **Return** button once, press the **Cancel** button once, and then press the **Return** button twice.

b. Use the left arrow button to navigate to **Engineering Menu - Service Menu**, and then press the **OK** button.

c. When **System Configuration** appears on the display, press the **OK** button.

d. When **Enter Serial Number** appears on the display, press the **OK** button.

e. Use the left arrow, right arrow, and **Return** buttons to enter the printer serial number.

 **NOTE:** Use the printer serial number found on a label adhered to the printer.

---

f. When the serial number is correctly entered, press the **OK** button.

g. Turn the printer power off, and then back on again to save the restored serial number.


- **MFP**

- a. From the control-panel Home screen, swipe down to access the printer dashboard.
- b. Select the [Setting](#) > [Preference](#) > [Date and Time](#) menus. Set the correct date and time, and then return to the Home screen.
- c. From the control-panel Home screen, press the [Home](#) button once, press the [Return](#) button once, and then press the [Home](#) button twice.
- d. Select the [Service](#) menu, select the [System Configuration](#) menu, and then press the [OK](#) button.
- e. When [Enter Serial Number](#) appears on the display, press the [OK](#) button.
- f. Use the up arrow and down arrow buttons to change the displayed character. Use the right arrow button to move the cursor to the next character.
- g. When the serial number is correctly entered, press the [OK](#) button.
- h. Turn the printer power off, and then back on again to save the restored serial number.

### Step 3 - HP Onsite Repair App: Pairing operation

Follow these steps to complete the pairing operation.


---

 **IMPORTANT:** If both a formatter **and** DCC/ECU need to be replaced, they must be installed and paired sequentially (one at a time). Do not replace both PCAs at the same time. Always replace one PCA, perform the pairing operation, and then replace and pair the second PCA.

---

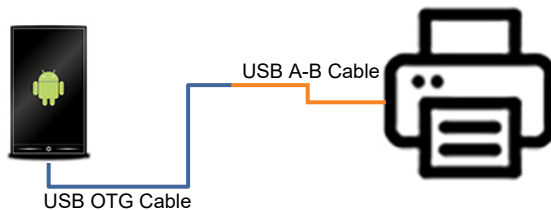
1. Use a USB OTG cable (Micro-USB or Type-C) and a standard A-B USB cable to connect an Android device to the printer.

---

 **NOTE:** Verify that the Android device is connected to the internet.


---

**Figure 5-694** Android to printer connection



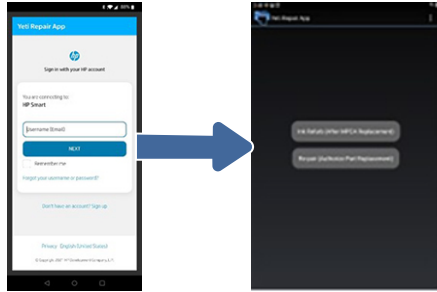
2. Open and log into the HP Onsite Repair App, and then select the **Re-pair (Authorized Parts Replacement)** button.

---


 **NOTE:** For more information about logging into the app, or how to create a new account, see *Create an HP Onsite Repair App account or sign-in*.

---

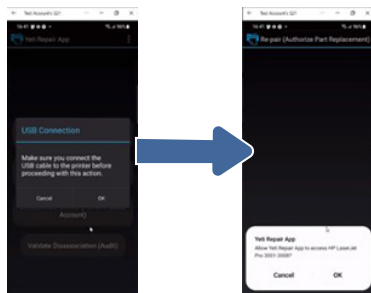
**Figure 5-695** Log in and select Re-pair




3. Select the **OK** button to confirm the Android device is connected to the printer, and then select the **OK** button to continue the operation.

 **NOTE:** Make sure that the Android device is correctly connected to the printer using the OTG and A-B USB cables.

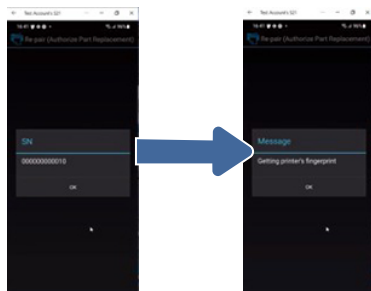
**Figure 5-696** Select OK to confirm and continue



4. Select the **OK** button to confirm the displayed printer serial number, and then select the **OK** button to retrieve the printer *Fingerprint*.

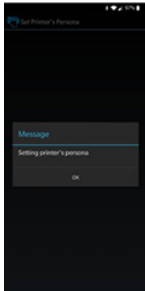
 **NOTE:** Make sure that the displayed serial number matches the serial number printed on the label adhered to the printer.

**Figure 5-697** Select OK to accept the printer serial number and Fingerprint



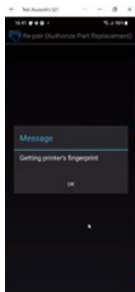
5. Select the **OK** button to send a Repair Authorization Request to the HP Stratus Cloud on the internet and retrieve the printer *Persona*.

**Figure 5-698** Select OK to retrieve the printer *Persona*



6. Select the **OK** button to retrieve the printer *Fingerprint*.

**Figure 5-699** Select OK to retrieve the printer *Fingerprint*



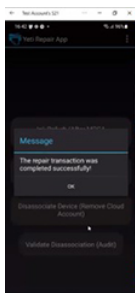
7. The message **The repair transaction was completed successfully** appears when the formatter and DCC/ECU pairing operation is complete. Select the **OK** button to send a Repair Acknowledgment Request to the HP Stratus Cloud on the internet.



**IMPORTANT:** If the printer was previously setup and claimed on the HP portal (on-boarded), a printer user or administrator must complete the on-boarding process again. Previous on-board information is not retained when using the HP Onsite Repair App to pair a formatter and DCC/ECU.

On-boarding is optional and only needed if the printer was previously on-boarded.

**Figure 5-700** Select OK to acknowledge the pairing



### Removal and replacement: Tag-cable assembly (toner-cartridge memory)

Learn how to remove and replace the tag-cable assembly.

Mean time to repair: 23 minutes SFP, 45 minutes MFP

Service level: Medium SFP, Medium MFP



## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-42** Part Information

Part number	Part description
RM2-2556-000CN	Tag cable assembly

## Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-701** Remove the tray



## 2. Remove the cartridge door assembly


Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

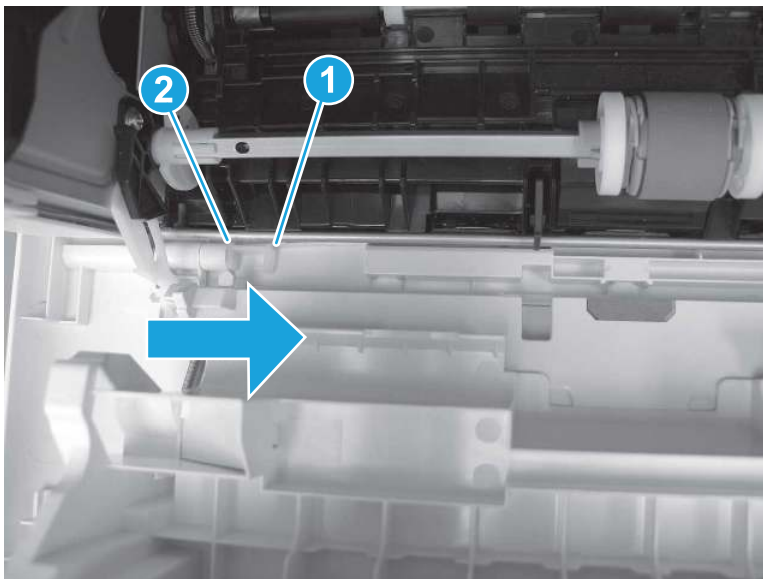
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

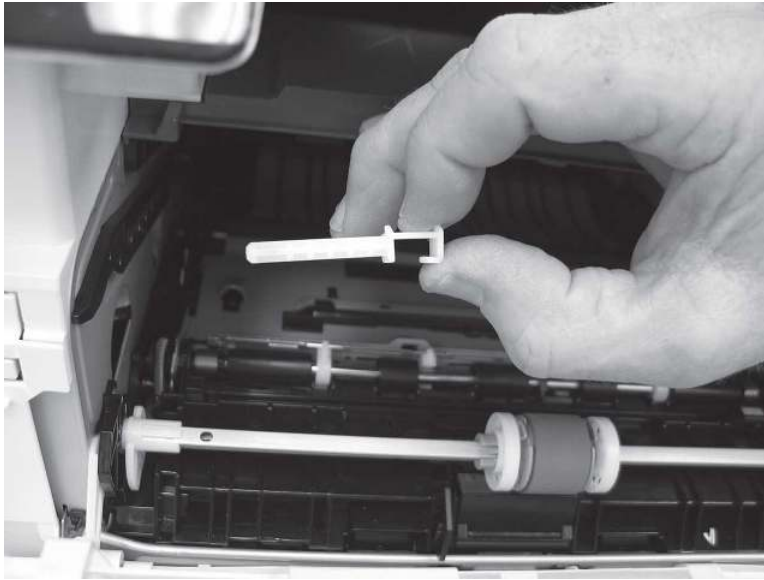
---

**Figure 5-702** Release the support shaft



2. Remove the support shaft.

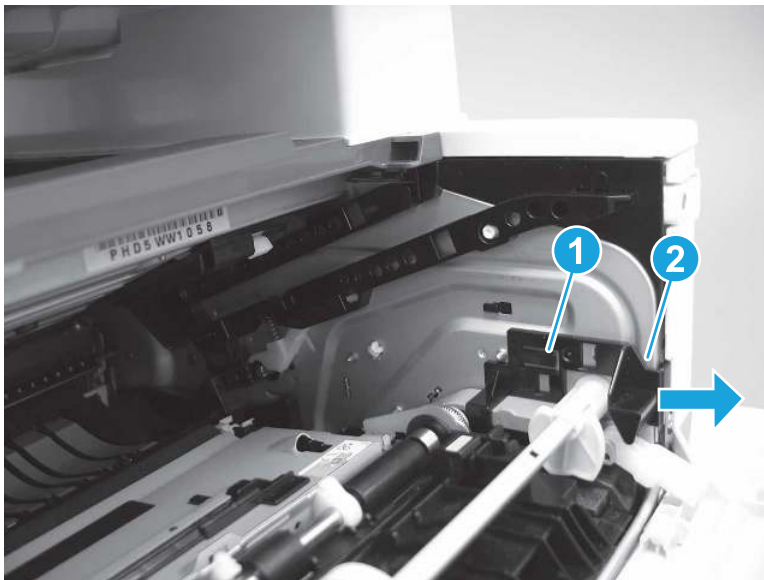
**Figure 5-703 Remove the support shaft**



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

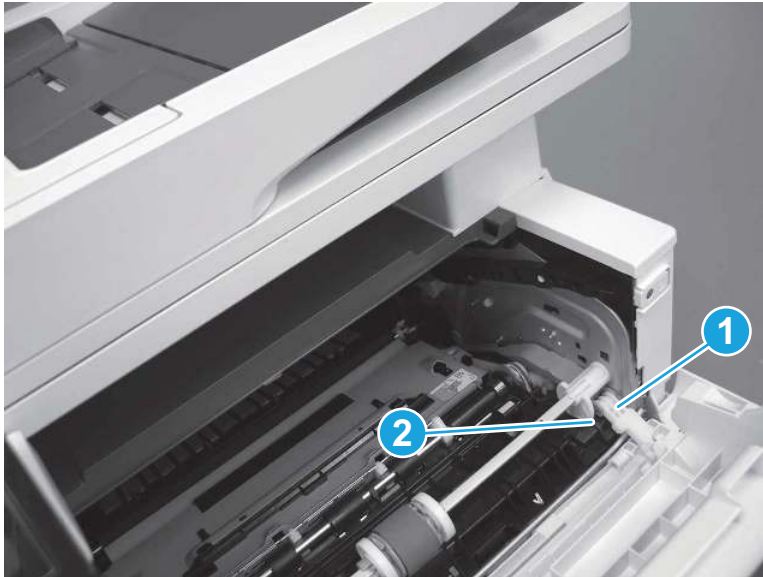
**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

**Figure 5-704 Remove the guide**



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-705** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

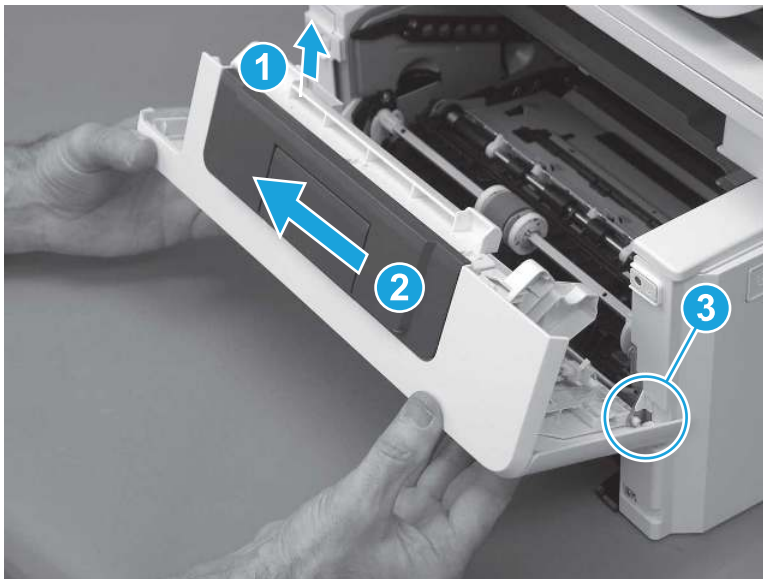
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

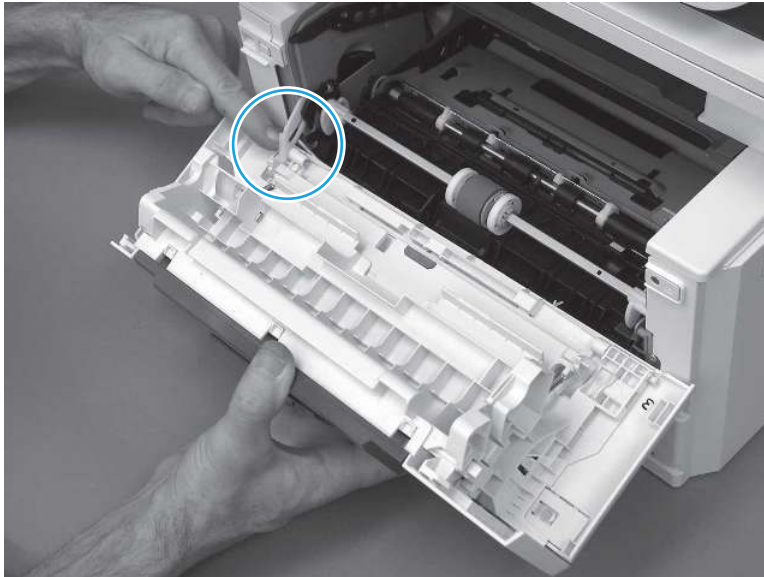
---

**Figure 5-706** Release the door



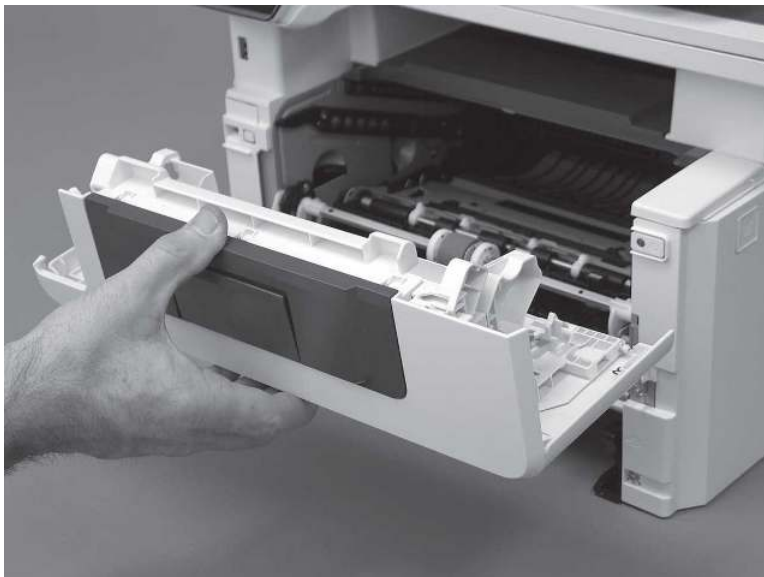
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-707** Release the left-side retainer arm



7. Remove the door.


**Figure 5-708** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

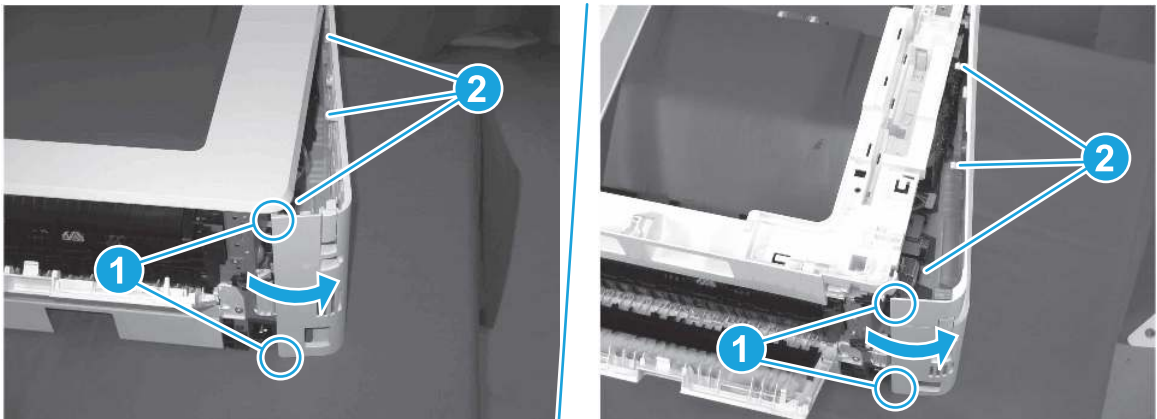
1. Remove one screw (callout 1).

**Figure 5-709** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-710** Release two bosses and three tabs



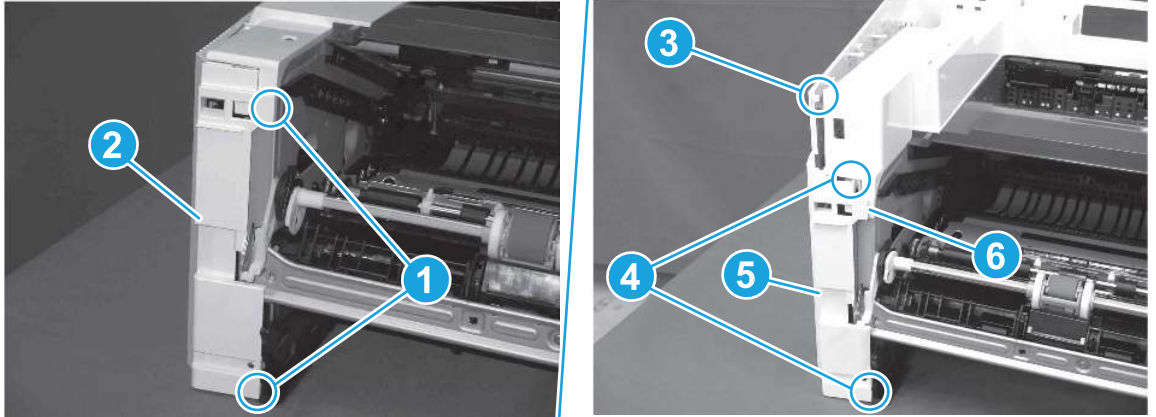
3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.



Figure 5-711 Remove the cover



#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).


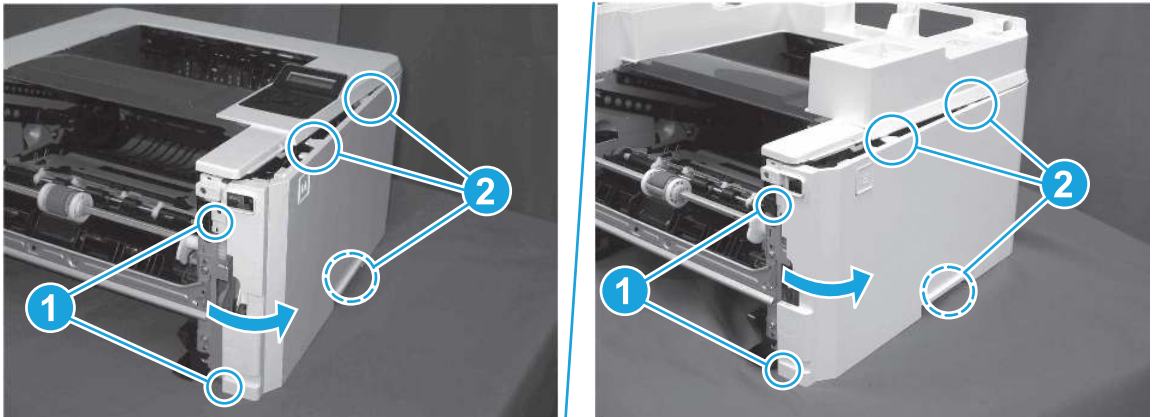
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

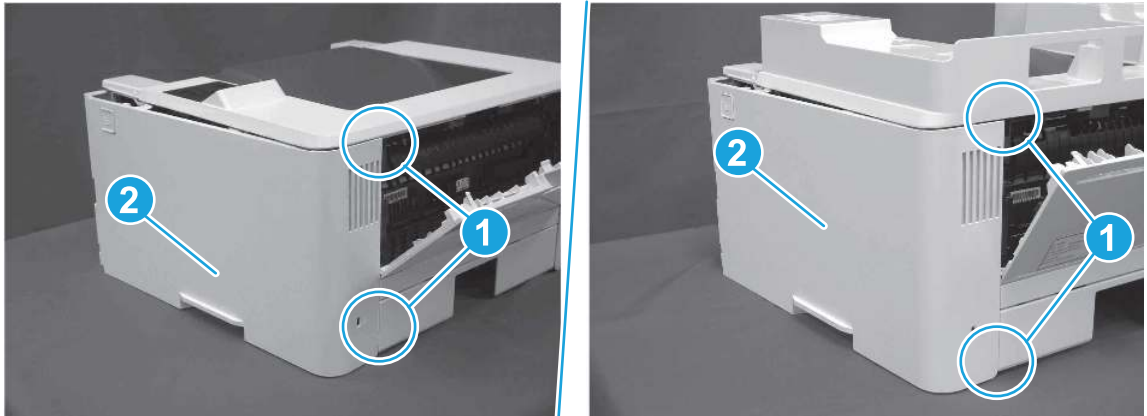
Figure 5-712 Release two bosses and three tabs





2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-713 Remove the cover**

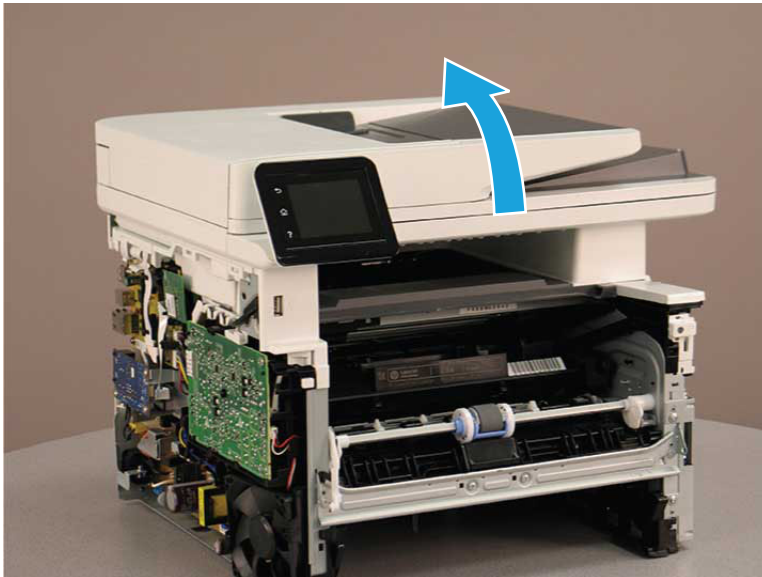


#### 5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

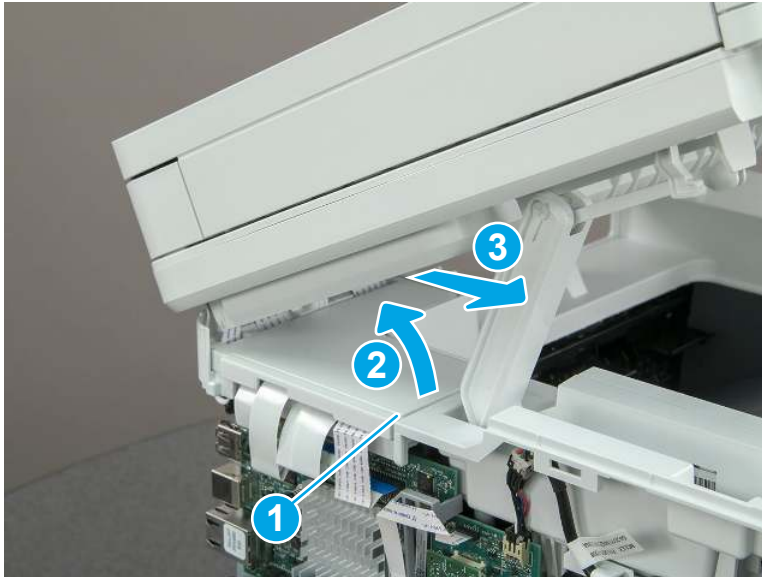
1. If the ISA is not already raised, raise it now.

**Figure 5-714 Raise the ISA**




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-715** Remove the ISA FFC cover




#### 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

**Figure 5-716** Disconnect three FFCs



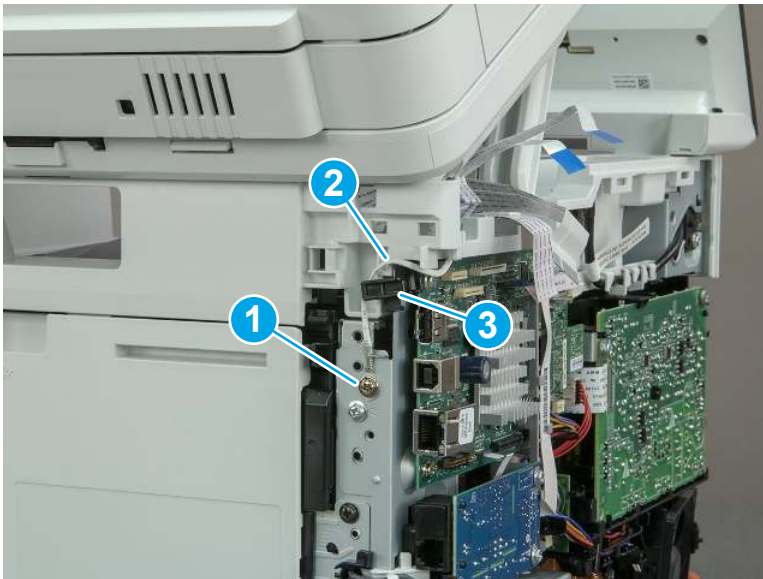
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-717** Release the tape



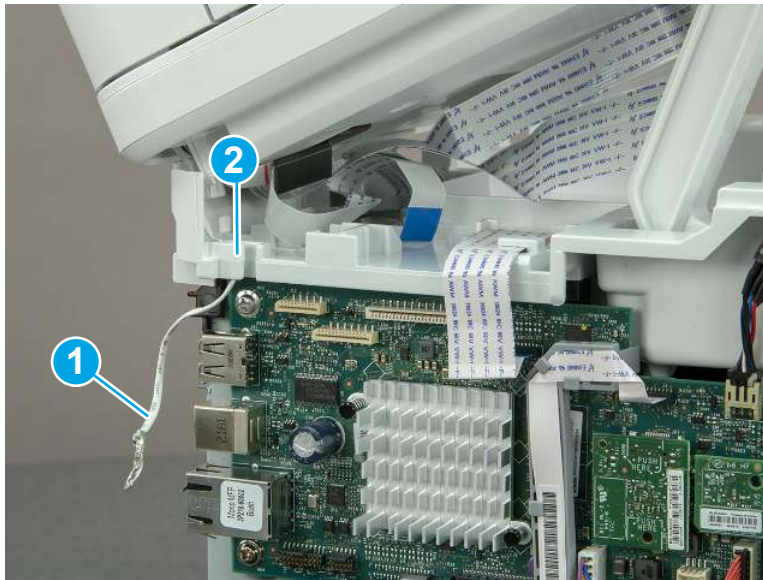
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-718** Release the ground wire



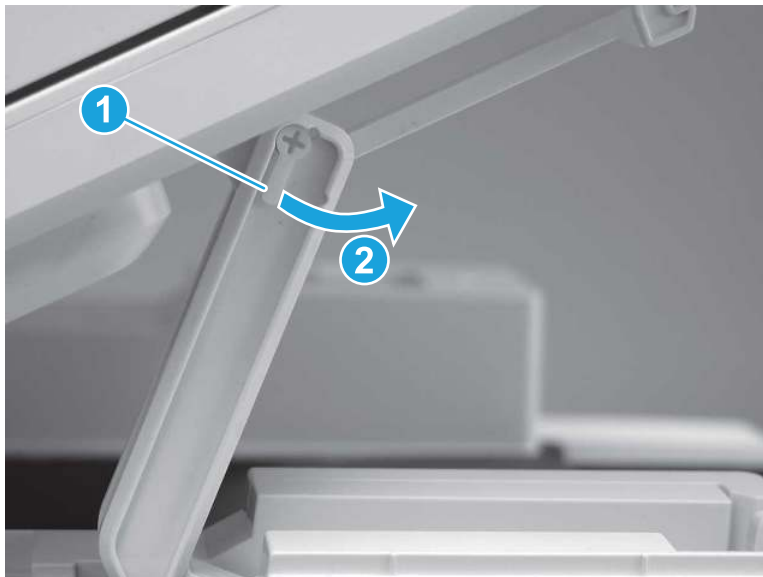
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-719 Release the ground wire**




5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-720 Release one tab and rotate the slider pin**



6. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

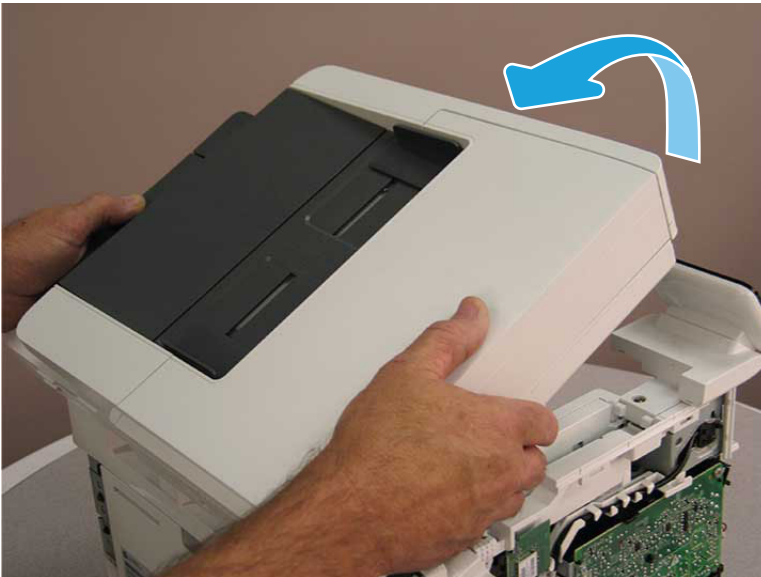
---

**Figure 5-721** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-722** Rotate the ISA towards the rear of the printer





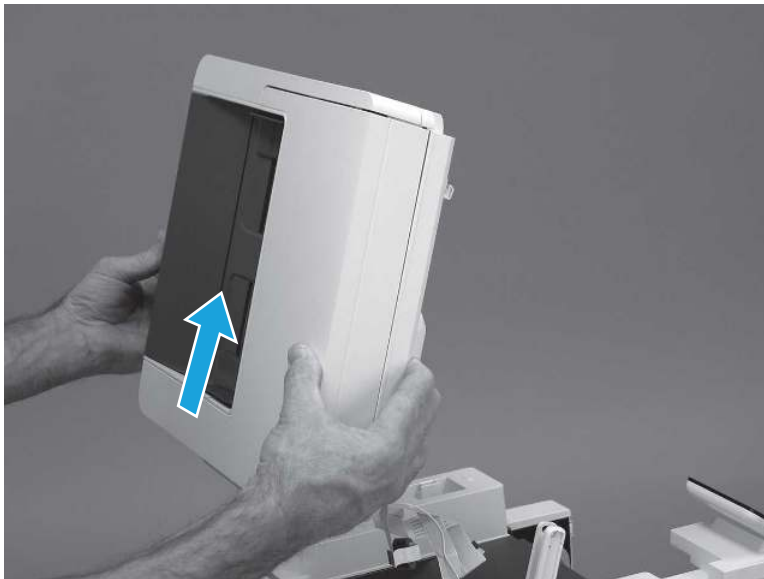
8. Slide the ISA as shown to release it.

**Figure 5-723** Release the ISA



9. Remove the ISA.

**Figure 5-724** Remove the ISA

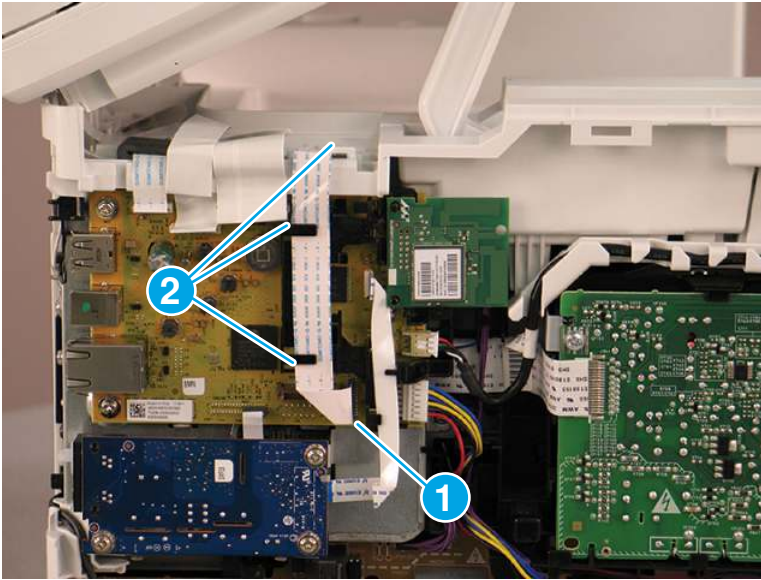


## 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-725** Disconnect one connector



2. Remove one screw (callout 1).

**Figure 5-726** Remove one screw





3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-727 Release two tabs**



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-728 Remove the cover**



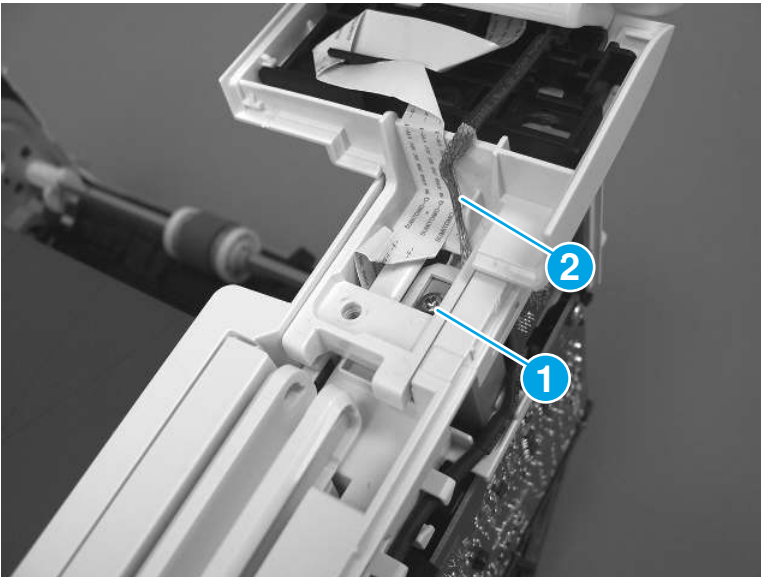
5. Remove the control-panel mount cover.

**Figure 5-729** Remove the cover



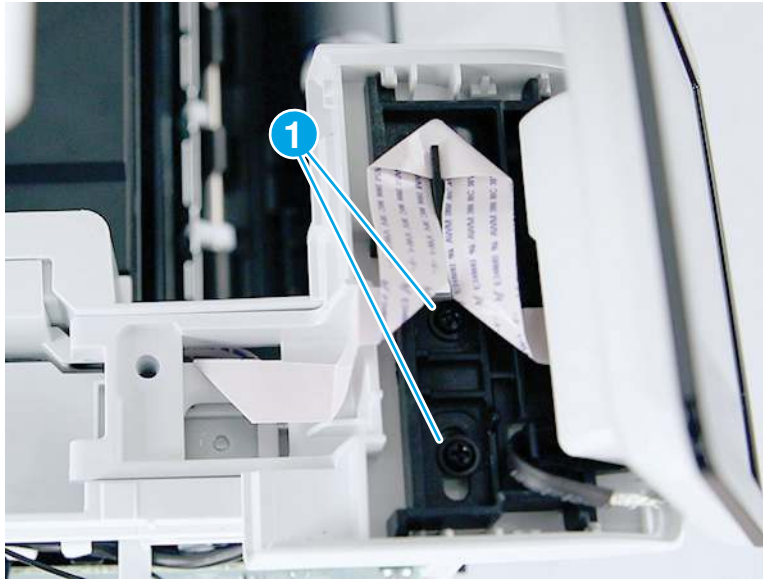
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-730** Remove one screw



7. Move the FFC out of the way, and then remove two screws (callout 1).

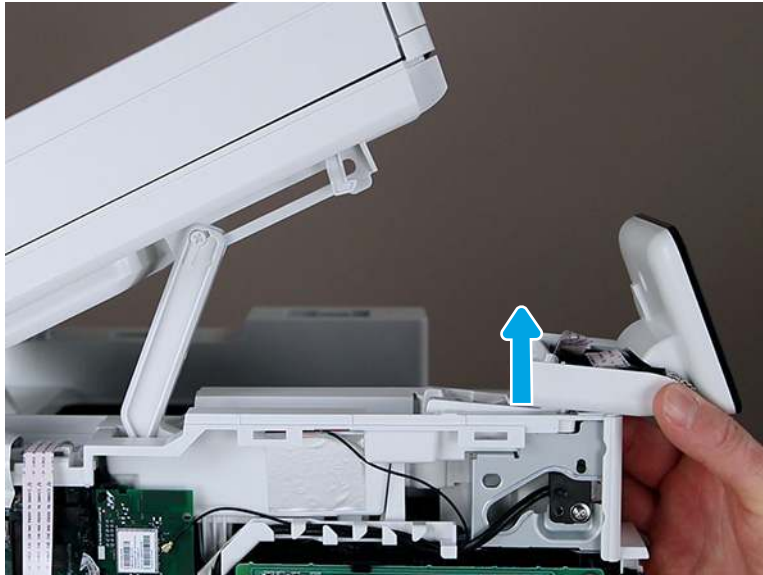
**Figure 5-731** Remove two screws



8. Slightly lift up the control-panel assembly to separate it from the top cover.

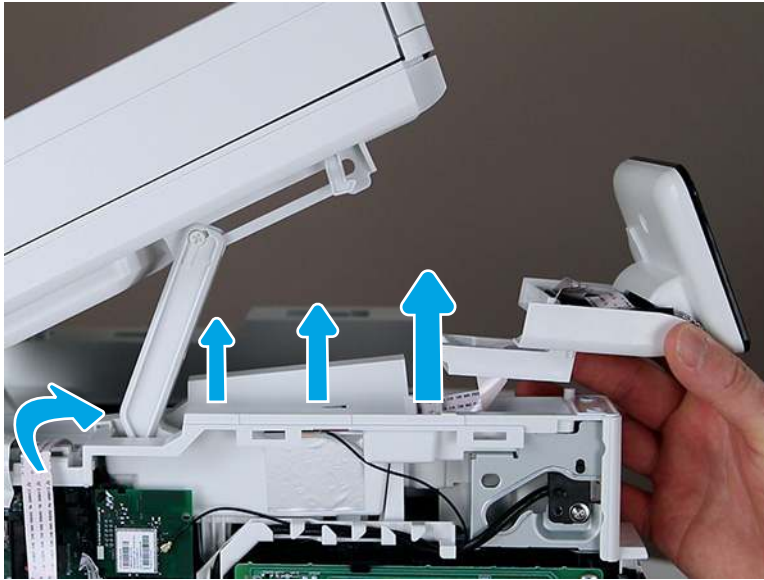
**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

**Figure 5-732** Lift up the control-panel assembly



- Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-733** Remove the control-panel assembly

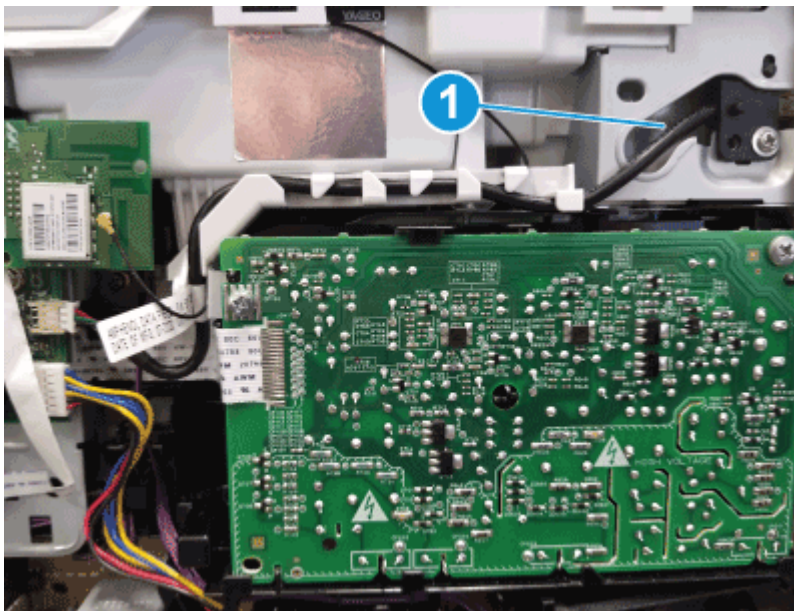


#### 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

- Release the USB cable (callout 1) from the cable guide.

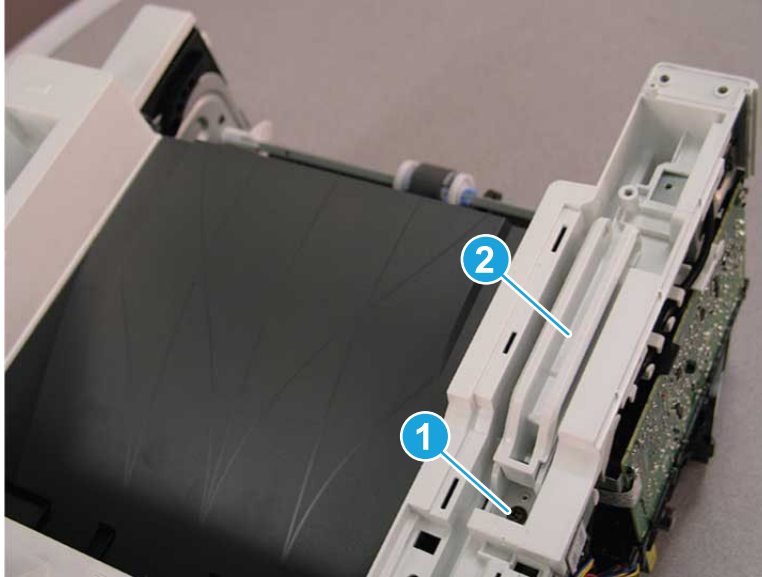
**Figure 5-734** Release the USB cable



- Remove one screw (callout 1), and then remove the support arm (callout 2).

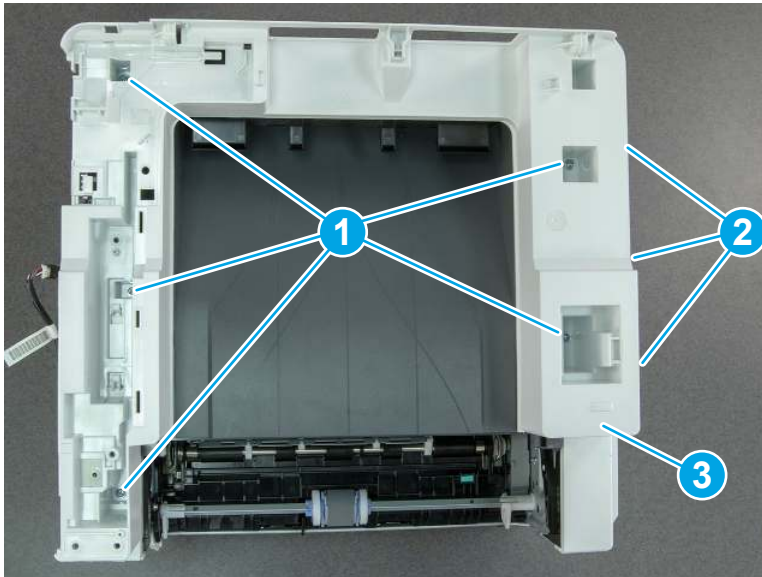
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-735 Remove the support arm**



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-736 Remove the top cover**



**9. Remove the top cover (SFP only)**

Follow these steps to remove the top cover (SFP only).



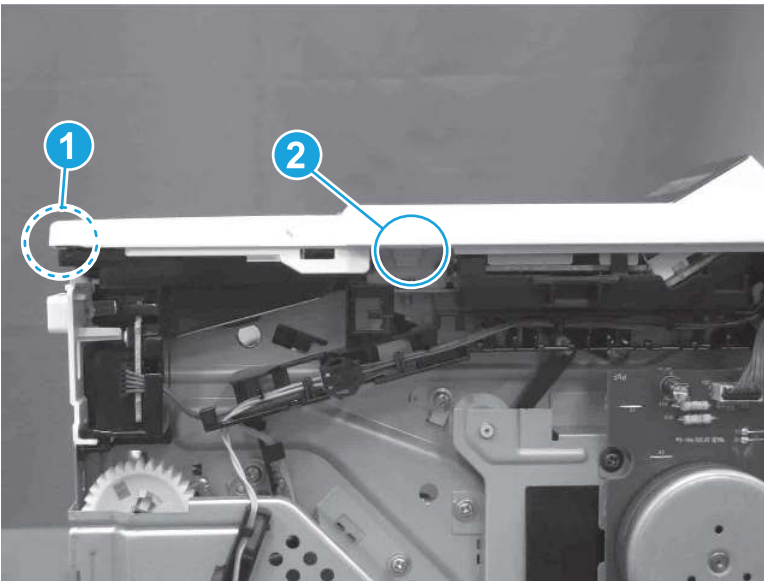
1. Remove one screw.

**Figure 5-737** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-738** Release one boss and one tab



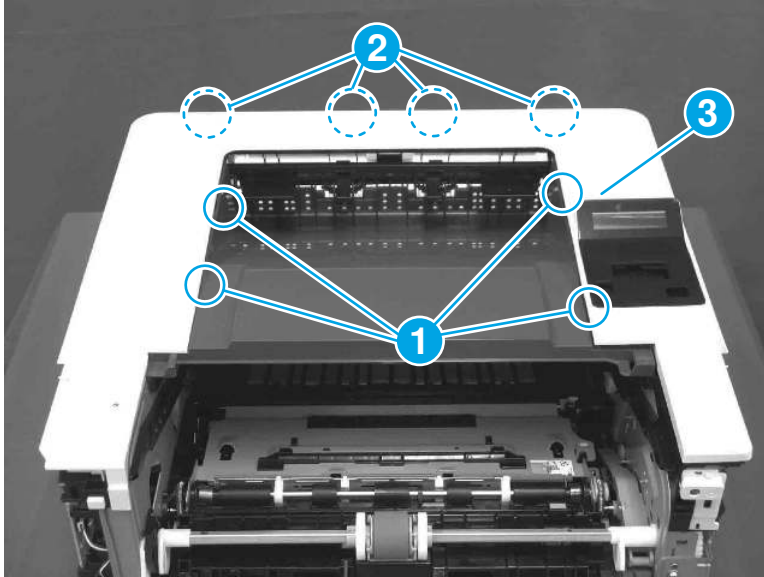
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.


---

Figure 5-739 Remove the cover



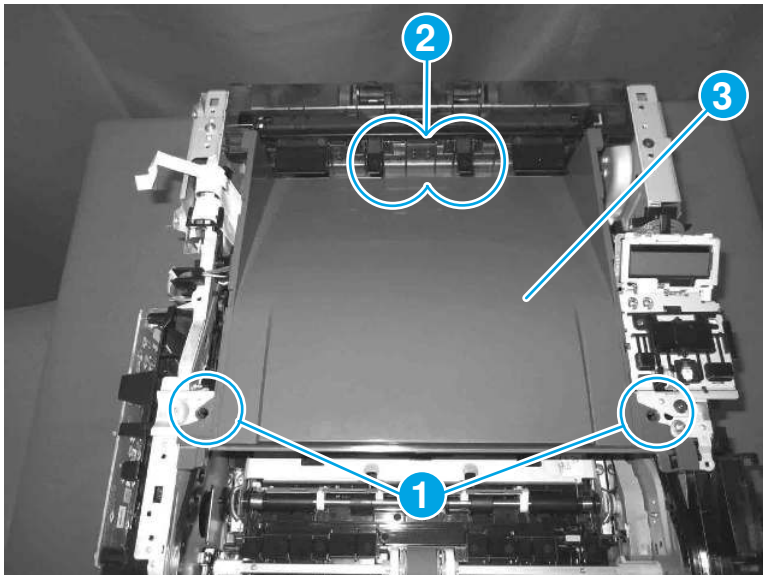
#### 10. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

 **NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-740 Remove the cover




#### 11. Remove the sheet-metal formatter bracket and formatter PCA

Follow these steps to remove the formatter bracket.




1. Do one of the following:

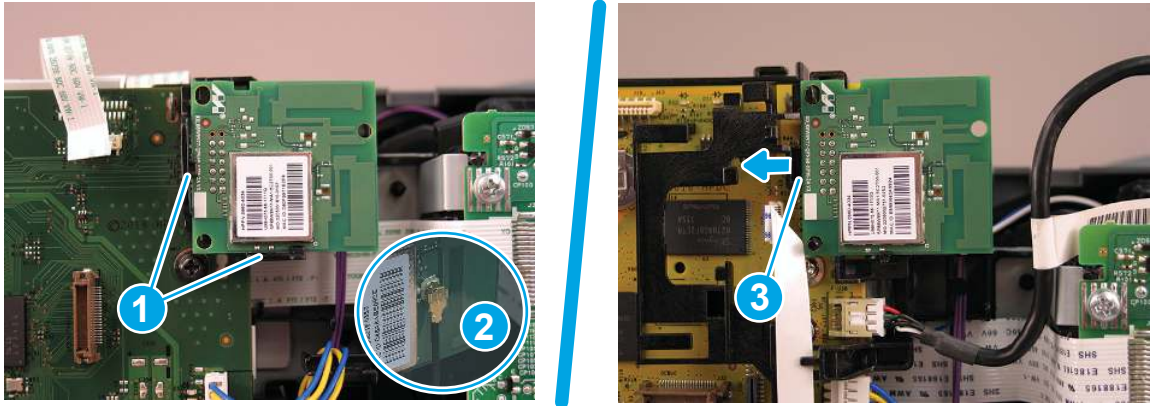
- **SFP only:** Release two tabs (callout 1), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **NOTE:** Disconnect the WiFi antenna (callout 2) before releasing the tabs.

- **MFP only:** Release one tab (callout 3), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **TIP:** Push the tab to the left to release it.

**Figure 5-741 Remove the wireless PCA**

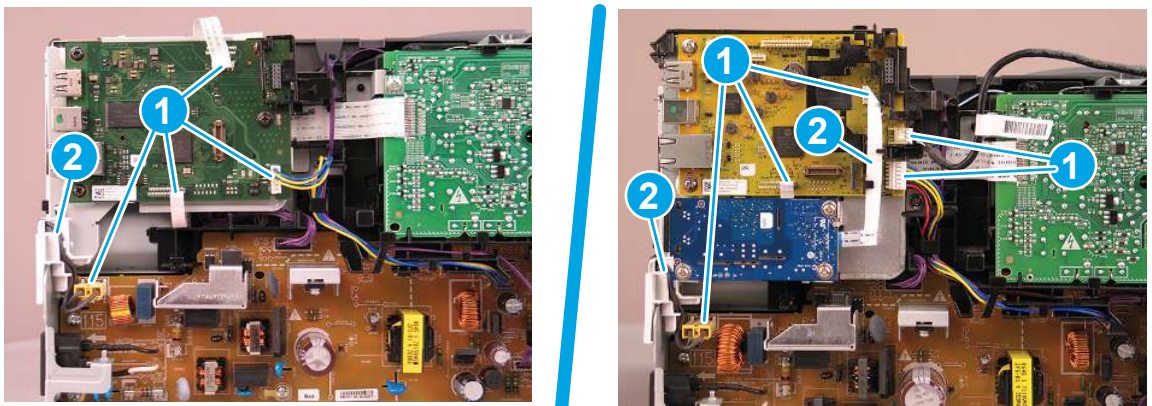


2. Do one of the following:

- **SFP only:** Disconnect the connectors (callout 1), and then release one wire harness (callout 2) from the guide.

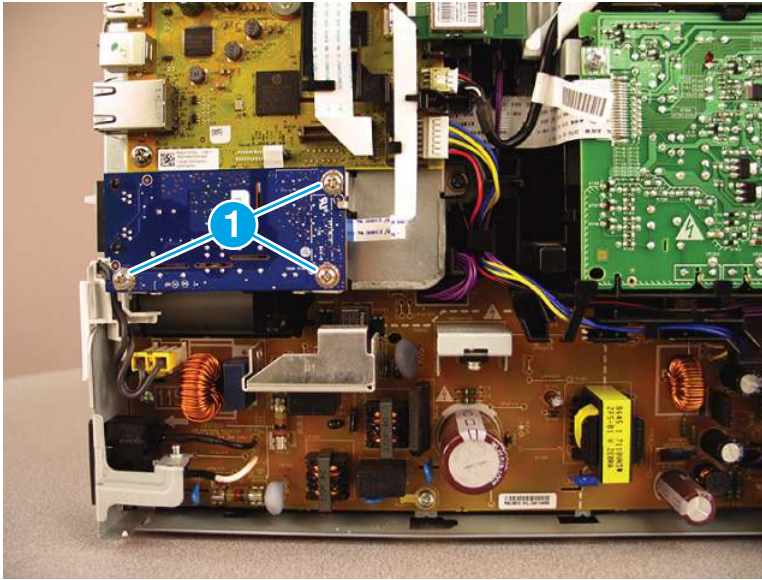
- **MFP only:** Disconnect the connectors (callout 1), and then release one wire harness and one FFC (callout 2) from the guides.

**Figure 5-742 Disconnect the connectors**



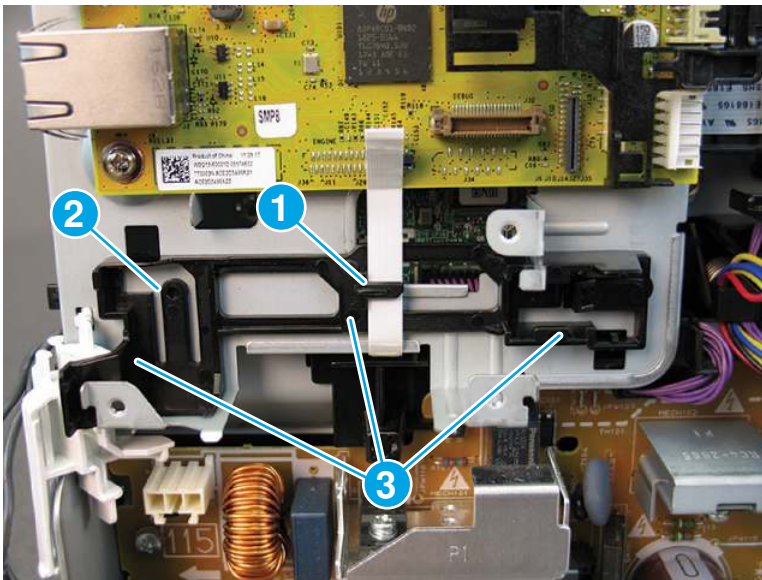
3. **MFP fax models only:** Remove three screws (callout 1), and then remove the fax PCA.

**Figure 5-743** Remove the fax PCA



4. **MFP only:** Release the FFC from the guide (callout 1), release one tab (callout 2), and then remove the FFC guide (callout 3).

**Figure 5-744** Remove the FFC guide

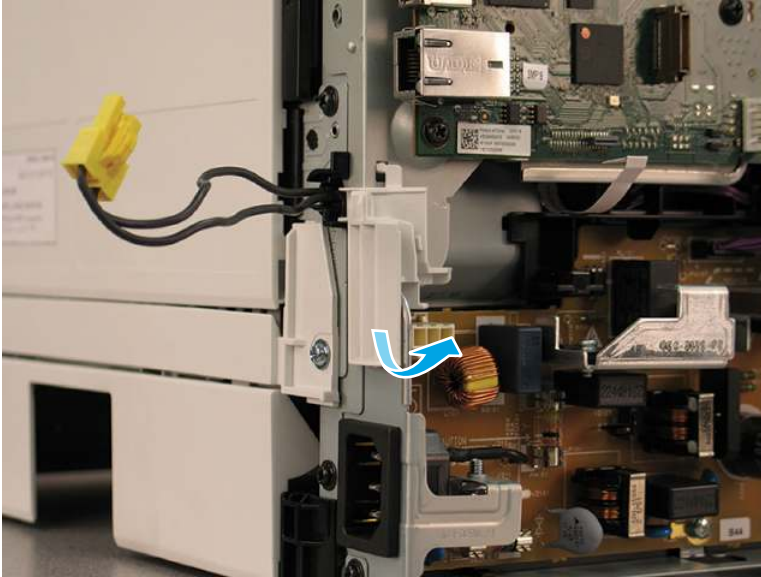


5. Remove one guide.



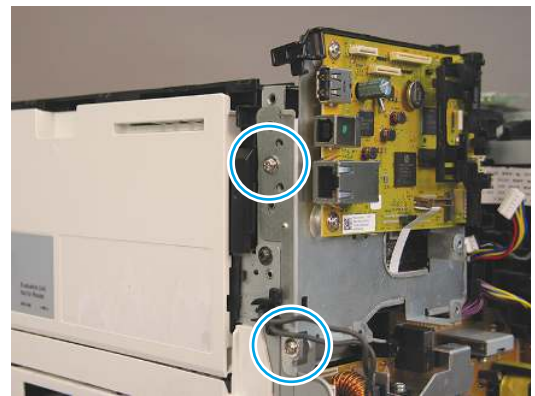
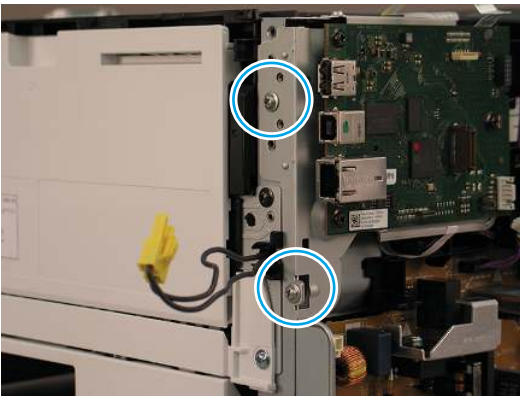
**NOTE:** A SFP printer is shown in the figure. However, the guide is identical for an MFP printer

Figure 5-745 Remove the guide



6. Remove two screws.

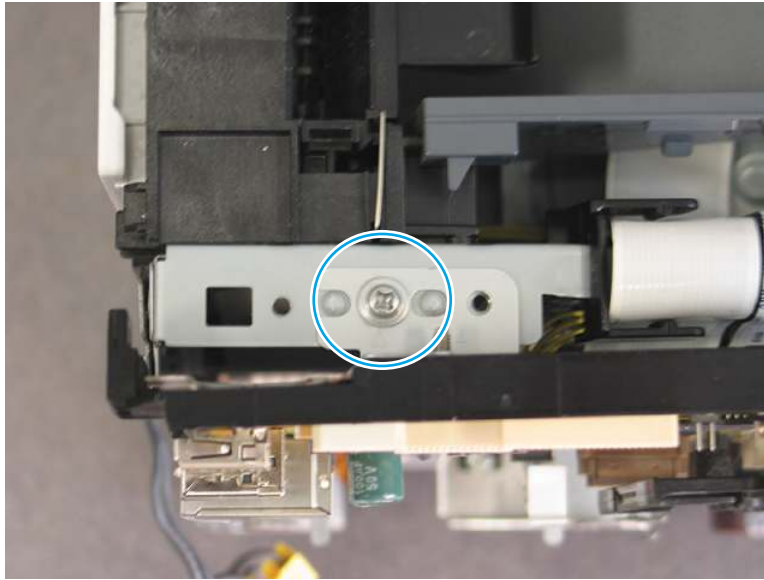
Figure 5-746 Remove two screws





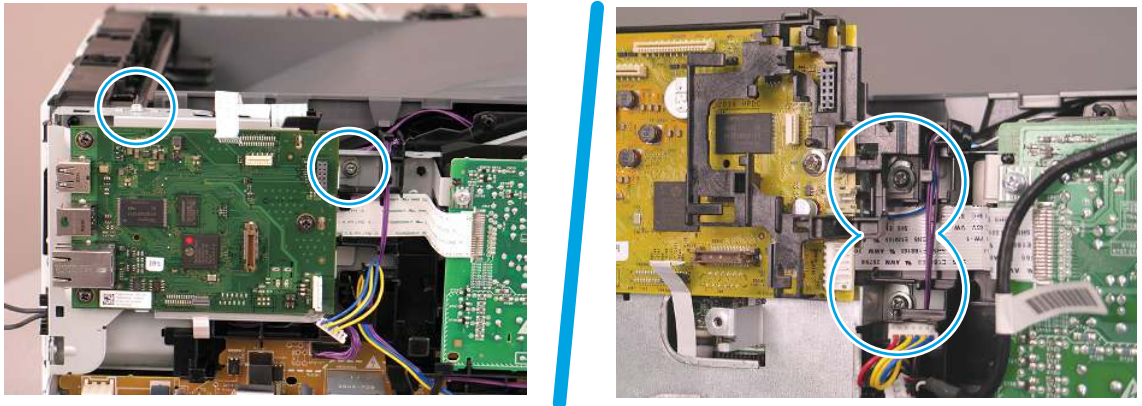
7. **MFP only:** Remove one screw.

**Figure 5-747** Remove one screw



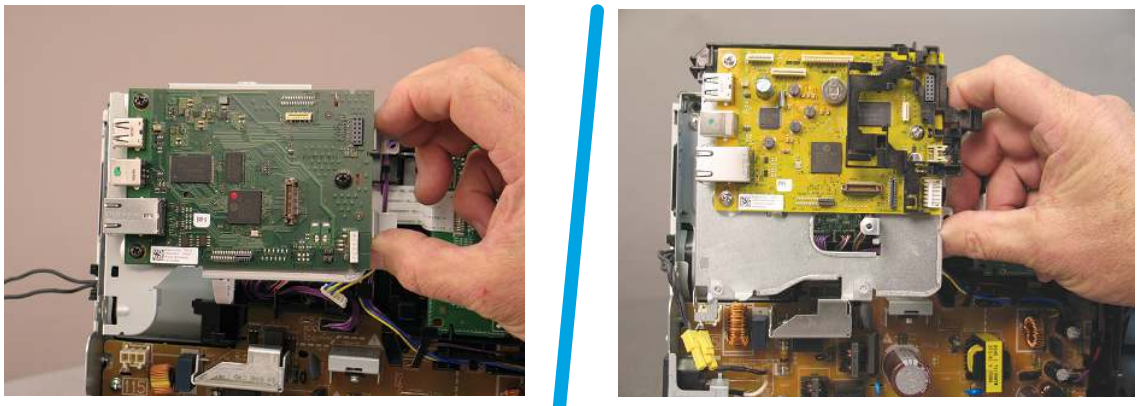
8. Support the formatter and bracket, and then remove two screws.

**Figure 5-748** Remove two screws



9. Remove the sheet-metal bracket and formatter PCA.

**Figure 5-749** Remove the bracket

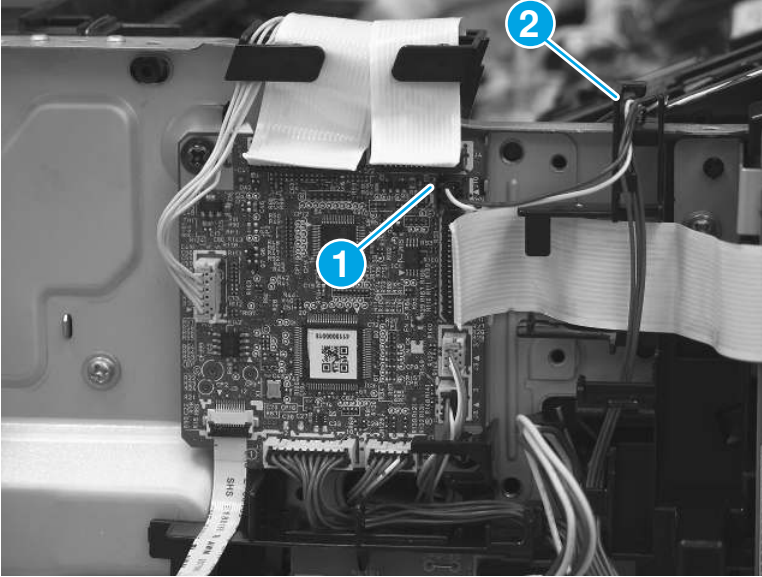


## 12. Remove the tag-cable assembly (toner-cartridge memory)

Follow these steps to remove the tag-cable assembly.

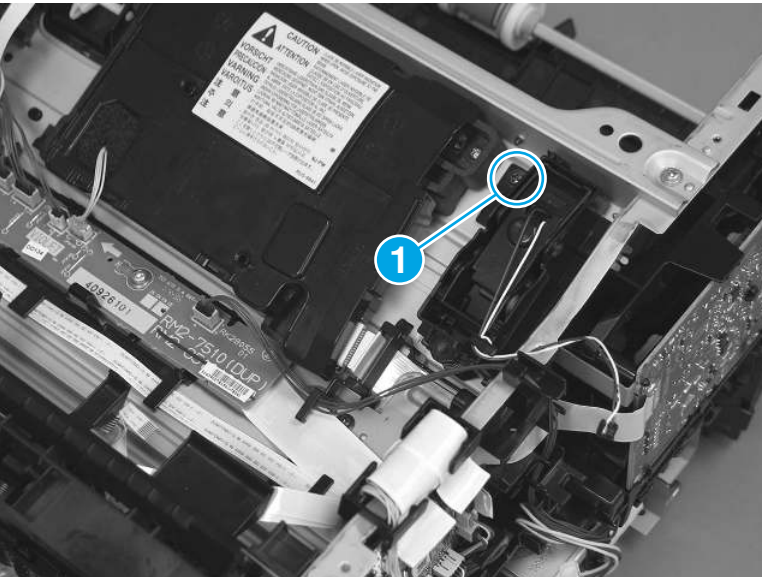
1. Disconnect one connector (callout 1), and then release the wire harness from the guide (callout 2).

**Figure 5-750** Disconnect one connector




2. Remove one screw (callout 1).

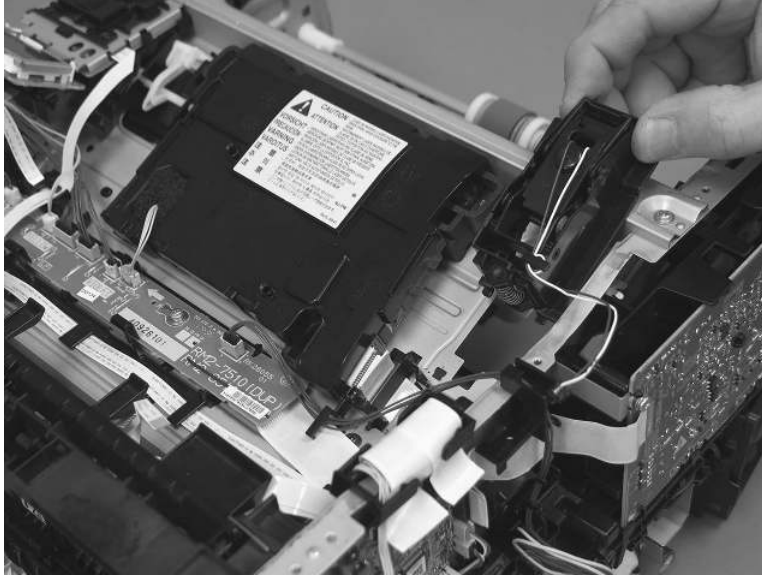
**Figure 5-751** Remove one screw



3. Remove the tag-cable assembly.

 **Reinstallation tip:** Make sure that the assembly is flat against the chassis. If the assembly is not correctly installed, it might not make proper contact with the toner cartridge.

**Figure 5-752 Remove the tag-cable assembly**



### 13. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### Removal and replacement: Connecting PCA

Learn how to remove and replace the connecting printed circuit assembly (PCA).

 [View a video of how to remove and replace the SFP connecting PCA.](#)

 [View a video of how to remove and replace the MFP connecting PCA.](#)


Mean time to repair: 22 minutes SFP, 44 minutes MFP

Service level: Medium SFP, Medium MFP

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-43** Part information

Part number	Part description
RM2-7510-000CN	Connecting PCA assembly (duplex)
RM2-8510-000CN	Connecting PCA assembly (simplex)

## Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length
- – Socket screwdriver 5.5 mm (.216 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.



- Pull the tray straight out of the printer to remove it.


**Figure 5-753** Remove the tray



## 2. Remove the cartridge door assembly


Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

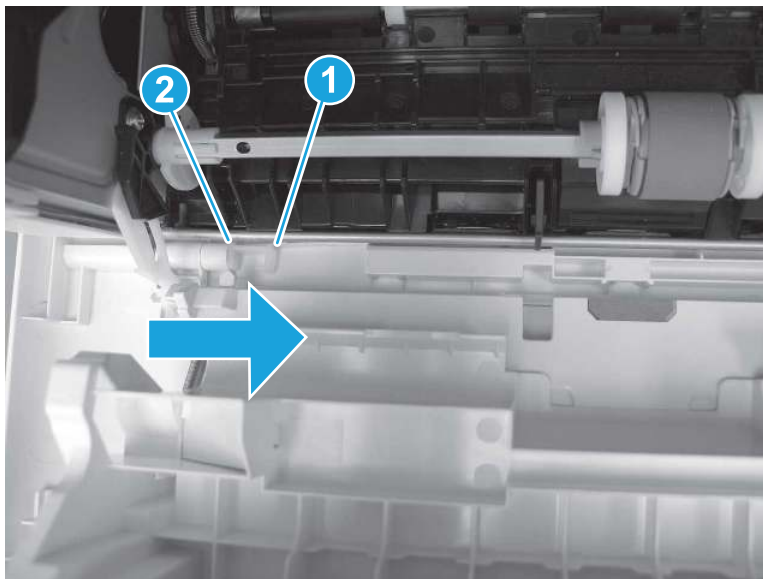
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

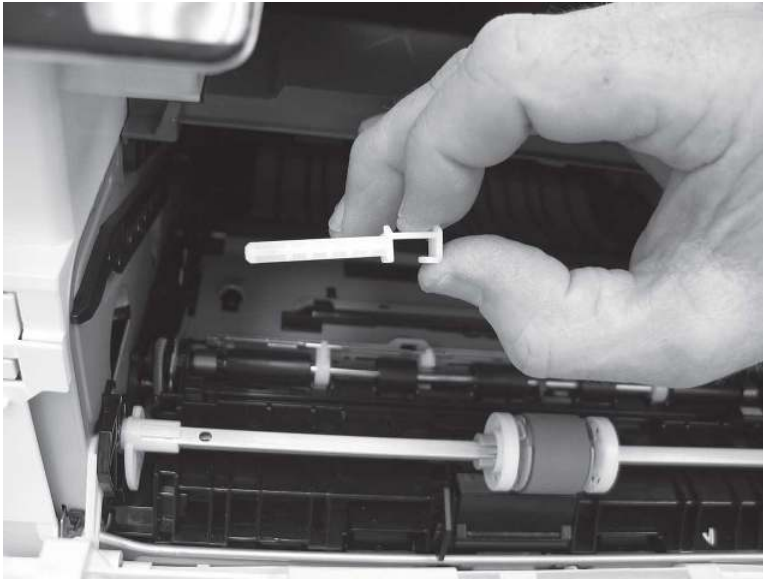
---

**Figure 5-754** Release the support shaft



2. Remove the support shaft.

**Figure 5-755** Remove the support shaft



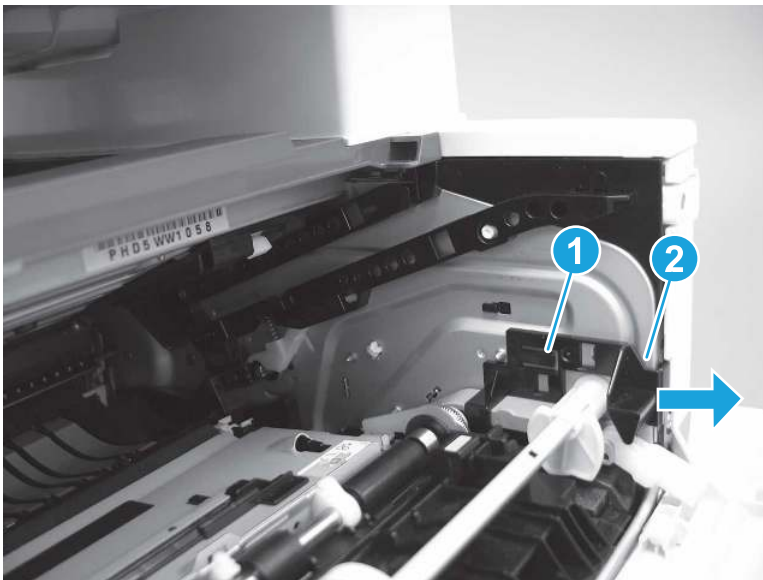
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

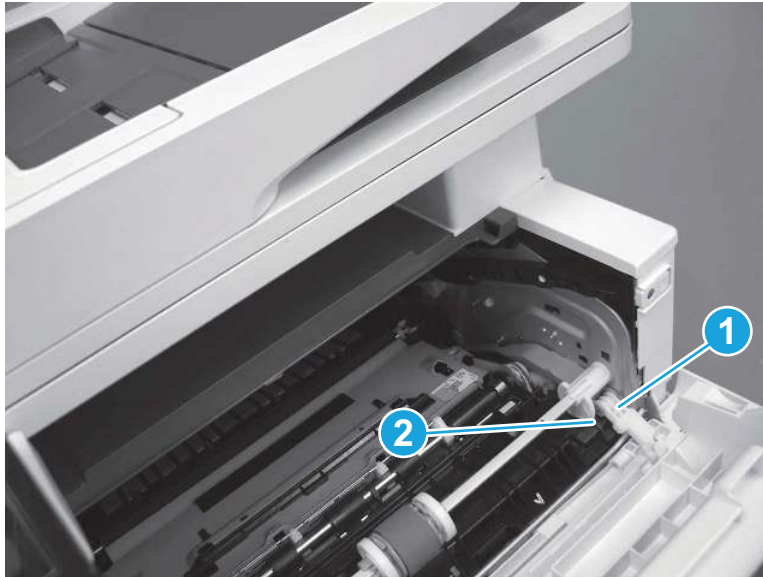
---

**Figure 5-756** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-757** Release the pressure-release link

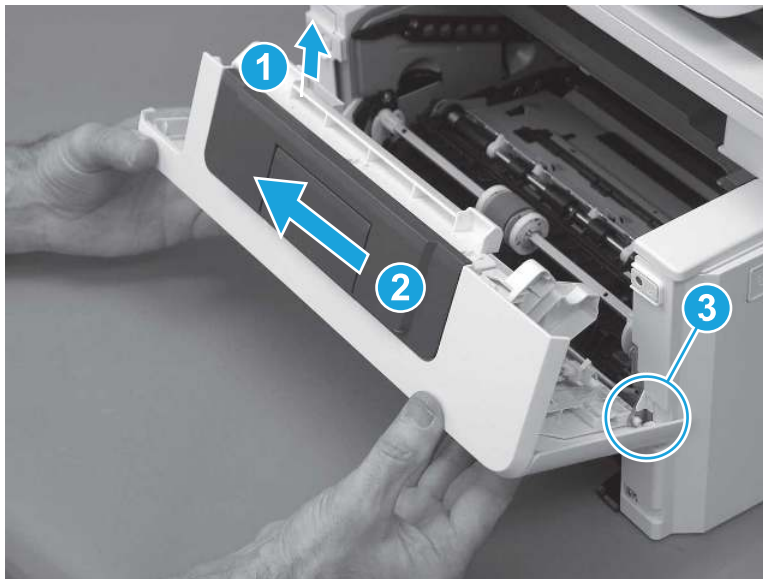


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

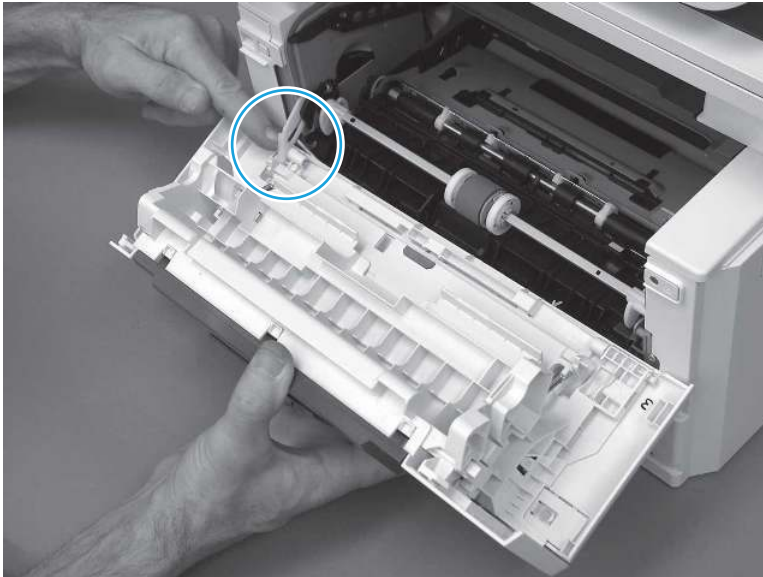
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-758** Release the door



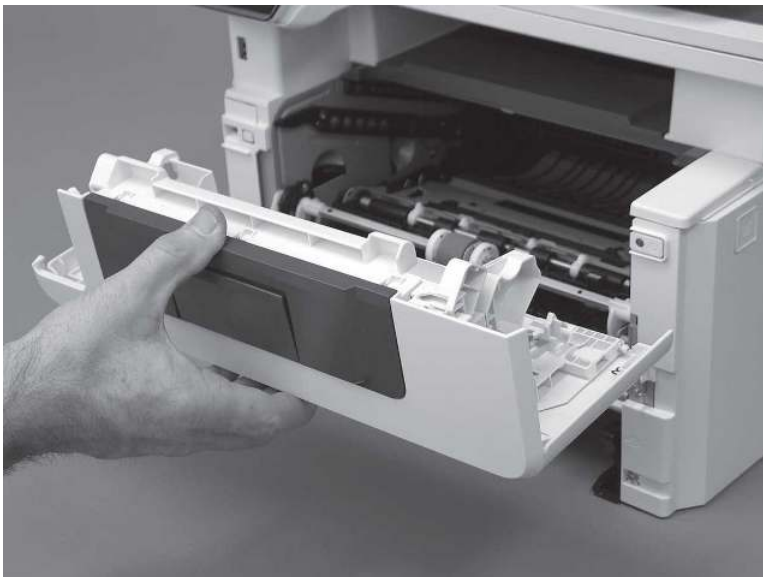
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-759** Release the left-side retainer arm



7. Remove the door.


**Figure 5-760** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

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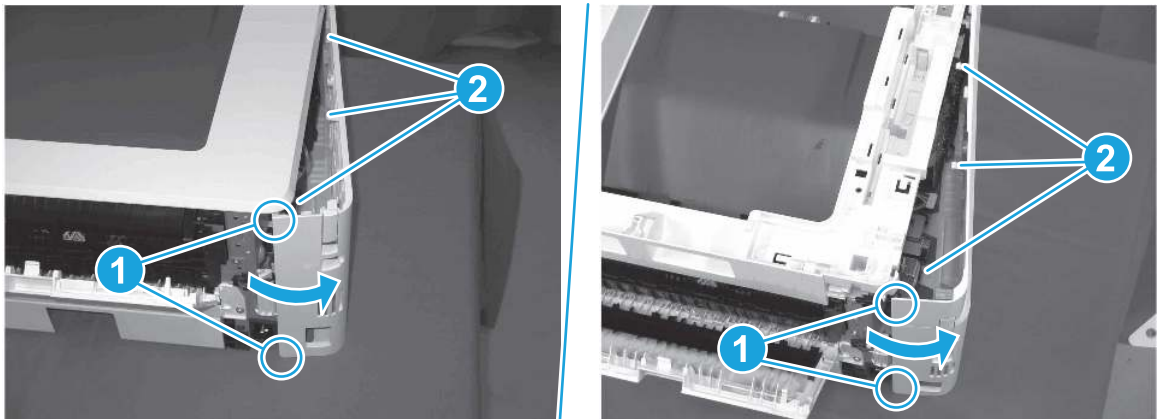
1. Remove one screw (callout 1).

