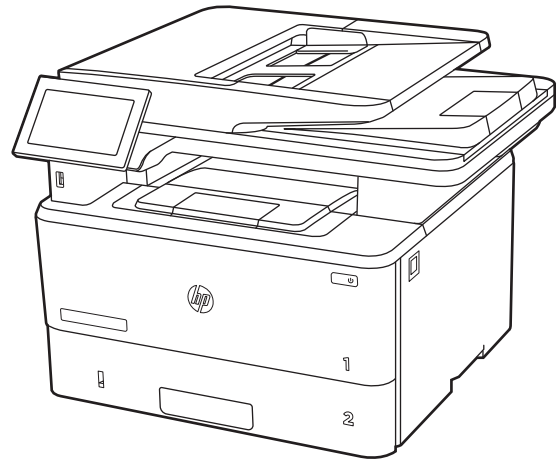
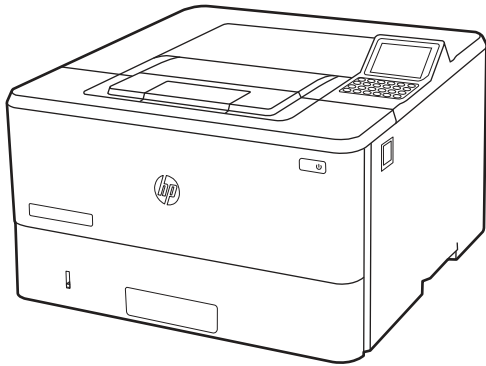




HP LaserJet Enterprise M406, M407  
HP LaserJet Managed E40040  
HP LaserJet Enterprise MFP M430, M431  
HP LaserJet Managed E42540

## Service Manual



[www.hp.com/videos/LaserJet](http://www.hp.com/videos/LaserJet)  
[www.hp.com/support/ljM406](http://www.hp.com/support/ljM406)  
[www.hp.com/support/ljM407](http://www.hp.com/support/ljM407)  
[www.hp.com/support/ljM430MFP](http://www.hp.com/support/ljM430MFP)

[www.hp.com/support/ljM431MFP](http://www.hp.com/support/ljM431MFP)  
[www.hp.com/support/ljE40040](http://www.hp.com/support/ljE40040)  
[www.hp.com/support/ljE42540MFP](http://www.hp.com/support/ljE42540MFP)





# HP LaserJet Enterprise M406, M407, HP LaserJet Managed E40040, HP LaserJet Enterprise MFP M430, M431, and HP LaserJet Managed MFP E42540 Service Manual

## SUMMARY

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

# Legal information

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Edition 1, 02/2021

## Revision history

View a list of document revisions.

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**Table** Revision history

Revision number	Revision date	Revision notes
1	02/2021	HP LaserJet Enterprise M406, M407, HP LaserJet Managed E40040, HP LaserJet Enterprise MFP M430, M431, HP LaserJet Managed MFP E42540 service manual initial release.


## 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.

---

## HP service and support

Learn about HP access to additional service and support information.

### Additional service and support for channel partners

Channel partners go to [partner.hp.com](https://partner.hp.com), and then use the steps below to access the HP Web-based Interactive Search Engine (WISE).

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

Access WISE for Channel partners

1. Select [Services & Support](#) (near the top of the screen).
2. Under [Services Delivery](#), select [Technical Support](#).
3. Select [Technical Documentation](#).

Find information about the following topics

- Service manuals
- Service advisories
- Up-to-date control panel message (CPMD) troubleshooting
- Solutions for printer issues and emerging issues
- Remove and replace part instructions and videos
- Install and configure
- Printer specifications
- Warranty and regulatory 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.

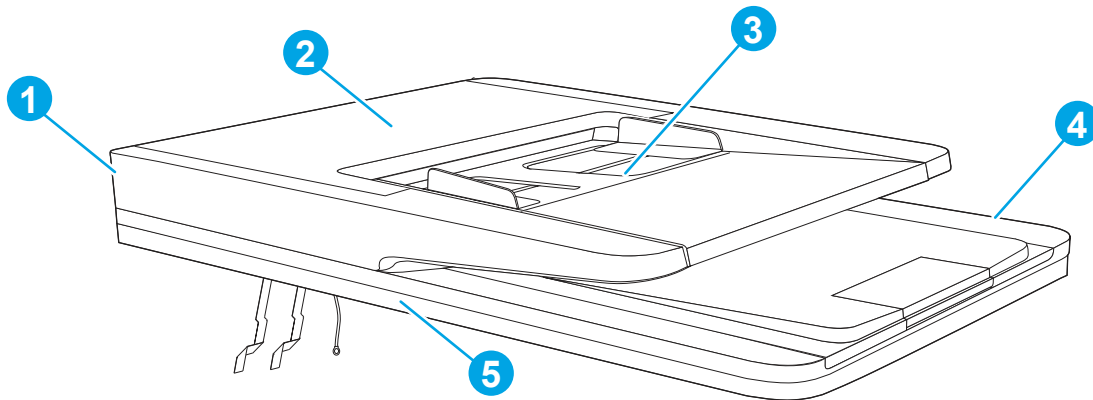
## Information (document feeder and scanner)

Learn about the document feeder and scanner.

### Document feeder and scanner front view

Learn about the document feeder and scanner components.

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/ljM430MFP](http://www.hp.com/support/ljM430MFP) or [www.hp.com/support/ljM431MFP](http://www.hp.com/support/ljM431MFP) or [www.hp.com/support/lj42540MFP](http://www.hp.com/support/lj42540MFP) for current information.

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

Copy and scan features	M430	M431	E42540
Copies and scans up to 32 pages per minute (ppm)	✓	✓	✓
50-page document feeder with dual-head scanning for single-pass duplex copying and scanning	✓	✓	✓
Scan to E-mail, Scan to USB, and Scan to Network Folder option	✓	✓	✓

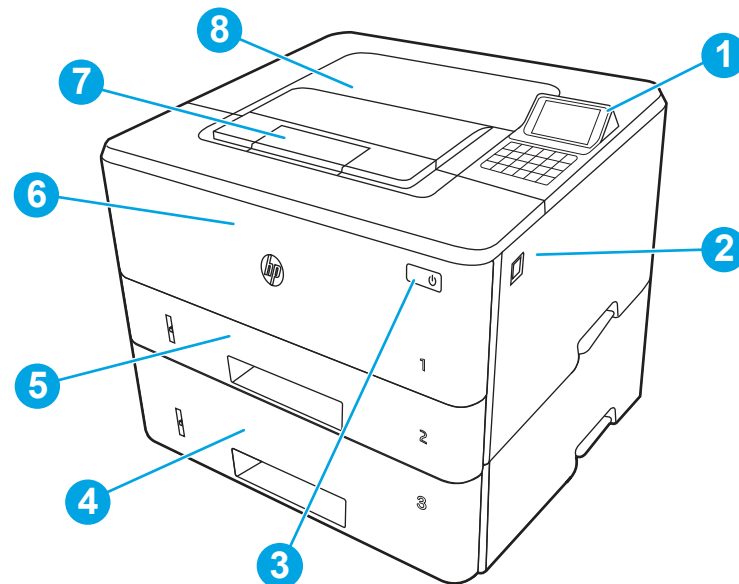
## Information (base printer)

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	Color non-touch control panel with 10-key keypad
2	Front door release button (access to the toner cartridge)
3	Power on/off button
4	Tray 3 (optional)
5	Tray 2

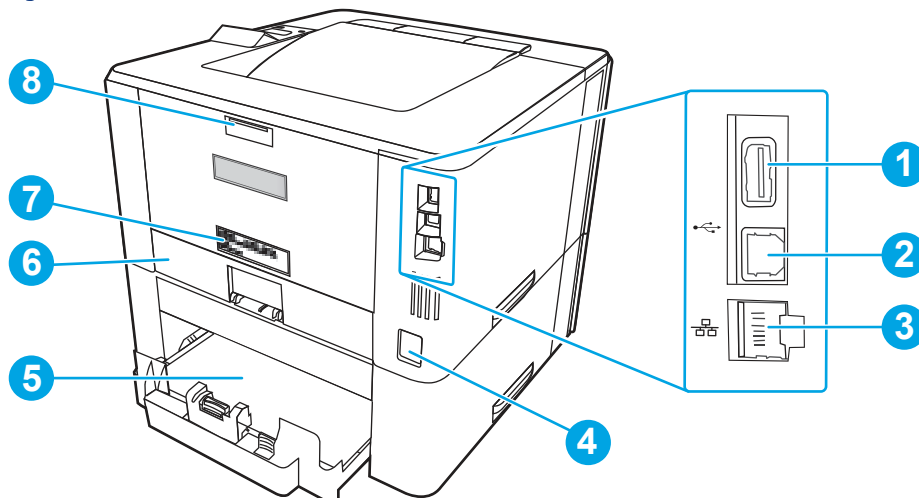


Number	Description
6	Tray 1
7	Output bin extension
8	Output bin

## Printer back view (SFP)

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

Figure 1-3 Printer rear view (SFP)

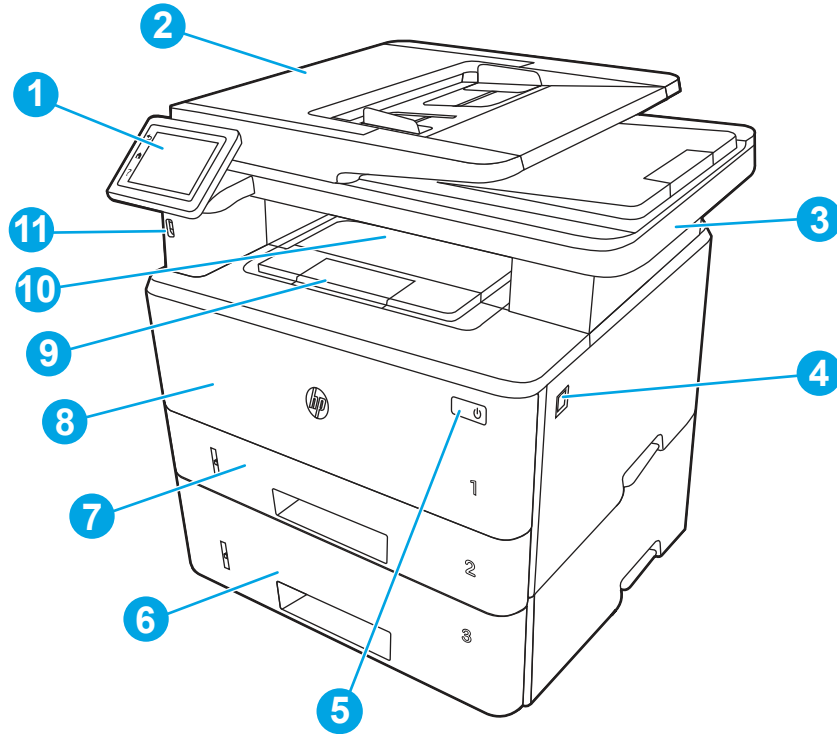


Number	Description
1	USB port for job storage or connecting accessories
2	USB port for direct connection to a computer
3	Ethernet port
4	Power connection
5	Tray 3 (optional)
	<b>NOTE:</b> Tray 3 extends when legal-size or A4-size paper is loaded.
6	Dust cover for Tray 2
	<b>NOTE:</b> Dust cover flips up when legal-size or A4-size paper is loaded.
7	Serial number and product number label
8	Rear door (access for clearing jams)

## Printer front view (MFP)

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

Figure 1-4 Printer front view (MFP)

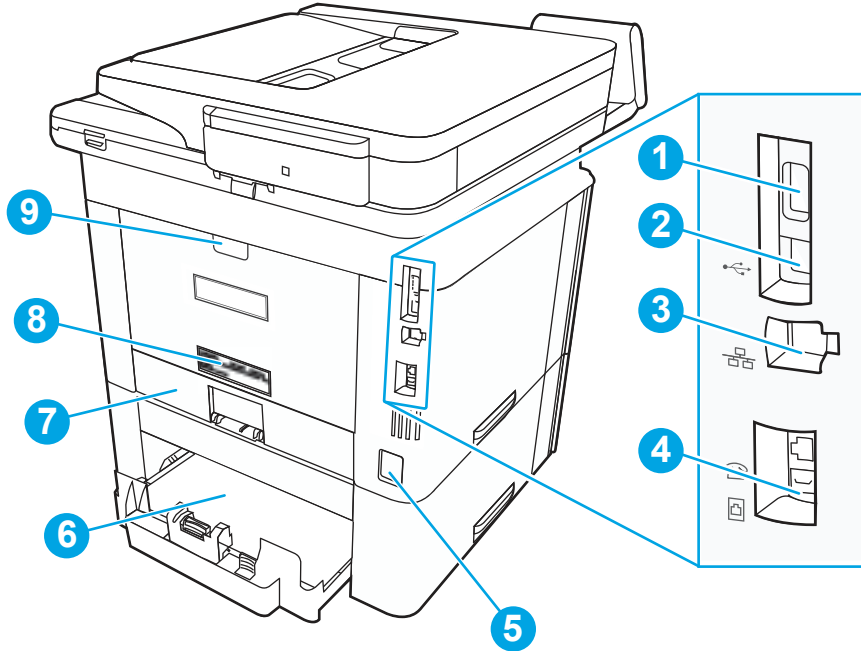


Number	Description
1	Control panel (tilts up for easier viewing)
2	Document feeder
3	Scanner
4	Front door release button (access to the toner cartridge)
5	Power on/off button
6	Tray 3 (optional)
7	Tray 2
8	Tray 1
9	Output bin extension
10	Output bin
11	Walk-up USB port (for printing and scanning without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

## Printer back view (MFP)

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

Figure 1-5 Printer rear view (MFP)



Number	Description
1	USB port (for job storage and private printing)
2	USB interface port
3	Ethernet port
4	Fax "line in" port (for attaching the fax phone line to the printer)
5	Power connection
6	Tray 3 (optional)
	<b>NOTE:</b> Tray 3 extends when legal-size or A4-size paper is loaded.
7	Dust cover for Tray 2
	<b>NOTE:</b> Dust cover flips up when legal-size or A4-size paper is loaded.
8	Serial number and printer number label
9	Rear door (provides access for clearing jams)

## Configuration (base printer)

Learn about the base printer configurations.

## Configuration (base printer SFP)

Learn about the base printer SFP configurations.

**Figure 1-6** HP LaserJet Enterprise M406/M407/E40040 printer



#### HP LaserJet Enterprise M406

- 40/38 pages per minute (letter/A4)
- FutureSmart 5 firmware
- Trusted platform module 2.0 (security)
- HP Web JetAdmin
- Automatic duplex printing
- 700-4,000 pages per month
- 350-sheet standard capacity
- 900-sheet maximum capacity
- 68.58 mm (2.7 in) color non-touchscreen control panel
- 1.0 GB RAM memory
- 4GB eMMC mass storage
- 550-sheet paper feeder (optional)
- 508 accessibility kit (optional)

#### HP LaserJet Enterprise M407

- Same features as the HP LaserJet Enterprise M406
- China/India specific supplies

#### HP LaserJet Managed E40040

- Same features as the HP LaserJet Enterprise M406
- Managed contractual cartridge with lowest possible cost per page
- Locking tray guides
- Smart device services (SDS) firmware features

## Configuration (base printer MFP)

Learn about the base printer MFP configurations.

Figure 1-7 HP LaserJet Enterprise M430/M431/E42540 printer



#### HP LaserJet Enterprise M430

- 40/38 pages per minute (letter/A4)
- FutureSmart 5 firmware
- Trusted platform module 2.0 (security)
- HP Web JetAdmin
- Automatic duplex printing
- 50-sheet document feeder (duplex scanning)
- Single pass double sided scan/copy
- Fax
- 700-4,000 pages per month
- 350-sheet standard capacity
- 900-sheet maximum capacity
- 109.22 mm (4.3 in) color touchscreen control panel
- 1.5 GB RAM memory
- 8GB eMMC mass storage
- 550-sheet paper feeder (optional)
- 508 accessibility kit (optional)

#### HP LaserJet Enterprise M431

- Same features as the HP LaserJet Enterprise M430
- China/India specific supplies

#### HP LaserJet Managed E42540

- Same features as the HP LaserJet Enterprise M430
- Managed contractual cartridge with lowest possible cost per page

- Locking tray guides
- Smart device services (SDS) firmware features

## Specifications (base printer)

Learn about the base printer specifications.

### Technical specifications (M406/M407)

Review the technical specifications for the M406/M407 printers.

See [www.hp.com/support/ljM406](http://www.hp.com/support/ljM406) or [www.hp.com/support/ljM407](http://www.hp.com/support/ljM407) or [www.hp.com/support/ljE40040](http://www.hp.com/support/ljE40040) for current information.

#### Product numbers for each model

- M406dn - #3PZ15A
- M407dn - #3PZ16A

**Table 1-2 Paper handling specifications**

Paper handling features	M406dn	M407dn
Tray 1 (100-sheet capacity)	✓	✓
Tray 2 (250-sheet capacity)	✓	✓
Optional 550-sheet accessory tray	Optional	Optional
Automatic duplex printing	✓	✓

**Table 1-3 Connectivity specifications**

Connectivity features	M406dn	M407dn
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓	✓
Hi-Speed USB 2.0	✓	✓
HP Jetdirect 2900nw Print Server accessory for Wi-Fi connectivity and an additional Ethernet port	Optional	Optional
HP Jetdirect 3000w NFC/Wireless Accessory for printing from mobile devices	Optional	Optional
HP Jetdirect 3100w accessory for Wi-Fi, BLE, NFC, and proximity badge reading	Optional	Optional

**Table 1-4 Print specifications**

Print features	M406dn	M407dn
Prints 38 pages per minute (ppm) on A4 and 40 ppm on letter-size paper	✓	✓
Prints 40 ppm on A4 and 42 ppm on letter-size paper with Speed-up Option		

**Table 1-4 Print specifications (continued)**

Print features	M406dn	M407dn
Job storage and private printing	✓	✓

**Table 1-5 Other specifications**

Other features	M406dn	M407dn
1.0 GB base memory	✓	✓
4 GB embedded Multi-Media Controller (eMMC)	✓	✓
68.58 mm (2.7 in) color non-touch control panel with 10-key keypad	✓	✓
HP Trusted Platform Module for encrypting all data that passes through the printer	✓	✓
HP Accessibility Kit	Optional	Optional
HP Accessibility Assistant	Optional	Optional
HP USB Universal Card Reader	Optional	Optional
HP LEGIC Card Reader	Optional	Optional

## Technical specifications (E40040)

Review the technical specifications for the E40040 printer.

See [www.hp.com/support/lj40040](http://www.hp.com/support/lj40040) for current information.

### Product numbers for each model

- E40040dn - #3PZ35A

**Table 1-6 Paper handling specifications**

Paper handling features	E40040dn
Tray 1 (100-sheet capacity)	✓
Tray 2 (250-sheet capacity)	✓
Optional 550-sheet accessory tray	Optional
Automatic duplex printing	✓

**Table 1-7 Connectivity specifications**

Connectivity features	E40040dn
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓
Hi-Speed USB 2.0	✓
HP Jetdirect 2900nw Print Server accessory for Wi-Fi connectivity and an additional Ethernet port	Optional
HP Jetdirect 3000w NFC/Wireless Accessory for printing from mobile devices	Optional

**Table 1-7 Connectivity specifications (continued)**

Connectivity features	E40040dn
HP Jetdirect 3100w accessory for Wi-Fi, BLE, NFC, and proximity badge reading	Optional

**Table 1-8 Print specifications**

Print features	E40040dn
Prints 38 pages per minute (ppm) on A4 and 40 ppm on letter-size paper	✓
Prints 40 ppm on A4 and 42 ppm on letter-size paper with Speed-up Option	
Job storage and private printing	✓

**Table 1-9 Other specifications**

Other features	E40040dn
1.0 GB base memory	✓
4 GB embedded Multi-Media Controller (eMMC)	✓
68.58 mm (2.7 in) color non-touch control panel with 10-key keypad	✓
HP Trusted Platform Module for encrypting all data that passes through the printer	✓
HP Accessibility Kit	Optional
HP Accessibility Assistant	Optional
HP USB Universal Card Reader	Optional
HP LEGIC Card Reader	Optional

## Technical specifications (M430/M431)

Review the technical specifications for the M430/M431 MFP printers.

See [www.hp.com/support/ljM430MFP](http://www.hp.com/support/ljM430MFP) or [www.hp.com/support/ljM431MFP](http://www.hp.com/support/ljM431MFP) or [www.hp.com/support/lj42540MFP](http://www.hp.com/support/lj42540MFP) for current information.

### Product numbers for each model

- M430f - #3PZ55A
- M431f - #3PZ56A

**Table 1-10 Paper handling specifications**

Paper handling features	M430f	M431f
Tray 1 (50-sheet capacity)	✓	✓
Tray 2 (250-sheet capacity)	✓	✓
Optional 550-sheet accessory tray	Optional	Optional
Automatic duplex printing	✓	✓



**Table 1-11 Connectivity specifications**

Connectivity features	M430f	M431f
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓	✓
Hi-Speed USB 2.0	✓	✓
Walk-up USB port	✓	✓
HP Jetdirect 2900nw Print Server accessory for Wi-Fi connectivity and an additional Ethernet port	Optional	Optional
HP Jetdirect 3000w NFC/Wireless Accessory for printing from mobile devices	Optional	Optional
HP Jetdirect 3100w accessory for Wi-Fi, BLE, NFC, and proximity badge reading	Optional	Optional

**Table 1-12 Print specifications**

Print features	M430f	M431f
Prints 38 pages per minute (ppm) on A4 and 40 ppm on letter-size paper	✓	✓
Prints 40 ppm on A4 and 42 ppm on letter-size paper with Speed-up Option		
Job storage and private printing	✓	✓

**Table 1-13 Copy and scan specifications**

Copy and scan features	M430f	M431f
Copies and scans up to 32 pages per minute (ppm)	✓	✓
50-page document feeder with dual-head scanning for single-pass duplex copying and scanning	✓	✓
Scan to E-mail, Scan to USB, and Scan to Network Folder options	✓	✓

**Table 1-14 Other specifications**

Other features	M430f	M431f
1.5 GB base memory	✓	✓
eMMC 16GB	✓	✓
Color touchscreen control panel	✓	✓
Fax features	✓	✓
HP Trusted Platform Module for encrypting all data that passes through the printer	✓	✓
HP Accessibility Kit	Optional	Optional
HP Accessibility Assistant	Optional	Optional
HP USB Universal Card Reader	Optional	Optional

**Table 1-14 Other specifications (continued)**

Other features	M430f	M431f
HP LEGIC Card Reader	Optional	Optional

## Technical specifications (E42540)

Review the technical specifications for the E42540 MFP printer.

See [www.hp.com/support/ljE42540MFP](http://www.hp.com/support/ljE42540MFP) for current information.

### Product numbers for each model

- E42540f - #3PZ75A

**Table 1-15 Paper handling specifications**

Paper handling features	E42540f
Tray 1 (50-sheet capacity)	✓
Tray 2 (250-sheet capacity)	✓
Optional 550-sheet accessory tray	Optional
Automatic duplex printing	✓

**Table 1-16 Connectivity specifications**

Connectivity features	E42540f
10/100/1000 Ethernet LAN connection with IPv4 and IPv6	✓
Hi-Speed USB 2.0	✓
Walk-up USB port	✓
HP Jetdirect 2900nw Print Server accessory for Wi-Fi connectivity and an additional Ethernet port	Optional
HP Jetdirect 3000w NFC/Wireless Accessory for printing from mobile devices	Optional
HP Jetdirect 3100w accessory for Wi-Fi, BLE, NFC, and proximity badge reading	Optional

**Table 1-17 Print specifications**

Print features	E42540f
Prints 38 pages per minute (ppm) on A4 and 40 ppm on letter-size paper	✓
Prints 40 ppm on A4 and 42 ppm on letter-size paper with Speed-up Option	
Job storage and private printing	✓

**Table 1-18 Copy and scan specifications**

Copy and scan features	E42540f
Copies and scans up to 32 pages per minute (ppm)	✓
50-page document feeder with dual-head scanning for single-pass duplex copying and scanning	✓
Scan to E-mail, Scan to USB, and Scan to Network Folder options	✓

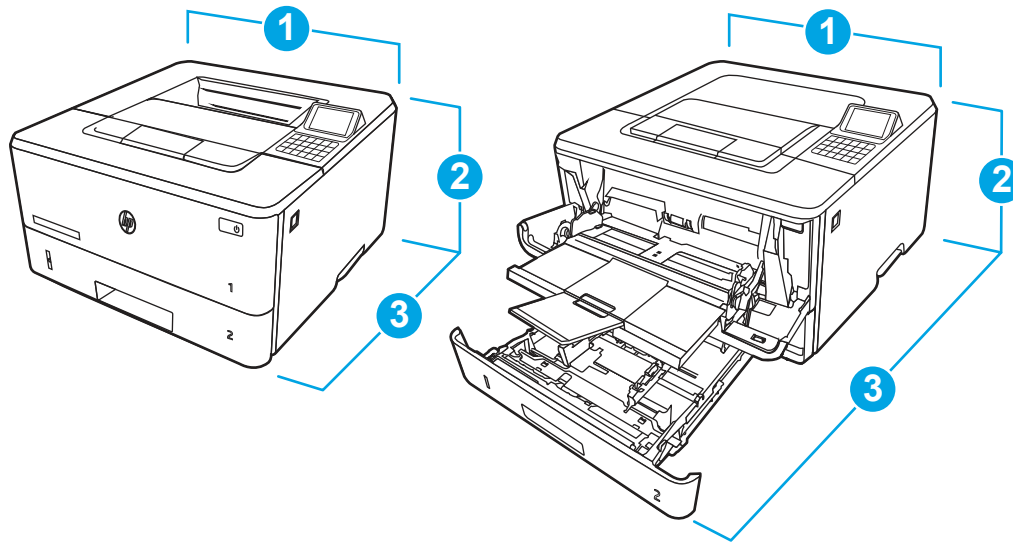
**Table 1-19 Other specifications**

Other features	E42540f
1.5 GB base memory	✓
eMMC 16GB	✓
Color touchscreen control panel	✓
Fax features	✓
HP Trusted Platform Module for encrypting all data that passes through the printer	✓
HP Accessibility Kit	Optional
HP Accessibility Assistant	Optional
HP USB Universal Card Reader	Optional
HP LEGIC Card Reader	Optional

## Printer dimensions (SFP)

Make sure your printer environment is large enough to accommodate the printer.

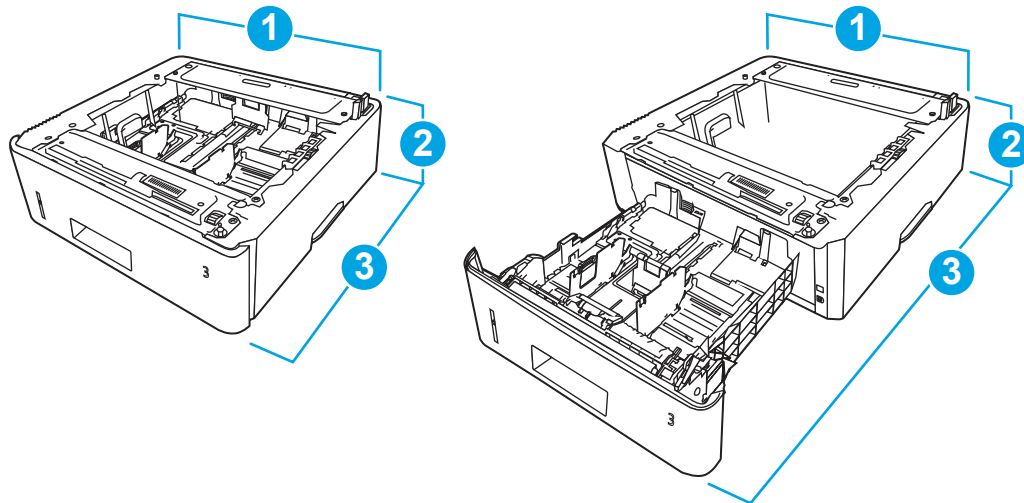
**Figure 1-8** Dimensions for the SFP printer



**Table 1-20** Dimensions for the SFP printer

Measurement	Printer fully closed	Printer fully opened
1. Width	381 mm (15 in)	381 mm (15 in)
2. Height	220 mm (8.7 in)	241 mm (9.5 in)
3. Depth	357 mm (14 in)	781 mm (30.8 in)
Weight (with cartridge)	8.5 kg (18.74 lb)	8.5 kg (18.74 lb)

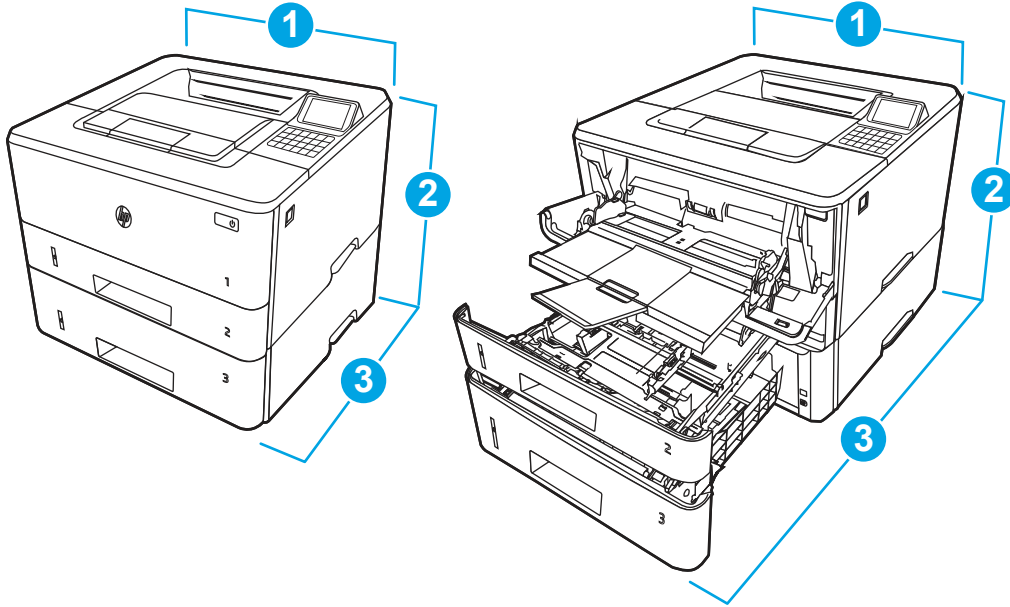
**Figure 1-9** Dimensions for the optional 550-sheet tray



**Table 1-21** Dimensions for the optional 550-sheet tray

Measurement	Tray fully closed	Tray fully opened
1. Width	381 mm (15 in)	381 mm (15 in)
2. Height	131 mm (5.1 in)	131 mm (5.1 in)
3. Depth	357 mm (14 in)	781 mm (30.8 in)
Weight	3.7 kg (8.2 lb)	3.7 kg (8.2 lb)

**Figure 1-10** Dimensions for the printer with the optional 550-sheet tray (SFP)



**Table 1-22** Dimensions for the printer with the optional 550-sheet tray (SFP)

Measurement	Printer fully closed	Printer fully opened
1. Width	381 mm (15 in)	381 mm (15 in)
2. Height	349 mm (13.7 in)	372 mm (14.6 in)
3. Depth	357 mm (14 in)	781 mm (30.8 in)
Weight (with cartridge)	12.2 kg (26.9 lb)	12.2 kg (26.9 lb)

## Printer dimensions (MFP)

Make sure your printer environment is large enough to accommodate the printer.

Figure 1-11 Dimensions for the MFP printer

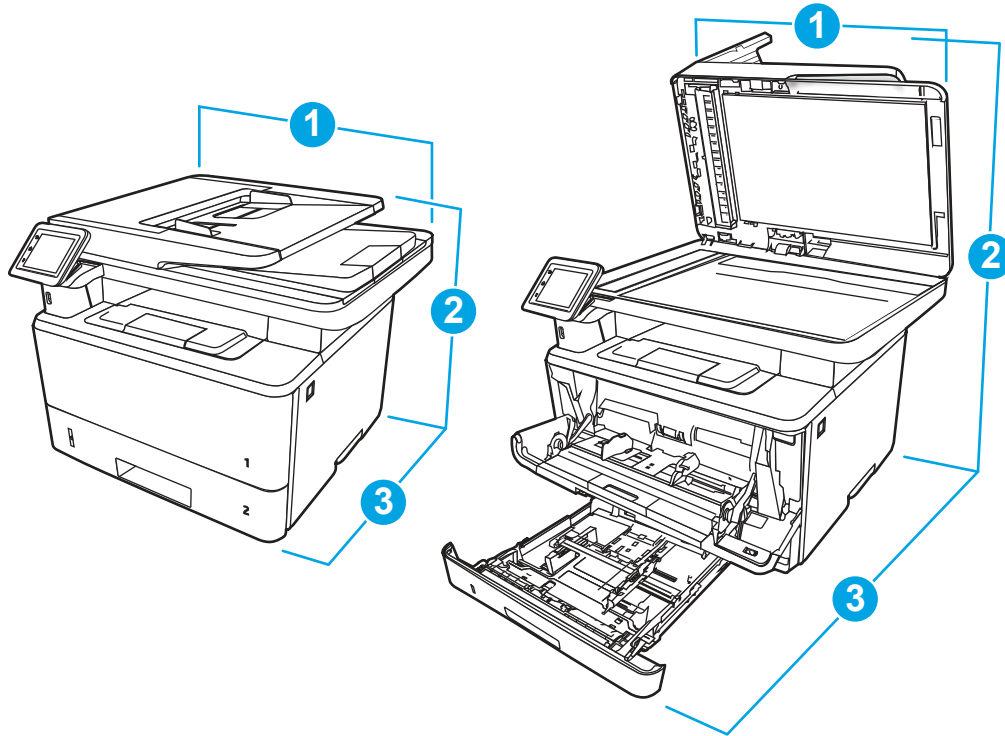
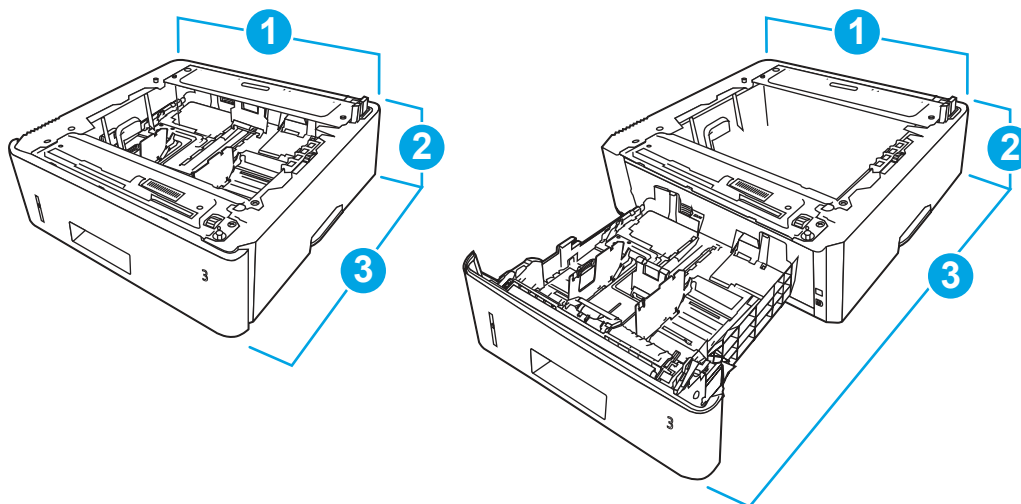


Table 1-23 Dimensions for the MFP printer

Measurement	Printer fully closed	Printer fully opened
1. Width	420 mm (16.5 in)	453 mm (17.8 in)
2. Height	323 mm (12.7 in)	577 mm (22.7 in)
3. Depth	390 mm (15.3 in)	839 mm (33 in)
Weight (with cartridge)	13.01 kg (28.68 lb)	13.01 kg (28.68 lb)

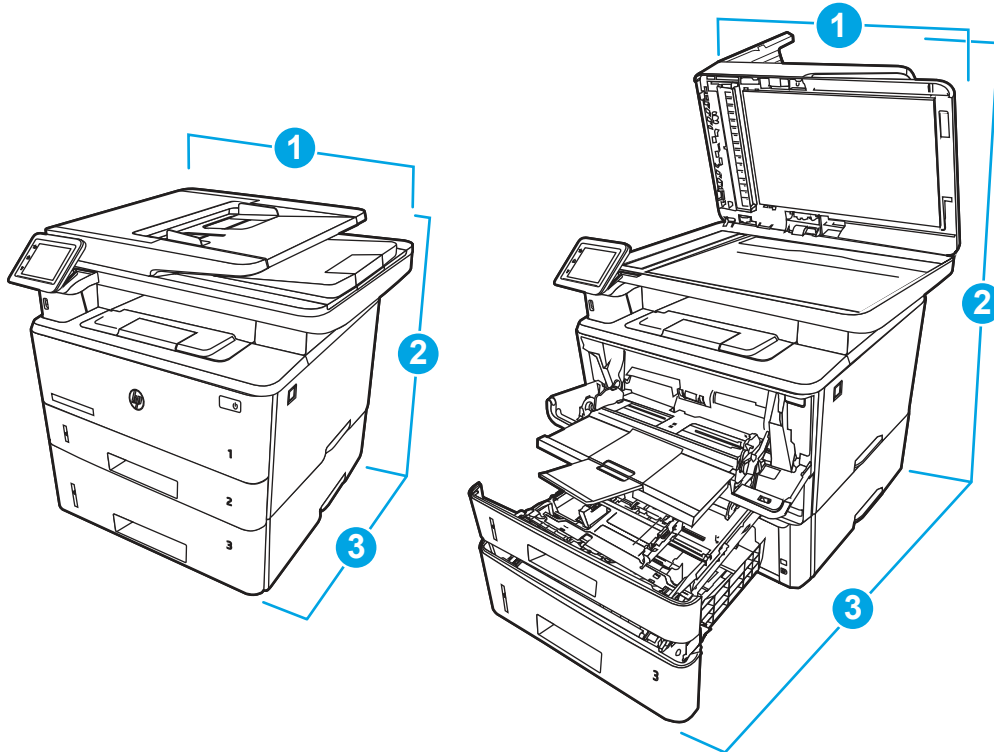
Figure 1-12 Dimensions for the optional 550-sheet tray



**Table 1-24** Dimensions for the optional 550-sheet tray

Measurement	Tray fully closed	Tray fully opened
1. Width	381 mm (15 in)	381 mm (15 in)
2. Height	131 mm (5.1 in)	131 mm (5.1 in)
3. Depth	357 mm (14 in)	781 mm (30.8 in)
Weight	3.7 kg (8.2 lb)	3.7 kg (8.2 lb)

**Figure 1-13** Dimensions for the printer with the optional 550-sheet tray (MFP)



**Table 1-25** Dimensions for the printer with the optional 550-sheet tray (MFP)

Measurement	Printer fully closed	Printer fully opened
1. Width	420 mm (16.5 in)	453 mm (17.8 in)
2. Height	452 mm (17.8 in)	706 mm (27.8 in)
3. Depth	390 mm (15.3 in)	839 mm (33 in)
Weight (with cartridge)	16.71 kg (36.83 lb)	16.71 kg (36.83 lb)

## Printer space requirements

Learn about the printer space requirements

HP recommends that 30 mm (1.81 in) be added to the printer dimensions to make sure there is sufficient space to open doors and covers, and to provide proper ventilation. See [Printer dimensions \(SFP\) on page 13](#) and/or [Printer dimensions \(MFP\) on page 15](#).

## Power consumption, electrical specifications, and acoustic emissions

In order to operate properly, the printer must be in an environment that meets certain power specifications.

See [www.hp.com/support/ljM406](http://www.hp.com/support/ljM406) or [www.hp.com/support/ljM407](http://www.hp.com/support/ljM407) or [www.hp.com/support/ljM430MFP](http://www.hp.com/support/ljM430MFP) or [www.hp.com/support/ljM431MFP](http://www.hp.com/support/ljM431MFP) or [www.hp.com/support/ljE40040](http://www.hp.com/support/ljE40040) or [www.hp.com/support/ljE42540MFP](http://www.hp.com/support/ljE42540MFP) for current information.

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

## Operating-environment range

In order to operate properly, the printer must be in an environment that meets certain specifications.

Table 1-26 Operating-environment specifications

Environment	Recommended	Allowed
Temperature	15° to 27°C (59° to 80.6°F)	10° to 32.5°C (50° to 90.5°F)
Relative humidity	30% to 70% relative humidity (RH)	10% to 80% RH

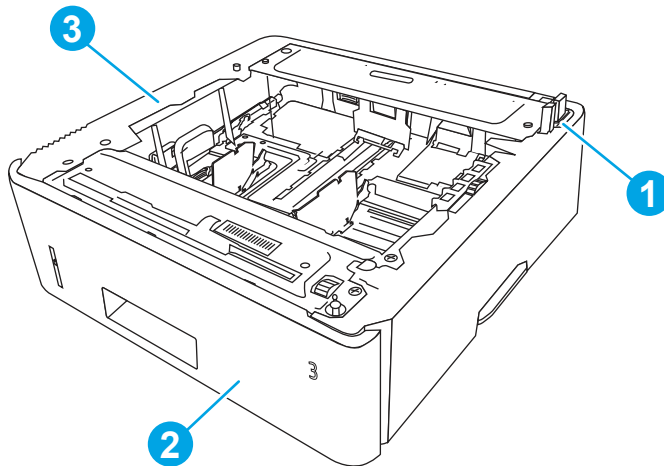
## Information (input devices)

Learn about the printer input devices.

### 550-sheet paper feeder front view

Identify the parts on the 550-sheet paper feeder.

Figure 1-14 550-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.

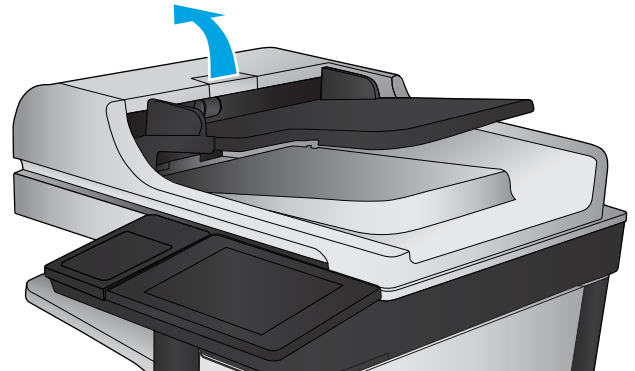
Over time, specks of debris might collect on the document feeder rollers and pads which can affect performance.

---

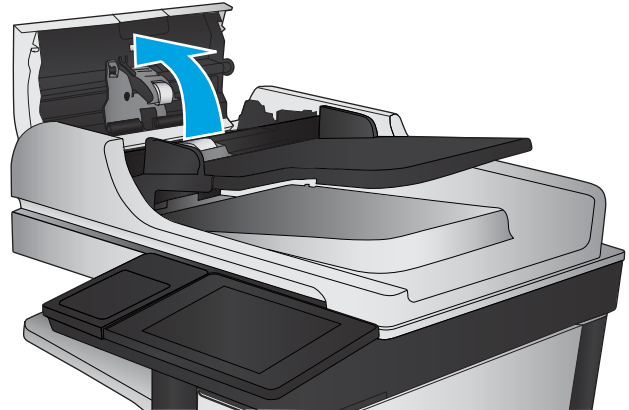
 **NOTE:** The figures in this topic show a typical MFP printer. However, the procedure is correct for all MFP printers.

---

1. Lift the document-feeder latch.

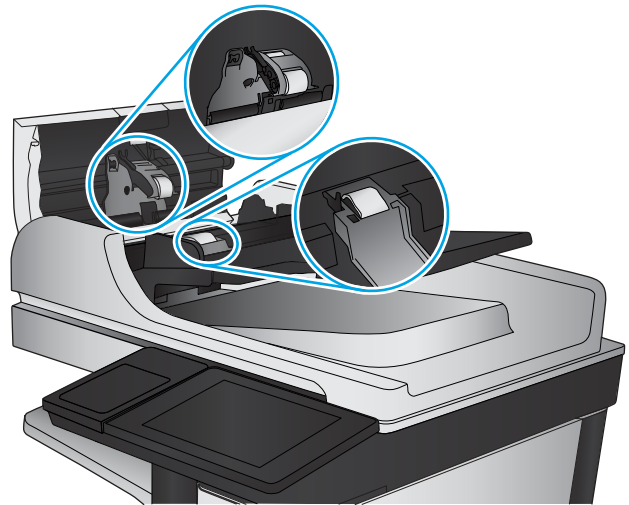


2. Open the document-feeder cover.



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.

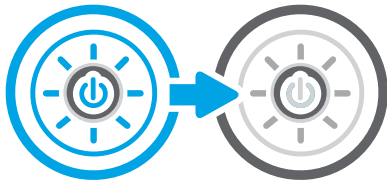
## Check the scanner glass for dirt and smudges

Learn about solving copy-quality debris problems.

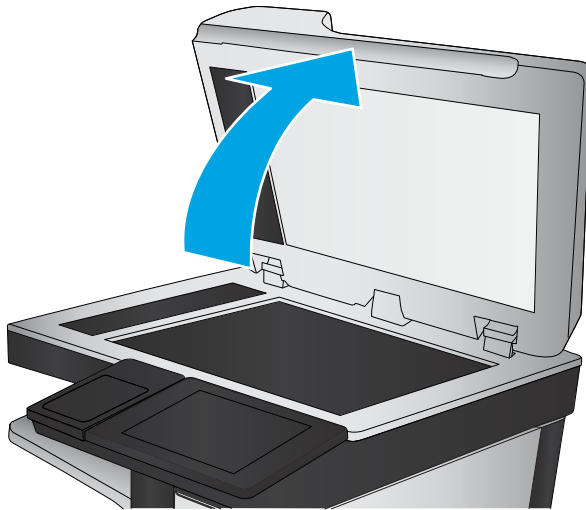
Over time, specks of debris might collect on the scanner glass and document feeder white plastic backing, which might cause print defects. Use the following procedure to clean the scanner if the printed pages have streaks, unwanted lines, black dots, poor print quality, or unclear text.

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

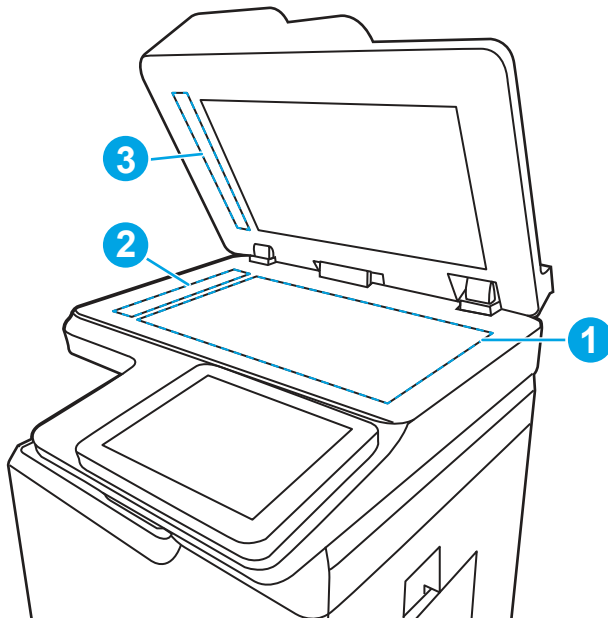
1. Press the power button to turn the printer off, and then disconnect the power cable from the electrical outlet.




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.

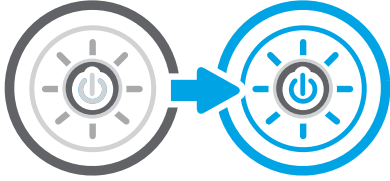


**⚠ CAUTION:** Do not use abrasives, acetone, benzene, ammonia, ethyl alcohol, or carbon tetrachloride on any part of the printer; these can damage the printer. Do not place liquids directly on the glass or platen. They might seep and damage the printer.

 **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

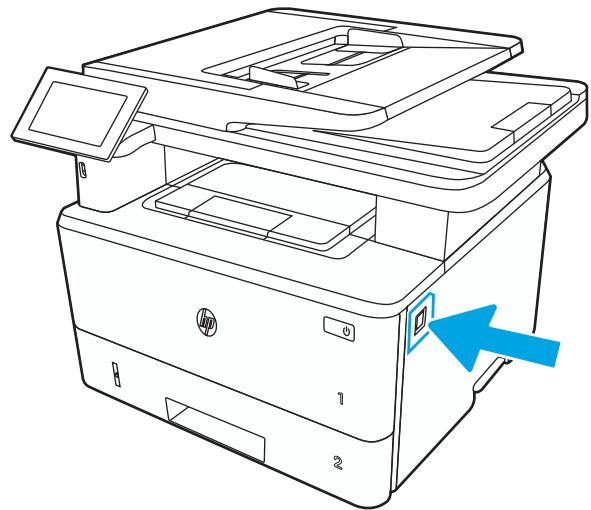
Learn about the base printer installation and maintenance.

### Remove and replace the cartridge

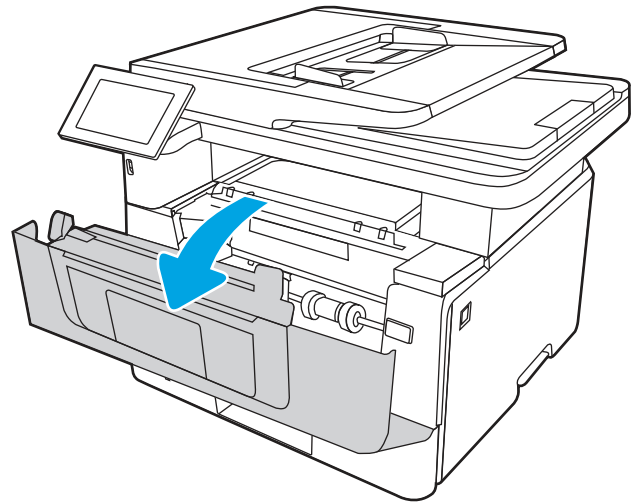
Follow these steps to replace the toner cartridge.

[View a video of how to replace the toner cartridge](#)

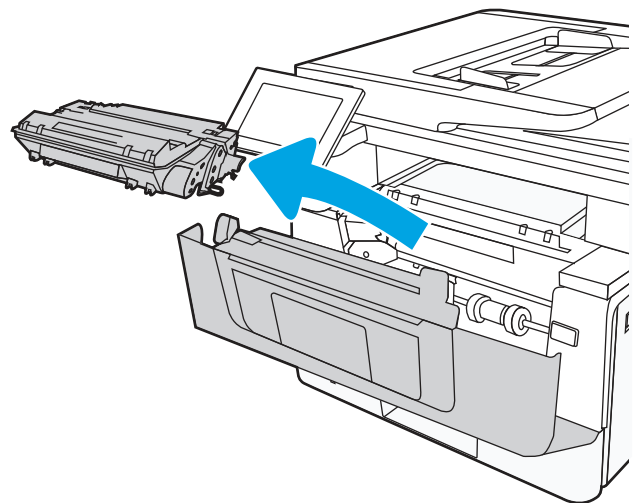
1. Press the front door release button.



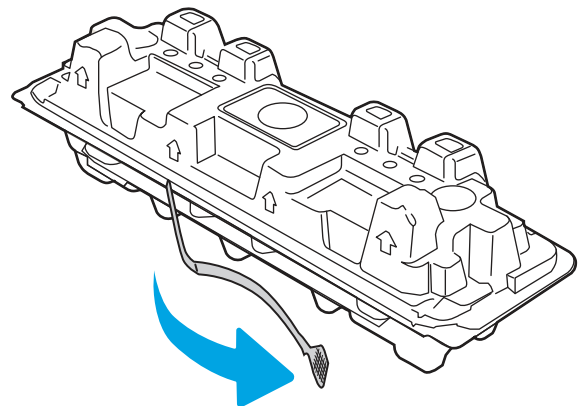
2. Open the front door.



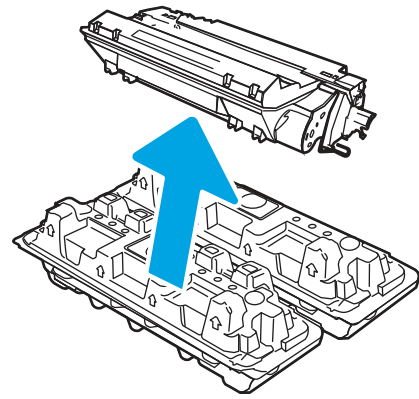
3. Remove the used toner cartridge from the printer.



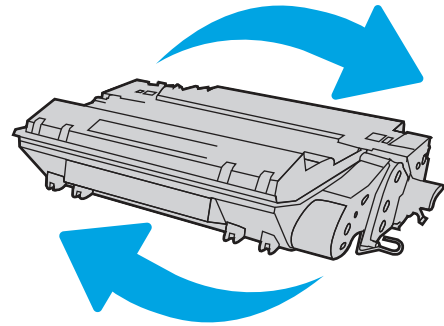
4. Remove the new toner cartridge package from the box, and then pull the release tab on the packaging.



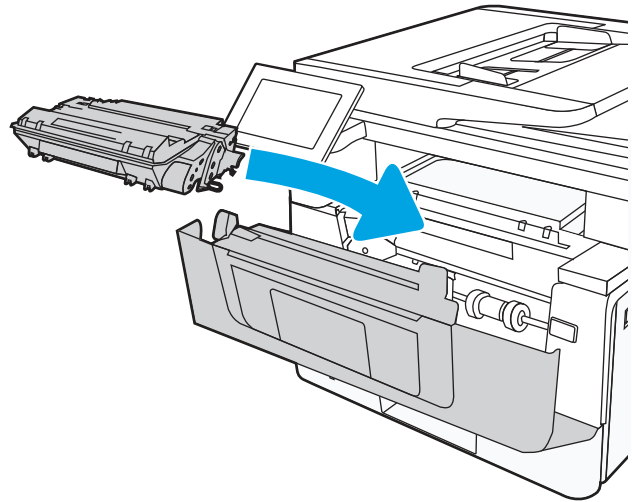
5. Remove the toner cartridge from the opened packaging shell. Place the used toner cartridge in the shell for recycling.



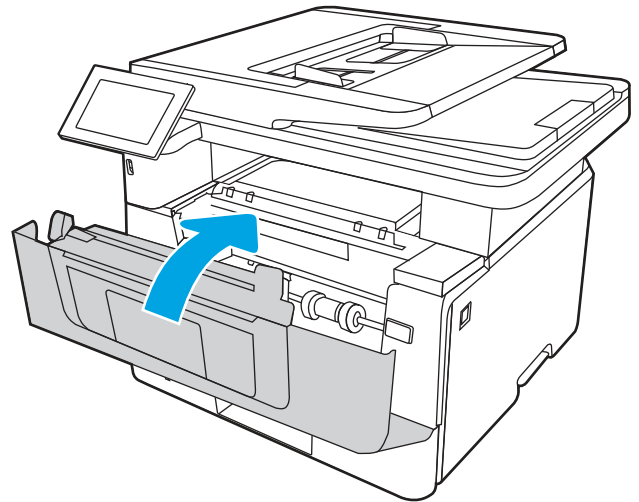
6. Holding the toner cartridge on both ends, gently rock the cartridge end to end to distribute the toner evenly inside the cartridge.



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



8. Close the front door.



## Print a cleaning page

Learn how to print a cleaning page.

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

1. From the [Home](#) screen on the printer control panel, use the arrow keys to navigate to [Support Tools](#), and then press the [OK](#) button.
2. Use the arrow buttons to scroll to [Maintenance](#), and then press the [OK](#) button.
3. Use the arrow buttons to scroll to [Calibration/Cleaning](#), and then press the [OK](#) button.
4. Use the arrow buttons to scroll to [Cleaning page](#), and then press the [OK](#) button.


---

 **TIP:** Use this screen to set up automatic cleaning page intervals if desired.

---

5. Use the arrow buttons to scroll to [Print](#) (at the bottom of the control-panel display), and then press the [OK](#) button to print the cleaning page.

---


 **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.

---

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

1. From the [Home](#) screen on the printer control panel, scroll to and touch the [Support Tools](#) button.
2. Open the following menus:
  - [Maintenance](#)
  - [Calibration/Cleaning](#)
3. Touch [Cleaning Page](#), and then touch the [Print](#) button to print the cleaning page.

---

 **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.

---

 **TIP:** Use this screen to set up automatic cleaning page intervals if desired.

---

## Automatic cleaning page

Learn how to set up automatic cleaning page intervals.

Enable and configure auto cleaning from a non-touchscreen control panel

1. From the **Home** screen on the printer control panel, use the arrow keys to navigate to **Support Tools**, and then press the **OK** button.
2. Use the arrow buttons to scroll to **Maintenance**, and then press the **OK** button.
3. Use the arrow buttons to scroll to **Calibration/Cleaning**, and then press the **OK** button.
4. Use the arrow buttons to scroll to **Cleaning page**, and then press the **OK** button.
5. Use the arrow buttons to scroll to the desired automatic cleaning page interval, and then press the **OK** button to print the cleaning page.
6. Use the arrow buttons to scroll to **Done** (at the bottom of the control-panel display), and then press the **OK** button.

Enable and configure auto cleaning from an touchscreen control panel

1. From the **Home** screen on the printer control panel, scroll to and touch the **Support Tools** button.
2. Open the following menus:
  - **Maintenance**
  - **Calibration/Cleaning**
  - **Cleaning Page**
3. Touch the desired automatic cleaning page interval, and then touch the **Done** button.

## 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 2-1** 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.

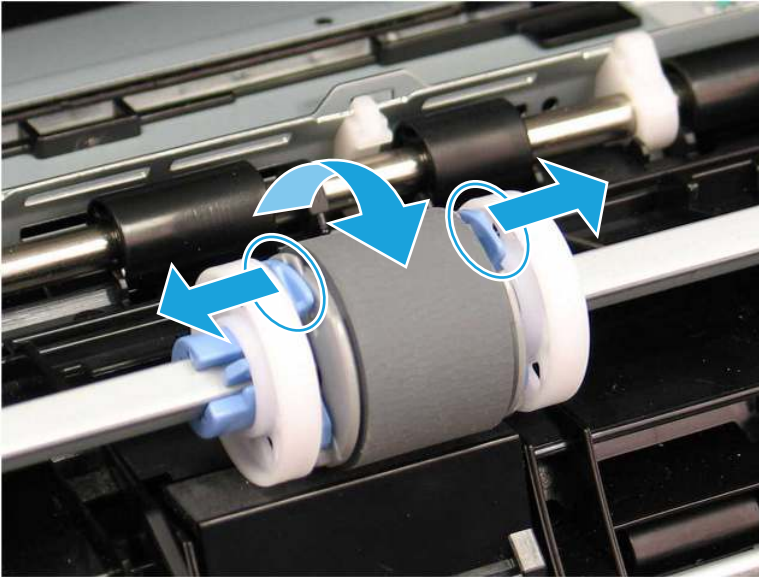
1. Press the door-release button, and then open the toner-cartridge door

**Figure 2-1** Open the toner-cartridge door



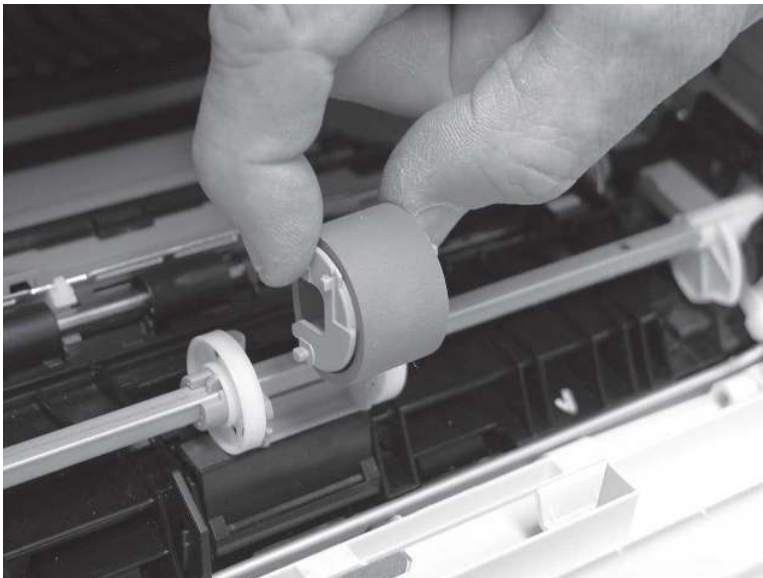
2. Release two tabs between the roller collar and roller, and then rotate the top of the roller out and away from the printer.

**Figure 2-2** Release the roller



3. Remove the roller.

**Figure 2-3** 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).

---

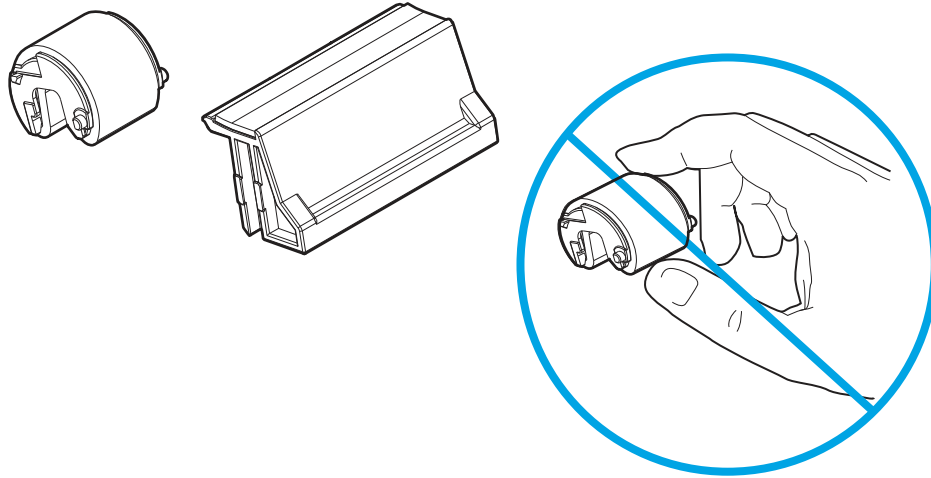
- ▲ Use a damp, lint-free cloth to gently clean the rollers.

---

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

---

**Figure 2-4** Clean the roller and pad



## Install the roller

Follow these steps to install the roller.

---

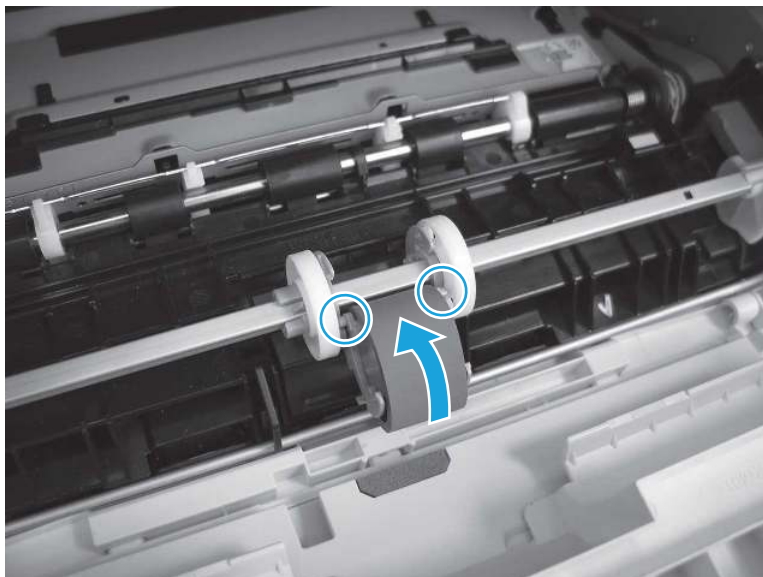
⚠ **CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper handling problems. HP recommends washing your hands before handling the assembly.

---

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

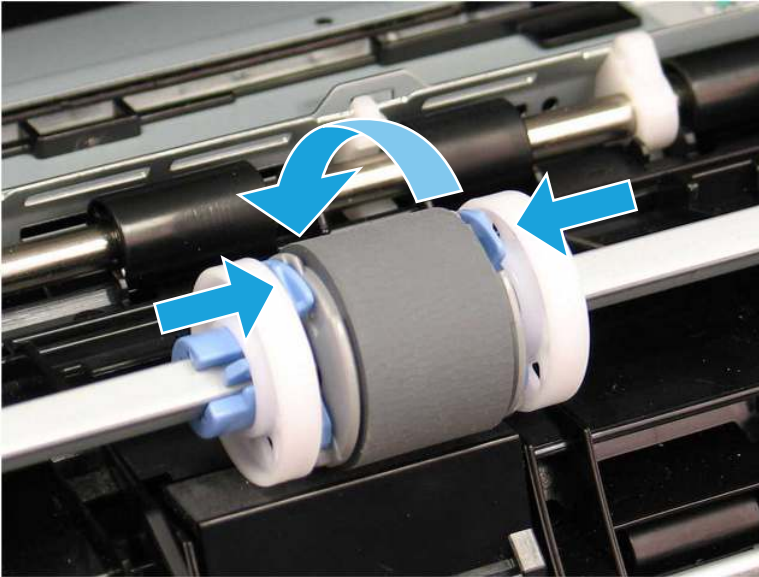
1. Position the pickup roller with the pins in the provided slots on the holder, and then rotate the top of the roller up and toward the printer.

**Figure 2-5** 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 2-6** Engage two tabs



3. Close the toner-cartridge door

**Figure 2-7** 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.

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 2-2** 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.

## Remove Tray 2

Follow these steps to remove Tray 2.

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


**Figure 2-8** 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.

---

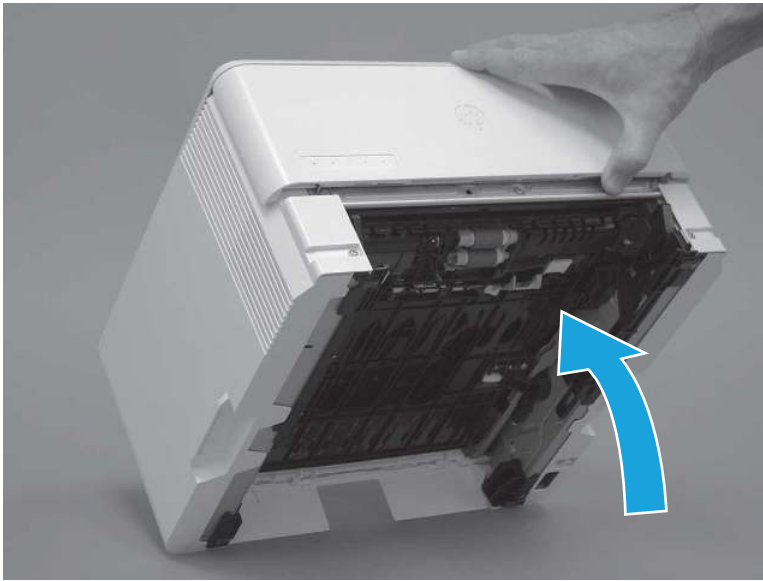
1. Carefully rotate the printer backward.

---

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

---

**Figure 2-9** 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.

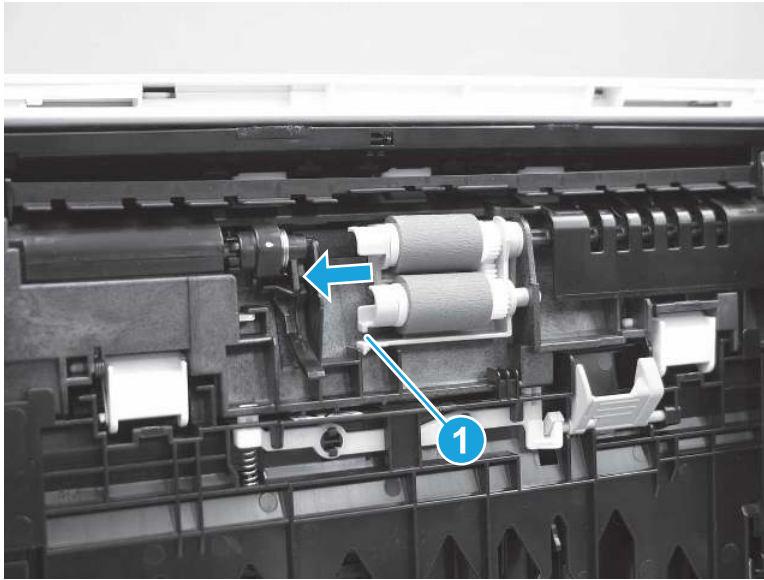
---

**Figure 2-10** Place the printer bottom-side face forward



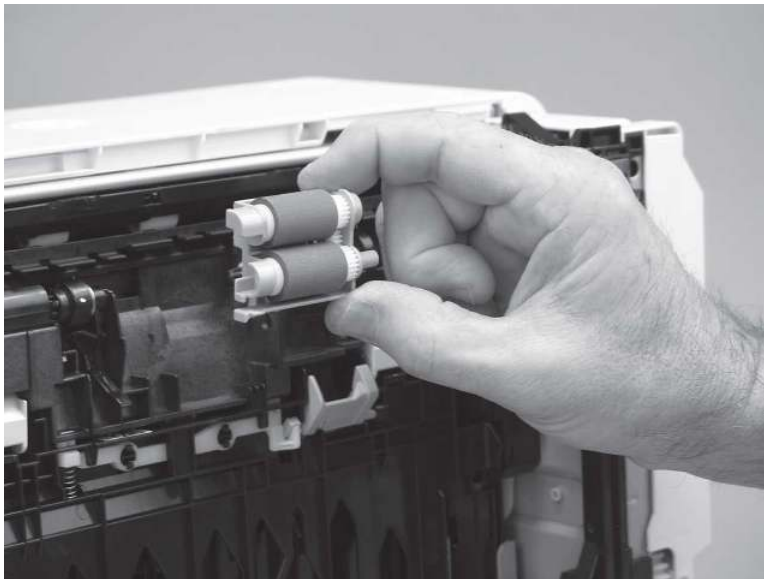
3. Release one tab (callout 1), and then slide the roller holder toward the left side of the printer to release it.

**Figure 2-11** Release one tab



4. Remove the roller assembly.

**Figure 2-12** 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.

---

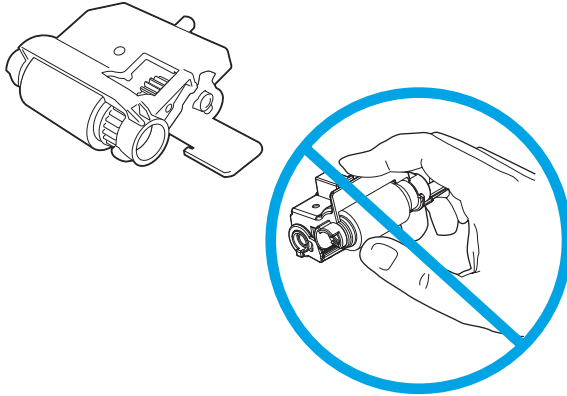
- ▲ Use a damp, lint-free cloth to gently clean the rollers.

---

⚠ **CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper handling problems. HP recommends washing your hands before handling the assembly.

---

**Figure 2-13** Clean the rollers



## Install the pickup roller assembly (Tray 2)

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

---

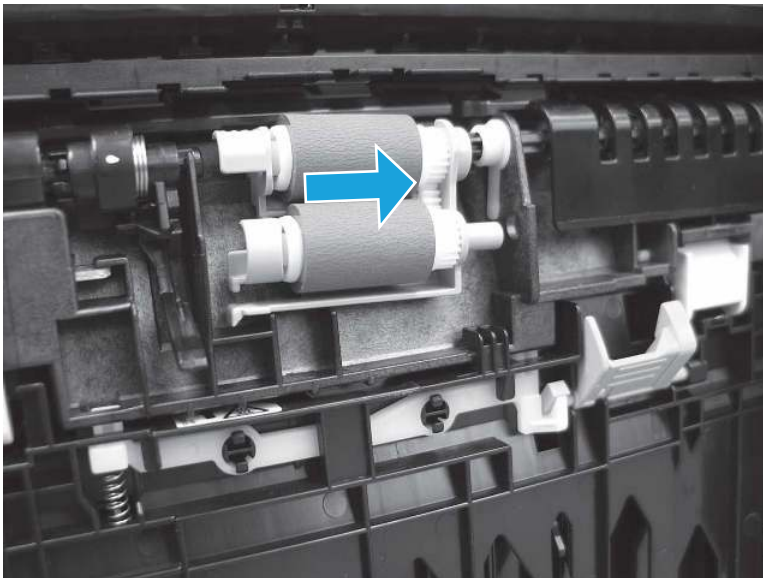
⚠ **CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper handling problems. HP recommends washing your hands before handling the assembly.

📄 **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 2-14** Install the roller holder



2. Make sure that the tab snaps into place.

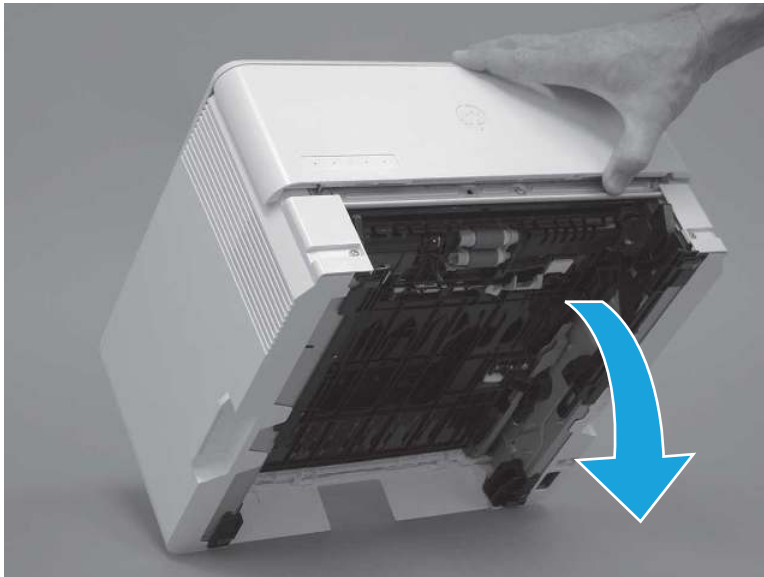


Figure 2-15 Check the tab



3. Carefully rotate the printer forward.

Figure 2-16 Rotate the printer forward



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

**Figure 2-17** 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 2-18** Install the tray



## Input devices

Learn about input device installation and maintenance.

## 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 2-3** 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

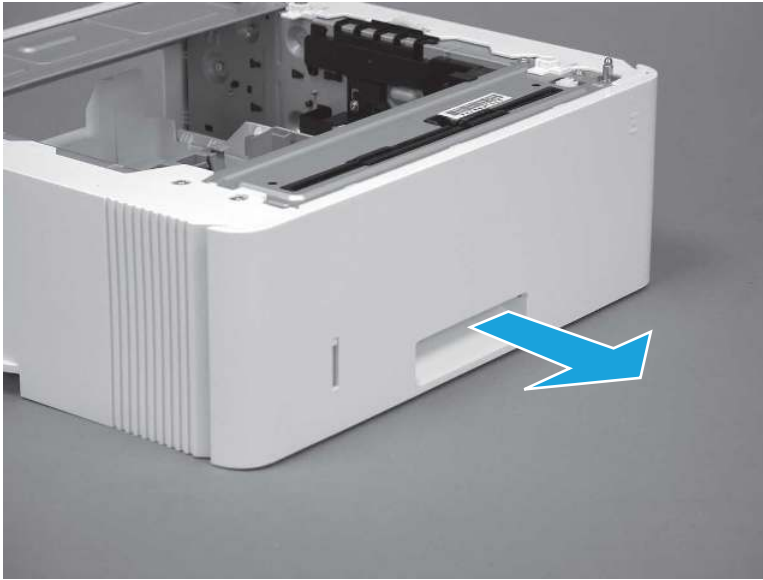
Print any pages necessary to make sure the printer is functioning correctly.

## Remove optional Tray 3

Follow these steps to remove optional Tray 3.

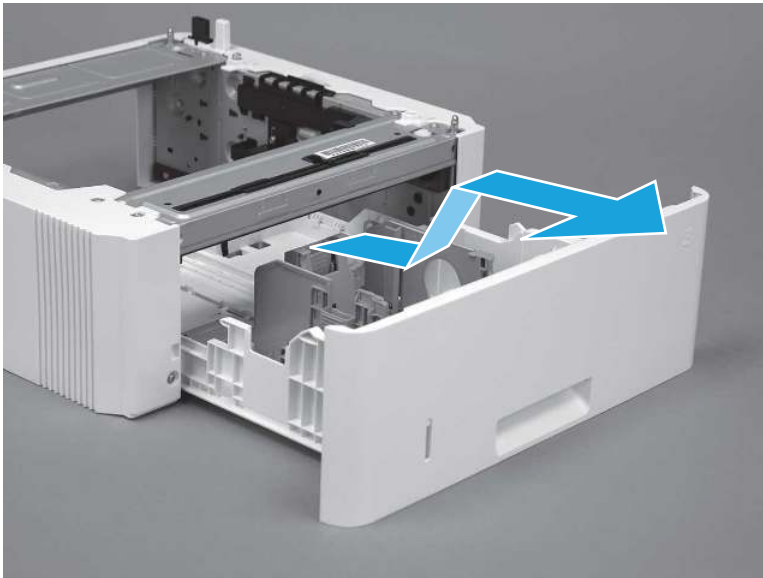
1. Pull the tray straight out of the printer until it stops.

**Figure 2-19** 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 2-20** 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).

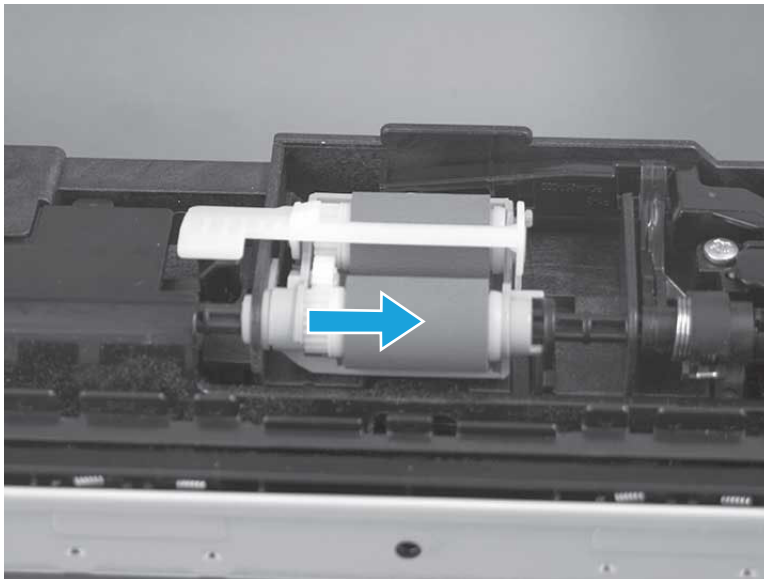
1. Carefully turn the accessory over to expose the roller assembly.

**Figure 2-21** Turn the accessory over



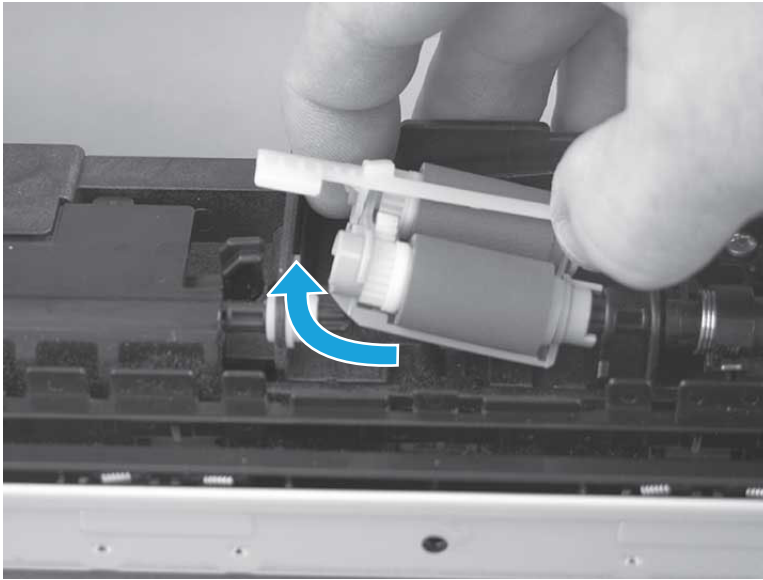
2. Slide the roller holder to the right to compress the spring-loaded shaft and release the assembly.

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



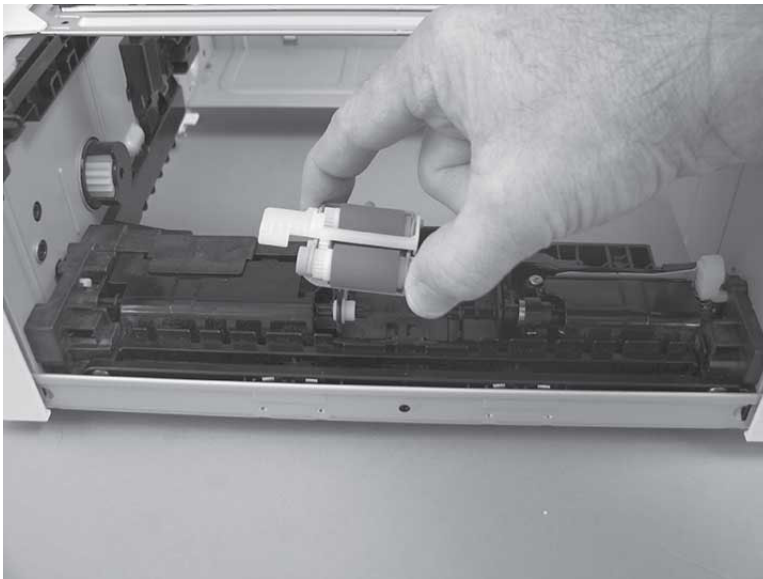
3. Rotate the end of the assembly up and away from the accessory.

**Figure 2-23** Rotate the assembly up



4. Remove the roller assembly.


**Figure 2-24** 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.

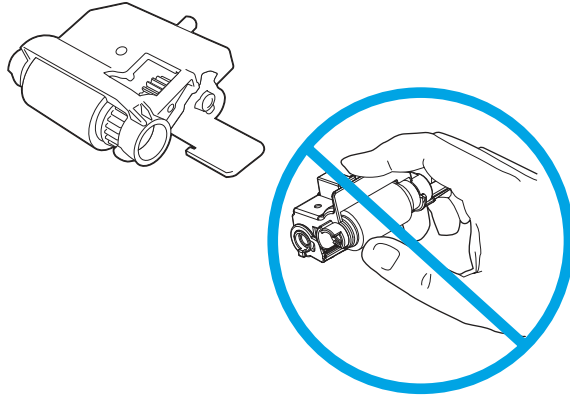
- ▲ Use a damp, lint-free cloth to gently clean the rollers.

---

⚠ **CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper handling problems. HP recommends washing your hands before handling the assembly.

---

**Figure 2-25** 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 problems. HP recommends washing your hands before handling the assembly.

---

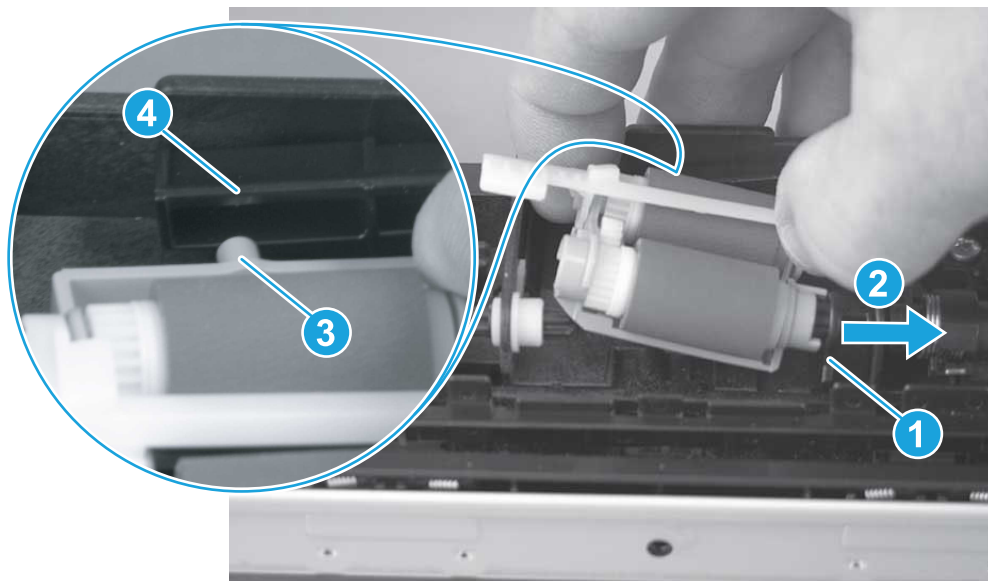
1. Install the right end of the assembly on the spring-loaded shaft (callout 1), and then slide it to the right to compress the shaft (callout 2).

---

📌 **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.

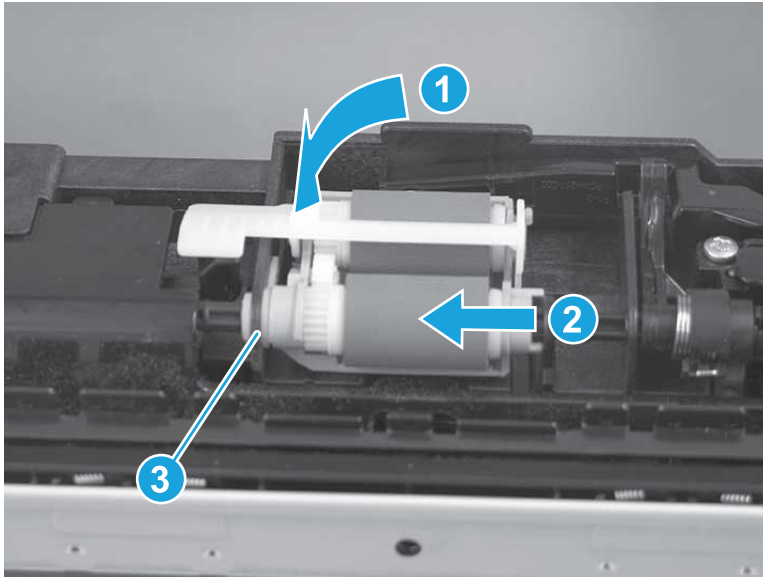
---

**Figure 2-26** 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).

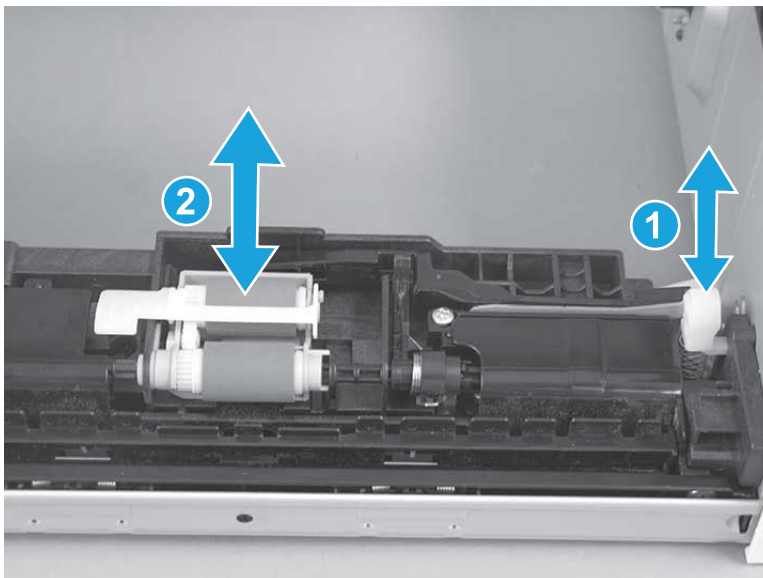
Figure 2-27 Engage the assembly



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 2-28 Check the installation



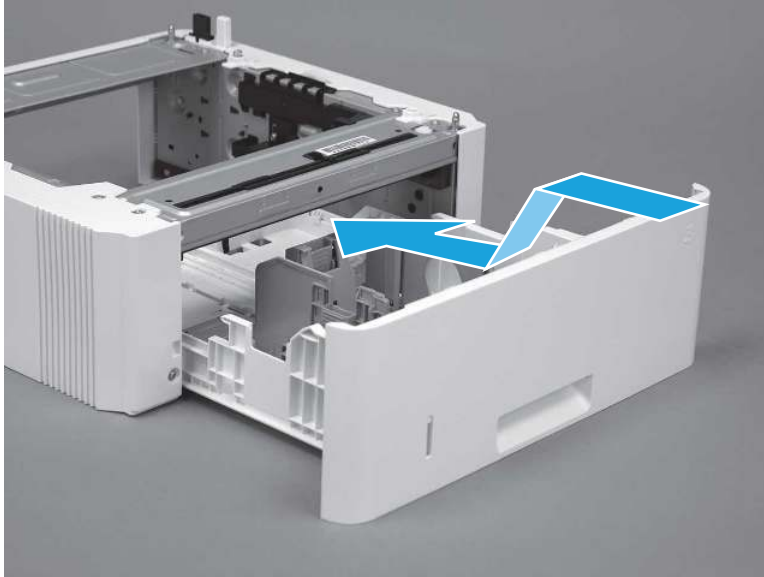
### Install optional Tray 3

Follow these steps to install optional Tray 3.



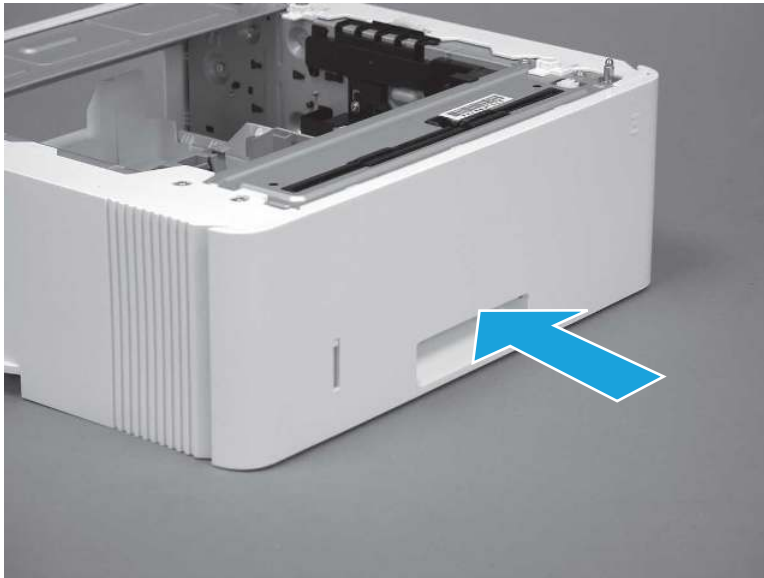
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 2-29** Install the tray



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

**Figure 2-30** 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.

---

### 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.

---

 **NOTE:** Duplex scanning is model specific. Some printer models might not support duplex scanning and printing.

---

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.

## 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).

## Base printer

Learn about the base printer components.

### Basic operation

Learn about the basic operation of the printer.

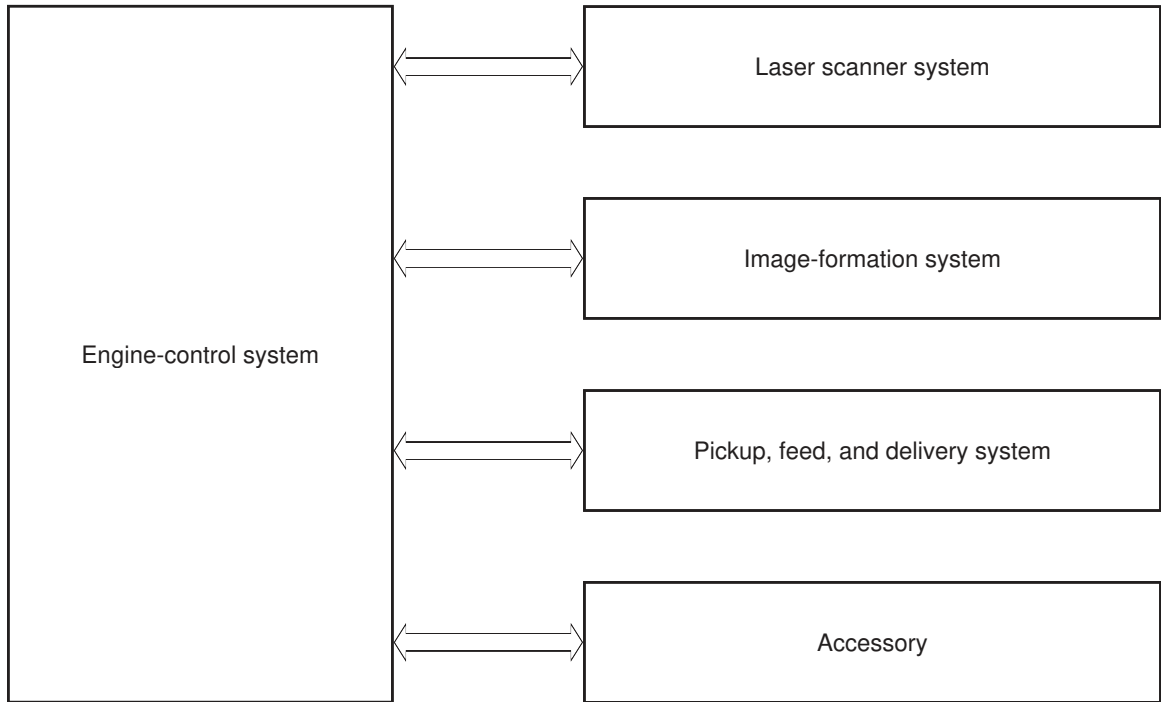
The printer routes all high-level processes through the formatter, which stores font information, processes the print image, and communicates with the host computer.

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>

**Table 3-1** Sequence of operation (continued)

Period	Duration	Description
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. The formatter stores important data specific to the model of printer it is installed in and is not designed to be swapped or repurposed in any way. Return a used formatter to HP.

Issues that can occur from swapping a formatter include:

- Serial number, product number, product name, page count, and supported cartridges information change and might make a product unusable
- 33.02.01 Used board/Disk installed errors

If a used formatter is installed and causes this issue, the **partner** must cover the costs of the repair in the form of a product replacement. **There is no method in the field to recover a printer where a used formatter is installed.**

The formatter performs the following functions:

- Controls 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 and the network or bi-directional interface

- Develops and coordinates data placement and timing with the DC controller PCA
- Stores customer configuration settings and paper types.
- Stores font information
- Communicates with the host computer through the network or the bidirectional interface

## 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.

## 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.

## 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. The firmware can be stored on a hard disk drive, a solid-state drive, or an embedded multimedia card (eMMC). A remote 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: 1.0 GB
- MFP: 1.5 GB

## 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.



---

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

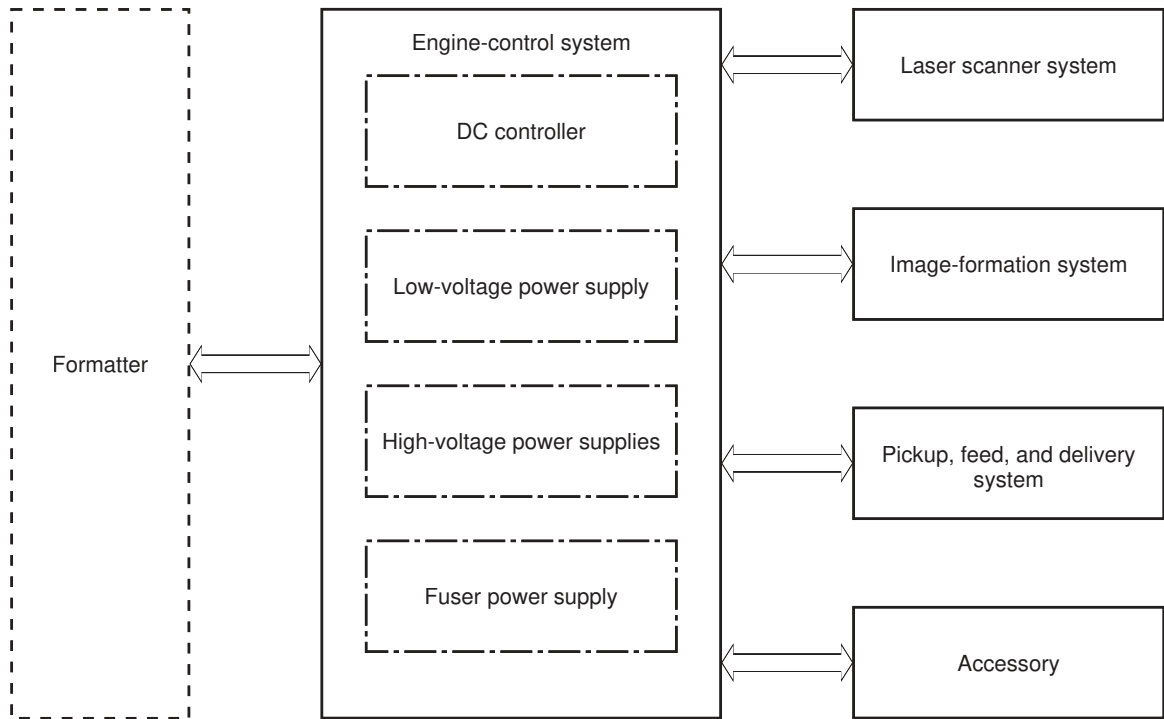
---

## 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.

Figure 3-2 Engine-control system



## DC controller

Learn about the DC controller.

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

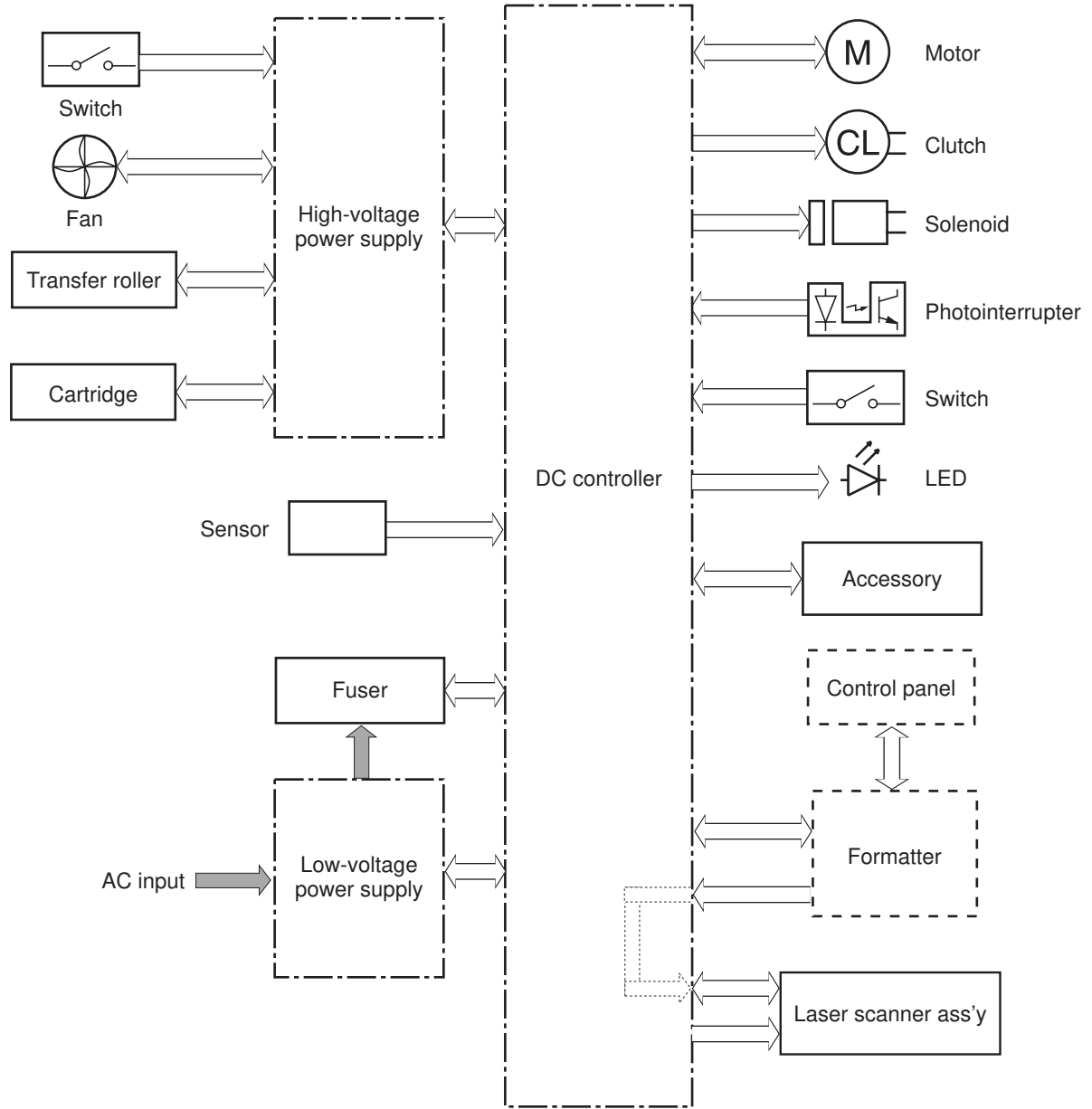


Table 3-2 Printer electrical components

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)
Switch	SW1	Power switch

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

Component type	Abbreviation	Component name
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

## Motors

Learn about the printer motors.

The printer has two motors. The motors drive the components in the paper-feed and image-formation systems.

The DC controller monitors the fuser motor and the scanner motor to determine if a motor has failed. It notifies the formatter when it encounters the following conditions:

- Start up failure: the motor does not reach a specified speed within a specified time from when the motor starts.
- Rotational failure: the rotational speed of the motor is not in the specified range for a specified time after the motor reaches a specified speed.

**Table 3-3 Motors**

Abbreviation	Name	Purpose	Failure detection
M1	Fuser motor	Drives the pressure roller and delivery roller; the pressurization and release of the pressure roller; and the engagement and disengagement of the primary and secondary transfer rollers	Yes
M3	Scanner motor	Drives the scanner mirror	Yes

## Fans

Learn about the printer fans.

The printer has one fan for preventing the temperature from rising in the printer and for cooling the printed pages.

The DC controller determines if there is a fan failure and notifies the formatter if the fan locks for a specified time from when the fan starts.

**Table 3-4 Fans**

Abbreviation	Name	Cooling area	Type	Speed
FM1	Main fan	Inside of printer	Intake	Full

## Solenoids

Learn about the printer solenoids.

The printer has three solenoids.

**Table 3-5 Solenoids**

Abbreviation	Component name
SL1	Cassette pickup solenoid
SL2	Tray 1 (MP) tray pickup solenoid
SL3	Duplex switchback solenoid (duplex models only)

## Clutches

Learn about the printer clutches.

The printer has two clutches.

**Table 3-6 Clutches**

Abbreviation	Component name
CL1	Duplex re-pickup clutch (duplex models only)
CL2	Feed clutch

## Switches

Learn about the printer switches.

The printer has two switches.

**Table 3-7 Switches**

Abbreviation	Component name
SW1	Power switch
SW101	Cartridge (front) door switch

## Sensors

Learn about the printer sensors.

The printer has one sensor.

Table 3-8 Sensors

Abbreviation	Component name
TH1	Environment sensor

## 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

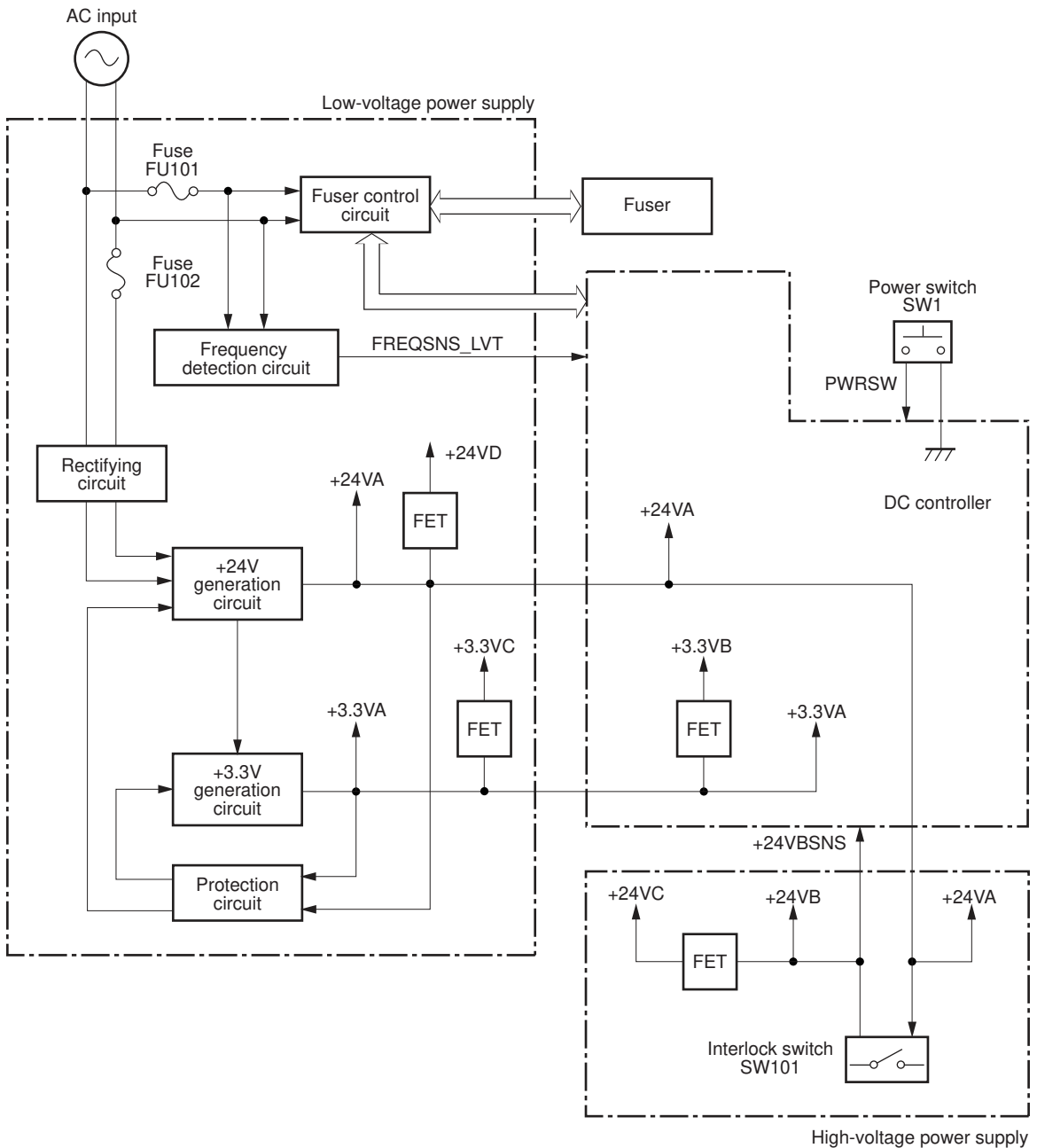


Table 3-9 LVPS voltages

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.
+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 3-10** Low-voltage power supply functions

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

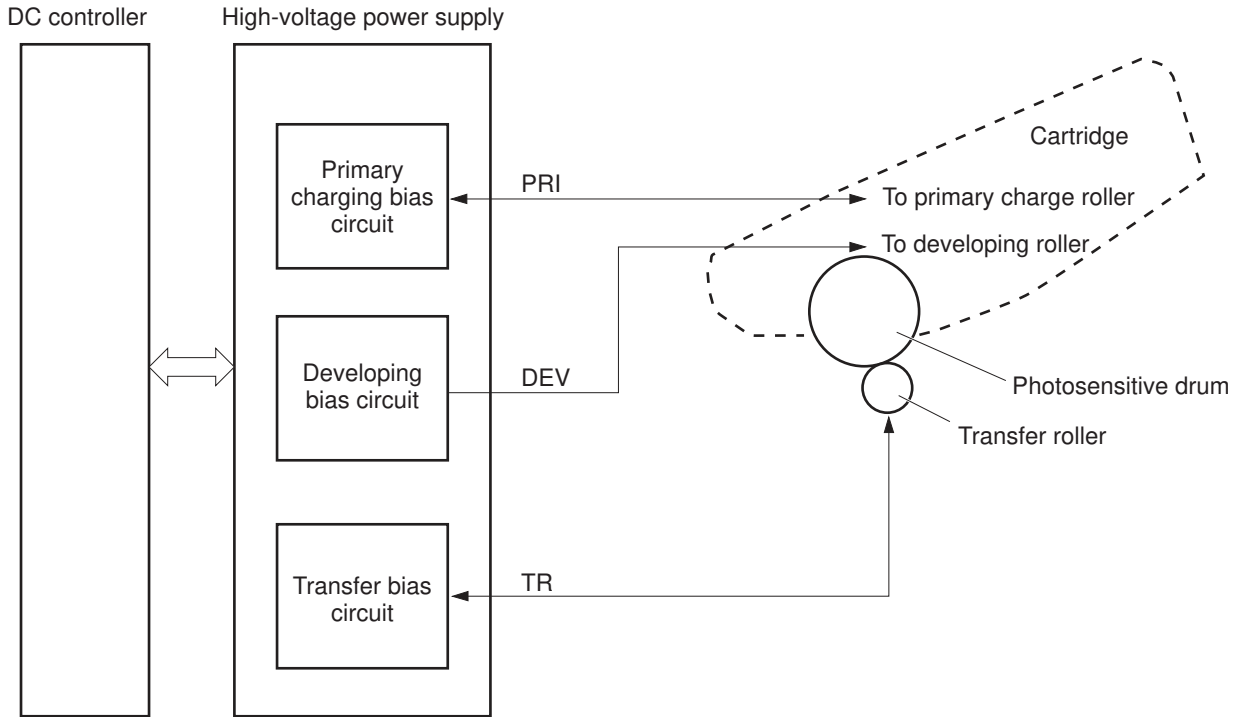


Table 3-11 High-voltage power supply circuits

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.
Automatic power OFF	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

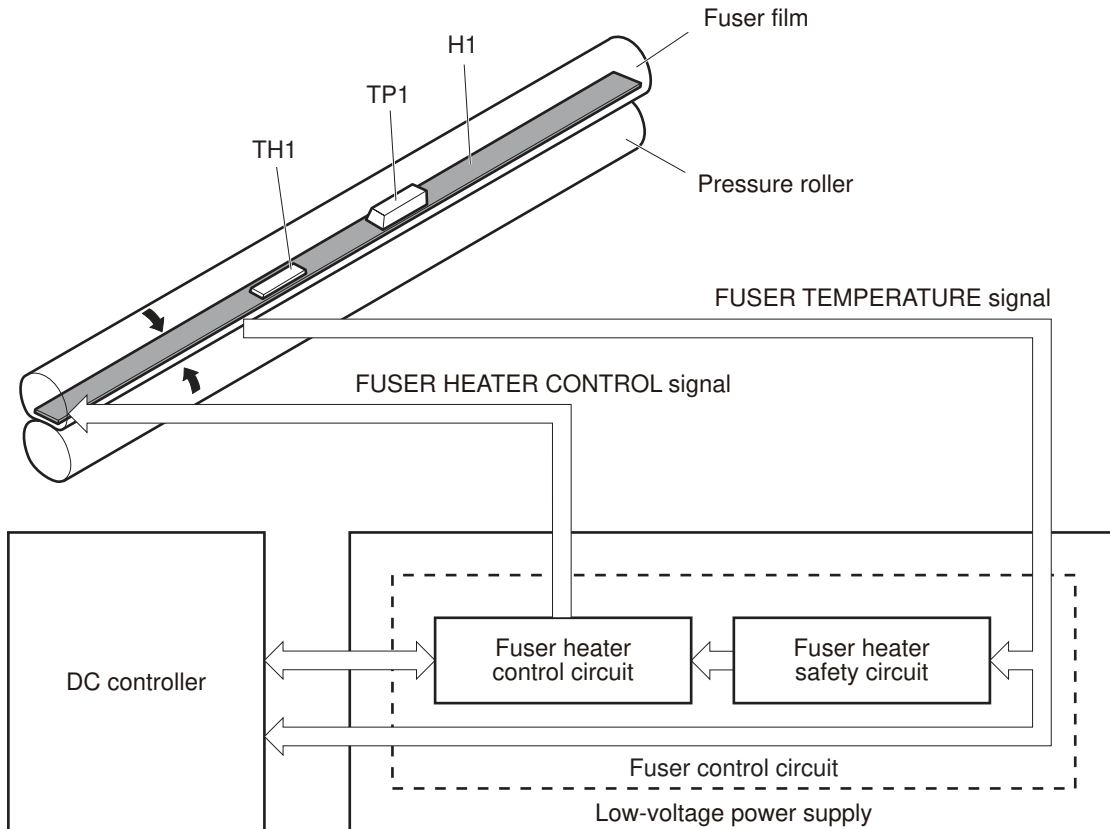


Table 3-12 Fuser components

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

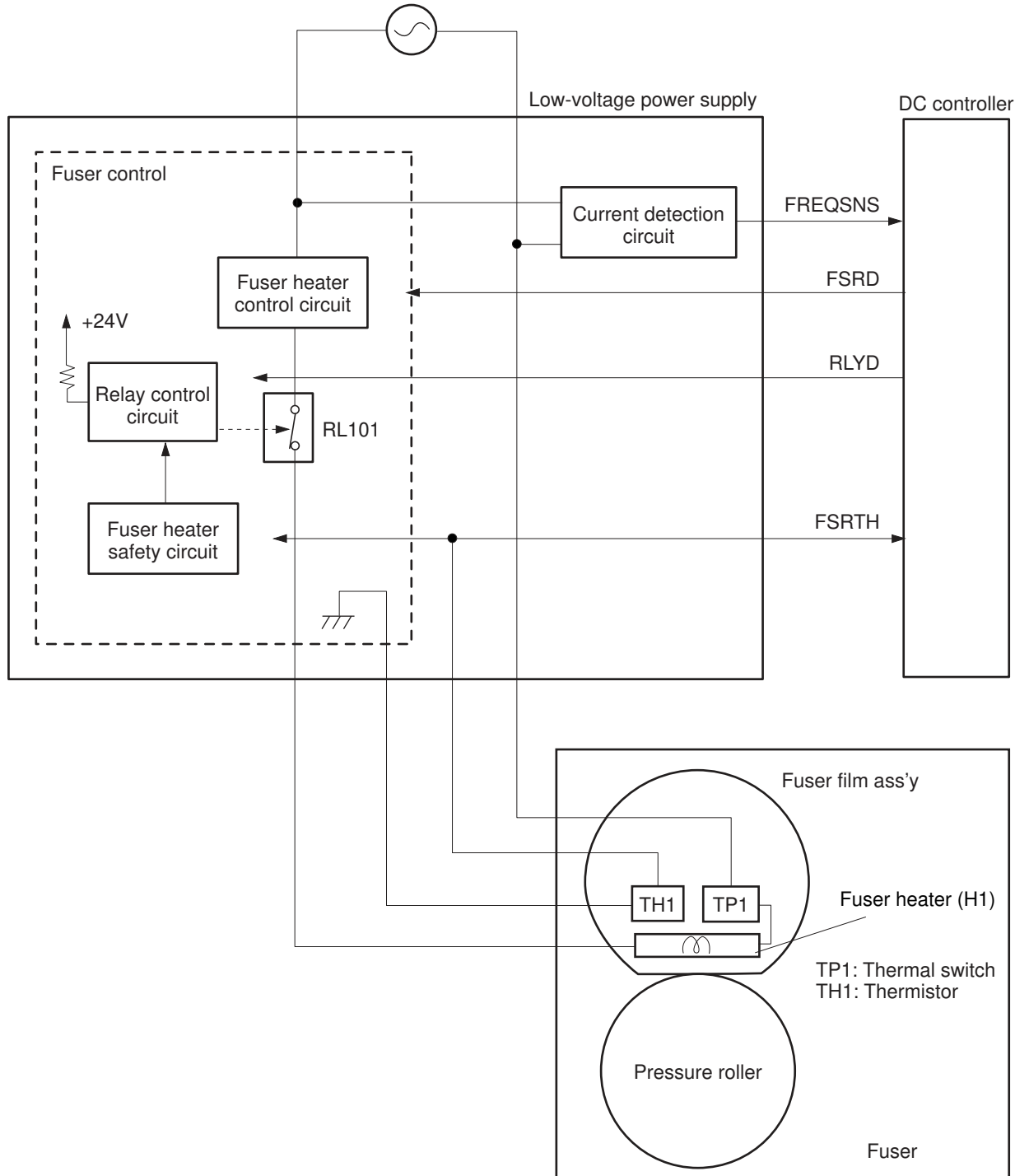


Table 3-13 Fuser control functions

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

**Table 3-13 Fuser control functions (continued)**

Failure detection function	Applied
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.

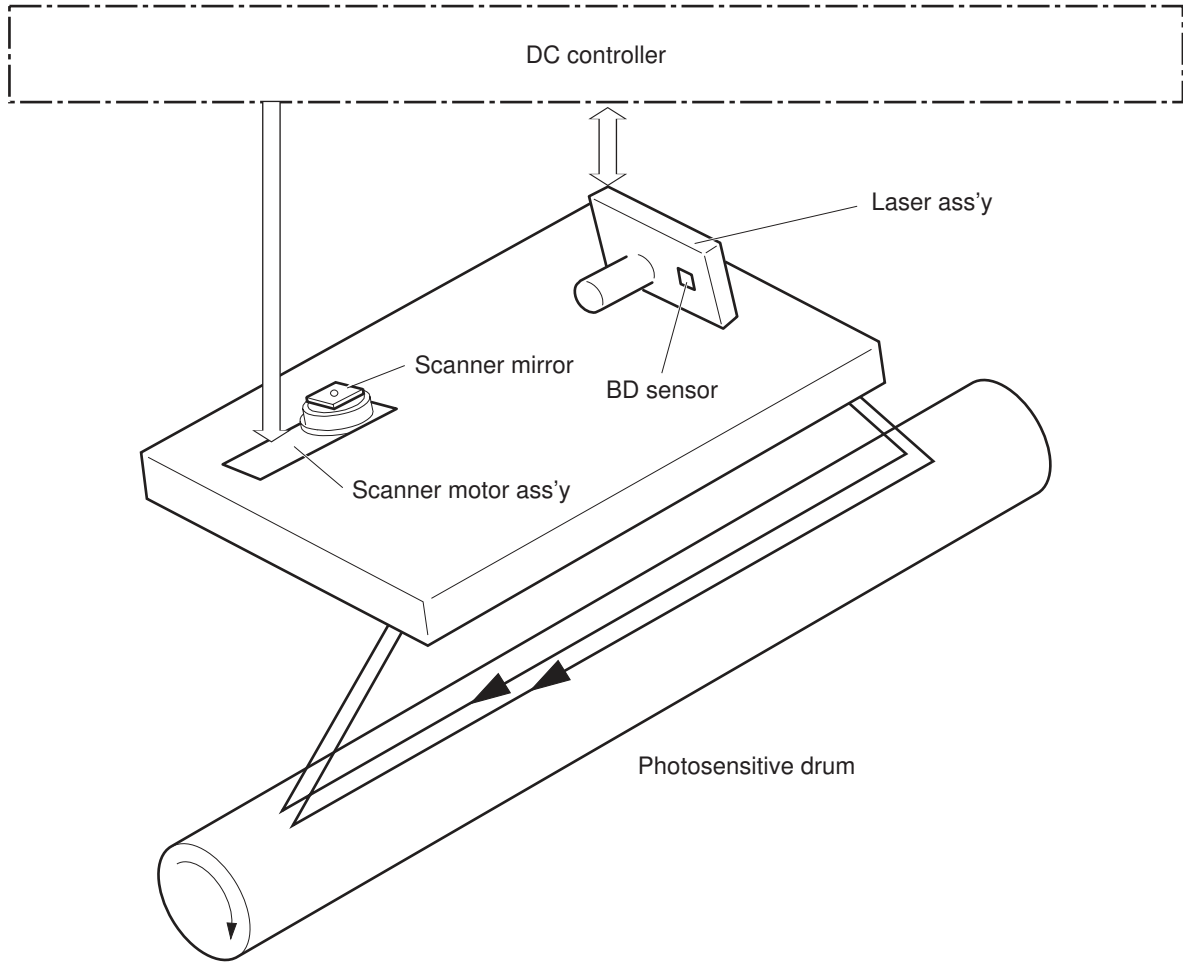
The laser/scanner system forms the latent electrostatic image on the photosensitive drum(s) inside the toner cartridge(s).

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 3-14 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

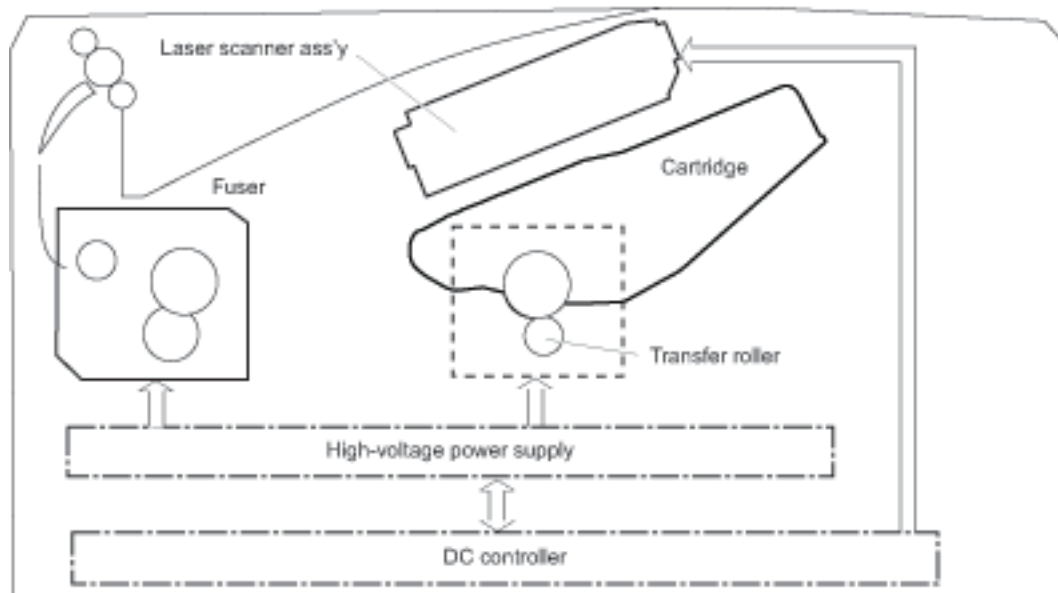
Learn about the image-formation process.

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

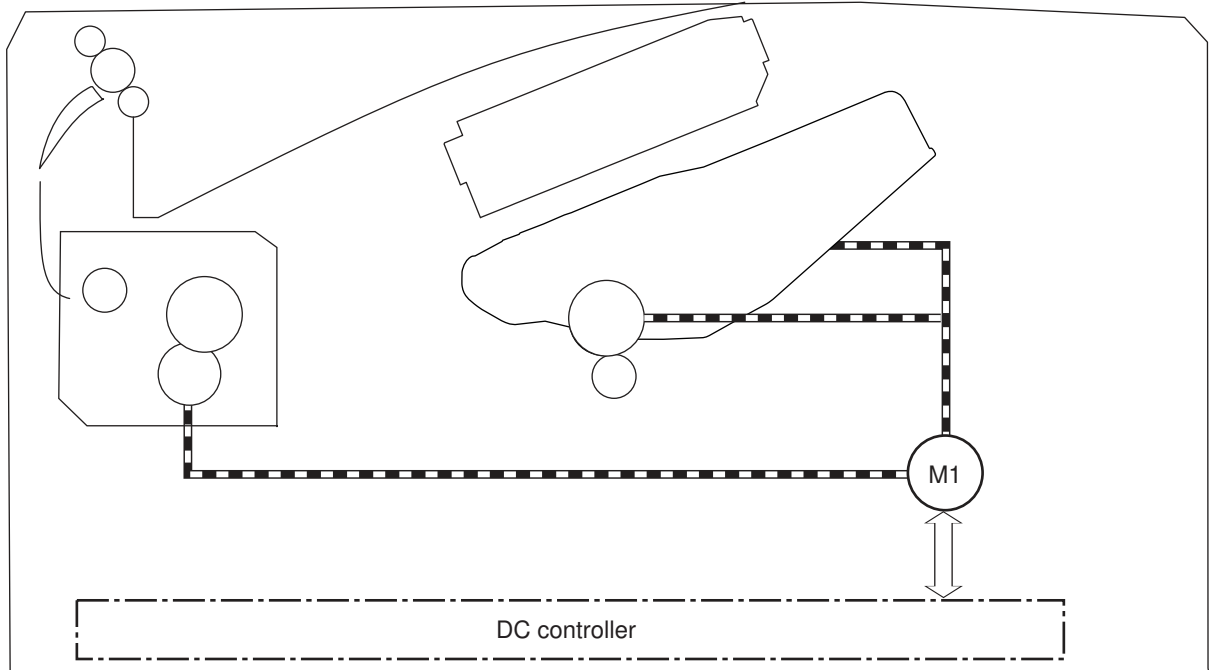


The fuser motor (M1) drives the following image formation components:

- 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

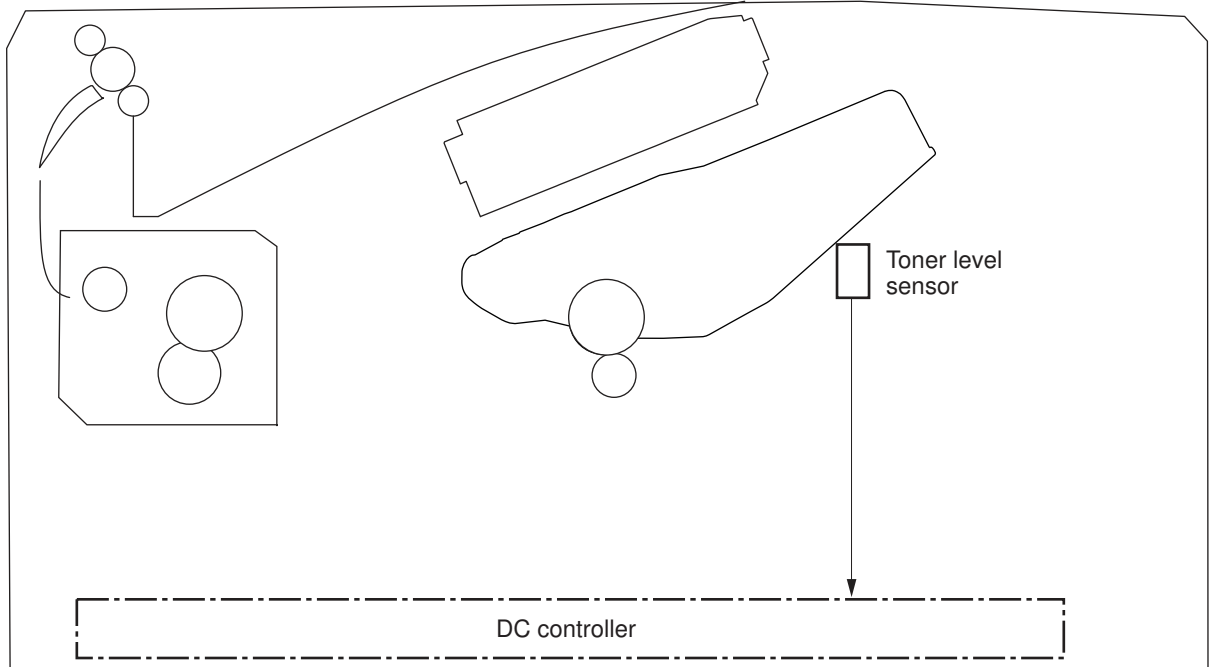


Abbreviation	Component
M1	Fuser motor

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

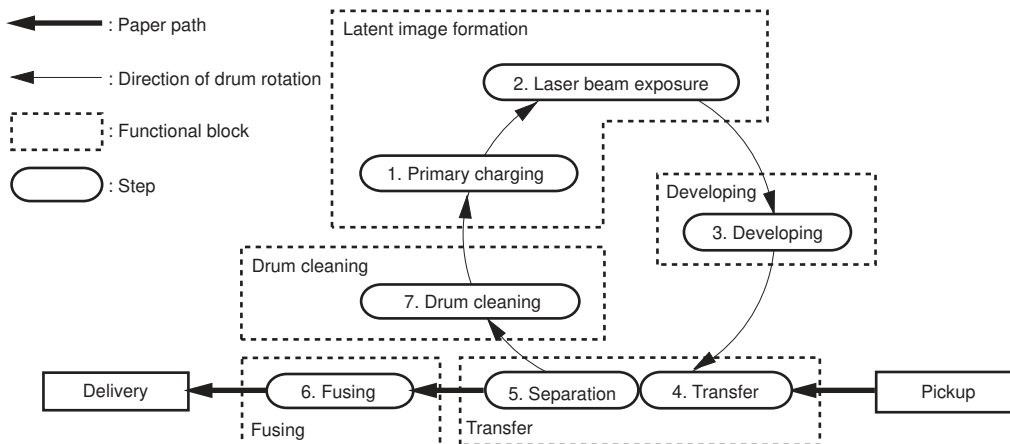


Table 3-15 Image formation process

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.
Development	3. Development	Toner adheres to the electrostatic latent image on the photosensitive drum.

**Table 3-15** Image formation process (continued)

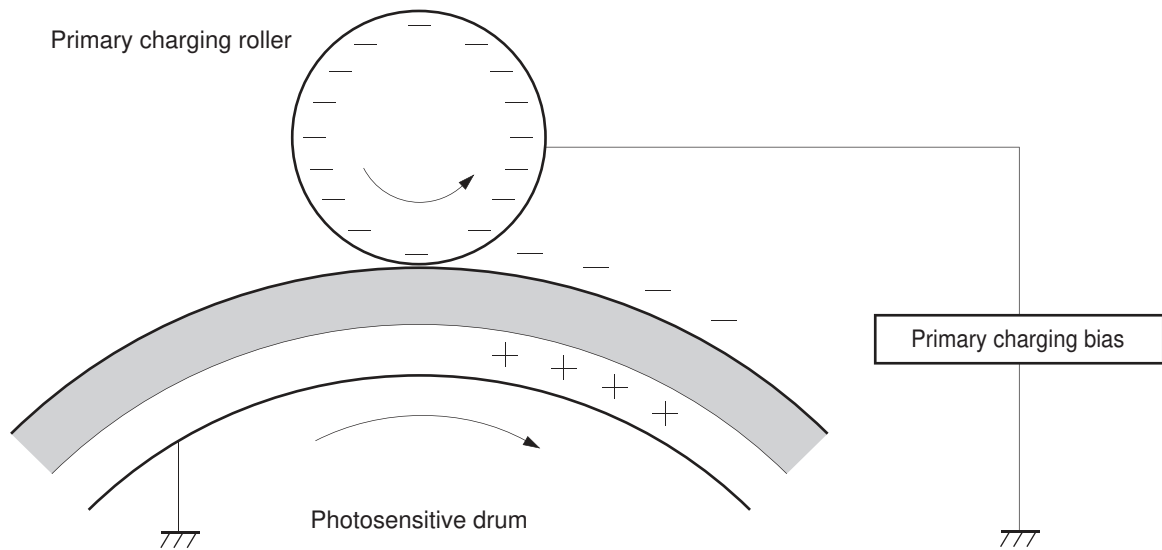
Functional block	Step	Description
Transfer	4. Transfer	The toner image transfers to the paper.
Transfer	5. Separation	The toner image transfers to the paper.
Fusing	6. Fusing	The toner fuses to the paper to make a permanent image.
Drum cleaning	7. Drum cleaning	Residual toner is removed from the drum.

### 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

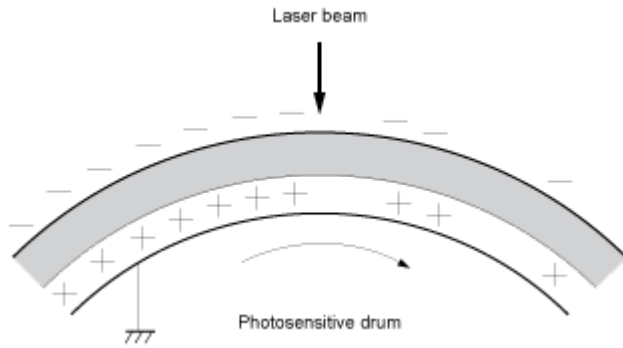


### Step 2: Laser-beam exposure

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

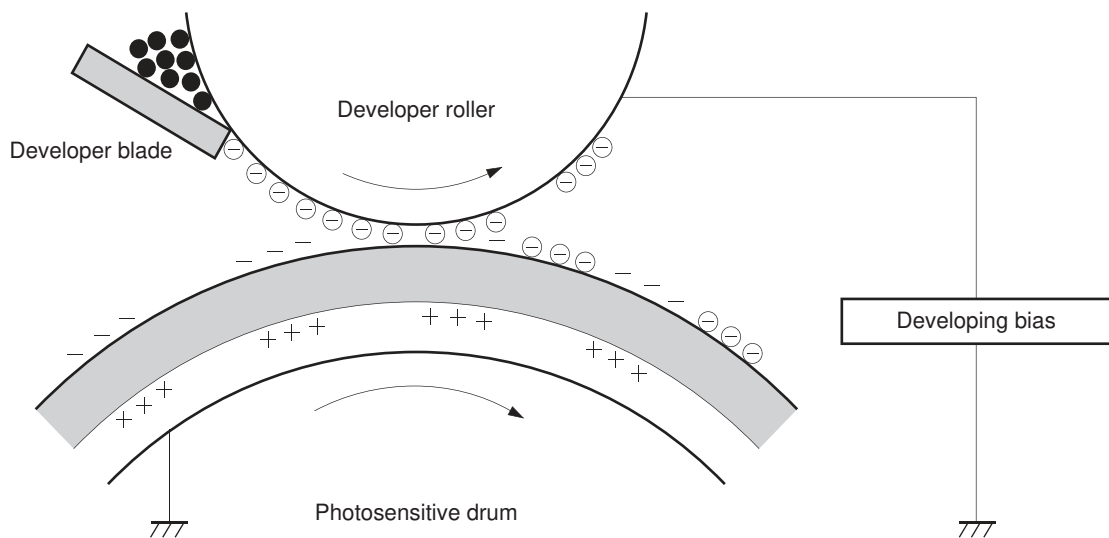


### Step 3: Development

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

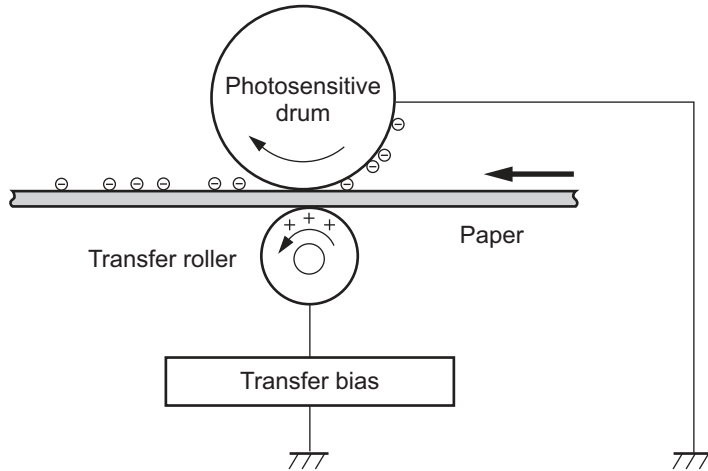


### Step 4: Transfer

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

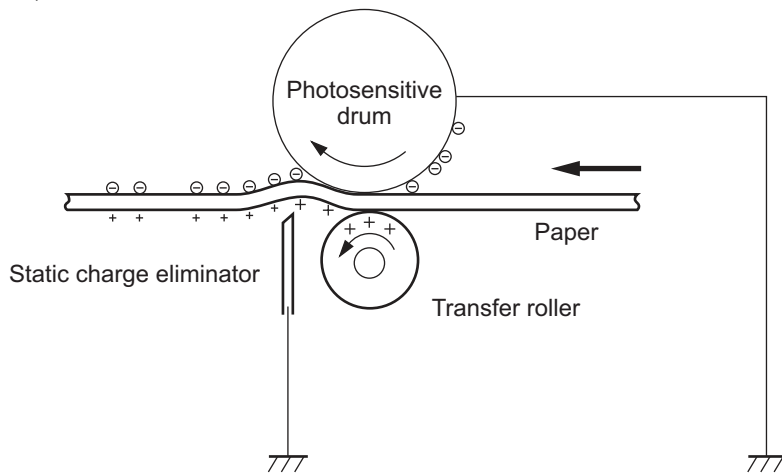


### Step 5: Separation

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

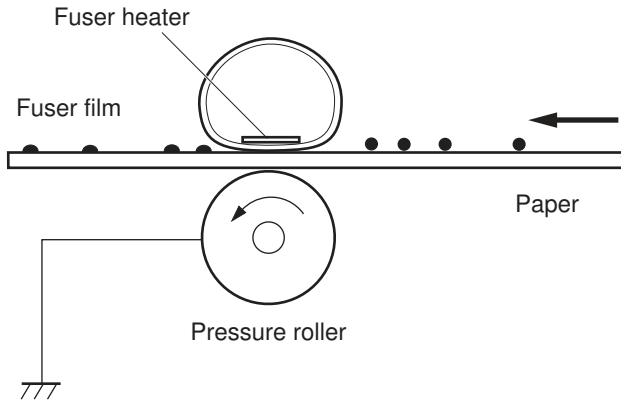


### Step 6: Fusing

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

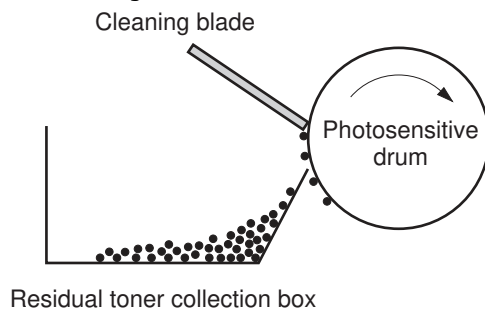


### Step 7: Drum cleaning

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

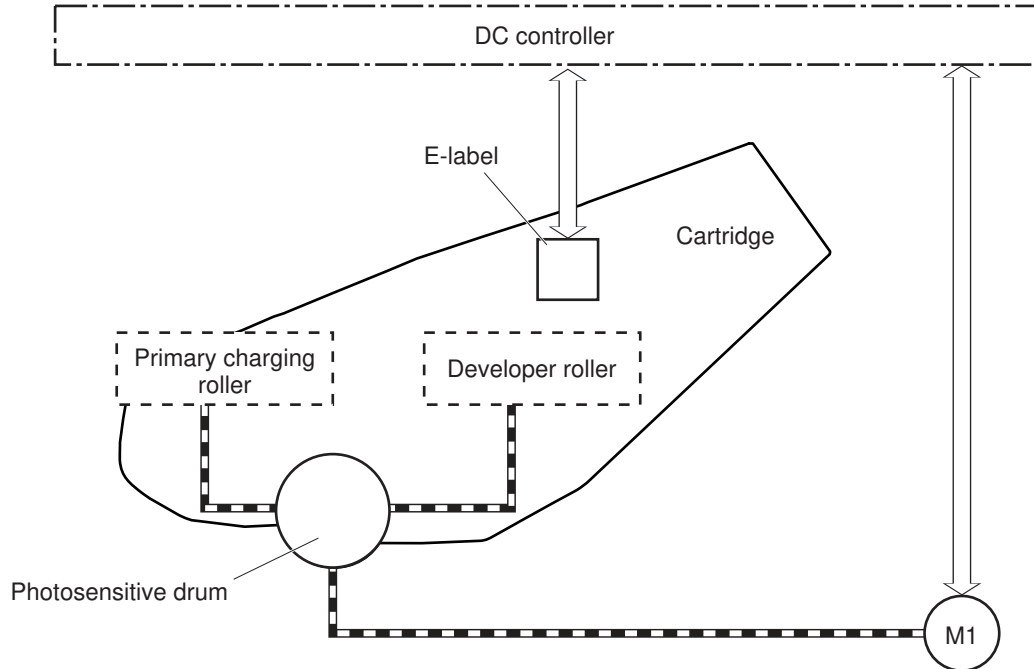
Learn about toner cartridge design features.

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 3-16** 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 cartridge seal

Learn about the toner cartridge seal.

The toner cartridge seal is opened automatically when the toner cartridge is installed into the printer.

### 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.

---

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).

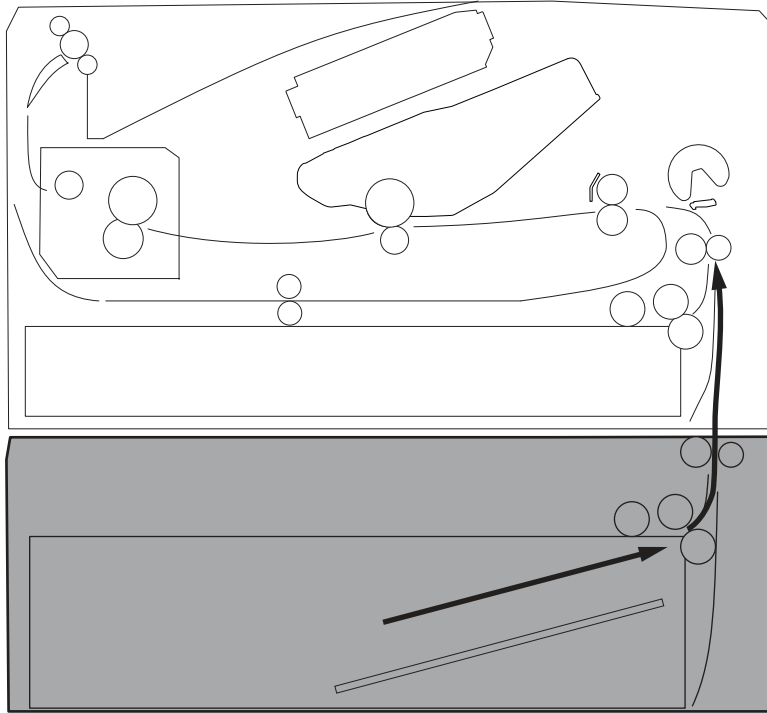
The 550-sheet paper feeder is optionally installed at bottom of the printer. It picks up the print media and feeds it to the printer. The paper DC controller controls the operational sequence of the paper feeder.

### 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

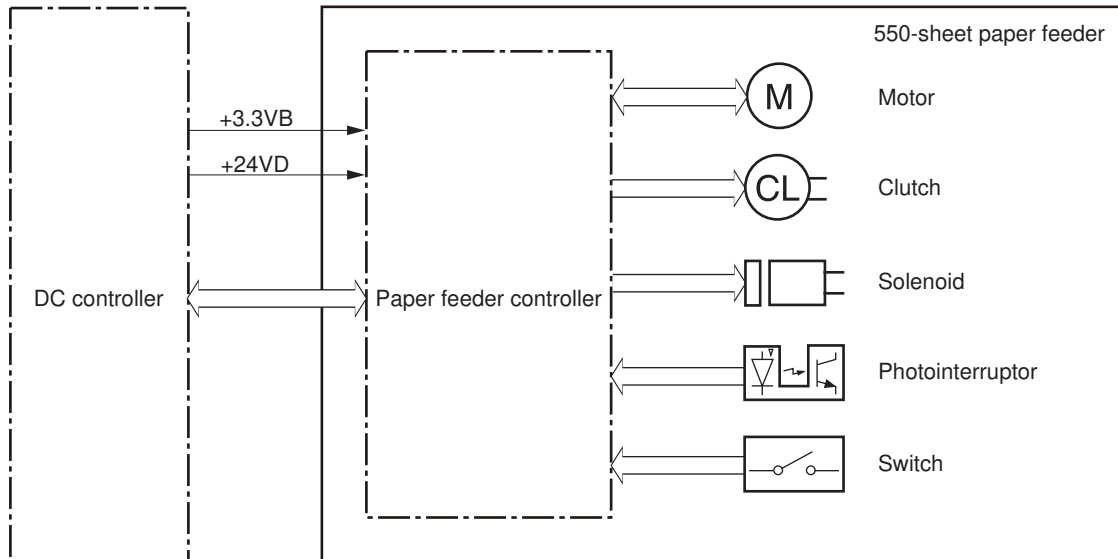


Table 3-17 Electrical component list, paper feeder

Component type	Abbreviation	Component name
Motor	M5	Lifter motor



**Table 3-17** Electrical component list, paper feeder (continued)

Component type	Abbreviation	Component name
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 3-18** Motor, paper feeder (Tray 3)

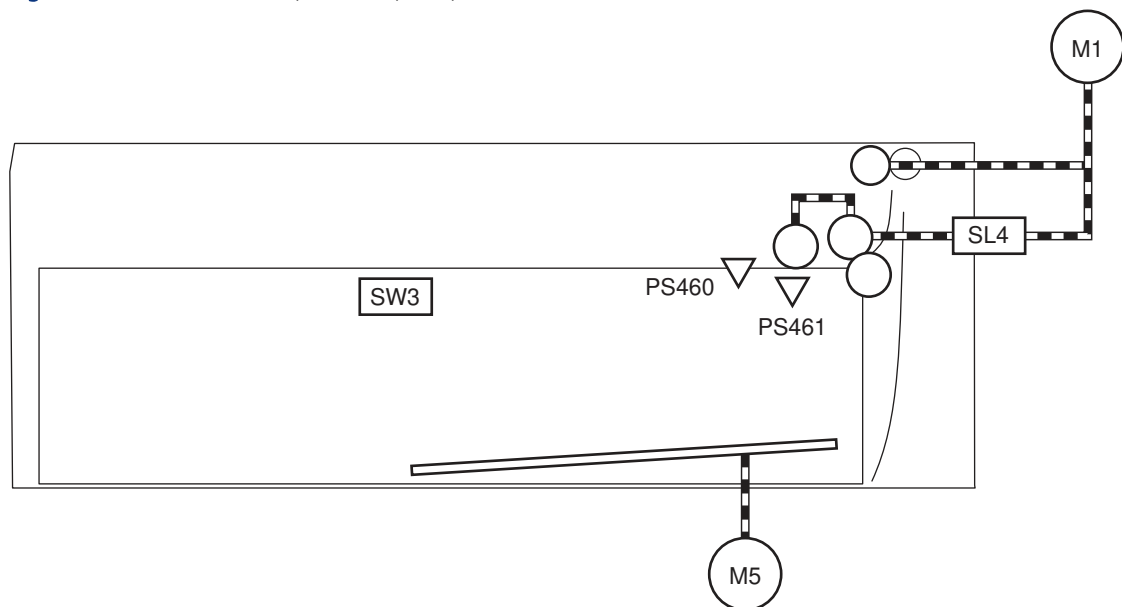
Abbreviation	Component name	Components driven
M5	Lifter motor	Lifts up the cassette

## 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 3-19** 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 3-20** 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.

---

# 4 Solve problems

Learn about solving printer problems.

## HP service and support

Learn about HP access to additional service and support information.

### Additional service and support for channel partners

Channel partners go to [partner.hp.com](https://partner.hp.com), and then use the steps below to access the HP Web-based Interactive Search Engine (WISE).

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

Access WISE for Channel partners

1. Select [Services & Support](#) (near the top of the screen).
2. Under [Services Delivery](#), select [Technical Support](#).
3. Select [Technical Documentation](#).

Find information about the following topics

- [Service manuals](#)
- [Service advisories](#)
- [Up-to-date control panel message \(CPMD\) troubleshooting](#)
- [Solutions for printer issues and emerging issues](#)
- [Remove and replace part instructions and videos](#)
- [Install and configure](#)
- [Printer specifications](#)
- [Warranty and regulatory 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 how to use WISE to find technical support videos \(Product detail page \[PDP\] search\).](#)

## 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:** 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></ul>

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

General topic	Questions
	<ul style="list-style-type: none"> <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?  <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).</li> <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>
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.