**Figure 5-761 Remove one screw**



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-762 Release two bosses and three tabs**



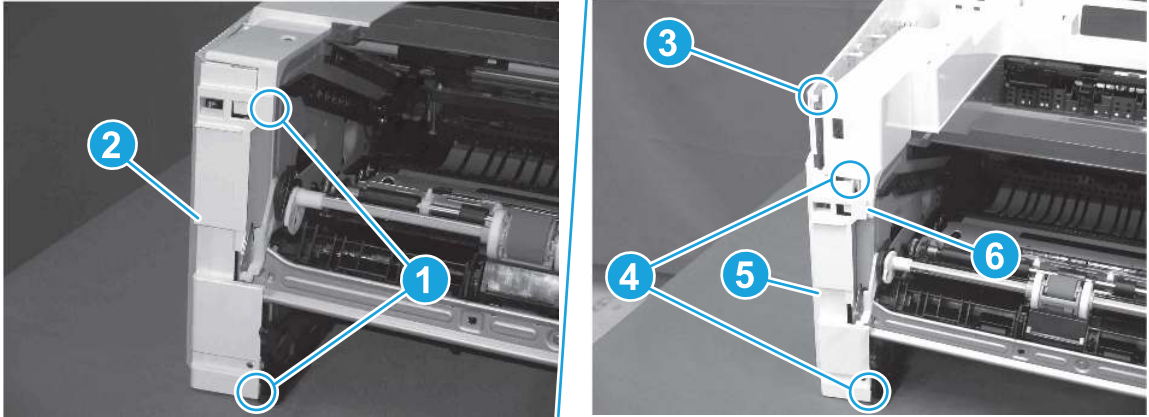
3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.



Figure 5-763 Remove the cover



#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).


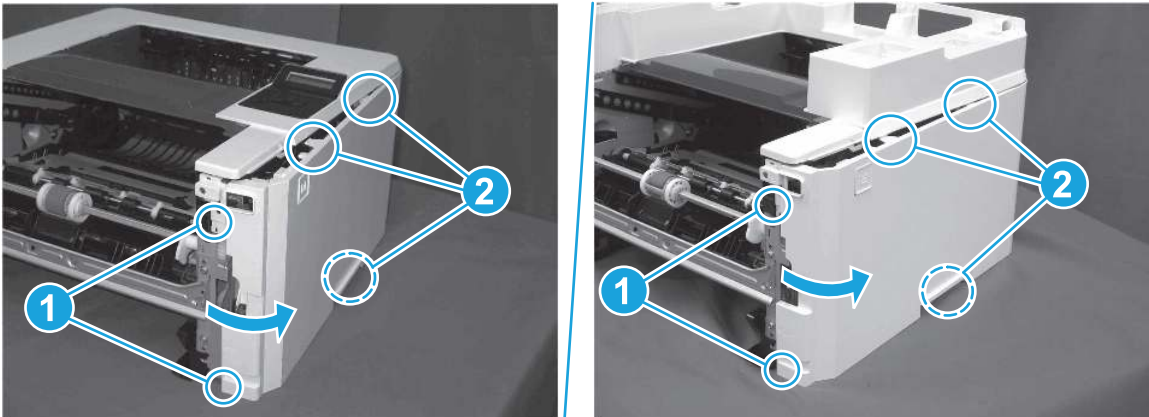
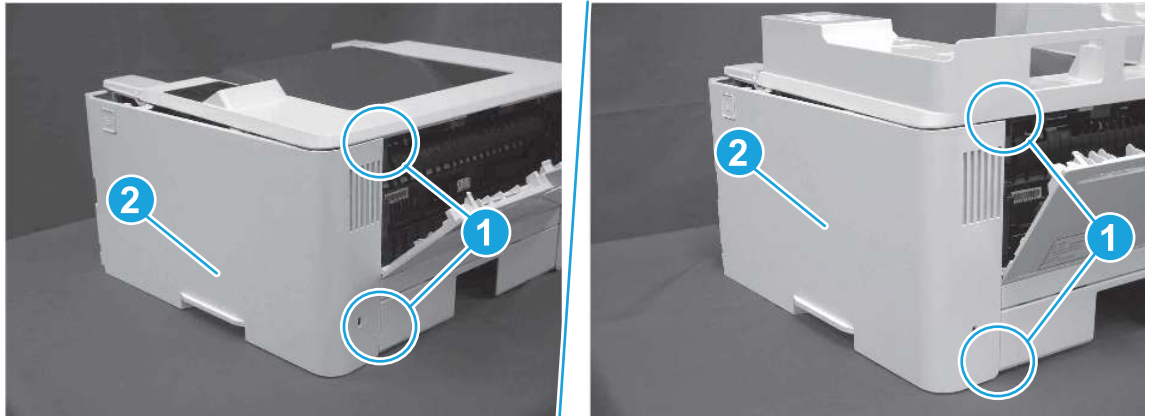
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-764 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-765 Remove the cover**

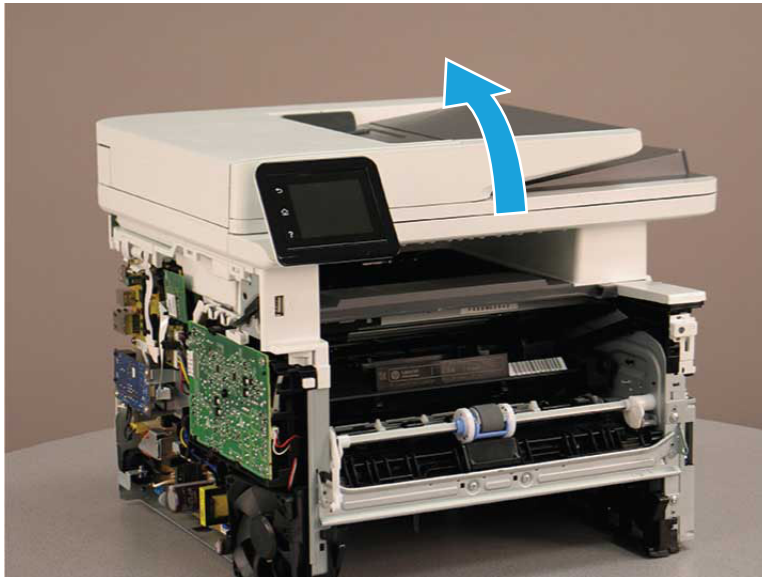


#### 5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

1. If the ISA is not already raised, raise it now.

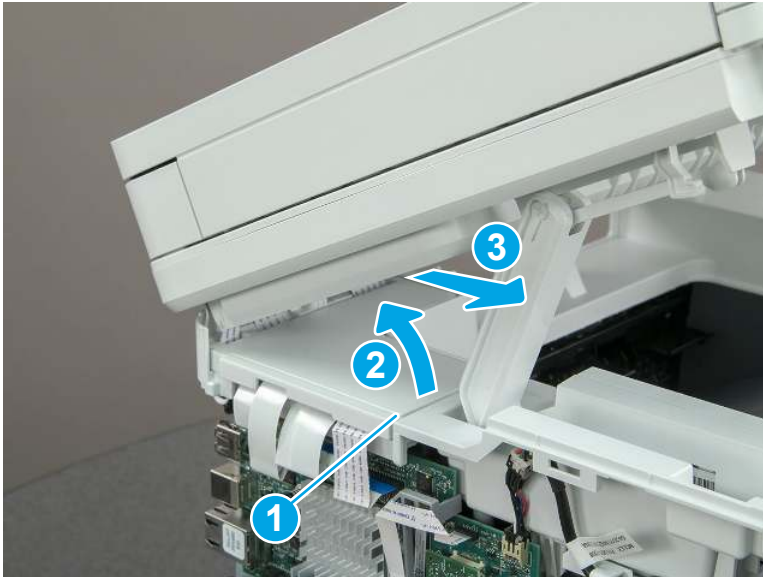
**Figure 5-766 Raise the ISA**






2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-767** Remove the ISA FFC cover




#### 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

**Figure 5-768** Disconnect three FFCs



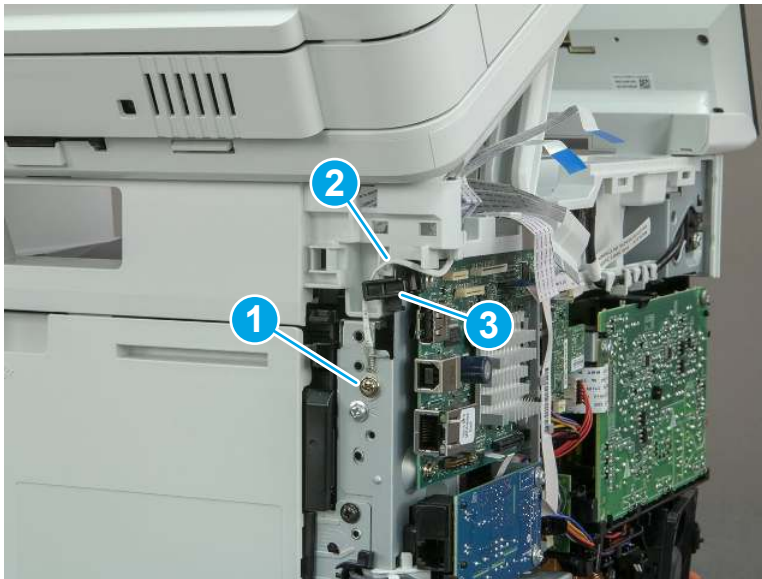
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-769** Release the tape



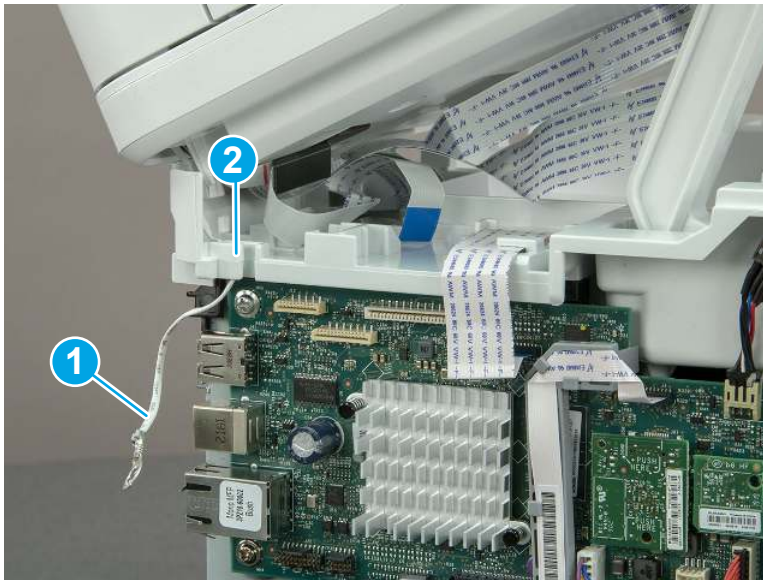
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-770** Release the ground wire



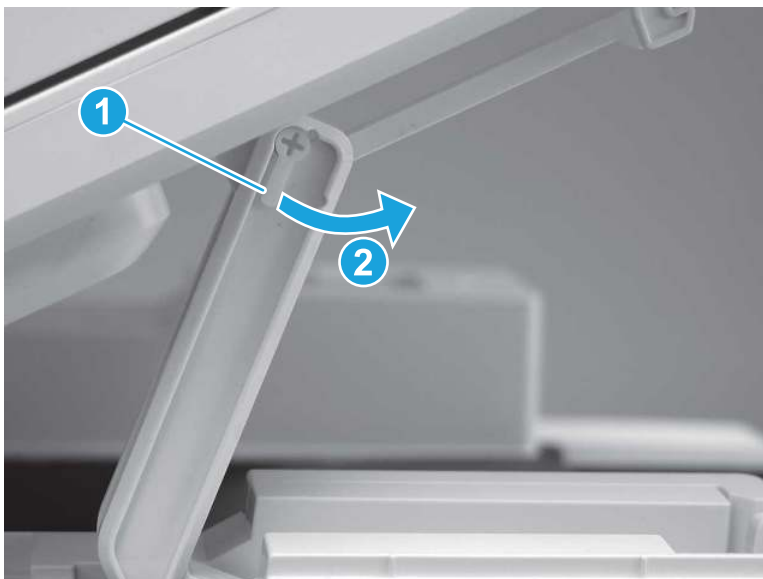
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-771** Release the ground wire



5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-772** Release one tab and rotate the slider pin



6. Remove the slider pin.



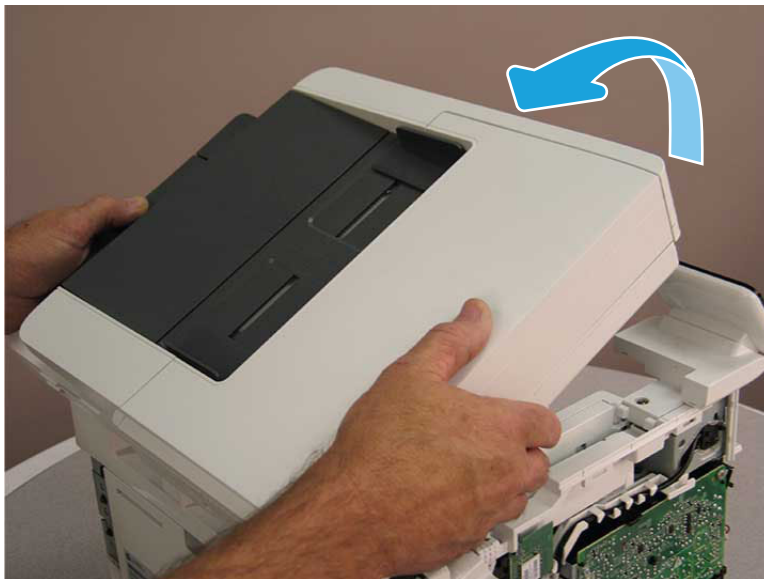
**Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

**Figure 5-773** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-774** Rotate the ISA towards the rear of the printer



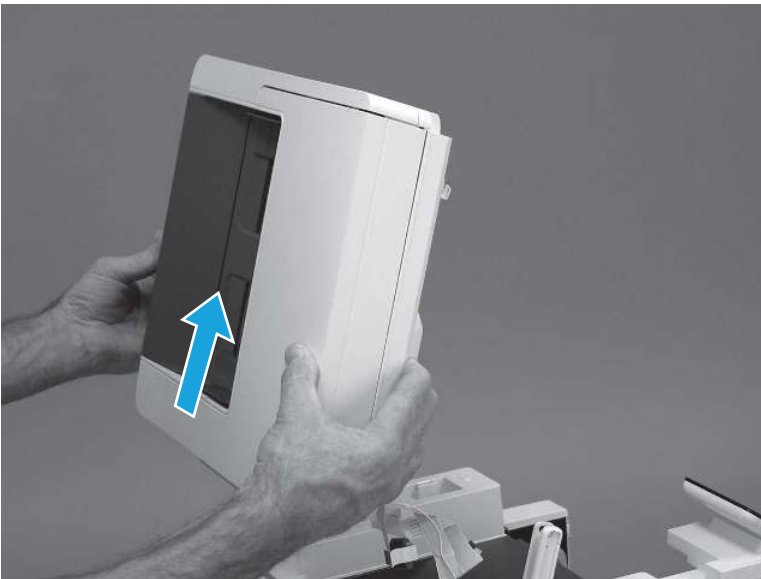
8. Slide the ISA as shown to release it.

**Figure 5-775** Release the ISA



9. Remove the ISA.

**Figure 5-776** Remove the ISA



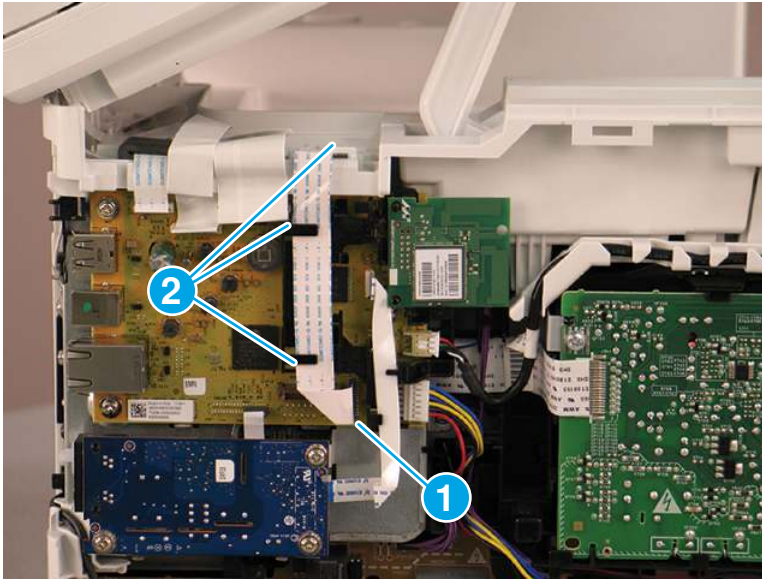
### 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).



1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-777 Disconnect one connector**



2. Remove one screw (callout 1).

**Figure 5-778 Remove one screw**



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-779** Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-780** Remove the cover





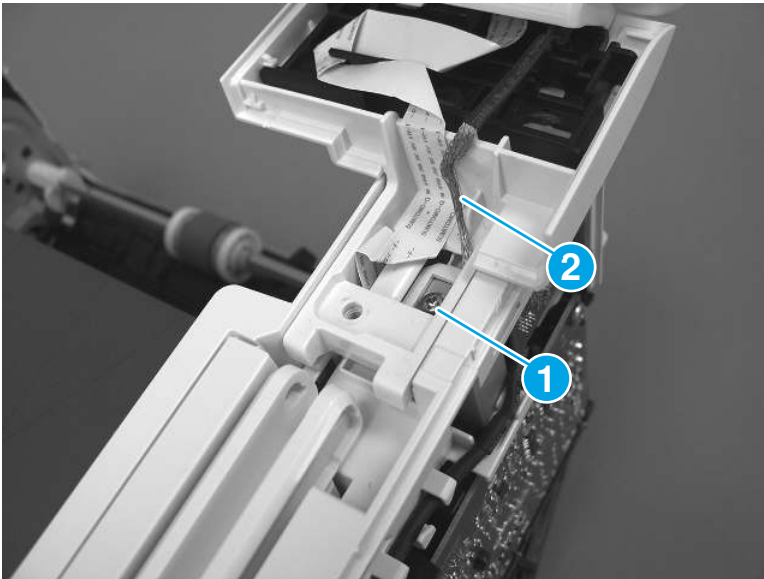
5. Remove the control-panel mount cover.

**Figure 5-781** Remove the cover



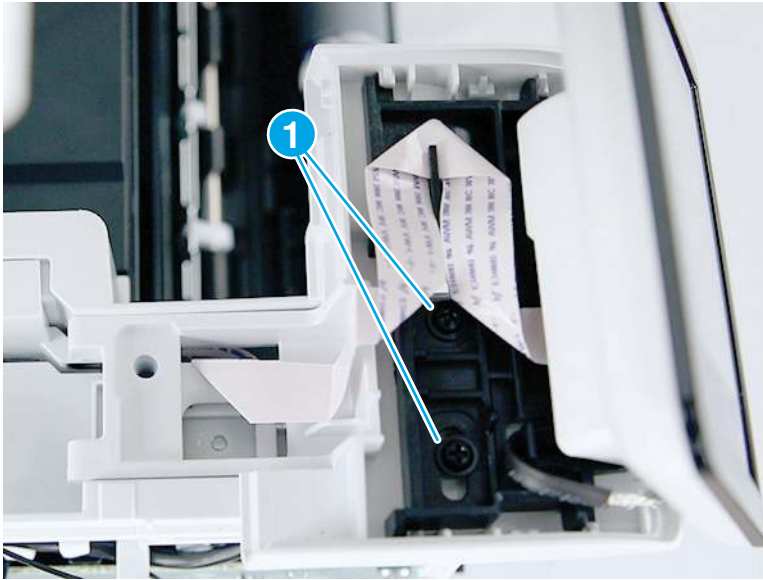
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-782** Remove one screw



7. Move the FFC out of the way, and then remove two screws (callout 1).

**Figure 5-783** Remove two screws



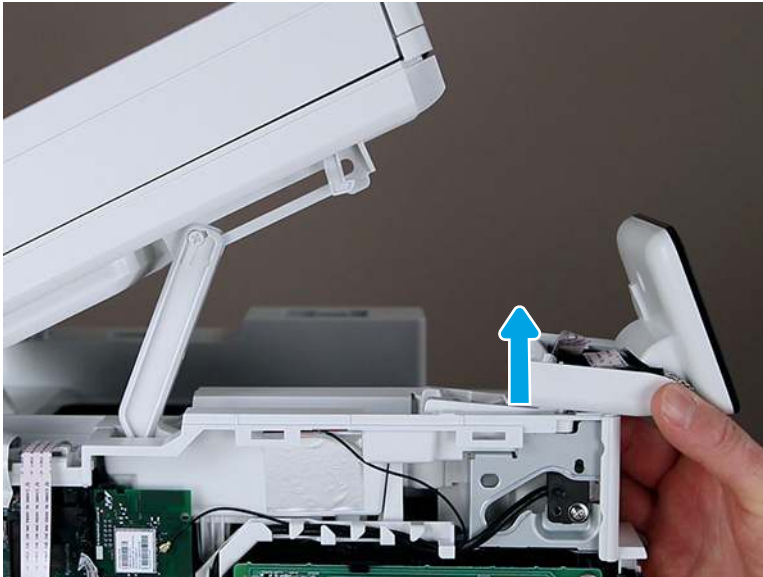
8. Slightly lift up the control-panel assembly to separate it from the top cover.

---

**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

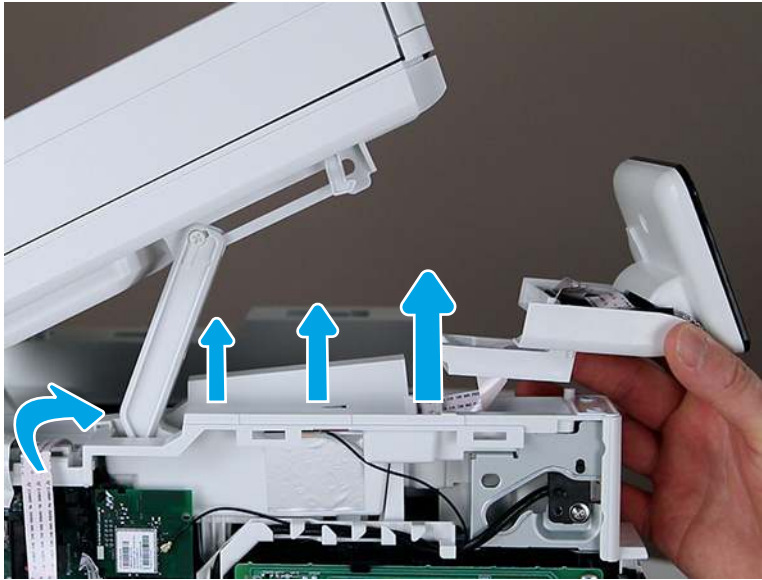
---

**Figure 5-784** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-785 Remove the control-panel assembly**

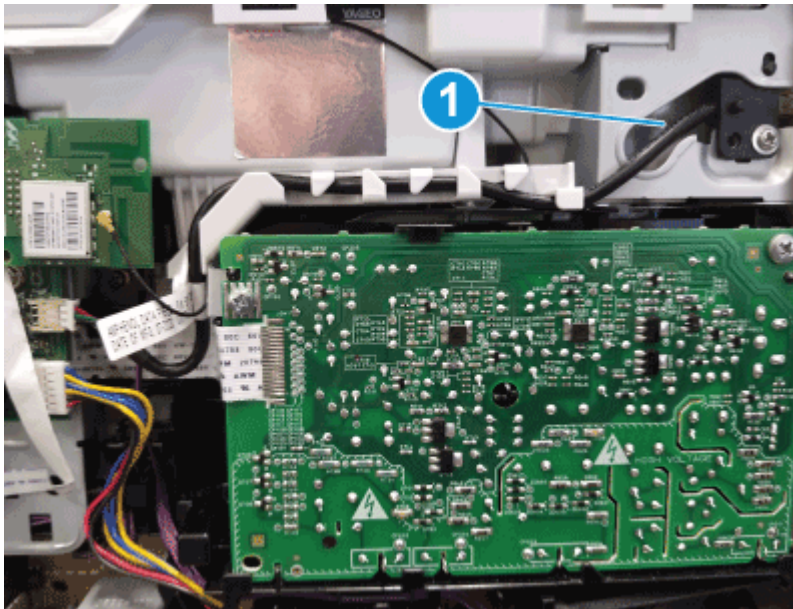


#### 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

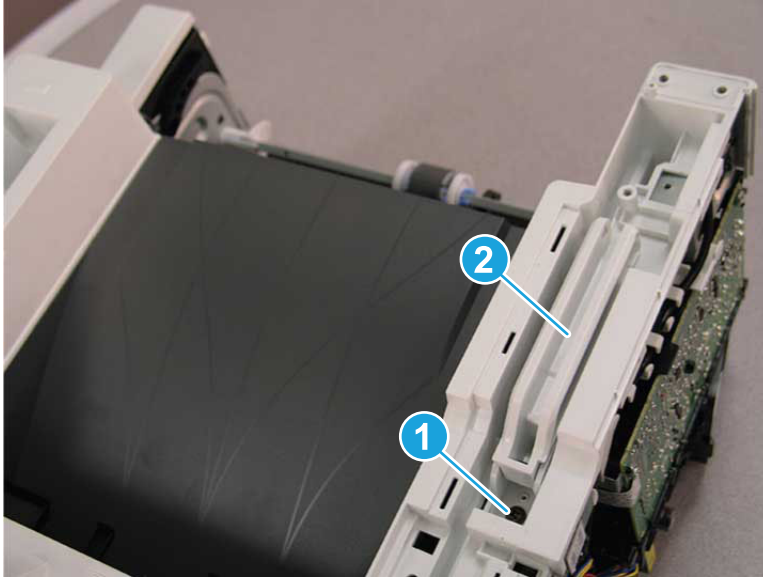
**Figure 5-786 Release the USB cable**



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

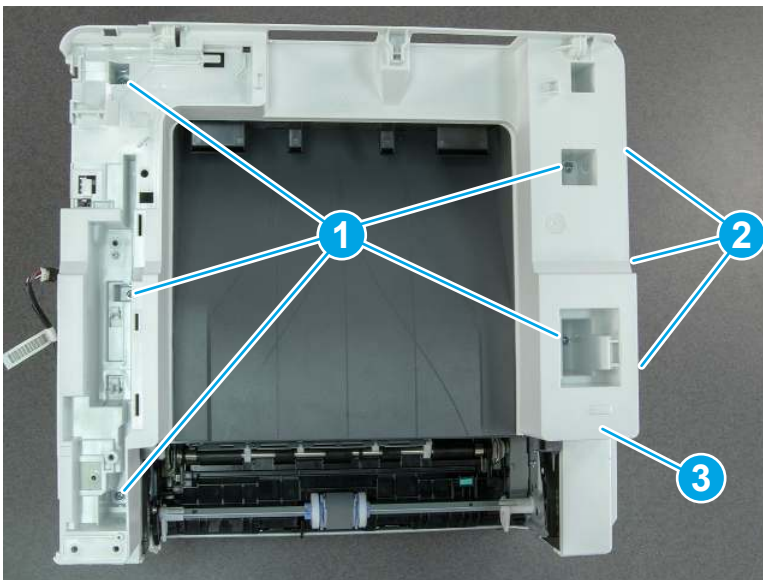
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-787** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-788** Remove the top cover



**9. Remove the top cover (SFP only)**

Follow these steps to remove the top cover (SFP only).

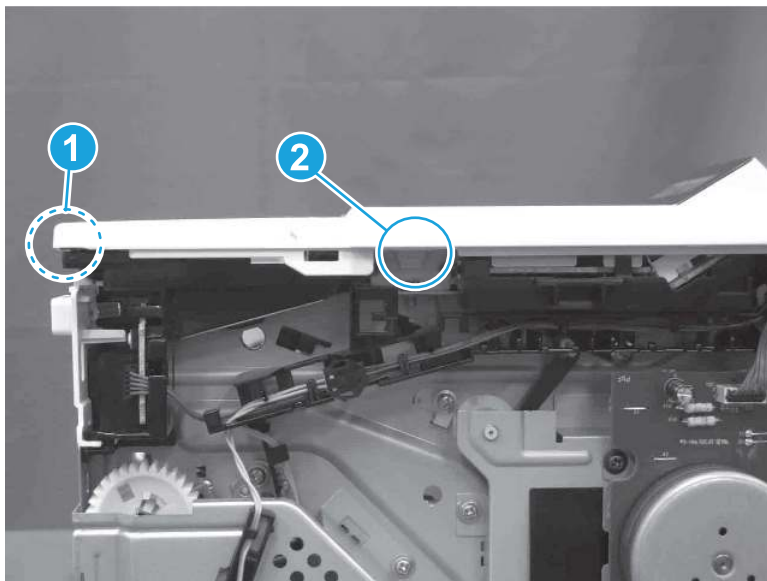
1. Remove one screw.

**Figure 5-789** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-790** Release one boss and one tab



3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

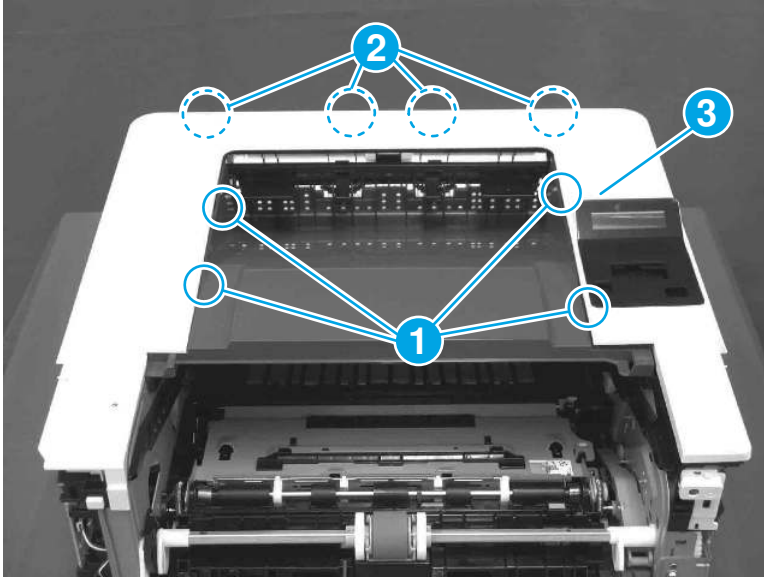
---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---



**Figure 5-791 Remove the cover**



**10. Remove the paper delivery tray (output bin)**

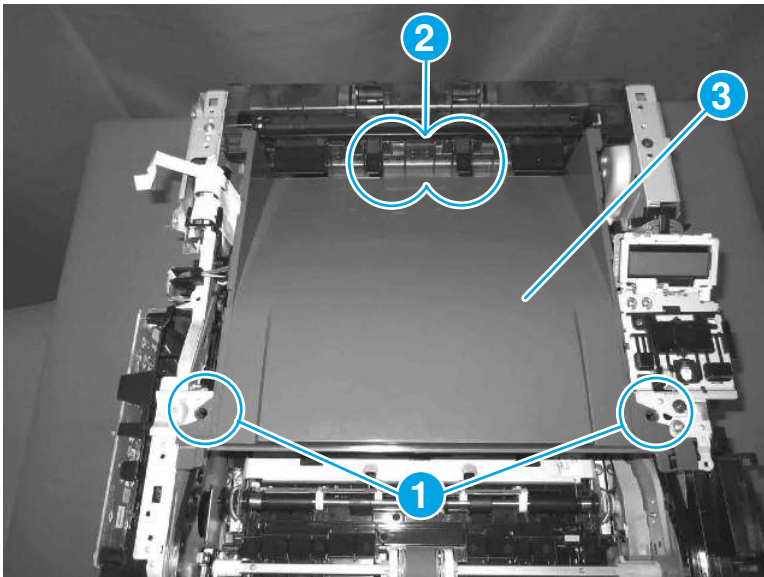
Follow these steps to remove the paper delivery tray (output bin).



**NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).

**Figure 5-792 Remove the cover**




**11. Remove the sheet-metal formatter bracket and formatter PCA**


Follow these steps to remove the formatter bracket.

1. Do one of the following:

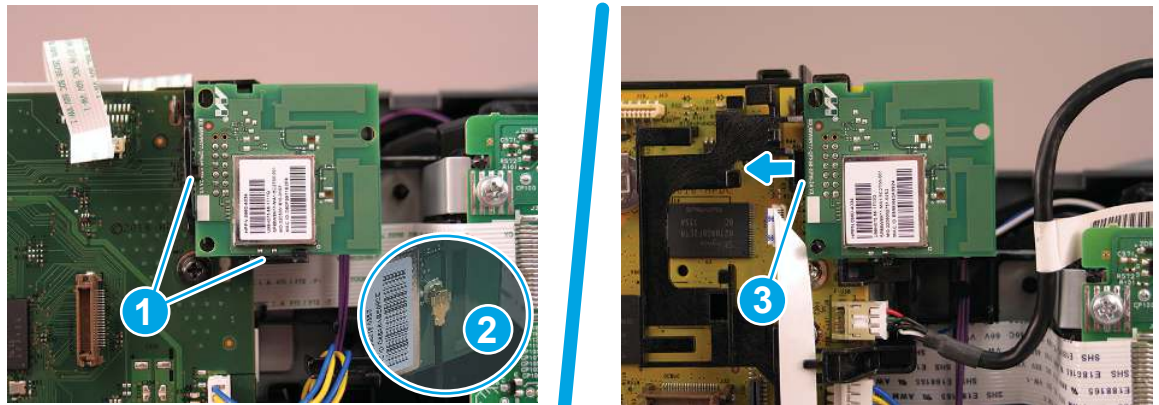
- **SFP only:** Release two tabs (callout 1), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **NOTE:** Disconnect the WiFi antenna (callout 2) before releasing the tabs.

- **MFP only:** Release one tab (callout 3), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **TIP:** Push the tab to the left to release it.

**Figure 5-793 Remove the wireless PCA**

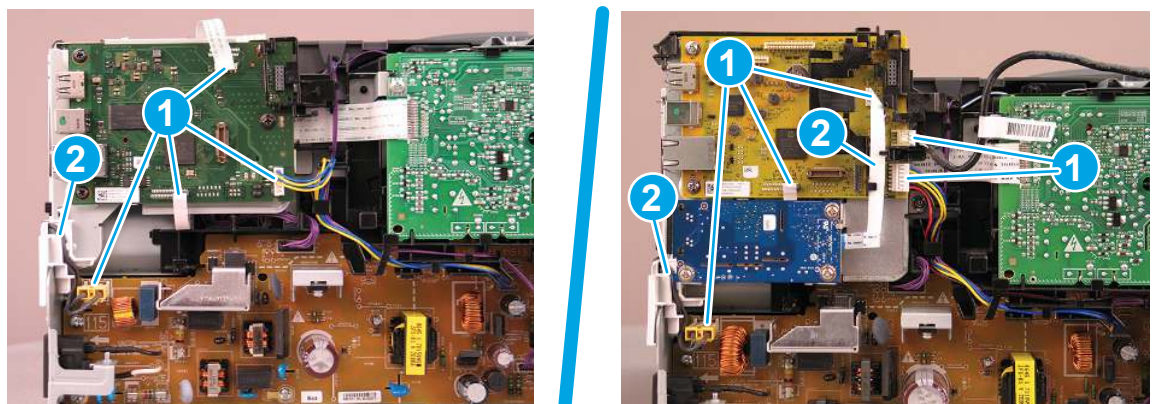


2. Do one of the following:

- **SFP only:** Disconnect the connectors (callout 1), and then release one wire harness (callout 2) from the guide.

- **MFP only:** Disconnect the connectors (callout 1), and then release one wire harness and one FFC (callout 2) from the guides.

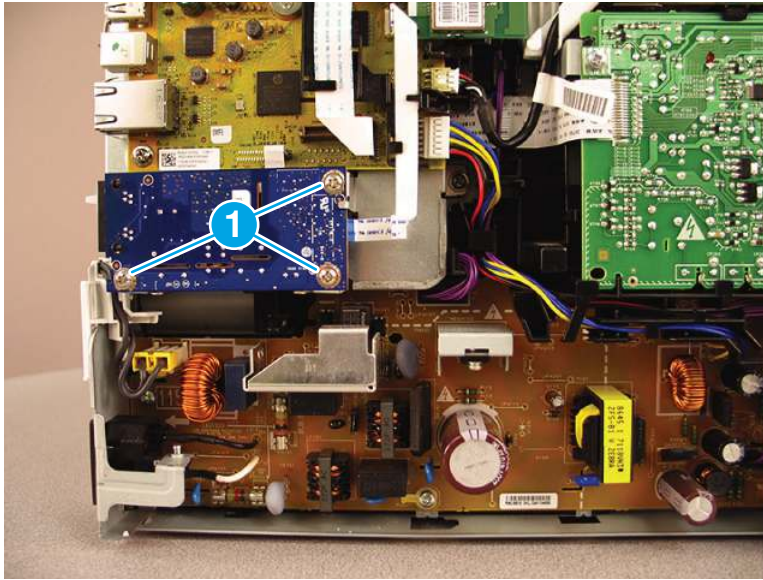
**Figure 5-794 Disconnect the connectors**





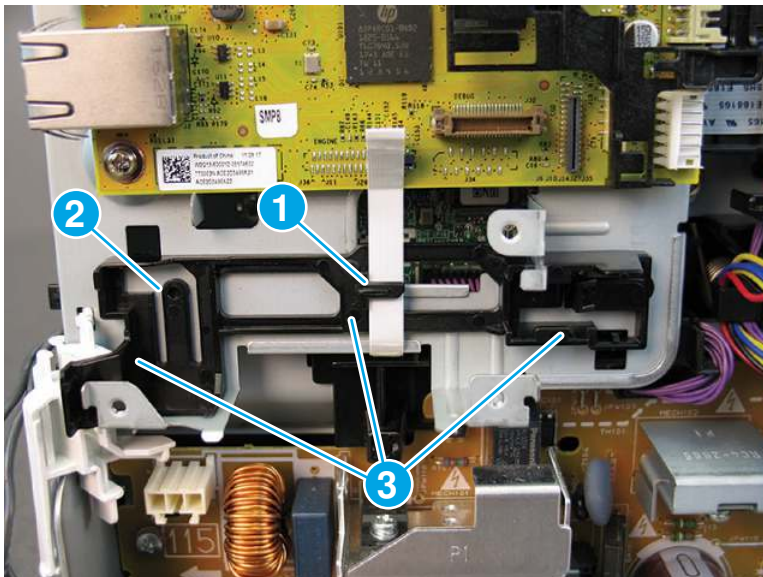
3. **MFP fax models only:** Remove three screws (callout 1), and then remove the fax PCA.

**Figure 5-795** Remove the fax PCA



4. **MFP only:** Release the FFC from the guide (callout 1), release one tab (callout 2), and then remove the FFC guide (callout 3).

**Figure 5-796** Remove the FFC guide

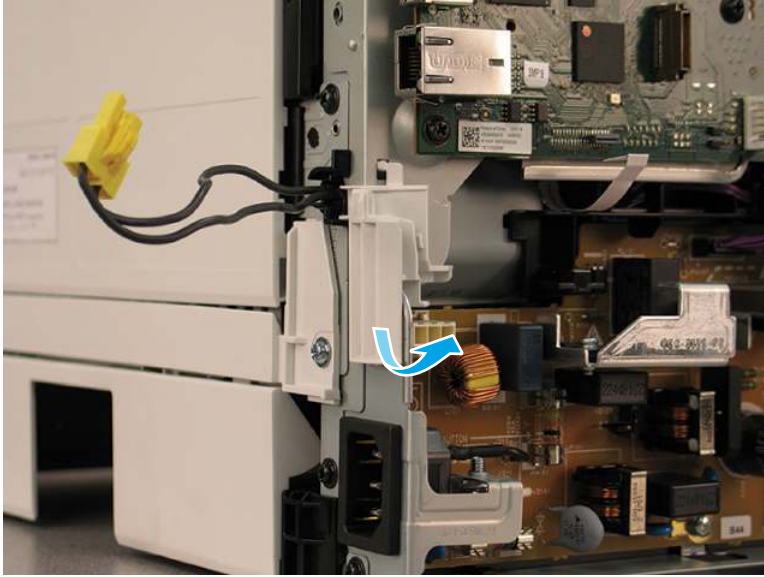


5. Remove one guide.



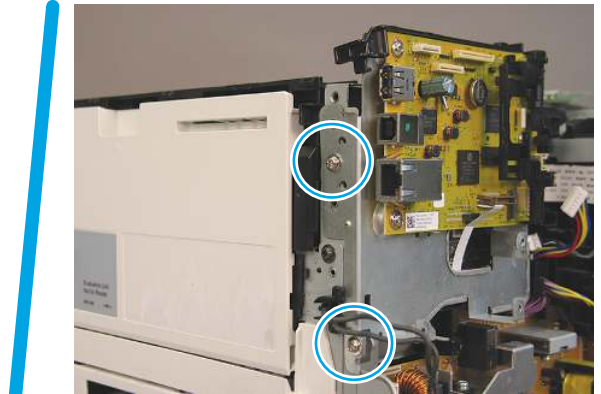
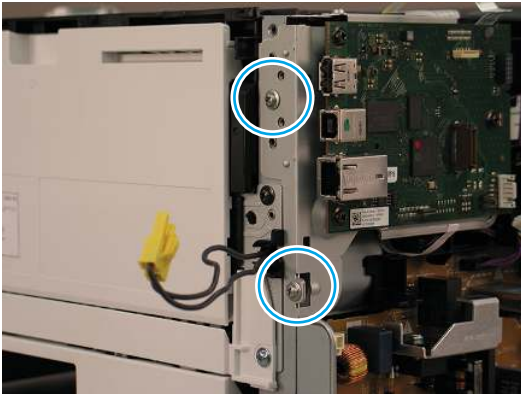
**NOTE:** A SFP printer is shown in the figure. However, the guide is identical for an MFP printer

Figure 5-797 Remove the guide



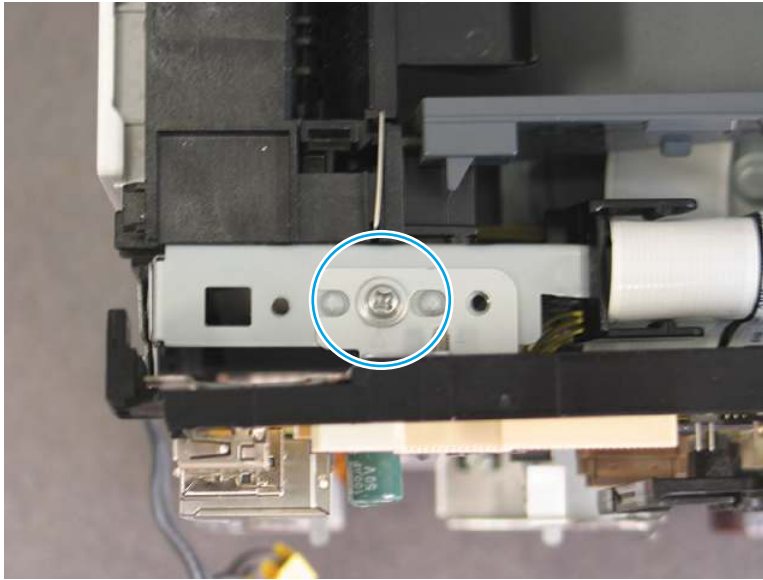
6. Remove two screws.

Figure 5-798 Remove two screws



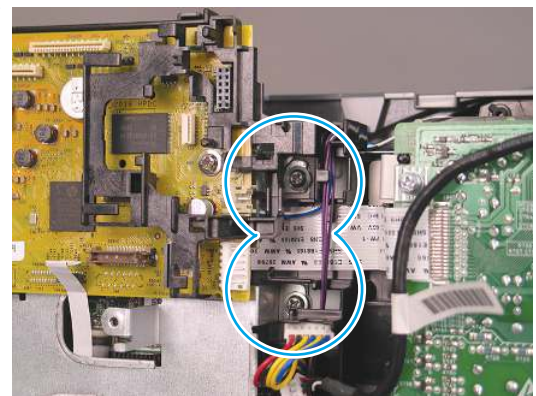
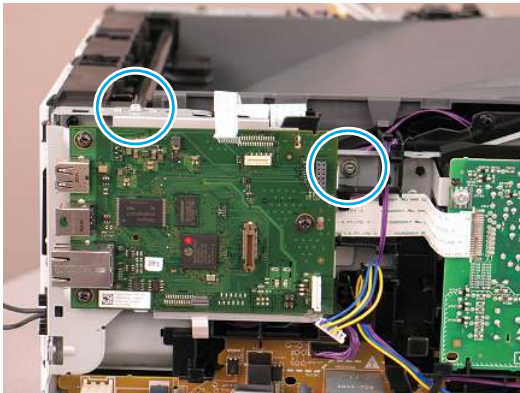
7. **MFP only:** Remove one screw.

**Figure 5-799** Remove one screw



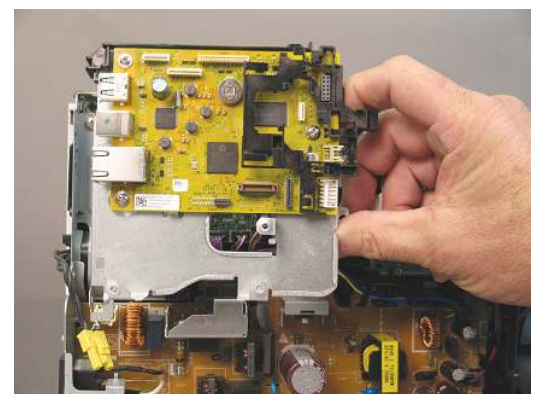
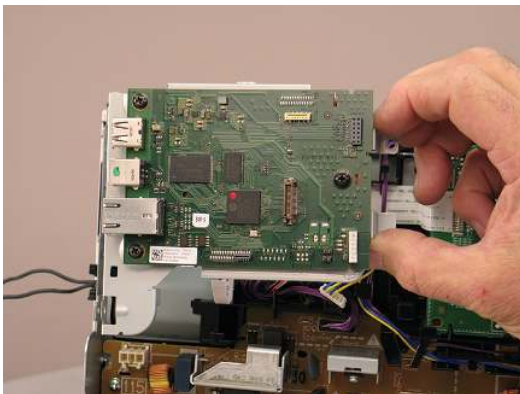
8. Support the formatter and bracket, and then remove two screws.

**Figure 5-800** Remove two screws



9. Remove the sheet-metal bracket and formatter PCA.

**Figure 5-801** Remove the bracket



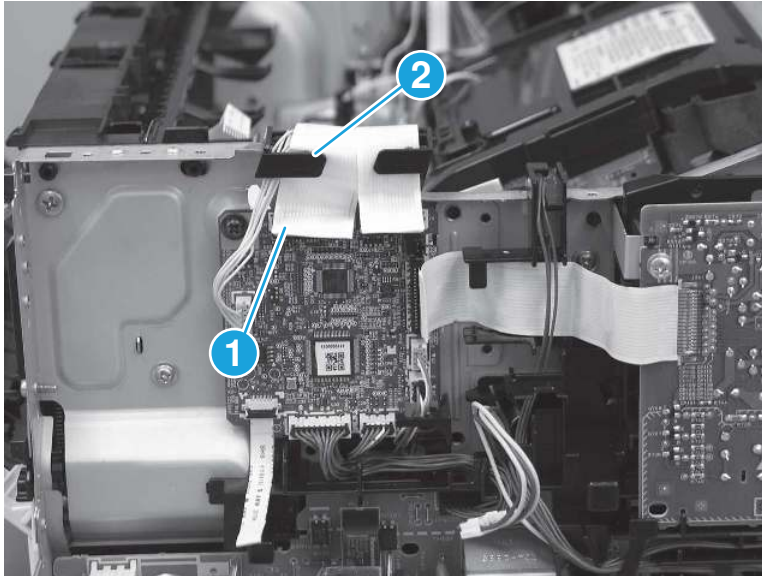


## 12. Remove the connecting PCA


Follow these steps to remove the connecting PCA.

1. Disconnect one FFC (callout 1) from the DC controller, and then release it from the guide (callout 2).

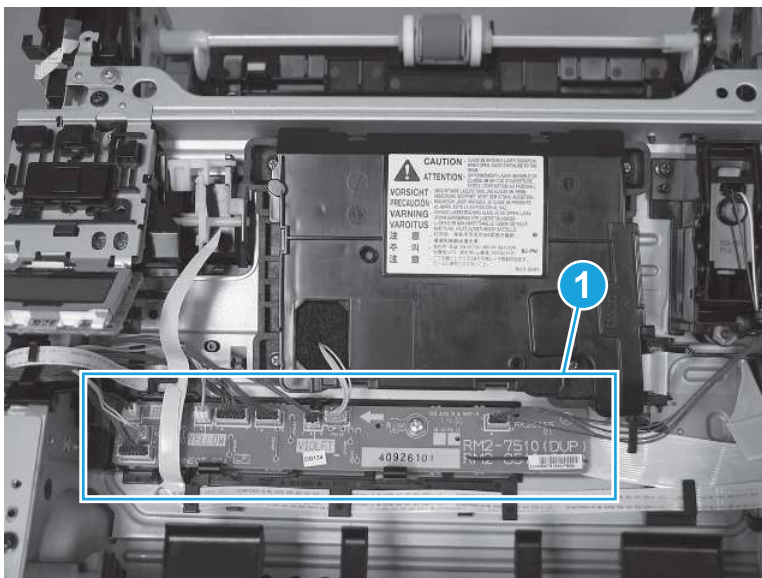
**Figure 5-802** Disconnect one FFC



2. Disconnect nine connectors (callout 1).

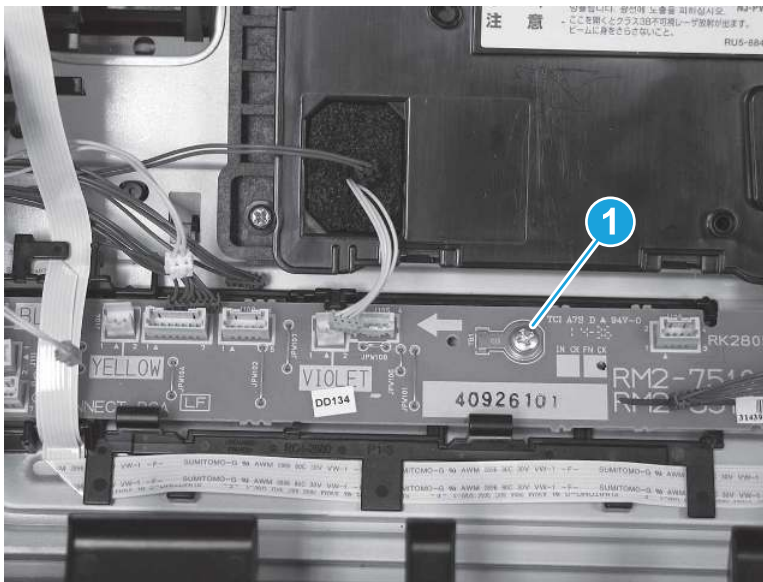
 **TIP:** Some of these connectors might be easier to disconnect if the wire harnesses are removed from the guides.

**Figure 5-803** Disconnect nine connectors



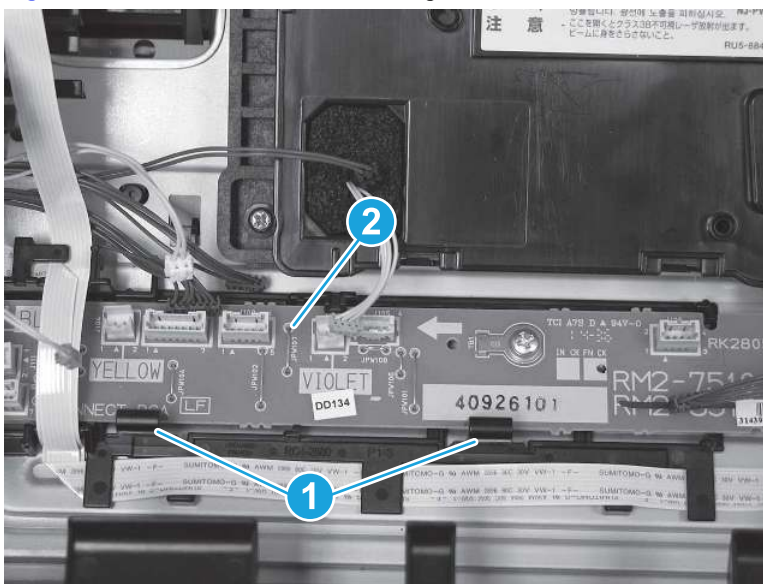
3. Remove one screw (callout 1).

**Figure 5-804 Remove one screw**



4. Release two holders (callout 1), and then remove the connecting PCA (callout 2).

**Figure 5-805 Remove the connecting PCA**



### 13. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.



1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>


2. Unpack the replacement part from the packaging.

 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Laser scanner FFC

Learn how to remove and replace the laser scanner flat-flexible cable (FFC).



[View a video of how to remove and replace the SFP laser scanner FFC.](#)



[View a video of how to remove and replace the MFP laser scanner FFC.](#)


Mean time to repair: 19 minutes SFP, 41 minutes MFP

Service level: Medium SFP, Medium MFP

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-44** Part information

Part number	Part description
RK2-9901-000CN	Cable, flat flexible, laser

### Required tools

- Small flat-blade screwdriver

- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length
- – Socket screwdriver 5.5 mm (.216 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-806 Remove the tray**



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.




**NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).



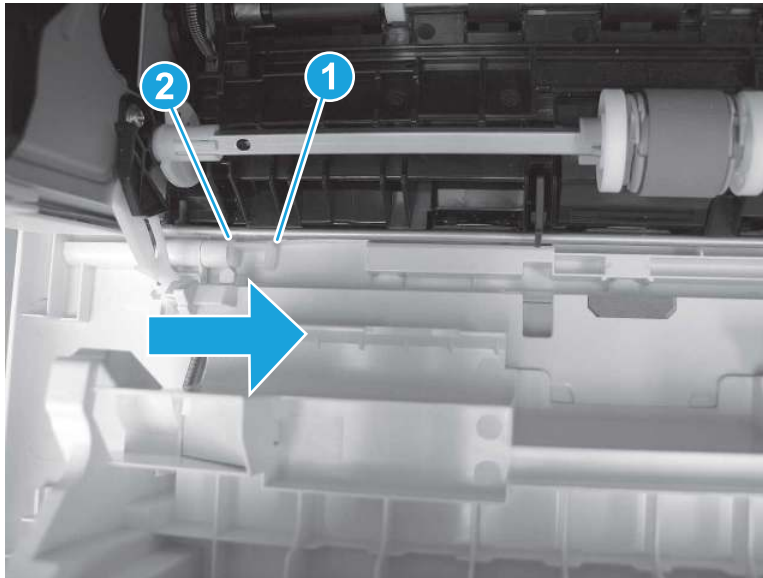
**TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.



 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

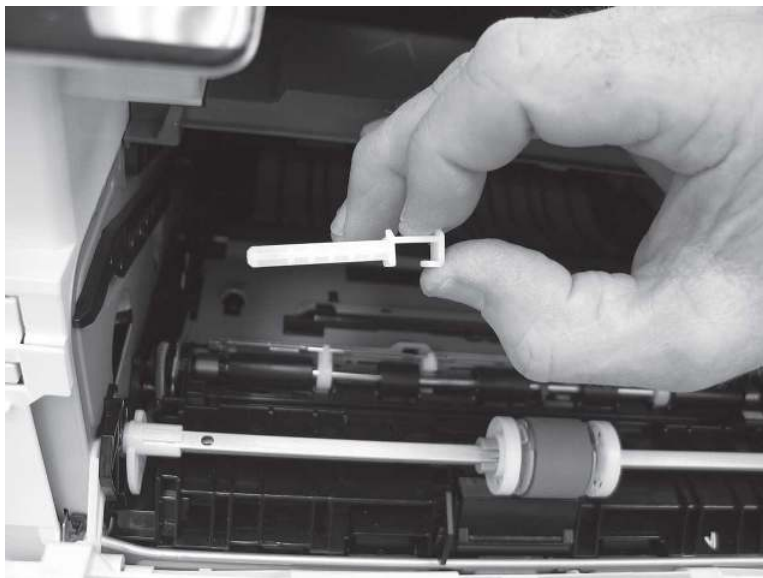
---

**Figure 5-807** Release the support shaft




2. Remove the support shaft.

**Figure 5-808** Remove the support shaft

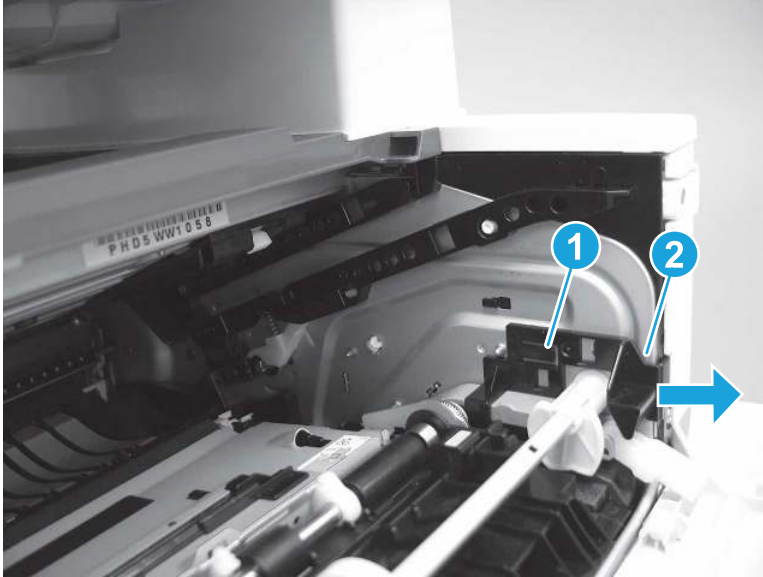


3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

 **CAUTION:** Be careful, the tab (callout 1) can be easily broken.

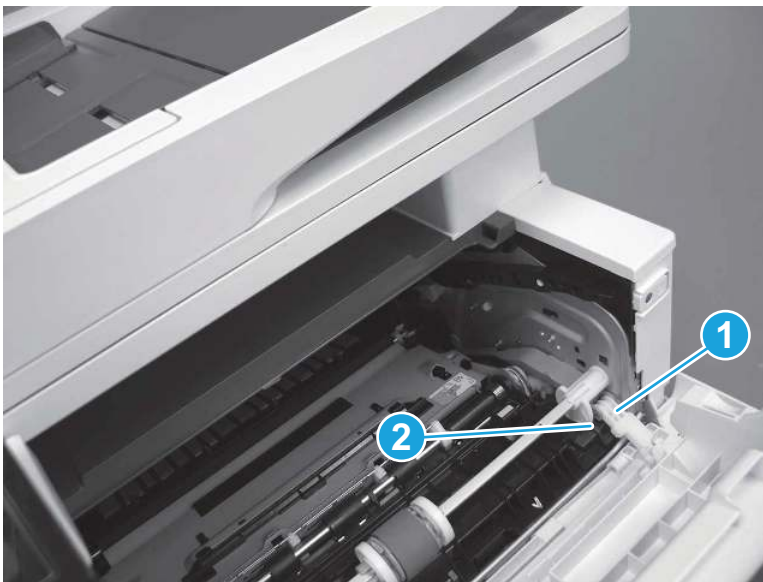
---

**Figure 5-809** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-810** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

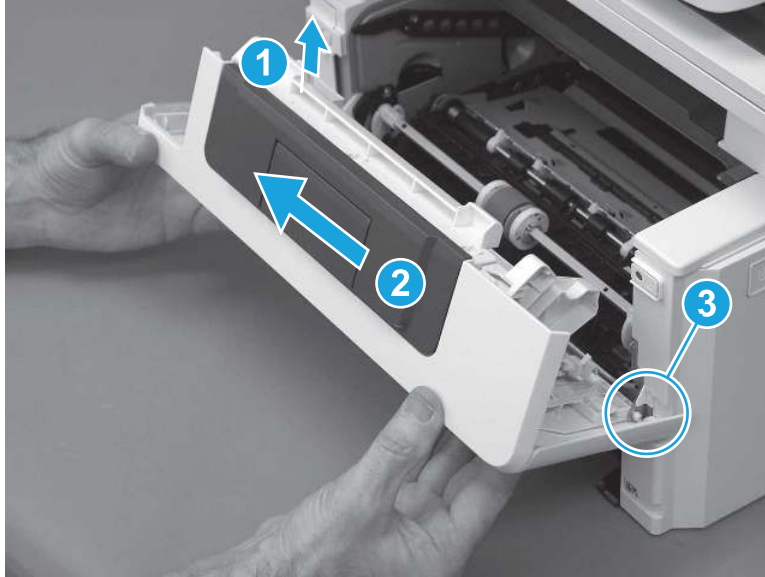
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

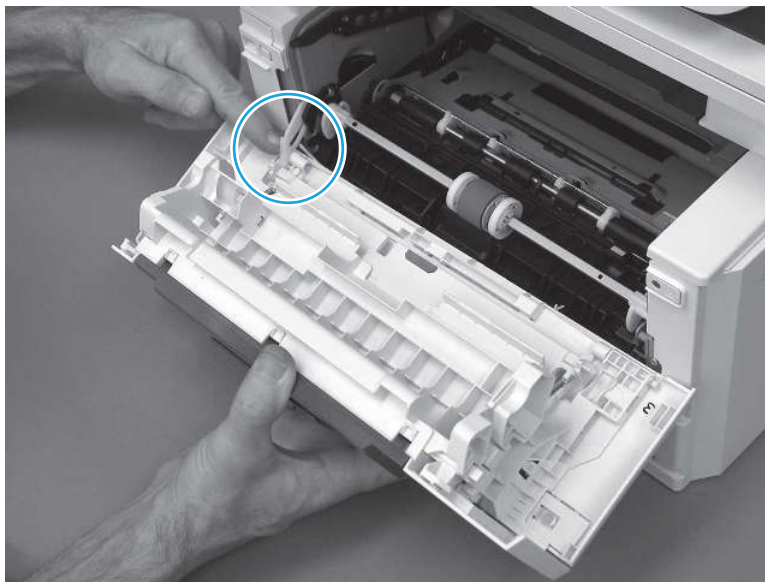
---

**Figure 5-811** Release the door



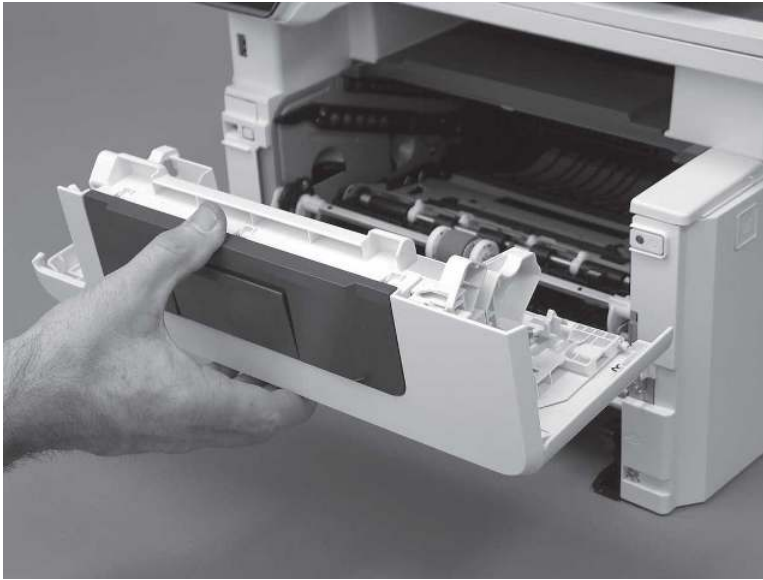
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-812** Release the left-side retainer arm



7. Remove the door.


**Figure 5-813** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

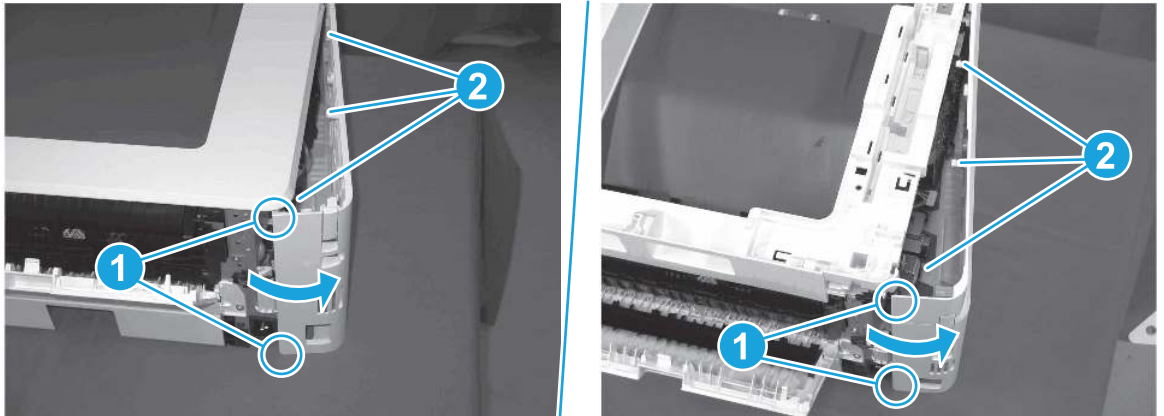
1. Remove one screw (callout 1).

**Figure 5-814** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

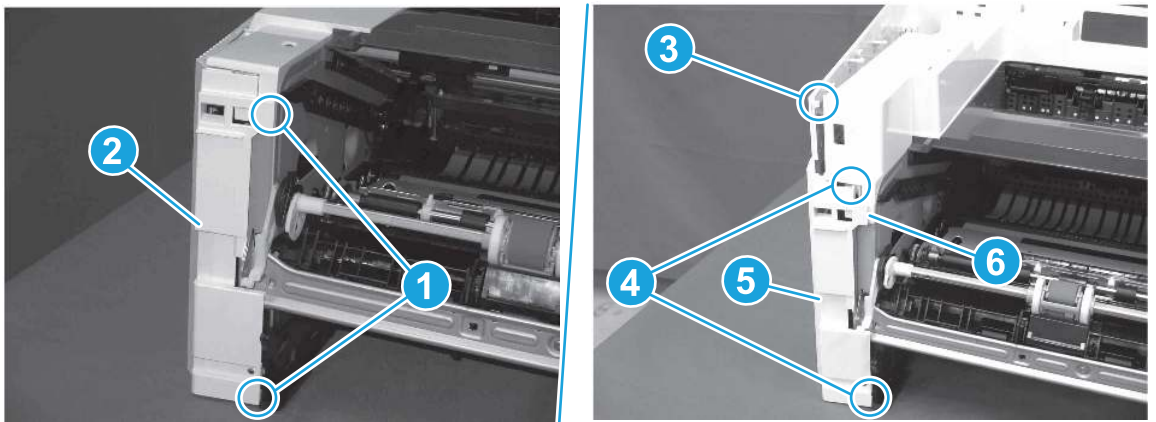
**Figure 5-815 Release two bosses and three tabs**



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-816 Remove the cover**



#### 4. Remove the right cover

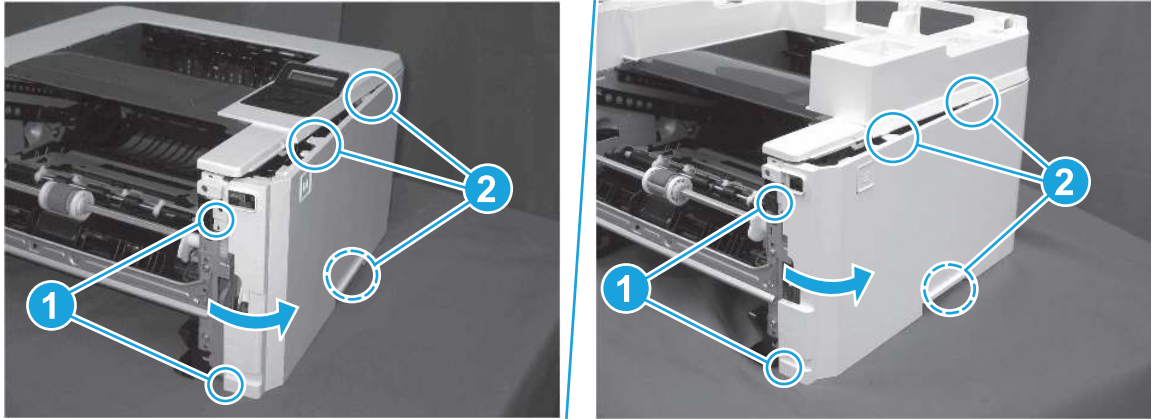
Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

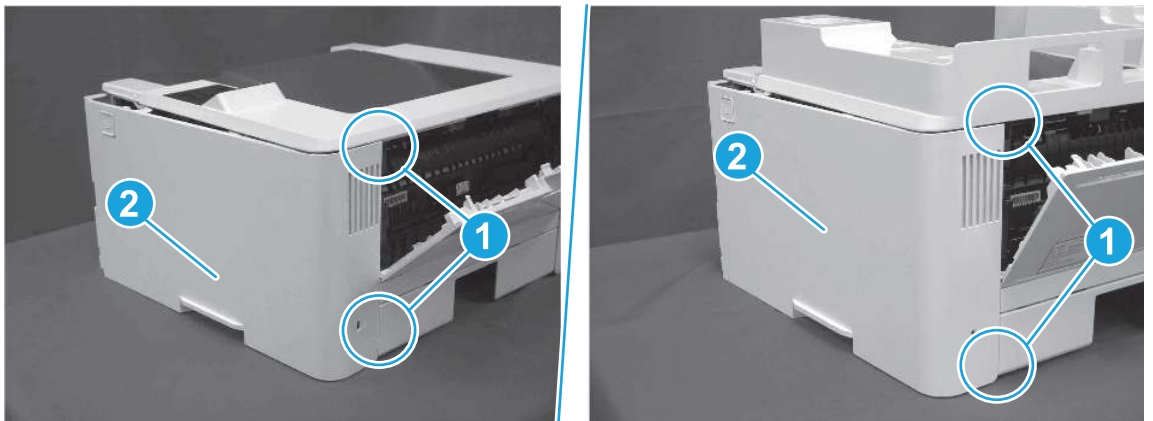


**Figure 5-817** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-818** Remove the cover

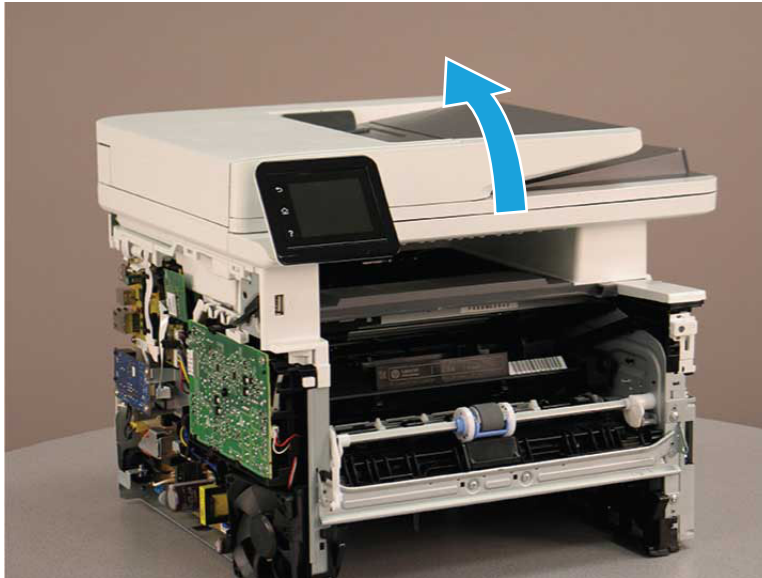


**5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)**

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

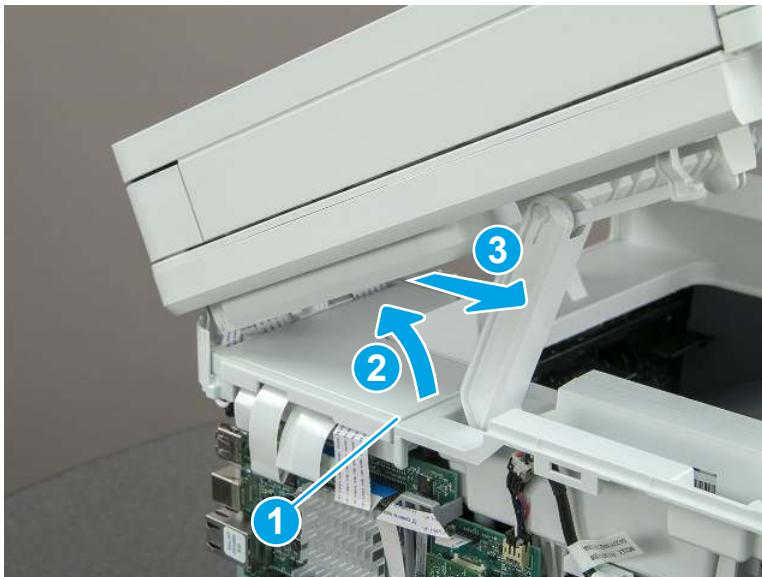
1. If the ISA is not already raised, raise it now.