**Table 4-2** Troubleshooting flowchart

Step	Question	Action
1 Power on	Is the printer on and does a readable message display?	<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>For more information, see <a href="#">Troubleshooting power-on or blank control panel problems on page 198</a></p> <p>After the control panel display is functional, see step 2.</p>
	Yes ↓	
2 Control panel messages	Does the message <b>Ready</b> display on the control panel?	<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>
	Yes ↓	
3 Event log	Open the <a href="#">Troubleshooting</a> menu and print an event log to see the history of errors with this printer.	<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>
	Does the event log print?	

Table 4-2 Troubleshooting flowchart (continued)

Step	Question	Action
4 Information pages	Open the <a href="#">Reports</a> menu and print the configuration pages to verify that all the accessories are installed.  Are all the accessories installed?	If accessories that are installed are not listed on the configuration page, remove the accessory and reinstall it.  Make sure that the most recent firmware is installed. See the firmware upgrade section of this manual for more information.  After evaluating the configuration pages, see step 5.
	Yes ↓                      No →	
5 Print quality	Does the print quality meet the customer's requirements?	Compare the images with the sample defects in the Image-quality troubleshooting section of this manual.  Solve print-quality and copy-quality issues as needed.  After the print quality is acceptable, see step 6.
	Yes ↓                      No →	
6 Interface	Can the customer print successfully from the host computer?	Verify that all I/O cables are connected correctly and that a valid IP address is listed on the HP Jetdirect configuration page.  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.  For more information on troubleshooting these issues, see <a href="#">Performance and connectivity troubleshooting on page 312</a> .  When the customer can print from the host computer, this is the end of the troubleshooting process.
	Yes. This is the end of the troubleshooting process.                      No →	

## Firmware upgrades

Learn about printer firmware upgrades.

To download the most recent firmware upgrade for the printer, go to:

- In the US, go to [www.hp.com/support/ljM406](http://www.hp.com/support/ljM406) or [www.hp.com/support/ljM407](http://www.hp.com/support/ljM407) or [www.hp.com/support/ljM430MFP](http://www.hp.com/support/ljM430MFP) or [www.hp.com/support/ljM431MFP](http://www.hp.com/support/ljM431MFP) or [www.hp.com/support/ljE40040](http://www.hp.com/support/ljE40040) or [www.hp.com/support/ljE42540MFP](http://www.hp.com/support/ljE42540MFP).
  - a. Select **Get drivers, Software, and Firmware**, and then select the appropriate product by name.


---

 **NOTE:** More than one printer model might be listed. Make sure to select the correct model so that the upgraded firmware supports all of the printer functions.

---

- b. Select the driver language and operating system.
- c. Locate the firmware download, and then select **Download**.
- Outside the U.S., go to [www.hp.com/support](http://www.hp.com/support).
  - a. Select your country/region.
  - b. Select **Drivers & Downloads**.
  - c. Enter the product name in the **Find my product** dialogue box, and then select **Go**.

---

 **TIP:** Click on the **How do I find my product name/number?** link to see a short video on identifying the printer name and number.

---

- d. Select the appropriate product by name.

---

 **NOTE:** More than one printer model might be listed. Make sure to select the correct model so that the upgraded firmware supports all of the printer functions.

---


- e. Select the driver language and operating system.
- f. Locate the firmware download, and then select **Download**.

## Determine the installed revision of firmware

Learn about how to determine the version of installed printer firmware.

Print a configuration page to determine the installed revision of firmware.

### Print the configuration page from an MFP control panel

1. From the **Home** screen on the printer control panel, scroll to and touch the **Reports** button.
2. Open the following menus:
  - **Configuration/Status pages**
3. Touch **Configuration Page** to select it.
4. Touch the print icon  to print the pages.

### Print the configuration page from a SFP control panel


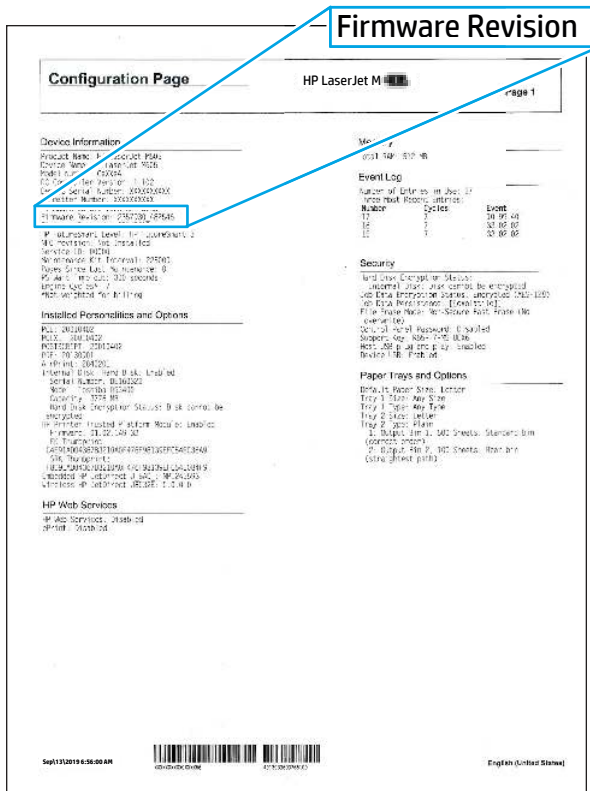
1. From the **Home** screen on the printer control panel, use the arrow keys to navigate to **Reports**, and then press the **OK** button.
2. Use the arrow buttons to scroll to **Configuration/Status Pages**, and then press the **OK** button.
3. Use the arrow buttons to scroll to **Configuration Page**, and then press the **OK** button.
4. Use the arrow buttons to scroll to the print icon . Press the **OK** button to print the pages.




Figure 4-1 Configuration page firmware version



## HP Embedded Web Server

Learn how to perform a firmware upgrade using the HP Embedded Web Server.

 **NOTE:** The printer should be at the **Ready** state.

The firmware update might take 10 minutes or longer based on the input/output (I/O) transfer rates and the time it takes for the printer to reinitialize.

1. Open an Internet browser window.
2. Enter the printer IP address in the URL line.
3. Select the **Firmware Upgrade** link from the **General** tab or from the **Troubleshooting** tab.
4. Browse to the location that the firmware upgrade file was downloaded to, and then select the firmware file. The file has a .bdl file extension. Select the **Install** button to perform the upgrade.

 **NOTE:** Do not close the browser window OR interrupt communication until the HP Embedded Web Server (EWS) displays the confirmation page.

5. After the printer reinitializes, print a configuration page and verify that the latest firmware version has been installed.

## USB flash drive firmware (Pre-boot menu) (SFP)

Learn how to perform a USB flash drive firmware (Pre-boot menu) update using a SFP control panel.

1. Press the **Cancel** button when you see the **1/8** under the logo.

2. Use the arrow buttons to highlight +3 Administrator, and then press the OK button.
3. Use the arrow buttons to highlight +1 Download, and then press the OK button.
4. Insert the USB flash drive with the .bdl file on it into the USB port on the printer.

---


 **NOTE:** If the error message **No USB Thumbdrive Files Found** displays on the control panel display, try using a different portable storage device.

---

5. Use the arrow buttons to highlight **USB Thumbdrive**, and then press the OK button.
6. Use the arrow buttons to highlight the .bdl file, and then press the OK button.

---

 **NOTE:** The upgrade process can take 10 minutes or longer to complete.

 **TIP:** If there is more than one .bdl file on the storage device, make sure to select the correct file for this printer.

---

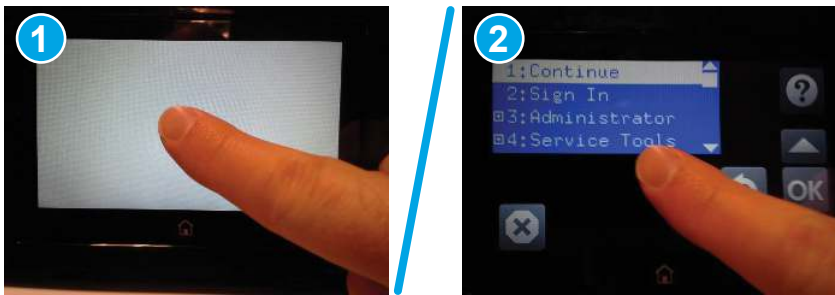
7. When the message **Complete** displays on the control panel display, turn the printer power off, and then on again.
8. When the upgrade process is complete, print a configuration page and verify that the upgrade firmware version was installed.

## USB flash drive firmware (Pre-boot menu) (MFP)

Learn how to perform a USB flash drive firmware (Pre-boot menu) update from an MFP control panel.

1. Copy the .bdl file to a portable USB flash drive.
2. Touch the middle of the control panel display when you see the 1/8 under the logo.

**Figure 4-2** Open the Pre-boot menu



3. Use the arrow buttons to highlight +3 Administrator, and then touch the OK button.
4. Use the arrow buttons to highlight +1 Download, and then touch the OK button.
5. Insert the USB flash drive with the .bdl file on it into the USB port on the printer.

---


 **NOTE:** If the error message **No USB Thumbdrive Files Found** displays on the control panel display, try using a different portable storage device.

---

6. Use the arrow buttons to highlight **USB Thumbdrive**, and then touch the OK button.
7. Use the arrow buttons to highlight the .bdl file, and then touch the OK button.

---

 **NOTE:** The upgrade process can take 10 minutes or longer to complete.

 **TIP:** If there is more than one .bdl file on the storage device, make sure to select the correct file for this printer.

---

8. When the message **Complete** displays on the control panel display, touch the down arrow ▼ button several times until the message **Continue** displays.
9. Touch the **OK** button to begin the upgrade. When the upgrade is complete, the printer will initialize to the **Ready** state.
10. When the upgrade process is complete, print a configuration page and verify that the upgrade firmware version was installed.

## USB flash drive firmware (control panel menu) (SFP)

Learn how to perform a USB flash drive firmware (control panel menu) update from a SFP control panel (FutureSmart 4 firmware or later).

1. From the **Home** screen on the printer control panel, use the arrow buttons to scroll to **Support Tools**, and then press the **OK** button.
2. Open the following menus:
  - **Maintenance**
  - **USB Firmware Upgrade**
3. Insert the USB flash drive with the .bdl file on it into the USB port on the printer.
4. Use the arrow buttons to scroll to the appropriate .bdl file, and then press the **OK** button.
5. When the upgrade process is complete, print a configuration page and verify that the upgrade firmware version was installed.

## USB flash drive firmware (control panel menu) (MFP)

Learn how to perform a USB flash drive firmware (control panel menu) update from a n MFP control panel.

1. Copy the .bdl file to a portable USB flash drive.
2. Turn the printer on, and then wait until it reaches the **Ready** state.
3. From the **Home** screen on the printer control panel, scroll to and touch the **Support Tools** button.
4. Open the **Maintenance** menu.
5. Touch the **USB Firmware Upgrade** button.
6. Insert the USB flash drive with the .bdl file on it into the USB port on the printer.
7. Touch the .bdl file, and then touch the **Upgrade** button.

 **TIP:** If there is more than one .bdl file on the storage device, make sure to select the correct file for this printer.

---

8. Select one of the following options:

- **Upgrade**

 **NOTE:** The upgrade process can take 10 minutes or longer to complete.

---

- Re-install
  - Downgrade
9. When the upgrade is complete, the printer will initialize to the **Ready** state.
  10. When the upgrade process is complete, print a configuration page and verify that the upgrade firmware version was installed.

## Comprehensive list of troubleshooting tools

Learn about the printer troubleshooting tools.

### 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.


 **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 four times within a three second time period to print a simplex engine test page. Open and close the door five times within a three second period to print a duplex engine test page.

### Pre-boot menu options

The *Pre-boot* menus are available prior to the printer initializing.

 **CAUTION:** The *Format Disk* option performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) will be completely lost. HP does not recommend this action unless it is specified as a solution in the CPMD.

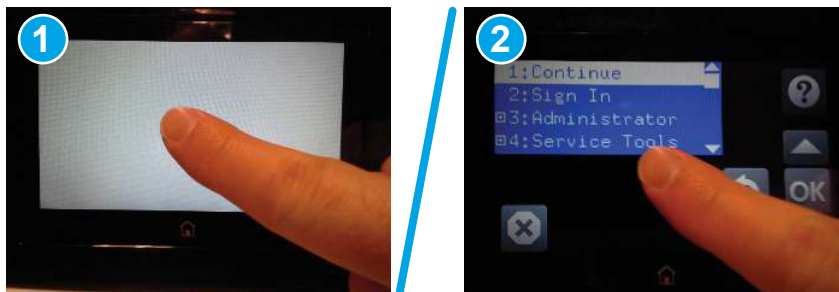
 **TIP:** The *Pre-boot* menu is also remotely accessible by using a telnet network protocol (Remote Admin) to establish an administration connection to the printer.

### Open the Pre-boot menu from a touchscreen control panel

Use the following procedure to open the *Pre-boot* menu from a touchscreen control panel.

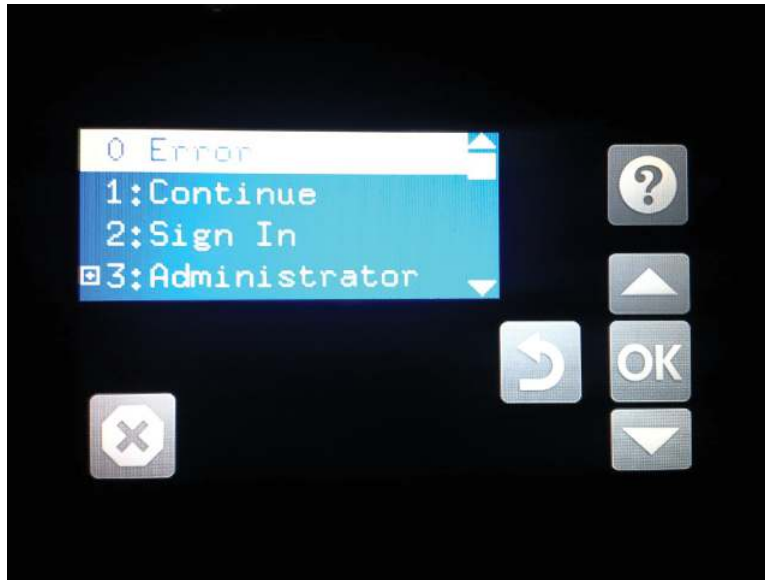
1. Turn the printer on.
2. Touch the middle of the control-panel display when you see the 1/8 under the logo.








**Figure 4-3** Open the *Pre-boot* menu



- On the Pre-boot menu screen, use the following buttons to navigate the tests.

Figure 4-4 Pre-boot menu




Button	Description
	Use this button to see more information about a selected item.
	Use this button to scroll up through menu items.
	Use this button to select a highlighted menu item.
	Use this button to scroll down through menu items.
	Use this button to go back to the previous menu.
	Not used.
	Use this button to exit a diagnostic test.

4. Use the arrow buttons on the touchscreen to navigate the **Pre-boot** menu.
5. Touch the **OK** button to select a menu item.

### Open the Pre-Boot menu from a LCD control panel

Use the following procedure to open the **Pre-Boot** menu from a LCD control panel.

1. Turn the printer on.
2. Press the **Cancel**  button when you see the 1/8 under the logo.
3. Use the arrow buttons on the control panel to navigate the **Pre-Boot** menu.
4. Press the **OK** button to select a menu item.

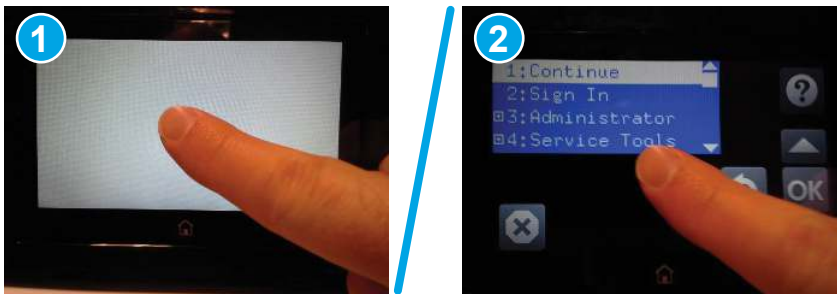
### Cold reset using the Pre-boot menu from a touchscreen control panel

Use the following procedure to perform a cold reset using the **Pre-boot** menu from a touchscreen control panel.

**CAUTION:** This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).

1. Touch the middle of the control-panel display when you see the 1/8 under the logo.

**Figure 4-5** Open the **Pre-boot** menu




2. Use the down arrow ▼ button to highlight the +3:Administrator item, and then touch the **OK** button.
3. Use the down arrow ▼ button to highlight the +8:Startup Options item, and then touch the **OK** button.
4. Use the down arrow ▼ button to highlight the 2 Cold Reset item, and then touch the **OK** button to select it.
5. Touch the Home button to return to the main **Pre-boot** menu and highlight the 1:Continue item, and then touch the **OK** button.

 **NOTE:** The printer will initialize.

### Cold reset using the Pre-boot menu from a LCD control panel


Use the following procedure to perform a cold reset using the **Pre-boot** menu from a LCD control panel.

**CAUTION:** This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).

1. Press the **Cancel**  button when you see the 1/8 under the logo.
2. Use the down arrow ▼ button to highlight the +3:Administrator item, and then press the **OK** button.

3. Use the down arrow ▼ button to highlight the +8:Startup Options item, and then press the OK button.
4. Use the down arrow ▼ button to highlight the 2 Cold Reset item, and then press the OK button to select it.
5. Touch the Home button to return to the main Pre-boot menu and highlight the 1:Continue item, and then touch the OK button.

 **NOTE:** The printer will initialize.

 **NOTE:** Some of the pre-boot options in the following tables are not supported by the current version of the printer firmware and are included for information only. Future versions of firmware will support these options.

**Table 4-3 Pre-boot menu options (1 of 7)**

Menu option	First level	Second level	Third level	Description
Continue				<p>Selecting the Continue item exits the Pre-boot menu and continues the normal boot process.</p> <p>If a selection is not made in the initial menu within 30 seconds, the printer returns to a normal boot (the same as selecting Continue).</p> <p>If the user navigates to another menu, the timeout does not apply.</p>
Sign In				Enter the administrator PIN or service PIN if one is required to open the Pre-boot menu.
Administrator				<p>This item navigates to the Administrator submenus.</p> <p>If authentication is required (and the user is not already signed in) the Sign In prompt displays. The user is required to sign in.</p>
Administrator	Download	Network		This item initiates a Pre-boot firmware download process. A USB Thumbdrive option will work on all FutureSmart printers. USB or Network connections are not currently supported.
		USB		
		USB Thumbdrive		
Administrator	Format Disk			<p>This item reinitializes the disk and cleans all disk partitions.</p> <p><b>CAUTION:</b> Selecting the Format Disk item removes <b>all</b> data.</p> <p>A delete confirmation prompt is <b>not</b> provided.</p> <p>The system is <b>not</b> bootable after this action and a <b>99.09.67</b> error displays on the control panel. A firmware download must be performed to return the system to a bootable state.</p>
Administrator	Partial Clean			<p>This item reinitializes the disk (removing all data except the firmware repository where the master firmware bundle is downloaded and saved).</p> <p><b>CAUTION:</b> Selecting the Partial Clean item removes <b>all</b> data except the firmware repository. A delete confirmation prompt is <b>not</b> provided.</p> <p><b>CAUTION:</b> This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).</p>

Table 4-3 Pre-boot menu options (1 of 7) (continued)

Menu option	First level	Second level	Third level	Description
				This allows a user to reformat the disk by removing the firmware image from the active directory without having to download new firmware code (printer remains bootable).
Administrator	Change Password			Select this item to set or change the administrator password.
Administrator	Clear Password			Select the <b>Clear Password</b> item to remove a password from the <b>Administrator</b> menu. Before the password is actually cleared, a message will be shown asking to confirm that the password should be cleared. Press the OK button to confirm the action.  When the confirmation prompt displays, press the OK button to clear the password.

Table 4-4 Pre-boot menu options (2 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Manage Disk	Clear disk		Select the <b>Clear disk</b> item to enable using an external device for job storage. Job storage is normally enabled only for the Boot device. This will be grayed out unless the <b>99.09.68</b> error is displayed.
Administrator	Manage Disk	Lock Disk		Select the <b>Lock Disk</b> item to lock (mate) a new secure disk to this printer.  The secure disk already locked to this printer will remain accessible to this printer. Use this function to have more than one encrypted disk accessible by the printer when using them interchangeably.  The data stored on the secure disk locked to this printer always remains accessible to this printer.
Administrator	Manage Disk	Leave Unlocked		Select the <b>Leave Unlocked</b> item to use a new secure disk in an unlocked mode for a single service event. The secure disk that is already locked to this printer will remain accessible to this printer and uses the old disk's encryption password with the new disk.  The secure disk that is already locked to this printer remains accessible to this printer.
Administrator	Manage Disk	Clear Disk Pwd		Select the <b>Clear Disk Pwd</b> item to continue using the non-secure disk and clear the password associated with the yet-to-be installed secure disk.  <b>CAUTION:</b> Data on the missing secure disk will be permanently inaccessible.
Administrator	Manage Disk	Retain Password		Select the <b>Retain Password</b> item to use the non-secure disk for this session only, and then search for the missing secure disk in future sessions.
Administrator	Manage Disk	Boot Device	Secure Erase	Select the <b>Secure Erase</b> item to erase all of the data on the disk and unlock it if required.  This might take a long time.  <b>NOTE:</b> The system will be unusable until the system files are reinstalled. The ATA secure-erase command is a



Table 4-4 Pre-boot menu options (2 of 7) (continued)

Menu option	First level	Second level	Third level	Description
				one-pass overwrite, which erases the entire disk including firmware. The disk remains an encrypted disk.
Administrator	Manage Disk	Boot Device	Erase/Unlock	Select the <b>Erase/Unlock</b> item to cryptographically erase all data on the disk and unlock the disk to allow a user to gain access to it from any printer.  <b>NOTE:</b> The system will be unusable until the system files are reinstalled. It erases the encryption key. The encryption key is erased, so the disk becomes a non-encrypted disk.
Administrator	Manage Disk	Boot Device	Get Status	This item provides disk status information if any is available.

Table 4-5 Pre-boot menu options (3 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Manage Disk (continued)	Internal Device		Select the <b>Internal Device</b> item to erase the internal device or get a status about the internal device.
Administrator	Manage Disk	Internal Device	Secure Erase	Select the <b>Secure Erase</b> item to erase all of the data on the disk and unlock it if required.  This might take a long time.  <b>NOTE:</b> The system will be unusable until the system files are reinstalled. The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk.
Administrator	Manage Disk	Internal Device	Erase/Unlock	Select the <b>Erase/Unlock</b> item to cryptographically erase all of the data on disk and unlock the disk to allow the user to gain access to it from any printer.  <b>NOTE:</b> The system will be unusable until the system files are reinstalled. The HP High Performance Secure Hard Disk is erased.
Administrator	Manage Disk	Internal Device	Get Status	This item provides disk status information if any is available.
Administrator	Manage Disk	External Device		Select the <b>External Device</b> item to erase the external device or get status about the external device.
Administrator	Manage Disk	External Device	Secure Erase	Select the <b>Secure Erase</b> item to erase all of the data on the disk and unlock it if required.  This might take a long time.  <b>NOTE:</b> The system will be unusable until the system files are reinstalled.  The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk.

**Table 4-5 Pre-boot menu options (3 of 7) (continued)**

Menu option	First level	Second level	Third level	Description
Administrator	Manage Disk	External Device	Erase/Unlock	Select the <b>Erase/Unlock</b> item to cryptographically erase all of the data on disk and unlock the disk to allow a user to gain access to it from any printer.  <b>NOTE:</b> The system will be unusable until the system files are reinstalled. The encryption key is erased, so the disk becomes a non-encrypted disk.
Administrator	Manage Disk	External Device	Get Status	This item provides disk status information if any is available.

**Table 4-6 Pre-boot menu options (4 of 7)**

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Configure LAN  <b>NOTE:</b> This configuration is only active when the Pre-boot menu is open.	IP Mode [DHCP]		The network can be configured to obtain the network settings from a DHCP server or as static.  Use this item for automatic IP address acquisition from the DHCP server.
Administrator	Configure LAN  <b>NOTE:</b> This configuration is only active when the Pre-boot menu is open.	IP Mode [STATIC]		Use this item to manually assign the network addresses.
Administrator	Configure LAN  <b>NOTE:</b> This configuration is only active when the Pre-boot menu is open.	IP Mode [STATIC]	IP Address	Use this item to manually enter the IP addresses.
Administrator	Configure LAN  <b>NOTE:</b> This configuration is only active when the Pre-boot menu is open.	IP Mode [STATIC]	Subnet Mask	Use this item to manually enter the subnet mask.
Administrator	Configure LAN  <b>NOTE:</b> This configuration is only active when the Pre-boot menu is open.	IP Mode [STATIC]	Default Gateway	Use this item to manually enter the default gateway.
Administrator	Configure LAN  <b>NOTE:</b> This configuration is only active when the Pre-boot menu is open.	IP Mode [STATIC]	Save	Select the <b>Save</b> item to save the manual settings.

Table 4-7 Pre-boot menu options (5 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Startup Options			Select the <a href="#">Startup Options</a> item to specify options that can be set for the next time the printer is turned on and initializes to the <b>Ready</b> state.
Administrator	Startup Options	Show Revision		<p><b>Not currently functional:</b> Select the <a href="#">Show Revision</a> item to allow the printer to initialize and show the firmware version when the printer reaches the <b>Ready</b> state.</p> <p>Once the printer power is turned on the next time, the <a href="#">Show Revision</a> item is unchecked so that the firmware revision is not shown.</p>
Administrator	Startup Options	Cold Reset		<p>Select the <a href="#">Cold Reset</a> item to clear the IP address and all customer settings. (This item also returns all settings to factory defaults.)</p> <p><b>NOTE:</b> Items in the <a href="#">Service</a> menu are not reset.</p>
Administrator	Startup Options	Skip Disk Load		Select the <a href="#">Skip Disk Load</a> item to disable installed third-party applications.
Administrator	Startup Options	Skip Cal		Select the <a href="#">Skip Cal</a> item to skip the printer calibration for the very next power-initialization cycle only.
Administrator	Startup Options	Lock Service		<p><b>CAUTION:</b> Select the <a href="#">Lock Service</a> item to lock the <a href="#">Service</a> menu access (both in the <a href="#">Pre-boot</a> menu and the <a href="#">Device Maintenance</a> menu).</p> <p>Service personnel must have the administrator remove the <a href="#">Lock Service</a> setting before they can open the <a href="#">Service</a> menu.</p>
Administrator	Startup Options	Skip FSCK		Select the <a href="#">Skip FSCK</a> item to disable Chkdisk/ScanVolume during startup.
Administrator	Startup Options	First Power		<p><b>Not currently functional:</b> This item allows the printer to initialize as if it is the first time it has been turned on.</p> <p>For example, the user is prompted to configure first-time settings like date/time, language, and other settings.</p> <p>Select this item so that it is enabled for the next time the printer power is turned on.</p> <p>When the printer power is turned on the next time, this item is unchecked so that the pre-configured settings are used during configuration, and the first-time setting prompt is not used.</p>
Administrator	Startup Options	Embedded Jetdirect Off		<p>Select the <a href="#">Embedded Jetdirect Off</a> item to disable the embedded HP Jetdirect.</p> <p>By default this item is unchecked so that HP Jetdirect is always enabled.</p>
Administrator	Startup Options	WiFi Accessory		Select the <a href="#">WiFi Accessory</a> item to enable the wireless accessory.

Table 4-8 Pre-boot menu options (6 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Diagnostics			Diagnostic items are useful to diagnose hardware components and their interface connections. Use these items to troubleshoot specific hardware components, and the interface between them and other components.
Administrator	Diagnostics	Memory	Do Not Run	Use the <b>Do Not Run</b> item to exclude the <b>Memory</b> diagnostic when executing multiple diagnostics.
Administrator	Diagnostics		Short	Use the <b>Short</b> item to select a brief memory test.  <b>NOTE:</b> This test requires about four minutes to execute.
Administrator	Diagnostics		Long	Use the <b>Long</b> item to select an extended memory test.  <b>NOTE:</b> This test requires about twenty minutes to execute.
Administrator	Diagnostics	Disk	Do Not Run	Use the <b>Do Not Run</b> item to exclude the <b>Disk</b> diagnostic when executing multiple diagnostics.
Administrator	Diagnostics		Short	Use the <b>Short</b> item to select a brief firmware self-test.  <b>NOTE:</b> This test requires about two or three minutes to execute.
Administrator	Diagnostics		Long	Use the <b>Long</b> item to select an extended firmware self-test.  <b>NOTE:</b> This test requires about sixty minutes to execute.
Administrator	Diagnostics		Optimized	Use the <b>Optimized</b> item to select a test that checks the active sectors on the disk.  <b>NOTE:</b> This test requires about thirty minutes to execute.
Administrator	Diagnostics		Raw	Use the <b>Raw</b> item to select a test that checks every sector on the disk.  <b>NOTE:</b> This test requires about fifty minutes to execute.
Administrator	Diagnostics		Smart	Use the <b>Smart</b> item to select a very brief test that checks the drive self-monitoring analysis and reporting technology (SMART) status—the drive detects and reports reliability indicators to help anticipate disk failures (SMART status).
Administrator	Diagnostics	CPB		Use the <b>CPB</b> item to verify the integrity of the copy processor board (CPB) and the formatter PCA connections.
Administrator	Diagnostics	Interconnect		Use the <b>Interconnect</b> item to verify the integrity of the interconnect PCA (ICB) and its connections.
Administrator	Diagnostics	Run Selected		Select the <b>Run Selected</b> item to execute a selected test.  <b>NOTE:</b> If more than one test is selected, they are executed in sequence.

Table 4-9 Pre-boot menu options (7 of 7)

Menu option	First level	Second level	Third level	Description
Administrator  (continued)	Remote Admin	Start Telnet		<p>The <a href="#">Remote Admin</a> item allows a service technician to access to the printer <a href="#">Pre-boot</a> menu remotely, and to navigate the menu selections from a remote location.</p> <p><b>IMPORTANT:</b> A Remote Admin connection must be initiated by a person that is physically present at the printer.</p> <p>This person will also need to provide a randomly generated PIN to the remote service technician.</p> <p><b>NOTE:</b> For more information about using the <a href="#">Remote Admin</a> function, see "Remote Admin (M506/M507/E50145, M527/M528/E52645)" in the <a href="#">Troubleshooting Manual</a>.</p>
Administrator	Remote Admin	Stop Telnet		
Administrator	Remote Admin	Refresh IP		
Administrator	System Triage	Copy Logs		<p>If the device will not boot to the <b>Ready</b> state, or the diagnostic log feature found in the <a href="#">Troubleshooting</a> menu is not accessible, then use the <a href="#">System Triage</a> item to copy the diagnostic logs to a USB flash drive at the next printer start up.</p> <p>The files can then be sent to HP to help diagnose the problem.</p>
Administrator	Change Svc PWD			Use this item to change the <a href="#">Service</a> menu personal identification number (PIN).
Administrator	Reset Svc PWD			If the <a href="#">Service</a> menu personal identification number (PIN) has been changed. Use this item to reset it to the original PIN.
Service Tools	Reset Password			Use this item to reset the Pre-boot administrator password.
Service Tools	Subsystems			For manufacturing use only. Do not change these values.
Developer Tools	Netexec			

## Remote Admin

Learn about the printer Remote Admin function.

The Remote Admin feature allows remote access the printer [Pre-boot](#) menu (BIOS environment). The printer functions as a telnet server which uses the telnet networking protocol to transmit text data. Any computer (with telnet installed and enabled) can function as the telnet client to remotely display and interact with the [Pre-boot](#) menu.



**IMPORTANT:** While the Remote Admin function allows remote access the [Pre-boot](#) menu, for security reasons the Remote Admin connection must be initiated by a person that is physically present at the printer.

### Required software and network connection

Before using the Remote Admin feature, make sure that the telnet network protocol is installed and enabled on the remote telnet client computer.

---

 **NOTE:** This section describes enabling and configuring the telnet feature for computers using a Windows® operating system.


HP recommends that the telnet client computer be a Windows-based system; however, there are other operating systems that support the telnet network protocol. For information about enabling and configuring the telnet network protocol for other operating systems, see the owner's manual for that operating system.

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## Enable the Windows telnet client

All computers using the Windows operating system have the telnet client installed, however, the telnet client function might not be enabled by default.

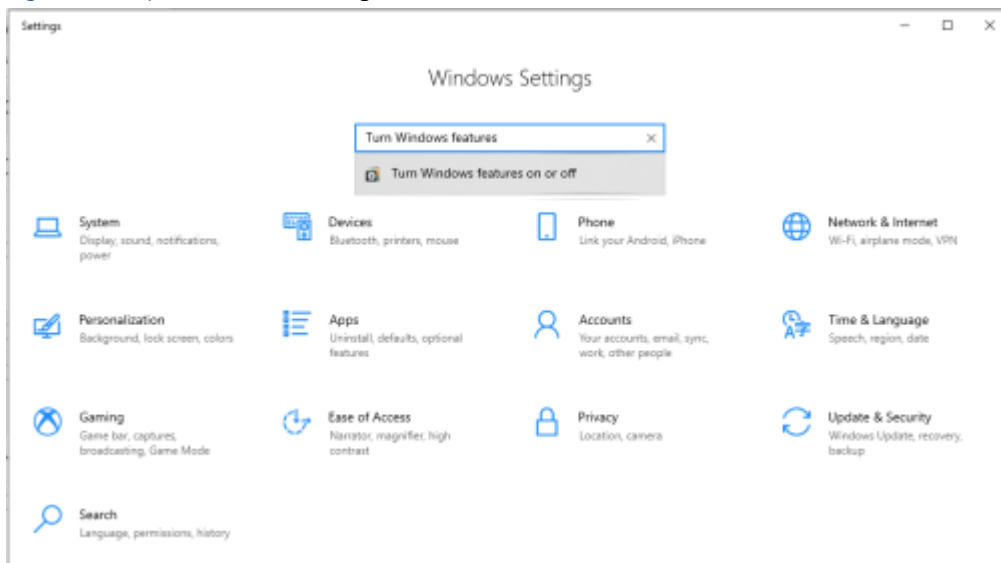
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 **NOTE:** The figures and menus in this section are for the Windows 10® operating system. Screens and menu selections might vary slightly for other operating systems.

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1. Use the **Start** menu to open the **Windows Settings** dialog box, and then search for **Turn Windows features on or off**. Click the **Turn Windows features on or off** item.

**Figure 4-6** Open Windows Settings



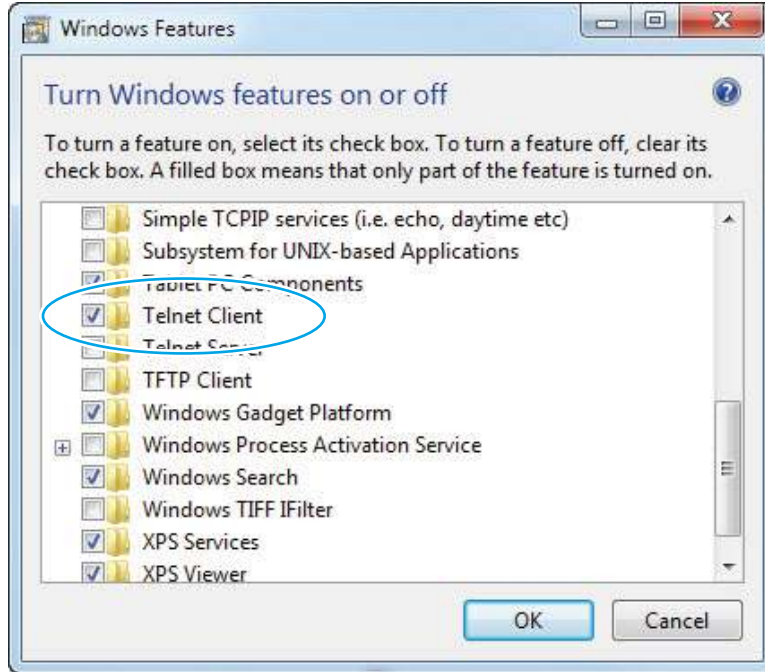
2. In the **Windows Features** box, scroll down to **Telnet Client**. If the check box is not checked, click the box to select it, and then click the **OK** button.

---

 **TIP:** If the check box is already checked then the telnet client function is already enabled. Click the **Cancel** button.

---

Figure 4-7 Enable the telnet client feature



## Network connection

The remote telnet client computer must have direct network access to the printer for the Remote Admin function to operate. This means that the telnet client computer must be on the same network as the printer.

The Remote Admin function cannot be accessed through a network firewall or other remote access network security programs.

If a private network is not accessible, ask the network administrator to set up a virtual private network (VPN) connection to the network.

## Connect a remote connection

Use the following procedures to connect a remote connection.

## Start the telnet server function at the printer

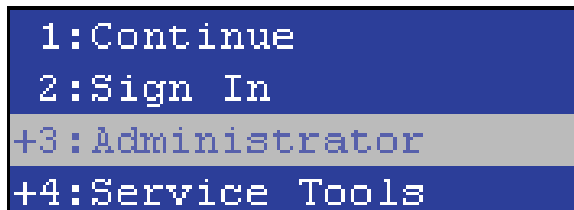
For security reasons the Remote Admin feature must be initiated by a person that is physically present at the printer. The following steps must be performed by a person that is physically present at the printer.

**NOTE:** This person might need to sign in with an administrator or service password depending on how the printer is configured.

1. Turn the printer on.
2. The HP logo displays on the printer control panel. When a `1/8` with an underscore displays, touch the middle of the screen to open the [Pre-boot](#) menu.

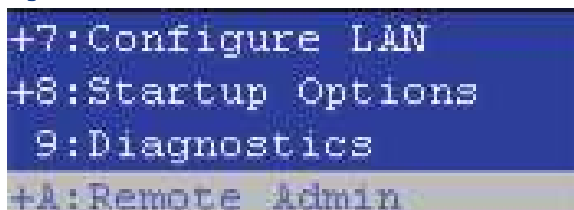
- Use the arrow buttons on the touchscreen to scroll down and highlight the +3:Administrator item, and then touch the OK button to select it.

Figure 4-8 Select the +3:Administrator item



- Use the arrow buttons on the touchscreen to scroll down and highlight the +A:Remote Admin item, and then touch the OK button to select it.

Figure 4-9 Select the +A:Remote Admin item



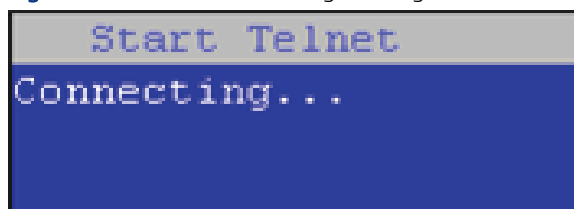
- Use the arrow buttons on the touchscreen to scroll down and highlight the 1:Start Telnet item, and then touch the OK button to select it.

Figure 4-10 Select the 1:Start Telnet item



- Do one of the following
  - If a connecting message displays briefly, go to 7..

Figure 4-11 Telnet connecting message



- If an error message displays, use the steps below to identify the problem.



Figure 4-12 Telnet error message

```
Start Telnet
Unable to connect
Contact network
administrator.
```

- a. The printer network cable is not correctly connected.
  - b. The BIOS LAN settings are incorrect.
    - The printer should be configured to use a static IP address, but is configured to use DHCP instead.
    - The printer is configured to use a static IP address, but the IP address is incorrect.
  - c. The printer is correctly configured to use DHCP, but the DHCP server is not turned on or is malfunctioning.
7. When the printer telnet server function is initialized, the following screen appears. Use the information on this screen to connect the remote telnet client computer to the printer.



---

**NOTE:** The printer is now ready to receive remote telnet client commands.

---

- **IP:** The static or dynamically allocated IP address for the printer.
- **Port:** The standard telnet port (23).
- **Pin:** A randomly generated 4-digit personal identification number (PIN).

Figure 4-13 Telnet server function initialized

```
Start Telnet
IP: 16.88.109.66
Port: 23
Pin : 4031
```

## Start the telnet client function at the remote computer

The following steps establish a Remote Admin connection from a remote computer to the printer.

1. From the **Start** menu open the **Command Prompt** desktop application.



---

**TIP:** Type `cmd` in the application search dialogue box to find the application.

---

- From any displayed directory, type `telnet` at the prompt, and then press the **Enter** key.

Figure 4-14 Start a telnet session



- Type `<IP ADDRESS>` at the telnet prompt, and then press the **Enter** key.

 **NOTE:** For `<IP ADDRESS>`, substitute the IP address that was displayed in step 7 of the "Start the telnet server function at the printer" topic.


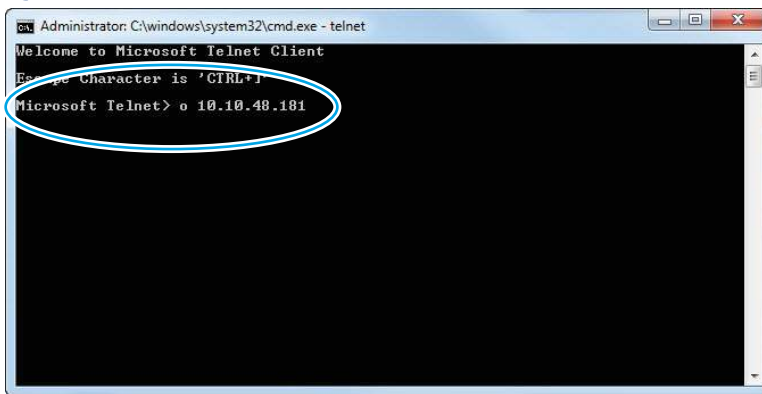
 **TIP:** If the telnet connection fails to establish a connection, the printer is probably behind a firewall or on a different network than the remote telnet client computer.

Figure 4-15 Establish a telnet connection



- Type the PIN that was displayed in step 7 of then "Start the telnet server function at the printer" topic at the prompt, and then press the **Enter** key.


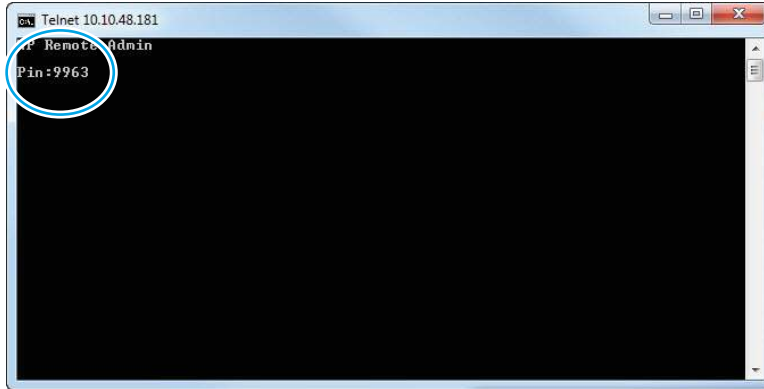

 **IMPORTANT:** Make sure to type the PIN correctly. After five incorrect PIN entries, the printer terminates the Remote Admin connection. The Remote Admin feature must be re-initiated at the printer. See the "Start the telnet server function at the printer" topic.

Figure 4-16 Enter the PIN



5. The following screen displays when the correct PIN is entered and the Remote Admin connection is successful. For information about the Pre-boot menu and options, see "Pre-boot menu options" in the printer *Service Manual*.

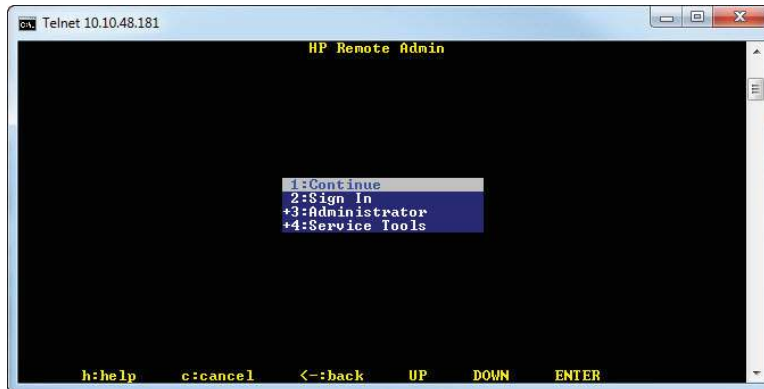
---

 **NOTE:** Because a Remote Admin connection is an unsecured telnet network protocol connection, the following Pre-boot menu items are disabled for the remote telnet client computer.

- The **+3:Administrator** menu **4:Change Password** item.
- The **+3:Administrator** menu **5:Clear Password** item.
- The **+3:Administrator** menu **6:Disk Manage** item.

---

Figure 4-17 Remote Admin window



### Disconnect a remote connection

The Remote Admin connection can be terminated from the printer control panel or the remote telnet client computer.

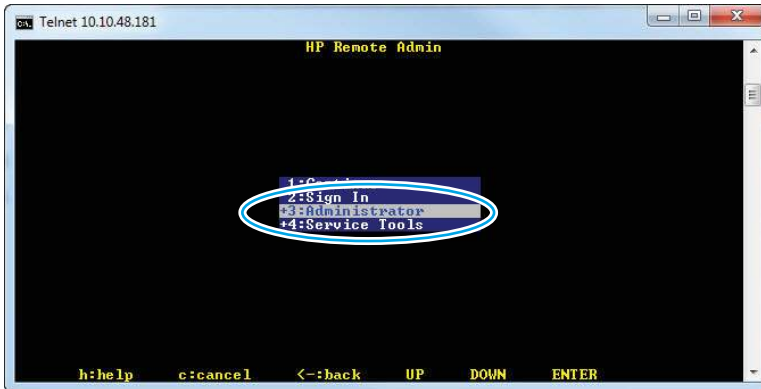
---

 **NOTE:** The following procedure describes terminating a Remote Admin connection from the remote telnet client computer.

---

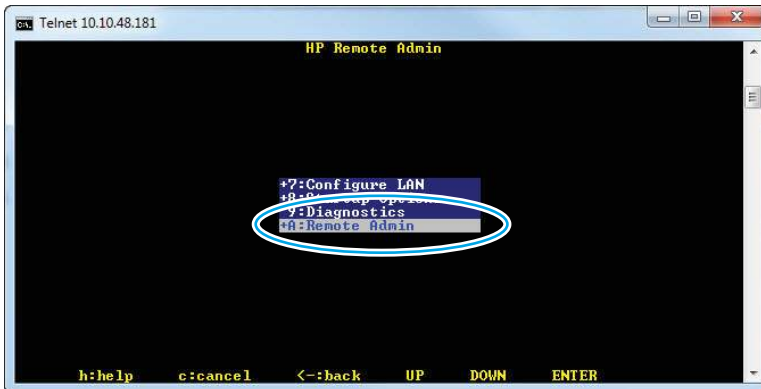
1. From the Pre-boot main menu, use the arrow buttons on the keyboard to scroll down to the **+3:Administrator** item, and then press the **Enter** key.

Figure 4-18 Access the administrator menu



2. Use the arrow buttons on the keyboard to scroll down to the **+A:Remote Admin** item, and then press the **Enter** key.

Figure 4-19 Access the remote admin menu

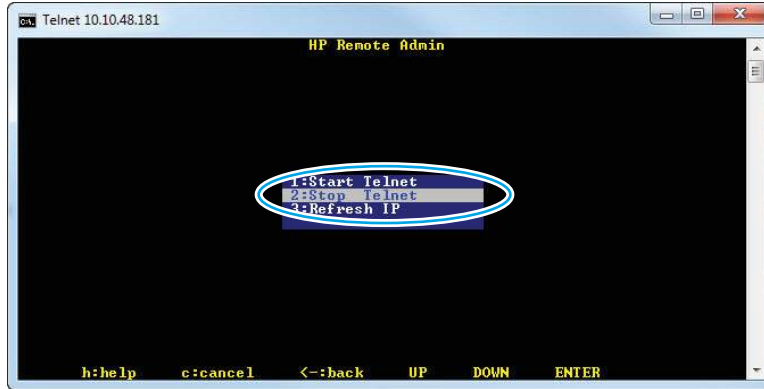


3. Use the arrow buttons on the keyboard to scroll down to the **2:Stop Telnet** item, and then press the **Enter** key. The Remote Admin connection between the printer and the remote telnet client computer terminates.

 **IMPORTANT:** The printer remains in the Pre-boot menu. Have the person that is physically present at the printer do the following:

- Touch the **Home** button to return to the main Pre-boot menu and highlight the **1:Continue** item, and then touch the **OK** button. The printer will continue to initialize.

Figure 4-20 Terminate the telnet connection



## Advanced configuration with the HP Embedded Web Server (EWS)

Use the HP Embedded Web Server to manage advanced printing functions.

### Introduction

Use the HP Embedded Web Server to manage printing functions from a computer instead of the printer control panel.

- View printer status information
- Determine the remaining life for all supplies and order new ones
- View and change tray configurations
- View and change the printer control-panel menu configuration
- View and print internal pages
- Receive notification of printer and supplies events
- View and change network configuration

The HP Embedded Web Server works when the printer is connected to an IP-based network. The HP Embedded Web Server does not support IPX-based printer connections. Internet access is not needed to open and use the HP Embedded Web Server.



When the printer is connected to the network, the HP Embedded Web Server is automatically available.



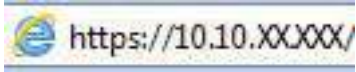
**NOTE:** The HP Embedded Web Server is not accessible beyond the network firewall.

### How to access the HP Embedded Web Server (EWS)


Use the following steps to open the EWS.

1. From the Home screen on the printer control panel, touch the Information icon , and then touch the Ethernet icon  to display the IP address or host name.

2. 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 the web browser displays a message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.

---

To use the HP Embedded Web Server, the browser must meet the following requirements:

Windows® 7

- Internet Explorer (version 8.x or greater)
- Google Chrome (version 34.x or greater)
- Firefox (version 20.x or greater)

Windows® 8 or greater

- Internet Explorer (version 9.x or greater)
- Google Chrome (version 34.x or greater)
- Firefox (version 20.x or greater)

macOS

- Safari (version 5.x or greater)
- Google Chrome (version 34.x or greater)

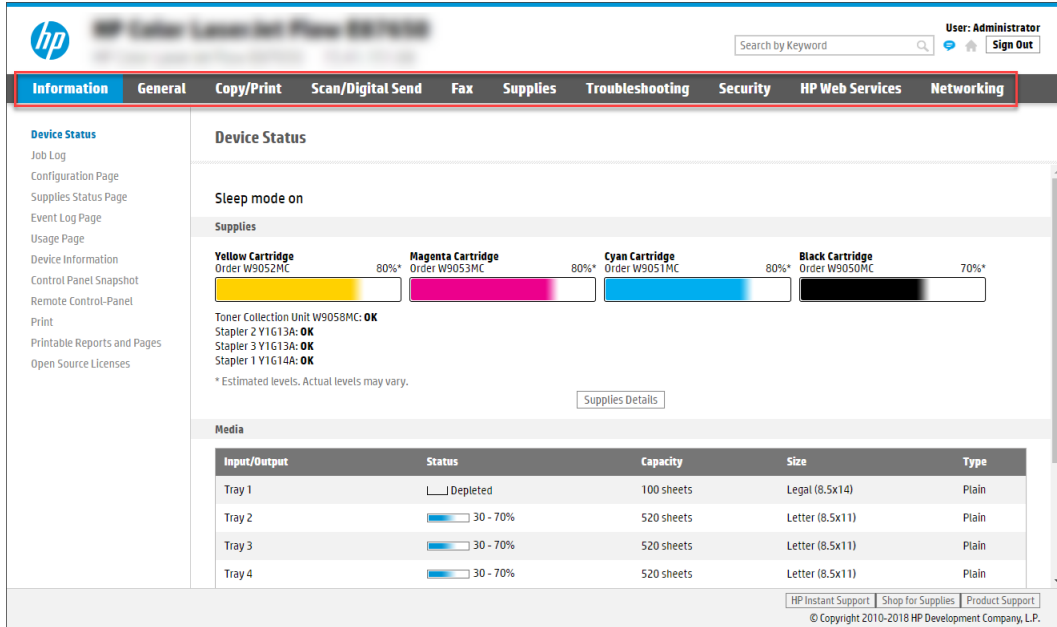
Linux

- Google Chrome (version 34.x or greater)
- Firefox (version 20.x or greater)

## HP Embedded Web Server features

Learn about the HP Embedded Web Server (EWS) features available on each tab.

Figure 4-21 EWS Tabs



**NOTE:** Copy/Print, Scan/Digital Send, and Fax tabs only appear for multi-function printers (MFPs). A Print tab appears for single-function printers (SFPs).

## Information tab

Refer to the table for settings in the **Information** tab.

Table 4-10 HP Embedded Web Server Information tab

Menu	Description
Device Status	Shows the printer status and shows the estimated life remaining of HP supplies. The page also shows the type and size of paper set for each tray. To change the default settings, click the <b>Change Settings</b> link.
Job Log	Provides a list of the jobs that have been processed.
Configuration Page	Shows the information found on the configuration page.
Supplies Status Page	Shows the status of the supplies for the printer.
Event Log Page	Shows a list of all printer events and errors. Use the <b>HP Instant Support</b> link (in the <b>Other Links</b> area on all HP Embedded Web Server pages) to connect to a set of dynamic web pages that help solve problems. These pages also show additional services available for the printer.
Usage Page	Shows a summary of the number of pages the printer has printed, grouped by size, type, and paper print path.
Device Information	Shows the printer network name, address, and model information. To customize these entries, click the <b>Device Information</b> menu on the <b>General</b> tab.
Control Panel Snapshot	Shows an image of the current screen on the control panel display.
Remote Control-Panel	Provides a way to troubleshoot or manage the printer from a browser window on a desktop or laptop.
Print	Allows the user to send a print-ready file to the printer to be printed.
Printable Reports and Pages	Lists the internal reports and pages for the printer. Select one or more items to print.

Table 4-10 HP Embedded Web Server Information tab (continued)

Menu	Description
Open Source Licenses	Shows a summary of the licenses for open source software programs that can be used with the printer.

## General tab

Refer to the table for settings in the **General** tab.

Table 4-11 HP Embedded Web Server General tab

Menu	Description
Control Panel Customization	Reorder, show, or hide features on the control-panel display.  Change the default display language and keyboard layouts.
Quick Sets	Configure jobs that are available in the <b>Quick Sets</b> area of the Home screen on the printer control panel.
Alerts	Set up email alerts for various printer and supplies events.
Control Panel Settings App	Shows the Settings app options that are available on the printer control panel.
General Settings	Configure how the printer recovers from jams and other general printer settings.
AutoSend	Configure the printer to send automated emails regarding printer configuration and supplies to specific email addresses.
Edit Other Links	Add or customize a link to another website. This link displays in the footer area on all HP Embedded Web Server pages.
Ordering Information	Enter information about ordering replacement toner cartridges. This information displays on the supplies status page.
Device Information	Name the printer and assign an asset number to it. Enter the name of the primary contact who will receive information about the printer.
Language	Set the language in which to display the HP Embedded Web Server information.
Firmware Upgrade	Download and install printer firmware upgrade files.
Date/Time Settings	Set the date and time or synchronize with a network time server.
Energy Settings	Set or edit a wake time, sleep time, and sleep delay for the printer. Set a different schedule for each day of the week and for holidays.  Set which interactions with the printer cause it to wake from sleep mode.
Back up and Restore	Create a backup file that contains printer and user data. If necessary, use this file to restore data to the printer.
Reset Factory Settings	Restore printer settings to the factory defaults.
Solution Installer	Install or remove third-party software packages that extend or modify the functionality of the printer.
Job Statistics Settings	Provides connection information about third-party job-statistics services, or enables local serverless device job accounting.
Quota Settings	Provides connection information about third-party job-quota services, or enables local device quota service.



## Other Links list

Configure which links display in the footer of the HP Embedded Web Server by using the **Edit Other Links** menu on the **General** tab.



**NOTE:** The following are the default links.

**Table 4-12** HP Embedded Web Server Other Links list

Menu	Description
HP Instant Support	Connect to the HP website to find solutions to printer problems.
Shop for Supplies	Connect to the HP website for information on purchasing original HP supplies, such as cartridges and paper.
Product Support	Connect to the support site for the printer to search for help on various topics.

## Copy/Print tab

Refer to the table for settings in the **Copy/Print** tab.

**Table 4-13** HP Embedded Web Server Copy/Print tab

Menu	Description
Print from USB Drive Settings	Enable or disable the <a href="#">Print from USB Drive</a> menu on the control panel.
Manage Stored Jobs	Enable or disable the ability to store jobs in the printer memory. Configure job-storage options.
Default Print Options	Configure the default options for print jobs.
Restrict Color (Color printers only)	Permit or restrict color printing and copying. Specify permissions for individual users or for jobs that are sent from specific software programs.
PCL and PostScript Settings	Adjust the PCL and PostScript settings for all print jobs, including copy jobs and received faxes.
Print Quality	Configure the print quality settings, including color adjustment, image registration, and allowed paper types.
Copy Settings	Configure the default options and Quick Sets for copy jobs. <b>NOTE:</b> If job-specific copy setting options are not set from the control panel at the start of a job, the default settings will be used for the job.
Expert Copy	Enable or disable Expert Copy and set the initial copy view. The Expert Copy feature is available only on some HP MFPs with larger control panels, and is available in FutureSmart 4 firmware 24.7.3 release or later.
Manage Trays	Configure settings for paper trays.
Manage Stapler/Stacker	Configure settings for the stapler/stacker for printers that have this feature.

## Scan/Digital Send tab

Refer to the table for settings in the **Scan/Digital Send** tab.

**Table 4-14 HP Embedded Web Server Scan/Digital Send tab**

Menu	Description
<b>Email Setup</b>	<p>Configure the default email settings for digital sending, including the following:</p> <ul style="list-style-type: none"> <li>● Settings for the outgoing mail (SMTP) server</li> <li>● Settings for Email Quick Sets jobs</li> <li>● Default message settings, such as the "From" address and the subject line</li> <li>● Settings for digital signatures and encryption</li> <li>● Settings for email notifications</li> <li>● Default scan settings for email jobs</li> <li>● Default file settings for email jobs</li> </ul>
<b>Scan to Network Folder</b>	<p>Configure the network folder settings for digital sending, including the following:</p> <ul style="list-style-type: none"> <li>● Settings for Quick Sets jobs saved in a network folder</li> <li>● Settings for notifications</li> <li>● Default scan settings for jobs saved in a network folder</li> <li>● Default file settings for jobs saved in a network folder</li> </ul>
<b>Scan to SharePoint®</b>	<p>Configure the SharePoint settings for digital sending, including the following:</p> <ul style="list-style-type: none"> <li>● Settings for Quick Sets jobs saved in a document library on the SharePoint site</li> <li>● Default settings for jobs saved in a document library on the SharePoint site</li> </ul>
<b>Scan to USB Drive</b>	<p>Configure the USB settings for digital sending, including the following:</p> <ul style="list-style-type: none"> <li>● Settings for Quick Sets jobs saved on a USB flash drive</li> <li>● Settings for notifications</li> <li>● Default scan settings for jobs saved on a USB flash drive</li> <li>● Default file settings for jobs saved on a USB flash drive</li> </ul>
<b>Contacts</b>	<p>Manage contacts, including the following:</p> <ul style="list-style-type: none"> <li>● Add email addresses into the printer one at a time.</li> <li>● Import a large list of frequently-used email addresses on to the printer all at once, rather than adding them one at a time.</li> <li>● Export contacts from the printer into a .CSV file on the computer to use as a data backup, or import the records onto another HP printer.</li> <li>● Edit email addresses that have already been saved in the printer.</li> </ul>
<b>Preferences</b>	<p>Manage general scanning settings.</p>
<b>Email and Scan to Network Folder Quick Setup Wizards</b>	<p>Configure the printer to send scanned images as email attachments.</p> <p>Configure the printer to save scanned images to network-folder Quick Sets. Quick Sets provide easy access to files saved on the network.</p>
<b>Digital Sending Software Setup</b>	<p>Configure settings related to using optional Digital Sending software.</p>

## Fax tab

Refer to the table for settings in the **Fax** tab.

**Table 4-15** HP Embedded Web Server Fax tab

Menu	Description
<b>Fax Send Setup</b>	Configure settings for sending faxes, including the following: <ul style="list-style-type: none"><li>● Default settings for outgoing faxes</li><li>● Settings for fax Quick Sets jobs</li><li>● Settings for notifications</li><li>● Default setting for sending faxes using the internal fax modem</li><li>● Settings for using a LAN fax service</li><li>● Settings for using an Internet fax service</li></ul>
<b>Fax Speed Dials</b>	Manage speed dials, including the following: <ul style="list-style-type: none"><li>● Import .CSV files containing email addresses, fax numbers, or user records, so that they can be accessed on this printer.</li><li>● Export email, fax, or user records from the printer into a file on the computer to use as a data backup, or import the records onto another HP printer.</li></ul>
<b>Fax Receive Setup</b>	Configure default print options for incoming faxes, and set up a fax printing schedule.
<b>Fax Archive and Forwarding</b>	Enable or disable fax archiving and fax forwarding, and configure basic settings for each: <ul style="list-style-type: none"><li>● Fax archiving is a method to send a copy of all incoming and outgoing faxes to an email address, a network folder, or an FTP server.</li><li>● Fax forwarding is a method to forward incoming faxes to a different fax device.</li></ul>
<b>Fax Activity Log</b>	Contains a list of the faxes that have been sent from or received by this printer.

## Supplies tab

Refer to the table for settings in the **Supplies** tab.

**Table 4-16** HP Embedded Web Server Supplies tab

Menu	Description
<b>Manage Supplies</b>	Configure how the printer reacts when supplies reach a Very Low state.

## Troubleshooting tab

Refer to the table for settings in the **Troubleshooting** tab.

**Table 4-17** HP Embedded Web Server Troubleshooting tab

Menu	Description
<b>General Troubleshooting</b>	Use the following options as appropriate: <ul style="list-style-type: none"><li>● <b>Reports and Tests</b> area: Select and print several types of reports and tests. Some reports can be viewed in the EWS by clicking the <b>View</b> button.</li></ul>

Table 4-17 HP Embedded Web Server Troubleshooting tab (continued)

Menu	Description
	<ul style="list-style-type: none"> <li>● <b>Fax Tools</b> area: Configure settings for fax troubleshooting. (MFP and Digital Sender products with HP analog fax accessory only)</li> <li>● <b>OXPd Troubleshooting</b> area: Enable or disable the <b>Allow a Non-Secure Connection for Web Services</b> option</li> <li>● <b>Auto Recovery</b> area: Enable or disable the <b>Enable Auto Recovery</b> option, which allows the printer to auto recover from errors that might require the power to be turned off and on (for example, a 49 error).</li> </ul>
<b>Online Help</b>	Link to HP cloud-based online help to assist in troubleshooting printing issues.
<b>Diagnostic Data</b>	Export printer information to a file that can be useful for HP technical support to use for detailed problem analysis.
<b>NOTE:</b> This item is available only if an administrator password is set from the <b>Security</b> tab.	
<b>Calibration/Cleaning</b> (Color LaserJet printers only)	Enable the automatic cleaning feature, create and print the cleaning page, and select an option to calibrate the printer immediately.
<b>Reset Factory Settings</b>	Restore printer settings to factory defaults.
<b>Firmware Upgrade</b>	Download and install printer firmware upgrade files.

## Security tab

Refer to the table for settings in the **Security** tab.

Table 4-18 HP Embedded Web Server Security tab

Menu	Description
<b>General Security</b>	Settings for general security, including the following: <ul style="list-style-type: none"> <li>● Configure an administrator password to restrict access to certain features on the printer.</li> <li>● Set a custom device Service Access Code.</li> <li>● Set PJI password for processing PJI commands.</li> <li>● Set file system access and firmware upgrade security.</li> <li>● Enable or disable the Host USB port on the control panel or the USB connectivity port on the formatter for printing directly from a computer.</li> <li>● View the status of all security settings.</li> </ul>
<b>Account Policy</b>	Enable administrator account settings.
<b>Access Control</b>	Configure access to printer functions for specific individuals or groups, and select the method individuals use to sign in to the printer.
<b>Protect Stored Data</b>	Configure and manage the internal storage for the printer.  Configure settings for jobs that are stored on the printer internal storage.
<b>Manage Remote Apps</b>	Manage or whitelist remote apps by importing or deleting certificates that allow devices to use this product.
<b>Certificate Management</b>	Install and manage security certificates for access to the printer and the network.

**Table 4-18 HP Embedded Web Server Security tab (continued)**

Menu	Description
Email Domain Restriction	If email functionality is enabled, administrators can limit the email addresses to which the printer can send messages.
Web Service Security	Allow resources on this printer to be accessed by web pages from different domains. If no sites are added to the list, then all sites are trusted.
Self Test	Verify that the security functions are running according to expected system parameters.

## HP Web Services tab

Use the **HP Web Services** tab to configure and enable HP Web Services for this printer. It is necessary to Enable HP Web Services to use the HP ePrint feature.

**Table 4-19 HP Embedded Web Server HP Web Services tab**

Menu	Description
Web Services Setup	Connect this printer to HP Connected on the web by enabling HP Web Services.
Web Proxy	Configure a proxy server if there are issues enabling HP Web Services or connecting the printer to the Internet.
HP JetAdvantage	Access solutions that extend the capabilities of the printer
Smart Cloud Print	Enable Smart Cloud Print, which allows access to web-based apps that extend the capabilities of the printer.

## Networking tab

Use the **Networking** tab to configure and secure network settings for the printer when it is connected to an IP-based network. This tab does not display if the printer is connected to other types of networks.

**Table 4-20 HP Embedded Web Server Networking tab > Configuration settings**

Menu	Description
Wireless Station	Configure the initial wireless settings.  <b>NOTE:</b> The configuration options available depend on the print server model.
Wi-Fi Direct	Configure Wi-Fi Direct settings for printers that include embedded Wi-Fi Direct Print and NFC printing or that have a wireless accessory installed.  <b>NOTE:</b> The configuration options available depend on the print server model.
TCP/IP Settings	Configure TCP/IP settings for IPv4 and IPv6 networks.  <b>NOTE:</b> The configuration options available depend on the print server model.
Network Settings	Configure IPX/SPX, AppleTalk, DLC/LLC, and SNMP settings, depending on the print server model.
Other Settings	Configure general printing protocols and services supported by the print server. The available options depend on the print server model, but can include firmware update, LPD queues, USB settings, support information, and refresh rate.
AirPrint	Enable, set up, or disable network printing from Apple-supported printers.

**Table 4-20 HP Embedded Web Server Networking tab > Configuration settings (continued)**

Menu	Description
Select Language	Change the language displayed by the HP Embedded Web Server. This page displays if the web pages support multiple languages. Optionally, select supported languages through language-preference settings in the browser.
Select Location	Select a country/region for the printer.

**Table 4-21 HP Embedded Web Server Networking tab > Google Cloud Print settings**

Menu	Description
Setup	Set up Google Cloud Print options.
Web Proxy	Configure proxy settings.

**Table 4-22 HP Embedded Web Server Networking tab > Security settings**

Menu	Description
Settings	View and restore current security settings to factory-default values.  Configure security settings using the Security Configuration Wizard.  <b>NOTE:</b> Do not use the Security Configuration Wizard to configure security settings if using network-management applications, such as HP Web Jetadmin.
Authorization	Control configuration management and use of this printer, including limiting host access to this printer through an Access Control List (ACL) (for selected print servers on IPv4 networks only).
Secure Communication	Configure Transport Layer Security (TLS) protocol and encryption options.
Mgmt. Protocols	Configure and manage security protocols for this printer, including the following: <ul style="list-style-type: none"> <li>● Set the security management level for the HP Embedded Web Server, and control traffic over HTTP and HTTPS.</li> <li>● Configure the SNMP (Simple Network Management Protocol) operation. Enable or disable the SNMP v1/v2c or SNMP v3 agents on the print server.</li> <li>● Control access through protocols that may not be secure, such as printing protocols, print services, discovery protocols, name resolution services, and configuration-management protocols.</li> </ul>
802.1X Authentication	Configure 802.1X authentication settings on the Jetdirect print server as required for client authentication on the network, and reset the 802.1X authentication settings to factory-default values.  <b>CAUTION:</b> When changing the 802.1X authentication settings; the printer might lose its connection. To reconnect, it might be necessary to reset the print server to a factory-default state and reinstall the printer.
IPsec/Firewall	View or configure a Firewall policy or an IPsec/Firewall policy.
Announcement Agent	Enable or disable the HP Device Announcement Agent, set the configuration server, and configure mutual authentication using certificates.


**Table 4-23 HP Embedded Web Server Networking tab > Diagnostics settings**

Menu	Description
<b>Network Statistics</b>	Display network statistics that are collected and stored on the HP Jetdirect print server.
<b>Protocol Info</b>	View a list of network-configuration settings on the HP Jetdirect print server for each protocol.
<b>Configuration Page</b>	View the HP Jetdirect configuration page, which contains status and configuration information.

## Print menu (SFP) and Copy/Print menu (MFP)

Learn about the control-panel [Print](#) menu (SFP) and the [Copy/Print](#) menu (MFP).

**To display:** At the printer control panel, select the [Settings](#) menu, and then select the [Print](#) menu (SFP) or the [Copy/Print](#) menu (MFP).

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the [OK](#) button to print the pages.

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

**Table 4-24 Print menu (SFP) or Copy/Print menu (MFP)**

First level	Second level	Third level	Fourth Level	Values	Description
Copy Settings MFP	Image preview			Make optional	Use this menu to configure how <a href="#">Copy</a> behaves.
				Require preview	
				Disable preview	
Copy Settings MFP	Copies			1-9999	Configure the default options for copy jobs. If the user does not specify the job options when creating the job, the default options are used.
				Default = 1	
Copy Settings MFP	Sides	Original Sides		1-sided	Use to indicate whether the original document is printed on one or both sides. For example, select <a href="#">Original Sides 1-sided</a> and <a href="#">Output Sides 2-sided</a> when the original is printed on one side, but you want to make two-sided copies.
				2-sided	
				Flip pages up	
Copy Settings	Sides	Output Sides		1-sided	Use to indicate whether the copies

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
MFP				2-sided Flip pages up	should be printed on one or both sides. For example, select <a href="#">Original Sides 1-sided</a> and <a href="#">Output Sides 2-sided</a> when the original is printed on one side, but you want to make two-sided copies.  Select <a href="#">Flip pages up</a> to print the pages with long edge of the in the landscape orientation.
Copy Settings MFP	Watermark	Watermark Type		None* Text	Use to set a text watermark.
Copy Settings MFP	Watermark	Watermark Text		Draft Confidential Secret Top Secret Urgent	Select a predefined text watermark.
Copy Settings MFP	Watermark	Text Font		Letter Gothic* Antique Olive New Century Schoolbook Roman Garamond Antiqua	Select the font of the text watermark.
Copy Settings MFP	Watermark	Text Size		30 point 40 point* 60 point	Select the font point size of the text watermark.
Copy Settings MFP	Watermark	Darkness		1 - (Lighter) 2 3* 4 5 - (Darker)	Select the darkness of the text watermark.
Copy Settings MFP	Stamps	Stamp Content		User-defined value None* IP address User name Product information Page number	Use to set a stamp in any or all the following locations in the document: <ul style="list-style-type: none"><li>● Top Left</li><li>● Top Center</li><li>● Top Right</li></ul>



Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
				Date and time	<ul style="list-style-type: none"> <li>● Bottom Left</li> <li>● Bottom Center</li> <li>● Bottom Right</li> </ul>
Copy Settings MFP	Stamps	Text Font		Letter Gothic* Antique Olive New Century Schoolbook Roman Garamond Antiqua	Select the font of the stamp.
Copy Settings MFP	Stamps	Text Size		8 point 12 point* 20 point	Select the font point size of the stamp.
Copy Settings MFP	Stamps	White background		Disabled* Enabled	Select the check box to enable a white background for the stamp.
Copy Settings MFP	Scan Mode			Standard document* Prompt for additional pages Book 2-sided ID	<p>Use to indicate the type of original document to be scanned.</p> <p>Select <a href="#">Prompt for additional pages</a> to copy or scan an original document that has more pages than the document feeder can accommodate at one time, or to scan originals of different sizes that cannot be scanned together, and then combine these separate scan jobs into a single job.</p>
Copy Settings MFP	Reduce/Enlarge			Automatic* Include margins Manual Default=100	<p>Scale the size of the document up or down.</p> <p>To reduce the image, select a scaling percentage that is less than 100. To enlarge the image, select a scaling percentage that is greater than 100.</p> <p>When <a href="#">Include margins</a> is enabled, the printer reduces the image slightly to fit the entire scanned image within the</p>

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
					printable area on the page.
Copy Settings	Original Size			Automatically detect*	Specify the size of the original document.
MFP				Letter (8.5x11)	
				Mixed Letter/Legal	
				Legal (8.5x14)	
				Executive (7.25x10.5)	
				Statement (5.5x8.5)	
				Oficio (8.5x13)	
				4x6	
				5x7	
				5x8	
				A4 (210x297 mm)	
				A5 (148x210 mm)	
				A6 (105x148 mm)	
				RA4 (215x305 mm)	
				B5 (182x257 mm)	
				B6 (128x182 mm)	
				10x15cm	
				16K (195x270 mm)	
				16K (184x260 mm)	
				16K (197x273 mm)	
				DPostcard JIS (148x200 mm)	
				Oficio (216x340 mm)	
Copy Settings	Paper Selection		Paper Size	Match original size*	Select the size of paper to use when printing or making copies.
MFP				Letter (8.5x11)	
				Legal (8.5x14)	
				Executive (7.25x10.5)	
				Statement (5.5x8.5)	
				Oficio (8.5x13)	
				3x5	
				4x6	
				5x7	
				5x8	

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
				A4 (210x297 mm)	
				A5 (148x210 mm)	
				A6 (105x148 mm)	
				RA4 (215x305 mm)	
				B5 (182x257 mm)	
				B6 (128x182 mm)	
				10x15cm	
				16K (195x270 mm)	
				16K (184x260 mm)	
				16K (197x273 mm)	
				Postcard JIS (100x148 mm)	
				DPostcard JIS (148x200 mm)	
				Envelope #9	
				Envelope #10	
				Envelope Monarch	
				Envelope #10	
				Envelope B5	
				Envelope C5	
				Envelope C6	
				Envelope DL	
				Custom	
				Oficio (216x340 mm)	
Copy Settings	Paper Selection		Paper Type	Any Type	Select the type of paper to use when printing or making copies.
MFP				Plain*	
				Light 60-74g	
				Intermediate 85-95g	
				Mid-Weight 96-110g	
				Heavy 111-130g	
				Extra Heavy 131-175g	
				Cardstock 176-220g	
				Mono Transparency	
				Labels	
				Letterhead	

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
				Envelope	
				Preprinted	
				Prepunched	
				Colored	
				Bond	
				Recycled	
				Rough	
				HP EcoFFICIENT	
				Light Bond	
Copy Settings MFP	Paper Selection		Paper Tray	Automatically detect* Manually Feed Tray 1 Tray 2	Select which tray to use when printing or making copies.
Copy Settings MFP	Booklet	Booklet Format		Enabled Disabled*	Select to have Booklet Format off or on.
Copy Settings MFP	Booklet	Booklet Format	Borders on each page	Enabled Disabled*	Select to have borders printed on the page.
Copy Settings MFP	Content Orientation			Portrait* Landscape	Specify the way the content of the original document is placed on the page.
Copy Settings MFP	Pages per Sheet			One* Two Four	Select how many pages to print on one sheet.
Copy Settings MFP	Page Order			Right, then down Down, then right	Select to print the pages in rows or columns.
Copy Settings MFP	Add page borders			Enabled Disabled*	Select the <a href="#">Add page borders</a> checkbox to add borders to the pages.
Copy Settings MFP	Image Adjustment	Darkness		1 - (Lighter) 2 3 4 5* 6 7	Adjust to increase or decrease the amount of white and black in the colors.

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
				8	
				9 - (Darker)	
Copy Settings	Image Adjustment	Contrast		1 - (Less)	Adjust to increase or decrease the difference between the lightest and darkest color on the page.
MFP				2	
				3	
				4	
				5*	
				6	
				7	
				8	
				9 - (More)	
Copy Settings	Image Adjustment	Background Cleanup		1 - (Normal)	Adjust if you are having trouble copying a faint image.
MFP				2	
				3*	
				4	
				5*	
				6	
				7	
				8	
				9 - (Cleaner)	
Copy Settings	Image Adjustment	Sharpness		1 - (Less)	Adjust to sharpen or soften the image.
MFP				2	
				3*	
				4	
				5 - (More)	
Copy Settings	Optimize Text/Picture			Text	Select to optimize for the output of a particular type of content.
MFP				Mixed*	
				Printed picture	
				Photograph	
Copy Settings	Edge-to-Edge			Normal (recommended)	When the Edge-to-Edge feature is enabled, the product minimizes margins and prints as close to the edge of the paper as possible.
MFP				Edge-to-Edge output	

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
Copy Settings MFP	Erase Edges	Use inches		Enabled*	Use the Erase Edges feature to remove blemishes, such as dark borders or staple marks, by cleaning the edges of the scanned image.  Disabling Use inches changes the measurements to millimeters.
				Disabled	
Copy Settings MFP	Erase Edges	Front Side		Specify a different width for each edge	Sets the width of the edge to clean.
				Apply same width to all edges*	
				All edges value Default = 0.00	
Copy Settings MFP	Erase Edges	Back Side		Specify a different width for each edge	Sets the width of the edge to clean.
				Apply same width to all edges	
				Mirror front side*	
Copy Settings MFP	Collate			Collate on*	When Collate on is selected, each set of copied pages are assembled in the same order as the original document.
				Collate off	
Copy Settings MFP	Multi-feed Detection			Disabled	Use this feature to detect when multiple pages are fed simultaneously into the ADF (automatic document feeder) or sheet-feed scanner.
				Enabled*	
Copy Settings MFP					
Enable Print from USB Drive				Enabled Disabled*	Enables the printer to open a file from a USB drive.
Manage Stored Jobs	Job Sort Order			Job Name* Date*	This option allows you list the jobs either alphabetically or chronologically.
Manage Stored Jobs	Retain Temporary Jobs			Do not retain Personal jobs only	Sets which temporary jobs will be retained in the event of a printer reboot.

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
				All temporary jobs	
Manage Stored Jobs	Temporary Job Storage Limit			1-300 Default = 32	Configure global settings for jobs that are stored in the printer memory.  The <a href="#">Temporary Job Storage Limit</a> feature specifies the number of temporary jobs that can be stored on the printer. The maximum allowed value is 300.
Manage Stored Jobs	Temporary Job Storage Retention			Off 30 minutes 1 hour 4 hours 1 day 1 week 4 weeks 3 days	Configure global settings for temporary jobs that are stored in the printer memory.  The <a href="#">Temporary Stored Job Retention</a> feature specifies the amount of time temporary jobs can be stored on the printer.
Manage Stored Jobs	Standard Stored Job Retention			Off 30 minutes 1 hour 4 hours 1 day 1 week 4 weeks 3 days	Configure global settings for jobs that are stored in the printer memory.  The <a href="#">Standard Stored Job Retention</a> feature specifies the amount of time jobs can be stored on the printer.
Default Print Options	Number of Copies			Range: 1-32000 Default = 1	Sets the default number of copies for a copy job. This default applies when the <a href="#">Copy</a> function or the <a href="#">Quick Copy</a> function is initiated from the printer Home screen.
Default Print Options	Paper Selection	Paper size Paper type Paper tray		Select from a list of sizes that the printer supports.	Configures the default paper size, type and tray used for print jobs.
Default Print Options	Default Custom Paper Size	X Dimension		Range: 3.00-8.50 inches	Configures the default paper size

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
				Default = 8.5 inches	that is used when the user selects <b>Custom</b> as the paper size for a print job.
Default Print Options	Default Custom Paper Size	Y Dimension		Range: 5.00-14.00 inches Default = 14 inches	Configures the default paper size that is used when the user selects <b>Custom</b> as the paper size for a print job.
Default Print Options	Default Custom Paper Size	Use Inches		Enabled* Disabled	
Default Print Options	Output Sides			1-sided* 2-sided	Use to indicate whether the original document is printed on one or both sides.
Default Print Options	Edge-to-Edge			Normal (recommended)* Edge-to-Edge output	Use to avoid shadows that can appear along the edges of copies when the original document is printed close to the edges.
Default Print Options	Resolution			FastRes 1200* ProRes 1200	Use to select the level of desired print quality.
Default Print Options	Resolution	Economode		Enabled Disabled*	Text is printed using less toner. This setting is useful when you are printing drafts. You can turn on this option independently of other print quality settings.
PCL and Postscript Settings	Courier Font			Regular* Dark	Select which version of the Courier font you want to use. The factory default setting is <b>Regular</b> , which uses an average stroke width. The <b>Dark</b> setting can be used if a heavier Courier font is needed.
PCL and Postscript Settings	Wide A4			Enabled Disabled*	Changes the printable area of A4-size paper. If you enable this option, eighty 10-pitch characters can be printed on a single line of A4 paper.



Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
PCL and Postscript Settings	Print PS Errors			Enabled	Use this feature to select whether a PostScript (PS) error page is printed when the printer encounters a PS error.
				Disabled*	
PCL and Postscript Settings	Print PDF Errors			Enabled	Selects whether a PDF error page is printed when the printer encounters a PDF error.
				Disabled*	
PCL and Postscript Settings	Personality			Automatic*	Configures the default print language or personality for the printer. Normally you should not change the printer language. If you change the setting to a specific printer language, the printer does not automatically switch from one language to another unless specific software commands are sent to it.
				PCL	
				PS	
				PDF	
PCL and Postscript Settings	PCL	Font Settings	Font Source	Internal	Selects the font source for the user-soft default font. The list of available options varies depending on the installed printer options.
				Disk resident*	
PCL and Postscript Settings	PCL	Font Settings	Font Number	Range: 0-110	Specifies the font number for the user-soft default font using the source that is specified in the <a href="#">Font Source</a> menu. The printer assigns a number to each font and lists it on the PCL font list. The font number displays in the Font # column of the printout.
				Default = 0	
PCL and Postscript Settings	PCL	Font Settings	Font Pitch	Range: 0.44-99.99	If the <a href="#">Font Source</a> option and the <a href="#">Font Number</a> setting indicate a contour font, then use this feature to select a default pitch (for a fixed-spaced font).
				Default = 10	

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
PCL and Postscript Settings	PCL	PCL Settings	Form Length	Range: 5-128 lines Default = 60	Controls the PCL print-command options. PCL is a set of printer commands that HP developed to provide access to printer features.  Use the <a href="#">Form Length</a> feature to select the user soft -default vertical form length.
PCL and Postscript Settings	PCL	PCL Settings	Orientation	Portrait* Landscape	Select the orientation that is most often used for copy or scan originals. Select the <a href="#">Portrait</a> option if the short edge is at the top or select the <a href="#">Landscape</a> option if the long edge is at the top.
PCL and Postscript Settings	PCL	PCL Settings	Symbol Set	Select from a list of symbol sets.	Select any one of several available symbol sets from the control panel. A symbol set is a unique grouping of all the characters in a font. The factory default value for this option is PC-8. Either PC-8 or PC-850 are recommended for line-draw characters.
PCL and Postscript Settings	PCL	PCL Settings	Append CR to LF	Enabled Disabled*	When enabled, this option appends a carriage return to each line feed encountered in backwards-compatible PCL jobs.
PCL and Postscript Settings	PCL	PCL Settings	Suppress Blank Pages	Enabled Disabled*	This option is for users who are generating their own PCL, which could include extra form feeds that would cause blank pages to be printed. When the <a href="#">On</a> option is selected, form feeds are ignored if the page is blank.
PCL and Postscript Settings	PCL	PCL Settings	Media Source Mapping	Standard* Classic	Use to select and maintain input trays by number when you are not using the printer

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
					<p>driver, or when the software program has no option for tray selection. The following options are available:</p> <p><b>Standard:</b> Tray numbering is based on newer HP LaserJet models.</p> <p><b>Classic:</b> Tray numbering is based on HP LaserJet 4 and older models.</p>
Print Quality	General	Toner Density		A sliding bar appears with the indicator set in the middle between <a href="#">Less</a> and <a href="#">More</a> .	Lighten or darken the print on the page by changing the toner density setting.
Print Quality	General	REt		Disabled Enabled*	Use this setting to enable or disable Resolution Enhancement technology (REt), which produces smoother angles, curves, and edges.
Print Quality	Image Registration	Tray	Tray 1 Tray 2 Tray 3 Tray 4 Tray 5  Depends upon the number of trays installed		Specify tray to be adjusted
Print Quality	Image Registration	Front-side Horizontal Shift Front-side Vertical Shift Back-side Horizontal Shift Back-side Vertical Shift		-5.00 mm to 5.00 mm	<p>Shift the margin alignment to center the image on the page from top to bottom and from left to right. You can also align the image on the front with the image printed on the back.</p> <p>The direction that is perpendicular to the way the paper passes through the printer is referred to as X. This is also known as the scan direction. X1 is the scan direction for</p>

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
					a single-sided page or for the second side of a two-sided page. X2 is the scan direction for the first side of a two-sided page.
					The direction that the paper feeds through the printer is referred to as Y. Y1 is the feed direction for a single-sided page or for the second side of a two-sided page. Y2 is the feed direction for the first side of a two-sided page.
					Use the <a href="#">Adjust Tray &lt;X&gt;</a> menu to adjust the registration settings for each tray. Before adjusting these values, print a registration test page. It provides alignment guides in the X and Y directions so you can determine which adjustments are necessary. You can adjust values for X1 Shift, X2 Shift, Y1 Shift, and Y2 Shift.
Print Quality	Image Registration	Print Test Page			Use the <a href="#">Print Test Page</a> option to print a page to test the image registration. It provides alignment guides in the X and Y directions so you can determine which adjustments are necessary.
Print Quality	Auto Sense Behavior	Tray 1		Sense every page Sense first page Sense transparency only	
Print Quality	Auto Sense Behavior	All Other Trays		Sense first page Sense transparency only	
Print Quality	Adjust Paper types	Select from a list of paper types	Print mode	Select from a list of paper types	Changing the <a href="#">Print mode</a> setting is

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
		that the printer supports. The available options are the same for each paper type.		Reset Paper Types	usually the first thing to try to resolve print-quality problems. Problems can include toner not sticking well to the page, a faint image of the page repeated on the same or following page, incorrect gloss level, and so on.
Print Quality	Adjust Paper types	Select from a list of paper types that the printer supports. The available options are the same for each paper type.	Resistance mode	Normal* Up 1 Up 2	Use this setting to correct print quality problems in low-humidity environments and highly resistive paper.  Use the Up options to solve print quality problems that are related to faded images or scattered toner on certain paper types.  The Up options raise the secondary transfer bias.
Print Quality	Adjust Paper types	Select from a list of paper types that the printer supports. The available options are the same for each paper type.	Paper curl mode	Normal* Reduced	Use this setting to reduce paper curl in print jobs.
Print Quality	Optimize	Line Detail		Normal* Off Alternate	Use this setting if you have scattered lines in printed pages.
Print Quality	Optimize	Moisture Control		Normal* Alternate	
Print Quality	Optimize	Envelope control		Normal Reduced Temp	
Print Quality	Optimize	Tray 1		Normal Alternate	
Print Quality	Optimize	Background		Normal Alternate	
Print Quality	Optimize	Uniformity Control		Normal Alternate 1	

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
				Alternate 2	
				Alternate 3	
Print Quality	Optimize	Cac03		Off	
				On	
Print Quality	Optimize	Best Normal		Off	
				On	
Print Quality	Optimize	Tracking Control		Off	
				On	
Print Quality	Optimize	Registration		Normal	
				Alternate	
Print Quality	Optimize	Transfer Control		Normal	
				Alternate 1	
Print Quality	Optimize	Moisture Control		Normal	
				Alternate	
Print Quality	Optimize	Reset Optimize		Reset	
Print Quality	Edge Control			Off	
				Light	
				Normal*	
				Maximum	
Manage Trays	Use Requested Tray			Exclusively*	Controls how the printer handles jobs that have specified a specific input tray. Two options are available:  <b>Exclusively:</b> The printer never selects a different tray when the user has indicated that a specific tray should be used, even if that tray is empty.  <b>When available:</b> The printer pulls from another tray if the specified tray is empty, even though the specific tray was indicated for the job.
				When available	
Manage Trays	Manually Feed Prompt			Always prompt*	Indicate whether a prompt should appear when the type or size for
				Prompt on mismatch	

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
					<p>a job does not match the specified tray and the printer pulls from the multipurpose tray instead. Two options are available:</p> <p><b>Always:</b> A prompt always displays before using the multipurpose tray.</p> <p><b>Prompt on mismatch:</b> A prompt displays only if the size or type do not match or the tray is empty.</p>
Manage Trays	Size/Type Prompt			<p>Display*</p> <p>Do not display</p>	<p>Controls whether the tray configuration message displays whenever a tray is closed. Two options are available:</p> <p><b>Display:</b> Shows the tray configuration message when a tray is closed. The user is able to configure the tray settings directly from this message.</p> <p><b>Do not display:</b> Prevents the tray configuration message from automatically appearing.</p>
Manage Trays	Use Another Tray			<p>Allow*</p> <p>Do not allow</p>	<p>Use to turn on or off the control panel prompt to select another tray when the specified tray is empty. Two options are available:</p> <p><b>Allow:</b> When this option is selected the user is prompted to either add paper to the selected tray or to choose a different tray. This is the factory default.</p> <p><b>Do not allow:</b> When this option is selected, the user is not given the option of selecting</p>

Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
					a different tray. The printer prompts the user to add paper to the tray that was initially selected.
Manage Trays	Alternative Letterhead Mode			Off* On	Use to load letterhead or preprinted paper into the tray the same way for all print jobs, whether you are printing to one side of the sheet or to both sides of the sheet. When this option is selected, load the paper as you would for printing on both sides. See the user documentation that came with the printer for instructions about loading letterhead for printing on both sides. When this option is selected, the printer speed slows to the speed required for printing on both sides.
Manage Trays	Duplex Blank Pages			Automatic* Always	Controls how the printer handles two-sided jobs (duplexing). Two options are available:  <i>Automatic:</i> Choose this option to skip printing blank sides during a two-sided print job. The printer can print jobs faster when blank sides are skipped.  <i>Always:</i> Choose this option to print all sides of a two-sided job, even if one side is blank. This might be preferable for certain jobs that use paper types such as letterhead or prepunched paper.
Manage Trays	Override A4/Letter			Yes* No	Prints on letter-size paper when an A4 job is sent but no A4-size paper is loaded in the



Table 4-24 Print menu (SFP) or Copy/Print menu (MFP) (continued)

First level	Second level	Third level	Fourth Level	Values	Description
					printer (or to print on A4 paper when a letter-size job is sent but no letter-size paper is loaded). This option will also override A3 with ledger-size paper and ledger with A3-size paper.

## Defeating interlocks

Learn about defeating printer interlocks.

Different tests can be used to isolate different types of issues. For assembly or noise isolation, run the diagnostic test when the toner cartridge door or rear door is open.

Defeating the door interlocks allows observation of the paper pick operation.

### Defeat the front (cartridge) door interlock

1. Open the front door.
2. Insert a folded piece of paper into the slot.

 **TIP:** Fold a stiff piece of paper, for example a business card or index card, into a strip, and insert the strip into the slot for the front door logic switch.

Figure 4-22 Defeat the front (cartridge) door interlock



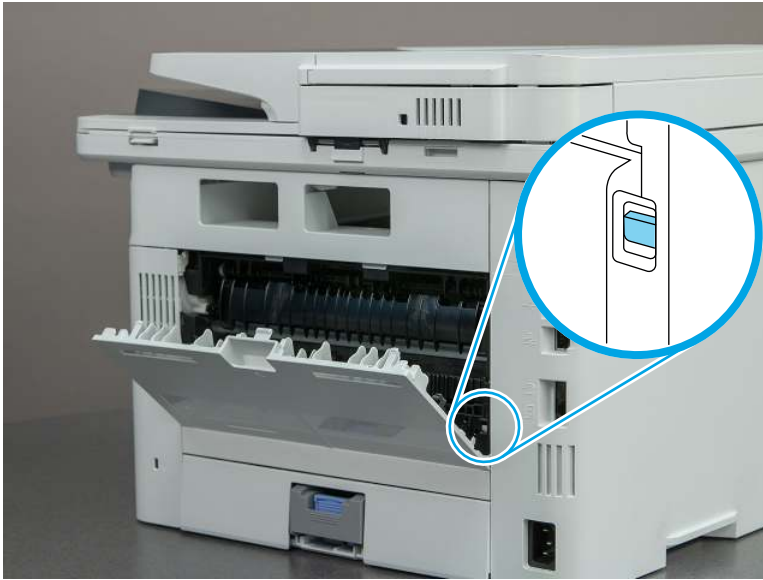
### Defeat the rear door interlock

1. Open the rear door.

2. Insert a folded piece of paper into the slot.

 **TIP:** It might be easier to use a small flat-blade screwdriver to defeat the rear door interlock.

**Figure 4-23** Defeat the rear door interlock



## LED Diagnostics (formatter)

Learn about troubleshooting the printer using formatter LEDs.

### Network LEDs

The formatter has two network port LEDs. When the printer is connected to a properly working network through a network cable, the amber LED indicates network activity, and the green LED indicates the link status.

A blinking amber 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, try to manually configure the network card link speed setting by using the printer control panel.

Configure link speed setting from a SFP control panel

1. From the [Home](#) screen on the printer control panel, use the arrow keys to navigate to [Settings](#), and then press the [OK](#) button.
2. Use the arrow buttons to scroll to [Networking](#), and then press the [OK](#) button.
3. Use the arrow buttons to scroll to [Ethernet](#), and then press the [OK](#) button.
4. Use the arrow buttons to scroll to [Link Speed](#), and then press the [OK](#) button.
5. Use the arrow buttons to scroll to the desired link speed setting, and then press the [OK](#) button.
6. Use the arrow buttons to scroll to [Done](#) (at the bottom of the control-panel display), and then press the [OK](#) button.

Configure link speed setting from an MFP control panel

1. From the [Home](#) screen on the printer control panel, scroll to and touch the [Settings](#) button.
2. Open the following menus:

- [Networking](#)
- [Ethernet](#)
- [Link Speed](#)

3. Touch and then touch the desired link speed setting, and then touch the [Done](#) button.

## Disable cartridge check

Learn about the disable cartridge check troubleshooting diagnostic.



**NOTE:** This item appears in the control-panel menus. However, the function is not available for this printer.

## Print/stop test

Learn about the print/stop test troubleshooting diagnostic.

Use this diagnostic test to isolate the cause of problems such as image-formation defects and jams within the engine.

During this test, stop the paper anywhere along the printer paper path. The test can be programmed to stop printing internal pages or an external print job when the paper reaches a certain position. The test can also be programmed to stop from 0 to 60,000 ms. If the timer is set to a value that is greater than the job-print time, the printer can recover in one of two ways.

Printer recovery (print/stop test)

- After the print job is completed press the [OK](#) button to return to the [Troubleshooting](#) menu before the timer times out.
- After the timer times out, touch the [Stop](#) button. Activate the door switch to restart the engine and return it to a normal state.

Common print/stop test timing millisecond (ms) stops

- **600 ms:** The page has passed the registration area and the leading edge is just short of entering the fuser. The image can be seen on the paper but has not fused. If the defect is visible then the cause might be the drum, transfer roller, or a roller prior to, or in, the registration area.
- **1200 ms:** The leading edge is about 18mm (0.71 in) into the top output bin. The image has gone through the fuser. If the defect was not visible prior to the fuser, and is visible after the fuser, then the fuser it is the likely cause of the print quality defect. Inspect the fuser for damage, debris, or labels stuck to the fuser. Replace the fuser. Discuss media specifications and proper care of the fuser with the customer.

### Print/stop test from a non-touchscreen control panel

1. From the [Home](#) screen on the printer control panel, use the arrow buttons to navigate to [Support Tools](#), and then press the [OK](#) button.
2. Use the arrow buttons to scroll to [Troubleshooting](#), and then press the [OK](#) button.
3. Use the arrow buttons to scroll to [Diagnostic Tests](#), and then press the [OK](#) button.
4. Select [Continue](#) to enter **Maintenance mode**.
5. Use the arrow buttons to scroll to [Print/Stop Test](#), and then press the [OK](#) button.

### Print/stop test from a touchscreen control panel

1. From the [Home](#) screen on the printer control panel, scroll to and touch the [Support Tools](#) button.
2. Open the following menus:
  - [Troubleshooting](#)
  - [Diagnostic Tests](#)
  - [Print/Stop Test](#)
3. Enter a range, and then touch the [OK](#) button.

## Individual component diagnostics

Learn about printer individual component diagnostics.

### Paper path test

Learn about the paper path test troubleshooting diagnostic.

This diagnostic test generates one or more test pages. Use these pages to isolate the cause of jams.

To isolate a problem, specify which input tray to use, and specify the number of copies to print. Print multiple copies to help isolate intermittent problems. The following options become available after beginning the diagnostic feature:

- [Print Test Page](#): Run the paper-path test from the default settings: Tray 2, no duplex, and one copy. To specify other settings, scroll down the menu, and select the setting, and then scroll back up and select [Print Test Page](#) to start the test.
- [Source Tray](#): Select Tray 1, Tray 2, or the optional tray.
- [Number of Copies](#): Set the numbers of copies to be printed; the choices are 1, 10, 50, 100, or 500.

#### Paper path test from a SFP control panel

1. From the [Home](#) screen on the printer control panel, use the arrow buttons to navigate to [Support Tools](#), and then press the [OK](#) button.
2. Use the arrow buttons to scroll to [Troubleshooting](#), and then press the [OK](#) button.
3. Use the arrow buttons to scroll to [Diagnostic Tests](#), and then press the [OK](#) button.
4. Select [Continue](#) to enter **Maintenance mode**.
5. Use the arrow buttons to scroll to [Paper Path Test](#), and then press the [OK](#) button.

#### Paper path test from an MFP control panel

1. From the [Home](#) screen on the printer control panel, scroll to and touch the [Support Tools](#) button.
2. Open the following menus:
  - [Troubleshooting](#)
  - [Diagnostic Tests](#)
  - [Paper Path Test](#)
3. Select the paper path test options for the test.

## Print/stop test

Learn about the print/stop test troubleshooting diagnostic.

Use this diagnostic test to isolate the cause of problems such as image-formation defects and jams within the engine.

During this test, stop the paper anywhere along the printer paper path. The test can be programmed to stop printing internal pages or an external print job when the paper reaches a certain position. The test can also be programmed to stop from 0 to 60,000 ms. If the timer is set to a value that is greater than the job-print time, the printer can recover in one of two ways.

Printer recovery (print/stop test)

- After the print job is completed press the **OK** button to return to the **Troubleshooting** menu before the timer times out.
- After the timer times out, touch the **Stop** button. Activate the door switch to restart the engine and return it to a normal state.

Common print/stop test timing millisecond (ms) stops

- **600 ms:** The page has passed the registration area and the leading edge is just short of entering the fuser. The image can be seen on the paper but has not fused. If the defect is visible then the cause might be the drum, transfer roller, or a roller prior to, or in, the registration area.
- **1200 ms:** The leading edge is about 18mm (0.71 in) into the top output bin. The image has gone through the fuser. If the defect was not visible prior to the fuser, and is visible after the fuser, then the fuser is the likely cause of the print quality defect. Inspect the fuser for damage, debris, or labels stuck to the fuser. Replace the fuser. Discuss media specifications and proper care of the fuser with the customer.

### Print/stop test from a non-touchscreen control panel

1. From the **Home** screen on the printer control panel, use the arrow buttons to navigate to **Support Tools**, and then press the **OK** button.
2. Use the arrow buttons to scroll to **Troubleshooting**, and then press the **OK** button.
3. Use the arrow buttons to scroll to **Diagnostic Tests**, and then press the **OK** button.
4. Select **Continue** to enter **Maintenance mode**.
5. Use the arrow buttons to scroll to **Print/Stop Test**, and then press the **OK** button.

### Print/stop test from a touchscreen control panel

1. From the **Home** screen on the printer control panel, scroll to and touch the **Support Tools** button.
2. Open the following menus:
  - **Troubleshooting**
  - **Diagnostic Tests**
  - **Print/Stop Test**
3. Enter a range, and then touch the **OK** button.

## Paper path sensors test

Learn about the paper path sensors test troubleshooting diagnostic.



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**NOTE:** This item appears in the control-panel menus. However, the function is not available for this printer.

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## Individual component test

Learn about the individual component test troubleshooting diagnostic.



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**NOTE:** This item appears in the control-panel menus. However, the function is not available for this printer.

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## Manual sensor test

Learn about the manual sensor test troubleshooting diagnostic.



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**NOTE:** This item appears in the control-panel menus. However, the function is not available for this printer.

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## Tray/bin manual sensor test

Learn about the tray/bin manual sensor test troubleshooting diagnostic.



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**NOTE:** This item appears in the control-panel menus. However, the function is not available for this printer.

---

## Diagrams: Block diagrams

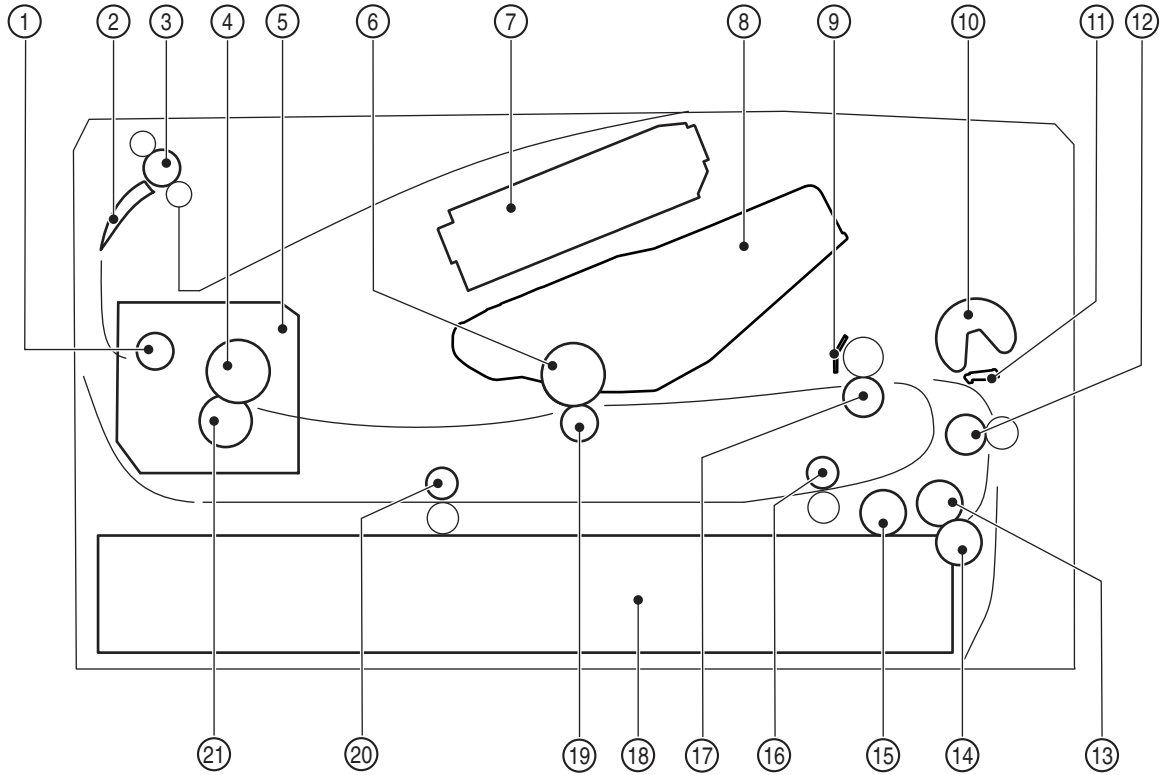
View block diagrams for the printer.

## Cross section diagrams

View printer and paper feeder cross section diagrams.

### Cross-sectional view of the printer

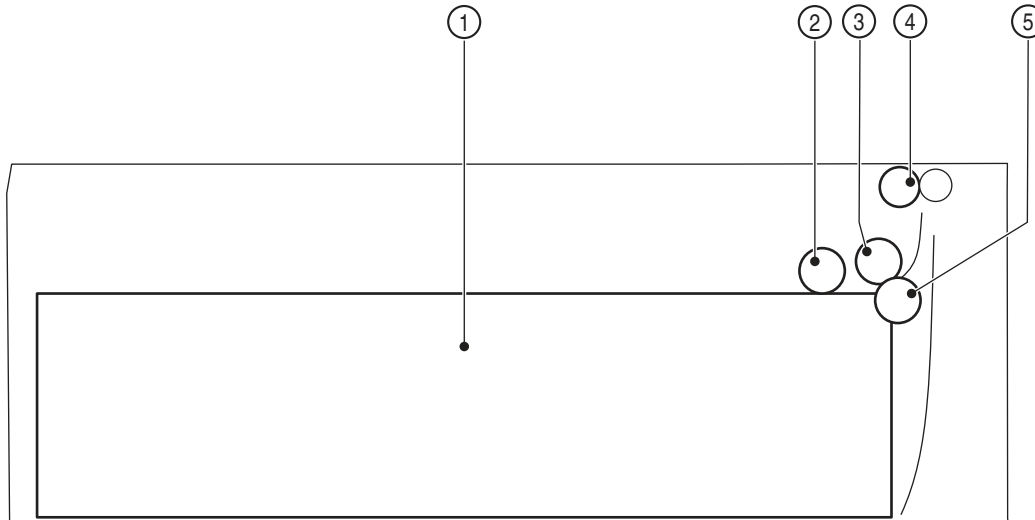
Figure 4-24 Cross-sectional view of the printer



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 4-25** Cross-sectional view of the 550-sheet paper feeder



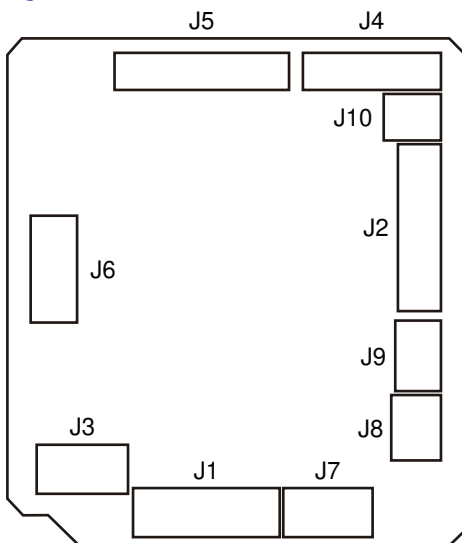
Item	Description
1	Tray 3
2	Tray 3 pickup roller
3	Tray 3 feed roller
4	Feed roller
5	Tray 3 separation roller

## Printed circuit assembly (PCA) connector locations

View printed circuit assembly (PCA) diagrams.

### DC controller PCA connections

**Figure 4-26** DC controller PCA connections

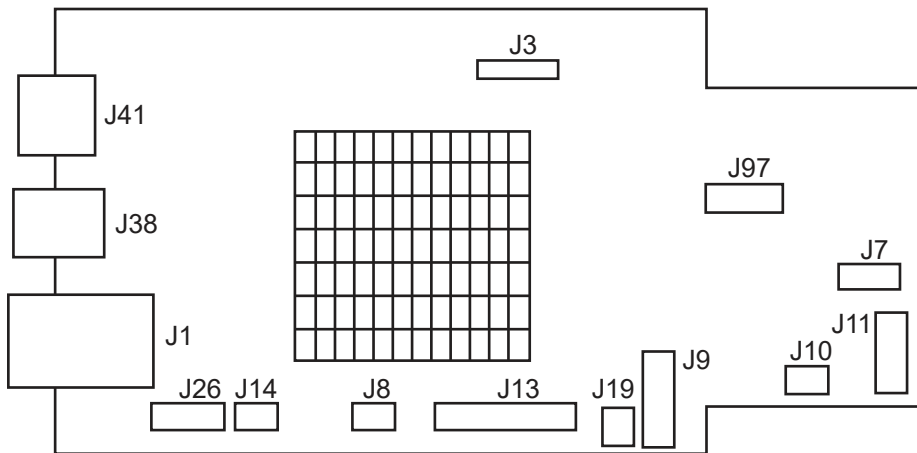




Item	Description	Item	Description
J1	Low-voltage power supply assembly	J6	Thermistor
J2	High-voltage power supply PCA	J7	Media-width sensor
J3	Formatter	J7	Duplex feed sensor
J4	Laser assembly	J7	TOP sensor
J5	Connector PCA	J8	Cassette media out sensor
J6	Output bin media-full sensor	J9	Multipurpose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

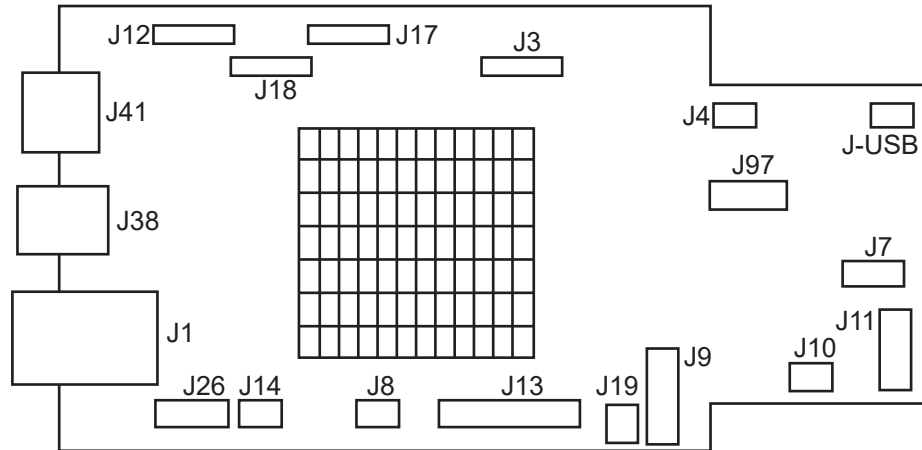
### Formatter PCA connections

Figure 4-27 Formatter PCA connections (SFP)



Item	Description	Item	Description
J1	Ethernet port	J3	Control-panel FFC
J7	Trusted platform module (TPM)	J8	DC controller
J9	Low-voltage power supply (LVPS)	J10	Empty
J11	Island of Data (IOD)	J13	Empty
J14	Empty	J19	Empty
J26	Empty	J38	USB port (direct computer connection)
J41	USB port (job storage or accessory connection)	J97	embedded Multi-Media Card (eMMC)

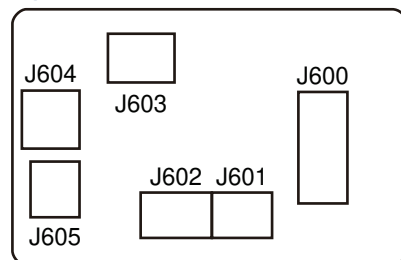
**Figure 4-28** Formatter PCA connections (MFP)



Item	Description	Item	Description
J1	Ethernet port	J3	Control-panel FFC
J4	Fax FFC	J7	Trusted platform module (TPM)
J8	DC controller	J9	Low-voltage power supply (LVPS)
J10	Empty	J11	Empty
J12	Document feeder	J13	Empty
J14	Empty	J17	Sub scanner assembly
J18	Sub scanner assembly	J19	Empty
J26	Empty	J38	USB port (direct computer connection)
J41	USB port (job storage or accessory connection)	J97	embedded Multi-Media Card (eMMC)
J-USB	Walk-up USB port		

### 1x550-sheet paper feeder PCA connectors

**Figure 4-29** 1x550-sheet paper feeder PCA connectors



Item	Description
1	Tray 3
2	Tray 3 pickup roller

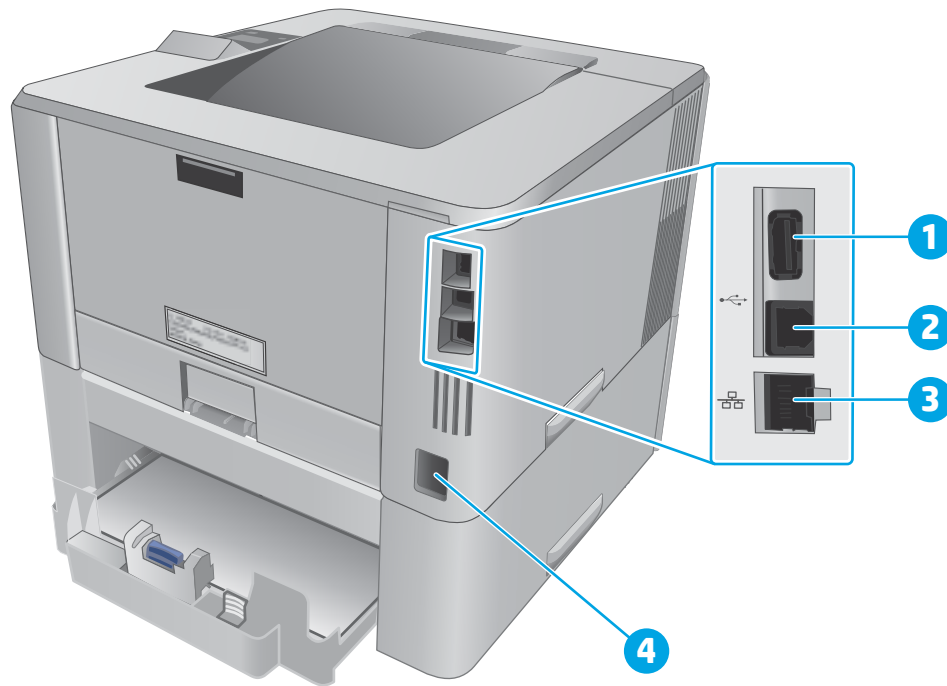
Item	Description
3	Tray 3 feed roller
4	Feed roller
5	Tray 3 separation roller

## Diagrams: External plug and port locations

View printer external plugs and ports diagrams.

### External plug and port locations (SFP)

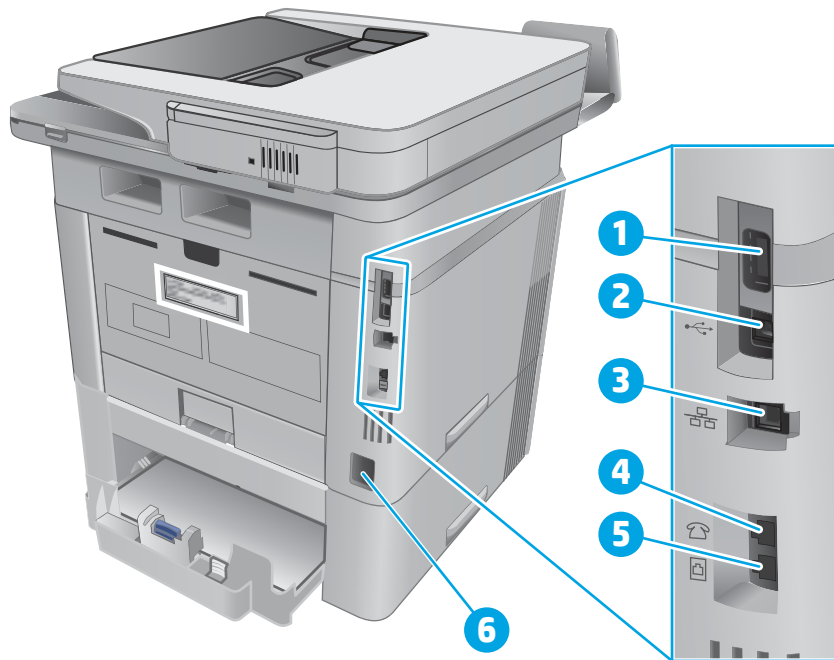
Figure 4-30 External plug and port locations (SFP)



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 4-31 External plug and port locations (MFP)



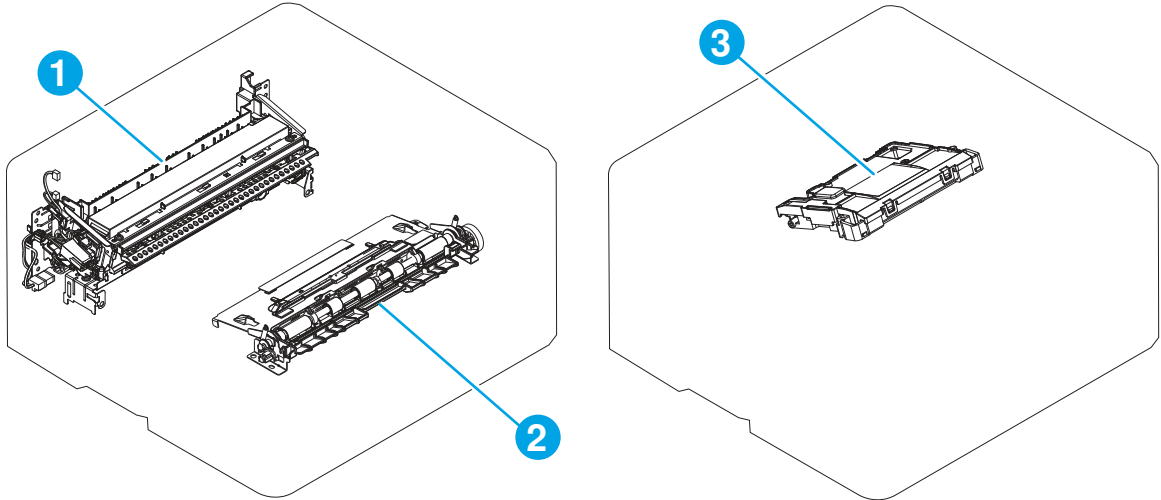
Item	Description
1	USB port (for job storage and private printing)
2	USB interface port
3	Ethernet port
4	Telephone "line out" port (this port is covered by a plug and is inactive)
5	Fax "line in" port (for attaching the fax phone line to the printer)
6	Power connection

## Diagrams: Major component locations

View printer major component locations diagrams.

### Major components (base printer)

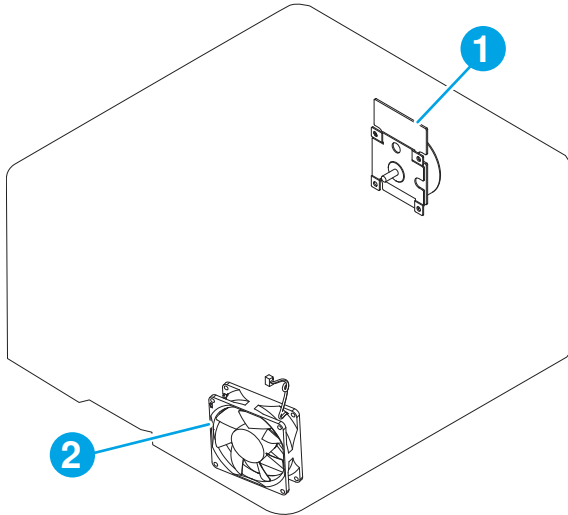
Figure 4-32 Major components (base printer)



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

Motors and fans (base printer)

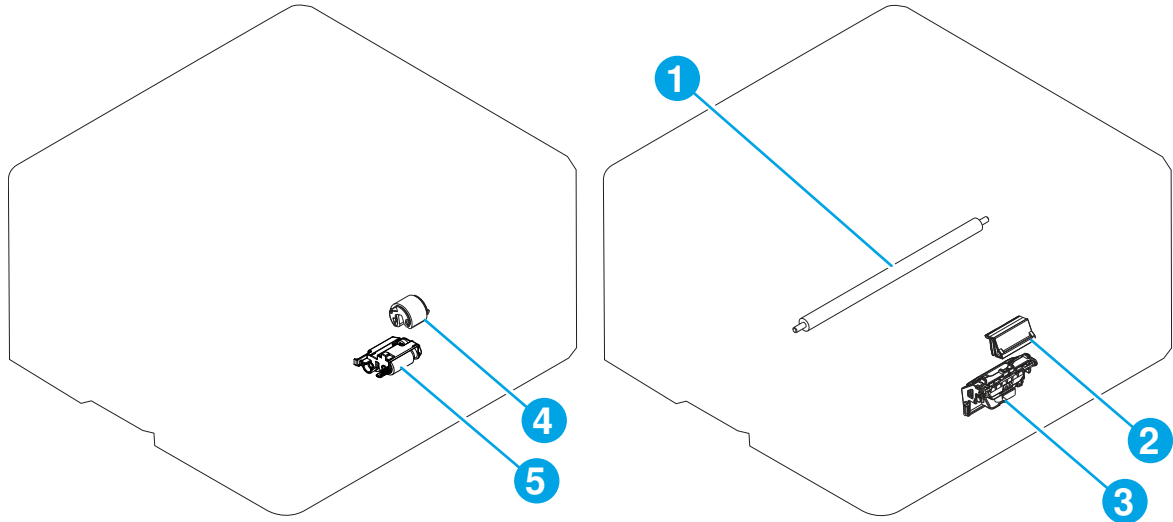
Figure 4-33 Motors and fans (base printer)



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

Rollers and pads (base printer)

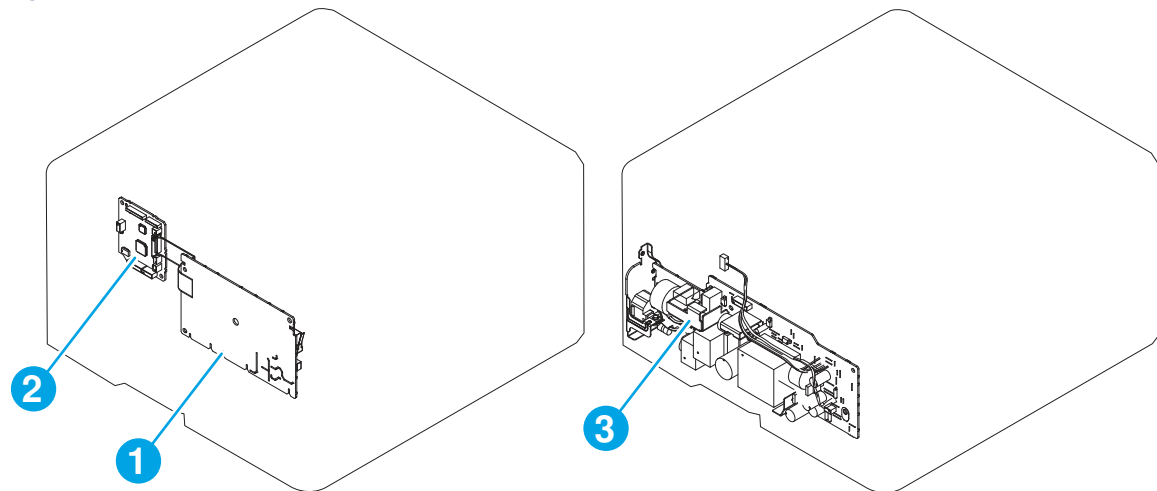
Figure 4-34 Rollers and pads (base printer)



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 4-35 PCAs (base printer)



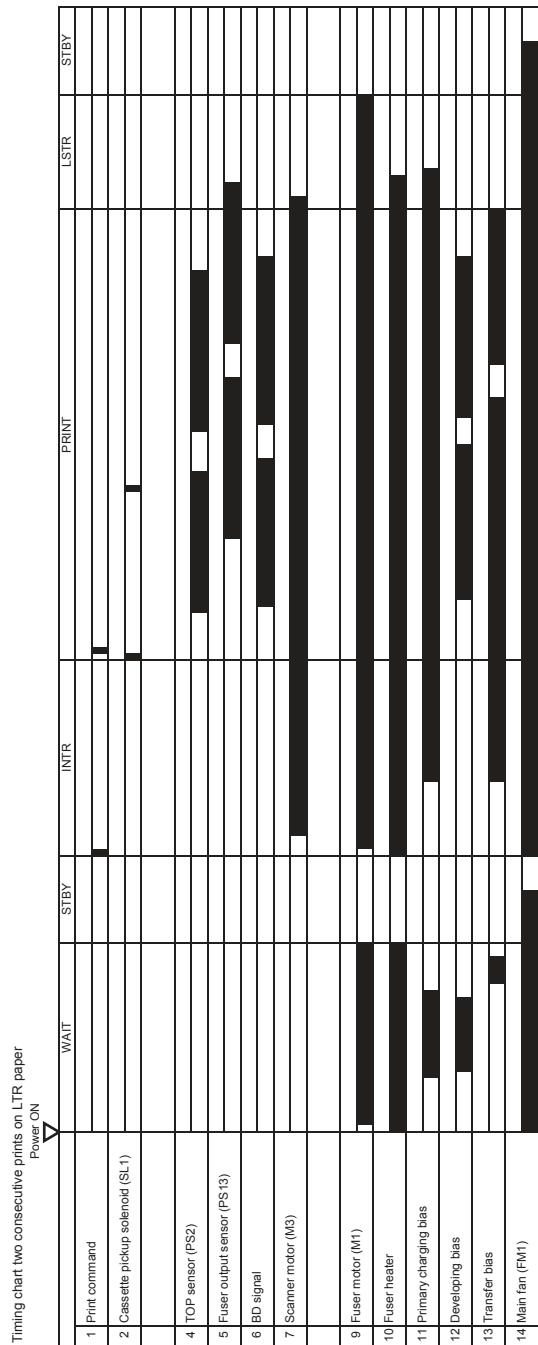
Item	Description
1	High-voltage power supply assembly
2	DC controller PCA
3	Low-voltage power supply assembly

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 4-36 Timing chart

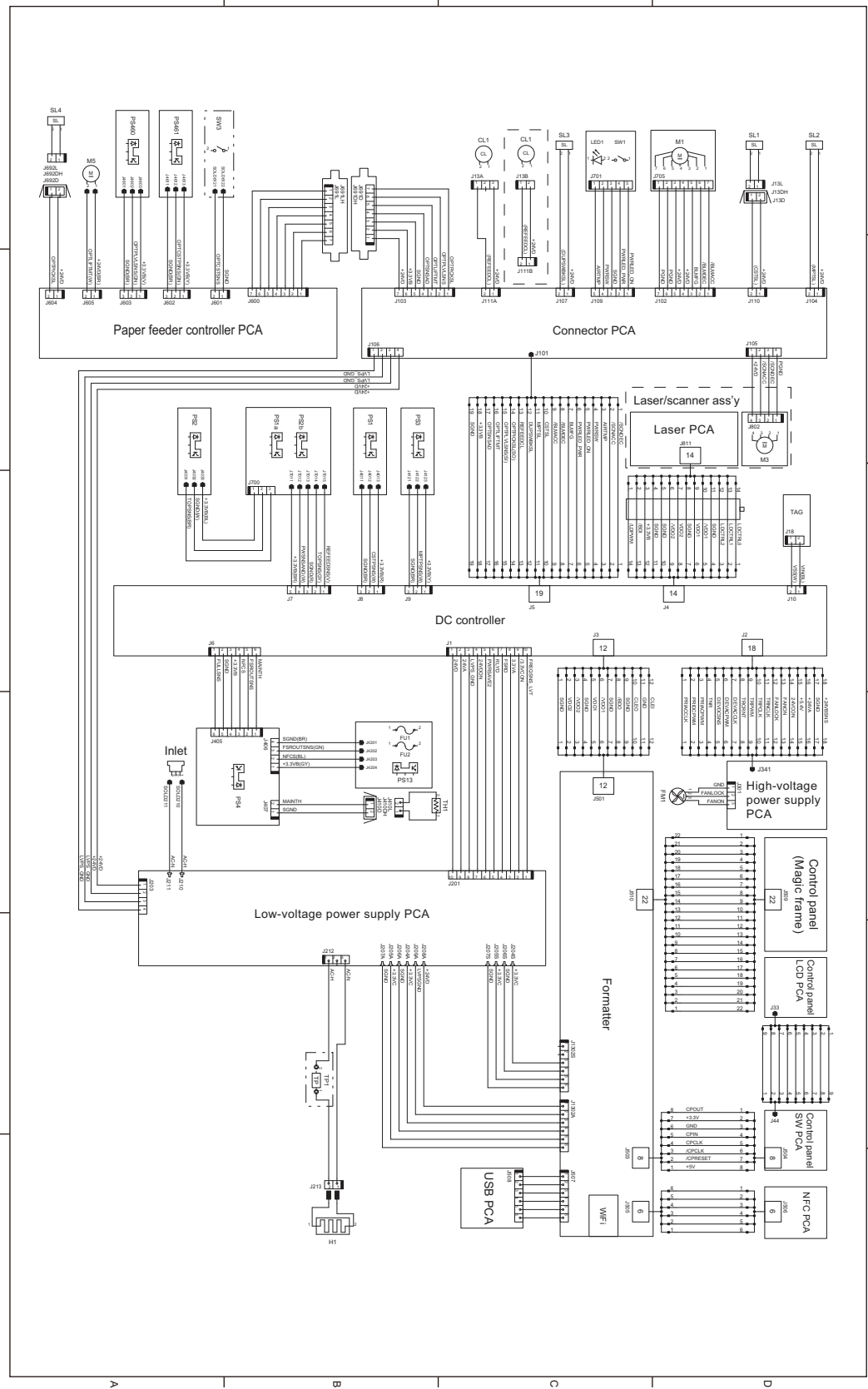


## Diagrams: General circuit diagrams

View the printer circuit diagram.



Figure 4-37 General circuit diagram (base printer)




## Internal test and information pages

Learn about printer test and information pages.

### Configuration and Jetdirect page


Print and find printer information on configuration and HP embedded Jetdirect information pages.

---

 **NOTE:** Depending on the model, up to three pages print when printing a configuration page. In addition to the main configuration page, the HP embedded Jetdirect configuration and the wireless pages print.

---

Print the configuration page from a non-touchscreen control panel

1. From the [Home](#) screen on the printer control panel, use the arrow buttons to navigate to [Reports](#), and then press the **OK** button.
2. Use the arrow buttons to scroll to [Configuration/Status Pages](#), and then press the **OK** button.
3. Use the arrow buttons to scroll to [Configuration Page](#), and then press the **OK** button.
4. Use the arrow buttons to scroll to the print icon . Press the **OK** button to print the pages.

Print the configuration page from a touchscreen control panel


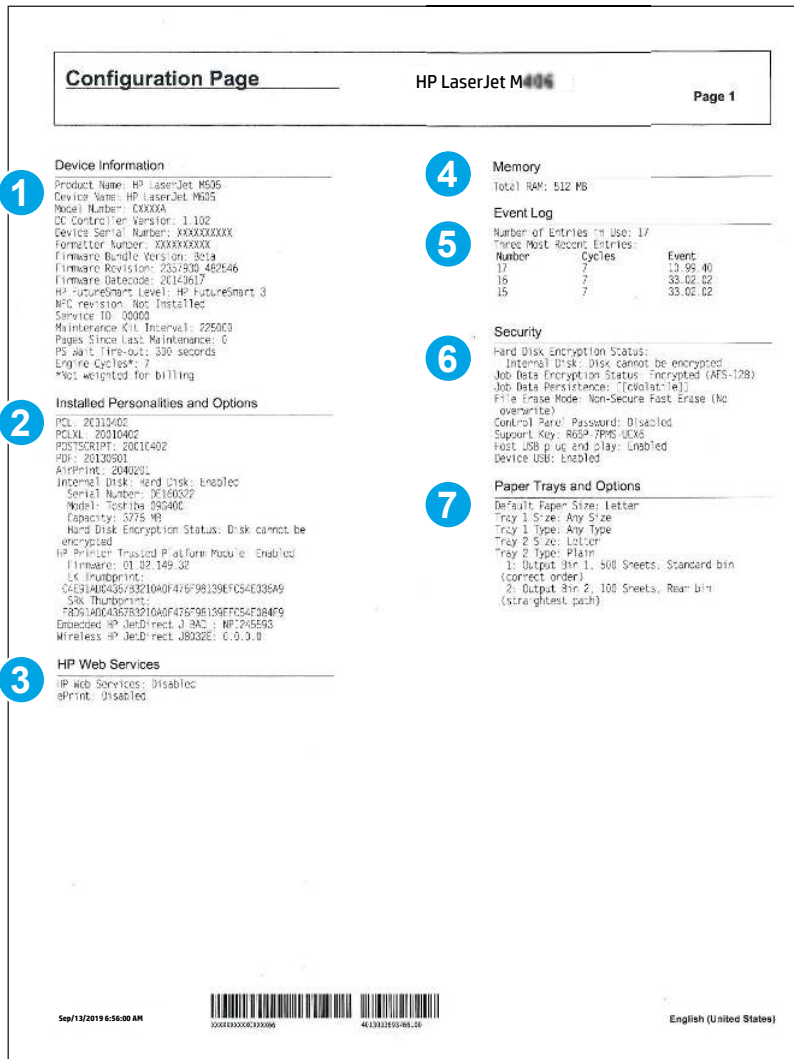
1. From the [Home](#) screen on the printer control panel, scroll to and touch the [Reports](#) button.
2. Open the following menus:
  - [Configuration/Status pages](#)
3. Touch [Configuration Page](#) to select it.
4. Touch the print icon  to print the pages.

Figure 4-38 Configuration page



Item	Description	Item	Description
1	Device information	5	Event log
2	Installed personalities and options	6	Security
3	HP Web services	7	Paper trays and options
4	Memory		

Certain information, such as the firmware date codes, the IP address, and the email gateways, is especially helpful while servicing the printer. This information is on the various configuration pages.

Table 4-25 Important information on the configuration pages

Type of information	Specific information	Configuration page
Firmware Bundle Version	Firmware information	Main configuration page (Device information)

**Table 4-25 Important information on the configuration pages (continued)**

Type of information	Specific information	Configuration page
Firmware Revision	Firmware information	Main configuration page (Device information)
Firmware Datecode	Firmware information	Main configuration page (Device information)
Accessories and internal storage  All optional devices that are installed on the printer should be listed on the main configuration page.  Separate pages print for the optional paper handling devices and the fax accessory. These pages list more-detailed information for those devices.	Optional installed formatter devices and accessories information	Main configuration page (Installed Personalities and Options)
Memory	Total RAM information	Main configuration page (Memory)
Tray and bin information	Size and type by tray (including installed optional paper feeders) information	Main configuration page (Paper Trays and Options)
Engine cycles, service ID, and cartridge information	Engine information	Main configuration page (Device Information)
Event-log information	Error information	Main configuration page (Event Log)

The second configuration page is the HP embedded Jetdirect page, which contains the following information:

Figure 4-39 HP embedded Jetdirect page

**Embedded Jetdirect Page**
**HP LaserJet M406**
Page 1

**1** ----- General Information -----  
Status: I/O Card Initializing  
Model Number: J8932E  
Hardware Address: ECC2:7245593  
Firmware Version: J0:7430315  
Port Config: Unknown  
Auto Negotiation: On  
Manufacturing ID: 0107510700\*\*\*M  
Build Date: 06/16/2014 06:00:50  
MS Registration: Not Registered  
ePrint: Not Applicable  
Email: Not Applicable

**2** ----- Security Settings -----  
IPsec: Disabled  
Secure Web: HTTPS Required  
Cert. Expires: 2009-01-17 02:14 UTC  
SNMP Versions: 1.2  
SNMP Set Only Name: Not Specified  
SNMP Get Only Name: Not Specified/Default  
Access List: Not Specified  
Admin Password: Not Specified  
Announcement Agent: Success  
FIPS: Disabled

**3** ----- Network Statistics -----  
Total Packets Received: 0  
Unicast Packets Received: 0  
Bad Packets Received: 0  
Framing Errors Received: 0  
Total Packets Transmitted: 0  
Unsendable Packets: 0  
Transmit Collisions: 0  
Transmit Late Collisions: 0  
Last Make: 00000000000000000000000000000000  
00000000000000000000000000000000  
00000000000000000000000000000000

**4** ----- TCP/IP -----  
IPv4: Enabled  
IPv6: Enabled  
Host Name: NP1245593  
IPv4 Domain Name: Not Specified  
IPv6 Domain Name: Not Specified  
Primary DNS Server: Not Specified  
Secondary DNS Server: Not Specified  
DNS(IPv4): Not Specified  
DNS(IPv6): Not Specified  
WINS Server: Not Specified  
TCP Idle Timeout: 90 sec

**5** ----- IPv4 -----  
Status: Initializing  
IP Address: 0.0.0.0  
Subnet Mask: 0.0.0.0  
Default Gateway: 0.0.0.0  
Config By: Not Configured  
BOOTP/DHCP Server: 0.0.0.0  
TFTP Server: 0.0.0.0  
Bonjour Service Name: Not Specified

**6** ----- IPv6 -----  
Status: Ready  
Link Local: Not Configured  
Siteless: Not Configured  
DHCPv6: Not Configured  
Manual: Not Configured


Sep/13/2019 6:56:00 AM
English (United States)

Item	Description
1	General Information indicates the printer status, model number, hardware firmware version, port select, port configuration, auto negotiation, manufacturing identification, and manufactured date.
2	Security Settings information
3	Network Statistics indicates the total packets received, unicast packets received, bad packets received, framing errors received, total packets transmitted, unsendable packets, transmit collisions, and transmit late collisions.
4	TCP/IP information, including the IP address
5	IPv4 information
6	IPv6 information

## Reports menu

Learn about the control-panel [Reports](#) menu.

**To display:** At the printer control panel, select the [Reports](#) menu.

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the **OK** button to print the pages.

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



**NOTE:** The [View](#) option is control-panel type dependent (might not be available).

**Table 4-26** Reports menu

First level	Second level	Values	Description
Configuration/Status Pages	Settings Menu Map	Cancel	Shows a map of the entire control panel system and the selected values for each setting.
		View	
		Print	
Configuration/Status Pages	Current Settings Page	Cancel	Shows a summary of the current settings for the printer. This might be helpful if you plan to make changes and need a record of the present configuration.
		View	
		Print	
Configuration/Status Pages	Configuration Page	Cancel	Shows the printer settings and installed accessories.
		View	
		Print	
Configuration/Status Pages	How to Connect Page	Cancel	Shows the network information typically needed to connect the printer to a network.
		View	
		Print	
Configuration/Status Pages	Supplies Status Page	Cancel	Shows the approximate remaining life for the supplies; reports statistics on total number of pages and jobs processed, serial number, page counts, and maintenance information.  HP provides approximations of the remaining life for the supplies as a customer convenience. The actual remaining supply levels might be different than the approximations provided.
		View	
		Print	
Configuration/Status Pages	Usage Page	Cancel	Shows a count of all paper sizes that have passed through the printer; lists whether they were simplex or duplex, and reports the page count.
		View	
		Print	

Table 4-26 Reports menu (continued)

First level	Second level	Values	Description
Configuration/Status Pages	File Directory Page	Cancel	Shows the file name and folder name for files that are stored in the printer memory.
		View	
		Print	
Configuration/Status Pages	Web Services Status Page	Cancel	Shows the detected Web Services for the printer.
		View	
		Print	
Fax Reports Fax models only	Fax Activity Log	Cancel	Contains a list of the faxes that have been sent from or received by this printer.
		View	
		Print	
Fax Reports Fax models only	Billing Codes Report	Cancel	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.
		View	
		Print	
Fax Reports Fax models only	Blocked Fax List	Cancel	A list of phone numbers that are blocked from sending faxes to this printer.
		View	
		Print	
Fax Reports Fax models only	Speed Dial List	Cancel	Shows the speed dials that have been set up for this printer.
		View	
		Print	
Fax Reports Fax models only	Fax Call Report	Cancel	A detailed report of the last fax operation, either sent or received.
		View	
		Print	
Other Pages	PCL Font List	Cancel	Prints the available PCL fonts.
		Print	
Other Pages	PS Font List	Cancel	Prints the available PS fonts.
		Print	

## Settings menu

Learn about the control-panel [Settings](#) menu.




**NOTE:** You can perform basic printer setup by using the [Settings](#) menu. Use the HP Embedded Web Server for more advanced printer setup. To open the HP Embedded Web Server, enter the printer IP address or host name in the address bar of a Web browser.

## General menu

Learn about the control-panel [General \(Settings\)](#) menu.

**To display:** At the printer control panel, select the [Settings](#) menu, and then select the [General](#) menu.

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the [OK](#) button to print the pages.

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

**Table 4-27 General menu**

First level	Second level	Third level	Fourth level	Values	Description
Date/Time Settings	Date/Time Format	Date Format		DD/MMM/YYYY MMM/DD/YYYY YYYY/MMM/DD	Use the <a href="#">Date/Time Settings</a> menu to specify the date and time and to configure date/time settings.
Date/Time Settings	Date/Time Format	Time Format		12 hour (AM/PM) 24 hours	Select the format that the printer uses to show the date and time, for example 12-hour format or 24-hour format.
Date/Time Settings	Date/Time	Time Zone		Select the time zone from a list.	
Date/Time Settings	Date/Time	Date		Select the date from a pop-up calendar.	
Date/Time Settings	Date/Time	Time		Select the time from a pop-up keypad.	
Date/Time Settings	Date/Time	Adjust for Daylight Savings		Checkbox	If you are in an area that uses daylight savings time, select the <a href="#">Adjust for Daylight Savings</a> box.
Energy Settings MFP	Sleep Schedule	A list of scheduled events displays.		+ (Add) Edit Delete	Use to configure the printer to automatically wake up or go to sleep at specific times on specific days. Using this feature saves energy.  <b>NOTE:</b> You must configure the date and time settings before you can use this feature.
Energy Settings MFP	Sleep Schedule	A list of scheduled events displays.	Event Type	Wake Sleep	Select whether to add or edit a <a href="#">Wake</a> event or a <a href="#">Sleep</a> event, and then select the time and the days for the wake or sleep event.
Energy Settings MFP	Sleep Schedule	A list of scheduled events displays.	Event Time		



Table 4-27 General menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Energy Settings MFP	Sleep Schedule	A list of scheduled events displays.	Event Days	Select days of the week from a list.	
Energy Settings MFP	Sleep Timer Settings	Sleep Mode/Auto Off After		Range: 1 to 120 minutes Default = 60 minutes	Set the number of minutes after which the printer enters Sleep or Auto Off mode. Use the arrow buttons on the control panel to increase or decrease the number of minutes.
Energy Settings MFP	Wake/Auto On to These Events			All Events* Network port Power button only	
Energy Settings SFP	Sleep Timer Settings	Sleep/Auto Off Timer		Enabled* Disabled	Enable or disable the printer sleep or auto off function.
Energy Settings SFP	Sleep Timer Settings	Sleep Mode/Auto Off After		Range: 1 to 120 minutes Default = 60 minutes	Set the number of minutes after which the printer enters Sleep or Auto Off mode. Use the arrow buttons on the control panel to increase or decrease the number of minutes.
Display Settings	Display Brightness	A sliding bar displays with the indicator set in the middle. Use the arrow keys to select the desired brightness and then select Done.			Use to specify the intensity of the LCD control panel display.
Display Settings	System Sound			On* Off	Use to enable or disable sounds on the printer.
Display Settings	Language Settings	Language		Select from a list of languages that the printer supports.	Use to select a different language for control panel messages and specify the default keyboard layout. When you select a new language, the keyboard layout automatically changes to match the factory default for the selected language.

Table 4-27 General menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Display Settings		Keyboard Layout		Each language has a default keyboard layout. To change it, select from a list of layouts.	Select the default keyboard layout that matches the language you want to use.
Display Settings	Information Screen			Show connection information* Hide connection information	Use this menu item to display or hide connection information on the Home screen.
Display Settings	Inactivity Timeout			Range: 10-300 seconds Default = 60 seconds	Specifies the amount of time that elapses between any activity on the control panel and when the printer resets to the default settings. When the timeout expires, the control panel display returns to the Home menu, and any user signed in to the printer is signed out.
Display Settings	Clearable Warnings			Display during job* Display until cleared	Use this feature to set the period that a clearable warning displays on the control panel. If the On setting is selected, clearable warnings appear until the Clearable Warnings button is pressed. If the Job setting is selected, clearable warnings stay on the display during the job that generated the warning and disappear from the display when the next job starts.
Display Settings	Continuable Events			Auto-continue (10 seconds)* Touch OK to continue	Use this option to configure the printer behavior when the printer encounters certain errors. If the Auto-continue (10 seconds) option is selected, the job will continue after 10 seconds. If the Touch OK to continue option is selected, the job will stop and require the user to touch the OK button before continuing.

Table 4-27 General menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Enable Device USB				Enabled Disabled*	Enables the printer to open a file from a USB drive.
Quiet Mode				Off* On Automatic transition Range: 10-300 pages Default = 10 pages	<p>Quiet Mode slows the printer down to reduce the noise the printer makes when printing.</p> <p>Automatic transition allows you to set a predetermined job size of 10 to 999 pages, and print jobs will print in Quiet Mode for all print jobs up to the predetermined page size.</p>
Jam Recovery				Automatic* Off On	<p>This printer provides a jam recovery feature that reprints jammed pages. Select one of the following options:</p> <p><b>Automatic:</b> The printer attempts to reprint jammed pages when sufficient memory is available. This is the default setting.</p> <p><b>Off:</b> The printer does not attempt to reprint jammed pages. Because no memory is used to store the most recent pages, performance is optimal.</p> <p><b>NOTE:</b> When using this option, if the printer runs out of paper and the job is being printed on both sides, some pages can be lost.</p> <p><b>On:</b> The printer always reprints jammed pages. Additional memory is allocated to store the last few pages printed. This might cause overall performance to suffer.</p>

Table 4-27 General menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Auto Recovery				Enabled Disabled*	If <a href="#">Auto Recovery</a> is enabled and an unrecoverable error occurs in the device firmware, the device automatically turns off and turns back on to recover from the error.
Enable Auto Send				Disabled* Enabled	<p>Browse to the HP Embedded Web Server AutoSend configuration page for advanced set up and the HP online Privacy Statement Information.</p> <p>Use the <a href="#">Enable Auto Send</a> menu to enable or disable the AutoSend feature. The AutoSend feature enables your product to periodically send product configuration information including serial number, event logs, page usage counts and supplies status information to HP web addresses (URLs), or email addresses. Information sent to HP is used to improve products and services, and to monitor the product if you have a relationship with HP that provides you services such as proactive cartridge replacement, pay-per-page contracts, support agreements, or usage tracking.</p>
Hold Off Print Job				Enabled* Disabled	Enable this feature if you want to prevent print jobs from starting while a user is initiating a copy job from the control panel. Held print jobs start printing after the copy job is finished, provided that no


Table 4-27 General menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
					other copy job is in the print queue.
Reset Factory Settings				Address Book (MFP) Copy (MFP) Digital Send (MFP) E-mail (MFP) Fax (MFP) General (MFP) Print (MFP) Security (MFP) Cancel (SFP) Reset (SFP)	Use to restore all printer settings to their factory defaults.

## Scan/Digital Send Settings menu (MFP)

Learn about the control-panel [Scan/Digital Send Settings](#) (MFP) menu.

**To display:** At the printer control panel, select the [Settings](#) menu, and then select the [Scan/Digital Send Settings](#) menu.

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the [OK](#) button to print the pages.

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

Table 4-28 Scan/Digital Send Settings menu (MFP)

First level	Second level	Third level	Fourth level	Values	Description
Scan to Email Settings	E-mail Setup	E-mail Setup Wizard			Use to configure settings that apply to sending documents through email or saving documents to a folder on the network or on a USB multi-drive.
Scan to Network Folder Settings	<b>NOTE:</b> Email Settings only				
Scan to USB Drive Settings					
<b>NOTE:</b> The same options are available for each of these features, except where noted.					The <a href="#">E-mail Setup Wizard</a> feature configures the printer to send scanned images as email attachments. To open the printer HP Embedded Web Server and set up the email notification server, enter the printer IP

Table 4-28 Scan/Digital Send Settings menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
					address into a Web browser.
	Default Job Options	Image Preview		Make optional*	<p>Defines the default job options for each function. If you do not specify the job options when creating the job, the default options are used. For complete setup, go to the HP Embedded Web Server by typing the IP address of the printer into a Web browser.</p> <p>Use the <a href="#">Image Preview</a> feature to scan a document and display a preview before completing the job. Select whether this feature is available on the printer.</p> <p><b>Make optional:</b> The feature is optional, depending on the user who is signed in.</p> <p><b>Require preview</b> Previews are required for all users.</p> <p><b>Disable preview:</b> Previews are disabled for all users.</p>
				Require preview	
				Disable preview	
		Default File Name		[Untitled]*	<p>The printer is shipped with a factory default file name of [Untitled] for any scanned files that are sent or saved. Use this feature to specify a different default file name. If you are saving a file to a network folder or USB storage device and a file with the default file name already exists, a number is appended to the file name, for example, [Untitled]001.</p>

Table 4-28 Scan/Digital Send Settings menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Document File Type		Select from a list of file types.	<p>PDF provides the best overall image and text quality.</p> <p>JPEG is a good choice for most graphics. Most computers have a browser that can view .JPEG files. This file type produces one file per page.</p> <p>TIFF is a standard file format that many graphics programs support. This file type produces one file per page.</p> <p>MTIFF: stands for multi-page TIFF. This file type saves multiple scanned pages in a single file.</p> <p>XPS (XML Paper Specification) creates an XAML file that preserves the original formatting of the document and supports color graphics and embedded fonts.</p> <p>PDF/A (Archivable): provides archivable text and image quality.</p> <p><b>NOTE:</b> OCR file types are not supported on this printer unless attached to DSS.</p>
		Optimize Text/Picture		Mixed* Text Printed picture Photograph	<p>Use to optimize the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture.</p> <p>Mixed: Use to optimize the setting for text and for pictures.</p> <p>Text: Use to optimize the text portion of the copy when text</p>

Table 4-28 Scan/Digital Send Settings menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
					and/or pictures are on the original.
					Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books.
					Photograph: Best suited for making copies of printed pictures.
		Quality and File Size		High (large file) Medium* Low (small file)	Use to select the quality for the output. Higher-quality images require a larger file size than lower-quality images. Larger files take more time to send, and some recipients might have trouble receiving larger files.
		Original Sides		1-sided 2-sided	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.
			Orientation	Automatically detect Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area,



Table 4-28 Scan/Digital Send Settings menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
					select whether the original document has a portrait or landscape orientation.
		Resolution		600 dpi 400 dpi 300 dpi 200 dpi 150 dpi* 75 dpi	Sets the resolution for sent documents. Higher resolution images have more dots per inch (dpi), so they show more detail. Lower resolution images have fewer dots per inch and show less detail, but the file size is smaller. Some file types, for example a file that will be processed with OCR, require a specific resolution. When these file types are selected, the <a href="#">Resolution</a> setting might automatically change to a valid value.
		Content Orientation	Orientation	Auto Detect Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation.
		Color/Black		Automatically detect color or black* Automatically detect color or gray Color Black Black/Gray	Use to enable or disable color scanning. <a href="#">Automatically detect color or black</a> : When pages without color are detected, the printer creates an image of the page in 1-bit black if other settings allow. If the

Table 4-28 Scan/Digital Send Settings menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
					<p>other settings don't allow (File Type, for example), the image is in grayscale.</p> <p>Automatically detect color or gray: When pages without color are detected, the printer creates an image of the page in grayscale. Select this option for the best image quality for non-color pages.</p> <p>Color: Scans documents in color.</p> <p>Black/Gray: Scans documents in grayscale.</p> <p>Black: Scans documents in black and white with a compressed file size.</p>
		Original Size			<p>Select from a list of supported sizes.</p> <p>Use to describe the page size of the original document.</p>
		Notification		<p>Do not notify*</p> <p>Notify when job completes</p> <p>Notify only if job fails</p>	<p>Configure to receive notification about the status of a sent document.</p> <p>Do not notify: Turns off this feature.</p> <p>Notify when job completes: Select to receive notification for this job only.</p>
				<p>Print</p> <p>E-mail</p>	<p>Notify only if job fails: Select to receive notification only if the job is not sent successfully.</p> <p>Print: Select to print the notification at this printer.</p>
			Include Thumbnail		<p><b>NOTE:</b> When sending an analog fax, select <b>Include Thumbnail</b> to receive a thumbnail image of the first page of the fax in your notification.</p>

Table 4-28 Scan/Digital Send Settings menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Notification E-mail address		E-mail: Select to receive the notification in an email. Touch the text box following <a href="#">Email Address</a> , and then type the email address for the notification.
		Image Adjustment	Darkness		Use to improve the overall quality of the copy.  Adjust the <a href="#">Darkness</a> setting to increase or decrease the amount of white and black in the colors.
			Contrast		Adjust the <a href="#">Contrast</a> setting to increase or decrease the difference between the lightest and darkest color on the page.
			Background Cleanup		Adjust the <a href="#">Background Cleanup</a> setting if you are having trouble copying a faint image.
			Sharpness		Adjust the <a href="#">Sharpness</a> setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
			Automatic Tone		
			Default		Select this to make the selected <a href="#">Image Adjustment</a> setting the default value.
		Cropping Options		Do not crop* Crop to content Crop to paper	Use this menu item to automatically crop the scan for digital sending. Use the <a href="#">Crop to content</a> option to scan the smallest possible area that has detectable content.


Table 4-28 Scan/Digital Send Settings menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Erase Edges		Use Inches Back side erase Front side erase	Use this menu item to remove blemishes, such as dark borders or staple marks, by cleaning the specified edges of the scanned image. In each of the text boxes enter the measurements, in millimeters or inches, for how much of the top edge, bottom edge, left edge, and right edge to clean.
		Multi-feed Detection		On* Off	This setting stops the scanning process if it detects multiple-page feeds through the document feeder.
		Blank Page Suppression		Disabled* Enabled	Use to prevent blank pages in the original document from being included in the output document.
Digital Send Service Setup	Allow Usage of Digital Sending Software (DSS) Server			Enabled* Disabled	Configure how the printer interacts with the HP Digital Sending Software (DSS) server. HP DSS handles digital sending tasks, such as faxing, emailing, and sending scanned documents to a network folder or USB storage device.  Use the <a href="#">Allow Usage of Digital Sending Software (DSS) Server</a> option to configure the printer to use HP DSS.
	Allow Transfer to New Digital Sending Software (DSS) Server			Enabled* Disabled	Use the <a href="#">Allow Transfer to New Digital Sending Software (DSS) Server</a> option to specify whether DSS management of a printer is transferable to a different DSS.

## Fax menu (MFP)

Learn about the control-panel [Fax menu \(MFP\)](#).

**To display:** At the printer control panel, select the [Settings](#) menu, and then select the [Fax](#) menu.

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the [OK](#) button to print the pages.

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

**Table 4-29 Fax menu (MFP)**

First level	Second level	Third level	Fourth level	Values	Description
Internal Fax Modem Setup					Configure settings for sending faxes from the printer.  Use the <a href="#">Internal Fax Modem Setup</a> feature to set up options for faxing.  <b>NOTE:</b> To set up LAN fax or Internet fax, use the HP Embedded Web Server. To open the HP Embedded Web Server, type the printer network address into a Web browser. To configure the fax features, select the <b>Fax</b> tab.
Fax Send Settings	Fax Send Setup	Fax Dialing Settings	Fax Dial Volume	Off Low* High	These settings control how the fax modem dials the outgoing fax number when faxes are sent.
Fax Send Settings	Fax Send Setup	Fax Dialing Settings	Dialing Mode	Tone* Pulse	
Fax Send Settings	Fax Send Setup	Fax Dialing Settings	Redial Interval	1 – 5 Minutes Default = 5 minutes	
Fax Send Settings	Fax Send Setup	Fax Dialing Settings	Fax Send Speed	Fast* Medium Slow	
Fax Send Settings	Fax Send Setup	Fax Dialing Settings	Dialing Prefix		
Fax Send Settings	Fax Send Setup	Fax Dialing Settings	Detect Dial Tone		
Fax Send Settings	Fax Send Setup	Fax Dialing Settings	Redial on Error	Range: 0 – 9 Default = 2	

Table 4-29 Fax menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
Fax Send Settings	Fax Send Setup	Fax Dialing Settings	Redial on No Answer	Range: 0 – 2 Default = 0	
Fax Send Settings	Fax Send Setup	Fax Dialing Settings	Redial on Busy	Range: 0 – 9 Default = 3	
Fax Send Settings	Fax Send Setup	General Fax Send Settings	Fax Number Confirmation	Enabled Disabled*	If this feature is enabled, you must enter the fax number twice.
Fax Send Settings	Fax Send Setup	General Fax Send Settings	PC Fax Send	Enabled* Disabled	Enables users who have the correct driver installed to send faxes through the printer from their computers.
Fax Send Settings	Fax Send Setup	General Fax Send Settings	JBIG Compression	Enabled* Disabled	The JBIG compression reduces fax-transmission time, which can result in lower phone charges. However, using JBIG compression sometimes causes compatibility problems with older fax machines. If this occurs, turn off the JBIG compression.
Fax Send Settings	Fax Send Setup	General Fax Send Settings	Error Correction Mode	Enabled* Disabled	When error-correction mode is enabled and an error occurs during fax transmission, the printer sends or receives the error portion again.
Fax Send Settings	Fax Send Setup	General Fax Send Settings	Fax Header	Prepend* Overlay	Use to prepend or overlay the fax header page.
Fax Send Settings	Fax Send Setup	Billing Codes	Enable Billing Codes	Off On*	When billing codes are enabled, a prompt displays that asks the user to enter the billing code for an outgoing fax. This prompt does not appear if the <a href="#">Allow users to edit billing codes</a> check box is not checked.  You can also use the billing codes report in the <a href="#">Reports</a>

Table 4-29 Fax menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
					menu to view the list of the billing codes that have been used for faxes that have been sent from the printer. The list is grouped by billing code and also shows fax details. This feature can be used for billing or usage tracking.
Fax Send Settings	Fax Send Setup	Billing Codes	Default Billing Code		Specify a default billing code for faxing. If you specify a default billing code, this code displays in the <a href="#">Billing Code</a> field when the user sends an outgoing fax. If this field is blank, no default billing code is provided for the user.
Fax Send Settings	Fax Send Setup	Billing Codes	Minimum Length	Range: 1 – 16 Default = 1	Specify the required length of the billing code. Billing codes can be between 1 and 16 characters long.
Fax Send Settings	Fax Send Setup	Billing Codes	Allow users to edit billing codes	Off On*	
Fax Send Settings	Default Job Options	Image Preview		Make optional* Require preview Disable preview	Use the <a href="#">Image Preview</a> feature to scan a document and display a preview before completing the job. Select whether this feature is available on the printer.  <a href="#">Make optional</a> : The feature is optional, depending on the user who is signed in.  <a href="#">Require preview</a> Previews are required for all users.  <a href="#">Disable preview</a> : Previews are disabled for all users.

Table 4-29 Fax menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
Fax Send Settings	Default Job Options	Resolution		Standard (100 x 200dpi)*	Select the resolution for outgoing faxes. If you increase the resolution, faxes might be clearer but they could transmit more slowly. Some file types, for example a file that will be processed with OCR, require a specific resolution. When these file types are selected, the <a href="#">Resolution</a> setting might be automatically changed to a valid value.
				Fine (200 x 200dpi)	
				Superfine (300 x 300dpi)	
Fax Send Settings	Default Job Options	Original Sides		1-sided*	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the <a href="#">Orientation</a> setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.  If the <a href="#">Pages flip up</a> option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.
				2-sided	
				Pages flip up	
Fax Send Settings	Default Job Options	Original Sides	Orientation	Portrait*	For some features to work correctly, you must specify the way the content of the original document is placed on the page.  <a href="#">Portrait</a> : This setting means the short edge of the page is along the top.  <a href="#">Landscape</a> : This setting means the long edge of the
				Landscape	



Table 4-29 Fax menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
					page is along the top.
Fax Send Settings	Default Job Options	Notification		Do not notify* Notify when job completes Notify only if job fails	Use to receive notification about the status of a sent document.  Do not notify: Turns off this feature.  Notify when job completes: Select to receive notification for this job only.  Notify only if job fails: Select to receive notification only if the job is not sent successfully.
Fax Send Settings	Default Job Options	Notification		Print E-mail	Print: Select to print the notification at this printer.  E-mail: Select to receive the notification in an email. Touch the text box following Email Address, and then enter the email address for the notification.
Fax Send Settings	Default Job Options	Notification	Include Thumbnail		When sending an analog fax, select Include Thumbnail to receive a thumbnail image of the first page of the fax in your notification.
Fax Send Settings	Default Job Options	Notification	Notification E-mail address		Provide the email address that will receive notifications.
Fax Send Settings	Default Job Options	Content Orientation	Orientation	Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page.  Portrait: This setting means the short edge of the page is along the top.  Landscape: This setting means the long edge of the

Table 4-29 Fax menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
					page is along the top.
Fax Send Settings	Default Job Options	Original Size		Select from a list of sizes that the printer supports.	Use to describe the page size of the original document.
Fax Send Settings	Default Job Options	Image Adjustment	Darkness		Use to improve the overall quality of the copy.  Adjust the <a href="#">Darkness</a> setting to increase or decrease the amount of white and black in the colors.
Fax Send Settings	Default Job Options	Image Adjustment	Contrast		Adjust the <a href="#">Contrast</a> setting to increase or decrease the difference between the lightest and darkest color on the page.
Fax Send Settings	Default Job Options	Image Adjustment	Background Cleanup		Adjust the <a href="#">Background Cleanup</a> setting if you are having trouble copying a faint image.
Fax Send Settings	Default Job Options	Image Adjustment	Sharpness		Adjust the <a href="#">Sharpness</a> setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
Fax Send Settings	Default Job Options	Image Adjustment	Automatic Tone		The printer automatically adjusts the <a href="#">Darkness</a> , <a href="#">Contrast</a> , and <a href="#">Background Cleanup</a> settings to the most appropriate for the scanned document.
Fax Send Settings	Default Job Options	Optimize Text/Picture	Manually adjust*	Optimize For Text Printed picture Photograph	Optimizes the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture.  <a href="#">Manually adjust:</a> Use to manually optimize the setting

Table 4-29 Fax menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
					for text or for pictures.  Text: Use to optimize the text portion of the copy where text and/or pictures are on the original.  Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books.  Photograph: Best suited for making copies of printed pictures.
Fax Send Settings	Default Job Options	Multi-feed Detection		Disabled Enabled*	This setting stops the scanning process if it detects multiple-page feeds through the document feeder.
Fax Send Settings	Default Job Options	Blank Page Suppression		Disabled* Enabled	Prevents blank pages in the original document from being included in the output document.
Fax Receive Settings	Fax Receive Setup	Ringer Volume		Off Low* High	Use to configure settings for receiving faxes.
Fax Receive Settings	Fax Receive Setup	Rings To Answer		Range: 1–6 Default = 1	
Fax Receive Settings	Fax Receive Setup	Fax Send Speed		Fast* Medium Slow	
Fax Receive Settings	Fax Receive Setup	Ring Interval		Range: 220–600 ms Default = 600 ms	
Fax Receive Settings	Fax Receive Setup	Ring Frequency		Range: 1–200 Default = 68hz	
Fax Receive Settings	Fax Printing Schedule			Always store faxes Always print faxes* Use schedule	If you have concerns about the security of private faxes, use this feature to store faxes rather than having them

Table 4-29 Fax menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
					automatically print. Select Incoming Fax Options, and then you can choose to always store faxes, always print them, or you can set up a schedule for each day of the week.
Fax Receive Settings	Fax Printing Schedule	Schedule	Add	Print incoming faxes	If you are using a fax printing schedule, use this menu to configure when to print faxes.
		Touch this to set up a fax printing schedule if you selected the Use Fax Printing Schedule option.	Edit	Store incoming faxes	
			Delete	Time	
				Event Days	
Fax Receive Settings	Blocked Fax Numbers	Fax Number to Block			<p>The blocked fax list can contain up to 30 numbers. When the printer receives a call from one of the blocked fax numbers, it deletes the incoming fax. It also logs the blocked fax in the activity log along with job-accounting information.</p> <p>Add blocked numbers: Enter a fax number into the <a href="#">Fax Number to Block</a> field, and then touch the arrow button to add a new number to the blocked fax list.</p> <p>To remove blocked numbers: Select a number and touch the <a href="#">Delete</a> button to delete it from the blocked fax list.</p> <p>To clear all blocked numbers: Touch the <a href="#">Delete All</a> button to clear all of the numbers from the blocked fax list.</p> <p>You can also use the <a href="#">Blocked Fax List</a> report in the <a href="#">Information</a> menu to view the list of the fax numbers that have been blocked on this printer.</p>

Table 4-29 Fax menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
Fax Receive Settings	Default Job Options	Notification		Do not notify*	Configure to receive notification about the status of a sent document.  Do not notify: Turns off this feature.  Notify when job completes: Select to receive notification for this job only.  Notify only if job fails: Select to receive notification only if the job is not sent successfully.
				Notify when job completes	
				Notify only if job fails	
Fax Receive Settings	Default Job Options			Print	E-mail: Select to receive the notification in an email. Touch the text box following <a href="#">Email Address</a> , and then enter the email address for the notification.
				E-mail*	
Fax Receive Settings	Default Job Options		Include Thumbnail		<b>NOTE:</b> When sending an analog fax, select <a href="#">Include Thumbnail</a> to receive a thumbnail image of the first page of the fax in your notification.
Fax Receive Settings	Default Job Options		Notification E-mail address		
Fax Receive Settings	Default Job Options	Stamp Received Faxes		Enabled	Use this option to add the date, time, sender's phone number, and page number to each page of the faxes that this printer receives.
				Disabled*	
Fax Receive Settings	Default Job Options	Fit to Page		Enabled*	Use to shrink faxes that are larger than Letter-size or A4-size so that they can fit onto a Letter-size or A4-size page. If this feature set to <a href="#">Disabled</a> , faxes larger than Letter or A4 will flow across multiple pages.
				Disabled	
Fax Receive Settings	Default Job Options	Paper Selection		Automatic*	


Table 4-29 Fax menu (MFP) (continued)

First level	Second level	Third level	Fourth level	Values	Description
					Select from a list of the trays.
Fax Receive Settings	Default Job Options	Output sides		1-sided* 2-sided Pages flip up	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the <a href="#">Orientation</a> setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.
Fax Forwarding	Enable Fax Forwarding			Disabled* Enabled	Use to forward received faxes to another fax machine.
Fax Forwarding	Type of Fax Job to Forward			All faxes Sent faxes Received faxes	
Fax Forwarding	Fax Forwarding Number				Enter the fax forwarding number.
Clear Fax Activity Log				Cancel Clear	Clears all events from the Fax Activity Log list.

## Manage Supplies menu

Learn about the control-panel [Manage Supplies](#) menu.

**To display:** At the printer control panel, select the [Settings](#) menu, and then select the [Manage Supplies](#) menu.

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the [OK](#) button to print the pages.

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

Table 4-30 Manage Supplies menu

First level	Second level	Third level	Fourth level	Values	Description
Low Warning Thresholds	Black Cartridge			1-100% Default = 4%	Set the estimated percentage at which the printer notifies you when a toner cartridge is very low.

Table 4-30 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Low Warning Thresholds	Document Feeder Kit			1-100%	Set the estimated percentage at which the printer notifies you when the document feeder kit is very low.
	MFP			Default = 10%	
Low Warning Thresholds	Maintenance Kit			1-100%	Set the estimated percentage at which the printer notifies you when the maintenance kit is very low.
	SFP			Default = 10%	
Low Warning Threshold Message				On*	Displays a message on the control panel when a cartridge is very low.
				Off	
Low Behavior				Continue*	Use one of these options to specify the action for the device to take when a supply reaches a low condition.  Stop: Stops the current print job.  Continue: Completes the current print job.
				Stop	
Very Low Behavior	Black Cartridge			Stop	Use one or more of these options to specify the action for the device to take when a supply reaches a very low condition.  Stop: Stops the current print job.  Continue: Completes the current print job.  Prompt to continue: Allows the user to decide whether or not to finish printing.
				Continue*	
				Prompt to continue	
Very Low Behavior	Document Feeder Kit			Stop	Use one or more of these options to specify the action for the device to take when a supply reaches a very low condition.  Stop: Stops the current print job.  Continue: Completes the current print job.
	MFP			Continue	
				Prompt to continue*	

Table 4-30 Manage Supplies menu (continued)


First level	Second level	Third level	Fourth level	Values	Description
					Prompt to continue: Allows the user to decide whether or not to finish printing.
Very Low Behavior	Maintenance Kit			Stop	Use one or more of these options to specify the action for the device to take when a supply reaches a very low condition.  Stop: Stops the current print job.  Continue: Completes the current print job.  Prompt to continue: Allows the user to decide whether or not to finish printing.
	SFP			Continue	
				Prompt to continue*	
Store Usage Data				On supplies*	Store Usage Data provides a way to suppress the toner cartridges from storing most of the information gathered exclusively for the purpose of understanding the usage of the printer. Select the On supplies setting to store the data on the toner cartridge memory chip. Select the Not on supplies setting to suppress the information from being stored on the memory chip.
				Not on supplies	
Cartridge Protection				Off*	Select to permanently protect cartridges so that they can be used only in this product or fleet of products.
				Protect cartridges	
Cartridge Policy				Off*	Set Authorized HP to allow only genuine HP cartridges to be used in this printer.
				Authorized HP	
Reset Supplies	Document Feeder Kit			Reset	Select this option if you have installed a new document feeder kit or maintenance kit.
	MFP			Cancel	
	Maintenance Kit				
	SFP				



## Networking menu

Learn about the control-panel [Networking](#) menu.

**To display:** At the printer control panel, select the [Settings](#) menu, and then select the [Networking](#) menu.

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the [OK](#) button to print the pages.

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

**Table 4-31 Networking menu**

First level	Second level	Third level	Fourth level	Values	Description
Ethernet	Information	Print Security Report		Yes No*	Yes: Prints a page that contains the current security settings on the HP Jetdirect print server.  No: A security settings page is not printed.
Ethernet	TCP/IP	Host Name		Use the arrow buttons to edit the host name.  NPIXXXXXX*	An alphanumeric string, up to 32 characters, used to identify the printer. This name is listed on the HP Jetdirect configuration page. The default host name is NPIxxxxxx, where xxxxxx is the last six digits of the LAN hardware (MAC) address.
Ethernet	TCP/IP	IPv4 Settings	Config Method	Bootp DHCP* Auto IP Manual	Specifies the method that TCP/IPv4 parameters will be configured on the HP Jetdirect print server.  Bootp (Bootstrap Protocol): Use for automatic configuration from a BootP server.  DHCP (Dynamic Host Configuration Protocol): Use for automatic configuration from a DHCPv4 server. If selected and a DHCP lease exists, the DHCP Release menu and the DHCP Renew menu are available to set DHCP lease options.

Table 4-31 Networking menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
					<p>Auto IP: Use for automatic link-local IPv4 addressing. An address in the form 169.254.x.x is assigned automatically.</p> <p>If you set this option to the Manual setting, use the <a href="#">Manual Settings</a> menu to configure TCP/IPv4 parameters.</p>
Ethernet	TCP/IP	IPv4 Settings	Default IP	Auto IP* Legacy	<p>Specify the IP address to default to when the print server is unable to obtain an IP address from the network during a forced TCP/IP reconfiguration (for example, when manually configured to use BootP or DHCP).</p> <p><b>NOTE:</b> This feature assigns a static IP address that might interfere with a managed network.</p> <p>Auto IP: A link-local IP address 169.254.x.x is set.</p> <p>Legacy: The address 192.0.0.192 is set, consistent with older HP Jetdirect printers.</p>
Ethernet	TCP/IP	IPv4 Settings	DHCP Release	Yes No*	
Ethernet	TCP/IP	IPv4 Settings	DHCP Renew	Yes No*	
Ethernet	TCP/IP	IPv4 Settings	Primary DNS	Range: 0-255 Default = xxx.xxx.xx.xx	Specify the IP address (n.n.n.n) of a Primary Domain Name System (DNS) Server.
Ethernet	TCP/IP	IPv4 Settings	Secondary DNS	Range: 0-255 Default = 0.0.0.0	Specify the IP address (n.n.n.n) of a Secondary DNS Server.
Ethernet	TCP/IP	IPv6 Settings	Enable	Off	Use this item to enable or disable

Table 4-31 Networking menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
				On*	IPv6 operation on the print server.  Off: IPv6 is disabled.  On: IPv6 is enabled.
Ethernet	TCP/IP	IPv6 Settings	Address	Manual Settings  Enable  Address	Use this item to enable and manually configure a TCP/IPv6 address.
Ethernet	TCP/IP	IPv6 Settings	DHCPv6 Policy	Router Specified  Router Unavailable*  Always	<b>Router Specified:</b> The stateful auto-configuration method to be used by the print server is determined by a router. The router specifies whether the print server obtains its address, its configuration information, or both from a DHCPv6 server.  <b>Router Unavailable:</b> If a router is not available, the print server should attempt to obtain its stateful configuration from a DHCPv6 server.  <b>Always:</b> Whether a router is available, the print server always attempts to obtain its stateful configuration from a DHCPv6 server.
Ethernet	TCP/IP	IPv6 Settings	Primary DNS	Range: 0-255  Default = xxx.xxx.xx.xx	Specify the IP address (n.n.n.n) of a Primary Domain Name System (DNS) Server.
Ethernet	TCP/IP	IPv6 Settings	Secondary DNS	Range: 0-255  Default = 0.0.0.0	Specify the IP address (n.n.n.n) of a Secondary DNS Server.
Ethernet	TCP/IP	Proxy Server		Select from a provided list.	Specifies the proxy server to be used by embedded applications in the printer. A proxy server is typically used by network clients for Internet access. It caches Web pages, and


Table 4-31 Networking menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
					<p>provides a degree of Internet security for those clients.</p> <p>To specify a proxy server, enter its IPv4 address or fully-qualified domain name. The name can be up to 255 octets.</p> <p>For some networks, you might need to contact your Internet Service Provider (ISP) for the proxy server address.</p>
Ethernet	TCP/IP	Proxy Port		<p>Range: 1-65535</p> <p>Default = 00080</p>	<p>Enter the port number used by the proxy server for client support. The port number identifies the port reserved for proxy activity on your network, and can be a value from 0 to 65535.</p>
Ethernet	TCP/IP	Idle Timeout		<p>Range: 1-3600</p> <p>Default = 0270</p>	<p>The time period, in seconds, after which an idle TCP print data connection is closed (default is 270 seconds, 0 disables the timeout).</p>
		I/O Timeout		<p>Range: 5 – 300 sec</p> <p>Default = 10</p>	<p>Use to set the I/O timeout period in seconds. I/O timeout refers to the elapsed time before a print job fails. If the stream of data that the printer receives for a print job gets interrupted, this setting indicates how long the printer will wait before it reports that the job has failed.</p>


## Supplies menu

Learn about the control-panel [Supplies](#) menu.

**To display:** At the printer control panel, select the [Supplies](#) menu.

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the **OK** button to print the pages.

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

 **NOTE:** The **View** option is control-panel type dependent (might not be available).


**Table 4-32 Supplies menu**

First level	Values	Description
Black Cartridge		View a summary of the status of the printer supplies.

## Trays menu

Learn about the control-panel **Trays** menu.

**To display:** At the printer control panel, select the **Trays** menu.

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the **OK** button to print the pages.

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

 **NOTE:** The **View** option is control-panel type dependent (might not be available).

**Table 4-33 Trays menu**

First level	Second level	Values	Description
Tray 1 Tray 2-x	Size	Select paper size from a list of supported sizes.	Choose the paper size for the tray
Tray 1 Tray 2-x	Type	Select paper type from a list of supported types.	Choose the paper type for the tray.

## Support Tools menu

Learn about the control-panel **Support Tools** menu.

 **NOTE:** The **Support Tools** sub-menu contains the options for maintaining the printer and troubleshooting printer problems.


## Maintenance menu

Learn about the control-panel **Maintenance** menu.

## Backup/Restore menu

Learn about the control-panel **Backup/Restore** menu.

**To display:** At the printer control panel, select the **Support Tools** menu, select the **Maintenance** menu, and then select the **Backup/Restore** menu.

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the **OK** button to print the pages.

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


**Table 4-34 Backup/Restore menu**

First level	Second level	Third level	Values
Back up Data	Enable Scheduled Backups	Backup Time	Enter a time
Back up Data	Enable Scheduled Backups	Days Between Backups	Enter the number of days
Back up Data	Back up Now		
Back up Data	Export Last Backup		
Restore Data			Insert a USB drive that contains the backup file.

## Calibration/Cleaning menu

Learn about the control-panel [Calibration/Cleaning menu](#) .

**To display:** At the printer control panel, select the [Support Tools](#) menu, select the [Maintenance](#) menu, and then select the [Calibration/Cleaning](#) menu.

**To print:** At the printer control panel, touch (MFP) or use the arrow buttons (SFP) to select the printer icon . For the SFP, press the **OK** button to print the pages.

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

**Table 4-35 Calibration/Cleaning menu**

First level	Values	Description
Cleaning Page	Automatic Cleaning Interval	Use this menu to configure the settings for the product to automatically print a cleaning page.
	Off*	
	1000 pages	Select <b>Off</b> to disable automatic cleaning.
	2000 pages	
	5000 pages	
	10000 pages	
20000 pages	Select a cleaning interval to set the number of pages to be printed before an automatic cleaning page is printed.	
		Touch <b>Print</b> to manually print a cleaning page.
		<b>NOTE:</b> Cleaning pages print on the default paper size configured for the printer.
Calibrate Scanner	Done	Touch <b>Start</b> to calibrate the device scanner. Messages on the control panel display will lead you through the calibration process.
MFP	Start	
Clean Document Feeder Rollers	Set cleaning reminder interval	Configure cleaning settings for the document feeder rollers.

Table 4-35 Calibration/Cleaning menu (continued)

First level	Values	Description
MFP	Range: 0 – 100%	
	Default = 10%	
	Done	
	Clean Now	

### USB Firmware Upgrade menu

Learn about the control-panel [USB Firmware Upgrade](#) menu.

**To display:** At the printer control panel, select the [Support Tools](#) menu, select the [Maintenance](#) menu, and then select the [USB Firmware Upgrade](#) menu.

Insert a USB storage device with a firmware upgrade bundle into the USB port, and follow the on-screen instructions.

### Service menu

Learn about the control-panel [Service](#) menu.

**To display:** At the printer control panel, select the [Support Tools](#) menu, and then select the [Service](#) menu.

The [Service](#) menu is locked and requires a personal identification number (PIN) for access. This menu is intended for use by authorized service personnel. See the Service menu section of this manual.

### Troubleshooting menu

Learn about the control-panel [Troubleshooting](#) menu.

**To display:** At the printer control panel, select the [Support Tools](#) menu, and then select the [Troubleshooting](#) menu.

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

Table 4-36 Troubleshooting menu


First level	Second level	Third level	Fourth level	Values	Description
Reports	Configuration/Status Pages			Settings Menu Map	Select the desired report and then select the print icon  to print the page.
				Current Settings Page	
				Configuration Page	
				Supplies Status Page	
				Usage Page	
				Paper Path Page	
				File Directory Page	
				Web Services Status Page	
				PCL Font List	

Table 4-36 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
				PS Font List	
				Event Log	
				Warning Log Page	
				T.30 Protocol Trace	
				PQ Troubleshooting Pages	
				Paper Path Test	
Reports	Fax Reports			Fax Activity Log	Select the desired report and then select the print icon  to print the page.
				Billing Codes Report	
				Blocked Fax List	
				Fax Call Report	
Reports	Other Pages			PCL Font List	Select the desired report and then select the print icon  to print the page.
				PS Font List	
Fax Tools Fax models only	Fax T.30 Trace Report			Never automatically print*	Use to print or configure the fax T.30 trace report. T.30 is the standard that specifies handshaking, protocols, and error correction between fax machines.
				Print after every fax	
				Print only after fax send jobs	
				Print only after received faxes	
				Print only after fax send errors	
				Print only after fax receive errors	
				Print after any fax error	
Fax Tools Fax models only	Fax V.34			Enable*	Use to disable V.34 modulations if several fax failures have occurred or if phone line conditions require it.
				Disable	
Fax Tools Fax models only	JBIG Compression			On	
				Off*	
Fax Tools Fax models only	Fax Speaker Mode			Normal*	Used by a technician to evaluate and diagnose fax issues by listening to the sounds of fax modulations
				Diagnostic	



Table 4-36 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Fax Tools Fax models only	Fax Service Log			Print	The standard fax log includes basic information such as the time and whether the fax was successful. The detailed fax log shows the intermediate results of the redial process not shown in the standard fax log.
Print Quality Pages	PQ Troubleshooting Pages			Print	Use to print pages that help you resolve problems with print quality.
Event Log					Prints the 50 most recent events in the Event Log. For each event, the printed log shows the error number, page count, error code, and description or personality.
Paper Path Page				Print	Shows how many pages were printed from each tray.
Diagnostic Tests	Disable Cartridge Check			Continue	Use this diagnostic test to print internal pages or send an external job to the printer when the toner cartridge is removed or exchanged. Supply errors are ignored while the printer is in this mode.
Diagnostic Tests	Paper Path Test	Source Tray		Select from a list of the available trays.	Generates a test page for testing paper handling features. You can define the path that is used for the test in order to test specific paper paths
Diagnostic Tests	Paper Path Test	Number of Copies		Range: 1–500 Default = 1	Sets the default number of copies for a copy job. This default applies when the Copy or Quick Copy function is initiated from the printer Home screen. The factory default setting is 1.

Table 4-36 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Diagnostic Tests	Paper Path Test	Test Duplex Path		Enable Disable*	Prints on both sides of the paper.
Diagnostic Tests	Print/Stop Test				Specify the length of time in milliseconds (0-60,000).
Diagnostic Tests	Paper Path Sensor Test			Select from a list of the printer sensors.	Initiates a test of the paper path sensors.
Diagnostic Tests	Manual Sensor Test  <b>NOTE:</b> This item appears in the control-panel menus. However, the function is not available for this printer			Select from a list of available components  Reset	Test the printer sensors and switches for correct operation. Each sensor is displayed on the control-panel screen, along with its status. Manually trip each sensor and watch for it to change on the screen. Press the <a href="#">Stop</a> button to abort the test.
Diagnostic Tests	Tray/Bin Manual Sensor Test  <b>NOTE:</b> This item appears in the control-panel menus. However, the function is not available for this printer			Select from a list of available components  Reset	Test the printer sensors and switches for correct operation. Each sensor is displayed on the control-panel screen, along with its status. Manually trip each sensor and watch for it to change on the screen. Press the <a href="#">Stop</a> button to abort the test.
Diagnostic Tests	Component Test  <b>NOTE:</b> This item appears in the control-panel menus. However, the function is not available for this printer			Select from a list of available components.	Use to exercise individual parts independently to isolate noise, leaking, or other issues. To start the test, select one of the components. The test will run the number of times specified by the <a href="#">Repeat</a> option. You might be prompted to remove parts from the printer during the test. Press the <a href="#">Stop</a> button to abort the test.
Diagnostic Tests	Continuous Scan  MFP			2-sided	

Table 4-36 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Diagnostic Tests	Scanner Tests			Sensors	
	MFP				
Generate Debug Data				Start	
Retrieve Diagnostic Data				Create device data file Create zipped debug information file Include crash dump files Clean up debug information Send to E-mail Export to USB	Create files that contain information about the printer that can help identify the cause of problems.
Retrieve Fax Diagnostic Data				Create device data file Create zipped debug information file Include crash dump files Clean up debug information Send to E-mail Export to USB	Create files that contain information about the printer that can help identify the cause of problems.

## Service menu

Learn about the printer [Service](#) menu.

[Service](#) menu access is restricted by using a personal identification number (PIN). Only authorized service people should access the [Service](#) menu. When selecting [Service](#) from the list of menus, the printer prompts the user to enter an eight-digit PIN.



**NOTE:** The printer automatically exits the [Service](#) menu after about one minute if no items are selected or changed.

### Open the [Service](#) menu from a SFP control panel

1. From the [Home](#) screen on the printer control panel, use the arrow buttons to navigate to [Support Tools](#), and then press the [OK](#) button.
2. Use the arrow buttons to scroll to [Service](#), and then press the [OK](#) button.

3. Make sure that [Service Access Code](#) is selected for the [Access Type](#) item.



**NOTE:** Use the arrow buttons to select and change the [Access Type](#) item if necessary.

4. Enter the following service access PIN for the printer:
  - 12040620 (SFP)
  - 12043020 (MFP)

#### Open the [Service](#) menu from an MFP control panel

1. From the [Home](#) screen on the printer control panel, scroll to and touch the [Support Tools](#) button.
2. Open the following menus:
  - [Service](#)
3. Make sure that [Service Access Code](#) is selected for the [Access Type](#) item.
4. Enter the following service access PIN for the printer:
  - 12040620 (SFP)
  - 12043020 (MFP)

#### Service menu table

The following menu items appear in the [Service](#) menu.

**Table 4-37** [Service](#) menu

First level	Second level	Value	Description
Event Log	Print		Print or view the event log.
Clear Event Log	Clear		Use this item to clear the printer event log.
Cycle Counts	Total Engine Cycles		Set the page count that was stored in NVRAM prior to installing a new formatter.
Cycle Counts	Refurbish Cycle Count		Use this item to record the page count when the printer was refurbished.
Cycle Counts	Document Feeder MFP		Total number of pages since the document feeder kit was replaced.
Cycle Counts	Document Feeder Kit Interval MFP		Use this item to set the interval that causes the printer to prompt the customer to replace document feeder maintenance kit.
Cycle Counts	Clean Rollers Count MFP		Total number of pages since the document feeder rollers were cleaned.
Cycle Counts	Clean Rollers Interval MFP		Use this item to set the interval that causes the printer to prompt the customer to clean the

Table 4-37 Service menu (continued)

First level	Second level	Value	Description
			document feeder rollers and separation pad.
Cycle Counts	ADF Count MFP		Set the total pages fed through the document feeder.
Cycle Counts	Flatbed Count MFP		Set the total pages scanned from the flatbed.
Cycle Counts	ADF Simplex Count MFP		Set the total single-sided pages fed through the document feeder.
Cycle Counts	ADF Duplex Count MFP		Set the total two-sided pages fed through the document feeder.
Cycle Counts	Copy Scan Count MFP		Set the total copy pages that have been scanned.
Cycle Counts	Send Scan Count MFP		Set the number of scanned pages sent to email.
Cycle Counts	Fax Scan Count Fax models only		Set the number of scanned pages that have been faxed.
Cycle Counts	Copy Pages Count MFP		Set the number of scanned pages that have been printed.
Scanner Settings MFP	ADF Settings	Leading edge front Leading edge back Trailing edge front Trailing edge back Left side front Left side back	Set the calibration values. <b>WARNING!</b> Do not change these values unless instructed to do so.
Scanner Settings MFP	Glass Settings	Leading edge glass Left Side Glass	
Serial Number			Set the serial number.
Service ID			Use this item to show the date that the printer was first used on the control panel. This eliminates the need for users to keep paper receipts for proof of warranty.
Cold Reset Paper			When you perform a cold reset, the paper size that is stored in NVRAM is reset to the default factory setting. If you replace a formatter board in a country/region that uses A4 as the standard

Table 4-37 Service menu (continued)

First level	Second level	Value	Description
			paper size, use this menu to reset the default paper size to A4. LETTER and A4 are the only available values.
Low Alerts		Enable Disable	Turn on (or off) low alerts (for supplies).
Reset Low Alerts	<ul style="list-style-type: none"> <li>● Reset to level 1</li> <li>● Reset to level 2</li> <li>● Reset to level 3</li> <li>● Set to non-HP managed mode</li> </ul>		
PTT Test Mode Fax models only			Test the internal modem for the analog fax accessory.
PTT Test Mode Fax models only	Hook Operations	Off Hook On Hook	
PTT Test Mode Fax models only	Generate Random Data	Select a value from the list.	
PTT Test Mode Fax models only	Generate DTMF Tone Burst	Select a value from the list.	
PTT Test Mode Fax models only	Generate DTMF Continuous Tone	Select a value from the list.	
PTT Test Mode Fax models only	Generate Pulse Burst	Select a value from the list.	
PTT Test Mode Fax models only	Generate Tone Dial Number	Enter dial number.	
PTT Test Mode Fax models only	Generate Pulse Dial Number	Enter dial number.	
PTT Test Mode Fax models only	Generate Single Modem Tone	Range: 1100–2100 Hz Default = 2100 Hz	
PTT Test Mode Fax models only	Line Measurements		
PTT Test Mode Fax models only	Fax Transmit Signal Loss		
Test Support	Continuous Scan MFP	2-sided Save to Disk	

Table 4-37 Service menu (continued)

First level	Second level	Value	Description
Test Support	Continuous Copy	2-sided	
	MFP	Save to Disk	
Test Support	Raw Scan	2-sided	
	MFP	Mechanical Calibration	
Test Support	Continuous Print from USB		
Test Support	Automatic Calibrations	Disabled	
	MFP	Enabled*	
Test Support	Runtime Configuration	Standard	
		StandardEIC	
		Workflow	
		WorkflowEIC	
		Reconfigure	

## Printer resets

Learn about the printer resets.

### Restore factory-set defaults from a non-touchscreen control panel

1. From the [Home](#) screen on the printer control panel, use the arrow buttons to navigate to [Settings](#), and then press the [OK](#) button.
2. Use the arrow buttons to scroll to [General](#), and then press the [OK](#) button.
3. Use the arrow buttons to scroll to [Restore Factory Settings](#), and then press the [OK](#) button.
4. A verification message advises that completing the reset function might result in loss of data. Select the [Reset](#) button to complete the process.

### Restore factory-set defaults from a touchscreen control panel

1. From the [Home](#) screen on the printer control panel, scroll to and touch the [Settings](#) button.
2. Open the following menus:
  - [General Settings](#)
  - [Reset Factory Settings](#)
3. A verification message advises that completing the reset function might result in loss of data. Touch the [Reset](#) button to complete the process.

### Restore the Service ID

When replacing the formatter, the Service ID date is lost. Use this menu item to reset the date to the original date that the printer was first used. The date format is YYDDD. Use the following formula to calculate the Service ID.

Calculate the service ID

For the calculation below, the placed-in-service date is 17OCT2002.


1. To calculate YY, subtract 1990 from the calendar year. If the printer was first used in 2002, calculate YY as follows:  $2002 - 1990 = 12$ . YY = 12.
2. Subtract 1 from 10 (October is the tenth month of the year):  $10 - 1 = 9$ .
  - Multiply 9 by 30:  $9 \times 30 = 270$  and add 17 to 270:  $270 + 17 = 287$ . Thus, DDD = 287.
3. In this example the Service ID is 12287.

Convert the Service ID to an actual date

Use the printer Service ID number to determine whether the printer is still under warranty. Use the following formula to convert the Service ID into the actual date the printer was placed-in-service. For the example below, use the Service ID previously calculated (12287).

1. Add 1990 to YY to get the actual year that the printer was installed.
2. Divide DDD by 30. If there is a remainder, add 1 to the result. This is the month.
3. The remainder from the calculation in step 2 is the date.
  - a.  $12 + 1990 = 2002$ , so the year is 2002.
  - b. 287 divided by 30 = 9 with a remainder of 17. Because there is a remainder, add 1 to 9 to get 10, which represents October.
  - c. The remainder in step 2 is 17, so that is the date. The complete date is 17-October-2002.

---

 **NOTE:** A six-day grace period is built into the date system.

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### Cold reset using the Pre-boot menu from a non-touchscreen control panel

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 **CAUTION:** This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).

---

1. Press the **Cancel** button when you see the **1/8** under the logo
2. Use the arrow buttons to highlight **+3:Administrator** item, and then press the **OK** button.
3. Use the arrow buttons to highlight **+8:Startup Options** item, and then press the **OK** button.
4. Use the arrow buttons to highlight **2 Cold Reset** item, and then press the **OK** button.
5. Press the Home button to return to the main Pre-boot menu and highlight the **1:Continue** item, and then press the **OK** button.

---

 **NOTE:** The printer initializes.

---

### Cold reset using the Pre-boot menu from a touchscreen control panel

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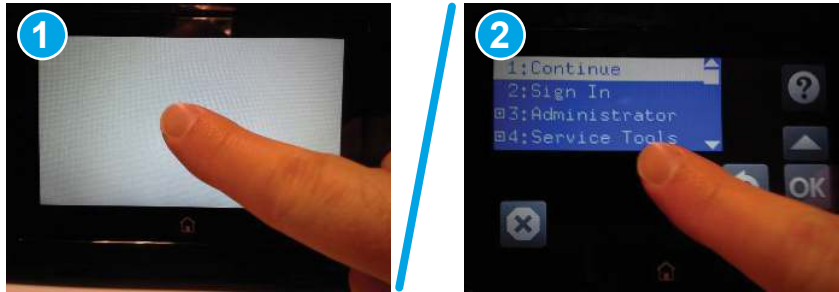
 **CAUTION:** This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).

---

1. Touch the middle of the control-panel display when you see the **1/8** under the logo



Figure 4-40 Open the Pre-boot menu (MFP)



2. Use the arrow buttons to highlight +3:Administrator item, and then press the OK button.
3. Use the arrow buttons to highlight +8:Startup Options item, and then press the OK button.
4. Use the arrow buttons to highlight 2 Cold Reset item, and then press the OK button.
5. Touch the Home button to return to the main Pre-boot menu and highlight the 1:Continue item, and then press the OK button.



**NOTE:** The printer initializes.

## Format Disk and Partial Clean functions

Learn about the printer [Format Disk](#) and [Partial Clean](#) functions.

### Active and repository firmware locations

The firmware bundle consists of multiple parts. The main components are the Windows CE Operating System and the printer/peripheral firmware files.

There are two locations/partitions on the hard drive where the firmware components are stored:

- The Active, where the operating system and firmware currently are executing.
- The Repository, the recovery location.

If the Active location is damaged, or a [Partial Clean](#) was performed, the printer automatically copies over the OS and firmware files from the Repository location and the printer recovers.

If both the Active and Repository locations are damaged, or a [Format Disk](#) was performed, then both locations are gone and the error message **99.09.67** displays on the control-panel display. The user must upload the firmware to the printer in order for it to function again.



**CAUTION:** The [Format Disk](#) option performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) are completely lost. HP does not recommend this action.

### Partial Clean

The [Partial Clean](#) option erases all partitions and data on the disk drive, except for the firmware repository where a backup copy of the firmware file is stored. This allows the disk drive to be reformatted without having to download a firmware upgrade file to return the printer to a bootable state.

Characteristics of a [Partial Clean](#)

- Customer-defined settings, third-party solutions, firmware files, and the operating system are deleted.

- Rebooting the printer restores the firmware files from the Repository location, but does not restore any customer-defined settings.
- For previous HP printers, a Hard Disk Initialization is similar to executing the [Partial Clean](#) function for this printer.

---

**CAUTION:** HP recommends backing-up printer configuration data before executing a [Partial Clean](#) to retain customer-defined settings (if needed). See the [Backup/Restore](#) item in the [Device Maintenance](#) menu.

---

#### Reasons for performing [Partial Clean](#)

- The printer continually boots up in an error state.

---

 **NOTE:** Try clearing the error prior to executing a [Partial Clean](#).

---

- The printer will not respond to commands from the control panel.
- Executing the [Partial Clean](#) function is helpful for troubleshooting hard disk problems.
- To reset the printer by deleting all solutions and customer-defined settings.
- The printer default settings are not properly working.

#### Execute a [Partial Clean](#) from a non-touchscreen control panel

This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).

1. Press the [Cancel](#) button when you see the [1/8](#) under the logo
2. Use the arrow buttons to highlight [+3:Administrator](#) item, and then press the [OK](#) button.
3. Use the arrow buttons to highlight [Partial Clean](#) item, and then press the [OK](#) button.
4. Press the [OK](#) button again.
5. Press the Home button to return to the main Pre-boot menu and highlight the [Continue](#) item, and then press the [OK](#) button.

---

 **NOTE:** The printer initializes.

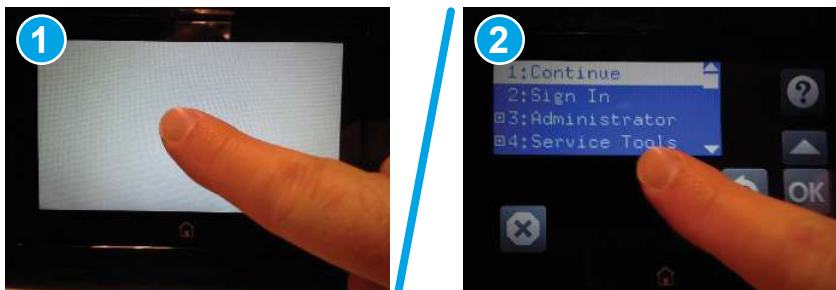
---

#### Execute a [Partial Clean](#) from a touchscreen control panel

This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).

1. Touch the middle of the control-panel display when you see the [1/8](#) under the logo

**Figure 4-41** Open the Pre-boot menu (MFP)



2. Use the arrow buttons to highlight **+3:Administrator** item, and then press the **OK** button.
3. Use the arrow buttons to highlight **Partial Clean** item, and then press the **OK** button.
4. Press the **OK** button again.
5. Touch the Home button to return to the main Pre-boot menu and highlight the **Continue** item, and then press the **OK** button.



**NOTE:** The printer initializes.

---

## Format Disk

The **Format Disk** option erases the entire disk drive.



**CAUTION:** After executing a **Format Disk** option, the printer is not bootable.

---

### Characteristics of a **Format Disk**

- Customer-defined settings, third-party solutions, firmware files, and the operating system are deleted.



**NOTE:** Rebooting the printer *does not* restore the firmware files

---

- Rebooting the printer restores the firmware files from the Repository location, but does not restore any customer-defined settings.
- After executing the **Format Disk** function, the message **99.09.67** displays on the control panel.
- After executing the **Format Disk** function, the printer firmware must be reloaded.



**CAUTION:** HP recommends not using the **Format Disk** option unless an error occurs and the solution in the printer service manual recommends this solution. After executing the **Format Disk** function, the printer is unusable.

HP recommends backing-up printer configuration data before executing a **Format Disk** to retain customer-defined settings (if needed). See the **Backup/Restore** item in the **Device Maintenance** menu.

---

### Reasons for performing **Format Disk**

- The printer continually boots up in an error state.



**NOTE:** Try clearing the error prior to executing a **Format Disk**.

---

- The printer will not respond to commands from the control panel.
- Executing the **Format Disk** function is helpful for troubleshooting hard disk problems.
- To reset the printer by deleting all solutions and customer-defined settings.


### Execute a **Format Disk** from a non-touchscreen control panel

This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).

1. Press the **Cancel** button when you see the **1/8** under the logo
2. Use the arrow buttons to highlight **+3:Administrator** item, and then press the **OK** button.
3. Use the arrow buttons to highlight **Format Disk** item, and then press the **OK** button.

4. Press the **OK** button again.

---

 **NOTE:** When the **Format Disk** operation is complete, reload the printer firmware.

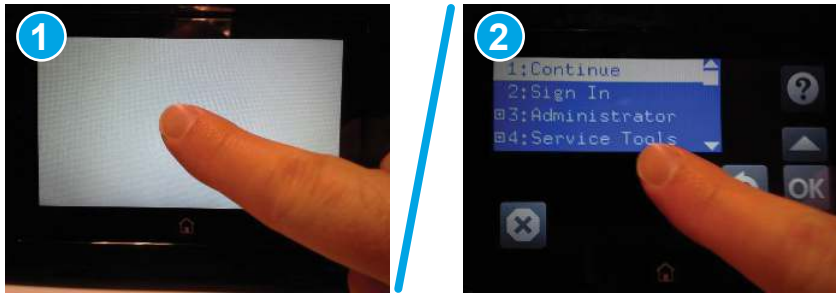
---

Execute a **Format Disk** from a touchscreen control panel

This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).


1. Touch the middle of the control-panel display when you see the 1/8 under the logo

**Figure 4-42** Open the Pre-boot menu (MFP)



2. Use the arrow buttons to highlight **+3:Administrator** item, and then press the **OK** button.
3. Use the arrow buttons to highlight **Format Disk** item, and then press the **OK** button.
4. Press the **OK** button again.

---

 **NOTE:** When the **Format Disk** operation is complete, reload the printer firmware.


---

## 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.

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.

---

 **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.
- 

 **NOTE:** The following conditions indicate that the printer has frozen while in Sleep mode or Sleep delay. Opening a door or pressing a control-panel button should cause the printer to wake up from Sleep mode or Sleep delay.

- The control panel home button LED is illuminated
  - The power-switch LED flashes once every three to five seconds
- 

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

- Turn the printer power off, and then on again.
  - 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?
  - 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.
  - 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.
  - 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 (for example, envelope feeders, paper feeders, or output 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. The engine test procedure varies by printer, so refer to the printer Service Manual to get instructions.
9. If the engine test page prints, the print engine is operating normally. Replace the formatter.
- 

 **CAUTION:** Under **NO** circumstances should a formatter from a different printer be installed during the repair or troubleshooting processes. The formatter stores important data specific to the model of printer it is installed in and is not designed to be swapped or repurposed in any way. Return a used formatter to HP.

Issues that can occur from swapping a formatter include:


- Serial number, product number, product name, page count, and supported cartridges information change and might make a product unusable
- 33.02.01 Used board/Disk installed errors

If a used formatter is installed and causes this issue, the **partner** must cover the costs of the repair in the form of a product replacement. **There is no method in the field to recover a printer where a used formatter is installed.**

For more information, see the following topic (c06360930):

- HP internal link: [33.02.01 error or printer name and/or product number changes after replacing the formatter](#)
- HP external partner link: [33.02.01 error or printer name and/or product number changes after replacing the formatter](#)

To access the HP partner link, you must first log in to the HP Partner First Portal and then connect to WISE.

 **NOTE:** If the engine test page does not print, turn the printer off, reconnect the formatter power connector, remove the embedded MultiMedia Card (eMMC), and then try the engine test again. If the page prints, the problem might be the eMMC.

10. If after replacing the formatter or eMMC normal start-up noises are still not heard, replace the DC controller.
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.

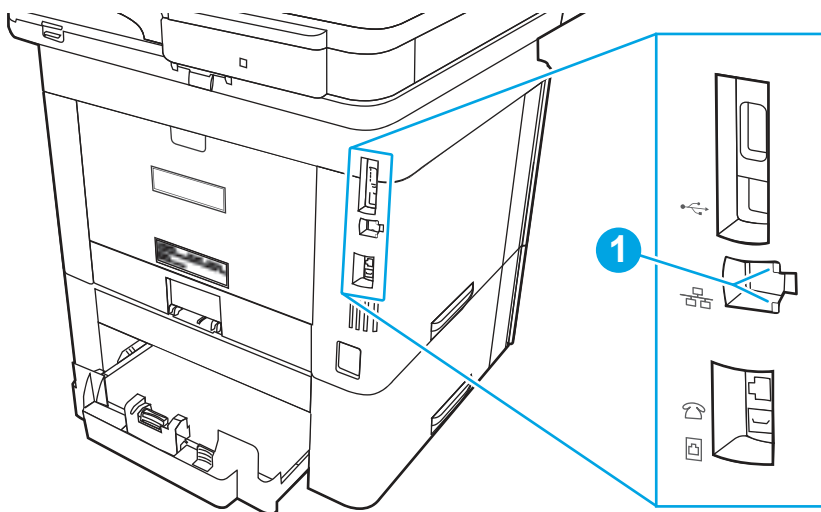

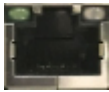



Table 4-38 Network LEDs


LED light pattern	Description
	Solid green light and flashing yellow light indicates a successful network connection.
	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. If the printer is connected to a network, an HP Jetdirect page also prints.

Print the configuration page from a SFP control panel

- a. From the [Home](#) screen on the printer control panel, use the arrow buttons to navigate to [Reports](#), and then press the [OK](#) button.
- b. Use the arrow buttons to scroll to [Configuration/Status Pages](#), and then press the [OK](#) button.
- c. Use the arrow buttons to scroll to [Configuration Page](#), and then press the [OK](#) button.
- d. Use the arrow buttons to scroll to the print icon . Press the [OK](#) button to print the pages.

Print the configuration page from an MFP control panel

- a. From the [Home](#) screen on the printer control panel, scroll to and touch the [Reports](#) button.
  - b. Open the following menus:
    - [Configuration/Status pages](#)
  - c. Touch [Configuration Page](#) to select it.
  - d. Touch the print icon  to print the pages.
5. Check to see if there is a newer version of the firmware available. If there is, update the firmware.
  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).

 **NOTE:** The host USB port may be disabled from the factory. If so, this port needs to be activated first before connecting the printer to the USB port.

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.

---

 **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 four times within a three second time period to print a simplex engine test page. Open and close the door five times within a three second period to print a duplex engine test page.

## Defeating interlocks

Learn about defeating printer interlocks.


Different tests can be used to isolate different types of issues. For assembly or noise isolation, run the diagnostic test when the toner cartridge door or rear door is open.

Defeating the door interlocks allows observation of the paper pick operation.

### Defeat the front (cartridge) door interlock

1. Open the front door.
2. Insert a folded piece of paper into the slot.

---

 **TIP:** Fold a stiff piece of paper, for example a business card or index card, into a strip, and insert the strip into the slot for the front door logic switch.

---

**Figure 4-43** Defeat the front (cartridge) door interlock



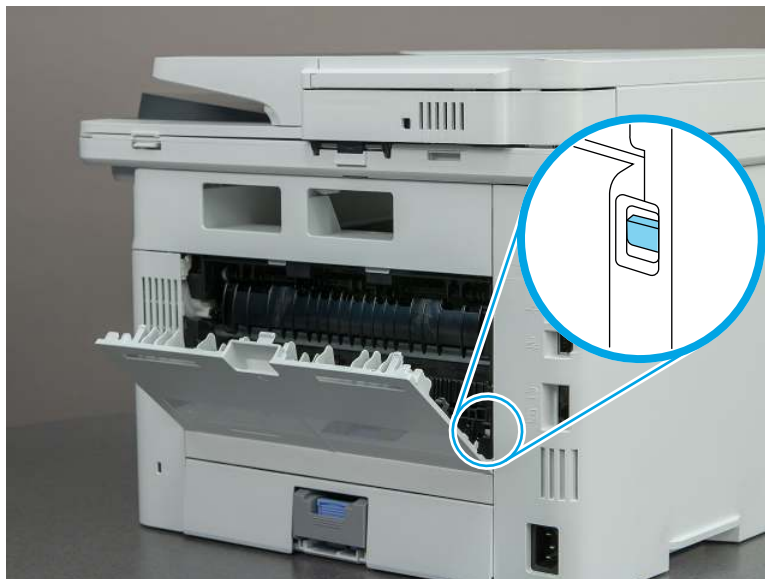


## Defeat the rear door interlock

1. Open the rear door.
2. Insert a folded piece of paper into the slot.

 **TIP:** It might be easier to use a small flat-blade screwdriver to defeat the rear door interlock.

**Figure 4-44** Defeat the rear door interlock



## Control panel troubleshooting

If the control panel is not responding normally or has display issues, use the following procedures to troubleshoot the issues.

### Control panel system diagnostics (MFP)

Learn about MFP printer firmware control panel troubleshooting.

Use the diagnostics in this section to test the control panel hardware and display using the printer firmware system diagnostics.

### Open the control panel system diagnostic tests

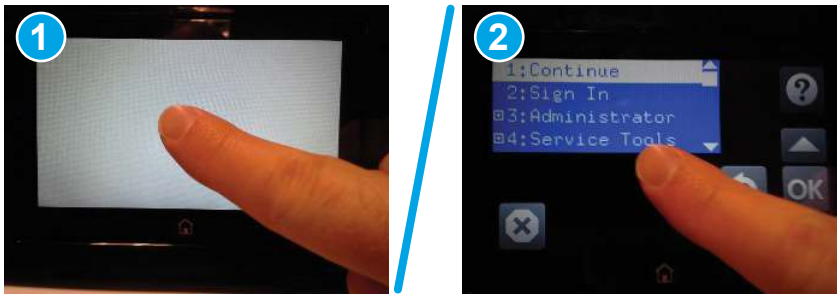
Learn about accessing the control panel system diagnostics tests from a touchscreen control panel.

Use the following procedure to open the control panel system diagnostics tests (MFP).

1. Turn the printer power off, and then on again.

2. Touch the middle of the control panel display when you see the 1/8 under the logo.

Figure 4-45 Open the Pre-boot menu



3. On the Pre-boot menu screen, use the following buttons to navigate the tests.

Figure 4-46 Pre-boot menu

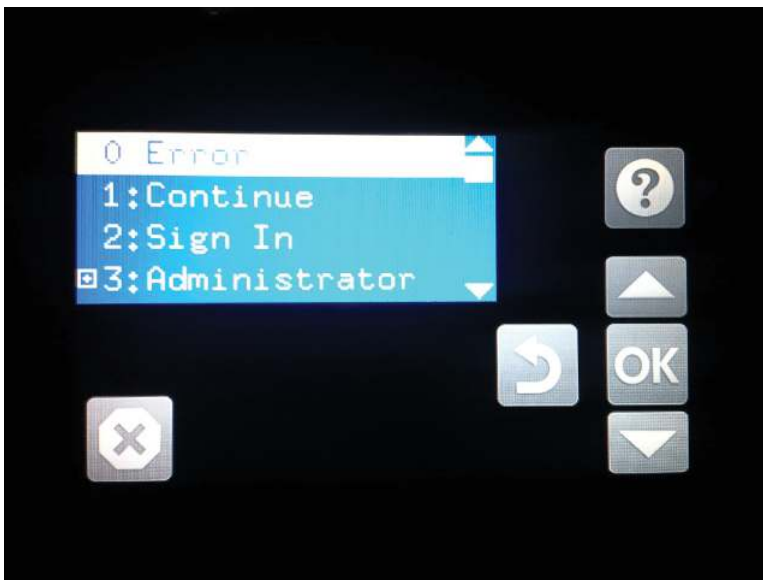


Table 4-39 Pre-boot menu button descriptions








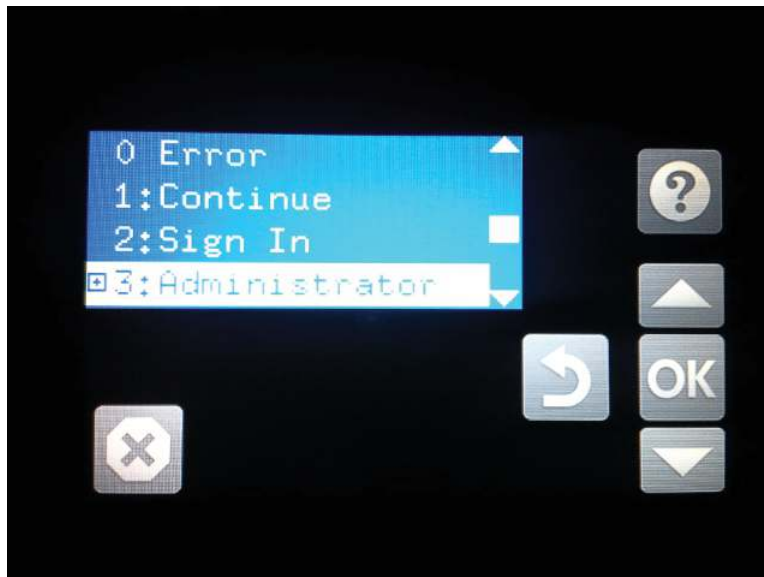
Button	Description
	Use this button to see more information about a selected item.
	Use this button to scroll up through menu items.
	Use this button to select a highlighted menu item.
	Use this button to scroll down through menu items.

Table 4-39 Pre-boot menu button descriptions (continued)

Button	Description
	Use this button to go back to the previous menu.
	Not used.
	Use this button to exit a diagnostic test.

- Use the down arrow ▼ button to scroll to +3 Administration, and then press the OK button to select it.

Figure 4-47 Access the administration menu



- Use the down arrow ▼ button to scroll to +E CP Diagnostics, and then press the OK button to select it.

 **NOTE:** An administrator password might be required to continue.

Figure 4-48 Access the diagnostics menu

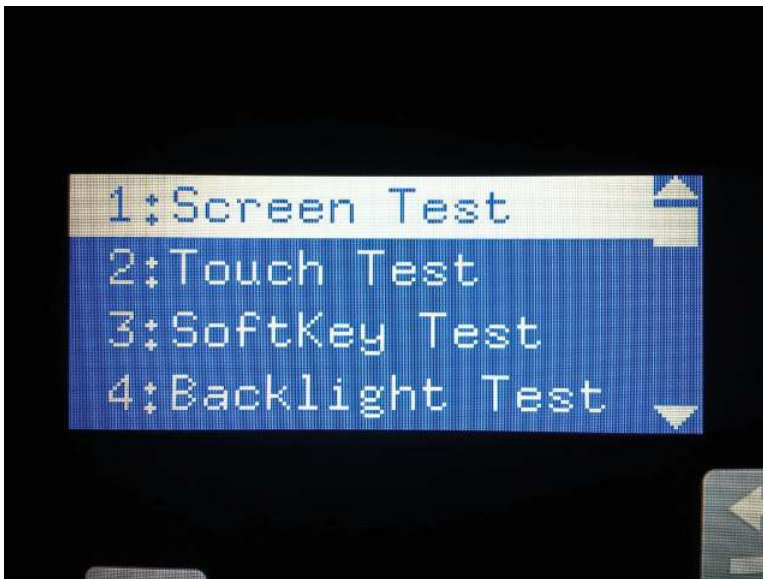


## Screen test

Learn about the control panel system diagnostic screen test.

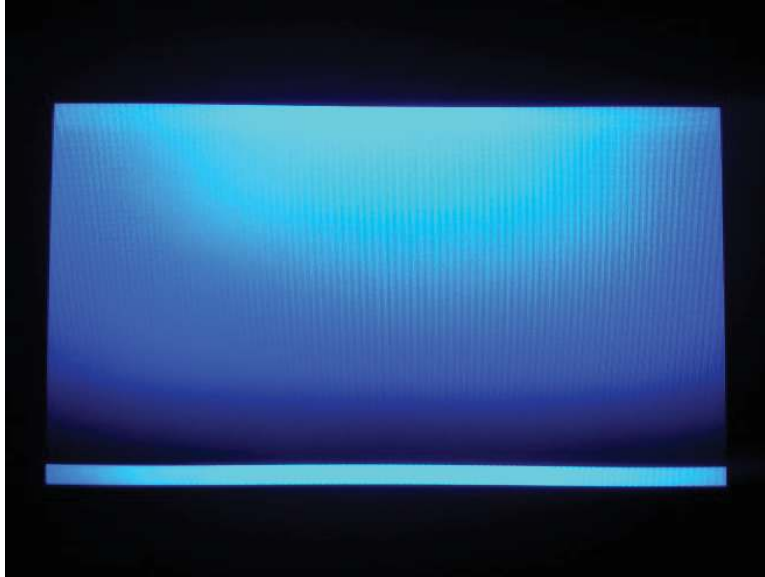
1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 203](#).
2. With 1 Screen Test highlighted, press the OK button to select it.

Figure 4-49 Open the screen test



The blue vertical gradient screen appears.

Figure 4-50 Blue vertical gradient screen



3. Touch the touchscreen to scroll through the remaining touchscreen test screens.

 **NOTE:** Touch the Home button to exit the test.

Table 4-40 Touchscreen test screens



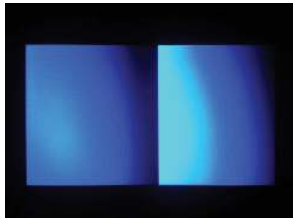
Screen	Description
	Green vertical gradient
	Red vertical gradient
	Blue horizontal gradient

Table 4-40 Touchscreen test screens (continued)

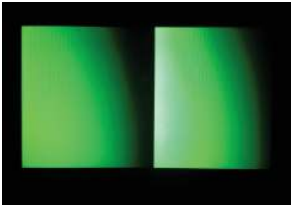
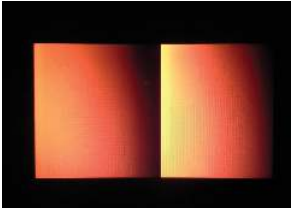




Screen	Description
	Green horizontal gradient
	Red horizontal gradient
	Blue with black horizontal interlaced
	Green with black horizontal interlaced
	Red with black horizontal interlaced
	Blue with black vertical interlaced

Table 4-40 Touchscreen test screens (continued)

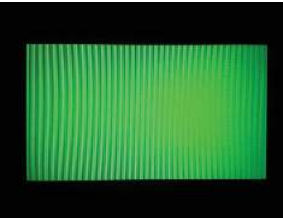
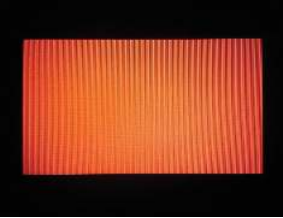





Screen	Description
	Green with black vertical interlaced
	Red with black vertical interlaced
	Black with white center
	White with black center
	Checkerboard
	Multicolor stripes

Table 4-40 Touchscreen test screens (continued)

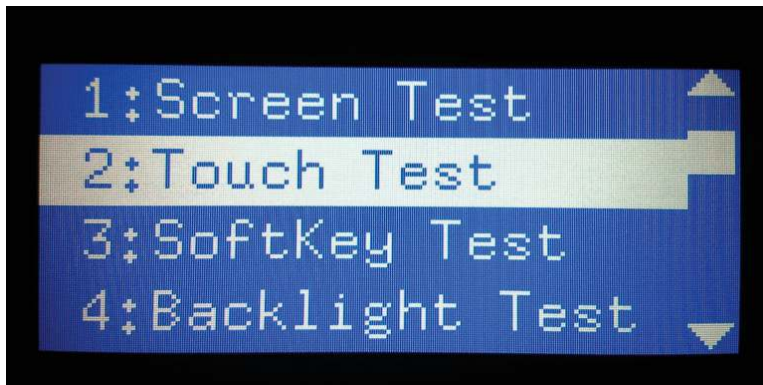
Screen	Description
	Blue green grid meshing

## Touch test

Learn about the control panel system diagnostic touch test.

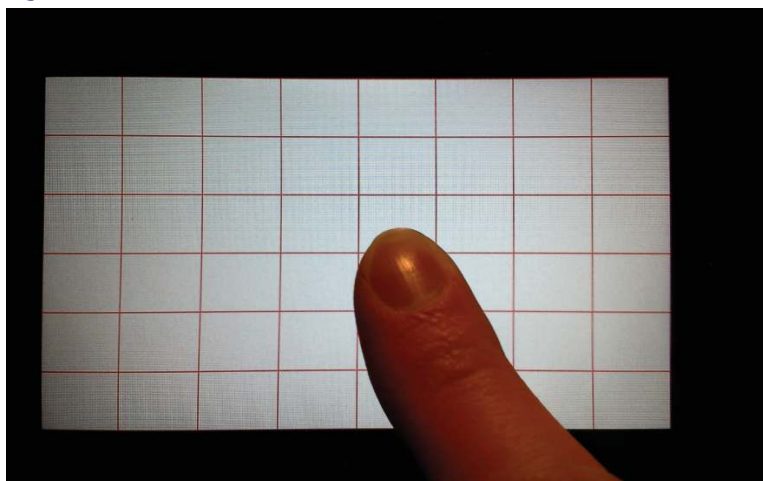
1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 203](#).
2. Use the down arrow ▼ button to scroll to 2 Touch Test, and then press the OK button to select it.

Figure 4-51 Open the touch test



3. Use your finger to touch the white grid on the display.

Figure 4-52 Touch the white grid





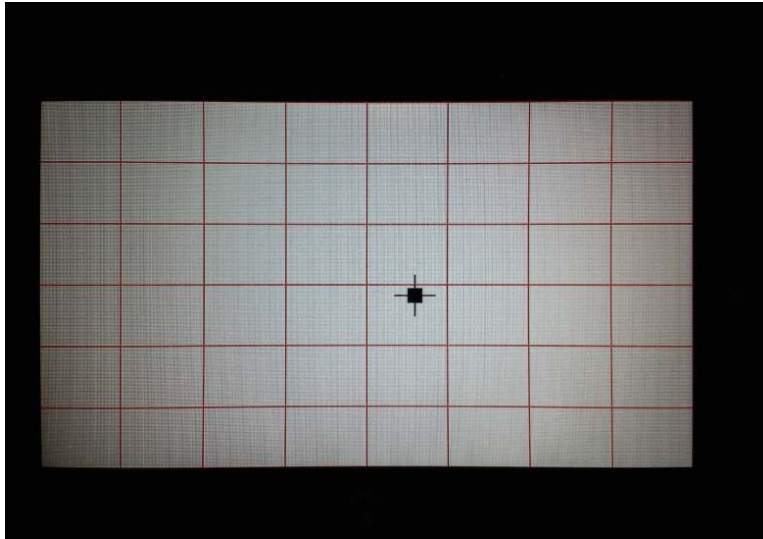
A mark appears on the grid where it was touched.

---

 **NOTE:** Touch the [Home](#) button to exit the test.

---

**Figure 4-53** Verify the mark



## SoftKey test

Learn about the control panel system diagnostic SoftKey test.

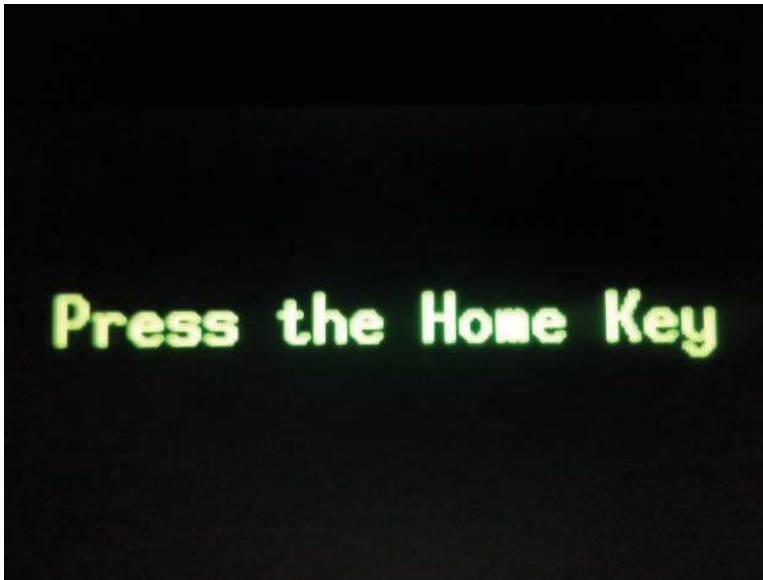
1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 203](#).
2. Use the down arrow ▼ button to scroll to 3 SoftKey Test, and then press the OK button to select it.

**Figure 4-54** Open the softkey test



3. When prompted, touch the [Home](#) button.

**Figure 4-55** Touch the [Home](#) button



If the test is successful, the following screen appears on the display.

---

 **NOTE:** Touch the screen to exit the test.

---

**Figure 4-56** Successful test




## Backlight test

Learn about the control panel system diagnostic backlight test.

1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 203](#).

2. Use the **down arrow ▼** button to scroll to **4 Backlight Test**, and then press the **OK** button to select it.  
After selecting the **4 Backlight Test**, the screen automatically dims, and then returns to full brightness.

---

 **NOTE:** Touch any key to exit the test.

---

**Figure 4-57** Open the backlight test



## Sound test

Learn about the control panel system diagnostic sound test.

1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 203](#).
2. Use the **down arrow ▼** button to scroll to **5 Sound Test**, and then press the **OK** button to select it.  
After selecting the **5 Sound Test**, the printer emits a series of audible tones.

---

 **NOTE:** Touch any key to exit the test.

---

Figure 4-58 Open the sound test




## Version

Learn about the control panel system diagnostic version information.

1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 203](#).
2. Use the **down arrow ▼** button to scroll to **7 Version**, and then press the **OK** button to select it.

---

 **NOTE:** Touch any key to exit the test.

---

Select **7 Version** to view the following types of information:

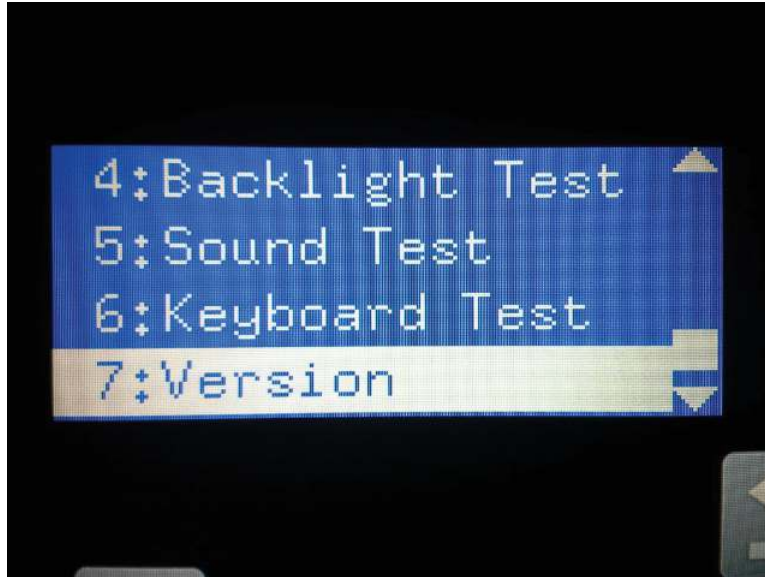
---

 **NOTE:** The following types of information are for the control panel only, not the printer.

---


- Panel ID
- Hardware (version)
- Firmware (version)
- KB Hw (version)
- KB Firm (version)
- LCD Vendor
- Touch Controller Version

Figure 4-59 Open the version information



## 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.](#)

## How to search for printer documentation

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

These are [Wise for Channel](#) and [WISE](#) (formerly SAW). Wise for channel is available to HP channel partners and WISE is available to call agents, service technicians, and other HP internal users. The level of detail available will depend on your access credentials. To learn how to find support content in WISE, [watch the video here](#).

To view a list of control panel message documents per printer in **WISE**, go to the following topic (c06912836):

- HP internal link: [Control panel message document \(CPMD\) list](#)
- HP external partner link: [Control panel message document \(CPMD\) list](#)

 **NOTE:** To access the HP partner link, you must first log in to the HP Partner First Portal and then connect to WISE.

## How to search WISE for printer 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](#).

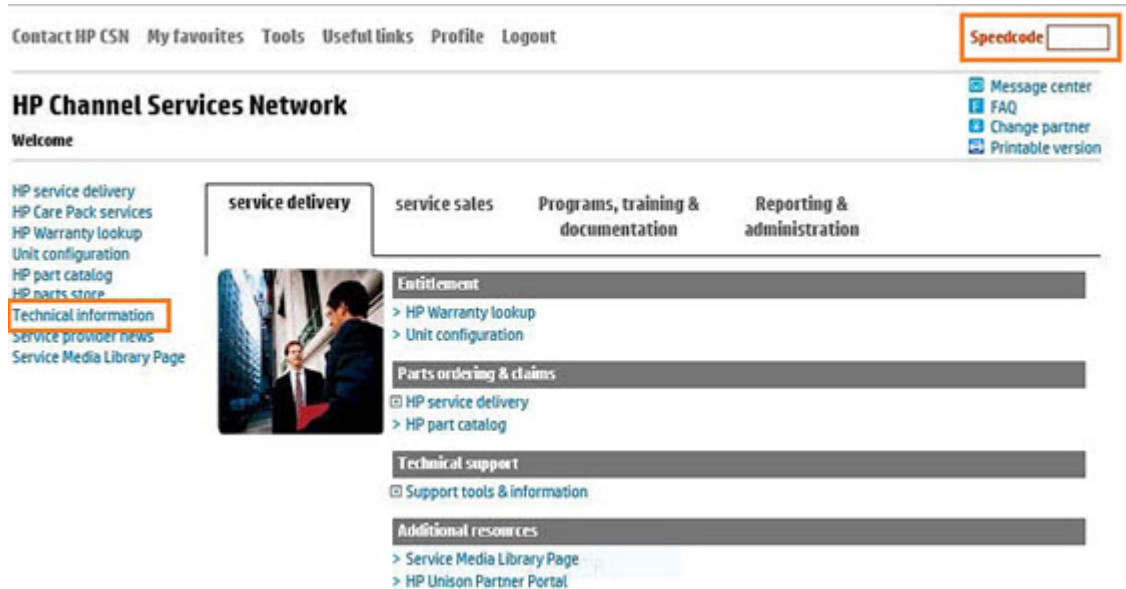
To view a list of control panel message documents per printer in **WISE**, go to [HP LaserJet, OfficeJet, PageWide, ScanJet Enterprise - Control panel message document \(CPMD\) list](#) (HP internal only).

## 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 4-60 Sample product search criteria

- 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

Category

Family

- Clear all of the high-level check boxes.

Select the appropriate check boxes for the document types you wish to review.

<input type="checkbox"/> <b>Support Communications</b>	<input type="checkbox"/> <b>Manuals and Guides</b>	<input type="checkbox"/> <b>Support Information</b>
<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"/> <b>Support Communications</b>	<input type="checkbox"/> <b>Manuals and Guides</b>	<input type="checkbox"/> <b>Support Information</b>
<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	

- Select **Submit**.

- 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.

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

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

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

### Error codes

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 4-41 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.



**Table 4-41 ERROR CODES: The first two characters (continued)**

Error code	System Component	System Error Description
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.
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)	LaserJet internal system error.

Table 4-41 ERROR CODES: The first two characters (continued)

Error code	System Component	System Error Description
	Print bar (PageWide)	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.
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.
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.

## 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.



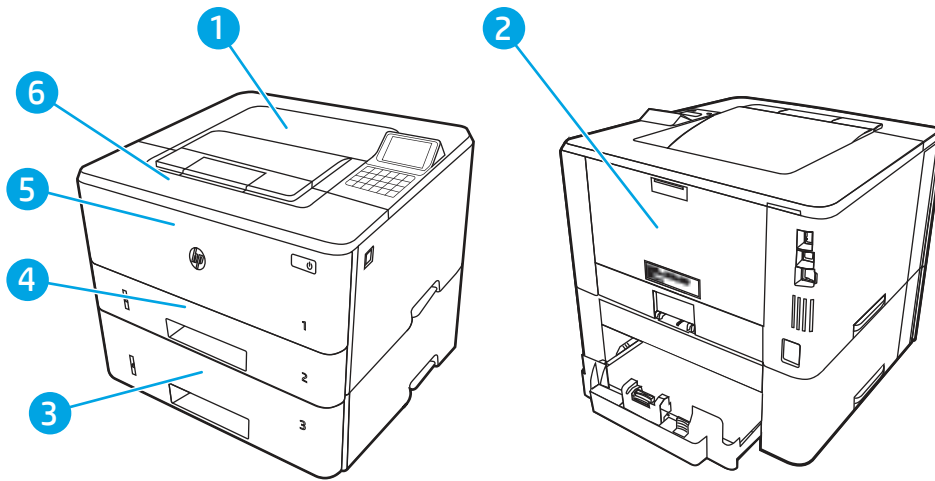
**NOTE:** To avoid tearing the paper, pull the jammed paper out slowly and gently.

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 4-61 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)

## Auto-navigation for clearing paper jams

Learn about printer jam clearing auto-navigation.

The auto-navigation feature assists in clearing jams by providing step-by-step instructions on the control panel.

When you complete a step, the printer displays instructions for the next step until you have completed all steps in the procedure.

## Experiencing frequent or recurring paper jams?

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

[View a video that demonstrates how to load paper in a way that reduces the number of paper jams](#)

1. Use only paper that meets HP specifications for this printer.

2. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.
3. Use paper that has not previously been printed or copied on.
4. Make sure the tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.
5. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides so they are touching the paper stack without bending it.
6. Make sure that the tray is fully inserted in the printer.
7. If you are printing on heavy, embossed, or perforated paper, use the manual feed feature and feed sheets one at a time.
8. Open the [Trays](#) menu on the printer control panel. Verify that the tray is configured correctly for the paper type and size.
9. Make sure the printing environment is within recommended specifications.

### 13.B2.D1 jam error in tray 1

Use the following procedure to clear paper jams in Tray 1.

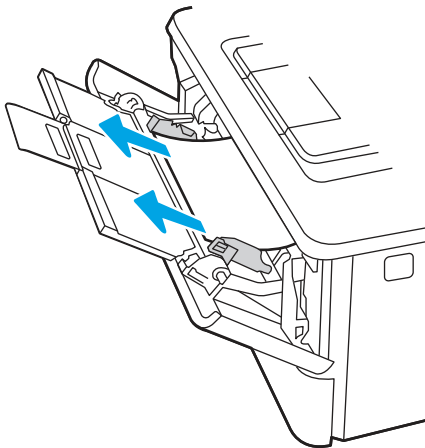
#### Recommended action for customers

When a jam occurs, the control panel displays a message and an animation that assists in clearing the jam.

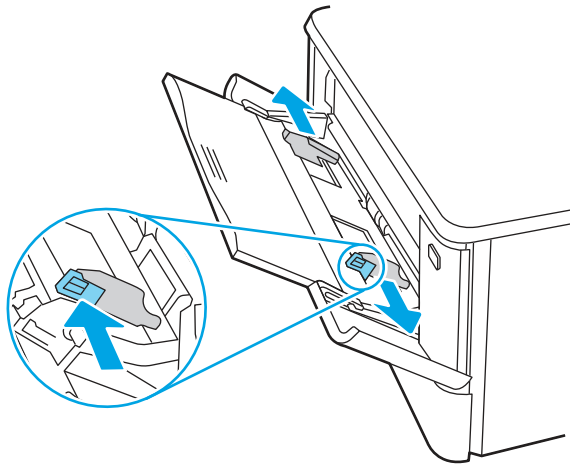
- **13.B2.D1 Jam in tray 1**

[View a video of how to clear a jam in tray 1](#)

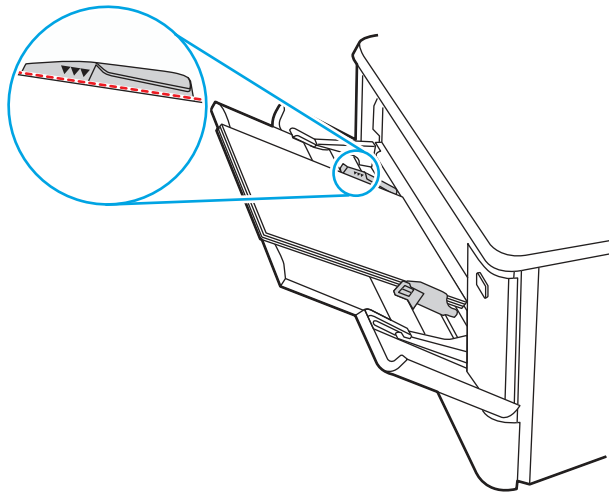
1. Slowly pull the jammed paper out of the printer.



2. Adjust the paper guides to the correct paper size, then reload paper into the tray.

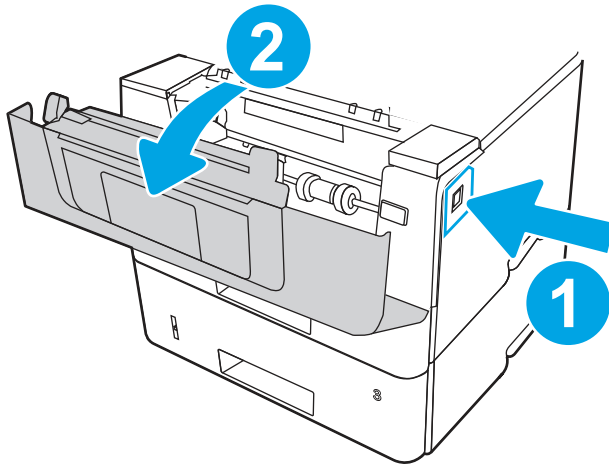


3. Ensure the tray is not overfilled. Paper should be below the 3 triangles in the following image.



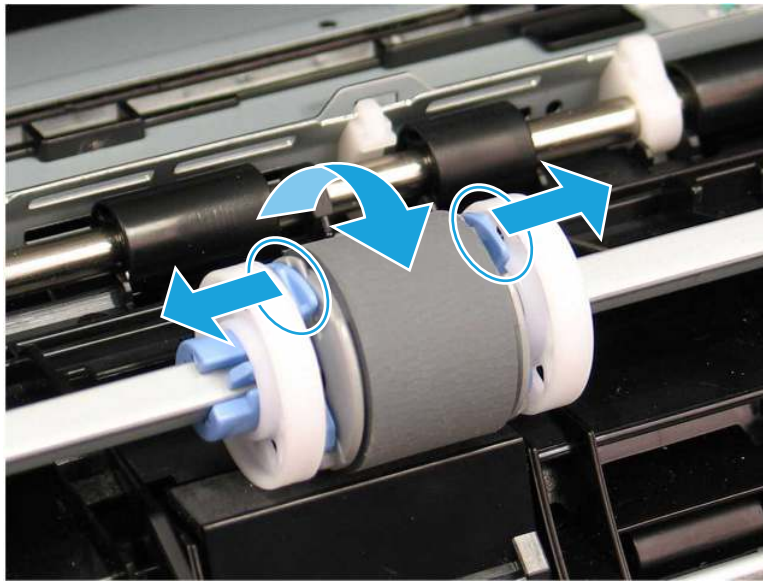
4. Ensure the type and quality of the paper being used meets the HP specifications for the printer.
5. If the error persists, clean the tray 1 pickup roller and separation pad.

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



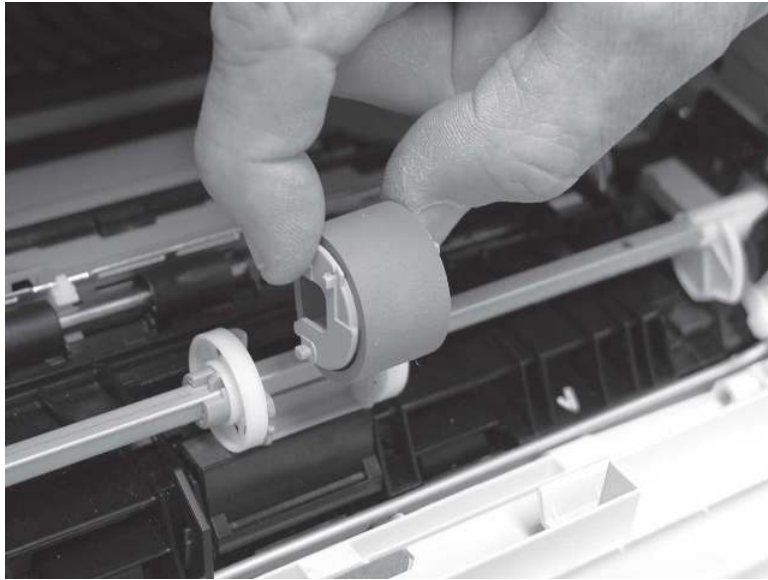
- b. To clean the roller thoroughly, release two tabs between the roller collar and roller, and then rotate the top of the roller out and away from the printer.

Figure 4-62 Release the roller



- c. Remove the roller.

**Figure 4-63** Remove the roller



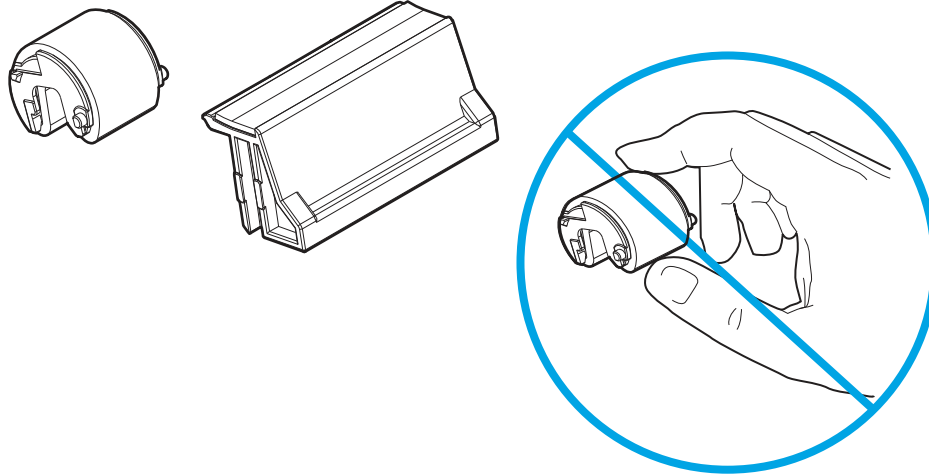
- d. With the Tray 1 roller removed the separation pad is accessible in the printer (it does not need to be removed to be cleaned).
- e. Use a damp, lint-free cloth to gently clean the rollers.

---

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

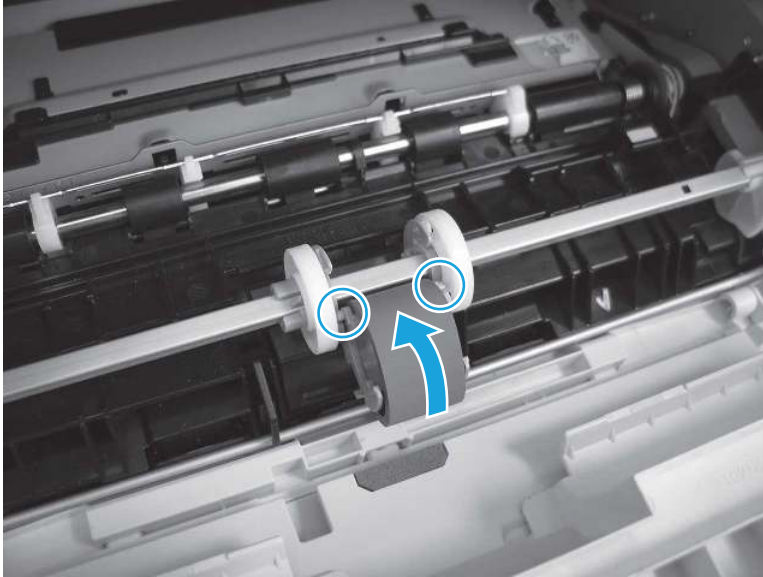
---

**Figure 4-64** Clean the roller and pad



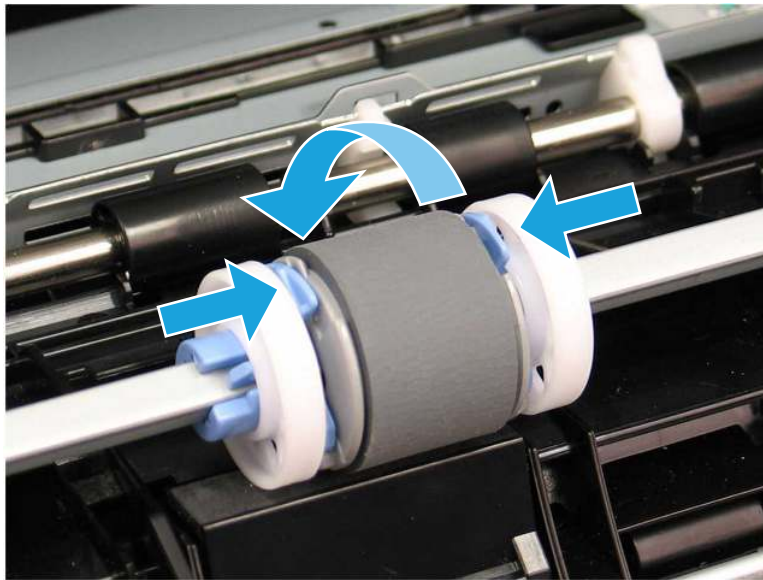
- f. Position the pickup roller with the pins in the provided slots on the holder, and then rotate the top of the roller up and toward the printer.

**Figure 4-65** 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 4-66** 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.B2.D2 jam error in tray 2

Use the following procedure to check for paper in all possible jam locations related to Tray 2.

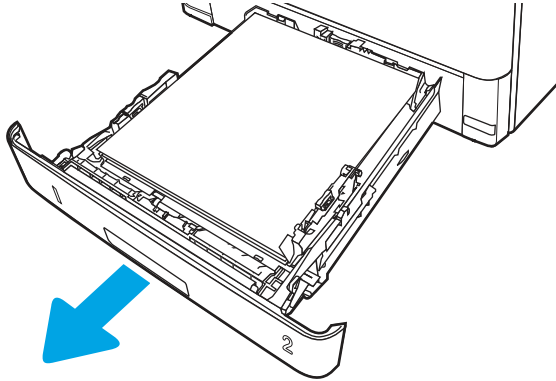
### Recommended action for customers

When a jam occurs, the control panel displays an animation that assists in clearing the jam.

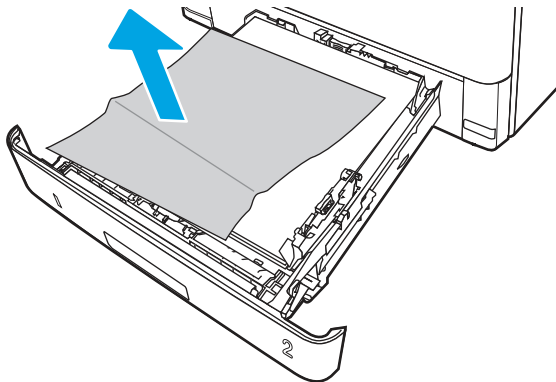
- 13.B2.D2 Paper jam in tray 2

[View a video of how to clear a jam in tray 2](#)

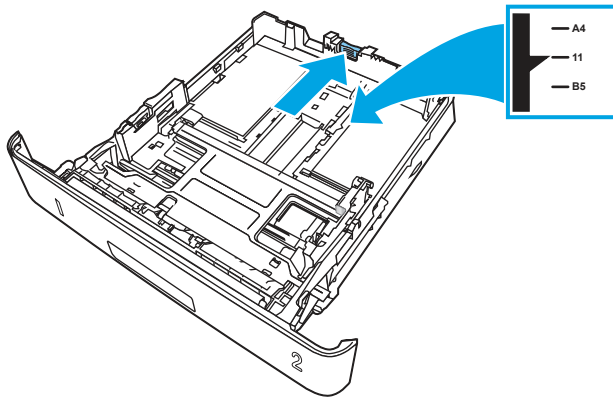
1. Remove the tray from the printer.



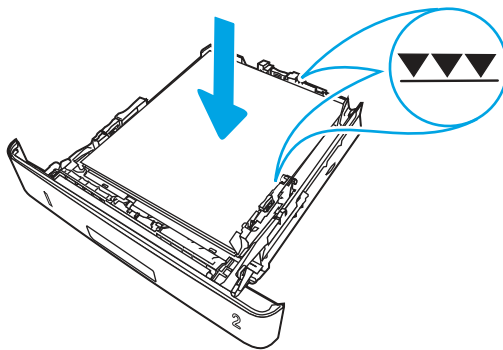
2. Remove the paper from the tray, and discard any damaged paper.



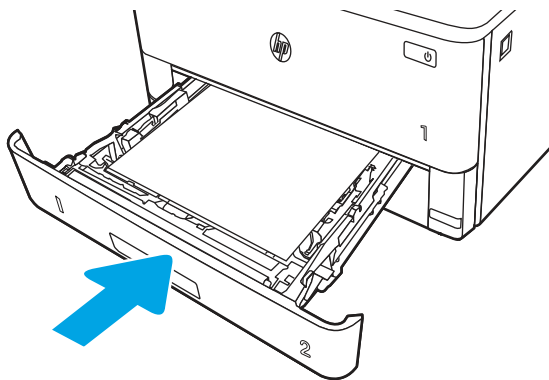
3. Verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.



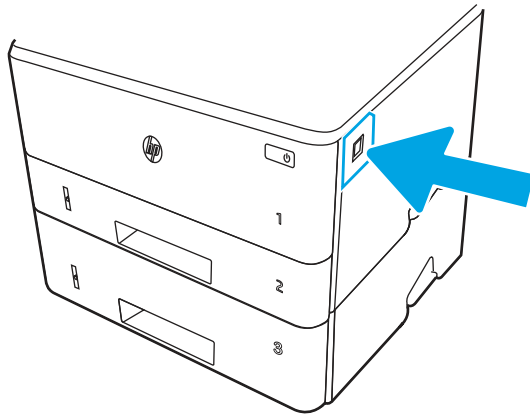
4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.



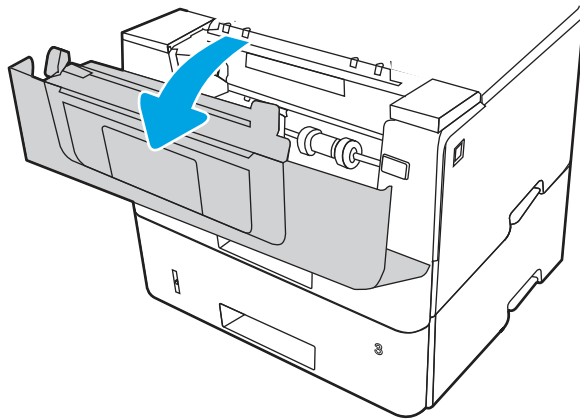
5. Reinsert and close the tray.



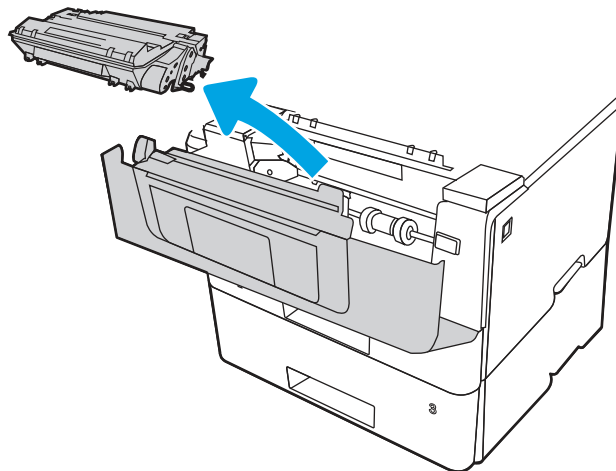
6. Press the front door release button.



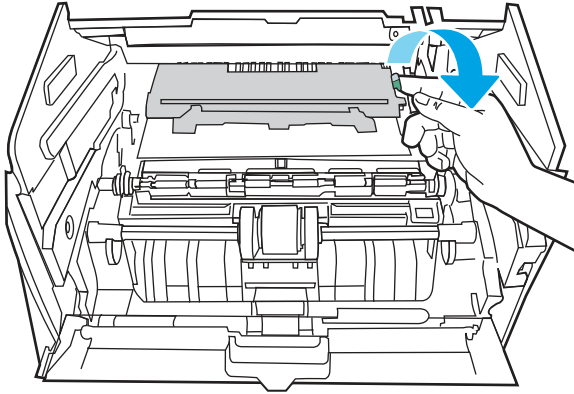
7. Open the front door.



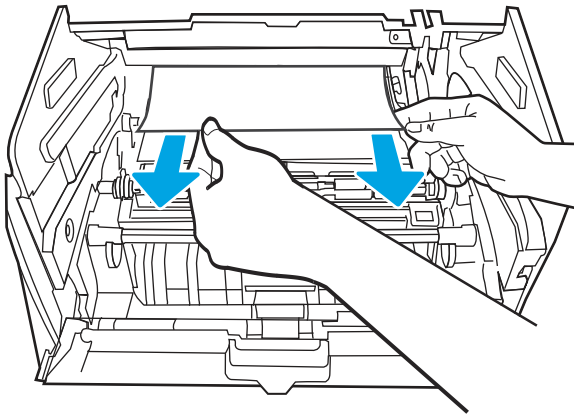
8. Remove the toner cartridge.



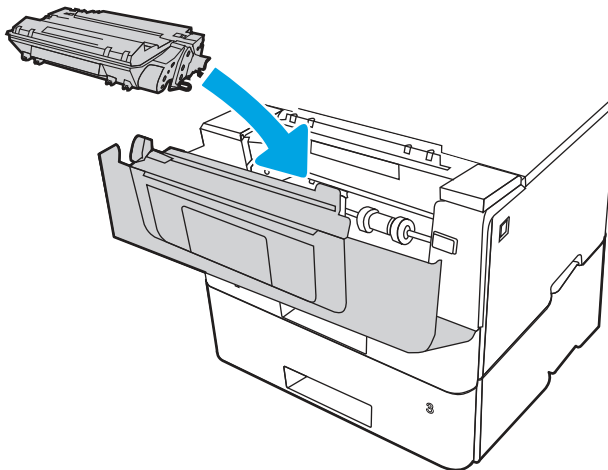
9. Lift the jam-access cover.



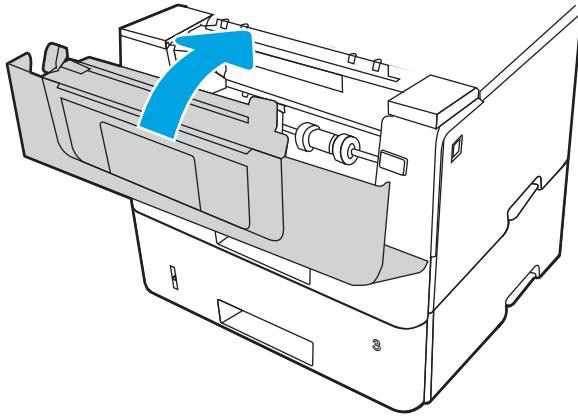
10. Remove any jammed paper.



11. Install the toner cartridge.




12. Close the front door.



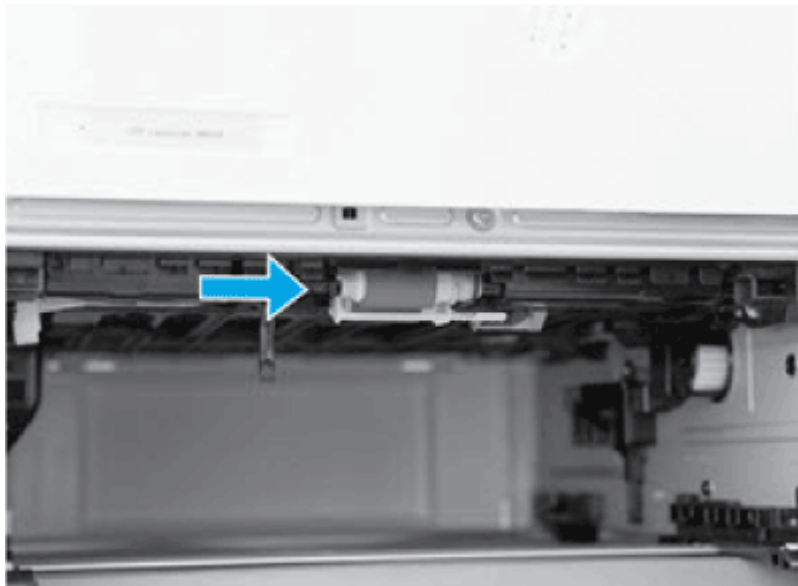
13. Ensure the type and quality of the paper being used meets the HP specifications for the printer.
14. If the error persists, clean the tray 2 pickup and feed rollers.

---

 **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.



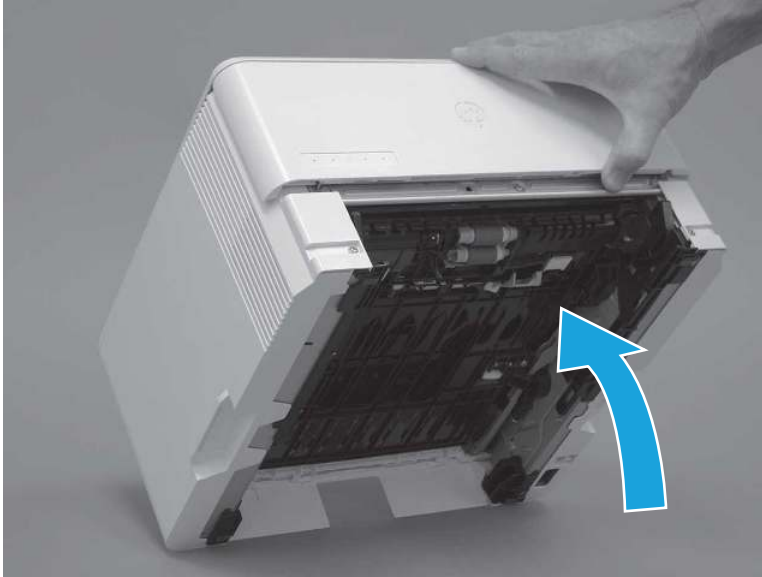
- b. Clean the rollers by gently wiping them with a damp, lint-free cloth.
- c. If needed for better access to the rollers, carefully rotate the printer backward.

---

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

---

Figure 4-67 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.

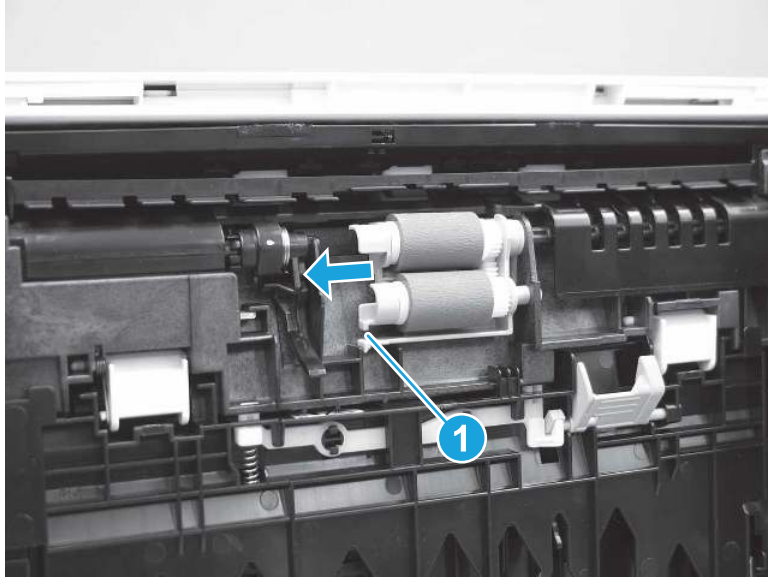
---

Figure 4-68 Place the printer bottom-side face forward



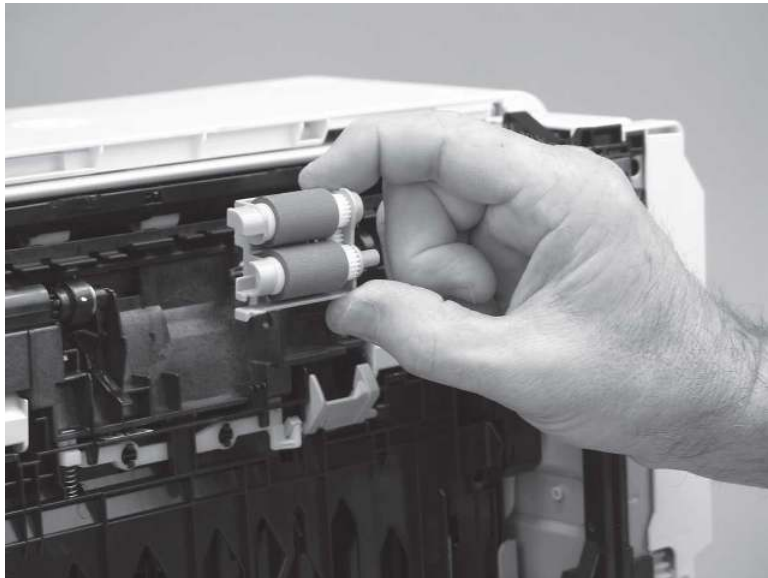
- e. Release one tab (callout 1), and then slide the roller holder toward the left side of the printer to release it.

**Figure 4-69** Release one tab



- f. Remove the roller assembly.

**Figure 4-70** Remove the roller assembly



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

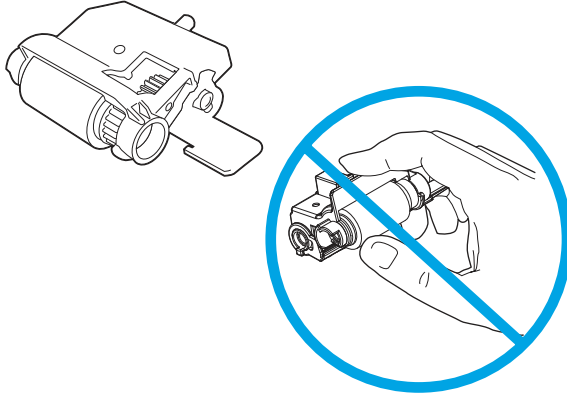


**NOTE:** The roller in the tray (cassette) can be cleaned without removing it from the tray.



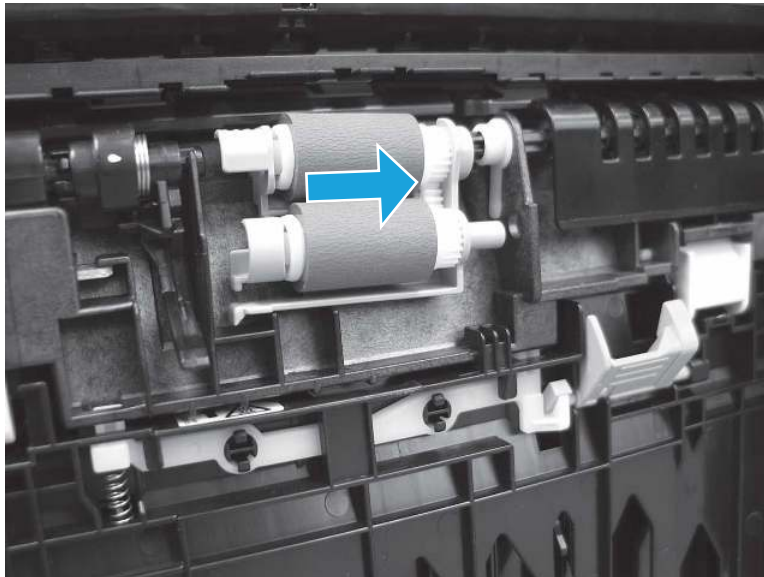
**CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper handling problems. HP recommends washing your hands before handling the assembly.

**Figure 4-71** Clean the rollers



- h.** After cleaning the roller, position the roller holder assembly in the printer as shown, and then slide it toward the right side of the printer.

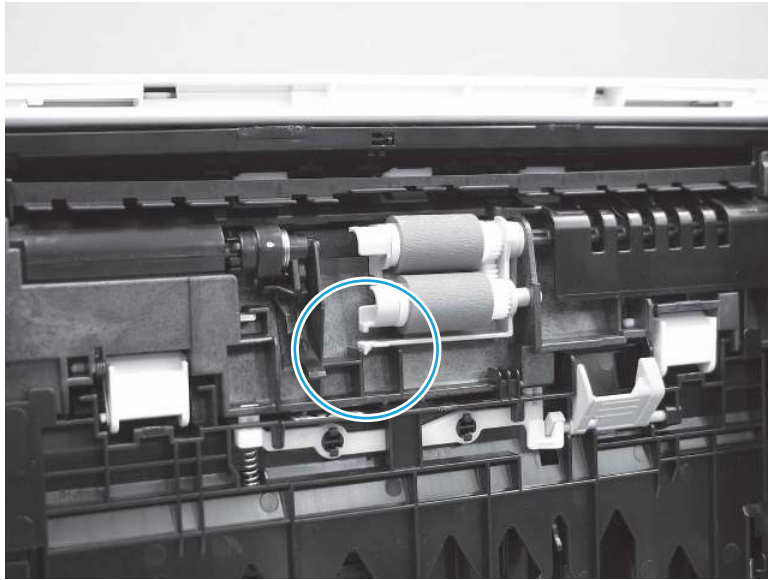
**Figure 4-72** Install the roller holder





- i. Make sure that the tab snaps into place.

**Figure 4-73** Check the tab



- j. 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.B2.D3 jam error in tray 3

Use the following procedure to check for paper in all possible jam locations related to Tray 3.

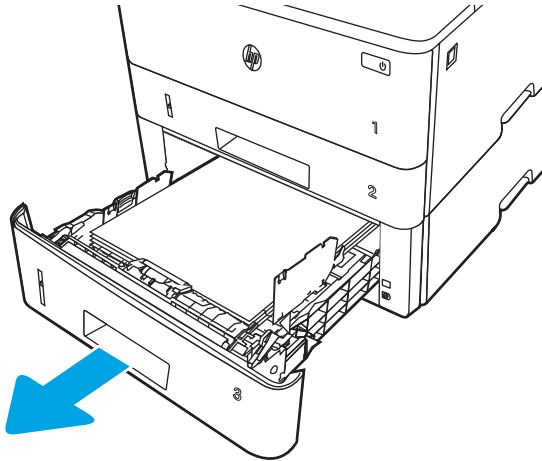
#### Recommended action for customers

When a jam occurs, the control panel displays an animation that assists in clearing the jam.

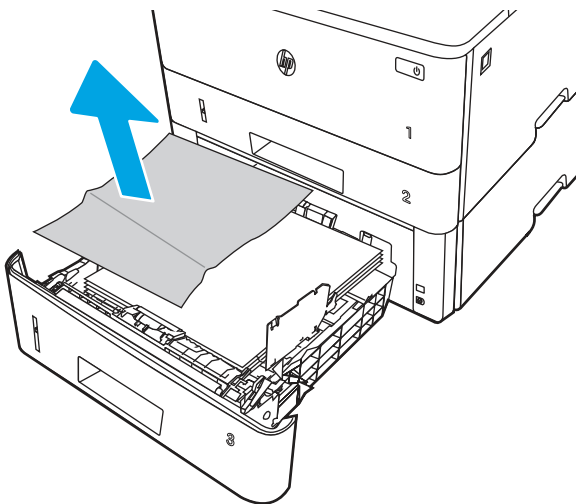
- 13.B2.D3 Paper jam in top cover

[View a video of how to clear a jam in tray 3](#)

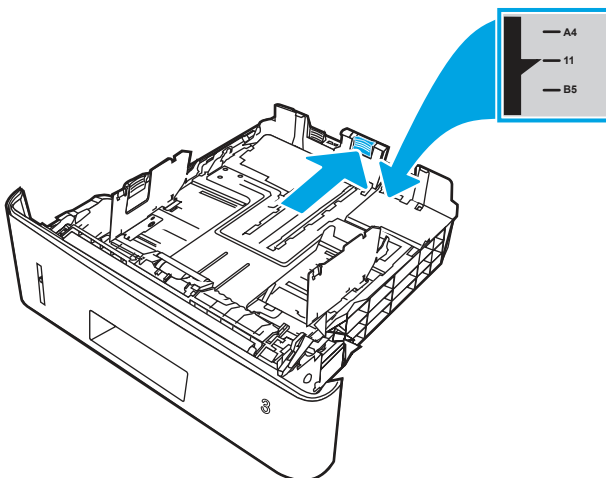
1. Remove the tray from the printer.



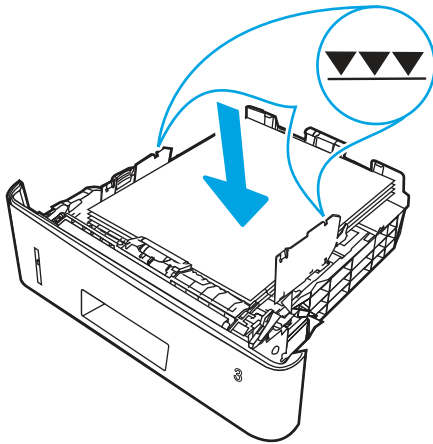
2. Remove the paper from the tray, and discard any damaged paper.



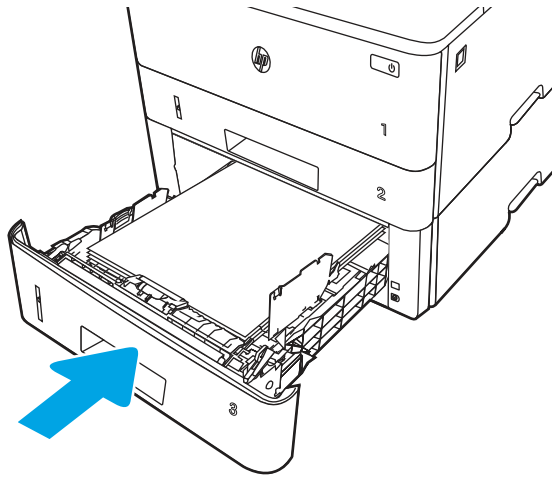
3. Verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.



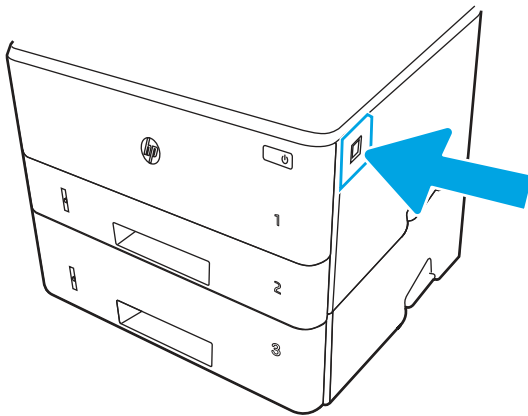
4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.



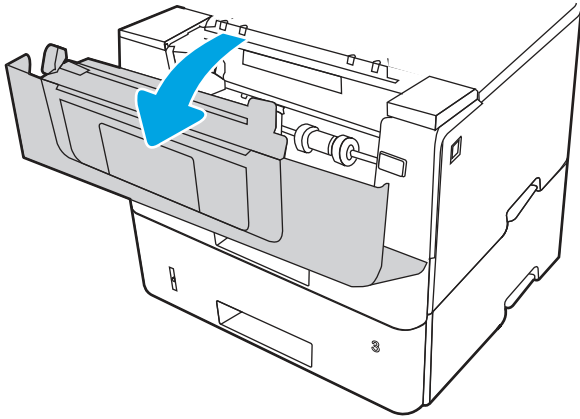
5. Reinsert and close the tray.



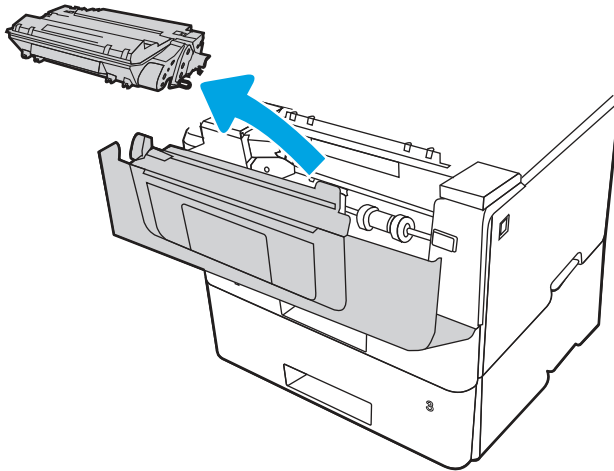
6. Press the front door release button.



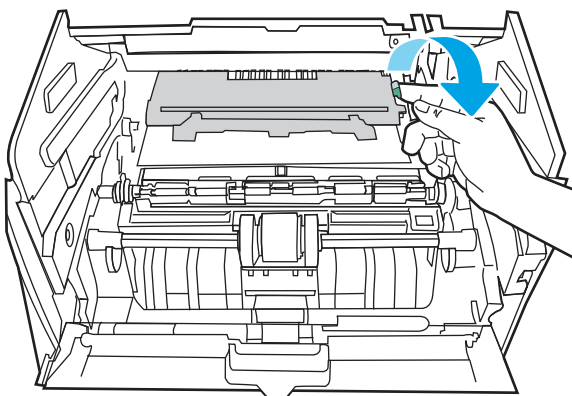
7. Open the front door.



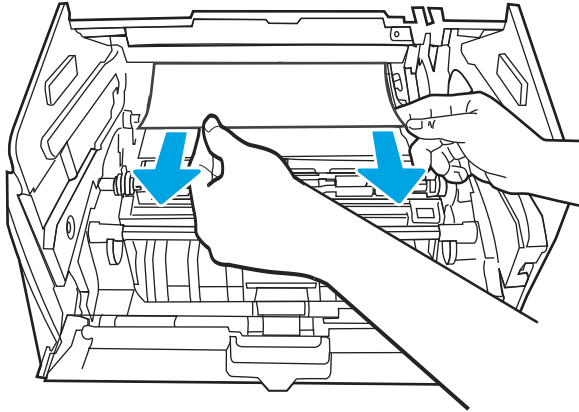
8. Remove the toner cartridge.



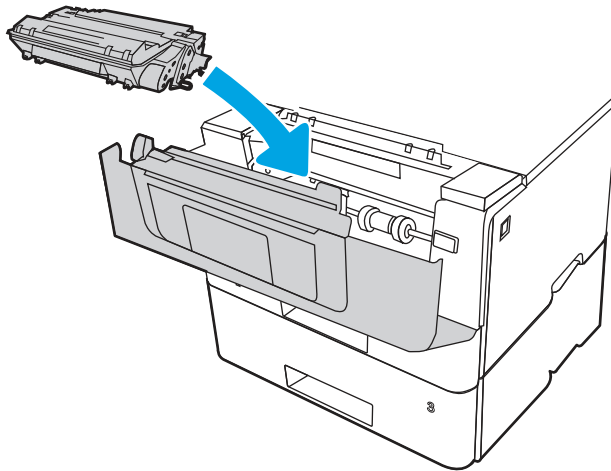
9. Lift the jam-access cover.



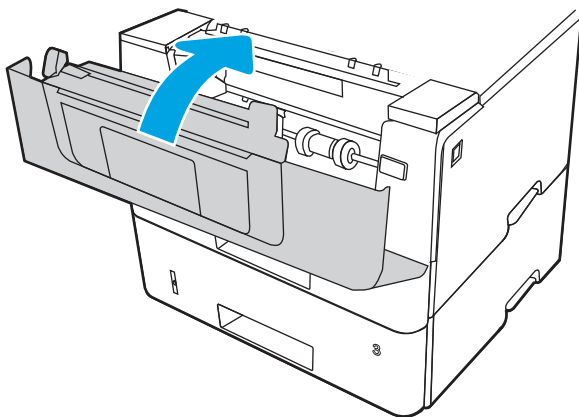
10. Remove any jammed paper.



11. Install the toner cartridge.

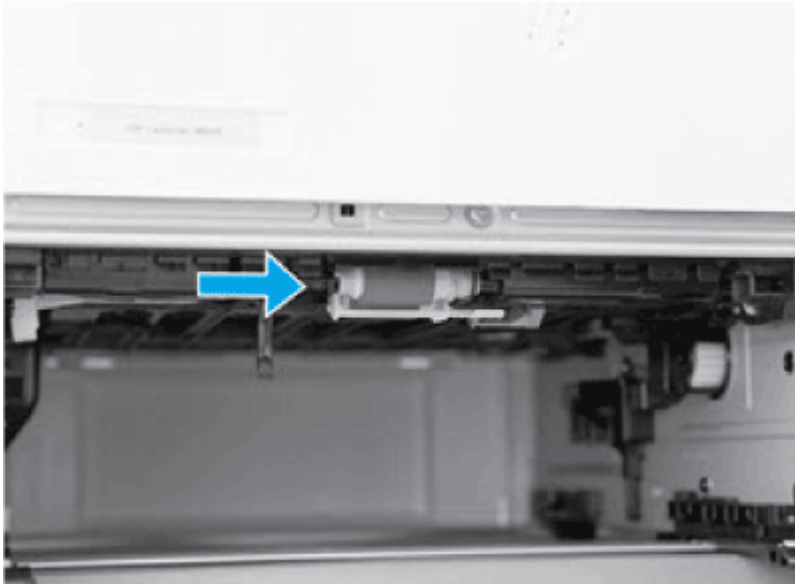


12. Close the front door.



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.B2.A jam error in the top cover

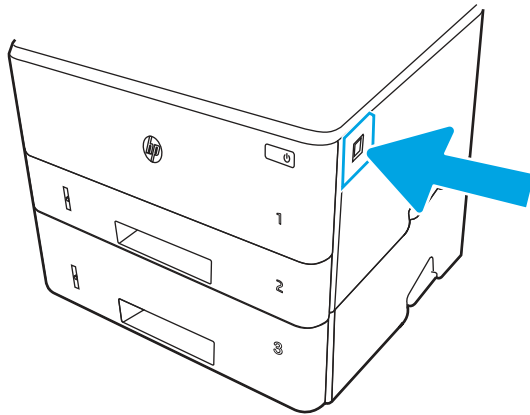
Use the following procedure to check for paper in all possible jam locations registration area.

#### Recommended action for customers

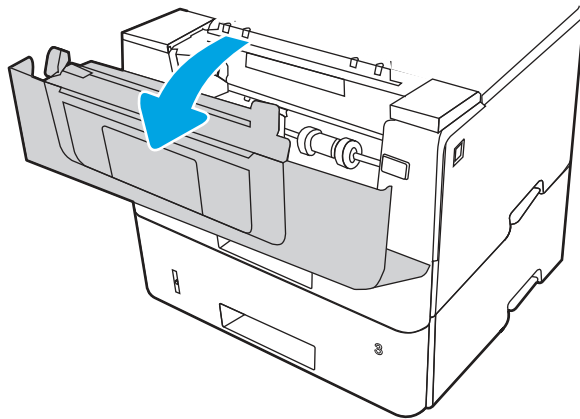
When a jam occurs, the control panel displays an animation that assists in clearing the jam.

- 13.B2.A1 Paper jam in top cover
- 13.B2.A2 Paper jam in top cover
- 13.B2.A3 Paper jam in top cover

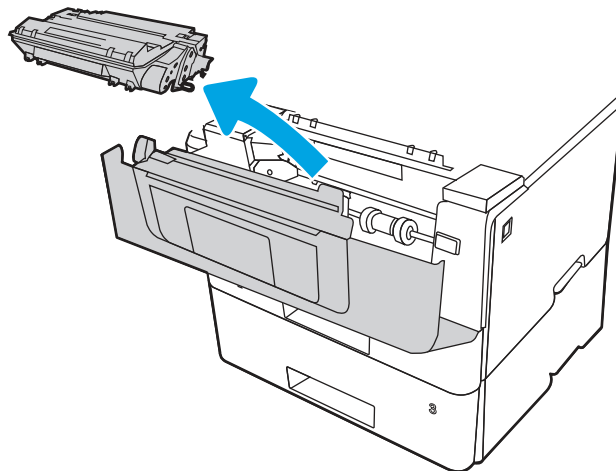
1. Press the front door release button.



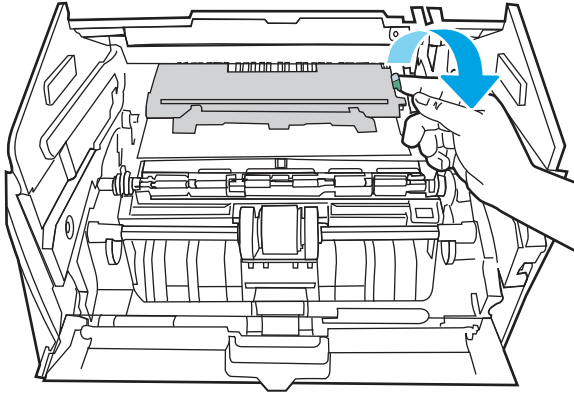
2. Open the front door.



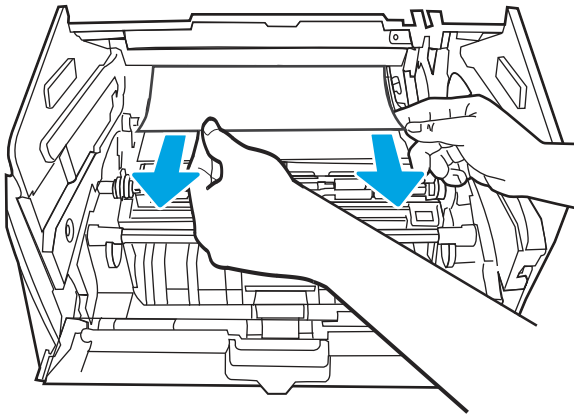
3. Remove the toner cartridge.



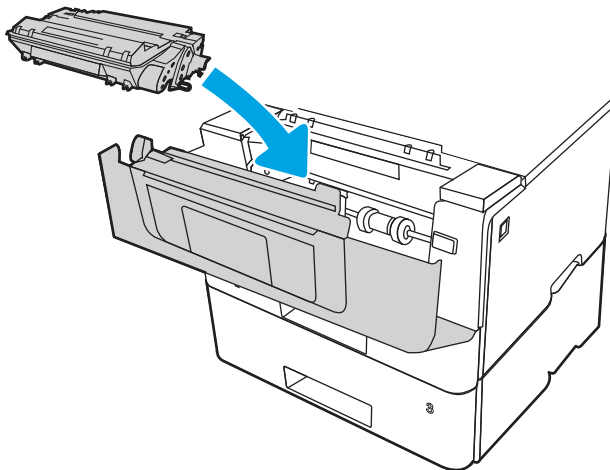
4. Lift the jam-access cover.



5. Remove any jammed paper.

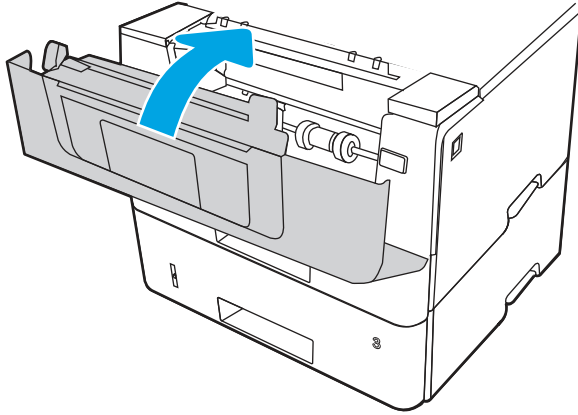


6. Install the toner cartridge.

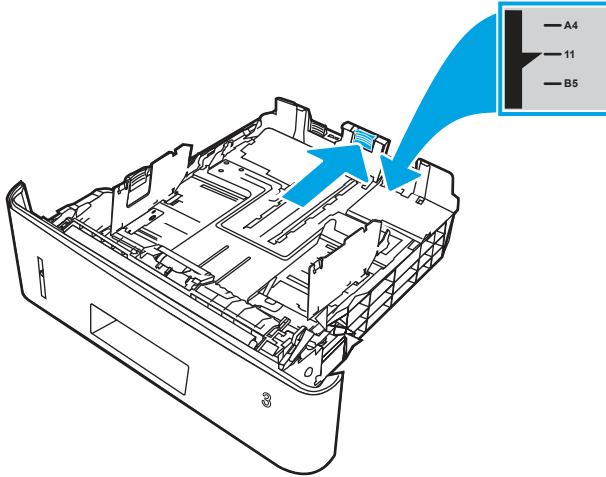




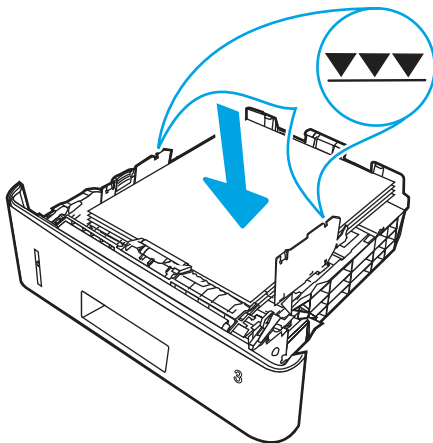
7. Close the front door.



8. 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.



9. 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.



10. If the error persists, ensure the type and quality of the paper being used meets the HP specifications for the printer.
11. 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.B9 jam error in the fuser area

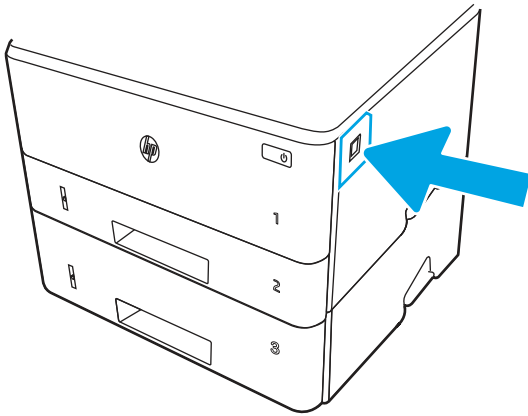
Use the following procedure to check for paper in all possible jam locations in the fuser area.

#### Recommended action for customers

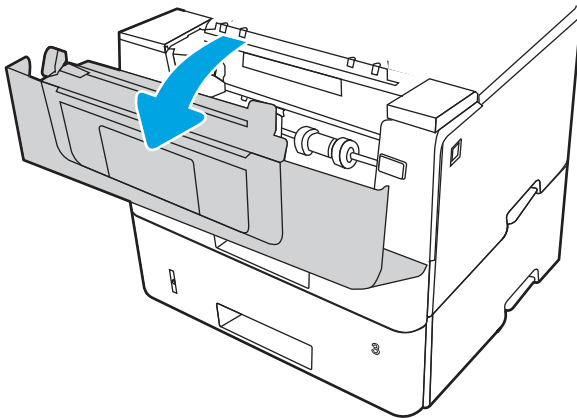
When a jam occurs, the control panel displays an animation that assists in clearing the jam.

[View a video of how to clear a jam in the fuser area](#)

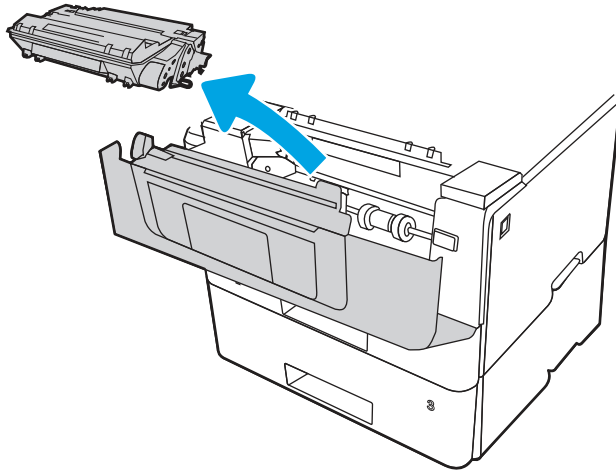
1. Press the front door release button.



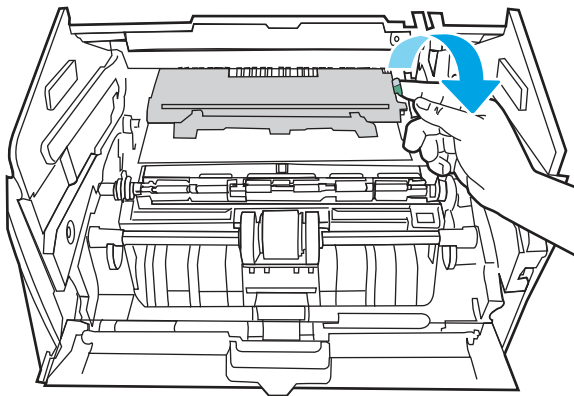
2. Open the front door.



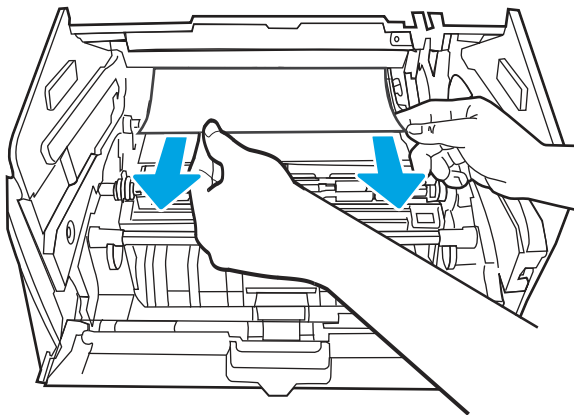
3. Remove the toner cartridge.



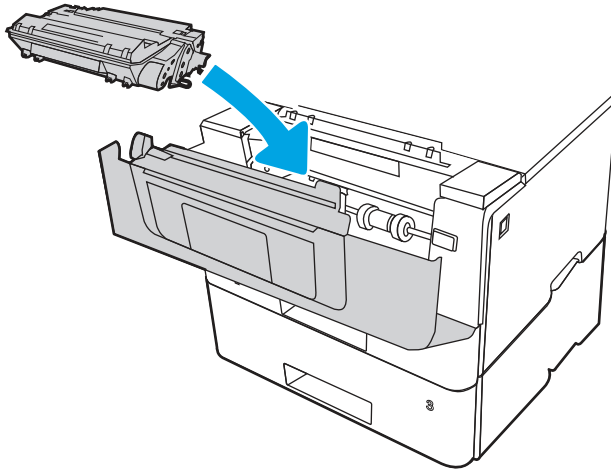
4. Lift the jam-access cover.



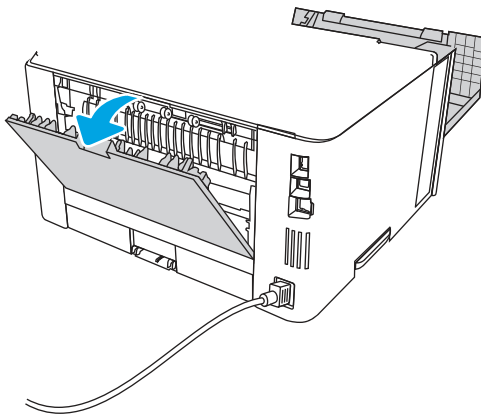
5. Remove any jammed paper.




6. Install the toner cartridge.



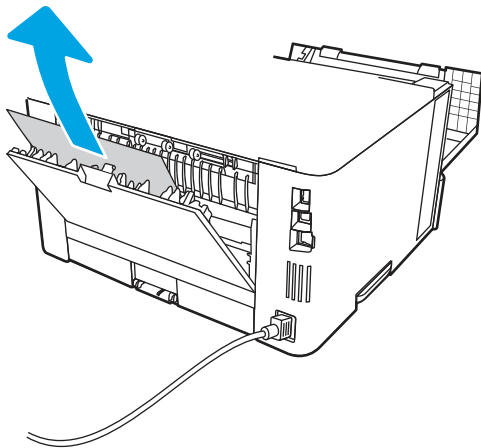
7. Open the front door and the rear door.



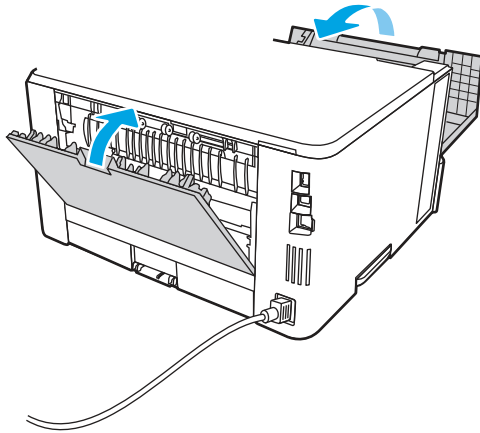
**CAUTION:**  The fuser can be hot while the printer is in use. Wait for the fuser to cool before handling it.

---

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, 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.D1, 13.D3 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.

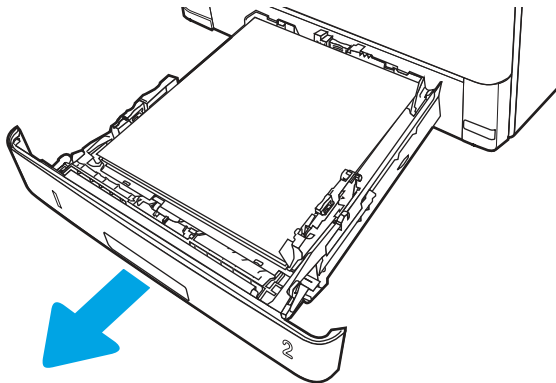
- 13.D1.yz - Jam in duplex unit
- 13.D3.yz - Jam in duplex unit

y = A, C, or D

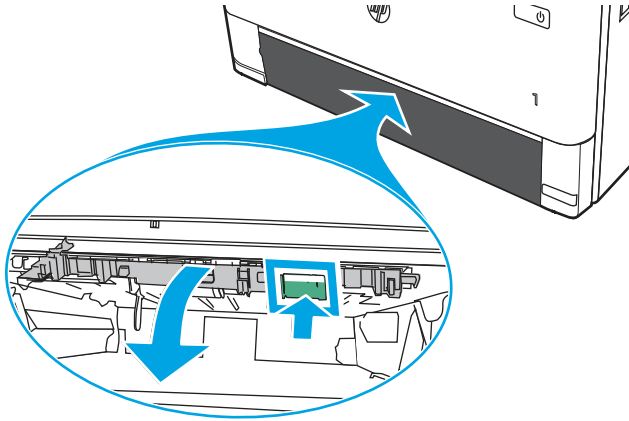
z = 0-9 or A-F

[View a video of how to clear a jam in the duplexer](#)

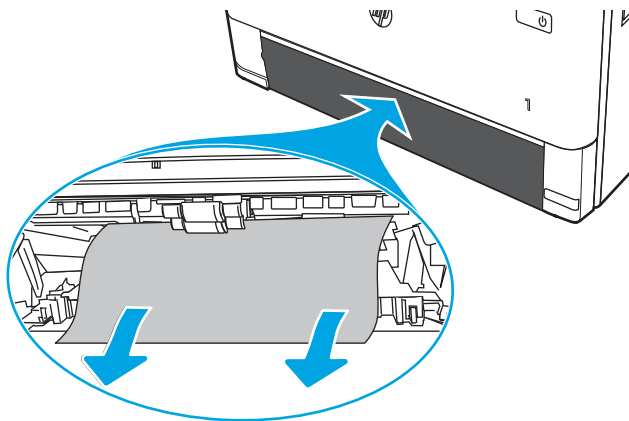
1. Completely remove Tray 2 from the printer.



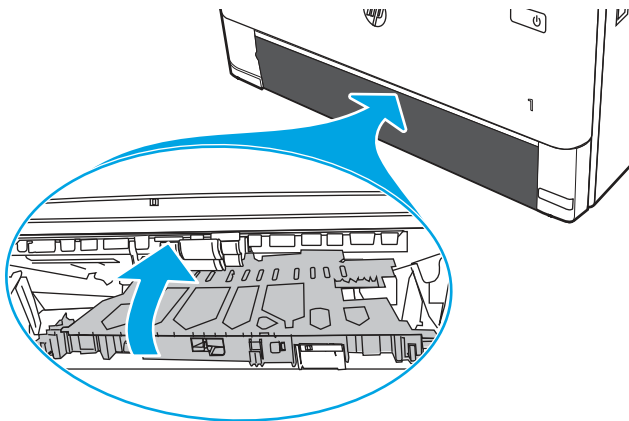
2. Push the green button to release the duplex pan.



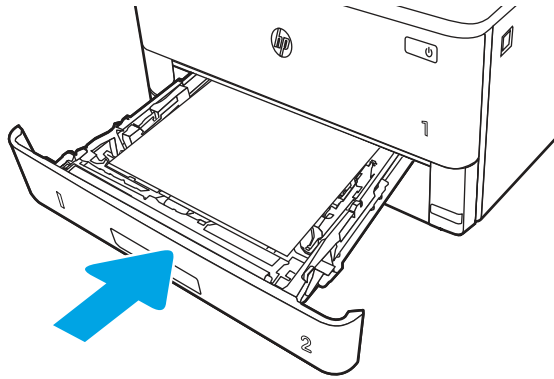
3. Remove any jammed paper.



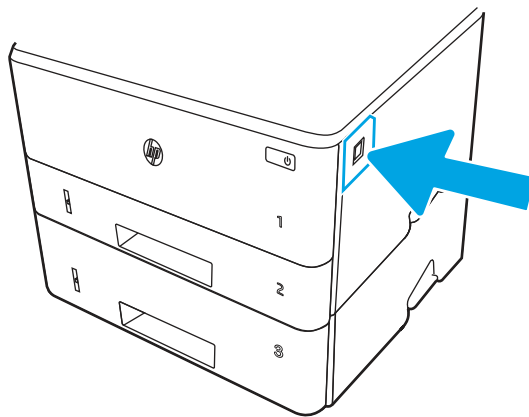
4. Close the duplex pan.



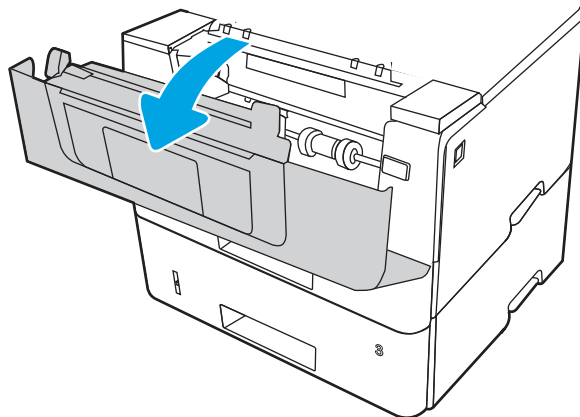
5. Reinsert Tray 2.



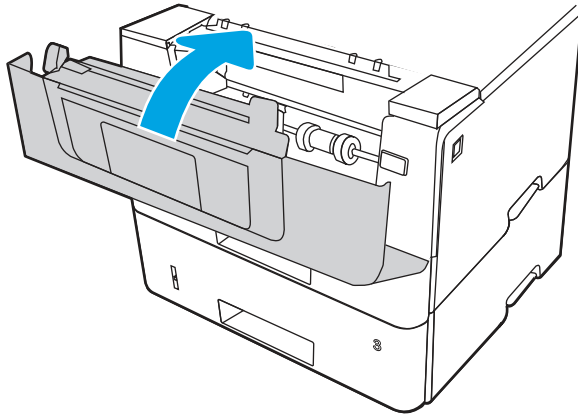
6. Open the front door to clear the jam message.
  - a. Press the front door release button.