**Figure 5-819 Raise the ISA**




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-820 Remove the ISA FFC cover**




## 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

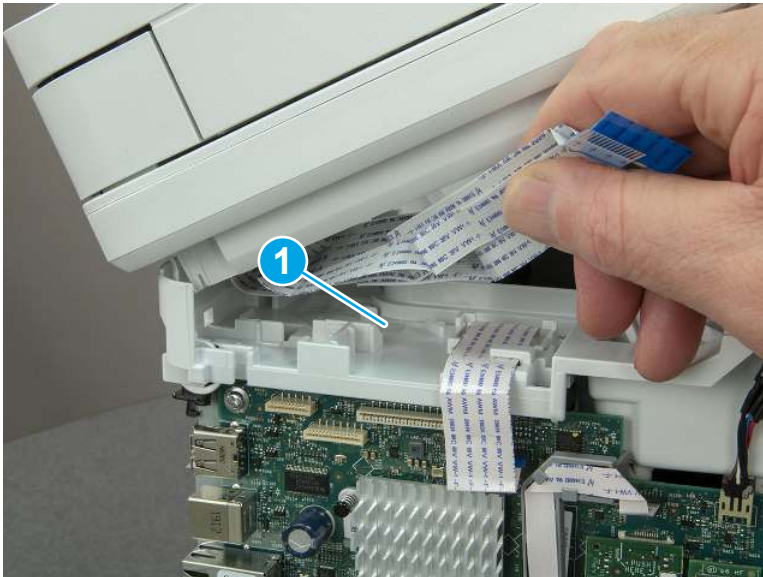


**Figure 5-821** Disconnect three FFCs



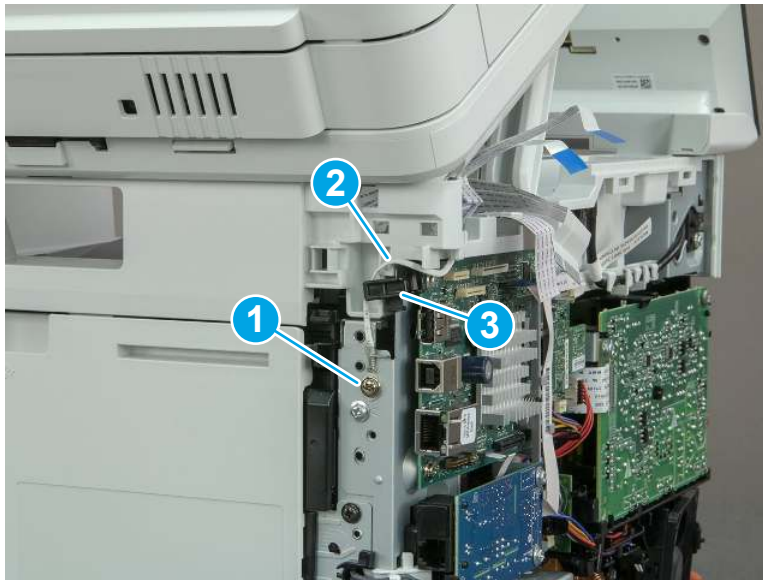
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-822** Release the tape



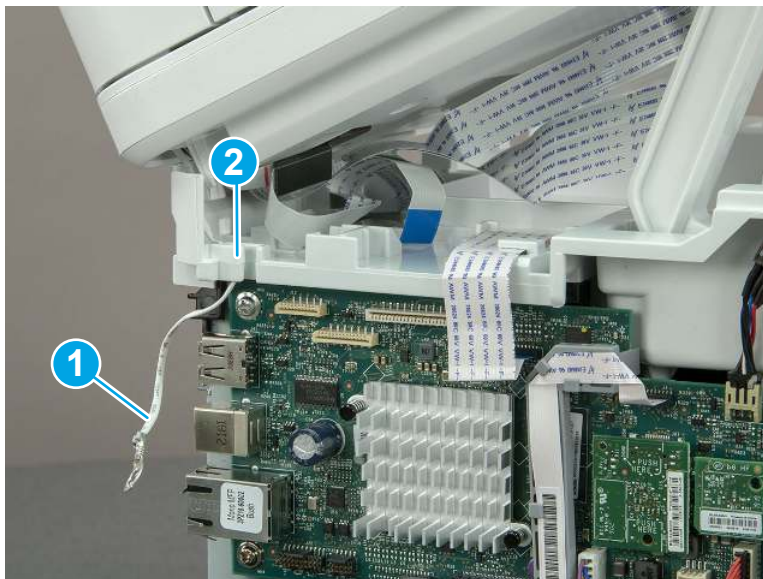
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-823 Release the ground wire**



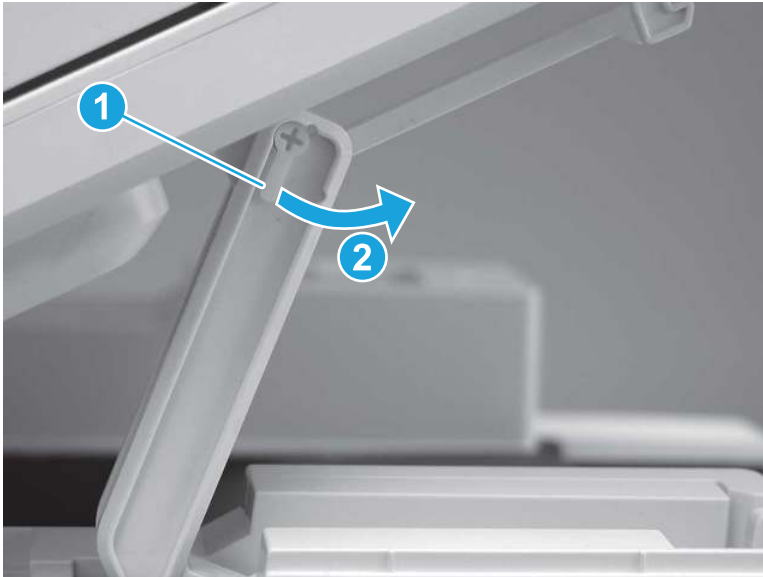
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-824 Release the ground wire**



5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-825** Release one tab and rotate the slider pin

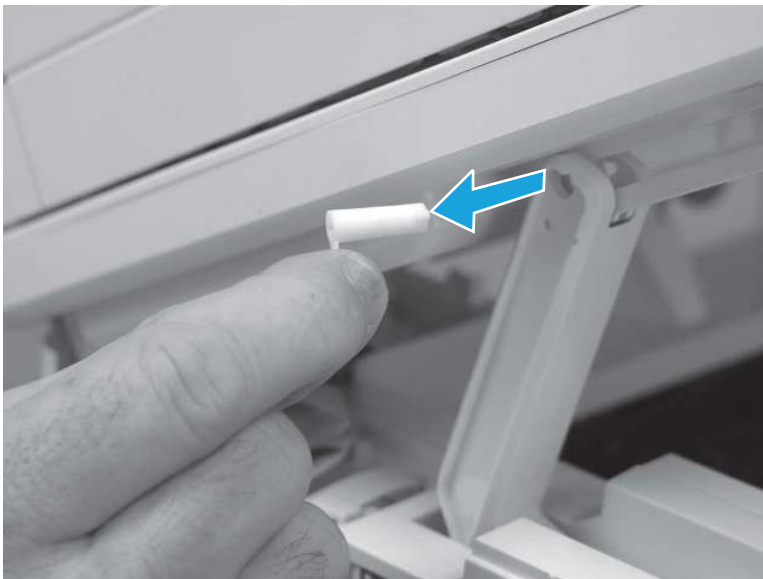


6. Remove the slider pin.



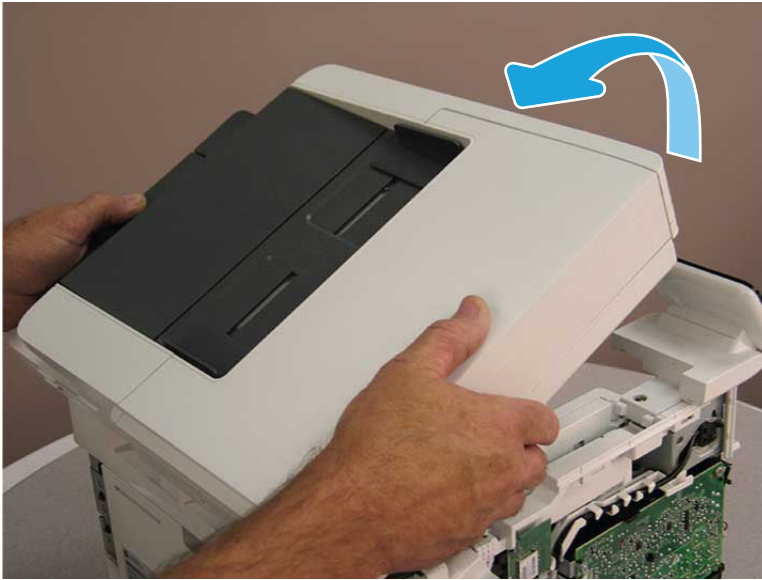
**Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

**Figure 5-826** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-827** Rotate the ISA towards the rear of the printer



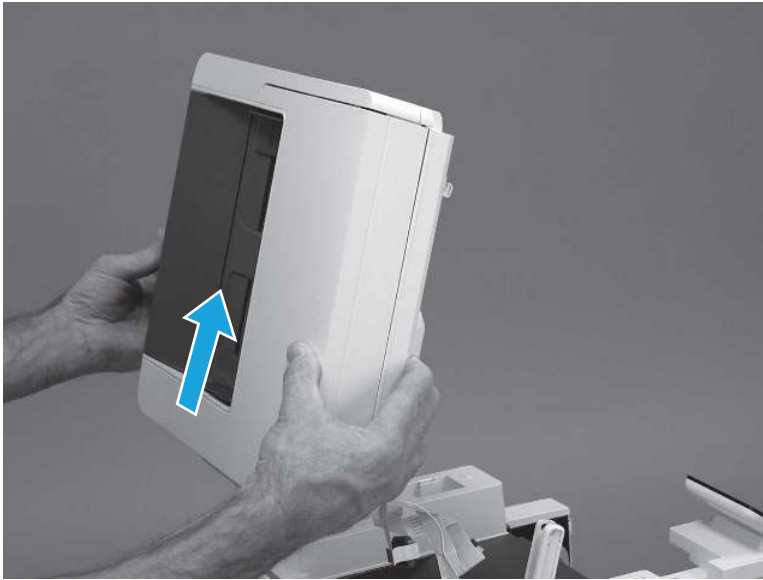
8. Slide the ISA as shown to release it.

**Figure 5-828** Release the ISA



9. Remove the ISA.

**Figure 5-829 Remove the ISA**

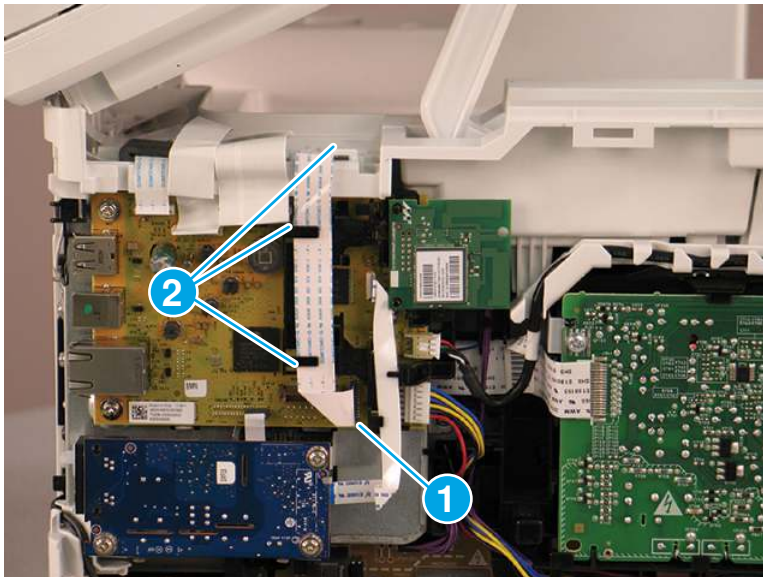


#### 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-830 Disconnect one connector**





2. Remove one screw (callout 1).

**Figure 5-831 Remove one screw**



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-832 Release two tabs**



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-833** Remove the cover



5. Remove the control-panel mount cover.

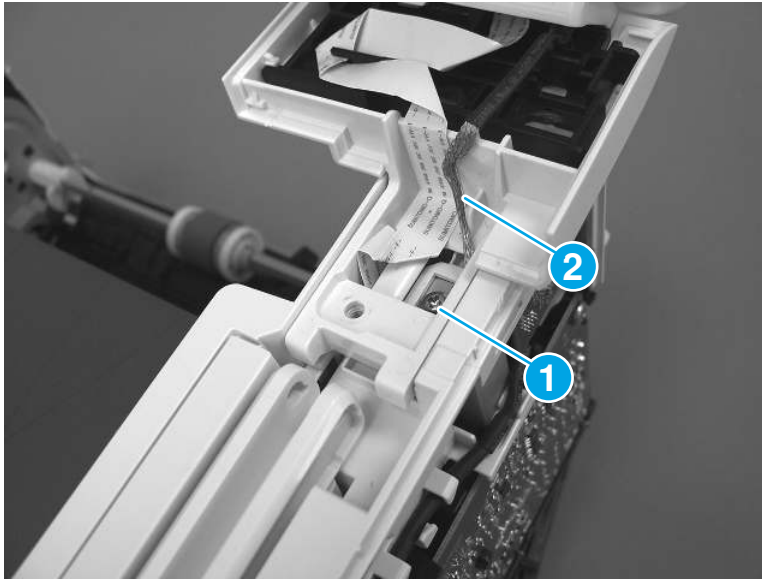
**Figure 5-834** Remove the cover





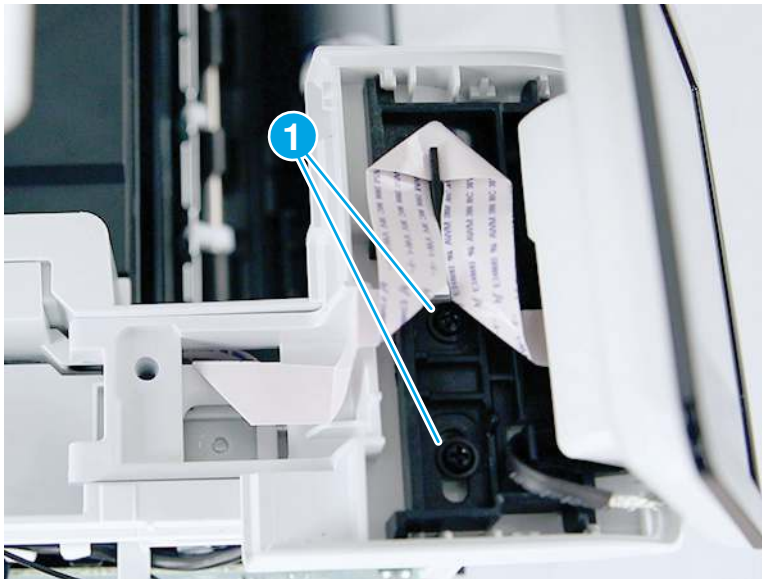
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-835 Remove one screw**



7. Move the FFC out of the way, and then remove two screws (callout 1).

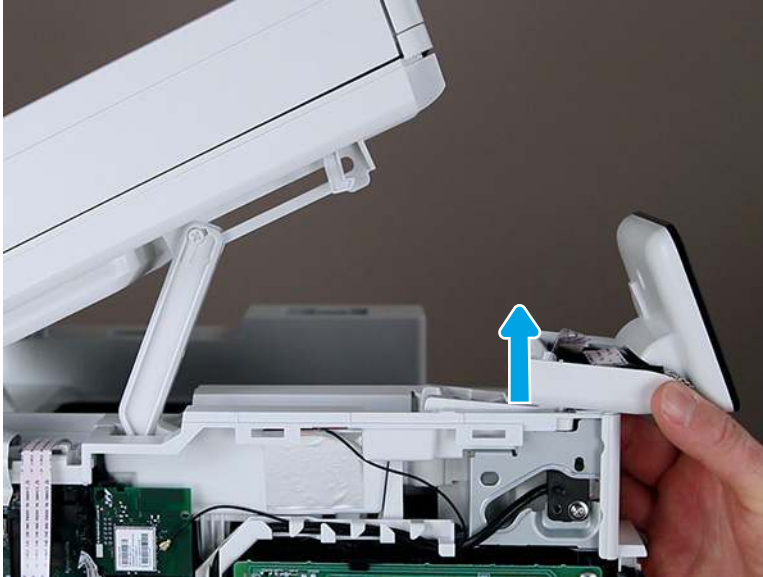
**Figure 5-836 Remove two screws**



8. Slightly lift up the control-panel assembly to separate it from the top cover.

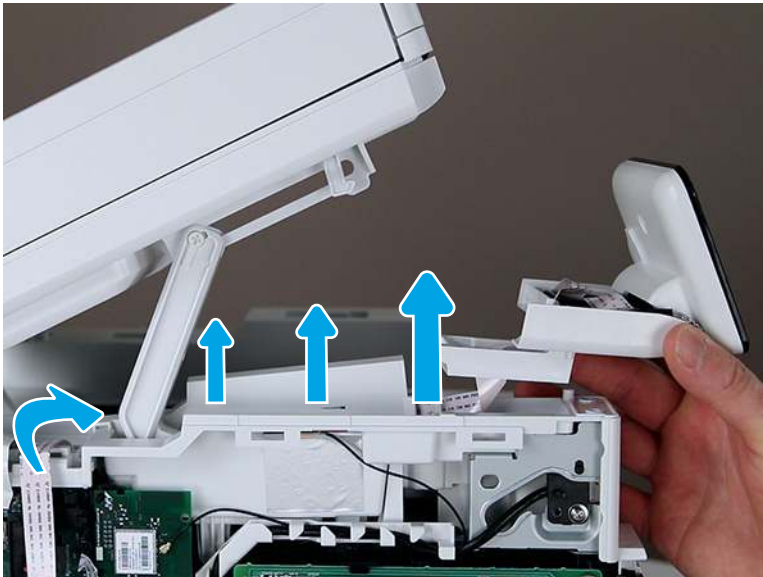
**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

**Figure 5-837** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-838** Remove the control-panel assembly

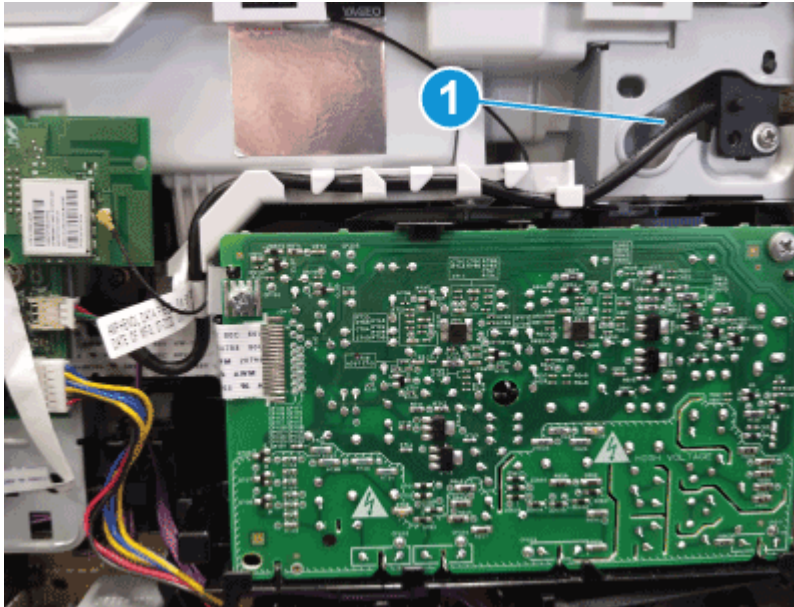


## 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

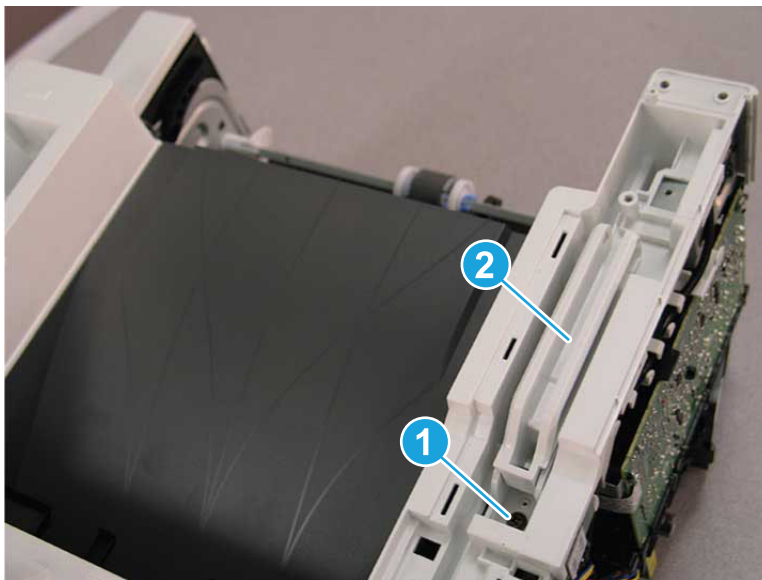
**Figure 5-839** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

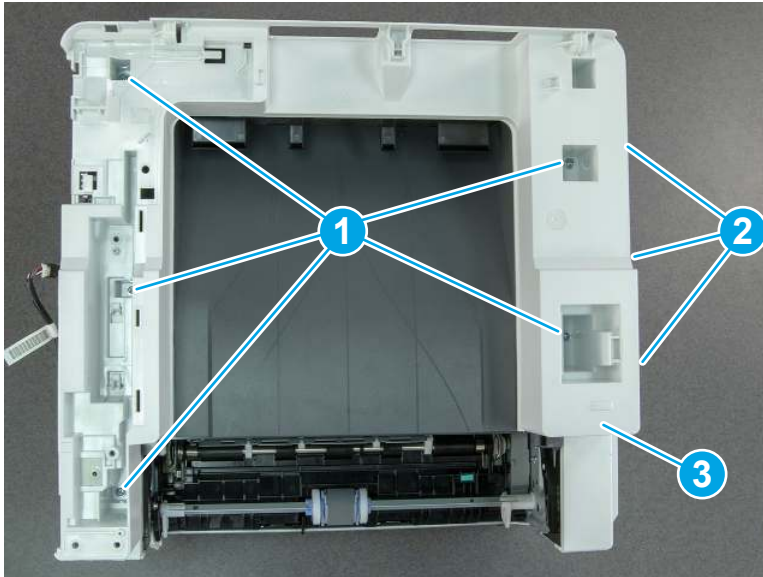
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-840** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-841** Remove the top cover



#### 9. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

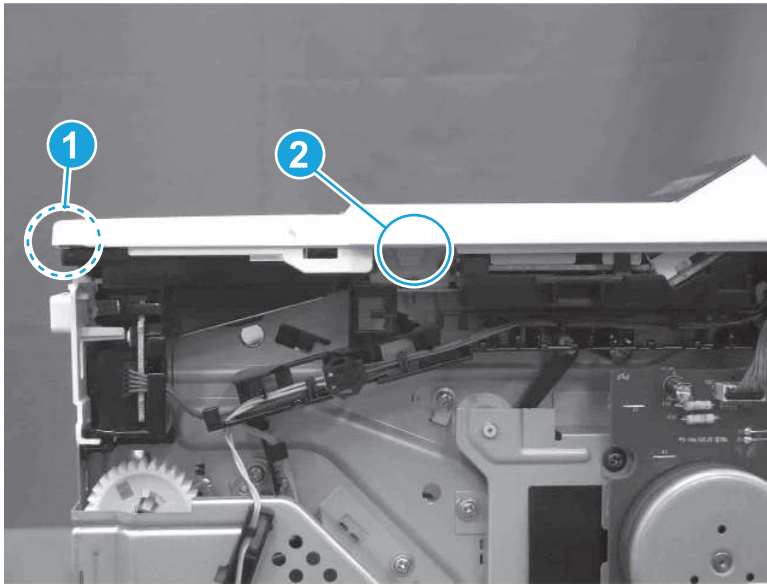
1. Remove one screw.

**Figure 5-842** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-843** Release one boss and one tab



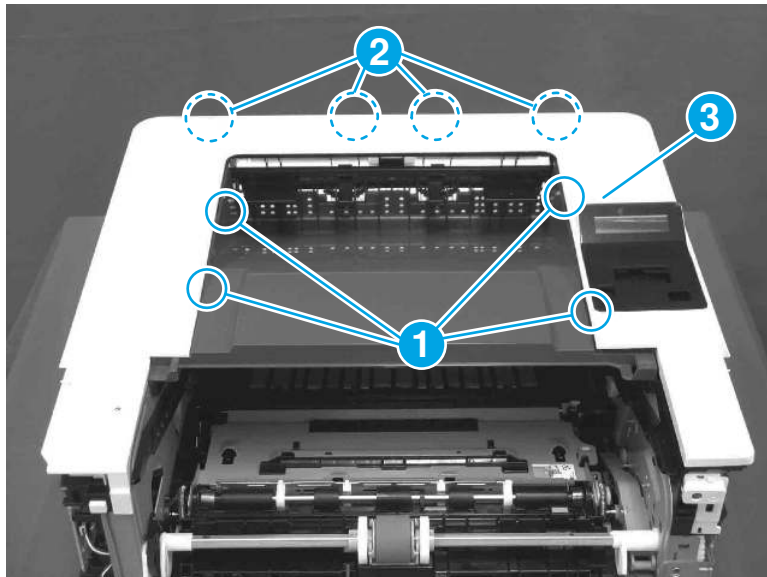
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---


**Figure 5-844** Remove the cover



## 10. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

---

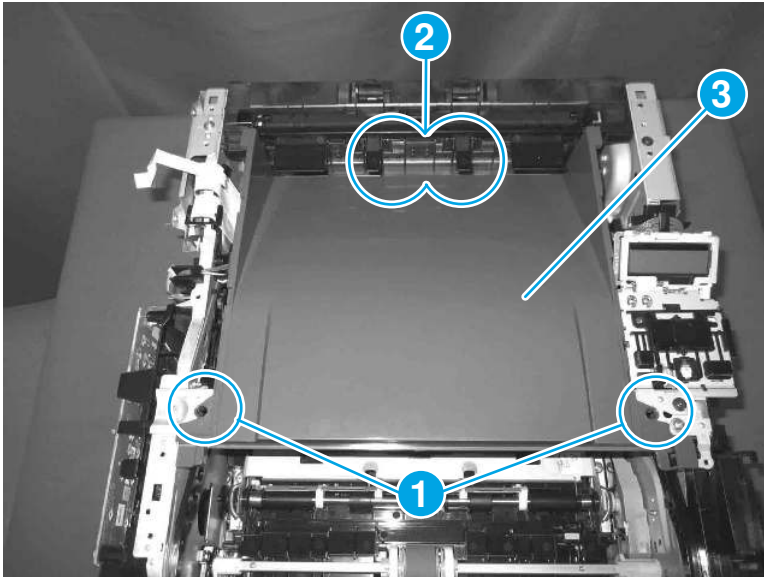
 **NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

---



- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).


**Figure 5-845 Remove the cover**




### 11. Remove the sheet-metal formatter bracket and formatter PCA

Follow these steps to remove the formatter bracket.

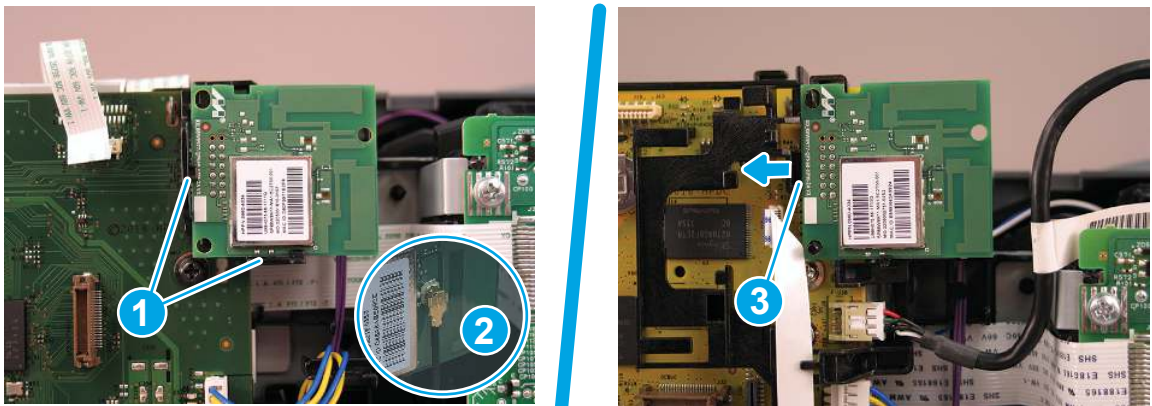
1. Do one of the following:
  - **SFP only:** Release two tabs (callout 1), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **NOTE:** Disconnect the WiFi antenna (callout 2) before releasing the tabs.

- **MFP only:** Release one tab (callout 3), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

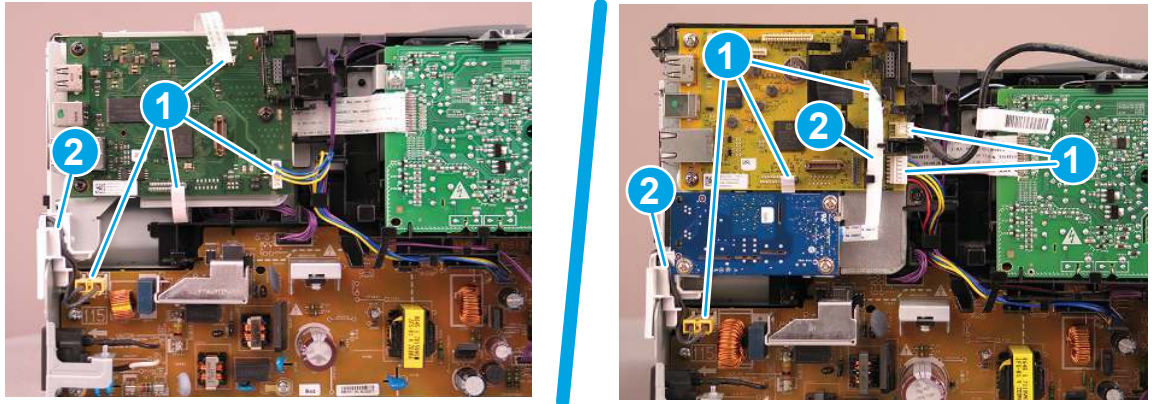
 **TIP:** Push the tab to the left to release it.

**Figure 5-846 Remove the wireless PCA**



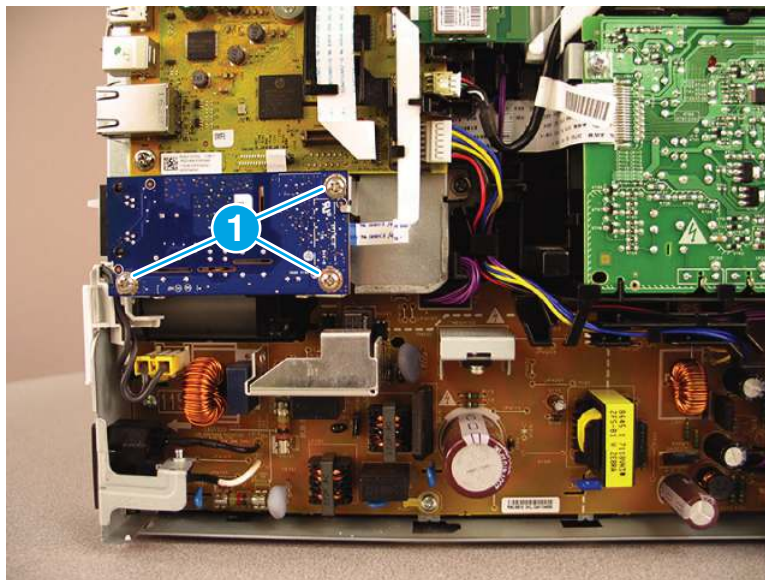
2. Do one of the following:
  - **SFP only:** Disconnect the connectors (callout 1), and then release one wire harness (callout 2) from the guide.
  - **MFP only:** Disconnect the connectors (callout 1), and then release one wire harness and one FFC (callout 2) from the guides.

**Figure 5-847** Disconnect the connectors



3. **MFP fax models only:** Remove three screws (callout 1), and then remove the fax PCA.

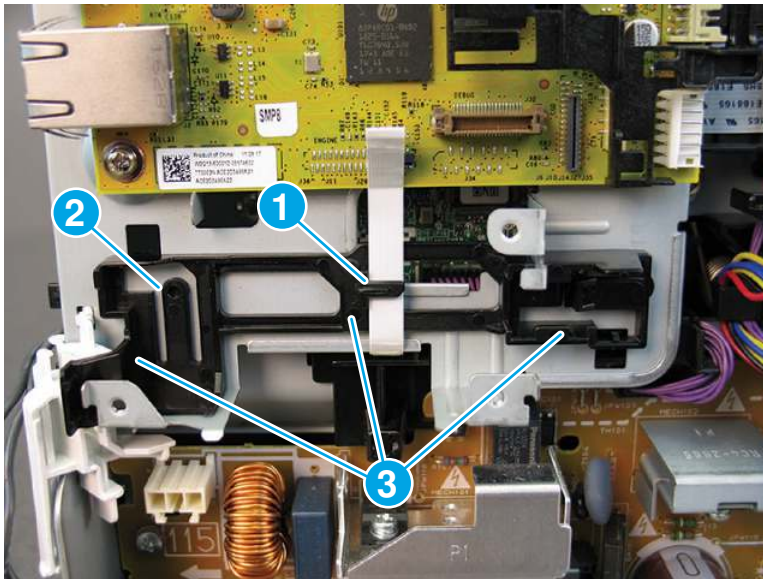
**Figure 5-848** Remove the fax PCA






4. **MFP only:** Release the FFC from the guide (callout 1), release one tab (callout 2), and then remove the FFC guide (callout 3).

**Figure 5-849** Remove the FFC guide



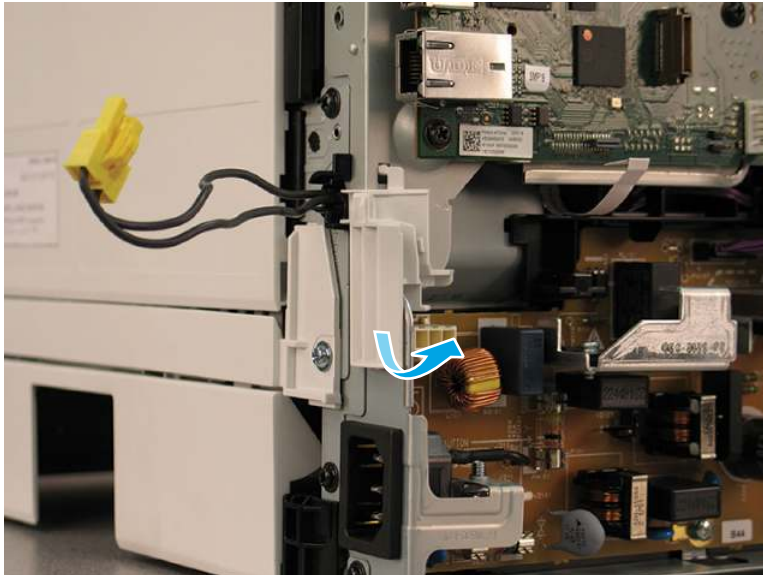
5. Remove one guide.

---

 **NOTE:** A SFP printer is shown in the figure. However, the guide is identical for an MFP printer

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**Figure 5-850** Remove the guide



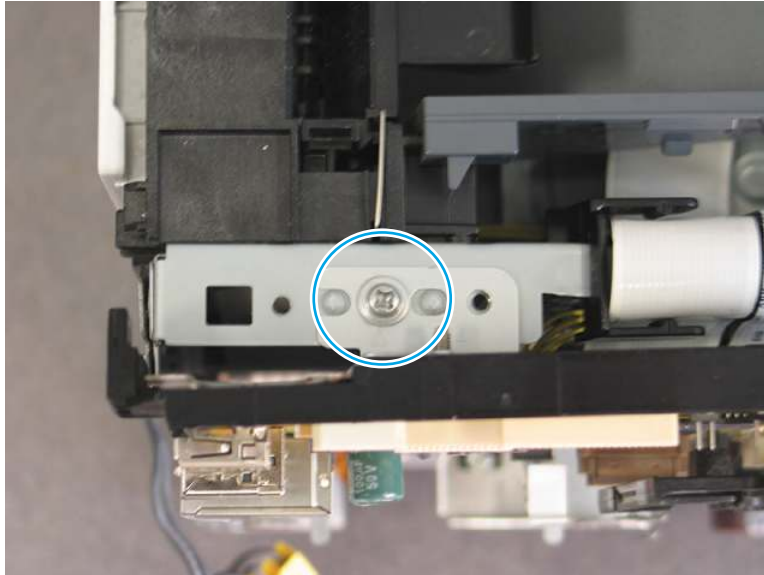
6. Remove two screws.

**Figure 5-851** Remove two screws



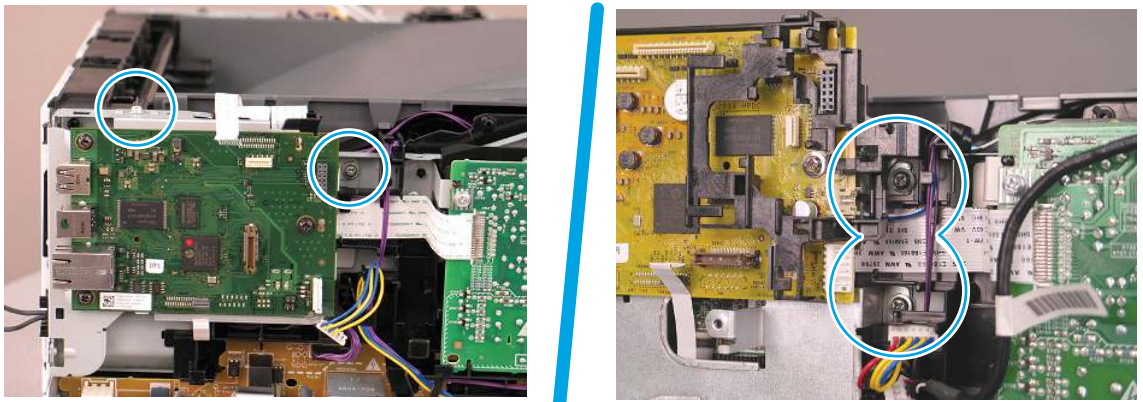
7. MFP only: Remove one screw.

**Figure 5-852** Remove one screw



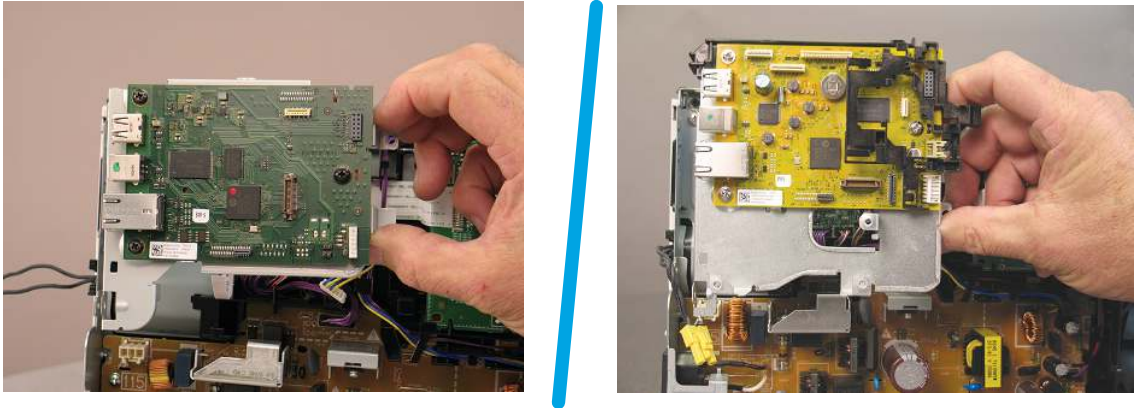
8. Support the formatter and bracket, and then remove two screws.

**Figure 5-853** Remove two screws



9. Remove the sheet-metal bracket and formatter PCA.

**Figure 5-854 Remove the bracket**

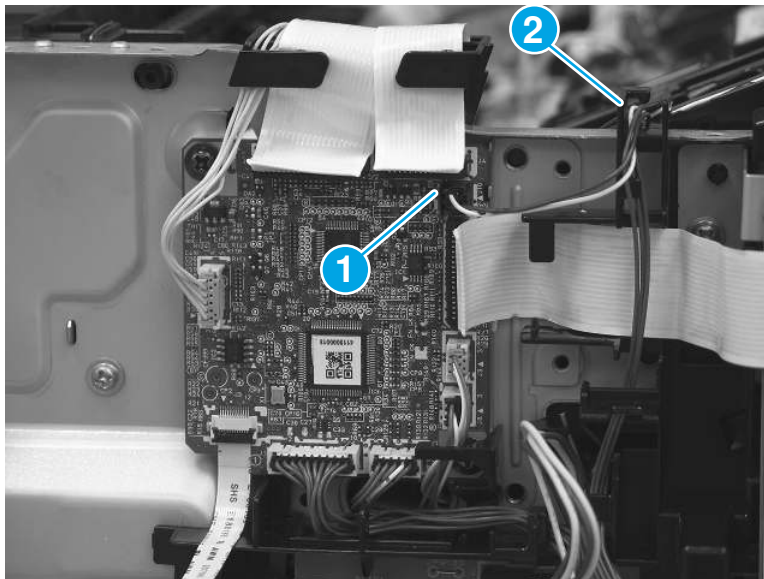


## 12. Remove the tag-cable assembly (toner-cartridge memory)

Follow these steps to remove the tag-cable assembly.

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

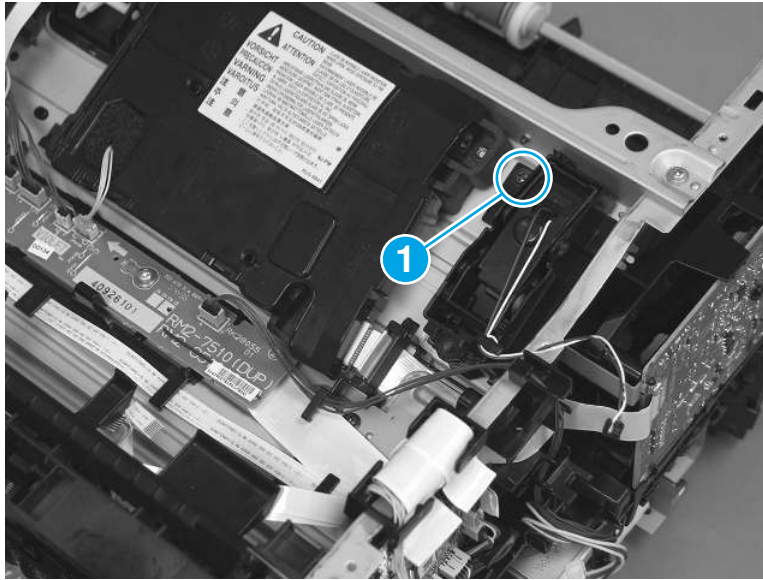
**Figure 5-855 Disconnect one connector**






2. Remove one screw (callout 1).

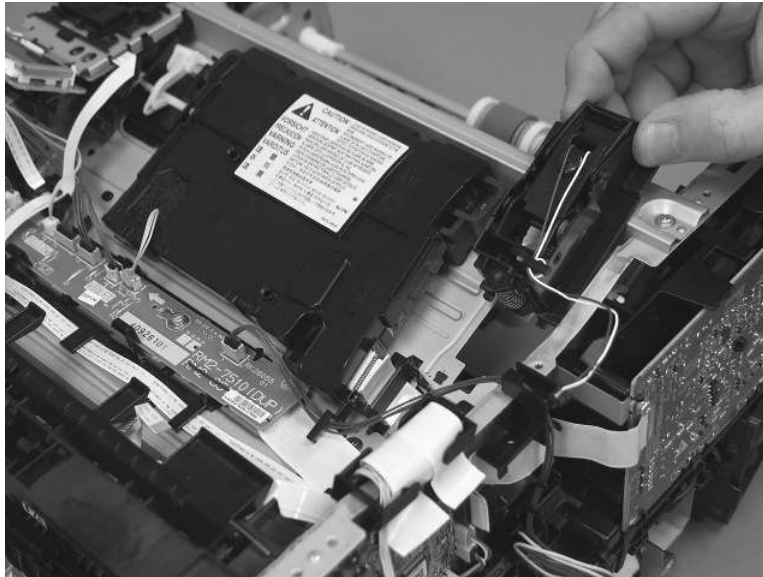
**Figure 5-856** Remove one screw



3. Remove the tag-cable assembly.

 **Reinstallation tip:** Make sure that the assembly is flat against the chassis. If the assembly is not correctly installed, it might not make proper contact with the toner cartridge.

**Figure 5-857** Remove the tag-cable assembly

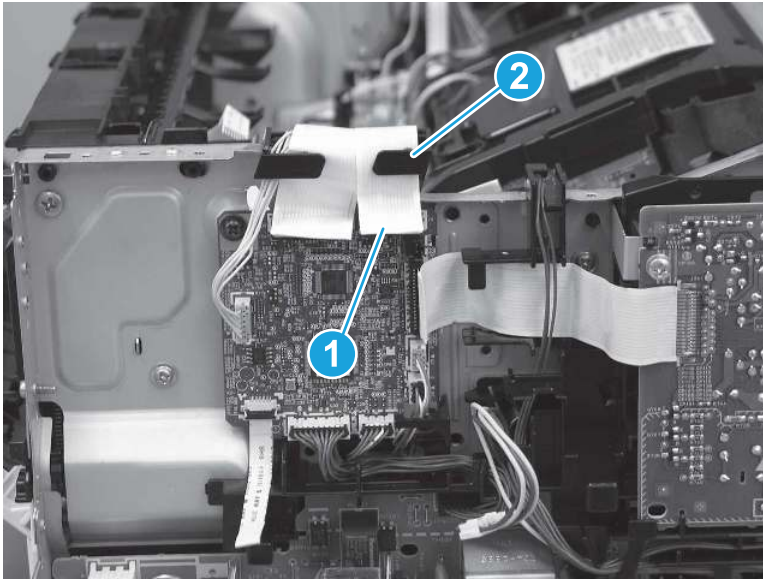


### 13. Remove the laser scanner FFC

Follow these steps to remove the laser scanner FFC.

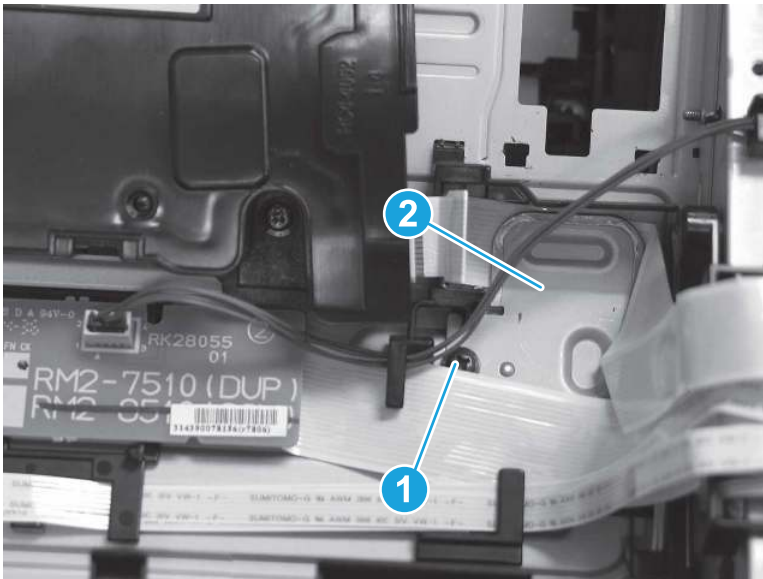
1. Disconnect one FFC (callout 1), and then release it from the guide (callout 2).

**Figure 5-858** Disconnect one FFC



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

**Figure 5-859** Remove one screw and the sheet-metal plate



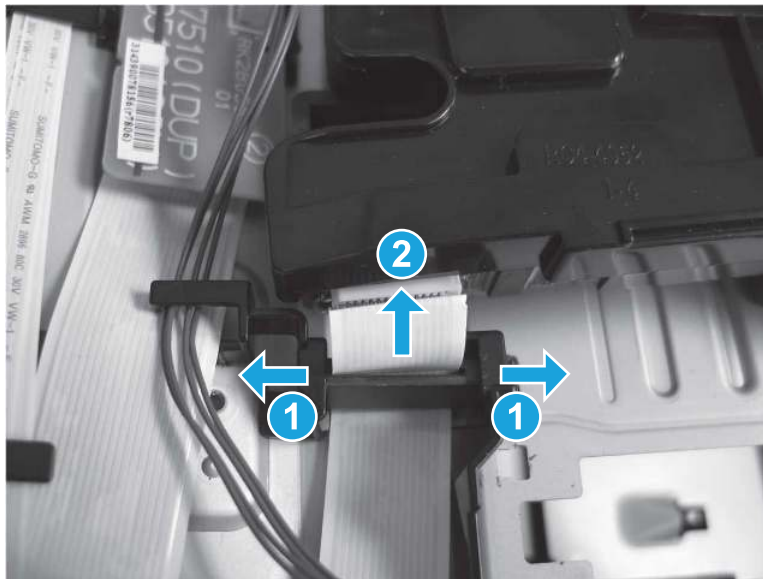
3. Disconnect one FFC (callout 1).

**Figure 5-860** Disconnect one FFC



4. Slightly flex the holder (callout 1), and then release the FFC ferrite (callout 2).

**Figure 5-861** Release the ferrite

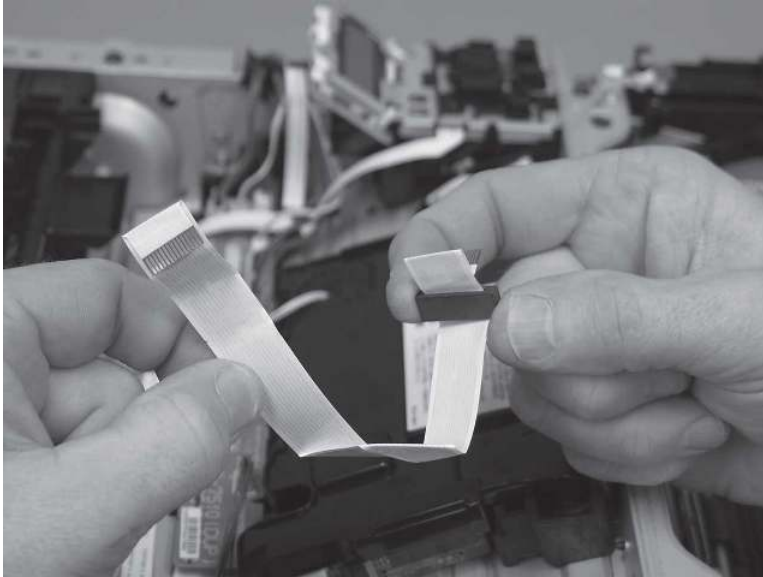


5. Remove the FFC.



**Reinstallation tip:** Install the ferrite on the replacement FFC.

**Figure 5-862 Remove the FFC**



#### 14. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

#### Removal and replacement: High-voltage power supply

Learn how to remove and replace the high-voltage power supply (HVPS).





[View a video of how to remove and replace the SFP HVPS.](#)



[View a video of how to remove and replace the MFP HVPS.](#)

Mean time to repair: 28 minutes SFP, 55 minutes MFP

Service level: Medium SFP, Difficult MFP

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-45 Part information**

Part number	Part description
RM2-7508-000CN	High-voltage power supply PCA

## Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-863 Remove the tray**



## 2. Remove the cartridge door assembly


Follow these steps to remove the cartridge door assembly.


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 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

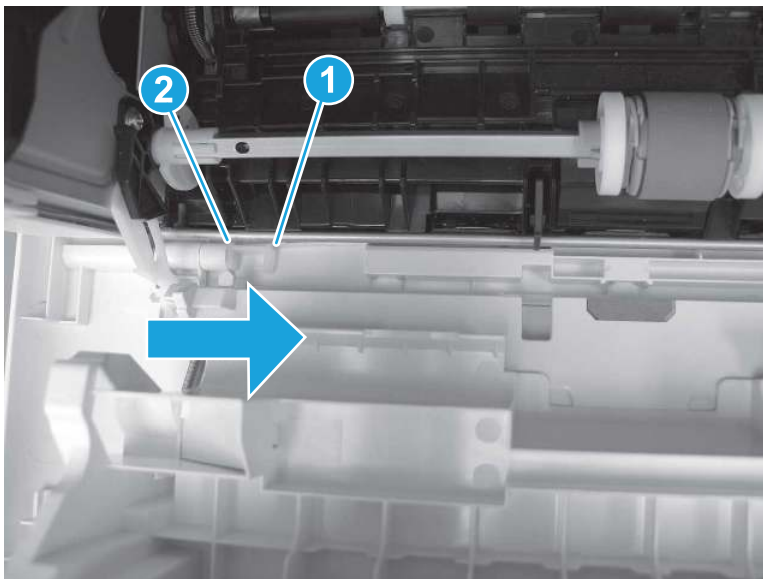
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

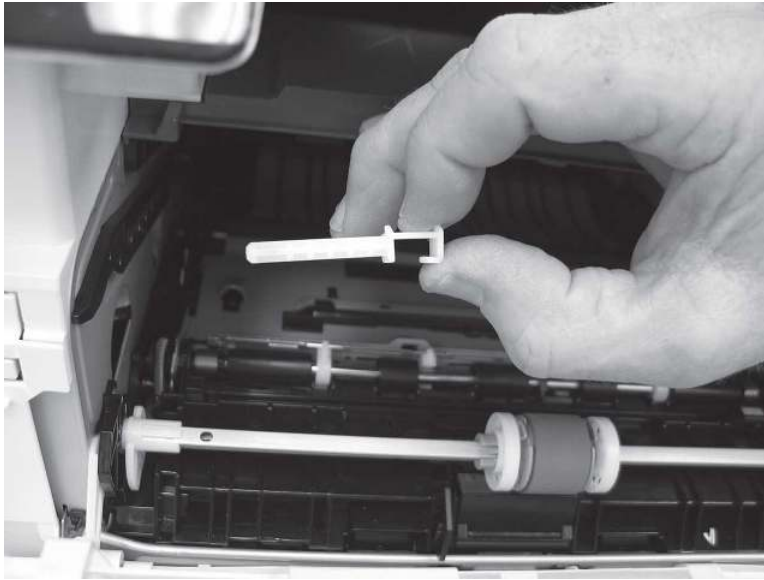
---

**Figure 5-864 Release the support shaft**



2. Remove the support shaft.

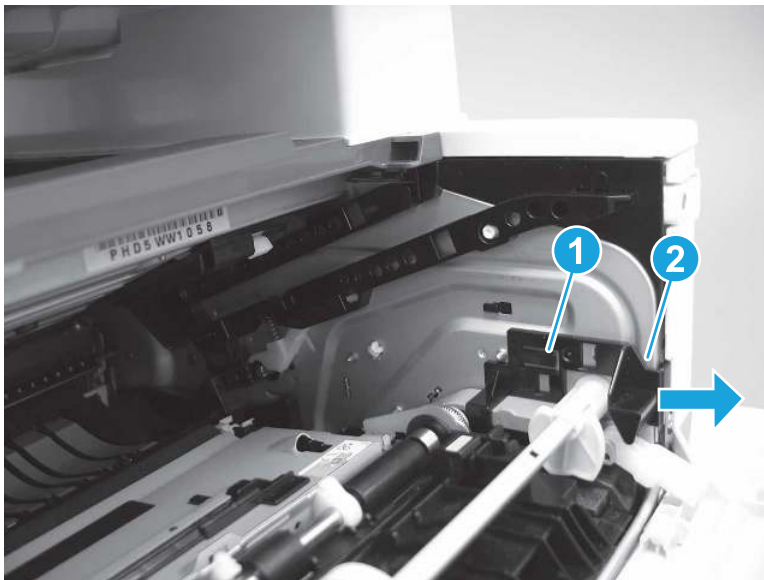
**Figure 5-865 Remove the support shaft**



3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

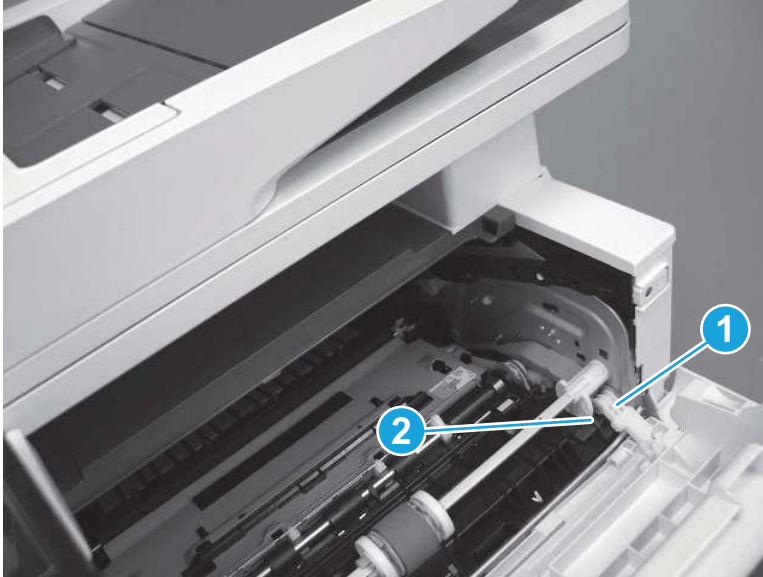
**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

**Figure 5-866 Remove the guide**



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-867** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

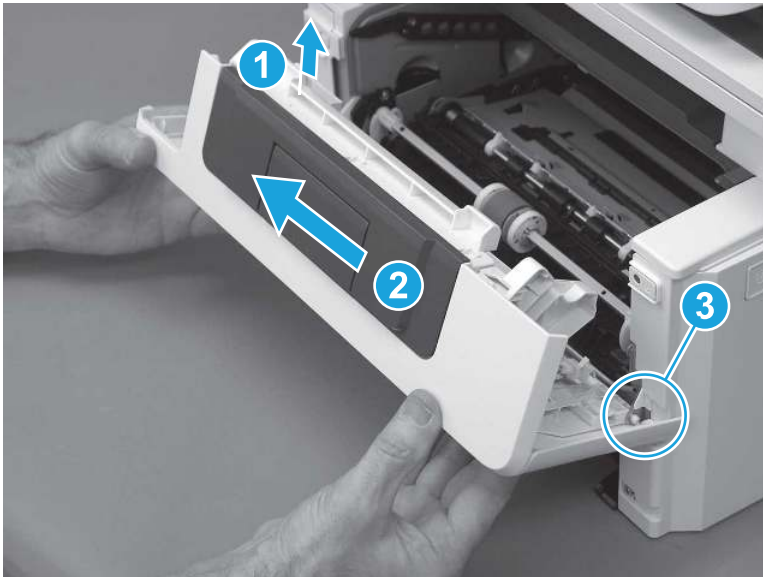
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

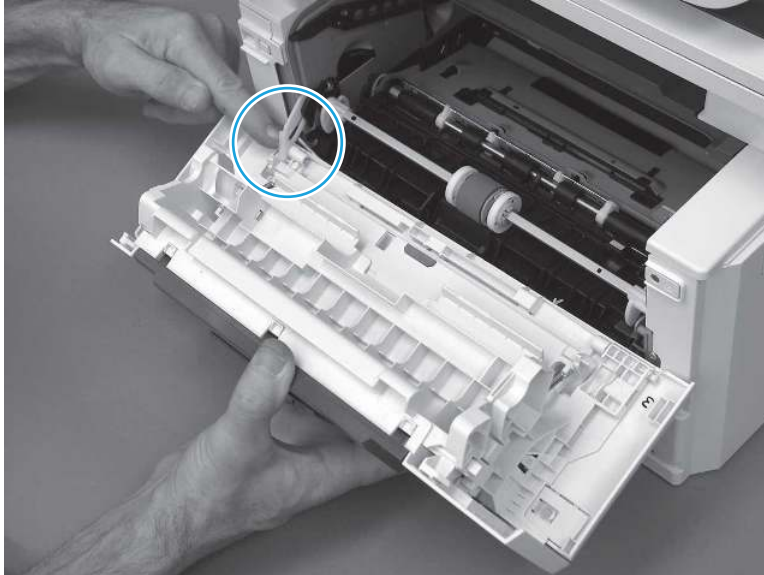
---

**Figure 5-868** Release the door



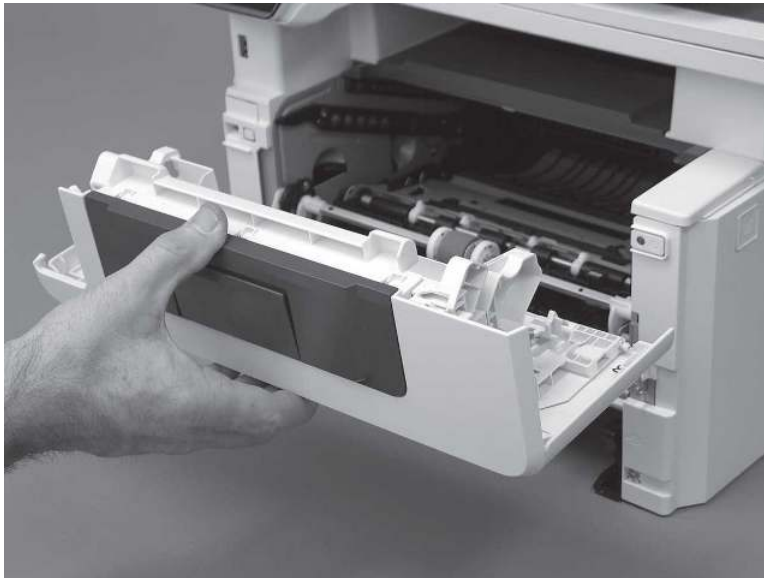
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-869** Release the left-side retainer arm



7. Remove the door.


**Figure 5-870** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

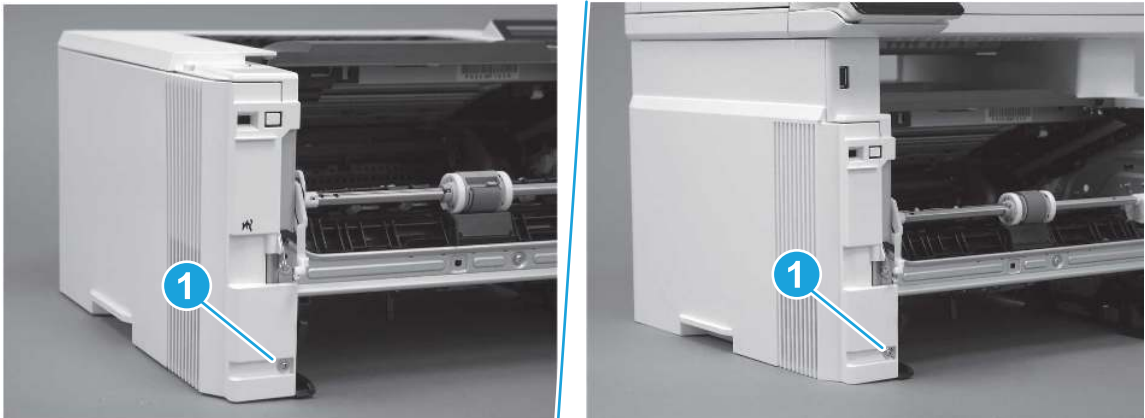
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

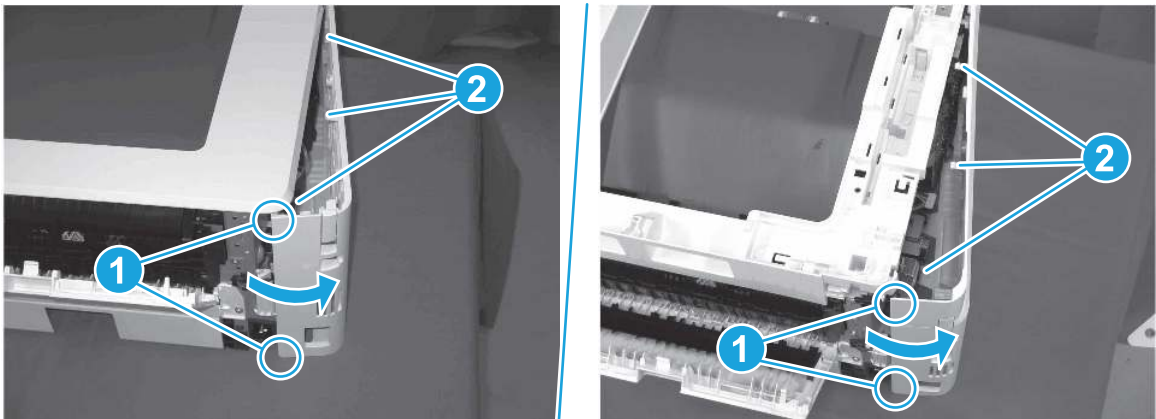
1. Remove one screw (callout 1).

**Figure 5-871** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-872** Release two bosses and three tabs



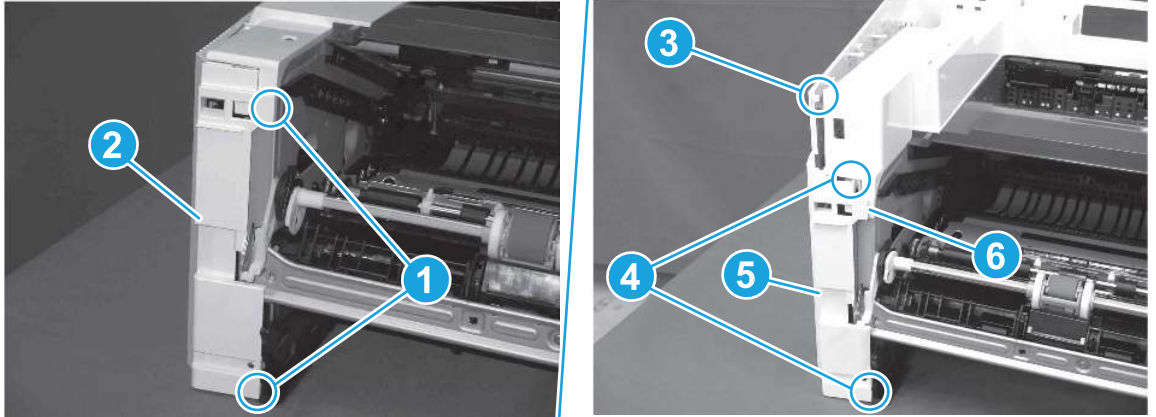
3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**⚠ CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.



Figure 5-873 Remove the cover



#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).


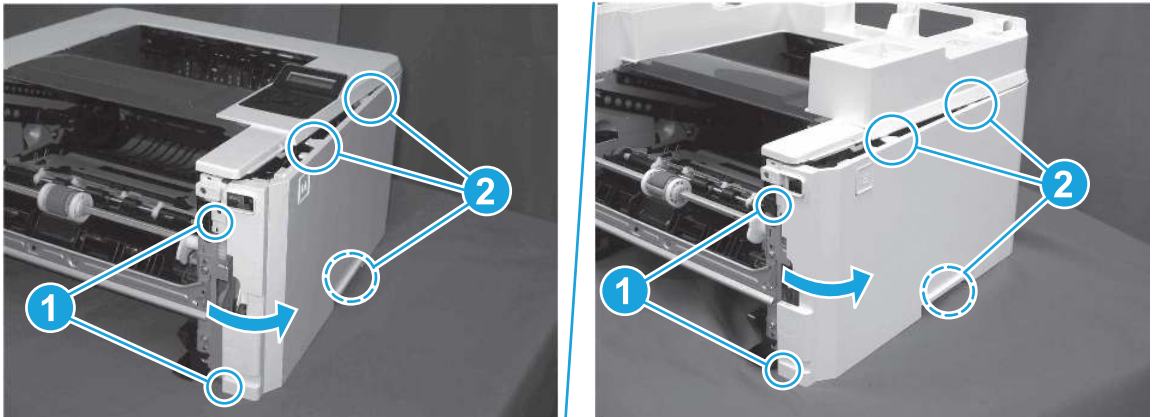
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

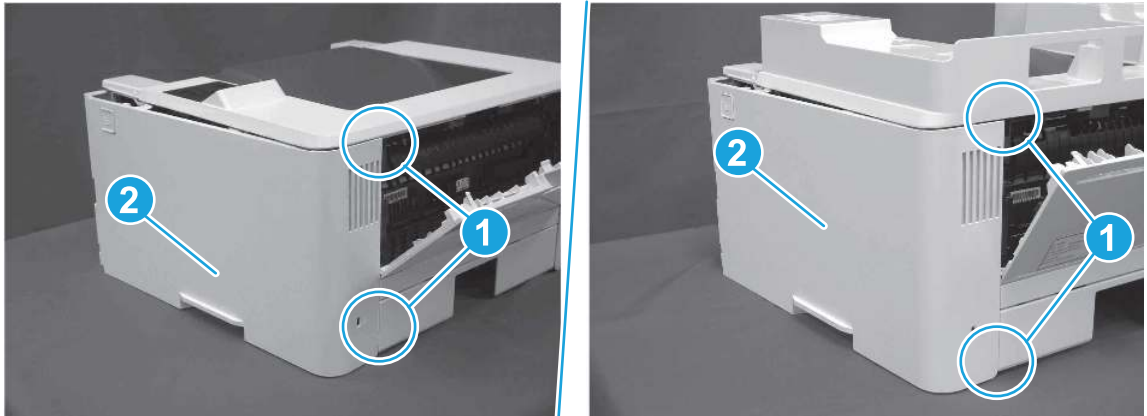
Figure 5-874 Release two bosses and three tabs





2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-875** Remove the cover

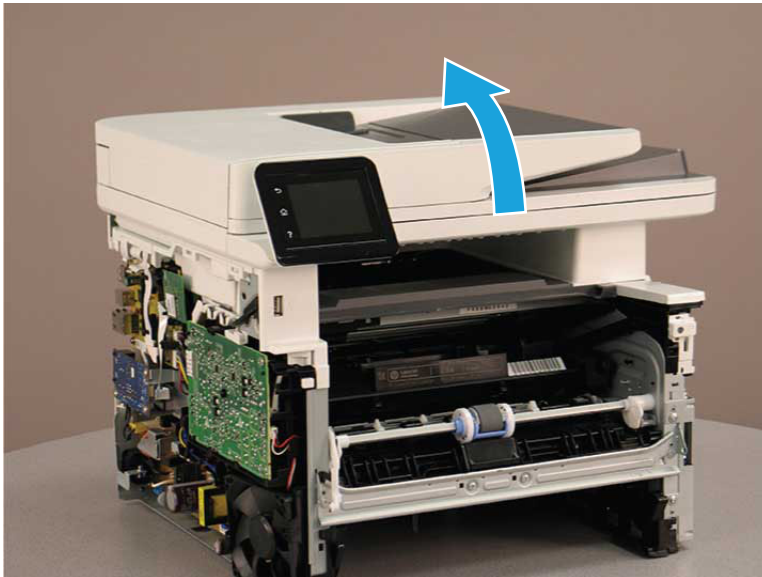


#### 5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

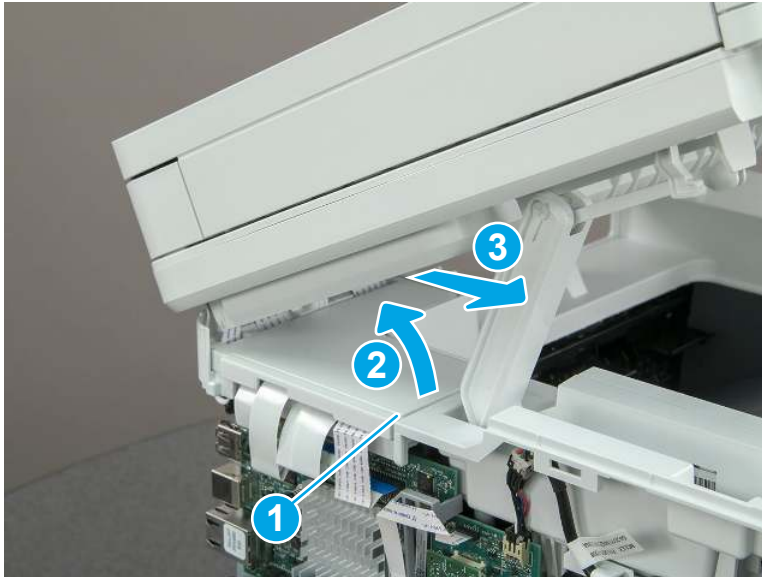
1. If the ISA is not already raised, raise it now.

**Figure 5-876** Raise the ISA




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-877** Remove the ISA FFC cover




#### 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

**Figure 5-878** Disconnect three FFCs



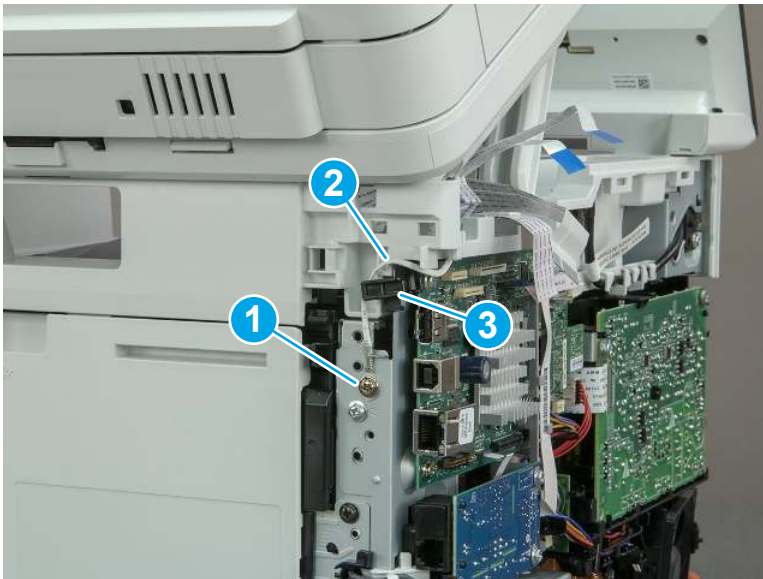
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-879 Release the tape**



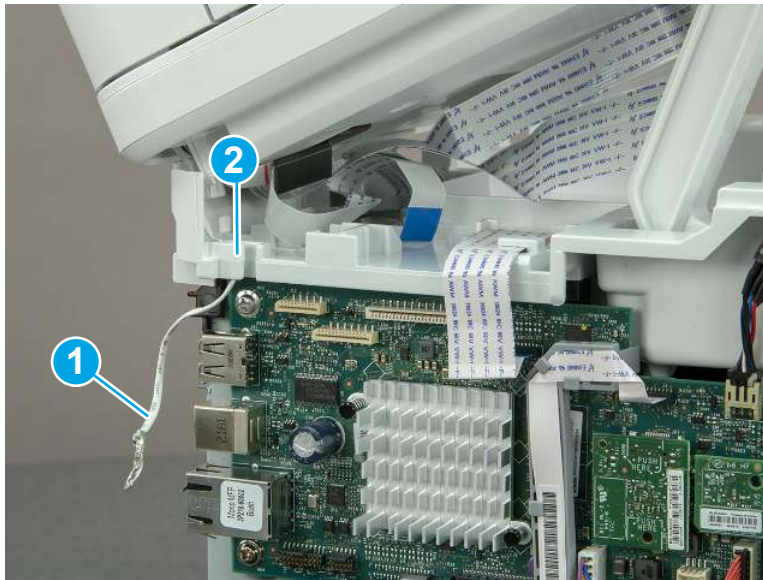
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-880 Release the ground wire**



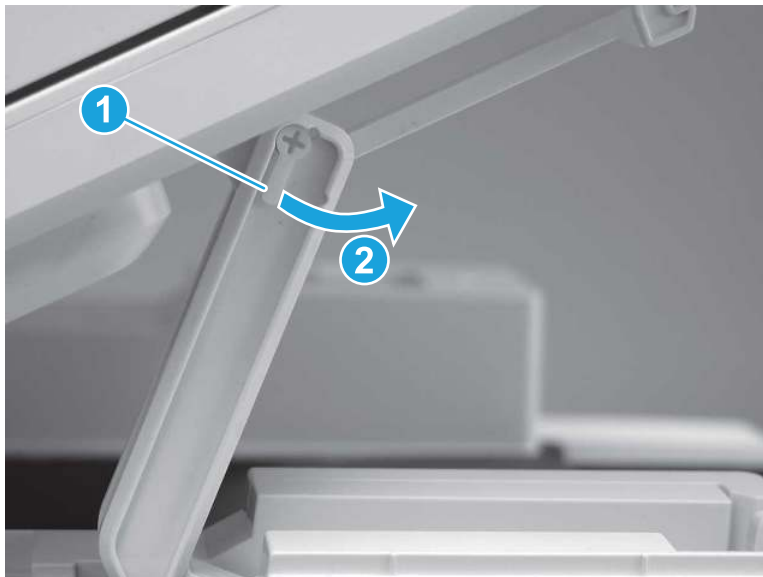
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-881** Release the ground wire




5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-882** Release one tab and rotate the slider pin



6. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

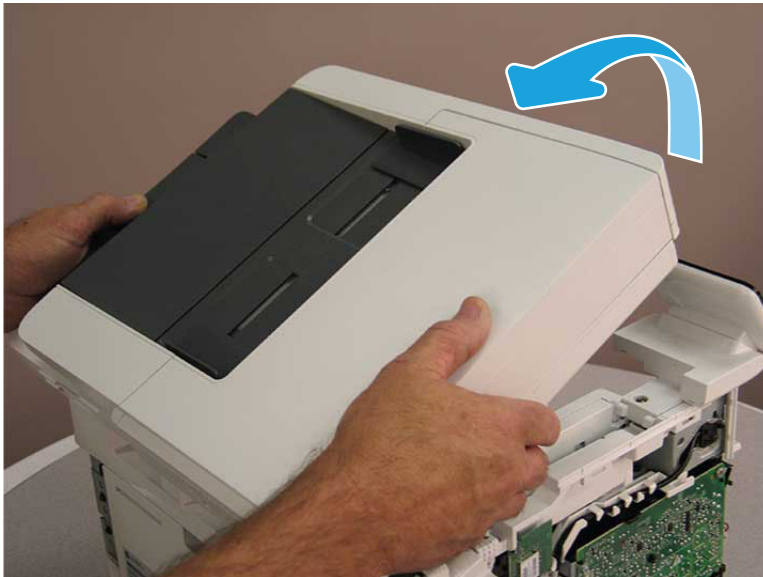
---

**Figure 5-883** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-884** Rotate the ISA towards the rear of the printer





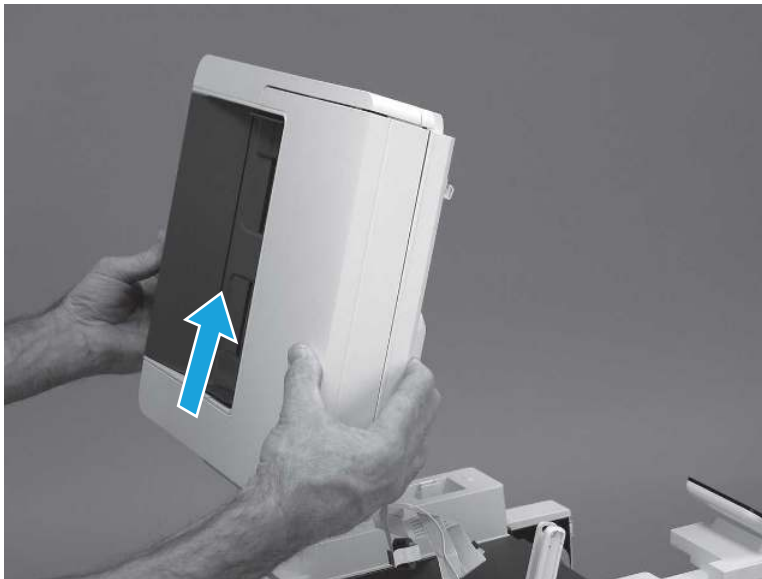
- Slide the ISA as shown to release it.

**Figure 5-885 Release the ISA**



- Remove the ISA.

**Figure 5-886 Remove the ISA**

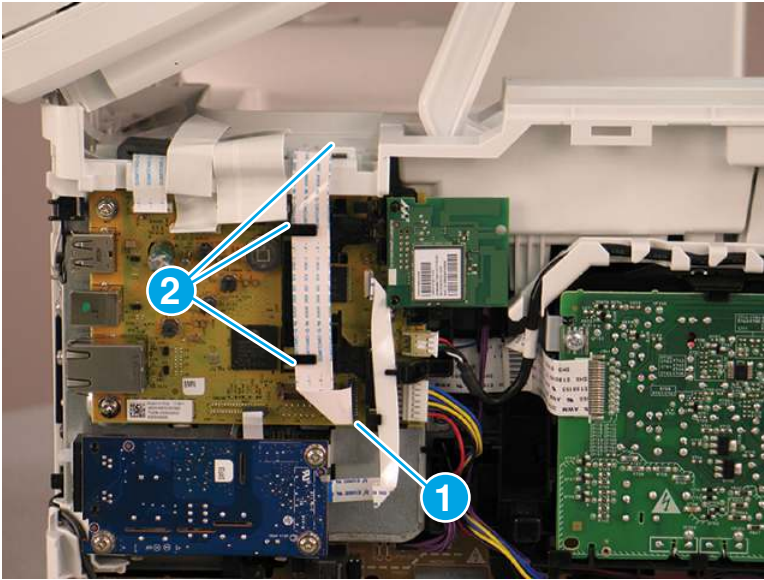


## 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-887** Disconnect one connector



2. Remove one screw (callout 1).

**Figure 5-888** Remove one screw





3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-889 Release two tabs**



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-890 Remove the cover**



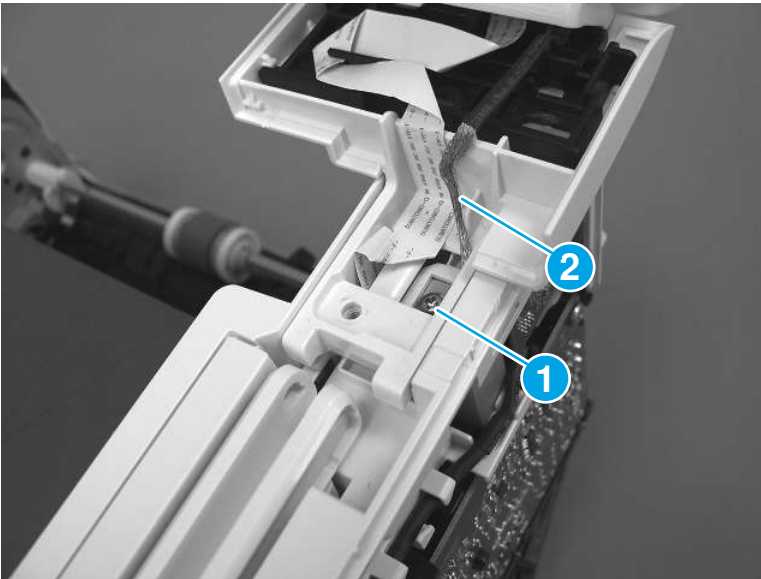
5. Remove the control-panel mount cover.

**Figure 5-891** Remove the cover



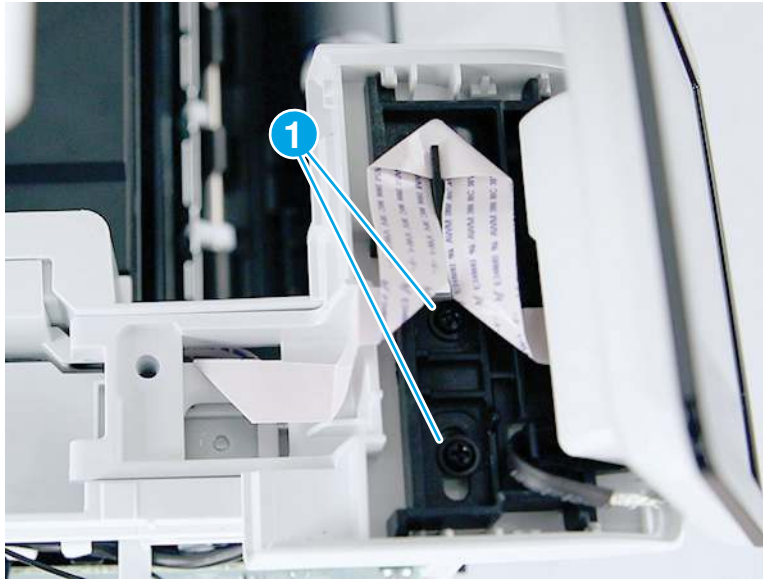
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-892** Remove one screw



7. Move the FFC out of the way, and then remove two screws (callout 1).

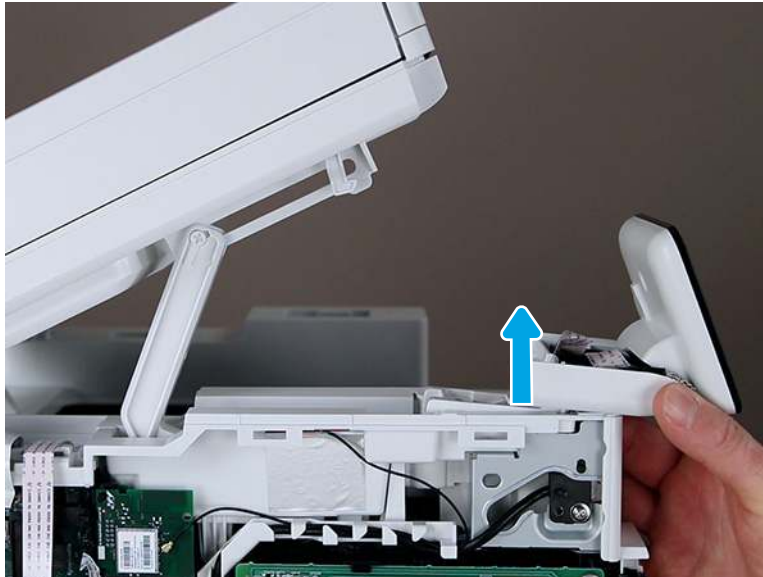
**Figure 5-893** Remove two screws



8. Slightly lift up the control-panel assembly to separate it from the top cover.

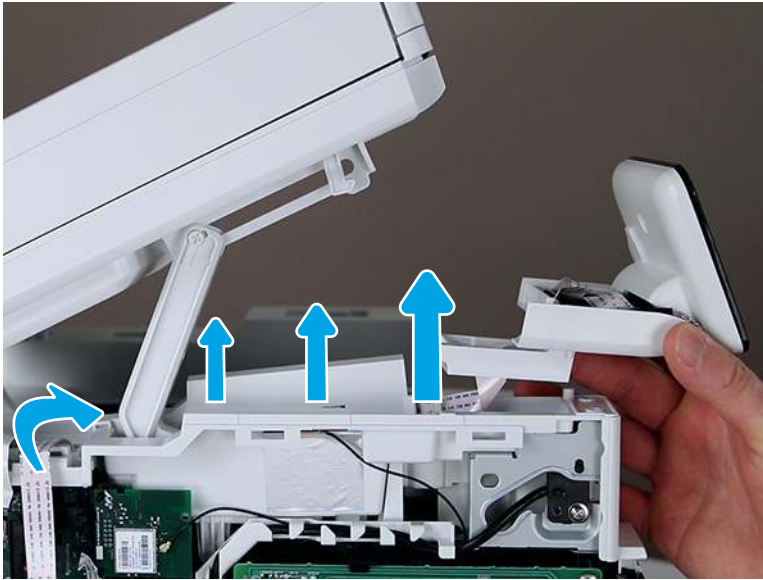
**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

**Figure 5-894** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-895** Remove the control-panel assembly

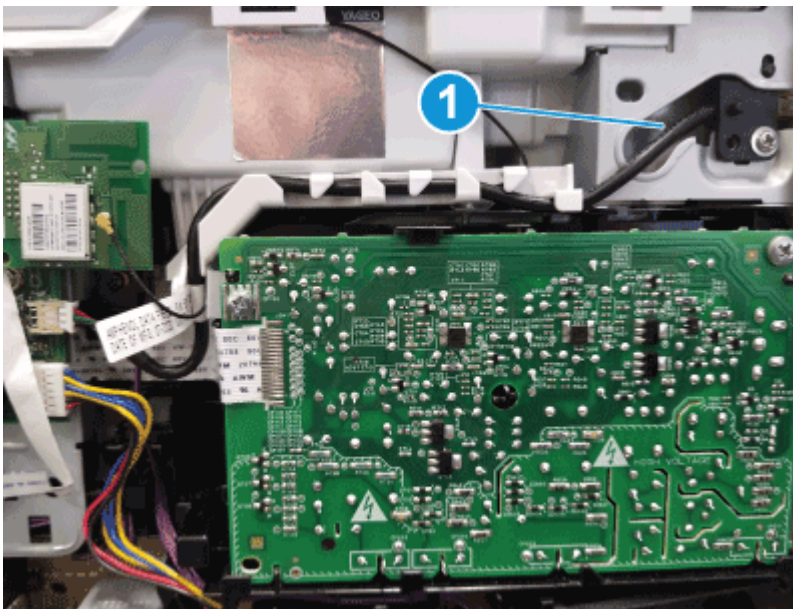


#### 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

**Figure 5-896** Release the USB cable



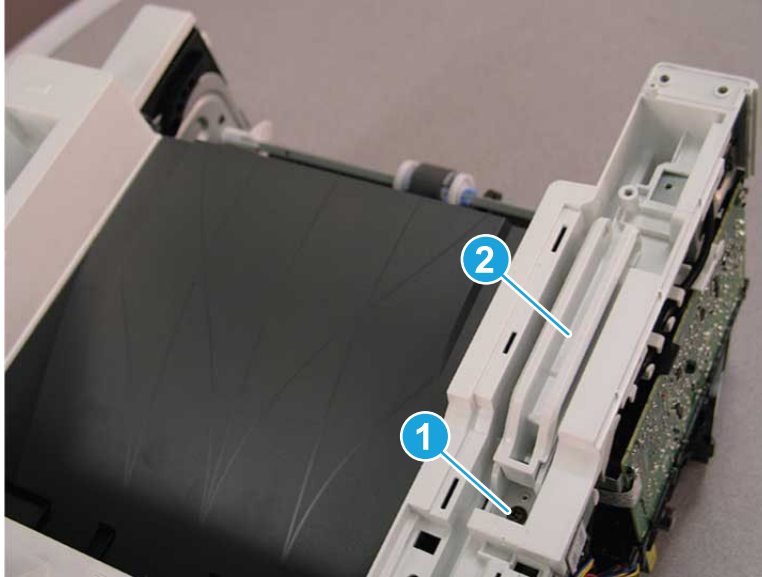
2. Remove one screw (callout 1), and then remove the support arm (callout 2).

---

**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

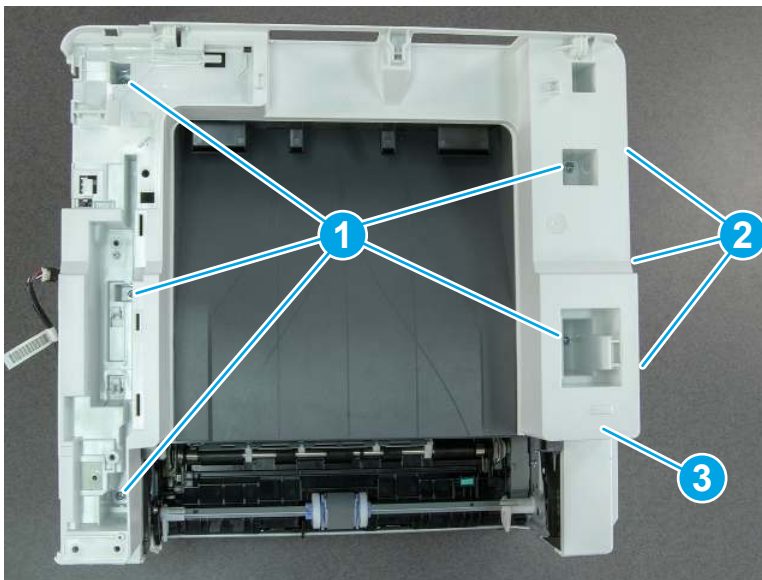
---

**Figure 5-897 Remove the support arm**



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-898 Remove the top cover**



**9. Remove the top cover (SFP only)**

Follow these steps to remove the top cover (SFP only).



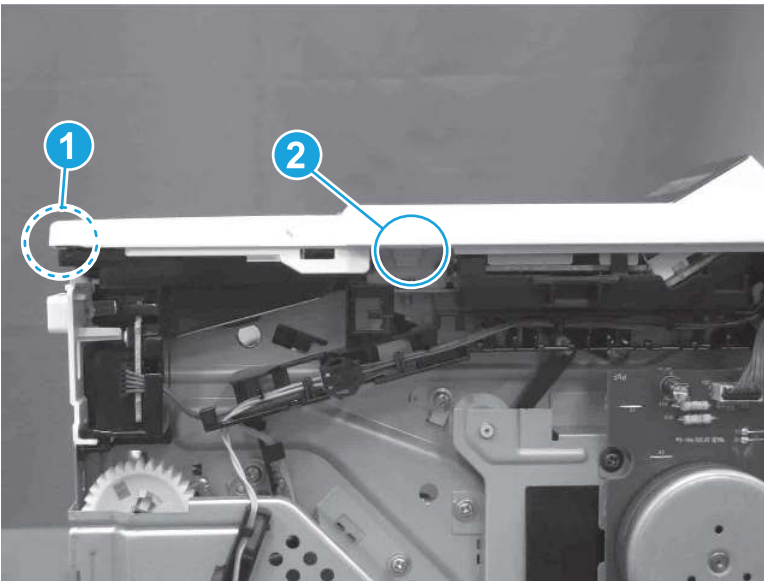
1. Remove one screw.

**Figure 5-899** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-900** Release one boss and one tab



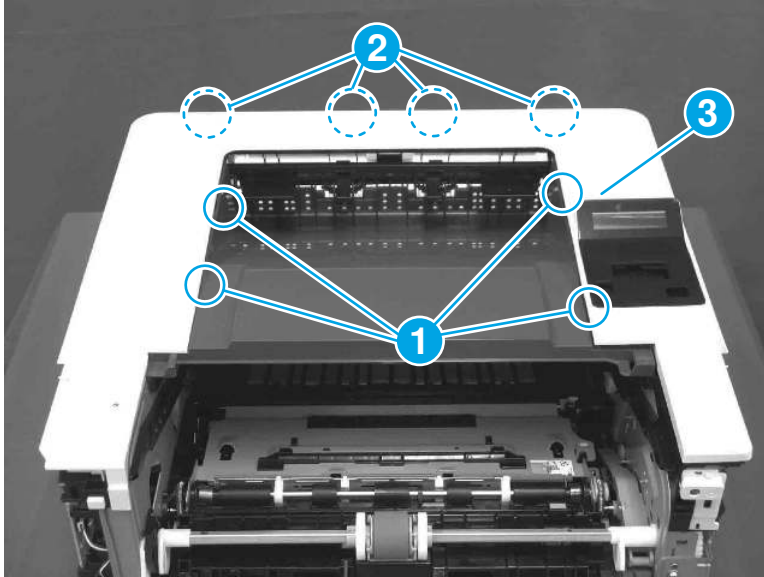
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.


---

Figure 5-901 Remove the cover



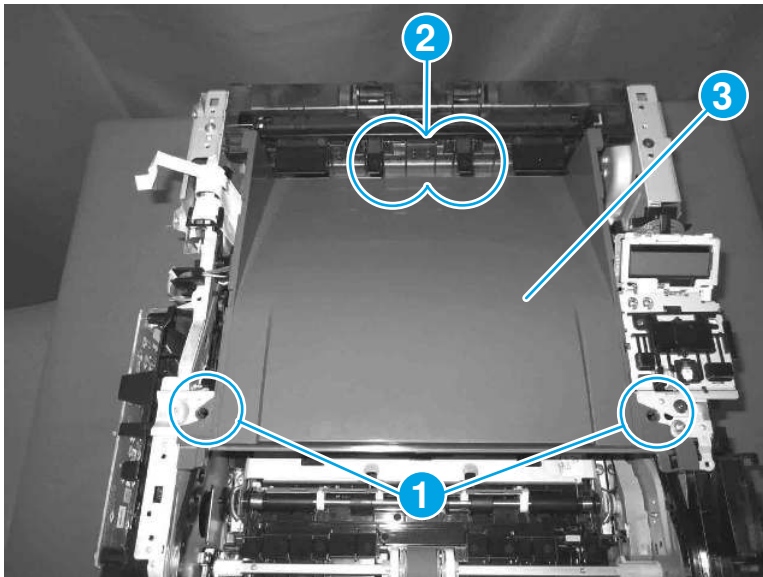
#### 10. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

 **NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-902 Remove the cover




#### 11. Remove the sheet-metal formatter bracket and formatter PCA

Follow these steps to remove the formatter bracket.




1. Do one of the following:

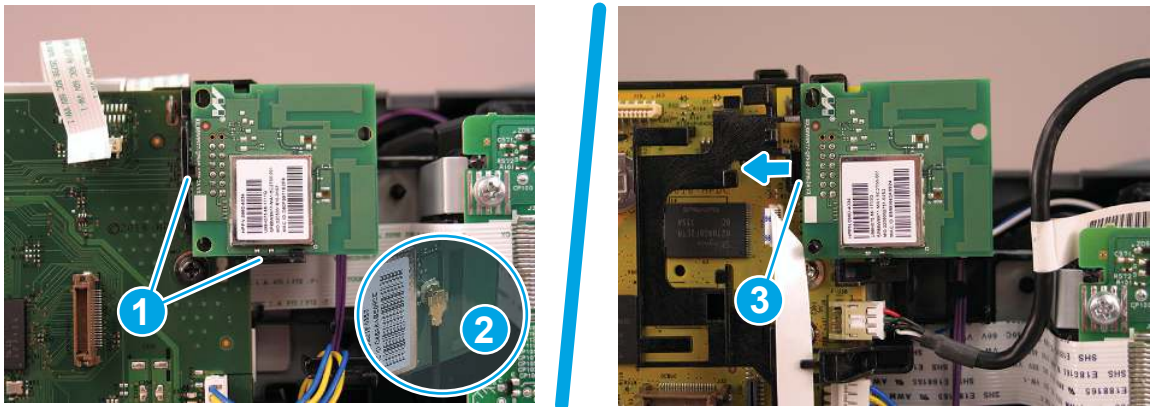
- **SFP only:** Release two tabs (callout 1), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **NOTE:** Disconnect the WiFi antenna (callout 2) before releasing the tabs.

- **MFP only:** Release one tab (callout 3), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **TIP:** Push the tab to the left to release it.

**Figure 5-903 Remove the wireless PCA**

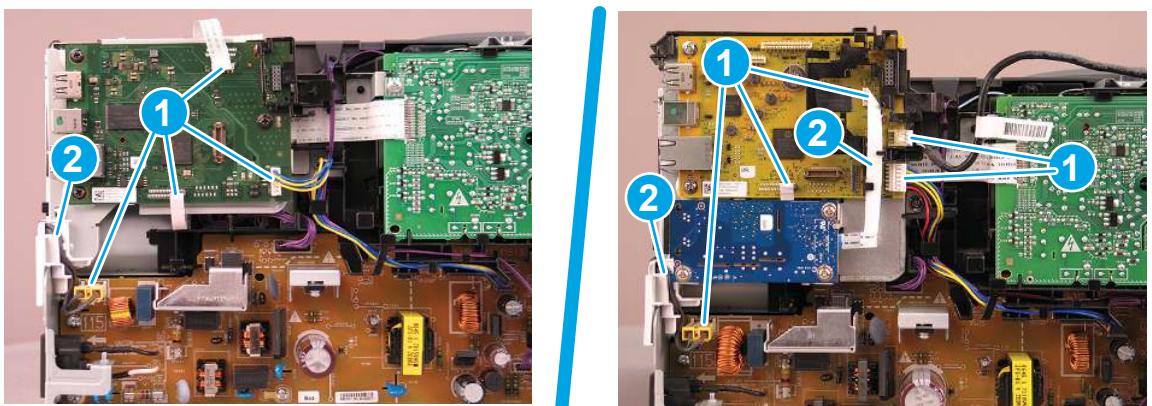


2. Do one of the following:

- **SFP only:** Disconnect the connectors (callout 1), and then release one wire harness (callout 2) from the guide.

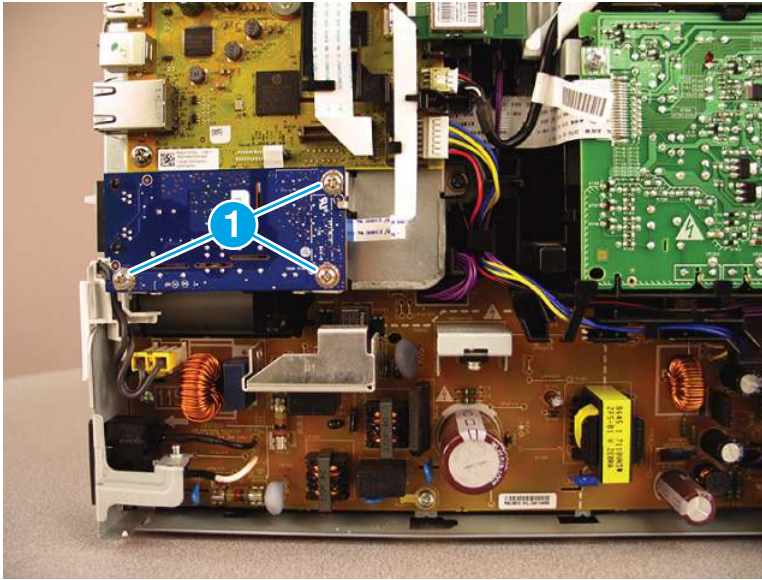
- **MFP only:** Disconnect the connectors (callout 1), and then release one wire harness and one FFC (callout 2) from the guides.

**Figure 5-904 Disconnect the connectors**



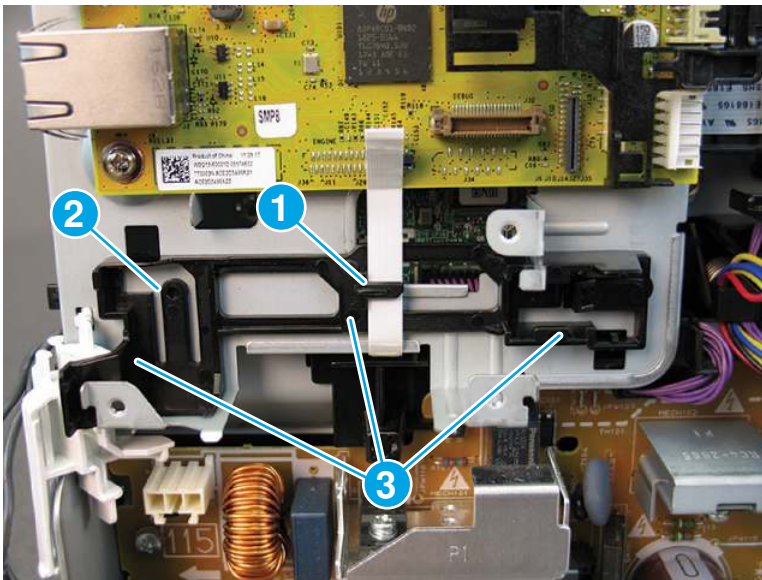
3. **MFP fax models only:** Remove three screws (callout 1), and then remove the fax PCA.

**Figure 5-905** Remove the fax PCA



4. **MFP only:** Release the FFC from the guide (callout 1), release one tab (callout 2), and then remove the FFC guide (callout 3).

**Figure 5-906** Remove the FFC guide

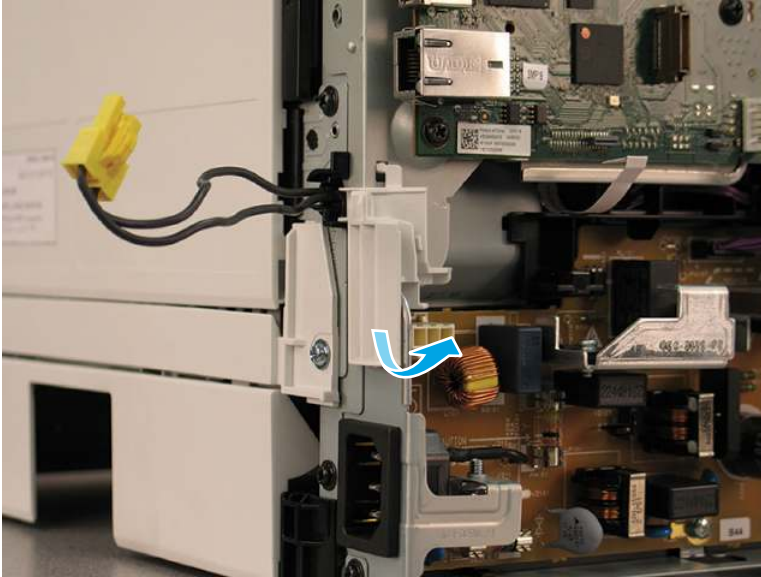


5. Remove one guide.



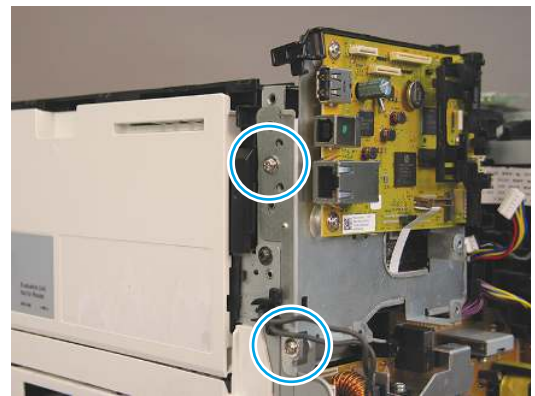
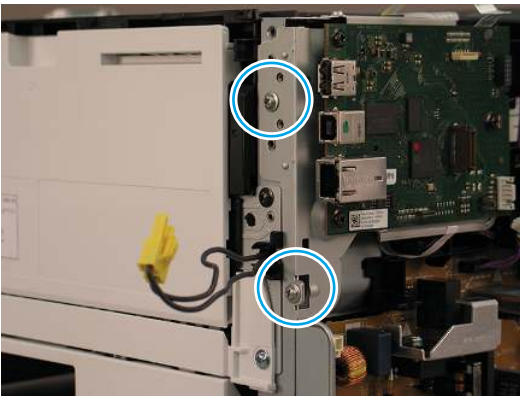
**NOTE:** A SFP printer is shown in the figure. However, the guide is identical for an MFP printer

**Figure 5-907** Remove the guide



6. Remove two screws.

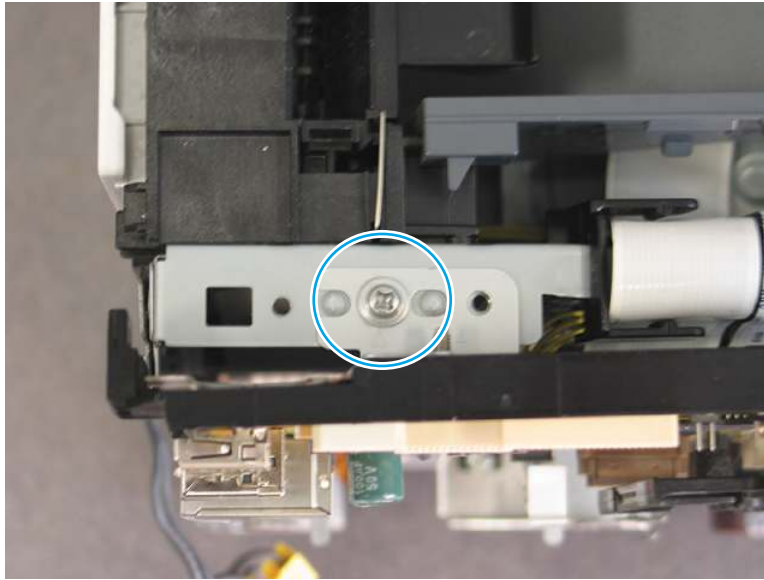
**Figure 5-908** Remove two screws





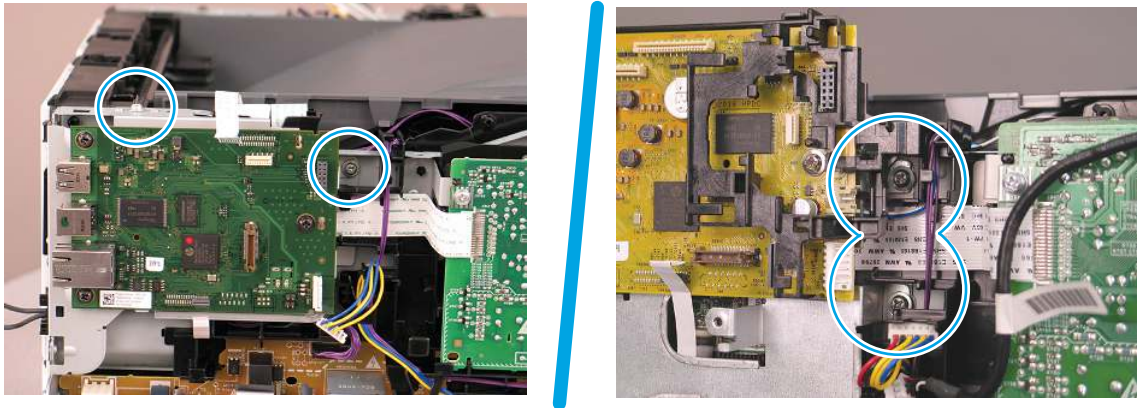
7. **MFP only:** Remove one screw.

**Figure 5-909** Remove one screw



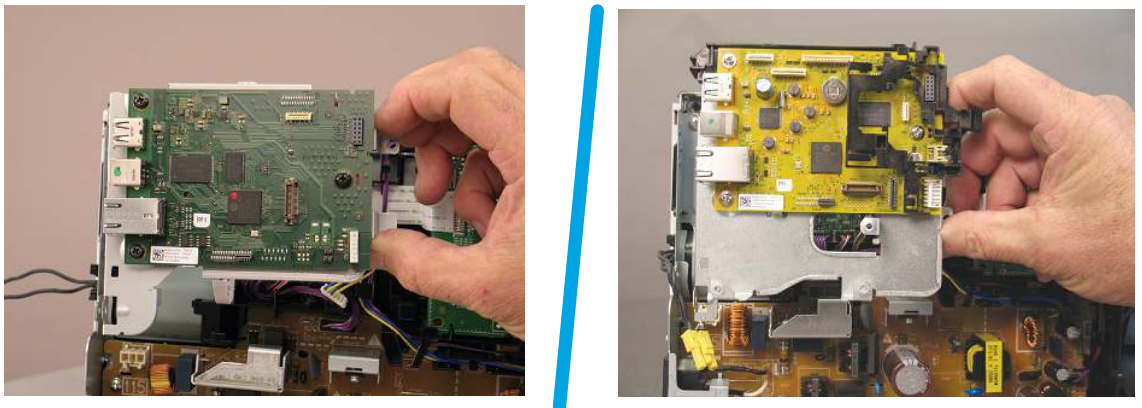
8. Support the formatter and bracket, and then remove two screws.

**Figure 5-910** Remove two screws



9. Remove the sheet-metal bracket and formatter PCA.

**Figure 5-911** Remove the bracket

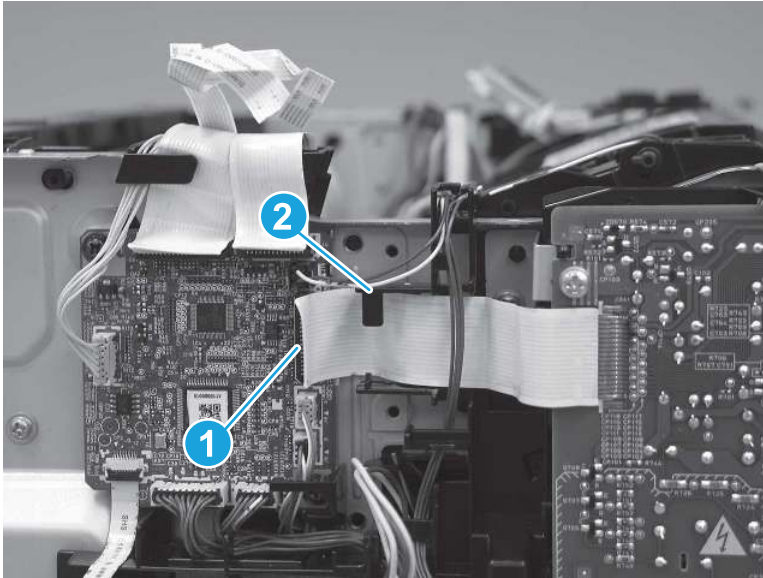


## 12. Remove the HVPS

Follow these steps to remove the HVPS.

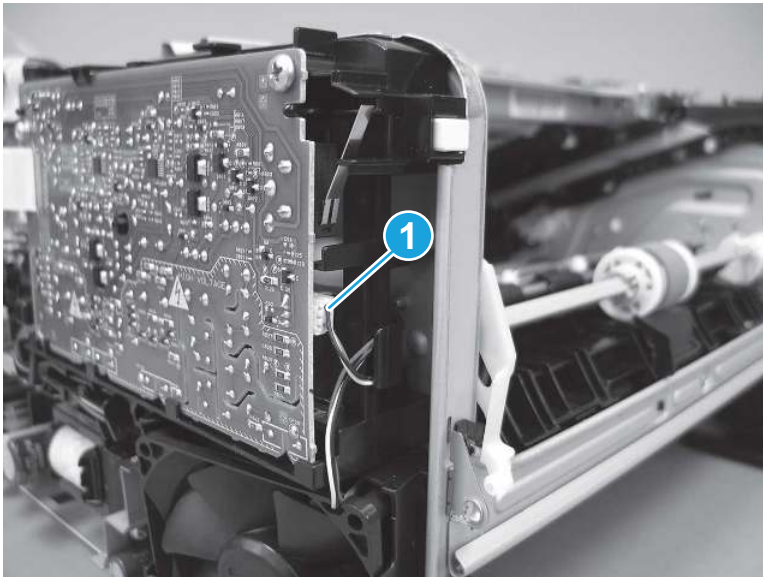
1. Disconnect one FFC (callout 1) on the DC controller, and then release it from the guide (callout 2).

**Figure 5-912** Disconnect one FFC



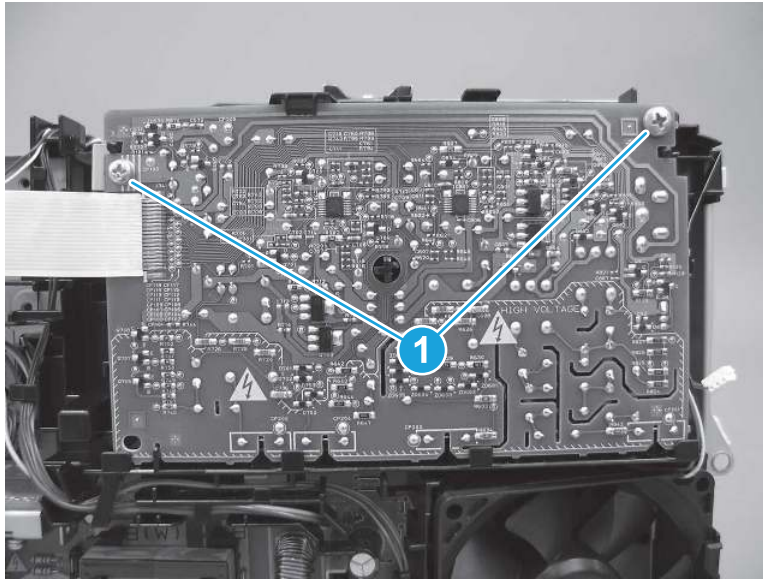
2. Disconnect one connector (callout 1).

**Figure 5-913** Disconnect one connector



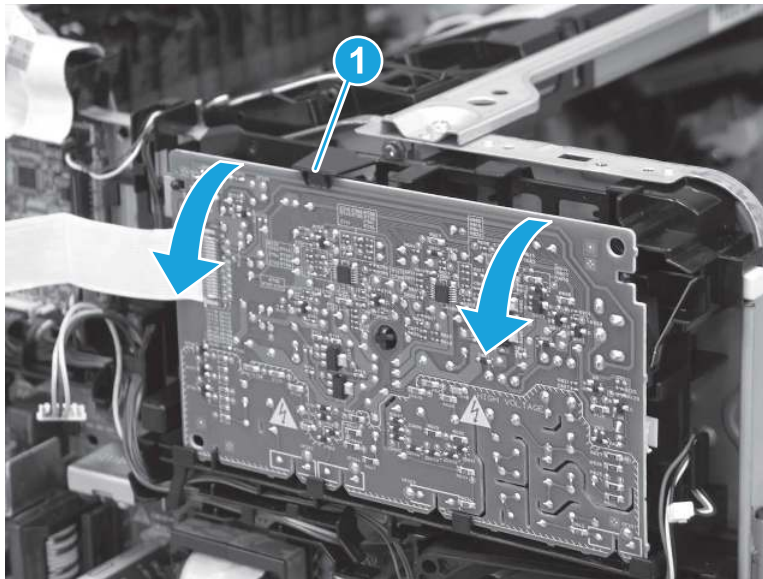
3. Remove two screws (callout 1).

**Figure 5-914** Remove two screws



4. Release one tab (callout 1), and then rotate the top of the HVPS away from the printer.

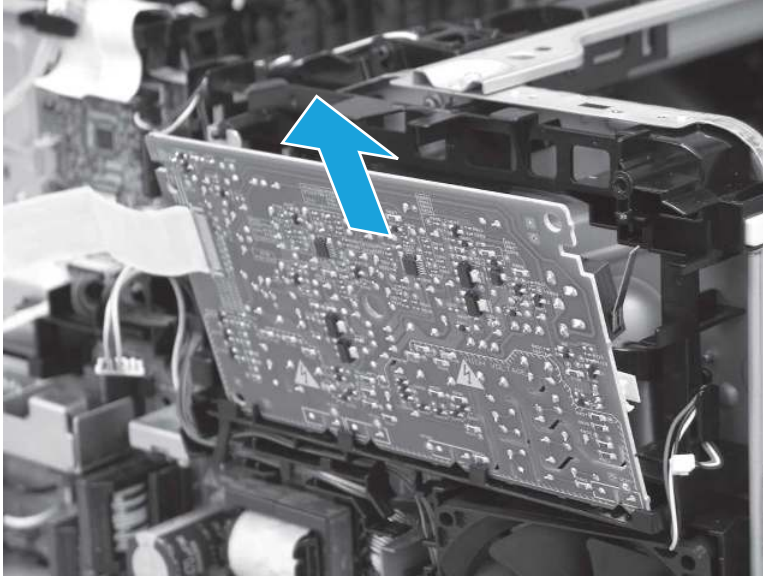
**Figure 5-915** Release one tab






5. Slide the HVPS up and away from the holder to remove it.

**Figure 5-916 Remove the HVPS**



---


 **TIP:** For reinstallation, the loop on the end of the springs needs to fit into the slots on the bottom of the board. When properly installed, the springs will touch the metal contacts on back side of the HVPS PCA.

---

### 13. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.



1. Dispose of the defective part.


 **NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

---

2. Unpack the replacement part from the packaging.

 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---



3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: Low-voltage power supply

Learn how to remove and replace the low-voltage power supply (LVPS).



[View a video of how to remove and replace the SFP LVPS.](#)



[View a video of how to remove and replace the MFP LVPS.](#)

Mean time to repair: 34 minutes SFP, 61 minutes MFP

Service level: Medium SFP, Difficult MFP

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-46** Part information

Part number	Part description
RM3-8540-000CN	LV power supply PCA (110-127V) SFP
RM3-8541-000CN	LV power supply PCA (220-240V) SFP
RM3-8542-000CN	LV power supply PCA (110-127V) MFP
RM3-8543-000CN	LV power supply PCA (220-240V) MFP

### Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.


**Figure 5-917** Remove the tray



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.


---


 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

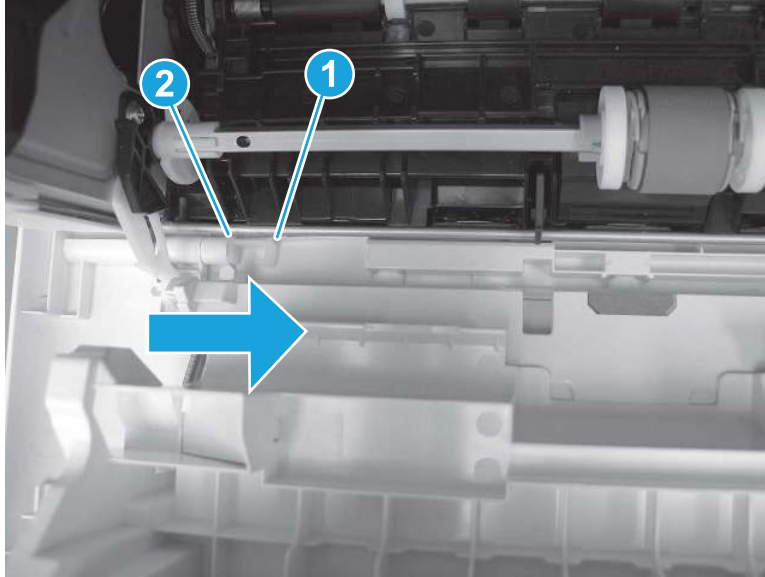
---

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

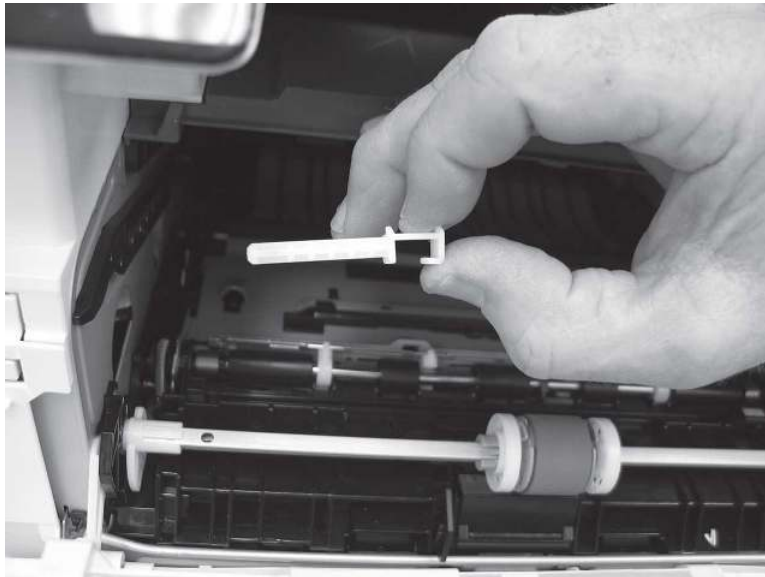
---

**Figure 5-918** Release the support shaft



2. Remove the support shaft.

**Figure 5-919** Remove the support shaft



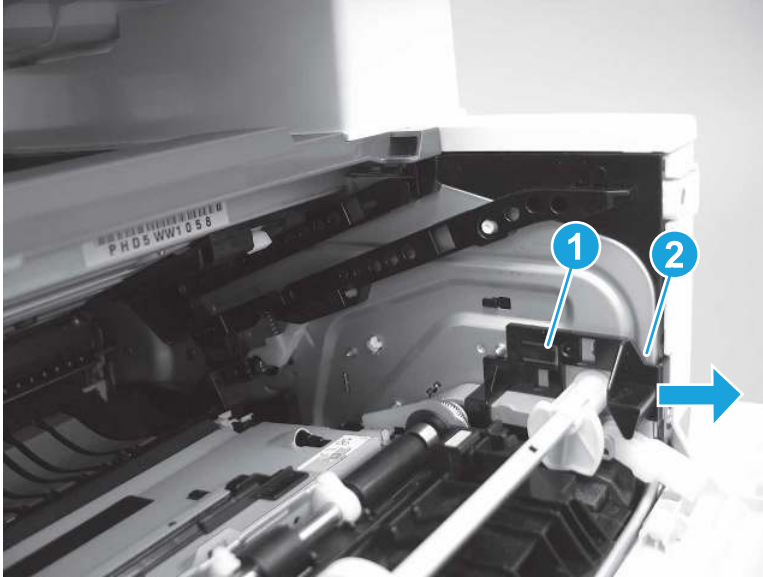
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

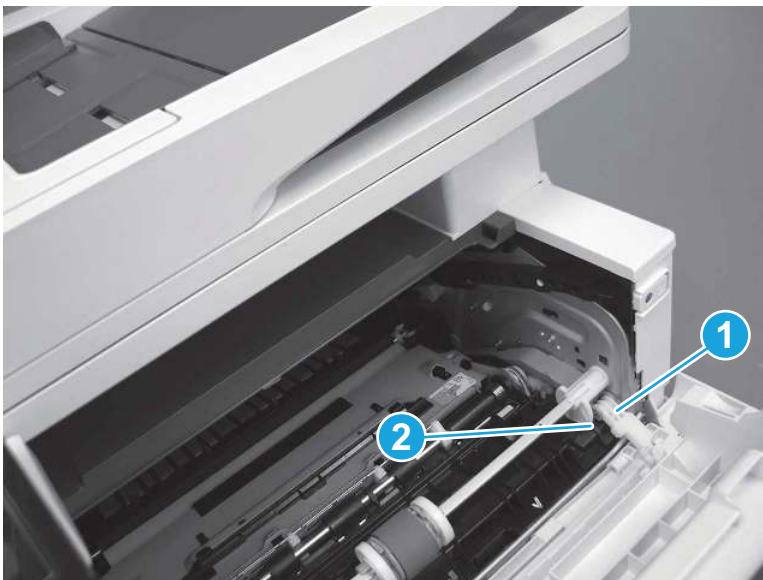
---

**Figure 5-920 Remove the guide**



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-921 Release the pressure-release link**



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

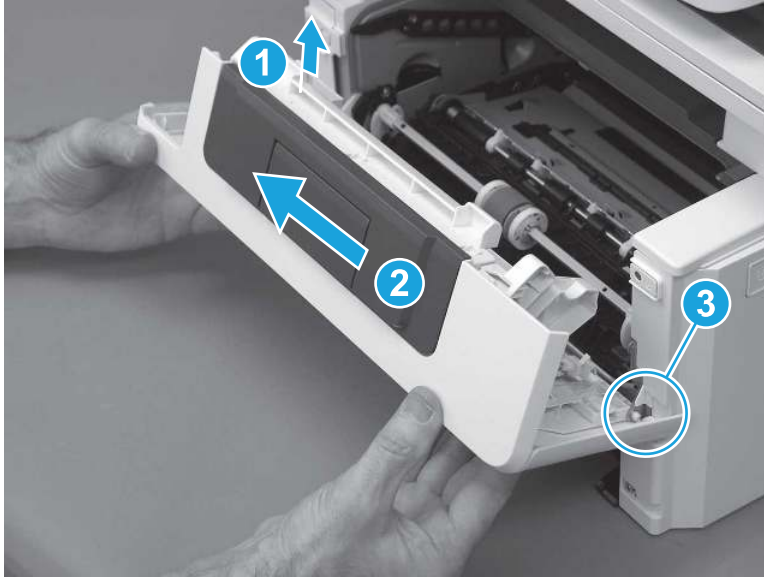
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

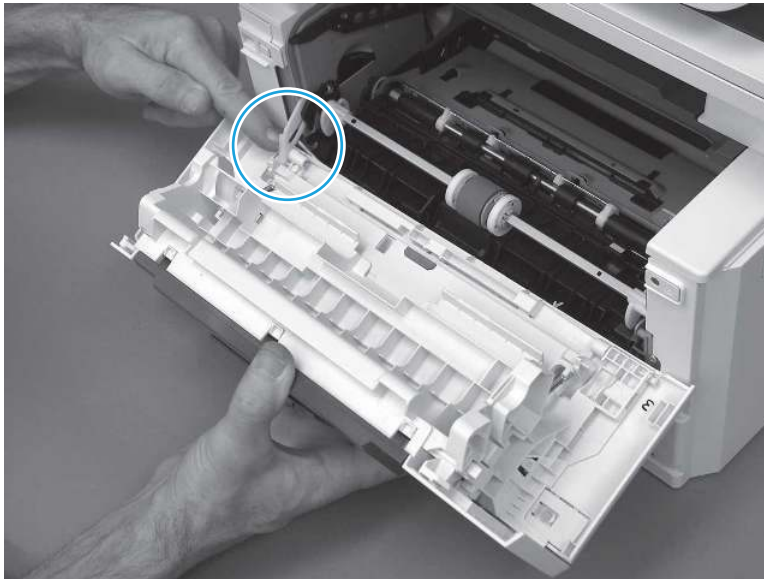
---

**Figure 5-922** Release the door



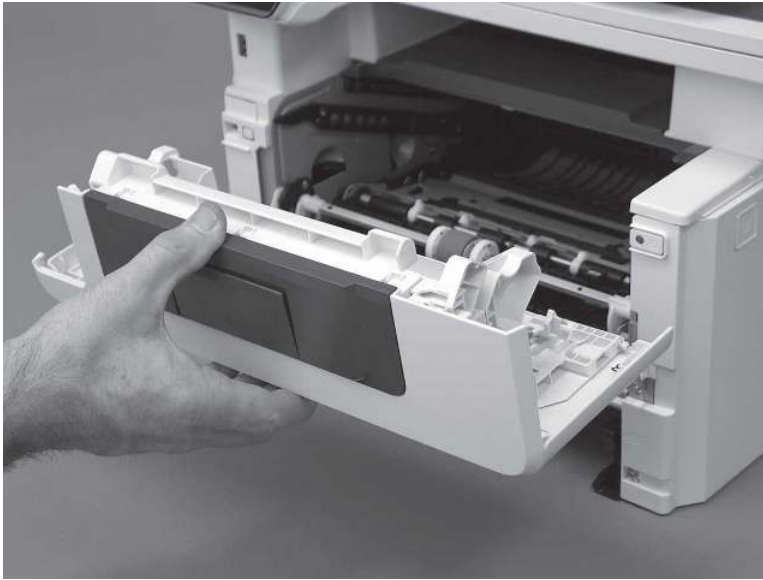
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-923** Release the left-side retainer arm



7. Remove the door.

**Figure 5-924** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

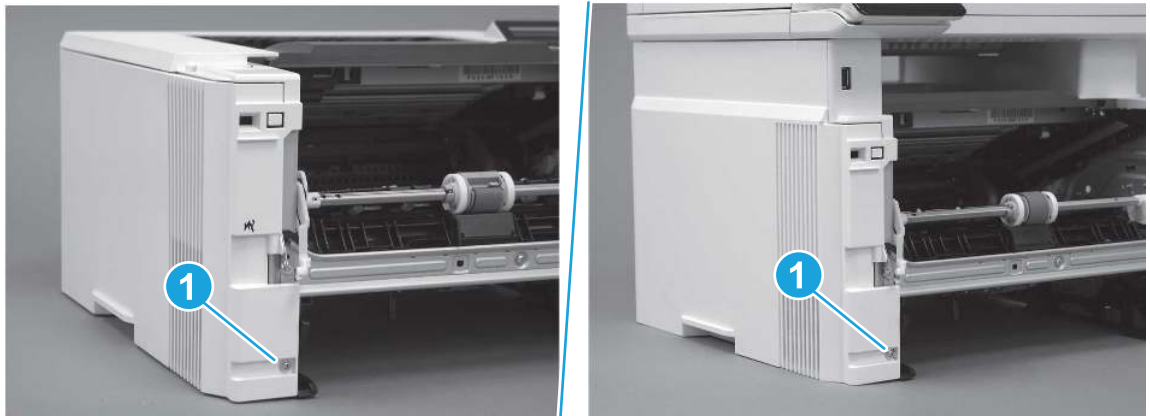
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

1. Remove one screw (callout 1).

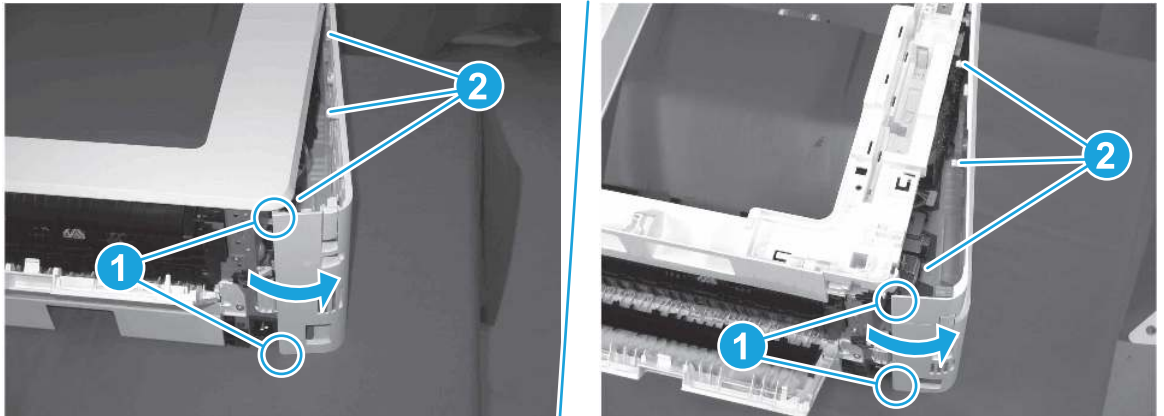
**Figure 5-925** Remove one screw





2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

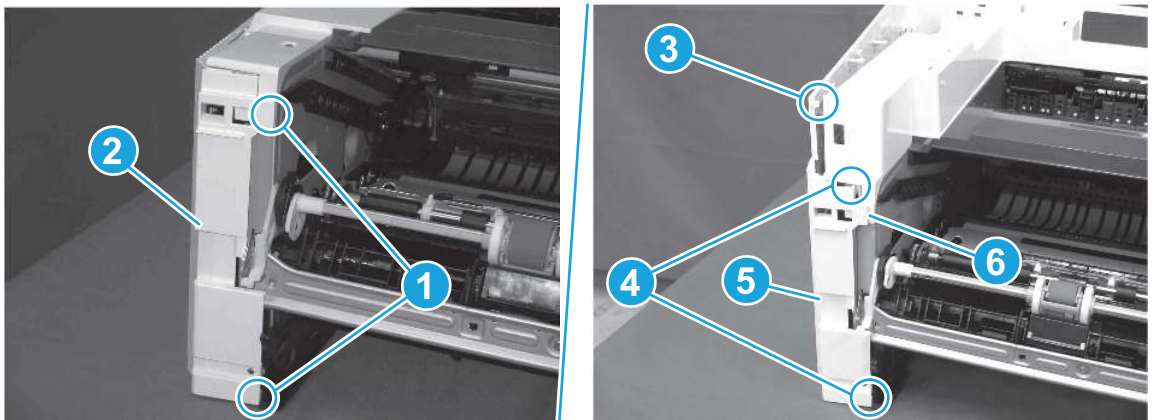
**Figure 5-926** Release two bosses and three tabs



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-927** Remove the cover



#### 4. Remove the right cover

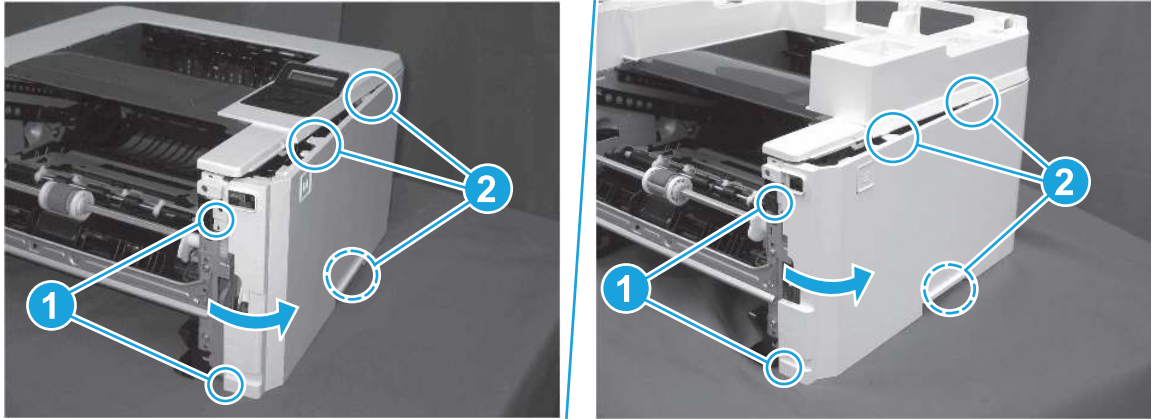
Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

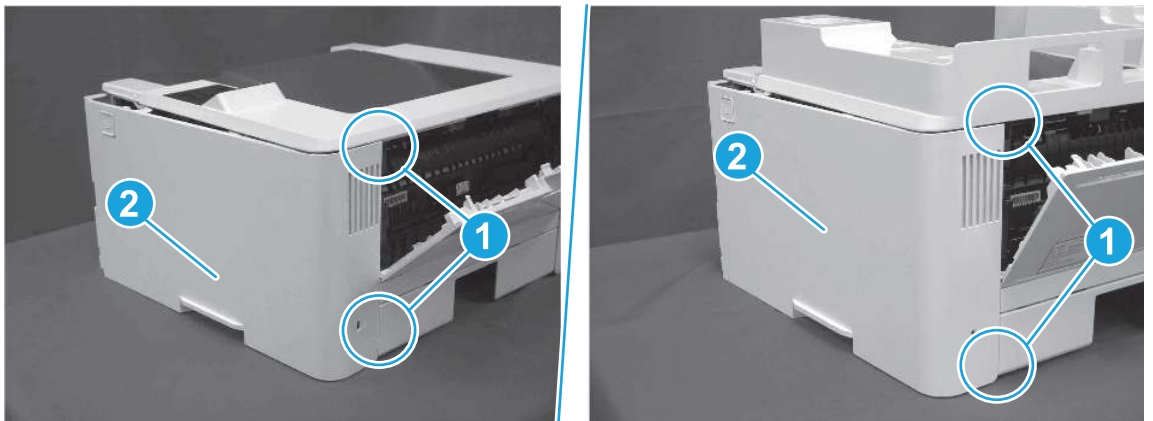


**Figure 5-928** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-929** Remove the cover

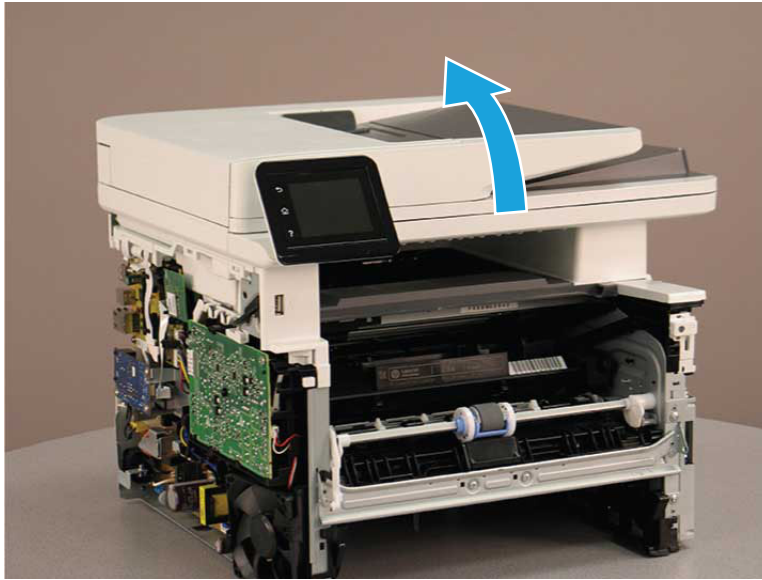


**5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)**

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

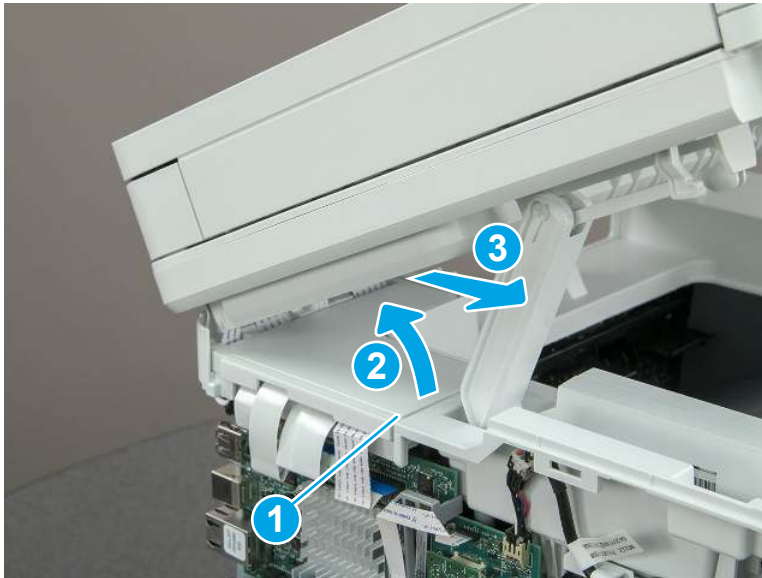
1. If the ISA is not already raised, raise it now.

**Figure 5-930** Raise the ISA




2. Release the tab (callout 1), rotate the front edge of the cover up (callout 2), and then slide it toward the front of the printer to remove it (callout 3).

**Figure 5-931** Remove the ISA FFC cover




## 6. Remove the integrated scanner assembly (MFP only)

Follow these steps to remove the integrated scanner assembly (MFP only).

 **NOTE:** MFP models only. The integrated scanner assembly (ISA) includes the sub-scanner assembly (SSA) and the automatic document feeder (ADF).

1. Disconnect three FFCs (callout 1), and then remove the ferrite (callout 2) from the holder.

 **CAUTION:** The ferrite is not captive on the FFC. Do not lose the ferrite while handling the ISA.

**Figure 5-932** Disconnect three FFCs



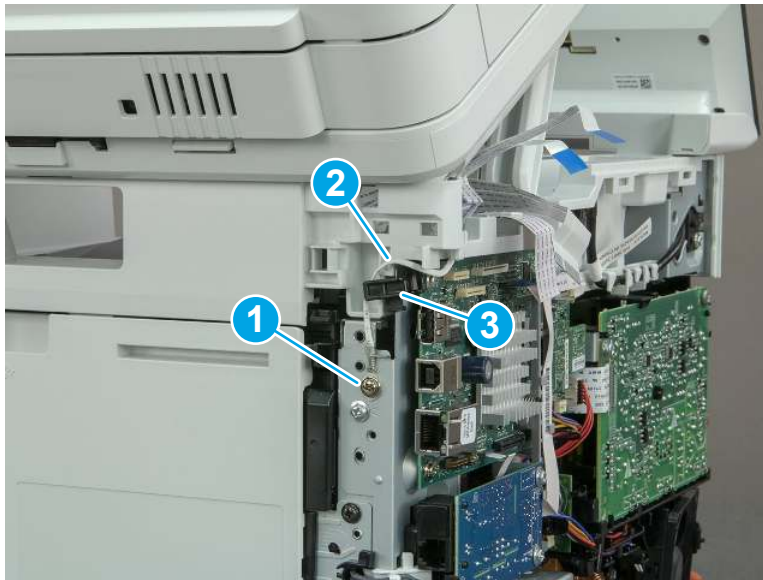
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-933** Release the tape



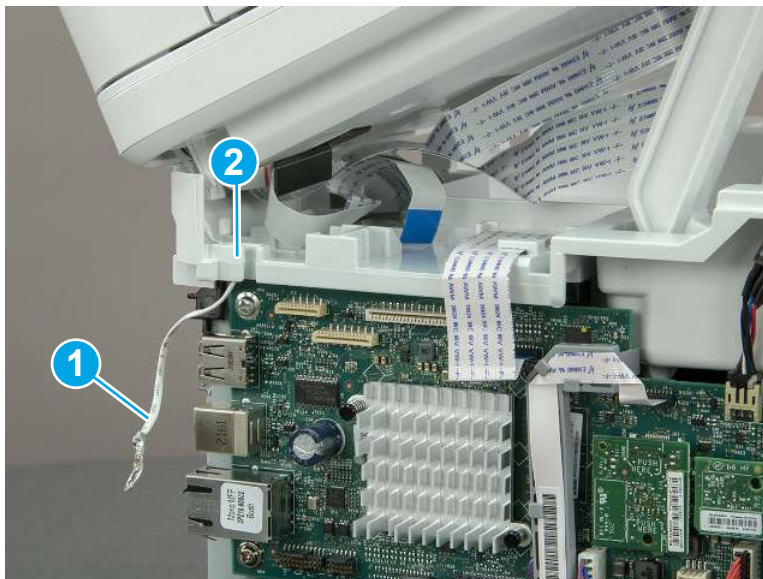
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-934** Release the ground wire



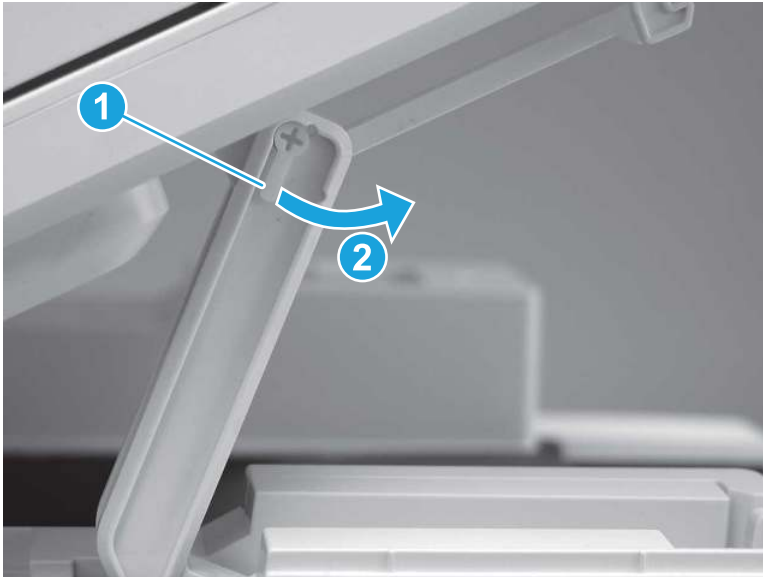
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-935** Release the ground wire



5. Release one tab (callout 1), and then rotate the ISA slider pin (callout 2) towards the front of the printer to release it.

**Figure 5-936** Release one tab and rotate the slider pin

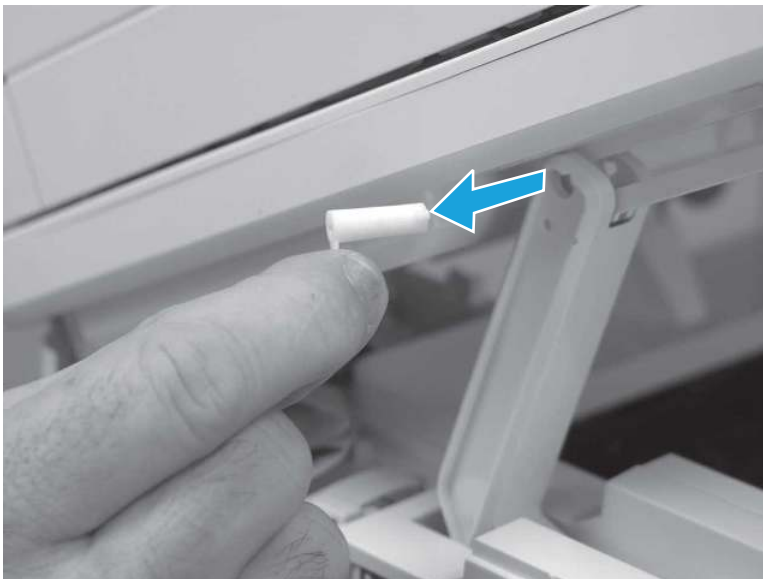


6. Remove the slider pin.



**Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

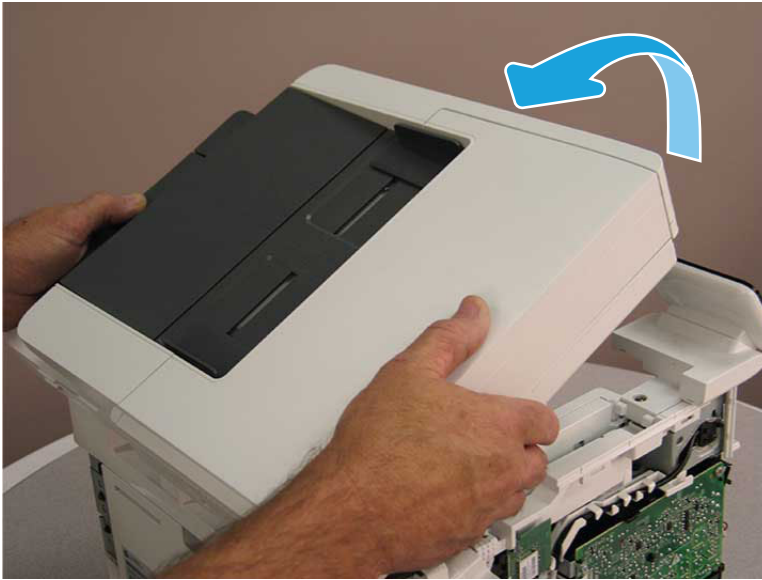
**Figure 5-937** Remove the slider pin





7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-938** Rotate the ISA towards the rear of the printer



8. Slide the ISA as shown to release it.

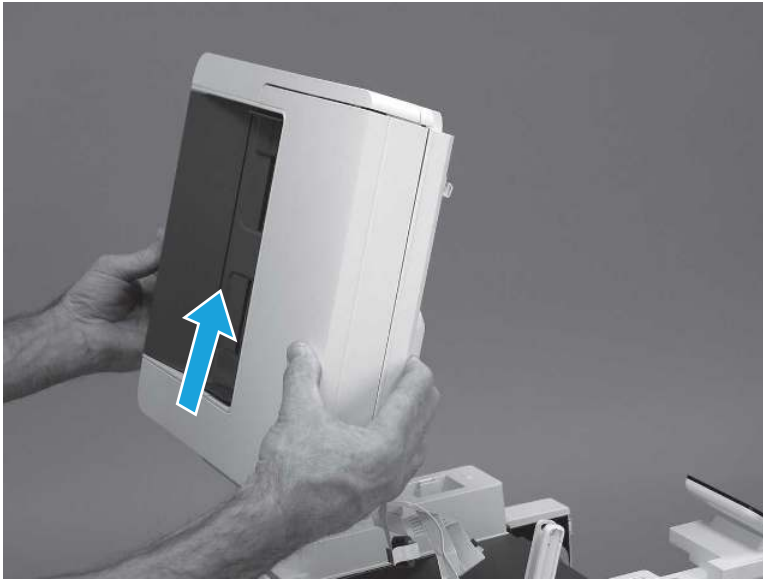
**Figure 5-939** Release the ISA





9. Remove the ISA.

**Figure 5-940** Remove the ISA

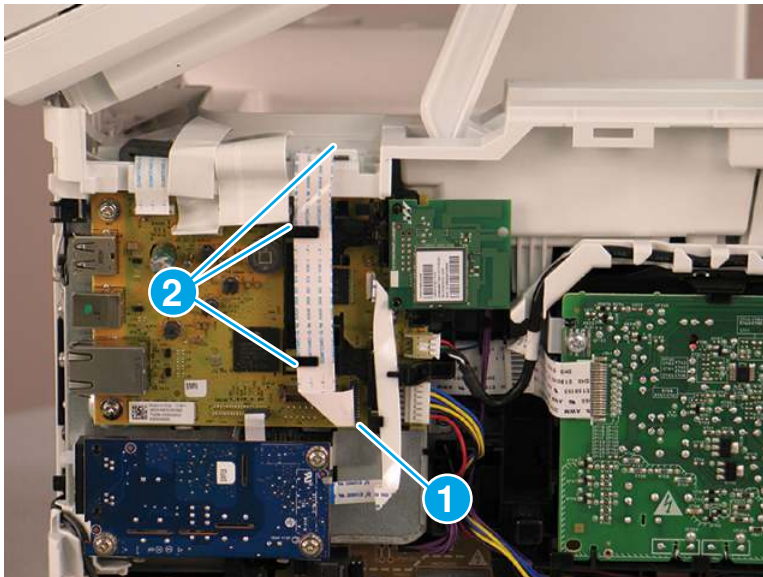


#### 7. Remove the control panel (MFP)

Follow these steps to remove the control panel (MFP).

1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-941** Disconnect one connector



2. Remove one screw (callout 1).

**Figure 5-942 Remove one screw**



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-943 Release two tabs**



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-944** Remove the cover



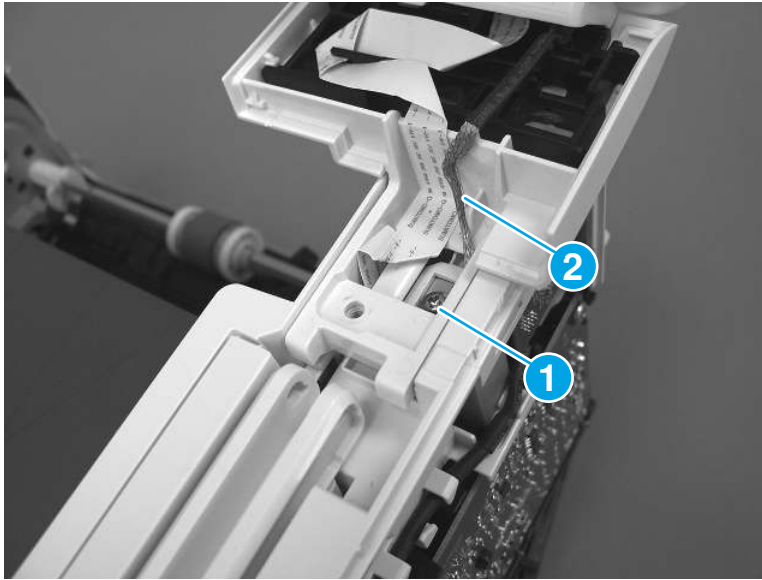
5. Remove the control-panel mount cover.