- b. Open the front door.



- c. Close the front door.



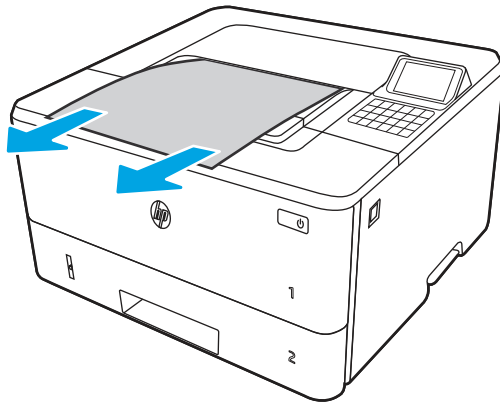
7. If the error persists, ensure the type and quality of the paper being used meets the HP specifications for the printer.
8. If the error persists, contact your HP-authorized service or support provider, or contact customer support at [www.hp.com/go/contactHP](http://www.hp.com/go/contactHP).

### 13.E1 jam error in the output bin

Use the following procedure to check for paper in all possible jam locations related to the output bin.

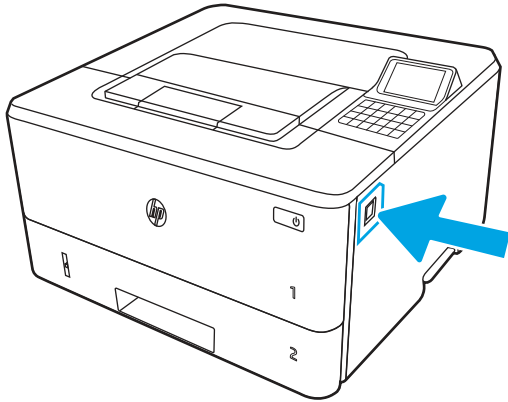
[View a video of how to clear a jam in the output bin](#)

1. If paper is visible in the output bin, grasp the leading edge and remove it.

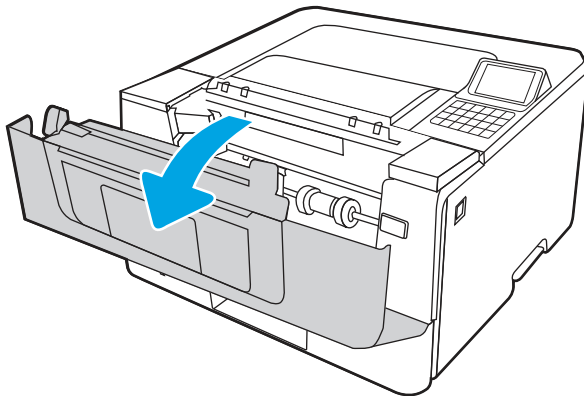




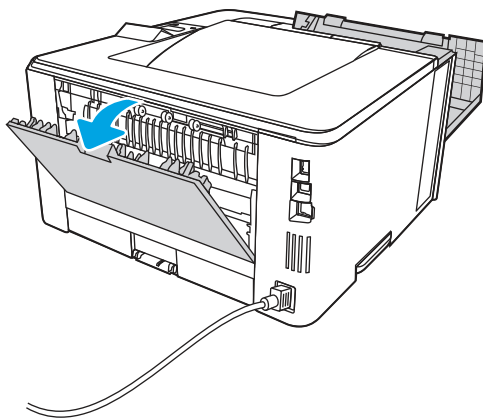
2. Press the front door release button.



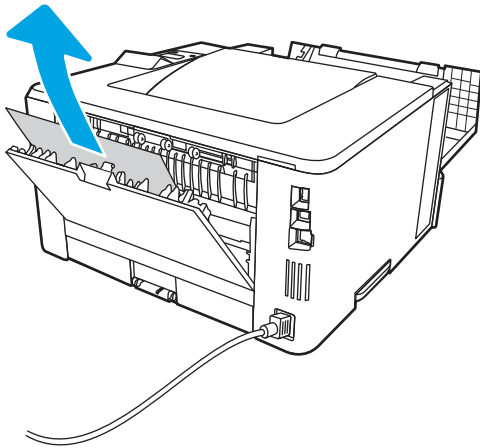
3. Open the front door.



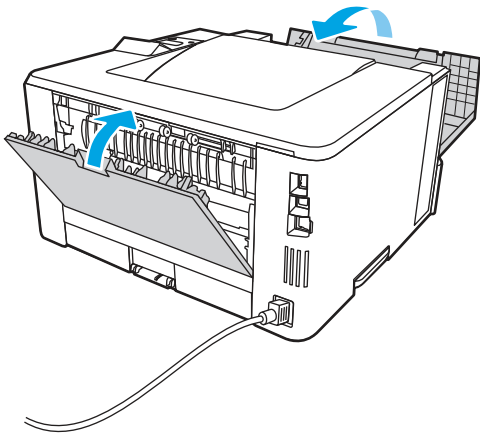
4. Open the rear door.



5. Remove any jammed paper from the rear door area.



6. Close the rear door and the front door.



### Change jam recovery (non-touchscreen)

Use the following procedure to change jam recovery from a non-touchscreen control panel (FutureSmart 4 firmware or later).

1. From the [Home](#) screen on the printer control panel, use the arrow buttons to navigate to [Settings](#), and then press the [OK](#) button.
2. Use the buttons to scroll to [General](#), and then press the [OK](#) button.
3. Use the arrow buttons to scroll to [Jam Recovery](#), and then press the [OK](#) button.
4. Use the arrow buttons to scroll to an option, and then press the [OK](#) button to select it.
  - [Auto](#) — The printer attempts to reprint jammed pages when sufficient memory is available. This is the default setting.
  - [Off](#) — The printer does not attempt to reprint jammed pages. Because no memory is used to store the most recent pages, performance is optimal.

---


 **NOTE:** Some pages can be lost if the printer runs out of paper while printing a duplex job with [Jam Recovery](#) set to [Off](#).

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- **On** — The printer always reprints jammed pages. Additional memory is allocated to store the last few pages printed.

## Clear paper jams (MFP)

Use the procedures in this section to clear jammed paper from the printer paper path.

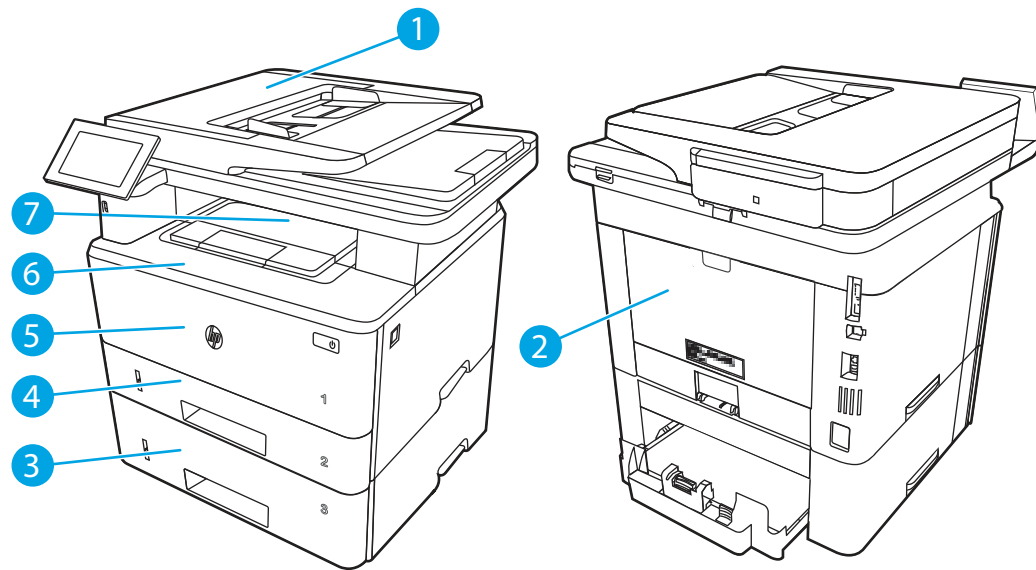
 **NOTE:** To avoid tearing the paper, pull the jammed paper out slowly and gently.

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 4-74 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

## Auto-navigation for clearing paper jams

Learn about printer jam clearing auto-navigation.

The auto-navigation feature assists in clearing jams by providing step-by-step instructions on the control panel.

When you complete a step, the printer displays instructions for the next step until you have completed all steps in the procedure.

## Experiencing frequent or recurring paper jams?

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

[View a video that demonstrates how to load paper in a way that reduces the number of paper jams](#)

1. Use only paper that meets HP specifications for this printer.
2. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.
3. Use paper that has not previously been printed or copied on.
4. Make sure the tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.
5. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides so they are touching the paper stack without bending it.
6. Make sure that the tray is fully inserted in the printer.
7. If you are printing on heavy, embossed, or perforated paper, use the manual feed feature and feed sheets one at a time.
8. Open the **Trays** menu on the printer control panel. Verify that the tray is configured correctly for the paper type and size.
9. Make sure the printing environment is within recommended specifications.

### 13.B2.D1 jam error in tray 1

Use the following procedure to clear paper jams in Tray 1.

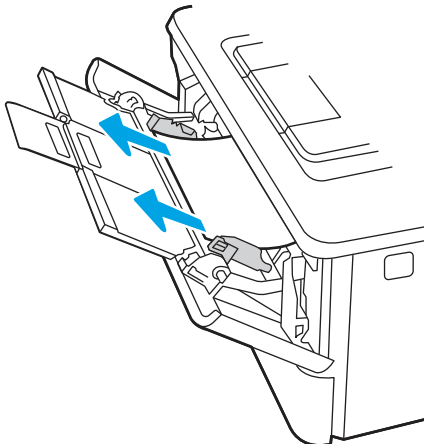
#### Recommended action for customers

When a jam occurs, the control panel displays a message and an animation that assists in clearing the jam.

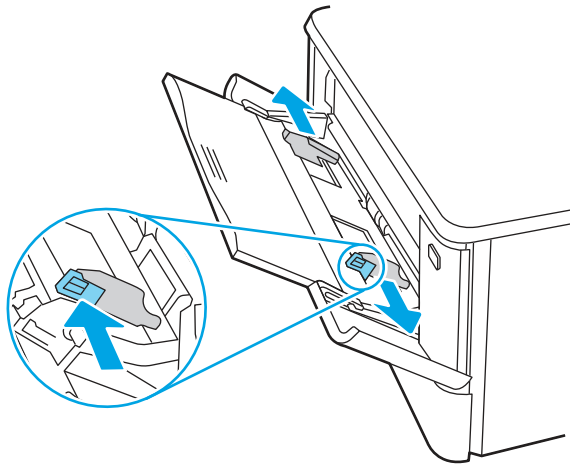
- 13.B2.D1 Jam in tray 1

[View a video of how to clear a jam in tray 1](#)

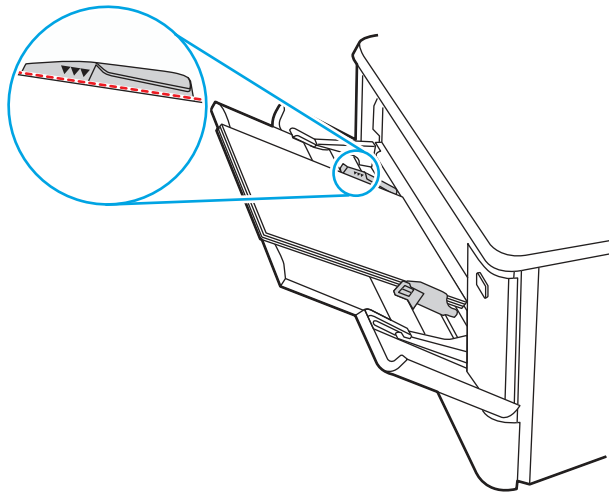
1. Slowly pull the jammed paper out of the printer.



2. Adjust the paper guides to the correct paper size, then reload paper into the tray.

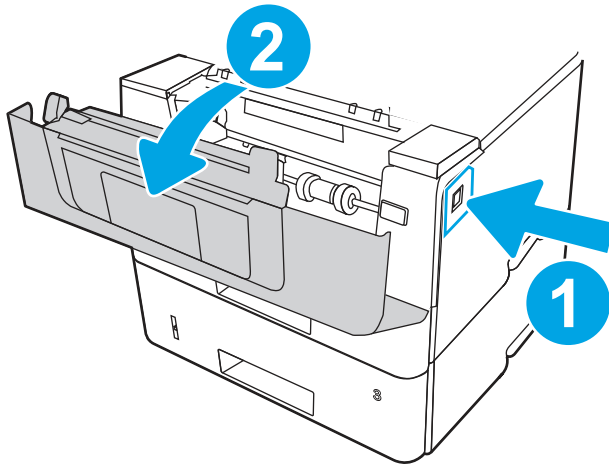


3. Ensure the tray is not overfilled. Paper should be below the 3 triangles in the following image.



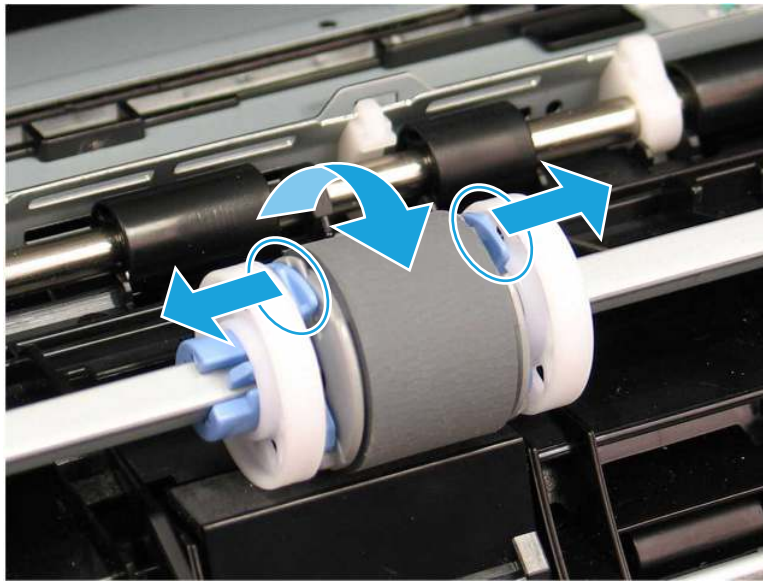
4. Ensure the type and quality of the paper being used meets the HP specifications for the printer.
5. If the error persists, clean the tray 1 pickup roller and separation pad.

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



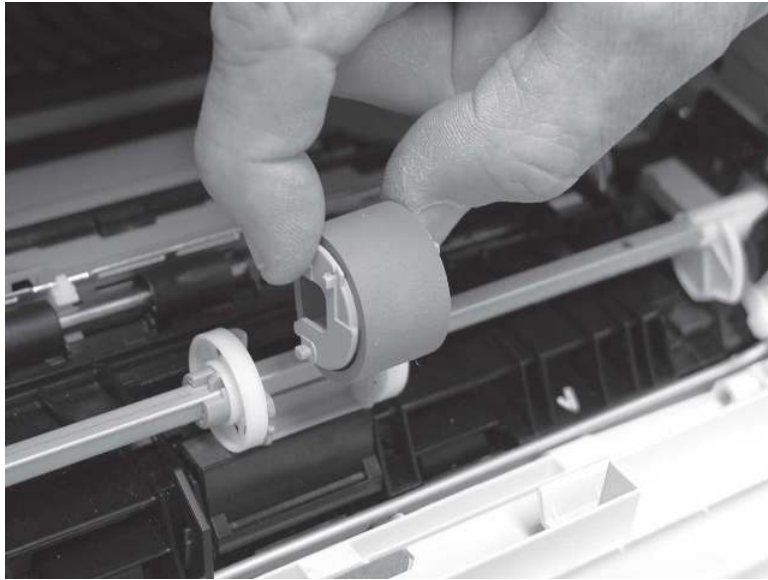
- b. To clean the roller thoroughly, release two tabs between the roller collar and roller, and then rotate the top of the roller out and away from the printer.

Figure 4-75 Release the roller



- c. Remove the roller.

**Figure 4-76** Remove the roller



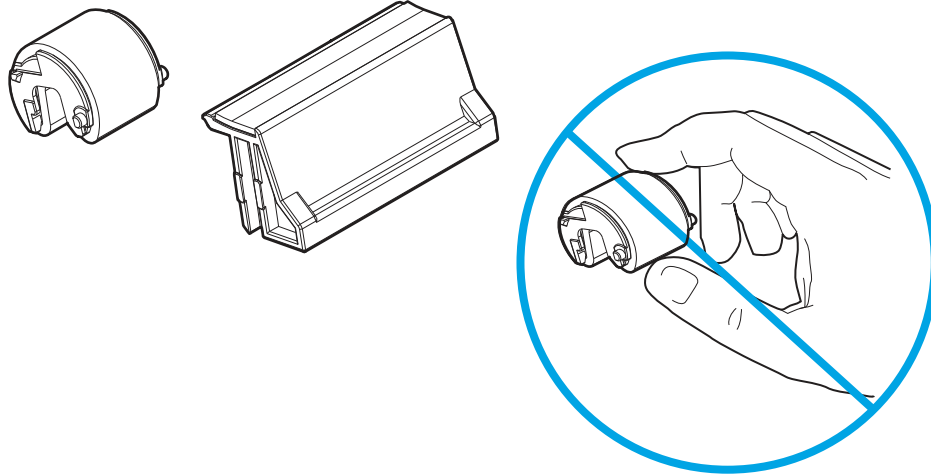
- d. With the Tray 1 roller removed the separation pad is accessible in the printer (it does not need to be removed to be cleaned).
- e. Use a damp, lint-free cloth to gently clean the rollers.

---

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

---

**Figure 4-77** Clean the roller and pad



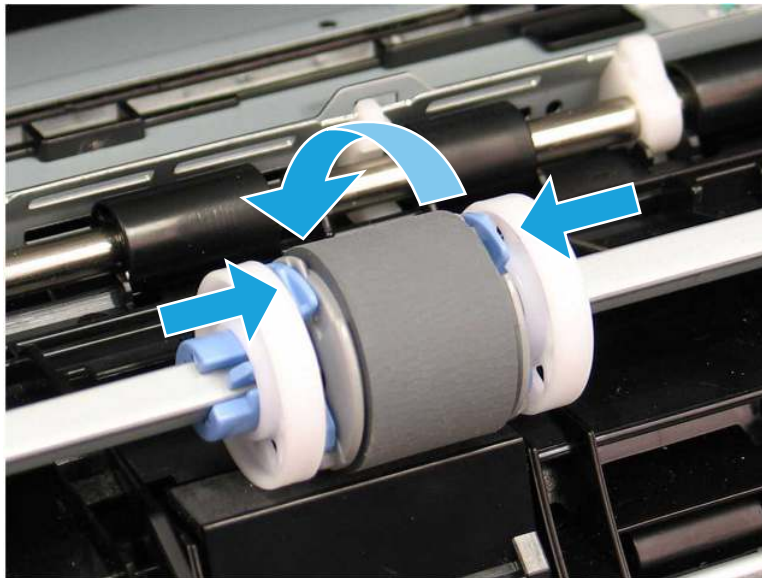
- f. Position the pickup roller with the pins in the provided slots on the holder, and then rotate the top of the roller up and toward the printer.

**Figure 4-78** 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 4-79** 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.B2.D2 jam error in tray 2

Use the following procedure to check for paper in all possible jam locations related to Tray 2.

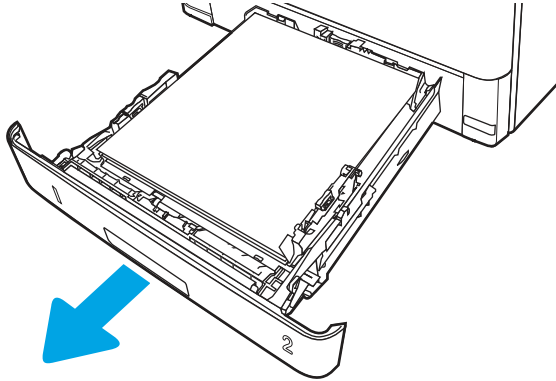
### Recommended action for customers

When a jam occurs, the control panel displays an animation that assists in clearing the jam.

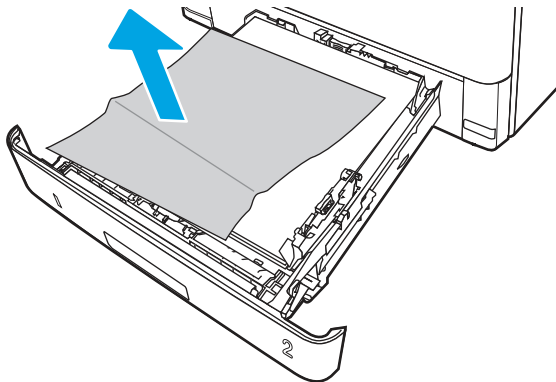
- 13.B2.D2 Paper jam in tray 2

[View a video of how to clear a jam in tray 2](#)

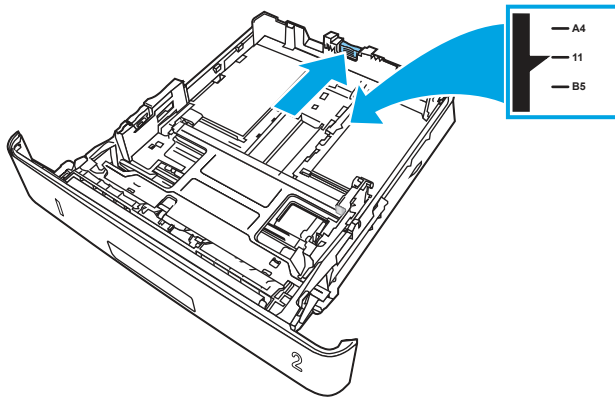
1. Remove the tray from the printer.



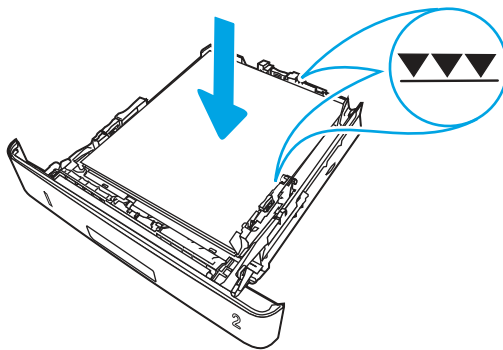
2. Remove the paper from the tray, and discard any damaged paper.



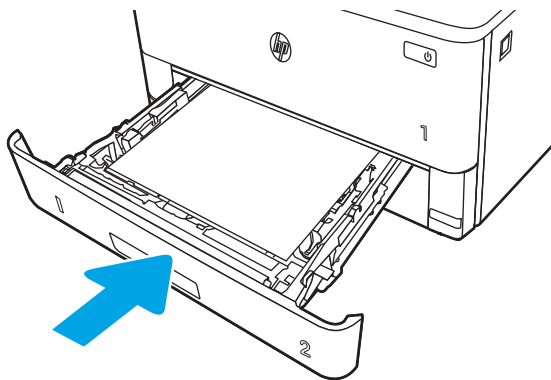
3. Verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.



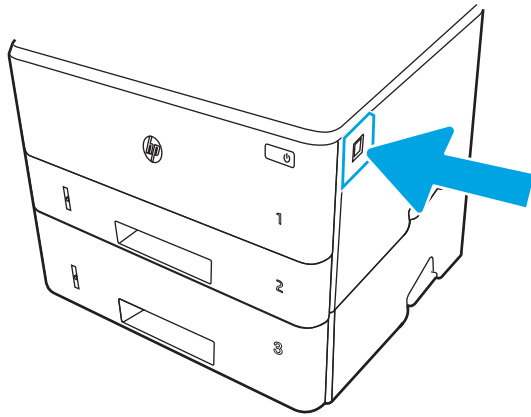
4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.



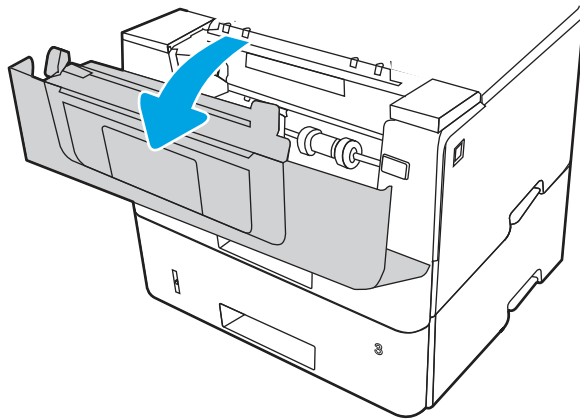
5. Reinsert and close the tray.



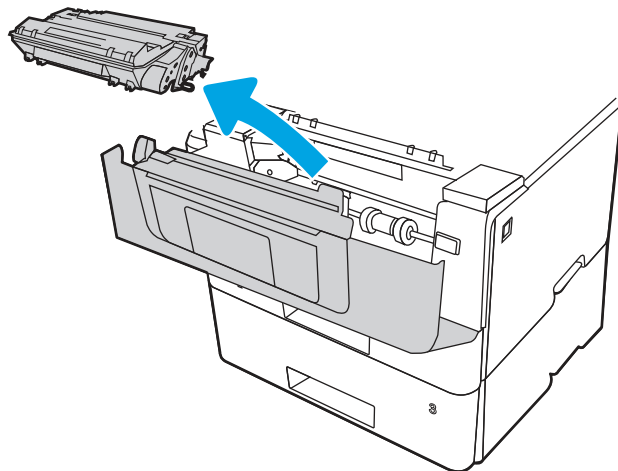
6. Press the front door release button.



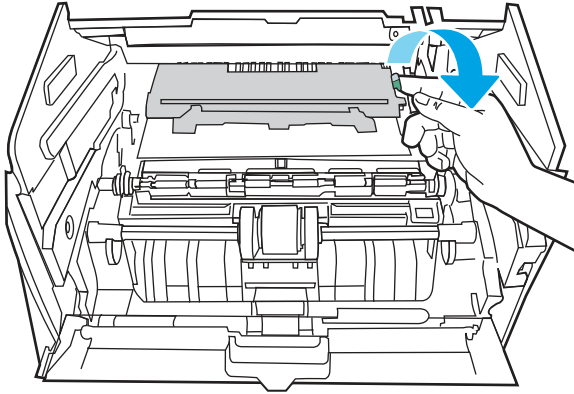
7. Open the front door.



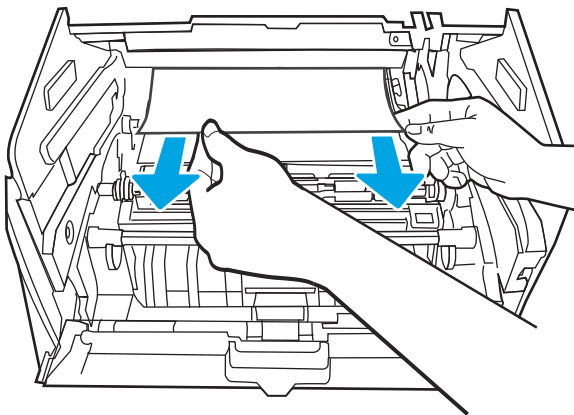
8. Remove the toner cartridge.



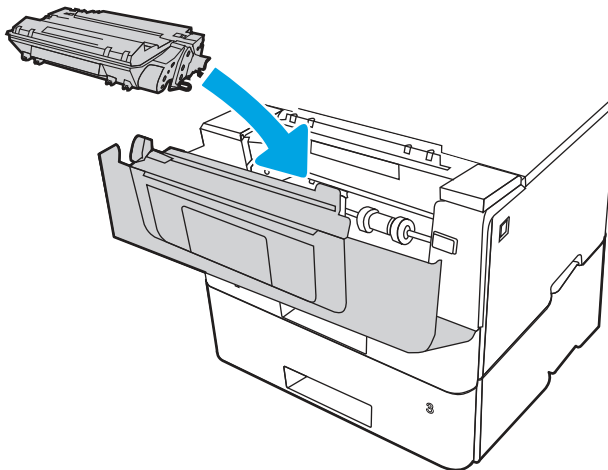
9. Lift the jam-access cover.



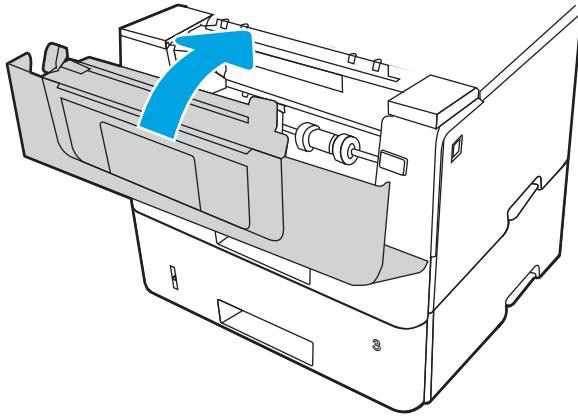
10. Remove any jammed paper.



11. Install the toner cartridge.




12. Close the front door.



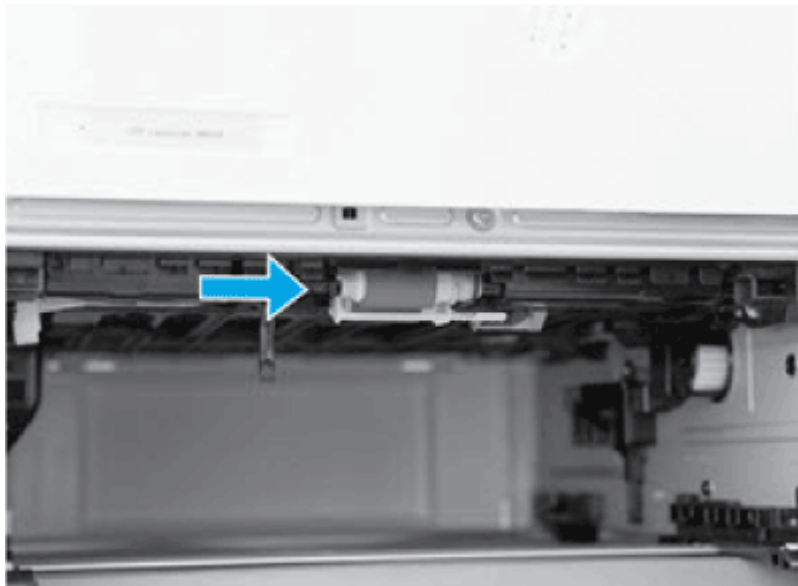
13. Ensure the type and quality of the paper being used meets the HP specifications for the printer.
14. If the error persists, clean the tray 2 pickup and feed rollers.

---

 **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.



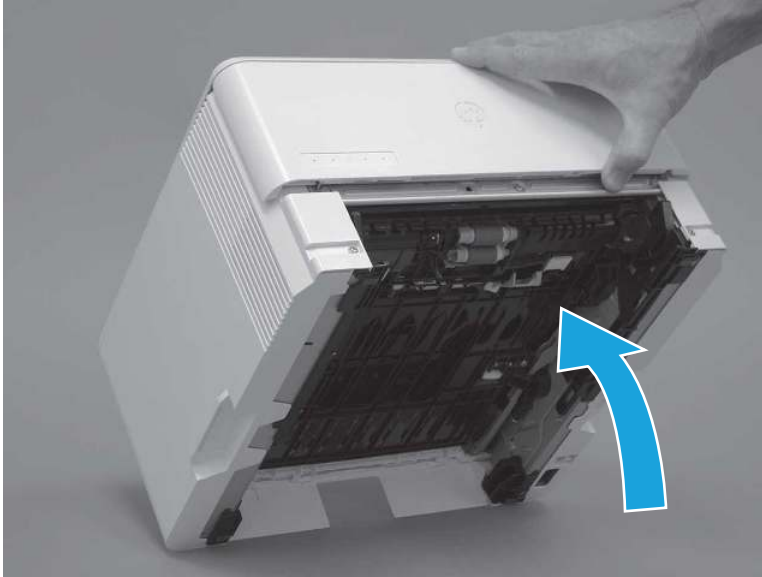
- b. Clean the rollers by gently wiping them with a damp, lint-free cloth.
- c. If needed for better access to the rollers, carefully rotate the printer backward.

---

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

---

Figure 4-80 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.

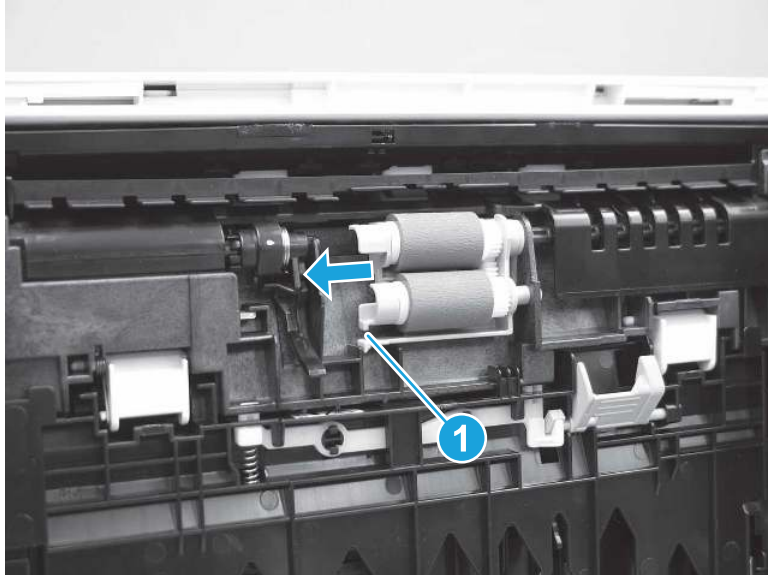
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Figure 4-81 Place the printer bottom-side face forward



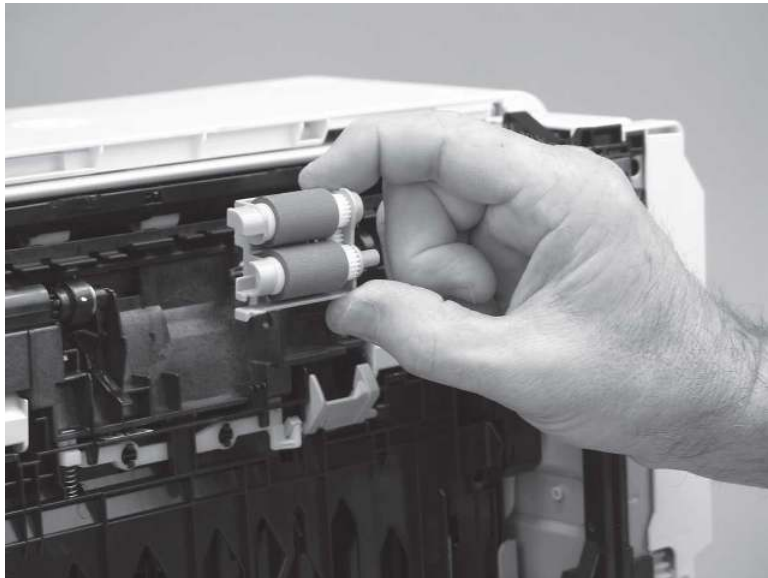
- e. Release one tab (callout 1), and then slide the roller holder toward the left side of the printer to release it.

**Figure 4-82** Release one tab



- f. Remove the roller assembly.

**Figure 4-83** Remove the roller assembly



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

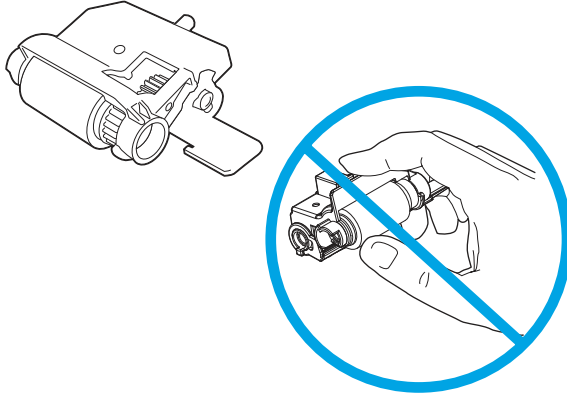


**NOTE:** The roller in the tray (cassette) can be cleaned without removing it from the tray.



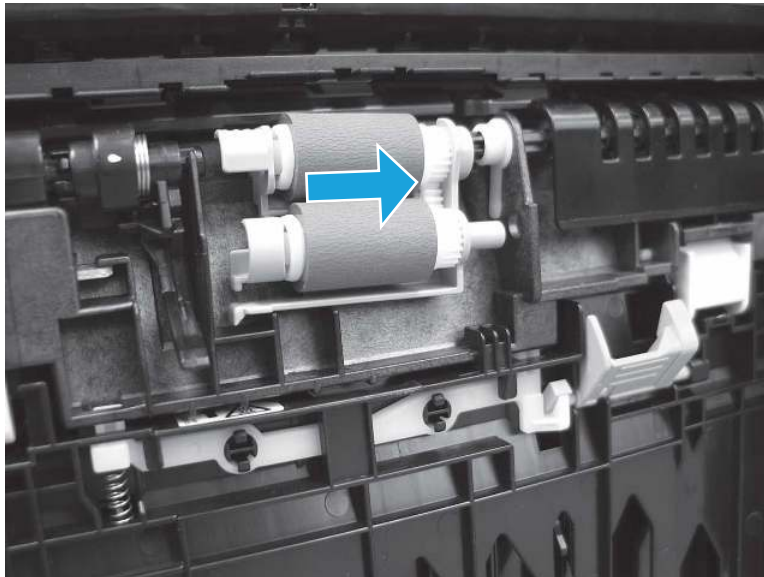
**CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper handling problems. HP recommends washing your hands before handling the assembly.

**Figure 4-84** Clean the rollers



- h.** After cleaning the roller, position the roller holder assembly in the printer as shown, and then slide it toward the right side of the printer.

**Figure 4-85** Install the roller holder





- i. Make sure that the tab snaps into place.

**Figure 4-86** Check the tab



- j. 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.B2.D3 jam error in tray 3

Use the following procedure to check for paper in all possible jam locations related to Tray 3.

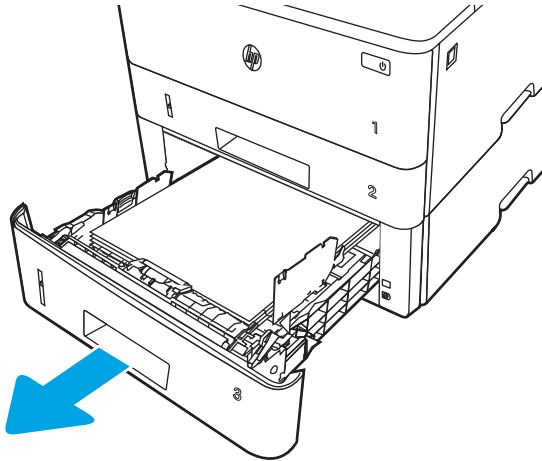
#### Recommended action for customers

When a jam occurs, the control panel displays an animation that assists in clearing the jam.

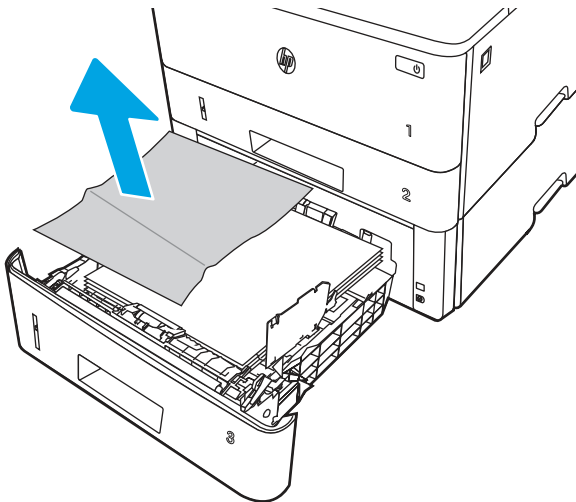
- 13.B2.D3 Paper jam in top cover

[View a video of how to clear a jam in tray 3](#)

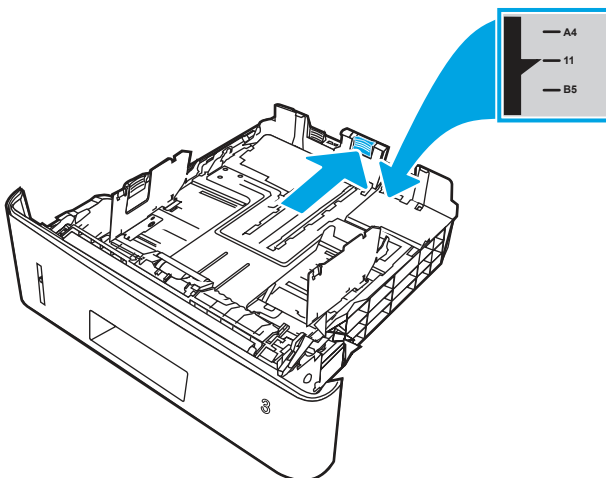
1. Remove the tray from the printer.



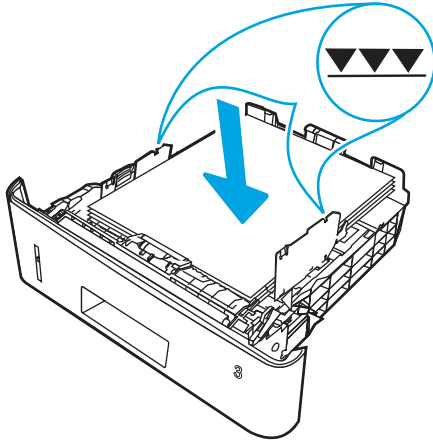
2. Remove the paper from the tray, and discard any damaged paper.



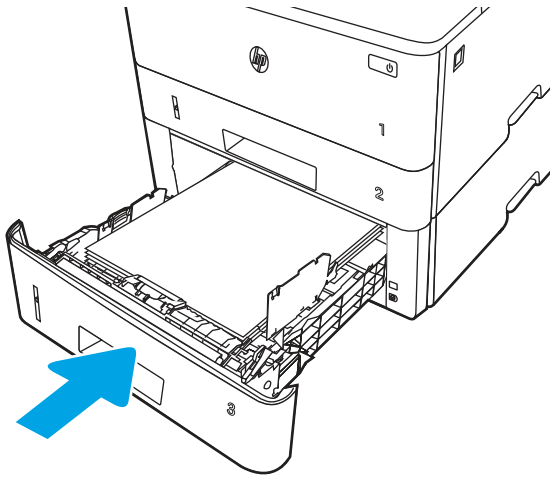
3. Verify that the rear paper guide is adjusted to the indentation for the correct paper size. If necessary, pinch the release and move the rear paper guide to the correct position. It should click into place.



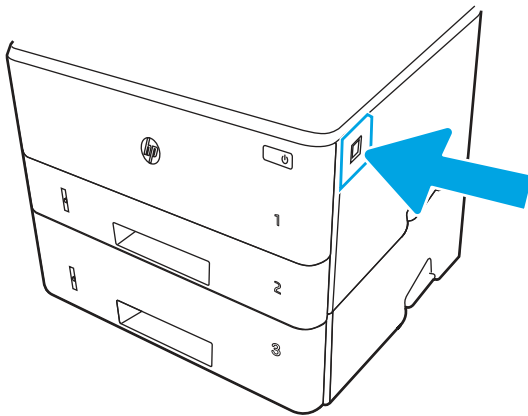
4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.



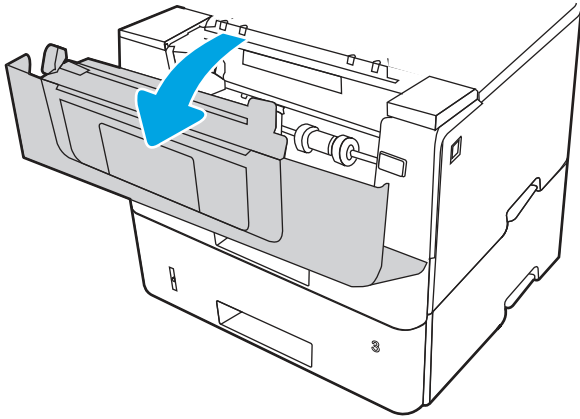
5. Reinsert and close the tray.



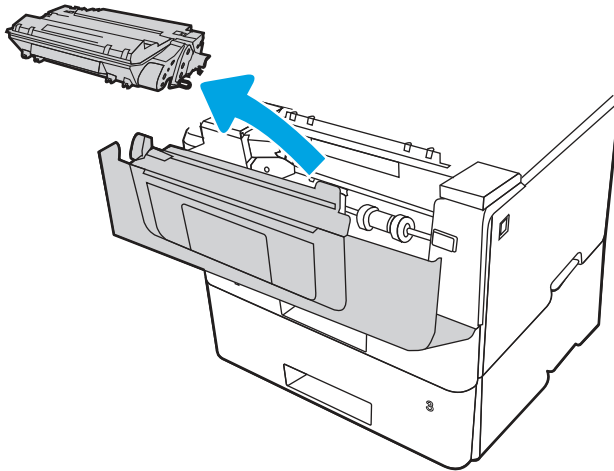
6. Press the front door release button.



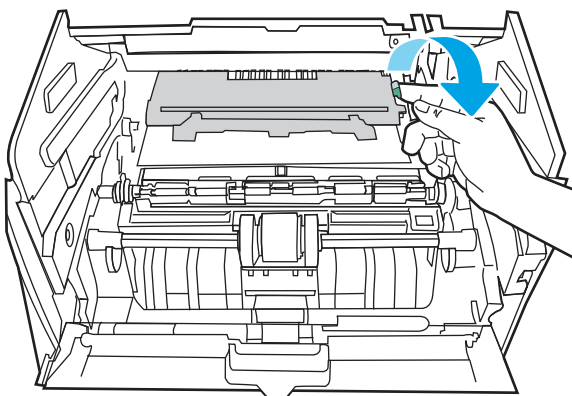
7. Open the front door.



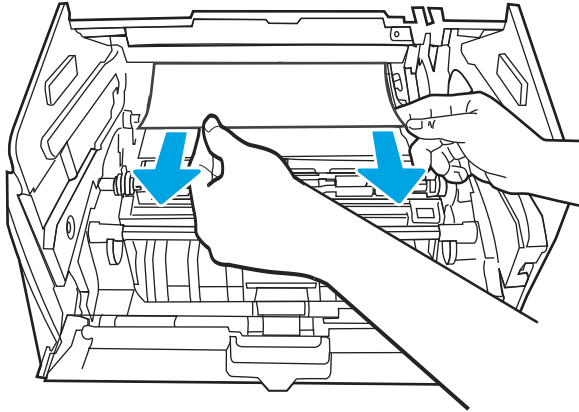
8. Remove the toner cartridge.



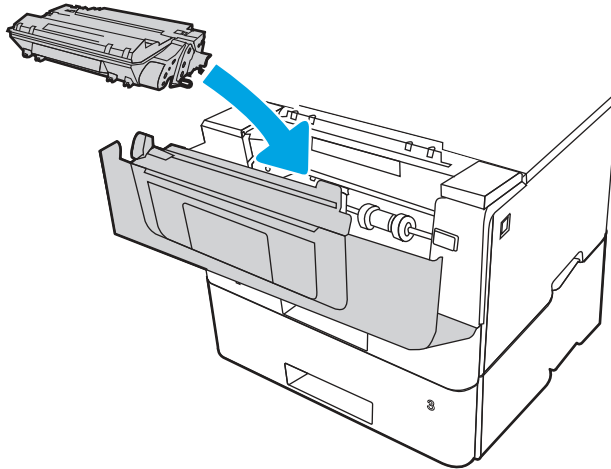
9. Lift the jam-access cover.



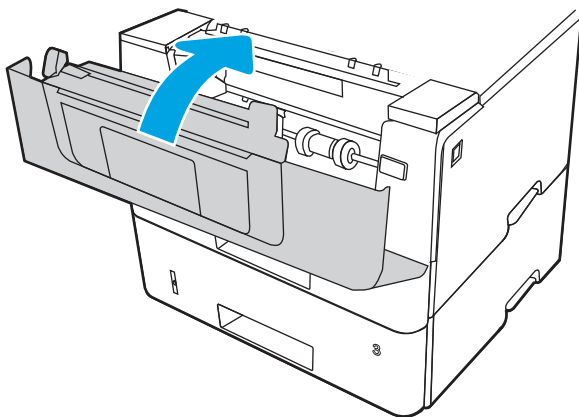
10. Remove any jammed paper.



11. Install the toner cartridge.

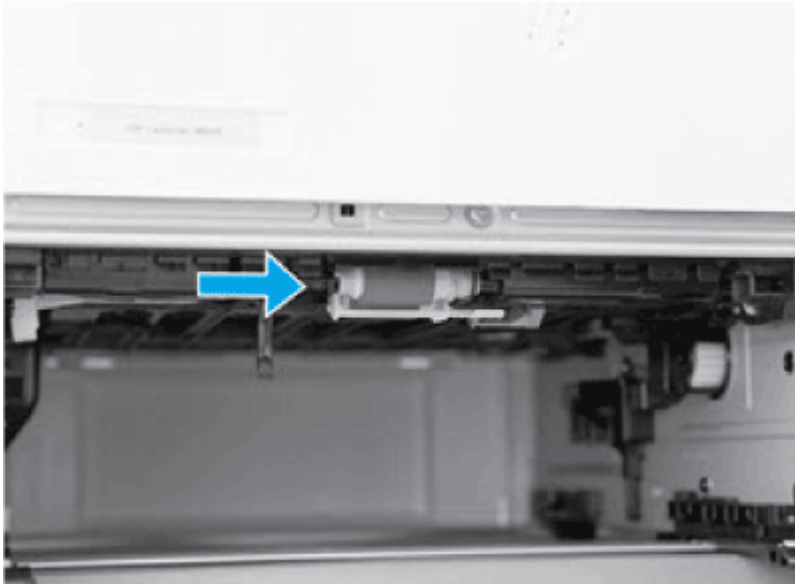


12. Close the front door.



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.B9 jam error in the fuser area

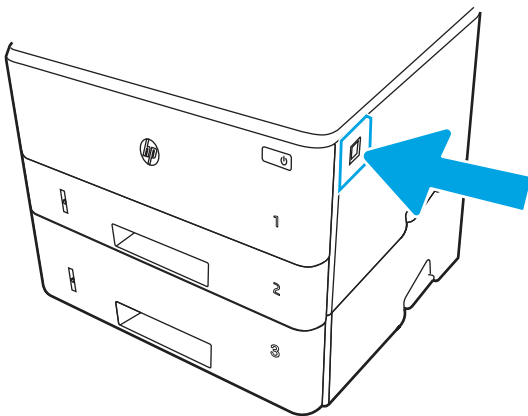
Use the following procedure to check for paper in all possible jam locations in the fuser area.

#### Recommended action for customers

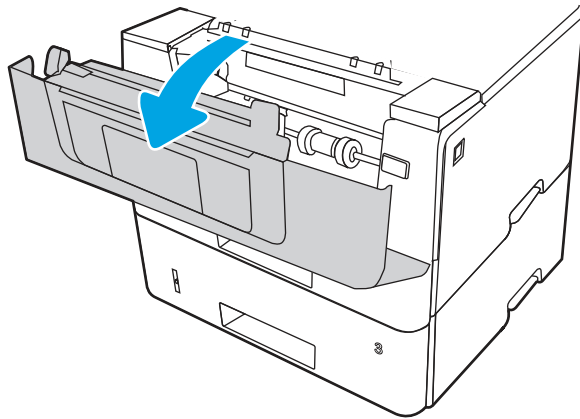
When a jam occurs, the control panel displays an animation that assists in clearing the jam.

[View a video of how to clear a jam in the fuser area](#)

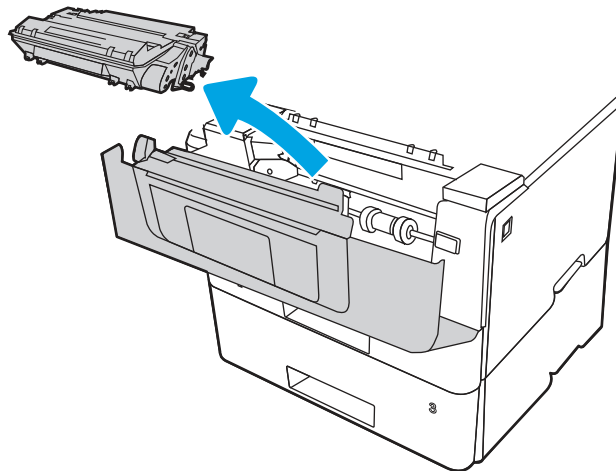
1. Press the front door release button.



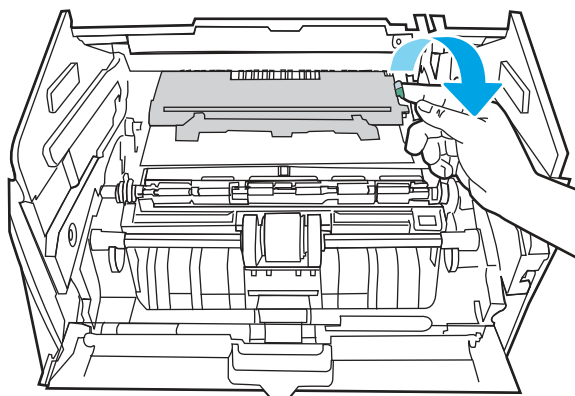
2. Open the front door.



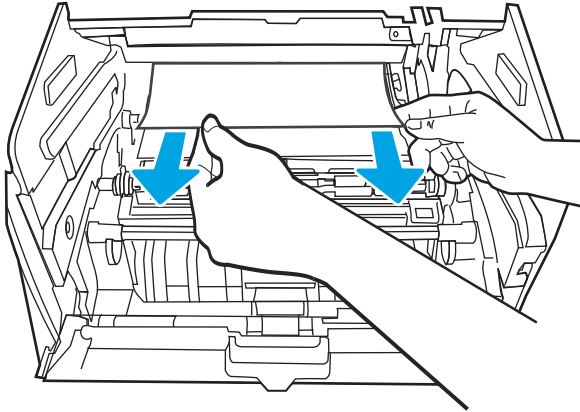
3. Remove the toner cartridge.



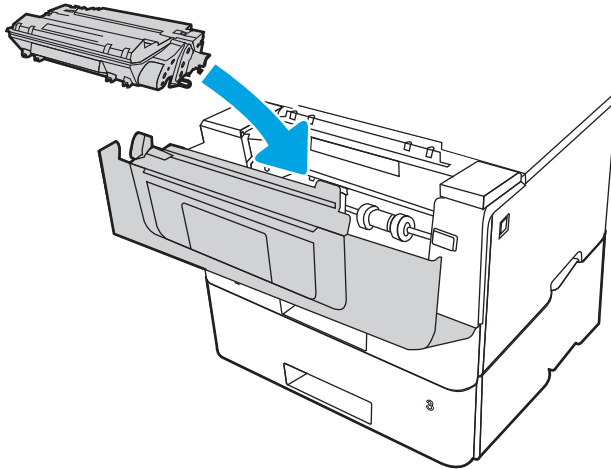
4. Lift the jam-access cover.



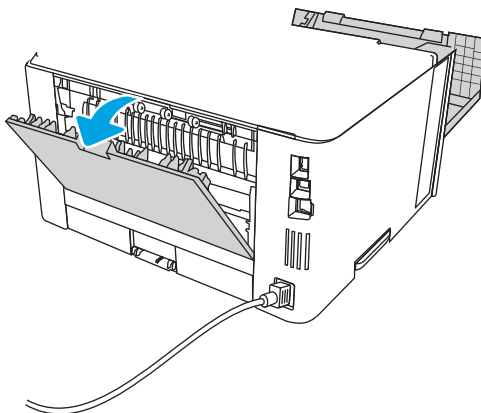
5. Remove any jammed paper.



6. Install the toner cartridge.



7. Open the front door and the rear door.



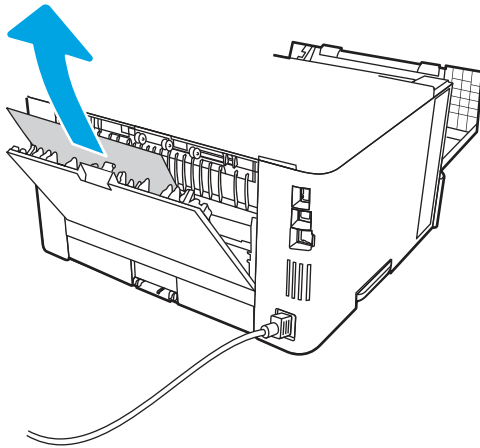
**CAUTION:**



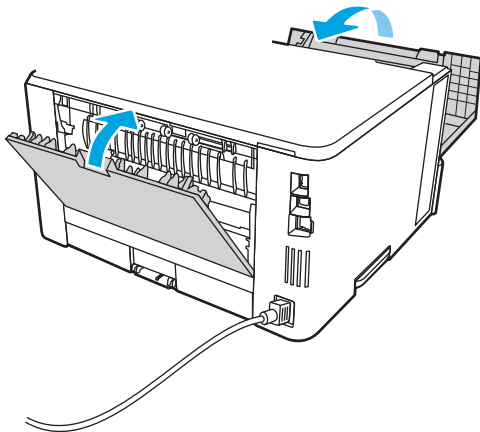
The fuser can be hot while the printer is in use. Wait for the fuser to cool before handling it.



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, 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.D1, 13.D3 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.

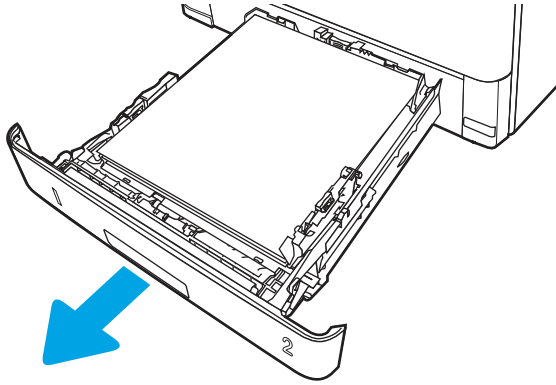
- 13.D1.yz - Jam in duplex unit
- 13.D3.yz - Jam in duplex unit

y = A, C, or D

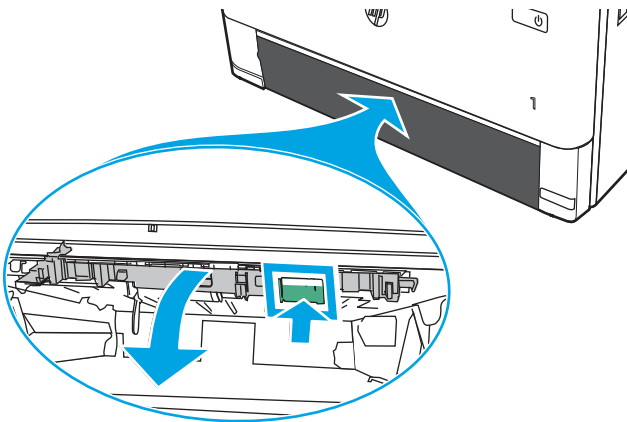
z = 0-9 or A-F

[View a video of how to clear a jam in the duplexer](#)

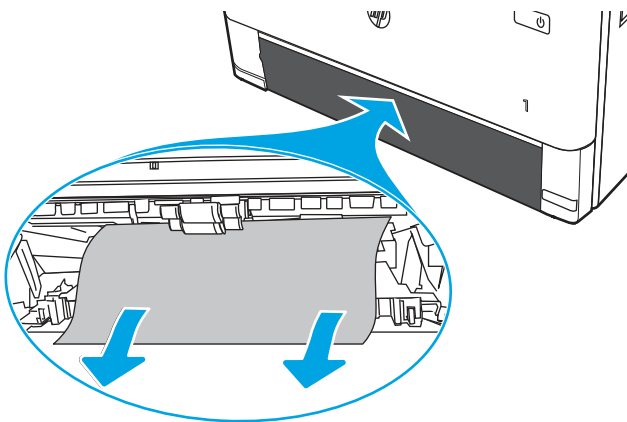
1. Completely remove Tray 2 from the printer.



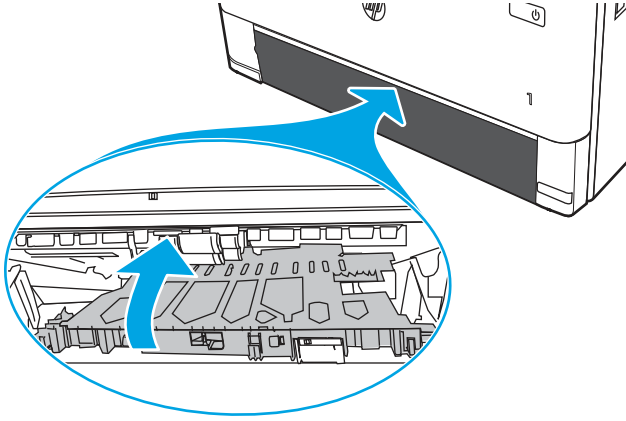
2. Push the green button to release the duplex pan.



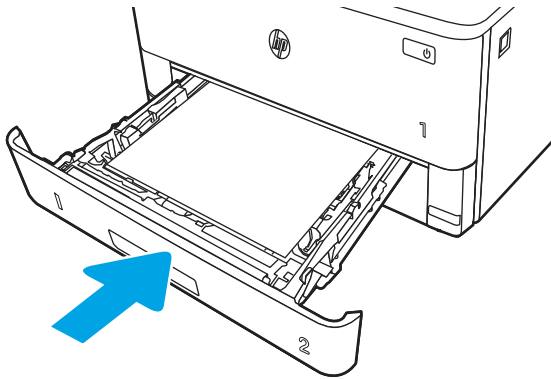
3. Remove any jammed paper.



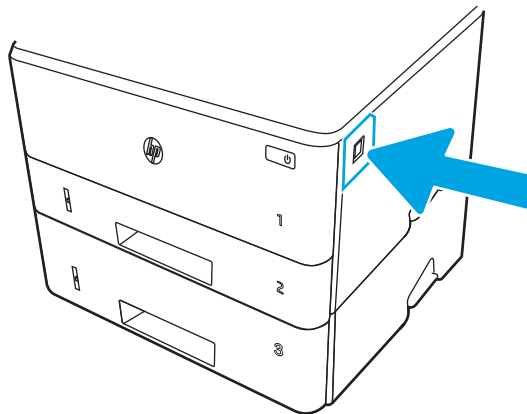
4. Close the duplex pan.



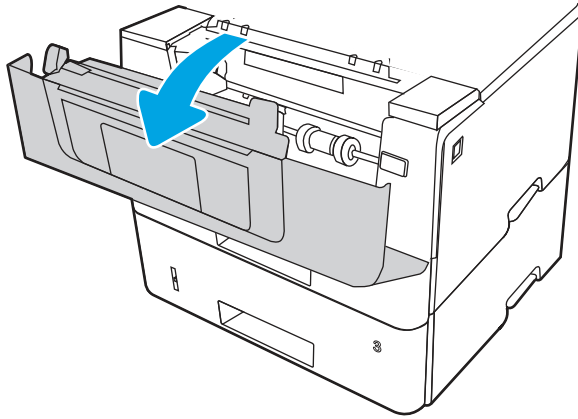
5. Reinsert Tray 2.



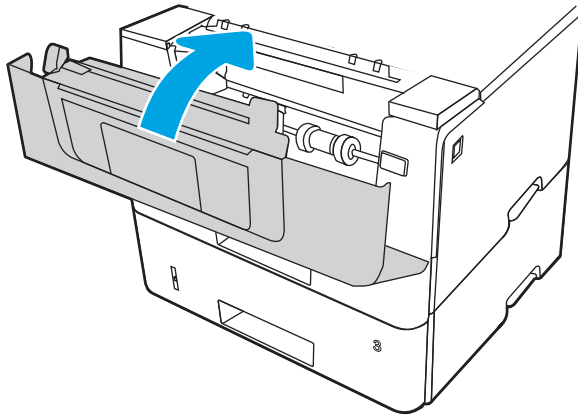
6. Open the front door to clear the jam message.
  - a. Press the front door release button.



- b. Open the front door.



- c. Close the front door.



7. If the error persists, ensure the type and quality of the paper being used meets the HP specifications for the printer.
8. 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).

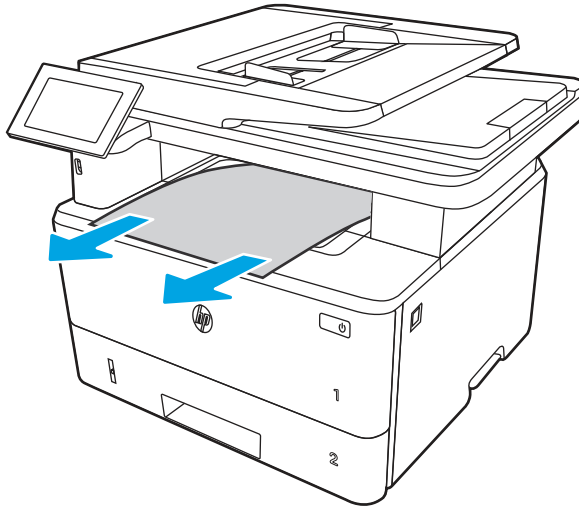
### 13.E1 jam error in the output bin

Use the following procedure to check for paper in all possible jam locations related to the output bin.

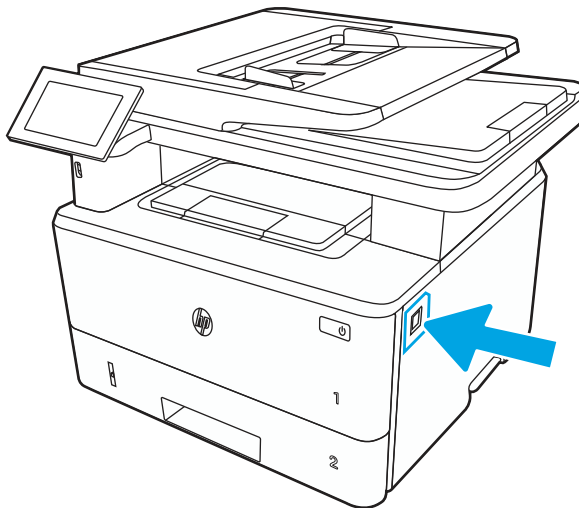
When a jam occurs, the control panel displays an animation that assists in clearing the jam.

[View a video of how to clear a jam in the output bin](#)

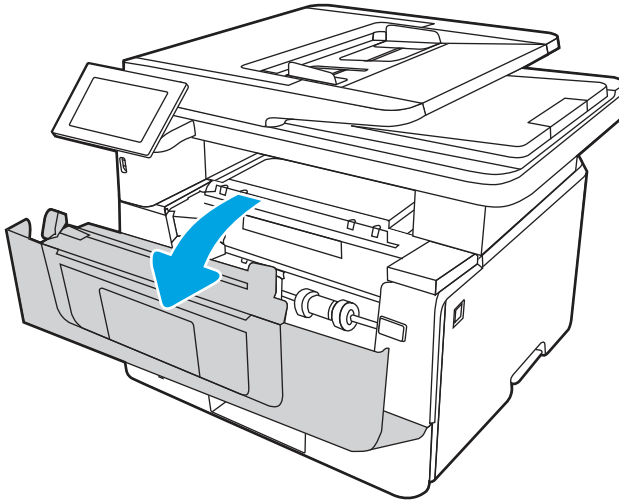
1. If paper is visible in the output bin, grasp the leading edge and remove it.



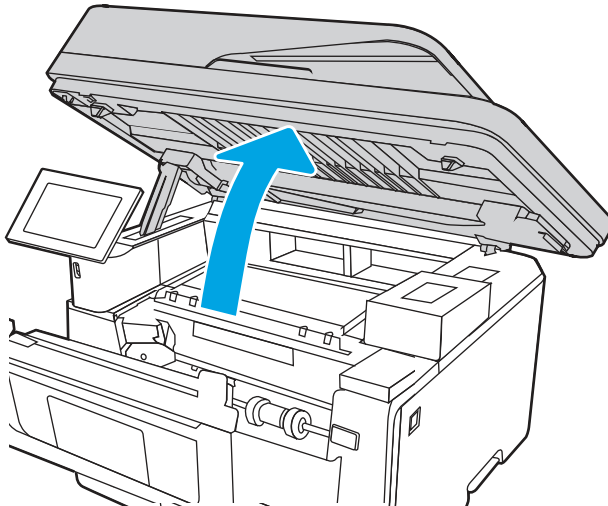
2. Press the front door release button.



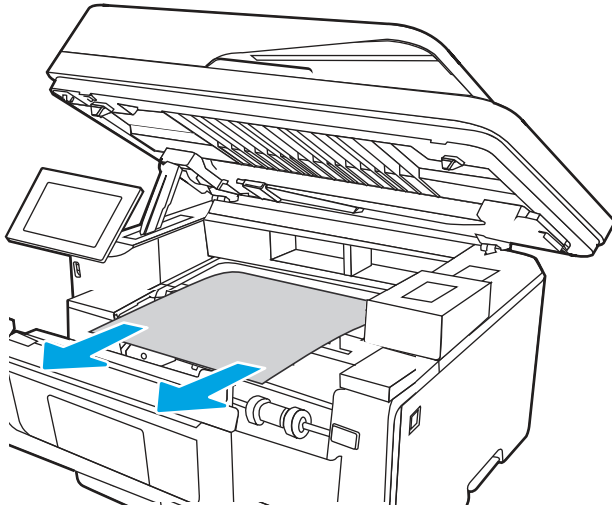
3. Open the front door.



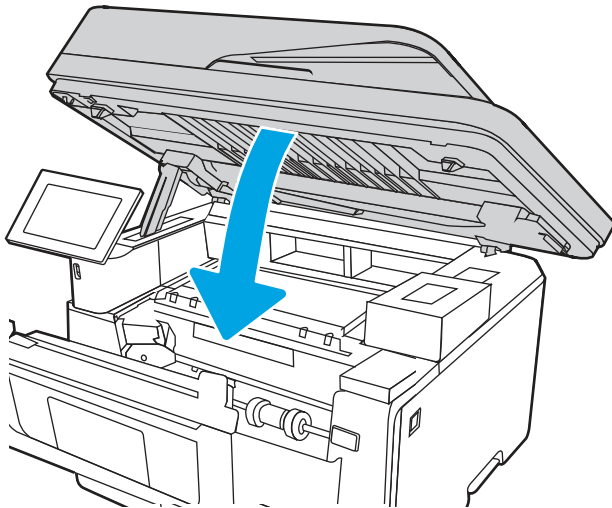
4. Lift the scanner assembly.



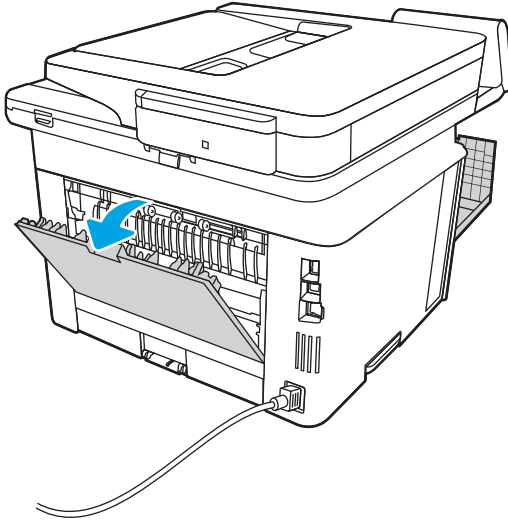
5. Remove any jammed paper.



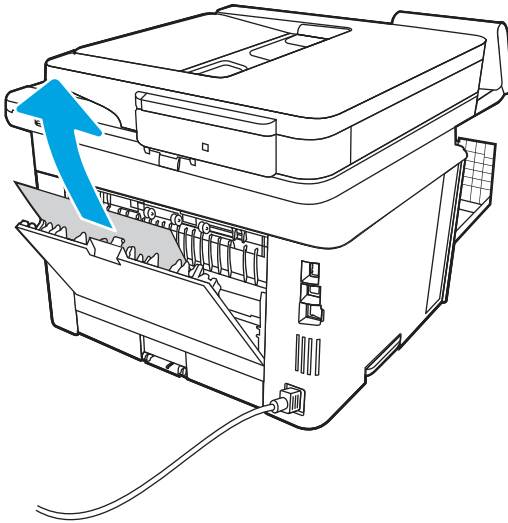
6. Close the scanner assembly.



7. Open the rear door.

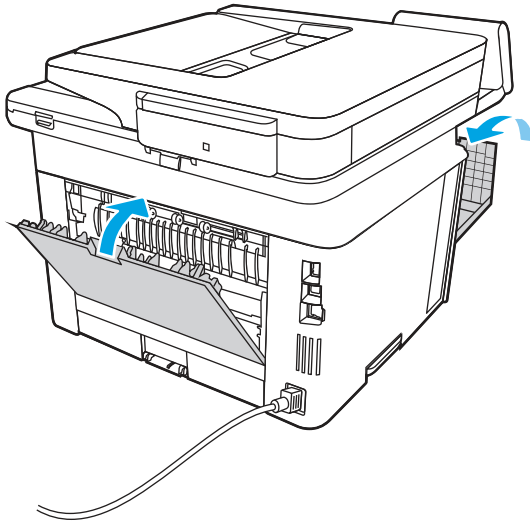


8. Remove any jammed paper from the rear door area.





9. Close the rear door and the front door.



## Change jam recovery (touchscreen)

Use the following procedure to change jam recovery from a touchscreen control panel.

1. From the Home screen on the printer control panel, scroll to and touch the [Settings](#) button.
2. Open the [General](#) menu, and then open the [Jam recovery](#) menu.
3. Select one of the following options:
  - [Auto](#) — The printer attempts to reprint jammed pages when sufficient memory is available. This is the default setting.
  - [Off](#) — The printer does not attempt to reprint jammed pages. Because no memory is used to store the most recent pages, performance is optimal.

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 **NOTE:** Some pages can be lost if the printer runs out of paper while printing a duplex job with [Jam Recovery](#) set to [Off](#).

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- [On](#) — The printer always reprints jammed pages. Additional memory is allocated to store the last few pages printed.

## Printer feeds incorrect page size

Review the following information when the printer feeds an incorrect page size.

**Table 4-42** 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.

**Table 4-42 Printer feeds incorrect page size (continued)**

Cause	Solution
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.

**Table 4-43 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 4-44 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.

**Table 4-45 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.
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.

**Table 4-45 Paper does not feed from Tray 2-X (continued)**

Cause	Solution
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 4-46 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.



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**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.

## 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.

## Paper does not feed automatically

Review the following information when the paper does not feed automatically.

**Table 4-47 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 288](#).
- **Copy-quality (CQ) problems:** See [Copy-quality troubleshooting on page 303](#).

## 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 288](#).
- **No:** If defects does not appear on the printed demonstration page the issue is CQ related. See [Copy-quality troubleshooting on page 303](#).

## 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.


**Table 4-48** 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.

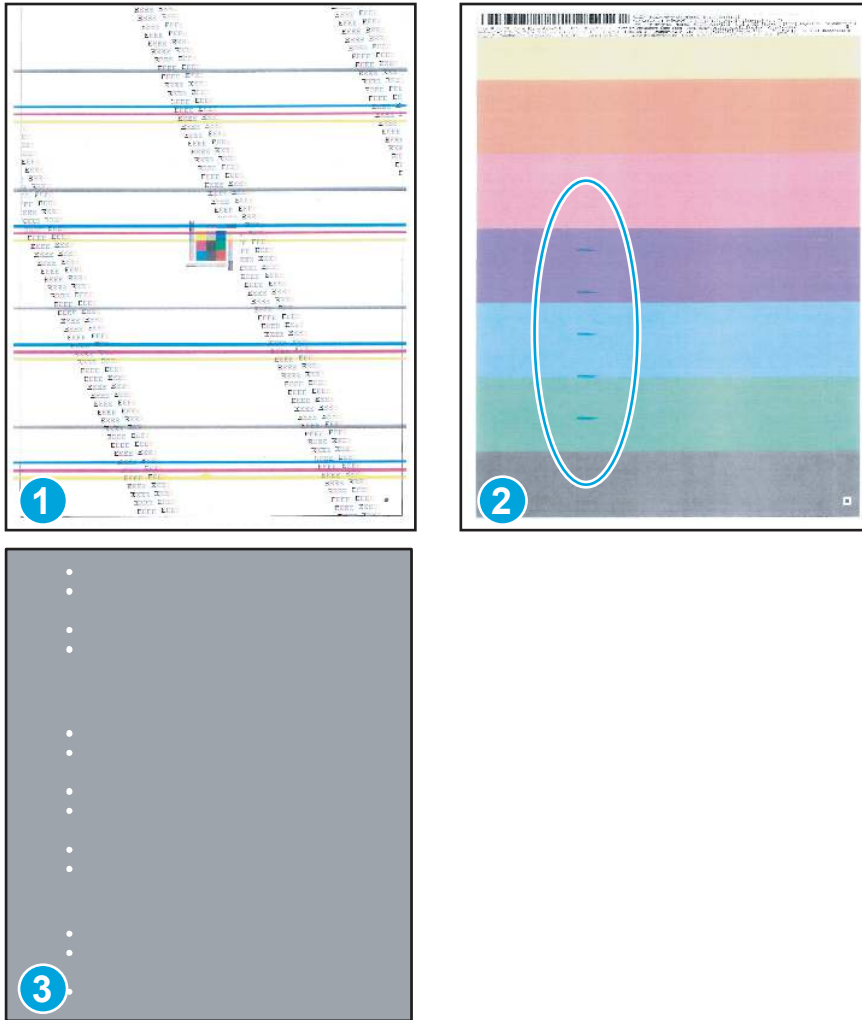
 **TIP:** Print a cleaning page to see if that resolves the defect.

 **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.

The example pages below show the following types of repetitive defects.

- Lines (callout 1)
- Smudges (callout 2)
- Dots or spots (callout 3)

Figure 4-87 Examples of repetitive defects

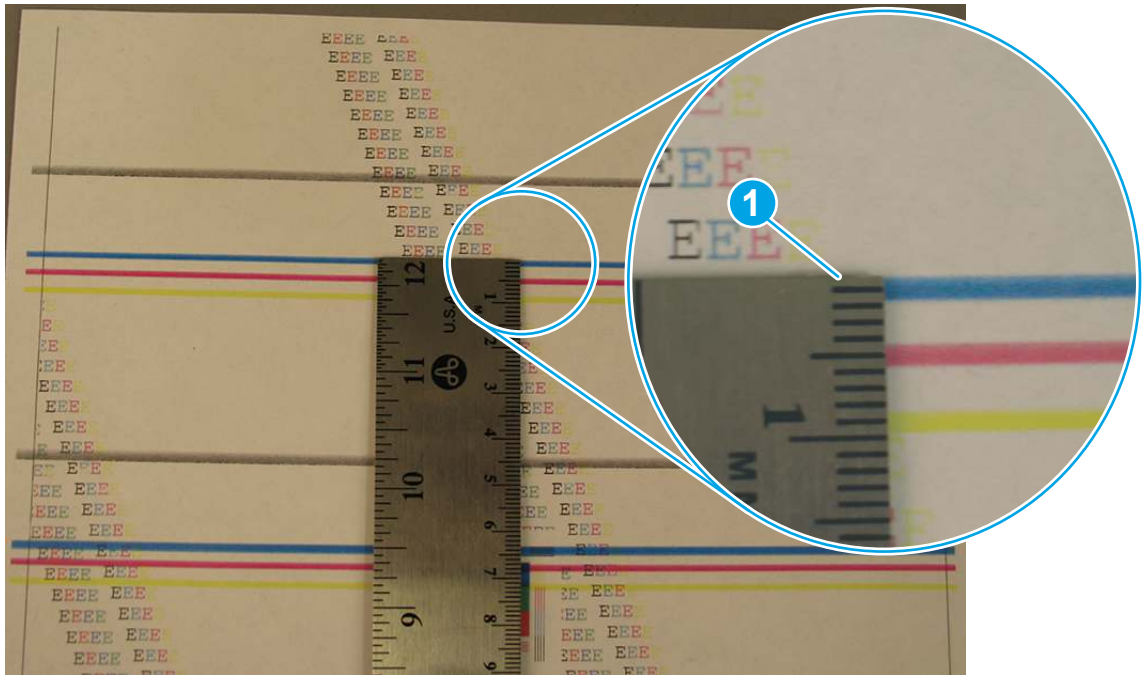


 **NOTE:** These are examples only, other types of repetitive defects might appear on a page.



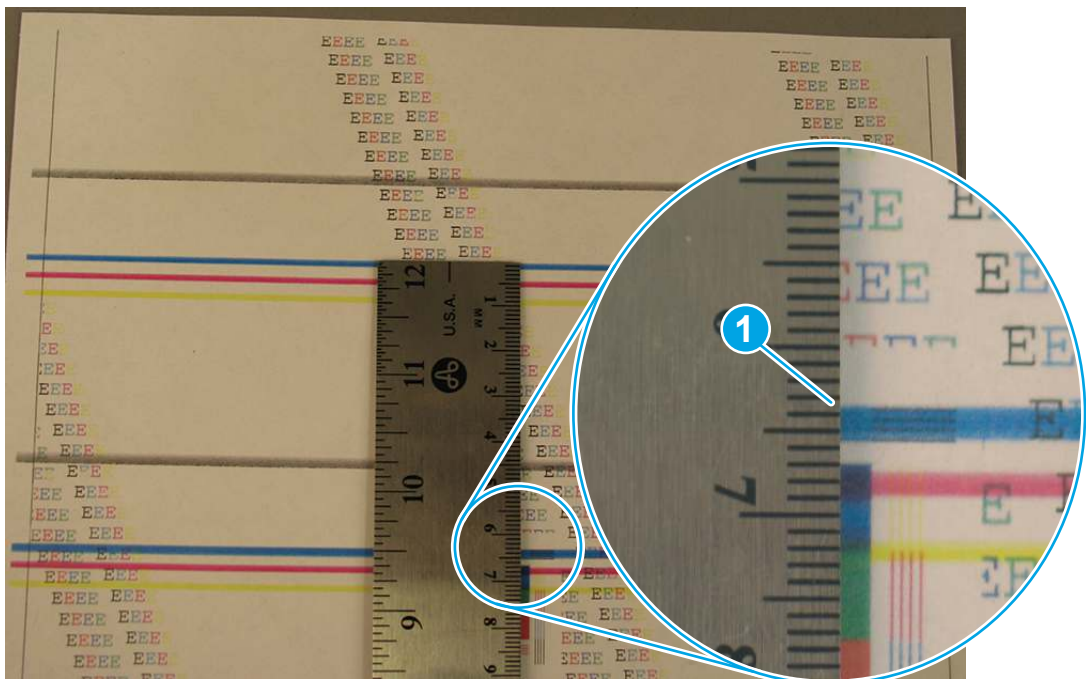
2. Position a metric ruler on the page with the “zero” ruler mark at one occurrence of the defect (callout 1).

Figure 4-88 Place the ruler on the page




3. Locate the next occurrence of the defect (callout 1).

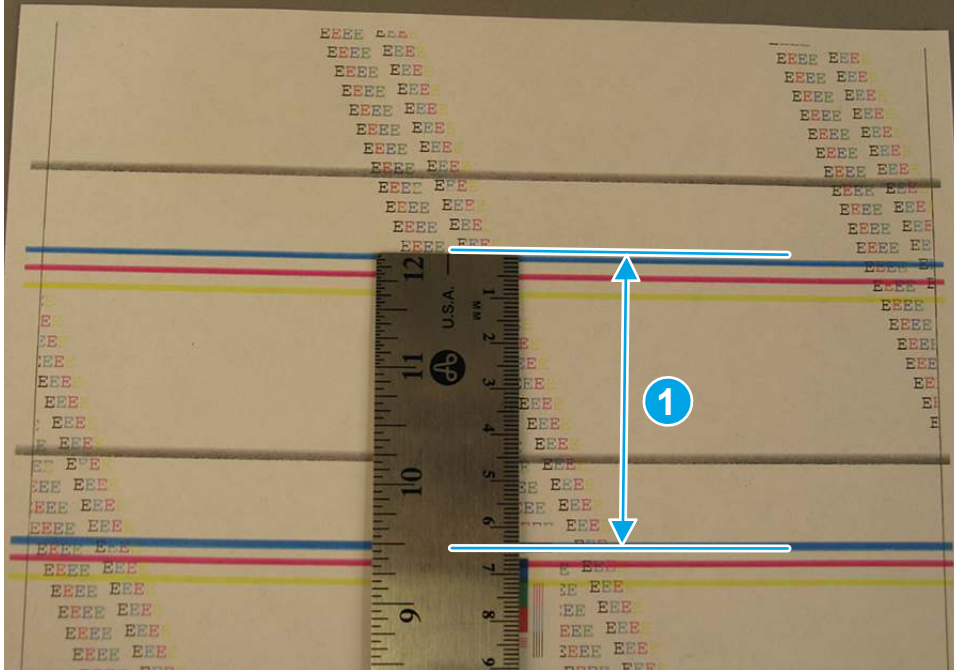
Figure 4-89 Locate the next repetitive defect



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 4-90** 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. Open and close the paper tray.
2. Follow the control panel prompts to confirm or modify the paper type and size settings for the tray.
3. Make sure the paper loaded meets specifications.
4. Adjust the humidity and resistance setting on the control panel to match the environment.
  - a. Open the following menus:
    - i. [Settings](#)
    - ii. [Copy/Print](#)

- iii. [Print quality](#)
    - iv. [Adjust paper type](#)
  - b. Select the paper type that matches the type loaded in the tray.
  - c. Use the arrows to increase or decrease the humidity and resistance setting.
5. Make sure the driver settings match the control panel settings.

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 **NOTE:** The print driver settings will override any control panel settings.

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### Check the paper type setting (Windows)

Check the paper type setting for Windows, and change the setting as needed.

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 **NOTE:** The print driver settings will override any control panel settings.

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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 menu 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. From the Home screen on the printer control panel, select the [Reports](#) menu.
2. Select the [Configuration/Status Pages](#) menu.
3. Select [Supplies Status Page](#), and then select [Print](#) to print the page.

### 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 how to print a cleaning page.

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

1. From the [Home](#) screen on the printer control panel, use the arrow keys to navigate to [Support Tools](#), and then press the [OK](#) button.
2. Use the arrow buttons to scroll to [Maintenance](#), and then press the [OK](#) button.
3. Use the arrow buttons to scroll to [Calibration/Cleaning](#), and then press the [OK](#) button.
4. Use the arrow buttons to scroll to [Cleaning page](#), and then press the [OK](#) button.

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 **TIP:** Use this screen to set up automatic cleaning page intervals if desired.

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5. Use the arrow buttons to scroll to [Print](#) (at the bottom of the control-panel display), and then press the [OK](#) button to print the cleaning page.

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 **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.

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

1. From the [Home](#) screen on the printer control panel, scroll to and touch the [Support Tools](#) button.
2. Open the following menus:
  - [Maintenance](#)
  - [Calibration/Cleaning](#)

3. Touch [Cleaning Page](#), and then touch the [Print](#) button to print the cleaning page.



**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.



**TIP:** Use this screen to set up automatic cleaning page intervals if desired.

## 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.

### Step three: Set the individual tray alignment

Follow these steps when text or images are not centered or aligned correctly on the printed page when printing from specific trays.

1. From the Home screen on the printer control panel, select the [Settings](#) menu.
2. Select the following menus:
  - a. [Copy/Print](#) or [Print](#)
  - b. [Print Quality](#)

- c. Image Registration
3. Select **Tray**, and then select the tray to adjust.
4. Select **Print Test Page**, and then follow the instructions on the printed pages.
5. Select **Print Test Page** again to verify the results, and then make further adjustments if necessary.
6. Select **Done** to save the new settings.

## 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 any of the following drivers from the HP Web site: [www.hp.com/support/ljM406](http://www.hp.com/support/ljM406) or [www.hp.com/support/ljM407](http://www.hp.com/support/ljM407) or [www.hp.com/support/ljM430MFP](http://www.hp.com/support/ljM430MFP) or [www.hp.com/support/ljM431MFP](http://www.hp.com/support/ljM431MFP) or [www.hp.com/support/ljE40040](http://www.hp.com/support/ljE40040) or [www.hp.com/support/ljE42540MFP](http://www.hp.com/support/ljE42540MFP).

**Table 4-49 Print drivers**

Driver	Description
HP PCL.6 driver	If available, this printer-specific print driver supports older operating systems like Windows XP and Windows Vista. For a list of supported operating systems, go to <a href="http://www.hp.com/go/support">www.hp.com/go/support</a> .
HP PCL 6 driver	This printer-specific print driver supports Windows 7 and newer operating systems that support version 3 drivers. For a list of supported operating systems, go to <a href="http://www.hp.com/go/support">www.hp.com/go/support</a> .
HP PCL-6 driver	This product-specific print driver supports Windows 8 and newer operating systems that support version 4 drivers. For a list of supported operating systems, go to <a href="http://www.hp.com/go/support">www.hp.com/go/support</a> .
HP UPD PS driver	<ul style="list-style-type: none"> <li>● Recommended for printing with Adobe software programs or with other highly graphics-intensive software programs</li> <li>● Provides support for printing from Postscript emulation needs, or for Postscript flash font support</li> </ul>
HP UPD PCL 6	<ul style="list-style-type: none"> <li>● Recommended for printing in all Windows environments</li> <li>● Provides the overall best speed, print quality, and printer feature support for most users</li> <li>● Developed to align with Windows Graphic Device Interface (GDI) for best speed in Windows environments</li> <li>● Might not be fully compatible with third-party and custom software programs that are based on PCL 5</li> </ul>



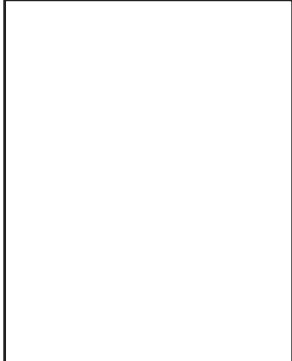
## Troubleshoot image defects

Review examples of image defects and steps to resolve these defects.

**Table 4-50 Image defects table quick reference**

Sample	Description	Possible solutions
<a href="#">Table 4-57 Light print on page 301</a>	<a href="#">Table 4-55 Gray background or dark print on page 300</a>	<a href="#">Table 4-53 Blank page — No print on page 299</a>

Table 4-50 Image defects table quick reference (continued)

Sample	Description	Possible solutions
		

[Table 4-52 Black page on page 299](#)



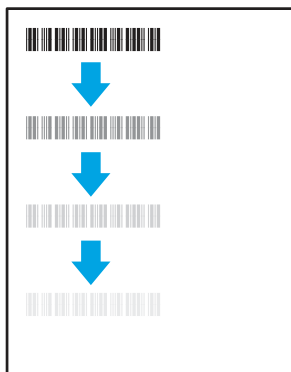
[Table 4-51 Banding defects on page 298](#)



[Table 4-59 Streak defects on page 302](#)



[Table 4-54 Fixing/fuser defects on page 300](#)



[Table 4-56 Image placement defects on page 301](#)



[Table 4-58 Output defects on page 302](#)

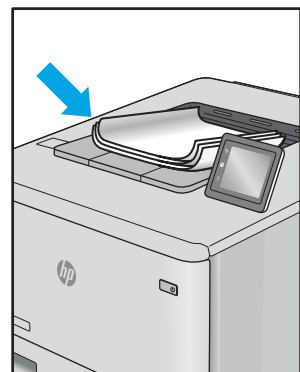


Image defects, no matter the cause, can often be resolved using the same steps. Use the following steps as a starting point for solving image defect issues.

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 4-51 Banding defects**

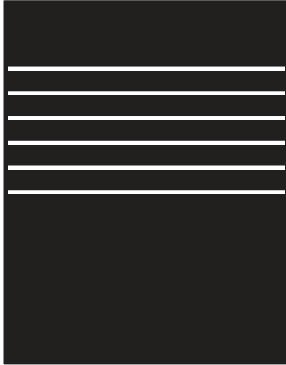
Sample	Description	Possible solutions
	<p>Dark or light lines which repeat down the length of the page, and are wide-pitch and/or impulse bands. They might be sharp or soft in nature. The defect displays only in areas of fill, not in text or sections with no printed content.</p>	<ol style="list-style-type: 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 4-52 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 4-53 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 4-54 Fixing/fuser defects

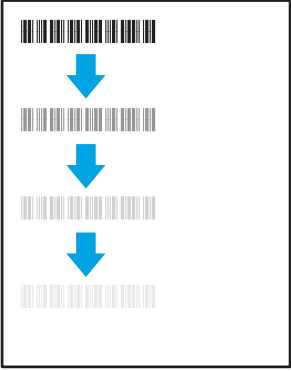
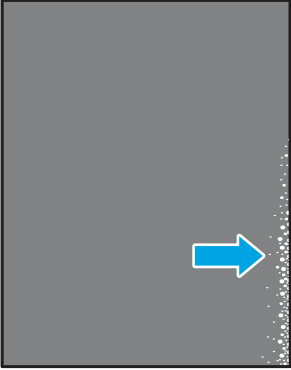
Sample	Description	Possible solutions
	<p>Slight shadows or offsets of the image are repeated down the page. The repeated image might fade with each recurrence.</p>	<ol style="list-style-type: none"> <li>1. Reprint the document.</li> <li>2. Check the paper type in the paper tray and adjust the printer settings to match. If necessary, select a lighter paper type.</li> <li>3. If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>
	<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 <i>Edge-to-Edge</i> menu and then select <i>Normal</i>. Reprint the document.</li> <li>4. <b>Enterprise models only:</b> From the printer control panel, select <i>Auto Include Margins</i> 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 4-55 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 <i>Adjust Toner Density</i> 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> </ol>

Table 4-55 Gray background or dark print

Sample	Description	Possible solutions
		<ol style="list-style-type: none"> <li>If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>

Table 4-56 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>Reprint the document.</li> <li>Remove the paper and then reload the tray. Make sure that all the paper edges are even on all sides.</li> <li>Make sure that the top of the paper stack is below the tray-full indicator. Do not overfill the tray.</li> <li>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>If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>

Table 4-57 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>Reprint the document.</li> <li>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><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>Make sure that the cartridge is installed correctly.</li> <li>Print a Supplies Status Page and check the life and usage of the cartridge.</li> <li>Replace the cartridge.</li> <li>If the issue persists, go to <a href="http://support.hp.com">support.hp.com</a>.</li> </ol>

Table 4-58 Output defects


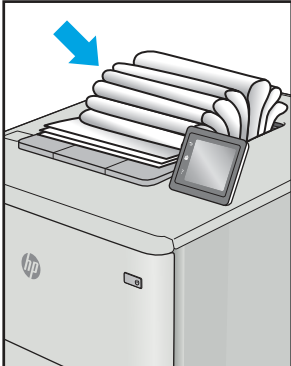
Sample	Description	Possible solutions
	<p>Printed pages have curled edges. The curled edge can be along the short or long side of the paper. Two types of curl are possible:</p> <ul style="list-style-type: none"> <li>● <b>Positive curl:</b> The paper curls toward the printed side. The defect occurs in 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>
	<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 4-59 Streak defects

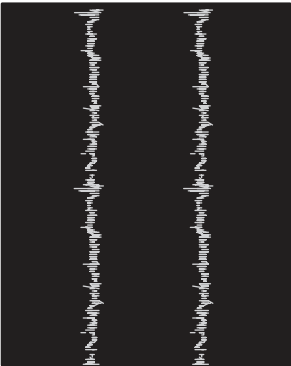
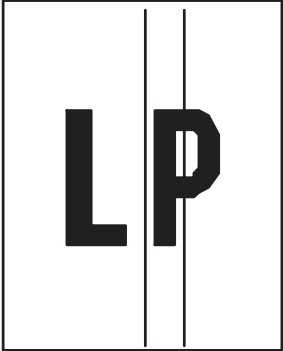
Sample	Description	Possible solutions
	<p>Light vertical streaks that usually span the length of the page. The defect displays only in areas of fill, not in text or sections with no printed content.</p>	<ol style="list-style-type: none"> <li>1. Reprint the document.</li> <li>2. Remove the cartridge, 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 4-59 Streak defects (continued)

Sample	Description	Possible solutions
	<p>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.</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. 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.

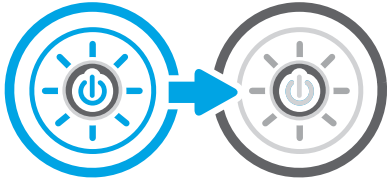
## Check the scanner glass for dirt and smudges

Learn about solving copy-quality debris problems.

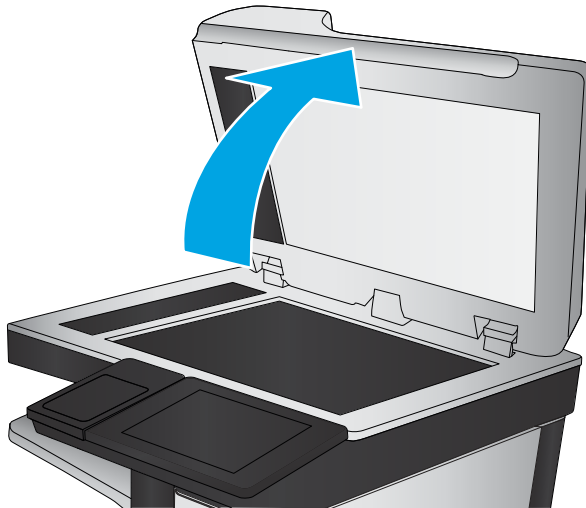
Over time, specks of debris might collect on the scanner glass and document feeder white plastic backing, which might cause print defects. Use the following procedure to clean the scanner if the printed pages have streaks, unwanted lines, black dots, poor print quality, or unclear text.

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

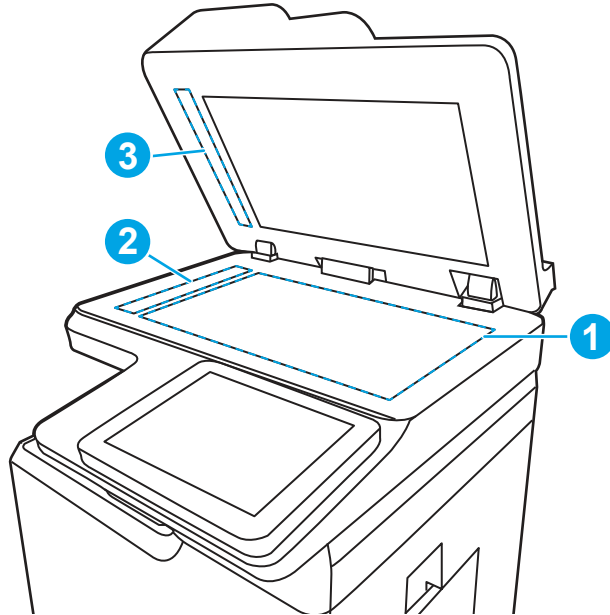
1. Press the power button to turn the printer off, and then disconnect the power cable from the electrical outlet.



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.



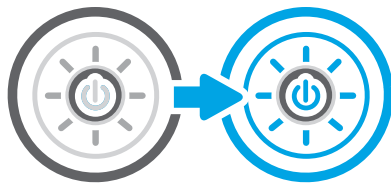
---

**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.



## 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 4-91** 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.

---

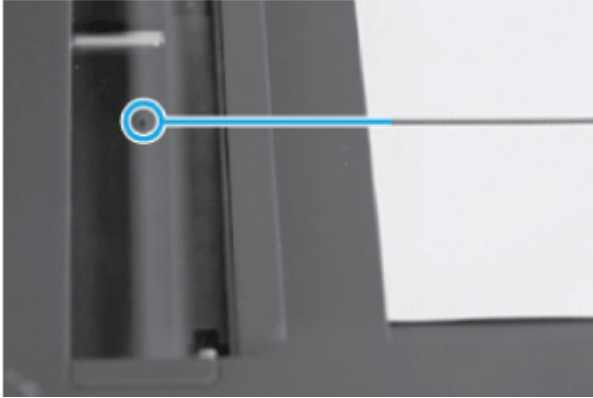
**Figure 4-92** Place the copy on the flatbed



4. Follow the line or streak on the paper to the area on the document feeder glass that is causing the CQ problem.



**Figure 4-93** 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 4-94** Clean the glass



6. Make another copy or scan to determine if the defect is gone.

#### Clean the duplexer scanner glass (model specific)

---

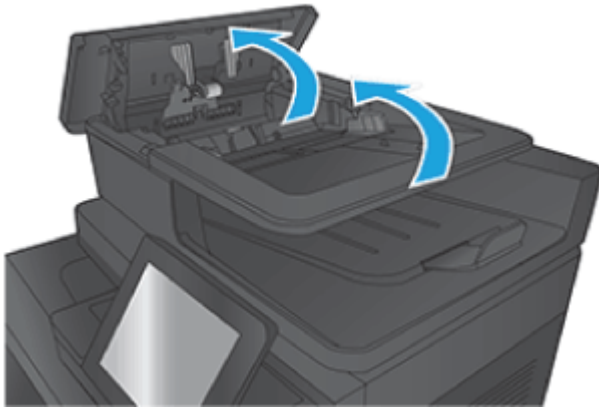
**📝 NOTE:** Not all MFP printers use a background selector for duplex printing.

If a *Side 2 Background Selector* cannot be located for the printer (it might not include one) skip this procedure.

---

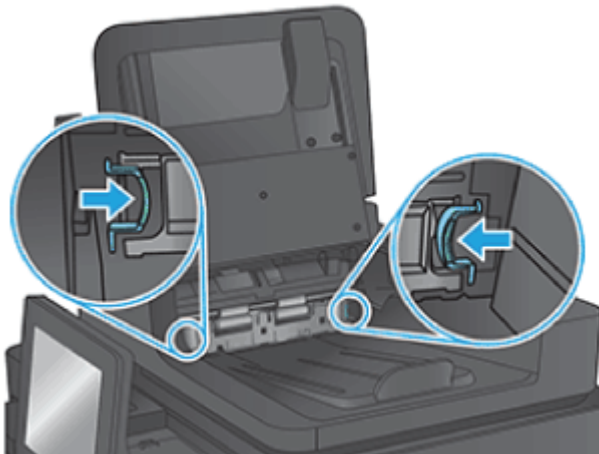
1. Release the latch and open the document feeder jam-access door.

**Figure 4-95** Open the jam-access door



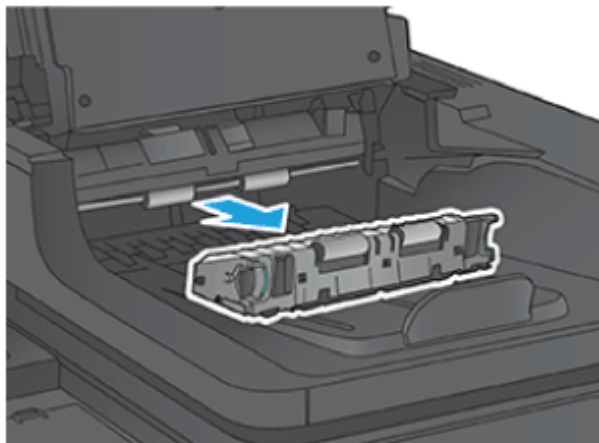
2. Unlock the Side 2 Background Selector by pressing and holding both green tabs inward towards each other.

**Figure 4-96** Release the Side 2 Background Selector




3. While holding the green tabs, pull out and remove the Side 2 Background Selector.

**Figure 4-97** Remove the Side 2 Background Selector



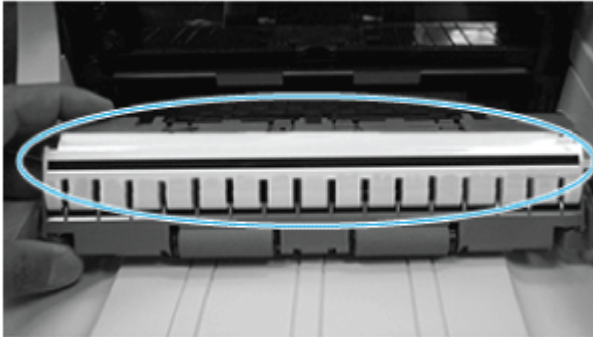
4. Rotate the top to reveal the white and black backside reflector (circled in blue).

---

 **NOTE:** If the white and black areas do not come clean, try again using isopropyl alcohol, and then wipe the surface thoroughly with a damp cloth to remove any residual alcohol. Dry the area with a soft, dry cloth to prevent spotting.

---

**Figure 4-98** 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.

---

 **IMPORTANT:** The printer settings described in this section are firmware dependent and might not be available for a specific printer (for example, color adjustment settings do not apply to mono printers).

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## Image Adjustment settings

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 **NOTE:** Settings > Print (SFP) or Copy/Print (MFP) > Image Adjustment > Background Cleanup.

---

Use the sliders to perform a [Background Cleanup](#), adjust the image [Darkness](#) as well as changing the [Sharpness](#) and [Contrast](#).

Use this feature to improve the overall quality of the copy (for example, adjusting the [Darkness](#) and [Sharpness](#)). Use the [Background Cleanup](#) setting to remove faint images from the background or to remove a light background color.

- [Darkness](#): Adjust this setting to increase or decrease the amount of white and black in the colors.
- [Contrast](#): Adjust this setting to increase or decrease the difference between the lightest and darkest color on the page.
- [Background Cleanup](#): Adjust this setting if copying a faint image is a problem.
- [Sharpness](#): Adjust this setting to clarify or soften the image. Increasing the sharpness might make text appear crisper, but decreasing it would make photographs appear smoother.

### Optimize Text/Picture settings



---

**NOTE:** [Settings](#) > [Scan/Digital Send Settings](#) > [Optimize Text/Picture](#).

---

Use to optimize the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture.

Use this setting to optimize the output for a particular type of content.

- [Mixed](#): Use to optimize the setting for text and for pictures.
- [Text](#): Use to optimize the text portion of the copy when text and/or pictures are on the original.
- [Printed picture](#): Use to optimize line drawing and preprinted images such as magazine clippings or pages from a book. If you see bands of irregular intensity on copies, try selecting [Printed picture](#) to improve quality.
- [Photographs](#): Use to optimize photographic prints.

### Color/Black settings



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**NOTE:** [Settings](#) > [Scan/Digital Send Settings](#) > [Color/Black](#).

---

Use to enable or disable color scanning.(some highlighters will not auto detect as color).

- [Automatically detect color or black](#): When pages without color are detected, the printer creates an image of the page in 1-bit black if other settings allow. If the other settings don't allow (File Type, for example), the image is in grayscale.
- [Automatically detect color or gray](#): When pages without color are detected, the printer creates an image of the page in grayscale. Select this option for the best image quality for non-color pages.
- [Color](#): Scans the documents in color.
- [Black](#): Scans documents in black and white with a compressed file size.
- [Black/Gray](#): Scans or prints documents in grayscale.

### Light or faint copies (color models)

Learn how to resolve light or faint copy-quality problems.

## Are you attempting to copy or scan highlighted text?

 **NOTE:** When digitally sending or copying highlighted images or text objects, the image might appear lighter than expected or does not show up at all with certain brands/types of highlighter pens.

---

Highlighters come in bright, often fluorescent colors. Fluorescent highlighter inks tend to reflect more light than that which is absorbed by the paper source. This reflection might cause the image to not show up as well as non-fluorescent colors depending upon the scanner/MFP being used.

The most common color for highlighters is yellow, but many other colors are also found such as pink, blue, green, orange, and purples. Yellow is often the preferred color to use when making a photocopy as it tends to not produce as much of a shadow on copies or scans.

There are different color and ink properties depending upon the brand of highlighters used. Due to these differences, scanning of the images might vary greatly from not being seen at all to changing colors (for example, orange highlighter might appear brown in the copy or scan or yellow highlighter might appear green).

## Automatic color detect

HP has a feature in all FutureSmart (LaserJet Enterprise Series only) printers which automatically detects color on each page. Depending upon the amount of color information on a page, the scanner might determine the page to be black and white due to a very, very small amount of color which might be considered background artifacts. This helps to reduce the file size of sent files as well as toner usage on a copied page. You might see small highlighted marks on pages print out in black and white or even disappear.

The black and white effect is due to the printer not seeing enough color on the page, in which case the whole image is rendered as a black and white page. The highlighted mark disappearing might be due to the marker characteristics not being detected by the scanner.

## Does the printer have the latest firmware version installed?

A Firmware enhancement has been introduced for certain LaserJets to help with the reproduction of highlighted images.

 **NOTE:** Some Multifunction Printers (MFPs) using FutureSmart firmware v3.5.3 or later have improved color reproduction of fluorescent highlighters when scanning or copying.

---

No or I don't know

Use the following steps to identify the installed firmware version, and then upgrade the firmware if needed.

1. Print a configuration page (from the printer control panel).
2. On the printed configuration page look in the section marked **Device Information**, and then identify the **Firmware Datecode** and **Firmware Revision**.

This is the current version of firmware installed on this printer.

3. In the US, go to [www.hp.com/support/ljM406](http://www.hp.com/support/ljM406) or [www.hp.com/support/ljM407](http://www.hp.com/support/ljM407) or [www.hp.com/support/ljM430MFP](http://www.hp.com/support/ljM430MFP) or [www.hp.com/support/ljM431MFP](http://www.hp.com/support/ljM431MFP) or [www.hp.com/support/ljE40040](http://www.hp.com/support/ljE40040) or [www.hp.com/support/ljE42540MFP](http://www.hp.com/support/ljE42540MFP).
  - a. Select **Get drivers, Software, and Firmware**, and then select the appropriate product by name.


 **NOTE:** More than one printer model might be listed. Make sure to select the correct model so that the upgraded firmware supports all of the printer functions.

---

- b. Select the driver language and operating system.

- c. Locate the firmware download. If the firmware version is more recent than the one shown on the printed configuration page, select **Download**.
4. Outside the U.S., go to [www.hp.com/support](http://www.hp.com/support).
  - a. Select your country/region.
  - b. Select **Drivers & Downloads**.
  - c. Enter the product name in the **Find my product** dialogue box, and then select **Go**.


---

 **TIP:** Click on the **How do I find my product name/number?** link to see a short video on identifying the printer name and number.

---

  - d. Select the appropriate product by name.

---

 **NOTE:** More than one printer model might be listed. Make sure to select the correct model so that the upgraded firmware supports all of the printer functions.

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  - e. Select the driver language and operating system.
  - f. Locate the firmware download. If the firmware version is more recent than the one shown on the printed configuration page, select **Download**.
5. Perform a firmware upgrade. See the *Firmware upgrades* topic in the product service manual.
6. When the upgrade process is complete, print a configuration page and verify that the upgrade firmware version was installed.

Yes

These procedures help provide settings which affect the way highlighters are scanned or copied. A firmware enhancement is available for certain printers that helps with the reproduction of highlighted images.

- **Enable Firmware Enhancement**

1. From the Home screen, select the desired scanning application (for example, [Copy](#), [E-Mail](#), [Save to Network Folder](#)).
2. Select [More Options](#) > [Optimize Text/Picture](#) > [Text](#) button (not slider). This enables the improved color reproduction of fluorescent highlighters.

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 **TIP:** Administrators can set Text as the default setting on the device.

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- **Alternative Settings**

See [Modify printer settings to improve scan or copy quality on page 309](#) for more information.

## 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 or HP Channel Services Network (CSN). Search using model number then use "fax troubleshooting" as the search term.

Channel partners, go to HP Channel Services Network (CSN) at <http://www.hp.com/partners/csn>.

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.

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 **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.

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## Factors affecting print performance

Review the following information about factors affecting print performance.

**Table 4-60 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.

**Table 4-60 Solve performance problems (continued)**

Problem	Cause	Solution
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/ljM406">www.hp.com/support/ljM406</a> or <a href="http://www.hp.com/support/ljM407">www.hp.com/support/ljM407</a> or <a href="http://www.hp.com/support/ljM430MFP">www.hp.com/support/ljM430MFP</a> or <a href="http://www.hp.com/support/ljM431MFP">www.hp.com/support/ljM431MFP</a> or <a href="http://www.hp.com/support/ljE40040">www.hp.com/support/ljE40040</a> or <a href="http://www.hp.com/support/ljE42540MFP">www.hp.com/support/ljE42540MFP</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.
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 <b>Printing</b> 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.

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/ljM406](http://www.hp.com/support/ljM406) or [www.hp.com/support/ljM407](http://www.hp.com/support/ljM407) or [www.hp.com/support/ljM430MFP](http://www.hp.com/support/ljM430MFP) or [www.hp.com/support/ljM431MFP](http://www.hp.com/support/ljM431MFP) or [www.hp.com/support/ljE40040](http://www.hp.com/support/ljE40040) or [www.hp.com/support/ljE42540MFP](http://www.hp.com/support/ljE42540MFP).
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 connectivity problems

Review the following information and procedures to solve connectivity problems.

### Solve USB connection problems

If you have connected the product directly to a computer, check the cable.

- Verify that the cable is connected to the computer and to the product.
- Verify that the cable is not longer than 2 m (6.65 ft). Try using a shorter cable.
- Verify that the cable is working correctly by connecting it to another product. Replace the cable if necessary.

### Solve wired network problems

Review the following information and procedures to solve wired network problems.

#### Introduction

Check the following items 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.

#### 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.
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.
2. Reconfigure the network settings if necessary.



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# 5 Removal and replacement

When servicing the printer, several items must be taken into account to ensure a successful repair and to avoid damage to the printer or injury. Learn about these considerations and find detailed instructions for removing and replacing printer parts.

## HP service and support

Learn about HP access to additional service and support information.

### Additional service and support for channel partners

Channel partners go to [partner.hp.com](http://partner.hp.com), and then use the steps below to access the HP Web-based Interactive Search Engine (WISE).

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

Access WISE for Channel partners

1. Select [Services & Support](#) (near the top of the screen).
2. Under [Services Delivery](#), select [Technical Support](#).
3. Select [Technical Documentation](#).

Find information about the following topics

- Service manuals
- Service advisories
- Up-to-date control panel message (CPMD) troubleshooting
- Solutions for printer issues and emerging issues
- Remove and replace part instructions and videos
- Install and configure
- Printer specifications
- Warranty and regulatory 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\).](#)

## Order parts, accessories, and supplies

Find information about ordering parts and supplies for the printer.

### Ordering

Order parts by authorized service providers.

**Table 5-1 Ordering**

Item or provider	Description
Order supplies and paper	<a href="http://www.hp.com/go/suresupply">www.hp.com/go/suresupply</a>
Order parts from authorized service providers	<a href="http://www.hp.com/buy/parts">www.hp.com/buy/parts</a> or <a href="http://partsurfer.hp.com">partsurfer.hp.com</a>
Order through service or support providers	Contact an HP-authorized service or support provider.
Order using the HP Embedded Web Server (EWS)	To access, in a supported web browser on your computer, enter the printer IP address or host name in the address/URL field. The EWS contains a link to the HP SureSupply web site, which provides options for purchasing Original HP supplies.

### Orderable parts

Not all of the parts shown in the exploded assembly diagrams are orderable parts.

Refer to the tables following the diagrams or the alphabetical/numerical parts lists to determine if a part is orderable.

## Supplies and accessories

Learn about the supplies and accessories that are available for the printer.

To order cartridges, visit <http://www.hp.com> (some portions of the HP Web site are available in English only). Ordering cartridges online is not supported in all countries/regions. However, many countries/regions have information about ordering by telephone, locating a local store, and printing a shopping list. In addition, go to [hp.com/supplies](http://hp.com/supplies) to obtain information about purchasing HP products in your country/region.

Use only the replacement cartridges that have the same cartridge number as the cartridge that is being replaced. Find the cartridge number in the following places:

- On the label of the cartridge that is being replaced.
- On a sticker inside the printer. Open the cartridge door to locate the sticker.
- Open the printer software (**HP Printer Assistant**), and then click **Shop > Shop For Supplies Online**.
- Open the HP Embedded Web Server (EWS), and then click **Tools > Supply Status** (under the **Product Information** item).

**Table 5-2** Supplies part numbers

Item	Description	Part number (service)	Product number (new)
Toner cartridge	HP 58A Black Original LaserJet toner cartridge	CF258-67901	CF258A
Toner cartridge	HP 59A Black Original LaserJet toner cartridge	CF259-67901	CF259A
Toner cartridge	HP 76A Black Original LaserJet toner cartridge	CF276-67901	CF276A
Toner cartridge	HP 77A Black Original LaserJet toner cartridge	CF277-67901	CF277A
Toner cartridge	HP 58X High Yield Black Original LaserJet toner cartridge	CF258-67902	CF258X
Toner cartridge	HP 59X High Yield Black Original LaserJet toner cartridge	CF259-67902	CF259X
Toner cartridge	HP 76X High Yield Black Original LaserJet toner cartridge	CF276-67902	CF276X
Toner cartridge	HP 77X High Yield Black Original LaserJet toner cartridge	CF277-67902	CF277X
Toner cartridge	Black, managed toner cartridge	3PZ35-67901	W9024MC

**Table 5-3** Accessories

Description	Part number (service)	Product number
550-sheet paper feeder	D9P29-67018	D9P29A
HP JetDirect 3100w BLE/NFC/Wireless accessory	3JN69-61001	3JN69A
HP Accessibility Kit	2TD64-61001	2TD64A
HP Accessibility Assistant	2MU47-61001	2MU47A
Locking Tray Guides (managed printers only)	3PZ15-67909	NA

**Table 5-3 Accessories (continued)**

Description	Part number (service)	Product number
HP Jetdirect LAN Accessory Module	5851-8004	8FP31A

## Customer self-repair parts

Learn about printer customer self-repair parts.

Customer self-repair (CSR) parts are available for many HP LaserJet printers to reduce repair time.



**NOTE:** More information about the CSR program and benefits can be found at [www.hp.com/go/csr-support](http://www.hp.com/go/csr-support) and [www.hp.com/go/csr-faq](http://www.hp.com/go/csr-faq).

Genuine HP replacement parts can be ordered at [www.hp.com/buy/parts](http://www.hp.com/buy/parts) or by contacting an HP-authorized service or support provider. When ordering, one of the following will be needed: part number, serial number (found on back of printer), product number, or printer name.

- Parts listed as **A**: Easy
- Parts listed as **B**: Difficult and/or require tools
- Parts listed as **Mandatory**: Customer installed self-replacement parts (unless the customer is willing to pay for HP service personnel to perform the repair). For these parts, on-site or return-to-depot support is not provided under the HP printer warranty.
- Parts listed as **Optional**: HP service personnel installed self-replacement parts by customer request for no additional charge during the printer warranty period.

**Table 5-4 Customer self-repair (CSR) parts**

Kit name	Description	CSR level	Self-replacement options	Part number
Tray 2	Replacement 250-sheet paper input tray (Tray 2)	A	Mandatory	RM2-5392-010CN
Tray 3	Replacement 550-sheet paper input tray (optional Tray 3)	A	Mandatory	RM2-5413-000CN
Tray 2 Separation Pad	Separation assembly (Tray 2)	A	Mandatory	3PZ15-67964
Tray 3 Separation Pad	Separation assembly (optional Tray 3)	A	Mandatory	3PZ15-67967
Tray 1 Pickup Roller	Tray pickup roller assembly (Multipurpose Tray 1)	A	Mandatory	3PZ15-67966
Tray 2 Pickup Roller	Tray pickup roller assembly (Tray 2)	A	Mandatory	3PZ15-67965
Tray 3 Pickup Roller	Tray pickup roller assembly (optional Tray 3)	A	Mandatory	3PZ15-67968

## HP service and support

Learn about HP access to additional service and support information.

### Additional service and support for channel partners



Channel partners go to [partner.hp.com](http://partner.hp.com), and then use the steps below to access the HP Web-based Interactive Search Engine (WISE).

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

Access WISE for Channel partners

1. Select [Services & Support](#) (near the top of the screen).
2. Under [Services Delivery](#), select [Technical Support](#).
3. Select [Technical Documentation](#).

Find information about the following topics

- [Service manuals](#)
- [Service advisories](#)
- [Up-to-date control panel message \(CPMD\) troubleshooting](#)
- [Solutions for printer issues and emerging issues](#)
- [Remove and replace part instructions and videos](#)
- [Install and configure](#)
- [Printer specifications](#)
- [Warranty and regulatory 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 how to use WISE to find technical support videos \(Product detail page \[PDP\] search\).](#)

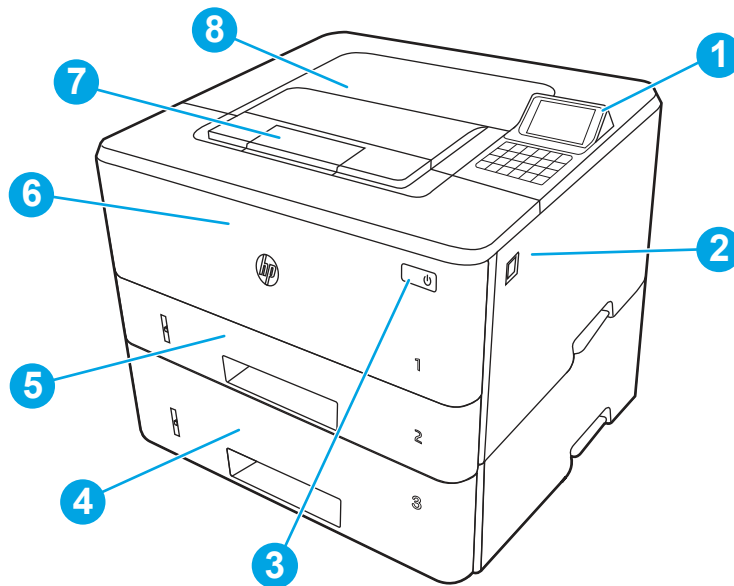
## Assembly locations

Learn about major printer assembly locations.

### Printer front view (SFP)

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

Figure 5-1 Printer front view (SFP)

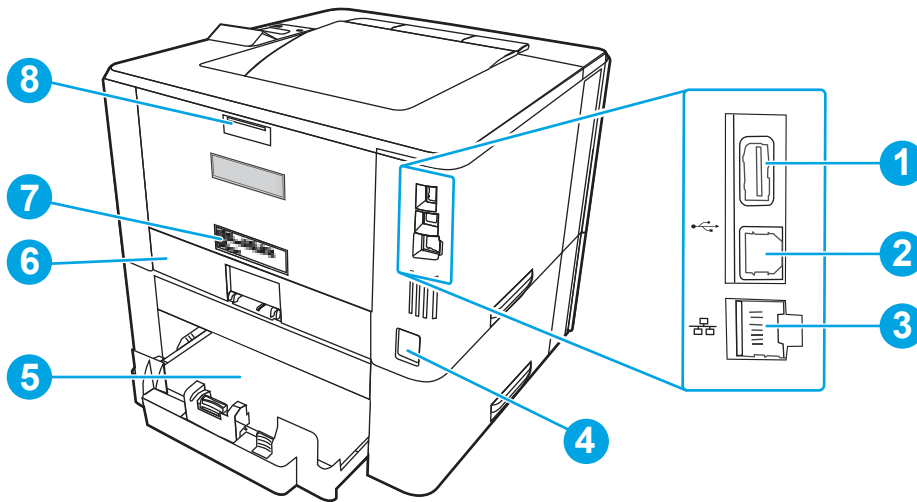


Number	Description
1	Color non-touch control panel with 10-key keypad
2	Front door release button (access to the toner cartridge)
3	Power on/off button
4	Tray 3 (optional)
5	Tray 2
6	Tray 1
7	Output bin extension
8	Output bin

## Printer back view (SFP)

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

Figure 5-2 Printer rear view (SFP)

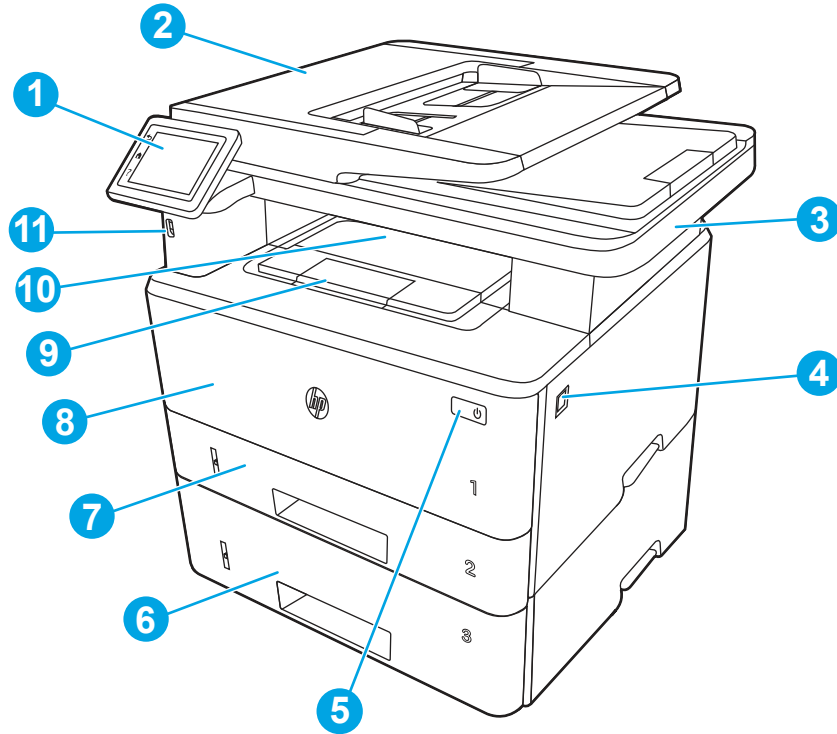


Number	Description
1	USB port for job storage or connecting accessories
2	USB port for direct connection to a computer
3	Ethernet port
4	Power connection
5	Tray 3 (optional)
	<b>NOTE:</b> Tray 3 extends when legal-size or A4-size paper is loaded.
6	Dust cover for Tray 2
	<b>NOTE:</b> Dust cover flips up when legal-size or A4-size paper is loaded.
7	Serial number and product number label
8	Rear door (access for clearing jams)

## Printer front view (MFP)

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

Figure 5-3 Printer front view (MFP)

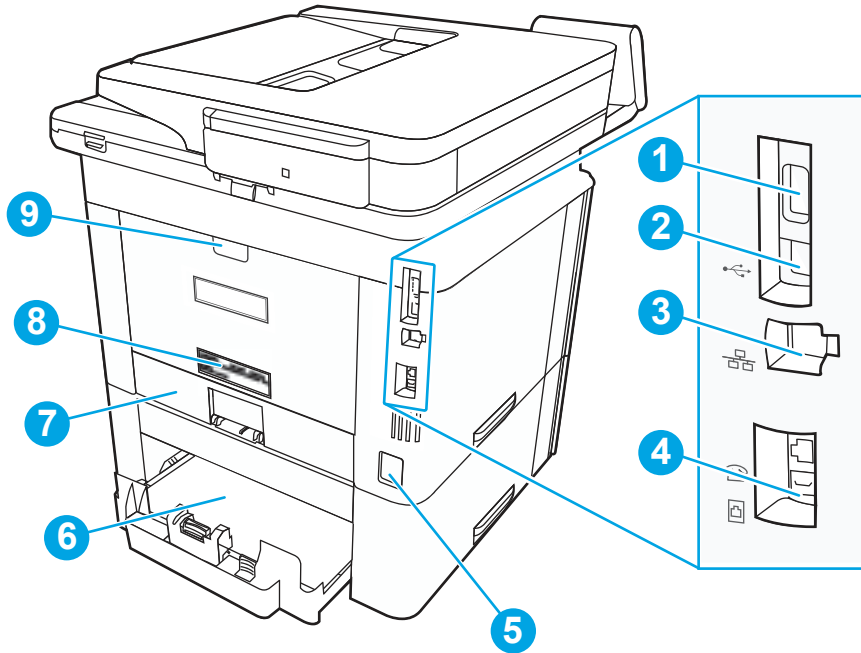


Number	Description
1	Control panel (tilts up for easier viewing)
2	Document feeder
3	Scanner
4	Front door release button (access to the toner cartridge)
5	Power on/off button
6	Tray 3 (optional)
7	Tray 2
8	Tray 1
9	Output bin extension
10	Output bin
11	Walk-up USB port (for printing and scanning without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

## Printer back view (MFP)

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

Figure 5-4 Printer rear view (MFP)



Number	Description
1	USB port (for job storage and private printing)
2	USB interface port
3	Ethernet port
4	Fax "line in" port (for attaching the fax phone line to the printer)
5	Power connection
6	Tray 3 (optional)
	<b>NOTE:</b> Tray 3 extends when legal-size or A4-size paper is loaded.
7	Dust cover for Tray 2
	<b>NOTE:</b> Dust cover flips up when legal-size or A4-size paper is loaded.
8	Serial number and printer number label
9	Rear door (provides access for clearing jams)

## 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.

### 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 5-5 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 5-5 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 5-6** 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 5-6** 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

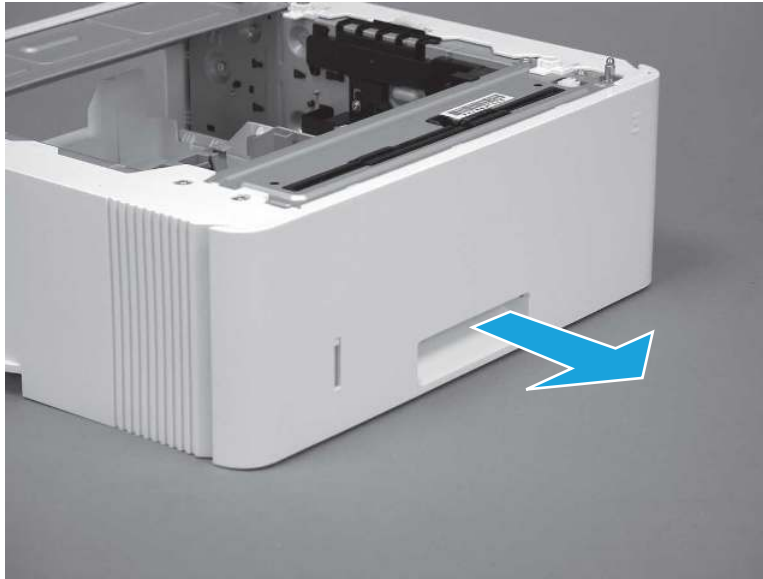
Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

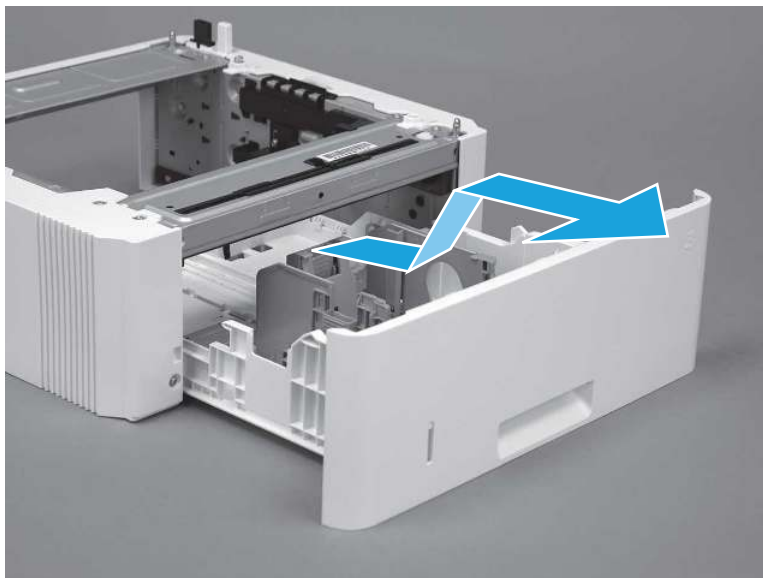
1. Pull the tray straight out of the printer until it stops.

**Figure 5-7** 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 5-8** 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.

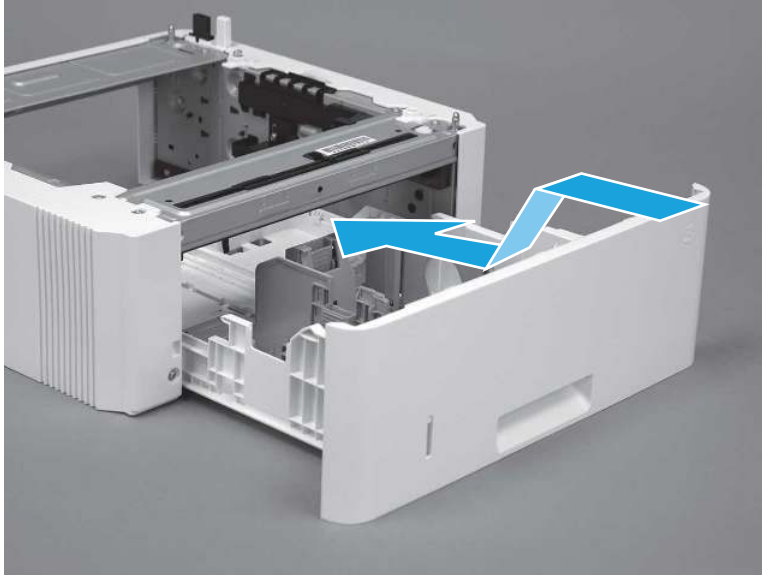
---

## 3. Install optional Tray 3

Follow these steps to install optional Tray 3.

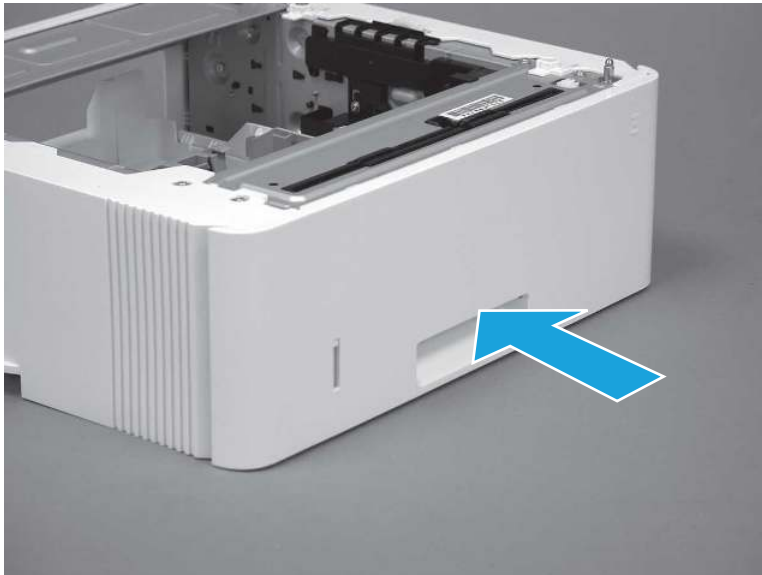
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-9** Install the tray



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

**Figure 5-10** 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 5-7 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.

## 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.

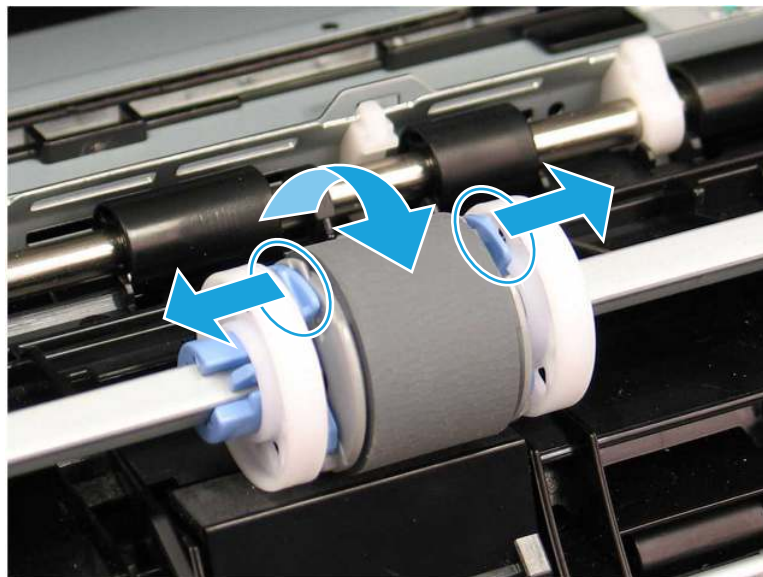
1. Press the door-release button, and then open the toner-cartridge door

**Figure 5-11** Open the toner-cartridge door



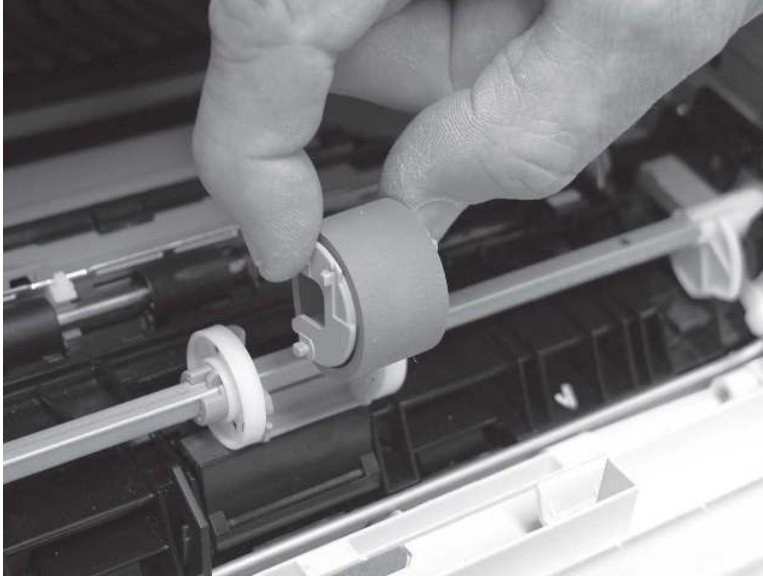
2. Release two tabs between the roller collar and roller, and then rotate the top of the roller out and away from the printer.

**Figure 5-12** Release the roller



3. Remove the roller.

**Figure 5-13** 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.

---

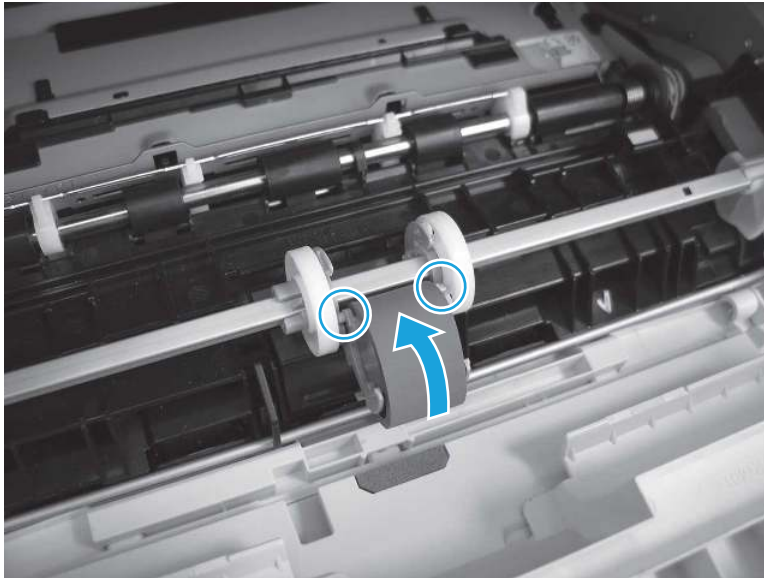
**⚠ CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper handling problems. HP recommends washing your hands before handling the assembly.

---

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

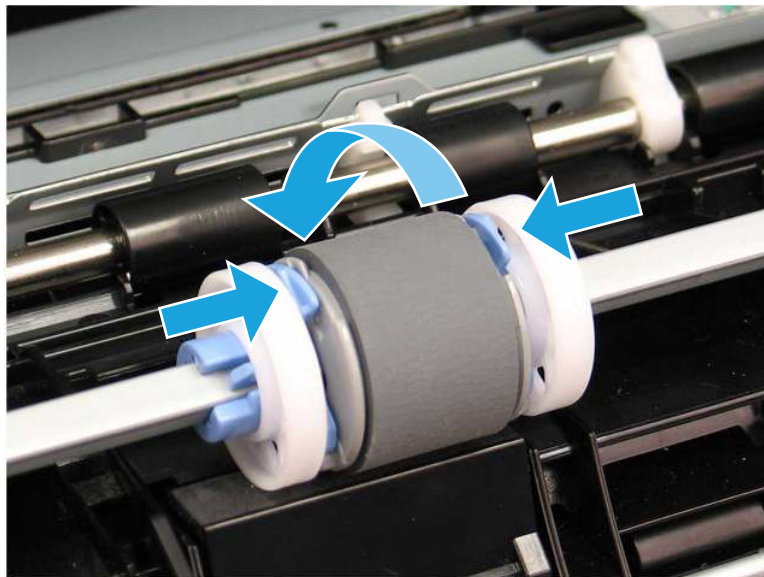
1. Position the pickup roller with the pins in the provided slots on the holder, and then rotate the top of the roller up and toward the printer.

**Figure 5-14** 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 5-15** Engage two tabs



3. Close the toner-cartridge door

**Figure 5-16** 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.

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
3PZ15-67965	Tray 2 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 Tray 2

Follow these steps to remove Tray 2.

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


**Figure 5-17** 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.

---

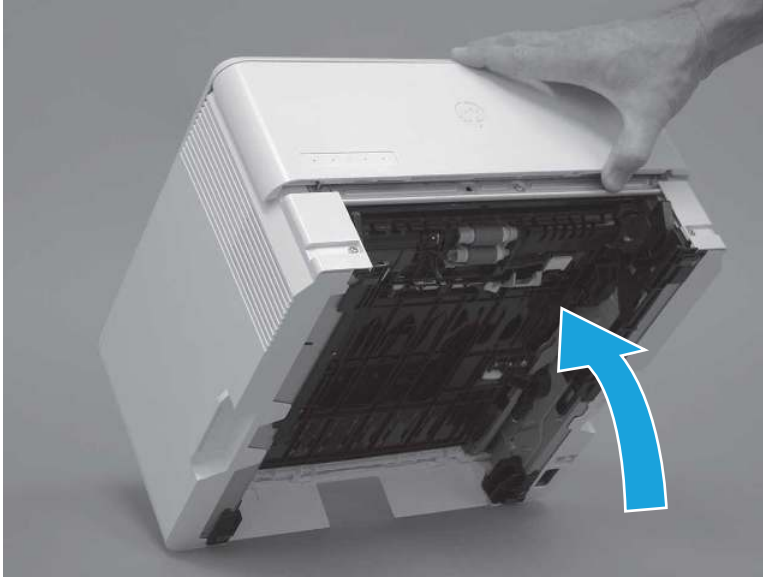
1. Carefully rotate the printer backward.

---

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

---

Figure 5-18 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.

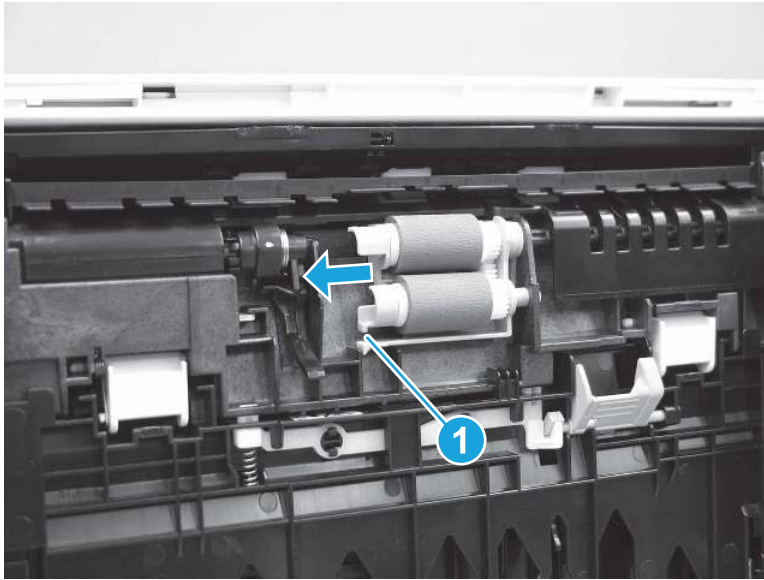
---

Figure 5-19 Place the printer bottom-side face forward



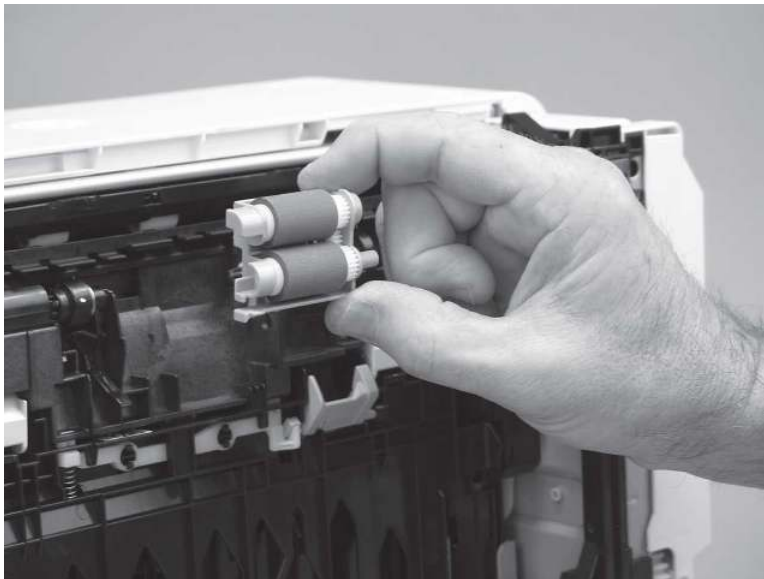
3. Release one tab (callout 1), and then slide the roller holder toward the left side of the printer to release it.

**Figure 5-20** Release one tab



4. Remove the roller assembly.

**Figure 5-21** 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).

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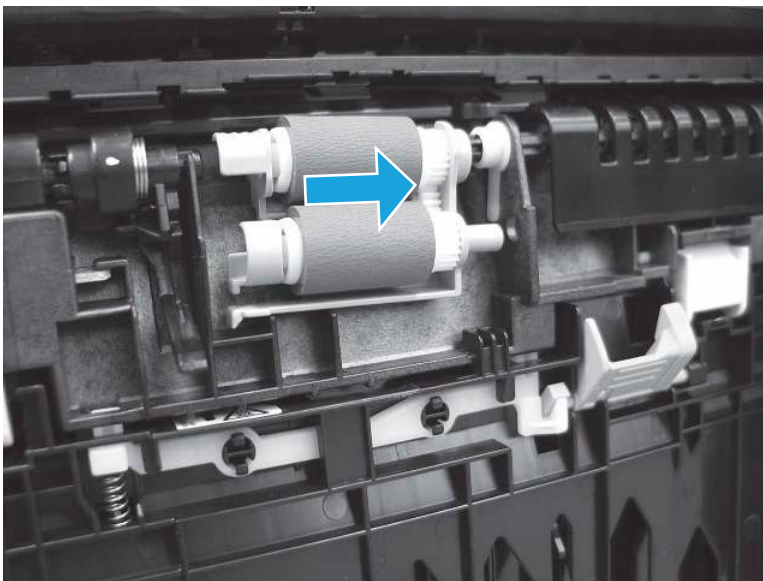
**CAUTION:**  Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper handling problems. HP recommends washing your hands before handling the assembly.

**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 5-22** Install the roller holder



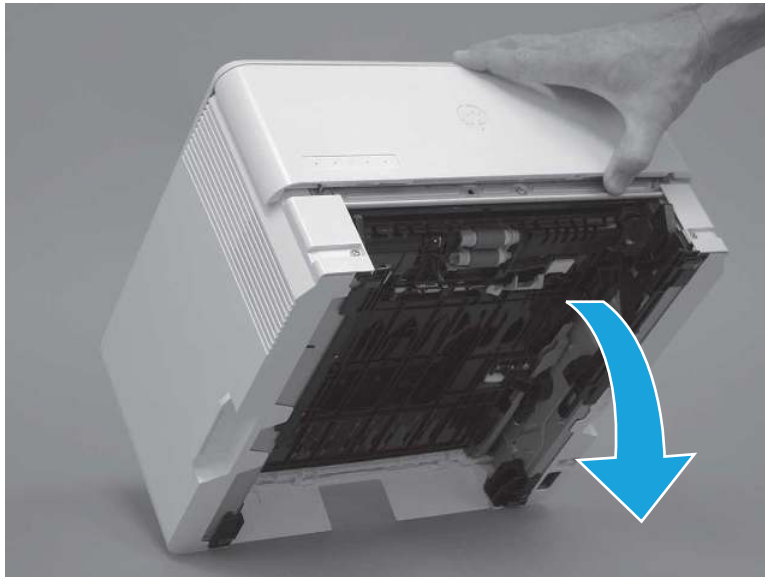
2. Make sure that the tab snaps into place.