**Figure 5-945** Remove the cover



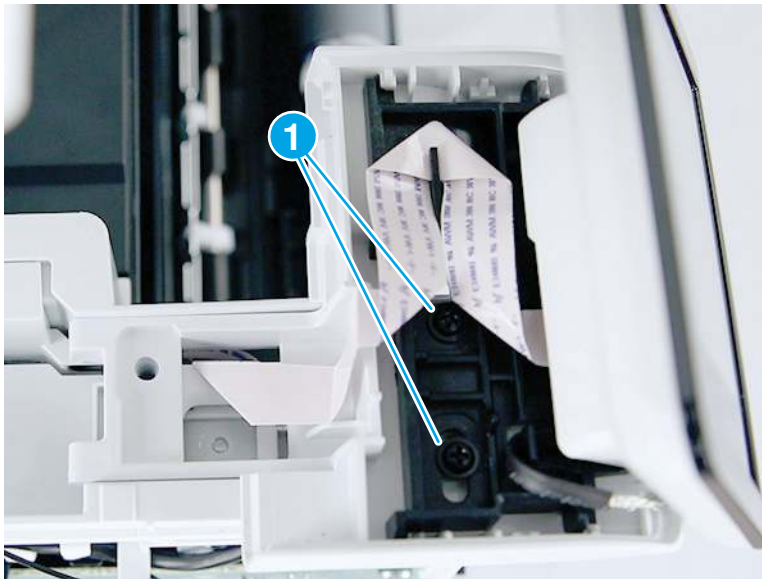
6. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-946** Remove one screw



7. Move the FFC out of the way, and then remove two screws (callout 1).

**Figure 5-947** Remove two screws



8. Slightly lift up the control-panel assembly to separate it from the top cover.

---

**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

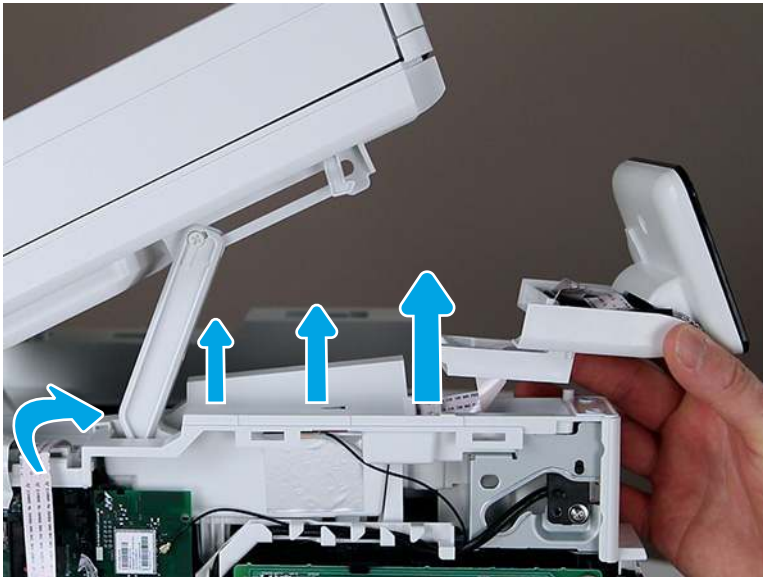
---

**Figure 5-948** Lift up the control-panel assembly



9. Lift up the control-panel FFC cover to remove the control-panel assembly.

**Figure 5-949** Remove the control-panel assembly



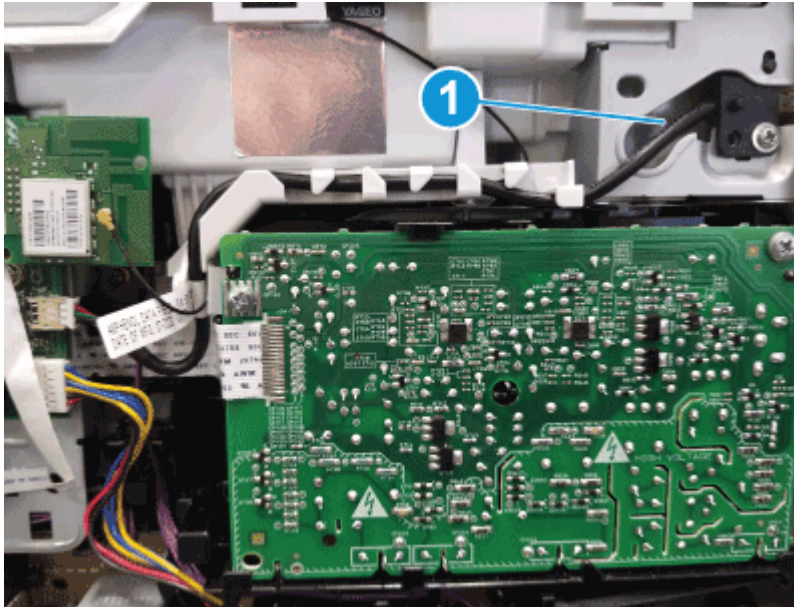
### 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).



1. Release the USB cable (callout 1) from the cable guide.

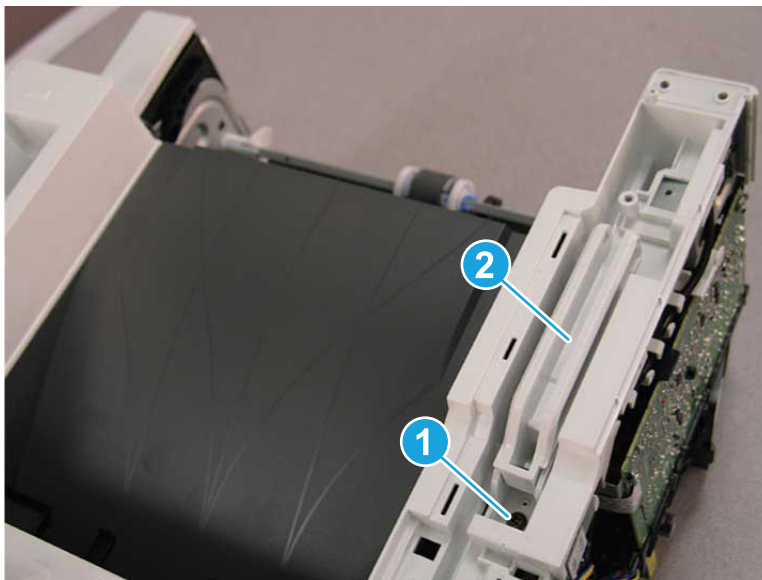
**Figure 5-950** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

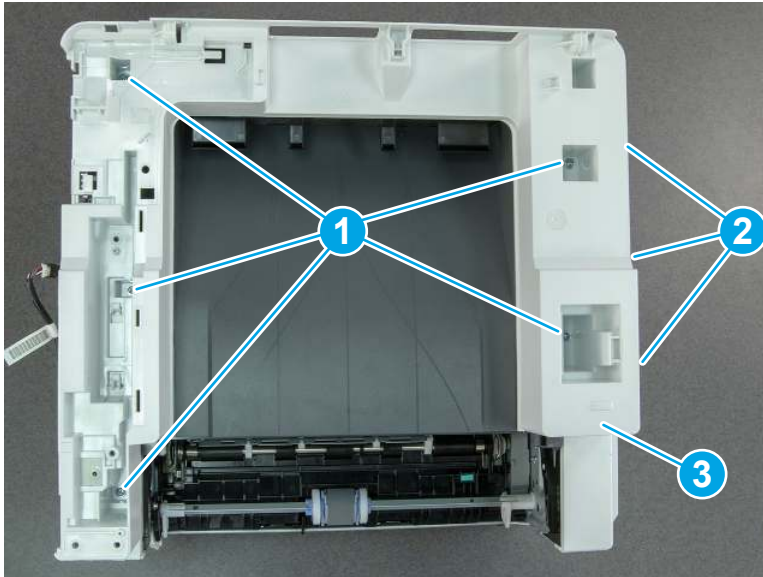
**Figure 5-951** Remove the support arm





3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-952** Remove the top cover



#### 9. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

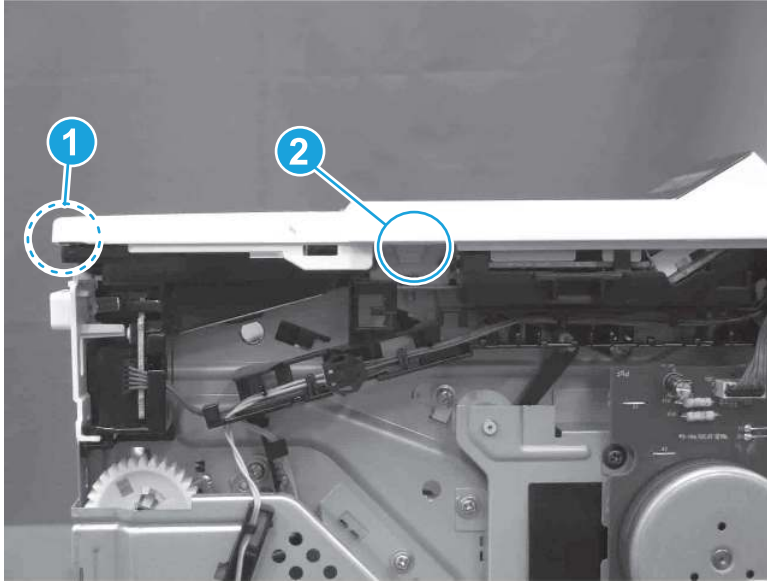
1. Remove one screw.

**Figure 5-953** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-954** Release one boss and one tab



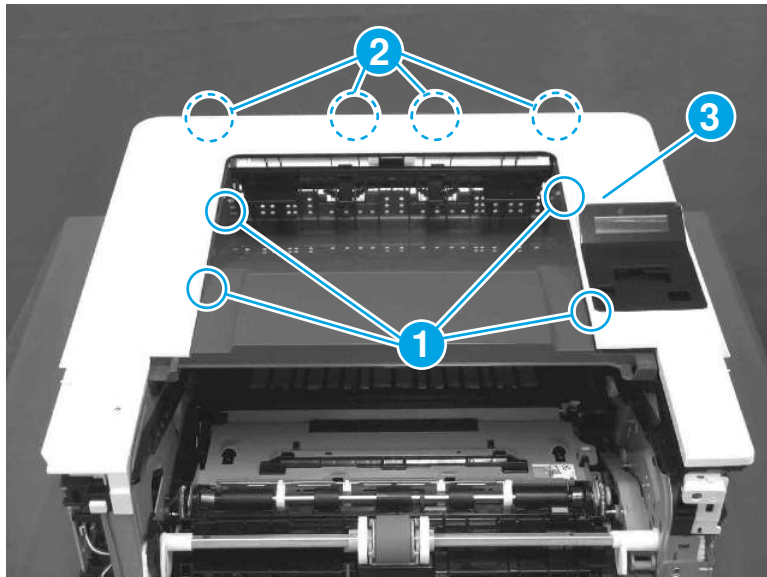
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---


**Figure 5-955** Remove the cover



## 10. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

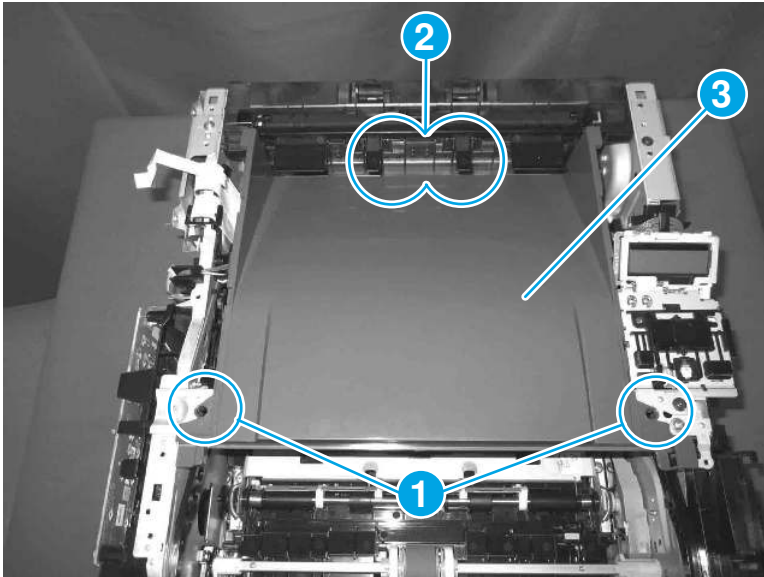
---

 **NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

---

- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).

**Figure 5-956** Remove the cover

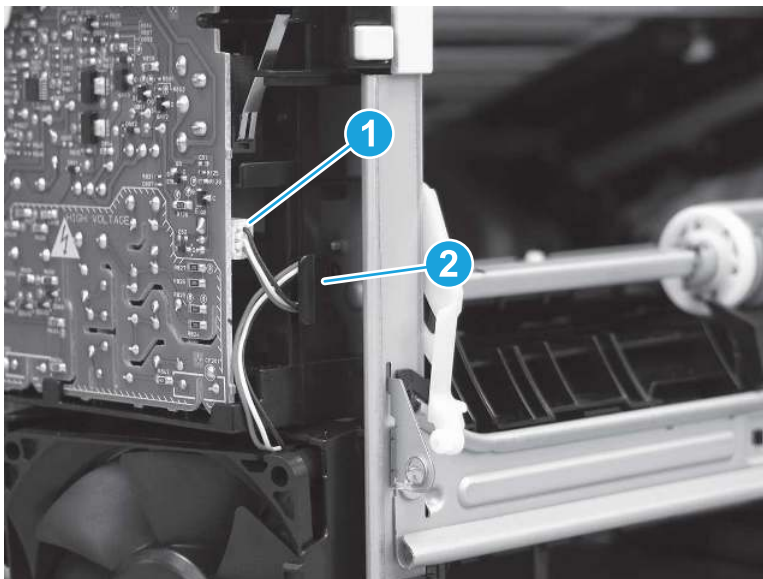


### 11. Remove the fan (FM1)

Follow these steps to remove the fan (FM1).

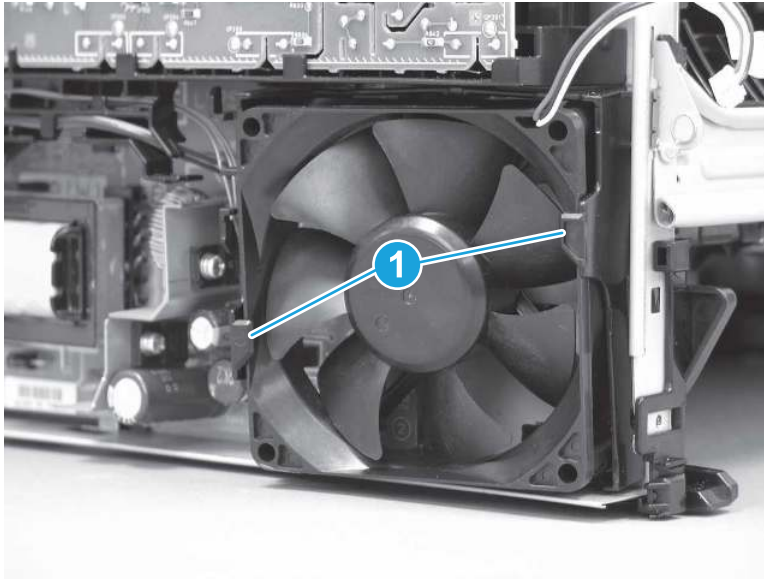
1. Disconnect one connector (callout 1), and then release the wire harness from the retainer (callout 2).

**Figure 5-957** Disconnect one connector




2. Release two tabs (callout 1).

**Figure 5-958** Release two tabs



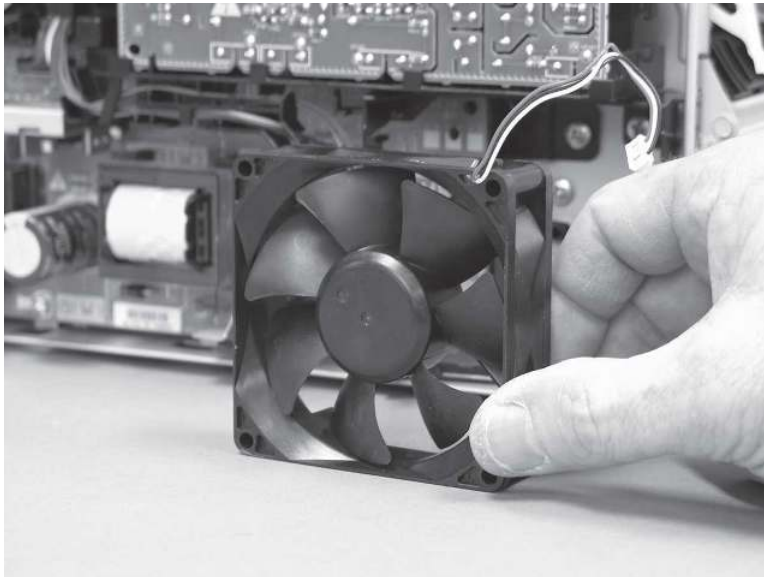
3. Remove the fan.

---

 **Reinstallation tip:** The fan must be correctly installed so that air is drawn into the printer. Make sure that the two arrows embossed on the right-side of the fan body—which indicate air flow direction—face upward and into the printer.

---

**Figure 5-959** Remove the fan




## 12. Remove the sheet-metal formatter bracket and formatter PCA

Follow these steps to remove the formatter bracket.




1. Do one of the following:

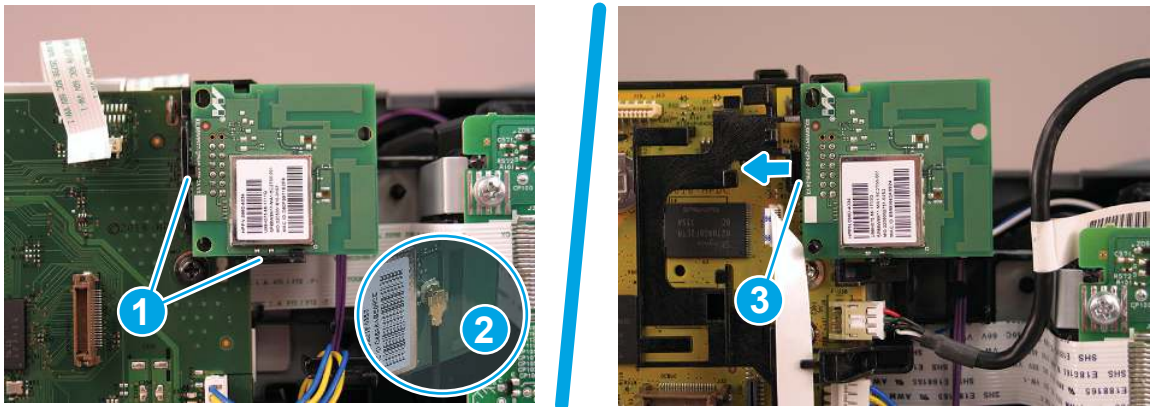
- **SFP only:** Release two tabs (callout 1), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **NOTE:** Disconnect the WiFi antenna (callout 2) before releasing the tabs.

- **MFP only:** Release one tab (callout 3), and then carefully pull the wireless PCA straight off of the formatter PCA to remove it.

 **TIP:** Push the tab to the left to release it.

**Figure 5-960 Remove the wireless PCA**

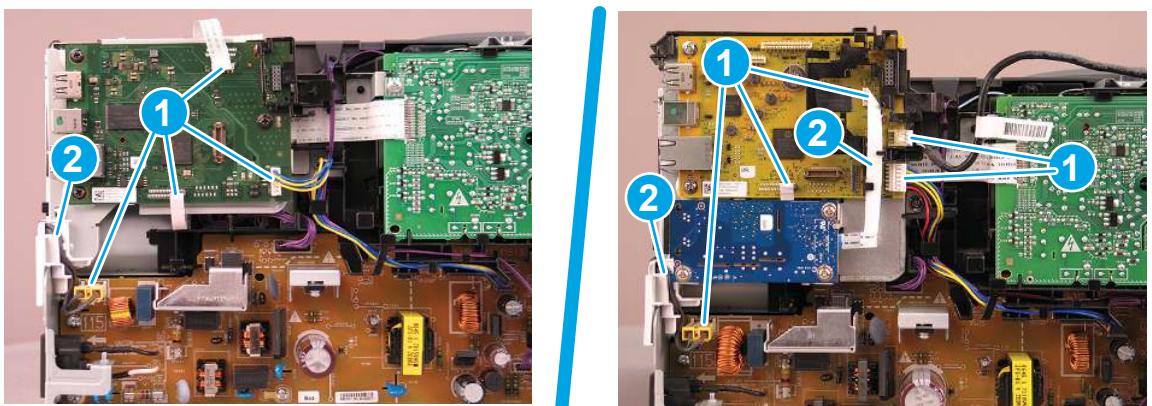


2. Do one of the following:

- **SFP only:** Disconnect the connectors (callout 1), and then release one wire harness (callout 2) from the guide.

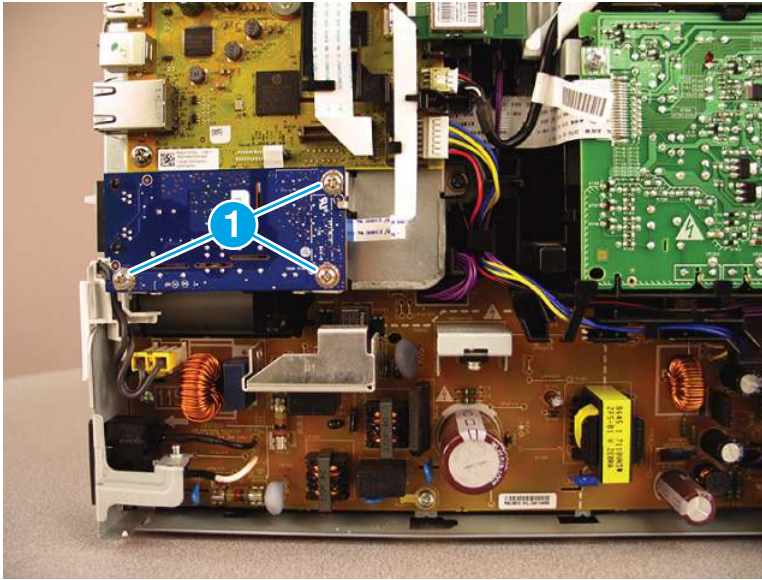
- **MFP only:** Disconnect the connectors (callout 1), and then release one wire harness and one FFC (callout 2) from the guides.

**Figure 5-961 Disconnect the connectors**



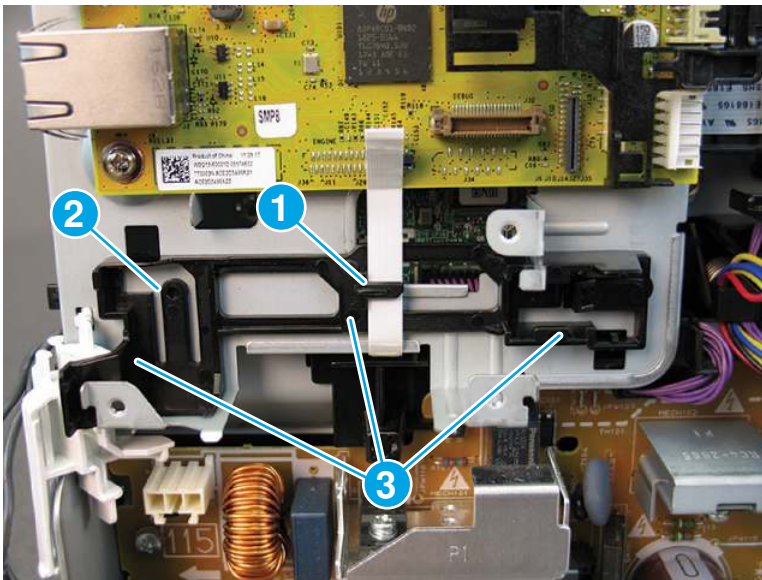
3. **MFP fax models only:** Remove three screws (callout 1), and then remove the fax PCA.

**Figure 5-962** Remove the fax PCA



4. **MFP only:** Release the FFC from the guide (callout 1), release one tab (callout 2), and then remove the FFC guide (callout 3).

**Figure 5-963** Remove the FFC guide



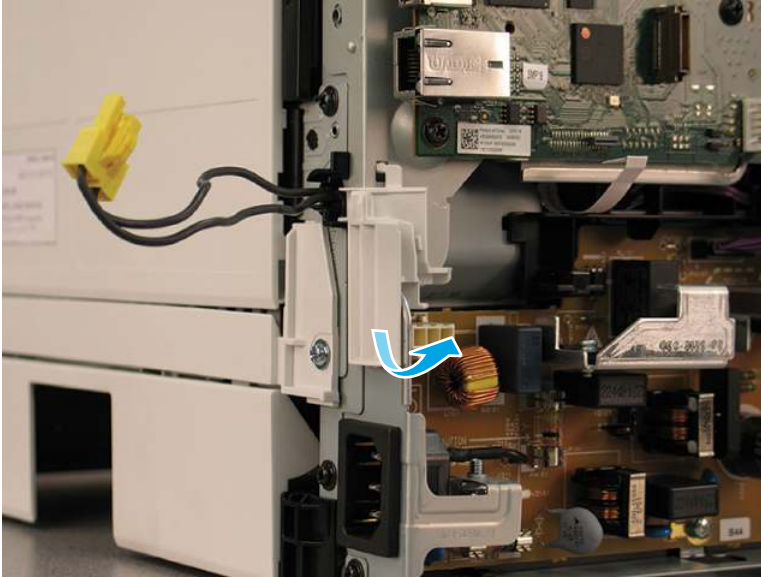
5. Remove one guide.



**NOTE:** A SFP printer is shown in the figure. However, the guide is identical for an MFP printer

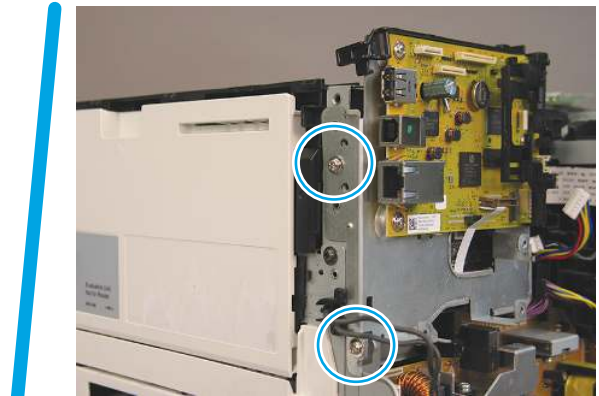
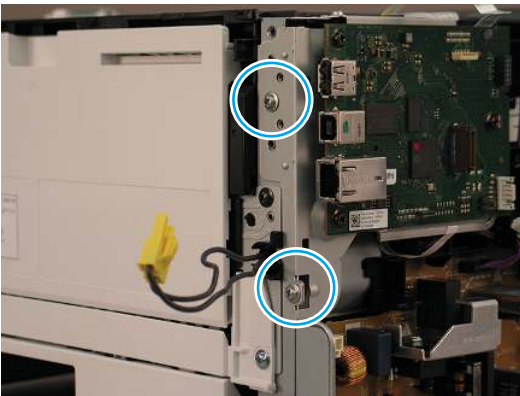


**Figure 5-964** Remove the guide



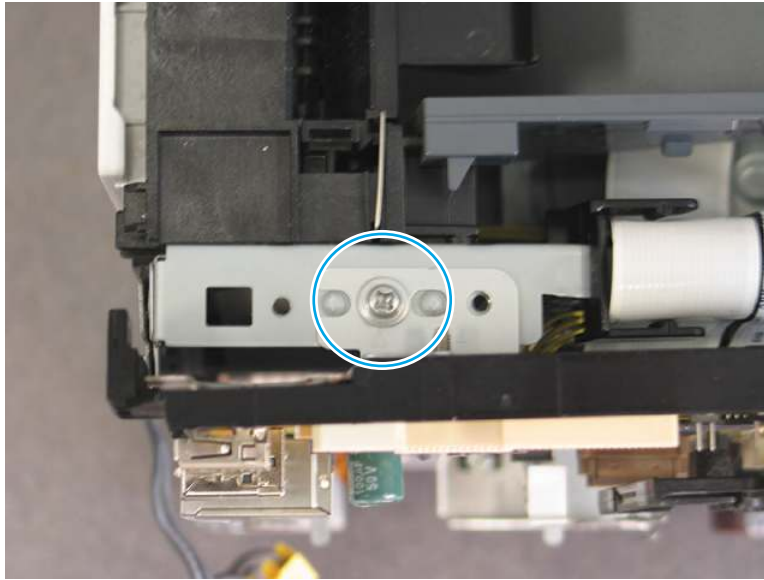
6. Remove two screws.

**Figure 5-965** Remove two screws



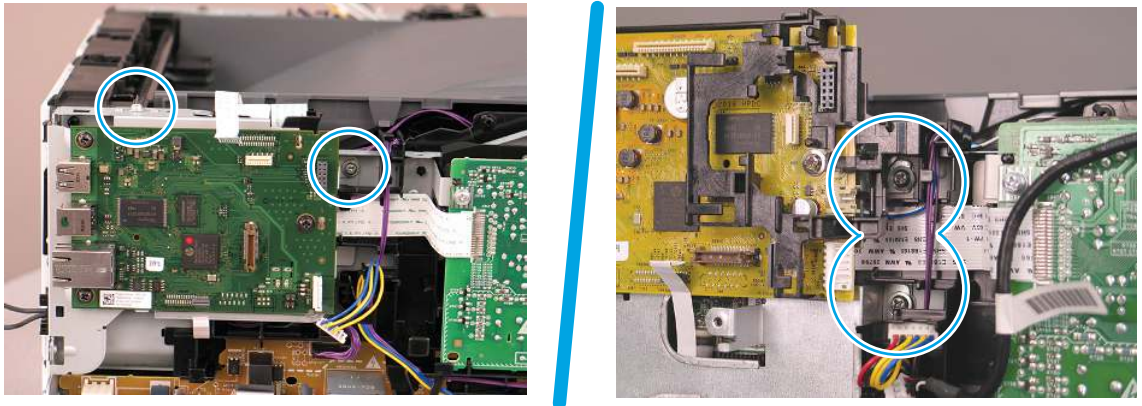
7. **MFP only:** Remove one screw.

**Figure 5-966** Remove one screw



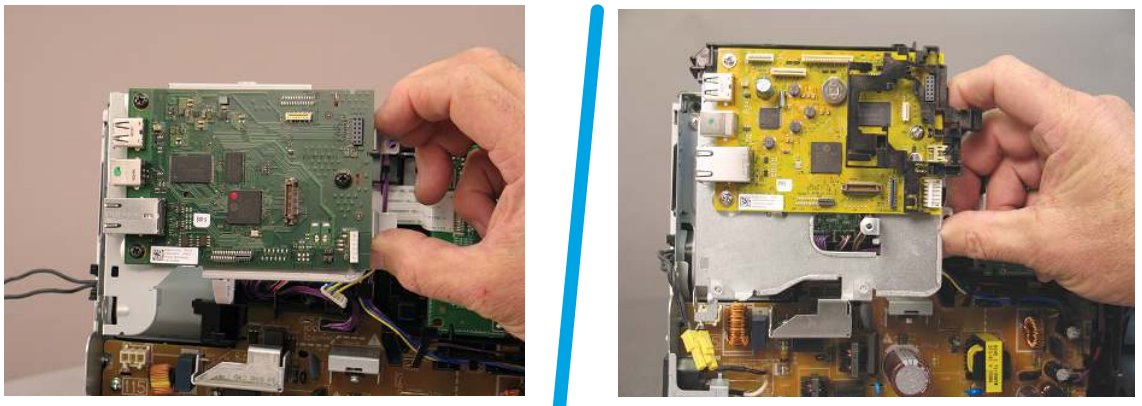
8. Support the formatter and bracket, and then remove two screws.

**Figure 5-967** Remove two screws



9. Remove the sheet-metal bracket and formatter PCA.

**Figure 5-968** Remove the bracket

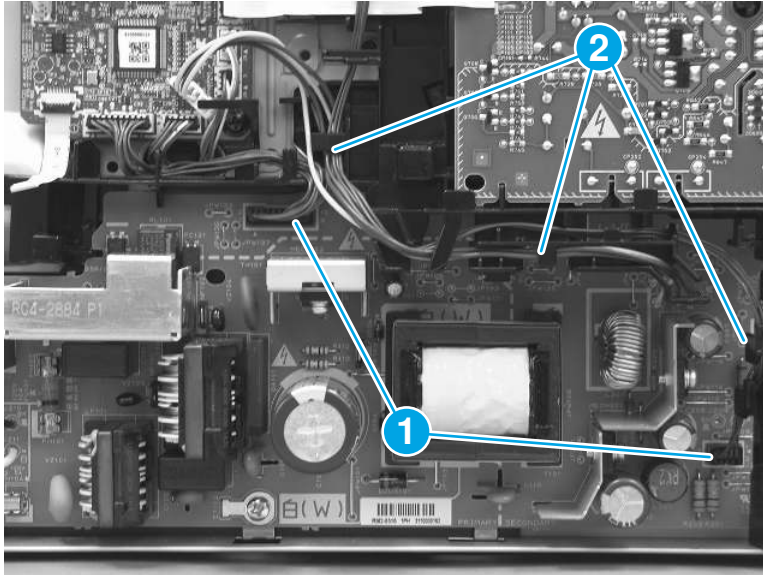


### 13. Remove the LVPS

Follow these steps to remove the LVPS.

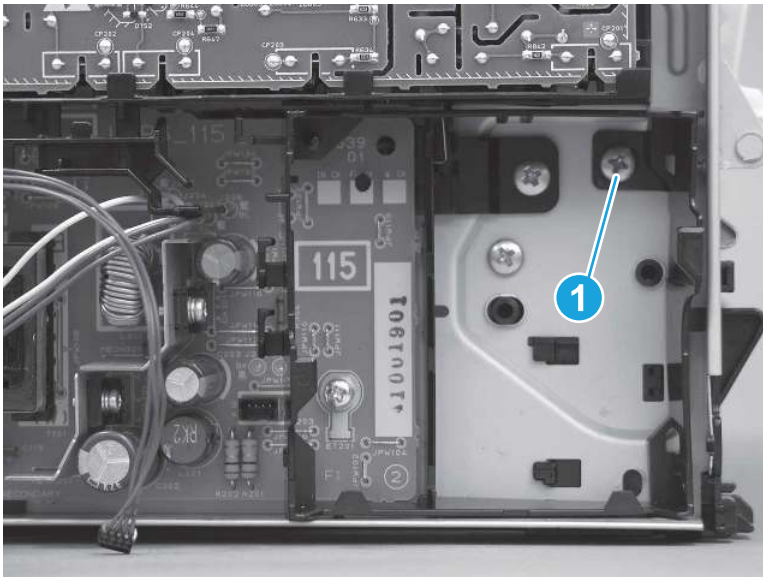
1. Disconnect two connectors (callout 1) on the LVPS, and then release the wire harnesses from the guides (callout 2).

**Figure 5-969** Disconnect two connectors



2. Remove one screw (callout 1).

**Figure 5-970** Remove one screw



3. Release one tab at the top-left side of the fan holder (callout 1), and then rotate the top-left side corner of the holder away from the printer.


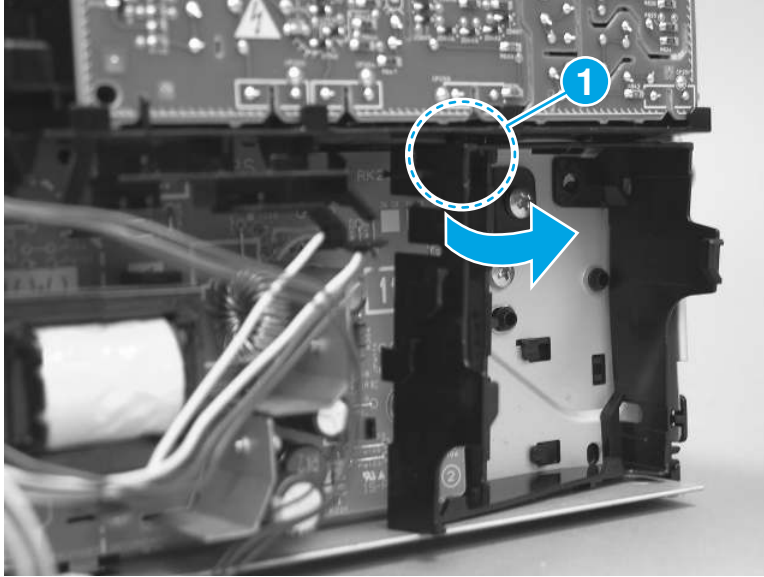
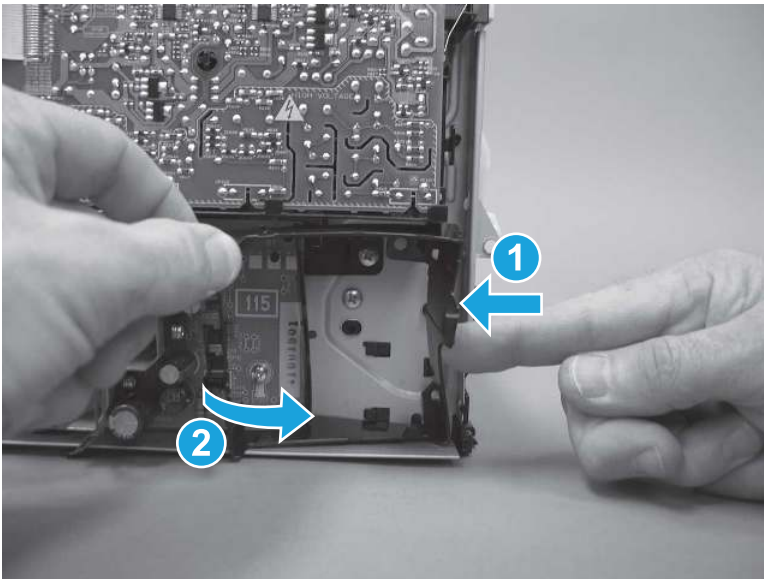
 **Reinstallation tip:** Use a flat blade screwdriver to slightly flex the top of the holder down to make it easier to disengage this tab.

Figure 5-971 Release one tab



4. Slightly flex the right side of the holder to release one tab (callout 1), and then rotate the top of the holder away from the printer (callout 2).

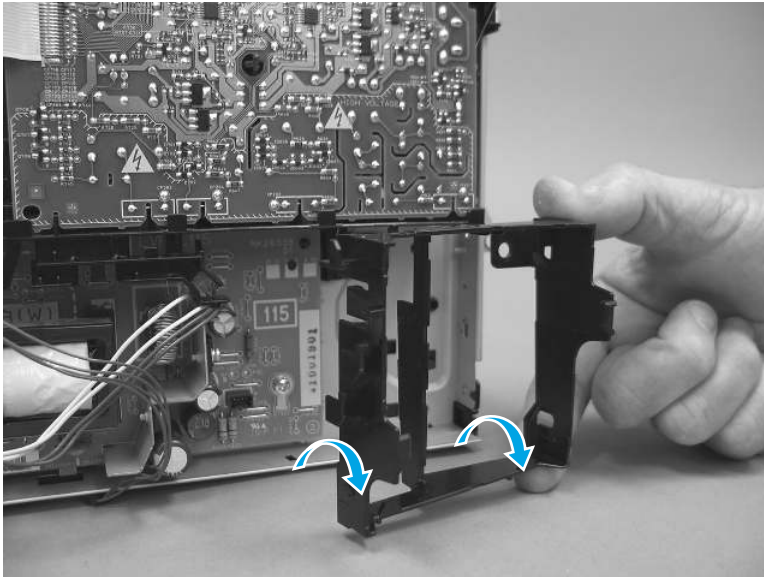
Figure 5-972 Release one tab





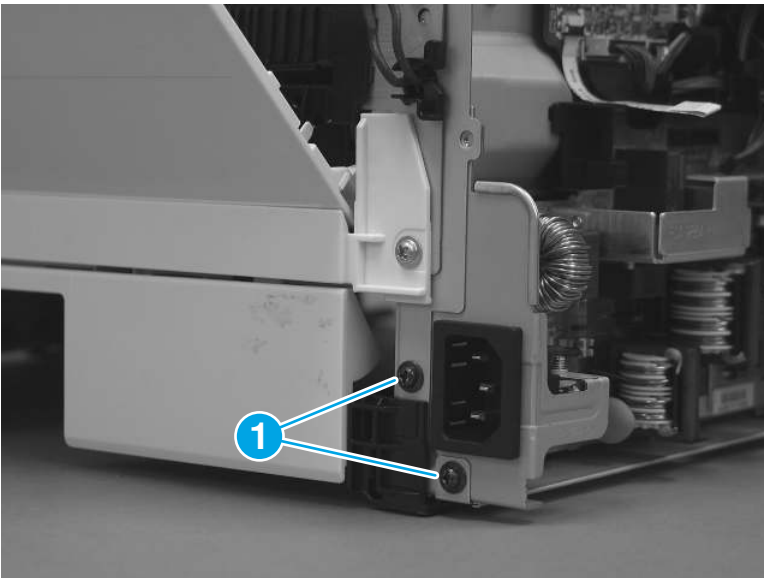
5. Lift the holder up to release two alignment tabs on the bottom of the holder, and then remove the holder.

**Figure 5-973** Remove the holder



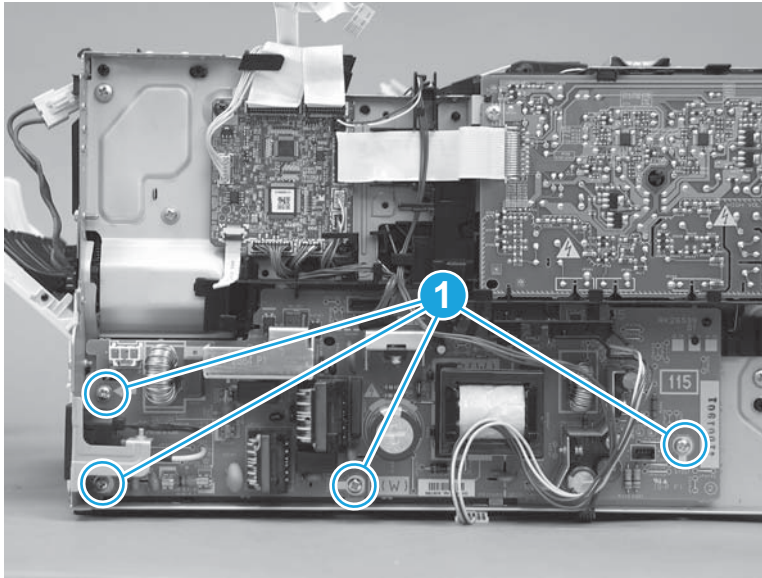
6. Remove two screws (callout 1).

**Figure 5-974** Remove two screws



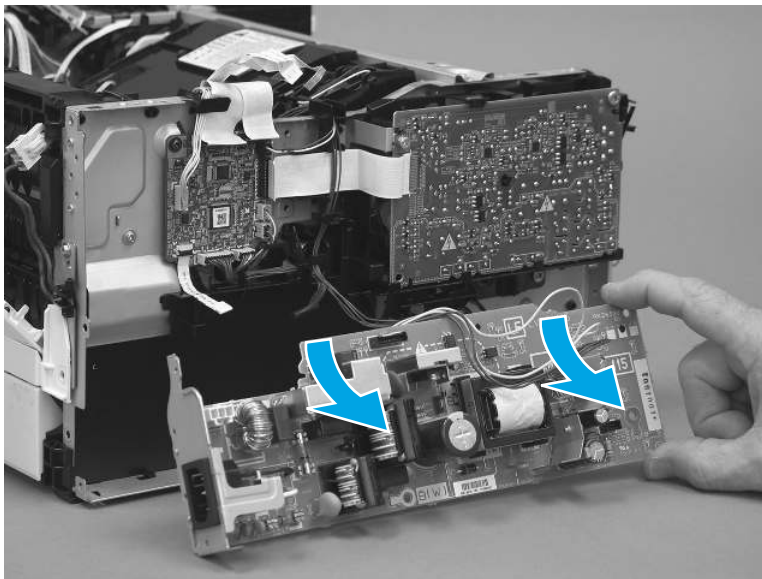
7. Remove three screws (callout 1).

**Figure 5-975 Remove four screws**



8. Rotate the bottom of the LVPS away from the printer, and then remove the LVPS.

**Figure 5-976 Remove the LVPS**



## 14. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>




2. Unpack the replacement part from the packaging.

---


 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

---

## Removal and replacement: Control-panel assembly (SFP)

Learn how to remove and replace the control-panel assembly (SFP).

 [View a video of how to remove and replace the control-panel assembly](#)

Mean time to repair: 19 minutes


Service level: Medium

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

---

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-47** Part information

Part number	Part description
RM2-5424-000CN	Control panel assembly (wireless model)
RM2-5391-000CN	Control panel assembly (non wireless model)

### Required tools

- Small flat-blade screwdriver

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

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Make sure that toner cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-977 Remove the tray**



## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.



**NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

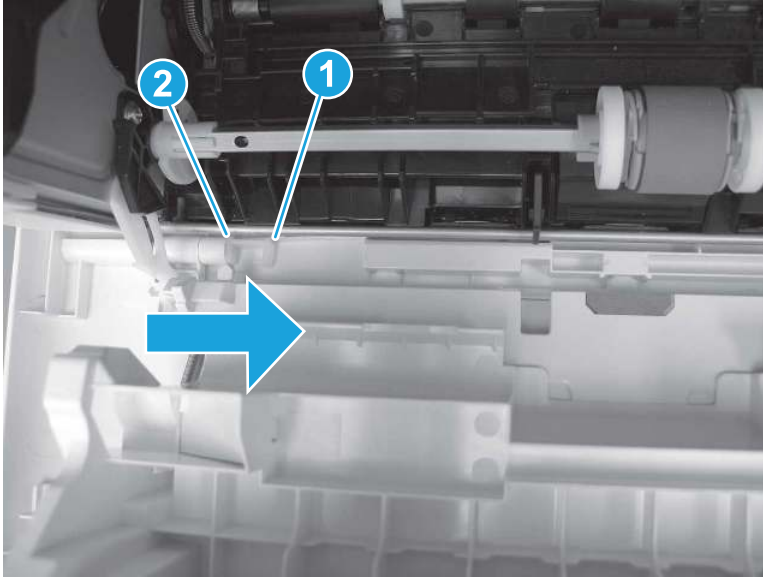


**TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.



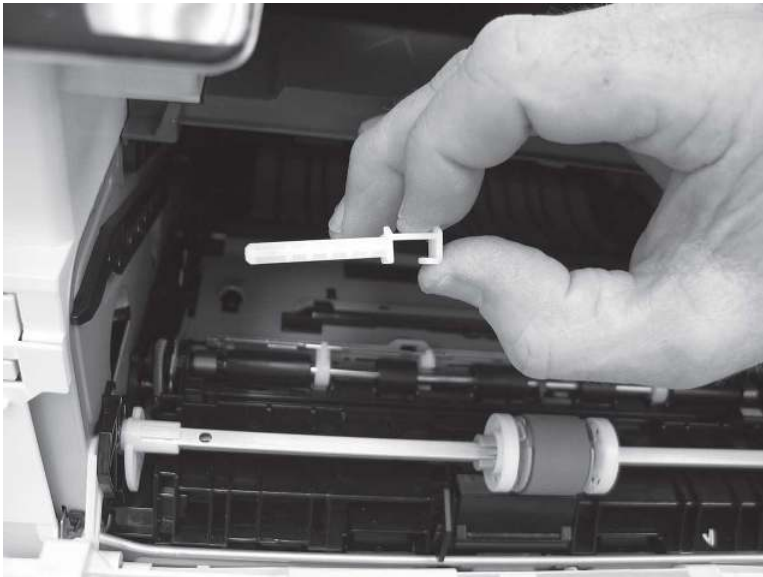
**Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

**Figure 5-978** Release the support shaft



2. Remove the support shaft.

**Figure 5-979** Remove the support shaft



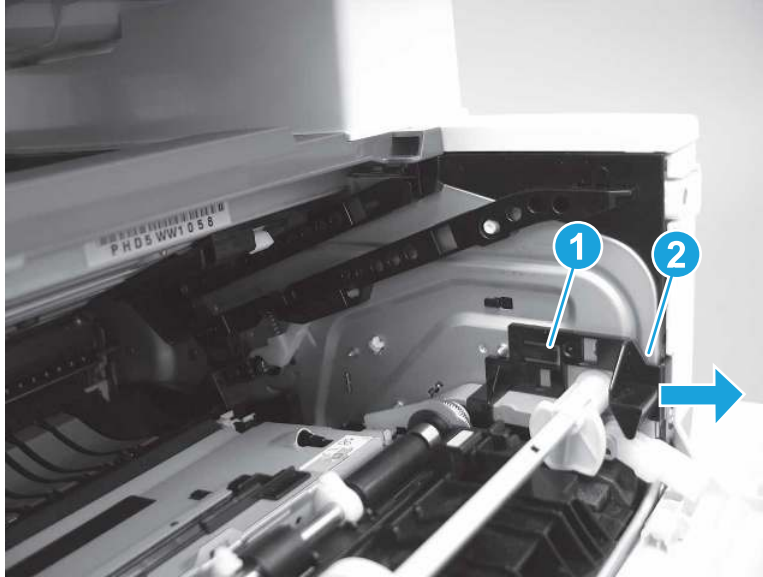
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

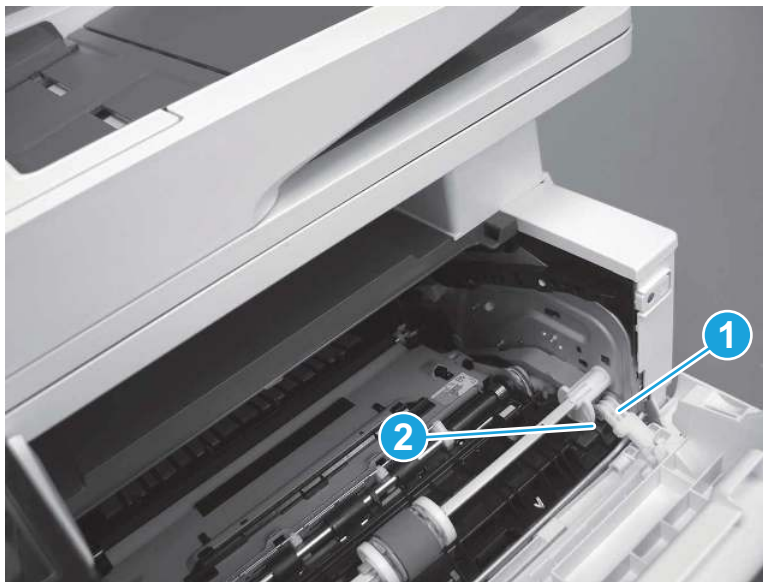
---

**Figure 5-980** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-981** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

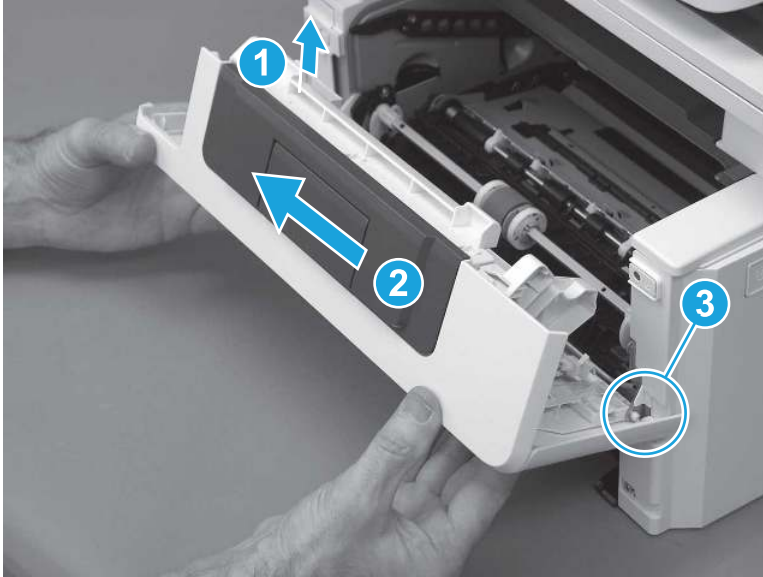
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

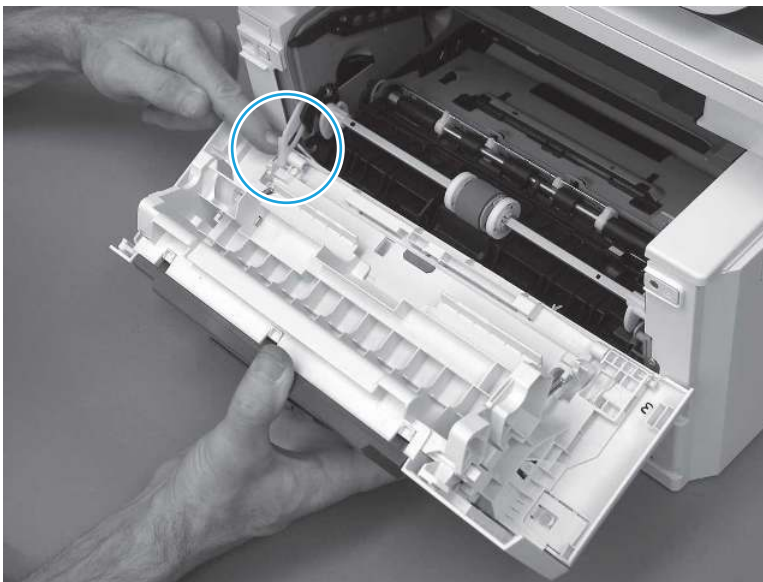
---

**Figure 5-982** Release the door



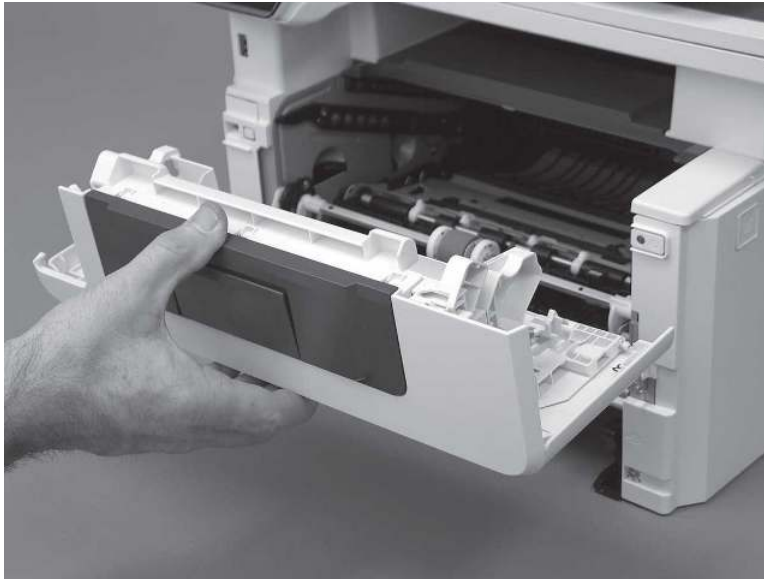
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-983** Release the left-side retainer arm



7. Remove the door.


**Figure 5-984** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

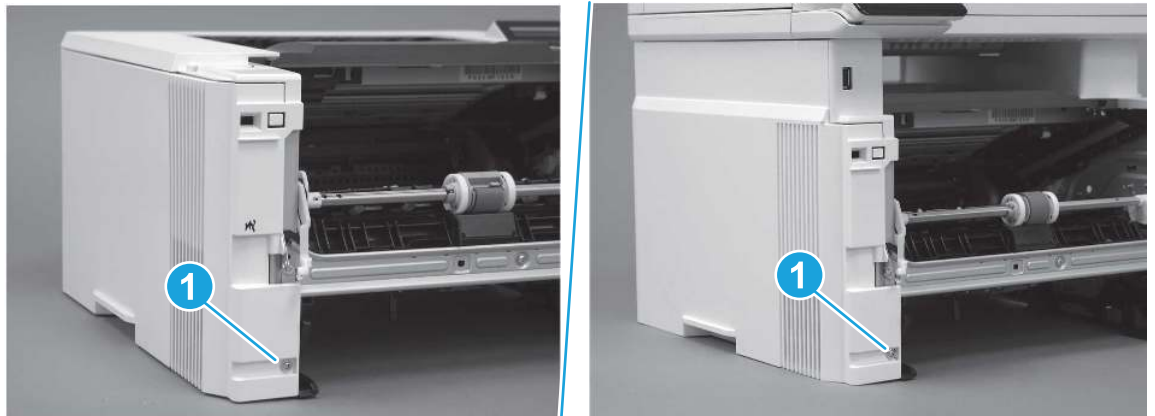
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

1. Remove one screw (callout 1).

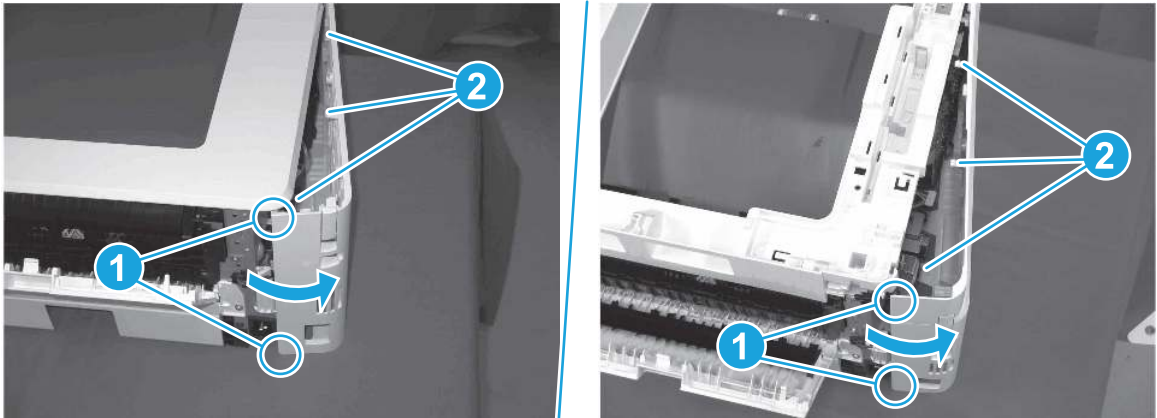
**Figure 5-985** Remove one screw





2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-986** Release two bosses and three tabs

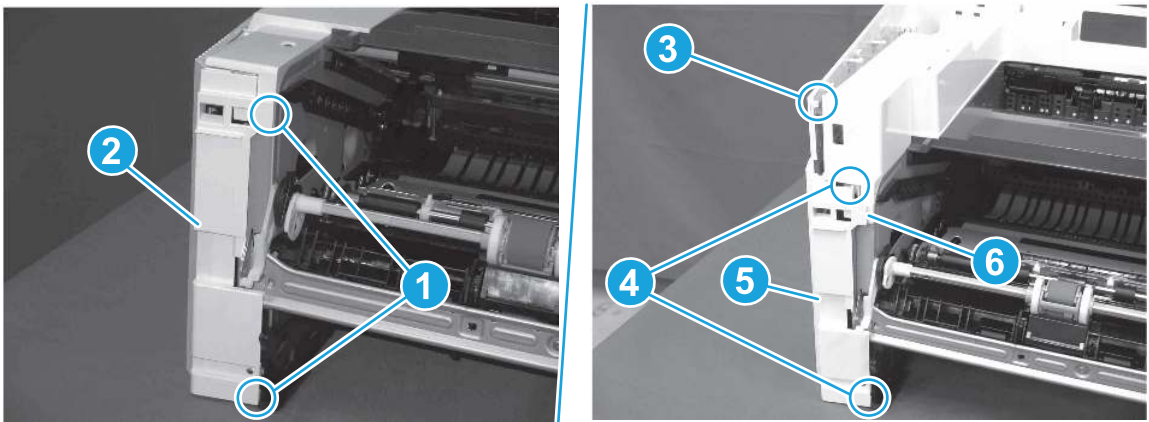


3. At the front of the printer, do one of the following:

- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-987** Remove the cover



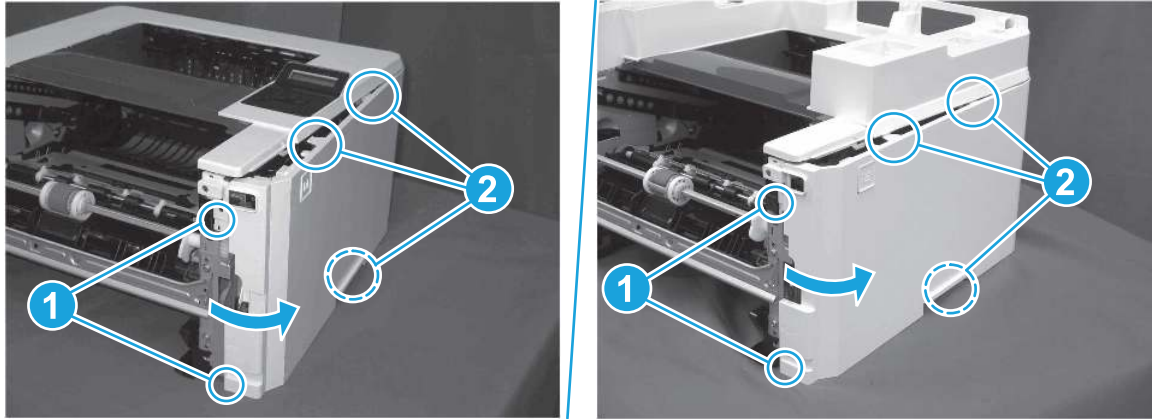
#### 4. Remove the right cover

Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

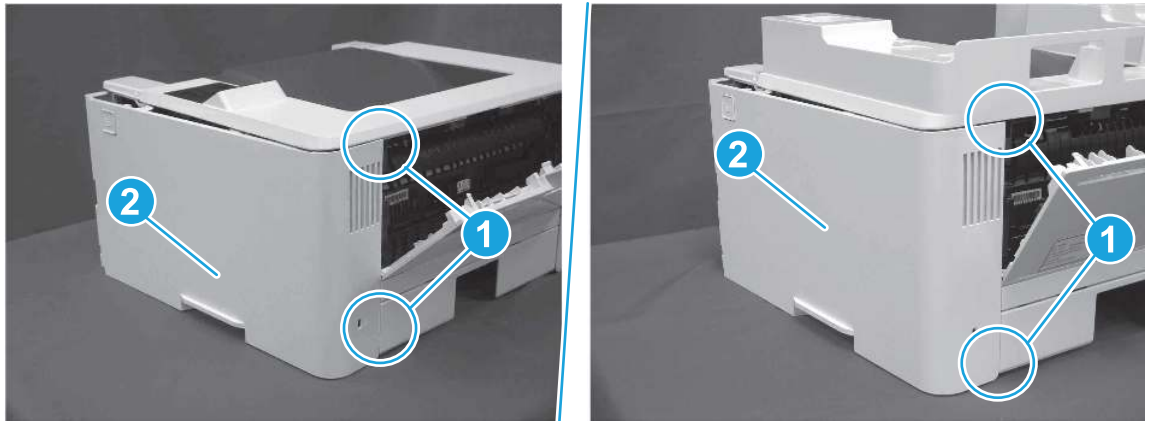
**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

**Figure 5-988** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-989** Remove the cover



**5. Remove the top cover (SFP only)**

Follow these steps to remove the top cover (SFP only).

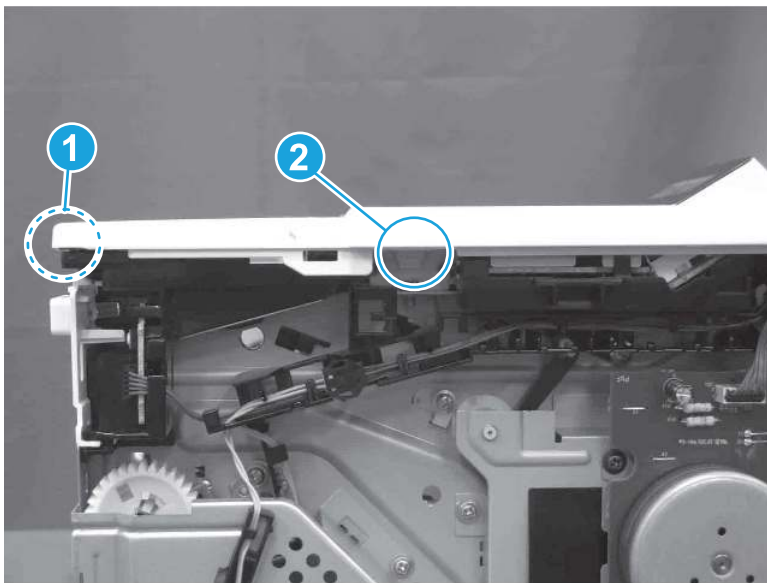
1. Remove one screw.

**Figure 5-990** Remove one screw




2. At the right side of the printer, release the one boss (callout 1), and then release one tab (callout 2).

**Figure 5-991** Release one boss and one tab



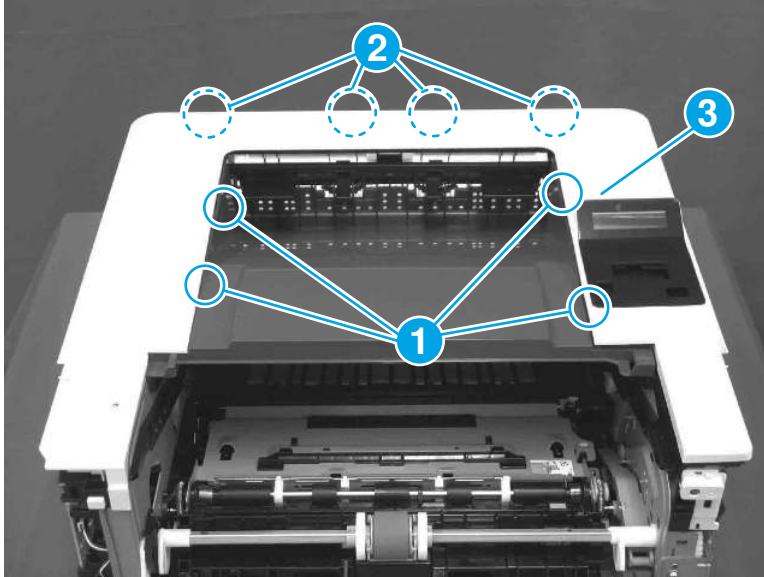
3. Release four tabs (callout 1), release four bosses (callout 2), and then remove the top cover (callout 3).

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.


---

Figure 5-992 Remove the cover



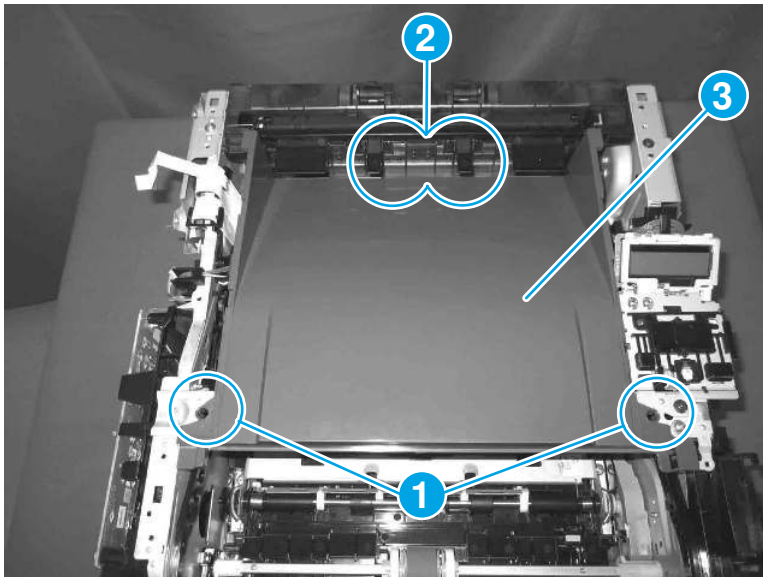
#### 6. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

 **NOTE:** This procedure shows the SFP printer. However the paper delivery tray (output bin) removal is similar for the MFP printer.

- Release two bosses (callout 1), release two tabs (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-993 Remove the cover

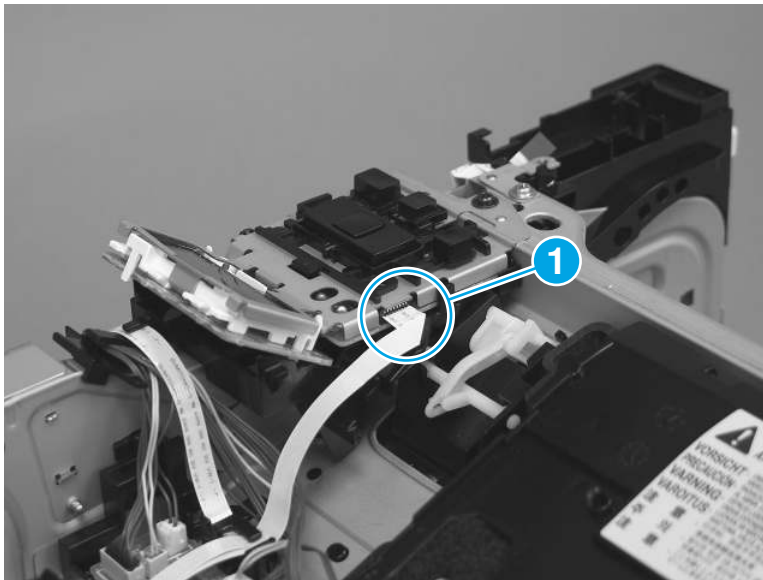


#### 7. Remove the control-panel assembly (SFP)

Follow these steps to remove the control-panel assembly (SFP).

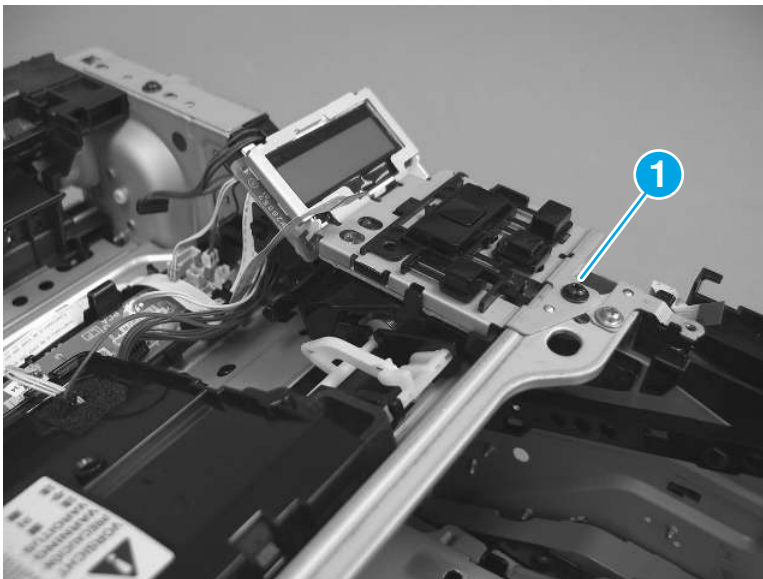
1. Disconnect one flat-flexible cable (FFC) (callout 1).

**Figure 5-994** Disconnect one FFC



2. Remove one screw (callout 1), and then remove the control panel.

**Figure 5-995** Remove the control panel



## 8. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.






**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.

---


 **CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

 **IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

 **NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

---

3. To install an assembly, reverse the removal steps.

 **NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

---

### Removal and replacement: Control panel assembly (MFP) and control panel sub assemblies

Learn how to remove and replace the control panel and control panel sub assemblies.



[View a video of how to remove and replace the control-panel assembly](#)

Mean time to repair: 20 minutes


Service level: Medium

#### Before performing service

##### Turn the printer power off

- Disconnect the power cable.

---

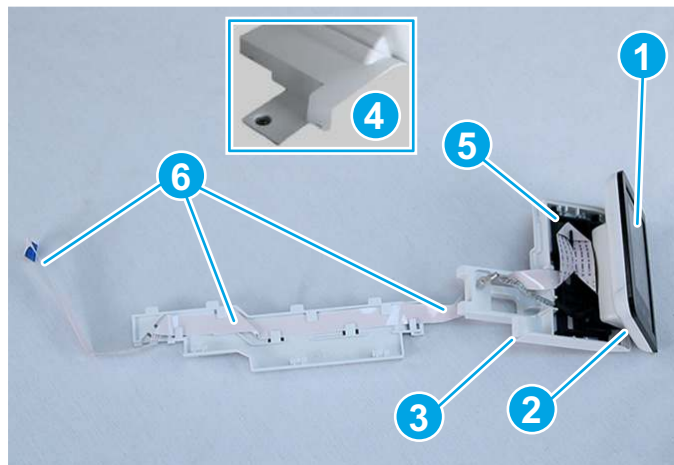
 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

---

Use the following figure and parts table to identify the control panel and sub assemblies.




**Figure 5-996** Control panel and sub assemblies



Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-48** Part Information

Part number	Part description
W2Q13-60103	Touchscreen control panel assembly (callout 1)
T6B80-40002	Cover, back control panel (callout 2)
B3Q11-40001	Control panel mount base (callout 3)
B3Q11-40002	Control panel mount cover (callout 4)
B3Q10-60145	CP mount chassis assembly (callout 5)
W1A30-60101	Control panel assembly FFC (callout 6)

 **NOTE:** If the control panel is damaged, make sure to order the following parts and assemble them together.

- W2Q13-60103 (Touchscreen control panel assembly)
- T6B80-40002 (Cover, back control panel)

### Required tools

- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length
- Small flat-blade screwdriver

### After performing service

#### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

Navigate the control-panel menus to make sure that the control panel is correctly functioning.

Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.


---

 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

---

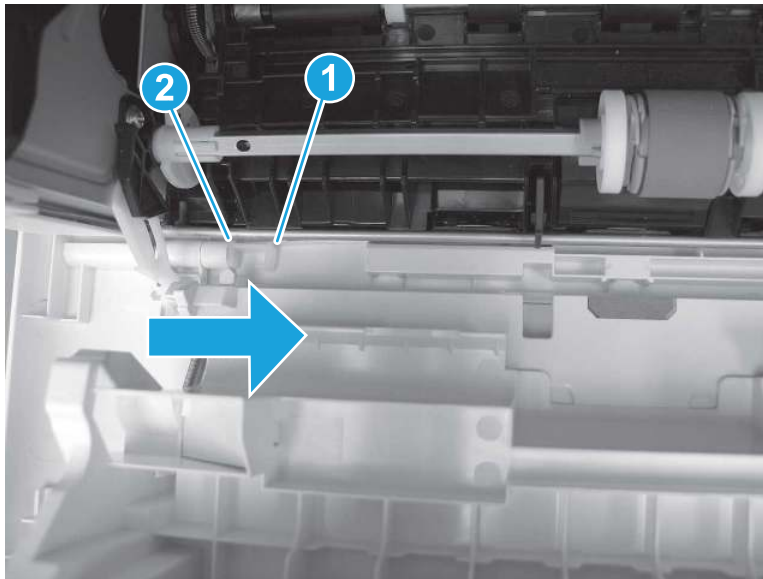
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

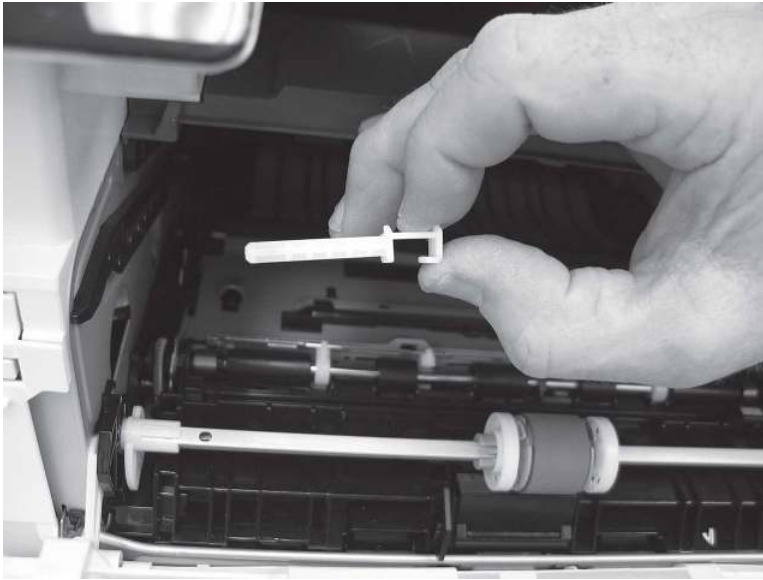
---

**Figure 5-997** Release the support shaft



2. Remove the support shaft.

**Figure 5-998** Remove the support shaft



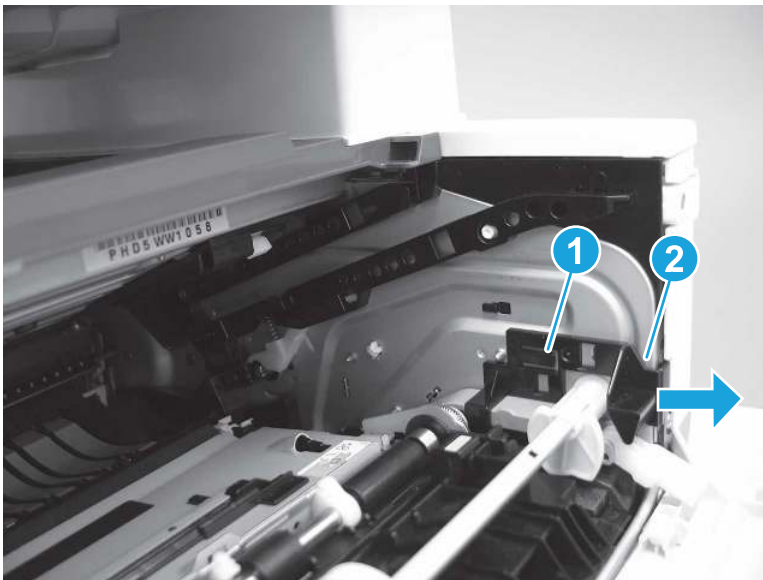
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**CAUTION:** Be careful, the tab (callout 1) can be easily broken.

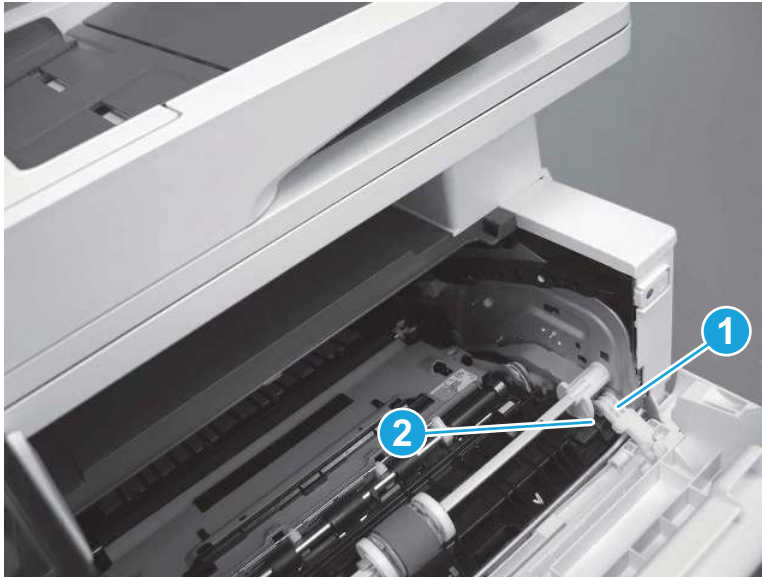
---

**Figure 5-999** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-1000** Release the pressure-release link

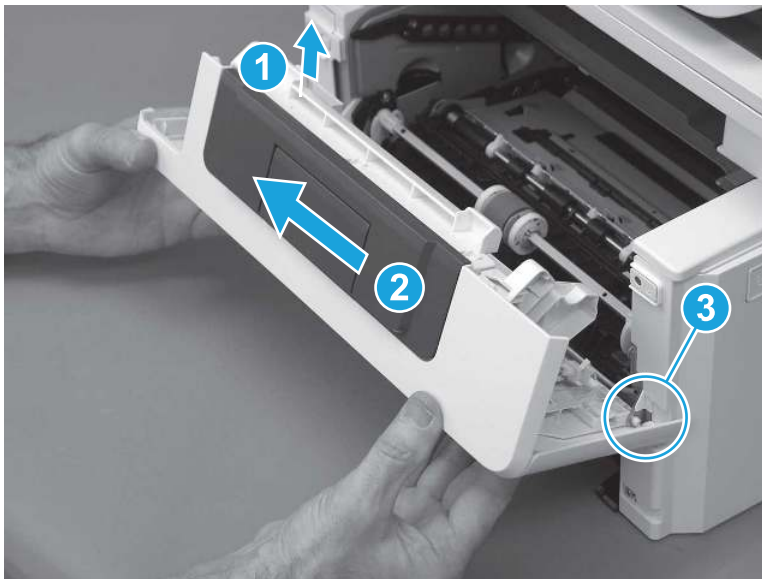


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

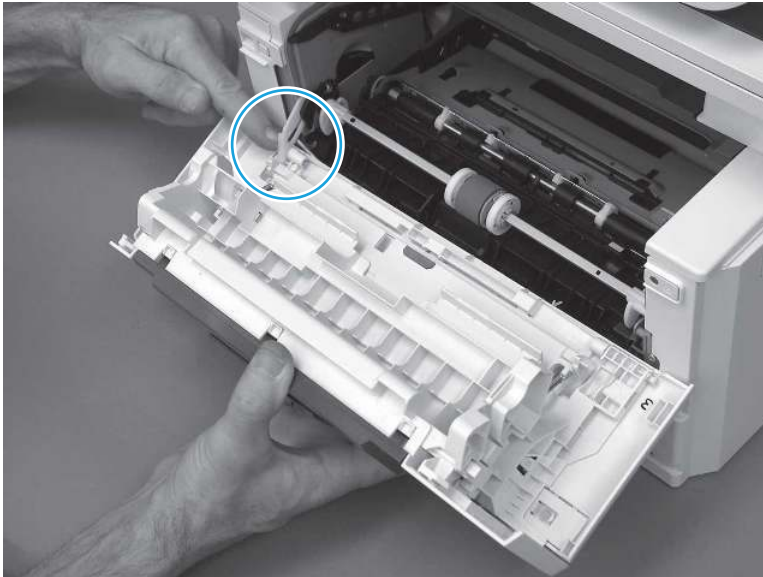
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-1001** Release the door



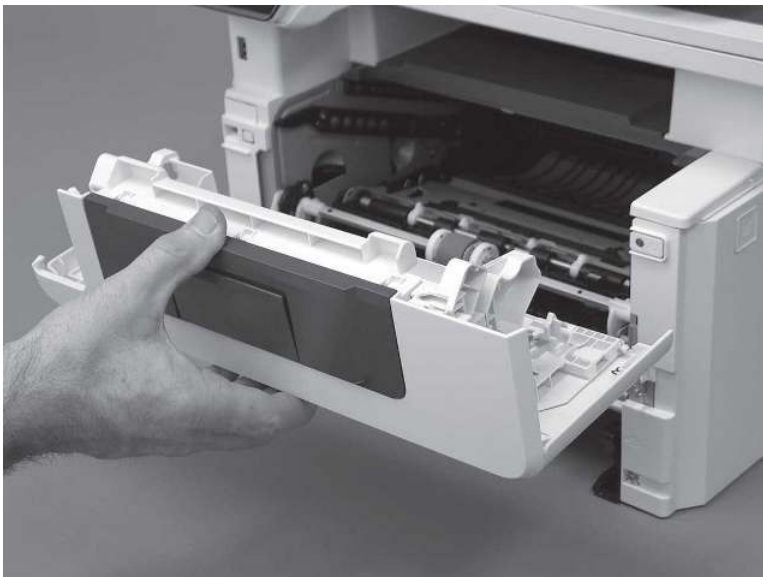
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-1002 Release the left-side retainer arm**



7. Remove the door.

**Figure 5-1003 Remove the door**



## 2. Remove the control panel mount cover (MFP only)

Follow these steps to remove the control panel mount cover (MFP only).

1. Open the integrated scanner assembly (ISA).



**NOTE:** If the control panel is not fully tilted forward, tilt it forward now until it stops.

**Figure 5-1004** Open the ISA



2. Remove one screw (callout 1).

**Figure 5-1005** Remove one screw





3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-1006** Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-1007** Remove the cover



5. Remove the control-panel mount cover.


**Figure 5-1008** Remove the cover



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

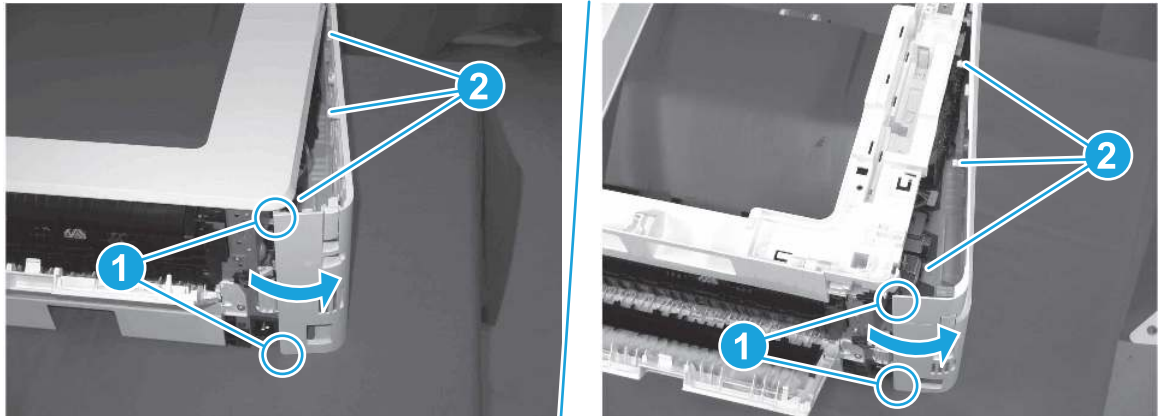
1. Remove one screw (callout 1).

**Figure 5-1009** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

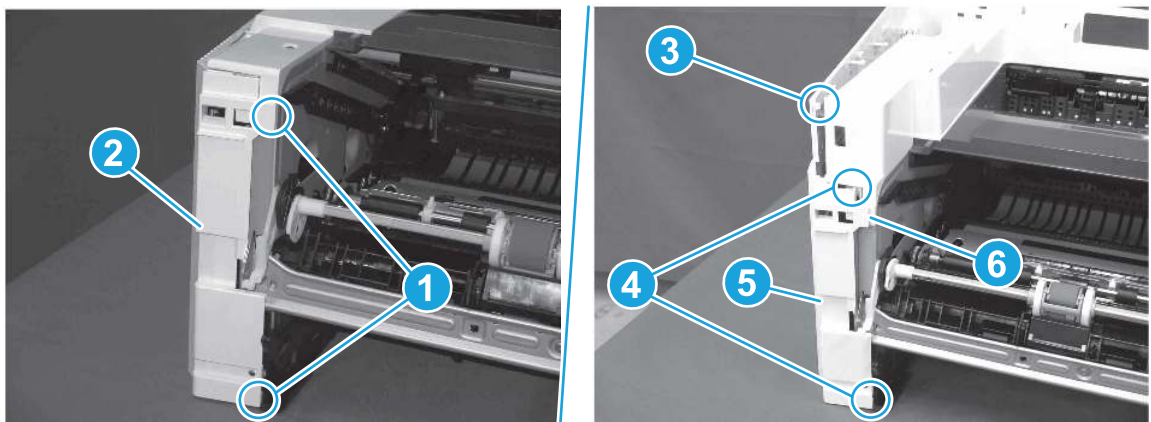
**Figure 5-1010 Release two bosses and three tabs**



3. At the front of the printer, do one of the following:
  - **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
  - **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-1011 Remove the cover**

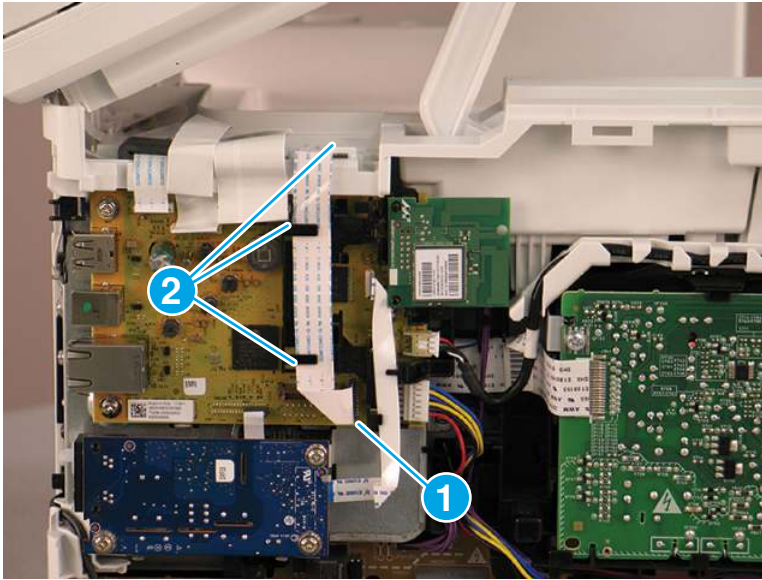


#### 4. Remove the control panel assembly

Follow these steps to remove the control panel (MFP).

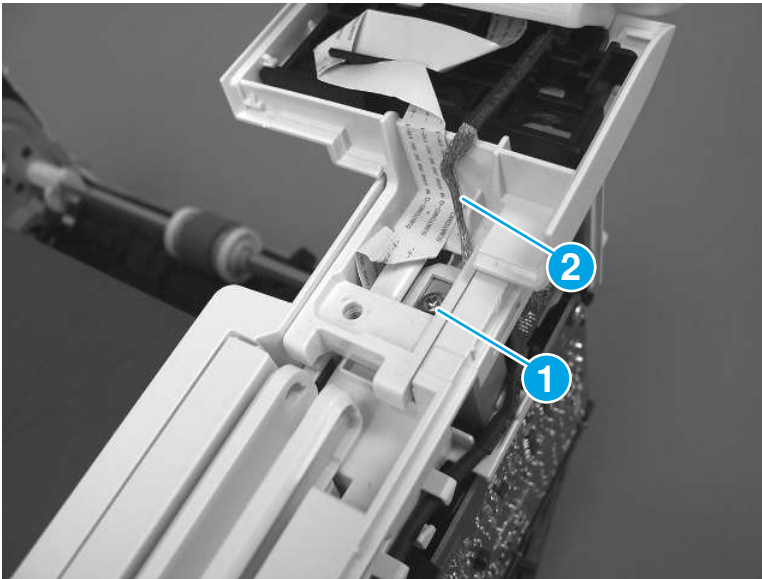
1. Disconnect one FFC (callout 1), and then release the FFC from the guide (callout 2).

**Figure 5-1012 Disconnect one connector**



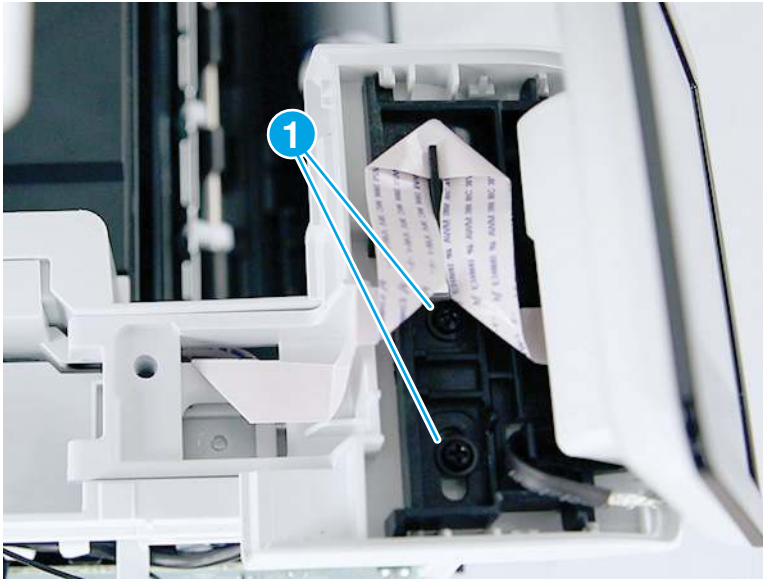
2. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-1013 Remove one screw**



3. Move the FFC out of the way, and then remove two screws (callout 1).

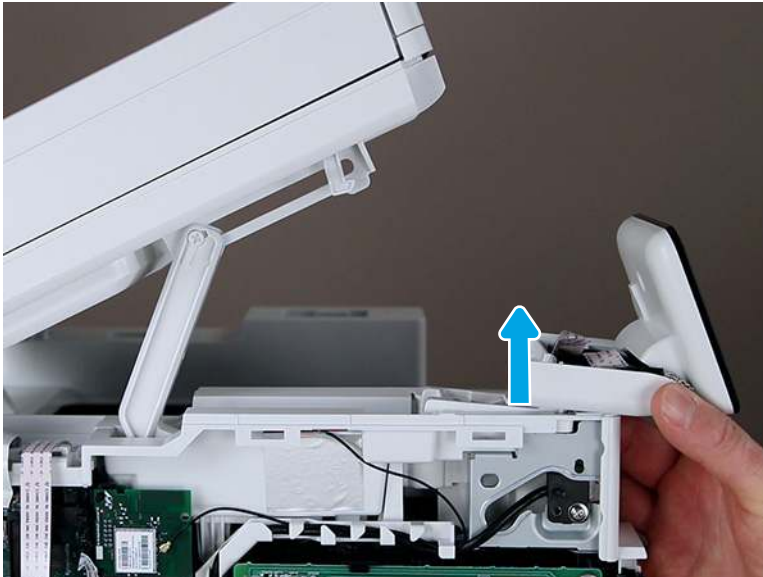
**Figure 5-1014** Remove two screws



4. Slightly lift up the control-panel assembly to separate it from the top cover.

**⚠ CAUTION:** The control panel assembly is still connected to the printer by the FFC. Do not attempt to completely remove the assembly.

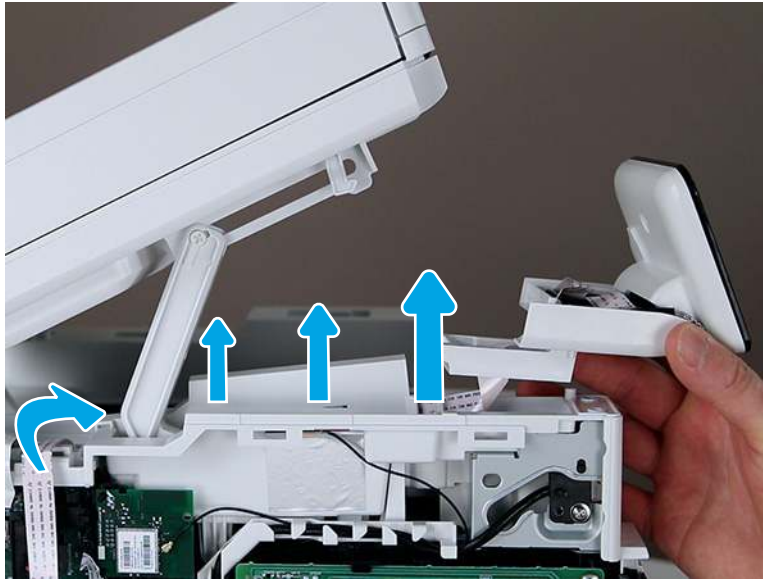
**Figure 5-1015** Lift up the control-panel assembly





- Lift up the control-panel FFC guide to remove the control-panel assembly.

**Figure 5-1016 Remove the control-panel assembly**



#### 5. Remove the control panel and sub assemblies (MFP)

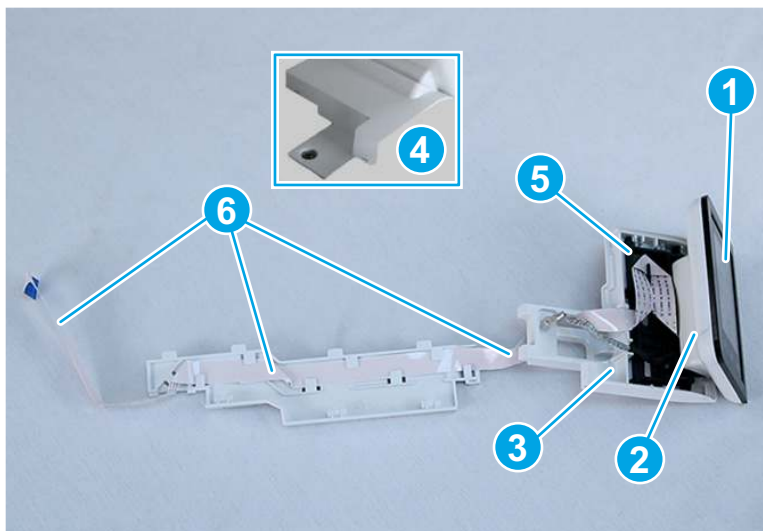
Follow these steps to remove the control panel and sub assemblies (MFP).

- Before proceeding, identify the control panel and sub assemblies.

**Table 5-49 Control panel identification**

Item	Item	Item
Touchscreen control panel assembly (callout 1)	Cover, back control panel (callout 2)	Control panel mount base (callout 3)
Control panel mount cover (callout 4)	CP mount chassis assembly (callout 5)	Control panel assembly FFC (callout 6)

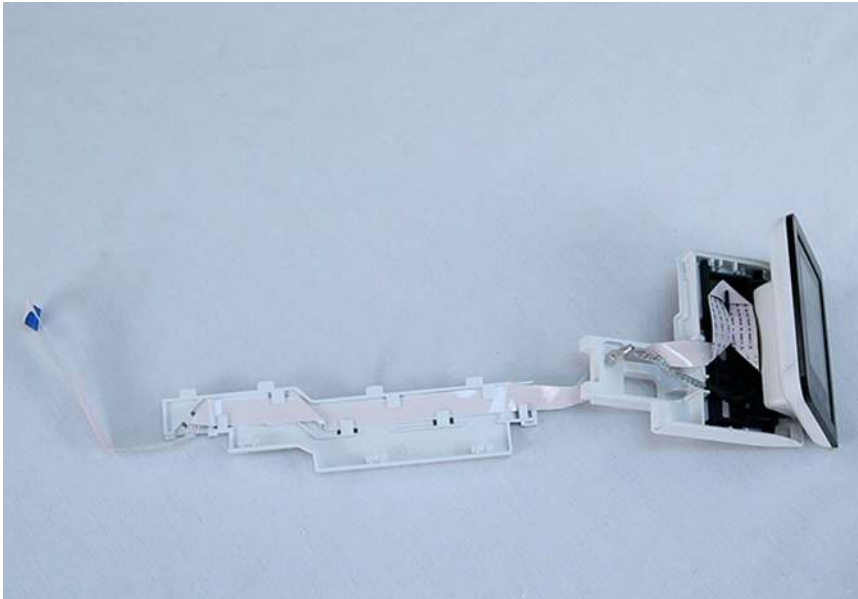
**Figure 5-1017 Identify the control panel and sub assemblies**





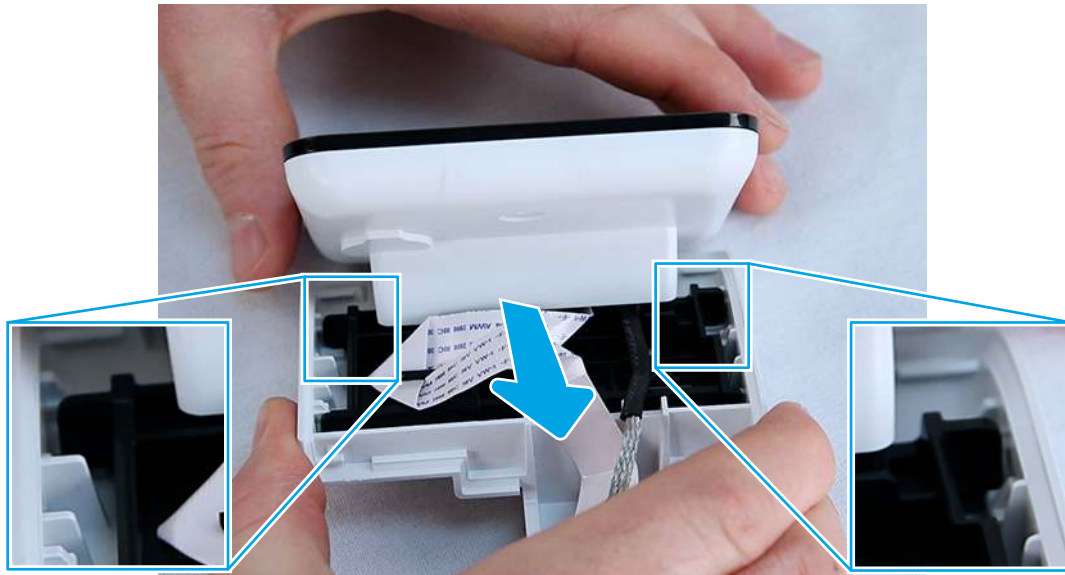
2. Place the control panel and sub assemblies on a flat work surface.

**Figure 5-1018 Place the assembly on the work surface**



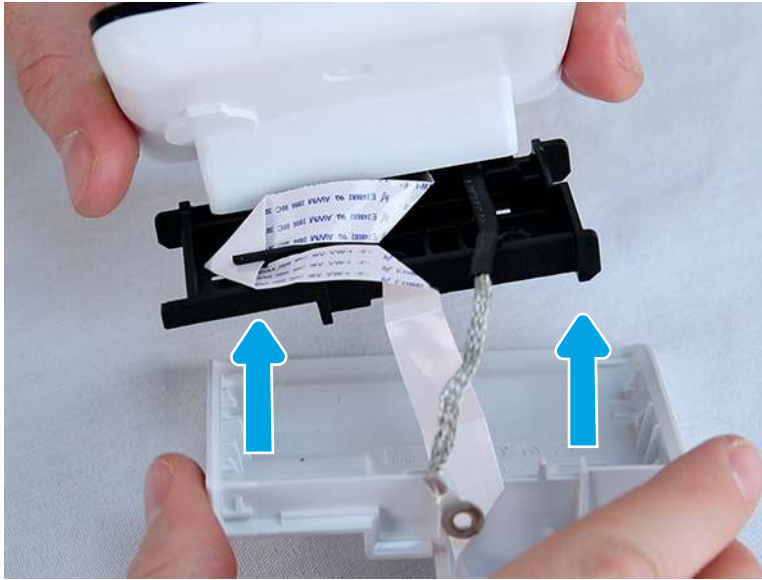
3. Slide the control panel and mount chassis as shown to release them from the mount base.

**Figure 5-1019 Release the control panel and mount chassis**



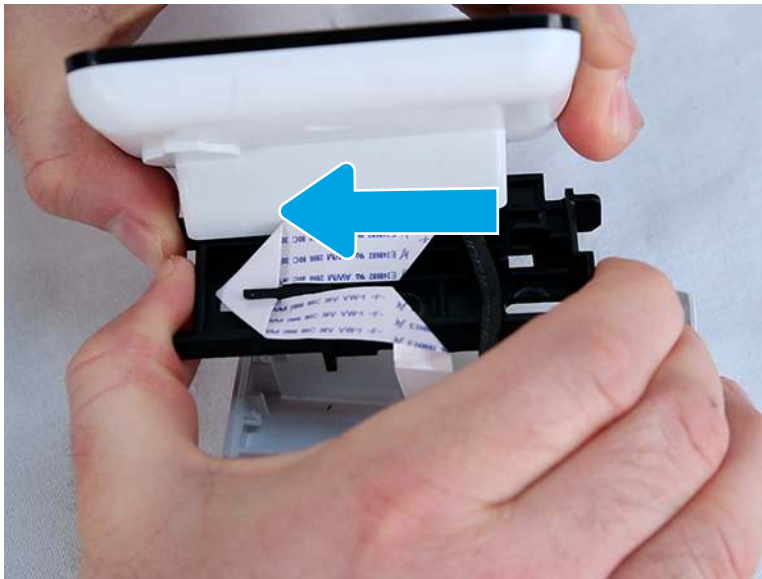
4. Remove the control panel and mount chassis from the mount base.

**Figure 5-1020** Remove the control panel and mount chassis



5. Firmly grasp the control panel and mount chassis, and then slide the control panel to the left.

**Figure 5-1021** Slide the control panel to the left



6. Slightly tilt the control panel back.



**NOTE:** Keep the control panel slid to the left on the mount chassis.

Figure 5-1022 Tilt the control panel



7. With the control panel slightly tilted back and slid to the left on the mount chassis, carefully disengage the ratchet wheel.

Figure 5-1023 Disengage the ratchet wheel



8. Separate the control panel from the mount chassis.

---

**⚠ CAUTION:** Do not attempt to completely remove the control panel. It is still attached to the mount chassis by a flat-flexible cable (FFC).

---

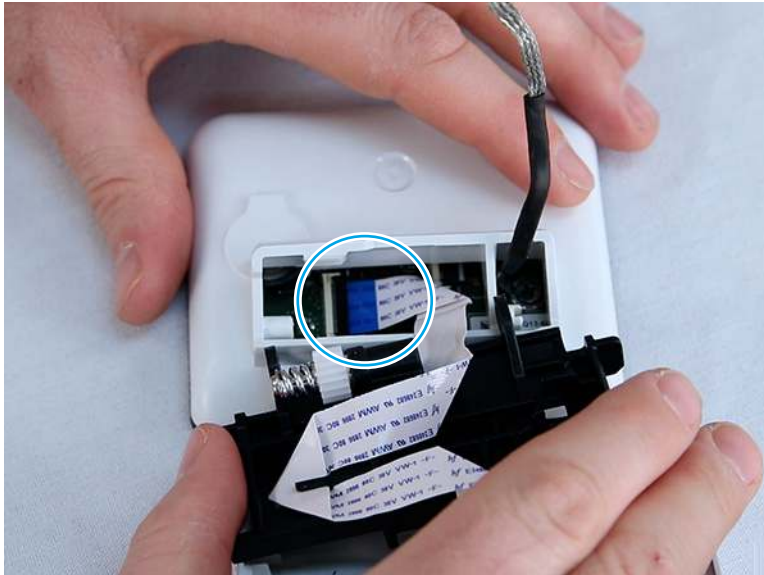
**Figure 5-1024** Separate the control panel and mount chassis



9. Disconnect one connector, and then remove the control panel assembly.

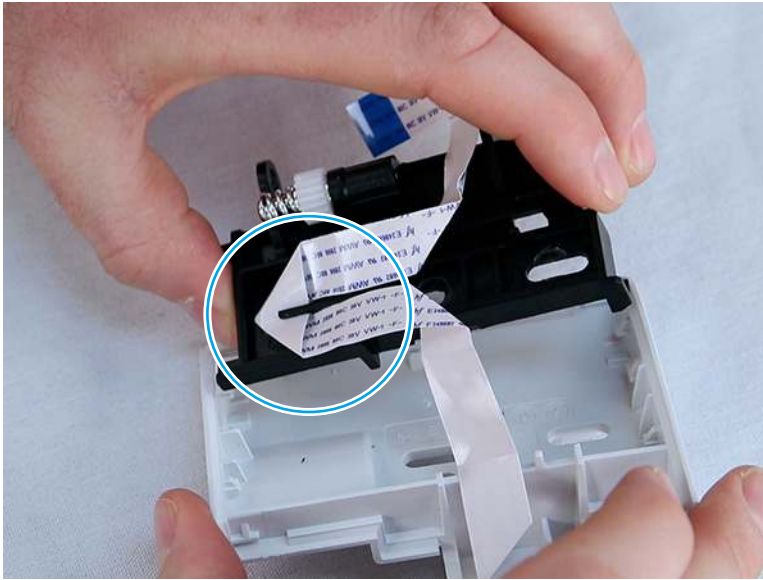
**⚠ CAUTION:** Release the locking clip on the zero insertion force (ZIF) connector to disconnect the FFC.

**Figure 5-1025** Remove the assembly



10. Release the FFC from the retainer to remove the mount chassis.


**Figure 5-1026** Remove the mount chassis



11. Do the following:

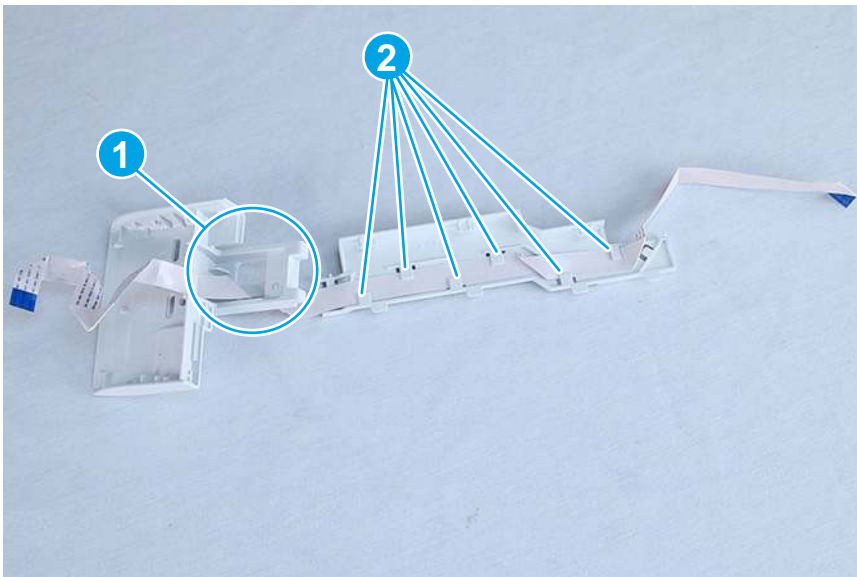
- Thread the FFC through the opening in the mount base (callout 1), and then remove the mount base.
- Release the FFC from the retainers on the guide (callout 2), and then remove the FFC.

---

 **NOTE:** The guide is not a service part.

---

**Figure 5-1027** Remove the mount base and FFC



## 6. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.



1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Removal and replacement: RM2-5375-000CN Tray 2 sensor assembly

Learn how to remove and replace the Tray 2 sensor assembly.



[View a video of how to remove and replace the Tray 2 sensor assembly.](#)

Mean time to repair: 22 minutes

Service level: Medium

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.



**WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-50** Part information

Part number	Part description
RM2-5375-000CN	Tray 2 sensor assembly



## Required tools

- Small flat-blade screwdriver
- #2 Phillips screwdriver with a magnetic tip and a 152 mm (6 in) shaft length

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Make sure that toner toner-cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

### 1. Remove Tray 2

Follow these steps to remove Tray 2.

- Pull the tray straight out of the printer to remove it.

**Figure 5-1028** Remove the tray



### 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.




**NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

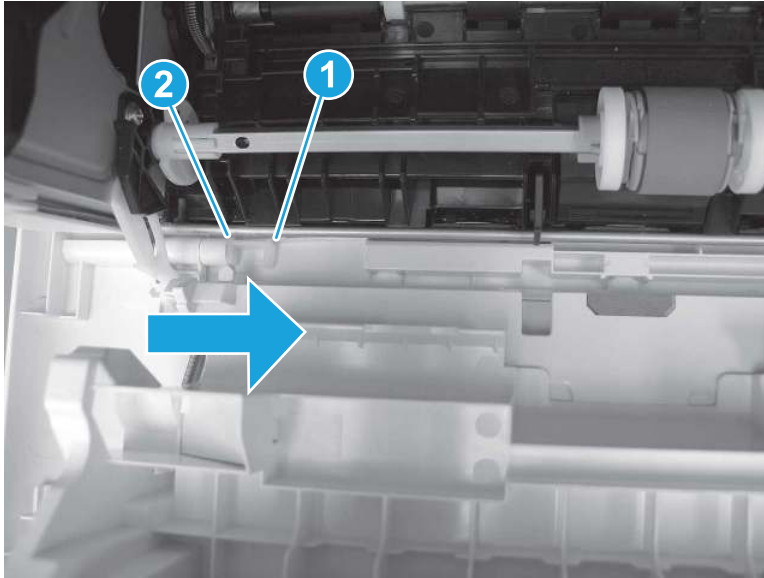


**TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

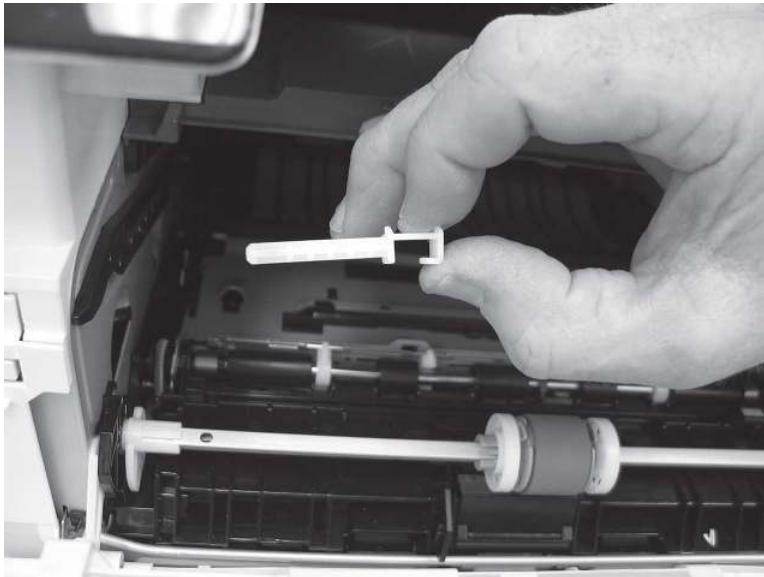
---

**Figure 5-1029** Release the support shaft




2. Remove the support shaft.

**Figure 5-1030** Remove the support shaft

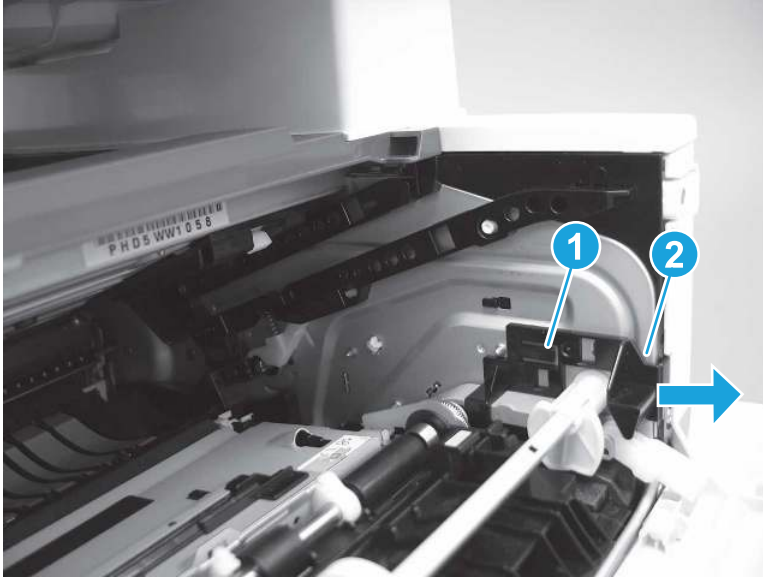


3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

 **CAUTION:** Be careful, the tab (callout 1) can be easily broken.

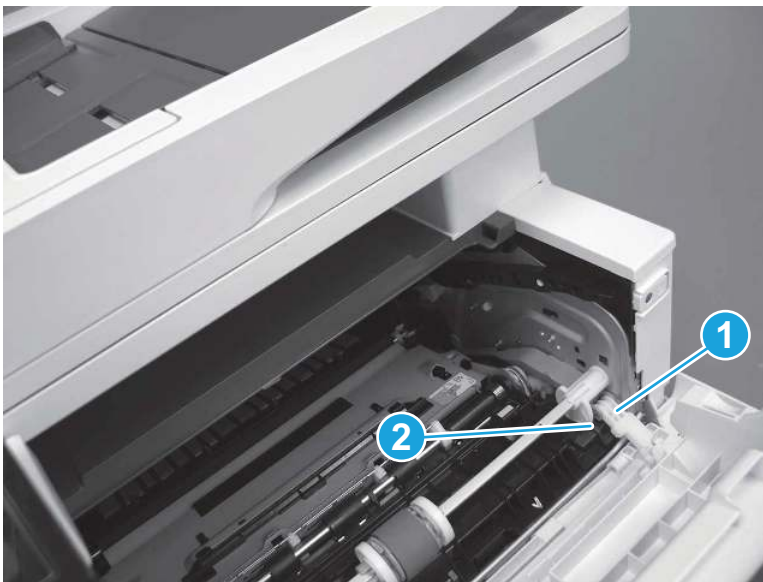
---

**Figure 5-1031** Remove the guide



4. Use a small flat-blade screwdriver to gently pry the white-plastic door arm (callout 1) off of the gray-plastic pressure-release link (callout 2) to release the door arm.

**Figure 5-1032** Release the pressure-release link



5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

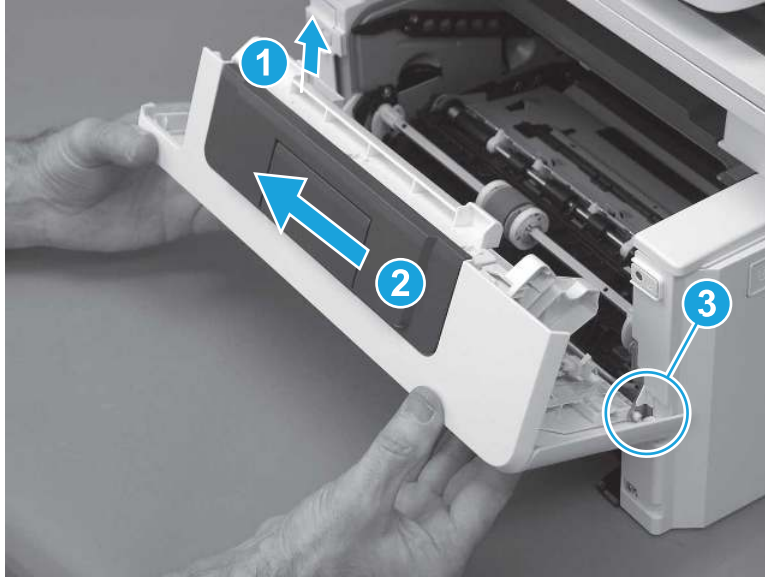
---

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

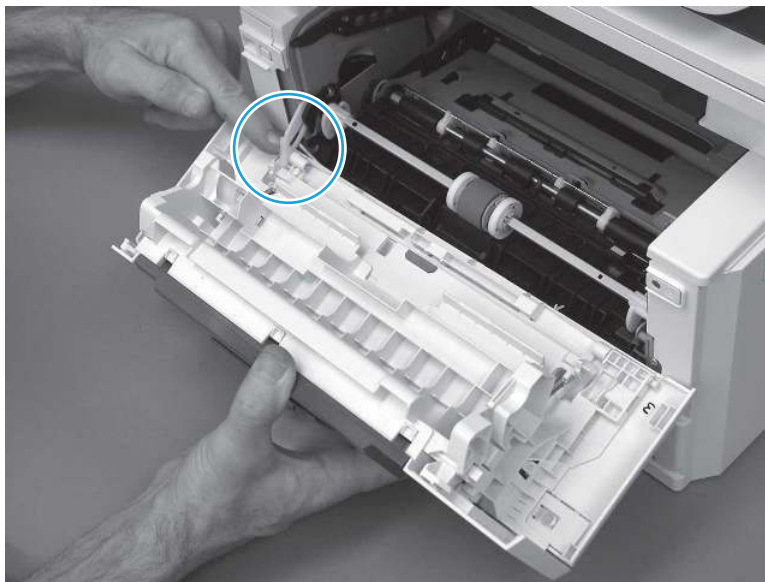
---

**Figure 5-1033** Release the door



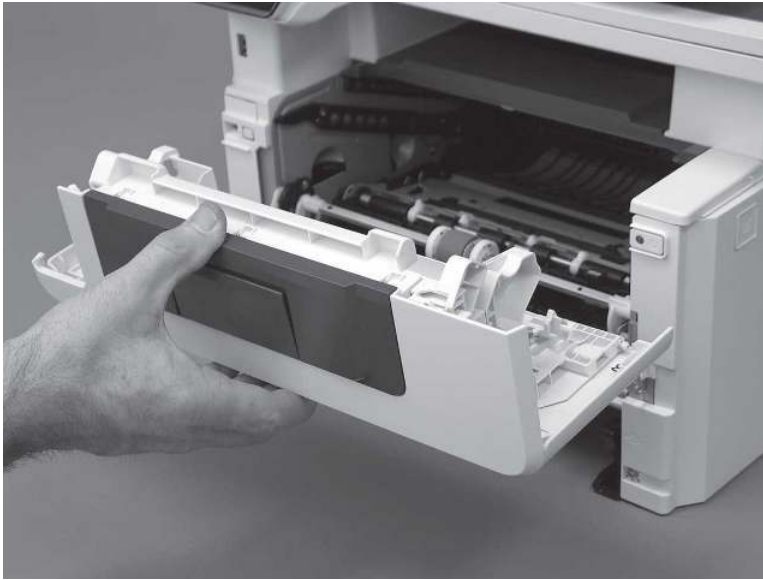
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-1034** Release the left-side retainer arm



7. Remove the door.


**Figure 5-1035** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

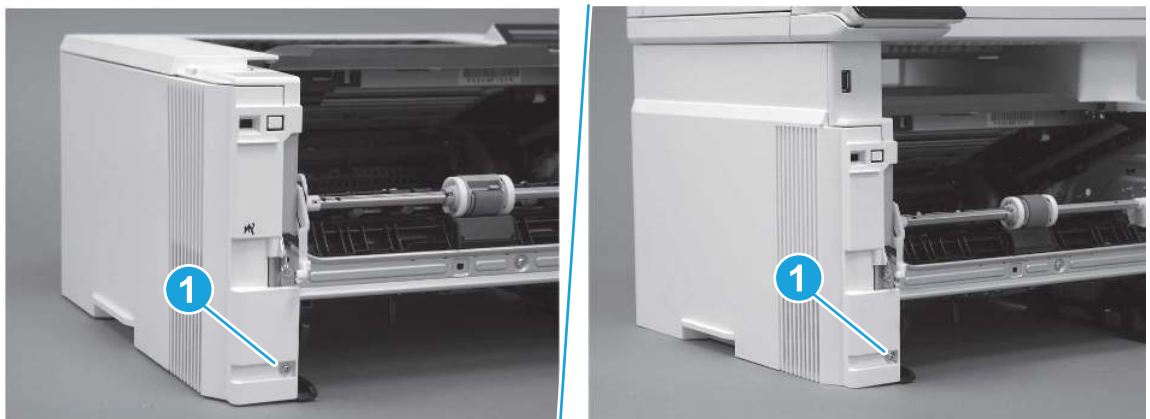
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 **NOTE:** If installed, the rear USB cover and network cover must be removed.

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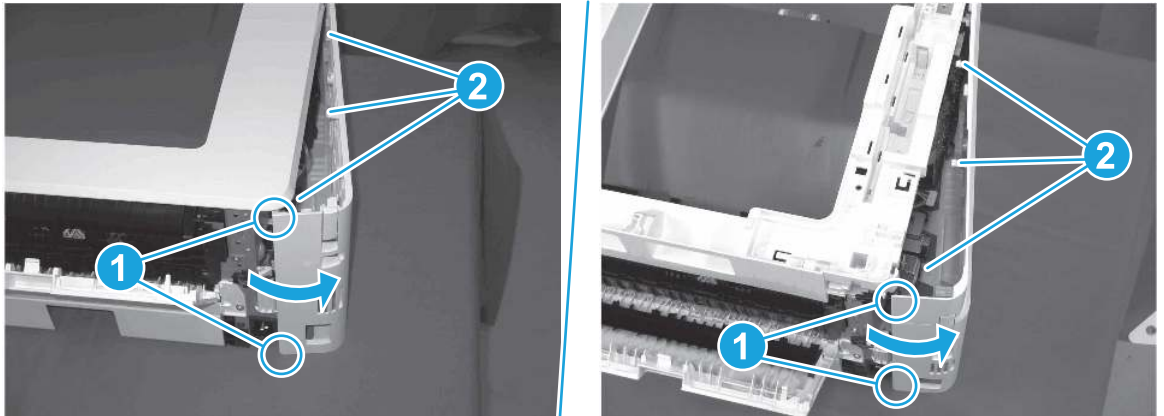
1. Remove one screw (callout 1).

**Figure 5-1036** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

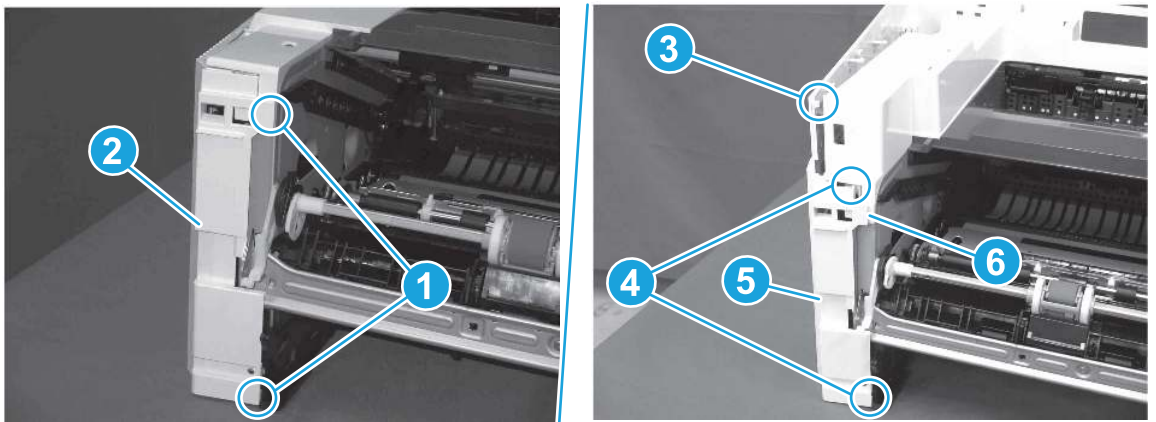
**Figure 5-1037 Release two bosses and three tabs**



3. At the front of the printer, do one of the following:
  - SFP: Release two bosses (callout 1), and then remove the cover (callout 2).
  - MFP: Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

**CAUTION:** Be careful when releasing the upper bosses on the SFP cover. One portion of the cover (callout 6) is fragile and is easily broken.

**Figure 5-1038 Remove the cover**



#### 4. Remove the right cover

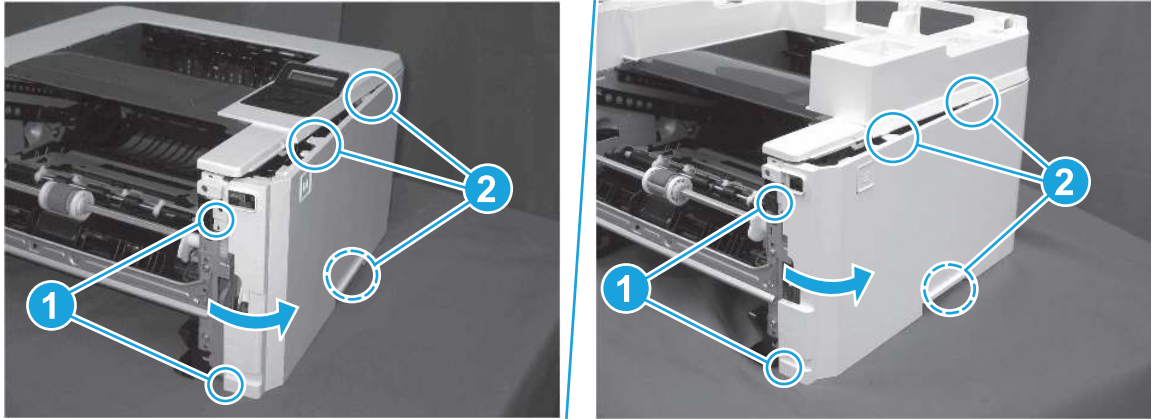
Follow these steps to remove the right cover.

1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

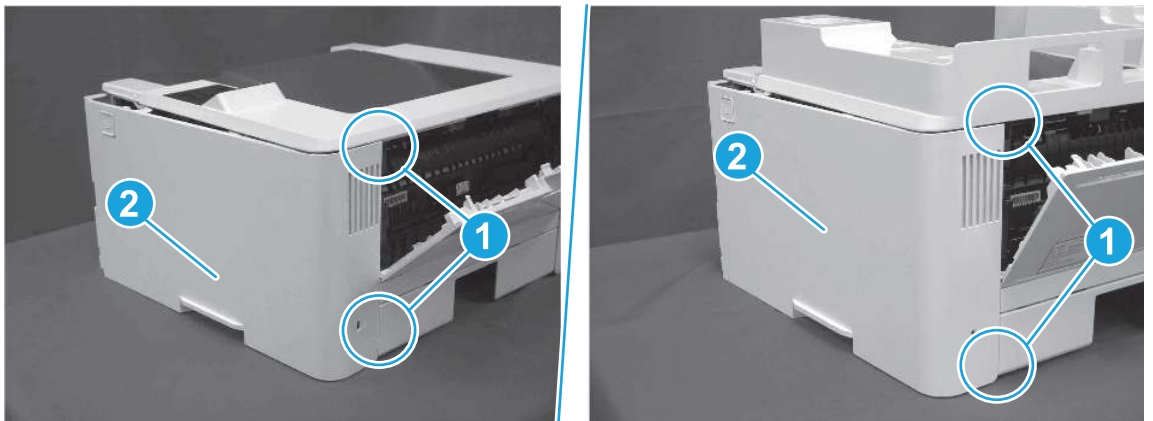


**Figure 5-1039** Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).


**Figure 5-1040** Remove the cover



## 5. Remove the Tray 2 sensor assembly

Follow these steps to remove the Tray 2 sensor assembly.

1. Grasp the white flanges on the Tray 1 pickup roller shaft, and then rotate the shaft clockwise (up to 90 degrees) to access the roller holder locking lever

 **Reinstallation tip:** Take note of the original roller position. When the roller is reinstalled, make sure to return the roller to its original position.

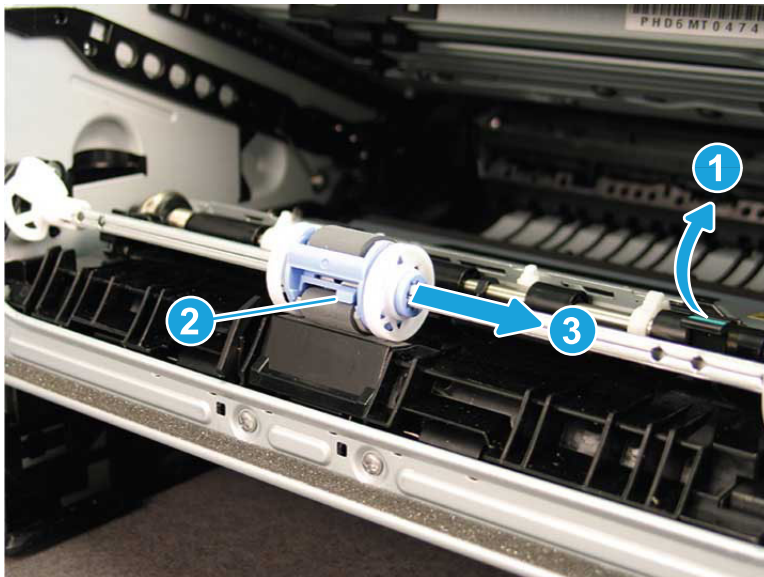
**Figure 5-1041** Rotate the Tray 1 pickup roller shaft



2. Raise the jam access door (callout 1), release one tab (callout 2), and then slide the roller and holder as shown (callout 3) to move it out of the way.

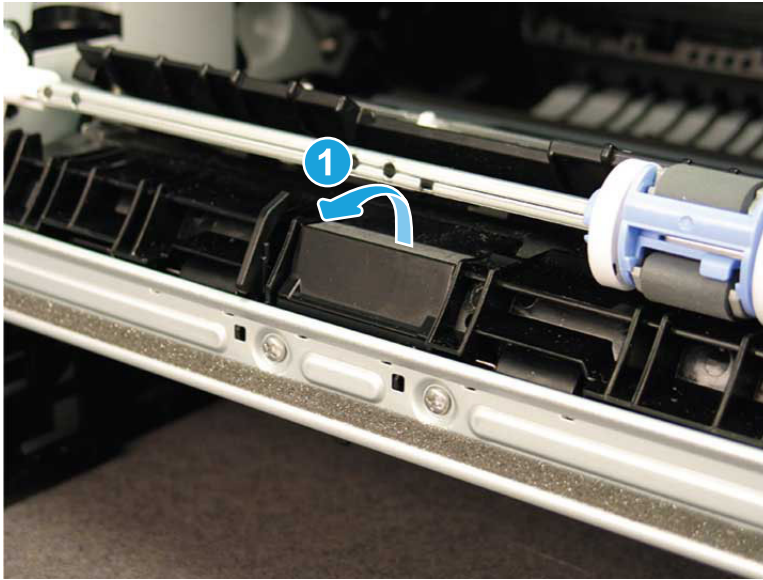
**⚠ CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

**Figure 5-1042** Slide the roller and holder out of the way




3. Remove the Tray 1 separation pad (callout 1).

**Figure 5-1043** Remove the Tray 1 separation pad




4. Do the following:
  - a. Remove four screws (callout 1/2/3/4).
- b. Release two hooks (callout 5), and then remove the front stay (callout 6).

---

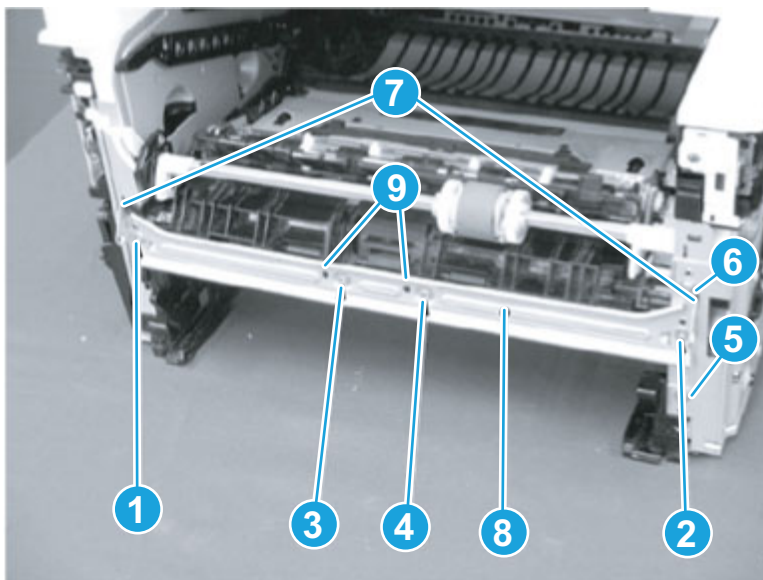
 **IMPORTANT:** When the stay is reinstalled, make sure that the screws are installed in the correct order (callout 1/2/3/4 in order).

---

 **Reinstallation tip:** When reinstalled, the bosses (callout 7) must engage the holes in the stay. Make sure that the stay is not positioned on top of the bosses.

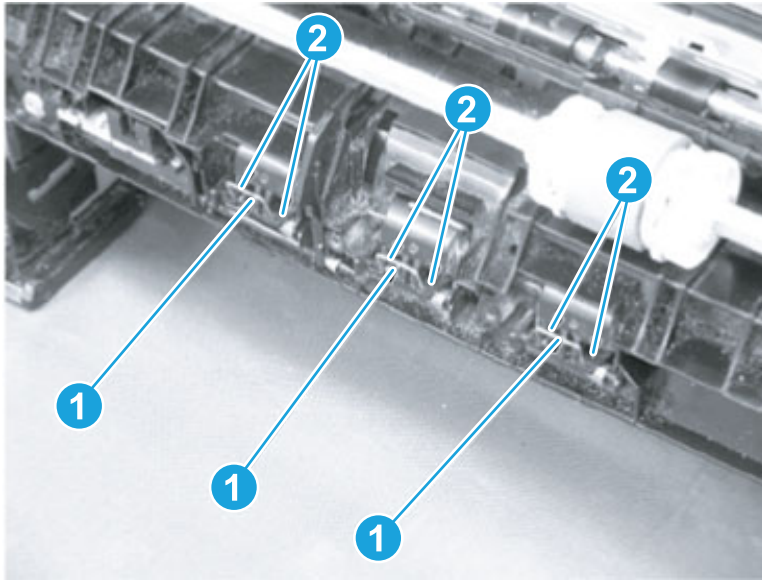
---

**Figure 5-1044** Remove the front stay

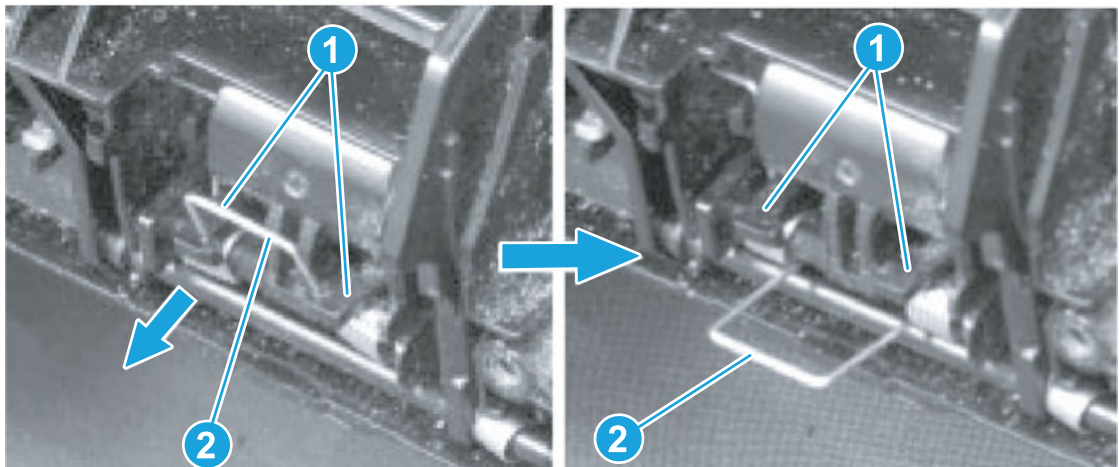


5. Rotate each spring (callout 1) down, and then unhook the springs from the hooks (callout 2).

**Figure 5-1045 Remove the springs (1 of 2)**



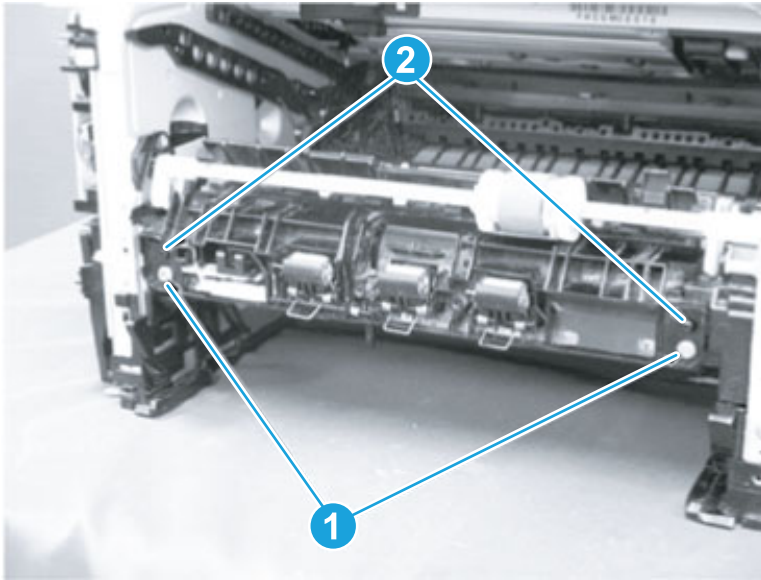
**Figure 5-1046 Remove the springs (2 of 2)**





- Remove two screws (M4 tapping; callout 1), and then release two bosses (callout 2).

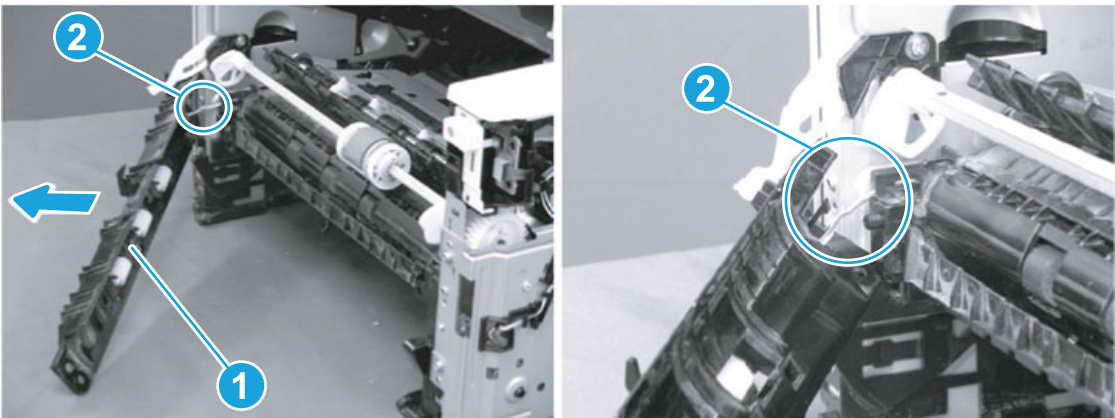
**Figure 5-1047** Remove two screw and release two bosses



- Separate the Tray 1 pickup assembly (callout 1) from the printer (as shown below).

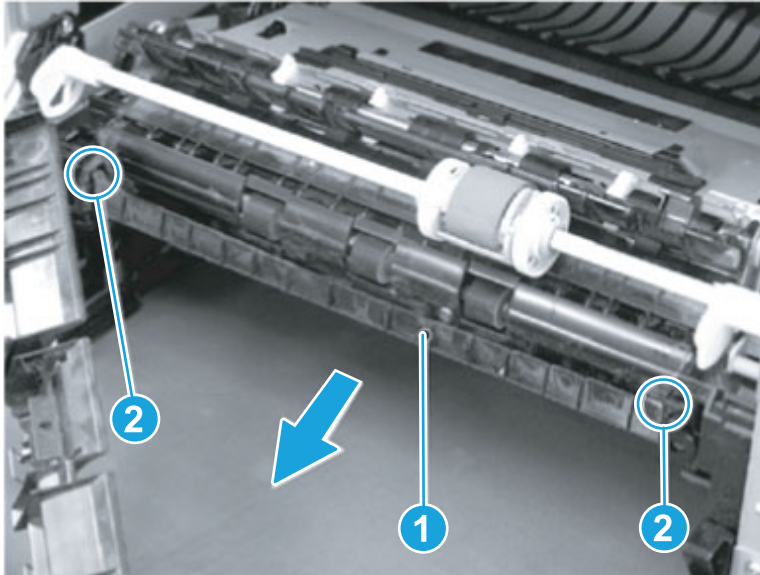
**⚠ CAUTION:** Do not attempt to completely remove the assembly. The assembly is still connected to the printer by a wire harness (callout 2).

**Figure 5-1048** Separate the Tray 1 pickup assembly from the printer



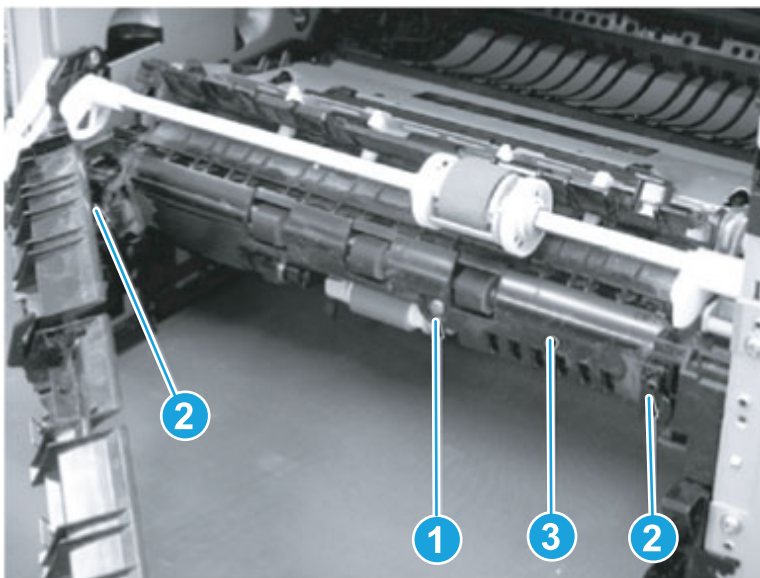
8. Slightly flex the pickup guide (callout 1) to release the left-side and right side bosses (callout 2), and then remove the pickup guide.

**Figure 5-1049 Remove the pickup guide**




9. Remove one screw (callout 1), release two bosses (callout 2), and then remove the guide and sensor lever (callout 2) assembly.

**Figure 5-1050 Remove the guide and sensor lever assembly**



10. Slide the sensor lever (callout 1) as shown, and then remove it from the guide (callout 2).

 **Reinstallation tip:** After reinstalling the guide and lever assembly on the printer, check the following:

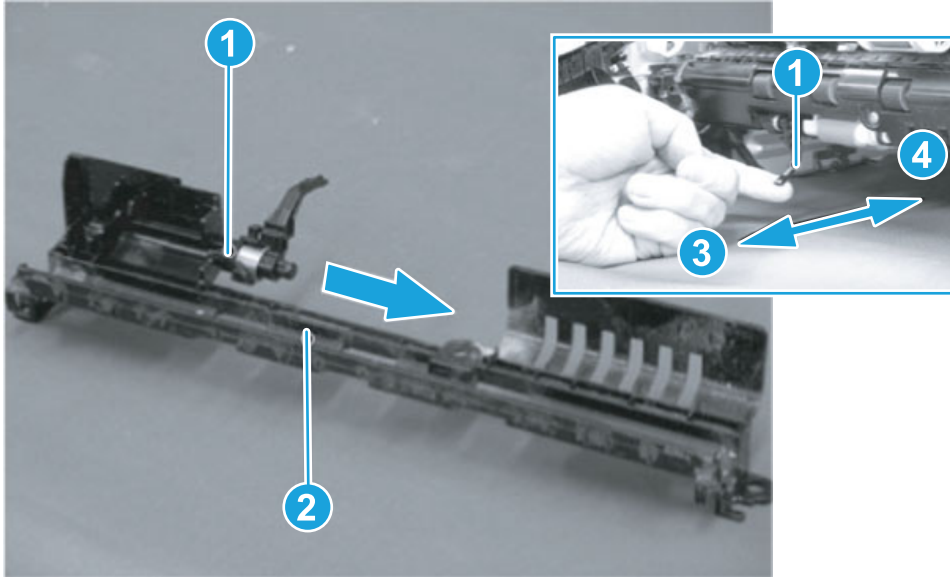
- Verify that the sensor lever (callout 1) returns to the home position when the lever is manually moved to the forward position and released (sensor lever spring return; callout 3).



- Verify that the sensor lever (callout 1) returns to the home position when the lever is manually moved to the rear position and released (sensor lever weight return; callout 4).

If the sensor lever does not return to the home position, remove the guide and lever assembly, and then remove and reinstall the lever.

**Figure 5-1051 Remove the sensor lever**



## 6. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

## Input device - 550-sheet paper feeder

Learn how to remove and replace the 550-sheet paper feeder parts and assemblies.

### Field-replaceable units (FRUs)

Learn about FRU parts removal and replacement.

### Internal parts and assemblies

Learn how to remove and replace the printer internal parts and assemblies.

### Removal and replacement: D9P29-67018 optional 550-sheet paper feeder

Learn how to remove and replace the optional 550-sheet paper feeder.



[View a video of how to remove and replace the 550-sheet paper feeder.](#)

Mean time to repair: 5 minutes

Service level: CSR A

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-51** Part information

Part number	Part description
D9P29-67018	550-sheet paper feeder

### Required tools

- No special tools are required to remove or install this assembly.

### After performing service

#### Turn the printer power on

- Connect the power cable.

- Use the power switch to turn the power on.

## Post service test

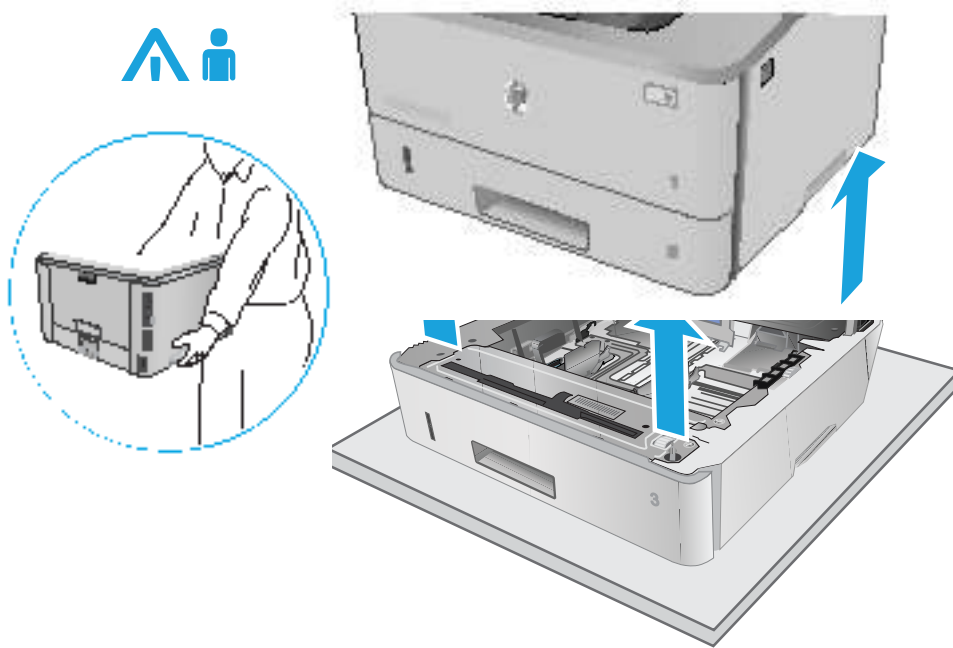
Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove the optional 550-sheet feeder Tray 3

Follow these steps to remove the optional 550-sheet feeder Tray 3.

- Carefully lift the printer off of the paper feeder assembly.

**Figure 5-1052 Remove the printer**



### 2. Remove the accessory from its package

Follow these steps to remove the accessory from its package.

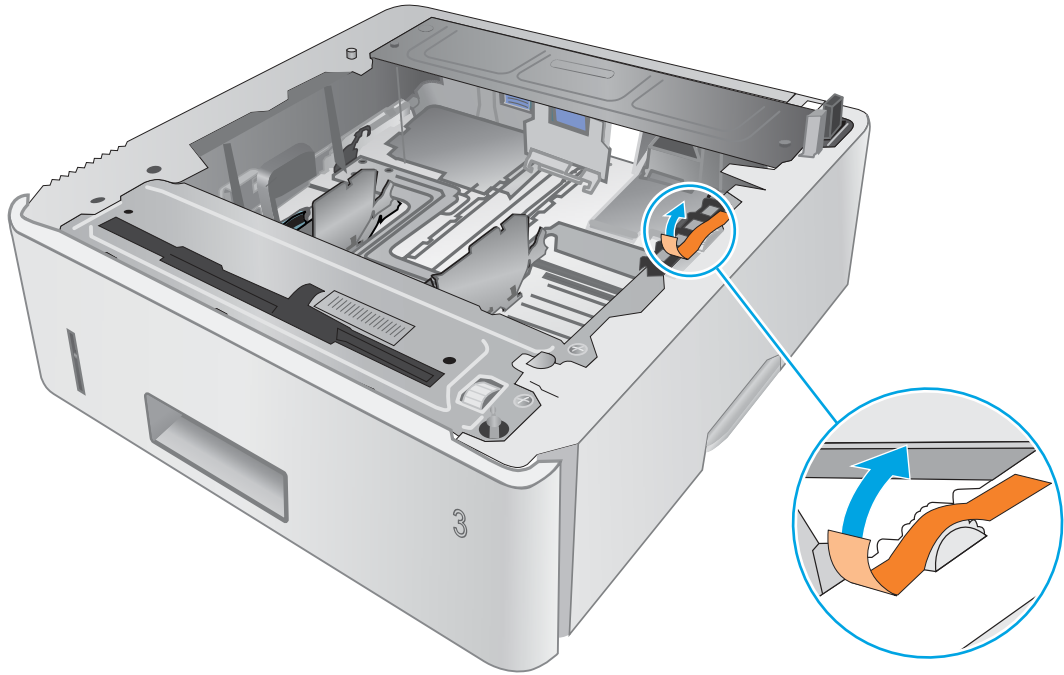
1. Save all packaging for recycling.
2. For complete information about HP recycling programs, go to <http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>.

### 3. Install the optional 550-sheet feeder Tray 3

Follow these steps to install the optional 550-sheet feeder Tray 3.

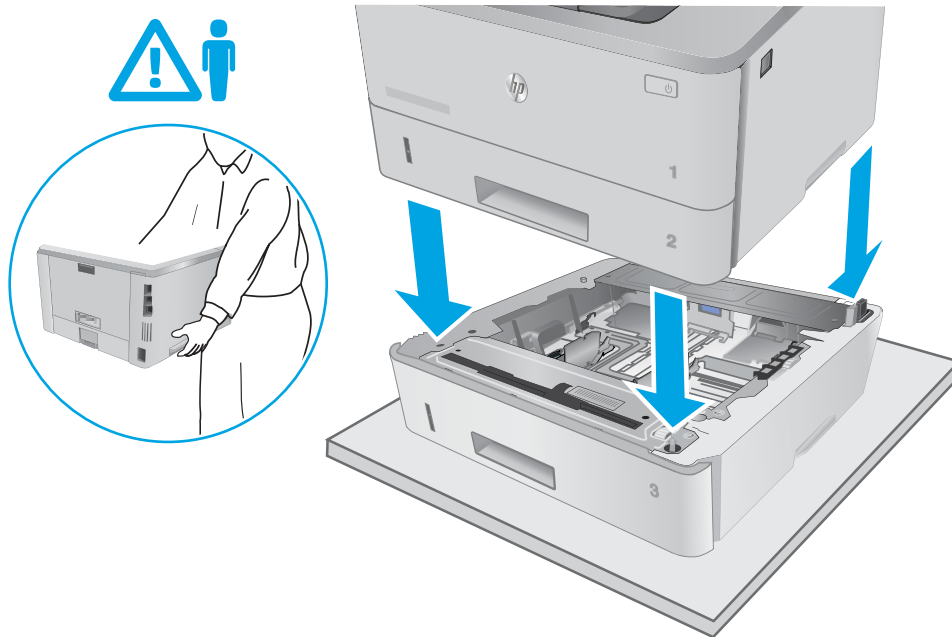
1. Remove the orange shipping tape.

**Figure 5-1053 Remove shipping tape**



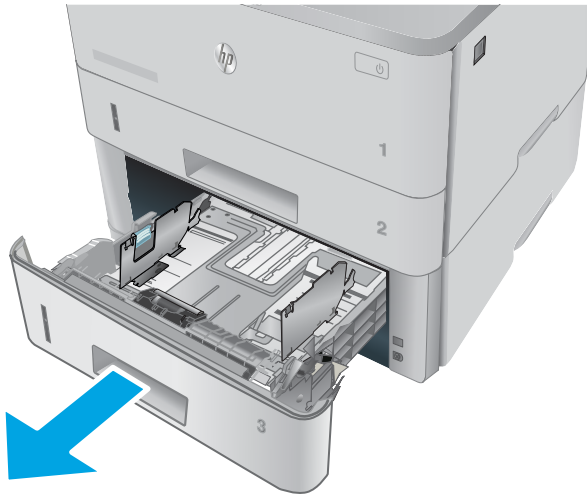
2. Carefully place the printer on the paper feeder assembly.

**Figure 5-1054 Install the printer**



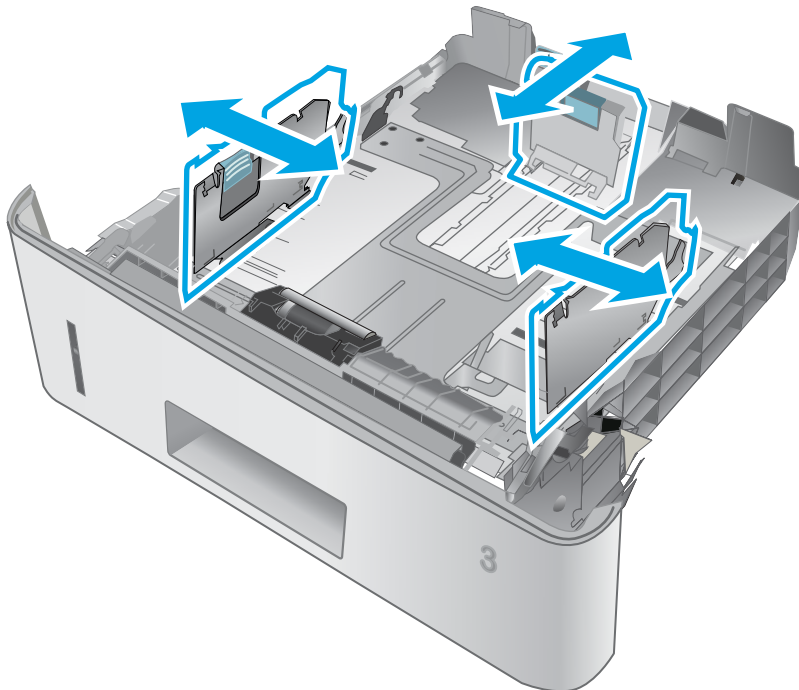
3. Pull Tray 3 out of the paper feeder assembly to remove it.