Figure 5-23 Check the tab



3. Carefully rotate the printer forward.

Figure 5-24 Rotate the printer forward



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

**Figure 5-25** 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 5-26** 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 5-9** 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 5-27 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.

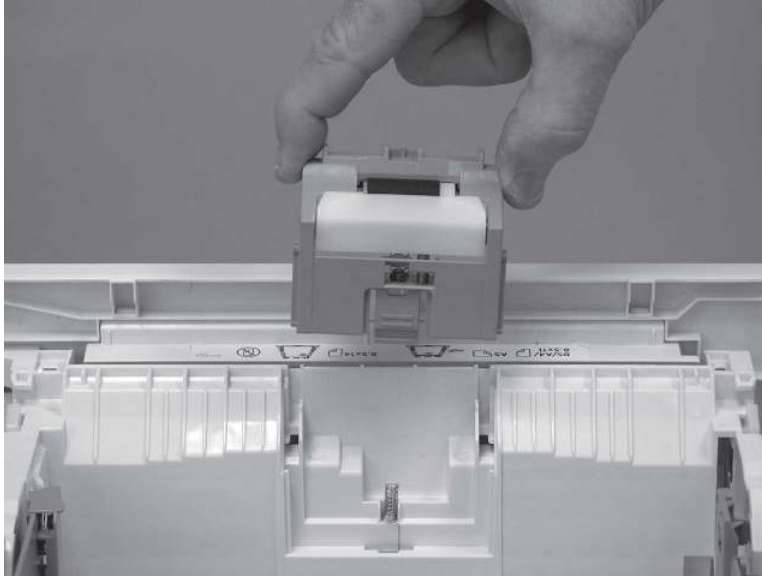
Figure 5-28 Release the assembly





2. Remove the assembly.

**Figure 5-29** 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.



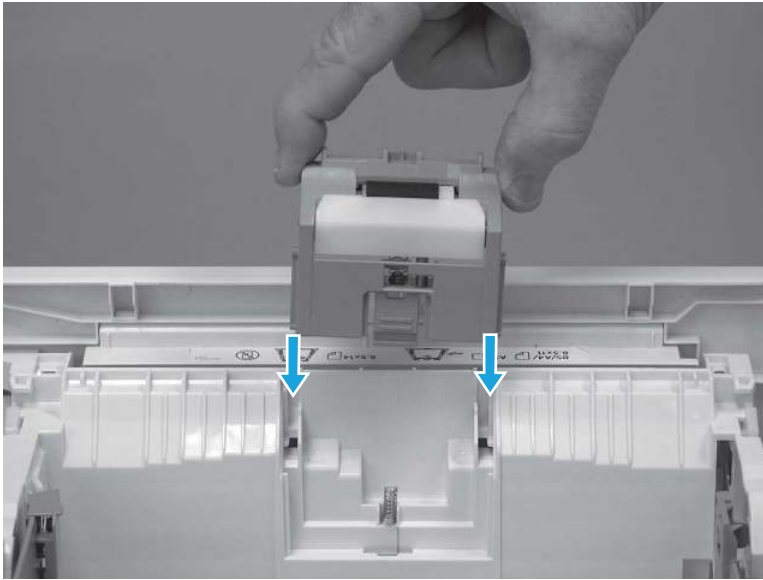
**NOTE:** When applicable, special installation instructions are provided for an assembly at the end of the removal procedure. Always completely read the removal instructions and follow all special installation instructions.

### 4. Install the separation pad roller assembly (Tray 2)

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

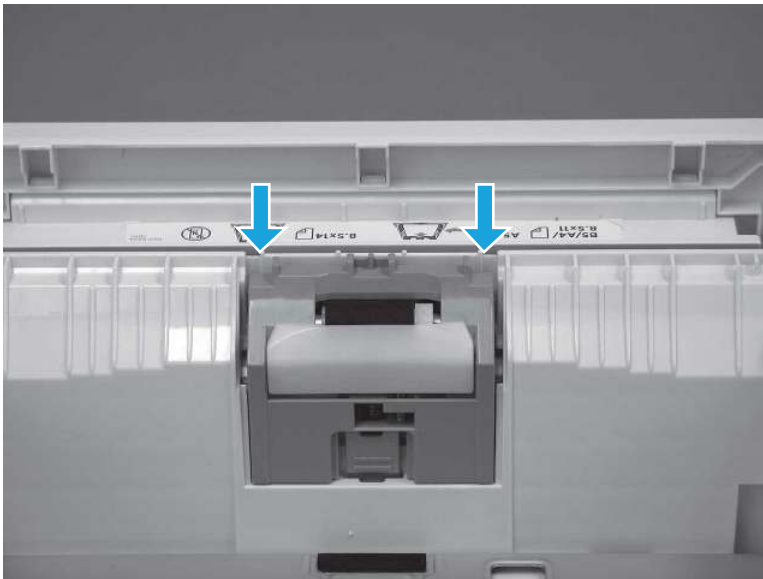
1. Install the assembly in the slots in the cassette.

**Figure 5-30** Install the assembly (1 of 2)



2. Push the separation roller assembly straight down until it snaps into place.

**Figure 5-31** 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 5-32 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 5-10 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

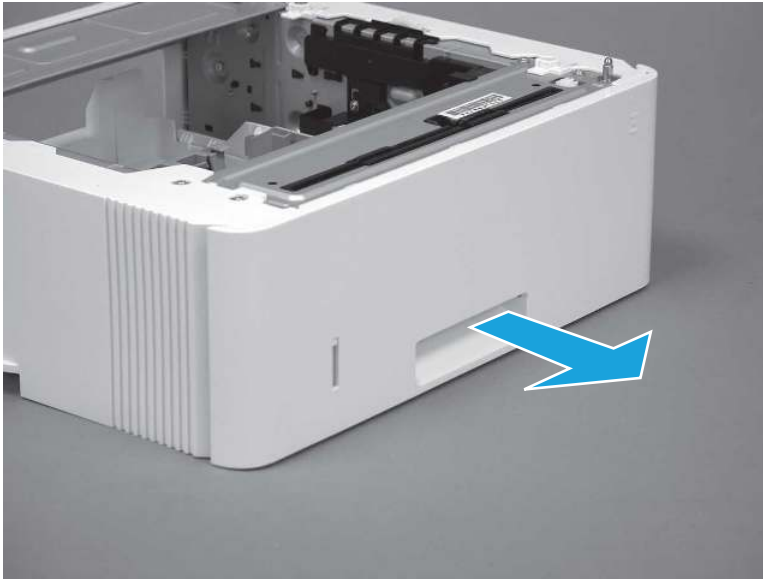
Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

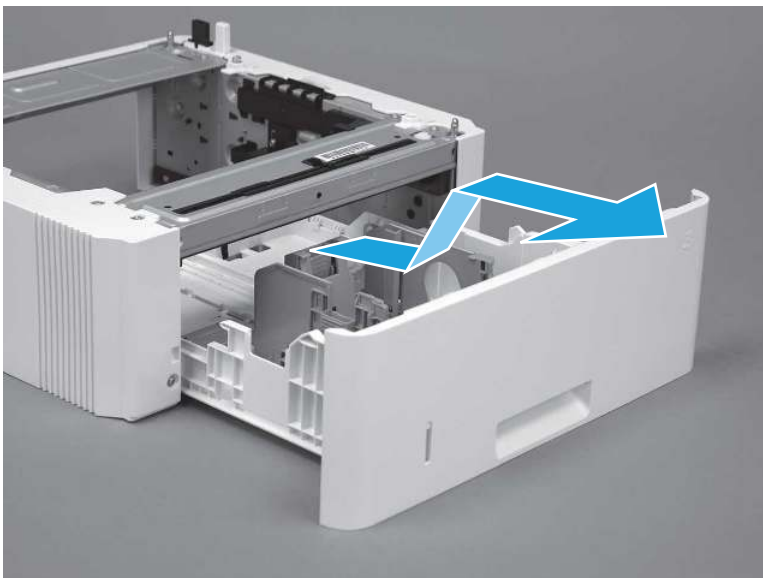
1. Pull the tray straight out of the printer until it stops.

**Figure 5-33** 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 5-34** 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).

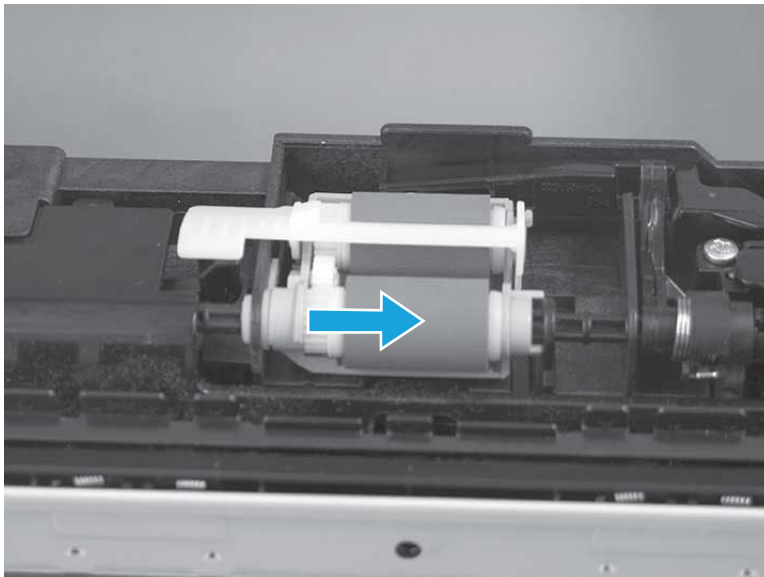
1. Carefully turn the accessory over to expose the roller assembly.

**Figure 5-35** Turn the accessory over



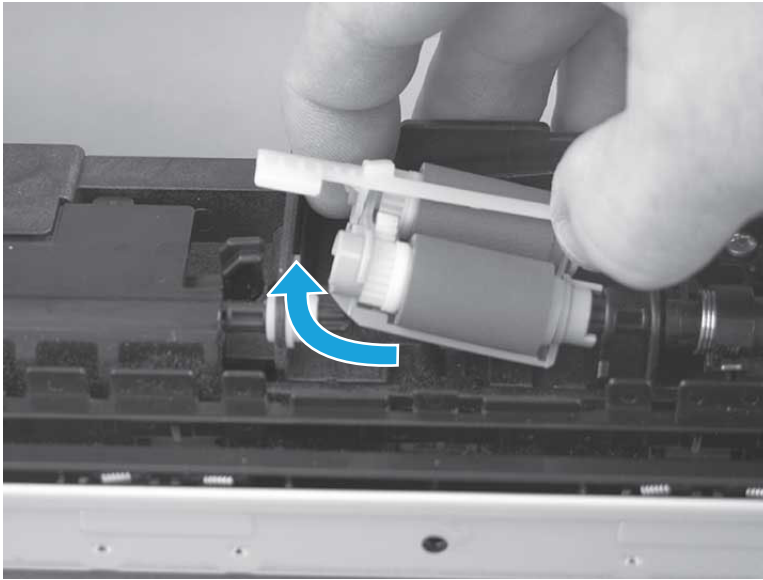
2. Slide the roller holder to the right to compress the spring-loaded shaft and release the assembly.

**Figure 5-36** Release the roller assembly



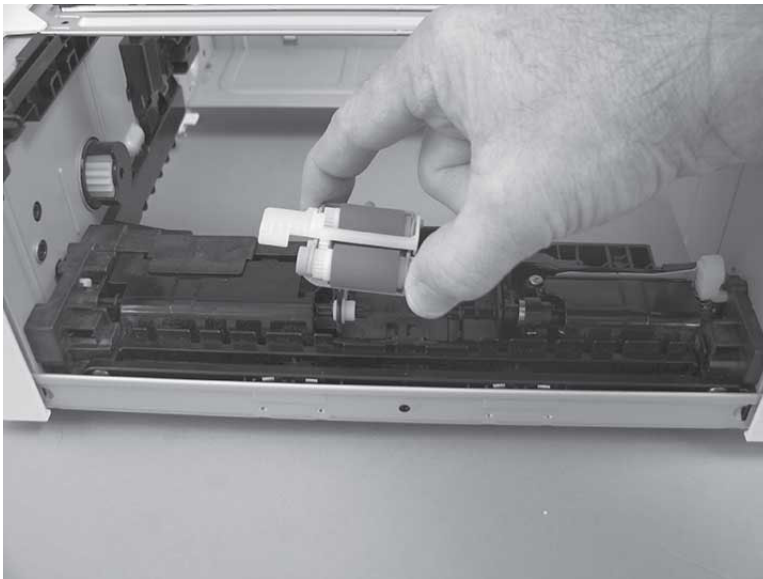
3. Rotate the end of the assembly up and away from the accessory.

**Figure 5-37** Rotate the assembly up



4. Remove the roller assembly.

**Figure 5-38** 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 problems. HP recommends washing your hands before handling the assembly.

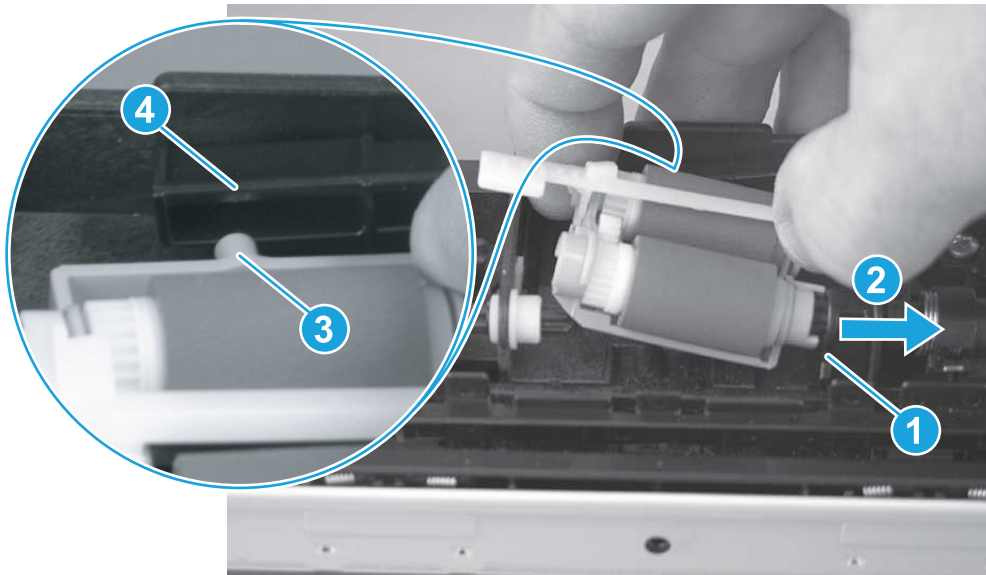
---

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.

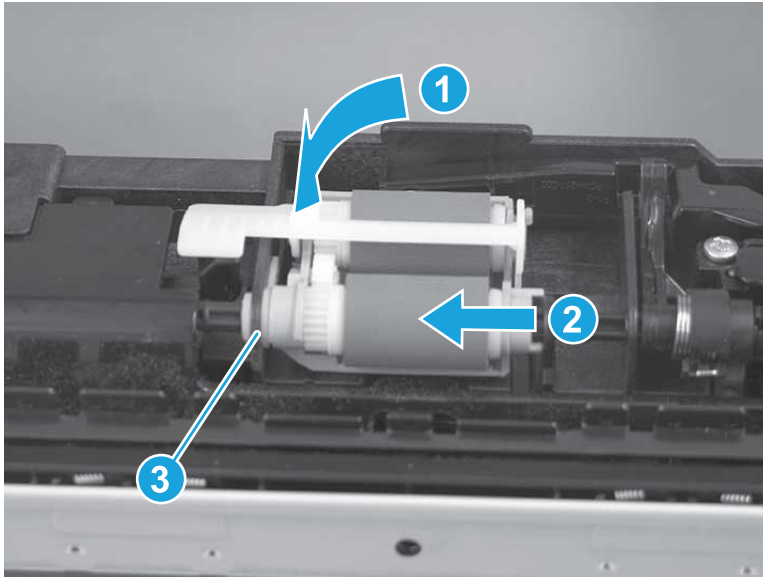
---

Figure 5-39 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).

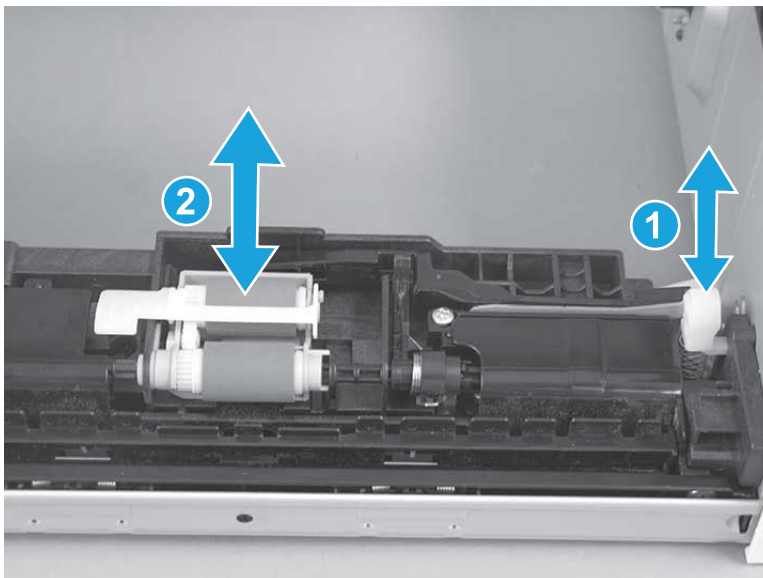
Figure 5-40 Engage the assembly



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 5-41 Check the installation



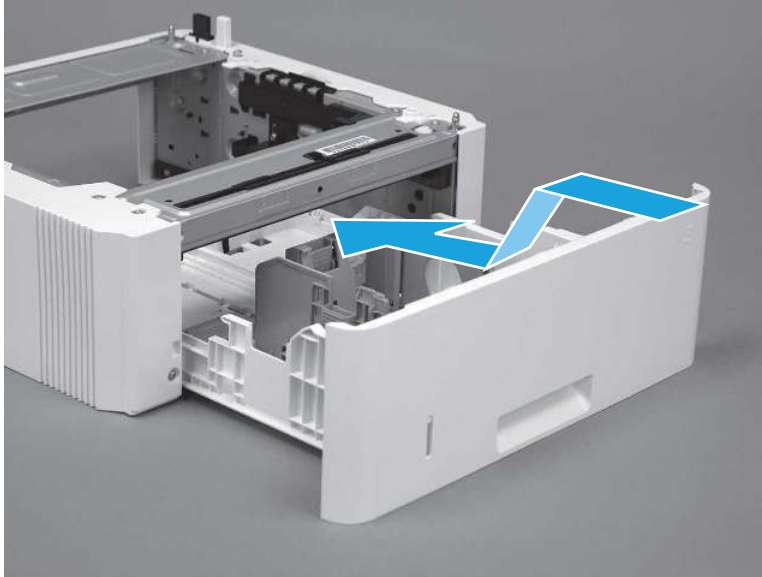
## 5. Install optional Tray 3

Follow these steps to install optional Tray 3.



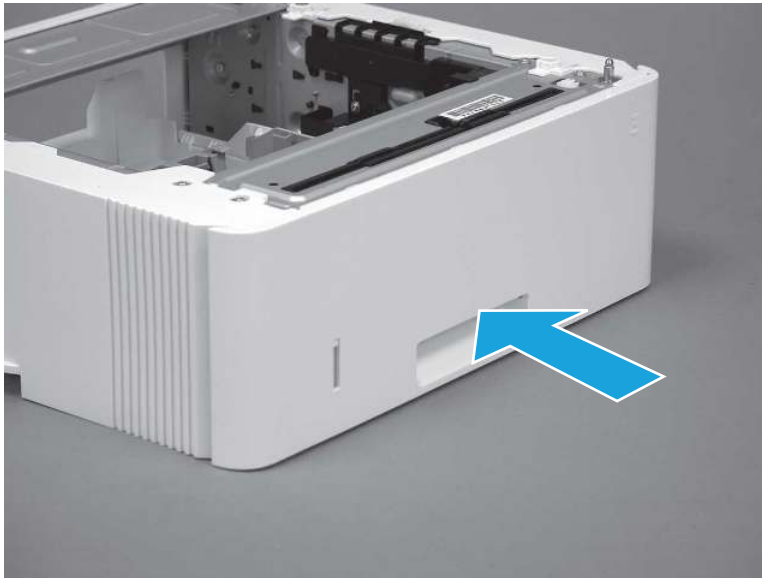
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-42** Install the tray



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

**Figure 5-43** 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 5-11** 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

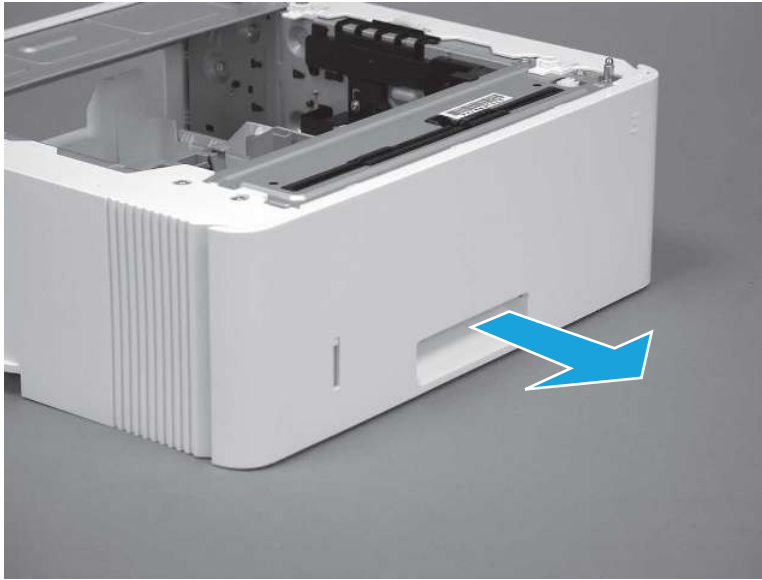
Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

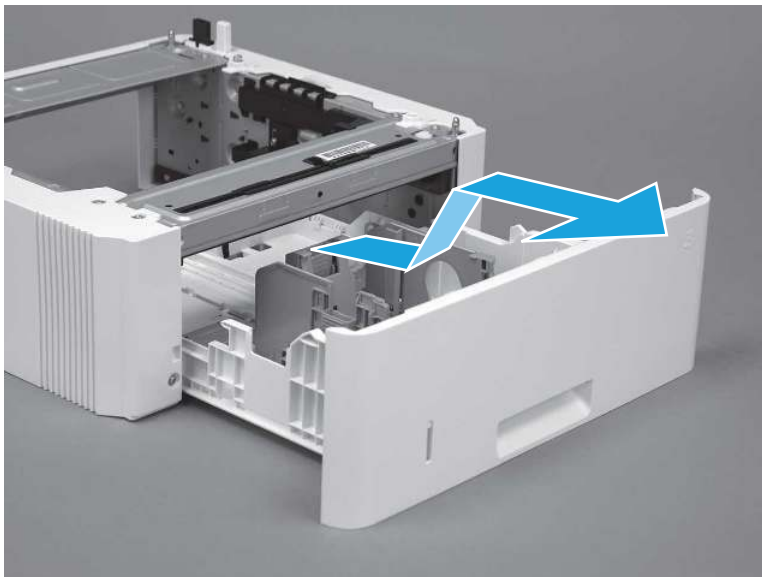
1. Pull the tray straight out of the printer until it stops.

**Figure 5-44** 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 5-45** Release and remove the tray

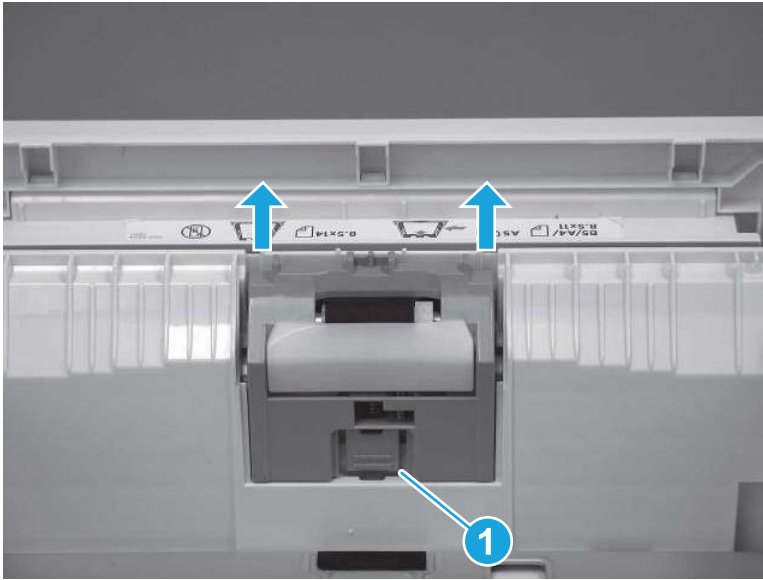


## 2. Remove the separation roller assembly (optional Tray 3)

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

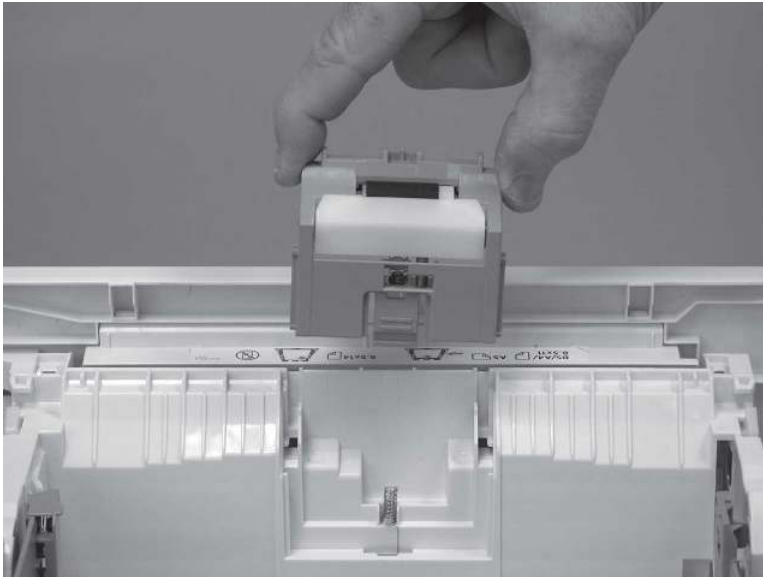
1. Press the locking lever (callout 1), and then pull the separation roller assembly straight up to release it.

**Figure 5-46** Release the assembly



2. Remove the assembly.

**Figure 5-47** 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.

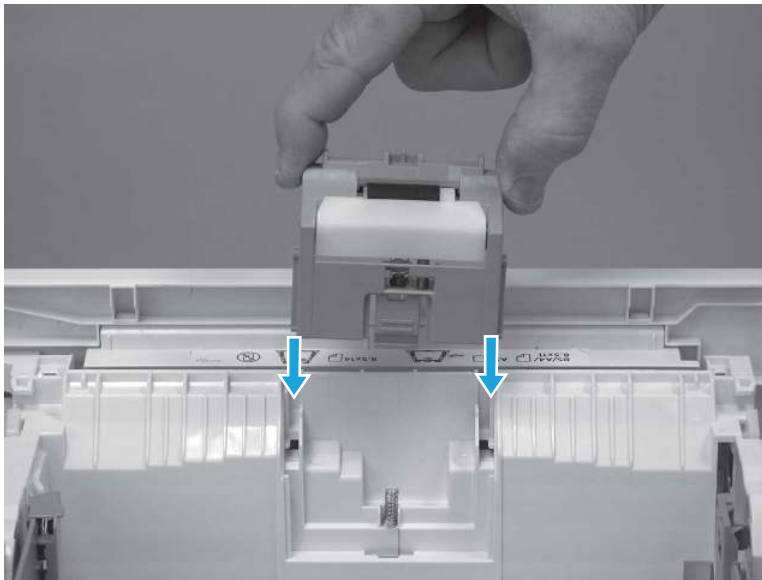
---

#### 4. Install the separation pad roller assembly (optional Tray 3)

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

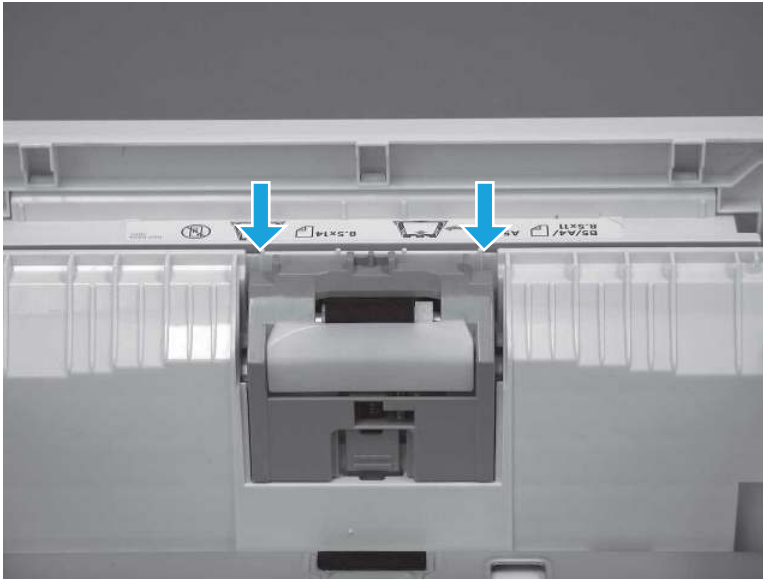
1. Install the assembly in the slots in the cassette.

**Figure 5-48** Install the assembly (1 of 2)



2. Push the separation roller assembly straight down until it snaps into place.

**Figure 5-49** Install the assembly (2 of 2)

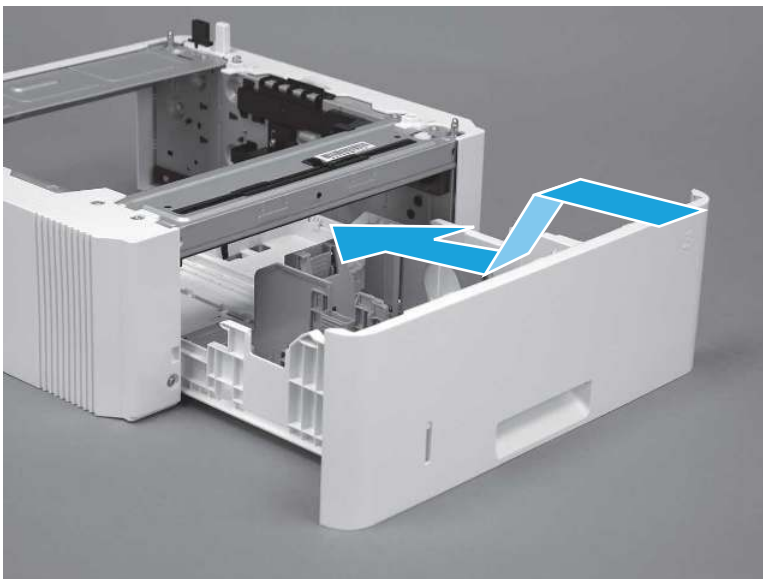


## 5. Install optional Tray 3

Follow these steps to install optional Tray 3.

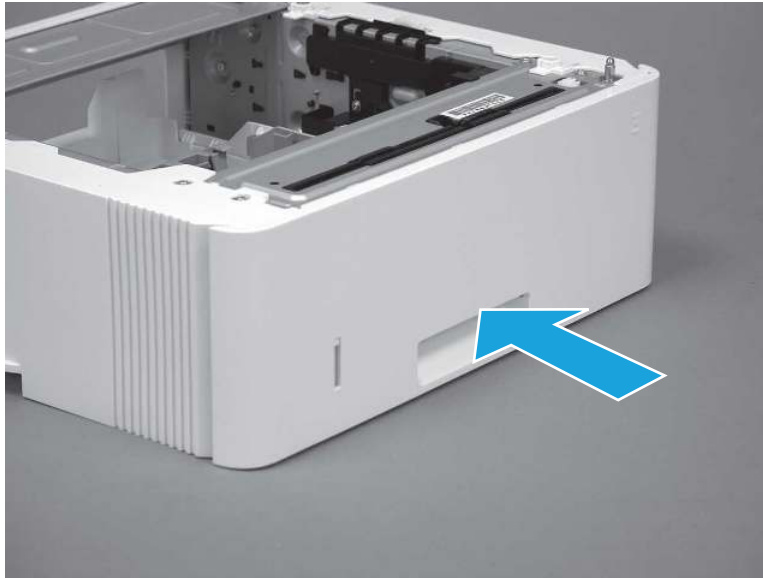
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-50** Install the tray



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

Figure 5-51 Close the tray



## Removal and replacement: Document feeder / scanner

Learn about document feeder and scanner parts removal and replacement.

### Removal and replacement: Document feeder top cover assembly with rollers

Learn how to remove and replace the document feeder top cover assembly with rollers.

[View a video of how to remove and replace the document feeder top cover assembly 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 5-12 Part information

Part number	Part description
W1A77-67903	Document feeder top cover assembly with 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

Make sure that toner toner-cartridge door correctly opens and closes.

Make sure that the printer initializes to a **Ready** state.

## 1. Remove the document feeder top cover assembly

Follow these steps to remove the document feeder top cover assembly.

1. Open the document feeder top cover.

**Figure 5-52** Open the document feeder top cover





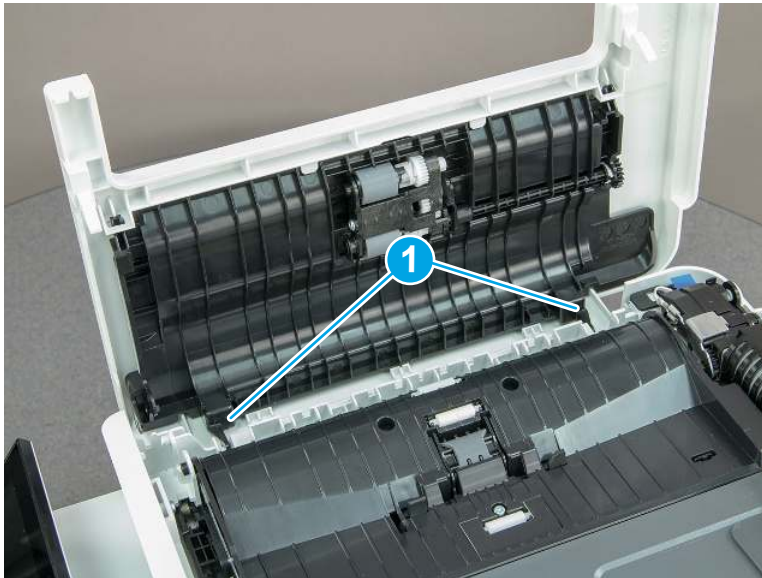
2. Release one hinge pin (callout 1).

**Figure 5-53** Release one hinge pin



3. Use a small, flat blade screwdriver to lift up and release two hinge pins (callout 1), and then remove the cover.

**Figure 5-54** Release two hinge pins



## 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 5-13** 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

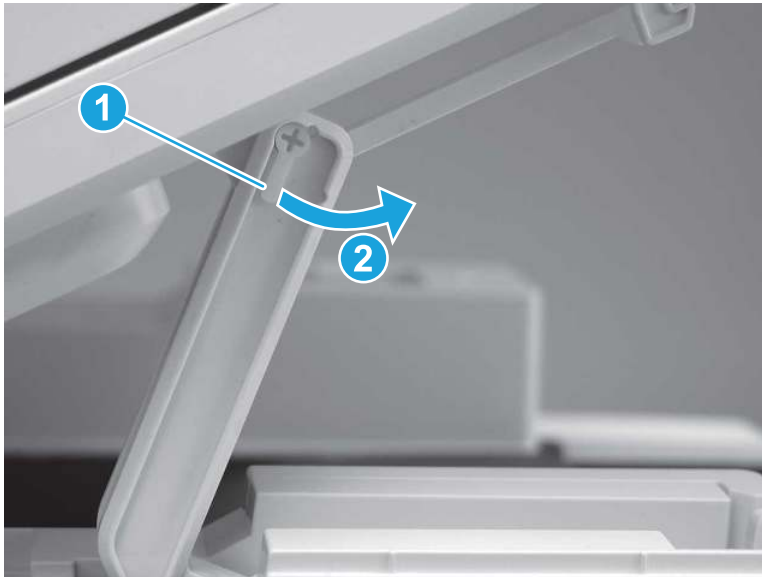
Make sure that toner ISA correctly opens and closes.

## 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 5-55** Release one tab and rotate the slider pin



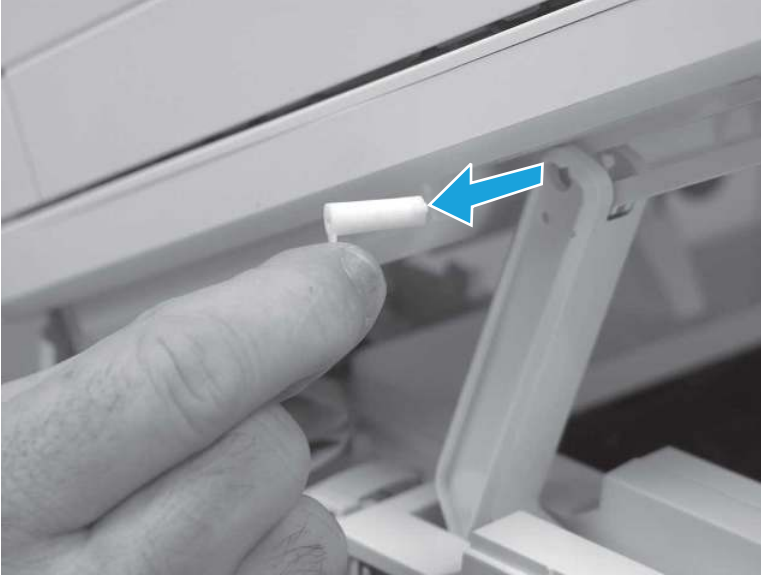
2. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

---

Figure 5-56 Remove the slider pin



3. Move the ISA out of the way, and then lower the support arm to the closed position.

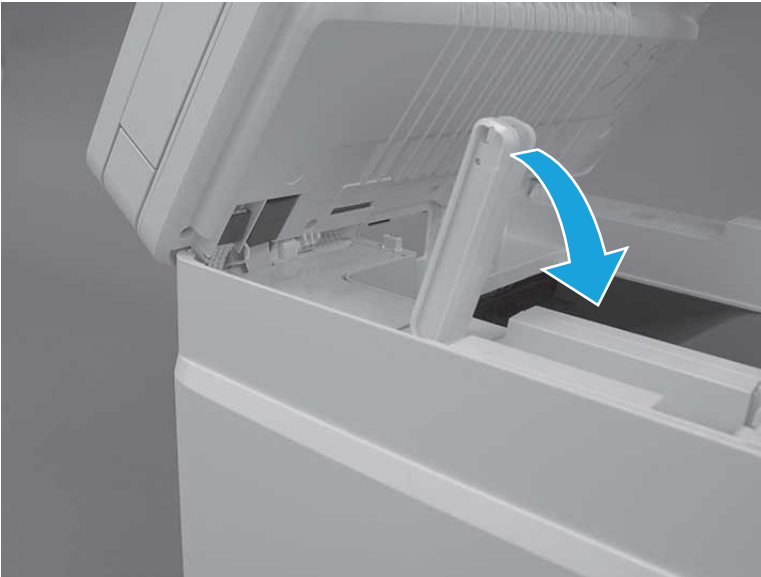
---

**⚠ 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 5-57 Lower the support arm



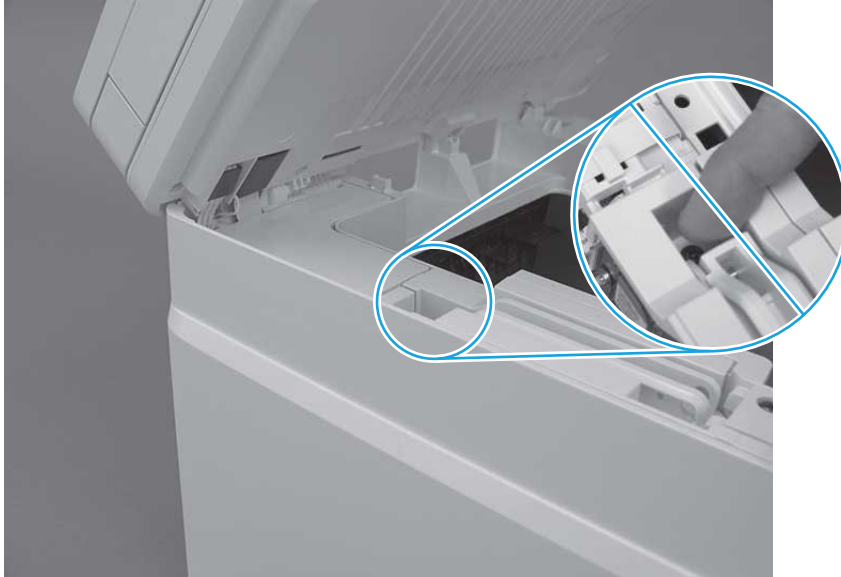
4. Before proceeding take note of the following.

---

**⚠ 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 5-58 Before proceeding take note



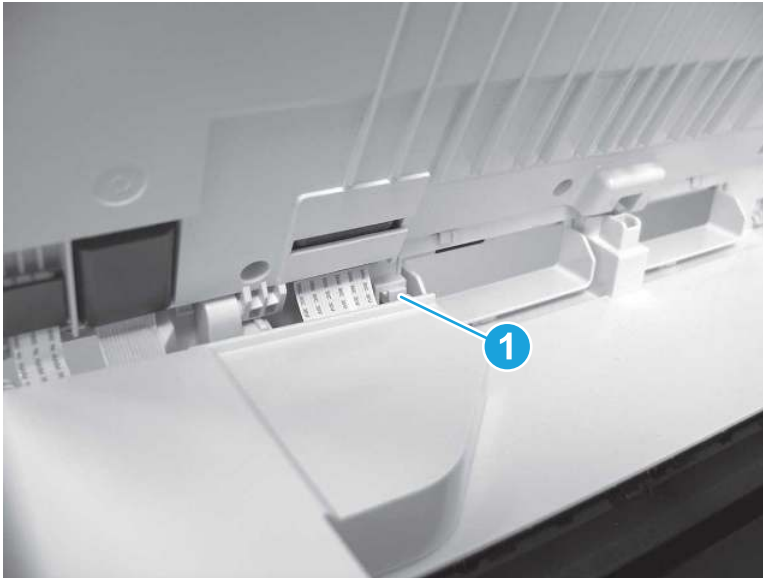
5. Remove one screw (callout 1).

Figure 5-59 Remove one screw



6. Use a flat-blade screwdriver to release one tab (callout 1).

**Figure 5-60** Release one tab



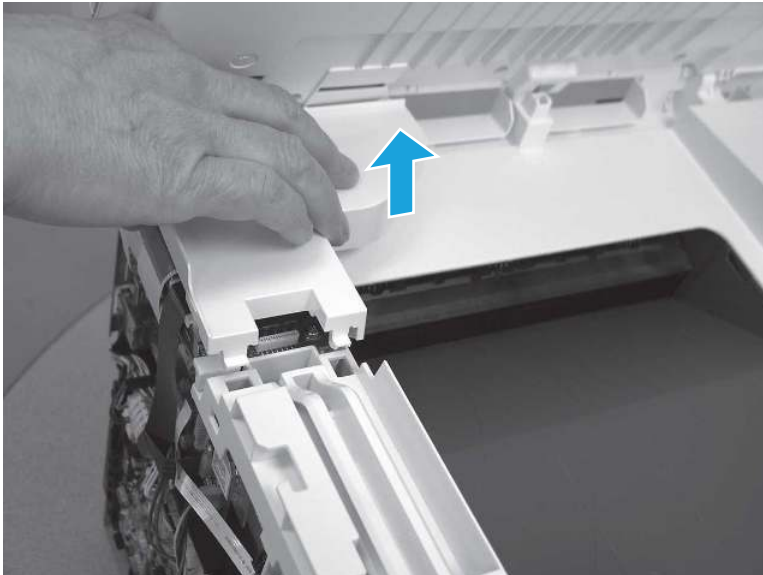
7. Remove the scanner cable cover.

---

 **NOTE:** The left cover is shown removed in the figure below. However, removing that cover is not necessary to remove the scanner cable cover.

---

**Figure 5-61** Remove the scanner cable cover



8. Remove the support arm.

**Figure 5-62** 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: 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 5-14** Part information

Part number	Part description
W1A73-60110	ISA assembly scanner/ADF 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 5-63 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).

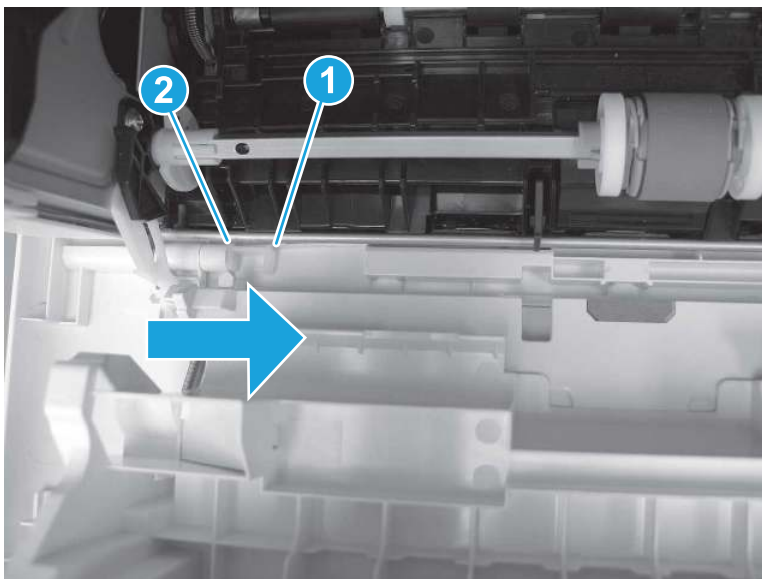
---

 **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.

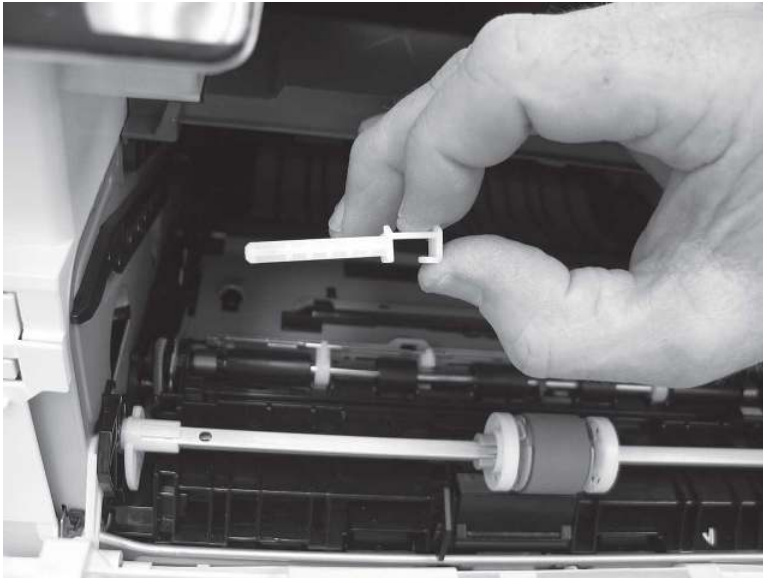
---

Figure 5-64 Release the support shaft



2. Remove the support shaft.

**Figure 5-65** Remove the support shaft



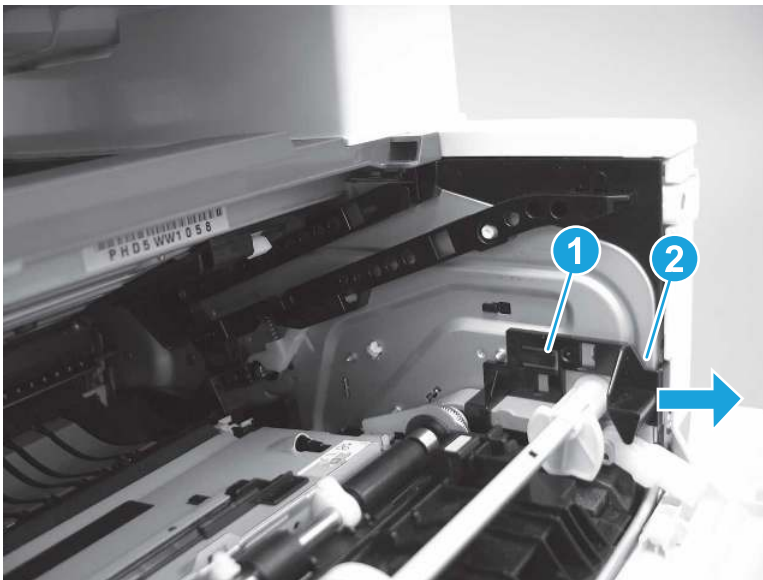
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

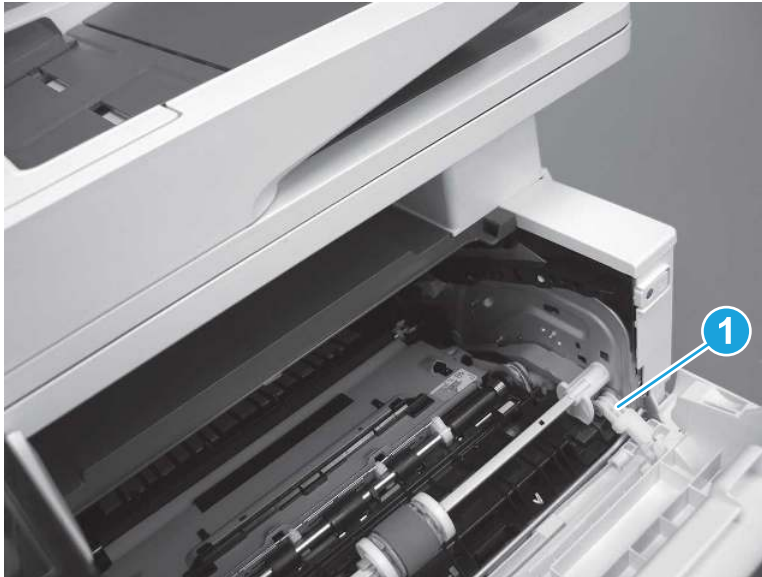
---

**Figure 5-66** 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 5-67** Release the pressure-release link

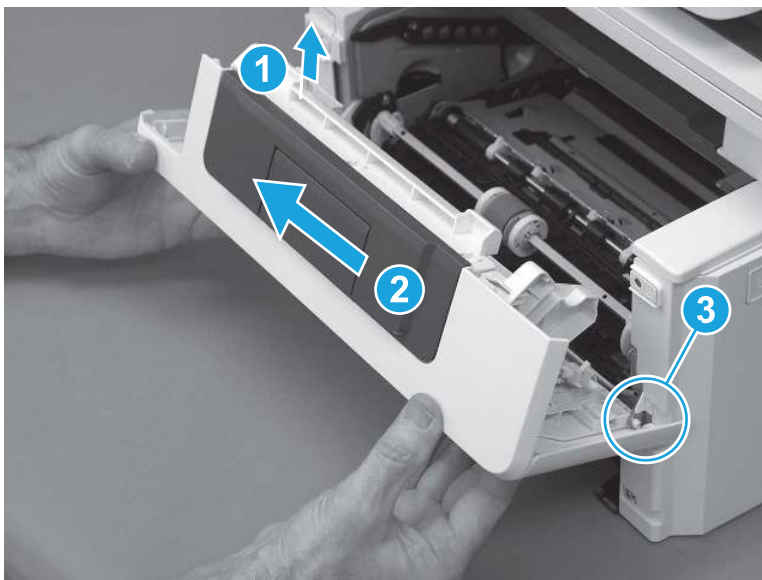


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

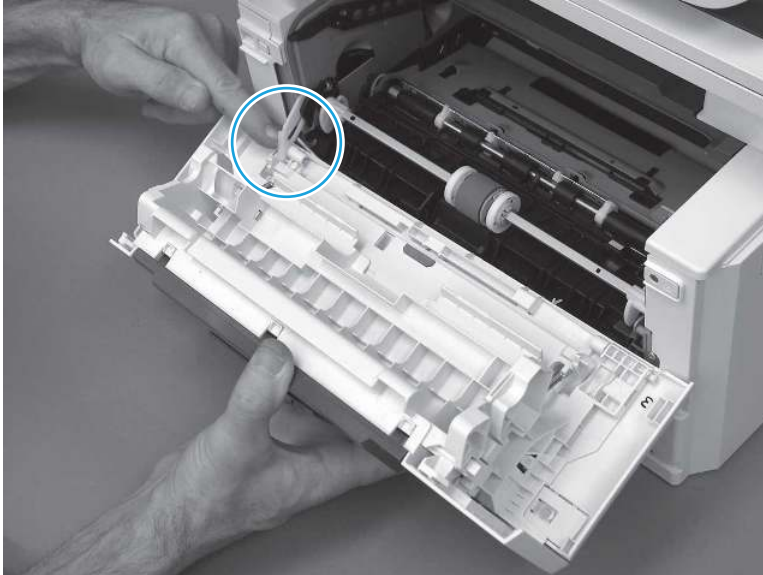
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-68** Release the door



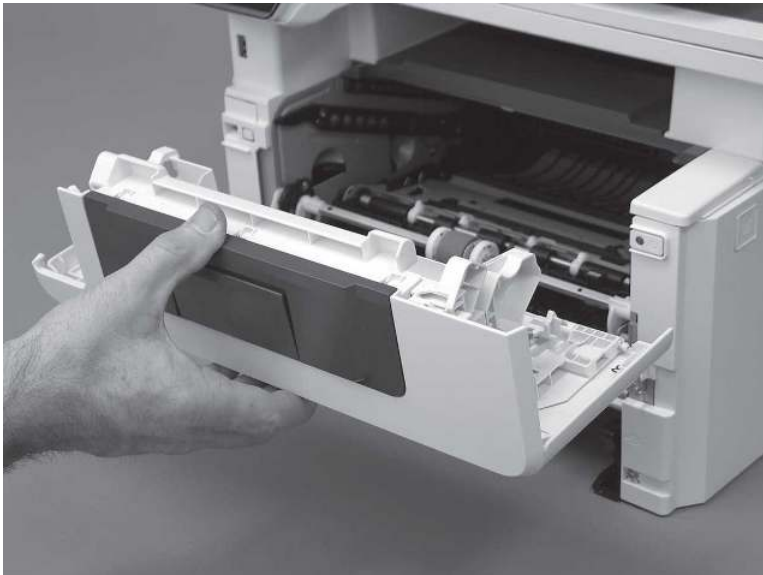
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-69** Release the left-side retainer arm



7. Remove the door.

**Figure 5-70** 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.

---

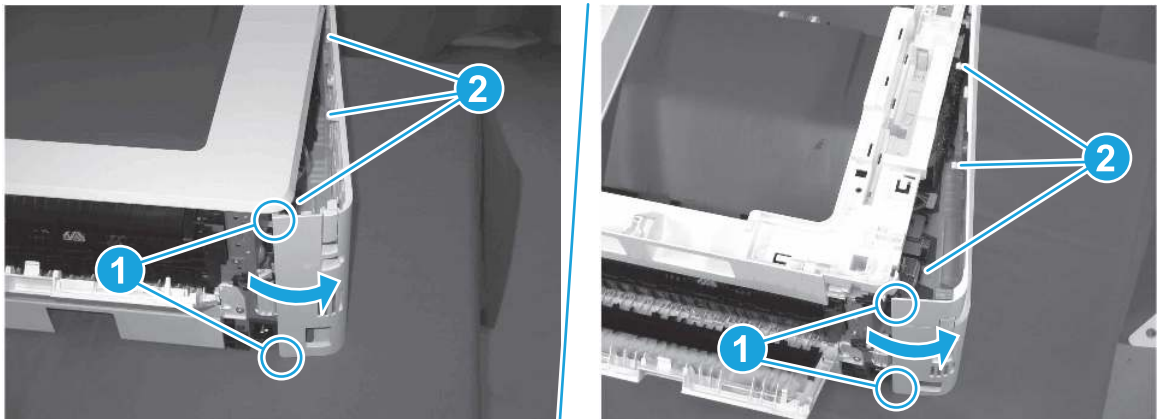
1. Remove one screw (callout 1).

**Figure 5-71** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-72** Release two bosses and three tabs



3. At the front of the printer, do one of the following:

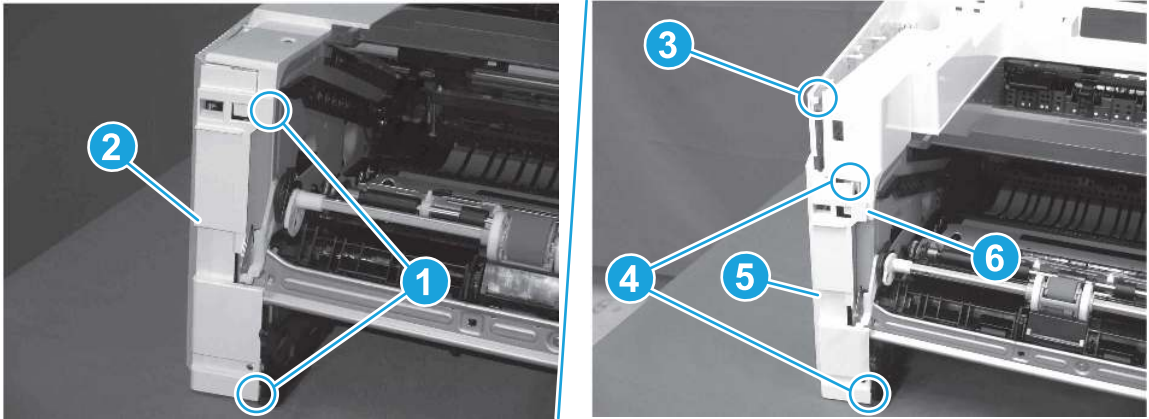
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**⚠ 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 5-73 Remove the cover

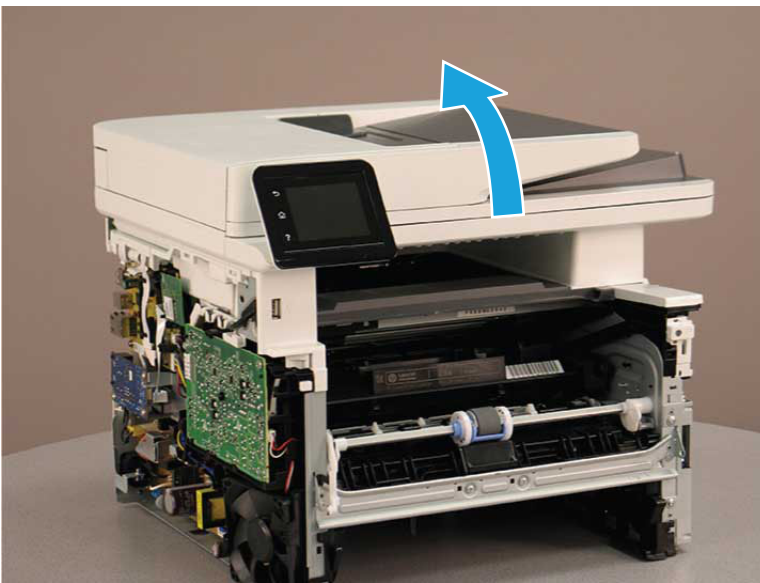


#### 4. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

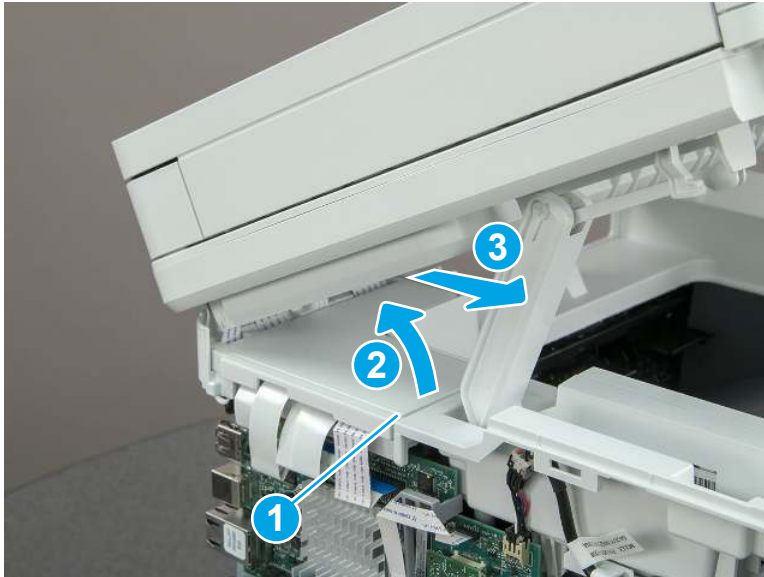
1. If the ISA is not already raised, raise it now.

Figure 5-74 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 5-75** 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 5-76** Disconnect three FFCs



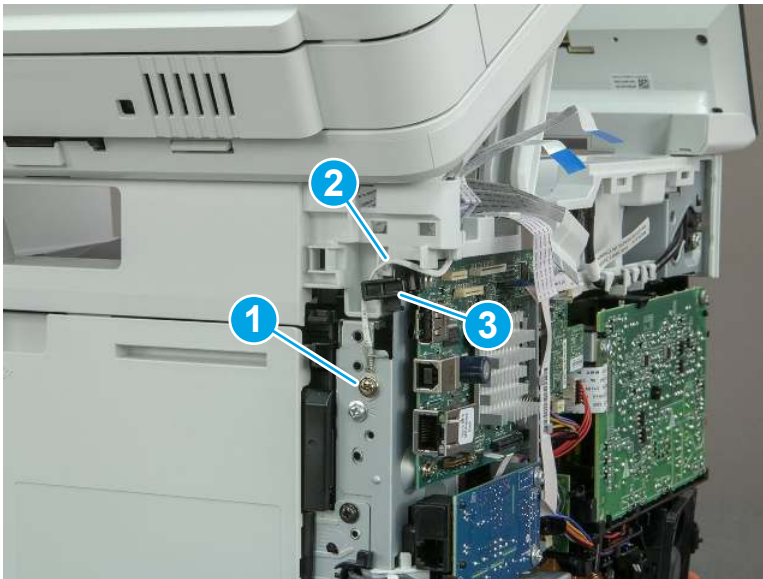
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-77** Release the tape



3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

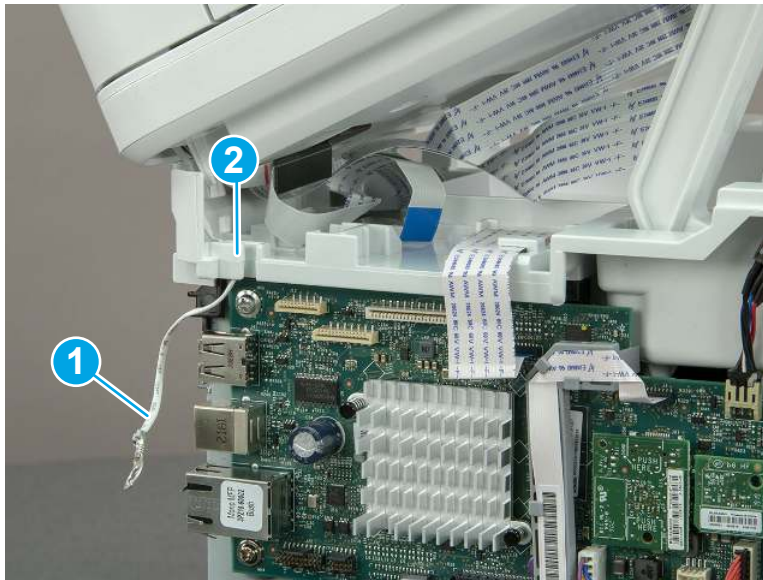
**Figure 5-78** Release the ground wire





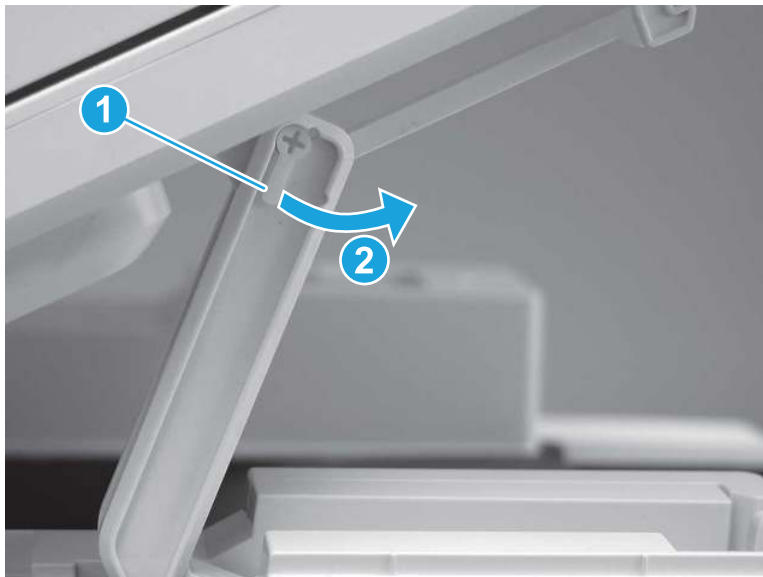
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-79** 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 5-80** 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.

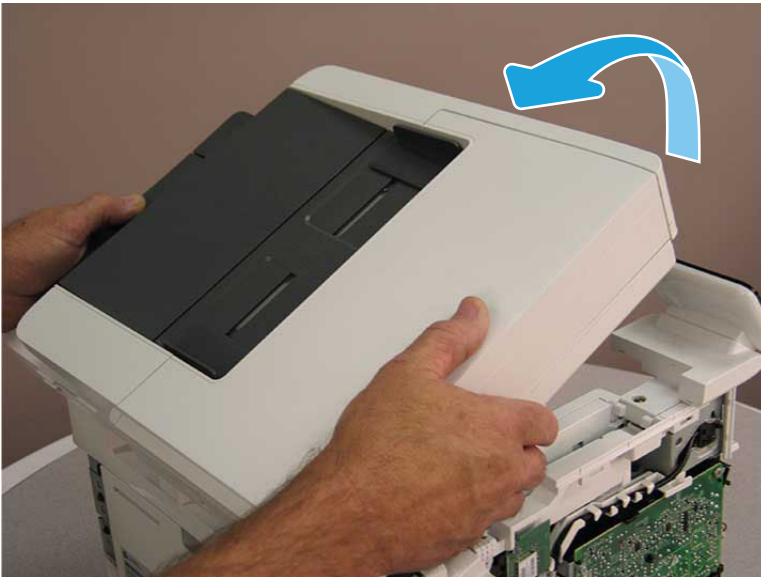
---

**Figure 5-81** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-82** Rotate the ISA towards the rear of the printer



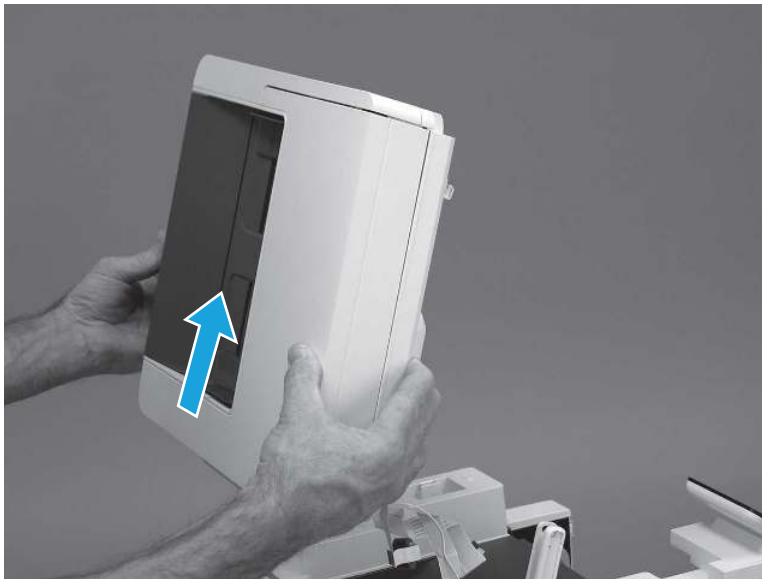
8. Slide the ISA as shown to release it.

**Figure 5-83** Release the ISA



9. Remove the ISA.

**Figure 5-84** 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>

- 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.

---

- 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: External panels, covers, and doors (base printer)

Learn how to remove and replace the printer external panels, covers, and doors.

### 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 5-15** Part information

Part number	Part description
Not orderable	Sheets, damper (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


No post service test is available for this assembly.

## 1. Remove the damper sheets

Follow these steps to remove the damper sheets.

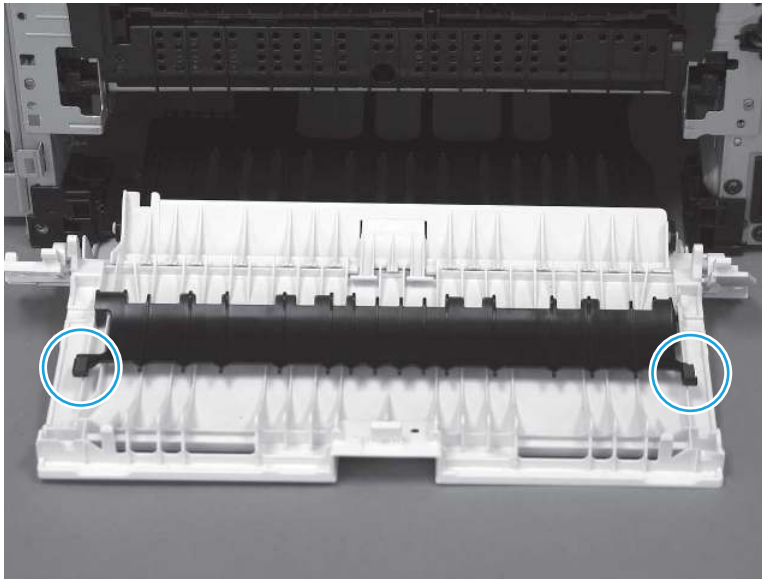
- ▲ Remove the damper sheets from the rear cover.

---

 **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 5-85** 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: Support shaft

Learn how to remove and replace the toner-cartridge door support shaft.

[View a video of how to remove and replace the toner-cartridge door support shaft.](#)

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 5-16** Part information

Part number	Part description
RC4-3002-000CN	Shaft, support

### Required tools

- Optional: 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 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).

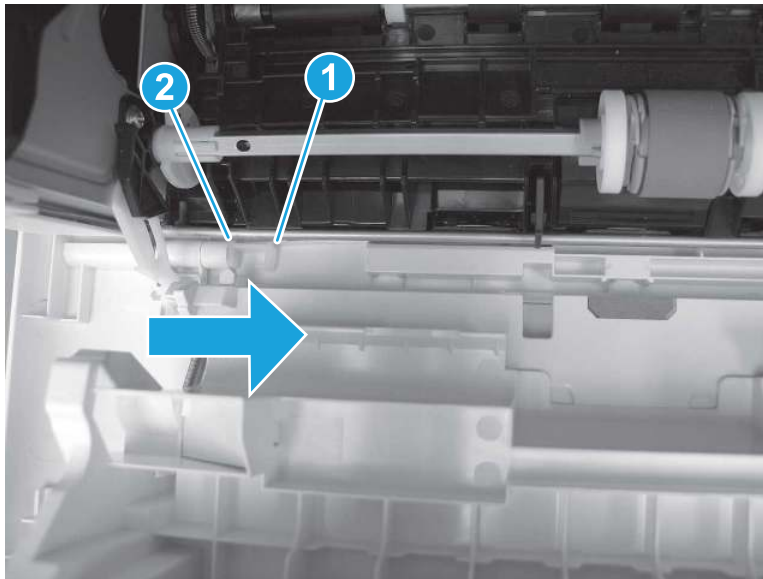
---

 **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.

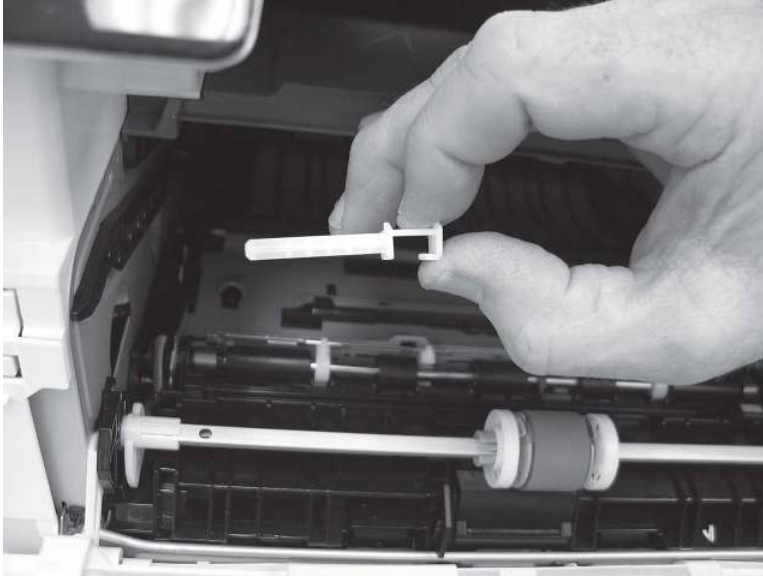
---

**Figure 5-86** Release the support shaft



2. Remove the support shaft.

**Figure 5-87** 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 5-17** Part information

Part number	Part description
RM2-2562-000CN	Cartridge (front) door assembly (SFP)
RM2-2567-000CN	Cartridge (front) 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 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).

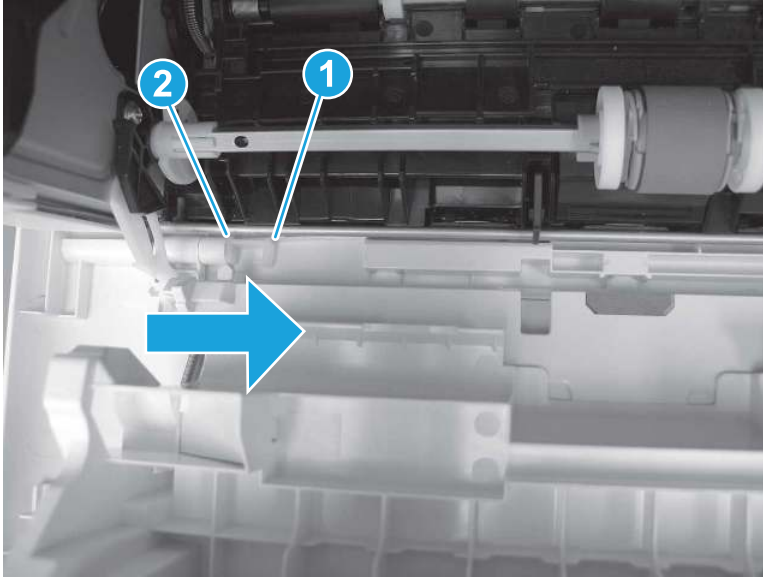
---

 **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.

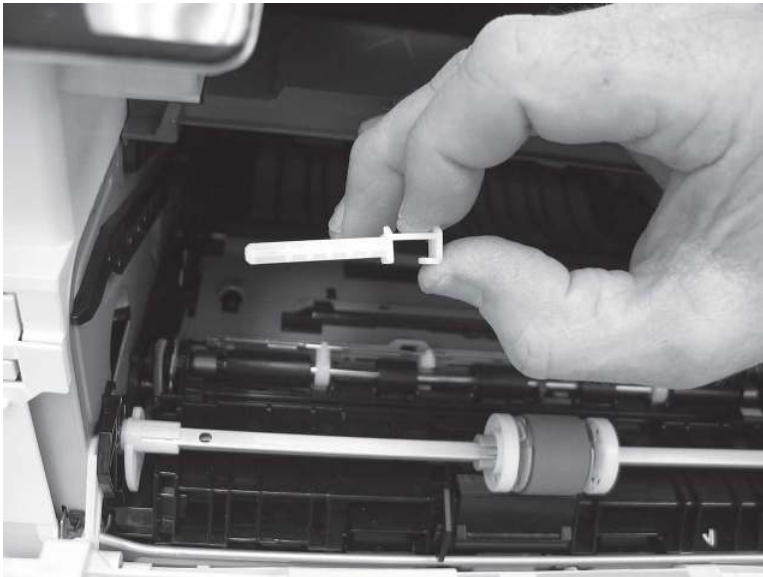
---

Figure 5-88 Release the support shaft



2. Remove the support shaft.

Figure 5-89 Remove the support shaft



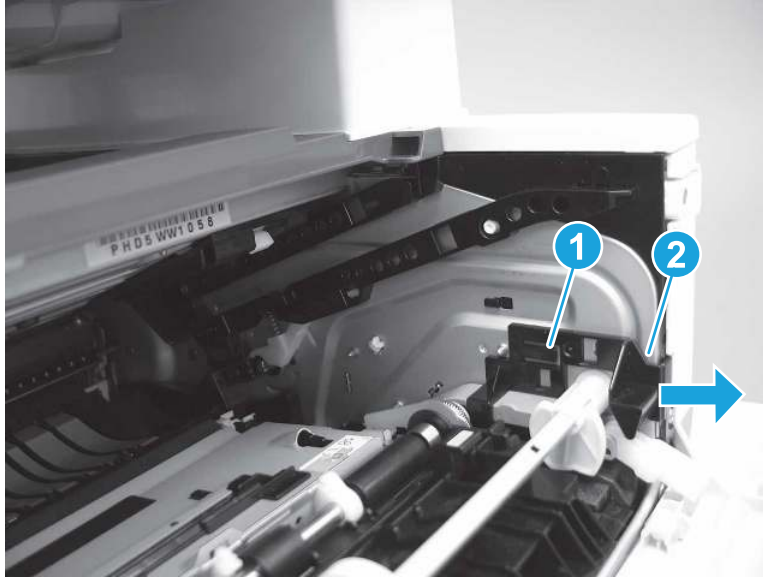
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

Figure 5-90 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 5-91 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).

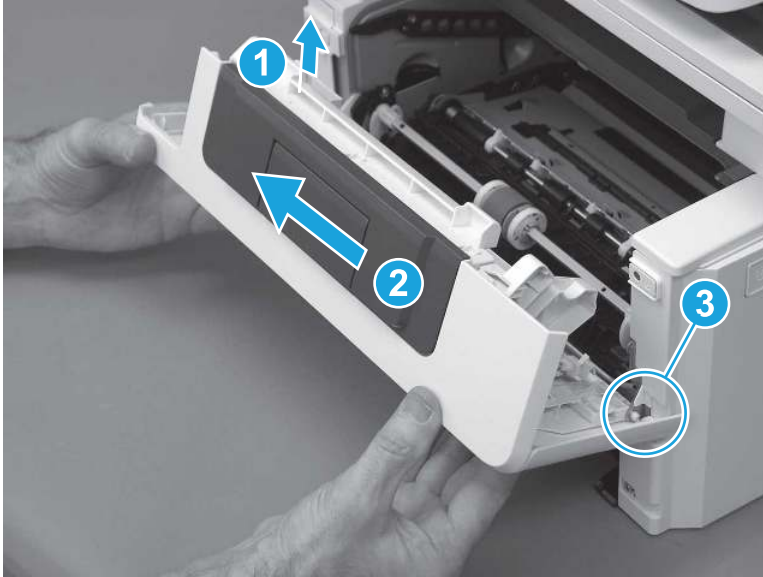
---

**⚠ 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.

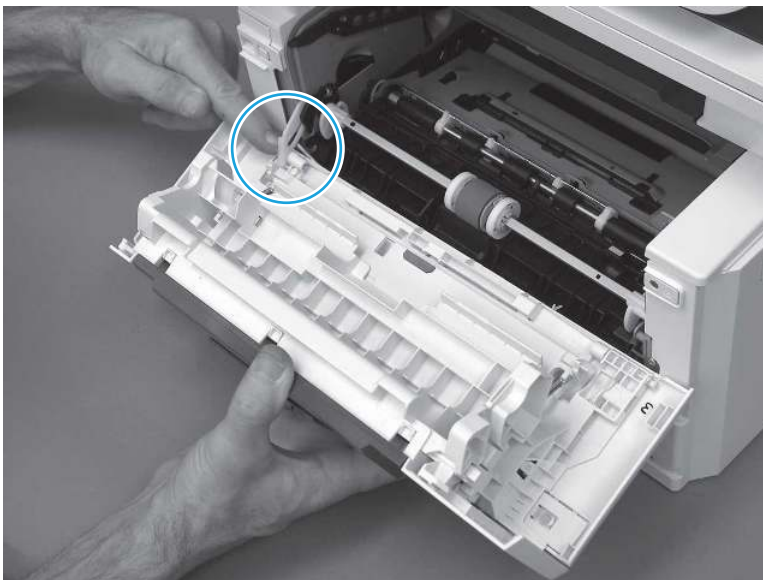
---

**Figure 5-92** Release the door



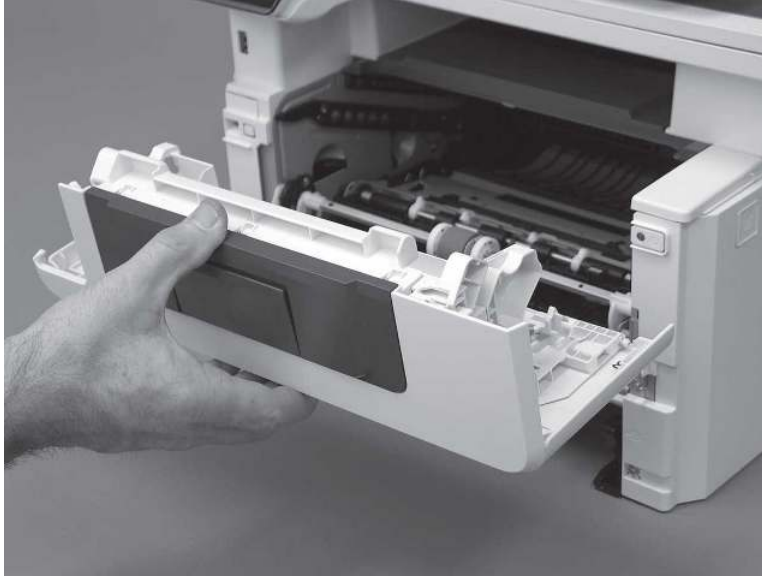
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-93** Release the left-side retainer arm



7. Remove the door.

**Figure 5-94** 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 5-18** 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).

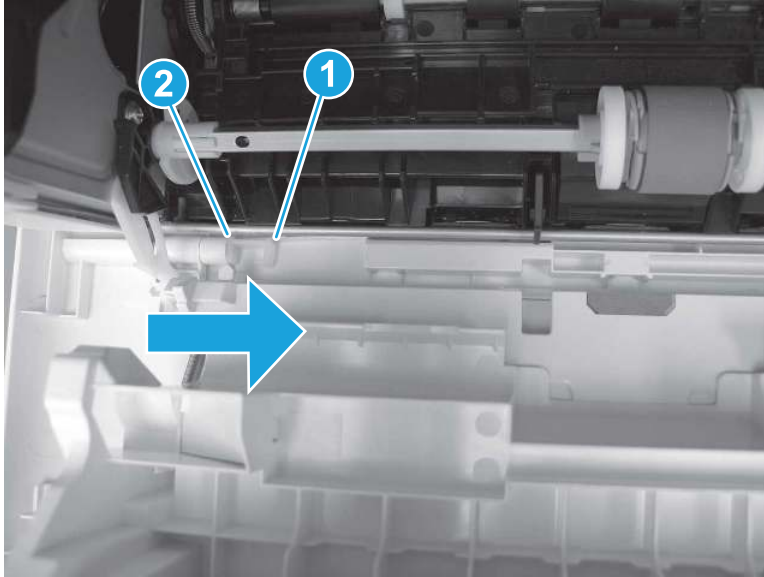
---

 **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.

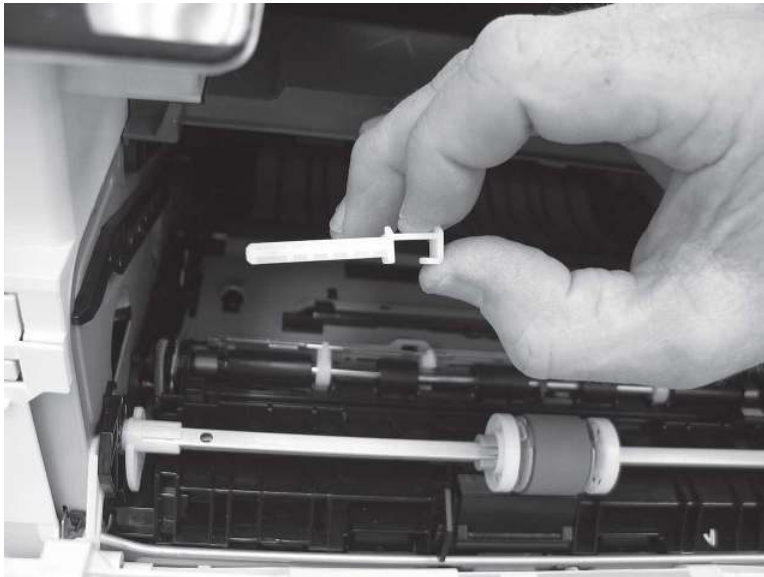
---

Figure 5-95 Release the support shaft



2. Remove the support shaft.

Figure 5-96 Remove the support shaft



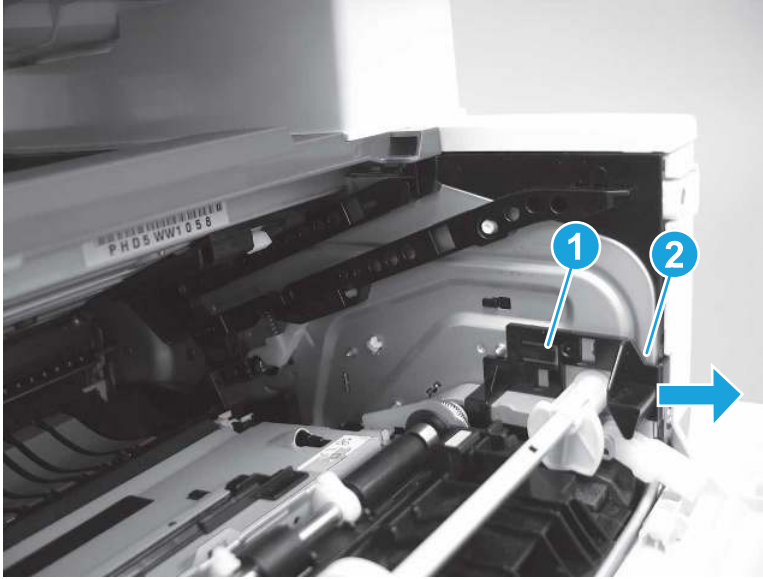
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

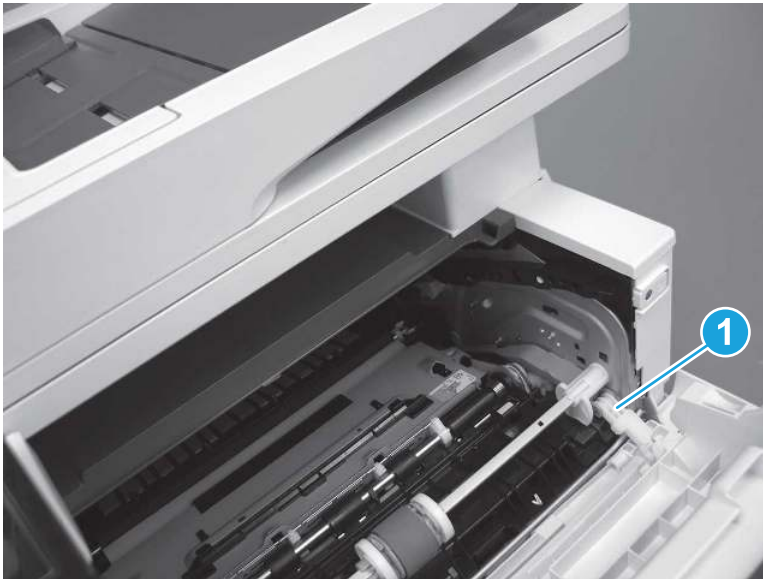
---

Figure 5-97 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 5-98 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).

---

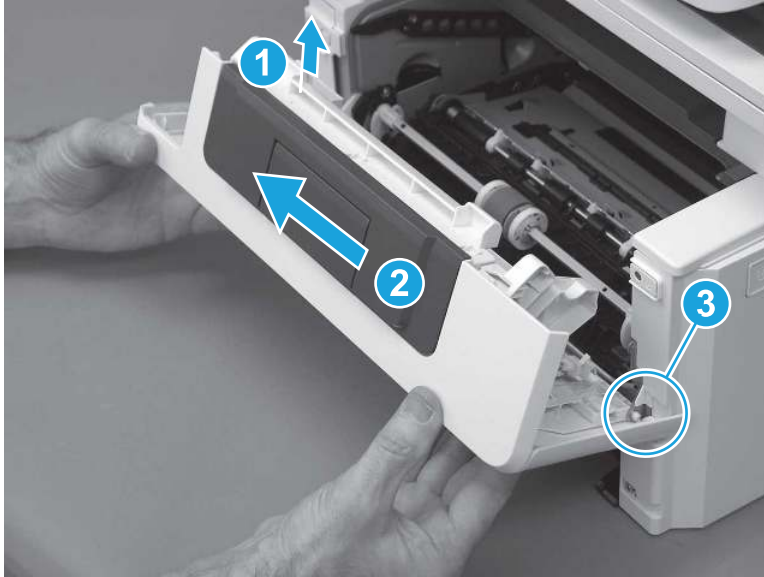
**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

**💡 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.

---

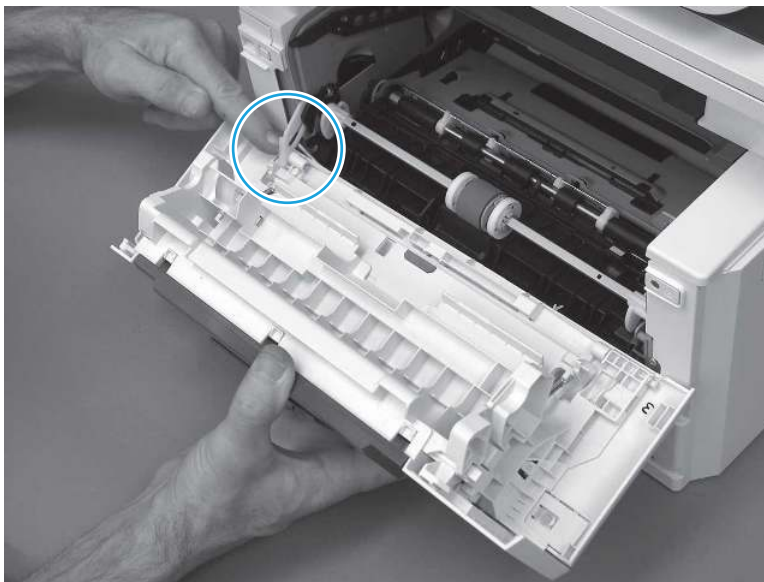


Figure 5-99 Release the door



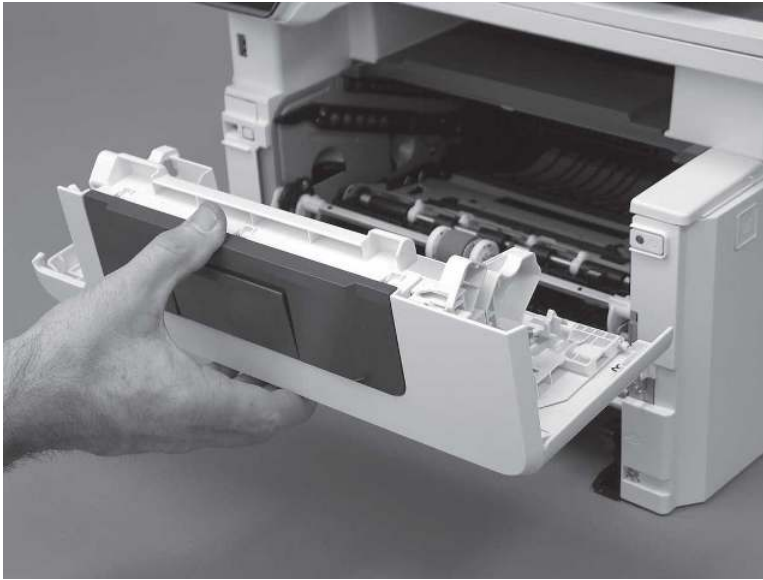
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

Figure 5-100 Release the left-side retainer arm



7. Remove the door.

**Figure 5-101** Remove the door

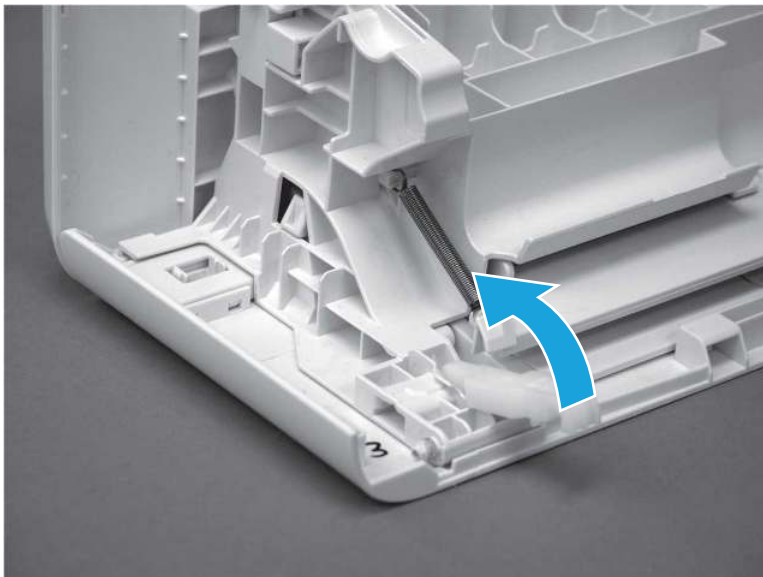


## 2. Remove the pressure-release link

Follow these steps to remove the pressure-release link.

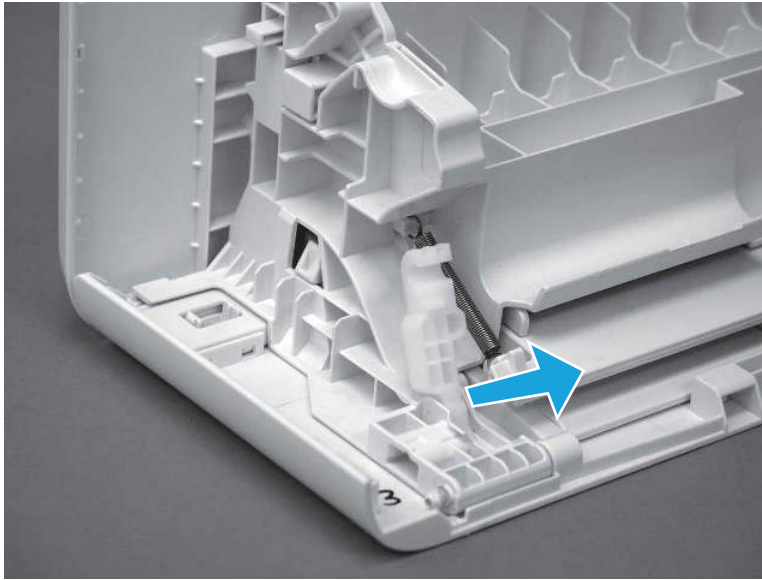
1. Rotate the pressure-release link until the keyed portion of the pin aligns with the slot in the holder.

**Figure 5-102** Release the pressure-release link



2. Remove the pressure-release link.

**Figure 5-103** 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 5-19** Part information

Part number	Part description
RM2-2960-000CN	Cover, left (SFP)
RM2-2961-000CN	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 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 5-104 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).

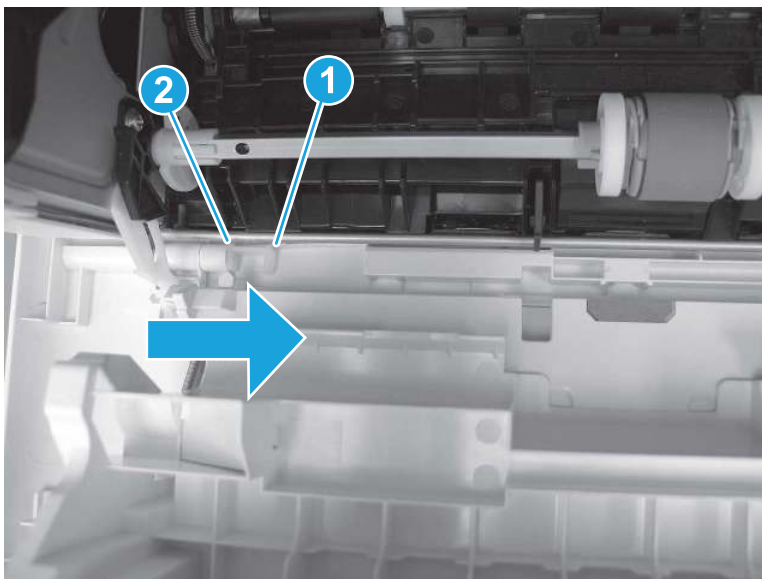
---

 **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.

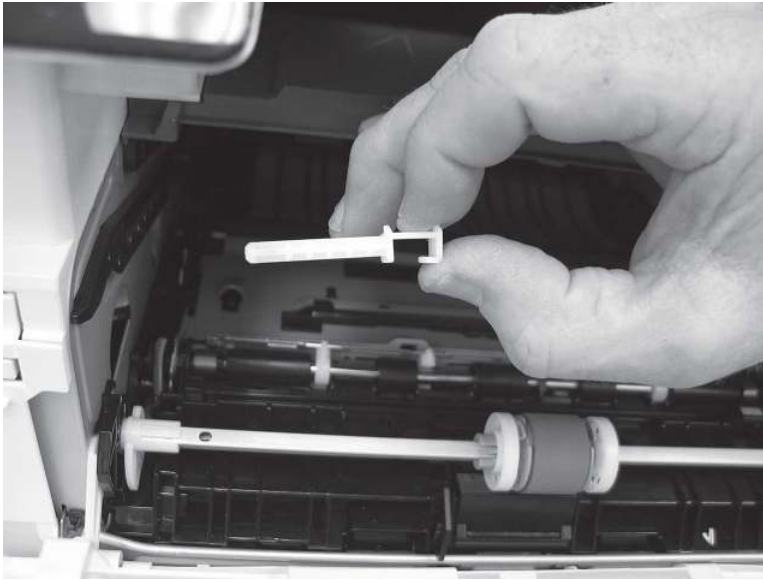
---

Figure 5-105 Release the support shaft



2. Remove the support shaft.

**Figure 5-106** Remove the support shaft



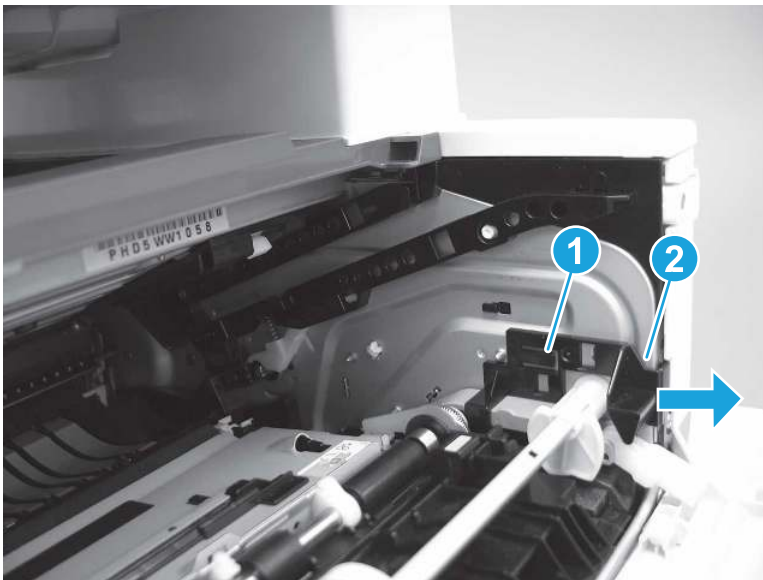
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

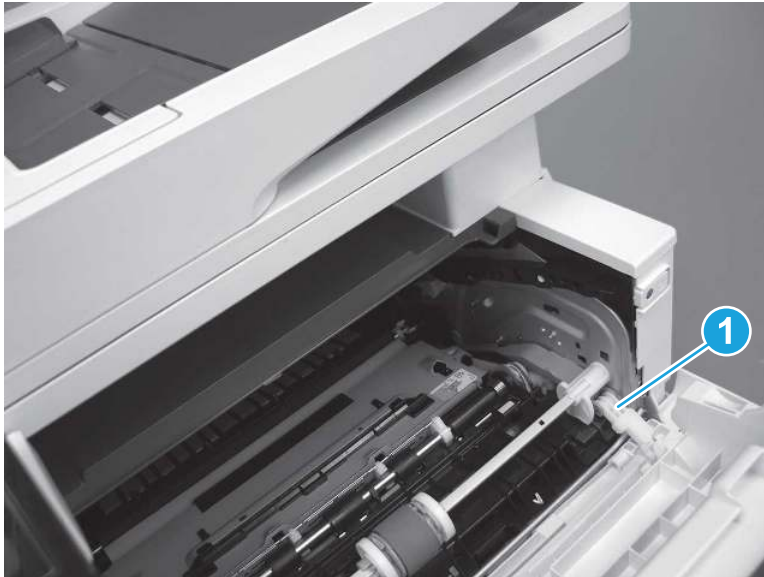
---

**Figure 5-107** 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 5-108** Release the pressure-release link

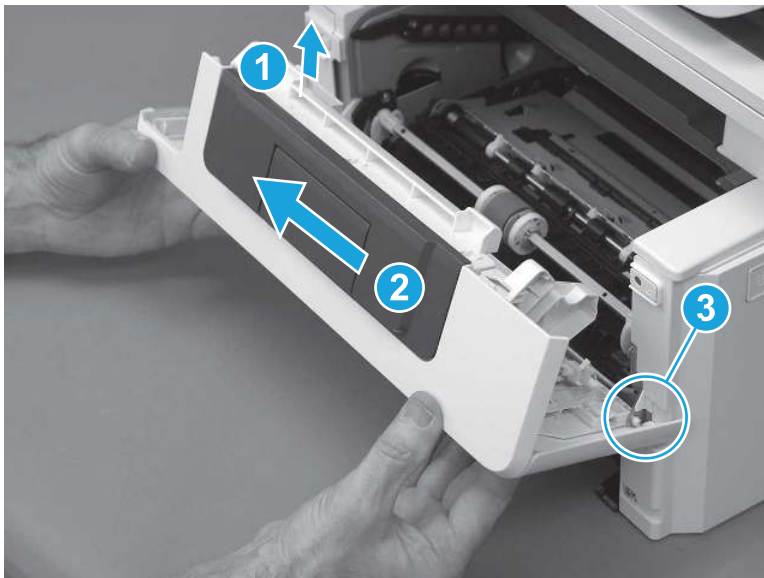


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

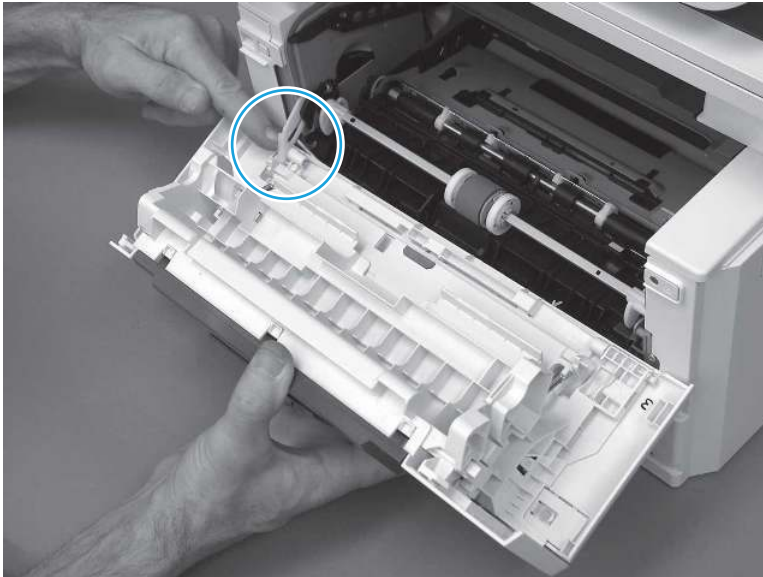
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-109** Release the door



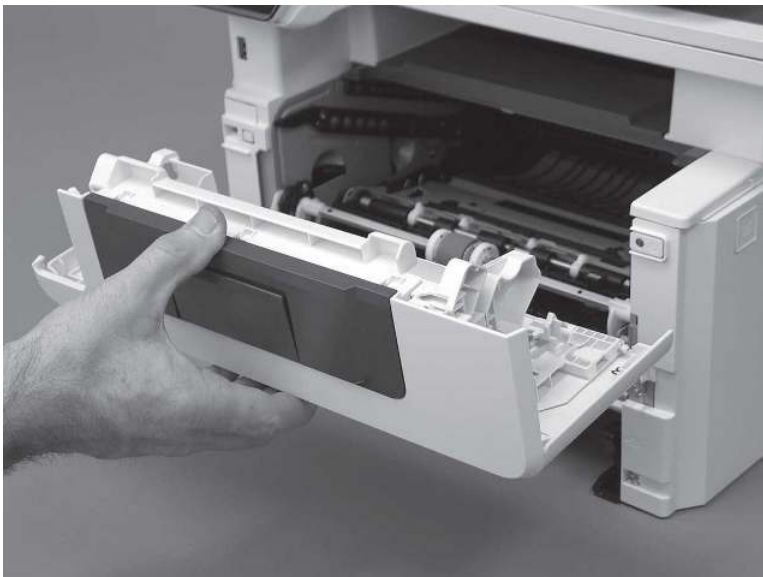
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-110** Release the left-side retainer arm



7. Remove the door.

**Figure 5-111** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

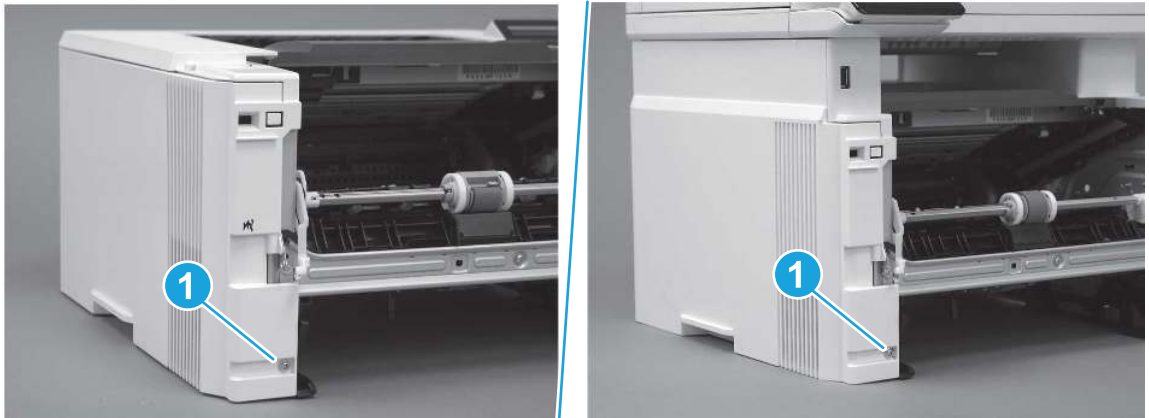
 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---



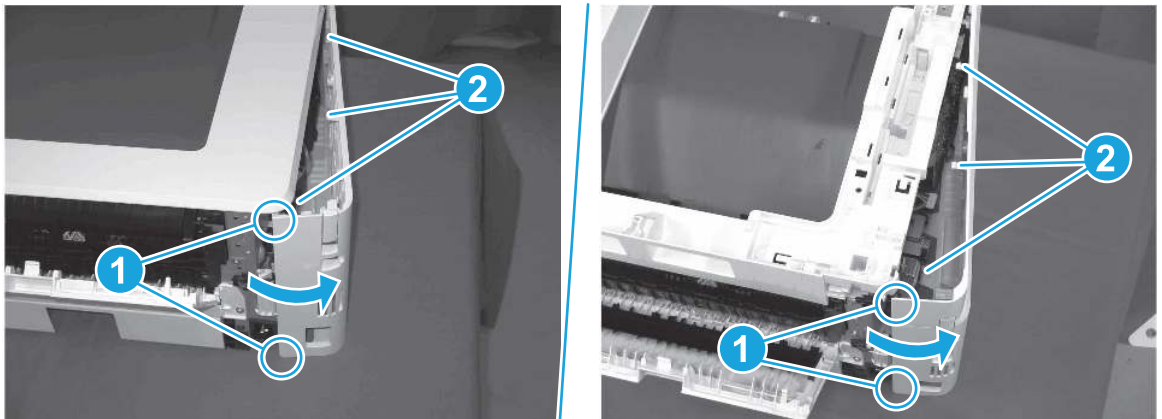
1. Remove one screw (callout 1).

**Figure 5-112** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-113** Release two bosses and three tabs



3. At the front of the printer, do one of the following:

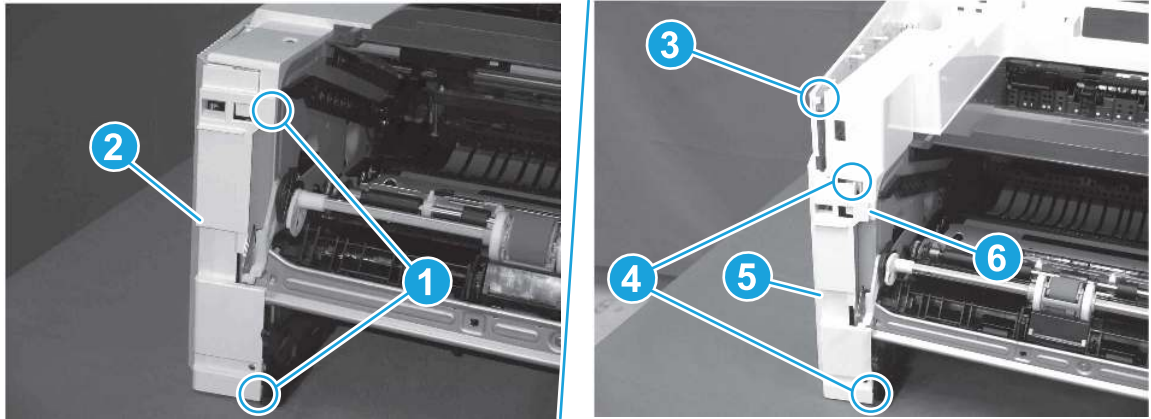
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**⚠ 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 5-114 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 5-20** Part information

Part number	Part description
Not orderable	Right cover

## 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 5-115 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).

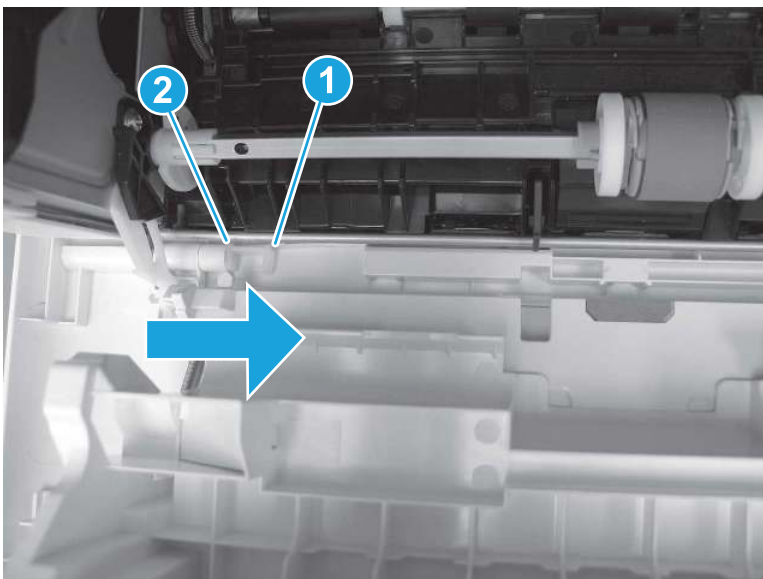
---

 **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.

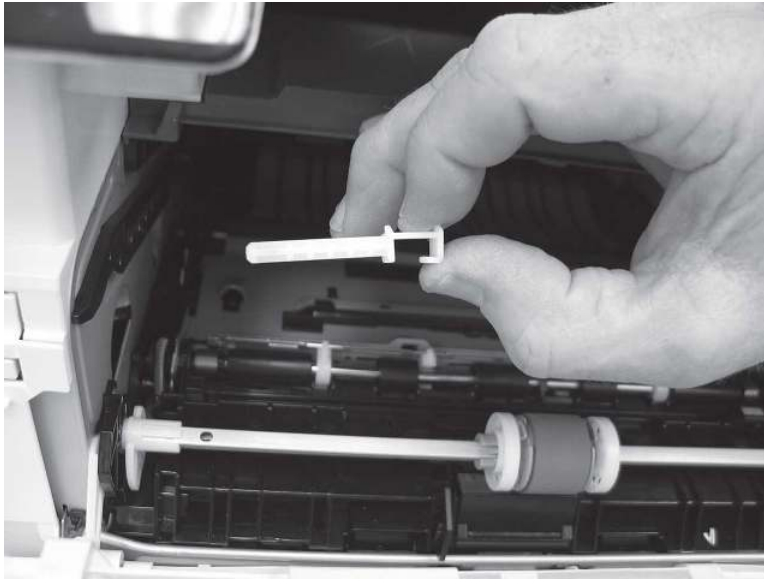
---

Figure 5-116 Release the support shaft



2. Remove the support shaft.

**Figure 5-117** Remove the support shaft



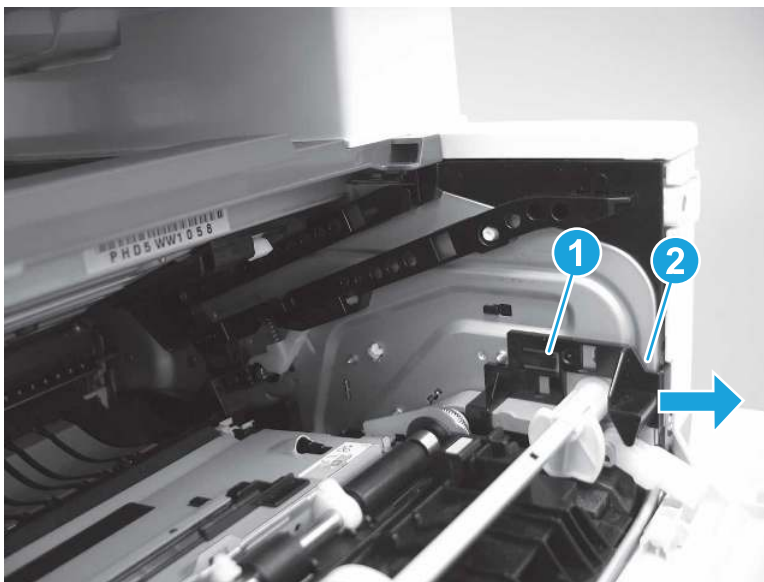
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

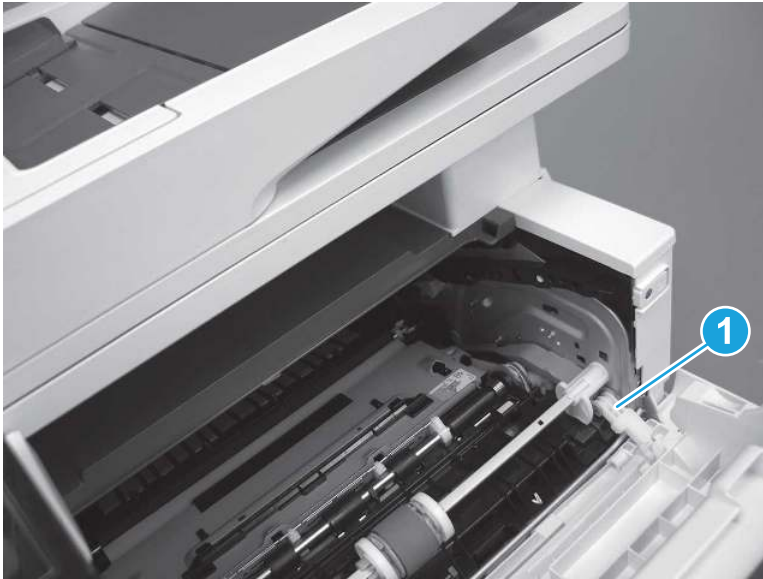
---

**Figure 5-118** 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 5-119** 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).

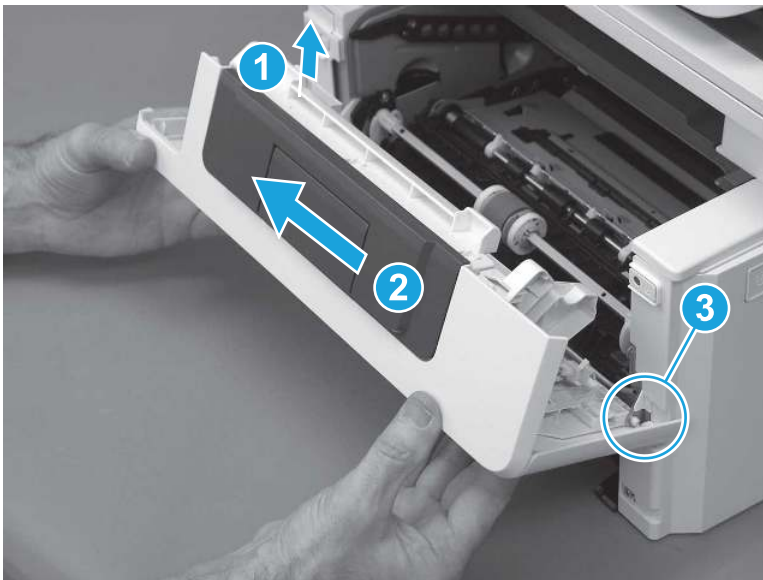
---

**⚠ 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.

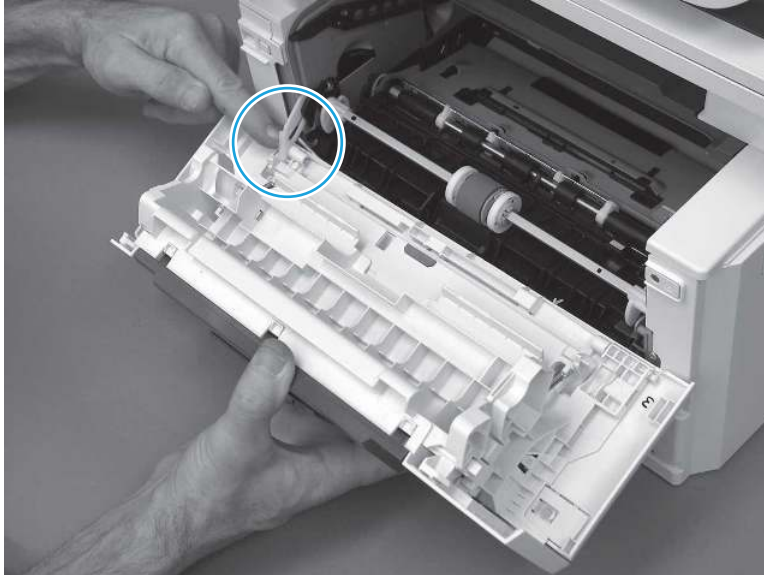
---

**Figure 5-120** Release the door



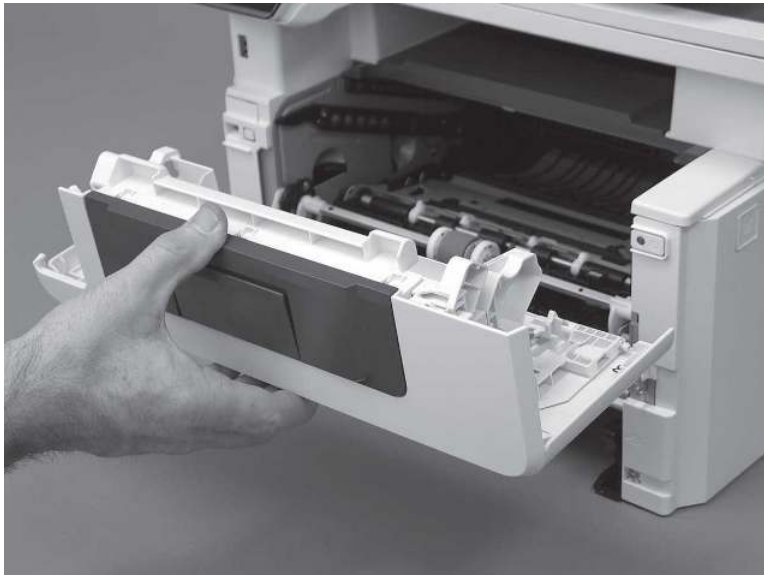
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-121** Release the left-side retainer arm



7. Remove the door.

**Figure 5-122** Remove the door



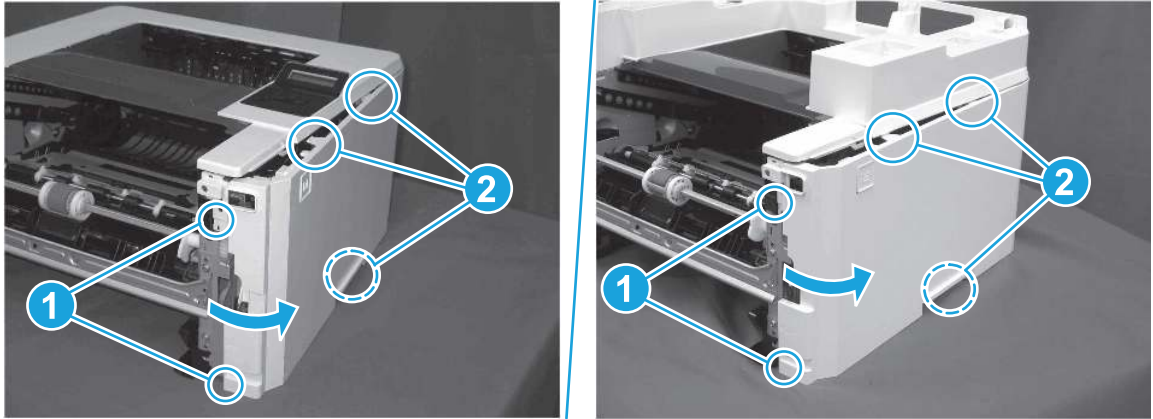
### 3. Remove the right cover

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).

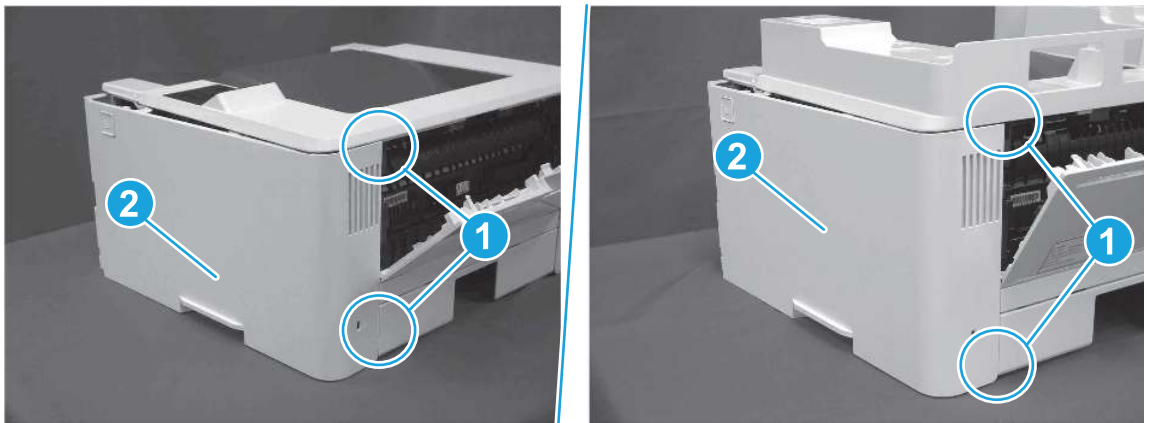
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-123 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-124 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 5-21 Part information**

Part number	Part description
RM2-5405-000CN	Rear door 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 5-125** 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).

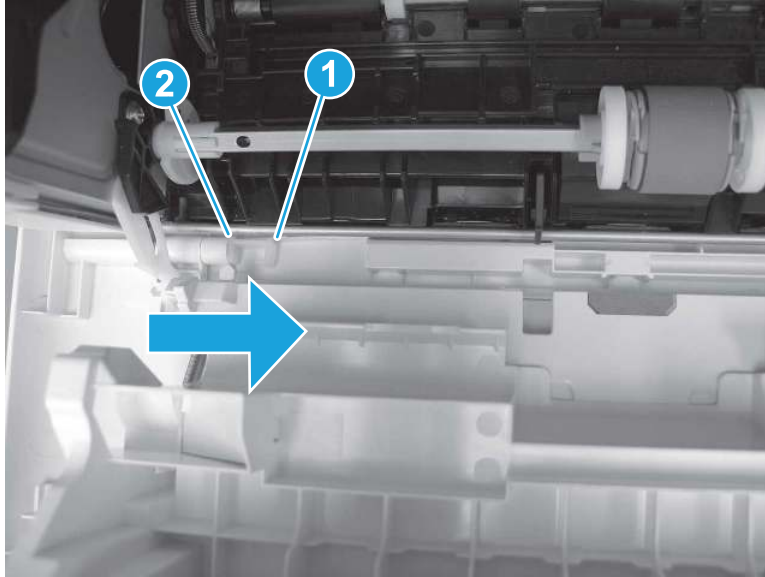
---

 **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.

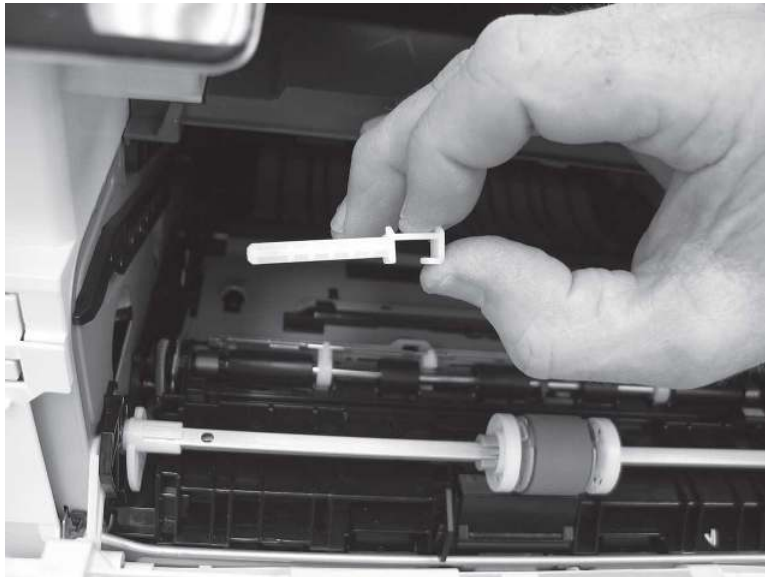
---

Figure 5-126 Release the support shaft



2. Remove the support shaft.

Figure 5-127 Remove the support shaft



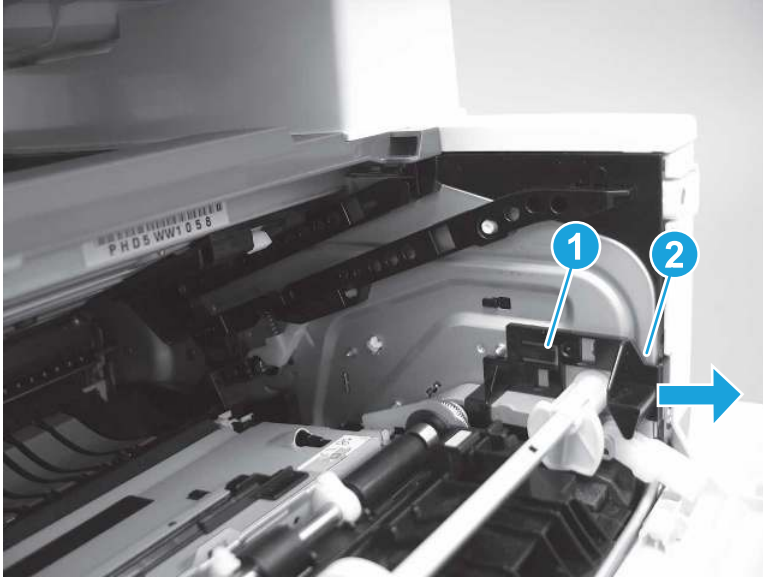
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

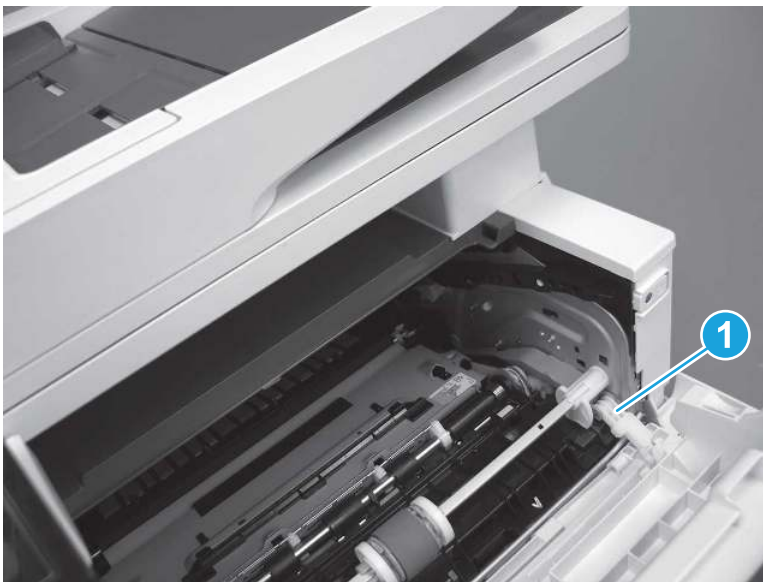
---

**Figure 5-128** 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 5-129** 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).

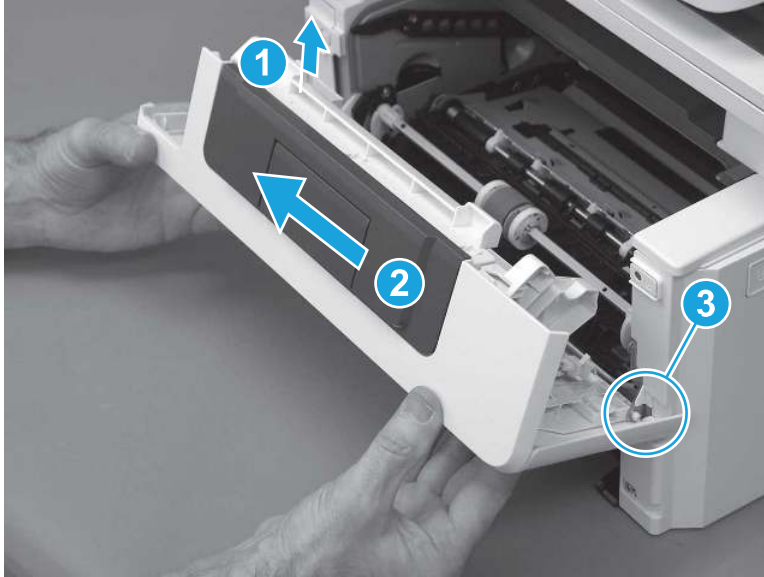
---

**⚠ 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.

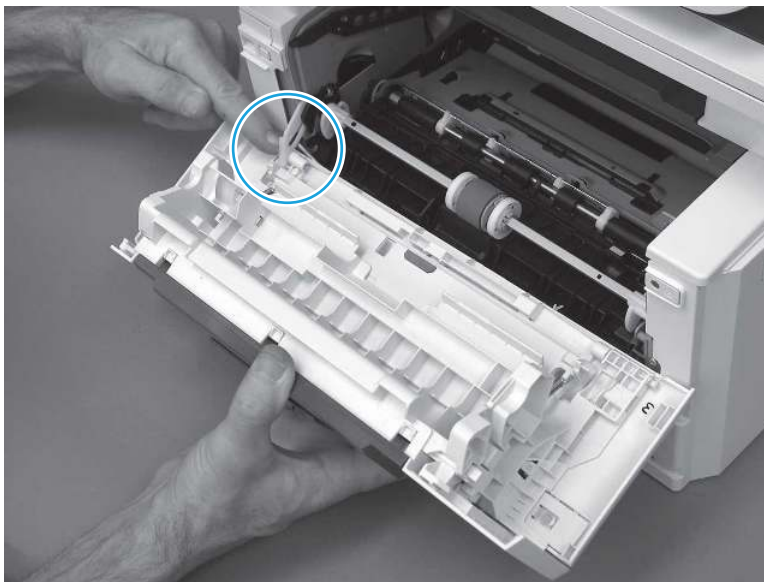
---

Figure 5-130 Release the door



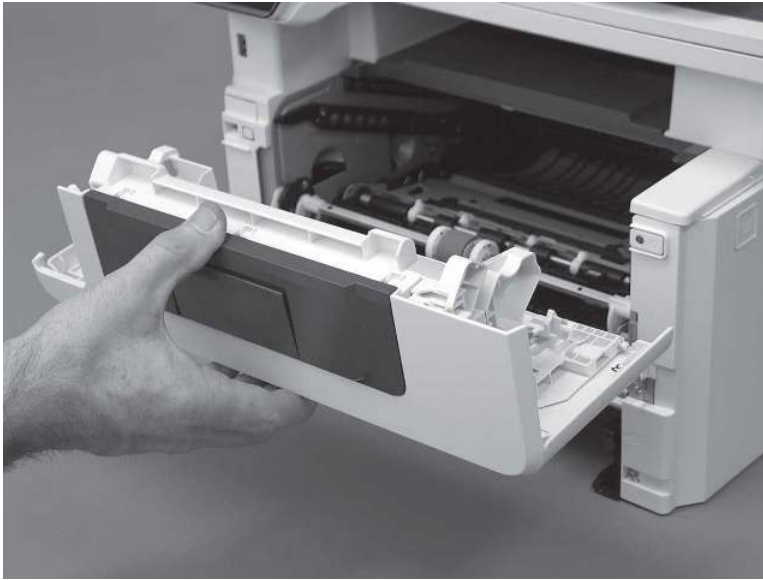
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

Figure 5-131 Release the left-side retainer arm



7. Remove the door.

**Figure 5-132** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

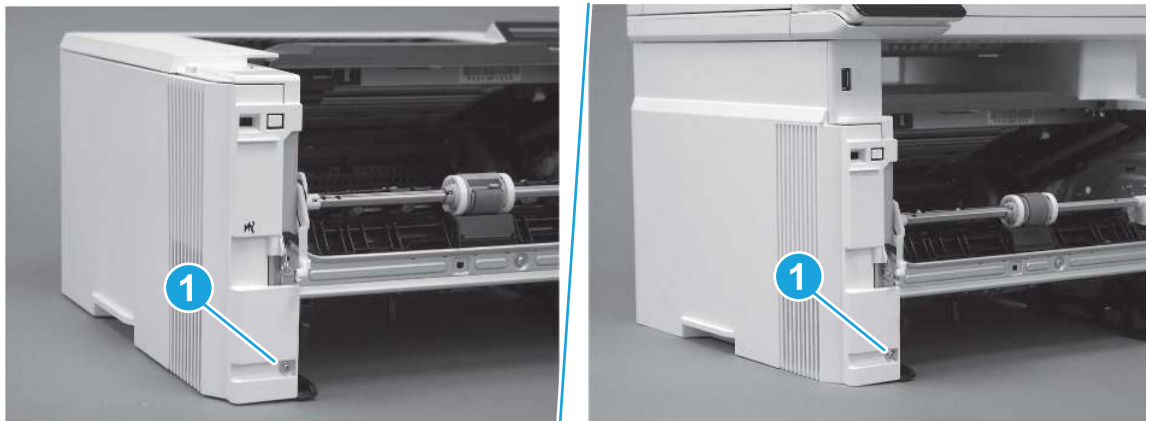
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

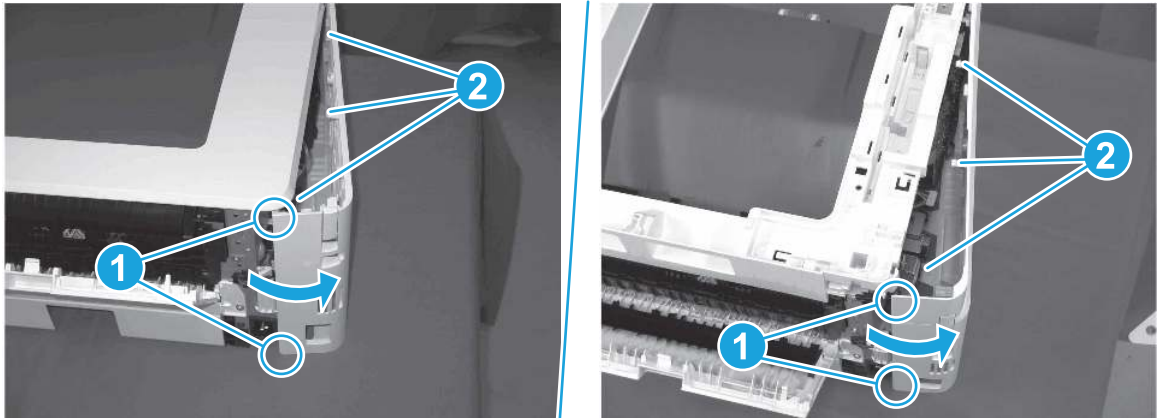
1. Remove one screw (callout 1).

**Figure 5-133** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

Figure 5-134 Release two bosses and three tabs

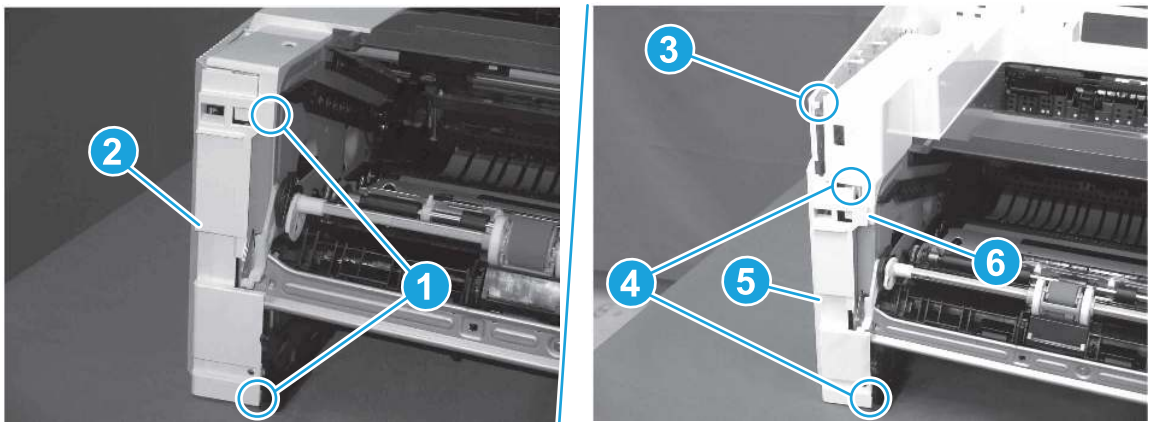


3. At the front of the printer, do one of the following:

- 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 5-135 Remove the cover



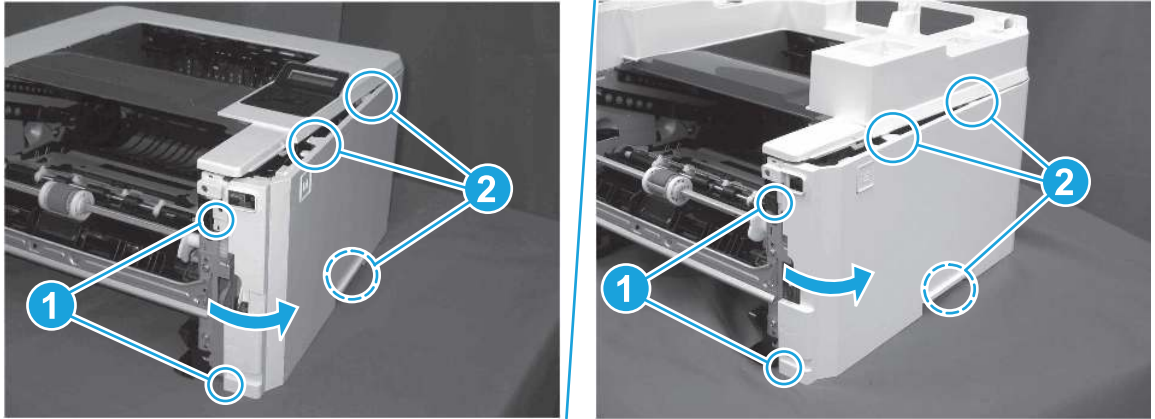
#### 4. Remove the right cover

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).

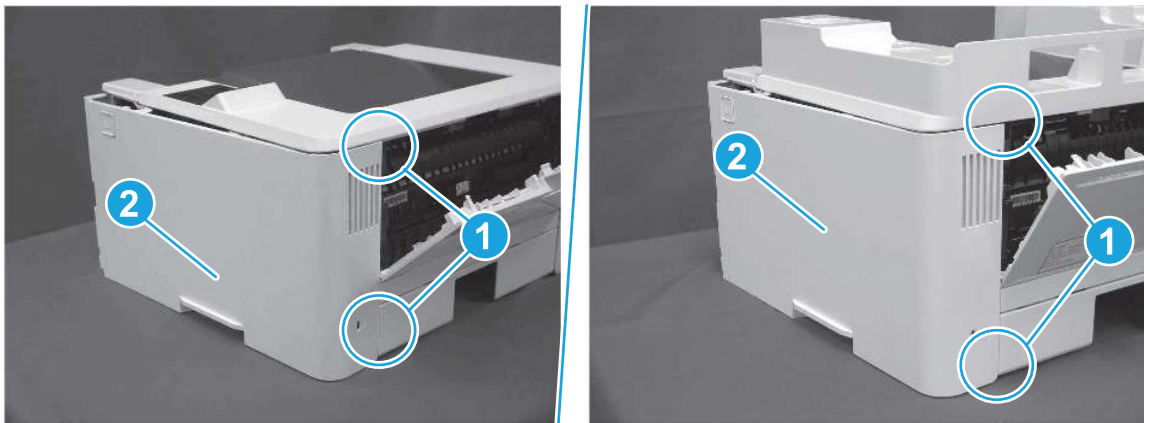
**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-136 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-137 Remove the cover



## 5. Remove the rear door assembly

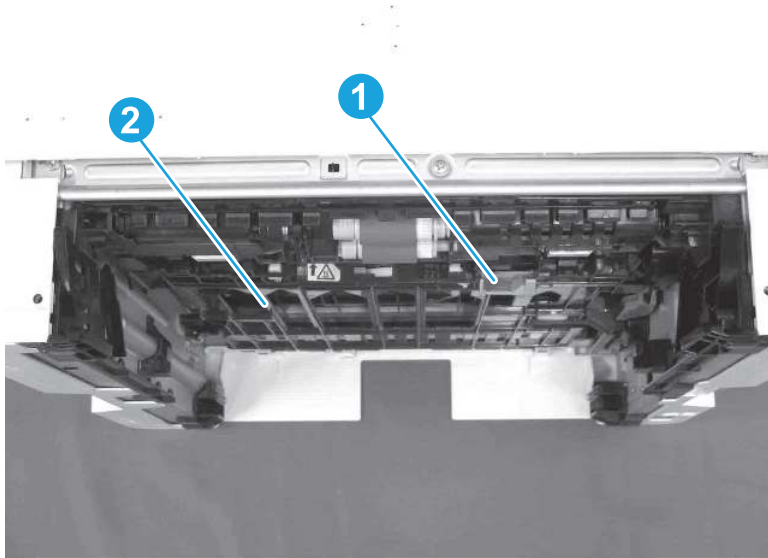
Follow these steps to remove the rear door assembly.

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 5-138 Lower the duplex feed assembly



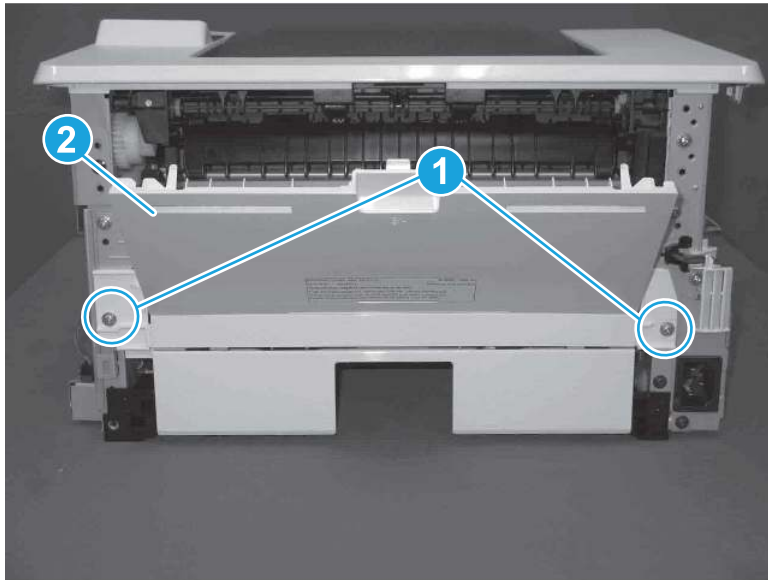
2. At the rear of the printer, remove two screws (callout 1), and then remove the rear door assembly (callout 2).

---

 **Reinstallation tip:** Slide the duplex tray into the Tray 2 cavity.

---

Figure 5-139 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 5-22** 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 5-140** 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).