**Figure 5-1055 Remove Tray 3**



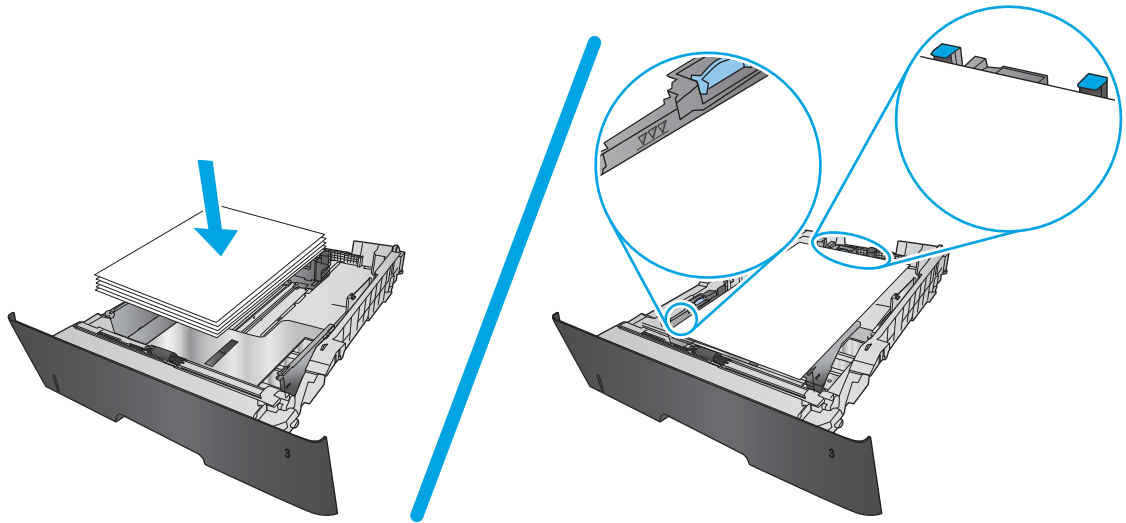
4. Adjust the Tray 3 sliding paper guides.

**Figure 5-1056 Adjust the paper guides**



5. Load paper in Tray 3.

**Figure 5-1057 Load paper**



6. Slide Tray 3 into the paper feeder assembly to install it.

**Figure 5-1058 Install Tray 3**



#### Removal and replacement: RM2-5413-000CN optional Tray 3 cassette

Learn how to remove and replace the Tray 3 cassette.



[View a video of how to remove and replace the Tray 3 cassette.](#)



Mean time to repair: 2 minutes

Service level: CSR A

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-52** Part Information

Part number	Part description
RM2-5413-000CN	Tray 3

## Required tools

- No special tools are required to remove or install this assembly.

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

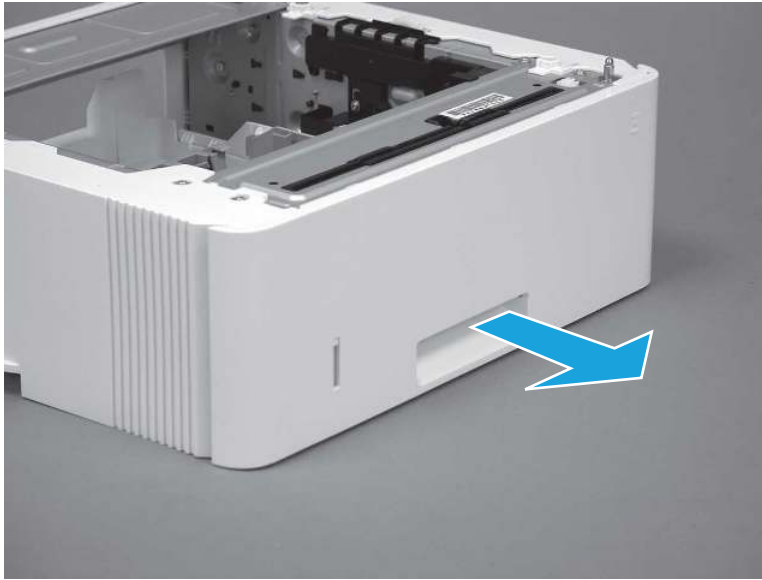
Print any pages necessary to make sure the printer is functioning correctly.

### 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

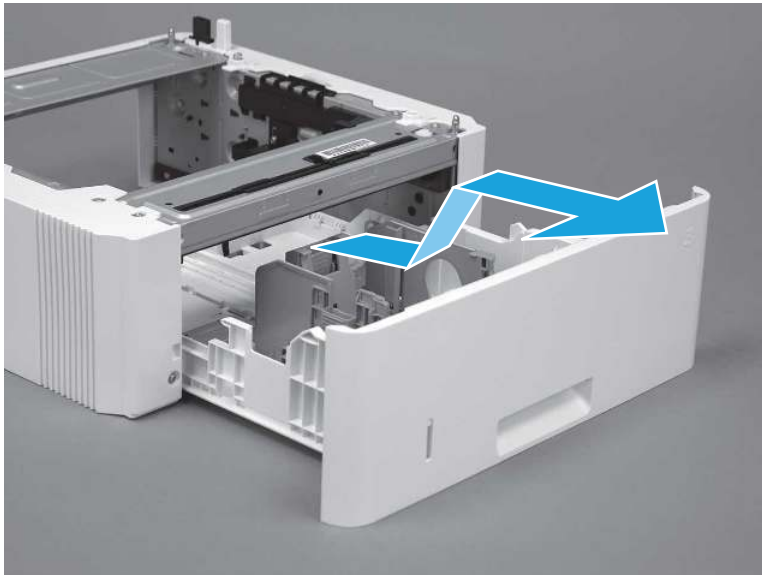
1. Pull the tray straight out of the printer until it stops.

**Figure 5-1059 Pull the tray out of the printer**



2. Slightly lift up on the front of the tray to release it, and then continue to pull the tray out of the accessory to remove it.

**Figure 5-1060 Release and remove the tray**



## 2. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.

---


**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

**IMPORTANT:**  Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

**NOTE:**  If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

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3. To install an assembly, reverse the removal steps.

**NOTE:**  When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

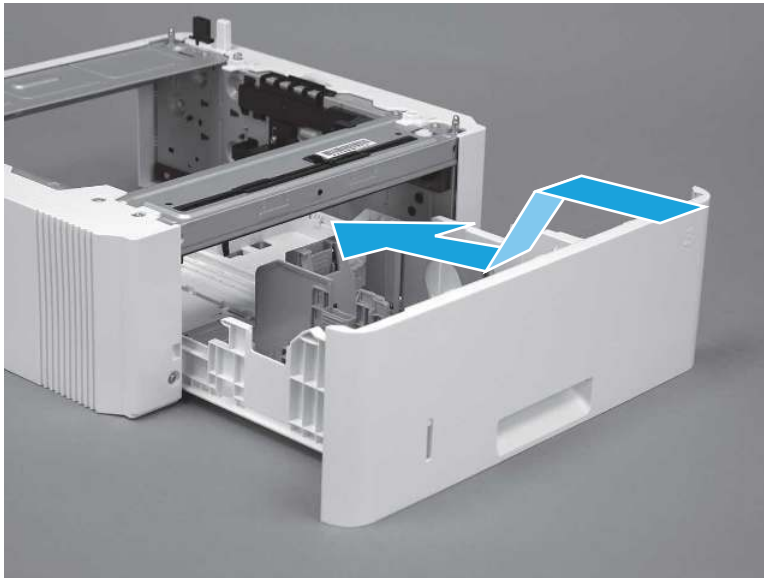
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### 3. Install optional Tray 3

Follow these steps to install optional Tray 3.

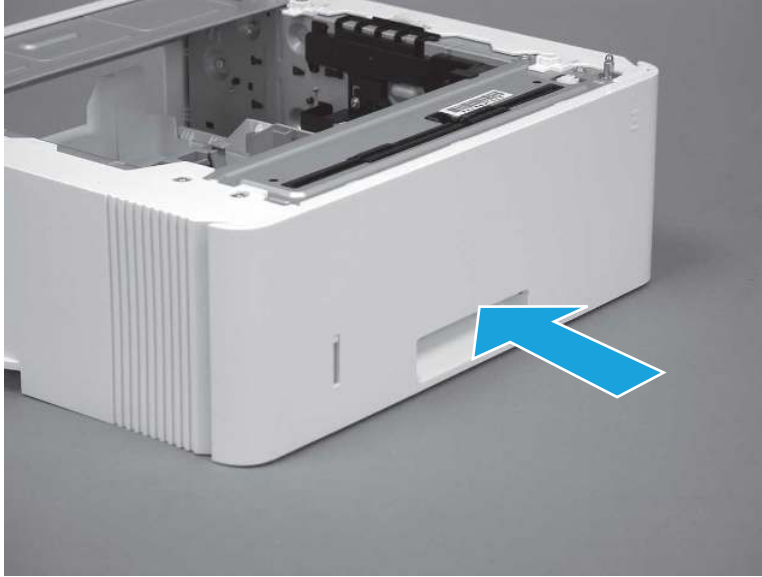
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-1061** Install the tray



2. Push the tray straight into the accessory to close it

**Figure 5-1062** Close the tray



### Removal and replacement: 3PZ15-67968 optional Tray 3 paper pickup roller assembly

Learn how to remove and replace the Tray 3 pickup roller.



[View a video of how to remove and replace the Tray 3 pickup roller.](#)

Mean time to repair: 2 minutes

Service level: CSR A

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-53** Part information

Part number	Part description
3PZ15-67968	Tray pickup roller assembly (optional Tray 3)

### Required tools

- No special tools are required to remove or install this assembly.

### After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

### Post service test

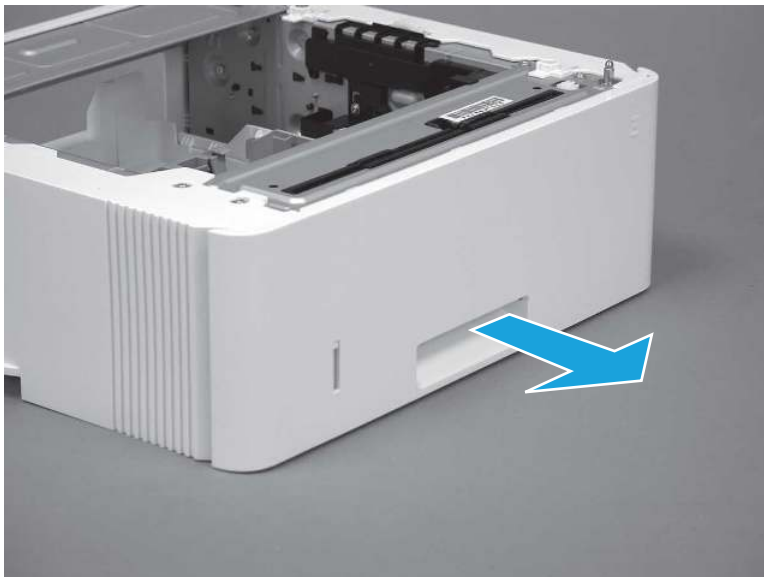
Print any pages necessary to make sure the printer is functioning correctly.

#### 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

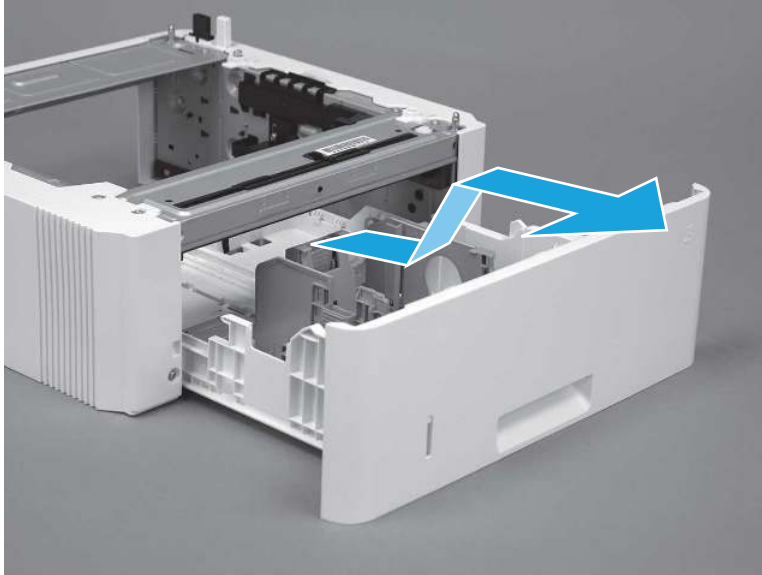
1. Pull the tray straight out of the printer until it stops.

**Figure 5-1063** Pull the tray out of the printer



2. Slightly lift up on the front of the tray to release it, and then continue to pull the tray out of the accessory to remove it.

**Figure 5-1064 Release and remove the tray**



## 2. Remove the pickup roller assembly (optional Tray 3)

Follow these steps to remove the pickup roller assembly (optional Tray 3).

1. Carefully turn the accessory over to expose the roller assembly.

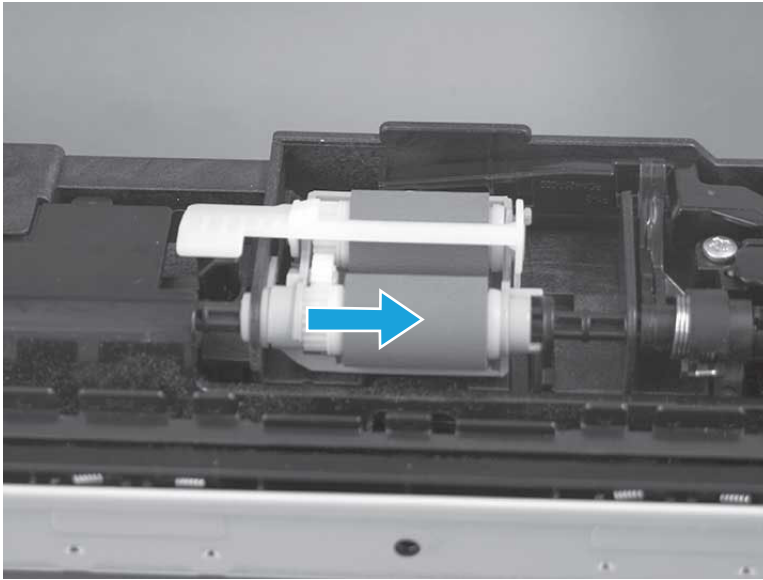
**Figure 5-1065 Turn the accessory over**





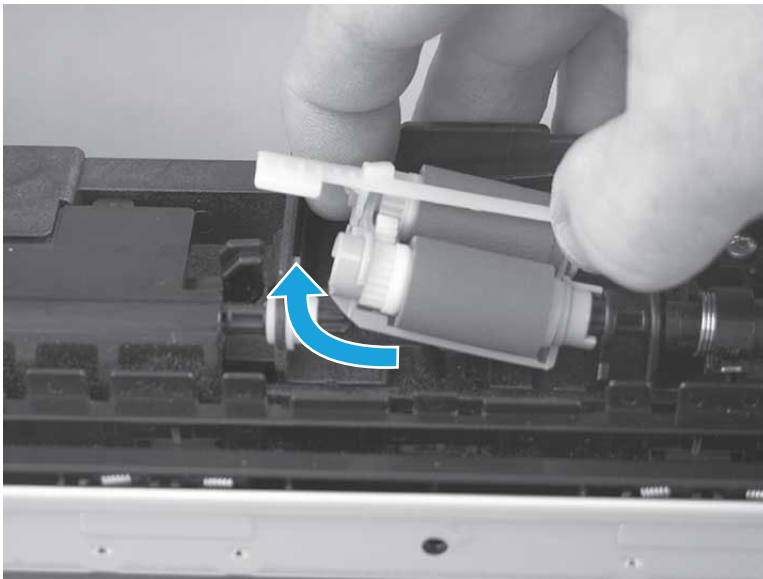
2. Slide the roller holder to the right to compress the spring-loaded shaft and release the assembly.

**Figure 5-1066** Release the roller assembly



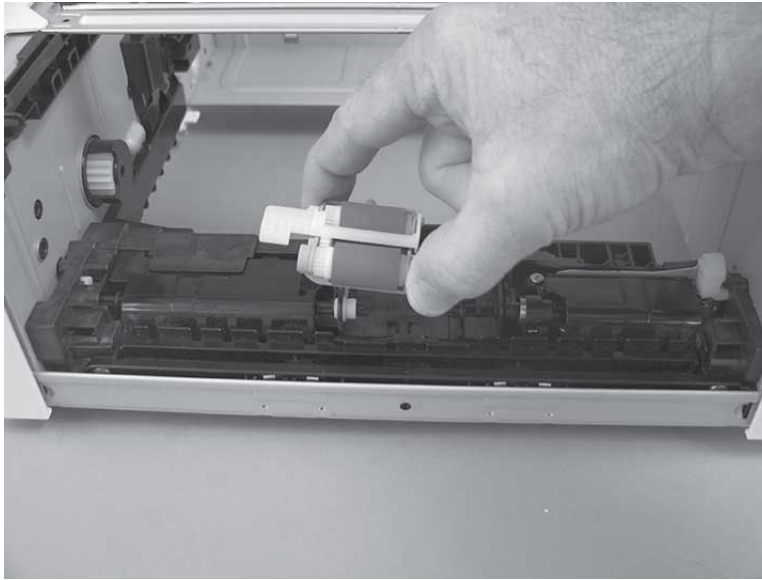
3. Rotate the end of the assembly up and away from the accessory.

**Figure 5-1067** Rotate the assembly up



4. Remove the roller assembly.

**Figure 5-1068 Remove the roller assembly**



### 3. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.




**NOTE:** HP recommends responsible disposal of the defective part.

<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.



**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.



**IMPORTANT:** Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.



**NOTE:** If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

3. To install an assembly, reverse the removal steps.



**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

#### 4. Install the pickup roller assembly (optional Tray 3)

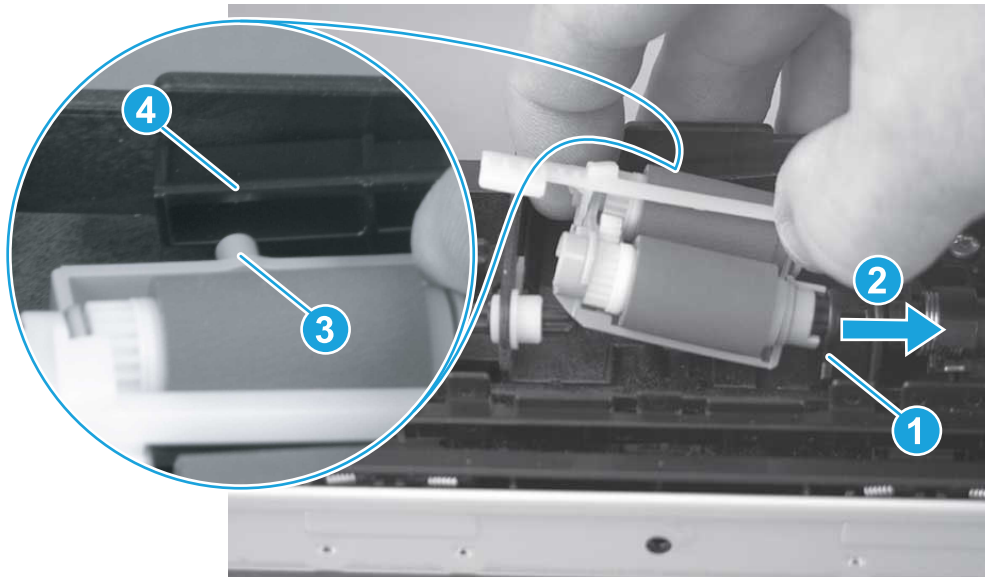
Follow these steps to install the pickup roller assembly (optional Tray 3).

**⚠ CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper-handling and print-quality problems. HP recommends using disposable gloves or thoroughly washing your hands before handling the assembly.

1. Install the right end of the assembly on the spring-loaded shaft (callout 1), and then slide it to the right to compress the shaft (callout 2).

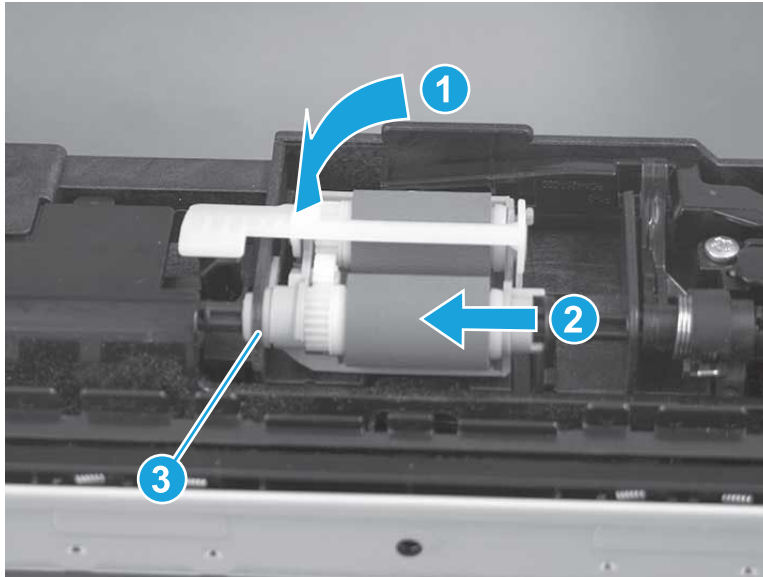
**📌 IMPORTANT:** Make sure that the pin on the back of the holder (callout 3) is inserted in the slot (callout 4) in the lever arm. If the pin is not correctly installed, the accessory will not pick paper.

**Figure 5-1069** Install the roller assembly




2. Rotate the left end of the assembly down and into place (callout 1), and then slide the assembly to the left (callout 2) to engage the drive end of the assembly with the drive shaft (callout 3).

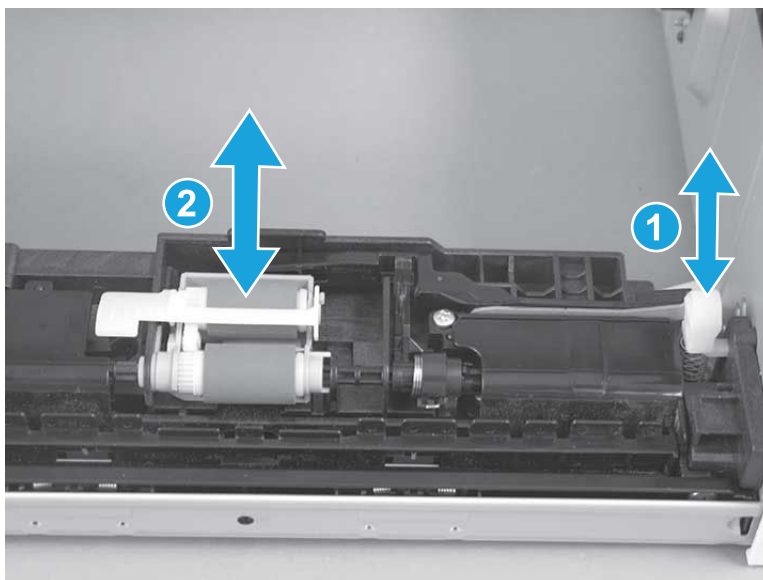
**Figure 5-1070 Engage the assembly**



3. Push down and then release the tray-roller actuator (callout 1) and observe the roller assembly. It should move up and down (callout 2) in response to the actuator.

 **NOTE:** If it does not, remove the roller assembly and reinstall it making sure that the pin on the back of the assembly is in the lever arm. See the previous steps in this section.

**Figure 5-1071 Check the installation**

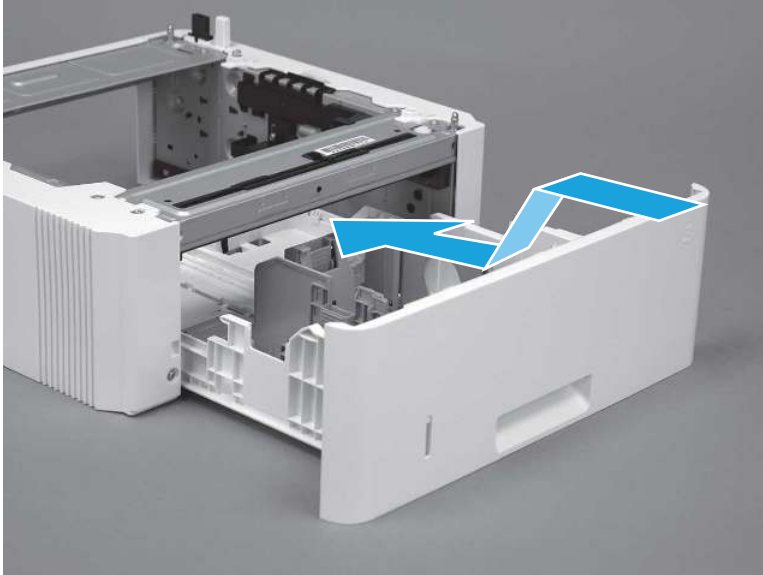


## 5. Install optional Tray 3

Follow these steps to install optional Tray 3.

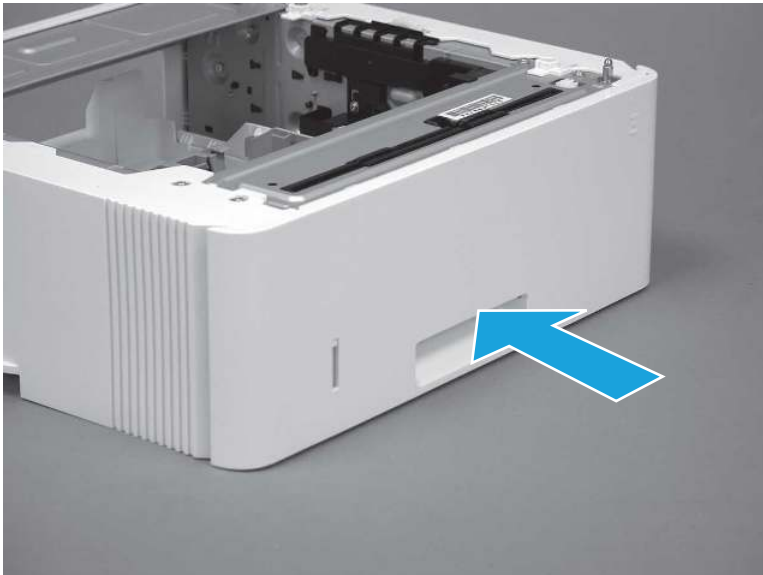
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-1072** Install the tray



2. Push the tray straight into the accessory to close it

**Figure 5-1073** Close the tray



#### Removal and replacement: 3PZ15-67967 optional Tray 3 separation roller assembly

Learn how to remove and replace the Tray 3 separation roller.

 [View a video of how to remove and replace the Tray 3 separation roller.](#)

Mean time to repair: 2 minutes

Service level: CSR A

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

**⚠ WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cord before attempting to service the printer.

Use the table below to identify the correct part number for your printer. To order the part, go to [www.hp.com/buy/parts](http://www.hp.com/buy/parts).

**Table 5-54** Part Information

Part number	Part description
3PZ15-67967	Tray 3 Separation Pad

## Required tools

- No special tools are required to remove or install this assembly.

## After performing service

### Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

## Post service test

Print any pages necessary to make sure the printer is functioning correctly.

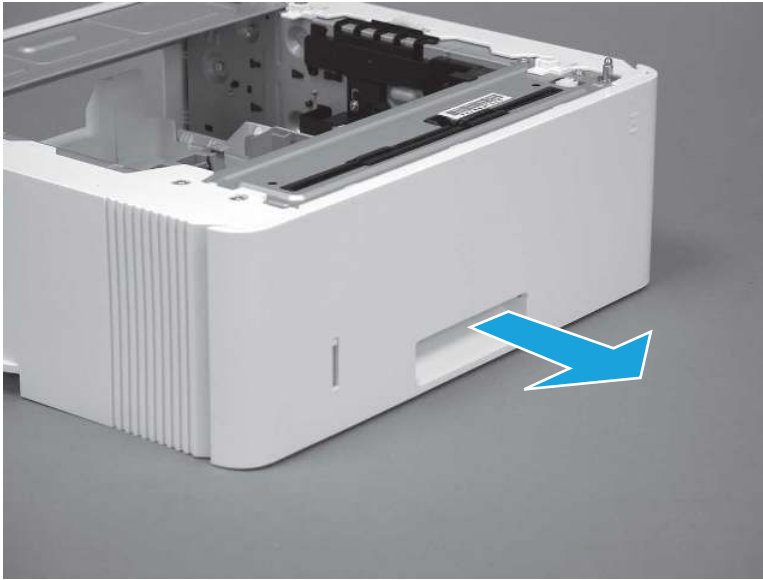
### 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.



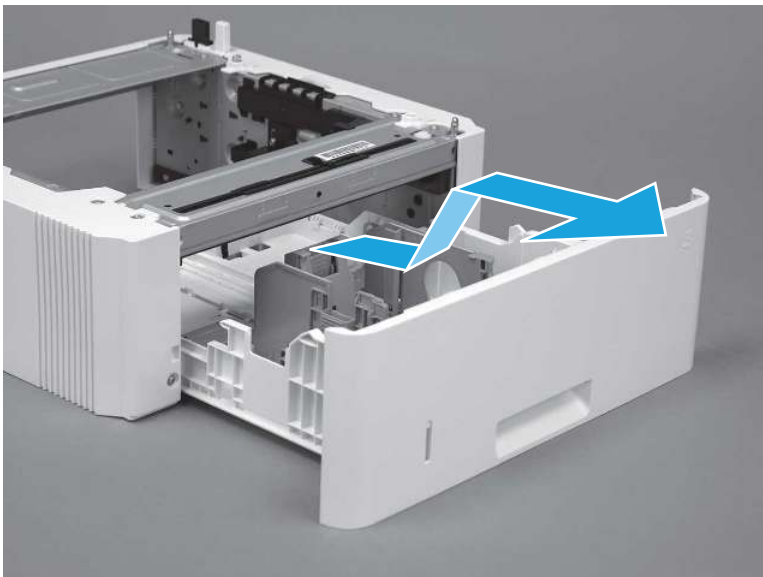
1. Pull the tray straight out of the printer until it stops.

**Figure 5-1074** Pull the tray out of the printer



2. Slightly lift up on the front of the tray to release it, and then continue to pull the tray out of the accessory to remove it.

**Figure 5-1075** Release and remove the tray



## 2. Remove the separation roller assembly (optional Tray 3)

Follow these steps to remove the separation roller assembly (optional Tray 3).

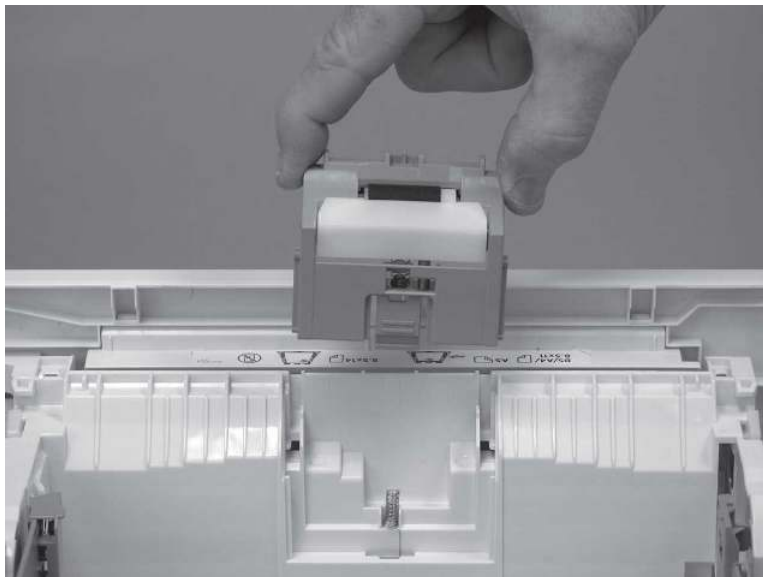
1. Press the locking lever (callout 1), and then pull the separation roller assembly straight up to release it.

**Figure 5-1076** Release the assembly



2. Remove the assembly.

**Figure 5-1077** Remove the assembly



### 3. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

1. Dispose of the defective part.





**NOTE:** HP recommends responsible disposal of the defective part.


<http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>

2. Unpack the replacement part from the packaging.

---


**CAUTION:**  Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, touch the sheet-metal chassis to provide a static ground before touching an ESD-sensitive assembly. Protect the ESD-sensitive assemblies by placing them in ESD pouches when they are out of the printer.

**IMPORTANT:**  Make sure that all of the shipping materials (for example shipping tape) are removed from the replacement part prior to installation.

**NOTE:**  If the replacement part is a roller or pad, avoid touching the spongy part of it. Skin oils on the roller or pad can cause paper pickup and/or print-quality problems. HP recommends using disposable gloves when handling rollers or pads or washing your hands before touching rollers or pads.

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3. To install an assembly, reverse the removal steps.

**NOTE:**  When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

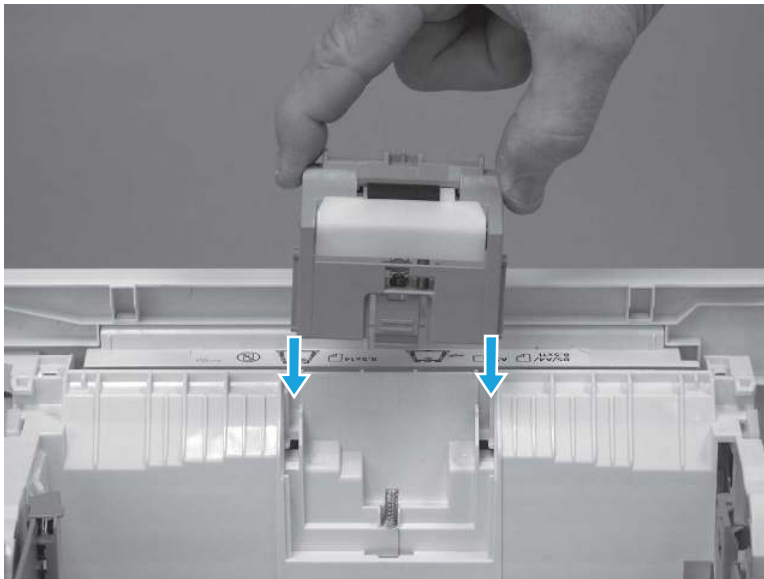
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#### 4. Install the separation pad roller assembly (optional Tray 3)

Follow these steps to install the separation pad roller assembly (optional Tray 3).

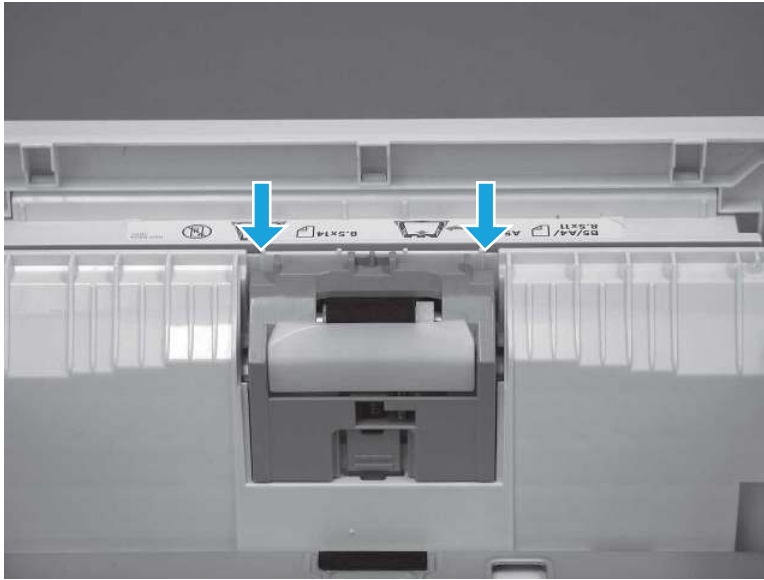
1. Install the assembly in the slots in the cassette.

**Figure 5-1078** Install the assembly (1 of 2)



2. Push the separation roller assembly straight down until it snaps into place.

**Figure 5-1079** Install the assembly (2 of 2)

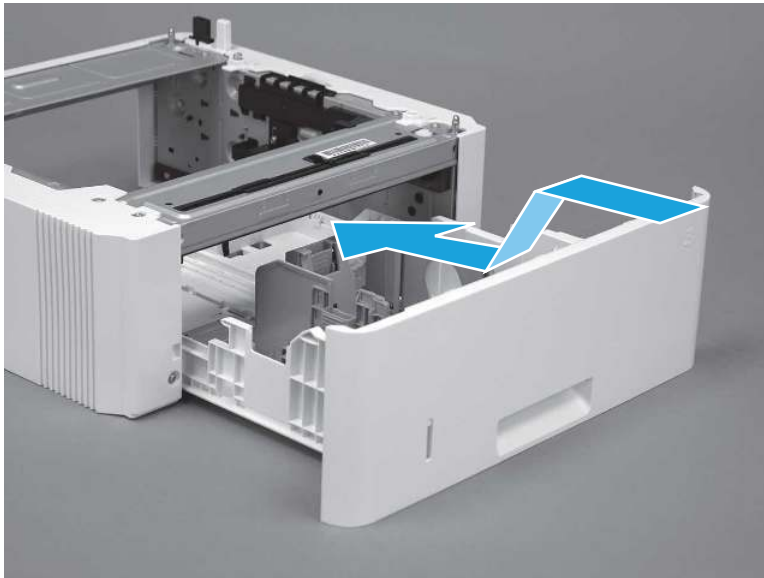


### 5. Install optional Tray 3

Follow these steps to install optional Tray 3.

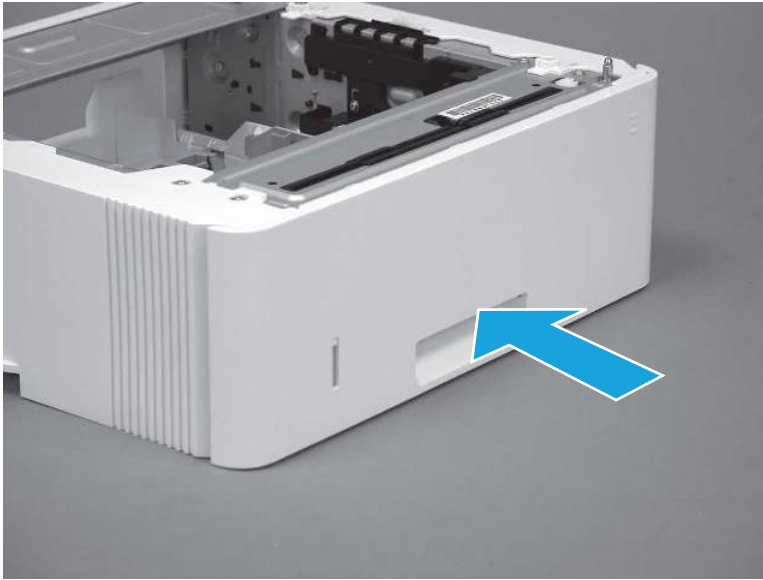
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-1080** Install the tray



2. Push the tray straight into the accessory to close it

**Figure 5-1081** Close the tray




# 6 Parts and diagrams

Printer parts information including exploded assembly diagrams and part number lists.

## Document feeder / scanner

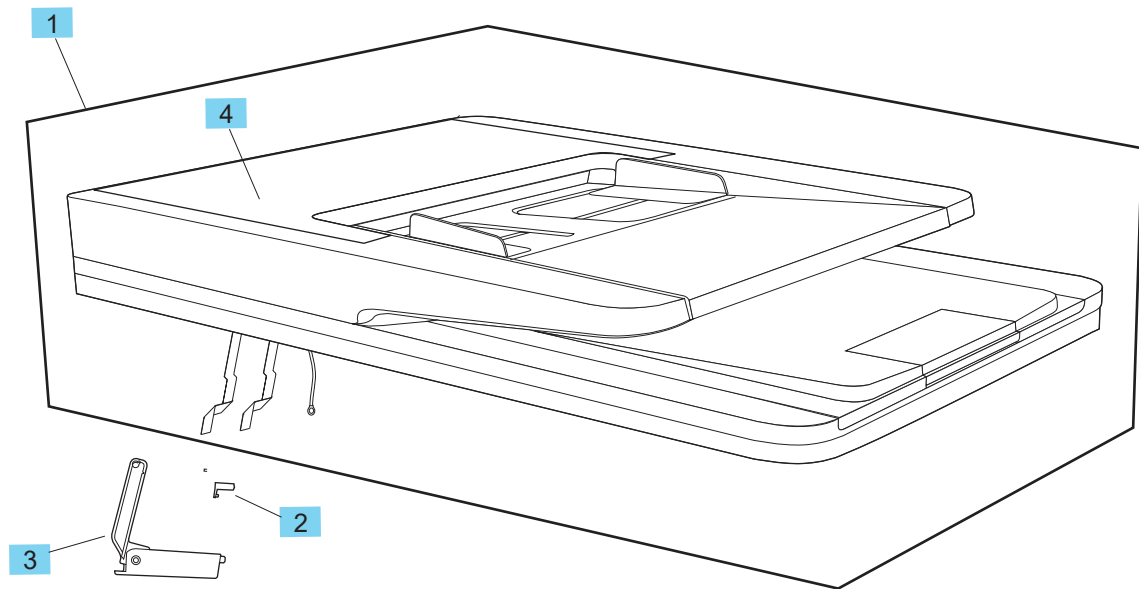
Learn about the integrated scanner assembly (ISA) parts and assemblies.

 **NOTE:** This section is for MFP printers only.

### Integrated scanner assembly

Parts diagram and part list for the integrated scanner assembly (ISA).

**Figure 6-1** Integrated scanner assembly



**Table 6-1** Integrated scanner assembly

Ref No	Part number	Description	Qty
1	W1A73-60113	Assy-duplex GSO (ISA/ADF assembly)	1
2	B3Q10-40041	ISA lift slider pin	1



**Table 6-1** Integrated scanner assembly (continued)

<b>Ref No</b>	<b>Part number</b>	<b>Description</b>	<b>Qty</b>
3	B3Q10-60128	ISA lift assembly	1
4	W1A77-67903	ADF top cover assembly (includes rollers)	1
Not shown	9170-2664	Ferrite - ISA	1
Not shown	9170-2437	Ferrite - ISA	1
Not shown	B3Q10-40048	Holder-Mylar	1
Not shown	B3Q10-00060	Mylar-ramp	1

## Base printer

Learn about the printer engine parts and assemblies.

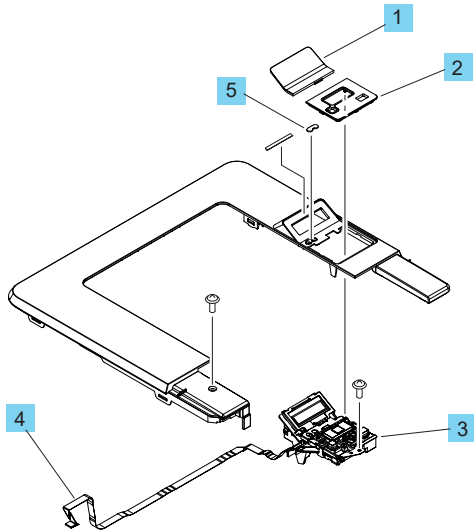
## Control panels

Parts diagrams and part lists for the control panels.

### Control panel (SFP)

Parts diagrams and parts lists for the SFP printer control panels.

**Figure 6-2 Control panels (4001/4002/4003/4004)**



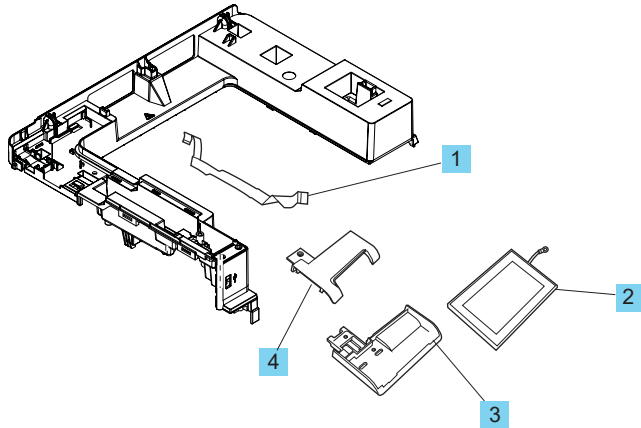
**Table 6-2 Control panels (4001/4002/4003/4004)**

Ref No	Part number	Description	Qty
1	RL2-0675-000CN	Cover, 2 line LCD indication	1
2	RC4-3322-000CN	Two line LCD operation cover (wireless models)	1
2	RC4-3312-000CN	Two line LCD operation cover (non-wireless models)	1
3	RM2-5424-000CN	Control panel assembly (wireless model)	1
3	RM2-5391-000CN	Control panel assembly (non wireless model)	1
4	RK2-6942-000CN	Control panel assembly FFC	1
5	RC4-3311-000CN	LED light guide	1

## Control panel (MFP)

Parts diagrams and parts lists for the MFP printer control panel.

**Figure 6-3** Control panel (4101/4102/4103/4104)



**Table 6-3** Control panel (4101/4102/4103/4104)

Ref No	Part number	Description	Qty
1	W1A30-60101	Control panel assembly FFC	1
2	W2Q13-60103	Touchscreen control panel assembly	1
3	B3Q11-40001	Control panel mount base	1
4	B3Q11-40002	Control panel mount cover	1
Not shown	T6B80-40002	Cover, back control panel	1
Not shown	B3Q10-60145	CP mount chassis assembly	1

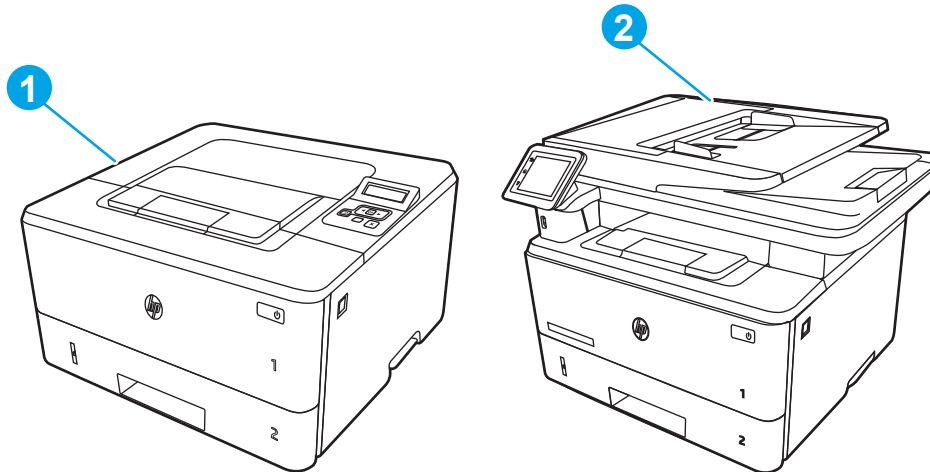
## Covers, panels, and doors

Parts diagrams and part lists for the covers, panels, and doors.

### Parts and diagrams: Whole unit replacement and toner cartridges

Parts diagram and parts list for whole unit replacement (WUR) and the toner cartridges.

**Figure 6-4** Whole unit replacement and toner cartridges



**Table 6-4** Whole unit replacement and toner cartridges

Ref No	Part number	Description	Qty
1	2Z599-69003	Prod-Exchange 110V 4001ne WUR	1
1	2Z600-69004	Prod-Exchange 110V 4001dne WUR	1
1	2Z601-69005	Prod-Exchange 220V 4001dwe WUR	1
1	2Z601-69006	Prod-Exchange 110V 4001dwe WUR	1
1	2Z600-69007	Prod-Exchange 220V 4001dne WUR	1
1	2Z605-69003	Prod-Exchange 220V 4002dne WUR	1
1	2Z606-69003	Prod-Exchange 220V 4002dwe WUR	1
1	2Z599-69004	Prod-Exchange 110V 4001n WUR	1
1	2Z600-69005	Prod-Exchange 220V 4001dn WUR	1
1	2Z600-69006	Prod-Exchange 110V 4001dn WUR	1
1	2Z601-69007	Prod-Exchange 220V 4001dw WUR	1
1	2Z601-69008	Prod-Exchange 110V 4001dw WUR	1
1	2Z605-69004	Prod-Exchange 220V 4002dn WUR	1
1	2Z606-69004	Prod-Exchange 220V 4002dw WUR	1
1	2Z607-69002	Prod-Exchange 220V 4002d WUR	1
1	2Z611-69003	Prod-Exchange 220V 4003n WUR	1

**Table 6-4 Whole unit replacement and toner cartridges (continued)**

Ref No	Part number	Description	Qty
1	2Z611-69004	Prod-Exchange 110V 4003n WUR	1
1	2Z609-69003	Prod-Exchange 220V 4003dn WUR	1
1	2Z609-69004	Prod-Exchange 110V 4003dn WUR	1
1	2Z610-69003	Prod-Exchange 220V 4003dw WUR	1
1	2Z610-69004	Prod-Exchange 110V 4003dw WUR	1
1	2Z613-69003	Prod-Replace New 220V 4004d CN WUR	1
1	2Z613-69004	Prod-Replace New 220V 4004d CN Gov WUR	1
1	2Z614-69003	Prod-Replace New 220V 4004dn CN WUR	1
1	2Z614-69004	Prod-Replace New 220V 4004dn CN Gov WUR	1
1	2Z615-69002	Prod-Replace New 220V 4004dw CN WUR	1
1	2Z613-69005	Prod-Replace New 220V 4004d IN WUR	1
1	2Z614-69005	Prod-Replace New 220V 4004dn IN WUR	1
1	2Z615-69003	Prod-Replace New 220V 4004dw IN WUR	1
2	2Z618-69003	Prod-Exchange 110V 4101fdne WUR	1
1	2Z618-69005	Prod-Exchange 220V 4101fdne WUR	1
	2Z618-69006	Prod-Exchange 220V 4101fdn WUR	
2	2Z619-69005	Prod-Exchange 220V 4101fdwe WUR	1
2	2Z619-69006	Prod-Exchange 110V 4101fdwe WUR	1
2	2Z620-69003	Prod-Exchange 110V 4101dwe WUR	1
2	2Z622-69003	Prod-Exchange 220V 4102dwe WUR	1
2	2Z624-69003	Prod-Exchange 220V 4102fdwe WUR	1
2	2Z618-69004	Prod-Exchange 110V 4101fdn WUR	1
2	2Z619-69007	Prod-Exchange 220V 4101fdw WUR	1
2	2Z619-69008	Prod-Exchange 110V 4101fdw WUR	1
2	2Z620-69004	Prod-Exchange 110V 4101dw WUR	1
2	2Z620-69006	Prod-Exchange 220V 4101dw WUR	1
2	2Z620-69005	Prod-Exchange 220V 4101dwe WUR	1
2	2Z622-69004	Prod-Exchange 220V 4102dw WUR	1
2	2Z623-69002	Prod-Exchange 220V 4102fdn WUR	1
2	2Z624-69004	Prod-Exchange 220V 4102fdw WUR	1
2	2Z627-69003	Prod-Exchange 220V 4103dw WUR	1
2	2Z627-69004	Prod-Exchange 110V 4103dw WUR LAR	1
2	2Z628-69003	Prod-Exchange 220V 4103fdn WUR	1

**Table 6-4 Whole unit replacement and toner cartridges (continued)**

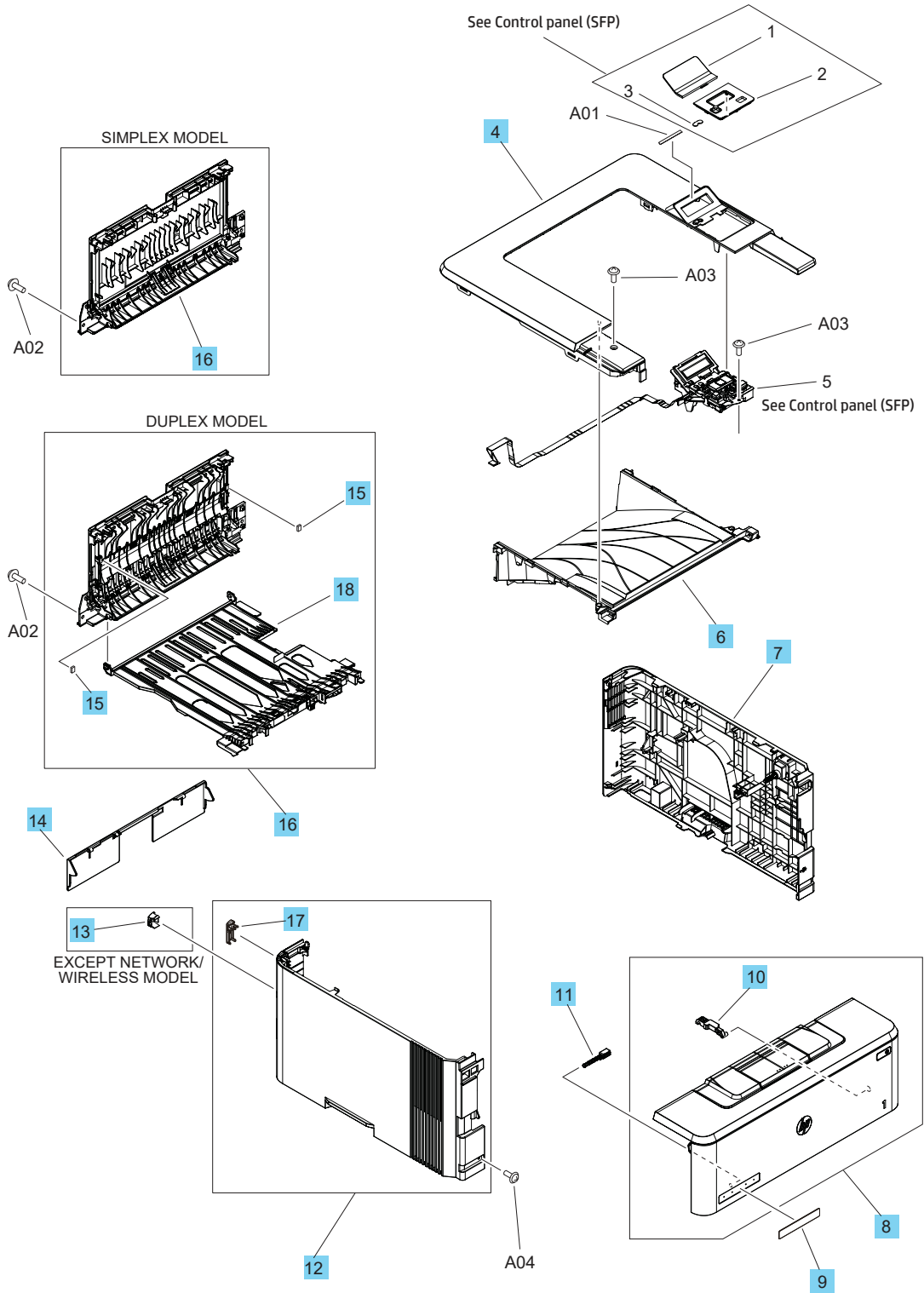
Ref No	Part number	Description	Qty
2	2Z628-69004	Prod-Exchange 110V 4103fdn WUR TW	1
2	2Z629-69004	Prod-Exchange 220V 4103fdw WUR	1
2	2Z629-69005	Prod-Exchange 110V 4103fdw WUR LAR/TW/JP	1
2	2Z629-69006	Prod-Exchange 110V 4103fdw WUR BRAZIL	1
2	2Z632-69002	Prod-Replace New 220V 4104dw WUR CN	1
2	2Z632-69003	Prod-Replace New 220V 4104dw WUR IN	1
2	2Z632-69004	Prod-Replace New 220V 4104dw WUR India Gov	1
2	2Z633-69002	Prod-Replace New 220V 4104fdn WUR CN	1
2	2Z633-69003	Prod-Replace New 220V 4104fdn WUR IN	1
2	2Z633-69004	Prod-Replace New 220V 4104fdn WUR India Gov	1
2	2Z634-69002	Prod-Replace New 220V 4104fdw WUR CN	1
2	2Z634-69003	Prod-Replace New 220V 4104fdw WUR IN	1
2	2Z634-69004	Prod-Replace New 220V 4104fdw WUR India Gov	1
2	2Z635-69002	Prod-Exchange 220V 4103dw WUR RUSSIA	1
2	2Z636-69002	Prod-Exchange 220V 4103fdn WUR RUSSIA	1
Not shown	W1480A	HP 148A Black Original LaserJet Toner Cartridge	1
Not shown	W1490A	HP 149A Black Original LaserJet Toner Cartridge	1
Not shown	W1510A	HP 151A Black Original LaserJet Toner Cartridge	1
Not shown	W1520A	HP 152A Black Original LaserJet Toner Cartridge	1
Not shown	W1480X	HP 148X High Yield Black Original LaserJet Toner Cartridge	1
Not shown	W1490X	HP 149X High Yield Black Original LaserJet Toner Cartridge	1
Not shown	W1510X	HP 151X High Yield Black Original LaserJet Toner Cartridge	1
Not shown	W1520X	HP 152A Black Original LaserJet Toner Cartridge	1
Not shown	W1020XC	HP 102XC High Yield Black Contract LaserJet Toner Cartridge	1
Not shown	W1030XC	HP 103XC High Yield Black Contract LaserJet Toner Cartridge	1



## Parts and diagrams: Covers (SFP)

Parts diagram and parts list for the SFP printer covers.

**Figure 6-5** Covers (4001/4002/4003/4004)



**Table 6-5 Covers (4001/4002/4003/4004)**

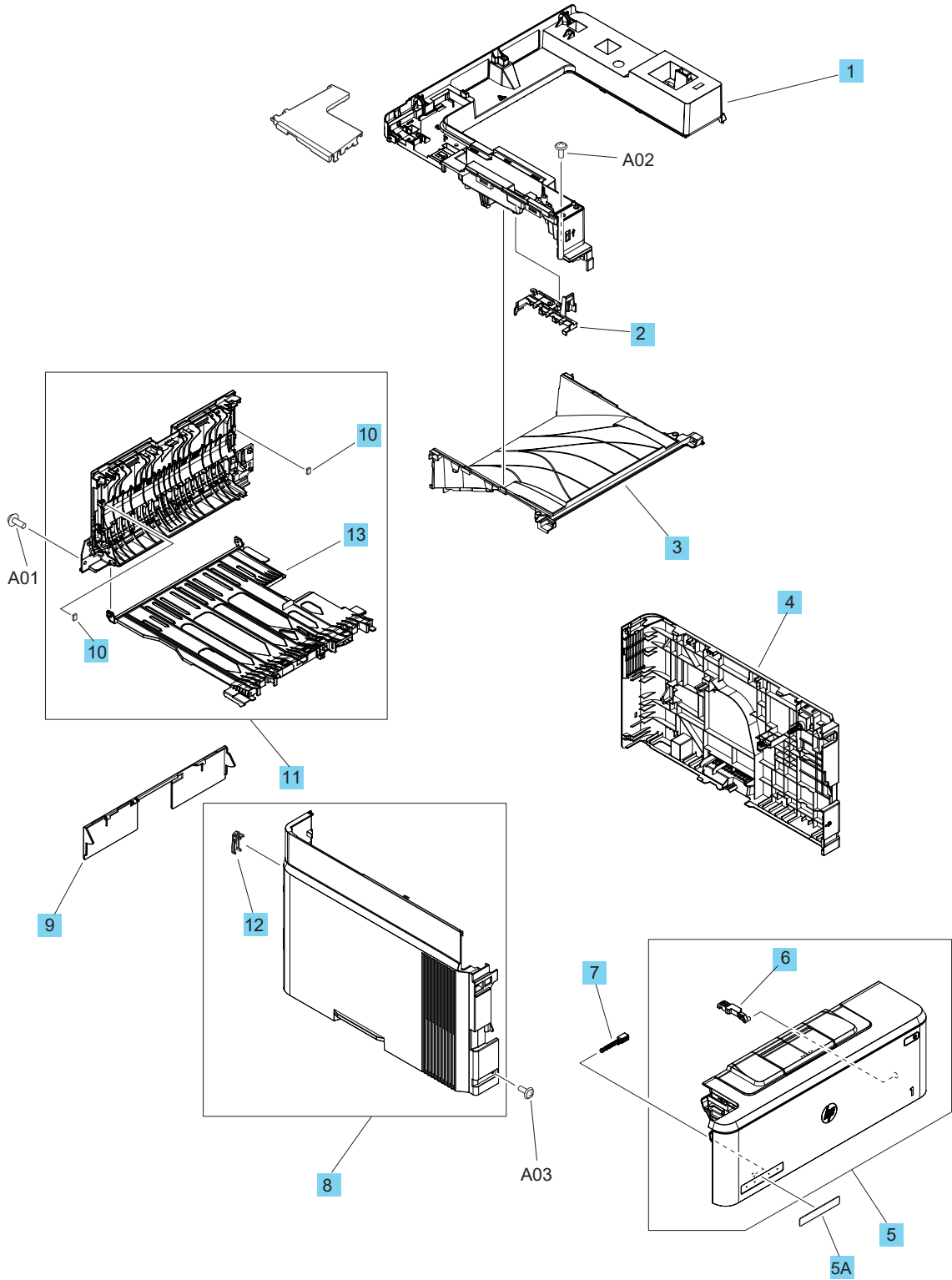
Ref No	Part number	Description	Qty
4	RC4-2956-000CN	Cover, top (SFP)	1
6	RC6-2515-000CN	Tray, paper delivery (MFP/SFP - no WiFi)	1
6	RM2-4699-000CN	Tray, paper delivery (SFP - WiFi)	1
7	RM2-5434-000CN	Cover, right	1
8	RM2-4714-000CN	Cartridge door assembly (SFP)	1
9	RC6-2571-000CN	Name plate 4001ne	1
9	RC6-2572-000CN	Name plate 4001n	1
9	RC6-2573-000CN	Name plate 4001dne	1
9	RC6-2574-000CN	Name plate 4001dn	1
9	RC6-2575-000CN	Name plate 4001dwe	1
9	RC6-2576-000CN	Name plate 4001dw	1
9	RC6-2579-000CN	Name plate 4002dne	1
9	RC6-2580-000CN	Name plate 4002dn	1
9	RC6-2581-000CN	Name plate 4002dwe	1
9	RC6-2582-000CN	Name plate 4002dw	1
9	RC6-2583-000CN	Name plate 4002d	1
9	RC6-2584-000CN	Name plate 4003dn	1
9	RC6-2585-000CN	Name plate 4003dw	1
9	RC6-2586-000CN	Name plate 4003n	1
9	RC6-2587-000CN	Name plate 4004d	1
9	RC6-2588-000CN	Name plate 4004dn	1
9	RC6-2589-000CN	Name plate 4004dw	1
10	RC4-4479-000CN	Link, pressure release	1
11	RC4-3002-000CN	Shaft, support	1
12	RL2-0673-000CN	Cover, left (SFP)	1
13	RC4-2907-000CN	Network cover assembly	1
14	RC4-3082-000CN	Cover, cassette rear	1
15	RC2-6075-000CN	Duplexer sheet damper	2
16	RM2-5430-000CN	Rear door assembly (simplex)	1
16	RM2-5405-000CN	Rear door assembly (duplex)	1
17	RC4-3298-000CN	Rear USB cover (SFP)	1
18	RM2-5666-000CN	Paper re-pick assembly	1
Not shown	7121-8686	HP logo jewel	1



## Parts and diagrams: Covers (MFP)

Parts diagram and parts list for the MFP printer covers.

**Figure 6-6 Covers (4101/4102/4103/4104)**



**Table 6-6 Covers (4101/4102/4103/4104)**

Ref No	Part number	Description	Qty
1	RC4-3207-000CN	Cover, top (MFP)	1
2	RC4-3217-010CN	Cable guide	1
3	RC6-2515-000CN	Tray, paper delivery (MFP/SFP - no WiFi)	1
4	RM2-5434-000CN	Cover, right	1
5	RM2-4715-000CN	Cartridge door assembly (MFP)	1
5A	2Z618-40003	Name plate 4101fdne	1
5A	2Z618-40004	Name plate 4101fdn	1
5A	2Z619-40003	Name plate 4101fdwe	1
5A	2Z619-40004	Name plate 4101fdw	1
5A	2Z620-40003	Name plate 4101dwe	1
5A	2Z620-40004	Name plate 4101dw	1
5A	2Z622-40003	Name plate 4102dwe	1
5A	2Z622-40004	Name plate 4102dw	1
5A	2Z623-40004	Name plate 4102fdn	1
5A	2Z624-40003	Name plate 4102fdwe	1
5A	2Z624-40004	Name plate 4102fdw	1
5A	2Z627-40002	Name plate 4103dw	1
5A	2Z628-40002	Name plate 4103fdn	1
5A	2Z629-40002	Name plate 4103fdw	1
5A	2Z632-40002	Name plate 4104dw	1
5A	2Z633-40002	Name plate 4104fdn	1
5A	2Z634-40002	Name plate 4104fdw	1
6	RC4-4479-000CN	Link, pressure release	1
7	RC4-3002-000CN	Shaft, support	1
8	RL2-0674-000CN	Cover, left (MFP)	1
9	RC4-3082-000CN	Cover, cassette rear	1
10	RC2-6075-000CN	Duplexer sheet damper	2
11	RM2-5405-000CN	Rear door assembly (duplex)	1
12	RC4-3299-000CN	Rear USB cover (MFP)	1
13	RM2-5666-000CN	Paper re-pick assembly	1
Not shown	7121-8686	HP logo jewel	1
Not shown	C5F99-40003	Fax port cover	1
Not shown	C5F98-40002	Cover FFC	1

**Table 6-6** Covers (4101/4102/4103/4104) (continued)

<b>Ref No</b>	<b>Part number</b>	<b>Description</b>	<b>Qty</b>
Not shown	C5F98-40003	Cover core	1



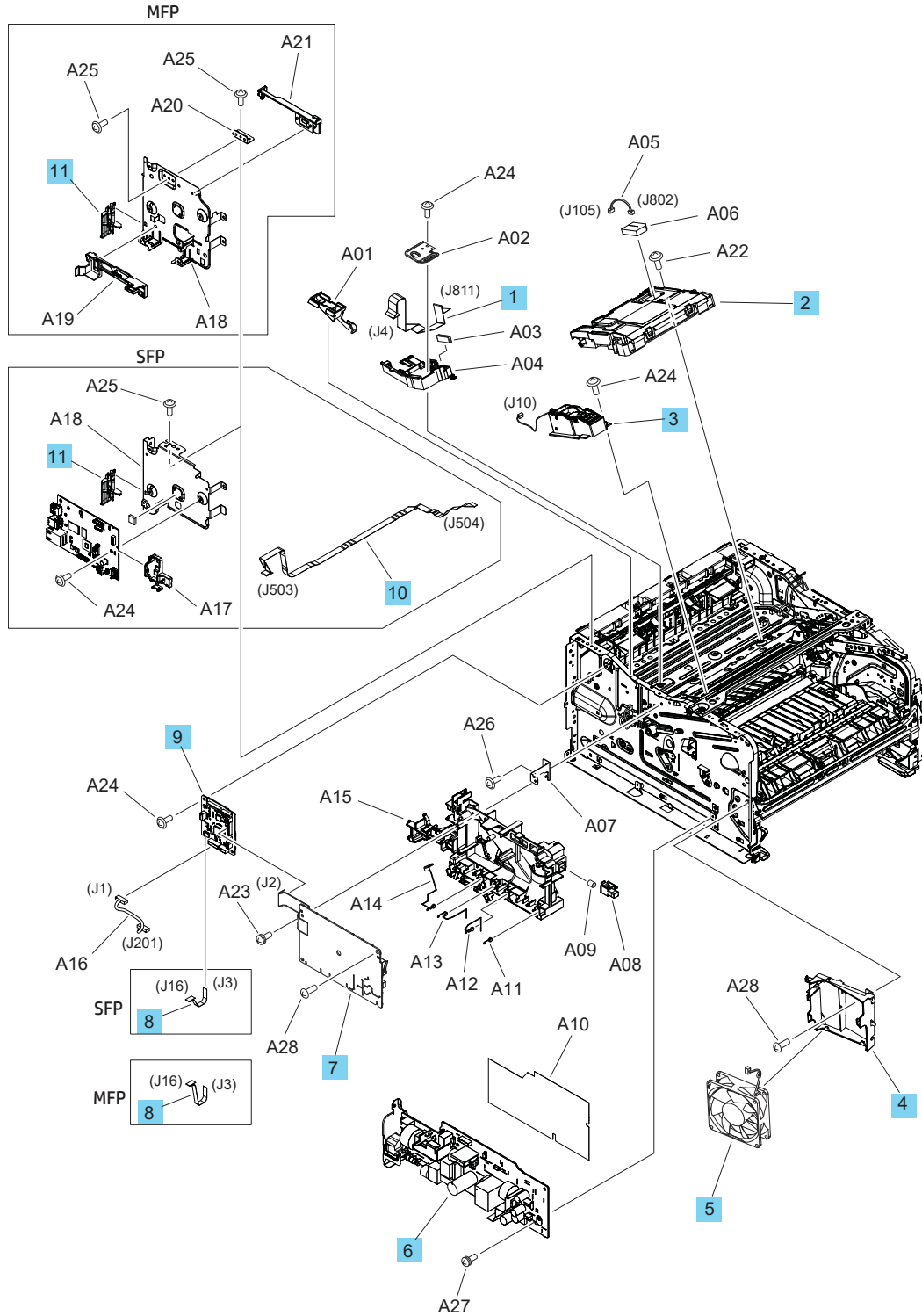
## Internal parts and assemblies

Parts diagrams and part lists for the internal parts and assemblies.

### Parts and diagrams: Internal assemblies (1 of 3)

Parts diagram and parts list for the internal printer assemblies.

**Figure 6-7 Internal assemblies (1 of 3)**



**Table 6-7 Internal assemblies (1 of 3)<sup>1</sup>**

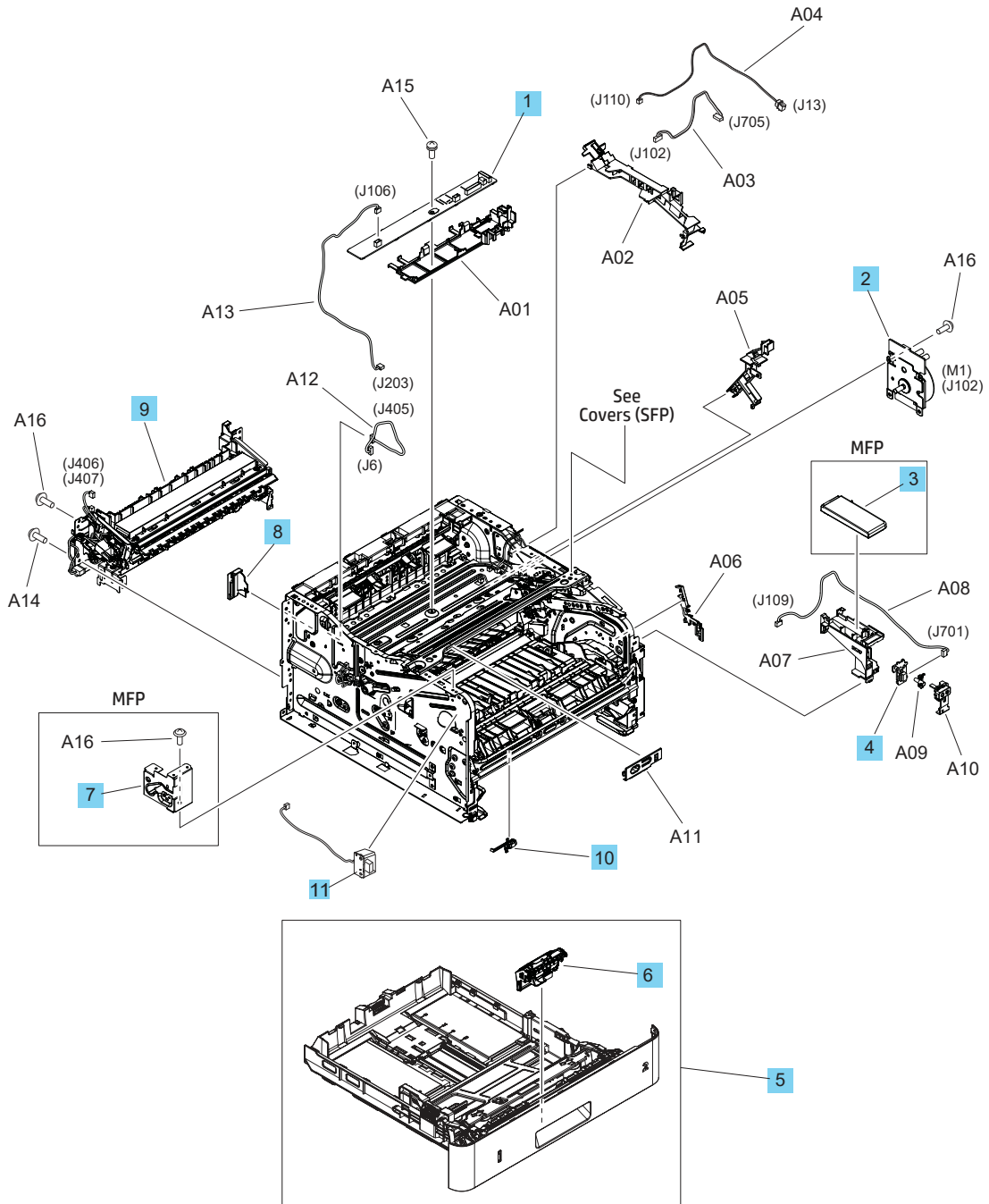
Ref No	Part number	Description	Qty
1	RK2-9901-000CN	Cable, flat flexible, laser	1
2	RM2-4862-000CN	Laser scanner assembly	
3	RM2-2556-000CN	Tag cable assembly	1
4	RC4-2891-000CN	Duct, fan (FM1)	1
5	RK2-1378-010CN	Fan	1
6	RM3-8540-000CN	LV power supply PCA (110-127V) SFP	1
6	RM3-8541-000CN	LV power supply PCA (220-240V) SFP	1
6	RM3-8542-000CN	LV power supply PCA (110-127V) MFP	1
6	RM3-8543-000CN	LV power supply PCA (220-240V) MFP	1
7	RM2-7508-000CN	High-voltage power supply PCA	1
8	RK2-6920-000CN	Cable, flexible flat Fmtr to DCC (SFP)	1
8	RK2-6931-000CN	Cable, flexible flat Fmtr to DCC (MFP)	1
9	RM3-8532-000CN	DC controller	1
10	RK2-6942-000CN	Control panel assembly FFC	1
11	RC4-3108-000CN	Inner left rear cover	1
Not shown	W1A78-67906	Fax PCA kit (USA)	1
Not shown	W1A78-67907	Fax PCA kit (EURO)	1
Not shown	W1A78-67908	Fax PCA kit (Brazil)	1
Not shown	W1A78-67909	W1A78-67909	1
Not shown	W1A30-60102	FMTR FFC Fax	1
Not shown	0960-4025	Wireless module (Ultra)	1
Not shown	W1A30-40001	Bracket-WiFi	1

<sup>1</sup>A replacement DC controller must be paired to the printer formatter using a special HP Android application. For more information, use WISE to see the DC controller remove and replacement procedure in the printer service manual or service web topic.

## Parts and diagrams: Internal assemblies (2 of 3)

Parts diagram and parts list for the internal printer assemblies.

**Figure 6-8** Internal assemblies (2 of 3)



**Table 6-8** Internal assemblies (2 of 3)

Ref No	Part number	Description	Qty
1	RM2-7510-000CN	Connecting PCA assembly (duplex)	1

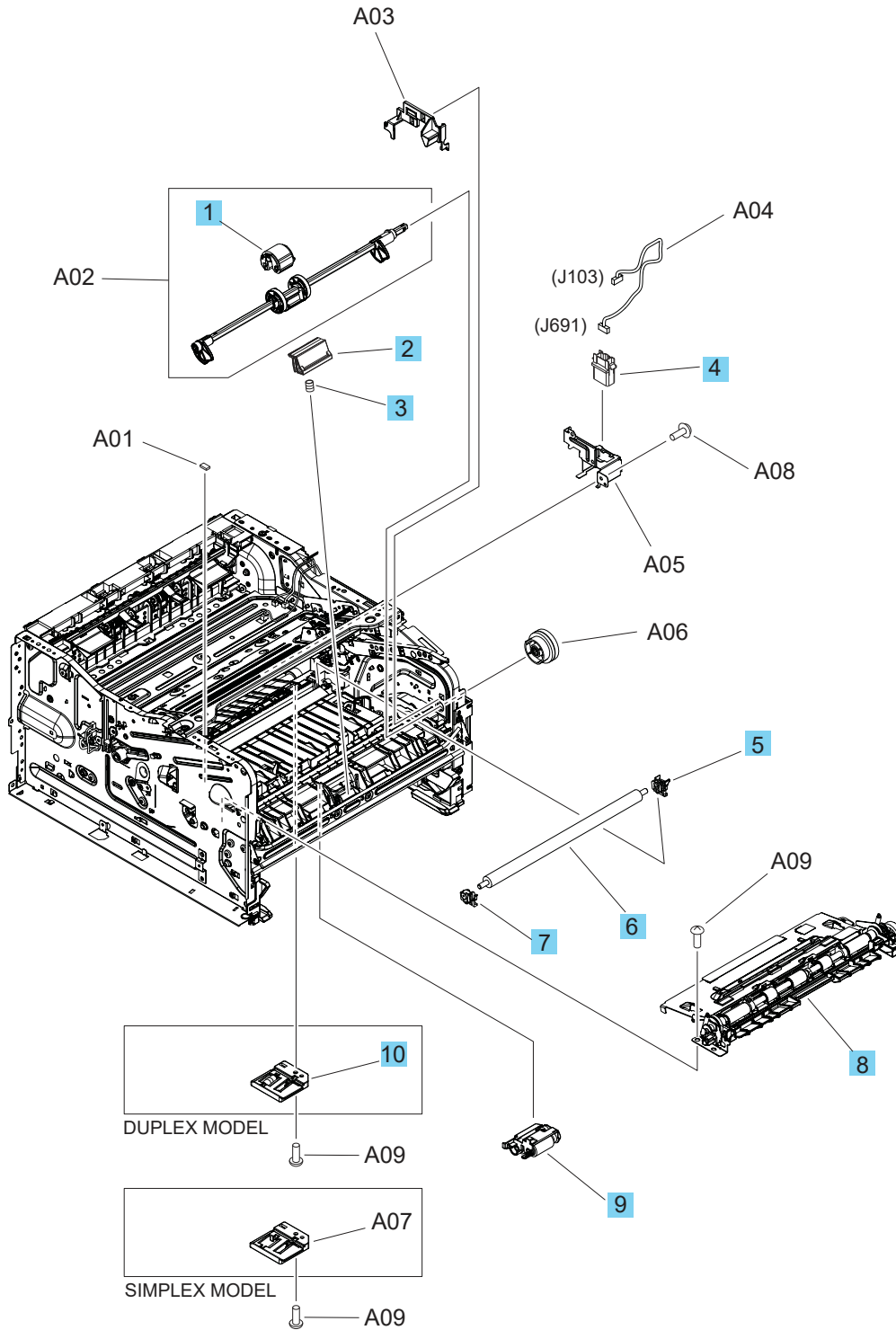
**Table 6-8 Internal assemblies (2 of 3) (continued)**

<b>Ref No</b>	<b>Part number</b>	<b>Description</b>	<b>Qty</b>
1	RM2-8510-000CN	Connecting PCA assembly (simplex)	1
2	RM2-9531-000CN	Assembly, main motor	1
3	RC4-2961-000CN	Cover, NFC	1
4	RM2-8506-000CN	Power switch PC board assembly	1
5	RM2-5392-010CN	Tray 2	1
6	3PZ15-67964	Tray 2 Separation Pad	1
7	RC4-2938-000CN	Bracket, USB	1
8	RC4-3219-000CN	Full detect sensor cover	1
9	RM2-4696-000CN	Fuser assembly (110-127V)	1
9	RM2-4697-000CN	Fuser assembly (220-240V)	1
10	RM2-5375-000CN	Tray 2 sensor assembly	1
11	5851-7008	USB A F panel mount to WTB 250mm (MFP)	1

## Parts and diagrams: Internal assemblies (3 of 3)

Parts diagram and parts list for the internal printer assemblies.

**Figure 6-9 Internal assemblies (3 of 3)**





**Table 6-9 Internal assemblies (3 of 3)<sup>1</sup>**

Ref No	Part number	Description	Qty
1	3PZ15-67966	Tray 1 Pickup Roller	1
2	RL2-0657-000CN	Pad, multipurpose separation (Tray 1)	1
3	RU8-2935-000CN	Spring, compression (mp pad)	1
4	VS1-7258-007CN	Connector, drawer	1
5	RC4-3133-000CN	Holder, transfer roller right	1
6	RM2-2039-000CN	Roller, transfer	1
7	RC4-3134-000CN	Holder, transfer roller left	1
8	RM2-2577-000CN	Registration assembly	1
9	3PZ15-67965	Tray 2 Pickup Roller	1
10	RL2-0647-000CN	Duplex roller assembly	1
Nor shown	RM2-5454-000CN	Duplexing de-skew roller	1
Not shown	5851-6550	Thermal transfer pad	1
Not shown	2Z599-67002	Formatter PCA 4001n/4001ne	1
Not shown	2Z600-67002	Formatter PCA 4001dn/4001dne	1
Not shown	2Z601-67002	Formatter PCA 4001dw/4001dwe	1
Not shown	2Z605-67002	Formatter PCA 4002dn/4002dne	1
Not shown	2Z606-67002	Formatter PCA 4002dw/4002dwe	1
Not shown	2Z607-67002	Formatter PCA 4002d	1
Not shown	2Z609-67002	Formatter PCA 4003dn	1
Not shown	2Z610-67002	Formatter PCA 4003dw	1
Not shown	2Z611-67002	Formatter PCA 4003n	1
Not shown	2Z613-67002	Formatter PCA 4004d	1
Not shown	2Z614-67002	Formatter PCA 4004dn	1
Not shown	2Z615-67002	Formatter PCA 4004dw	1
Not shown	2Z613-60002	Formatter PCA service d models (4001/4002/4003/4004)	1
Not shown	2Z605-60002	Formatter PCA service n/dn/dw models (4001/4002/4003/4004)	1
Not shown	2Z618-67002	Formatter PCA 4101fdn/4101fdne	1
Not shown	2Z619-67002	Formatter PCA 4101fdw/4101fdwe	1
Not shown	2Z620-67002	Formatter PCA 4101dw/4101dwe	1
Not shown	2Z622-67002	Formatter PCA 4102dw/4102dwe	1
Not shown	2Z623-67002	Formatter PCA 4102fdn	1
Not shown	2Z624-67002	Formatter PCA 4102fdw/4102fdwe	1

**Table 6-9 Internal assemblies (3 of 3)<sup>1</sup> (continued)**

<b>Ref No</b>	<b>Part number</b>	<b>Description</b>	<b>Qty</b>
Not shown	2Z627-67002	Formatter PCA 4103dw	1
Not shown	2Z628-67002	Formatter PCA 4103fdn	1
Not shown	2Z629-67002	Formatter PCA 4103fdw	1
Not shown	2Z632-67002	Formatter PCA 4104dw	1
Not shown	2Z633-67002	Formatter PCA 4104fdn	1
Not shown	2Z634-67002	Formatter PCA 4104fdw	1
Not shown	2Z622-60002	Formatter PCA service all models (4101/4102/4103/4104)	1

<sup>1</sup>A replacement formatter must be paired to the printer DC controller using a special HP Android application. For more information, use WISE to see the formatter remove and replacement procedure in the printer service manual or service web topic.

## Input device - 550-sheet paper feeder

Learn about the 550-sheet paper feeder parts and assemblies.

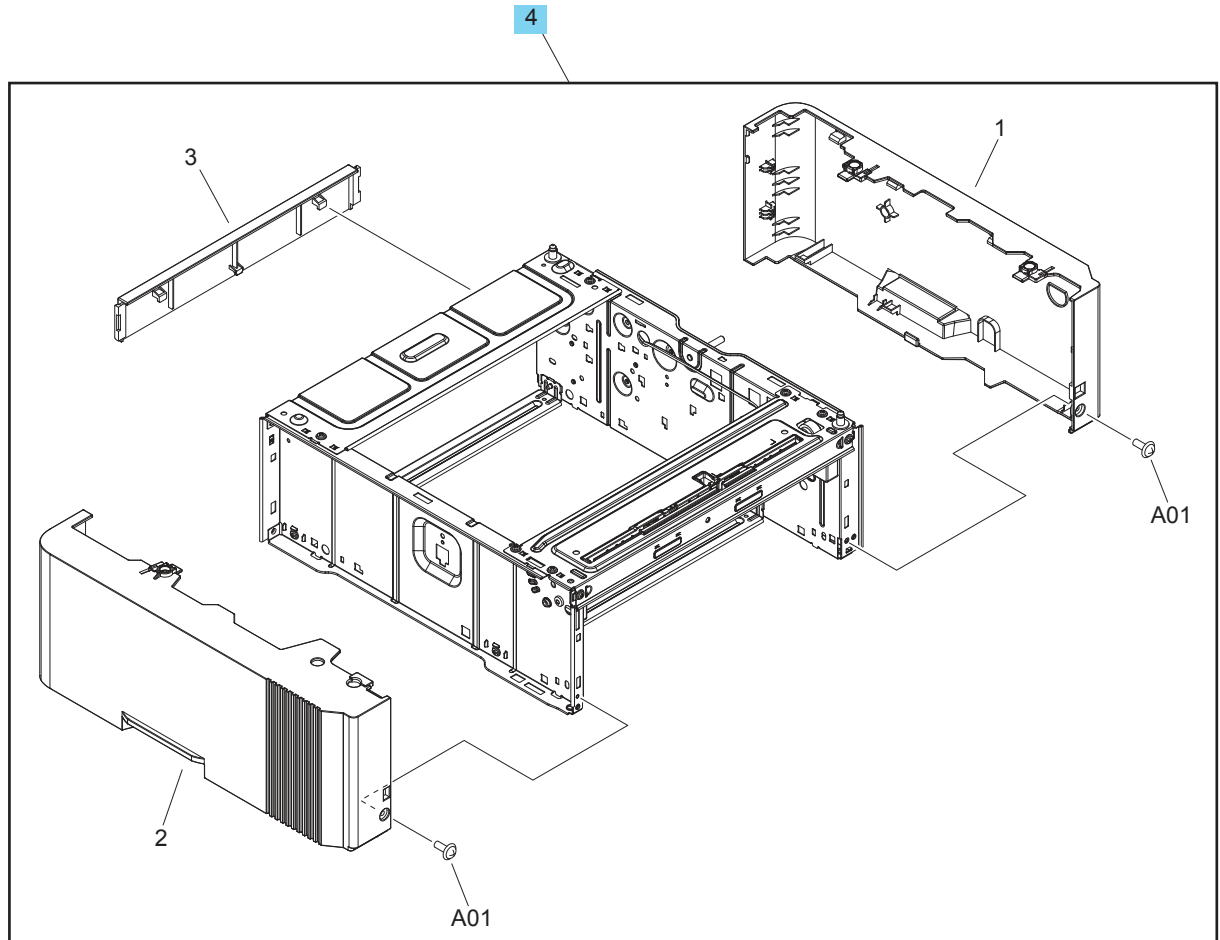
### Covers, panels, and doors

Parts diagrams and part lists for the covers, panels, and doors.

### Parts and diagrams: 550-sheet paper feeder covers

Parts diagram and part list for the 550-sheet paper feeder covers.

**Figure 6-10 550-sheet paper feeder covers**



**Table 6-10 550-sheet paper feeder covers**

Ref No	Part number	Description	Qty
4	D9P29-67018	550-sheet paper feeder	1

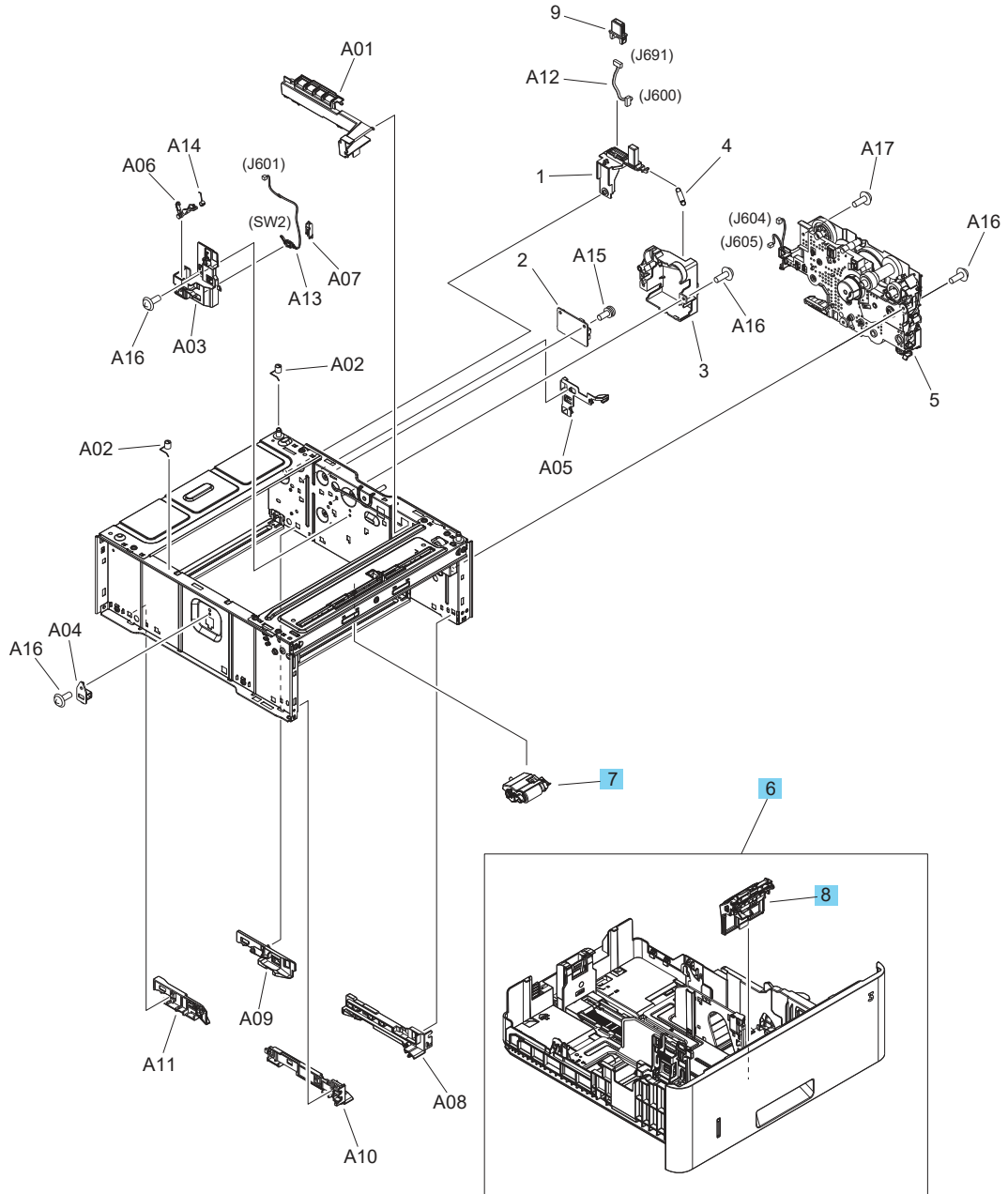
## Internal parts and assemblies

Parts diagrams and part lists for the internal parts and assemblies.

### Parts and diagrams: 550-sheet paper feeder main body

Parts diagram and part list for the 550-sheet paper feeder main body.

**Figure 6-11 550-sheet paper feeder main body**



**Table 6-11 550-sheet paper feeder main body**

Ref No	Part number	Description	Qty
6	RM2-5413-000CN	Tray 3	1
7	3PZ15-67968	Tray 3 Pickup Roller	1
8	3PZ15-67967	Tray 3 Separation Pad	1

# Alphabetical parts list

**Table 6-12 Alphabetical parts list**

Description	Part number	Table and page
Prod-Exchange 110V 4003dn WUR	2Z609-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
550-sheet paper feeder	D9P29-67018	<a href="#">550-sheet paper feeder covers on page 904</a>
ADF top cover assembly (includes rollers)	W1A77-67903	<a href="#">Integrated scanner assembly on page 883</a>
Assembly, main motor	RM2-9531-000CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Assy-duplex GSO (ISA/ADF assembly)	W1A73-60113	<a href="#">Integrated scanner assembly on page 883</a>
Bracket, USB	RC4-2938-000CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Bracket-WiFi	W1A30-40001	<a href="#">Internal assemblies (1 of 3) on page 898</a>
CP mount chassis assembly	B3Q10-60145	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
Cable guide	RC4-3217-010CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Cable, flat flexible, laser	RK2-9901-000CN	<a href="#">Internal assemblies (1 of 3) on page 898</a>
Cable, flexible flat Frmtr to DCC (MFP)	RK2-6931-000CN	<a href="#">Internal assemblies (1 of 3) on page 898</a>
Cable, flexible flat Frmtr to DCC (SFP)	RK2-6920-000CN	<a href="#">Internal assemblies (1 of 3) on page 898</a>
Cartridge door assembly (MFP)	RM2-4715-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Cartridge door assembly (SFP)	RM2-4714-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Connecting PCA assembly (duplex)	RM2-7510-000CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Connecting PCA assembly (simplex)	RM2-8510-000CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Connector, drawer	VS1-7258-007CN	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Control panel assembly (non wireless model)	RM2-5391-000CN	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
Control panel assembly (wireless model)	RM2-5424-000CN	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
Control panel assembly FFC	RK2-6942-000CN	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>

**Table 6-12** Alphabetical parts list (continued)

<b>Description</b>	<b>Part number</b>	<b>Table and page</b>
Control panel assembly FFC	RK2-6942-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Control panel assembly FFC	W1A30-60101	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
Control panel mount base	B3Q11-40001	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
Control panel mount cover	B3Q11-40002	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
Cover FFC	C5F98-40002	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Cover core	C5F98-40003	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Cover, 2 line LCD indication	RL2-0675-000CN	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
Cover, NFC	RC4-2961-000CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Cover, back control panel	T6B80-40002	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
Cover, cassette rear	RC4-3082-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Cover, cassette rear	RC4-3082-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Cover, left (MFP)	RL2-0674-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Cover, left (SFP)	RL2-0673-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Cover, right	RM2-5434-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Cover, right	RM2-5434-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Cover, top (MFP)	RC4-3207-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Cover, top (SFP)	RC4-2956-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
DC controller	RM3-8532-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Duct, fan (FM1)	RC4-2891-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Duplex roller assembly	RL2-0647-000CN	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>



**Table 6-12 Alphabetical parts list (continued)**

<b>Description</b>	<b>Part number</b>	<b>Table and page</b>
Duplexer sheet damper	RC2-6075-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Duplexer sheet damper	RC2-6075-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Duplexing de-skew roller	RM2-5454-000CN	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
FMTR FFC Fax	W1A30-60102	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Fan	RK2-1378-010CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Fax PCA kit (Brazil)	W1A78-67908	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Fax PCA kit (EURO)	W1A78-67907	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Fax PCA kit (USA)	W1A78-67906	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Fax port cover	C5F99-40003Fax port cover	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Ferrite - ISA	9170-2437	<a href="#">Integrated scanner assembly on page 883</a>
Ferrite - ISA	9170-2664	<a href="#">Integrated scanner assembly on page 883</a>
Formatter PCA 4001dn/4001dne	2Z600-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Formatter PCA 4001dw/4001dwe	2Z601-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Formatter PCA 4001n/4001ne	2Z599-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Formatter PCA 4002d	2Z607-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Formatter PCA 4002dn/4002dne	2Z605-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Formatter PCA 4002dw/4002dwe	2Z606-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Formatter PCA 4003dn	2Z609-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Formatter PCA 4003dw	2Z610-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Formatter PCA 4003n	2Z611-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Formatter PCA 4004d	2Z613-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Formatter PCA 4004dn	2Z614-67002	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>

**Table 6-12 Alphabetical parts list (continued)**

<b>Description</b>	<b>Part number</b>	<b>Table and page</b>
Formatter PCA 4004dw	2Z615-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4101dw/4101dwe	2Z620-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4101fdn/4101fdne	2Z618-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4101fdw/4101fdwe	2Z619-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4102dw/4102dwe	2Z622-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4102fdn	2Z623-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4102fdw/4102fdwe	2Z624-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4103dw	2Z627-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4103fdn	2Z628-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4103fdw	2Z629-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4104dw	2Z632-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4104fdn	2Z633-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA 4104fdw	2Z634-67002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA service all models (4101/4102/4103/4104)	2Z622-60002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA service d models (4001/4002/4003/4004)	2Z613-60002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Formatter PCA service n/dn/dw models (4001/4002/4003/4004)	2Z605-60002	<a href="#">Internal assemblies (3 of 3) on page 902</a>
Full detect sensor cover	RC4-3219-000CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Fuser assembly (110-127V)	RM2-4696-000CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Fuser assembly (220-240V)	RM2-4697-000CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
HP 102XC High Yield Black Contract LaserJet Toner Cartridge	W1020XC	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
HP 103XC High Yield Black Contract LaserJet Toner Cartridge	W1030XC	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
HP 148A Black Original LaserJet Toner Cartridge	W1480A	<a href="#">Whole unit replacement and toner cartridges on page 887</a>

**Table 6-12 Alphabetical parts list (continued)**

<b>Description</b>	<b>Part number</b>	<b>Table and page</b>
HP 148X High Yield Black Original LaserJet Toner Cartridge	W1480X	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
HP 149A Black Original LaserJet Toner Cartridge	W1490A	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
HP 149X High Yield Black Original LaserJet Toner Cartridge	W1490X	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
HP 151A Black Original LaserJet Toner Cartridge	W1510A	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
HP 151X High Yield Black Original LaserJet Toner Cartridge	W1510X	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
HP 152A Black Original LaserJet Toner Cartridge	W1520A	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
HP 152A Black Original LaserJet Toner Cartridge	W1520X	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
HP logo jewel	7121-8686	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
HP logo jewel	7121-8686	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
High-voltage power supply PCA	RM2-7508-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Holder, transfer roller left	RC4-3134-000CN	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Holder, transfer roller right	RC4-3133-000CN	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Holder-Mylar	B3Q10-40048	<a href="#">Integrated scanner assembly on page 883</a>
ISA lift assembly	B3Q10-60128	<a href="#">Integrated scanner assembly on page 883</a>
ISA lift slider pin	B3Q10-40041	<a href="#">Integrated scanner assembly on page 883</a>
Inner left rear cover	RC4-3108-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
LED light guide	RC4-3311-000CN	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
LV power supply PCA (110-127V)	RM3-8540-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
LV power supply PCA (110-127V)	RM3-8542-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
LV power supply PCA (220-240V)	RM3-8541-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
LV power supply PCA (220-240V)	RM3-8543-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Laser scanner assembly	RM2-4862-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>

**Table 6-12** Alphabetical parts list (continued)

<b>Description</b>	<b>Part number</b>	<b>Table and page</b>
Link, pressure release	RC4-4479-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Link, pressure release	RC4-4479-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Mylar-ramp	B3Q10-00060	<a href="#">Integrated scanner assembly on page 883</a>
Name plate 4001dn	RC6-2574-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4001dne	RC6-2573-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4001dw	RC6-2576-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4001dwe	RC6-2575-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4001n	RC6-2572-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4001ne	RC6-2571-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4002d	RC6-2583-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4002dn	RC6-2580-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4002dne	RC6-2579-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4002dw	RC6-2582-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4002dwe	RC6-2581-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4003dn	RC6-2584-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4003dw	RC6-2585-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4003n	RC6-2586-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4004d	RC6-2587-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4004dn	RC6-2588-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4004dw	RC6-2589-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Name plate 4101dw	2Z620-40004	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4101dwe	2Z620-40003	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>

**Table 6-12** Alphabetical parts list (continued)

Description	Part number	Table and page
Name plate 4101fdn	2Z618-40004	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4101fdne	2Z618-40003	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4101fdw	2Z619-40004	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4101fdwe	2Z619-40003	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4102dw	2Z622-40004	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4102dwe	2Z622-40003	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4102fdn	2Z623-40004	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4102fdw	2Z624-40004	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4102fdwe	2Z624-40003	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4103dw	2Z627-40002	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4103fdn	2Z628-40002	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4103fdw	2Z629-40002	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4104dw	2Z632-40002	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4104fdn	2Z633-40002	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Name plate 4104fdw	2Z634-40002	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Network cover assembly	RC4-2907-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Pad, multipurpose separation (Tray 1)	RL2-0657-000CN	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Paper re-pick assembly	RM2-5666-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Paper re-pick assembly	RM2-5666-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Power switch PC board assembly	RM2-8506-000CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Prod-Exchange 110V 4001dn WUR	2Z600-69006	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4001dne WUR	2Z600-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>

**Table 6-12 Alphabetical parts list (continued)**

<b>Description</b>	<b>Part number</b>	<b>Table and page</b>
Prod-Exchange 110V 4001dw WUR	2Z601-69008	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4001dwe WUR	2Z601-69006	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4001n WUR	2Z599-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4001ne WUR	2Z599-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4003dw WUR	2Z610-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4003n WUR	2Z611-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4101dw WUR	2Z620-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4101dwe WUR	2Z620-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4101fdn WUR	2Z618-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4101fdne WUR	2Z618-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4101fdw WUR	2Z619-69008	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4101fdwe WUR	2Z619-69006	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4103dw WUR LAR	2Z627-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4103fdn WUR TW	2Z628-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4103fdw WUR BRAZIL	2Z629-69006	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 110V 4103fdw WUR LAR/TW/JP	2Z629-69005	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4001dn WUR	2Z600-69005	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4001dne WUR	2Z600-69007	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4001dw WUR	2Z601-69007	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4001dwe WUR	2Z601-69005	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4002d WUR	2Z607-69002	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4002dn WUR	2Z605-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>



**Table 6-12 Alphabetical parts list (continued)**

<b>Description</b>	<b>Part number</b>	<b>Table and page</b>
Prod-Exchange 220V 4002dne WUR	2Z605-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4002dw WUR	2Z606-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4002dwe WUR	2Z606-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4003dn WUR	2Z609-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4003dw WUR	2Z610-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4003n WUR	2Z611-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4101dw WUR	2Z620-69006	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4101dwe WUR	2Z620-69005	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4101fdn WUR	2Z618-69006	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4101fdne WUR	2Z618-69005	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4101fdw WUR	2Z619-69007	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4101fdwe WUR	2Z619-69005	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4102dw WUR	2Z622-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4102dwe WUR	2Z622-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4102fdn WUR	2Z623-69002	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4102fdw WUR	2Z624-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4102fdwe WUR	2Z624-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4103dw WUR	2Z627-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4103dw WUR RUSSIA	2Z635-69002	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4103fdn WUR	2Z628-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4103fdn WUR RUSSIA	2Z636-69002	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Exchange 220V 4103fdw WUR	2Z629-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>

**Table 6-12 Alphabetical parts list (continued)**

<b>Description</b>	<b>Part number</b>	<b>Table and page</b>
Prod-Replace New 220V 4004d CN Gov WUR	2Z613-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4004d CN WUR	2Z613-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4004d IN WUR	2Z613-69005	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4004dn CN Gov WUR	2Z614-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4004dn CN WUR	2Z614-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4004dn IN WUR	2Z614-69005	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4004dw CN WUR	2Z615-69002	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4004dw IN WUR	2Z615-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4104dw WUR CN	2Z632-69002	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4104dw WUR IN	2Z632-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4104dw WUR India Gov	2Z632-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4104fdn WUR CN	2Z633-69002	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4104fdn WUR IN	2Z633-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4104fdn WUR India Gov	2Z633-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4104fdw WUR CN	2Z634-69002	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4104fdw WUR IN	2Z634-69003	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Prod-Replace New 220V 4104fdw WUR India Gov	2Z634-69004	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
Rear USB cover (MFP)	RC4-3299-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Rear USB cover (SFP)	RC4-3298-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Rear door assembly (duplex)	RM2-5405-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Rear door assembly (duplex)	RM2-5405-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Rear door assembly (simplex)	RM2-5430-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>

**Table 6-12 Alphabetical parts list (continued)**

<b>Description</b>	<b>Part number</b>	<b>Table and page</b>
Registration assembly	RM2-2577-000CN	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Roller, transfer	RM2-2039-000CN	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Shaft, support	RC4-3002-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Shaft, support	RC4-3002-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Spring, compression (mp pad)	RU8-2935-000CN	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Tag cable assembly	RM2-2556-000CN	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Thermal transfer pad	5851-6550	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Touchscreen control panel assembly	W2Q13-60103	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
Tray 1 Pickup Roller	3PZ15-67966	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Tray 2	RM2-5392-010CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Tray 2 Pickup Roller	3PZ15-67965	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
Tray 2 Separation Pad	3PZ15-67964	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Tray 2 sensor assembly	RM2-5375-000CN	<a href="#">Internal assemblies (2 of 3) on page 899</a>
Tray 3	RM2-5413-000CN	<a href="#">550-sheet paper feeder main body on page 905</a>
Tray 3 Pickup Roller	3PZ15-67968	<a href="#">550-sheet paper feeder main body on page 905</a>
Tray 3 Separation Pad	3PZ15-67967	<a href="#">550-sheet paper feeder main body on page 905</a>
Tray, paper delivery (MFP/SFP - no WiFi)	RC6-2515-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Tray, paper delivery (MFP/SFP - no WiFi)	RC6-2515-000CN	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
Tray, paper delivery (SFP - WiFi)	RM2-4699-000CN	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
Two line LCD operation cover (non-wireless models)	RC4-3312-000CN	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
Two line LCD operation cover (wireless models)	RC4-3322-000CN	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>

**Table 6-12** Alphabetical parts list (continued)

Description	Part number	Table and page
USB A F panel mount to WTB 250mm (MFP)	5851-7008	<a href="#">Internal assemblies (2 of 3) on page 899</a>
W1A78-67909	W1A78-67909W1A78-67909	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
Wireless module (Ultra)	0960-4025	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>

# Numerical parts list

**Table 6-13 Numerical parts list**

Part number	Description	Table and page
0960-4025	Wireless module (Ultra)	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
2Z599-67002	Formatter PCA 4001n/4001ne	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z599-69003	Prod-Exchange 110V 4001ne WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z599-69004	Prod-Exchange 110V 4001n WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z600-67002	Formatter PCA 4001dn/4001dne	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z600-69004	Prod-Exchange 110V 4001dne WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z600-69005	Prod-Exchange 220V 4001dn WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z600-69006	Prod-Exchange 110V 4001dn WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z600-69007	Prod-Exchange 220V 4001dne WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z601-67002	Formatter PCA 4001dw/4001dwe	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z601-69005	Prod-Exchange 220V 4001dwe WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z601-69006	Prod-Exchange 110V 4001dwe WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z601-69007	Prod-Exchange 220V 4001dw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z601-69008	Prod-Exchange 110V 4001dw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z605-60002	Formatter PCA service n/dn/dw models (4001/4002/4003/4004)	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z605-67002	Formatter PCA 4002dn/4002dne	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z605-69003	Prod-Exchange 220V 4002dne WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z605-69004	Prod-Exchange 220V 4002dn WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z606-67002	Formatter PCA 4002dw/4002dwe	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z606-69003	Prod-Exchange 220V 4002dwe WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z606-69004	Prod-Exchange 220V 4002dw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>

**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
2Z607-67002	Formatter PCA 4002d	<a href="#">Internal assemblies (3 of 3) on page 902</a>
2Z607-69002	Prod-Exchange 220V 4002d WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z609-67002	Formatter PCA 4003dn	<a href="#">Internal assemblies (3 of 3) on page 902</a>
2Z609-69003	Prod-Exchange 220V 4003dn WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z609-69004	Prod-Exchange 110V 4003dn WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z610-67002	Formatter PCA 4003dw	<a href="#">Internal assemblies (3 of 3) on page 902</a>
2Z610-69003	Prod-Exchange 220V 4003dw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z610-69004	Prod-Exchange 110V 4003dw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z611-67002	Formatter PCA 4003n	<a href="#">Internal assemblies (3 of 3) on page 902</a>
2Z611-69003	Prod-Exchange 220V 4003n WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z611-69004	Prod-Exchange 110V 4003n WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z613-60002	Formatter PCA service d models (4001/4002/4003/4004)	<a href="#">Internal assemblies (3 of 3) on page 902</a>
2Z613-67002	Formatter PCA 4004d	<a href="#">Internal assemblies (3 of 3) on page 902</a>
2Z613-69003	Prod-Replace New 220V 4004d CN WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z613-69004	Prod-Replace New 220V 4004d CN Gov WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z613-69005	Prod-Replace New 220V 4004d IN WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z614-67002	Formatter PCA 4004dn	<a href="#">Internal assemblies (3 of 3) on page 902</a>
2Z614-69003	Prod-Replace New 220V 4004dn CN WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z614-69004	Prod-Replace New 220V 4004dn CN Gov WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z614-69005	Prod-Replace New 220V 4004dn IN WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z615-67002	Formatter PCA 4004dw	<a href="#">Internal assemblies (3 of 3) on page 902</a>
2Z615-69002	Prod-Replace New 220V 4004dw CN WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>



**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
2Z615-69003	Prod-Replace New 220V 4004dw IN WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z618-40003	Name plate 4101fdne	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z618-40004	Name plate 4101fdn	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z618-67002	Formatter PCA 4101fdn/4101fdne	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z618-69003	Prod-Exchange 110V 4101fdne WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z618-69004	Prod-Exchange 110V 4101fdn WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z618-69005	Prod-Exchange 220V 4101fdne WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z618-69006	Prod-Exchange 220V 4101fdn WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z619-40003	Name plate 4101fdwe	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z619-40004	Name plate 4101fdw	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z619-67002	Formatter PCA 4101fdw/4101fdwe	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z619-69005	Prod-Exchange 220V 4101fdwe WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z619-69006	Prod-Exchange 110V 4101fdwe WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z619-69007	Prod-Exchange 220V 4101fdw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z619-69008	Prod-Exchange 110V 4101fdw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z620-40003	Name plate 4101dwe	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z620-40004	Name plate 4101dw	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z620-67002	Formatter PCA 4101dw/4101dwe	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z620-69003	Prod-Exchange 110V 4101dwe WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z620-69004	Prod-Exchange 110V 4101dw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z620-69005	Prod-Exchange 220V 4101dwe WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z620-69006	Prod-Exchange 220V 4101dw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>

**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
2Z622-40003	Name plate 4102dwe	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z622-40004	Name plate 4102dw	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z622-60002	Formatter PCA service all models (4101/4102/4103/4104)	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z622-67002	Formatter PCA 4102dw/4102dwe	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z622-69003	Prod-Exchange 220V 4102dwe WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z622-69004	Prod-Exchange 220V 4102dw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z623-40004	Name plate 4102fdn	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z623-67002	Formatter PCA 4102fdn	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z623-69002	Prod-Exchange 220V 4102fdn WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z624-40003	Name plate 4102fdwe	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z624-40004	Name plate 4102fdw	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z624-67002	Formatter PCA 4102fdw/4102fdwe	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z624-69003	Prod-Exchange 220V 4102fdwe WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z624-69004	Prod-Exchange 220V 4102fdw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z627-40002	Name plate 4103dw	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z627-67002	Formatter PCA 4103dw	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z627-69003	Prod-Exchange 220V 4103dw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z627-69004	Prod-Exchange 110V 4103dw WUR LAR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z628-40002	Name plate 4103fdn	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z628-67002	Formatter PCA 4103fdn	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z628-69003	Prod-Exchange 220V 4103fdn WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z628-69004	Prod-Exchange 110V 4103fdn WUR TW	<a href="#">Whole unit replacement and toner cartridges on page 887</a>

**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
2Z629-40002	Name plate 4103fdw	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z629-67002	Formatter PCA 4103fdw	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z629-69004	Prod-Exchange 220V 4103fdw WUR	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z629-69005	Prod-Exchange 110V 4103fdw WUR LAR/TW/JP	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z629-69006	Prod-Exchange 110V 4103fdw WUR BRAZIL	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z632-40002	Name plate 4104dw	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z632-67002	Formatter PCA 4104dw	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z632-69002	Prod-Replace New 220V 4104dw WUR CN	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z632-69003	Prod-Replace New 220V 4104dw WUR IN	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z632-69004	Prod-Replace New 220V 4104dw WUR India Gov	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z633-40002	Name plate 4104fdn	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z633-67002	Formatter PCA 4104fdn	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z633-69002	Prod-Replace New 220V 4104fdn WUR CN	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z633-69003	Prod-Replace New 220V 4104fdn WUR IN	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z633-69004	Prod-Replace New 220V 4104fdn WUR India Gov	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z634-40002	Name plate 4104fdw	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
2Z634-67002	Formatter PCA 4104fdw	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
2Z634-69002	Prod-Replace New 220V 4104fdw WUR CN	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z634-69003	Prod-Replace New 220V 4104fdw WUR IN	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z634-69004	Prod-Replace New 220V 4104fdw WUR India Gov	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z635-69002	Prod-Exchange 220V 4103dw WUR RUSSIA	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
2Z636-69002	Prod-Exchange 220V 4103fdn WUR RUSSIA	<a href="#">Whole unit replacement and toner cartridges on page 887</a>

**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
3PZ15-67964	Tray 2 Separation Pad	<a href="#">Internal assemblies (2 of 3) on page 899</a>
3PZ15-67965	Tray 2 Pickup Roller	<a href="#">Internal assemblies (3 of 3) on page 902</a>
3PZ15-67966	Tray 1 Pickup Roller	<a href="#">Internal assemblies (3 of 3) on page 902</a>
3PZ15-67967	Tray 3 Separation Pad	<a href="#">550-sheet paper feeder main body on page 905</a>
3PZ15-67968	Tray 3 Pickup Roller	<a href="#">550-sheet paper feeder main body on page 905</a>
5851-6550	Thermal transfer pad	<a href="#">Internal assemblies (3 of 3) on page 902</a>
5851-7008	USB A F panel mount to WTB 250mm (MFP)	<a href="#">Internal assemblies (2 of 3) on page 899</a>
7121-8686	HP logo jewel	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
7121-8686	HP logo jewel	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
9170-2437	Ferrite - ISA	<a href="#">Integrated scanner assembly on page 883</a>
9170-2664	Ferrite - ISA	<a href="#">Integrated scanner assembly on page 883</a>
B3Q10-00060	Mylar-ramp	<a href="#">Integrated scanner assembly on page 883</a>
B3Q10-40041	ISA lift slider pin	<a href="#">Integrated scanner assembly on page 883</a>
B3Q10-40048	Holder-Mylar	<a href="#">Integrated scanner assembly on page 883</a>
B3Q10-60128	ISA lift assembly	<a href="#">Integrated scanner assembly on page 883</a>
B3Q10-60145	CP mount chassis assembly	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
B3Q11-40001	Control panel mount base	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
B3Q11-40002	Control panel mount cover	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
C5F98-40002	Cover FFC	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
C5F98-40003	Cover core	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
C5F99-40003Fax port cover	Fax port cover	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>

**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
D9P29-67018	550-sheet paper feeder	<a href="#">550-sheet paper feeder covers on page 904</a>
RC2-6075-000CN	Duplexer sheet damper	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC2-6075-000CN	Duplexer sheet damper	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RC4-2891-000CN	Duct, fan (FM1)	<a href="#">Internal assemblies (1 of 3) on page 898</a>
RC4-2907-000CN	Network cover assembly	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC4-2938-000CN	Bracket, USB	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RC4-2956-000CN	Cover, top (SFP)	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC4-2961-000CN	Cover, NFC	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RC4-3002-000CN	Shaft, support	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC4-3002-000CN	Shaft, support	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RC4-3082-000CN	Cover, cassette rear	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC4-3082-000CN	Cover, cassette rear	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RC4-3108-000CN	Inner left rear cover	<a href="#">Internal assemblies (1 of 3) on page 898</a>
RC4-3133-000CN	Holder, transfer roller right	<a href="#">Internal assemblies (3 of 3) on page 902</a>
RC4-3134-000CN	Holder, transfer roller left	<a href="#">Internal assemblies (3 of 3) on page 902</a>
RC4-3207-000CN	Cover, top (MFP)	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RC4-3217-010CN	Cable guide	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RC4-3219-000CN	Full detect sensor cover	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RC4-3298-000CN	Rear USB cover (SFP)	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC4-3299-000CN	Rear USB cover (MFP)	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RC4-3311-000CN	LED light guide	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>

**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
RC4-3312-000CN	Two line LCD operation cover (non-wireless models)	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
RC4-3322-000CN	Two line LCD operation cover (wireless models)	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
RC4-4479-000CN	Link, pressure release	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC4-4479-000CN	Link, pressure release	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RC6-2515-000CN	Tray, paper delivery (MFP/SFP - no WiFi)	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2515-000CN	Tray, paper delivery (MFP/SFP - no WiFi)	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RC6-2571-000CN	Name plate 4001ne	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2572-000CN	Name plate 4001n	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2573-000CN	Name plate 4001dne	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2574-000CN	Name plate 4001dn	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2575-000CN	Name plate 4001dwe	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2576-000CN	Name plate 4001dw	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2579-000CN	Name plate 4002dne	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2580-000CN	Name plate 4002dn	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2581-000CN	Name plate 4002dwe	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2582-000CN	Name plate 4002dw	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2583-000CN	Name plate 4002d	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2584-000CN	Name plate 4003dn	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2585-000CN	Name plate 4003dw	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2586-000CN	Name plate 4003n	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2587-000CN	Name plate 4004d	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>



**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
RC6-2588-000CN	Name plate 4004dn	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RC6-2589-000CN	Name plate 4004dw	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RK2-1378-010CN	Fan	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RK2-6920-000CN	Cable, flexible flat Frmtr to DCC (SFP)	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RK2-6931-000CN	Cable, flexible flat Frmtr to DCC (MFP)	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RK2-6942-000CN	Control panel assembly FFC	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
RK2-6942-000CN	Control panel assembly FFC	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RK2-9901-000CN	Cable, flat flexible, laser	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RL2-0647-000CN	Duplex roller assembly	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
RL2-0657-000CN	Pad, multipurpose separation (Tray 1)	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
RL2-0673-000CN	Cover, left (SFP)	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RL2-0674-000CN	Cover, left (MFP)	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RL2-0675-000CN	Cover, 2 line LCD indication	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
RM2-2039-000CN	Roller, transfer	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
RM2-2556-000CN	Tag cable assembly	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RM2-2577-000CN	Registration assembly	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
RM2-4696-000CN	Fuser assembly (110-127V)	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RM2-4697-000CN	Fuser assembly (220-240V)	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RM2-4699-000CN	Tray, paper delivery (SFP - WiFi)	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RM2-4714-000CN	Cartridge door assembly (SFP)	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RM2-4715-000CN	Cartridge door assembly (MFP)	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>

**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
RM2-4862-000CN	Laser scanner assembly	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RM2-5375-000CN	Tray 2 sensor assembly	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RM2-5391-000CN	Control panel assembly (non wireless model)	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
RM2-5392-010CN	Tray 2	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RM2-5405-000CN	Rear door assembly (duplex)	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RM2-5405-000CN	Rear door assembly (duplex)	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RM2-5413-000CN	Tray 3	<a href="#">550-sheet paper feeder main body on page 905</a>
RM2-5424-000CN	Control panel assembly (wireless model)	<a href="#">Control panels (4001/4002/4003/4004) on page 885</a>
RM2-5430-000CN	Rear door assembly (simplex)	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RM2-5434-000CN	Cover, right	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RM2-5434-000CN	Cover, right	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RM2-5454-000CN	Duplexing de-skew roller	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
RM2-5666-000CN	Paper re-pick assembly	<a href="#">Covers (4001/4002/4003/4004) on page 891</a>
RM2-5666-000CN	Paper re-pick assembly	<a href="#">Covers (4101/4102/4103/4104) on page 894</a>
RM2-7508-000CN	High-voltage power supply PCA	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RM2-7510-000CN	Connecting PCA assembly (duplex)	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RM2-8506-000CN	Power switch PC board assembly	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RM2-8510-000CN	Connecting PCA assembly (simplex)	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RM2-9531-000CN	Assembly, main motor	<a href="#">Internal assemblies (2 of 3) on page 899</a>
RM3-8532-000CN	DC controller	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RM3-8540-000CN	LV power supply PCA (110-127V)	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>

**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
RM3-8541-000CN	LV power supply PCA (220-240V)	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RM3-8542-000CN	LV power supply PCA (110-127V)	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RM3-8543-000CN	LV power supply PCA (220-240V)	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
RU8-2935-000CN	Spring, compression (mp pad)	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
T6B80-40002	Cover, back control panel	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
VS1-7258-007CN	Connector, drawer	<a href="#">Internal assemblies (3 of 3)1 on page 902</a>
W1020XC	HP 102XC High Yield Black Contract LaserJet Toner Cartridge	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
W1030XC	HP 103XC High Yield Black Contract LaserJet Toner Cartridge	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
W1480A	HP 148A Black Original LaserJet Toner Cartridge	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
W1480X	HP 148X High Yield Black Original LaserJet Toner Cartridge	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
W1490A	HP 149A Black Original LaserJet Toner Cartridge	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
W1490X	HP 149X High Yield Black Original LaserJet Toner Cartridge	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
W1510A	HP 151A Black Original LaserJet Toner Cartridge	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
W1510X	HP 151X High Yield Black Original LaserJet Toner Cartridge	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
W1520A	HP 152A Black Original LaserJet Toner Cartridge	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
W1520X	HP 152A Black Original LaserJet Toner Cartridge	<a href="#">Whole unit replacement and toner cartridges on page 887</a>
W1A30-40001	Bracket-WiFi	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
W1A30-60101	Control panel assembly FFC	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>
W1A30-60102	FMTR FFC Fax	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
W1A73-60113	Assy-duplex GSO (ISA/ADF assembly)	<a href="#">Integrated scanner assembly on page 883</a>
W1A77-67903	ADF top cover assembly (includes rollers)	<a href="#">Integrated scanner assembly on page 883</a>

**Table 6-13 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
W1A78-67906	Fax PCA kit (USA)	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
W1A78-67907	Fax PCA kit (EURO)	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
W1A78-67908	Fax PCA kit (Brazil)	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
W1A78-67909W1A78-67909	W1A78-67909	<a href="#">Internal assemblies (1 of 3)1 on page 898</a>
W2Q13-60103	Touchscreen control panel assembly	<a href="#">Control panel (4101/4102/4103/4104) on page 886</a>

# A Certificate of Volatility

Review the certificates of volatility for the printer.

## Certificate of Volatility

Review the certificates of volatility for the printers.

**Figure A-1 Certificate of Volatility SFP wireless (1 of 2)**

Hewlett-Packard Certificate of Volatility				
Model: HP LaserJet Pro 4001 HP LaserJet Pro 4002 HP LaserJet Pro 4003 HP LaserJet Pro 4004	Part Number: 4001dwe= 2Z601E; 4001dw= 2Z601F; 4002dwe= 2Z606E; 4002dw= 2Z606F; 4003dw= 2Z610A; 4004dw= 2Z615A	Address: Hewlett Packard Company 11311 Chinden Blvd Boise, ID 83714		
Volatile Memory				
Does the device contain volatile memory (Memory whose contents are lost when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (SRAM, DRAM, etc):	Size: 256M	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Used for temporary storage during the processing of jobs and for applications running on the OS.	Steps to clear memory: When the printer is powered off, the memory is erased
Type (SRAM, DRAM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Type (SRAM, DRAM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Non-Volatile Memory				
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (Flash, EEPROM, etc): Flash	Size: 256MB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Device FW	Steps to clear memory: NA
Type (Flash, EEPROM, etc): EEPROM	Size: 32KB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: User setting parameters for printer	Steps to clear memory: Restore factory defaults from control panel or EWS
Type (Flash, EEPROM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:

**Figure A-2 Certificate of Volatility SFP wireless (2 of 2)**

USB			
Does the item accept USB input and if so, for what purpose (i.e. Print Jobs, device firmware updates, scan upload)?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Rear USB host when configured will accept stored jobs, encrypted files stored and deleted by user.			
Can any data other than scan upload be sent to the USB device)?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Rear USB host when configured will accept stored jobs, encrypted files stored and deleted by user.			

RF/RFID			
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Purpose: BLE (Bluetooth Low Energy)			
Frequency: BLE 2.4 to 2.485 GHz band		Bandwidth: 0.27 Mbit/s	
Modulation: Gaussian frequency shift modulation		Effective Radiate Power (ERP): 10mW max	
Specifications:			

Other Transmission Capabilities			
Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below:			
Purpose: Wireless Network Connectivity			
Frequency: 2.4GHz and 5GHz Bands		Bandwidth: 20/40 MHz	
Modulation: Multiple		Effective Radiate Power (ERP): 802.11n/g: 15+/- 1.5dbm 802.11b: 17+/- 1.5dbm	
Specifications: 802.11a/b/g/n			

Other Capabilities			
Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below:			
Purpose:			
Specifications:			

Author Information			
Name	Title	Email	Business Unit
Hewlett Packard Company	Technical Marketing Engineer		LES Boise CA
Hewlett Packard Company	Electrical Engineer		LES Boise R&D
Date Prepared: 2,2022			



**Figure A-3 Certificate of Volatility SFP non wireless (1 of 2)**

Hewlett-Packard Certificate of Volatility				
Model: HP LaserJet Pro 4001 HP LaserJet Pro 4002 HP LaserJet Pro 4003 HP LaserJet Pro 4004		Part Number: 4001ne= 2Z599E; 4001n= 2Z599F; 4001dne= 2Z600E; 4001dn= 2Z600F; 4002dne= 2Z605E; 4002dn= 2Z605F; 4002d= 2Z607F; 4003dn= 2Z609A; 4003n= 2Z611A; 4004d= 2Z613A; 4004dn= 2Z614A		Address: Hewlett Packard Company 11311 Chinden Blvd Boise, ID 83714
Volatile Memory				
Does the device contain volatile memory (Memory whose contents are lost when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (SRAM, DRAM, etc): DRAM	Size: 256M	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Used for temporary storage during the processing of jobs and for applications running on the OS.	Steps to clear memory: When the printer is powered off, the memory is erased
Type (SRAM, DRAM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Type (SRAM, DRAM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Non-Volatile Memory				
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (Flash, EEPROM, etc): Flash	Size: 256MB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Device FW	Steps to clear memory: NA
Type (Flash, EEPROM, etc): EEPROM	Size: 32KB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: User setting parameters for printer	Steps to clear memory: Restore factory defaults from control panel or EWS
Type (Flash, EEPROM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:

**Figure A-4 Certificate of Volatility SFP non wireless (2 of 2)**

USB			
Does the item accept USB input and if so, for what purpose (i.e. Print Jobs, device firmware updates, scan upload)?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Rear USB host when configured will accept stored jobs, encrypted files stored and deleted by user.			
Can any data other than scan upload be sent to the USB device)?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Rear USB host when configured will accept stored jobs, encrypted files stored and deleted by user.			
RF/RFID			
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below			
Purpose:			
Frequency:		Bandwidth:	
Modulation:		Effective Radiate Power (ERP):	
Specifications:			
Other Transmission Capabilities			
Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below:			
Purpose:			
Frequency:		Bandwidth:	
Modulation:		Effective Radiate Power (ERP):	
Specifications:			
Other Capabilities			
Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below:			
Purpose:			
Specifications:			
Author Information			
Name	Title	Email	Business Unit
Hewlett Packard Company	Technical Marketing Engineer		LES Boise CA
Hewlett Packard Company	Electrical Engineer		LES Boise R&D
Date Prepared: 2,2022			

**Figure A-5 Certificate of Volatility wireless / fax MFP (1 of 2)**

Hewlett-Packard Certificate of Volatility				
Model: HP LaserJet Pro 4101 HP LaserJet Pro 4102 HP LaserJet Pro 4103 HP LaserJet Pro 4104		Part Number: 4101fdwe= 2Z619E; 4101fdw= 2Z619F; 4102fdwe= 2Z624E; 4102fdw= 2Z624F; 4103fdw= 2Z629A; 4104fdw= 2Z634A		Address: Hewlett Packard Company 11311 Chinden Blvd Boise, ID 83714
Volatile Memory				
Does the device contain volatile memory (Memory whose contents are lost when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (SRAM, DRAM, etc):	Size: 512M	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Used for temporary storage during the processing of jobs and for applications running on the OS.	Steps to clear memory: When the printer is powered off, the memory is erased
Type (SRAM, DRAM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Type (SRAM, DRAM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Non-Volatile Memory				
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (Flash, EEPROM, etc): Flash	Size: 512MB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Device FW	Steps to clear memory: NA
Type (Flash, EEPROM, etc): EEPROM	Size: 32KB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: User setting parameters for printer	Steps to clear memory: Restore factory defaults from control panel or EWS
Type (Flash, EEPROM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:

**Figure A-6 Certificate of Volatility wireless / fax MFP (2 of 2)**

USB	
Does the item accept USB input and if so, for what purpose (i.e. Print Jobs, device firmware updates, scan upload)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below	
Rear USB host when configured will accept stored jobs, encrypted files stored and deleted by user.	
Can any data other than scan upload be sent to the USB device)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below	
Rear USB host when configured will accept stored jobs, encrypted files stored and deleted by user.	

RF/RFID	
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below	
Purpose: BLE (Bluetooth Low Energy)	
Frequency: BLE 2.4 to 2.485 GHz band	Bandwidth: 0.27 Mbit/s
Modulation: Gaussian frequency shift modulation	Effective Radiate Power (ERP): 10mW max
Specifications:	

Other Transmission Capabilities	
Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below:	
Purpose: Wireless Network Connectivity	
Frequency: 2.4GHz and 5GHz Bands	Bandwidth: 20/40 MHz
Modulation: Multiple	Effective Radiate Power (ERP): 802.11n/g: 15+/- 1.5dbm 802.11b: 17+/- 1.5dbm
Specifications: 802.11a/b/g/n	

Other Capabilities	
Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below:	
Purpose: Fax	
Specifications: V34, V32, V23, V21	

Author Information			
Name	Title	Email	Business Unit
Hewlett Packard Company	Technical Marketing Engineer		LES Boise CA
Hewlett Packard Company	Electrical Engineer		LES Boise R&D
Date Prepared: 2,2022			

**Figure A-7 Certificate of Volatility non wireless / fax MFP (1 of 2)**

Hewlett-Packard Certificate of Volatility				
<b>Model:</b> HP LaserJet Pro 4101 HP LaserJet Pro 4102 HP LaserJet Pro 4103 HP LaserJet Pro 4104		<b>Part Number:</b> 4101fdne= 2Z618E; 4101fdn= 2Z618F; 4102fdn= 2Z623F; 4103fdn= 2Z628A; 4104fdn= 2Z633A, 2Z636A		<b>Address:</b> Hewlett Packard Company 11311 Chinden Blvd Boise, ID 83714
Volatile Memory				
Does the device contain volatile memory (Memory whose contents are lost when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (SRAM, DRAM, etc):	Size: 512M	User Modifiable:  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Used for temporary storage during the processing of jobs and for applications running on the OS.	Steps to clear memory: When the printer is powered off, the memory is erased
Type (SRAM, DRAM, etc):	Size:	User Modifiable:  <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Type (SRAM, DRAM, etc):	Size:	User Modifiable:  <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Non-Volatile Memory				
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (Flash, EEPROM, etc): Flash	Size: 512MB	User Modifiable:  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Device FW	Steps to clear memory: NA
Type (Flash, EEPROM, etc): EEPROM	Size: 32KB	User Modifiable:  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: User setting parameters for printer	Steps to clear memory: Restore factory defaults from control panel or EWS
Type (Flash, EEPROM, etc):	Size:	User Modifiable:  <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc):	Size:	User Modifiable:  <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:

**Figure A-8 Certificate of Volatility non wireless / fax MFP (2 of 2)**

USB			
Does the item accept USB input and if so, for what purpose (i.e. Print Jobs, device firmware updates, scan upload)?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Rear USB host when configured will accept stored jobs, encrypted files stored and deleted by user.			
Can any data other than scan upload be sent to the USB device)?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Rear USB host when configured will accept stored jobs, encrypted files stored and deleted by user.			

RF/RFID			
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below			
Purpose:			
Frequency:		Bandwidth:	
Modulation:		Effective Radiate Power (ERP):	
Specifications:			

Other Transmission Capabilities			
Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below:			
Purpose:			
Frequency:		Bandwidth:	
Modulation:		Effective Radiate Power (ERP):	
Specifications:			

Other Capabilities			
Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below:			
Purpose: Fax			
Specifications: V34, V32, V23, V21			

Author Information			
Name	Title	Email	Business Unit
Hewlett Packard Company	Technical Marketing Engineer		LES Boise CA
Hewlett Packard Company	Electrical Engineer		LES Boise R&D
Date Prepared: 2,2022			

**Figure A-9 Certificate of Volatility wireless / non fax MFP (1 of 2)**

Hewlett-Packard Certificate of Volatility				
Model: HP LaserJet Pro 4101 HP LaserJet Pro 4102 HP LaserJet Pro 4103 HP LaserJet Pro 4104		Part Number: 4101dwe= 2Z620E; 4101dw= 2Z620F; 4102dwe= 2Z622E; 4102dw= 2Z622F; 4103dw= 2Z627A, 2Z635A; 4104dw= 2Z632A		Address: Hewlett Packard Company 11311 Chinden Blvd Boise, ID 83714
Volatile Memory				
Does the device contain volatile memory (Memory whose contents are lost when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (SRAM, DRAM, etc):	Size: 512M	User Modifiable:  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Used for temporary storage during the processing of jobs and for applications running on the OS.	Steps to clear memory: When the printer is powered off, the memory is erased
Type (SRAM, DRAM, etc):	Size:	User Modifiable:  <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Type (SRAM, DRAM, etc):	Size:	User Modifiable:  <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Non-Volatile Memory				
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (Flash, EEPROM, etc): Flash	Size: 512MB	User Modifiable:  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Device FW	Steps to clear memory: NA
Type (Flash, EEPROM, etc): EEPROM	Size: 32KB	User Modifiable:  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: User setting parameters for printer	Steps to clear memory: Restore factory defaults from control panel or EWS
Type (Flash, EEPROM, etc):	Size:	User Modifiable:  <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc):	Size:	User Modifiable:  <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:



**Figure A-10 Certificate of Volatility wireless / non fax MFP (2 of 2)**

USB			
Does the item accept USB input and if so, for what purpose (i.e. Print Jobs, device firmware updates, scan upload)?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Rear USB host when configured will accept stored jobs, encrypted files stored and deleted by user.			
Can any data other than scan upload be sent to the USB device)?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Rear USB host when configured will accept stored jobs, encrypted files stored and deleted by user.			
RF/RFID			
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Purpose: BLE (Bluetooth Low Energy)			
Frequency: BLE 2.4 to 2.485 GHz band		Bandwidth: 0.27 Mbit/s	
Modulation: Gaussian frequency shift modulation		Effective Radiate Power (ERP): 10mW max	
Specifications:			
Other Transmission Capabilities			
Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below:			
Purpose: Wireless Network Connectivity			
Frequency: 2.4GHz and 5GHz Bands		Bandwidth: 20/40 MHz	
Modulation: Multiple		Effective Radiate Power (ERP):	
		802.11n/g: 15+/- 1.5dbm	
		802.11b: 17+/- 1.5dbm	
Specifications: 802.11a/b/g/n			
Other Capabilities			
Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below:			
Purpose:			
Specifications:			
Author Information			
Name	Title	Email	Business Unit
Hewlett Packard Company	Technical Marketing Engineer		LES Boise CA
Hewlett Packard Company	Electrical Engineer		LES Boise R&D
Date Prepared: 2,2022			

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# Glossary of terms

## **802.11**

802.11 is a set of standards for wireless local area network (WLAN) communication, developed by the IEEE LAN/MAN Standards Committee (IEEE 802).

## **802.11b/g/n**

802.11b/g/n can share the same hardware and use the 2.4 GHz band. 802.11b supports bandwidth up to 11 Mbps, 802.11n supports bandwidth up to 150 Mbps. 802.11b/g/n devices might occasionally suffer interferences from microwave ovens, cordless telephones, and Bluetooth devices.

## **AC**

An electric current that reverses its direction many times a second at regular intervals. For example, the 110V line current found in a typical US electrical wall receptacle.

## **AC Control Module (PageWide)**

The AC Control Module controls the heating elements in the airflow assembly. Functions include voltage monitoring (ensuring correct operation in a low-quality-power environment), isolation (low voltage heater control signals are isolated from the high voltage AC power for safety), AC switching (power is switched on/off to the heater), and heating element configuration (heating element configuration is changed between series and parallel for temperature predictability).

## **ADF**

An Automatic Document Feeder (ADF) is a device that automatically feeds an original sheet (or multiple sheets) of paper into the image scanner. The document feeder is a component of the integrated scanner assembly (ADF and image scanner).

## **Airflow System (PageWide)**

The airflow system conditions the printed pages to avoid page curling due to the ink on the page. The airflow system functionally consists of a fan and heating elements. The pressurized air is blown on the page through the nozzles that are placed on the paper path of the airflow system between print and eject zone.

## **BOOTP**

Bootstrap Protocol. A network protocol used by a network client to obtain its IP address automatically. This is usually done in the bootstrap process of computers or operating systems running on them. The BOOTP servers assigns an IP address from a pool of addresses to each client. BOOTP enables "diskless workstation" computers to obtain an IP address prior to loading any advanced operating system.

## **CCD**

A Charged Coupled Device (CCD) is the scanner module which enables a scan job. A CCD locking mechanism is used to hold the CCD module to prevent any damage when the printer is moved.

**CIS**

A Contact Image Sensor (CIS) scanner captures an image using the printer's optical path. Red, green, and blue LEDs sequentially illuminate a small strip of the document (often called a raster line), and the optical system captures each color in a single row of Charged Coupled Device (CCD) sensors that cover the entire page width.

**Collation**

Collation is a process of printing a multiple-copy job in sets. When collation is selected, the device prints an entire set before printing additional copies.

**Control Panel**

The control panel is a flat, typically vertical panel or screen where the user can control and/or monitor the printer. The control panel is found on the front of the printer.

**Coverage**

Coverage is the printing term used for a toner usage measurement on printing. For example, 5% coverage means that an A4 sided paper has about 5% image or text on it. If the paper or original has complicated images or a large amount of text, the coverage will be higher and at the same time, a toner usage will be as much as the coverage.

**DC**

An electric current flowing in one direction only. Typically, a low voltage load current supplied to an electrical assembly.

**DCC**

The DC controller (DCC) controls the operation of the printer sub-systems and electrical components. The DCC sends out various signals to operate motors, solenoids, and other printer components based on the print command and image data that the host computer sends the formatter.

**Default**

The value or setting that is in effect when a printer is unboxed, reset, or initialized.

**DHCP**

Dynamic Host Configuration Protocol (DHCP) is a client-server networking protocol. A DHCP server provides configuration parameters specific to the DHCP client host requesting, generally, information required by the client host to participate on an IP network. The DHCP also provides a mechanism for allocation of IP addresses to client hosts.

**Digital Send Software**

Digital send software allows a multi-function printer (MFP) to scan and send information quickly and securely to email, network folders, other printers, and fax services.

**DIMM**

A Dual Inline Memory Module (DIMM) is a small circuit board that holds memory. The DIMM stores all data within the printer, such as printing data and received fax data.

**DPI**

Dots Per Inch (DPI) is a measurement of resolution that is used for scanning and printing. Generally, higher DPI results in a higher resolution (more visible detail in the image and a larger file size).

**Duplex**

A mechanism that automatically turns over a sheet of paper so that the printer can print (or scan) on both sides of the paper. A printer equipped with a duplex unit can print on both sides of the paper during one print cycle.

**Duty Cycle**

Duty cycle is the page quantity which does not affect printer performance for a month. Generally, the printer has the lifespan limitation such as pages per year. The lifespan means the average capacity of print-outs, usually within the warranty period. For example, if the duty cycle is 48,000 pages per month the printer limit is 2,400 pages a day (assuming 20 working days/month).

**Dynamic Security**

Dynamic Security is a toner cartridge design and process for authenticating genuine HP supplies. HP printers use toner cartridges that have security chips or electronic circuitry. Cartridges using a non-HP chip, or modified chip, or non-HP circuitry might not work (now or in the future).

**e-Duplex**

Single-pass electronic duplex (e-Duplex) printer use two separate scan modules to scan the front-side and back-side of an e-duplex copy job page in a single pass through the document feeder.

**EMC**

EMC is a measure of a device's ability to operate as intended in its shared operating environment while, at the same time, not affecting the ability of other equipment within the same environment to operate as intended.

**EMI**

EMI is the electromagnetic energy which affects the functioning of an electronic device. Electronic devices (like printers) are a source of EMI. Because it is rare for electronics to operate in isolation, products are generally engineered to function in the presence of some amount of EMI.

**eMMC**

An embedded Multi-Media Card is a compact memory device consisting of NAND flash memory and a simple storage controller.

**Emulation**

Emulation is a technique of one machine obtaining the same results as another. An emulator duplicates the functions of one system with a different system, so that the second system behaves like the first system. Emulation focuses on exact reproduction of external behavior. This is different from simulation, which concerns an abstract model of the system being simulated, often considering its internal state.

**EPS**

Encapsulated PostScript (EPS) is a PostScript (PS) code file which is used for storing font and vector graphic image information.

**ESD**

An electrostatic discharge (ESD) is a sudden flow of electricity between two electrically charged objects caused by contact, an electrical short, or dielectric breakdown. Discharge of built up static electricity.

**Ethernet**

Ethernet is a frame-based computer networking technology for local area networks (LANs). It defines wiring and signaling for the physical layer, and frame formats and protocols for the media access control (MAC)/data link layer of the OSI model. Ethernet is mostly standardized as IEEE 802.3. Ethernet has become the most widespread LAN technology in use during the 1990s to present.

**Ferrite**

A ferrite is used to reduce the amount of radio frequency noise (or interference) in a wire or cable. A ferrite enables proper EMC/EMI performance for regulatory purposes.

**FFC**

Flat Flexible Cables (FFCs) are designed for Printed Circuit Assembly (PCA) to PCA connections (for example, connecting a fax PCA to the formatter).

**FIH**

A Foreign Interface Harness (FIH) is a port that enables HP multifunction printers (MFPs) to use third-party devices to extend the capabilities of the MFP.

**Firmware**

The formatter stores the printer firmware. A remote firmware upgrade process is used to overwrite and upgrade the firmware.

**Flash memory**

Flash memory is non-volatile, meaning it retains stored data even when the power is turned off.

**Flow integrated scanner assembly**

A printer scanner assembly that includes a slide-out external physical keyboard.

**Formatter (LaserJet)**

The formatter controls printer functions like receiving and processes print data, developing and coordinating data placement and timing with the DC controller PCA, storing font and customer configuration information, communicating with the host computer, and monitoring control panel functions and relaying printer status information through the control panel.

**FTP**

FTP stands for File Transfer Protocol. FTP is a protocol designed for transferring files over the Internet. Files stored on an FTP server can be accessed using an FTP client, such as a web browser, FTP software program, or a command line interface.

**Fuser Unit**

The fuser unit is part of a laser printer that adheres the toner onto the printed page. It consists of a heat roller and a pressure roller. After toner is transferred onto the paper, the fuser unit applies heat and pressure to make sure that the toner stays on the paper permanently (which is why paper is warm when it comes out of a laser printer).

**Gateway**

A connection between computer networks, or between a computer network and a telephone line. A gateway is used to connect two different computer networks, especially a connection to the Internet.

**Grayscale**

Shades of gray that represent light and dark portions of a color image printed in monochrome. Colors are represented by a range of gray shades from white to black.

**Halftone**

Halftone is a way of reproducing a photograph or other image in which the various tones of gray or color are produced by variously sized dots of ink or toner. Halftone simulates grayscale by varying the number of dots. Highly colored areas consist of a large number of dots, while lighter areas consist of a smaller number of dots.

**HDD**

A Hard-Disk Drive (HDD) (commonly referred to as a hard drive or hard disk) is a non-volatile storage device which stores digitally-encoded data on rapidly rotating platters with magnetic surfaces.

**IEEE**

The Institute of Electrical and Electronics Engineers (IEEE) is an international non-profit, professional organization for the advancement of technology related to electricity.

**Image scanner**

The image scanner (or Sub Scanner Assembly) contains the components to digitally scan an original source document. The image scanner is a component of the integrated scanner assembly (ADF and image scanner).

**IP address**

An Internet Protocol (IP) address is a unique number that a device uses in order to identify and communicate with other devices on a network utilizing the Internet Protocol standard.

**IPM**

The Images Per Minute (IPM) is a method of measuring the speed of a printer. An IPM rate indicates the number of single-sided sheets a printer can complete in one minute.

**IPP**

The Internet Printing Protocol (IPP) defines a standard protocol for printing and managing print jobs, media size, resolution, etc. IPP can be used locally, or over the internet to reach hundreds of printers. IPP also supports access control, authentication, and encryption, making it a capable and secure printing solution.

**ISA**

The Integrated Scanner Assembly (ISA) includes the document feeder and image scanner.

**ISO**

The International Organization for Standardization (ISO) is an international standard-setting body composed of representatives from national standards bodies. It produces world-wide industrial and commercial standards.

**JBIG**

Joint Bi-level Image Experts Group (JBIG) is an image compression standard with no loss of accuracy or quality. It was designed for compression of binary images, particularly for faxes, but can also be used for other images.

**JPEG**

Joint Photographic Experts Group (JPEG) is a commonly used standard method of loss compression for photographic images. It is the format used for storing and transmitting photographs on the World Wide Web.

**LDAP**

The Lightweight Directory Access Protocol (LDAP) is a networking protocol for querying and modifying directory services running over TCP/IP.

**LED**

A Light-Emitting Diode (LED) is a semiconductor device that can indicate the status of a printer (formatter LEDs) or a component in a contact image sensor (CIS) scanner that helps capture an image.

**LEDM**

Low end data model (LEDM) provides one consistent data representation method and defines the dynamic and capabilities tickets shared between clients and devices, as well as the access protocol, event, security, and discovery methods.

**LPDC**

Late point differentiation configuration (LPDC) allows the channel partner to configure the speed to the printer depending on the customer's order. LPDC configuration is stored on the Trusted Platform Module (TPM).

**LVPS - SMPS**

Low Voltage Power Supplies (LVPS) and Switching Mode Power Supplies (SMPS) supply direct current (DC) voltages to various printer components and assemblies.

**MAC address**

Media Access Control (MAC) address is a unique identifier associated with a network adapter. MAC address is a unique 48-bit identifier usually written as 12 hexadecimal characters grouped in pairs (for example, 00-00-0c-34-11-4e). This address is usually hard-coded into a Network Interface Card (NIC) by the manufacturer and used as an aid for routers trying to locate machines on a large network.

**MEt**

HP Memory Enhancement technology (MEt) effectively doubles the standard memory through a variety of font- and data-compression methods. MEt is available only in Printer Command Language (PCL) mode; it is not functional when printing in PostScript (PS) mode.

**MFP**

A Multi Function Printer (MFP) is a printer that incorporates multiple functionalities in a single physical body. For example, an MFP printer can scan, digitally send, fax, copy, and print.

**MHV**

Miniature High Voltage (MHV) is designed for high voltage applications of BNC connectors (DC voltage between 500 V and 5 kV).

**Modem**

A device that modulates a carrier signal to encode digital information, and also demodulates such a carrier signal to decode transmitted information.

**MPCA (PageWide)**

The MPCA integrates both formatter (LaserJet) and engine control electronics (DC controller) into a single assembly. The Main PCA (MPCA) controls printer functions like receiving and processes print data, developing and coordinating data placement, storing font and customer configuration information, communicating with the host computer, and monitoring control panel functions and relaying printer status information through the control panel.

**NAND**

NAND is not an acronym (the term is short for **NOT AND** a Boolean operator and logic gate). NAND (flash) memory is non-volatile, meaning it retains stored data even when the power is turned off.

**NVRAM**

Nonvolatile random access memory (NVRAM) is used to store I/O and information about the print environment configuration (stored data even when the power is turned off).

**OPC**

Organic Photo Conductor (OPC) is a mechanism that makes a virtual image for print using a laser beam emitted from a laser printer. It is usually green or rust colored and has a cylinder shape. An imaging unit containing a drum slowly wears the drum surface during its usage in the printer, and it should be replaced appropriately due to wear from contact with the cartridge development brush, cleaning mechanism, and paper.

**Originals**

The first example of something, such as a document, photograph, or text which is copied, reproduced, or translated to produce additional copies. The original itself is not copied or derived from something else.



**PCA**

Printed Circuit Assembly (PCA). Once the printed circuit board (PCB) is complete, electronic components must be assembled to form a functional printed circuit assembly or PCA.

**PCL**

Printer Command Language (PCL) is a Page Description Language (PDL) developed by HP as a printer protocol. PCL has become an industry standard. Originally developed for early Inkjet printers, PCL has been released in varying levels for thermal, dot matrix printers and laser printers.

**PDF**

Portable Document Format (PDF) is a proprietary file format developed by Adobe Systems. A PDF represents two dimension documents in a device independent and resolution independent format.

**PJL**

Printer job language (PJL) is an integral part of printer configuration, in addition to the standard PCL and PostScript (PS). With standard cabling, the printer can use PJL to perform a variety of functions like dynamic I/O switching, context-sensitive switching, and isolation of print environment settings from one print job to the next.

**PML**

Printer management language (PML) allows remote configuration of the printer and status read-back from the printer through the I/O ports.

**PostScript (PS)**

PostScript (PS) is a Page Description Language (PDL) and programming language used primarily in electronic and desktop publishing. PostScript is run in an interpreter to generate an image.

**PPM**

Pages Per Minute (PPM) is a method of measurement for determining how fast a printer works, meaning the number of pages a printer can produce in one minute.

**Print Media**

Media like paper, envelopes, labels, and transparencies which can be used in a printer, scanner, fax, or copier.

**Printer Driver**

A program used to send commands and transfer data from the computer to the printer.

**Printhead (PageWide)**

The printhead converts the digital firing instructions from the printer electronics into properly formed and timed microscopic drops of the four ink colors.

**Printhead Wiper (PageWide)**

The printhead wiper system keeps the printhead nozzles firing correctly throughout the life of the printer as it performs the wiping and capping functions. The wiping function cleans the nozzles of ink residue and particulates. The capping function keeps the nozzles moist during storage and when the printer is idle.

**Protocol**

A convention or standard that controls or enables the connection, communication, and data transfer between two computing endpoints.

**RAM**

Random Access Memory (RAM) is the printer memory device where the data in current use is kept so it can be quickly retrieved by the device's processor. This memory is an important factor in avoiding errors and printing documents properly. Printer memory is used to store, and process print jobs as they are sent to the printer from a computer. After printing, the job is cleared from the memory to make room for more print jobs. Printer memory is directly linked to two print characteristics: speed and print quality. More memory allows you to print faster and print larger, high-quality graphics.

**REDI sensor**

An optical reflective edge detection interrupter (REDI) sensor. Usually used in conjunction with mirrors to sense the presence or absence of paper in the paper path. These sensors are carefully aligned and calibrated at the factory, so care must be taken when servicing these sensors.

**Resolution**

The sharpness of an image is measured in Dots Per Inch (DPI). The higher the DPI, the greater the resolution.

**SCB**

The Scanner Control Board (SCB) controls the functions of the image scanner components in the Sub Scanner Assembly (SSA).

**Service fluid and aerosol management systems (PageWide)**

There are two types of service fluid, shipping fluid and ink. The service fluid management system is contained entirely within the duplex module. Service fluid is discharged as droplets from the printhead, and then collected in a container inside the duplex module. Some of the droplets are called aerosol because they are lighter than air. Aerosol can float inside the printer and collect on the lens of optical sensors, producing false failures. The aerosol management system transports the aerosol and collects it in a safe place. Aerosol management consists of an aerosol fan, mounted on the rear wall of the air flow assembly, which creates air flow that pulls the aerosol through the holes in the platen and into the aerosol filter inside the duplex module.

**SFP**

A single-function printer only processes print jobs sent from a host computer or from an USB port on the printer.

**SMB**

Server Message Block (SMB) is a network protocol mainly applied to share files, printers, serial ports, and miscellaneous communications between nodes on a network. SMB also provides an authenticated inter-process communication mechanism.

**SMTP**

Simple Mail Transfer Protocol (SMTP) is the standard for email transmissions across the internet. SMTP is a relatively simple, text-based protocol, where one or more recipient of a message is specified, and the message text is transferred. It is a client server protocol where the client transmits an email message to the server.

**SODIMM**

Small outline dual in-line memory module (SODIMM) is a thin profile memory storage device (a smaller alternative to a standard DIMM device).

**SSA**

The Sub-Scanner Assembly is the image scanner component of the Integrated Scanner Assembly (ISA, which includes the document feeder and the image scanner).

**Subnet Mask**

The subnet mask is used in conjunction with the network address to determine which part of the address is the network address and which part is the host address.

**TCP/IP**

The Transmission Control Protocol (TCP) and the Internet Protocol (IP) are the set of communications protocols that implement the protocol stack on which the internet and most commercial networks run.

**TIFF**

Tagged Image File Format (TIFF) is a variable-resolution bit mapped image format. TIFF describes image data that typically come from scanners. TIFF images use tags, keywords defining the characteristics of the image that is included in the file. This flexible and platform-independent format can be used for pictures that have been made by various image processing applications.

**Toner Cartridge**

A bottle or container that holds toner, which is used in a machine like a printer. Toner is a powder used in laser printers and photocopiers. The toner forms the text and images on printed paper. Toner can be fused by a combination of heat/pressure from the fuser, causing it to bind the fibers in the paper.

**TPM**

The HP Trusted Platform Module (TPM) is a security accessory for printers. The TPM strengthens protection of encrypted credentials and data stored on your printer. Certificate private keys are both generated by and protected by the TPM. Once installed, the printer and the TPM are sealed, and the printer owns the TPM. The TPM may not be moved to another device without losing its ownership from the original printer. Installing a TPM accessory might necessitate a firmware upgrade. The TPM prevents the printer from starting if the TPM is missing. If the TPM is removed from the printer, a control-panel error message appears indicating that the TPM is missing.



**NOTE:** The TPM is not a service part for some printer models. Check the printer service manual to determine if the TPM is a replaceable service part.

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**TWAIN**

An industry standard for scanners and software. By using a TWAIN compliant scanner with TWAIN-compliant software, a scan can be initiated from the program. TWAIN is an image capture API for Microsoft Windows and Apple Macintosh operating systems.

**URL**

Uniform Resource Locator (URL) is the global address of documents and resources on the internet. The first part of the address indicates what protocol to use. The second part specifies the IP address or the domain name where the resource is located.

**USB**

Universal Serial Bus (USB) is a standard that was developed by the USB Implementers Forum, Inc., to connect computers and peripherals. Unlike the parallel port, USB is designed to concurrently connect a single computer USB port to multiple peripherals.

**Walk-up USB**

Some printers support direct printing from a USB flash drive (the walk-up USB port is usually near the control panel).

**Watermark**

A watermark is a recognizable image or pattern in paper that appears lighter when viewed by transmitted light. Watermarks were first introduced in Bologna, Italy in 1282. Watermarks have been used by paper makers to identify their product, and also on postage stamps, currency, and other government documents to discourage counterfeiting.

**XPS**

XML Paper Specification (XPS) is a specification for a Page Description Language (PDL) and a new document format developed by Microsoft. This has benefits for portable document and electronic documents. It is an XML-based specification based on a new print path and vector-based, device-independent document format.

**ZIF Connector**

Zero insertion force (ZIF) connectors use a mechanical locking method to secure Flat Flexible Cables (FFCs) to a Printed Circuit Assembly (PCA).

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