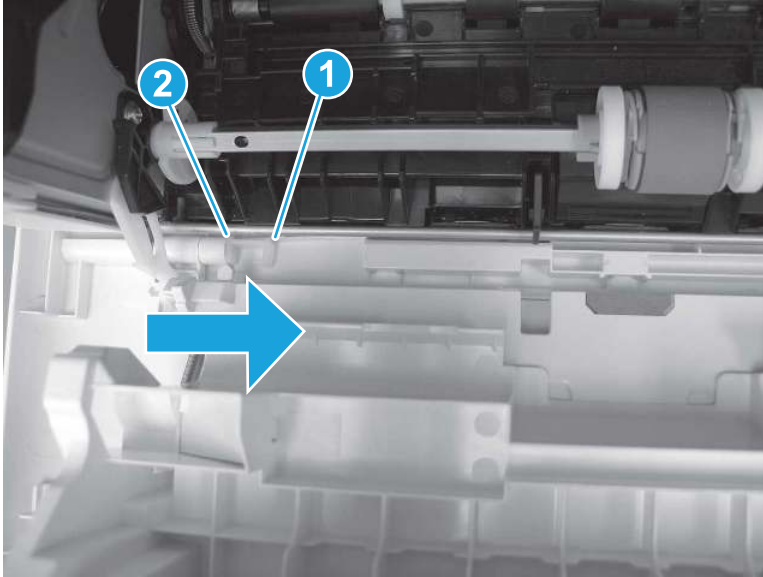
---

 **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.

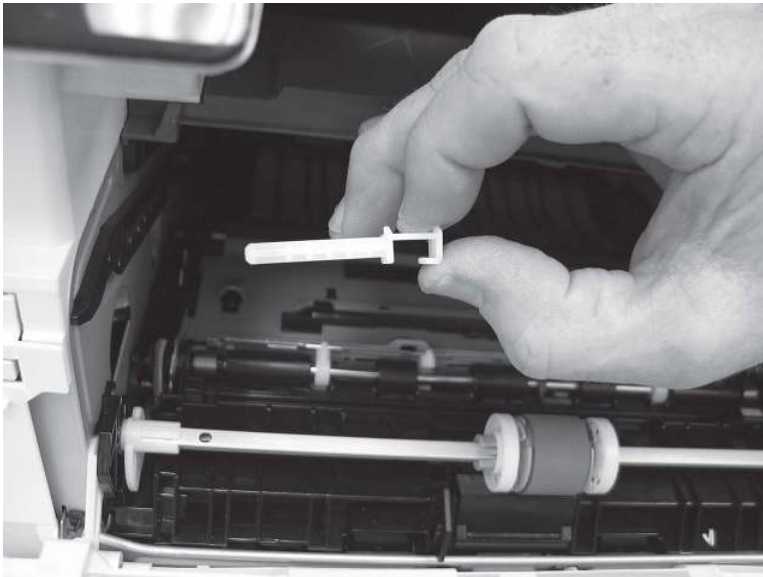
---

Figure 5-141 Release the support shaft



2. Remove the support shaft.

Figure 5-142 Remove the support shaft



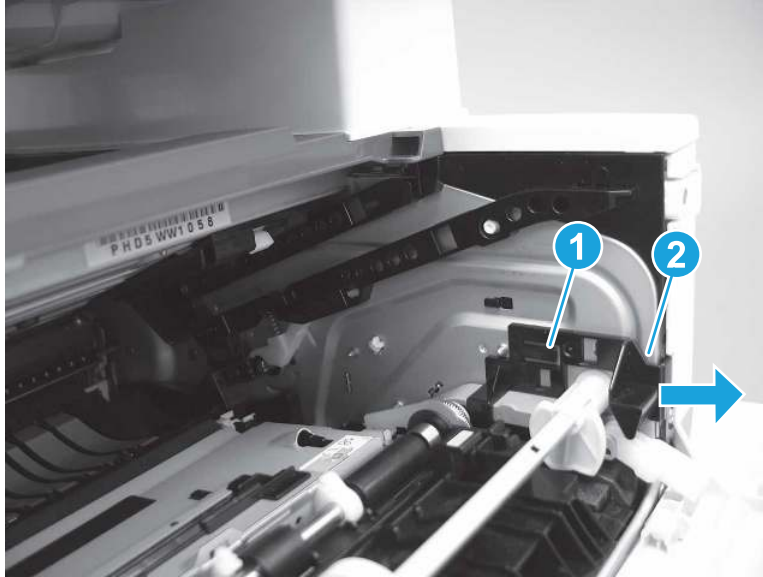
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

Figure 5-143 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 5-144 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).

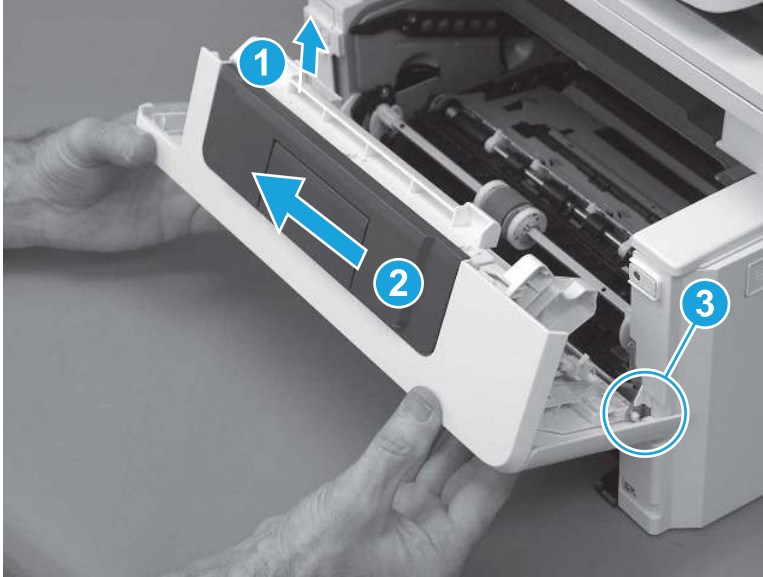
---

**⚠ 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.

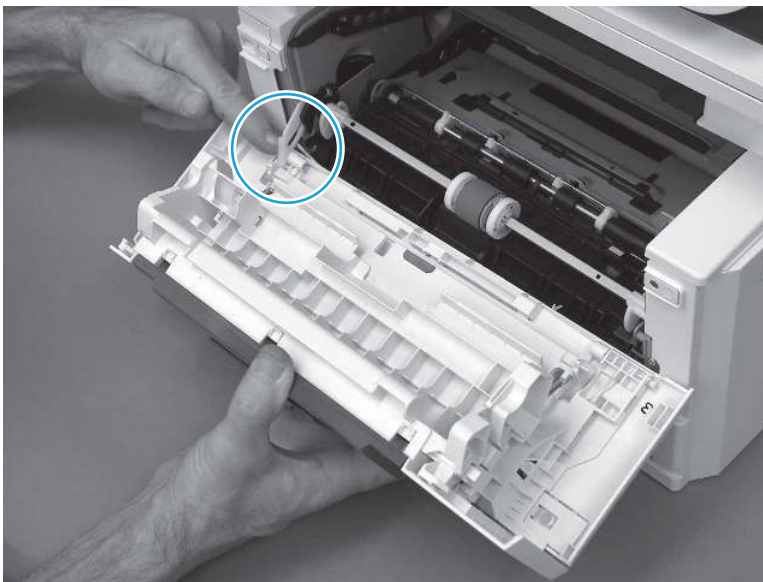
---

Figure 5-145 Release the door



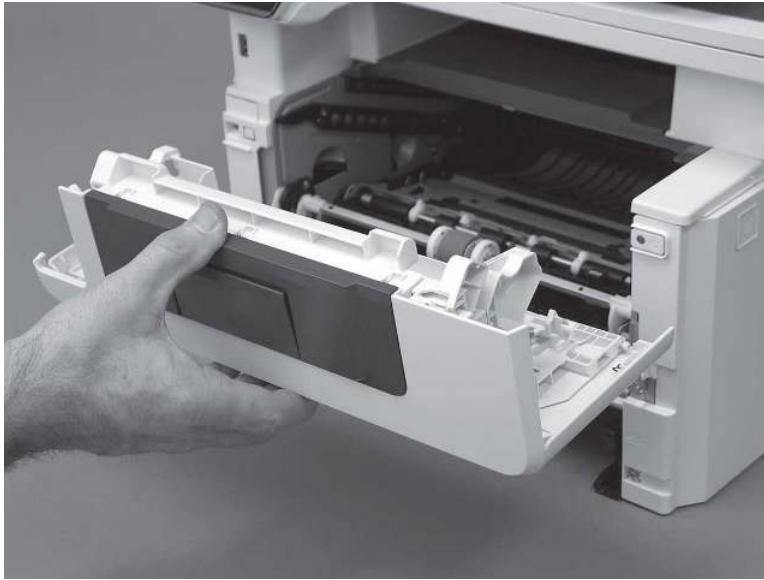
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

Figure 5-146 Release the left-side retainer arm



7. Remove the door.

**Figure 5-147** Remove the door



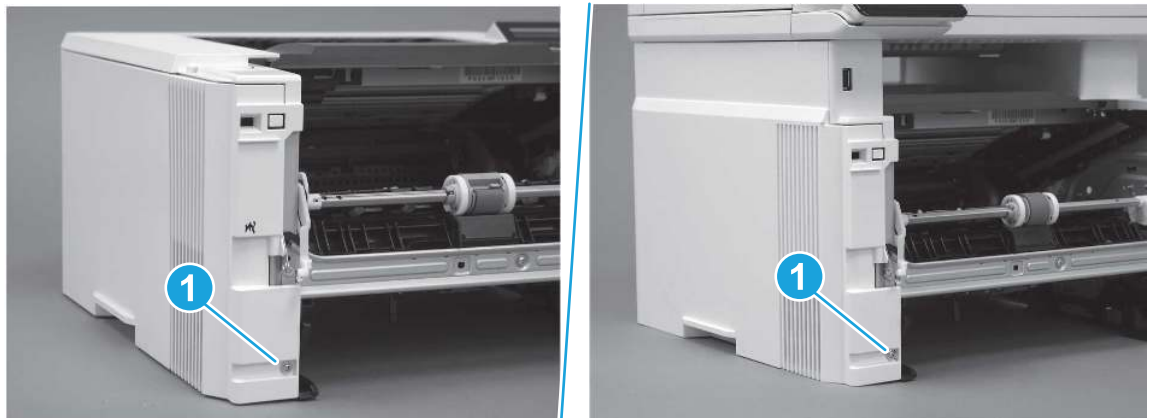
### 3. Remove the left cover

Follow these steps to remove the left cover.

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

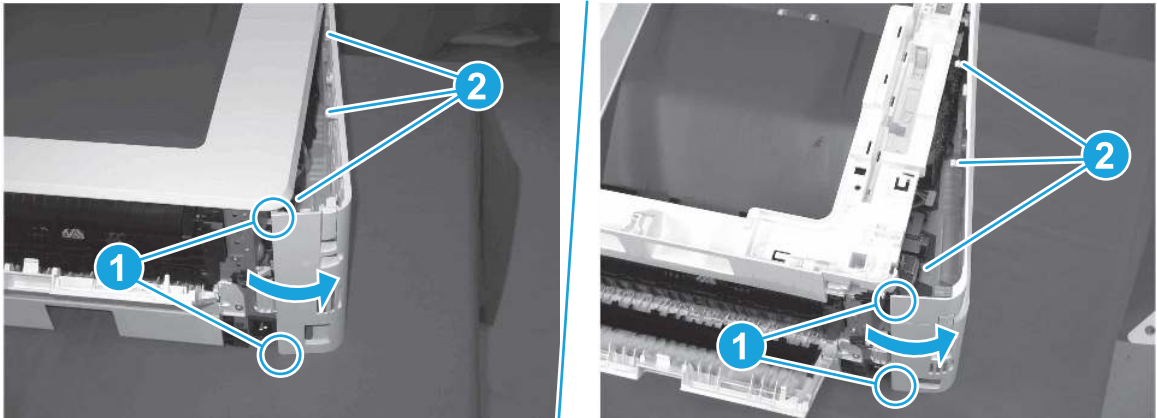
1. Remove one screw (callout 1).

**Figure 5-148** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

Figure 5-149 Release two bosses and three tabs

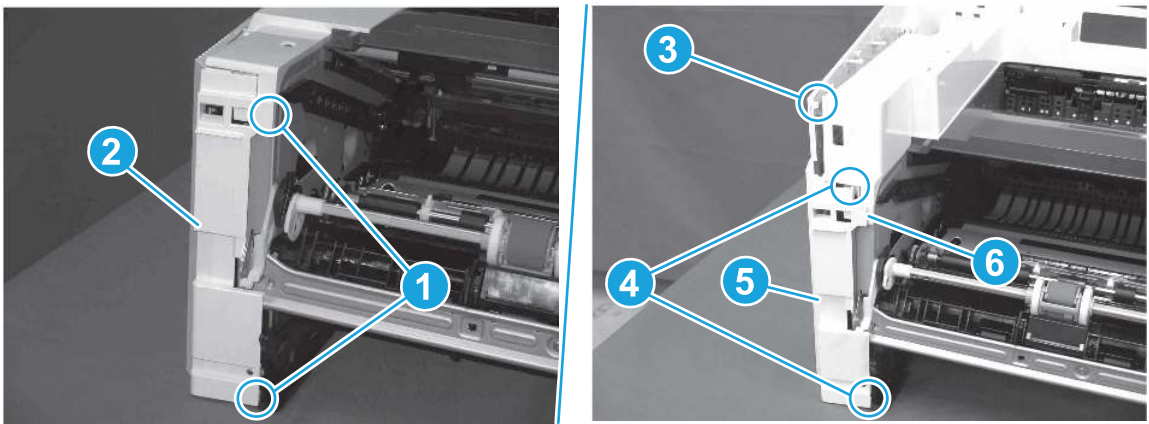


3. At the front of the printer, do one of the following:

- **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 5-150 Remove the cover



#### 4. Remove the right cover

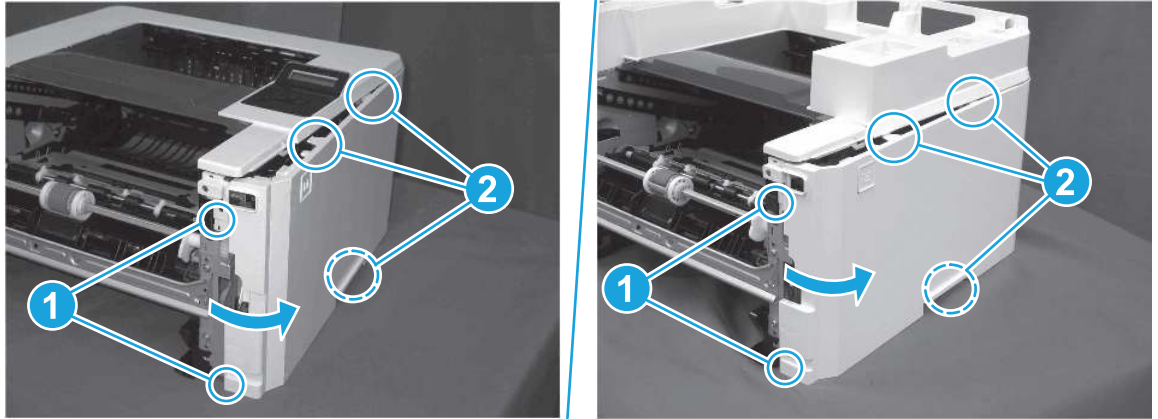
Follow these steps to remove the right cover.

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.

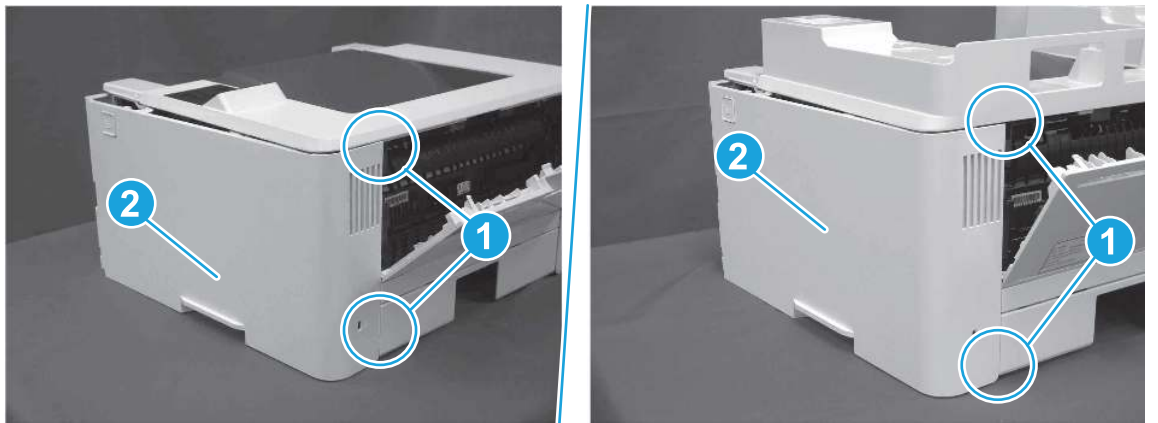


Figure 5-151 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-152 Remove the cover



## 5. Remove the rear door assembly

Follow these steps to remove the rear door assembly.

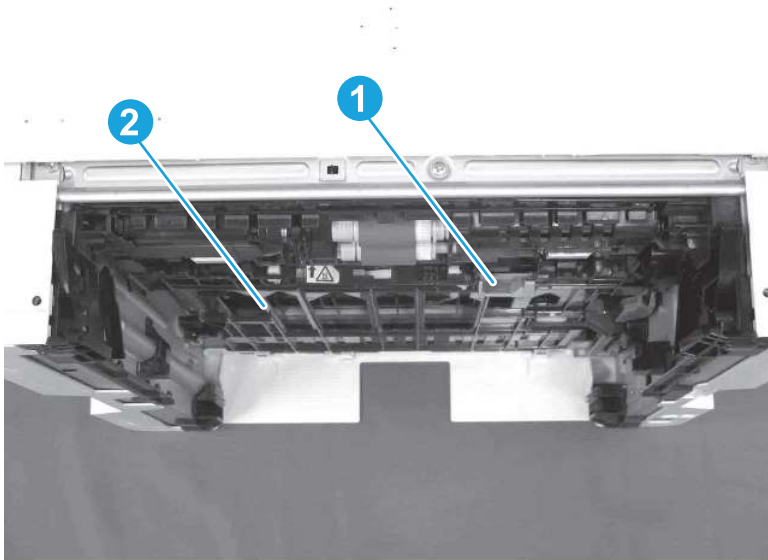
1. Inside the Tray 2 cavity, press the green jam access lever (callout 1), and then lower the duplex feed assembly (callout 2).

---

 **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 5-153 Lower the duplex feed assembly



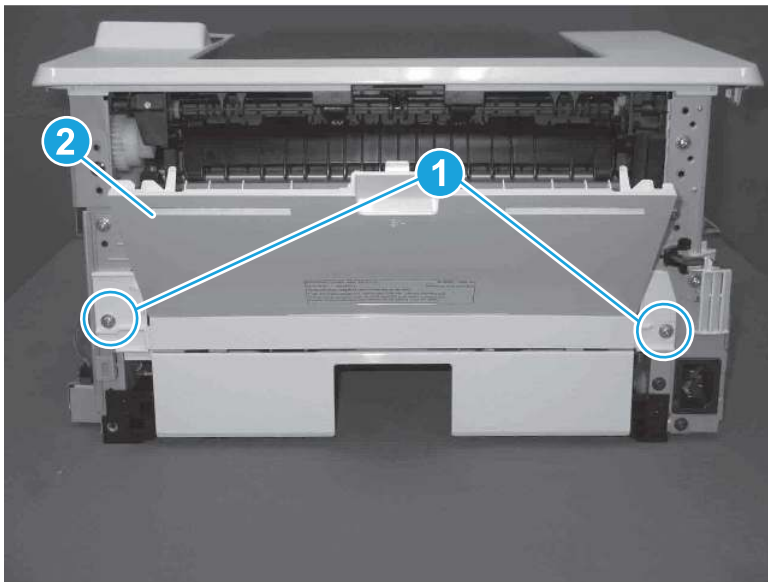
2. At the rear of the printer, remove two screws (callout 1), and then remove the rear door assembly (callout 2).

---

 **Reinstallation tip:** Slide the duplex tray into the Tray 2 cavity.

---

Figure 5-154 Remove the door assembly



## 6. Remove the cassette rear cover

Follow these steps to remove the cassette rear cover.

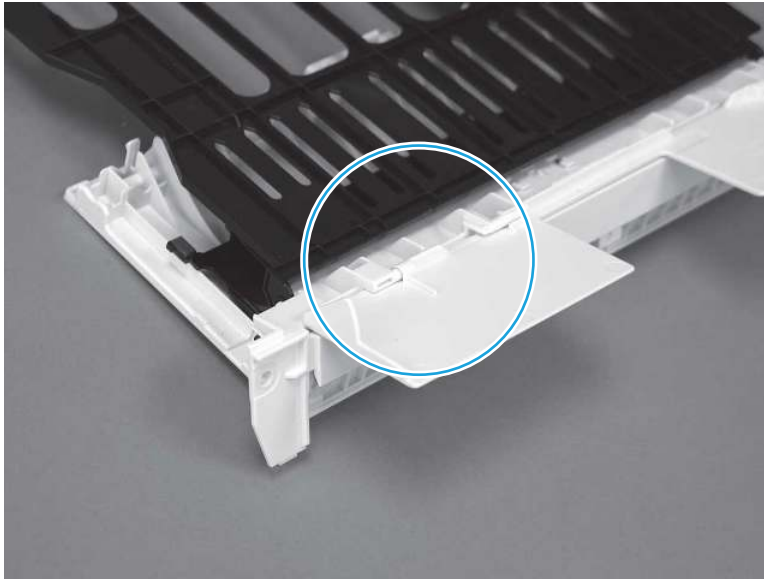
---

 **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 5-155** Locate the hinge retainer



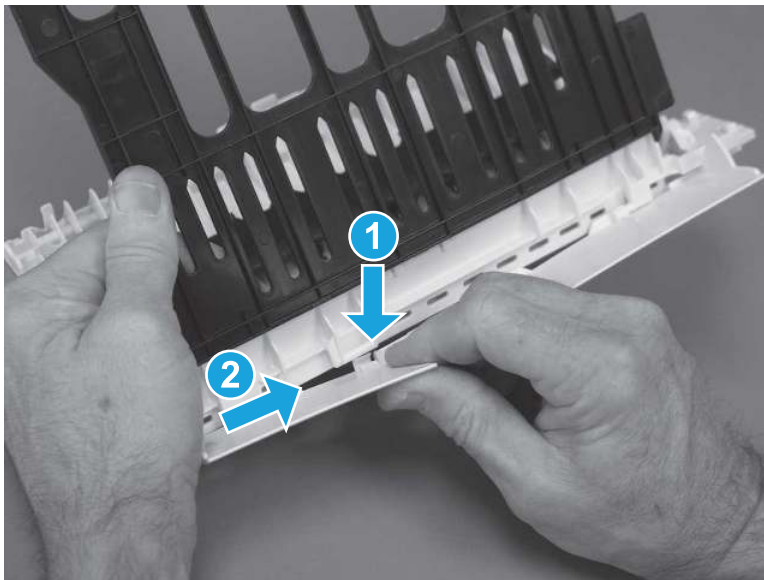
2. Carefully flex the cover to release the retainer (callout 1), and the left-side hinge pin (callout 2).

---

 **Reinstallation tip:** When the cover is correctly installed, it moves freely on the hinge pins.

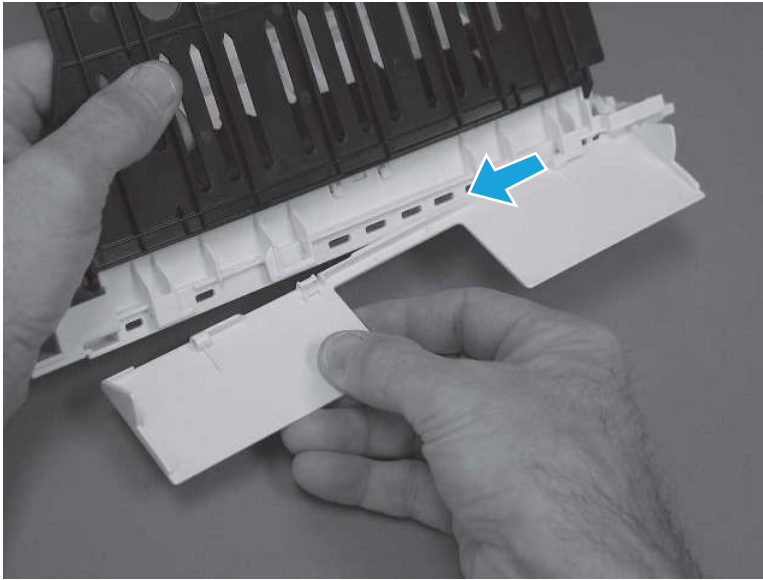
---

**Figure 5-156** Release the retainer and the hinge pin



3. Remove the cover.

Figure 5-157 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: Control panel mount top cover (MFP)

Learn how to remove and replace the MFP control panel mount cover.

[View a video of how to remove and replace the control panel mount top cover \(MFP\).](#)

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 5-23** Part information

Part number	Part description
3PZ55-67902	Cover, top control panel mount

## 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 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 5-158** Open the ISA



2. Remove one screw (callout 1).

**Figure 5-159** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

Figure 5-160 Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

Figure 5-161 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.

---

## 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 5-24** 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 5-162** 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.

---

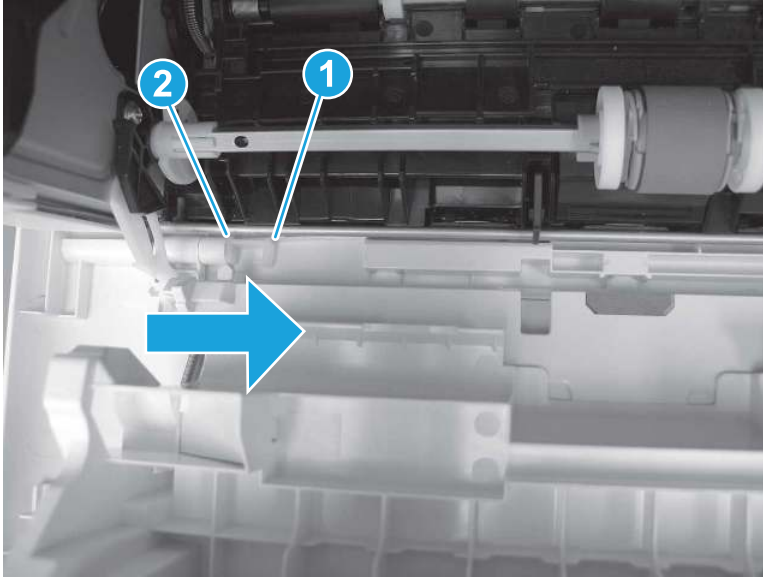
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **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.

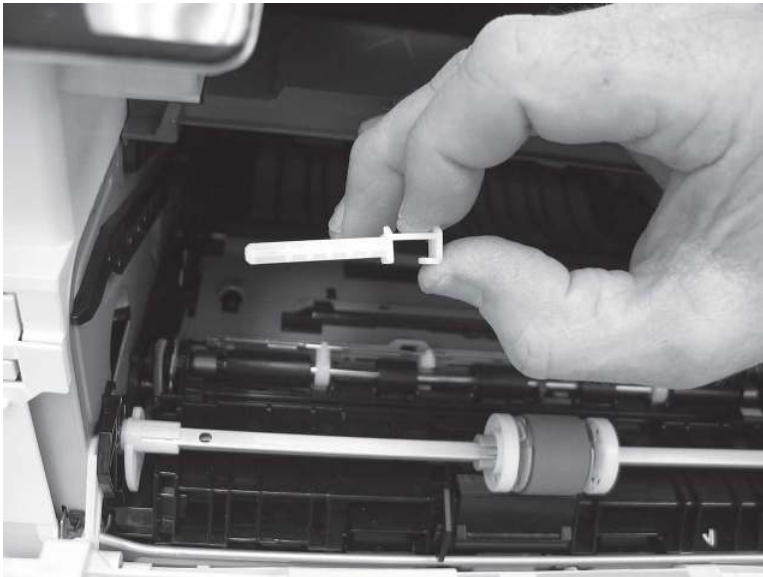
---

**Figure 5-163** Release the support shaft



2. Remove the support shaft.

**Figure 5-164** Remove the support shaft



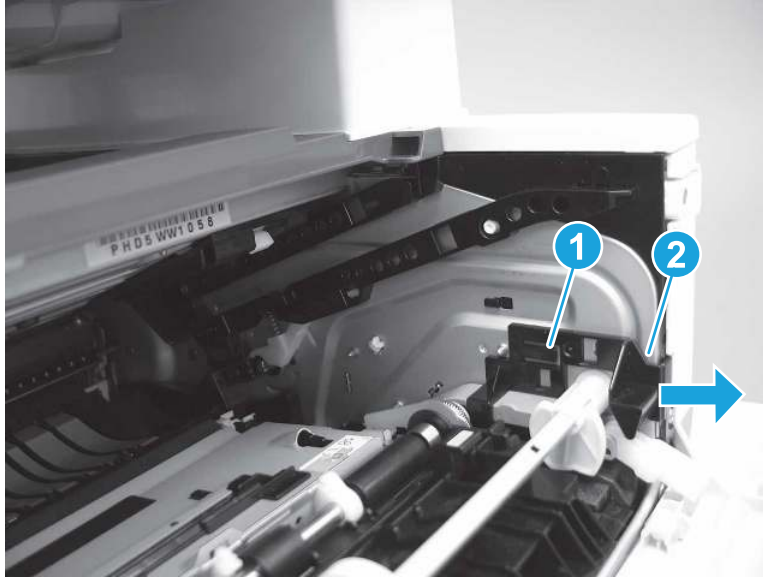
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

Figure 5-165 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 5-166 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).

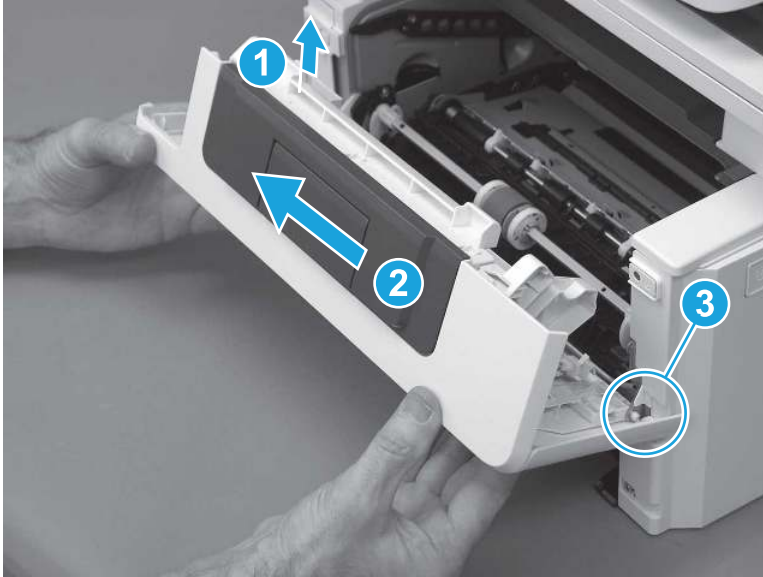
---

**⚠ 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.

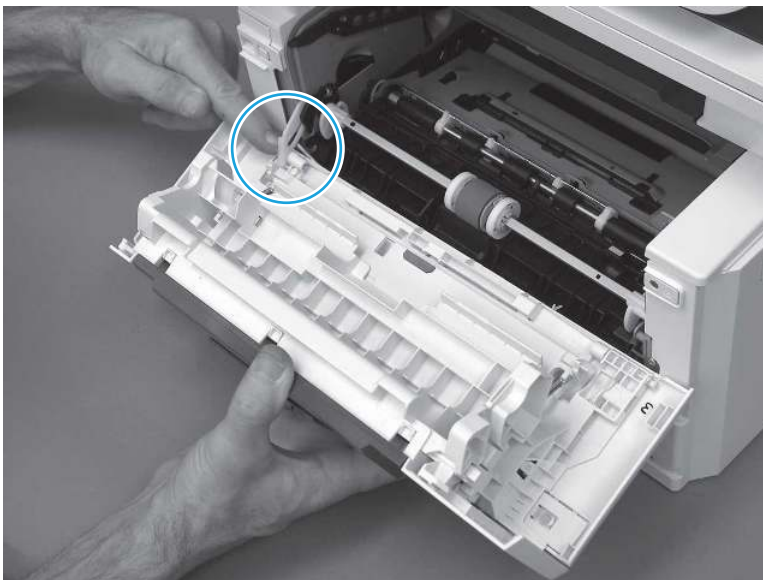
---

**Figure 5-167** Release the door



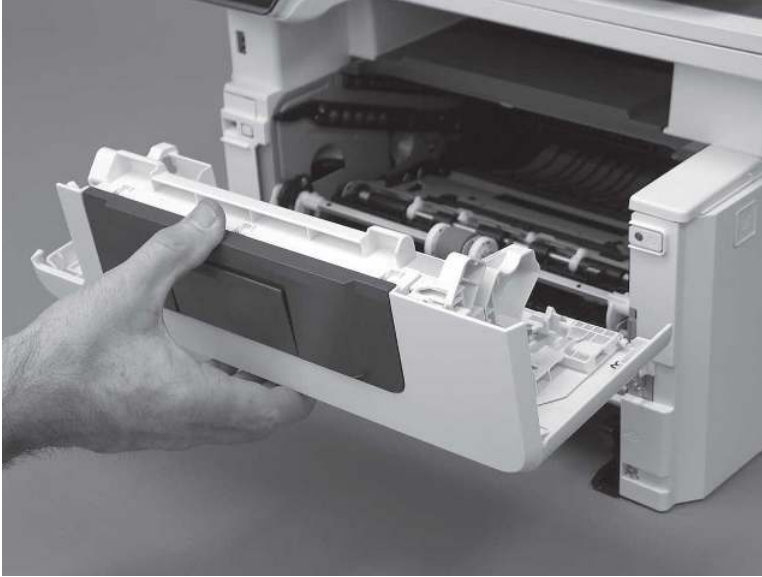
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-168** Release the left-side retainer arm



7. Remove the door.

**Figure 5-169** 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.

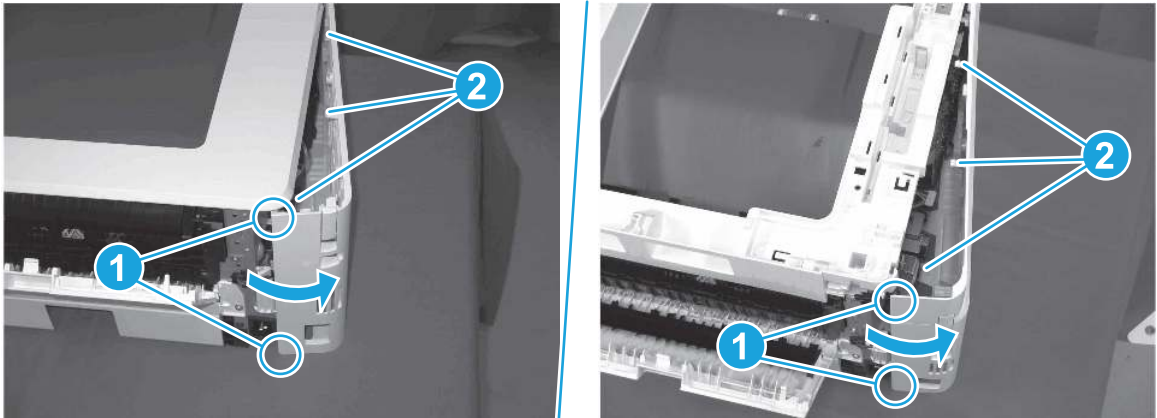
1. Remove one screw (callout 1).

**Figure 5-170** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

Figure 5-171 Release two bosses and three tabs

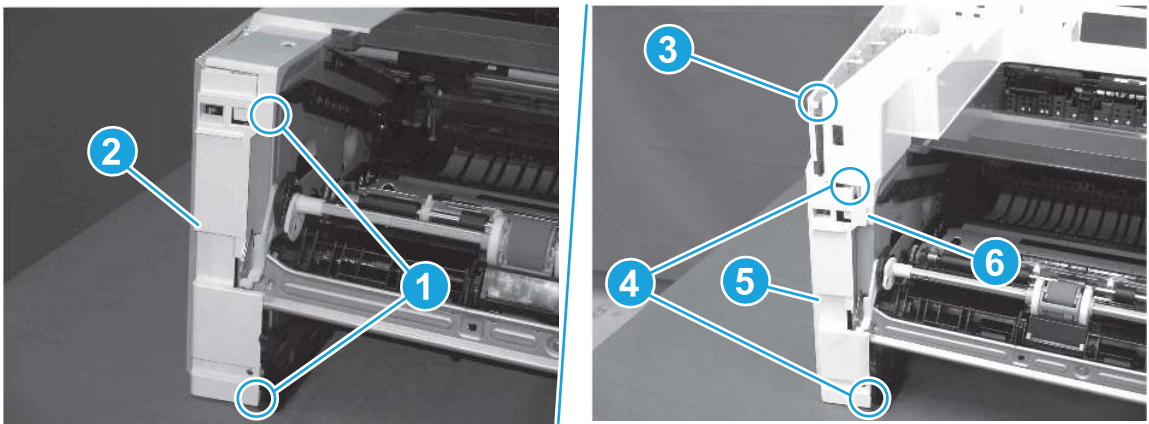


3. At the front of the printer, do one of the following:

- **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 5-172 Remove the cover



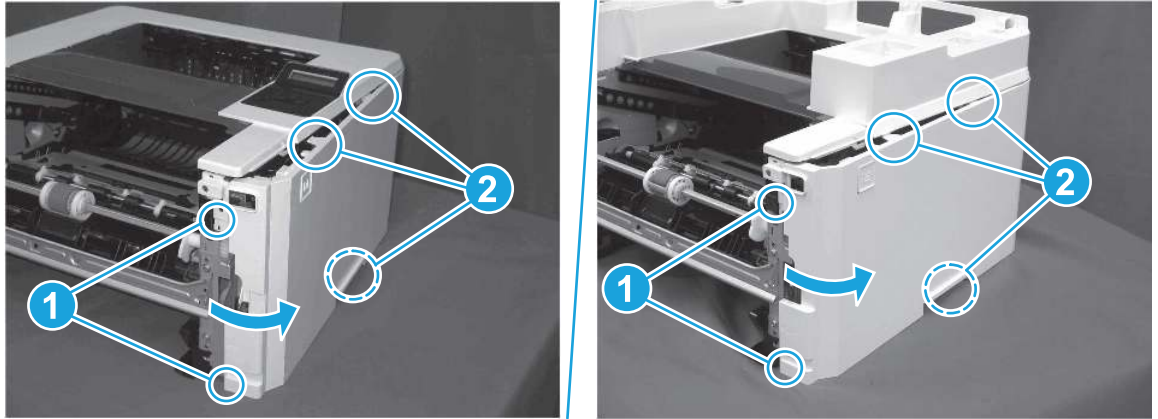
#### 4. Remove the right cover

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).

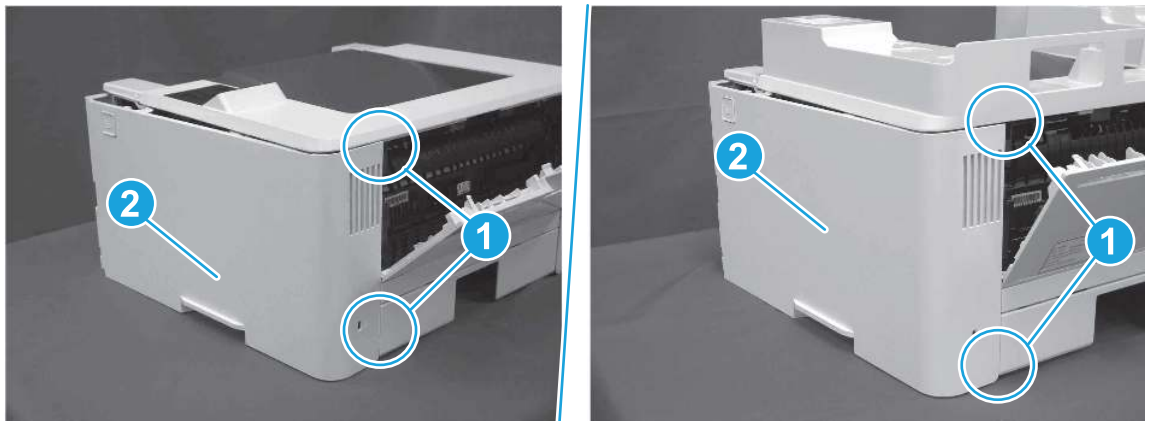
**💡 Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-173 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-174 Remove the cover

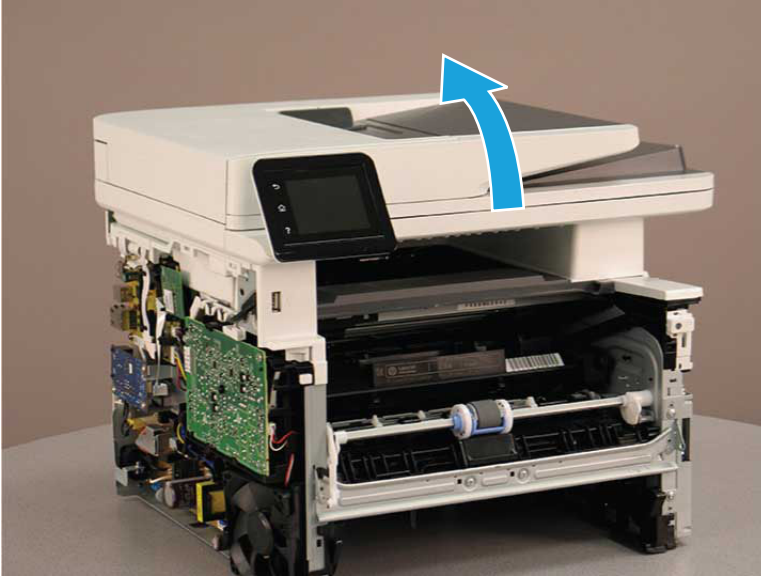


## 5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

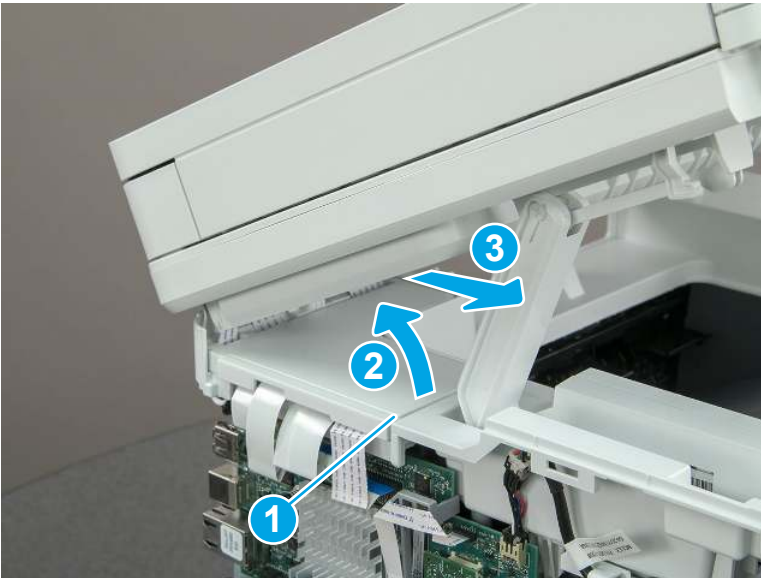
1. If the ISA is not already raised, raise it now.

**Figure 5-175** 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 5-176** 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 5-177 Disconnect three FFCs



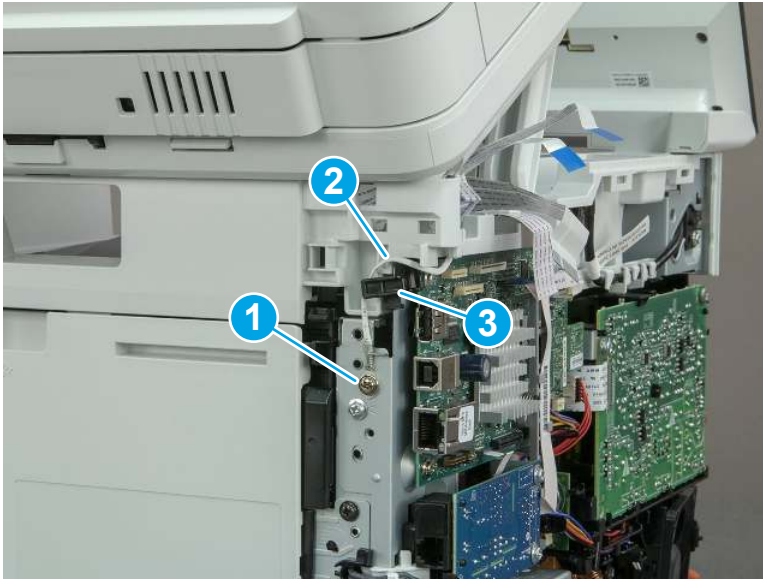
2. Release the tape (callout 1) that holds the flat cables to the top cover.

Figure 5-178 Release the tape



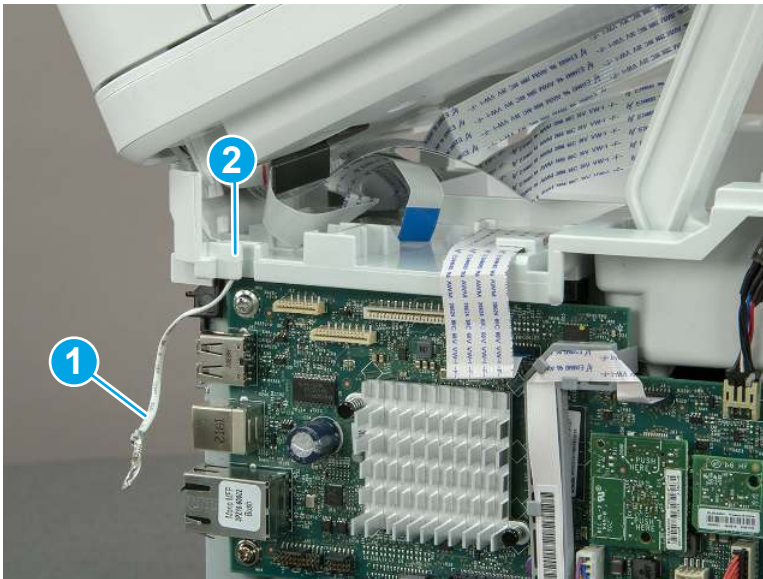
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-179** Release the ground wire



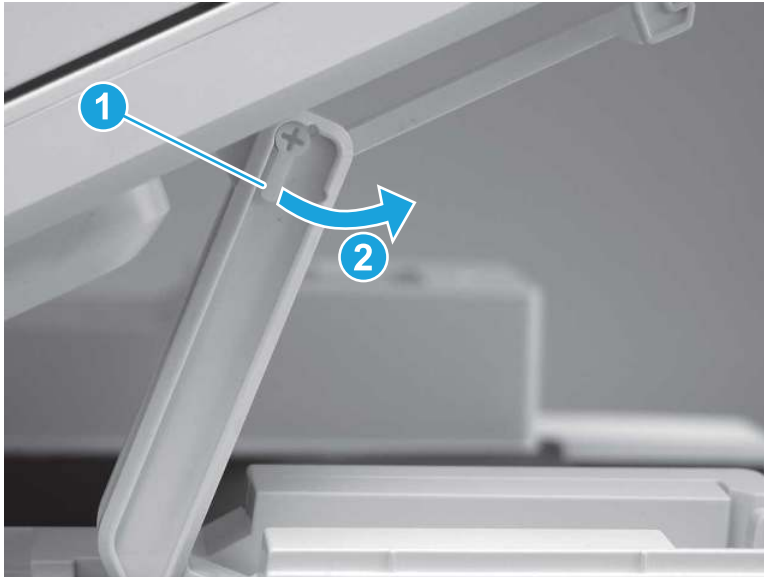
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-180** 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 5-181** 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.

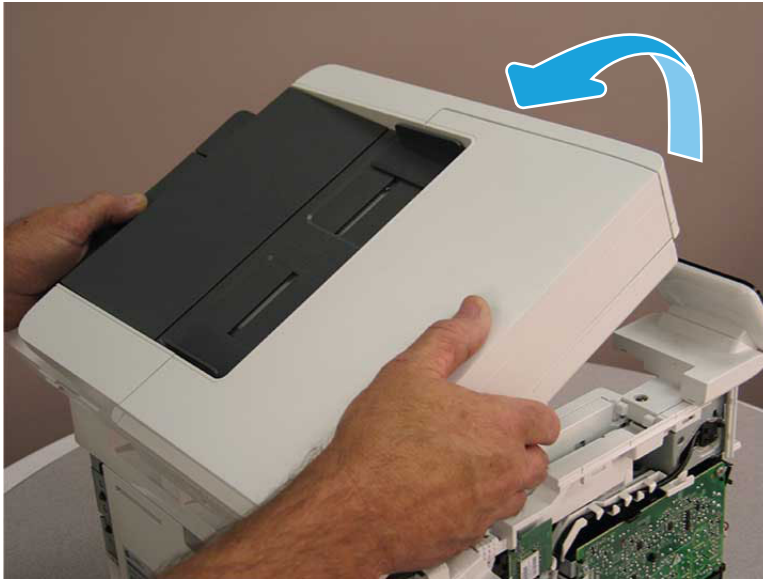
---

**Figure 5-182** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-183** Rotate the ISA towards the rear of the printer



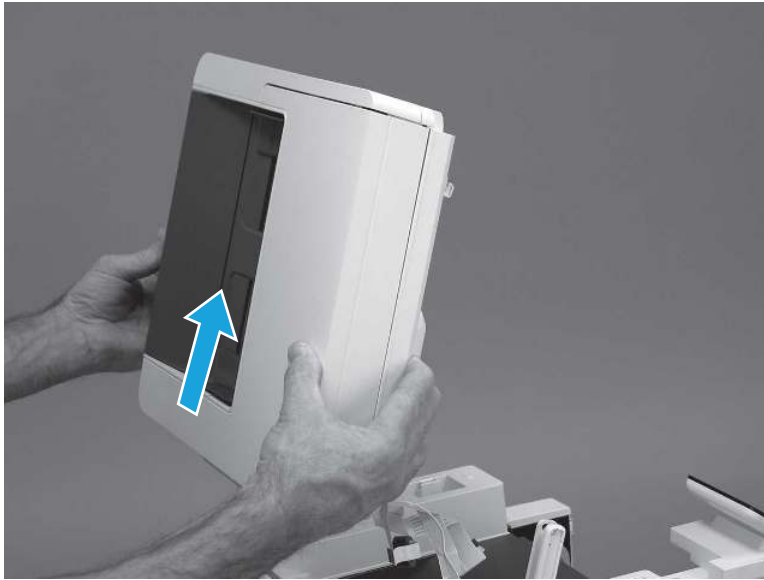
8. Slide the ISA as shown to release it.

**Figure 5-184** Release the ISA



9. Remove the ISA.

**Figure 5-185** Remove the ISA



## 7. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

---

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

If the control panel is not fully tilted forward, tilt it forward now until it stops.

---

**Figure 5-186** Open the ISA



2. Remove one screw (callout 1).

**Figure 5-187** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-188** Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-189** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-190** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-191** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-192** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**⚠ CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---



**Figure 5-193** Remove two screws and remove the control panel assembly

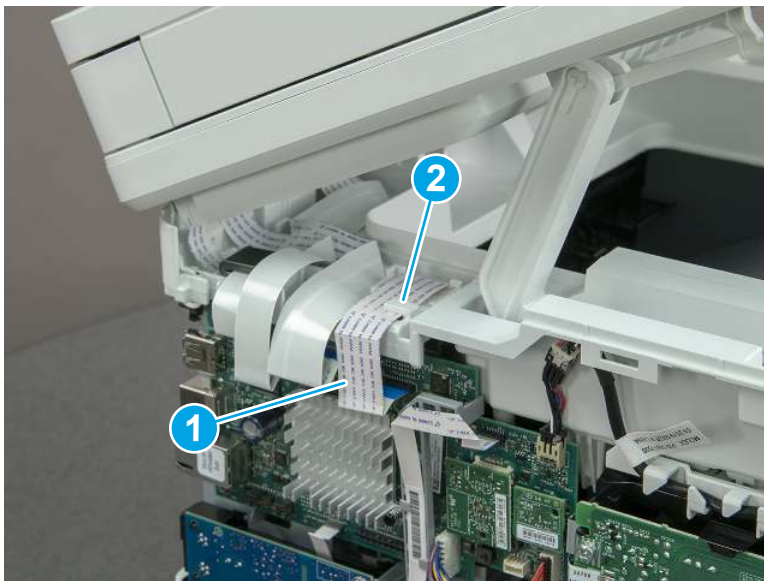


### 8. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

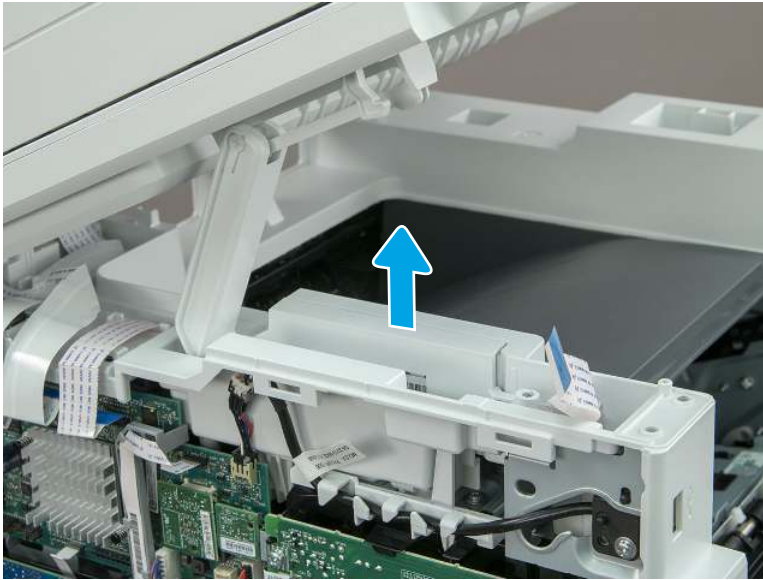
1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

**Figure 5-194** Disconnect one cable



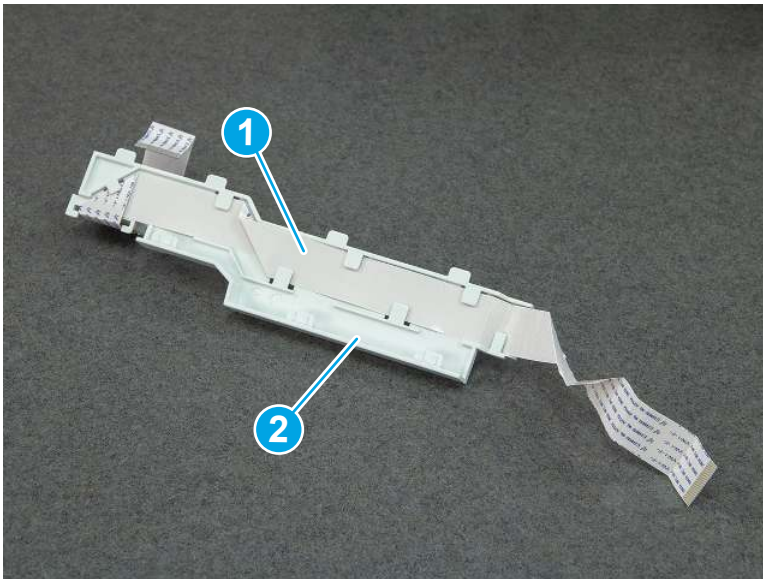
2. Lift up the control-panel FFC cover to remove the cover and cable.

**Figure 5-195** Remove the cover and cable



3. If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).

**Figure 5-196** Remove the FFC

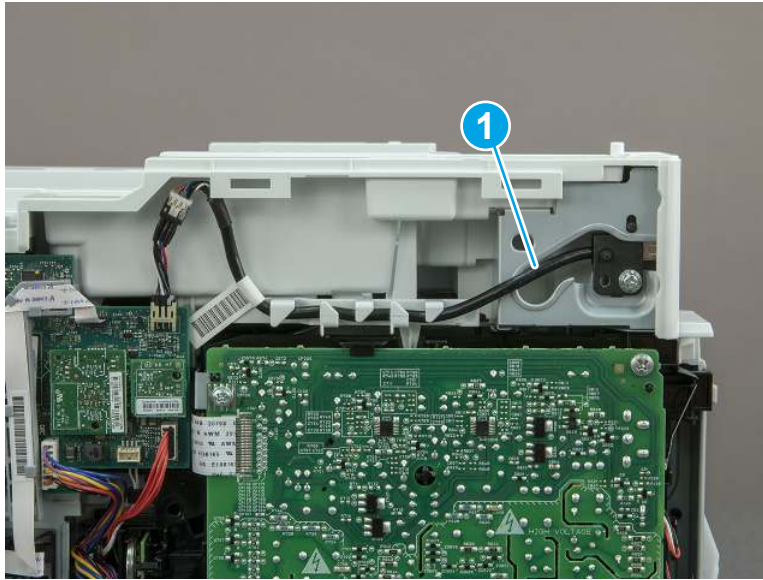


## 9. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

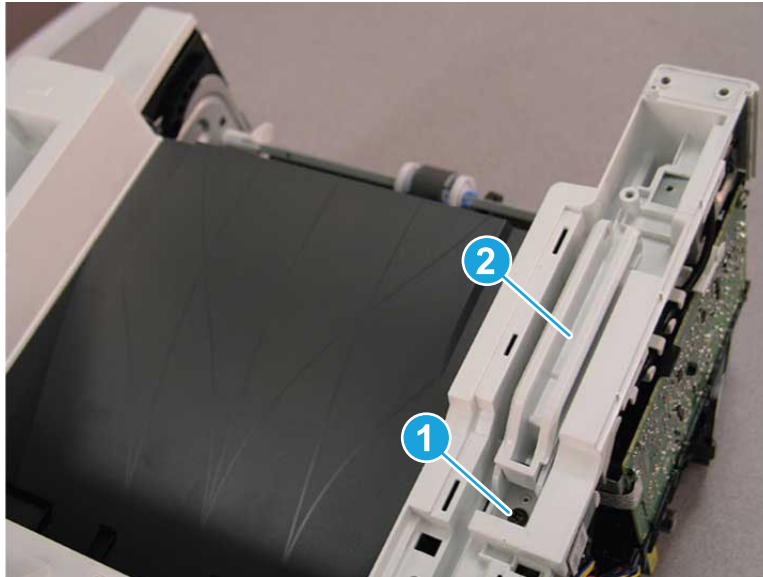
**Figure 5-197** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

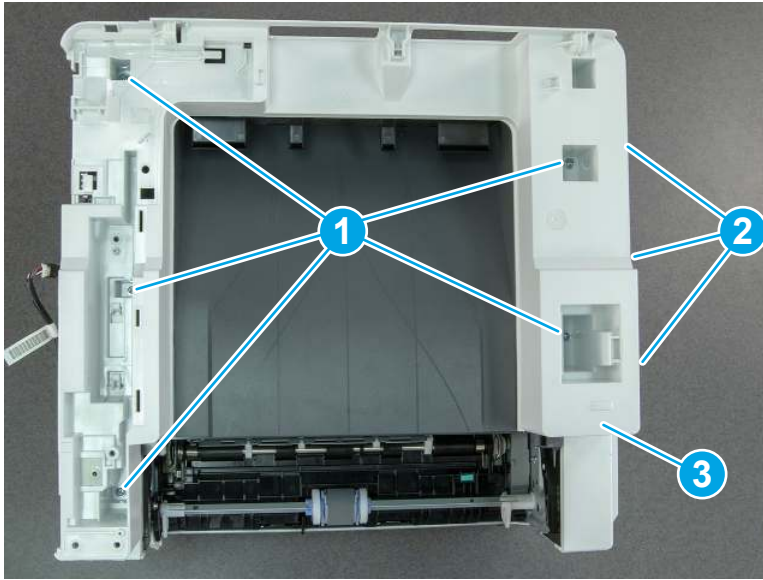
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-198** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

Figure 5-199 Remove the top cover



## 10. 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 cable guide (MFP)

Learn how to remove and replace the cable guide (MFP).

[View a video of how to remove and replace the cable guide.](#)

Mean time to repair: 38 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 5-25** Part information

Part number	Part description
RC5-7024-000CN	Guide, USB cable

## 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 5-200 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).

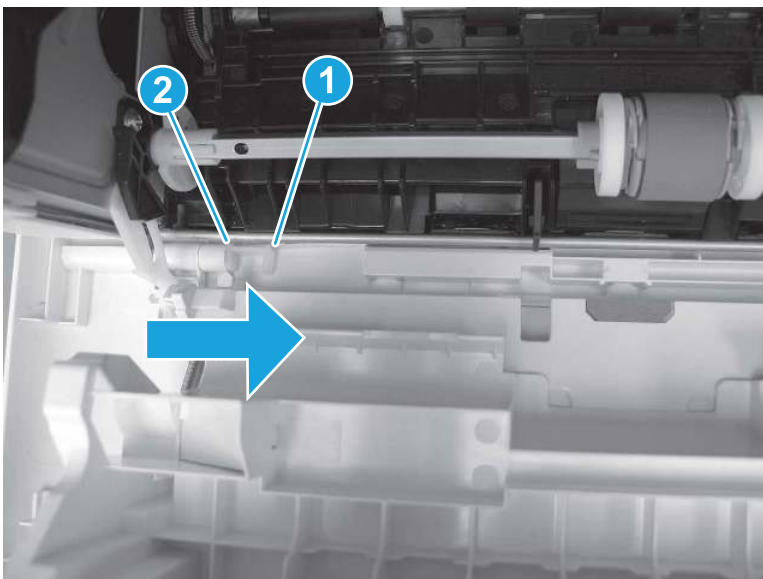
---

 **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.

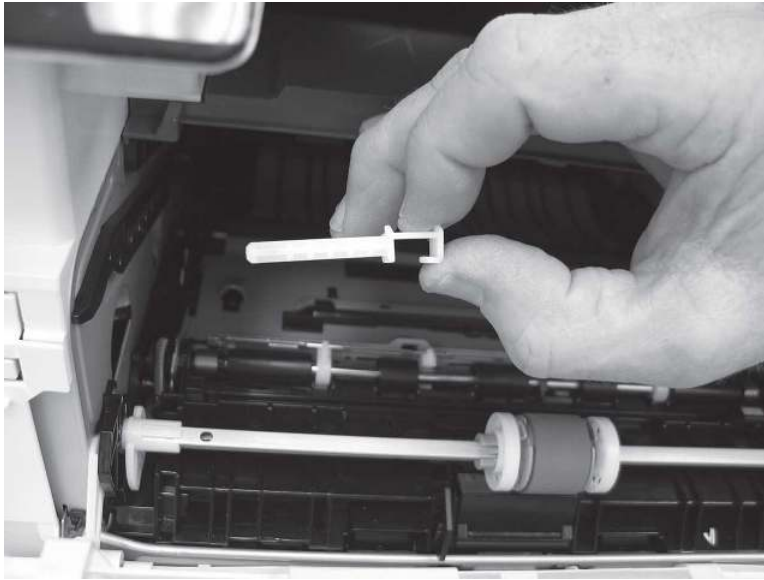
---

Figure 5-201 Release the support shaft



2. Remove the support shaft.

**Figure 5-202** Remove the support shaft



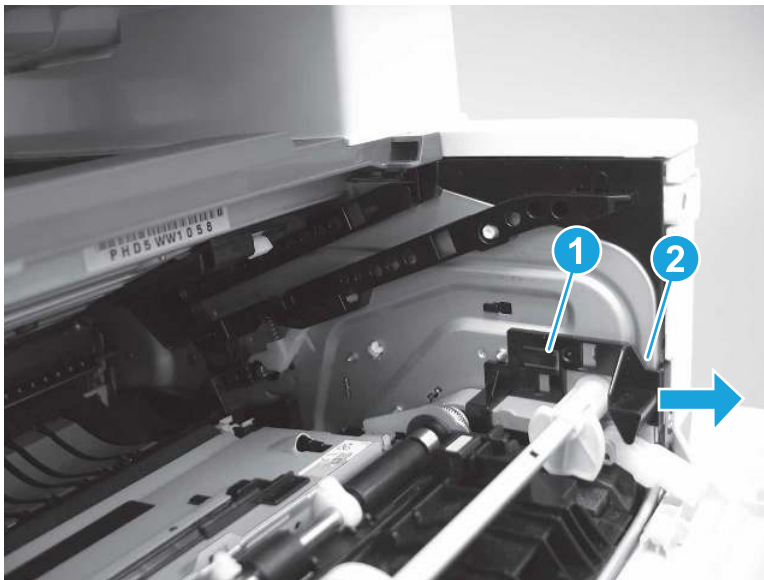
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

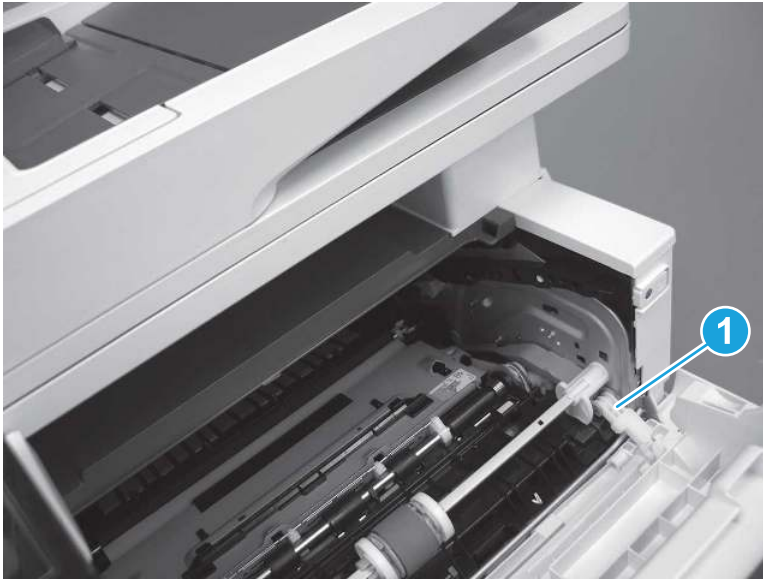
---

**Figure 5-203** 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 5-204** 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).

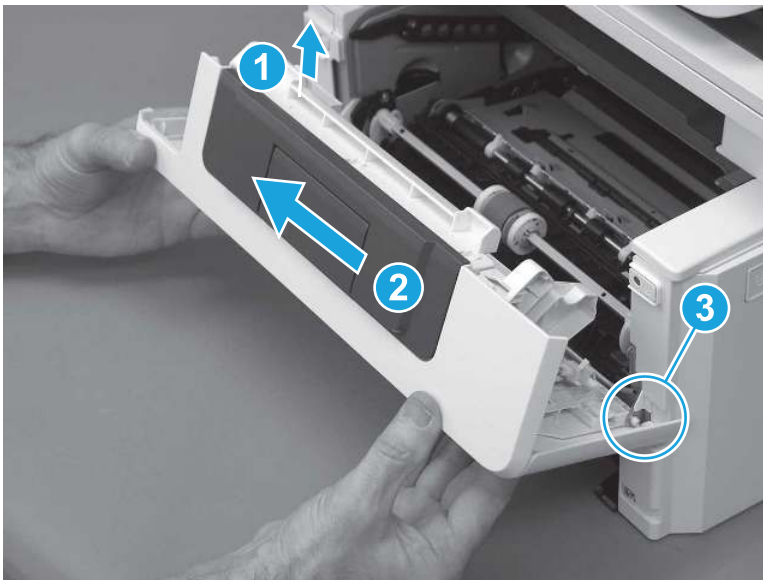
---

**⚠ 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.

---

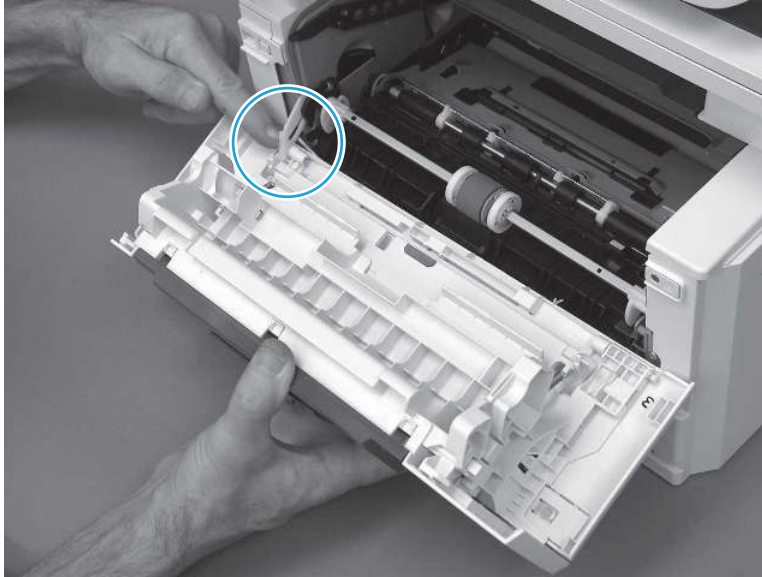
**Figure 5-205** Release the door





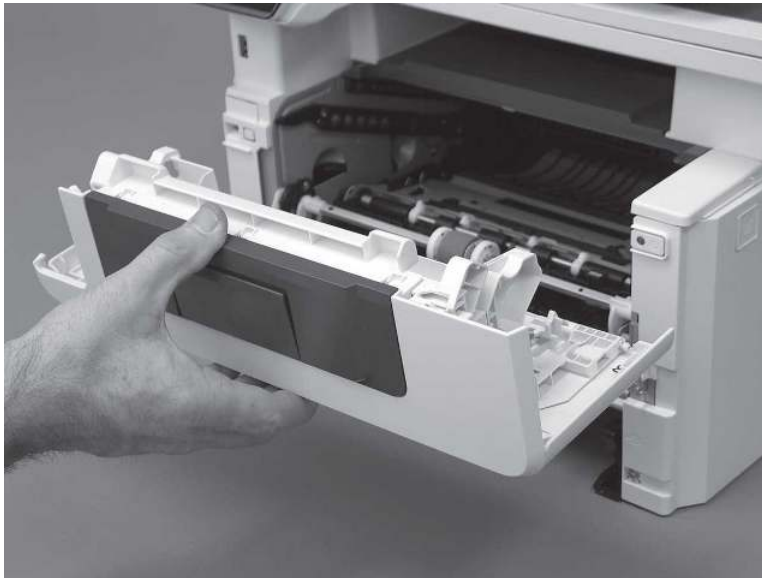
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-206** Release the left-side retainer arm



7. Remove the door.

**Figure 5-207** 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.

---

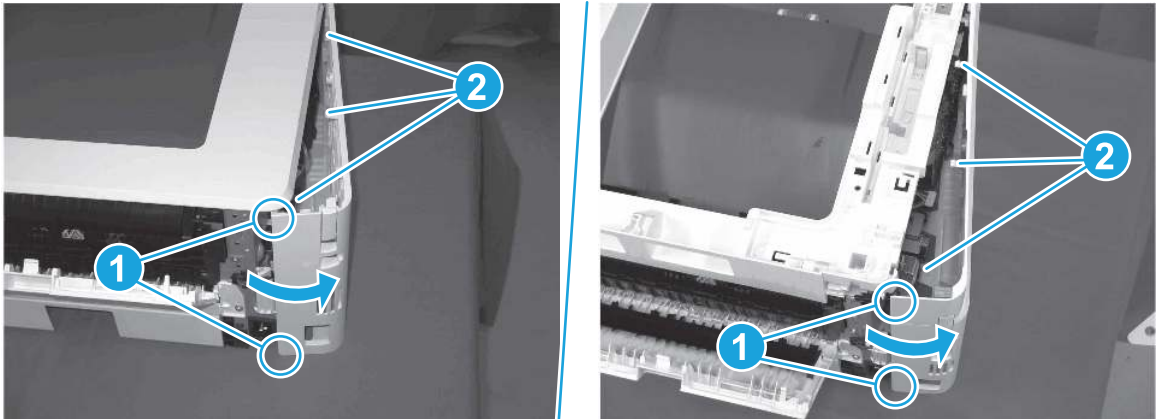
1. Remove one screw (callout 1).

**Figure 5-208** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-209** Release two bosses and three tabs



3. At the front of the printer, do one of the following:

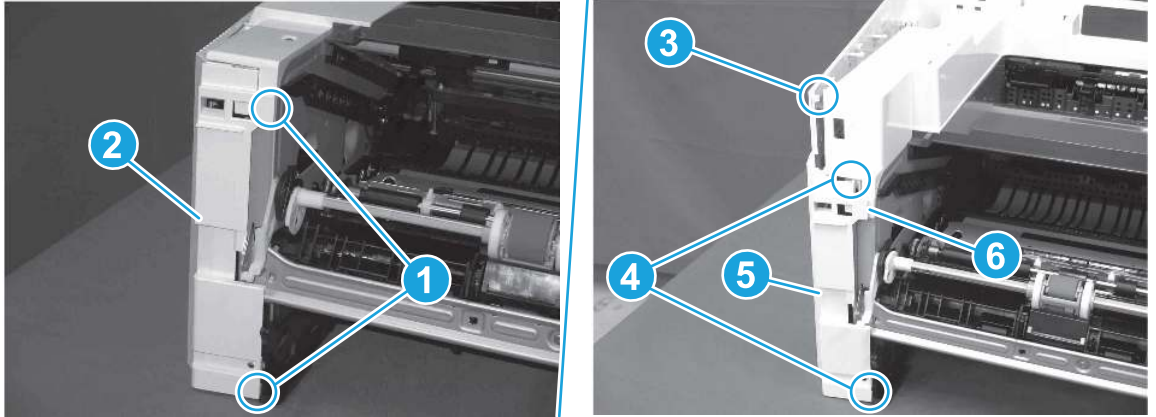
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**⚠ 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 5-210 Remove the cover



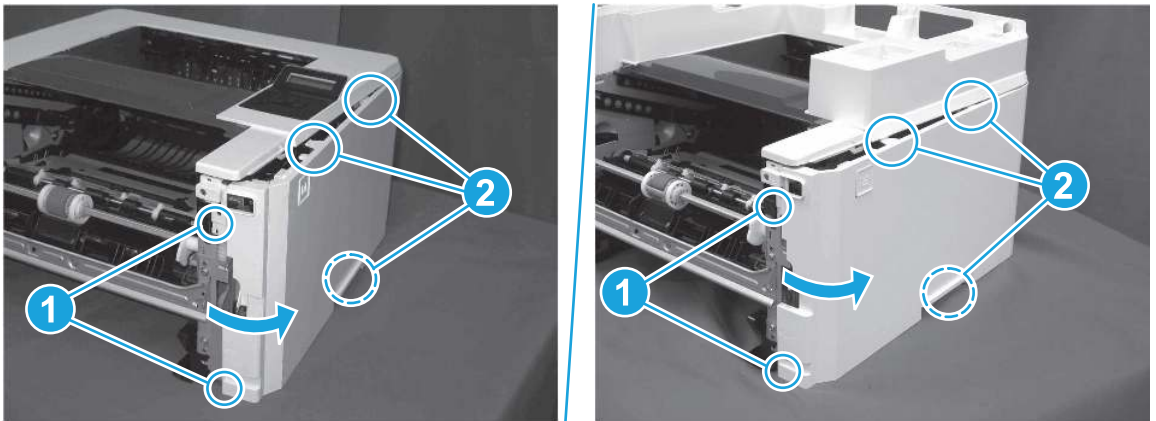
#### 4. Remove the right cover

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).

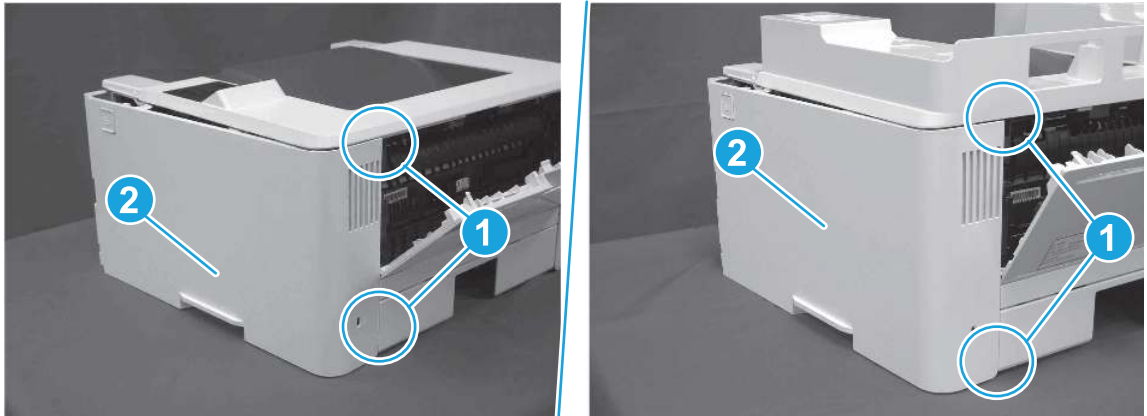
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-211 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-212** Remove the cover

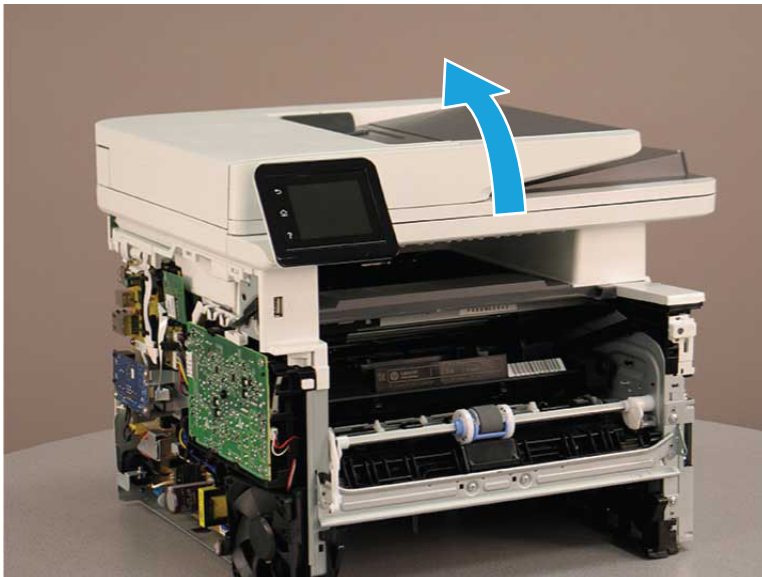


## 5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

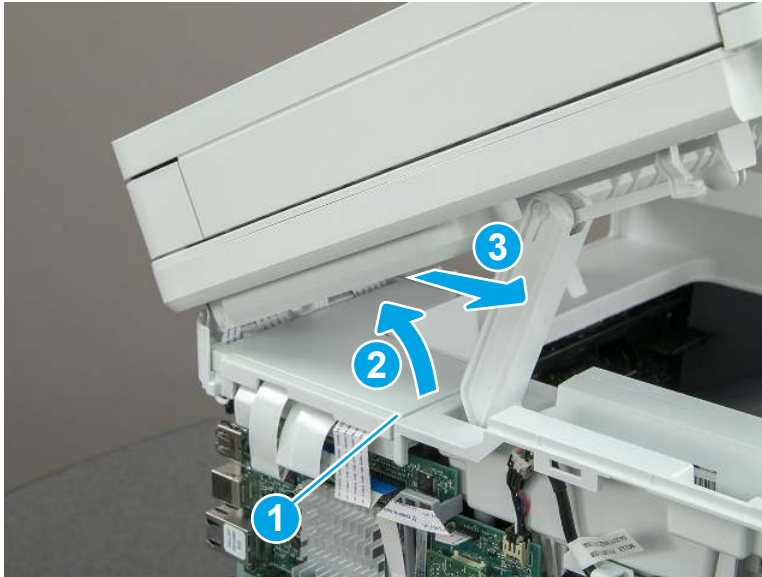
1. If the ISA is not already raised, raise it now.

**Figure 5-213** 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 5-214** 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 5-215** Disconnect three FFCs



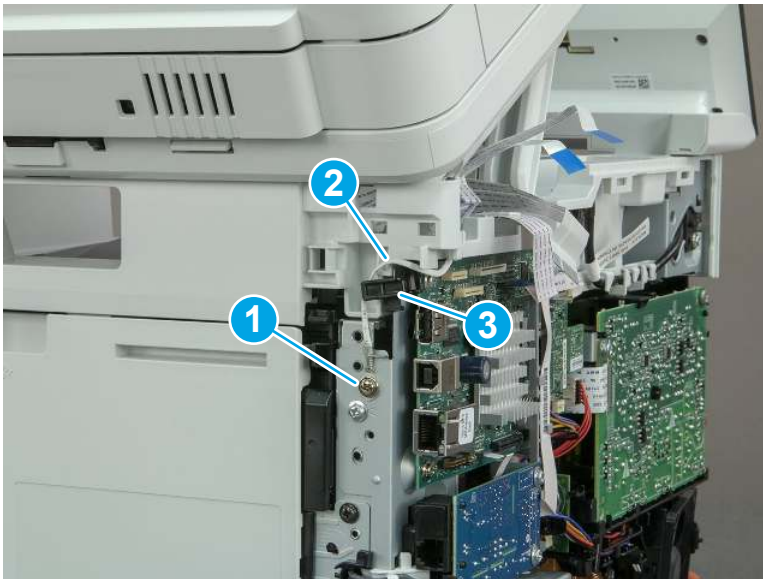
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-216** Release the tape



3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-217** Release the ground wire



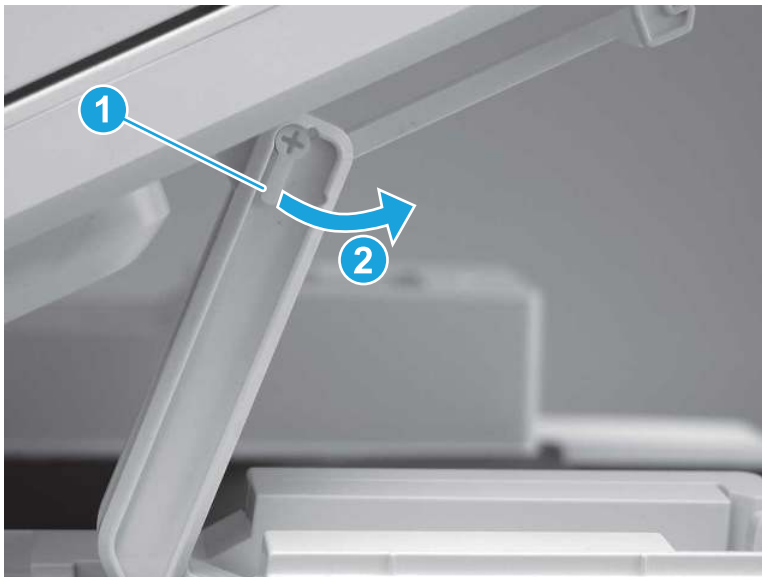
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-218** 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 5-219** 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.

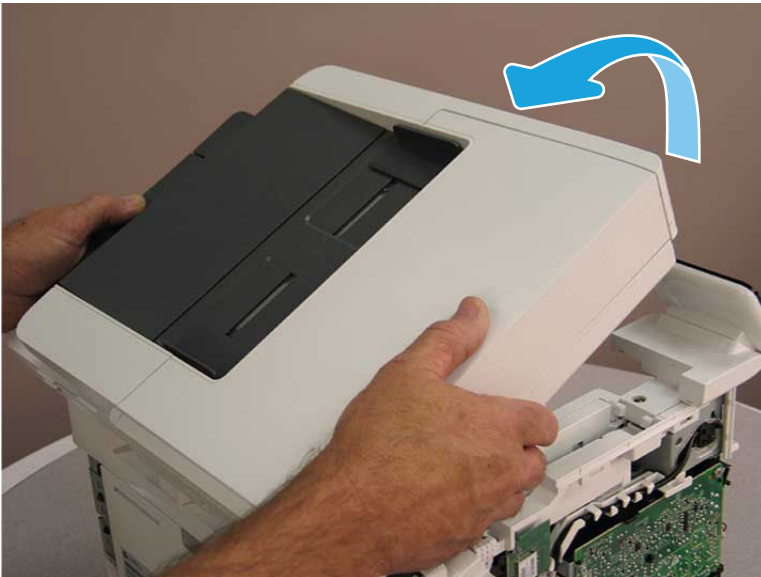
---

**Figure 5-220** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-221** Rotate the ISA towards the rear of the printer





8. Slide the ISA as shown to release it.

Figure 5-222 Release the ISA



9. Remove the ISA.

Figure 5-223 Remove the ISA




## 7. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

---

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

If the control panel is not fully tilted forward, tilt it forward now until it stops.

---

Figure 5-224 Open the ISA



2. Remove one screw (callout 1).

Figure 5-225 Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

Figure 5-226 Release two tabs



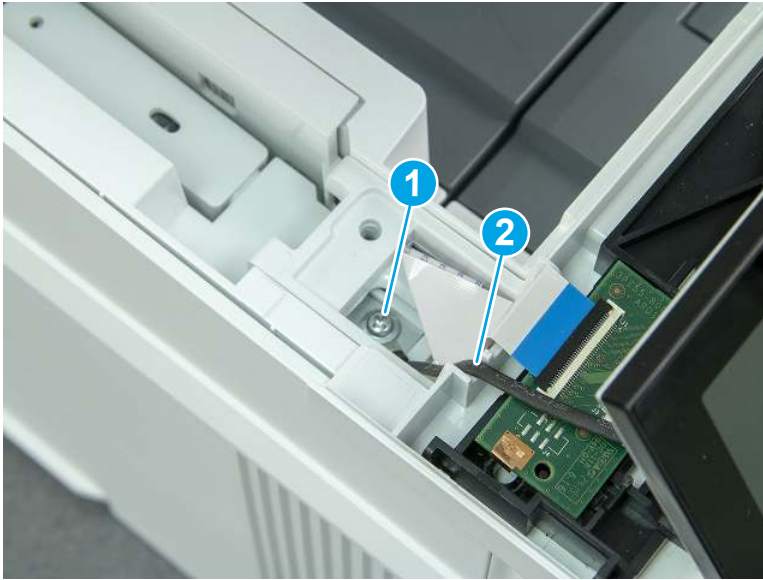
4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

Figure 5-227 Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-228** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-229** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-230** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**⚠ CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-231** Remove two screws and remove the control panel assembly

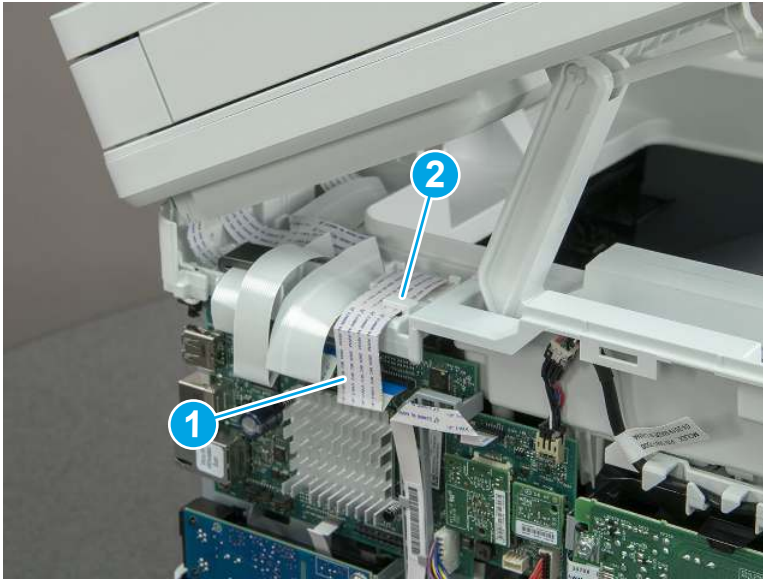


## 8. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

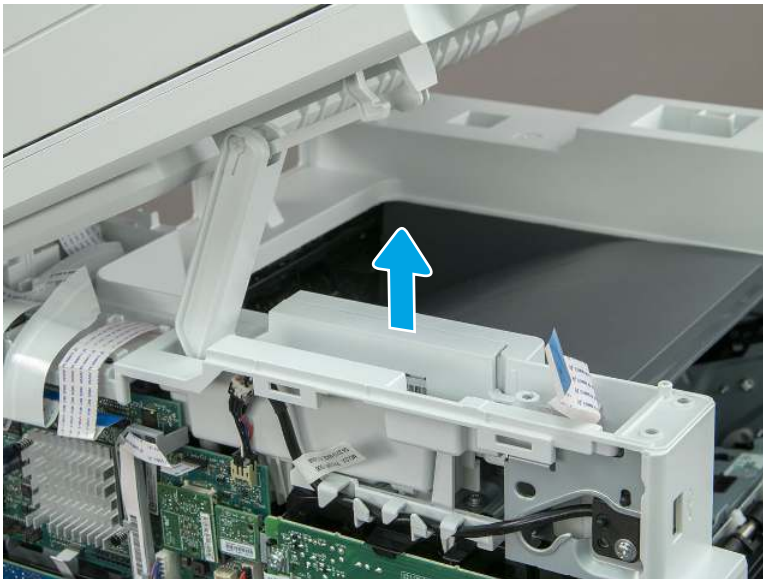
1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

**Figure 5-232** Disconnect one cable



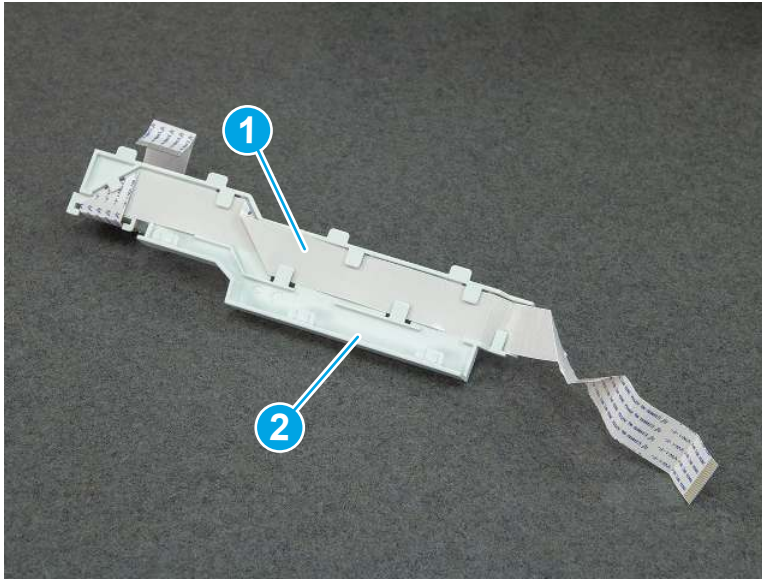
2. Lift up the control-panel FFC cover to remove the cover and cable.

**Figure 5-233** Remove the cover and cable



3. If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).

Figure 5-234 Remove the FFC

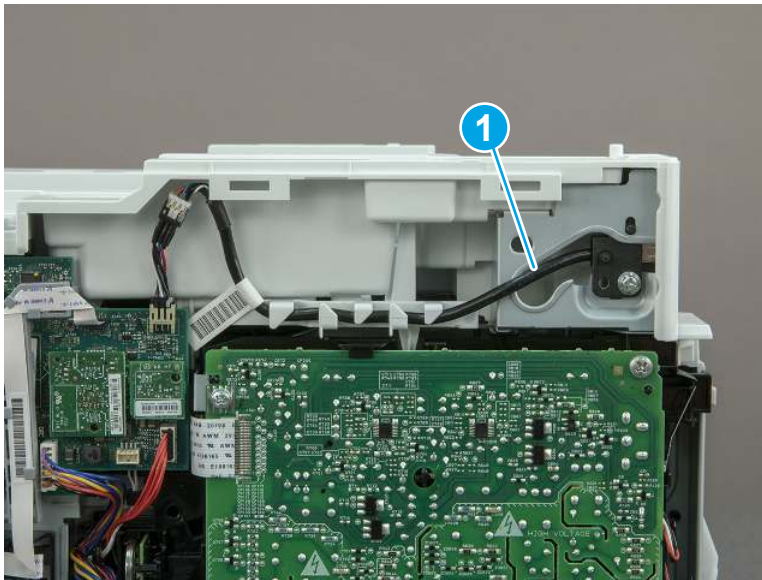


## 9. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

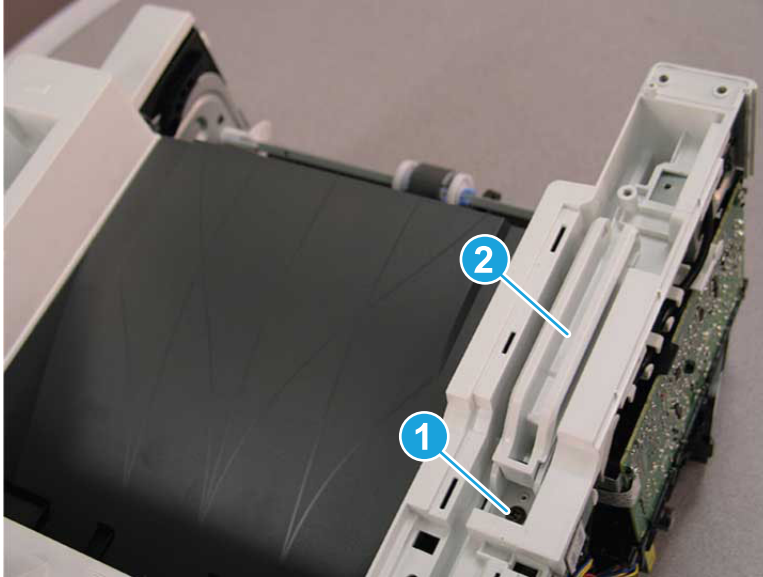
Figure 5-235 Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

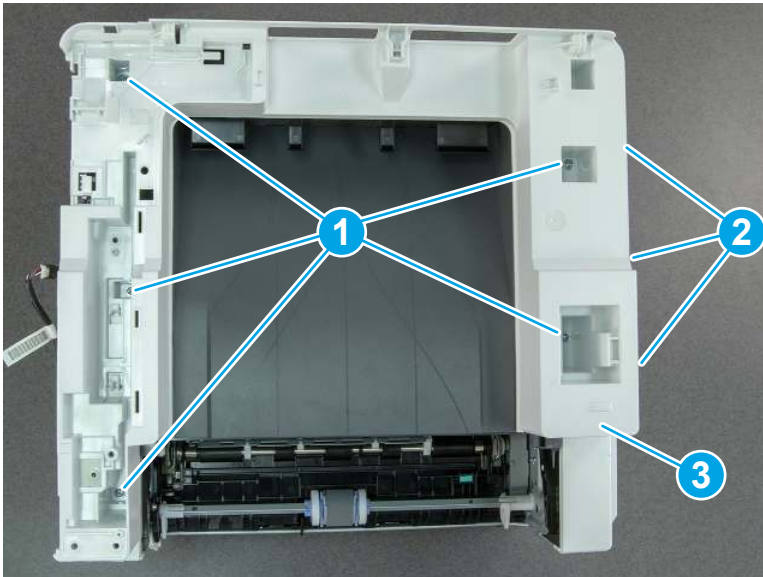
**CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-236** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-237** Remove the top cover



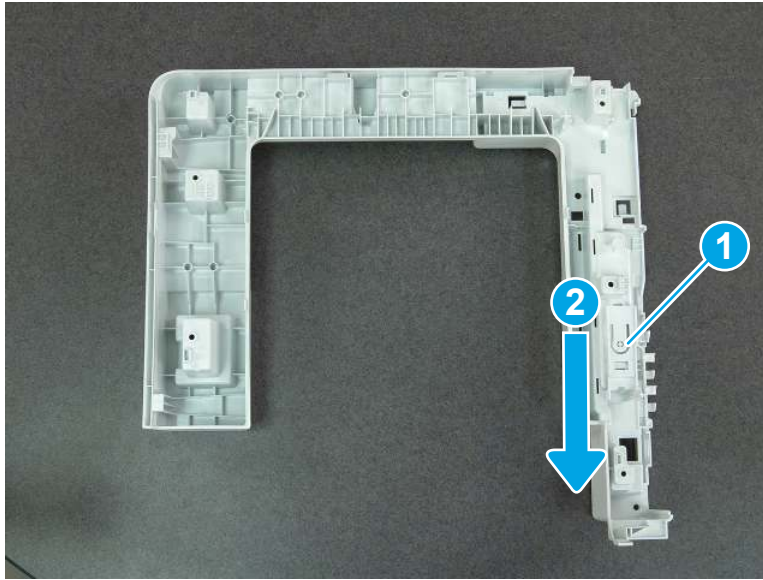
## 10. Remove the cable guide (MFP only)

Follow these steps to remove the cable guide (MFP only).



- ▲ Turn the top cover over, release one tab (callout 1), and then slide the guide as shown to release it.

Figure 5-238 Release the cable guide



## 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.

## Removal and replacement: Integrated scanner assembly (ISA) FFC cover

Learn how to remove and replace the integrated scanner assembly (ISA) cable cover.

[View a video of how to remove and replace the ISA cable cover.](#)

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 5-26** Part information

Part number	Part description
3PZ55-67978	Cover, ISA/fax FFC cables

### 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

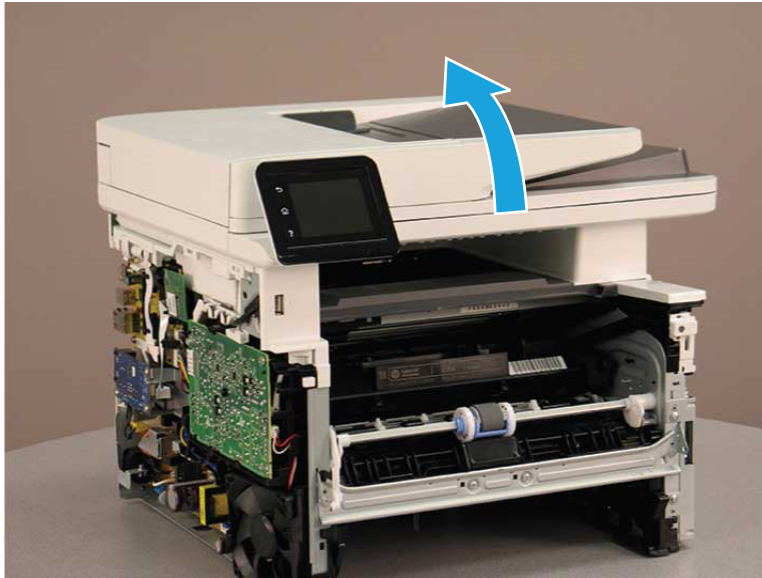
Make sure that the printer initializes to a **Ready** state.

## 1. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

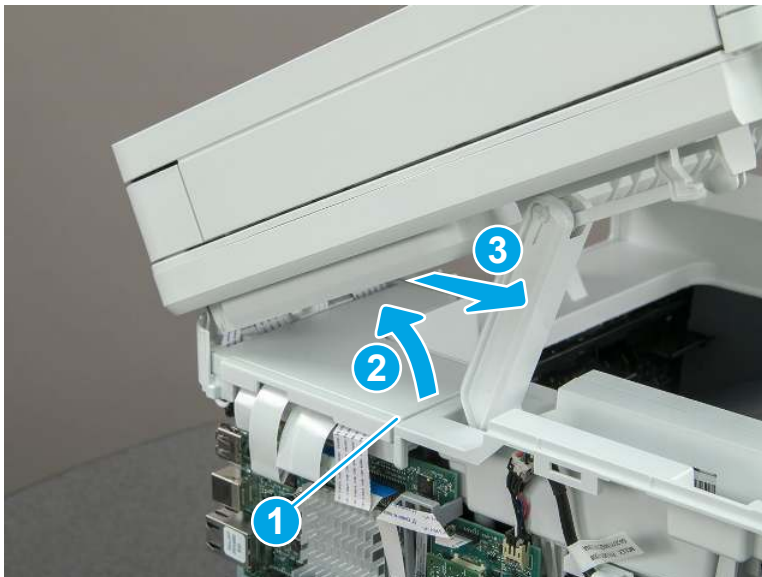
1. If the ISA is not already raised, raise it now.

**Figure 5-239** 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 5-240** Remove the ISA FFC 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: 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 5-27** Part information

Part number	Part description
RC5-7026-000CN	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 5-241** 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).

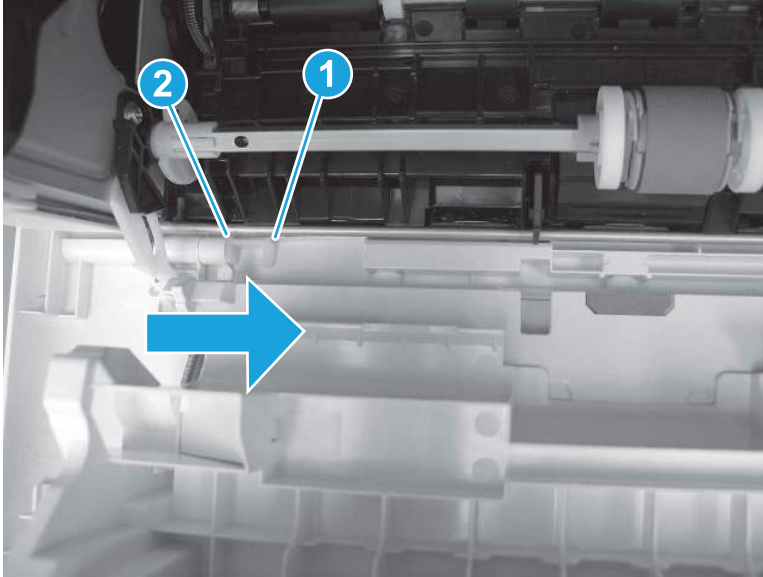
---

 **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.

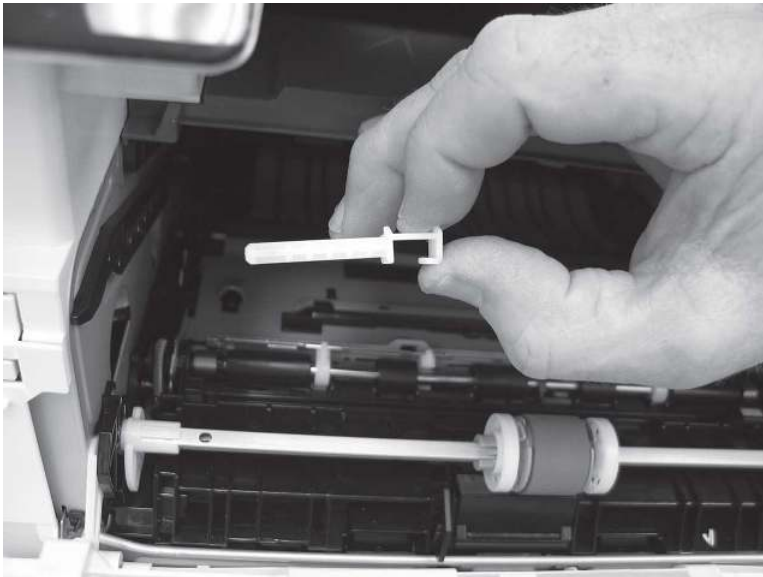
---

Figure 5-242 Release the support shaft



2. Remove the support shaft.

Figure 5-243 Remove the support shaft



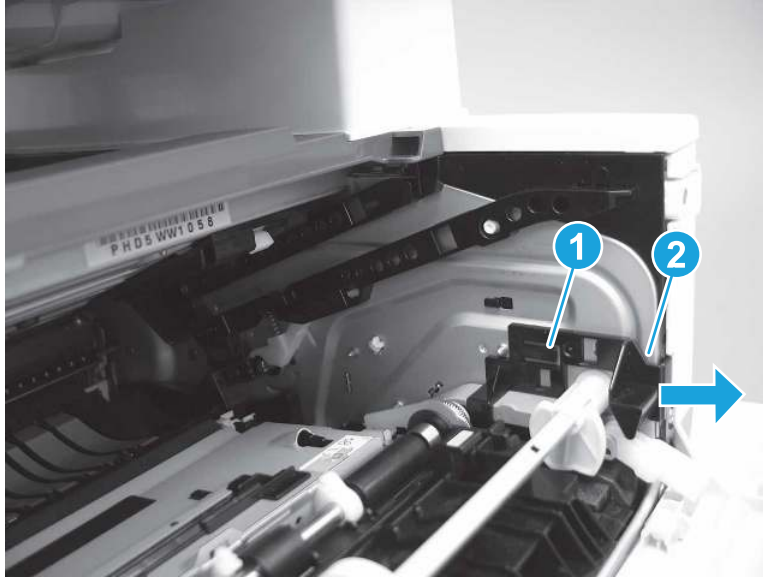
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

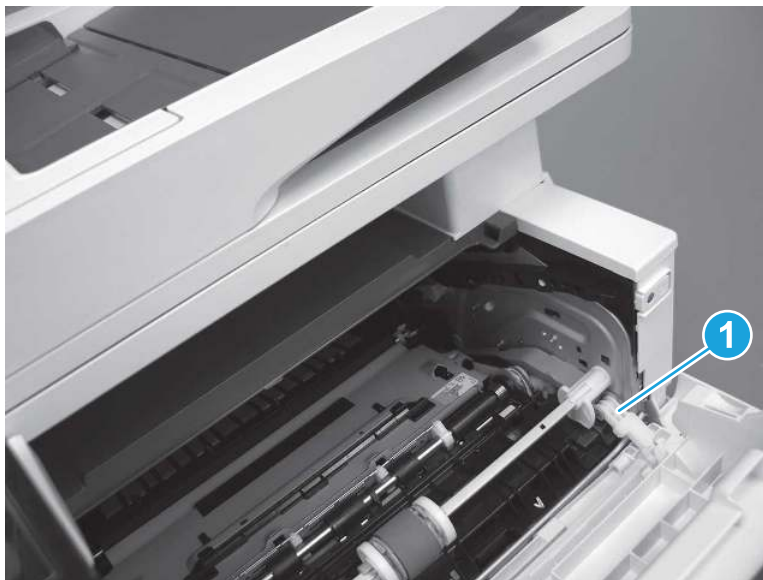
---

Figure 5-244 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 5-245 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).

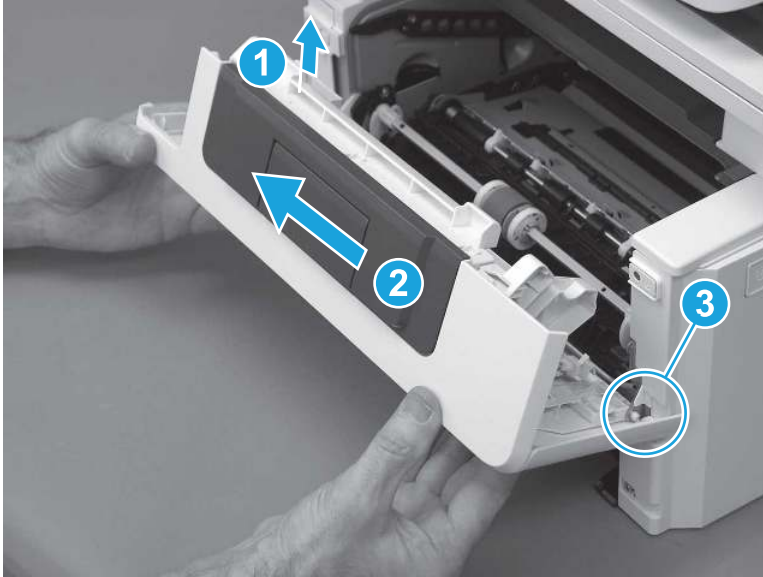
---

**⚠ 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.

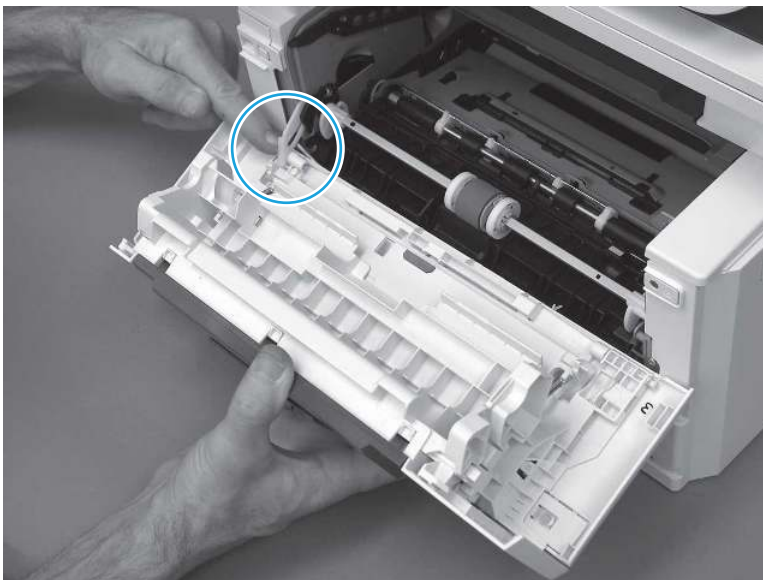
---

Figure 5-246 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.

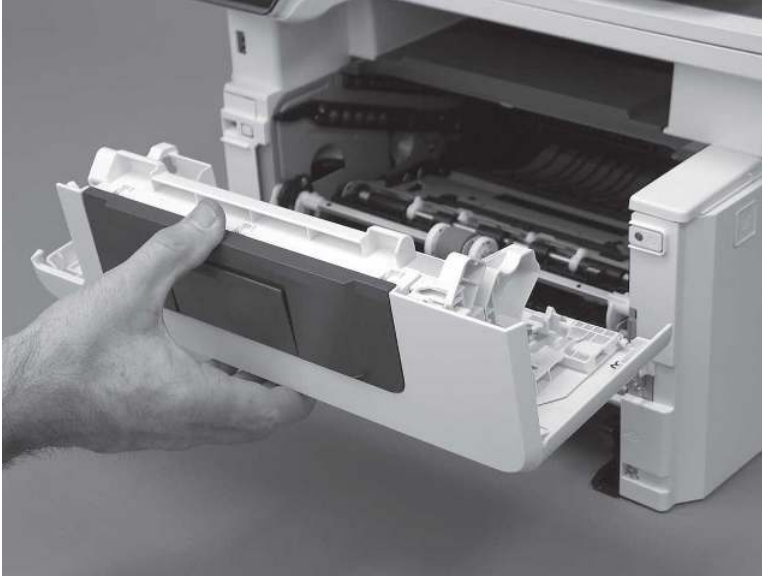
Figure 5-247 Release the left-side retainer arm





7. Remove the door.

Figure 5-248 Remove the door



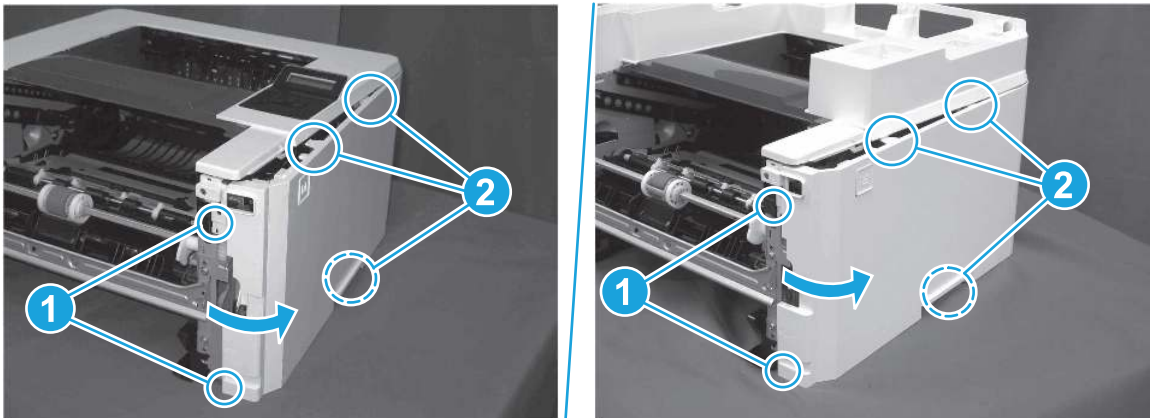
### 3. Remove the right cover

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).

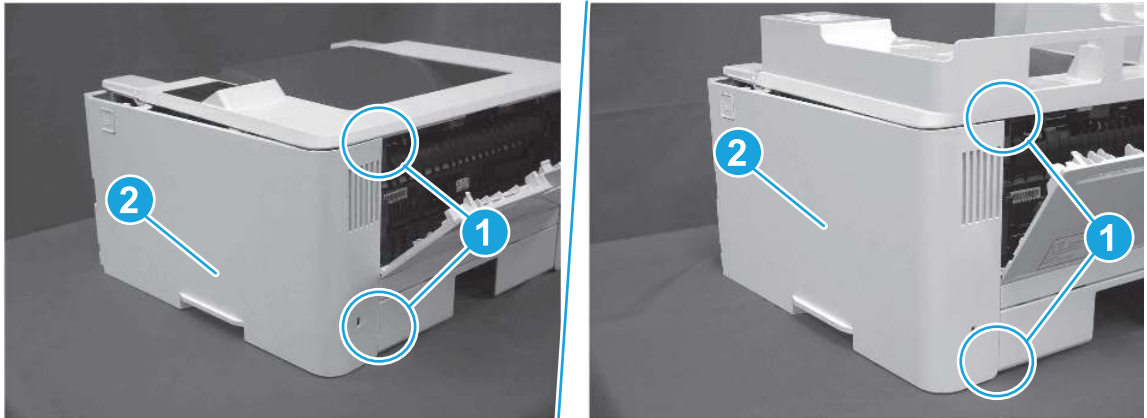
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-249 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-250 Remove the cover



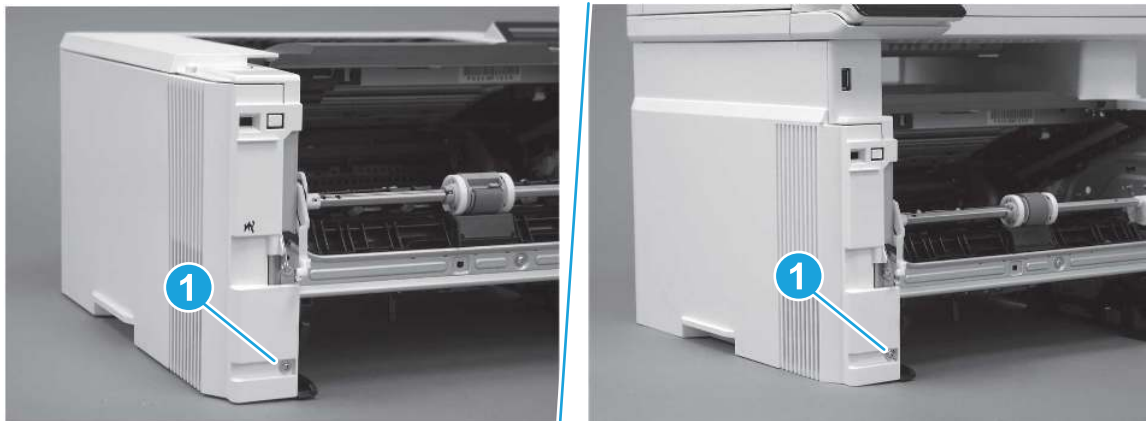
#### 4. Remove the left cover

Follow these steps to remove the left cover.

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

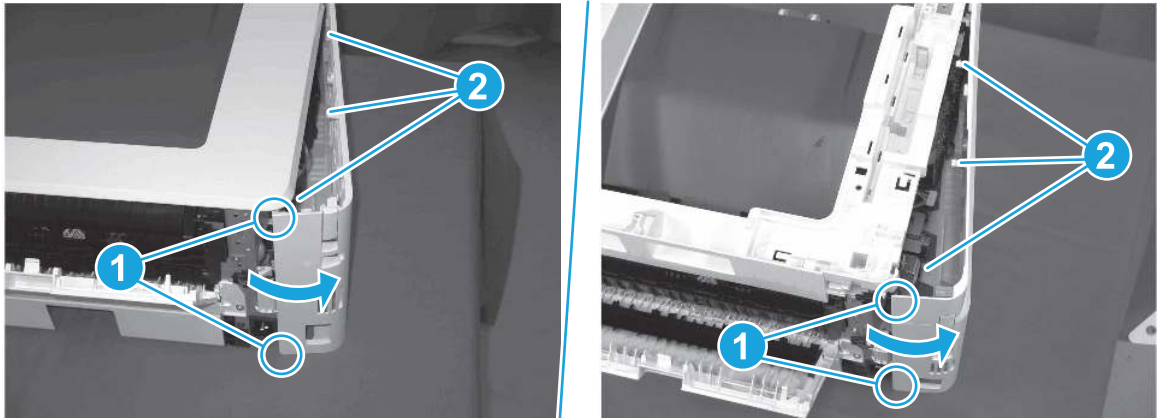
1. Remove one screw (callout 1).

Figure 5-251 Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

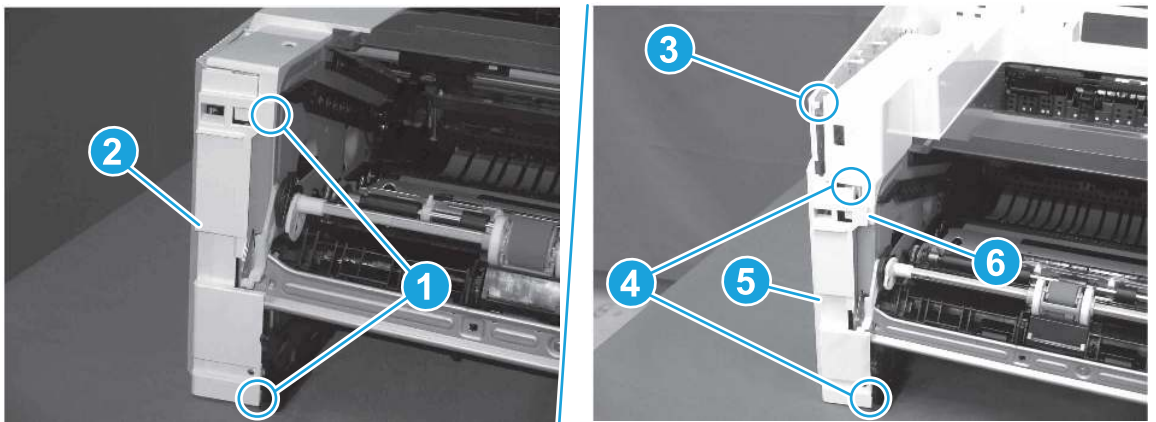
Figure 5-252 Release two bosses and three tabs



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 5-253 Remove the cover



## 5. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

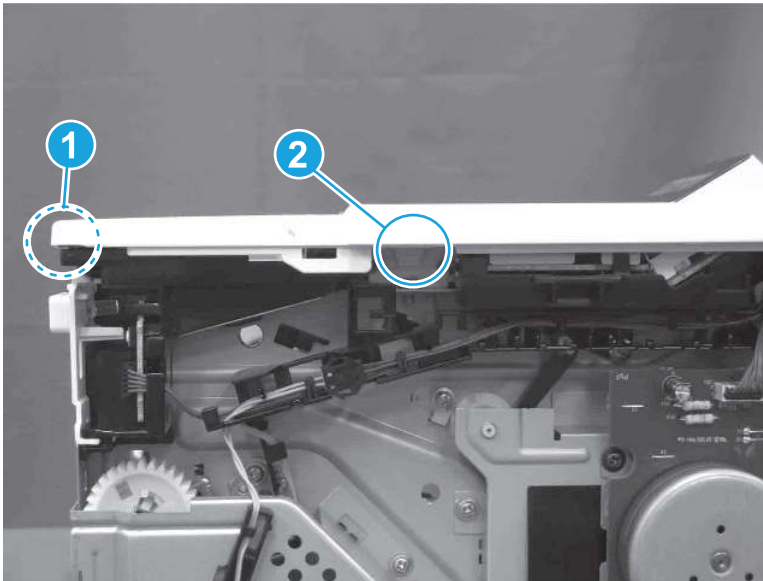
1. Remove one screw.

Figure 5-254 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 5-255 Release one boss and one tab



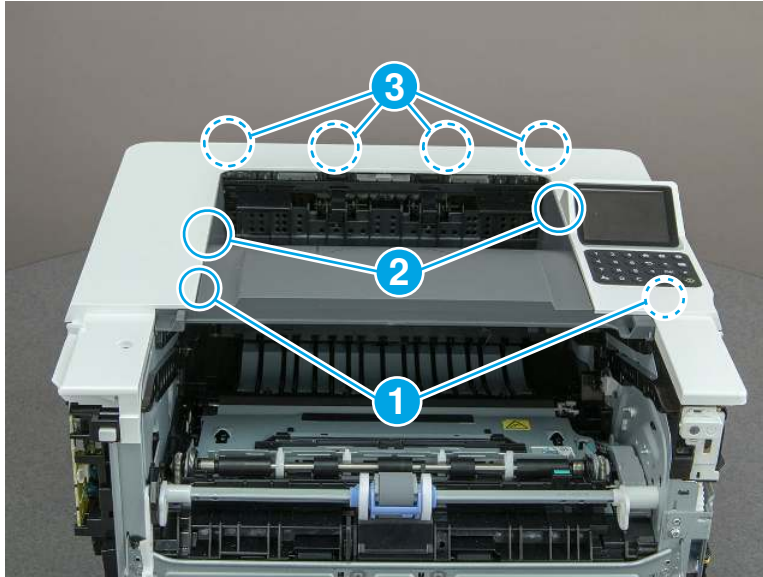
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

Figure 5-256 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.


<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: Keypad cover and indication cover (SFP)

Learn how to remove and replace the keypad and indication covers.

[View a video of 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 5-28** Part information

Part number	Part description
RC5-7025-000CN	Keypad cover
RL2-3790-000CN	Cover, 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 5-257 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).

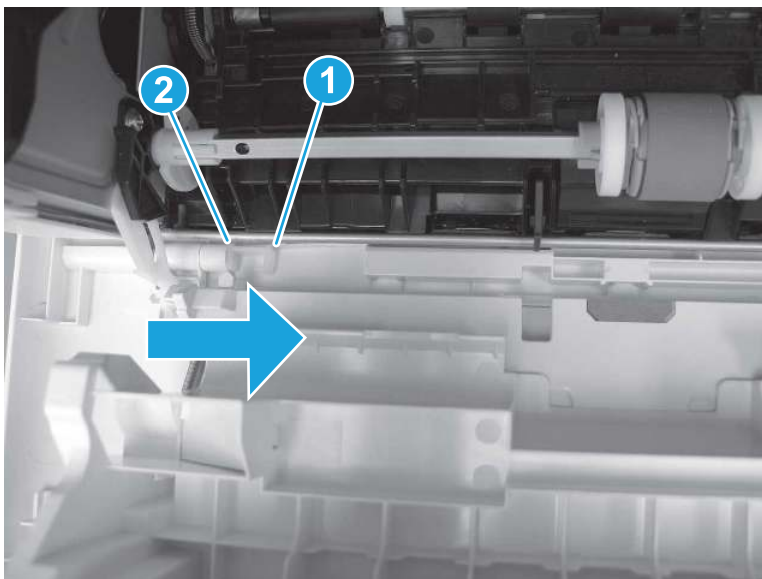
---

 **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.

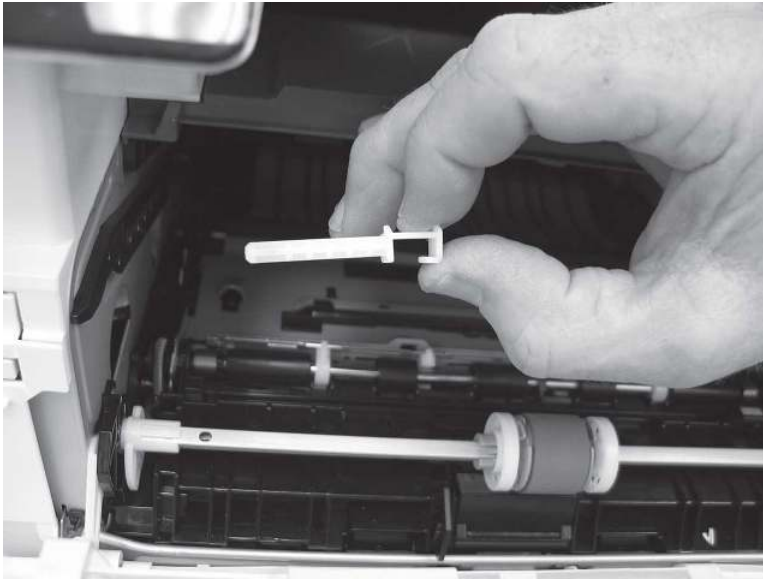
---

Figure 5-258 Release the support shaft



2. Remove the support shaft.

**Figure 5-259** Remove the support shaft



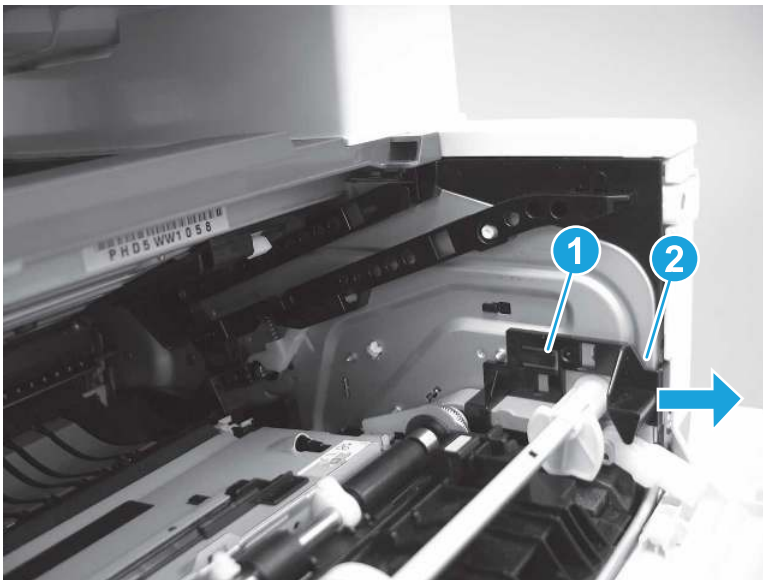
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

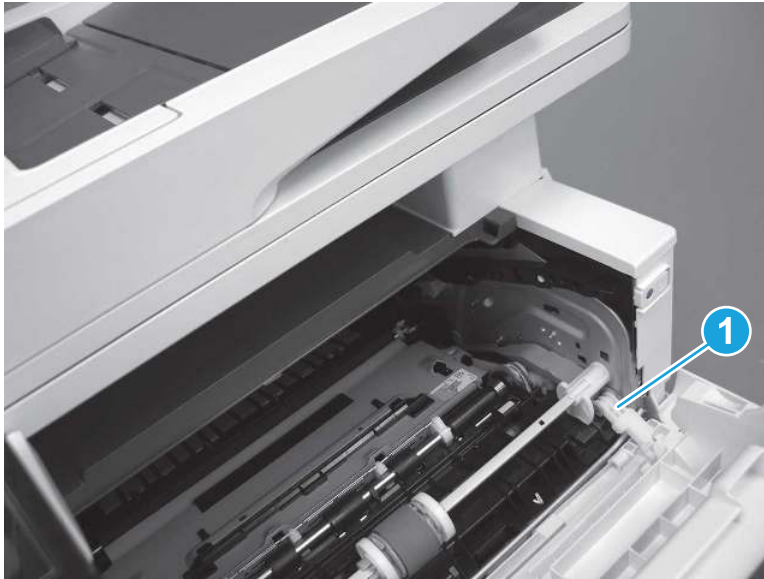
**Figure 5-260** Remove the guide





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 5-261** Release the pressure-release link

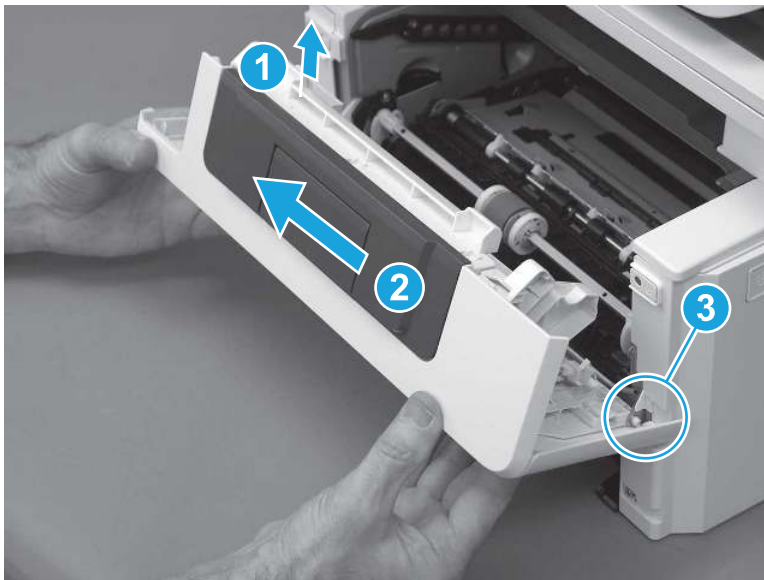


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

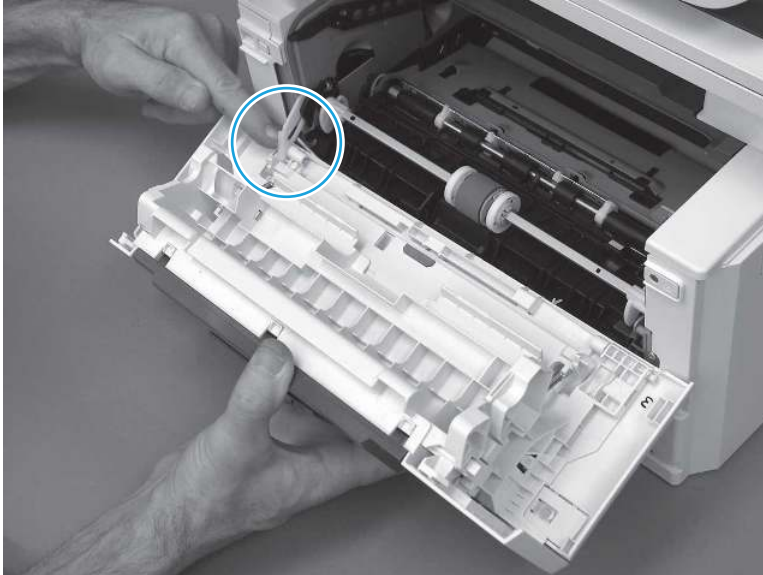
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-262** Release the door



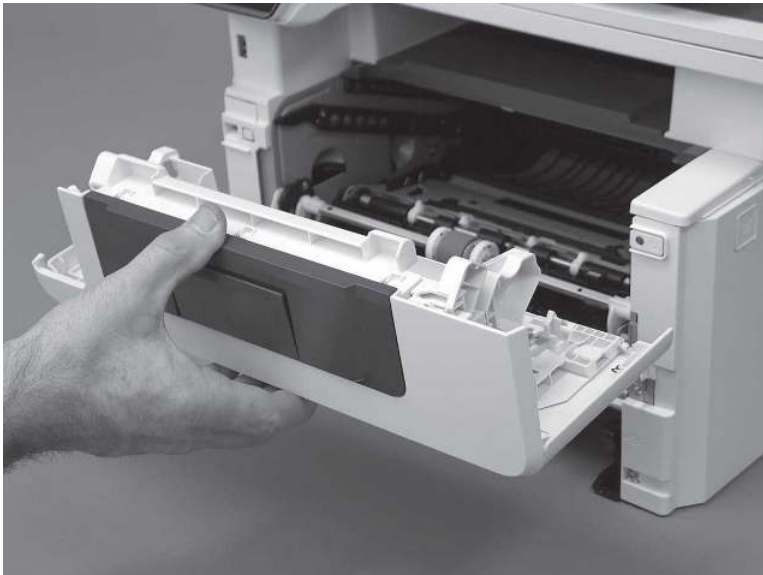
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-263** Release the left-side retainer arm



7. Remove the door.

**Figure 5-264** Remove the door



### 3. Remove the right cover

Follow these steps to remove the right cover.

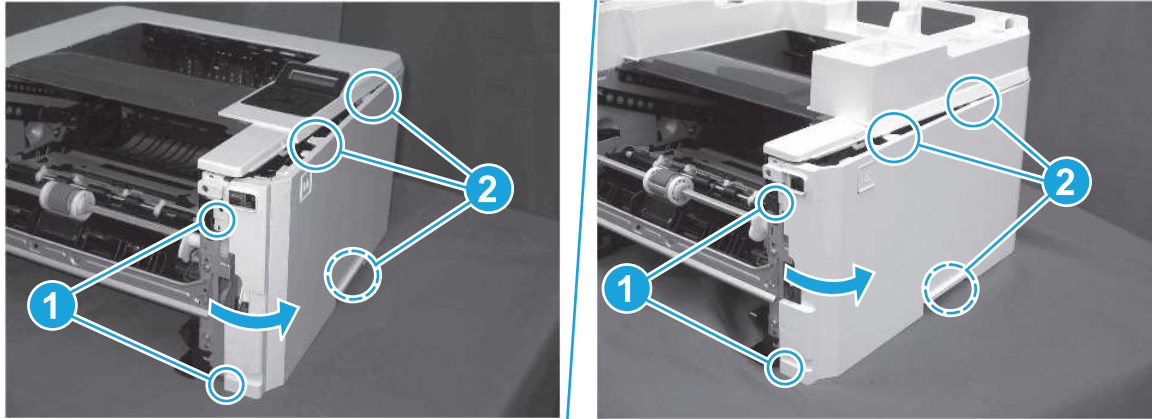
1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

---

 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

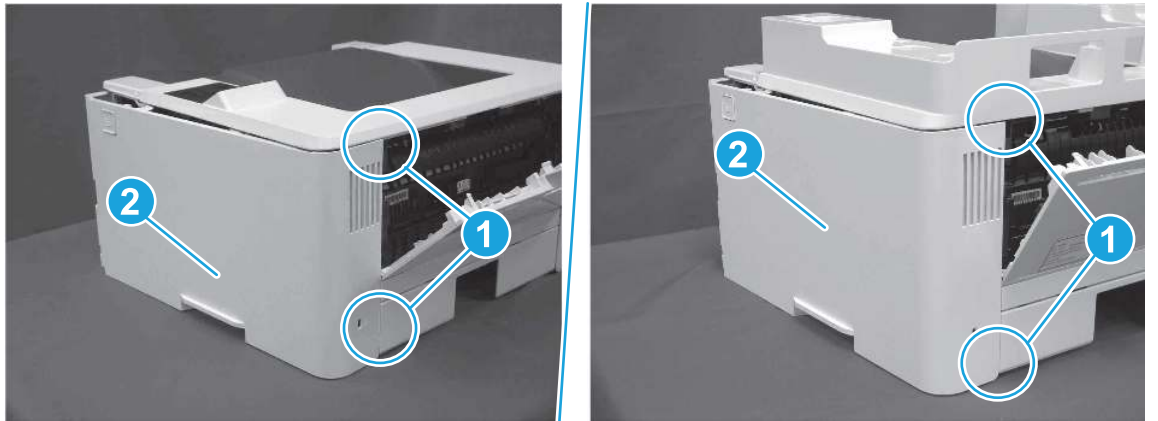
---

Figure 5-265 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-266 Remove the cover



#### 4. 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.

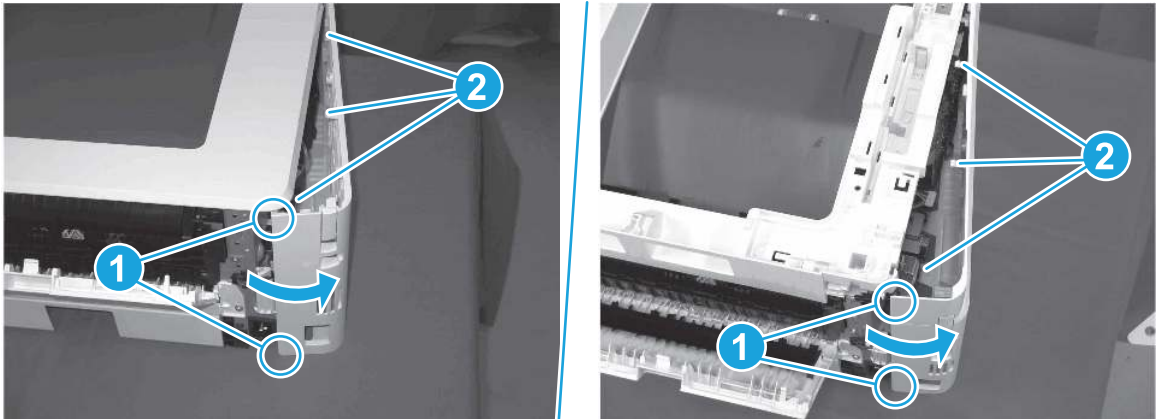
1. Remove one screw (callout 1).

**Figure 5-267** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-268** Release two bosses and three tabs



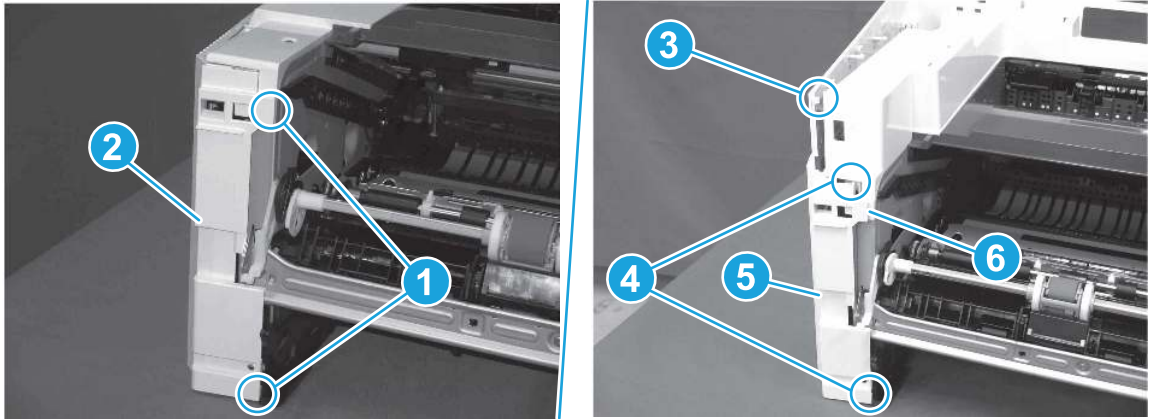
3. At the front of the printer, do one of the following:
  - **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
  - **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**⚠ 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 5-269 Remove the cover



## 5. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

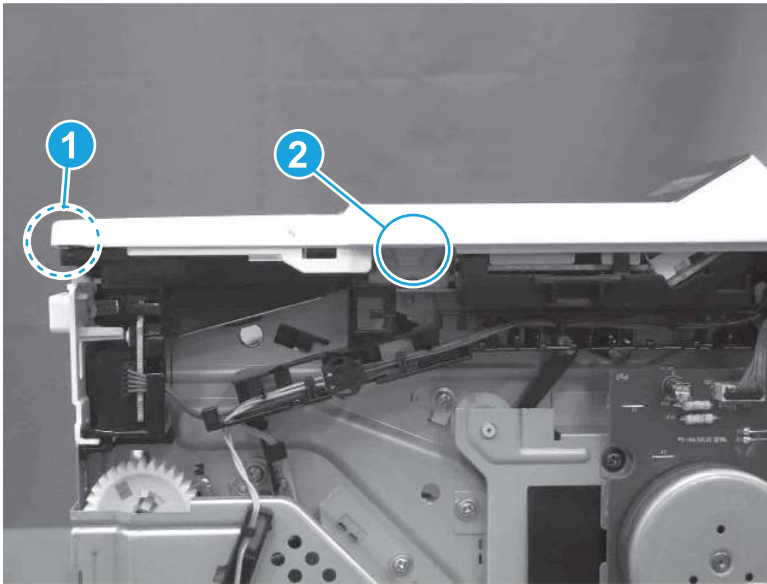
1. Remove one screw.

Figure 5-270 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 5-271** Release one boss and one tab



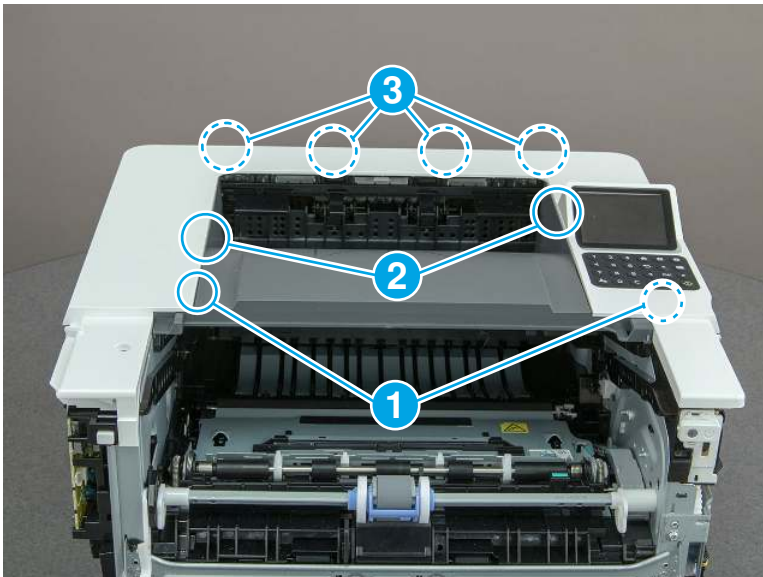
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

**Figure 5-272** Remove the cover



## 6. Remove the keypad cover and indication cover

Follow these steps to remove the keypad cover and indication cover.

1. Starting with a corner of the keypad cover, gently peel it away from the printer to remove it.

**Figure 5-273** Remove the keypad



2. Rotate the top edge of the indication cover away from the printer to release it.

---

 **Reinstallation tip:** Use two-sided tape to secure the upper edge of the indication cover to the top cover.

---

**Figure 5-274** Remove the cover



3. Remove the indicator cover.

Figure 5-275 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 5-29** Part information

Part number	Part description
RC4-3231-000CN	Tray, paper delivery (output bin)

## 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 5-276 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).

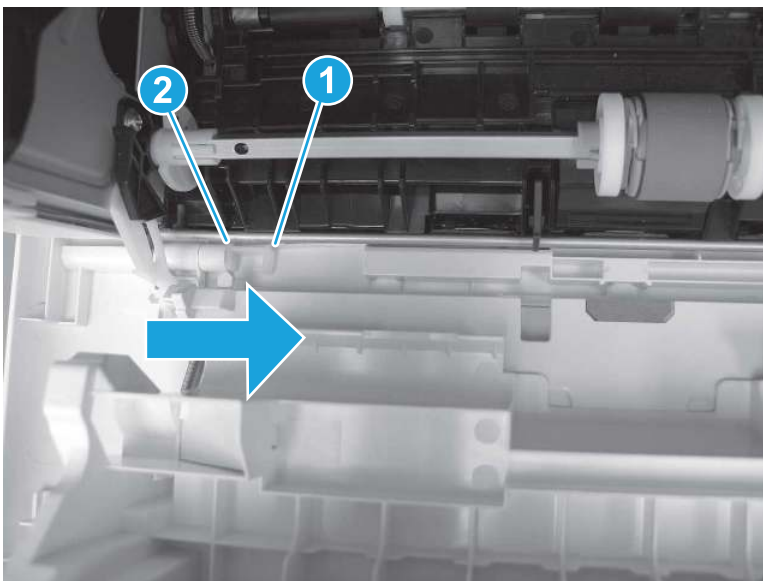
---

 **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.

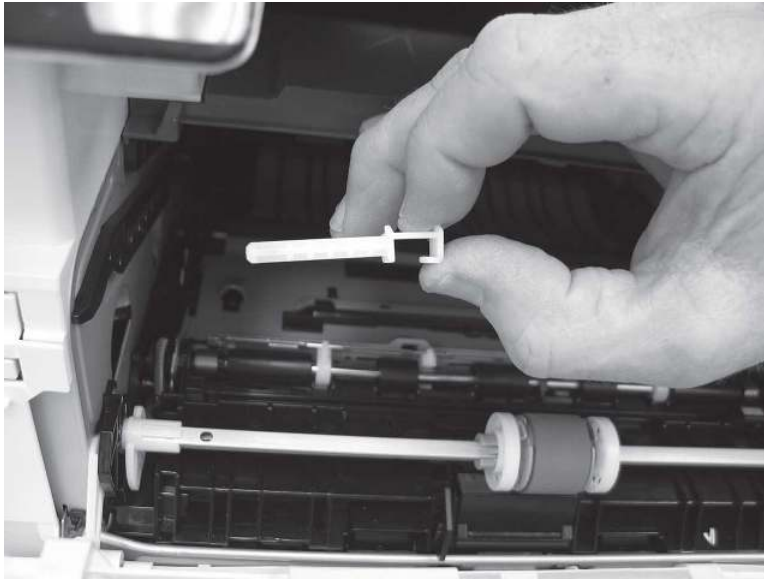
---

Figure 5-277 Release the support shaft



2. Remove the support shaft.

**Figure 5-278** Remove the support shaft



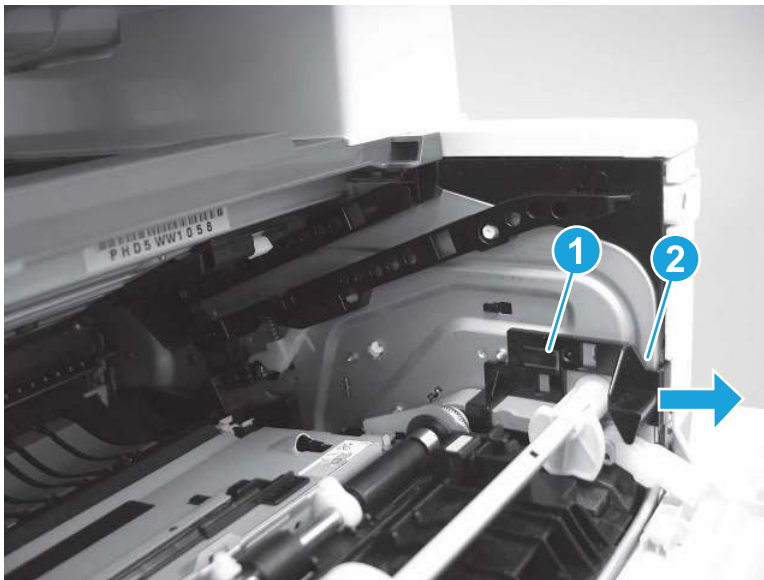
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

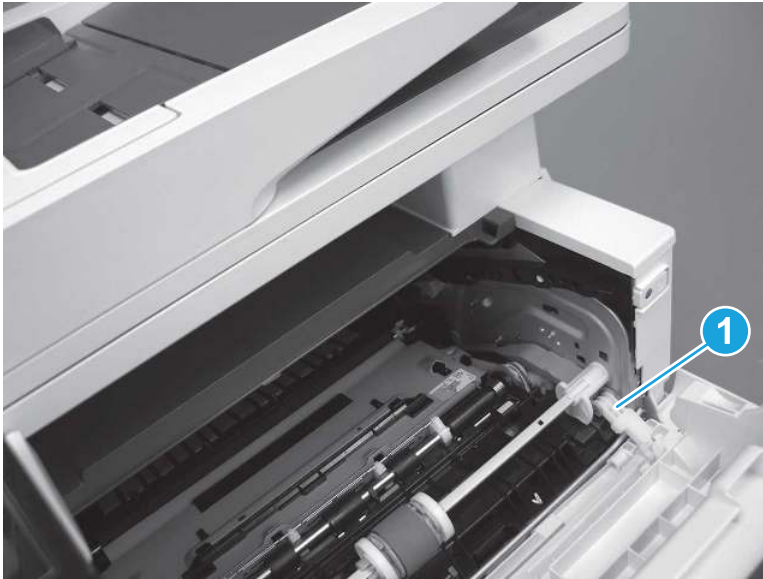
---

**Figure 5-279** 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 5-280** 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).

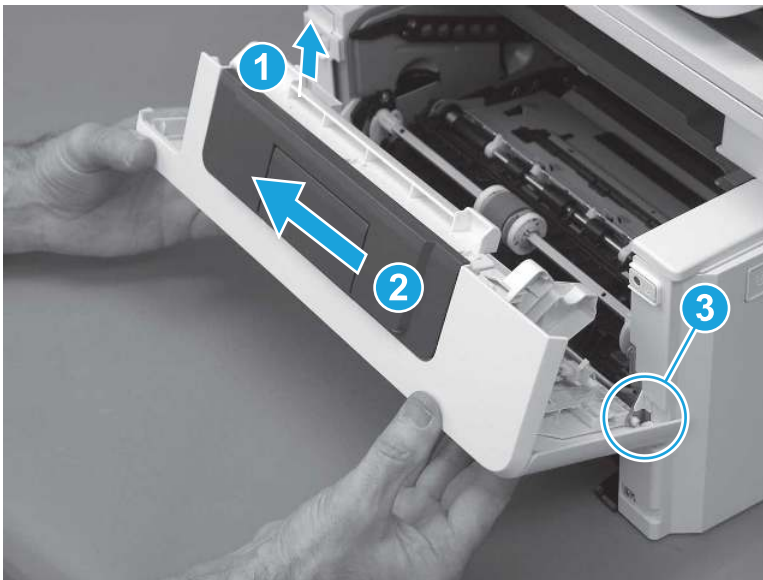
---

**⚠ 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.

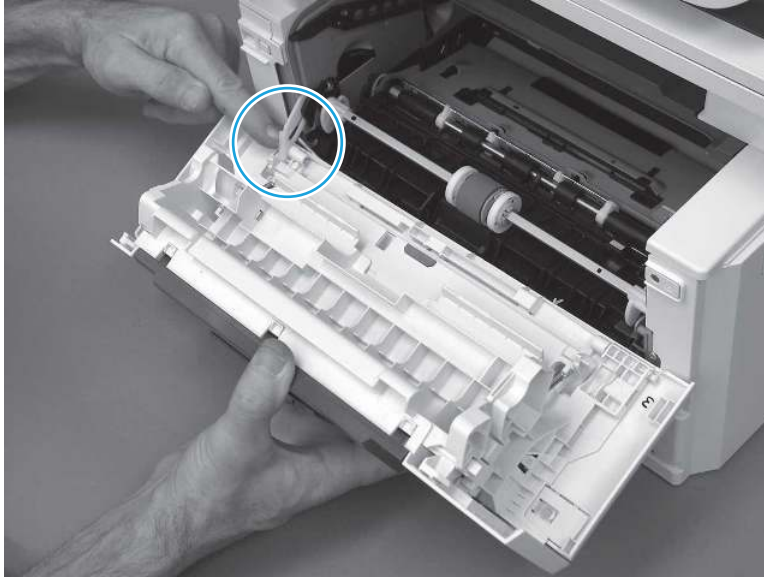
---

**Figure 5-281** Release the door



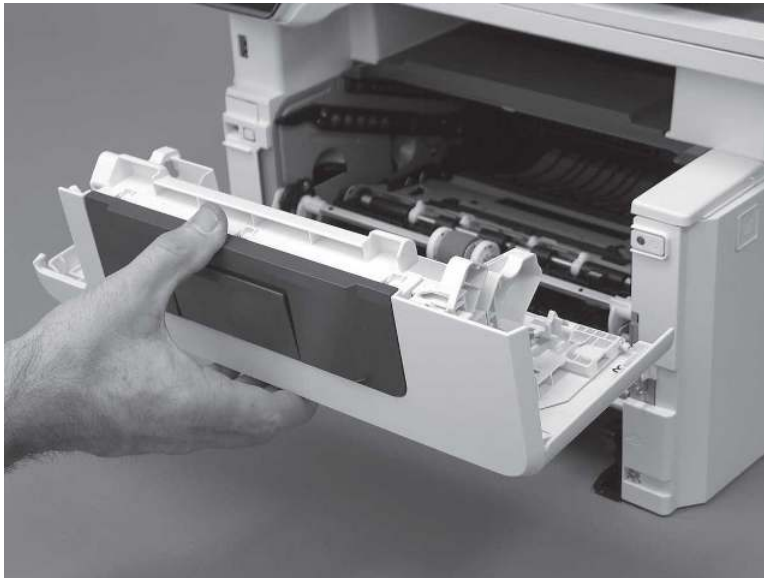
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-282** Release the left-side retainer arm



7. Remove the door.

**Figure 5-283** 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.

---

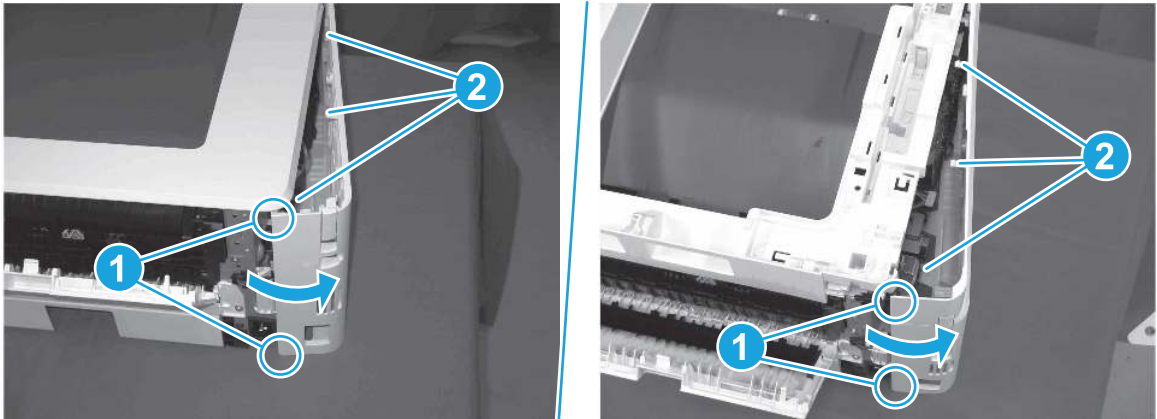
1. Remove one screw (callout 1).

Figure 5-284 Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

Figure 5-285 Release two bosses and three tabs



3. At the front of the printer, do one of the following:

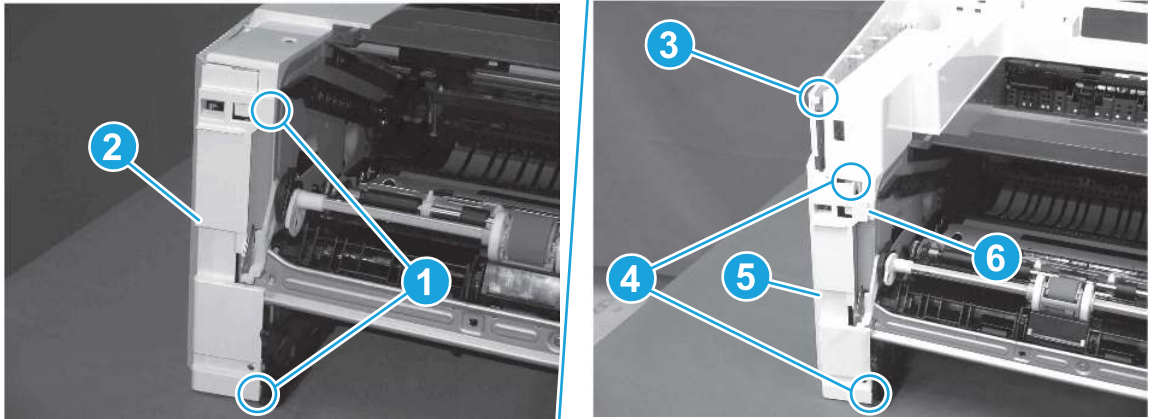
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**⚠ 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 5-286 Remove the cover



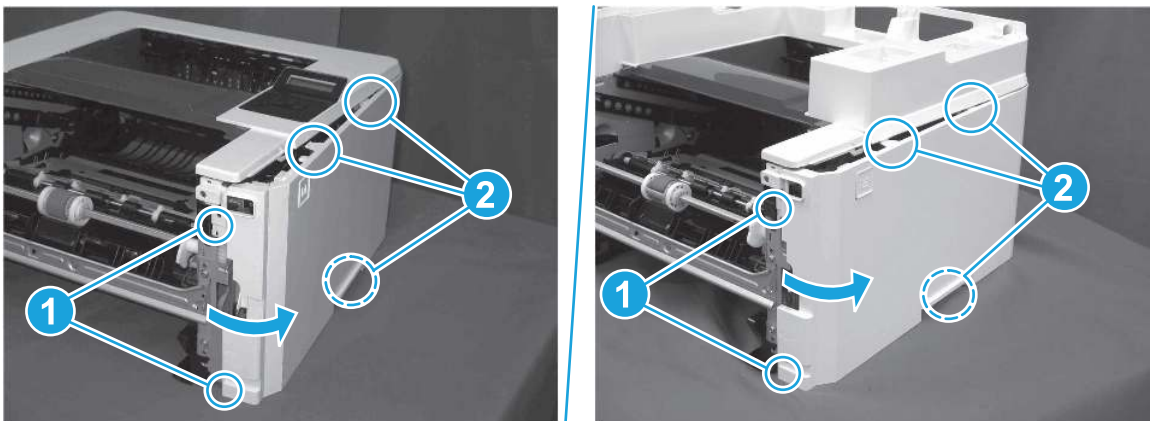
#### 4. Remove the right cover

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).

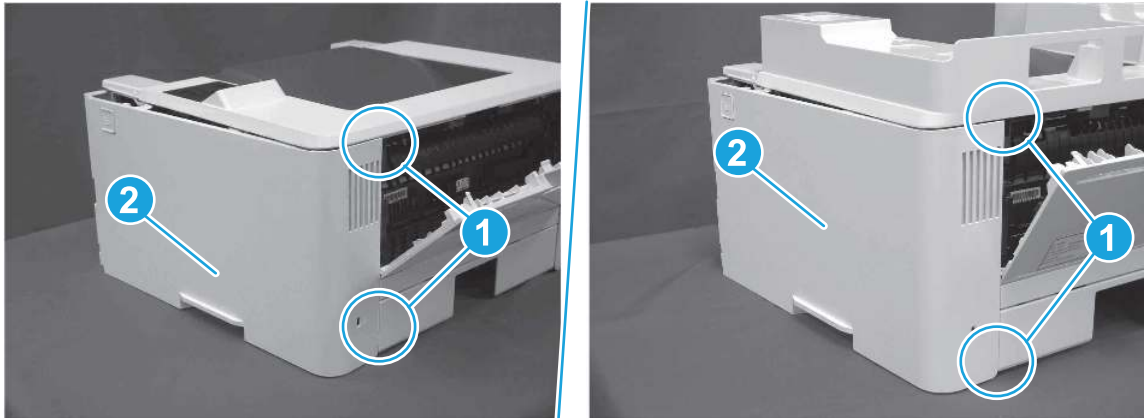
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-287 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-288** Remove the cover

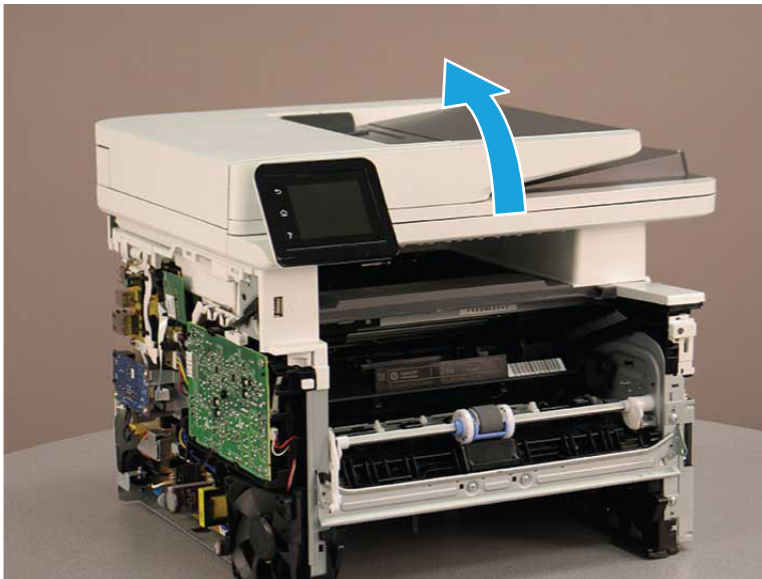


## 5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

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.

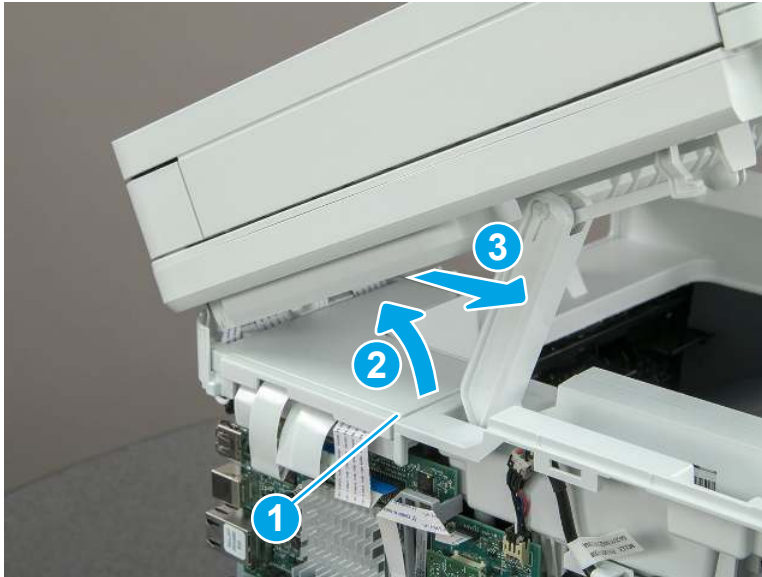
**Figure 5-289** Raise the ISA





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 5-290** 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 5-291** Disconnect three FFCs



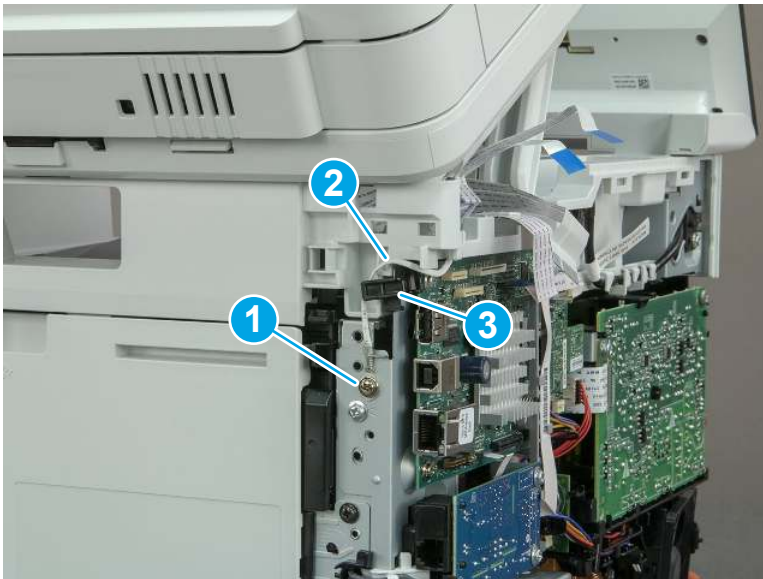
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-292** Release the tape



3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-293** Release the ground wire



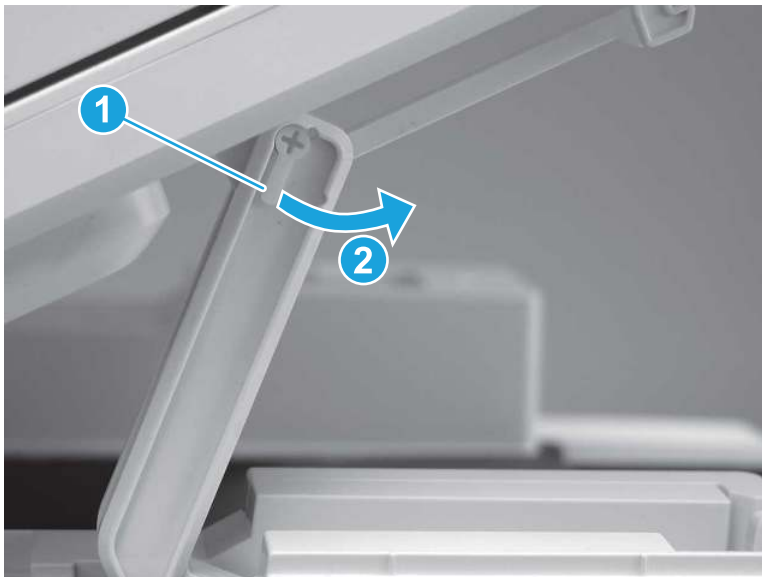
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-294** 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 5-295** 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 5-296** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-297** Rotate the ISA towards the rear of the printer



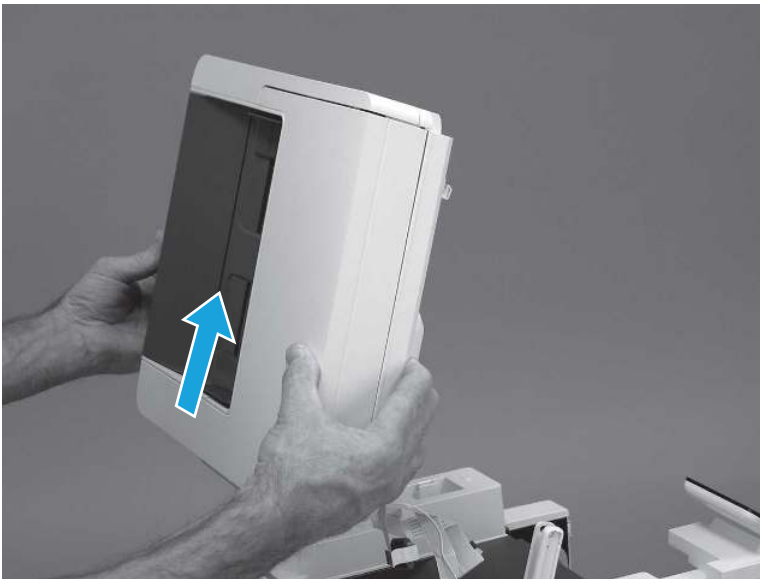
8. Slide the ISA as shown to release it.

**Figure 5-298** Release the ISA



9. Remove the ISA.

**Figure 5-299** Remove the ISA



## 7. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

---

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

If the control panel is not fully tilted forward, tilt it forward now until it stops.

---

**Figure 5-300** Open the ISA



2. Remove one screw (callout 1).

**Figure 5-301** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-302** Release two tabs



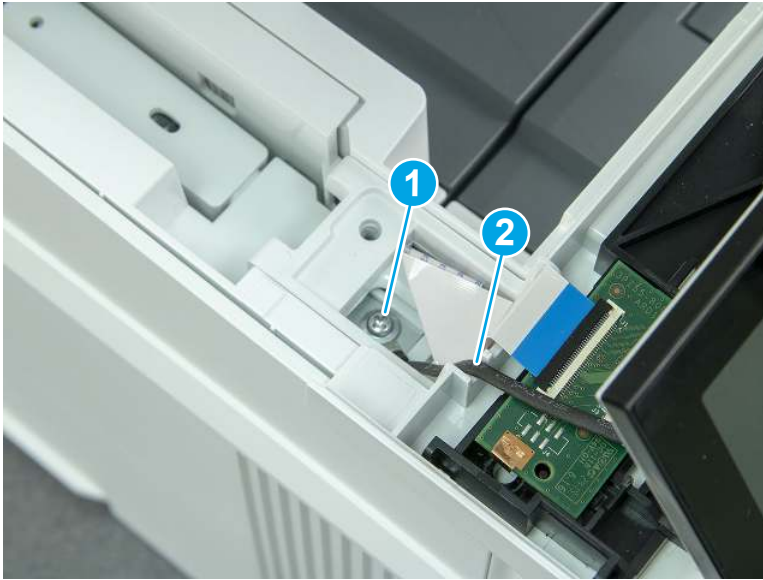
4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-303** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-304** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-305** Disconnect two FFC





7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-306** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**⚠ CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-307** Remove two screws and remove the control panel assembly

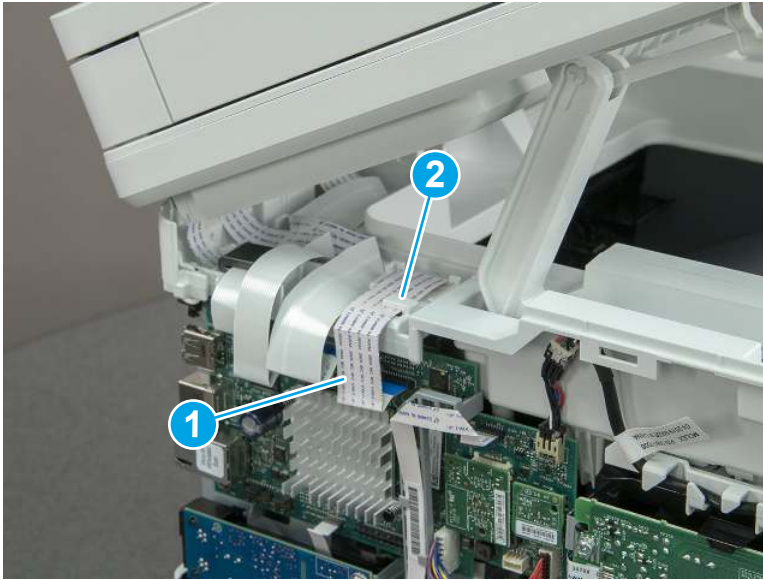


## 8. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

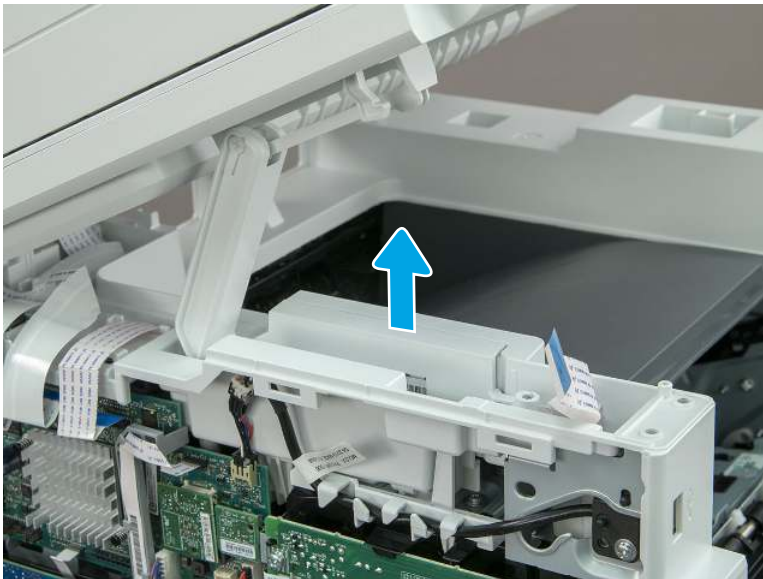
1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

**Figure 5-308** Disconnect one cable



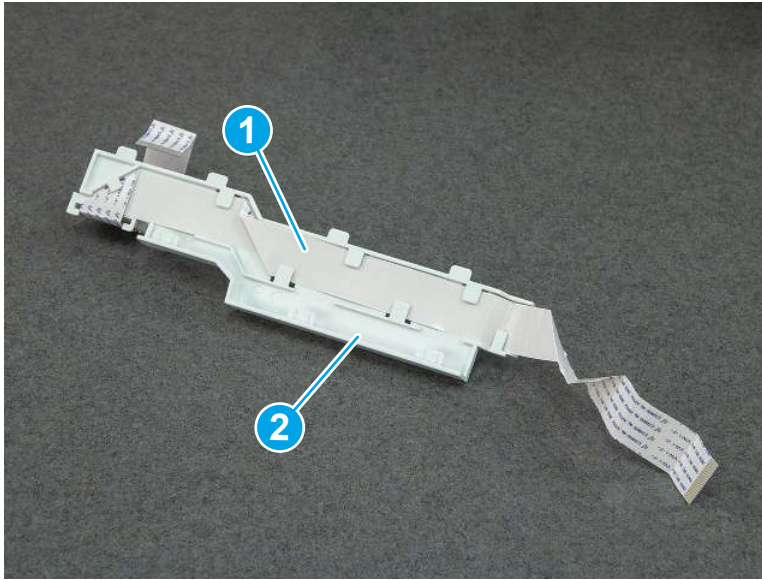
2. Lift up the control-panel FFC cover to remove the cover and cable.

**Figure 5-309** Remove the cover and cable



3. If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).

**Figure 5-310** Remove the FFC

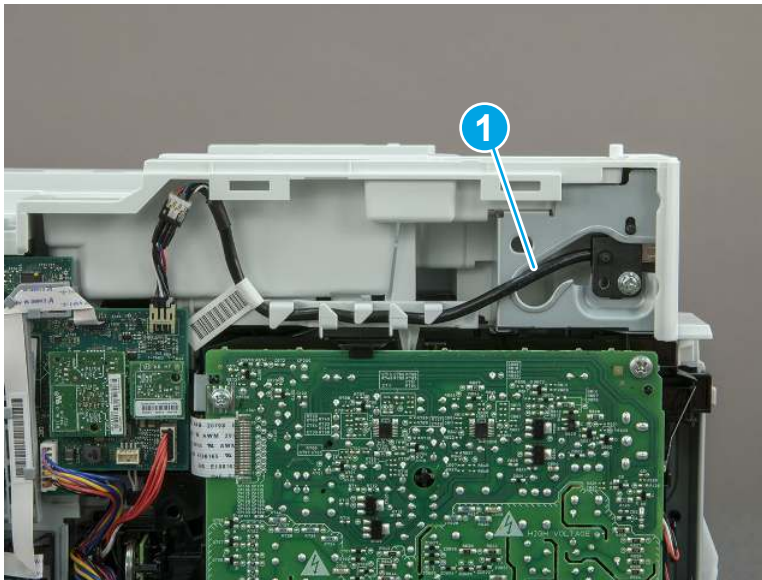


## 9. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

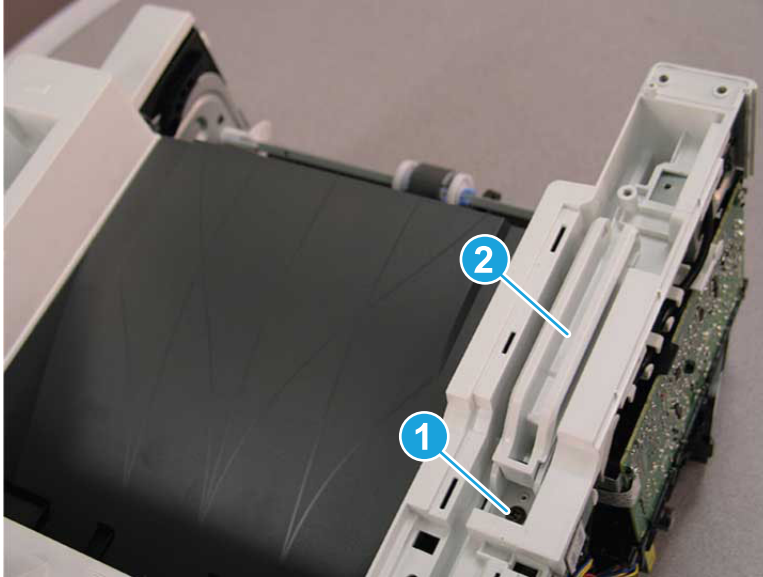
**Figure 5-311** Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

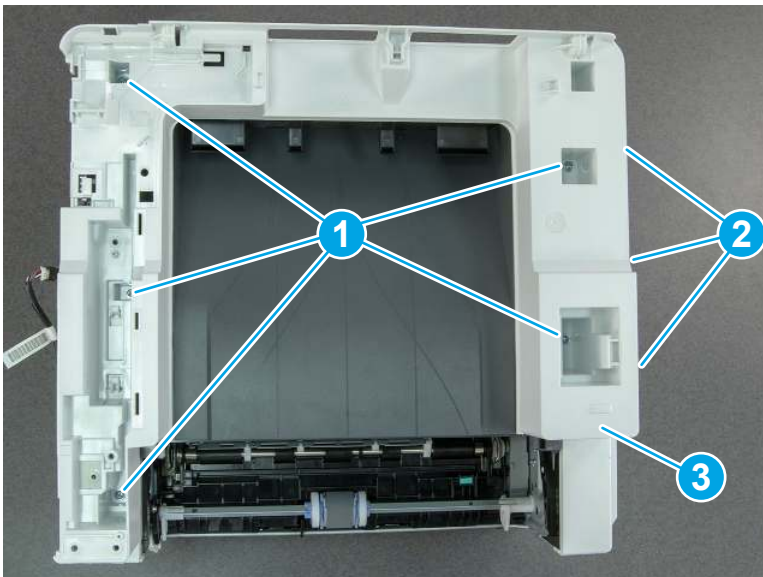
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

**Figure 5-312** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-313** Remove the top cover



## 10. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

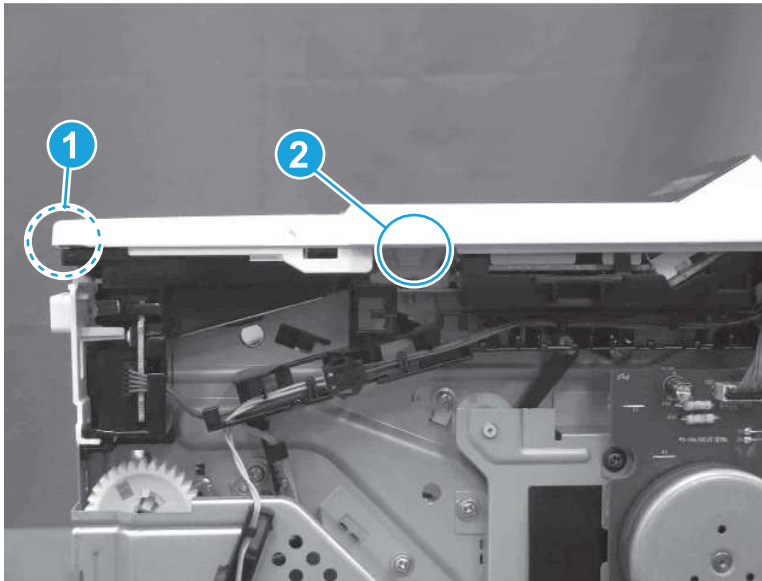
1. Remove one screw.

Figure 5-314 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 5-315 Release one boss and one tab



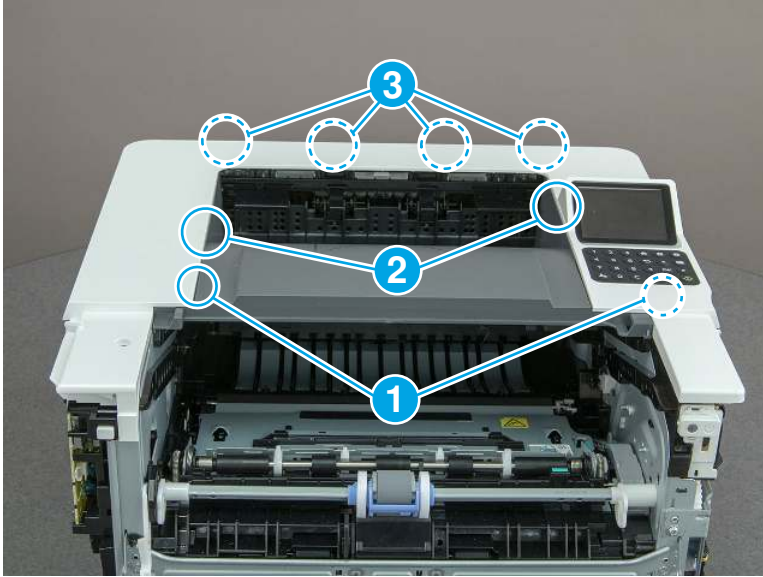
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

Figure 5-316 Remove the cover

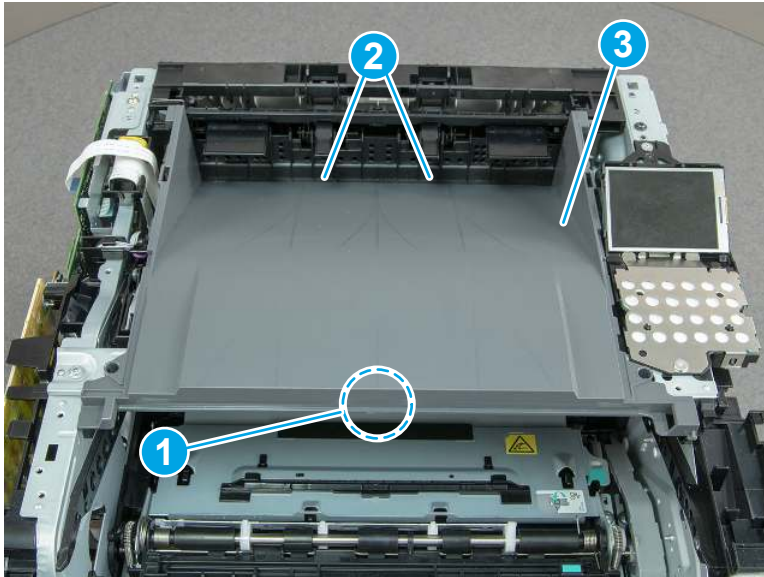


### 11. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

- ▲ Release one tab (callout 1), release two bosses (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-317 Remove the cover



## 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: Internal parts and assemblies (base printer)

Learn how to remove and replace the base 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 5-30** Part information

Part number	Part description
RM2-2554-000CN	Fuser assembly (110-127V)
RM2-2555-000CN	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 5-318** Remove the tray





## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.

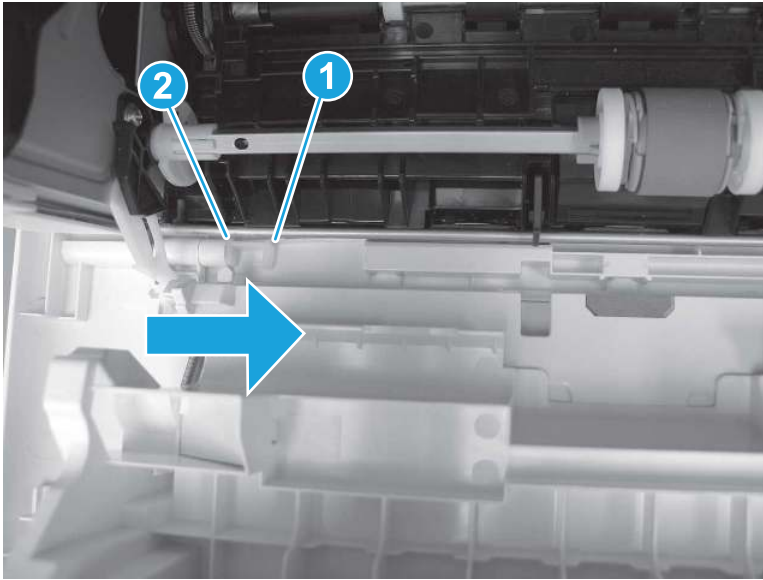
 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

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.

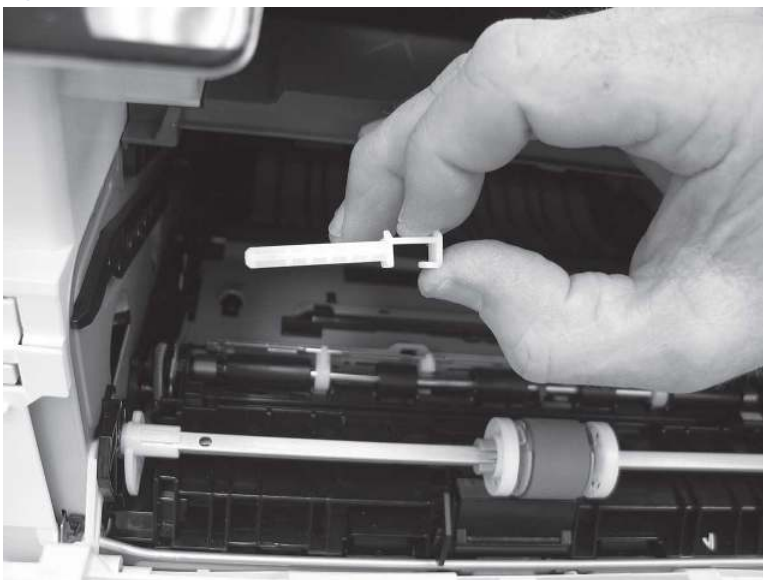
 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

**Figure 5-319** Release the support shaft



2. Remove the support shaft.

**Figure 5-320** Remove the support shaft



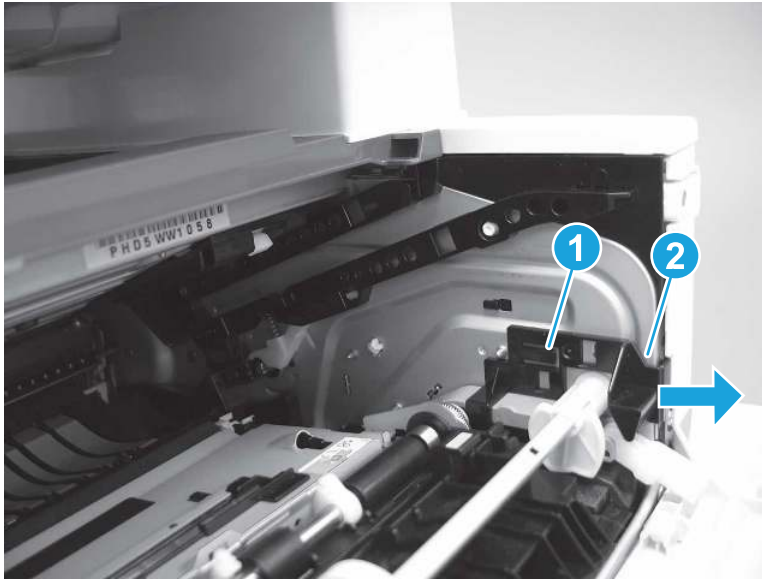
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

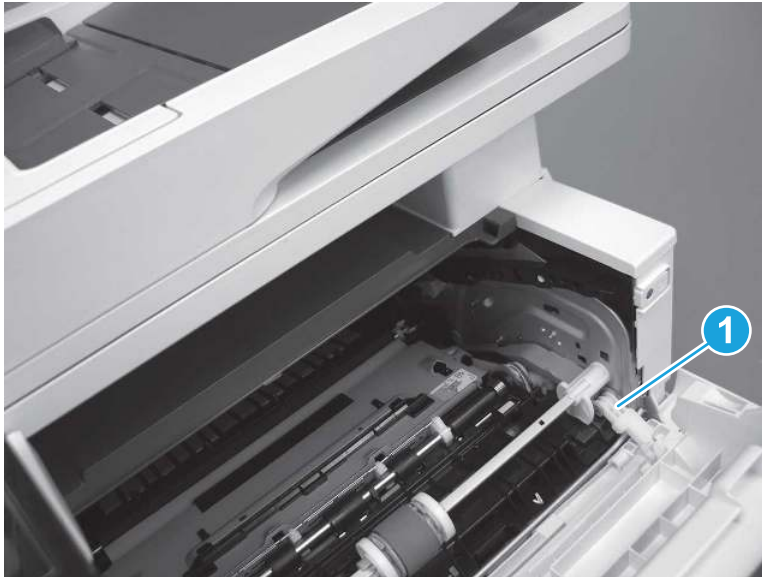
---

**Figure 5-321** 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 5-322** 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).

---

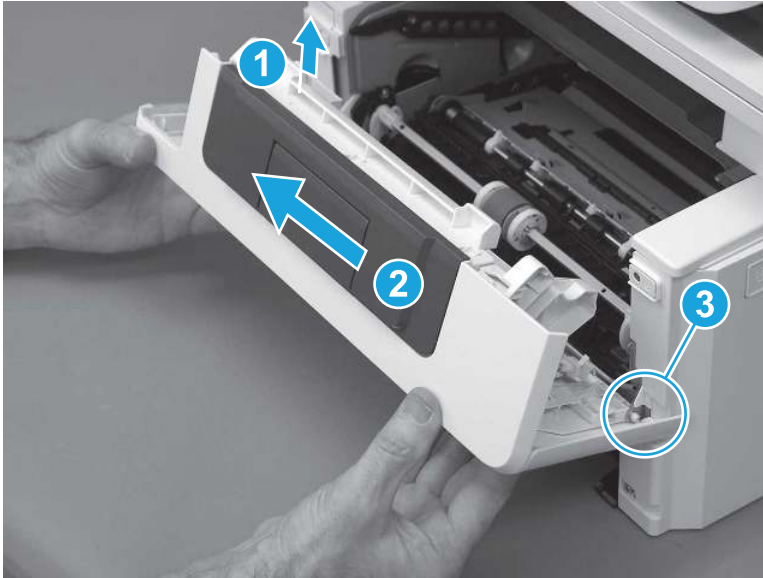
**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

---

 **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.

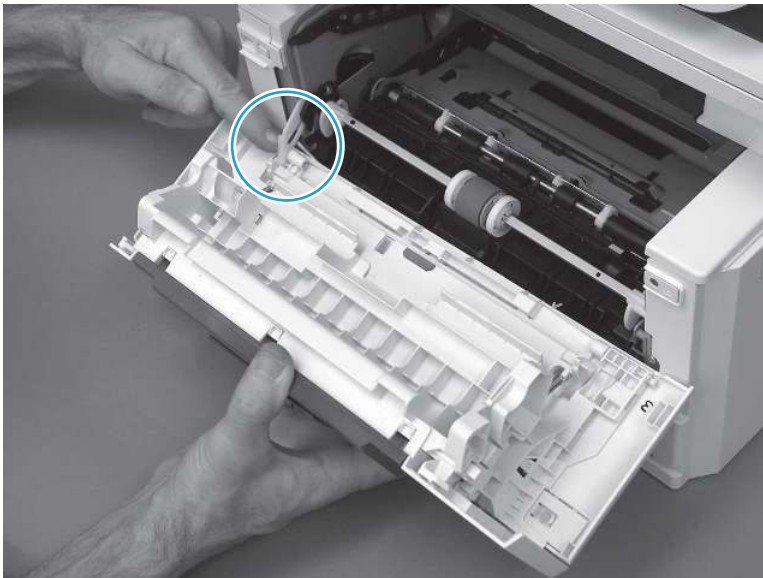
---

**Figure 5-323** Release the door



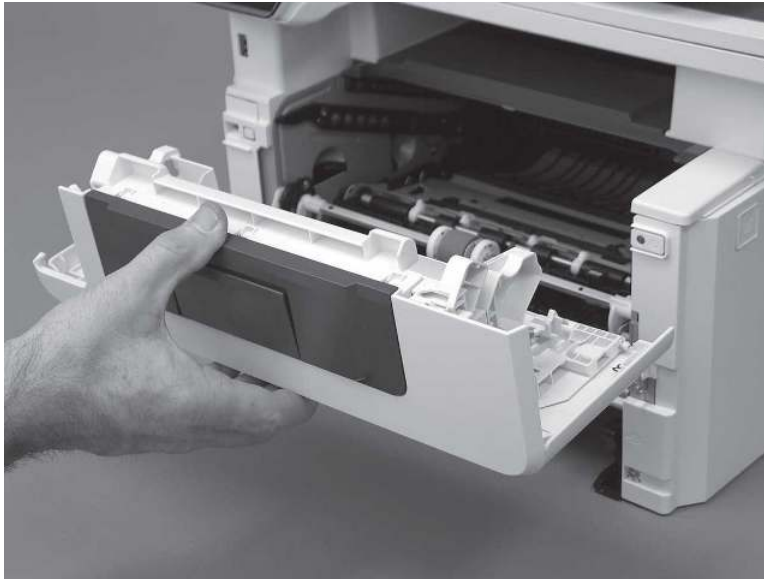
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-324** Release the left-side retainer arm



7. Remove the door.

**Figure 5-325** Remove the door



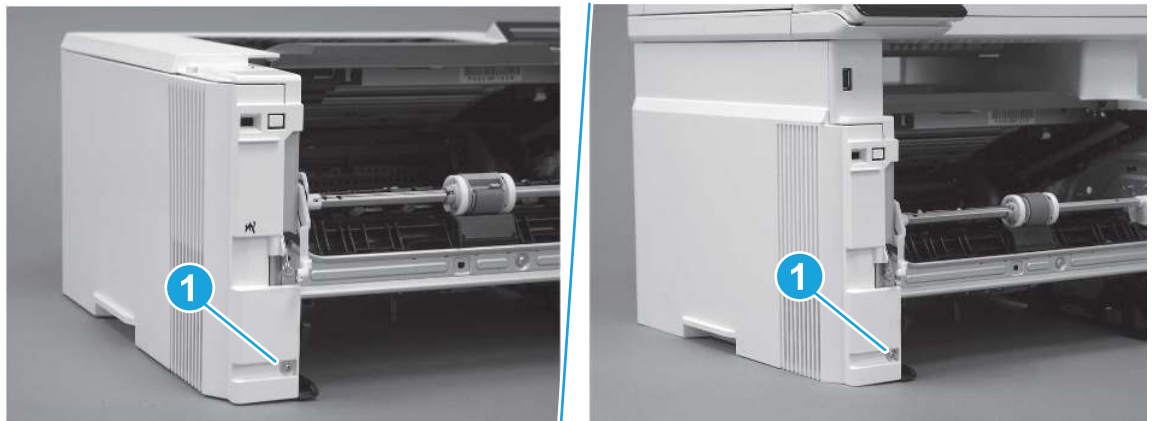
### 3. Remove the left cover

Follow these steps to remove the left cover.

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

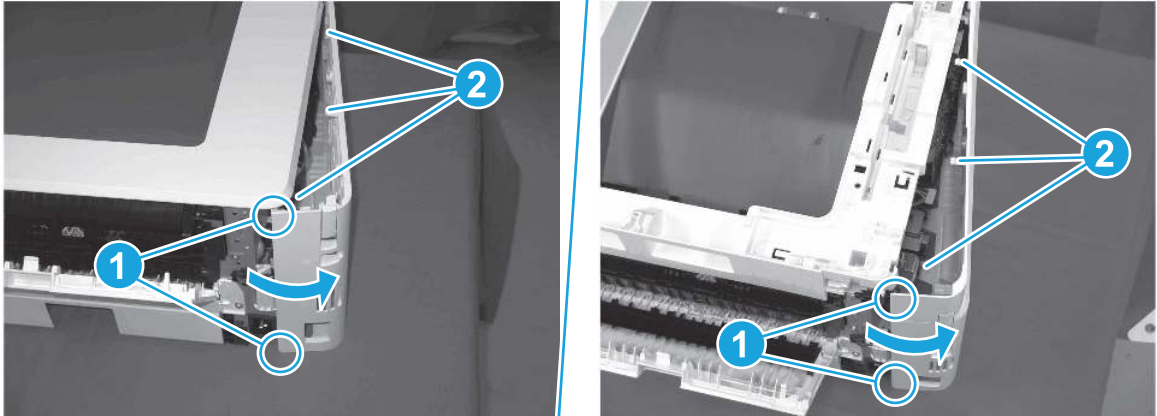
1. Remove one screw (callout 1).

**Figure 5-326** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

Figure 5-327 Release two bosses and three tabs

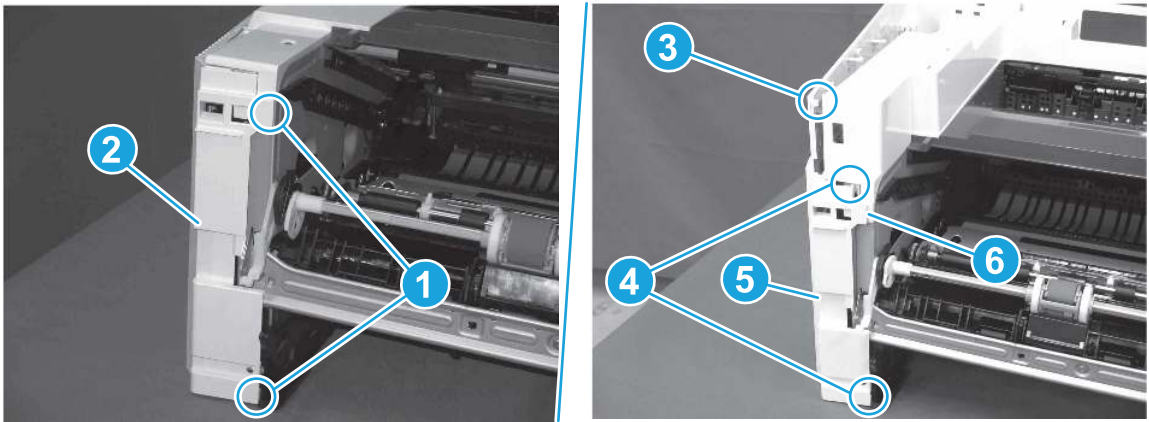


3. At the front of the printer, do one of the following:

- **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 5-328 Remove the cover



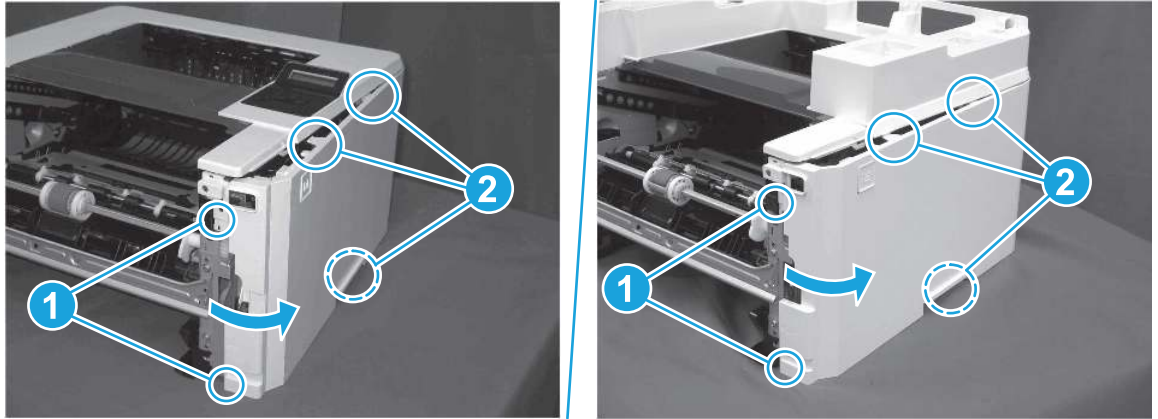
#### 4. Remove the right cover

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).

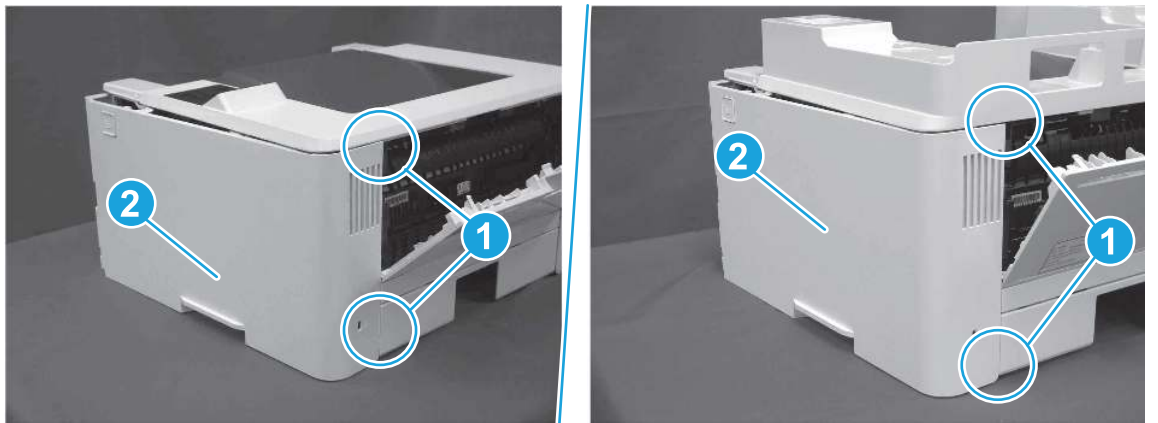
**💡 Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-329 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-330 Remove the cover



## 5. Remove the rear door assembly

Follow these steps to remove the rear door assembly.

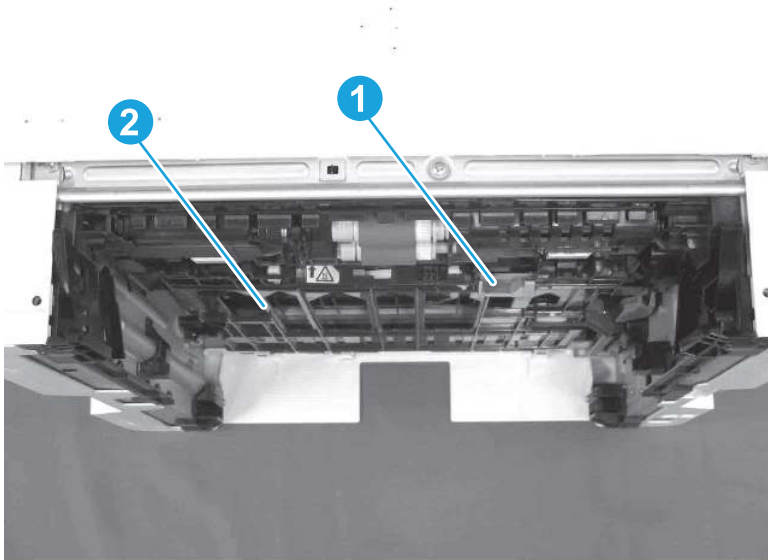
1. Inside the Tray 2 cavity, press the green jam access lever (callout 1), and then lower the duplex feed assembly (callout 2).

---

 **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 5-331 Lower the duplex feed assembly



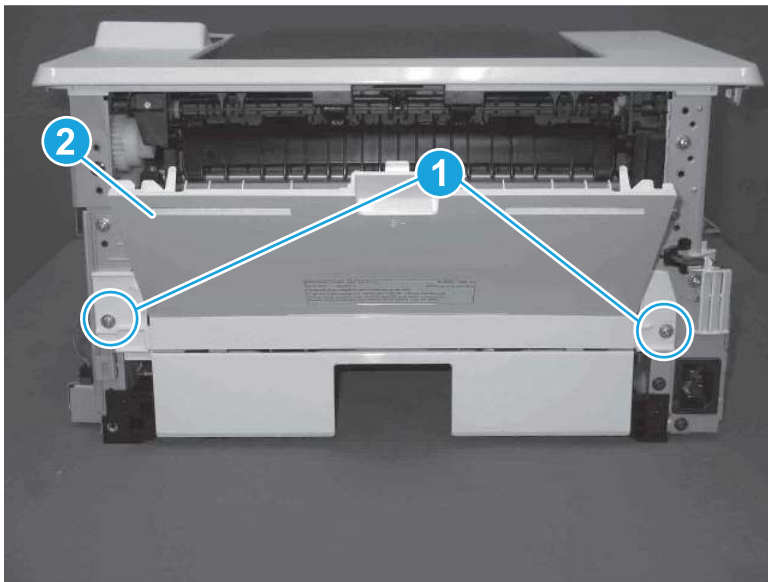
2. At the rear of the printer, remove two screws (callout 1), and then remove the rear door assembly (callout 2).

---

 **Reinstallation tip:** Slide the duplex tray into the Tray 2 cavity.

---

Figure 5-332 Remove the door assembly



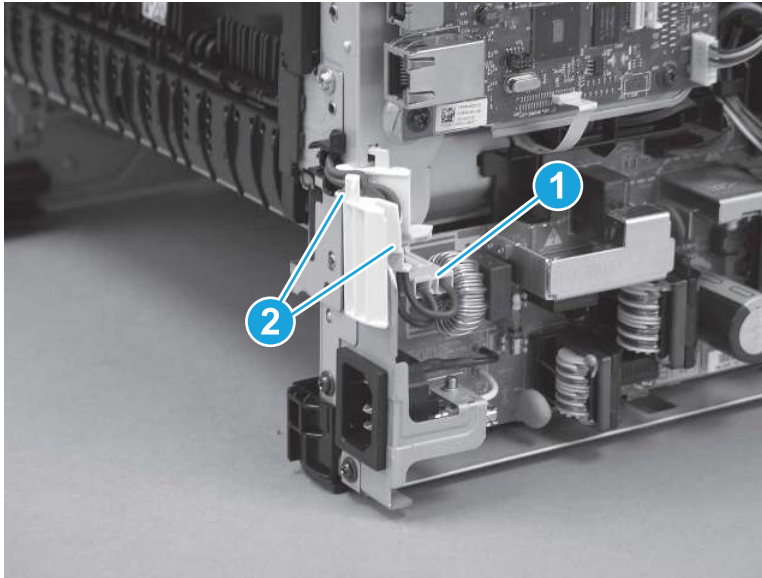
## 6. Remove the fuser

Follow these steps to remove the fuser.



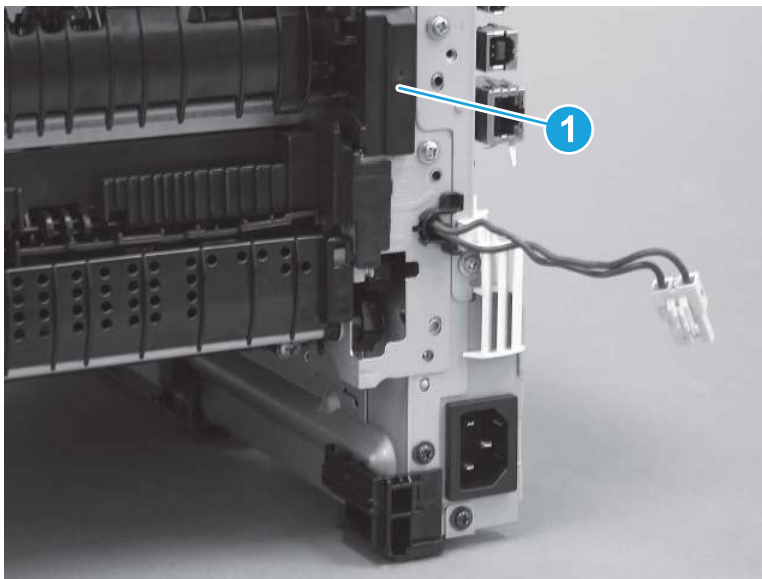
1. Disconnect one connector (callout 1), and then release the wire harness from the guide (callout 2).

**Figure 5-333** Disconnect one connector



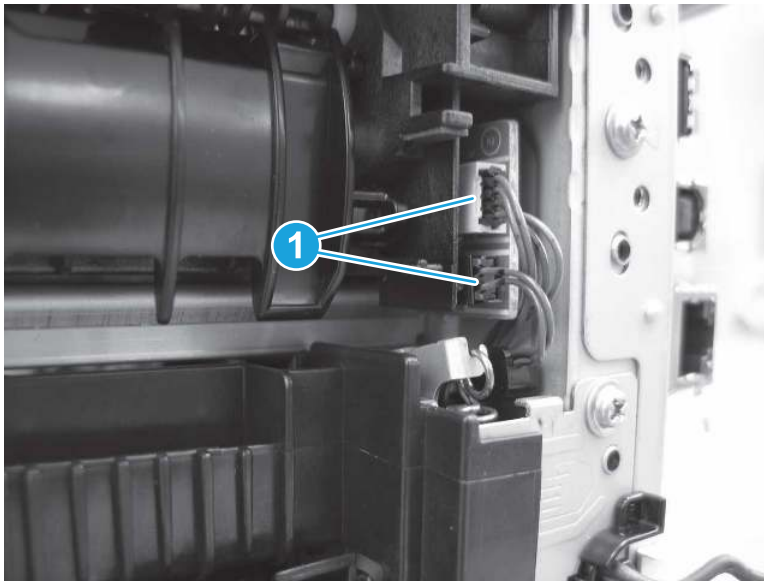
2. Pull the upper connector cover (callout 1) straight off of the printer to remove it.

**Figure 5-334** Remove the cover



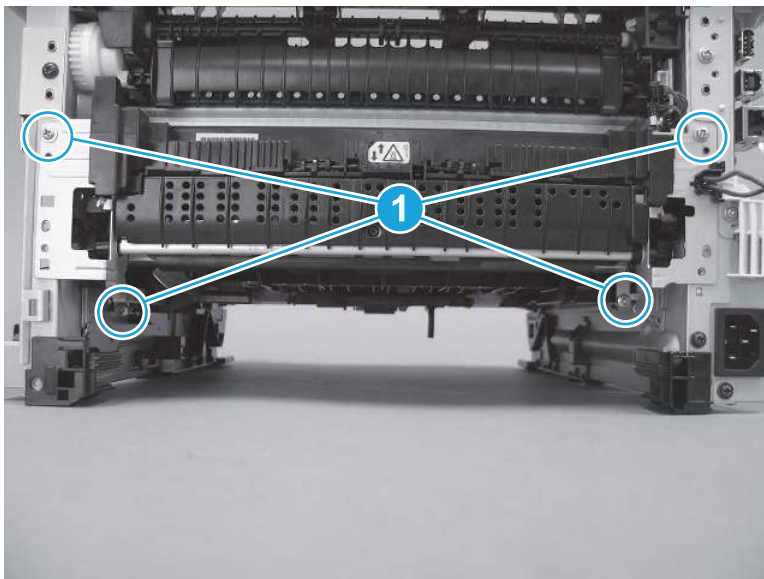
3. Disconnect two connectors (callout 1).

**Figure 5-335** Disconnect two connectors



4. Remove four screws (callout 1).

**Figure 5-336** Remove four screws



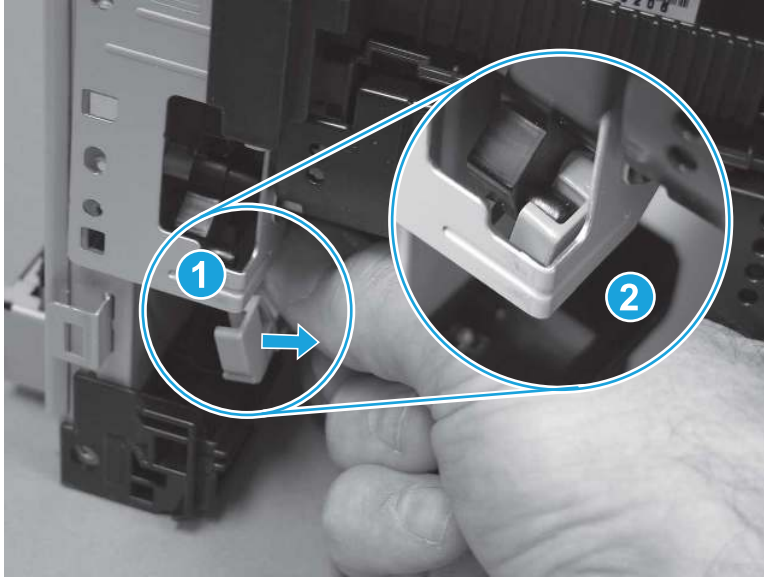
5. Pull the pressure-release link arm (callout 1) to release it from the fuser.

---

 **Reinstallation tip:** When the fuser is installed, make sure that the pressure-release arm is correctly connected to the fuser (callout 2)

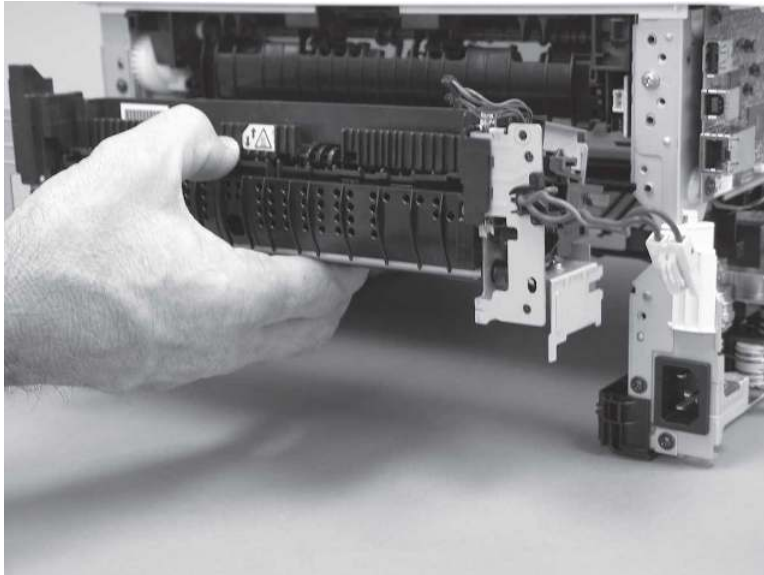
---

Figure 5-337 Release the pressure-release arm



6. Slide the fuser straight out of the printer to remove it.

Figure 5-338 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 5-31 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 5-339** 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.

---

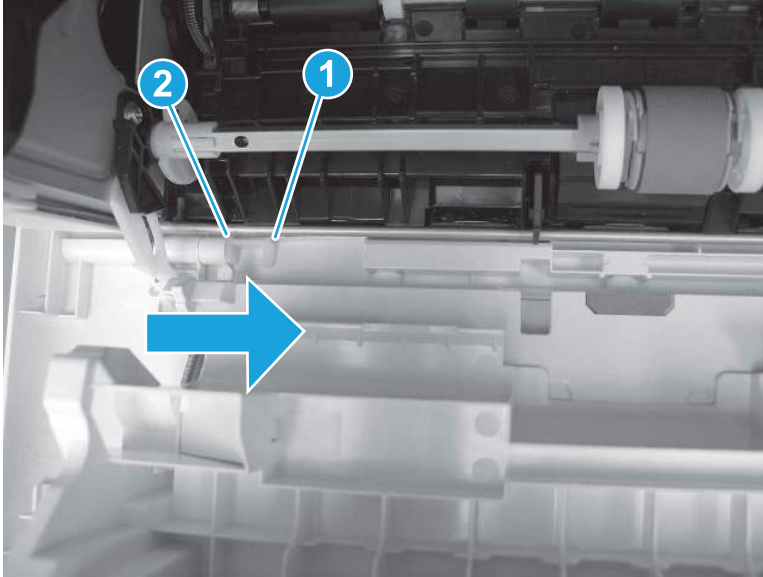
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **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.

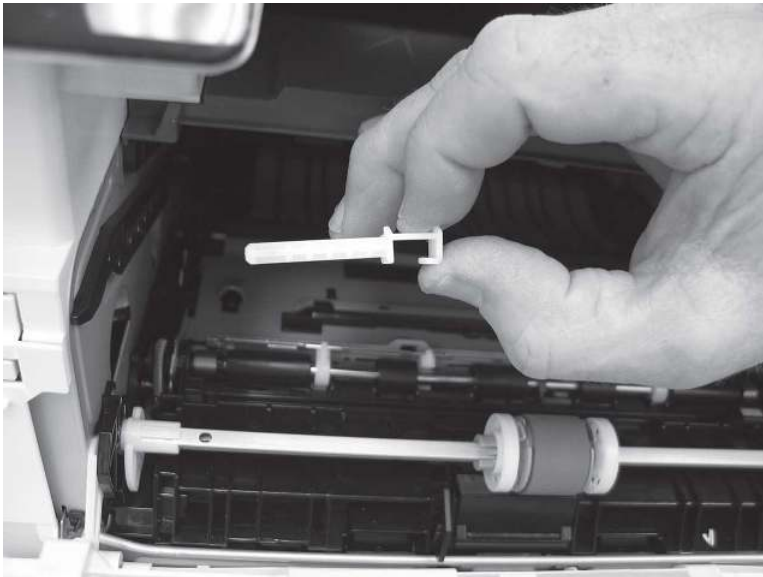
---

Figure 5-340 Release the support shaft



2. Remove the support shaft.

Figure 5-341 Remove the support shaft



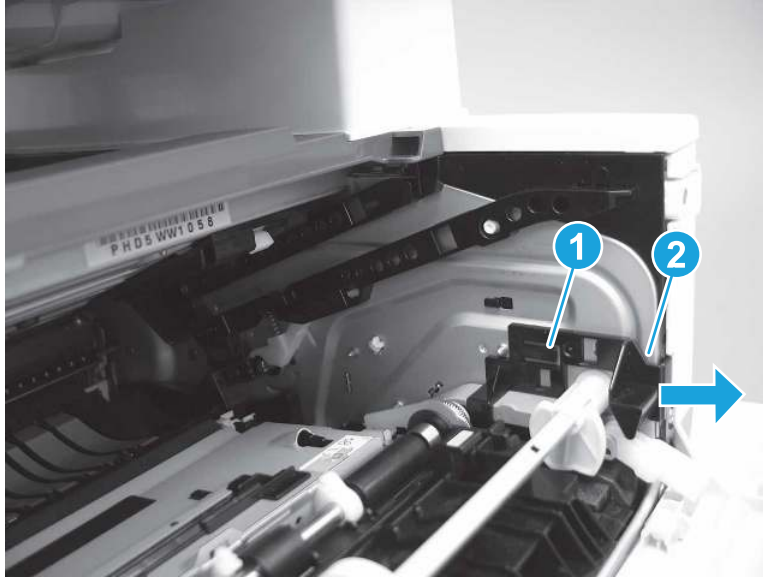
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

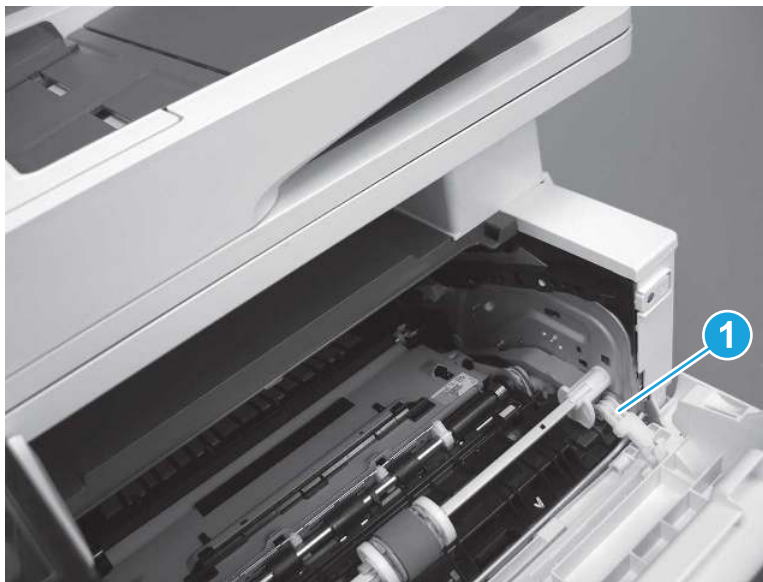
---

Figure 5-342 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 5-343 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).

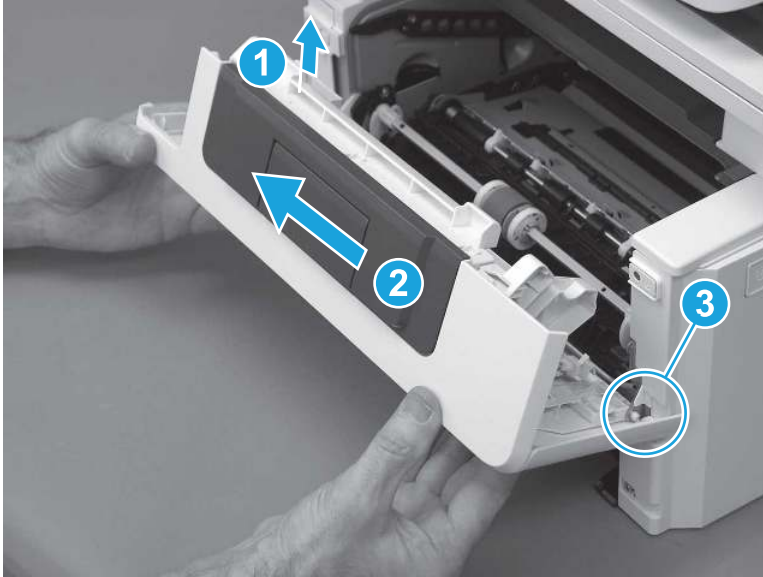
---

**⚠ 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.

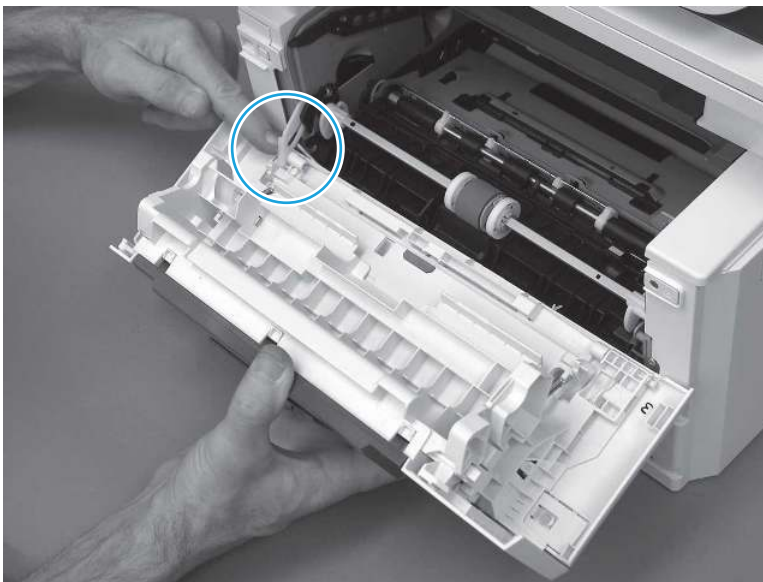
---

**Figure 5-344** 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.

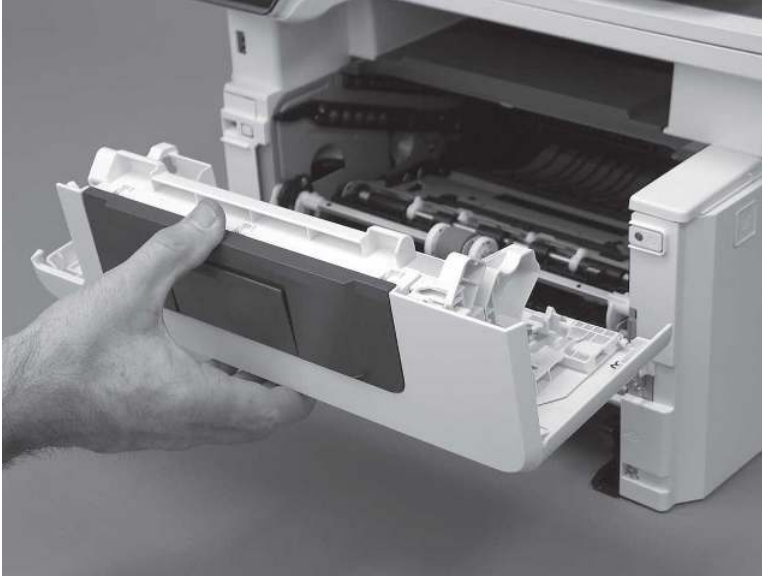
**Figure 5-345** Release the left-side retainer arm





7. Remove the door.

**Figure 5-346** 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.

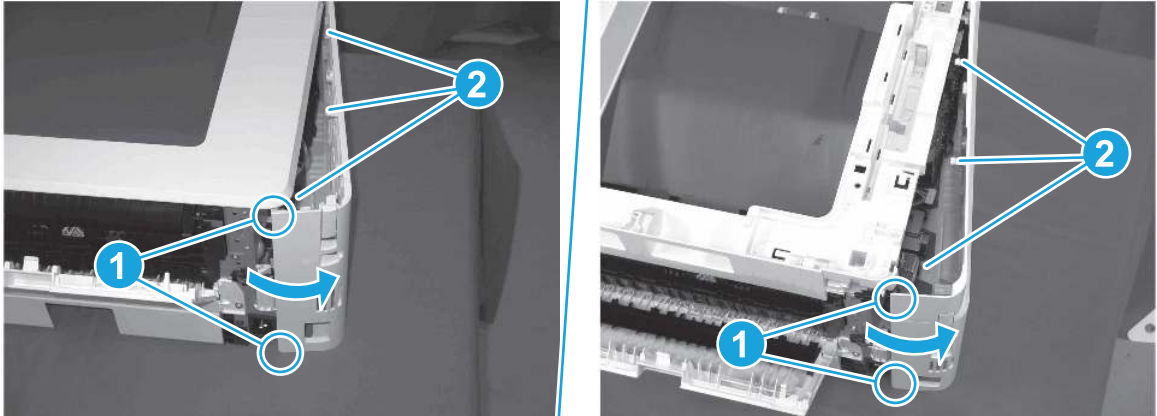
1. Remove one screw (callout 1).

**Figure 5-347** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

Figure 5-348 Release two bosses and three tabs

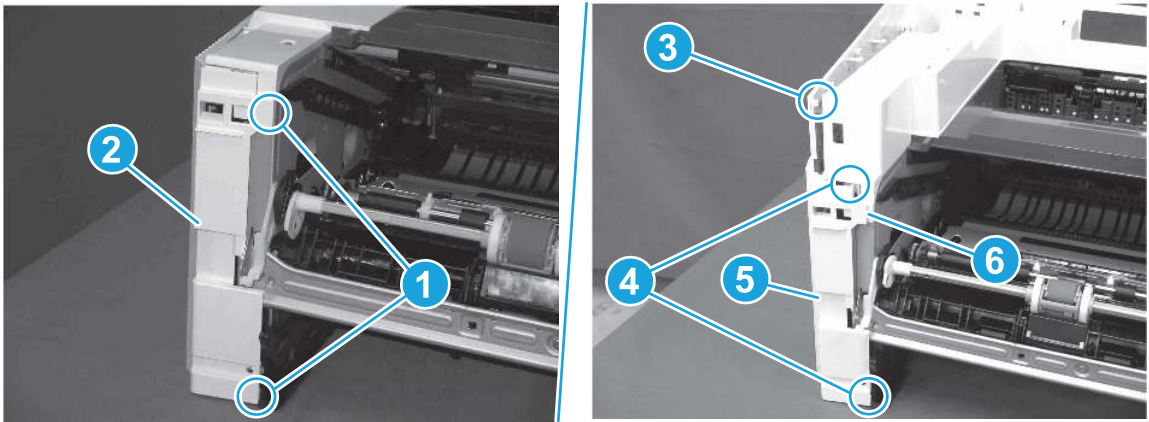


3. At the front of the printer, do one of the following:

- **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 5-349 Remove the cover



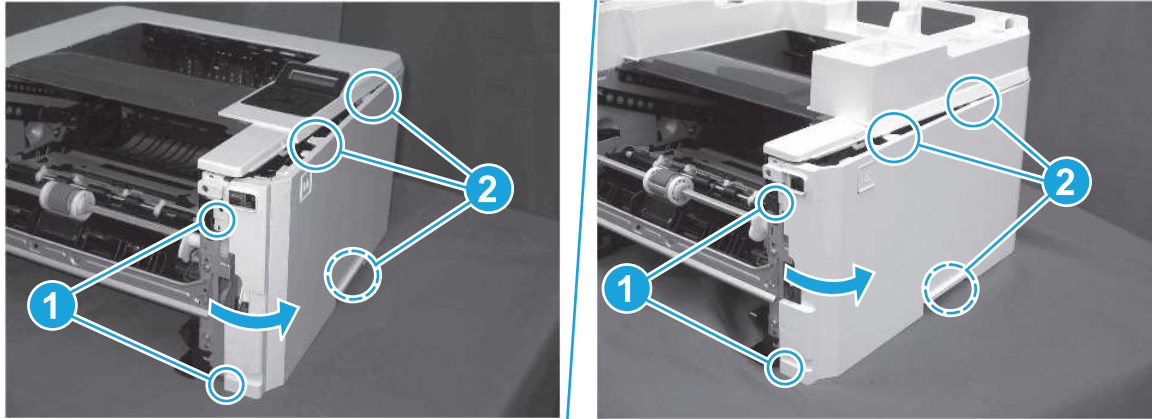
#### 4. Remove the right cover

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).

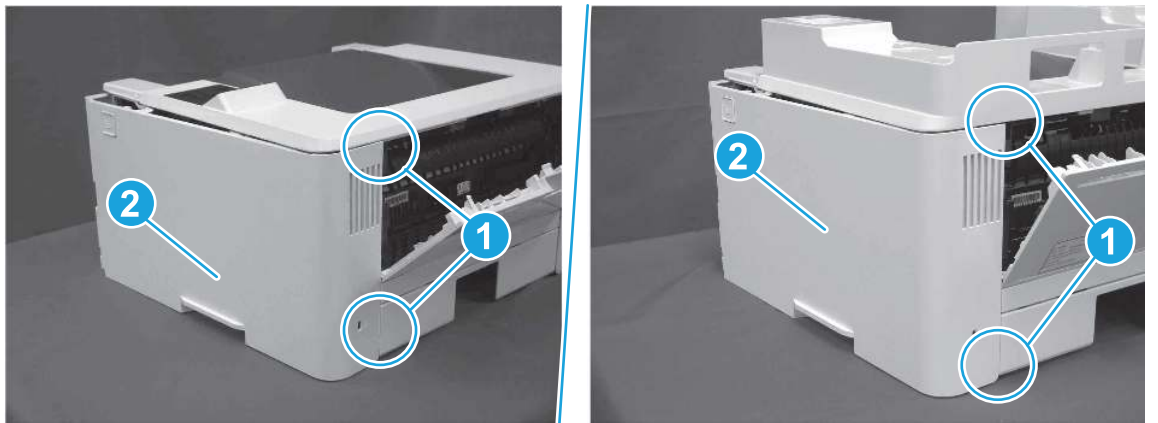
**💡 Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-350 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-351 Remove the cover



## 5. Remove the rear door assembly

Follow these steps to remove the rear door assembly.

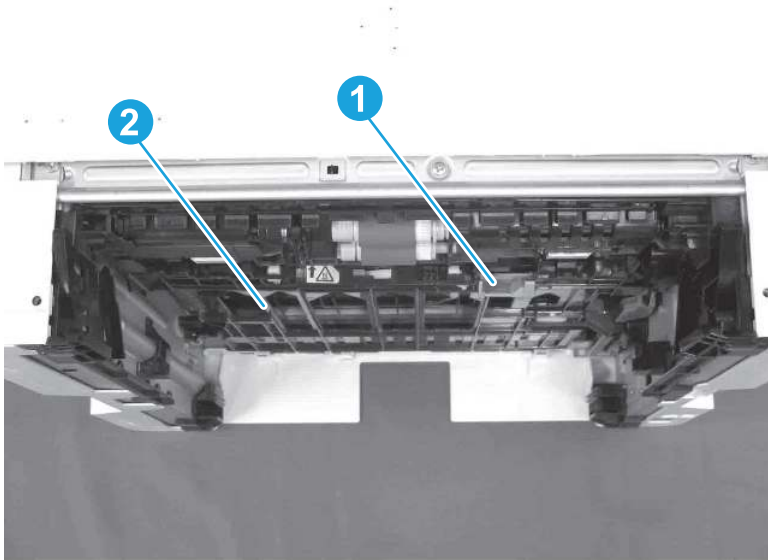
1. Inside the Tray 2 cavity, press the green jam access lever (callout 1), and then lower the duplex feed assembly (callout 2).

---

 **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 5-352 Lower the duplex feed assembly



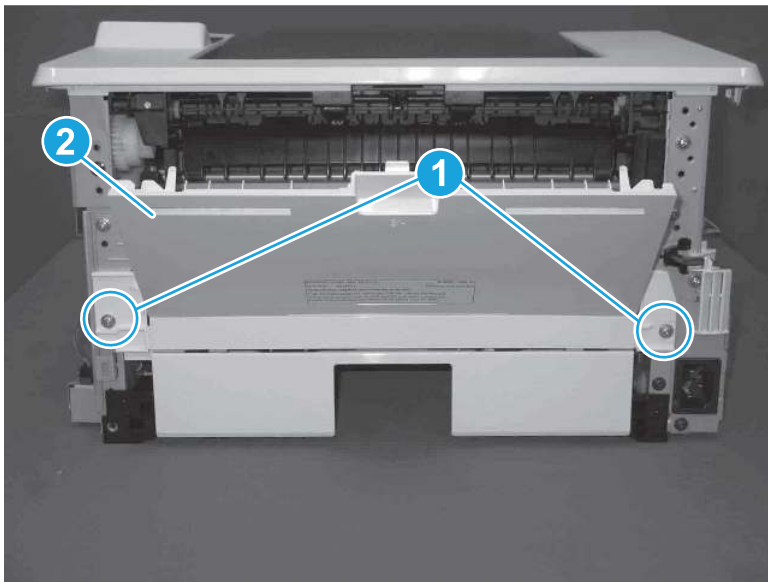
2. At the rear of the printer, remove two screws (callout 1), and then remove the rear door assembly (callout 2).

---

 **Reinstallation tip:** Slide the duplex tray into the Tray 2 cavity.

---

Figure 5-353 Remove the door assembly




## 6. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

---

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

---

If the control panel is not fully tilted forward, tilt it forward now until it stops.

---

Figure 5-354 Open the ISA



2. Remove one screw (callout 1).

Figure 5-355 Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-356** Release two tabs



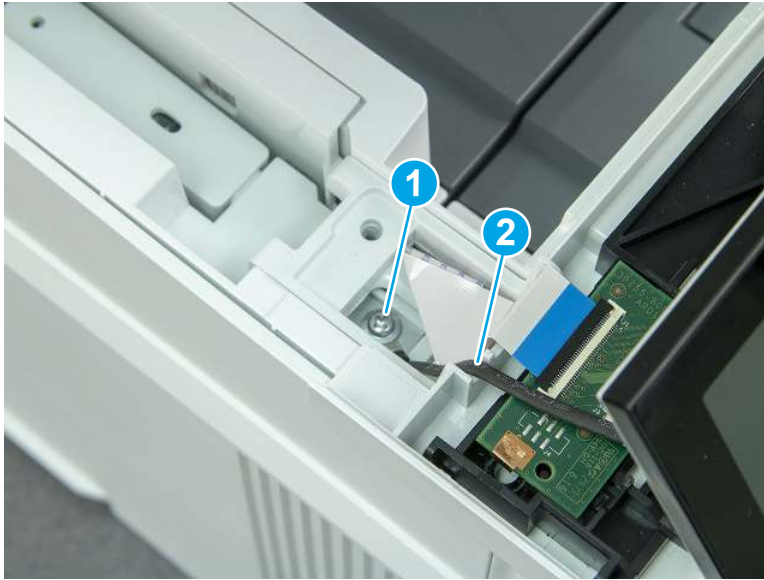
4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-357** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-358** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-359** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-360** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-361** Remove two screws and remove the control panel assembly



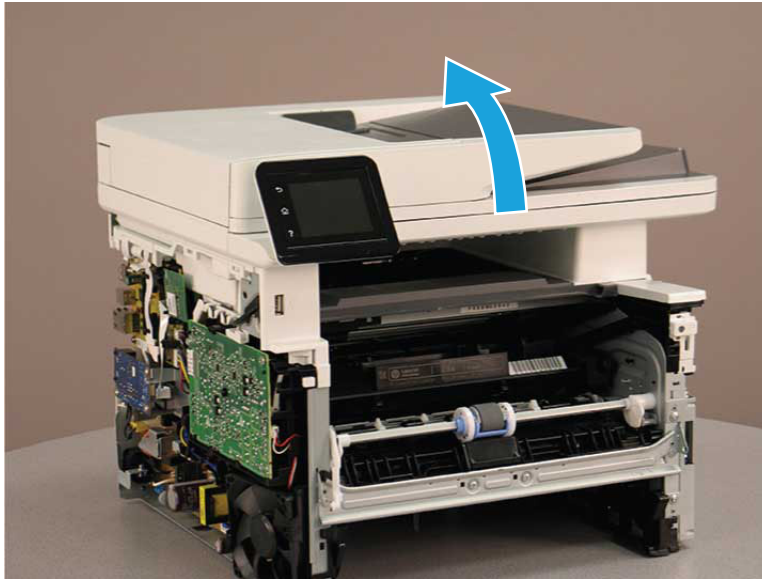
## 7. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).



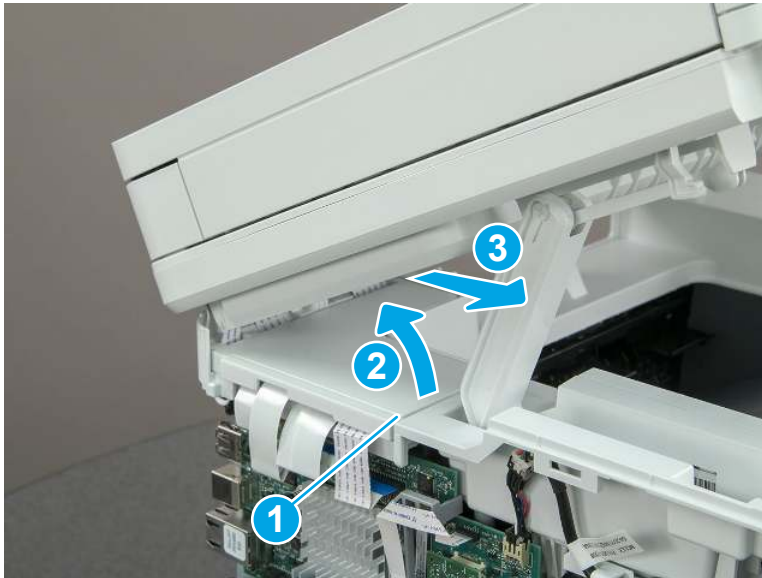
1. If the ISA is not already raised, raise it now.

**Figure 5-362** 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 5-363** Remove the ISA FFC cover



## 8. 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 5-364 Disconnect three FFCs



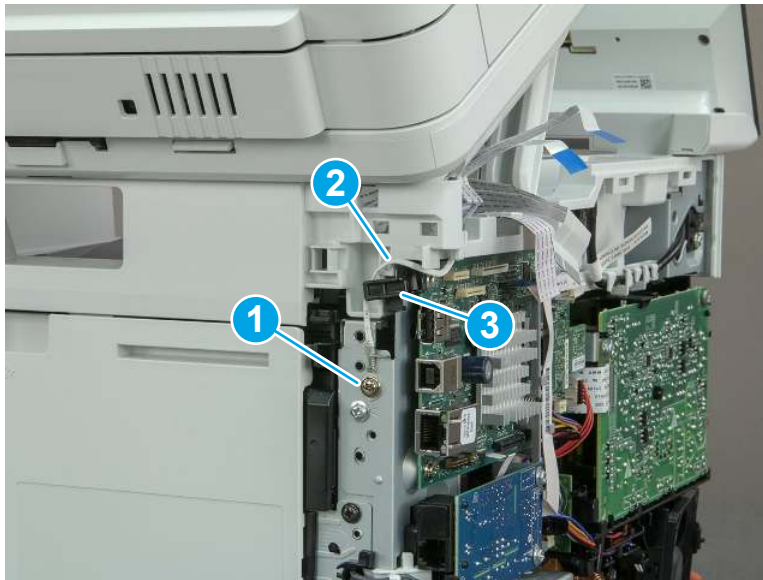
2. Release the tape (callout 1) that holds the flat cables to the top cover.

Figure 5-365 Release the tape



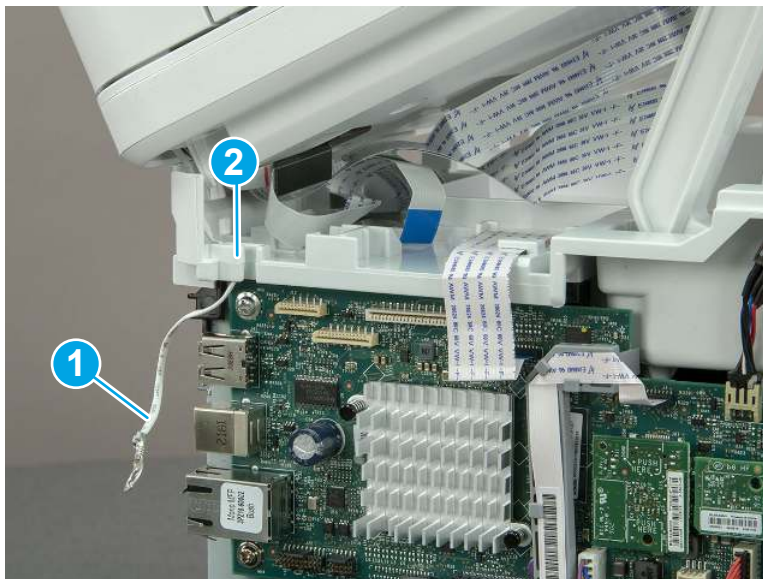
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-366** Release the ground wire



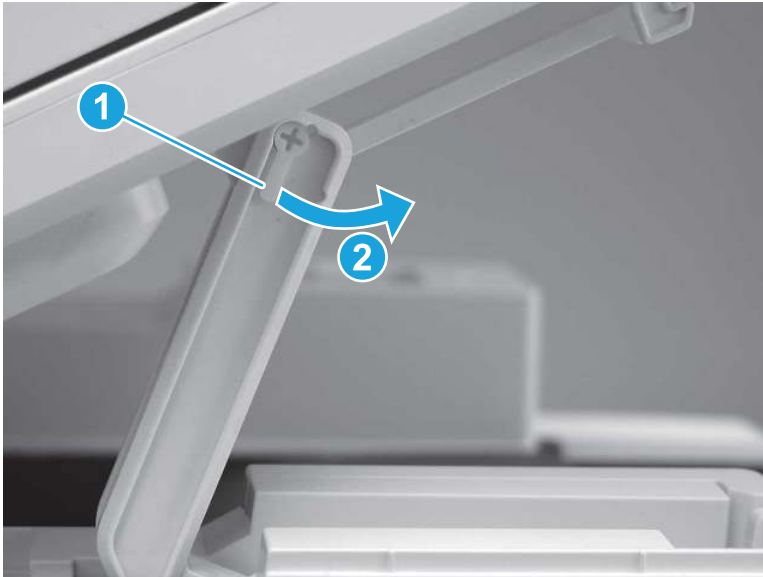
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-367** 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 5-368** 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.

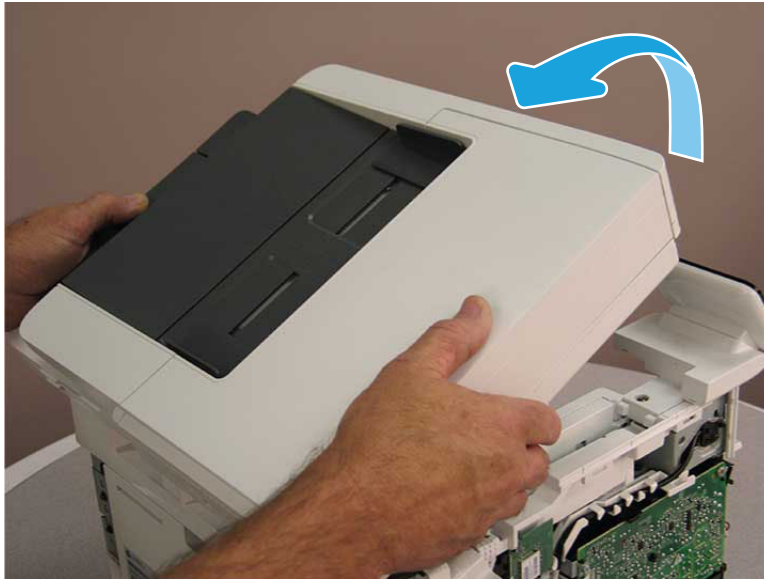
---

**Figure 5-369** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-370** Rotate the ISA towards the rear of the printer



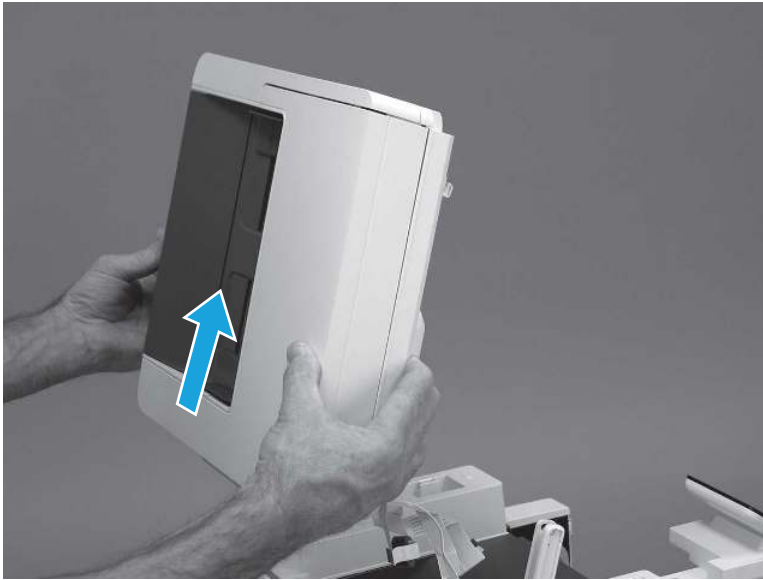
8. Slide the ISA as shown to release it.

**Figure 5-371** Release the ISA



9. Remove the ISA.

**Figure 5-372** Remove the ISA

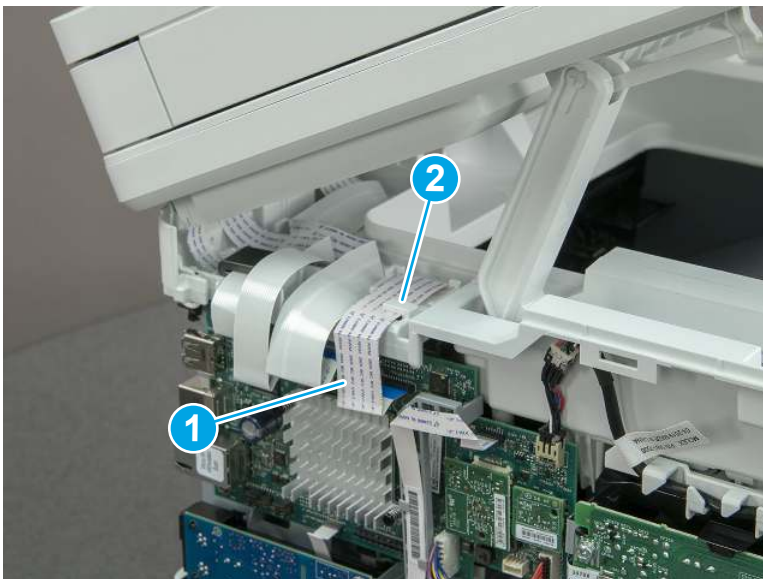


### 9. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

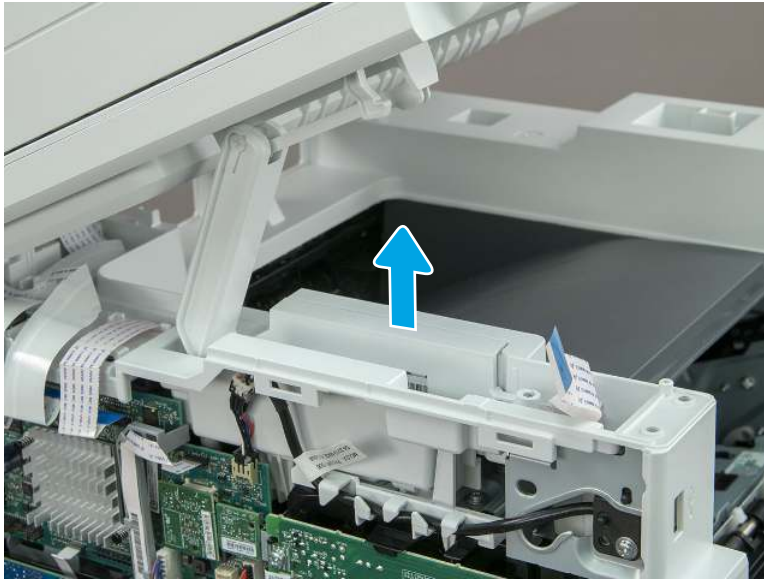
1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

**Figure 5-373** Disconnect one cable



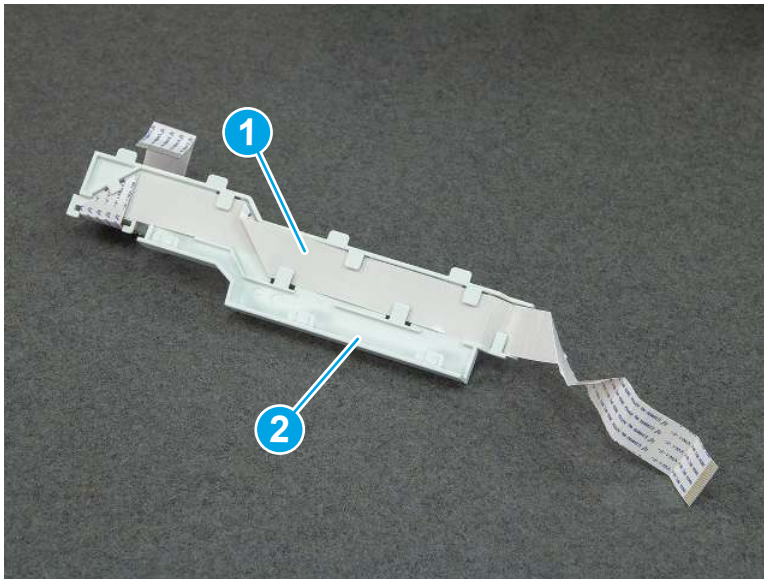
2. Lift up the control-panel FFC cover to remove the cover and cable.

**Figure 5-374** Remove the cover and cable



3. If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).

**Figure 5-375** Remove the FFC

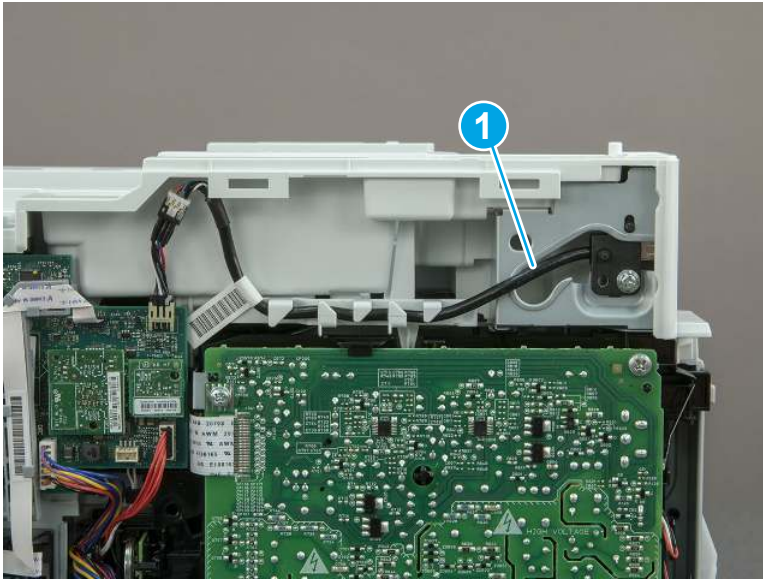


## 10. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

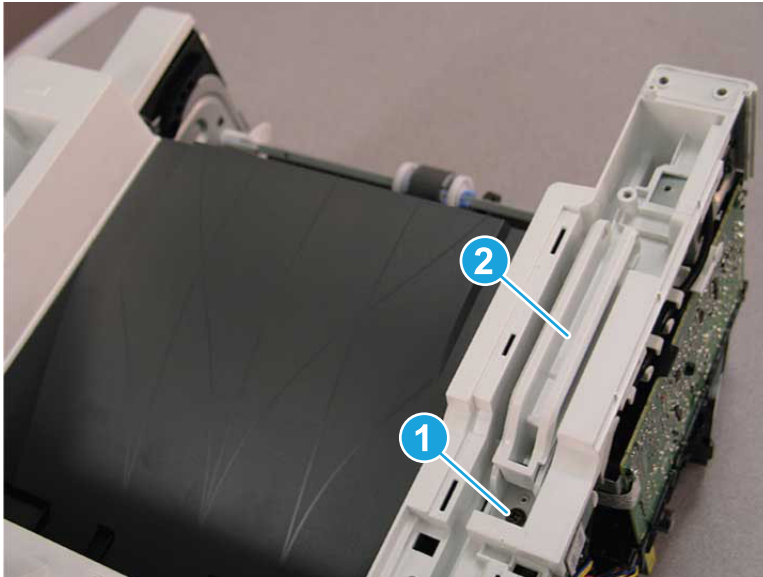
**Figure 5-376** Release the USB cable



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.

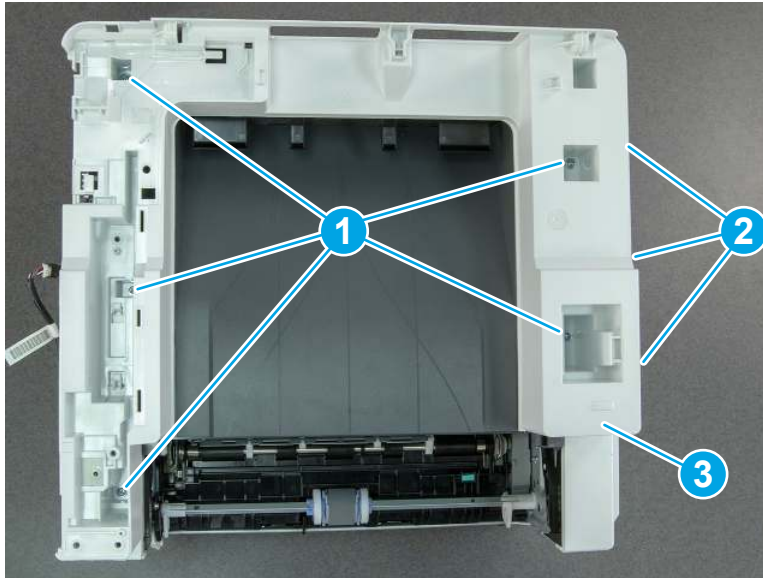
**Figure 5-377** Remove the support arm





3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-378** Remove the top cover



## 11. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

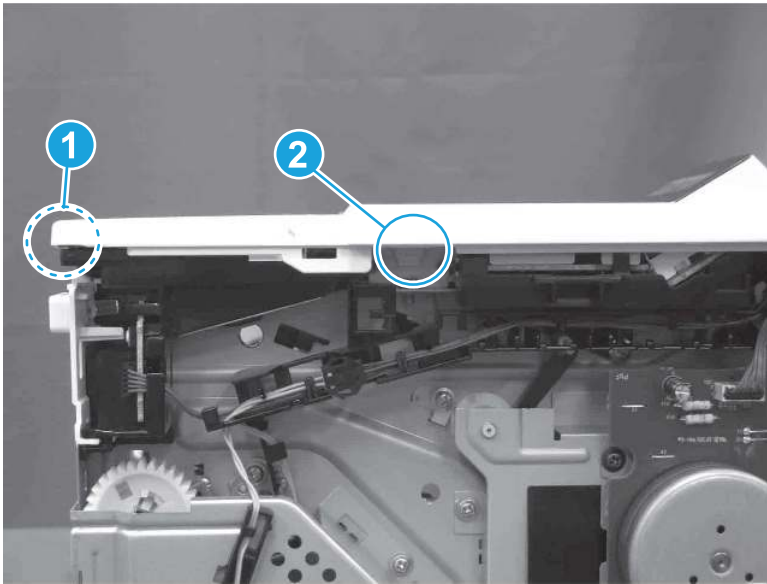
1. Remove one screw.

**Figure 5-379** 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 5-380** Release one boss and one tab



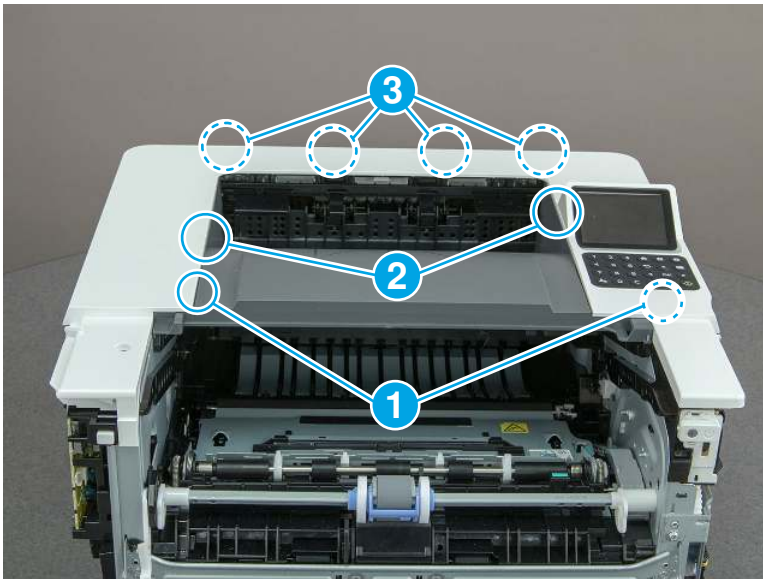
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

**Figure 5-381** Remove the cover

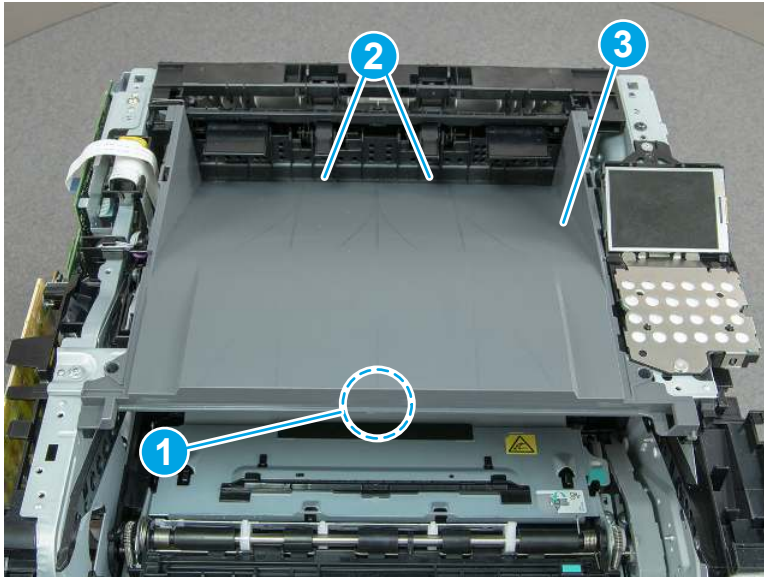


## 12. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

- ▲ Release one tab (callout 1), release two bosses (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-382 Remove the cover

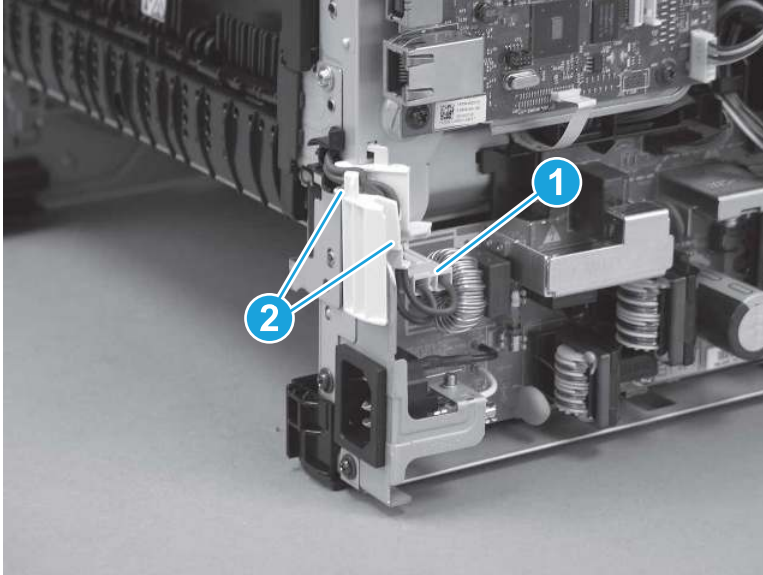


### 13. Remove the fuser

Follow these steps to remove the fuser.

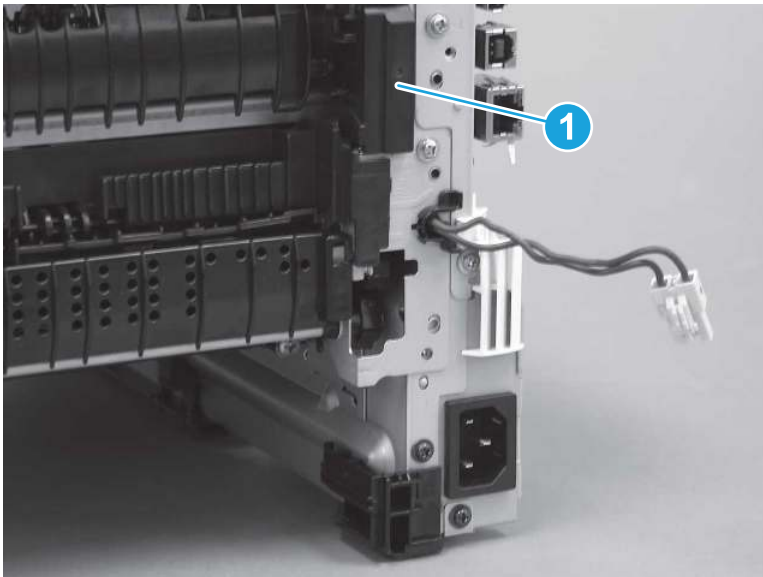
1. Disconnect one connector (callout 1), and then release the wire harness from the guide (callout 2).

**Figure 5-383** Disconnect one connector



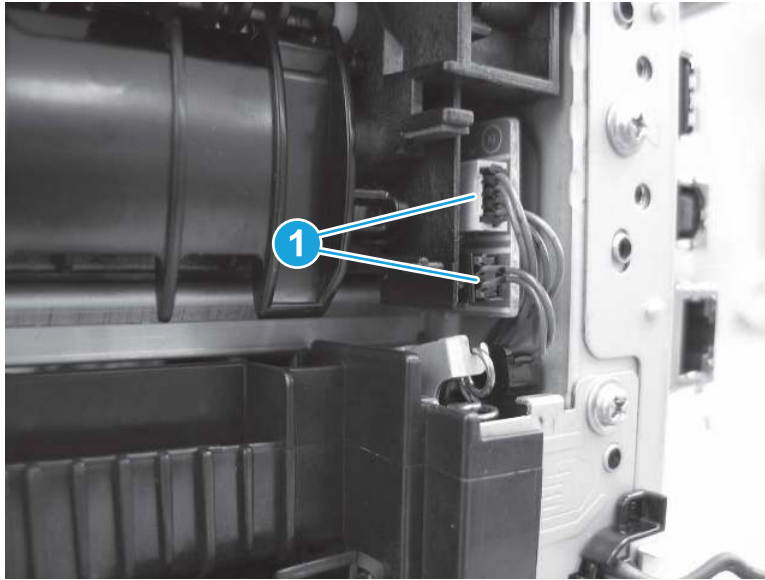
2. Pull the upper connector cover (callout 1) straight off of the printer to remove it.

**Figure 5-384** Remove the cover



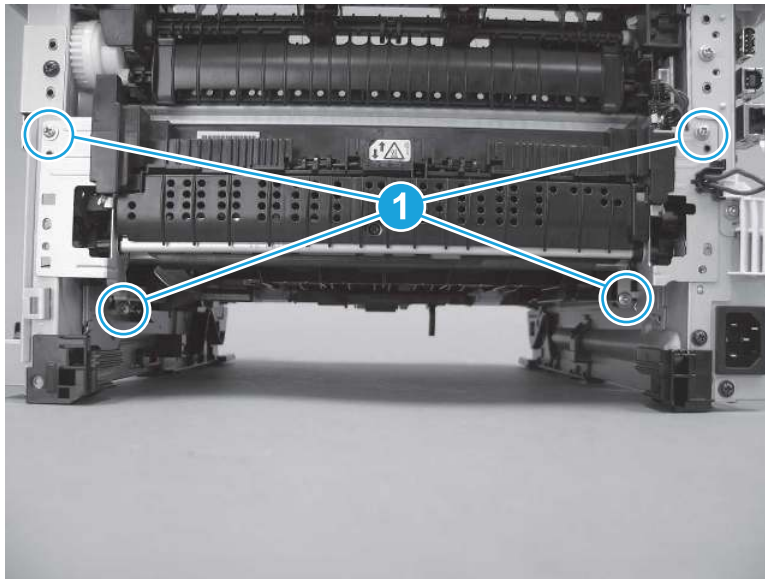
3. Disconnect two connectors (callout 1).

**Figure 5-385** Disconnect two connectors



4. Remove four screws (callout 1).

**Figure 5-386** Remove four screws



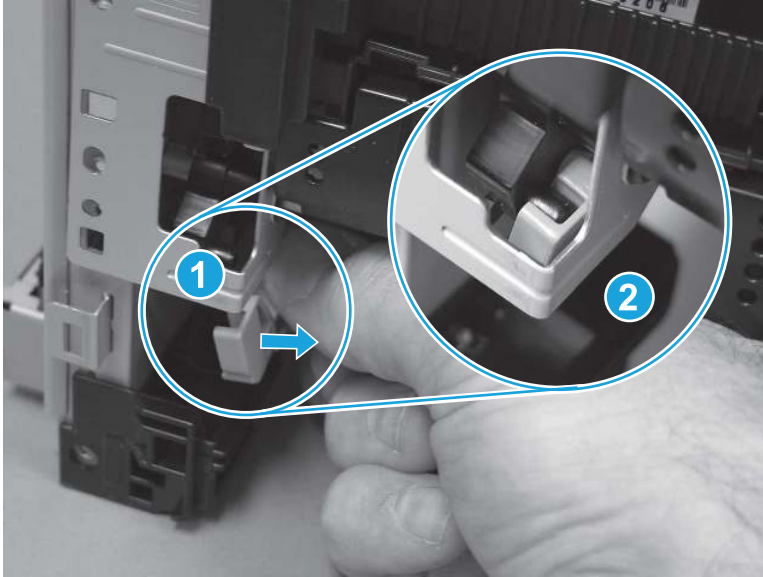
5. Pull the pressure-release link arm (callout 1) to release it from the fuser.

---

 **Reinstallation tip:** When the fuser is installed, make sure that the pressure-release arm is correctly connected to the fuser (callout 2)

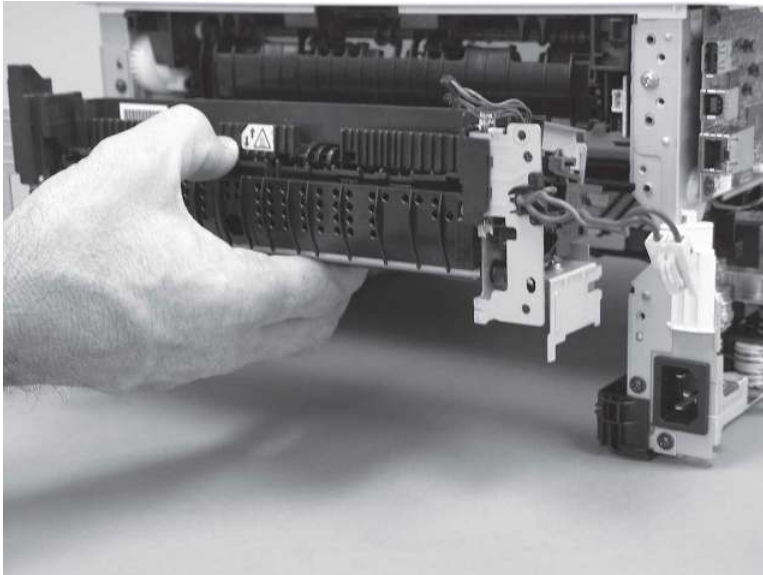
---

**Figure 5-387** Release the pressure-release arm



6. Slide the fuser straight out of the printer to remove it.

**Figure 5-388** Remove the fuser

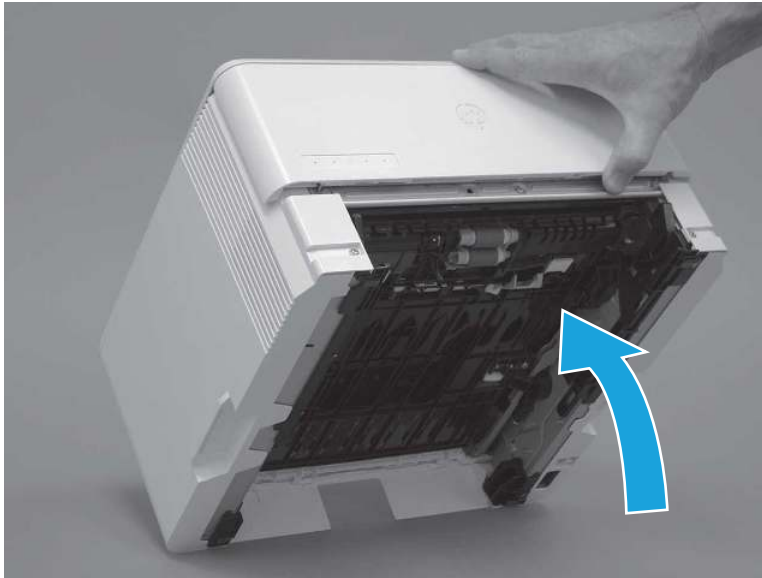


## 14. Remove the registration assembly

Follow these steps to remove the registration assembly.

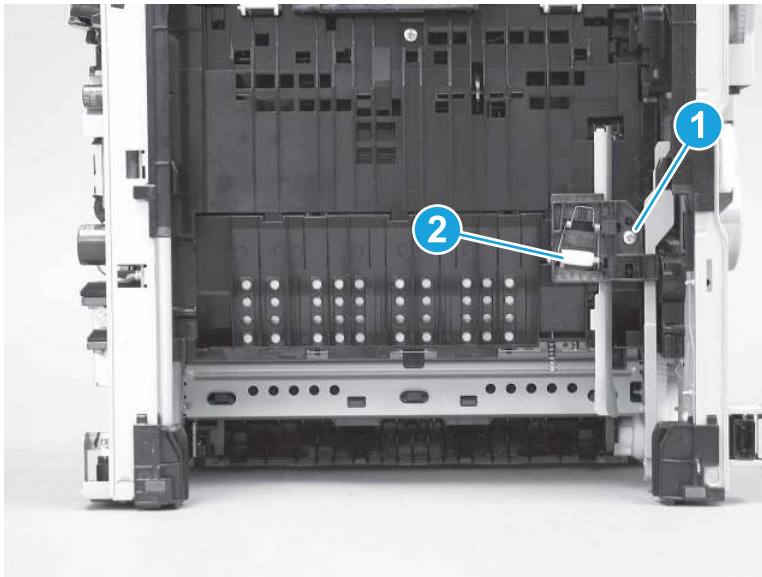
1. Carefully rotate the printer backward until it rests on the rear side, bottom-side face forward.

**Figure 5-389** Place the printer bottom-side face forward



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

**Figure 5-390** Remove one screw and the guide



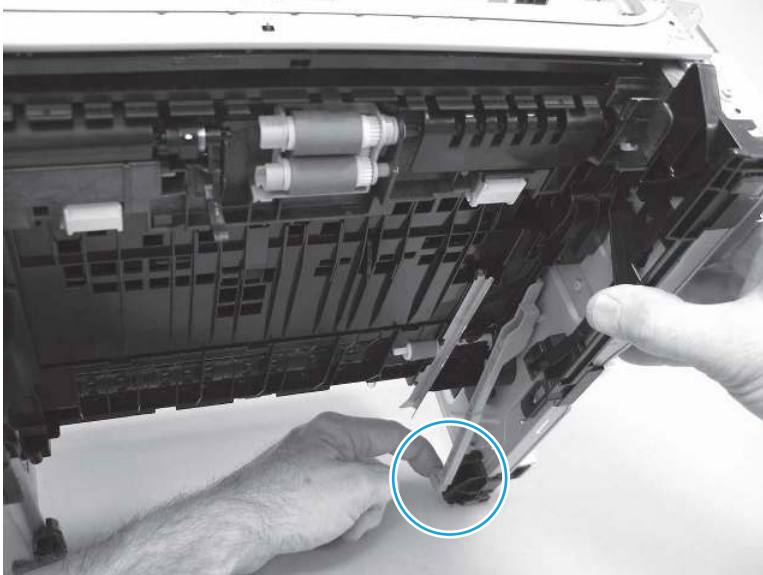
3. Move the end of pressure-release link arm out of the way.

---

 **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.

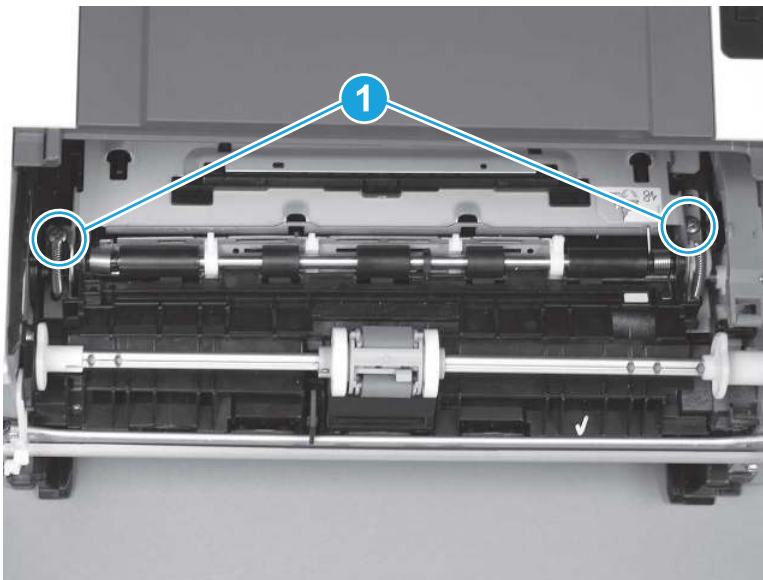
---

**Figure 5-391** 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).

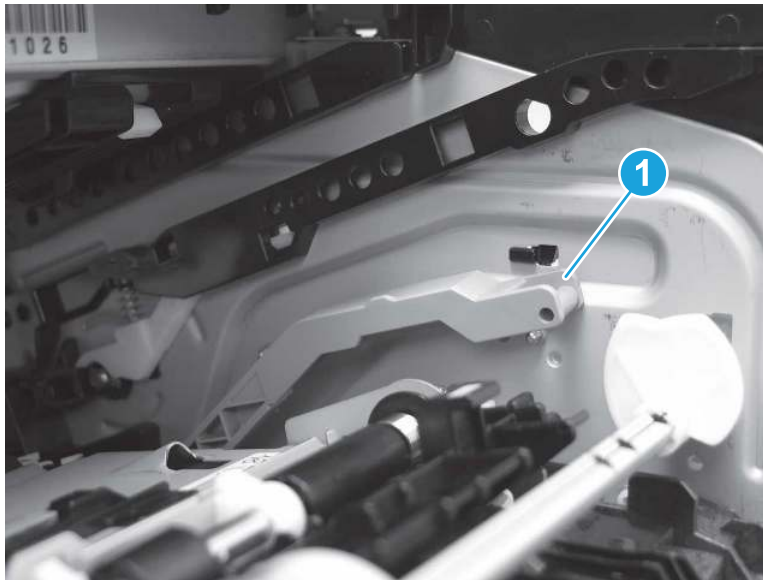
**Figure 5-392** Remove two screws





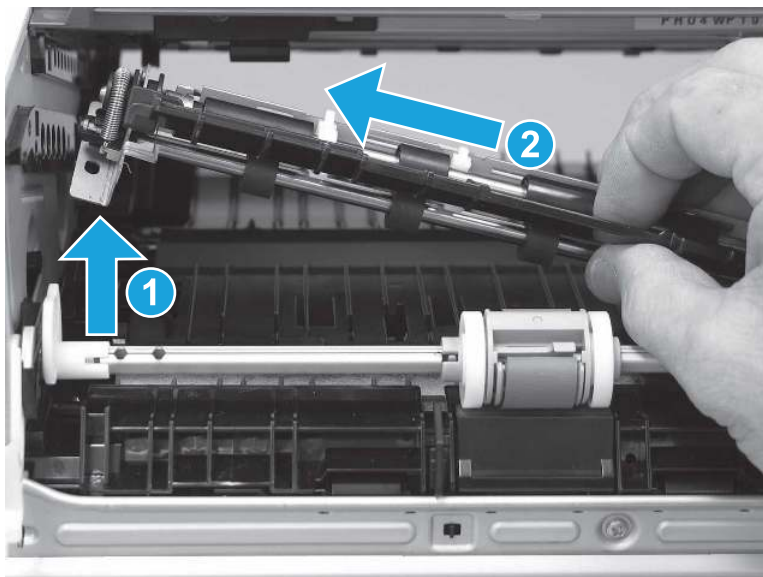
5. Move the end of pressure-release link arm (callout 1) out of the way.

**Figure 5-393** Move the pressure-release arm out of the way



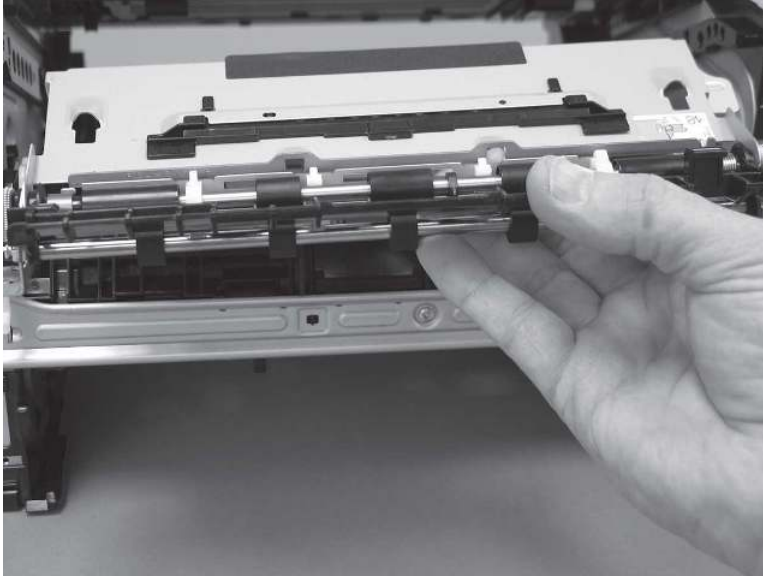
6. Rotate the left end of the registration up and out of the printer (callout 1), and then slide it to the left to release the gear end of the assembly (callout 2).

**Figure 5-394** Release the assembly



7. Remove the assembly.

**Figure 5-395** Remove the assembly



## 15. 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 5-32** 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 5-396 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).

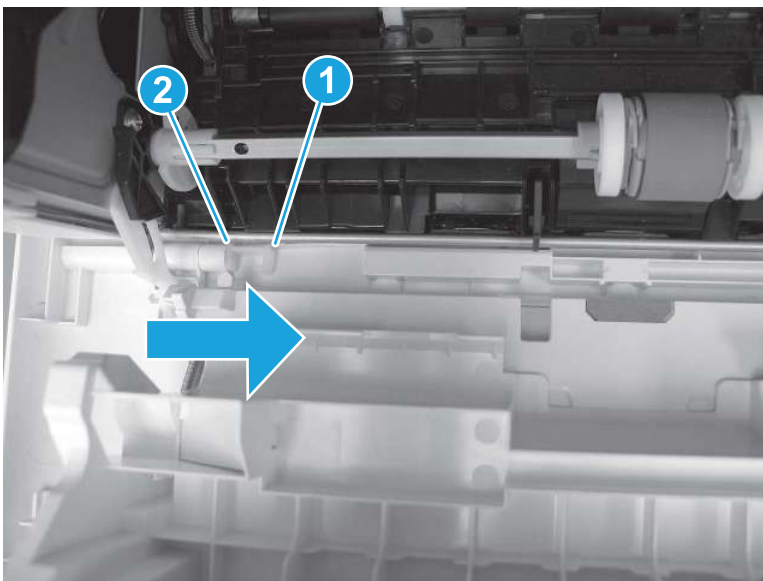
---

 **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.

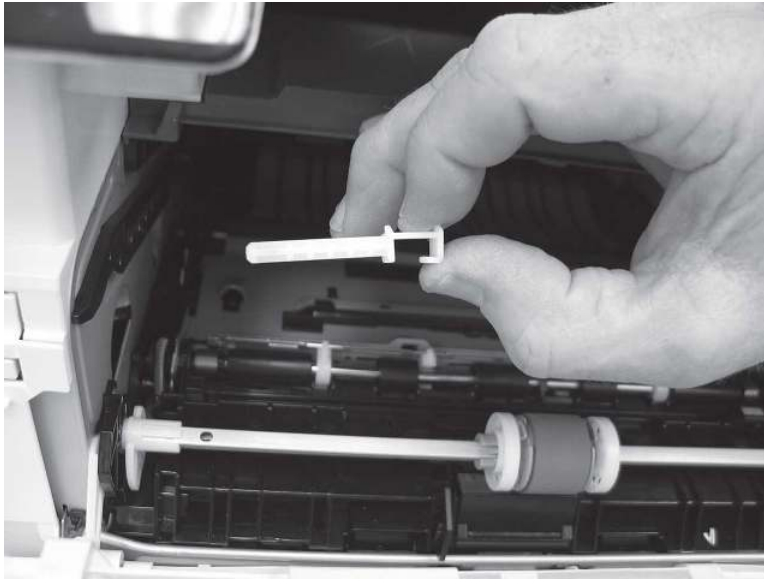
---

Figure 5-397 Release the support shaft



2. Remove the support shaft.

**Figure 5-398** Remove the support shaft



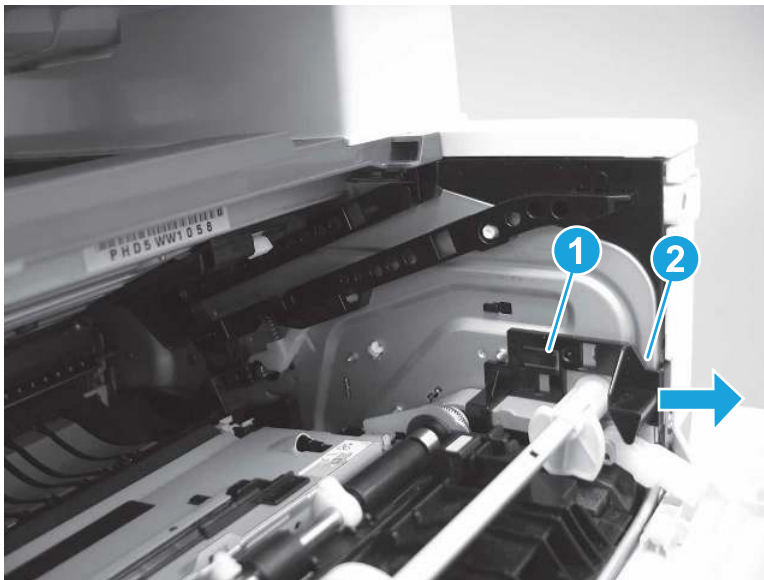
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

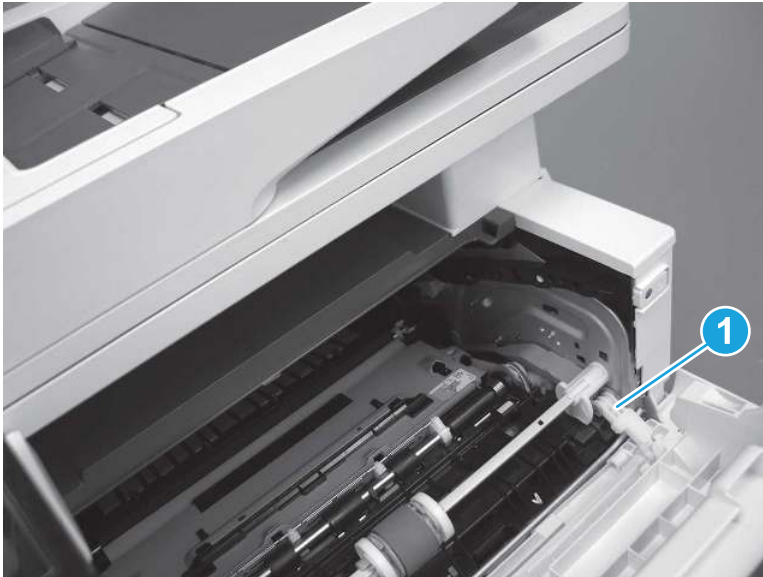
---

**Figure 5-399** 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 5-400** 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).

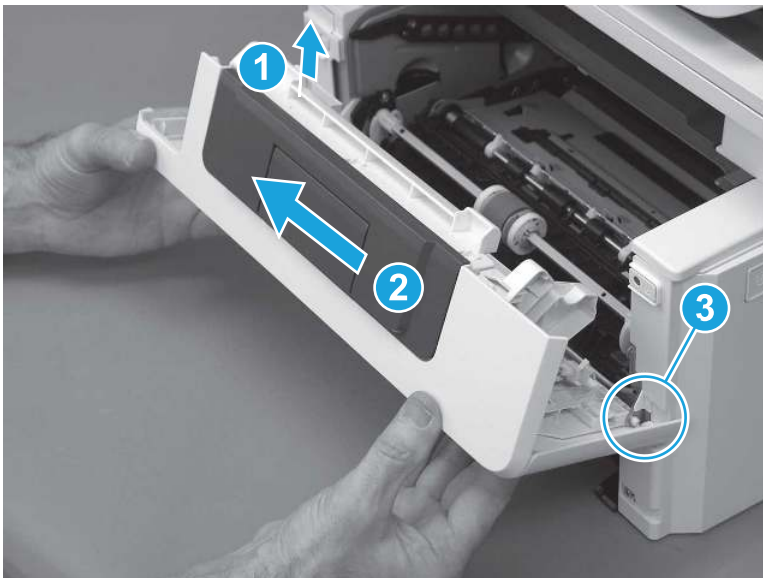
---

**⚠ 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.

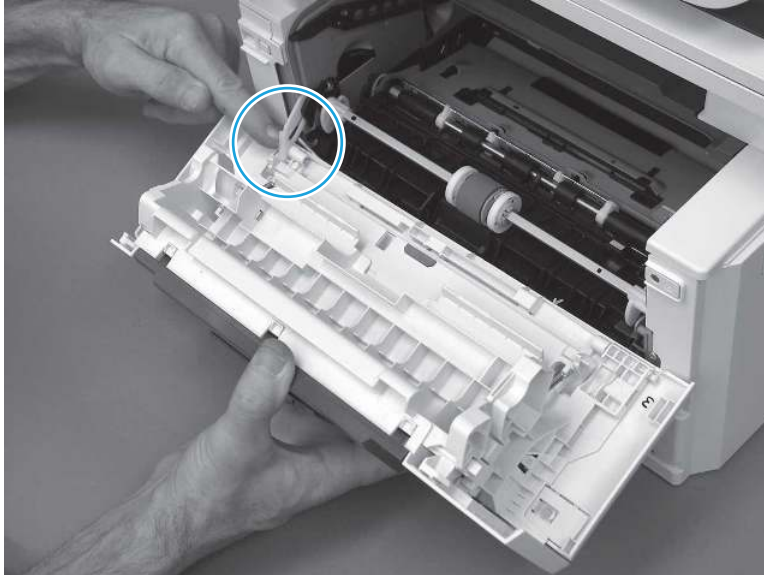
---

**Figure 5-401** Release the door



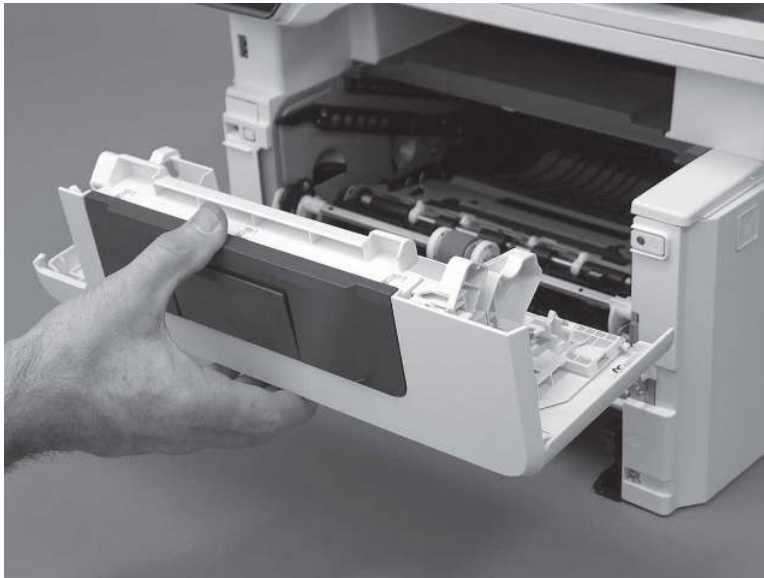
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-402** Release the left-side retainer arm



7. Remove the door.

**Figure 5-403** Remove the door



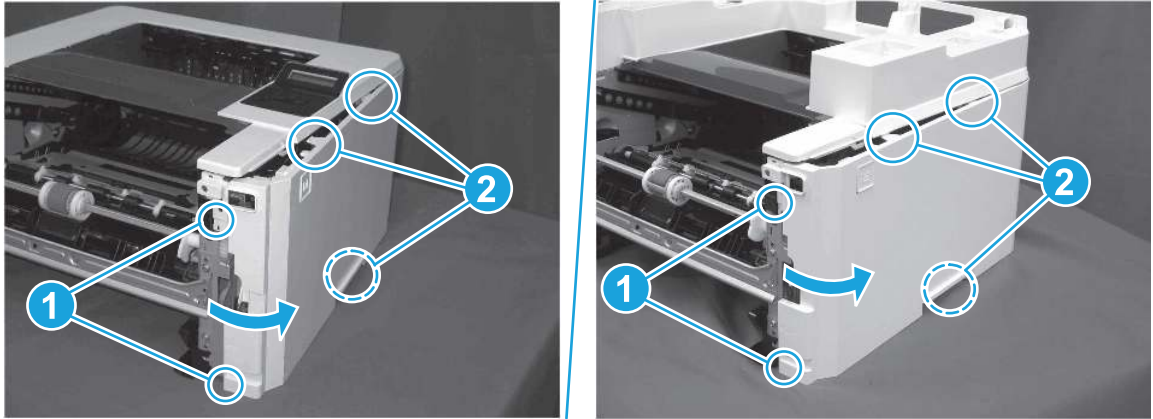
### 3. Remove the right cover

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).

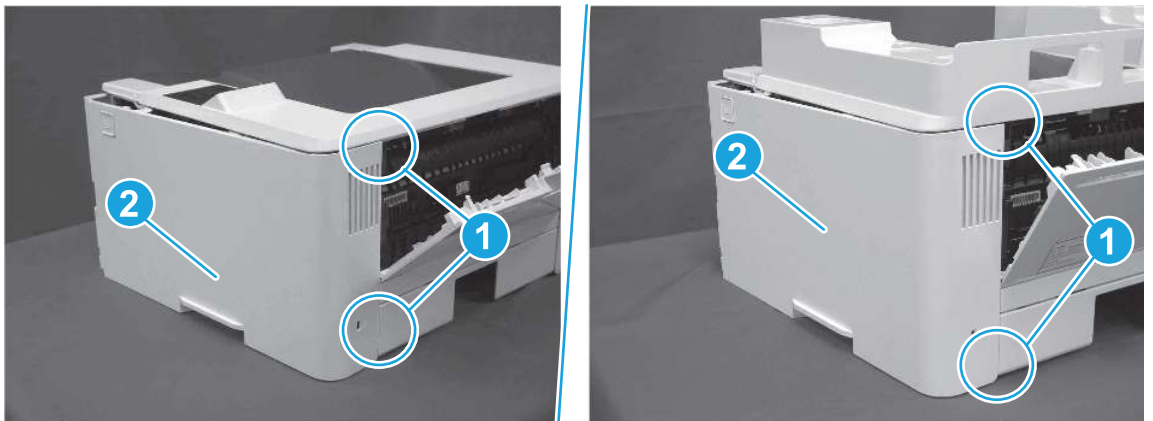
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-404 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-405 Remove the cover



#### 4. Remove the main motor (M1)

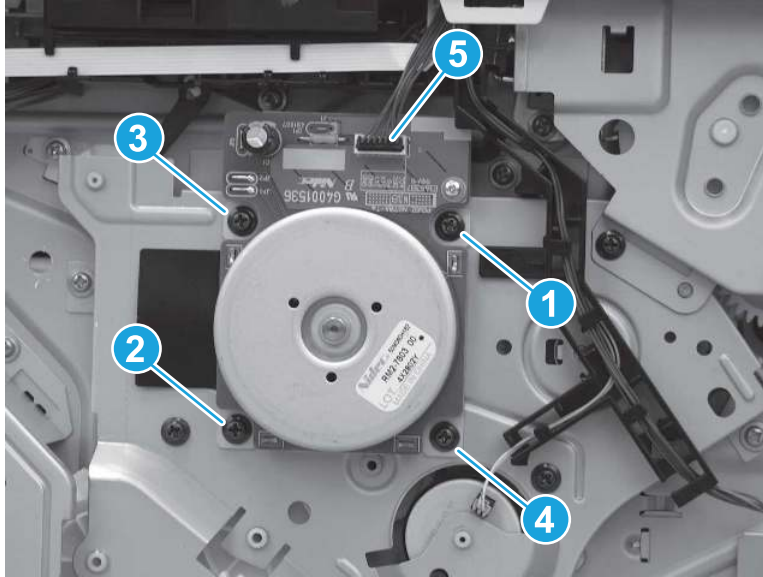
Follow these steps to remove the main motor (M1).

- ▲ 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 5-406 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 5-33** 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 5-407 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).

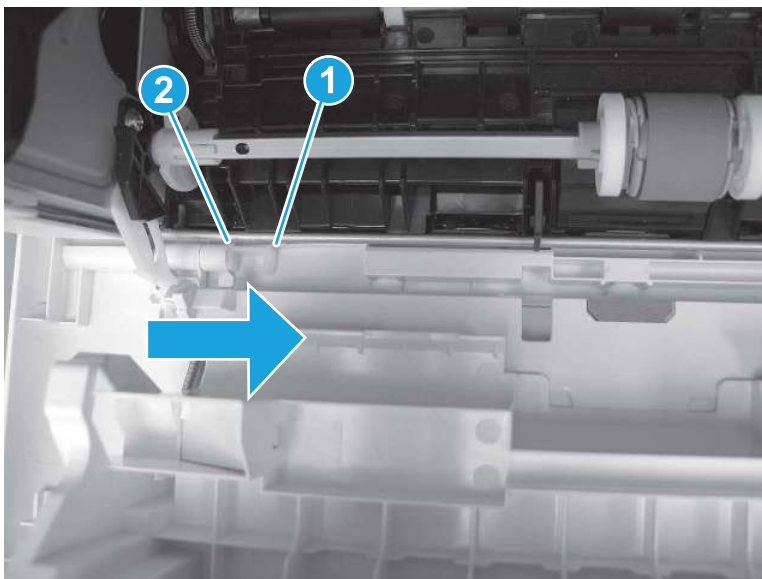
---

 **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.

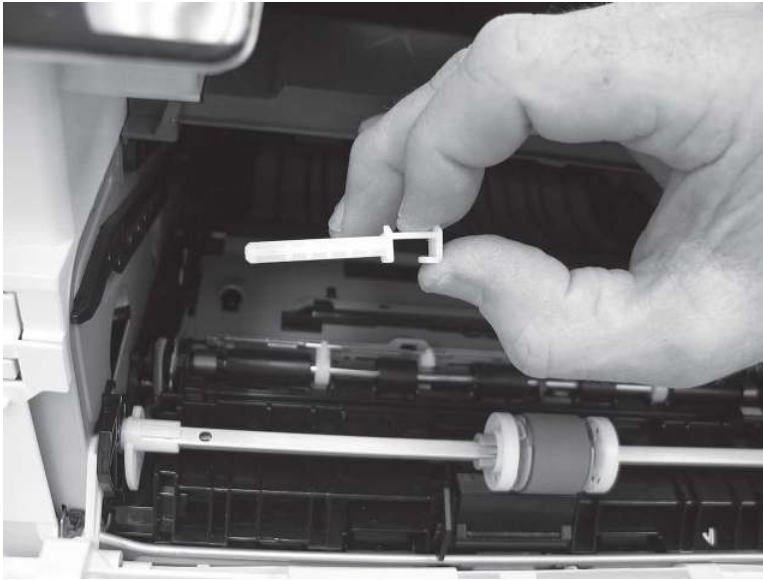
---

Figure 5-408 Release the support shaft



2. Remove the support shaft.

**Figure 5-409** 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.

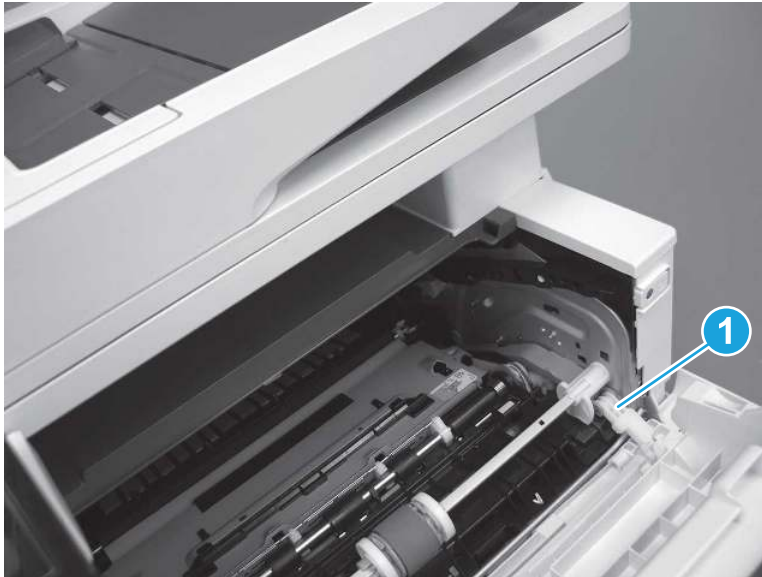
---

**Figure 5-410** 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 5-411** Release the pressure-release link

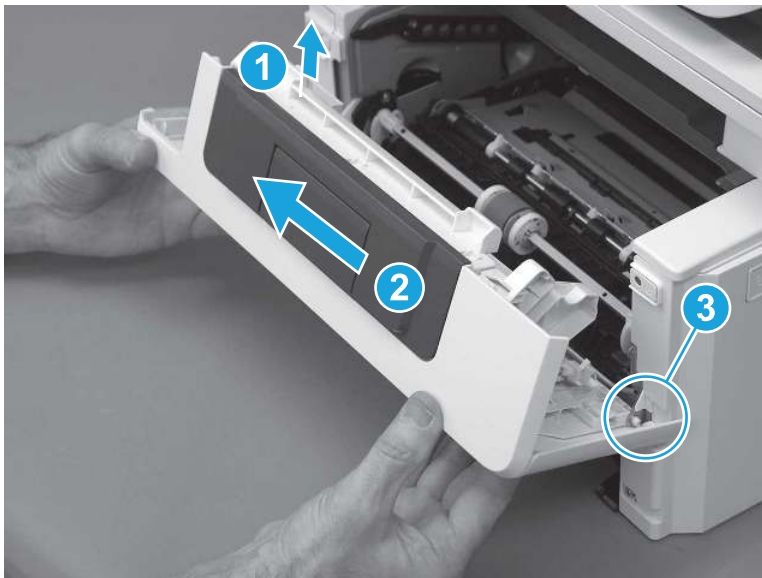


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

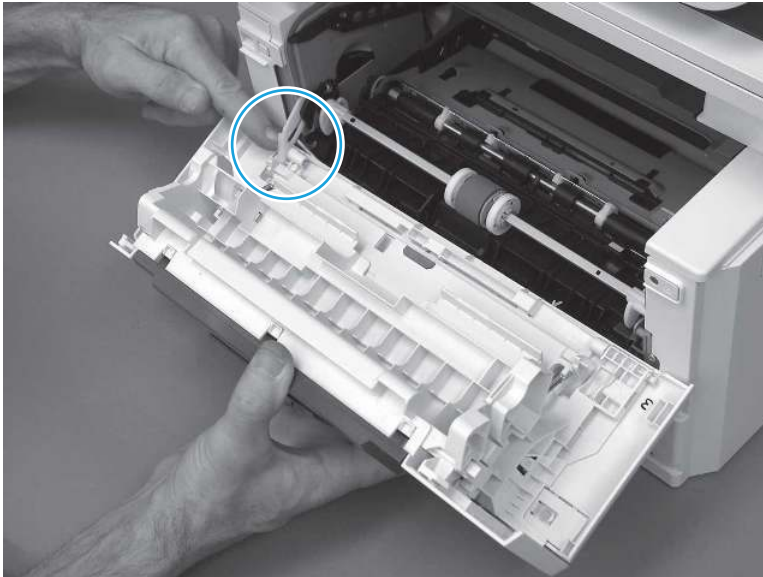
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-412** 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 5-413** Release the left-side retainer arm



7. Remove the door.

**Figure 5-414** Remove the door



### 3. Remove the right cover

Follow these steps to remove the right cover.

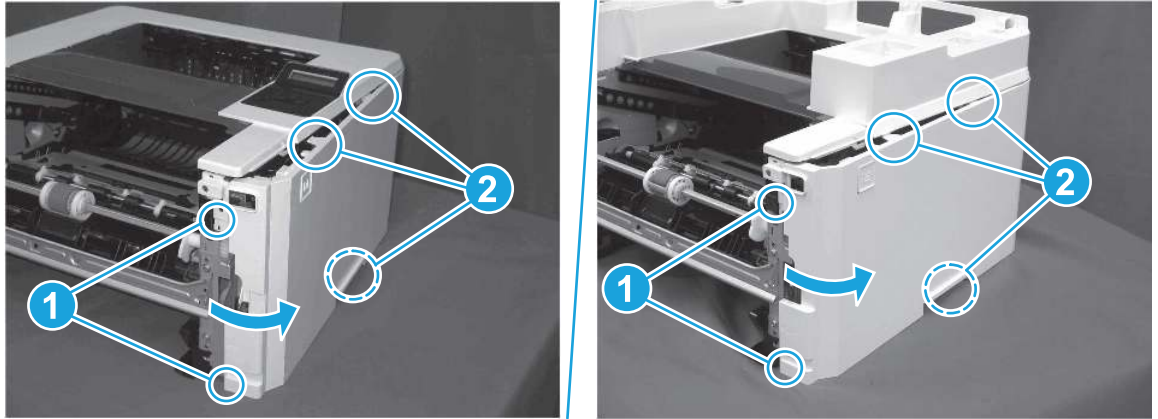
1. At the front of the printer, release two bosses (callout 1), and then release three tabs (callout 2).

---

 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

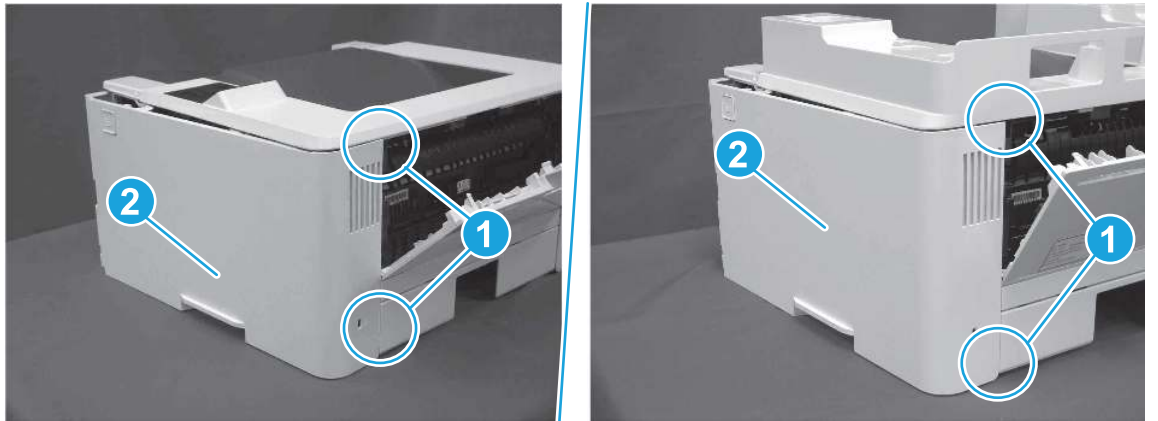
---

Figure 5-415 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-416 Remove the cover

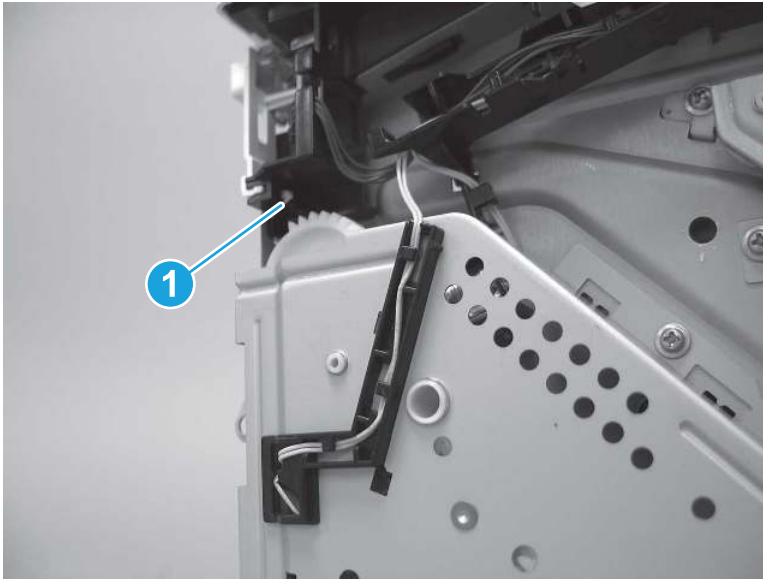


#### 4. Remove the power switch PCA

Follow these steps to remove the power switch PCA.

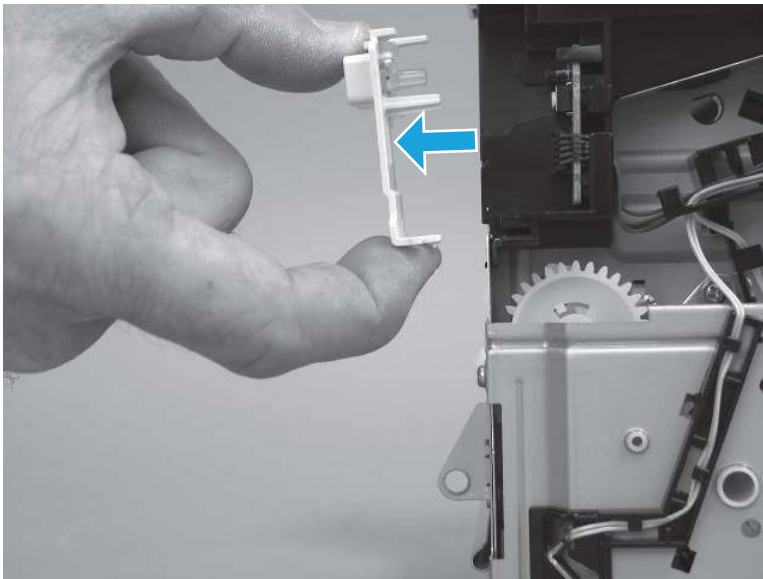
1. Release one tab (callout 1).

**Figure 5-417** Release one tab



2. Remove the switch lever.

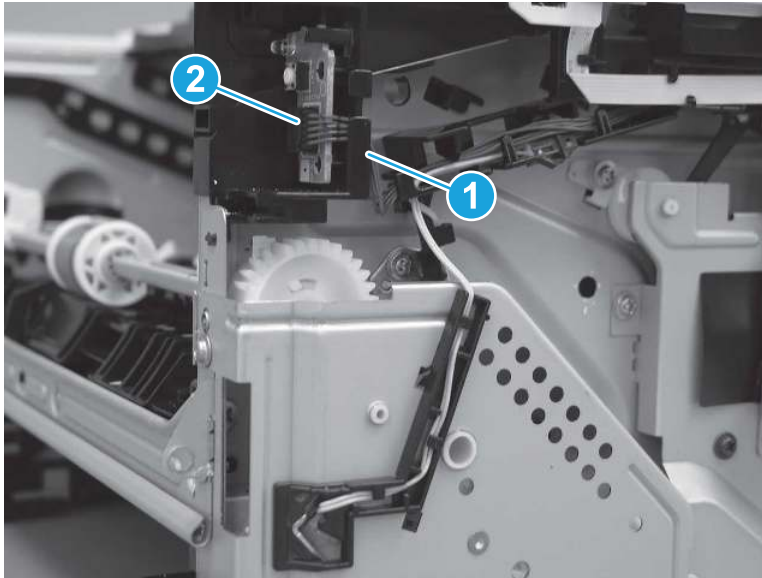
**Figure 5-418** Remove the switch lever





3. Release the wire harness from the guide (callout 1), and then disconnect one connector (callout 2).

**Figure 5-419** Disconnect one connector

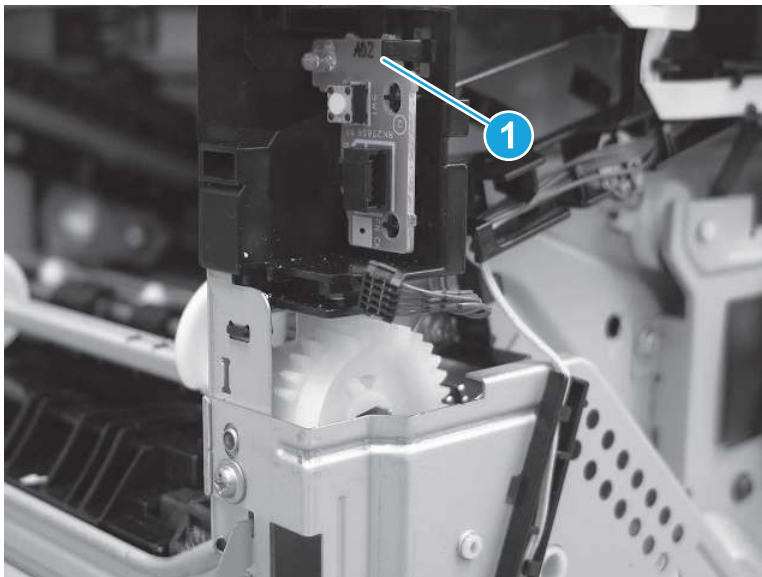


4. Release one tab (callout 1), and then remove the power switch PCA.

**CAUTION:** Do not damage the tab (callout 1) when releasing 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 5-420** 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) and cable.

[View a video of how to remove and replace the fax PCA.](#)


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 5-34 Part information**

Part number	Part description
3PZ55-67911	Cable, FFC fax to formatter
3PZ55-67980	Fax PCA with plug kit (USA)
3PZ55-67981	Fax PCA with plug kit (EURO)

Table 5-34 Part information (continued)

Part number	Part description
3PZ55-67982	Fax PCA with plug kit (BRAZIL)
3PZ55-67983	Fax PCA with plug kit (AP)

### 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 5-421 Remove the tray




## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.

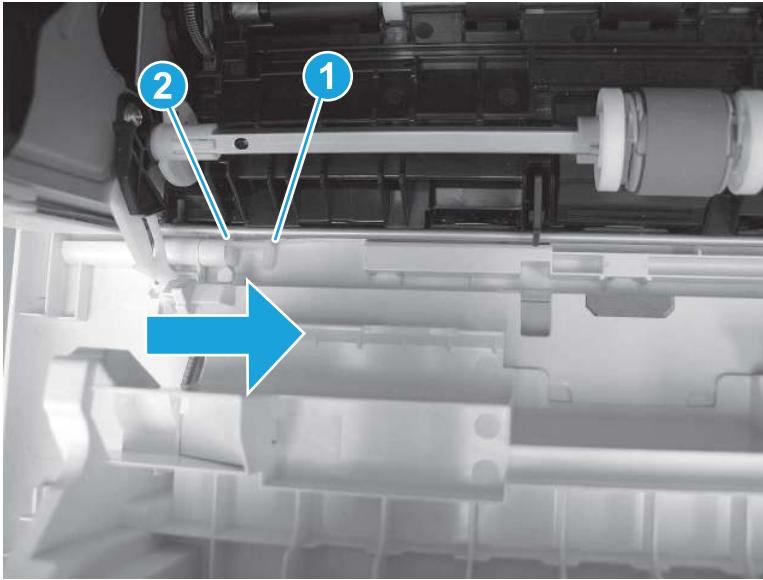
 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

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.

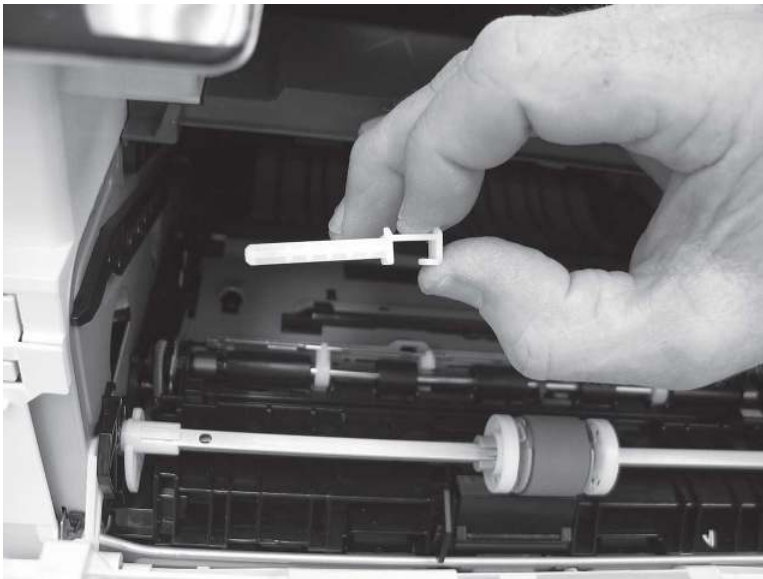
 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

**Figure 5-422** Release the support shaft



2. Remove the support shaft.

**Figure 5-423** Remove the support shaft



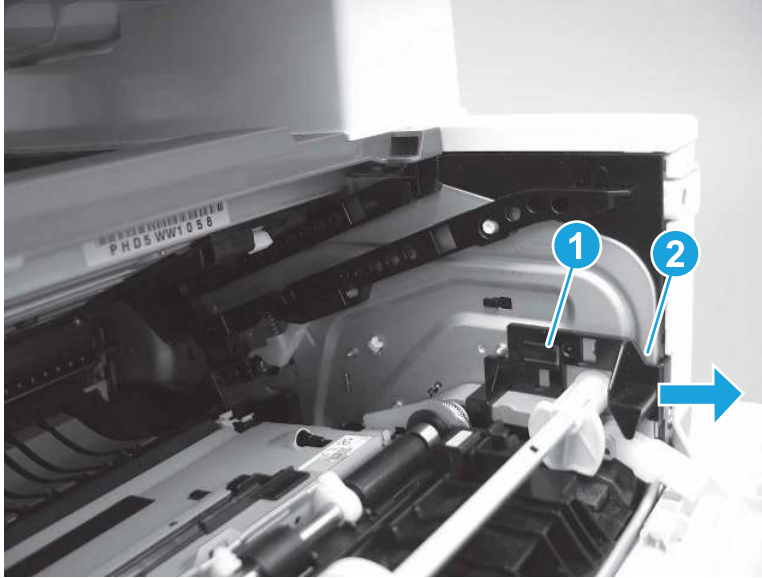
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

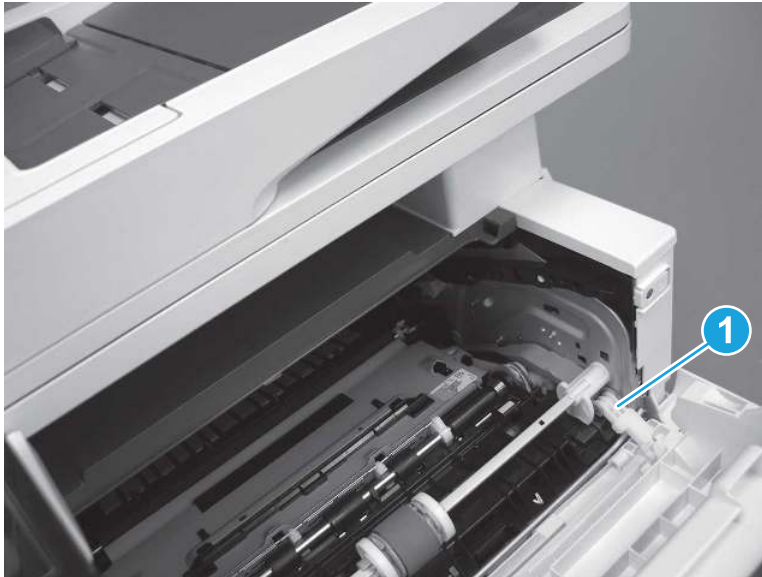
---

**Figure 5-424** 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 5-425** 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).

---

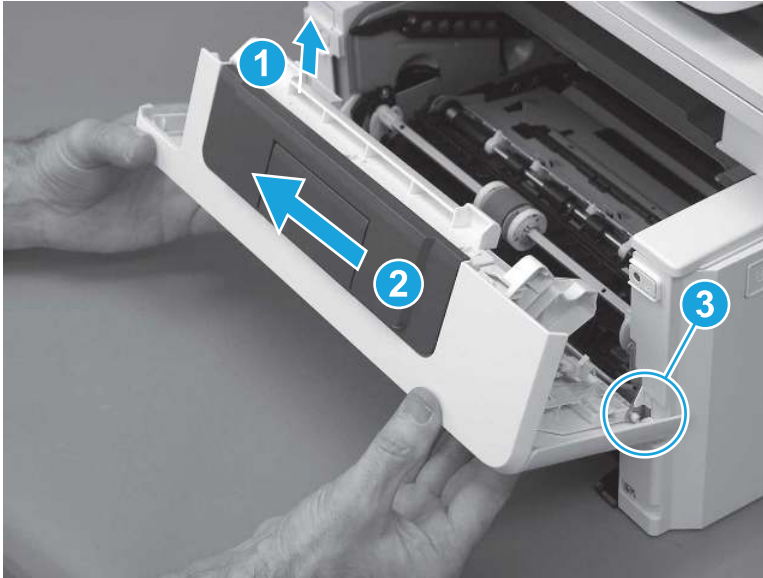
**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

---

 **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.

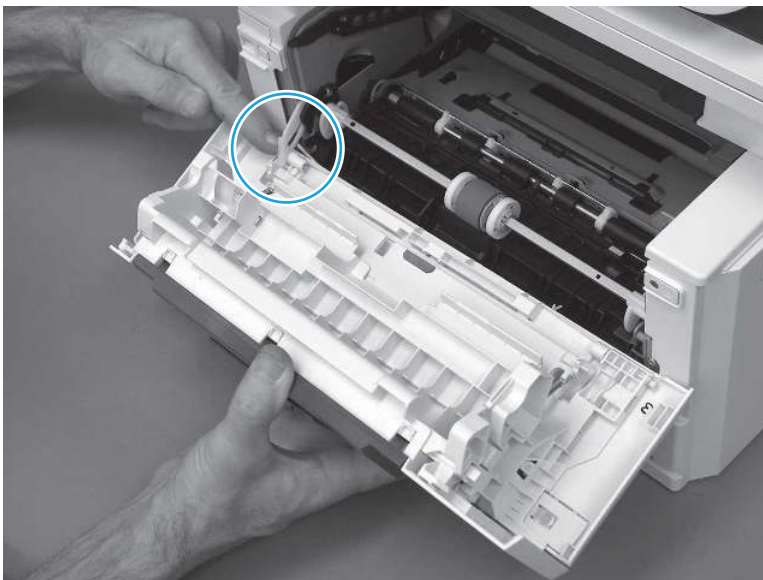
---

**Figure 5-426** Release the door



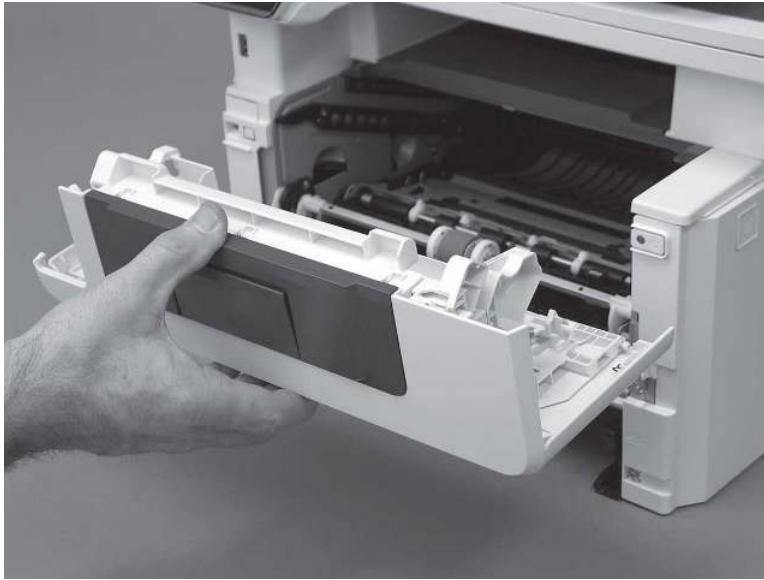
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-427** Release the left-side retainer arm



7. Remove the door.

**Figure 5-428** Remove the door



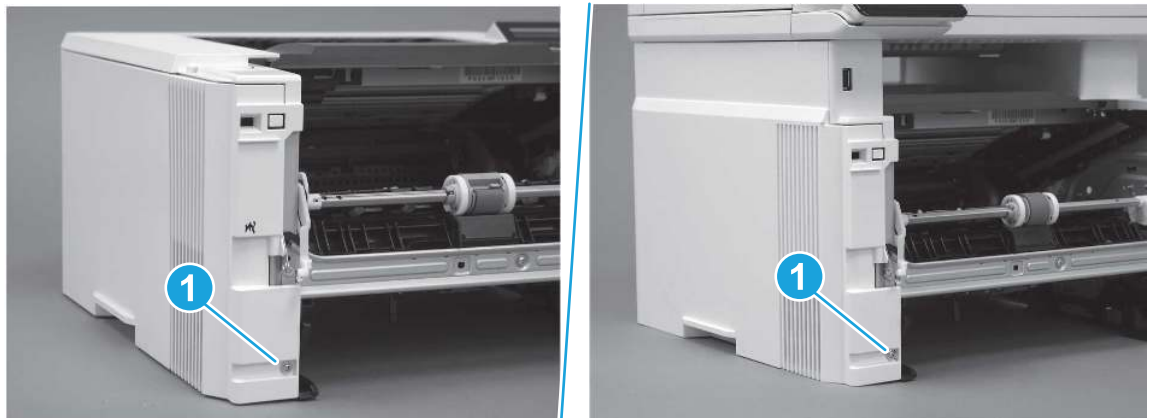
### 3. Remove the left cover

Follow these steps to remove the left cover.

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

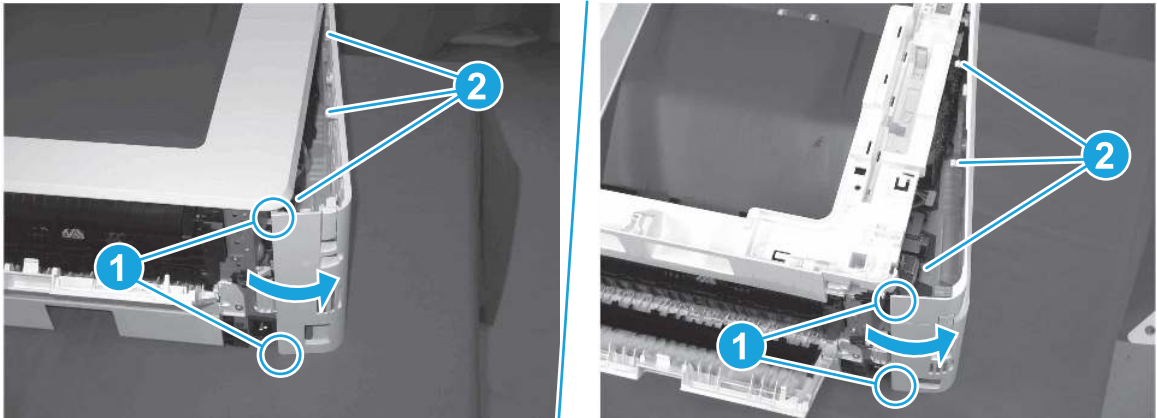
1. Remove one screw (callout 1).

**Figure 5-429** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

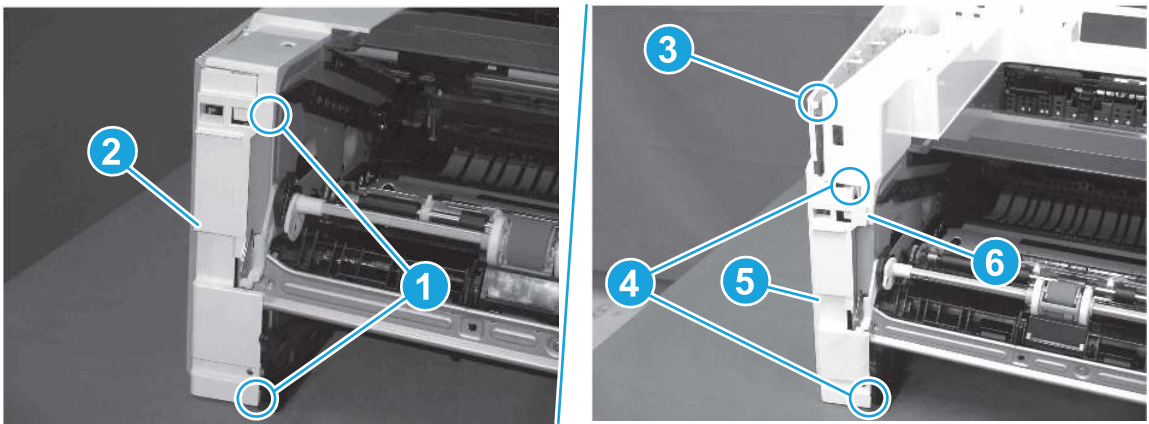
Figure 5-430 Release two bosses and three tabs



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 5-431 Remove the cover



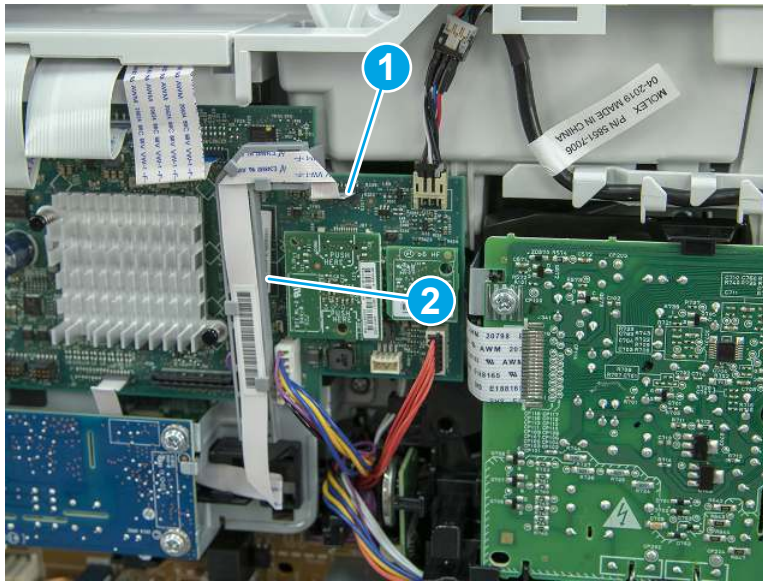
#### 4. Remove the fax PCA and cable (Fax models only)

Follow these steps to remove the fax PCA and cable (Fax models only).



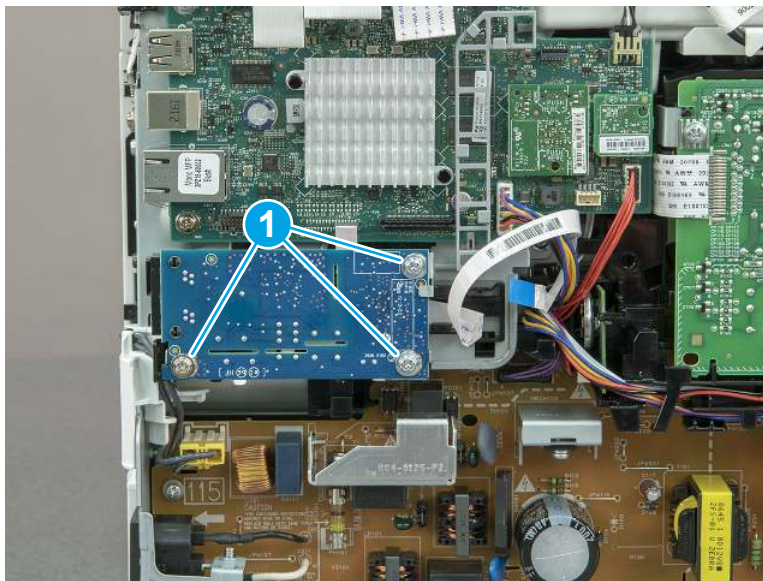
1. Disconnect one connector (callout 1), and then remove the cable from the guide (callout 2).

Figure 5-432 Disconnect one connector



2. Remove three screws (callout 1), and then remove the fax PCA and cable.

Figure 5-433 Remove three screws



3. **Optional step:** If you are replacing the fax PCA or the cable, disconnect the cable from the PCA.

Figure 5-434 Disconnect the cable



## 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 cable guide (MFP)

Learn how to remove and replace the fax cable guide.

[View a video of how to remove and replace the fax cable guide.](#)

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
3PZ55-67979	Guide, fax 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.

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 5-435 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).

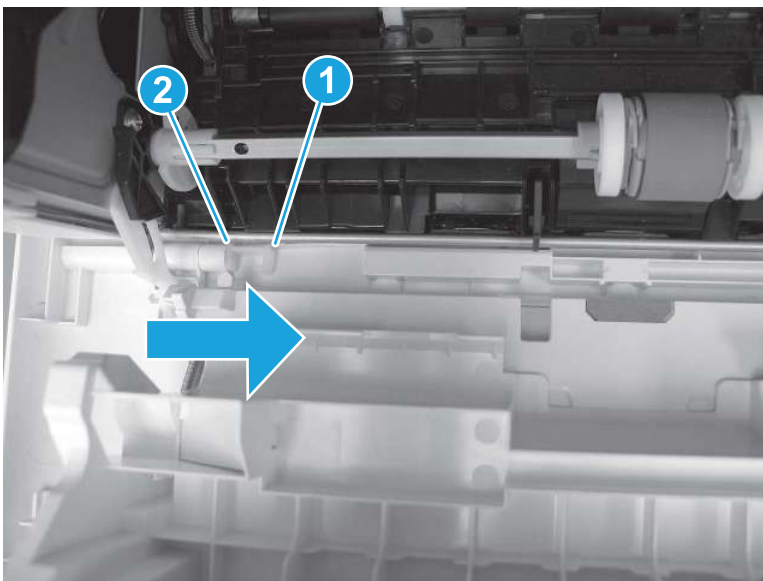
---

 **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.

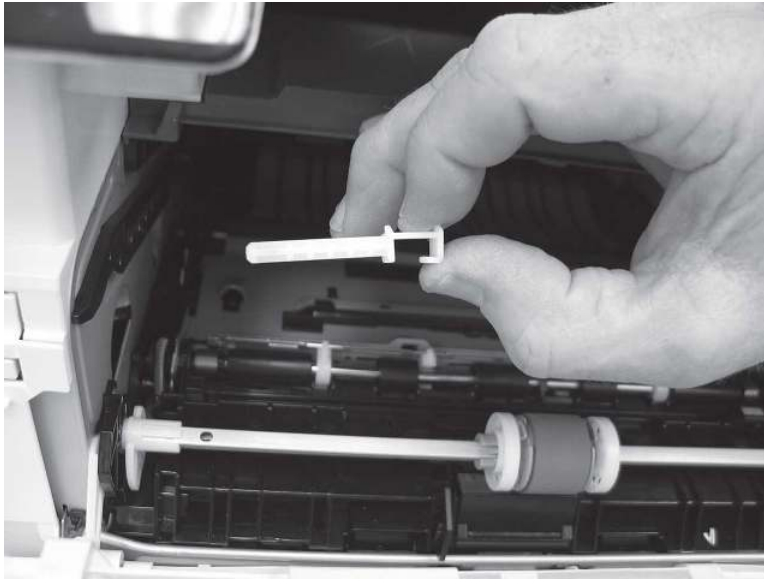
---

Figure 5-436 Release the support shaft



2. Remove the support shaft.

**Figure 5-437** Remove the support shaft



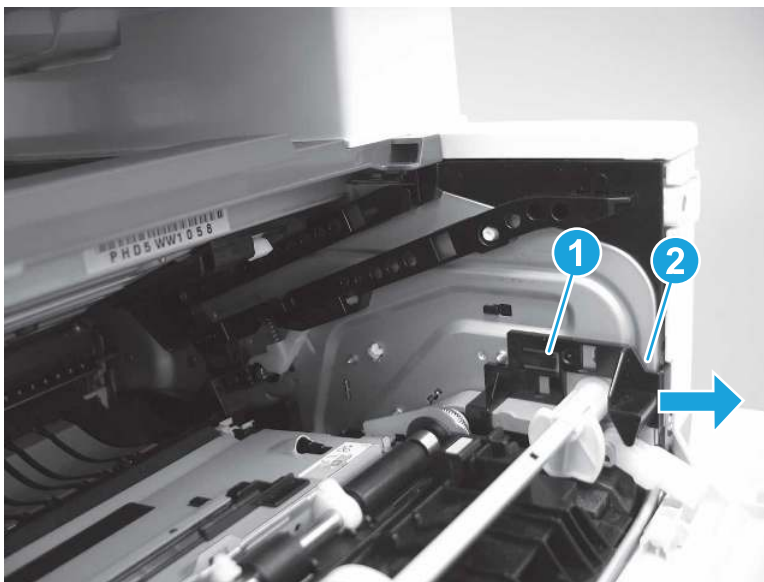
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

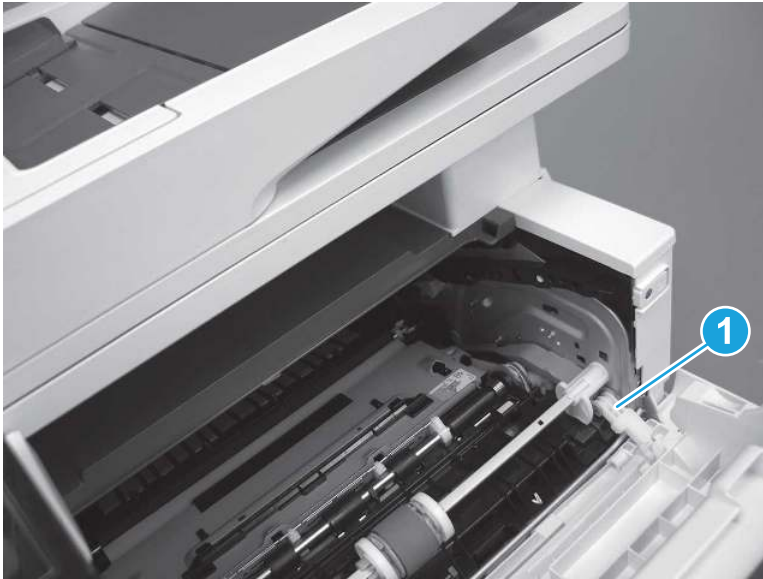
---

**Figure 5-438** 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 5-439** 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).

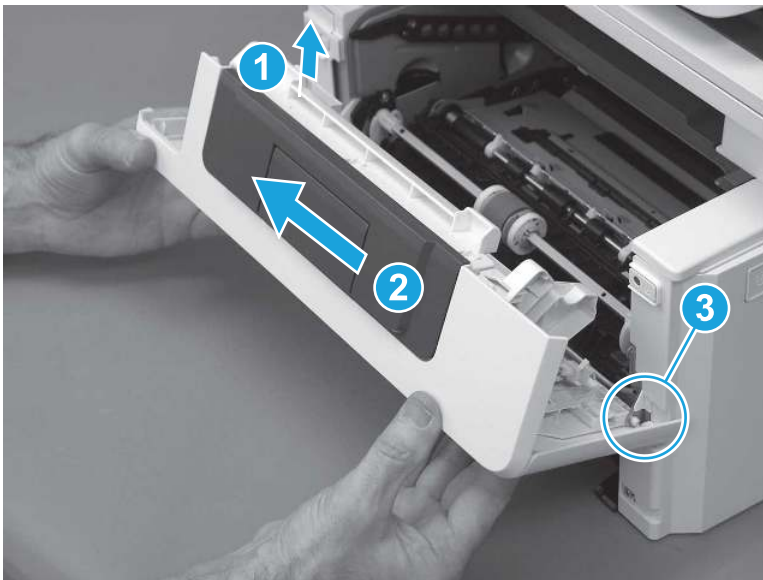
---

**⚠ 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.

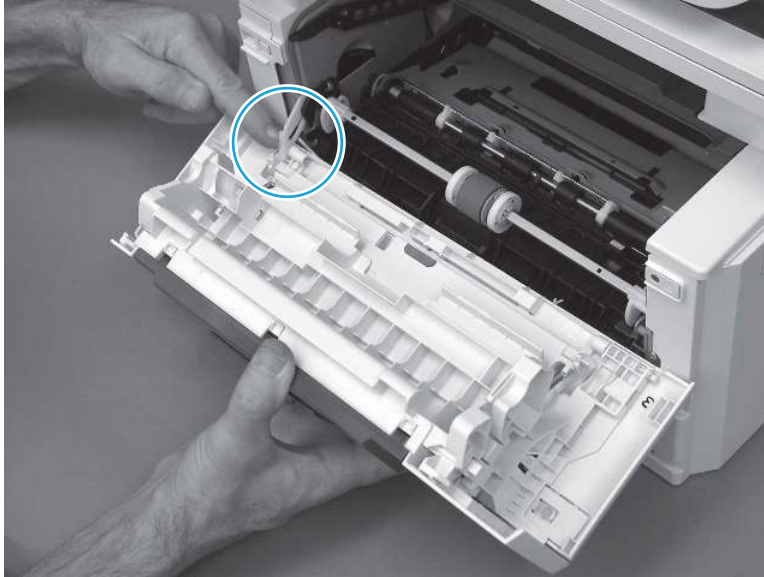
---

**Figure 5-440** Release the door



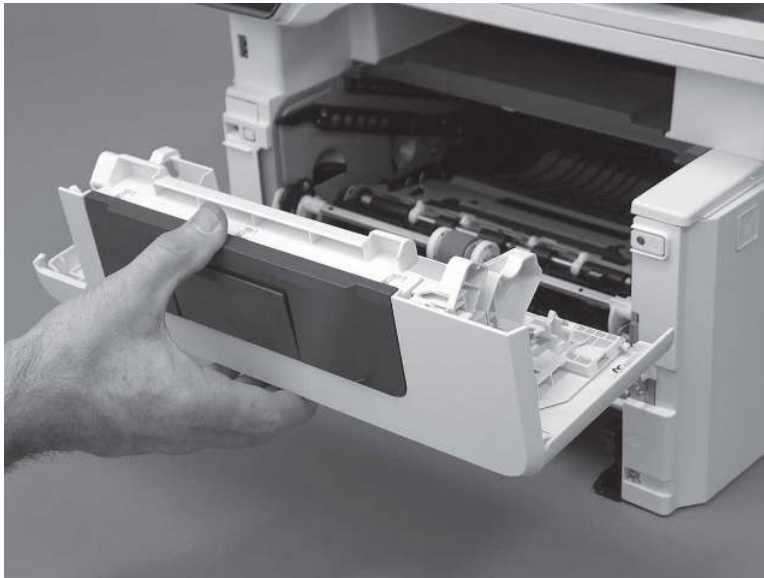
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-441** Release the left-side retainer arm



7. Remove the door.

**Figure 5-442** 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.

---

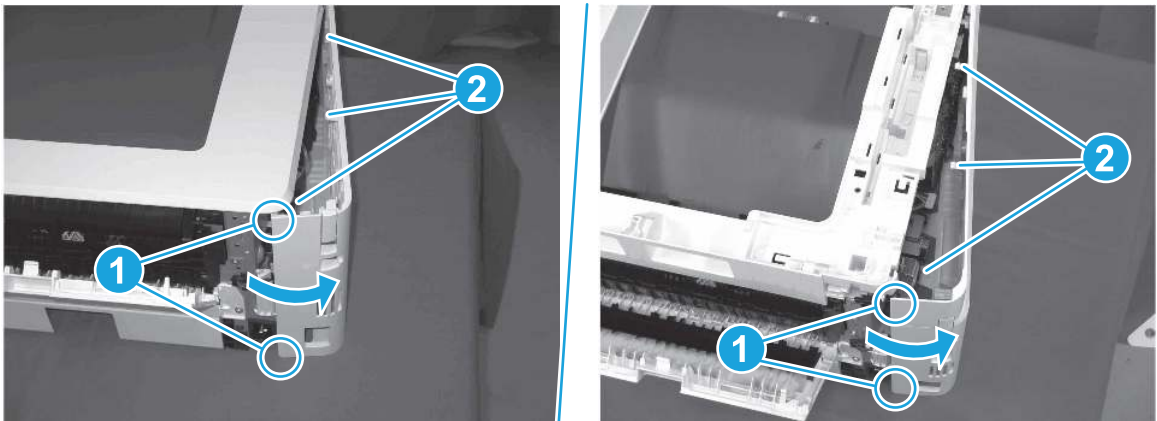
1. Remove one screw (callout 1).

Figure 5-443 Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

Figure 5-444 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).

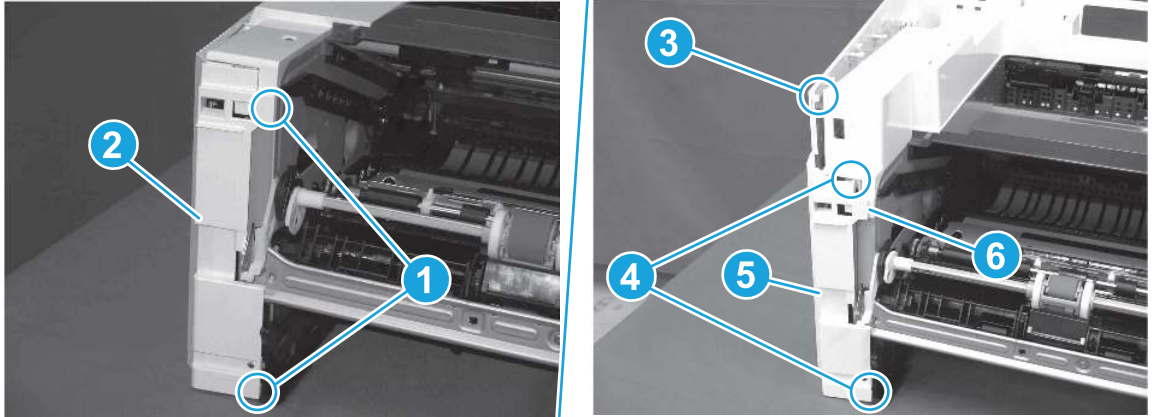
---

**⚠ 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 5-445 Remove the cover

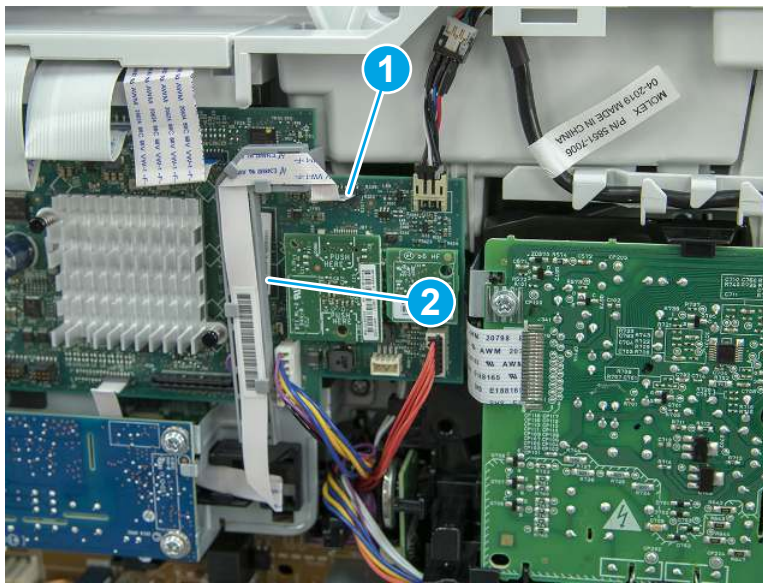


#### 4. Remove the fax cable guide (fax models only)

Follow these steps to remove the fax cable guide (fax models only).

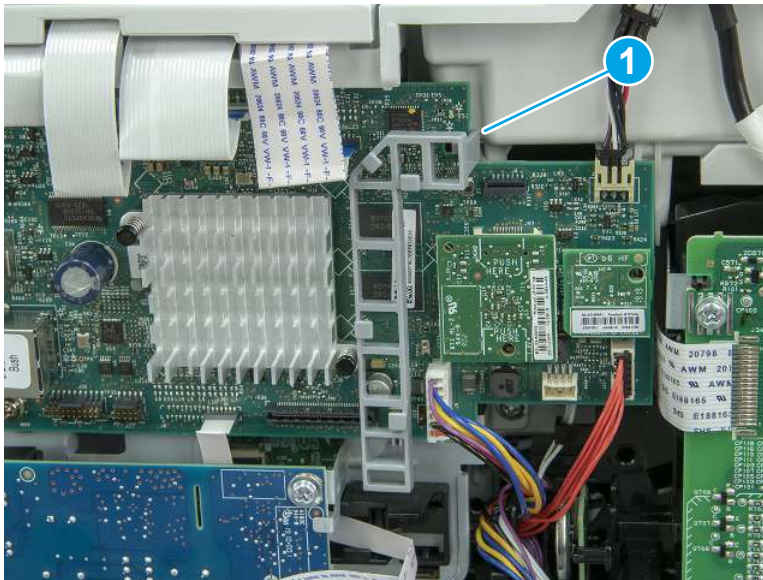
1. Disconnect one connector (callout 1), and then remove the cable from the guide (callout 2).

Figure 5-446 Remove the cable from the guide



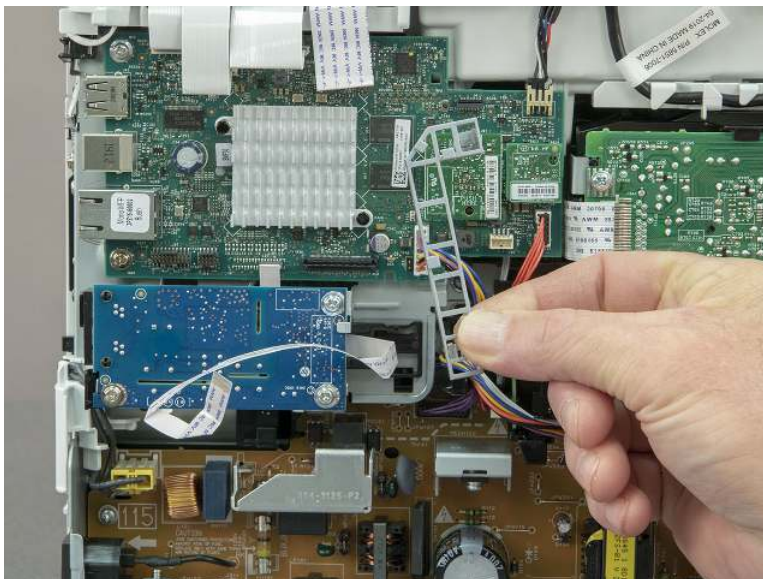
2. Release one tab (callout 1).

**Figure 5-447** Release one tab



3. Lower the guide to release it from the formatter.

**Figure 5-448** Lower the guide



## 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.

[View a video of 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 5-36** Part information

Part number	Part description
5851-7008	USB port and cable (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 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 5-449** 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).

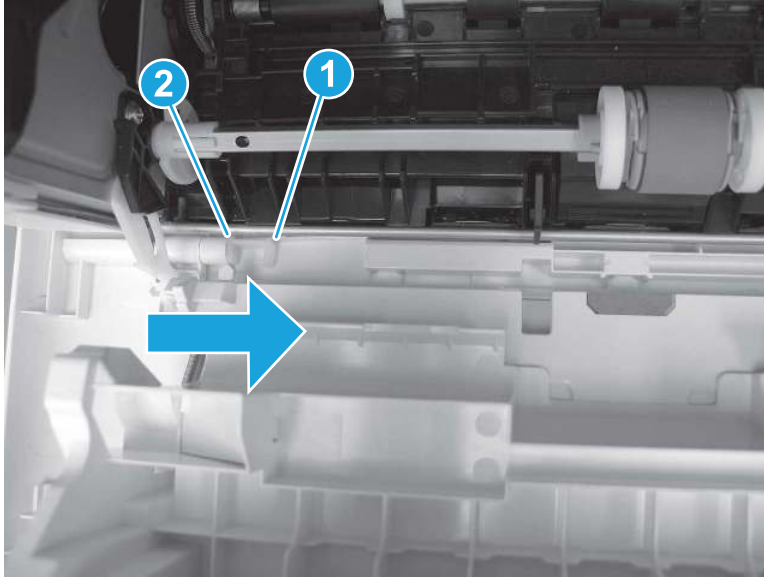
---

 **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.

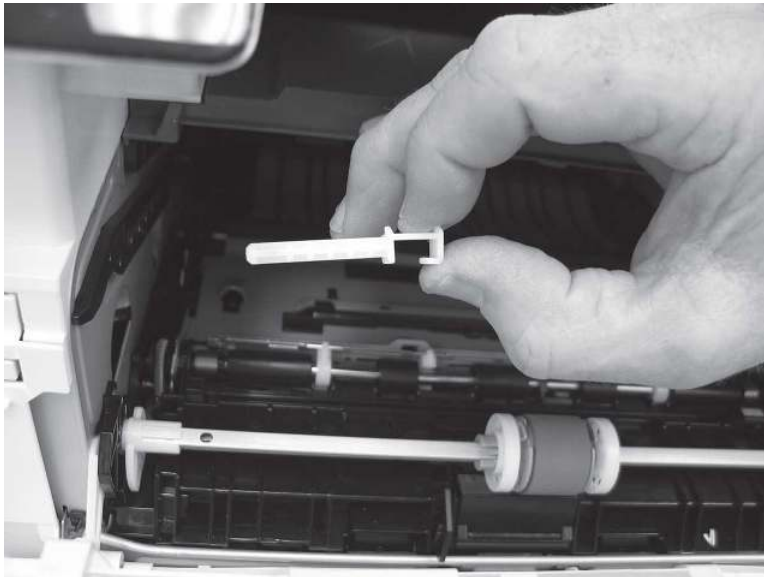
---

Figure 5-450 Release the support shaft



2. Remove the support shaft.

Figure 5-451 Remove the support shaft



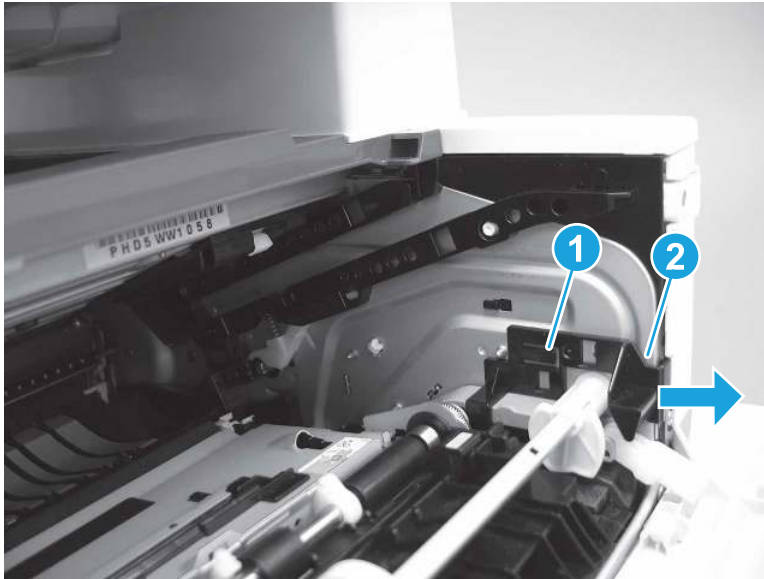
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

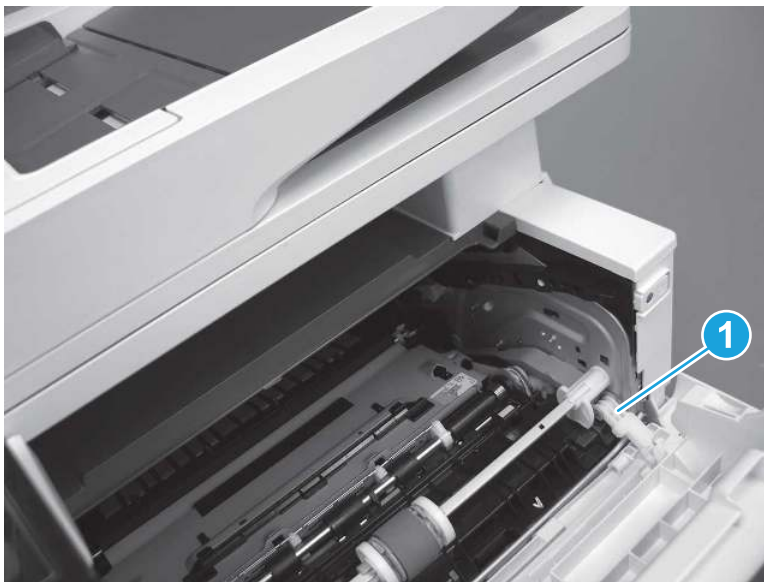
---

Figure 5-452 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 5-453 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).

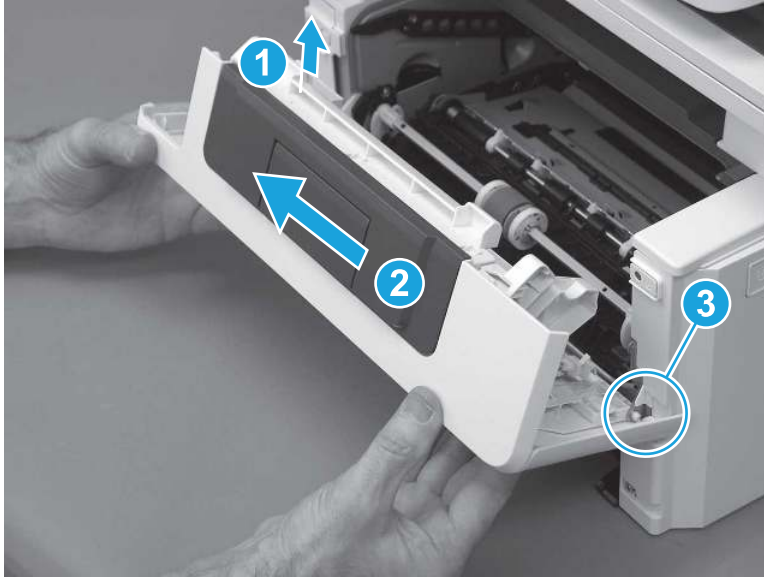
---

**⚠ 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.

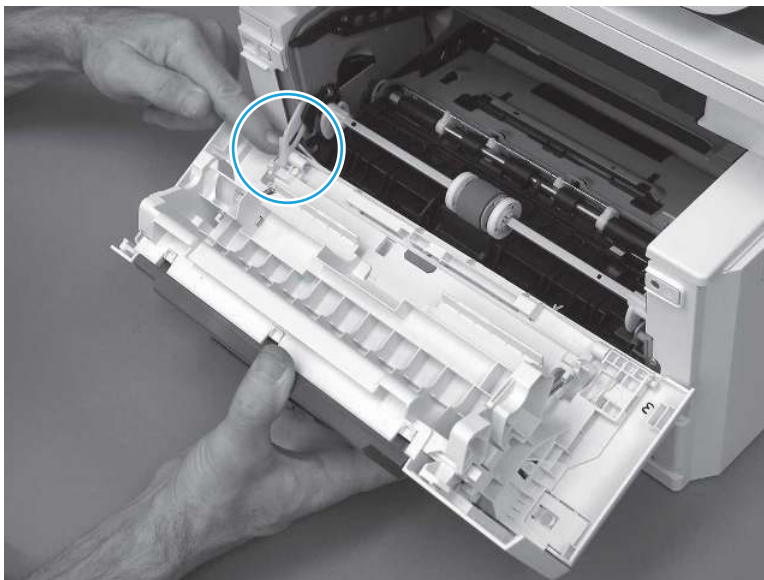
---

Figure 5-454 Release the door



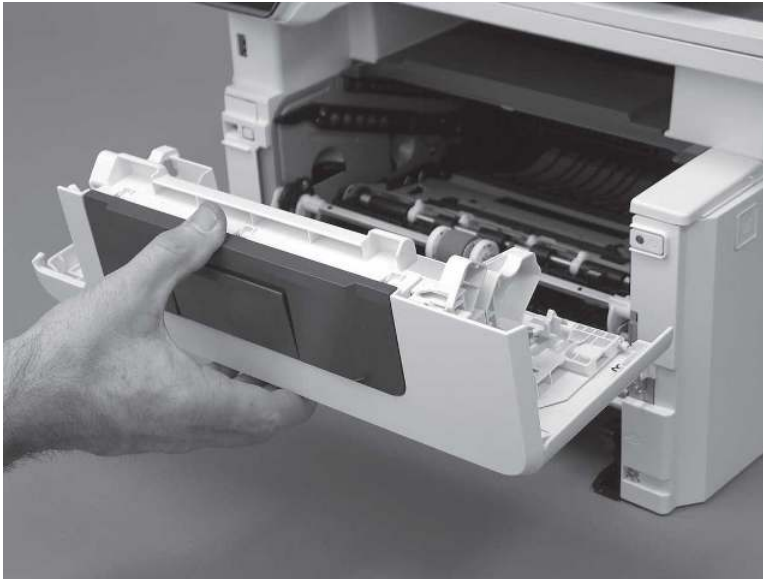
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

Figure 5-455 Release the left-side retainer arm



7. Remove the door.

**Figure 5-456** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

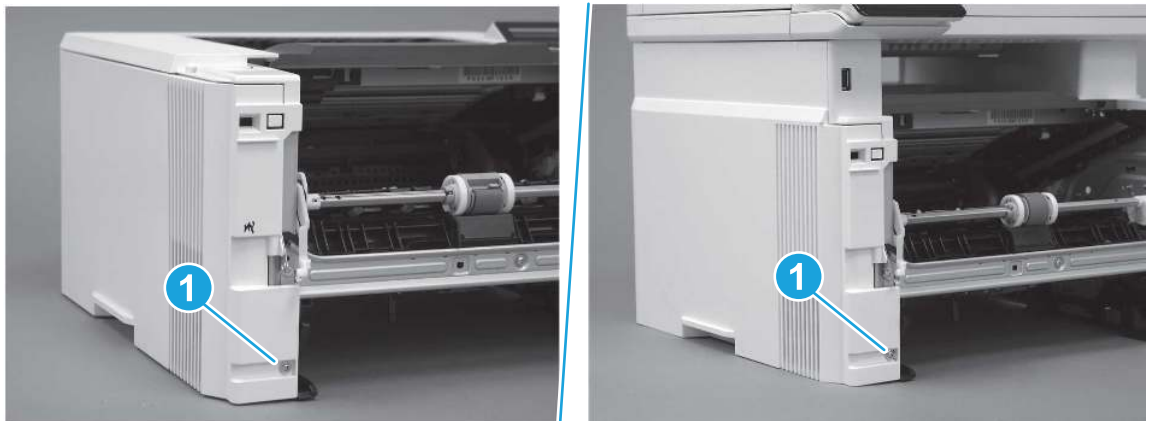
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

1. Remove one screw (callout 1).

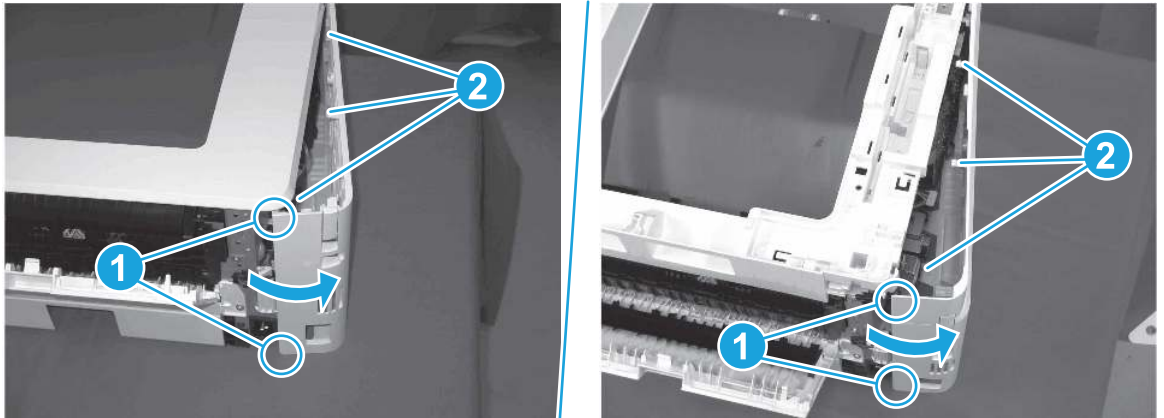
**Figure 5-457** Remove one screw





2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

Figure 5-458 Release two bosses and three tabs

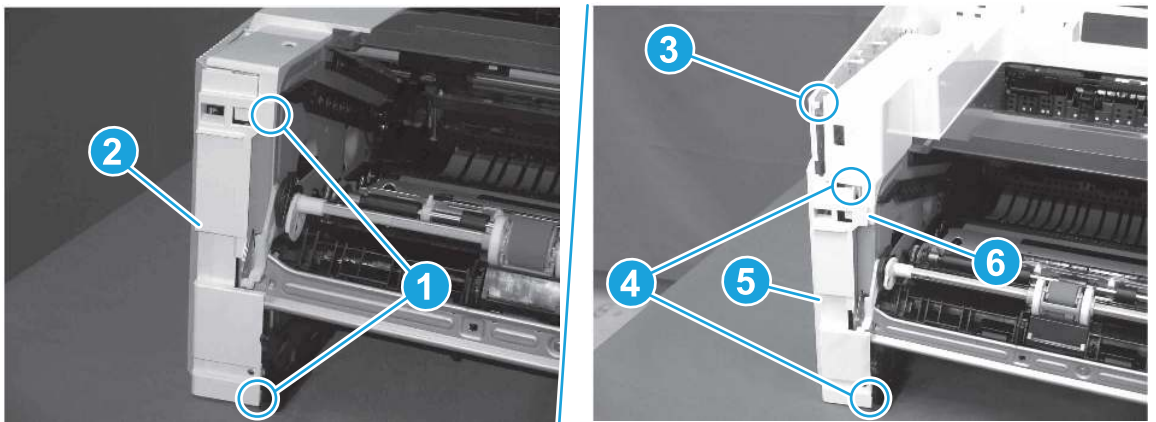


3. At the front of the printer, do one of the following:

- 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 5-459 Remove the cover

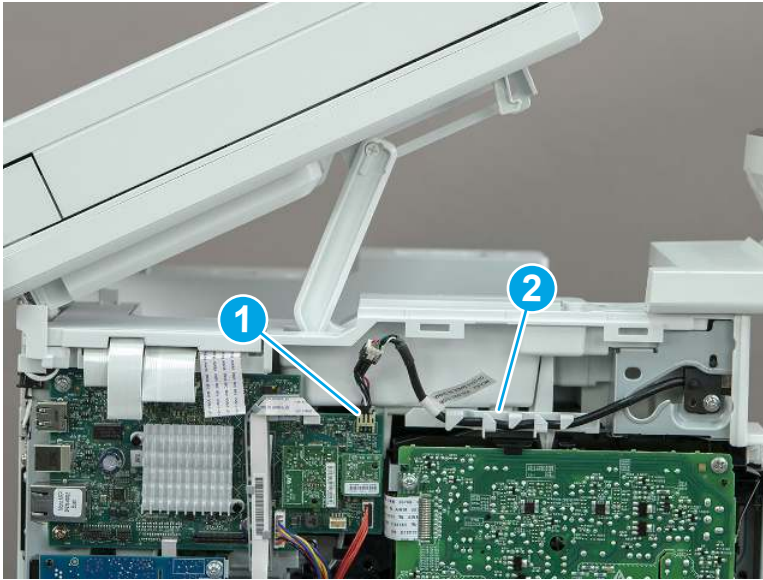


#### 4. Remove the USB port and cable (MFP)

Follow these steps to remove the USB port and cable (MFP).

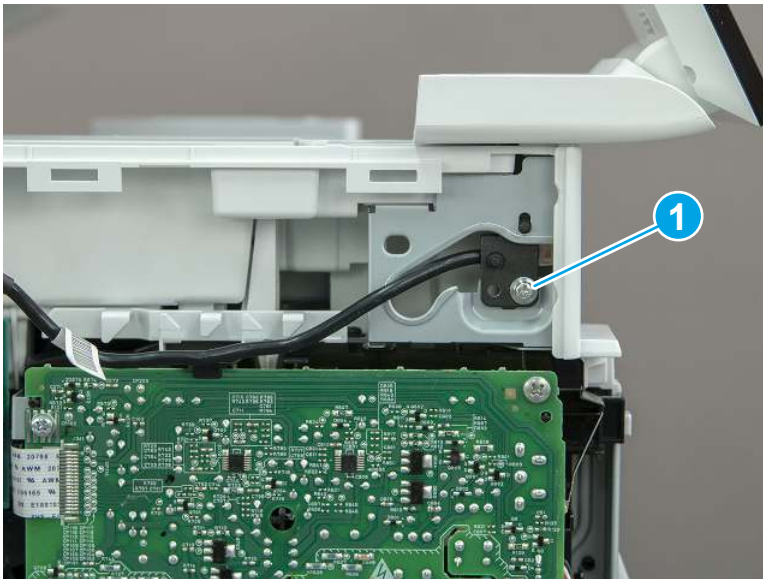
1. Disconnect one connector (callout 1), and then release the wire harness from the guide (callout 2).

**Figure 5-460** Disconnect one connector



2. Remove one screw (callout 1), and then remove the USB port and cable.

**Figure 5-461** Remove the USB port and cable



## 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: Island of Data (IOD)

Learn how to remove and replace the Island of Data (IOD).

[View a video of how to remove and replace the IOD.](#)

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 5-37** Part information

Part number	Part description
3PZ15-67908	Island of Data (IOD)

### 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

Make sure that the 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 5-462** 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).

---

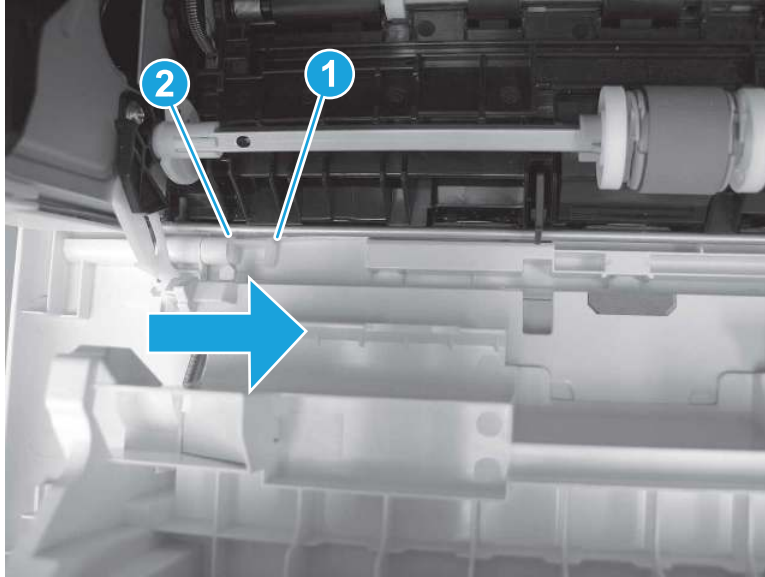
 **TIP:** It might be easier to release the support shaft by using a small flat-blade screwdriver.

---

 **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.

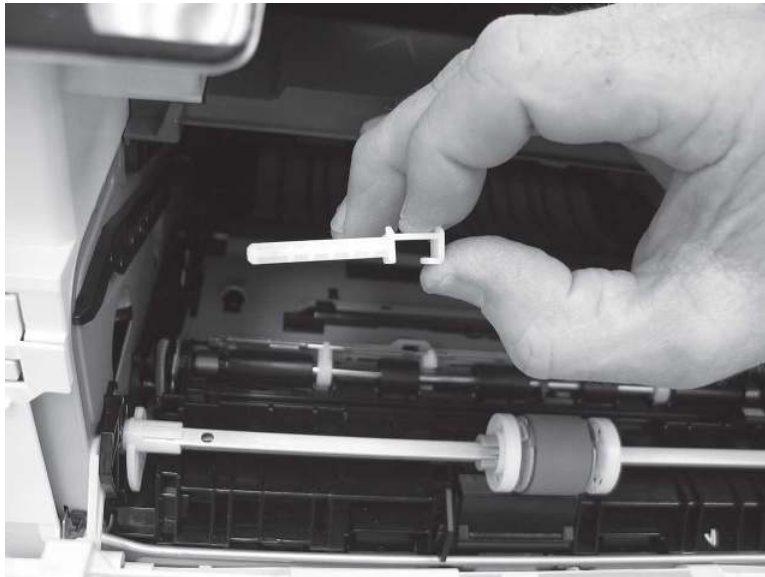
---

Figure 5-463 Release the support shaft



2. Remove the support shaft.

Figure 5-464 Remove the support shaft



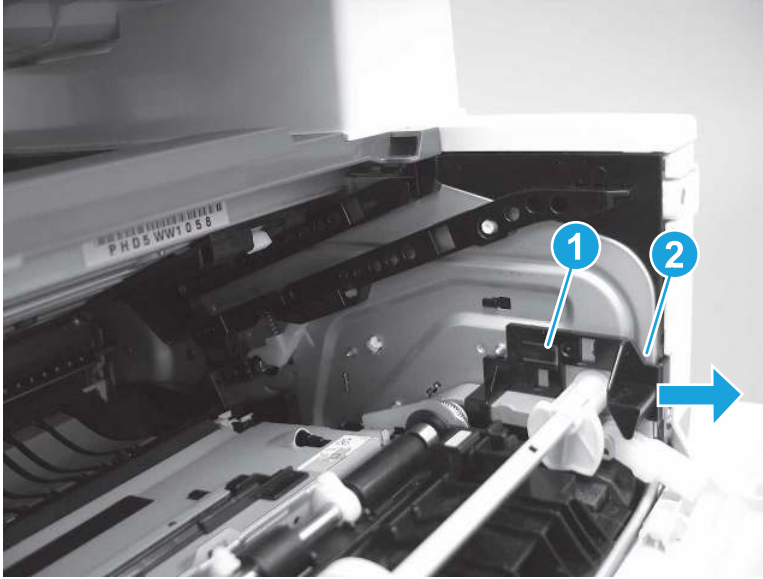
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

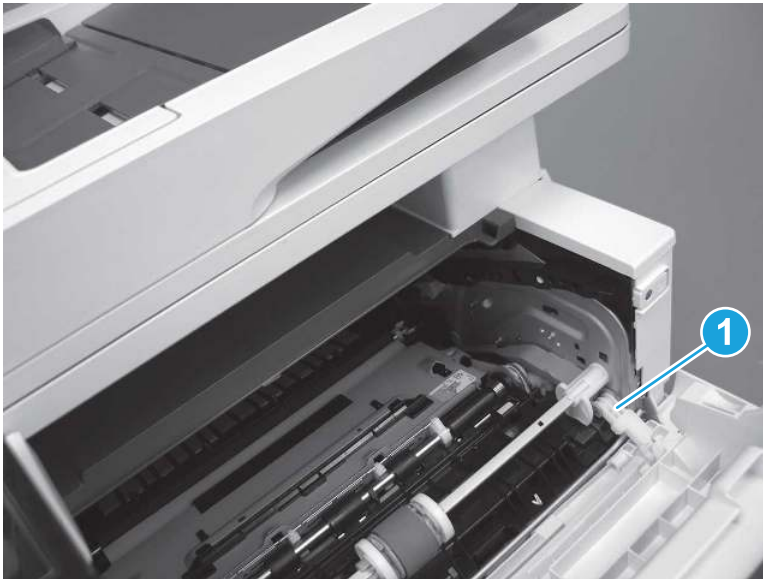
---

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).

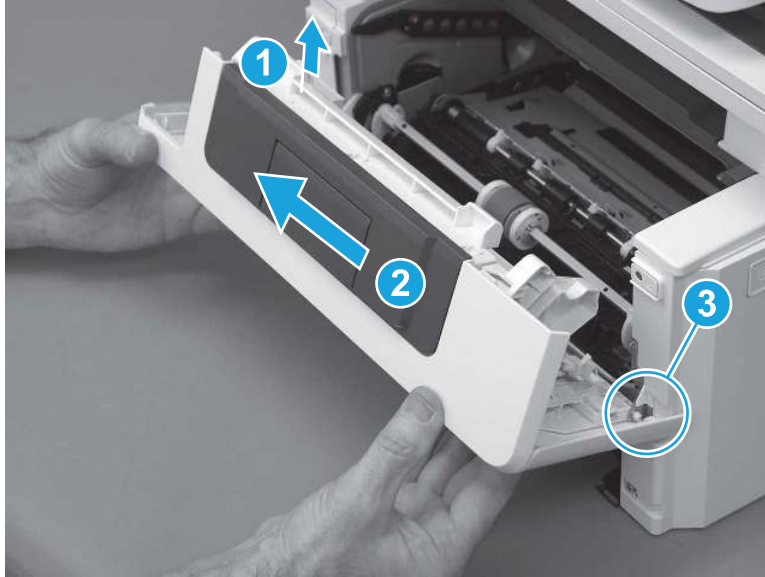
---

**⚠ 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.

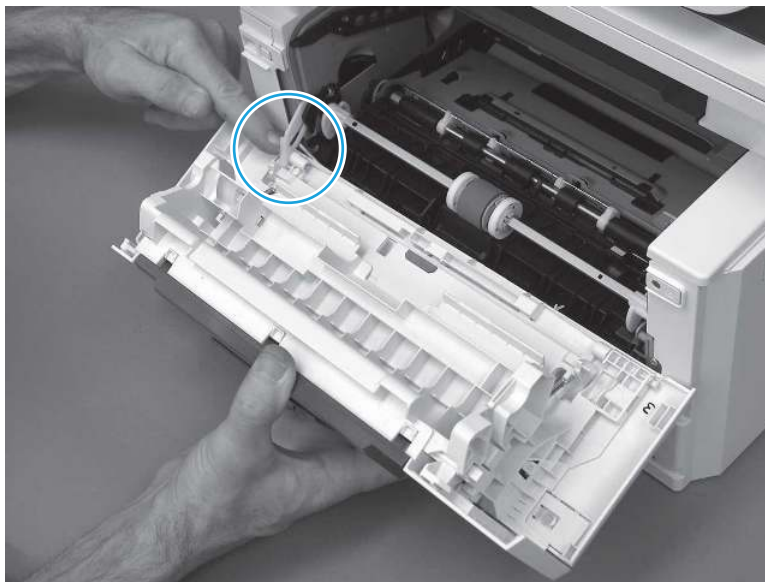
---

Figure 5-467 Release the door



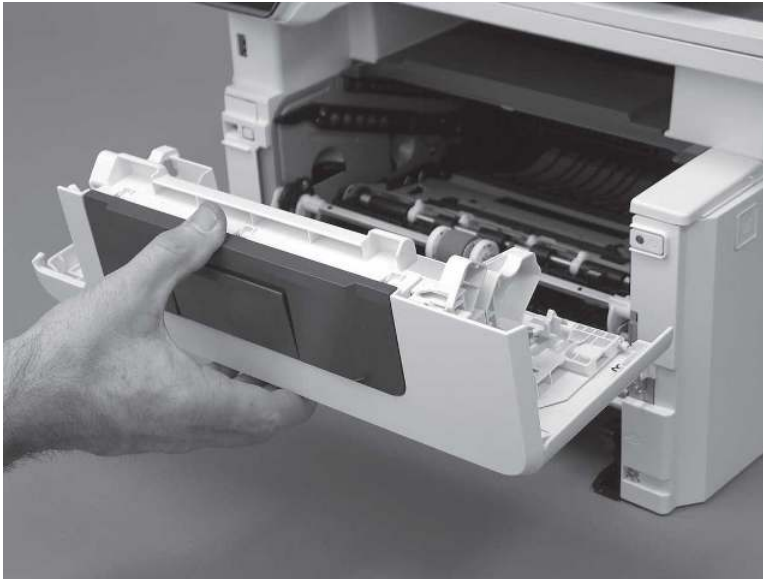
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

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.

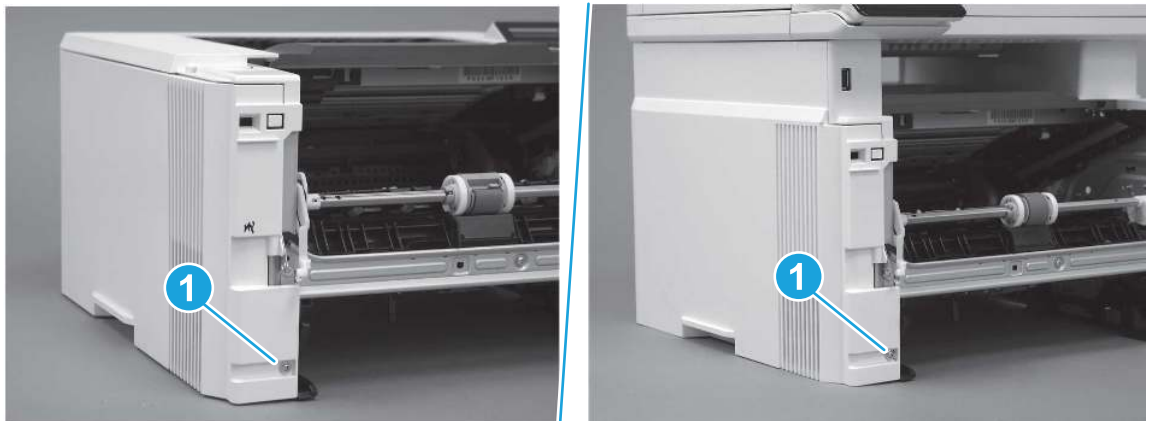
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

1. Remove one screw (callout 1).

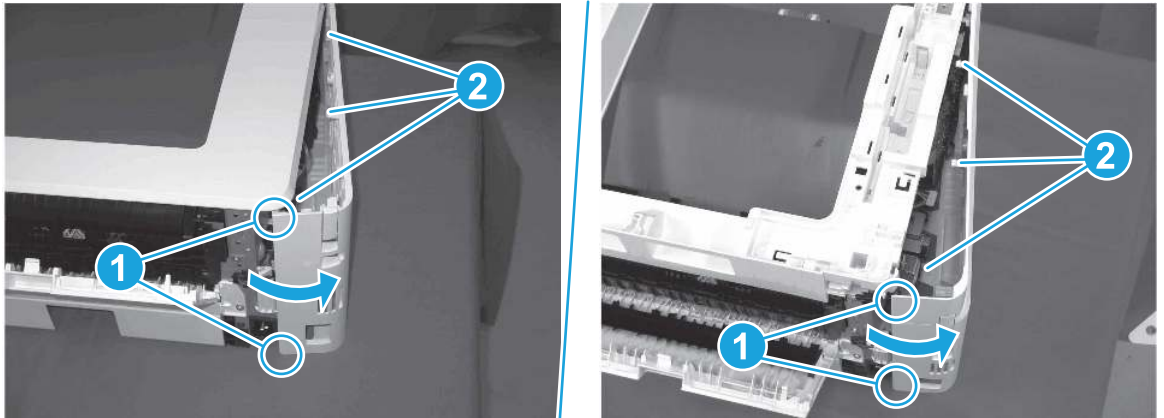
**Figure 5-470** Remove one screw





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

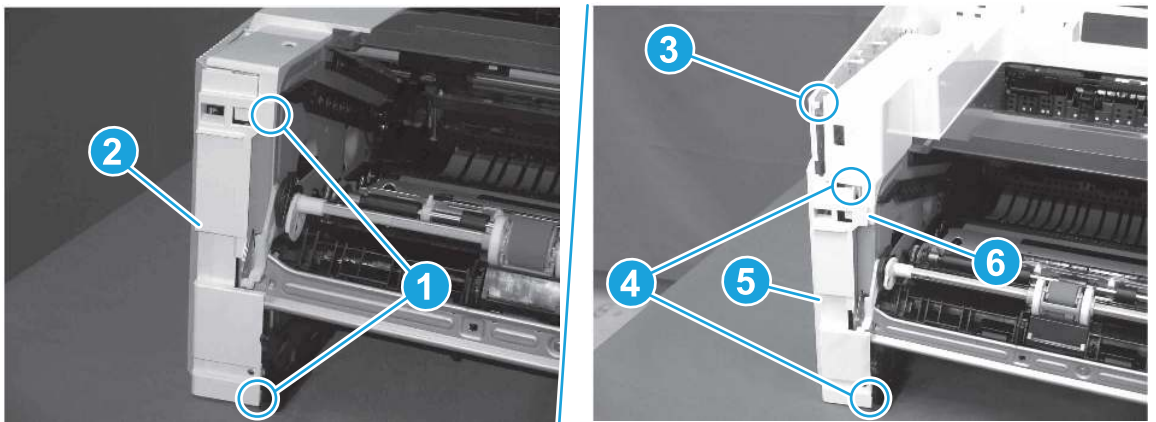


3. At the front of the printer, do one of the following:

- 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

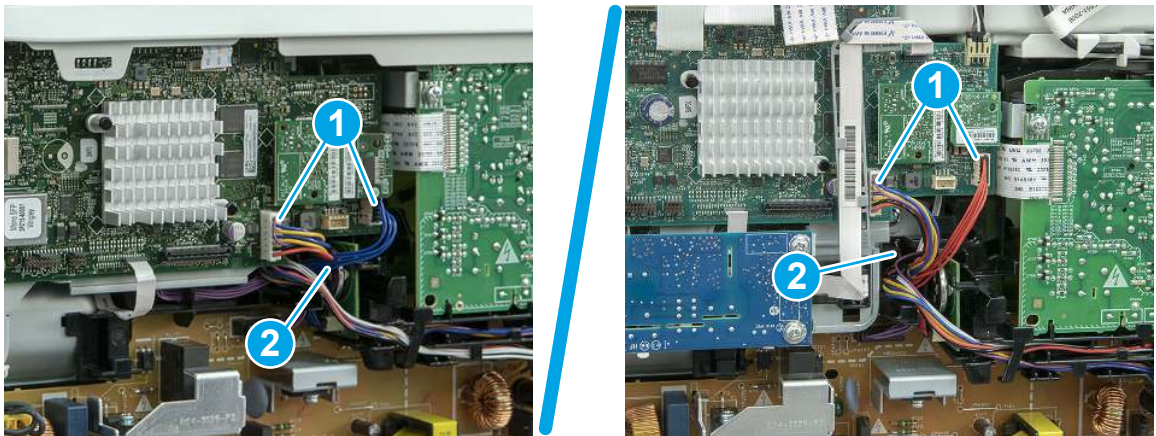


#### 4. Remove the Island of Data (IOD)

Follow these steps to remove the Island of Data (IOD).

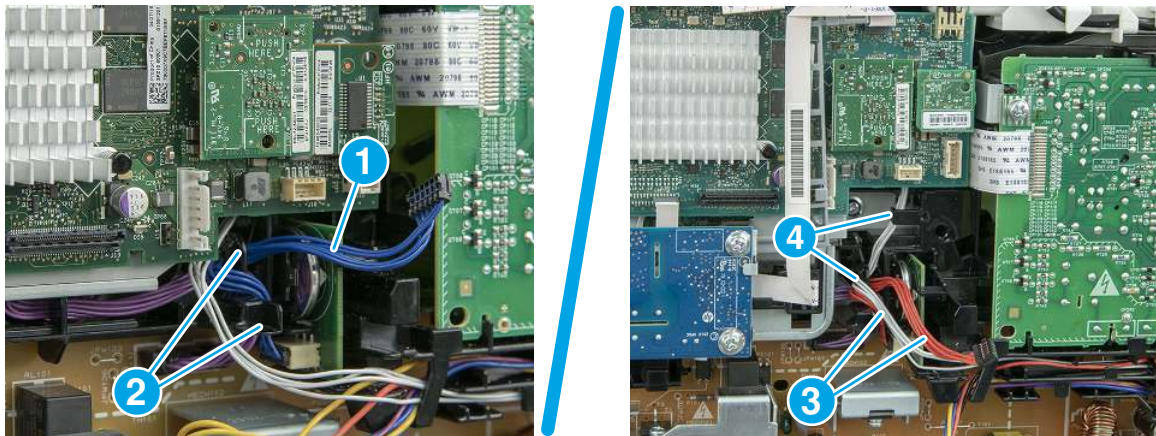
1. Disconnect two connectors (callout 1), and then remove the wire harness from the guide (callout 2).

Figure 5-473 Remove the wire harness



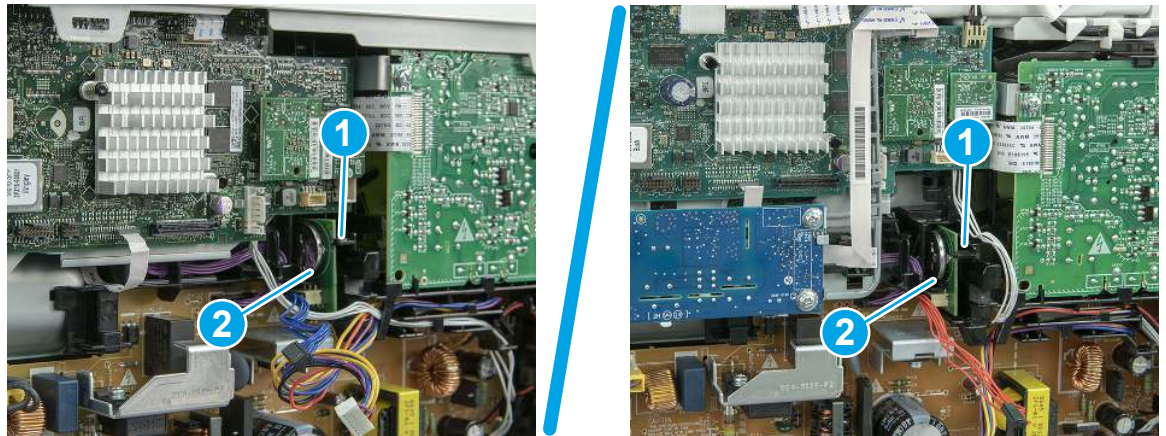
2. Do one of the following:
  - SFP: Remove the wire harness (callout 1) from the guide (callout 2).
  - MFP: Remove the wire harnesses (callout 3) from the guides (callout 4).

Figure 5-474 Remove the wire harness



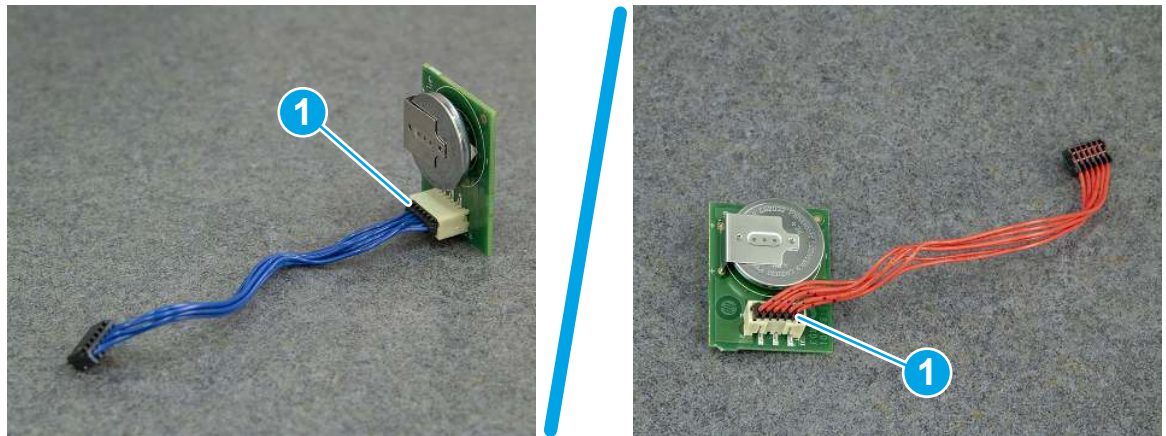
3. Release one tab (callout 1), and then slide the IOD (callout 2) away from the printer to remove it.

**Figure 5-475** Press the wire down and release the tab



4. Disconnect one connector (callout 1), and then connect the cable to the replacement part (callout 2).

**Figure 5-476** Remove the IOD



## 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: embedded Multi-Media Card (eMMC)

Learn how to remove and replace the embedded Multi-Media Card (eMMC).

[View a video of how to remove and replace the eMMC.](#)


Mean time to repair: 10 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 5-38** Part information

Part number	Part description
3PZ15-67905	eMMC 4GB SFP
B5L32-60002	eMMC 16GB (MFP)

### 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

Make sure that the 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 5-477** 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).

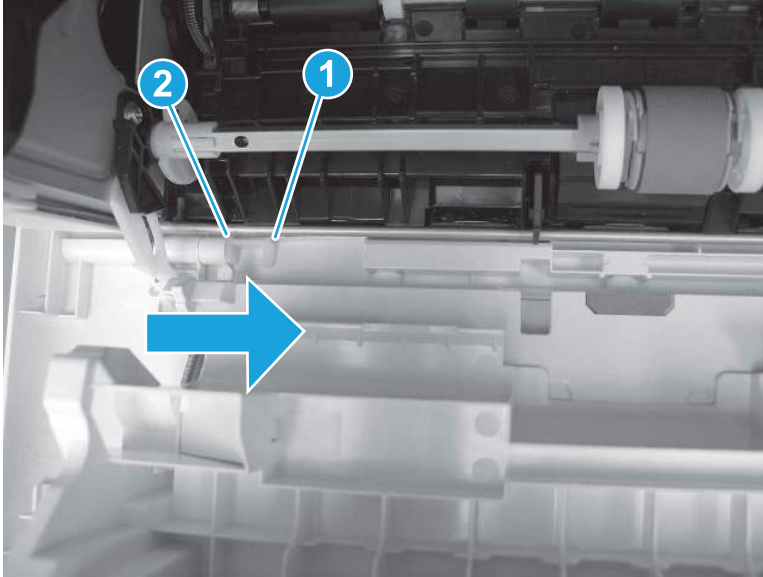
---

 **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.

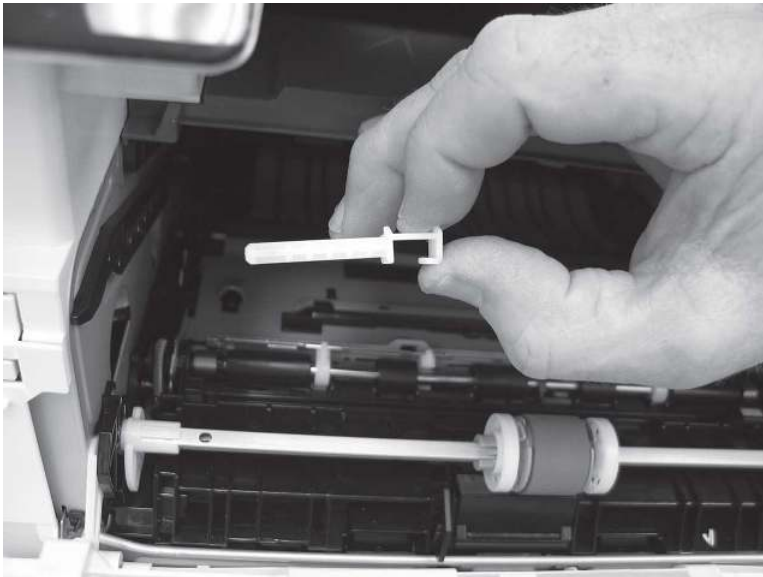
---

Figure 5-478 Release the support shaft



2. Remove the support shaft.

Figure 5-479 Remove the support shaft



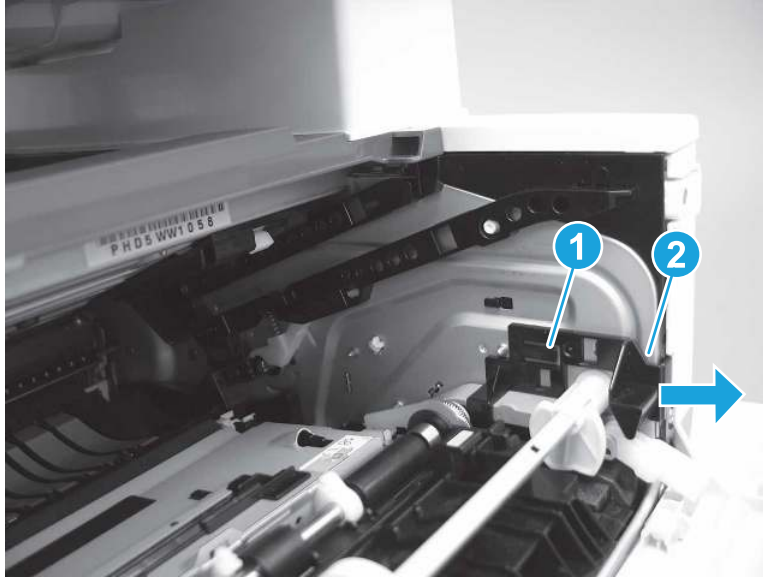
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

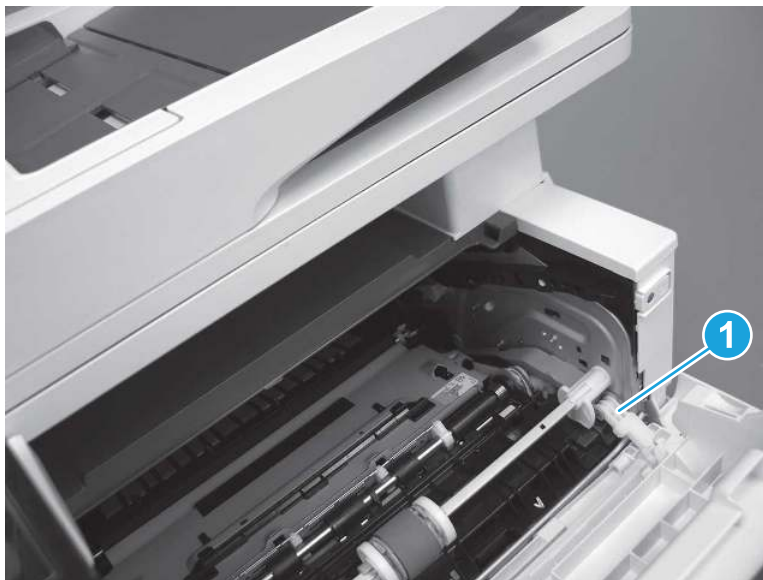
---

Figure 5-480 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 5-481 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).

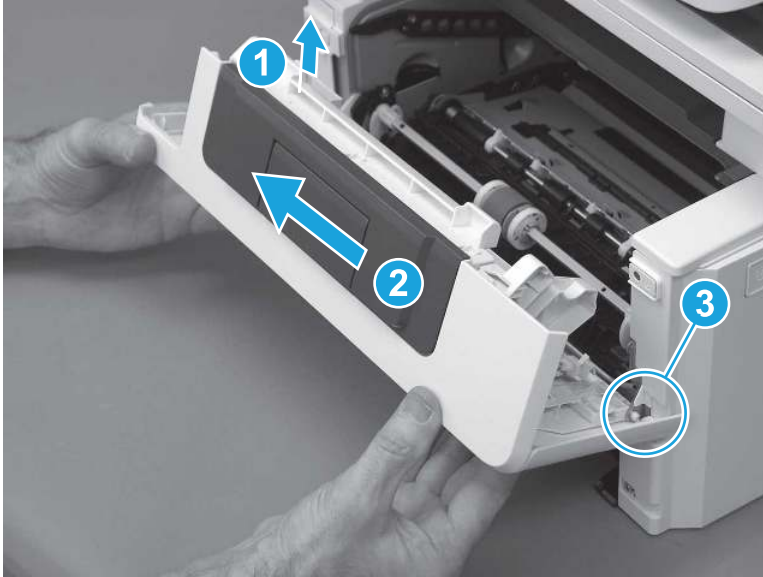
---

**⚠ 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.

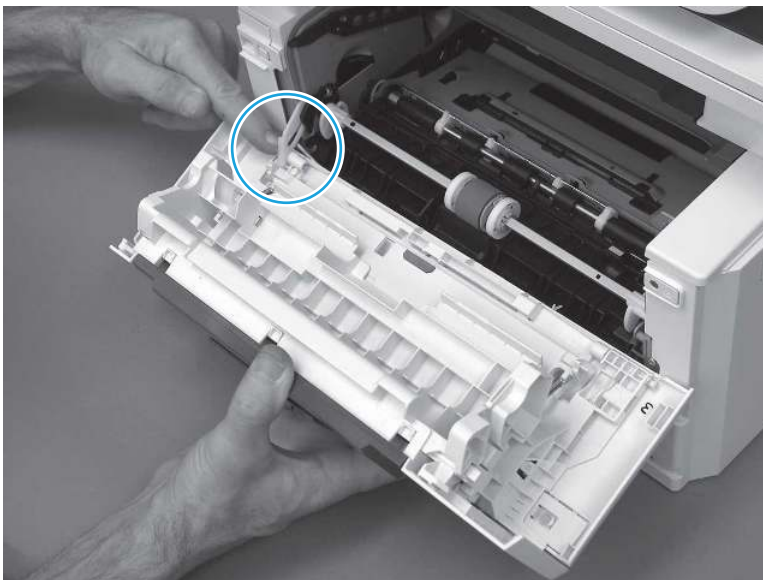
---

**Figure 5-482** 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.

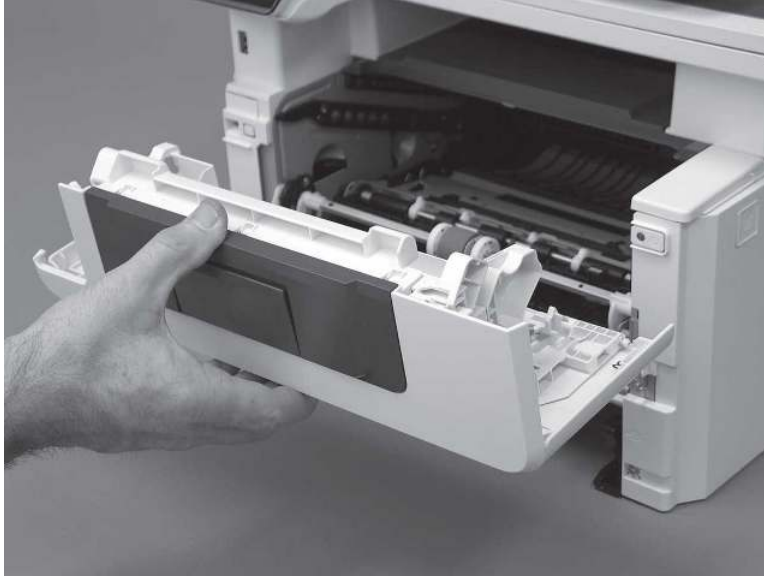
**Figure 5-483** Release the left-side retainer arm





7. Remove the door.

**Figure 5-484** 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.

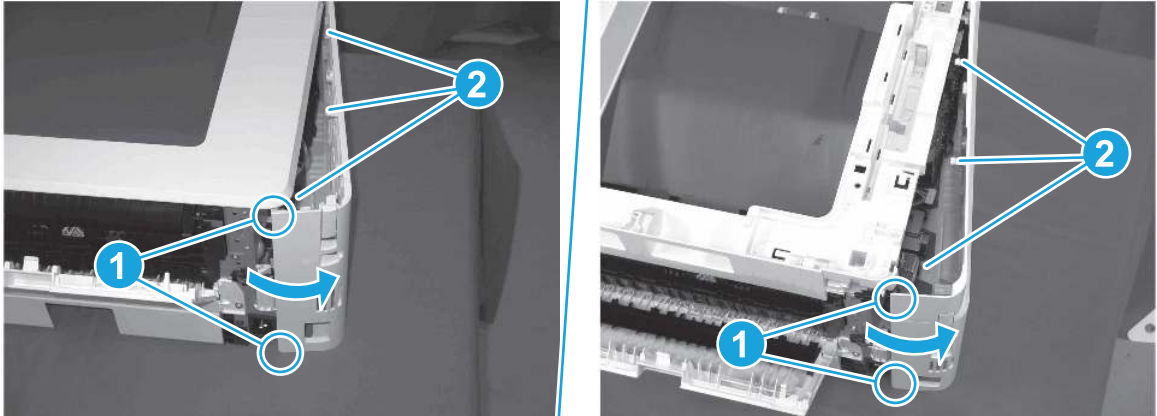
1. Remove one screw (callout 1).

**Figure 5-485** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

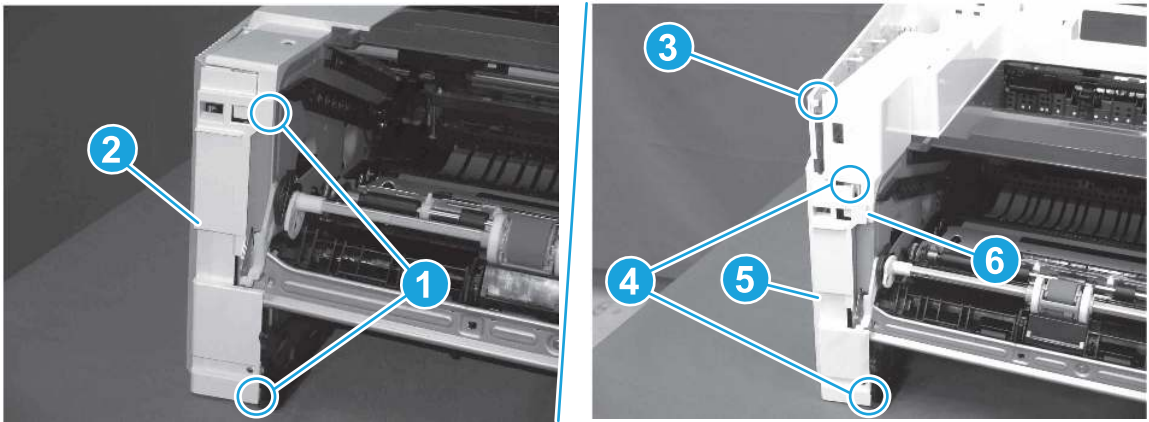
Figure 5-486 Release two bosses and three tabs



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 5-487 Remove the cover



#### 4. Remove the embedded Multi-Media Card (eMMC)

Follow these steps to remove the embedded Multi-Media Card (eMMC).

- ▲ Carefully pull the eMMC away from the formatter to remove it.

**📝 NOTE:** If replacing the formatter, retain the eMMC for installation on the replacement formatter.

Figure 5-488 Remove the eMMC



## 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.](#)

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 stores important data specific to the model of printer it is installed in and is not designed to be swapped or repurposed in any way. Return a used formatter to HP.

Issues that can occur from swapping a formatter include:

- Serial number, product number, product name, page count, and supported cartridges information change and might make a product unusable
- 33.02.01 Used board/Disk installed errors

If a used formatter is installed and causes this issue, the **partner** must cover the costs of the repair in the form of a product replacement. **There is no method in the field to recover a printer where a used formatter is installed.**

For more information, see [HP LaserJet Enterprise, HP LaserJet Managed, HP PageWide Enterprise, HP PageWide Managed - 33.02.01 error or printer name and/or product number changes after replacing the formatter.](#)

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
3PZ15-67903	Formatter (SFP)
3PZ15-67904	Formatter (China/India; SFP)
3PZ55-67906	Formatter (MFP)
3PZ55-67907	Formatter (China/India; 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 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 5-489** 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).

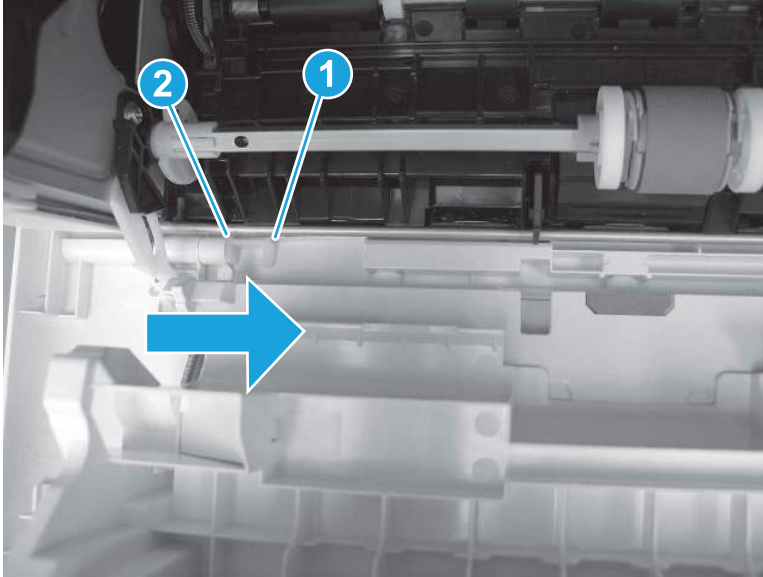
---

 **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.

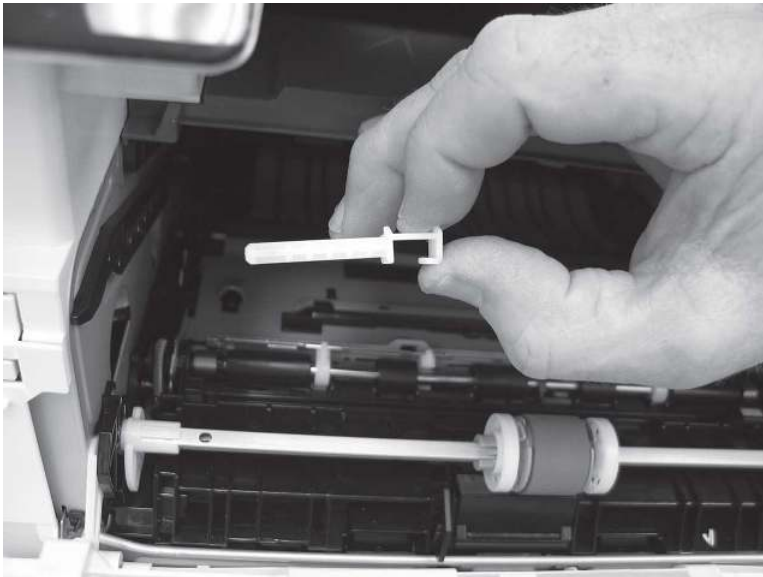
---

Figure 5-490 Release the support shaft



2. Remove the support shaft.

Figure 5-491 Remove the support shaft



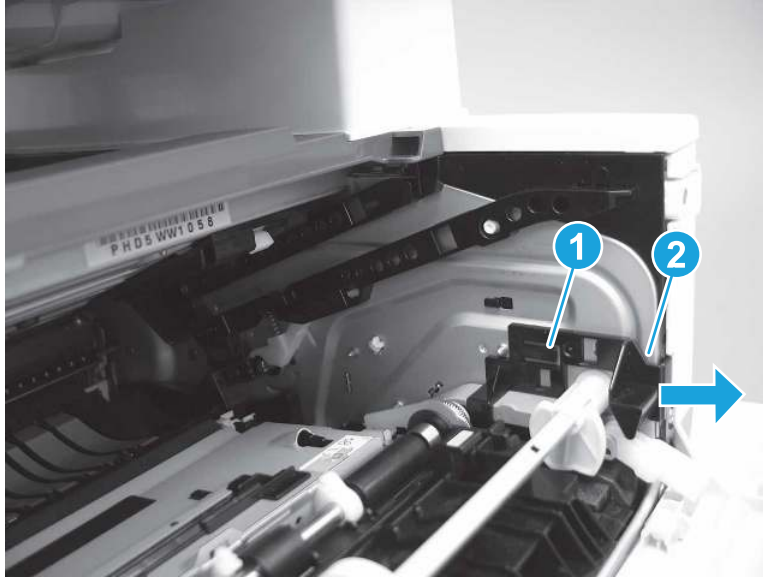
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

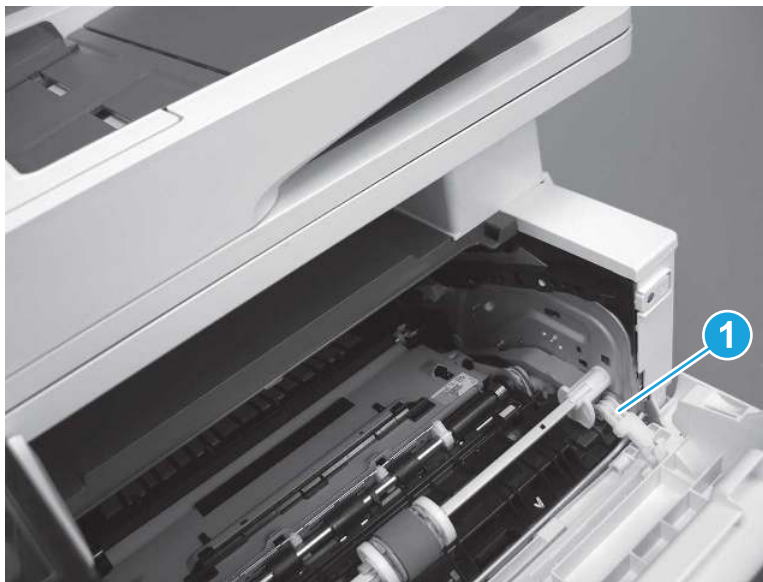
---

Figure 5-492 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 5-493 Release the pressure-release link

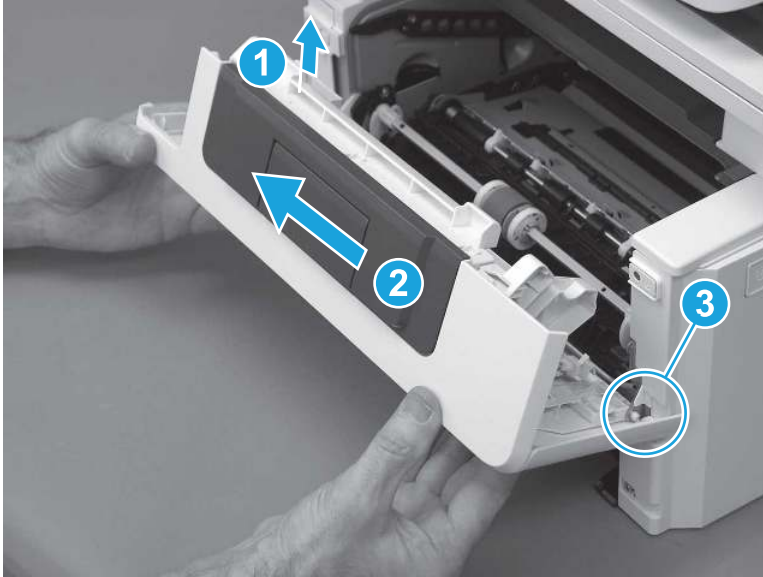


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

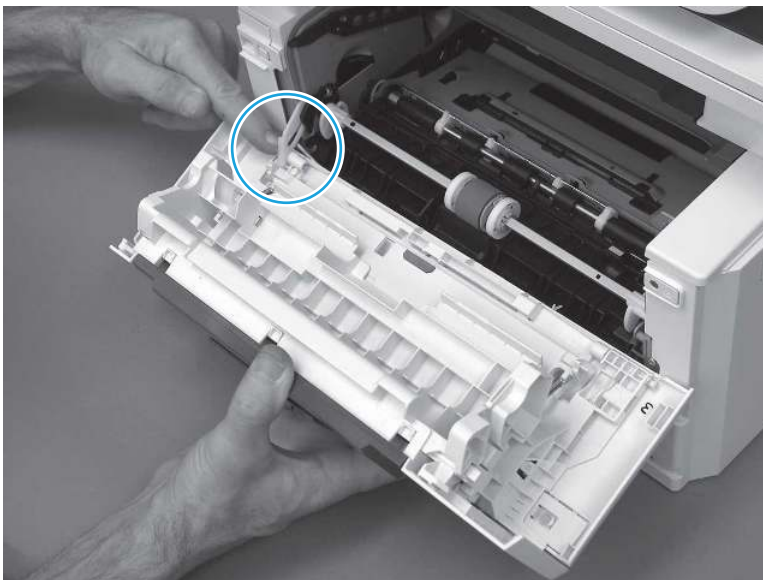
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

Figure 5-494 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.

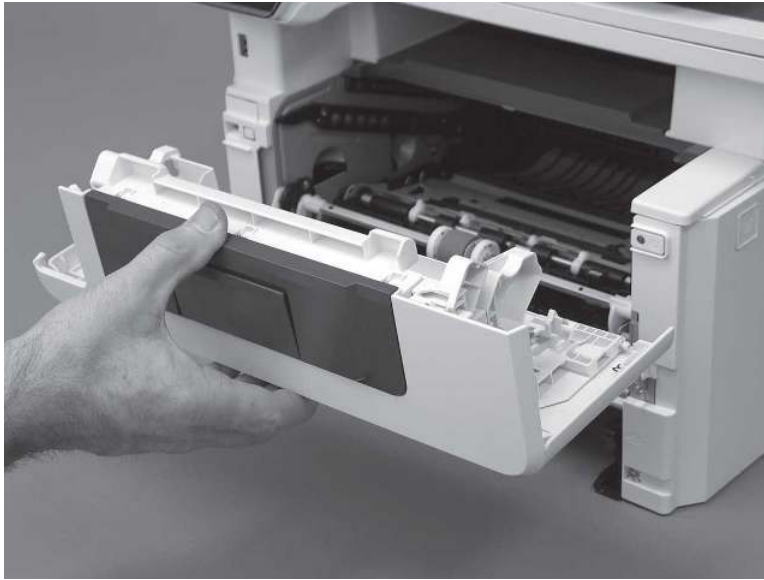
Figure 5-495 Release the left-side retainer arm





7. Remove the door.

**Figure 5-496** Remove the door



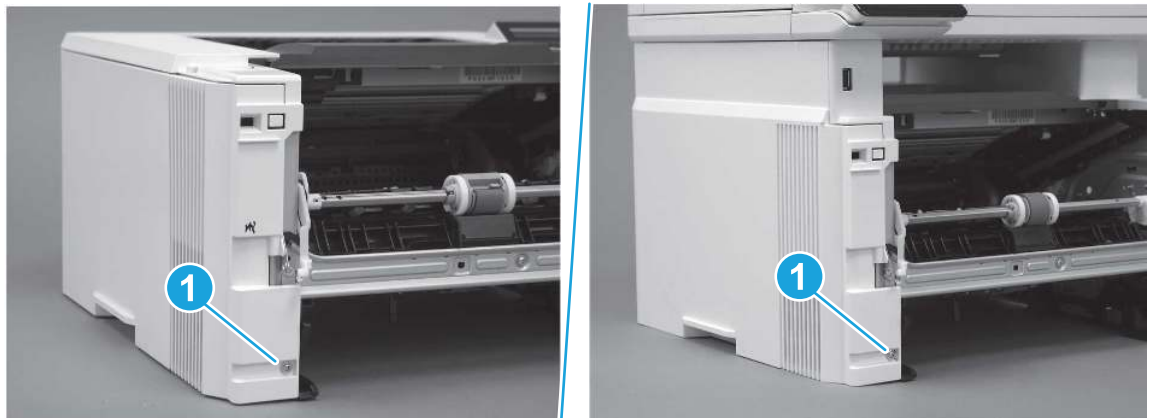
### 3. Remove the left cover

Follow these steps to remove the left cover.

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

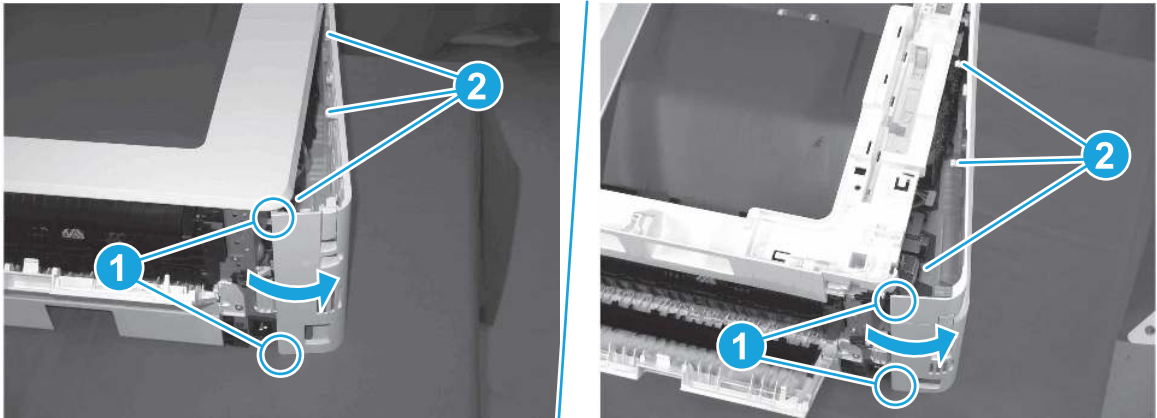
1. Remove one screw (callout 1).

**Figure 5-497** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

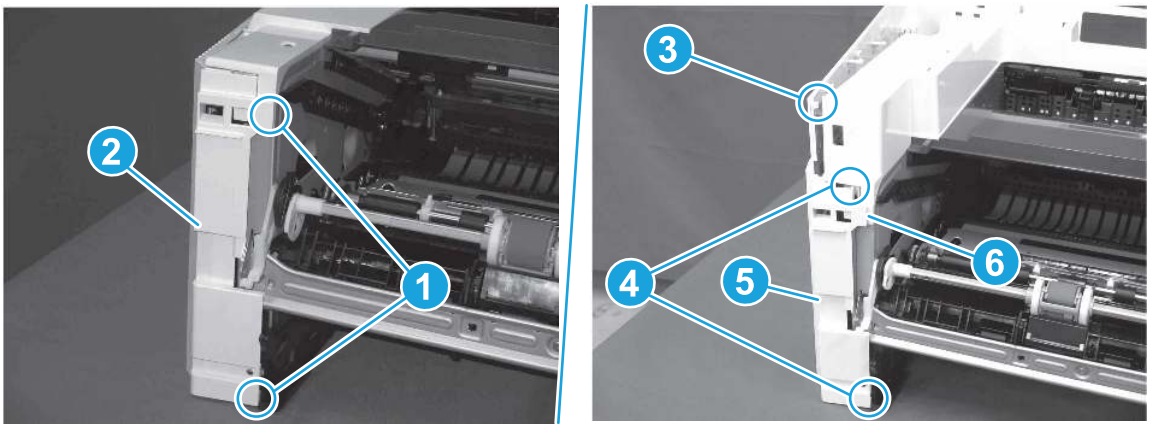
Figure 5-498 Release two bosses and three tabs



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 5-499 Remove the cover

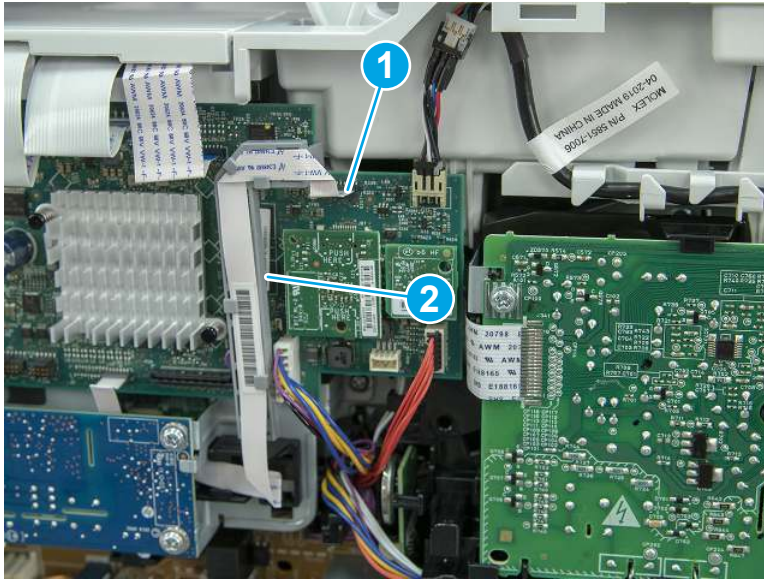


#### 4. Remove the fax cable guide and fax PCA (fax models only)

Follow these steps to remove the fax cable guide and fax PCA (fax models only).

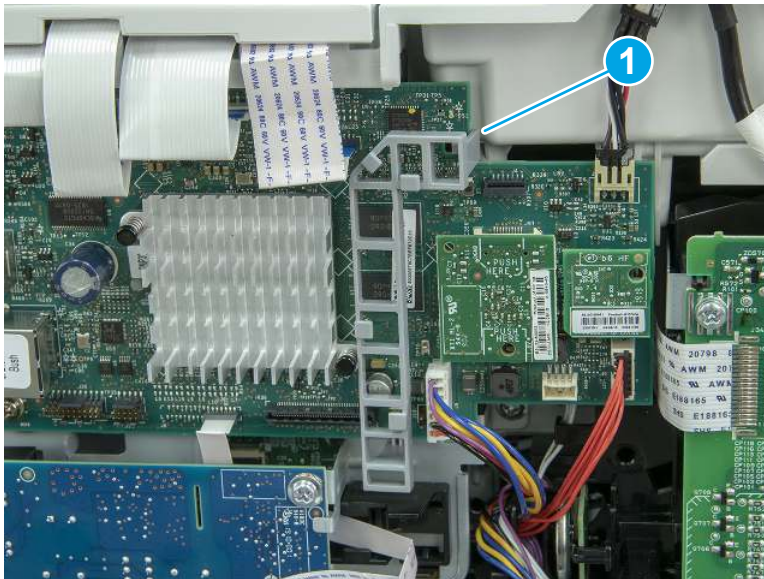
1. Disconnect one connector (callout 1), and then remove the cable from the guide (callout 2).

**Figure 5-500** Remove the cable from the guide



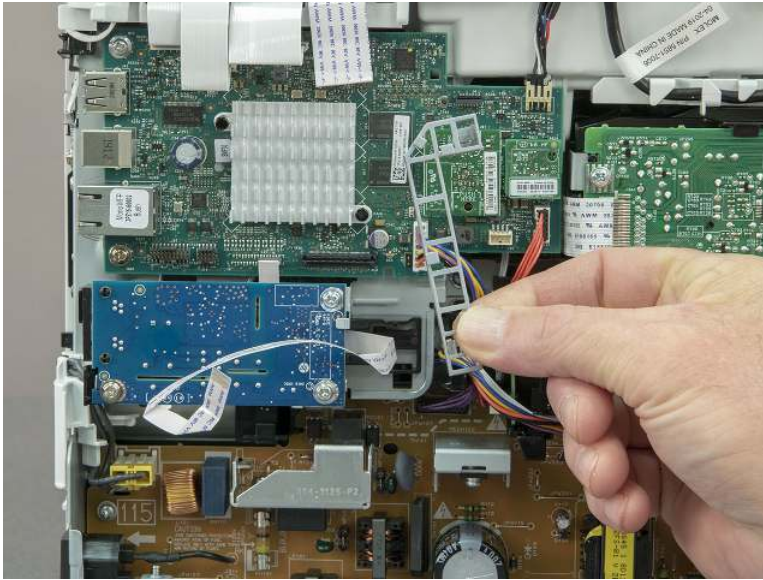
2. Release one tab (callout 1).

**Figure 5-501** Release one tab



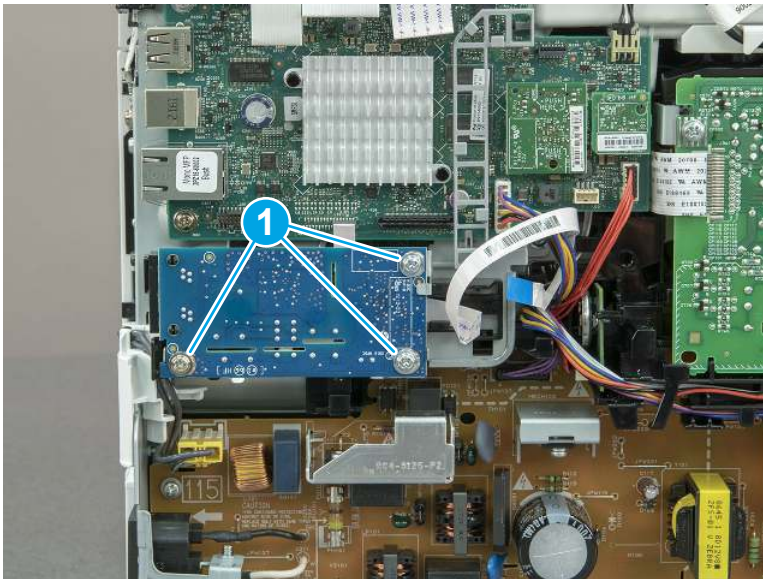
3. Lower the guide to release it from the formatter.

Figure 5-502 Lower the guide



4. Remove three screws (callout 1), and then remove the fax PCA and cable.

Figure 5-503 Remove three screws




## 5. Remove the embedded Multi-Media Card (eMMC)

Follow these steps to remove the embedded Multi-Media Card (eMMC).

- ▲ Carefully pull the eMMC away from the formatter to remove it.

---

 **NOTE:** If replacing the formatter, retain the eMMC for installation on the replacement formatter.

---

Figure 5-504 Remove the eMMC



## 6. 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 stores important data specific to the model of printer it is installed in and is not designed to be swapped or repurposed in any way. Return a used formatter to HP.

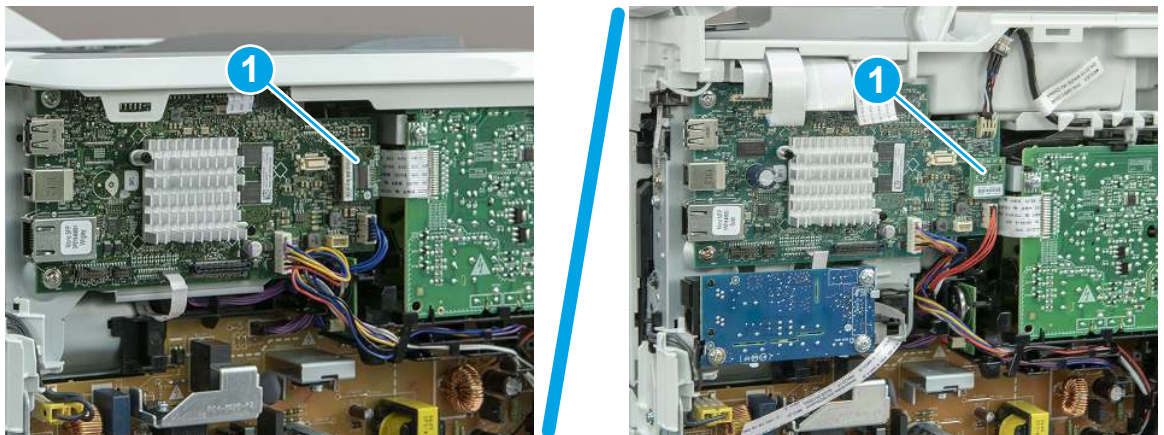
**📌 IMPORTANT:** For replacement formatter installations: Make sure that the eMMC and TPM components are removed from the discarded formatter, and then installed on the replacement formatter.

A factory installed TPM **must** remain with the printer it is originally installed in. If the TPM is removed *the printer will not function* (reinstall the original TPM). If a TPM cannot be reinstalled or is damaged, a whole unit replacement printer is required (for security reasons there is no method for in-the-field recovery of the printer).

**📌 NOTE:** The formatter PCA on other models might look differently and have a different number of connections. However, the procedure is correct for all models.

1. Carefully pull the Trusted Platform Module (TPM) (callout 1) away from the formatter to remove it.

Figure 5-505 Remove the TPM

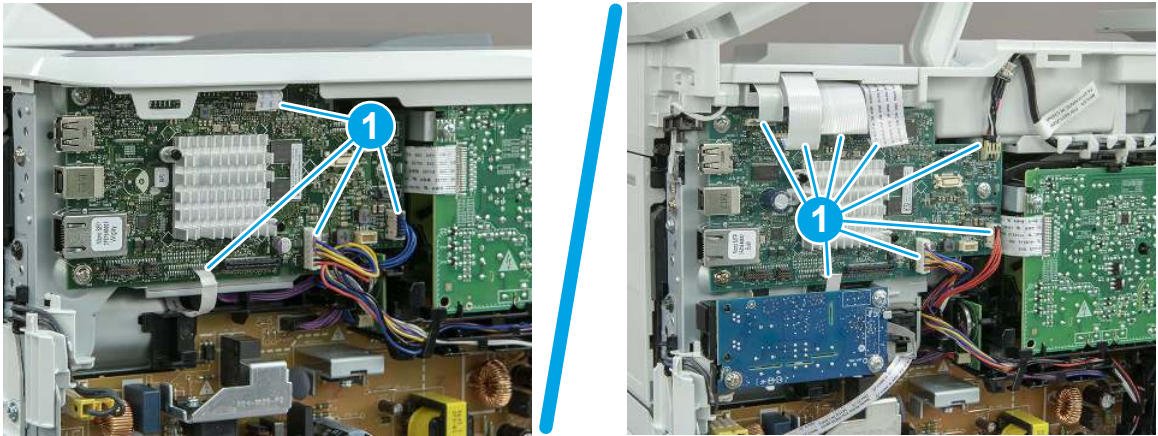


2. Do one of the following:
  - **SFP:** Disconnect four connectors (callout 1).

- MFP: Disconnect eight connectors (callout 1).

 **IMPORTANT:** Take note of any empty connectors before removing the formatter PCA.

**Figure 5-506** SFP/MFP: Disconnect the connectors



3. Remove three screws (callout 1), and then remove the formatter PCA.


**Figure 5-507** Remove three screws



## 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: 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 5-40** Part information

Part number	Part description
RK2-8068-000CN	Fan 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.

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 5-508** 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.

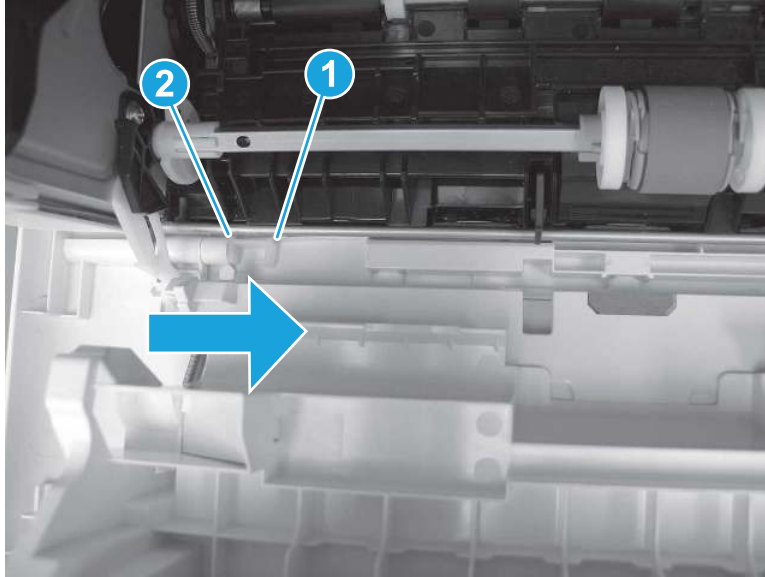
---

 **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.

---

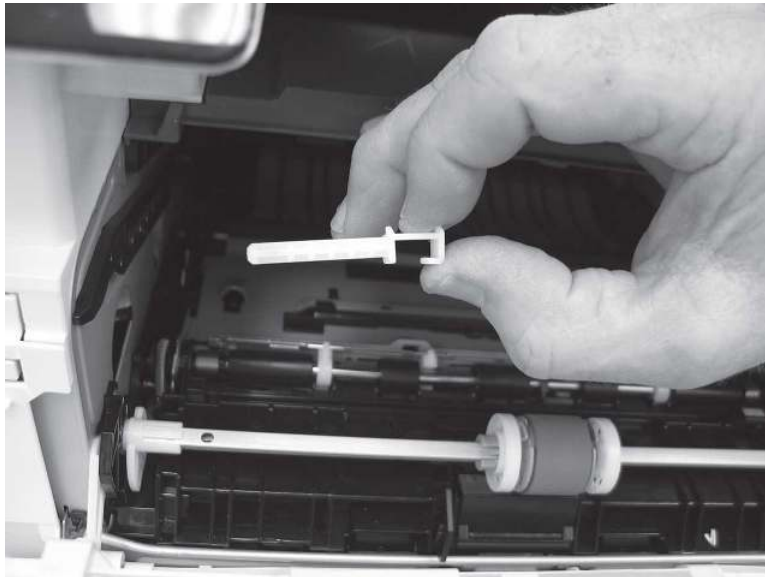


Figure 5-509 Release the support shaft



2. Remove the support shaft.

Figure 5-510 Remove the support shaft



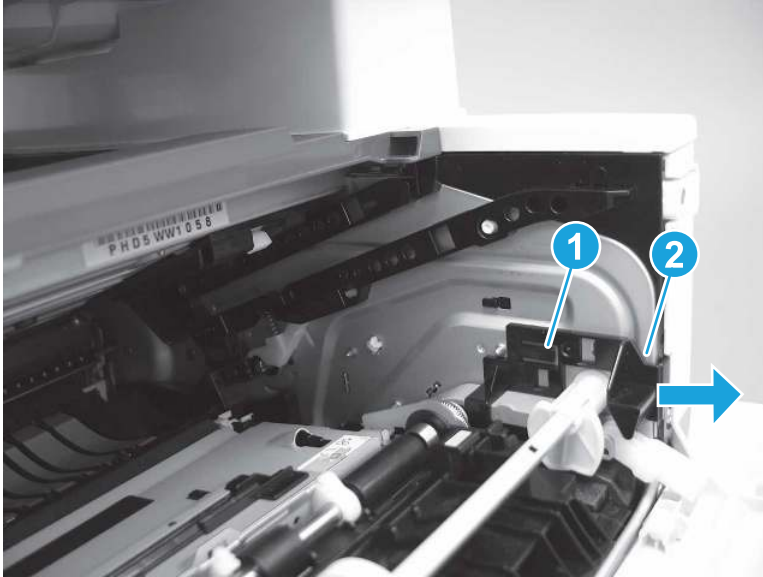
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

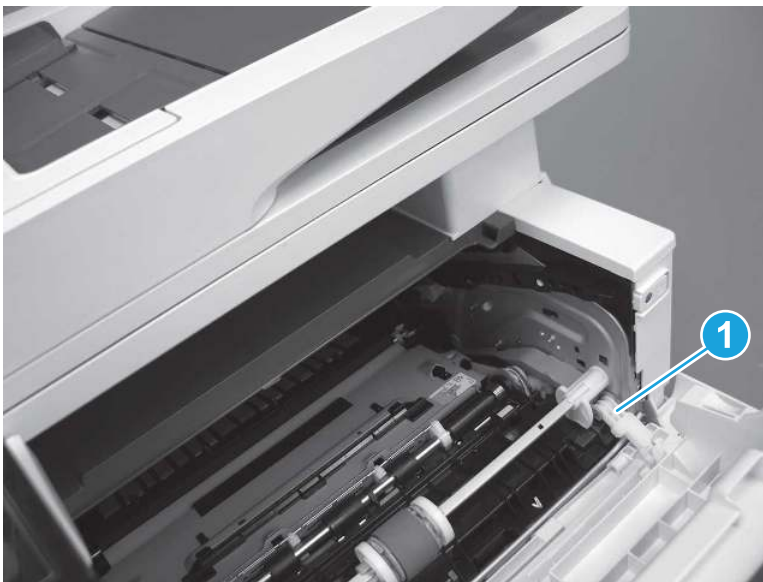
---

**Figure 5-511** 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 5-512** 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).

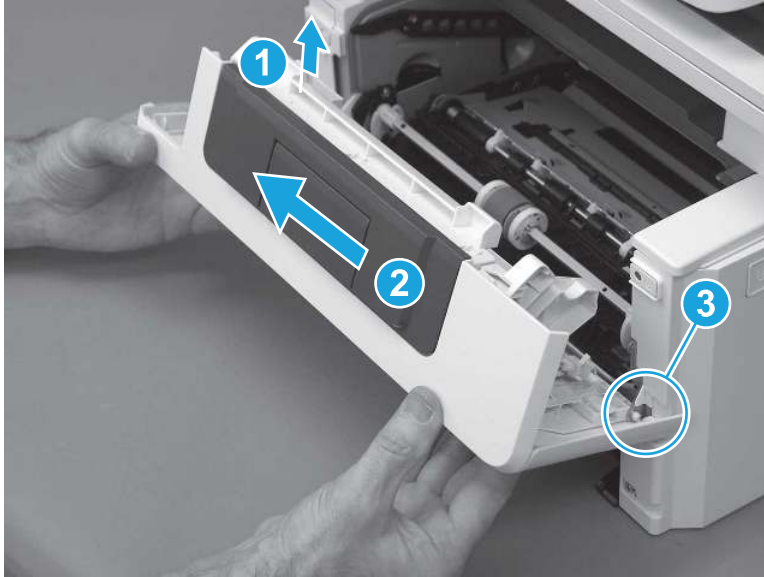
---

**⚠ 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.

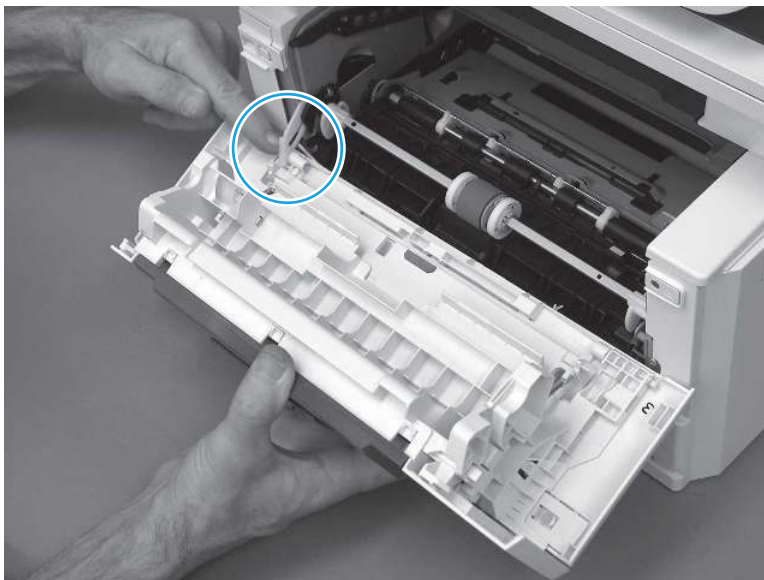
---

Figure 5-513 Release the door



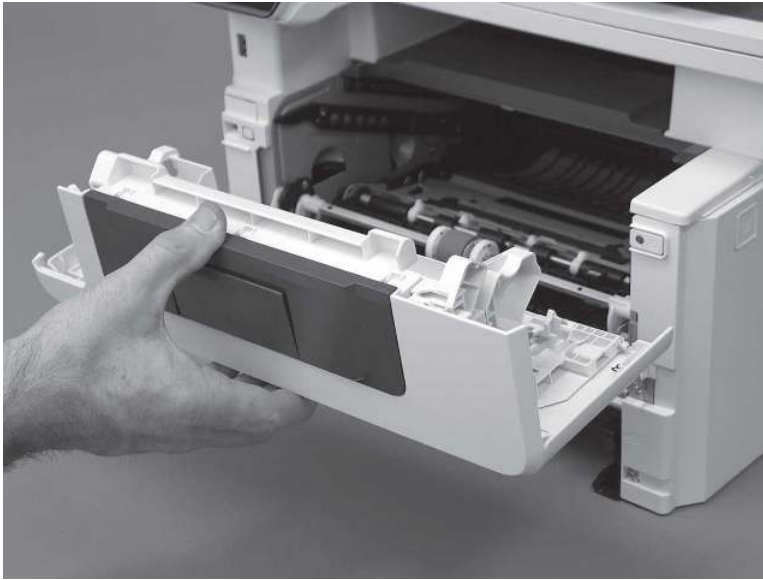
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

Figure 5-514 Release the left-side retainer arm



7. Remove the door.

**Figure 5-515** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

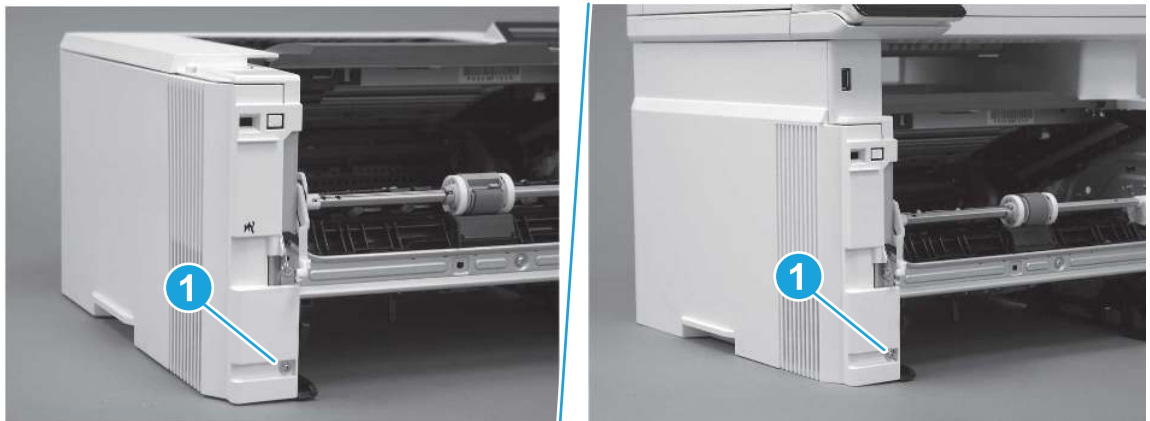
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

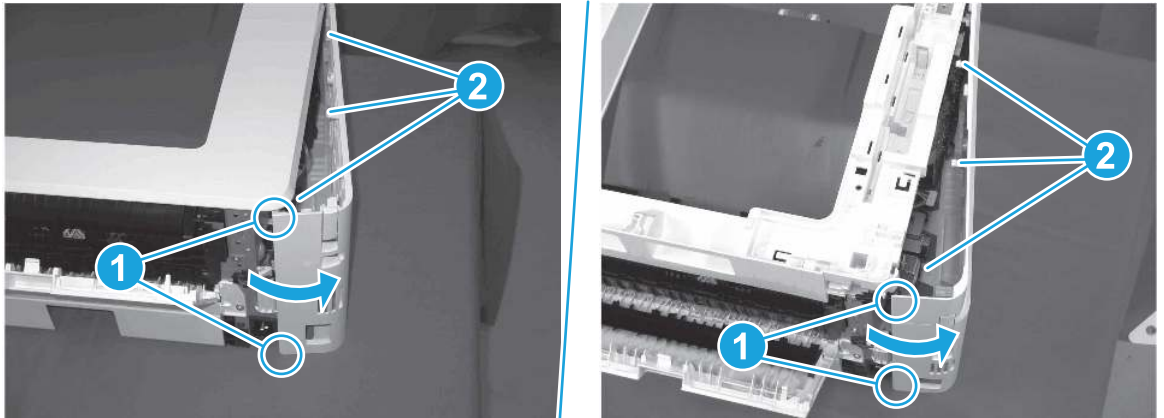
1. Remove one screw (callout 1).

**Figure 5-516** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

Figure 5-517 Release two bosses and three tabs

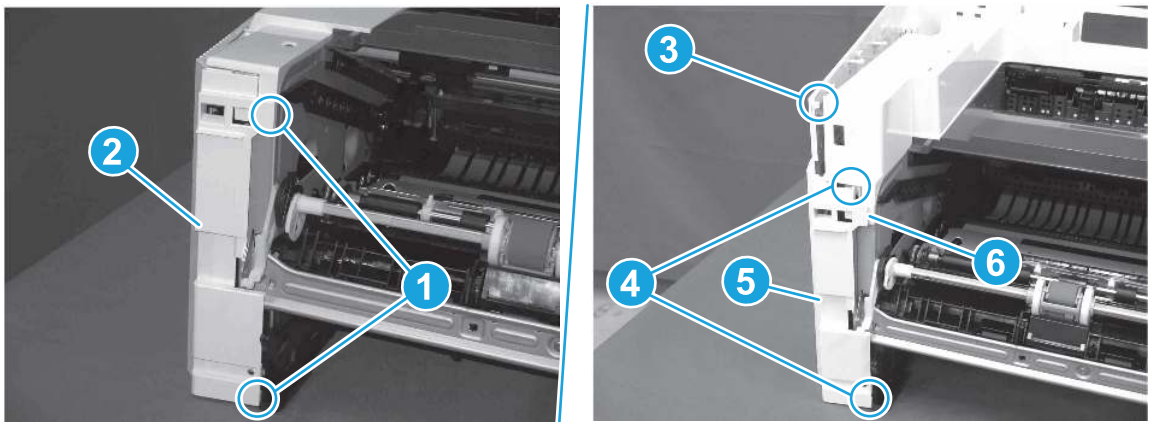


3. At the front of the printer, do one of the following:

- 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 5-518 Remove the cover

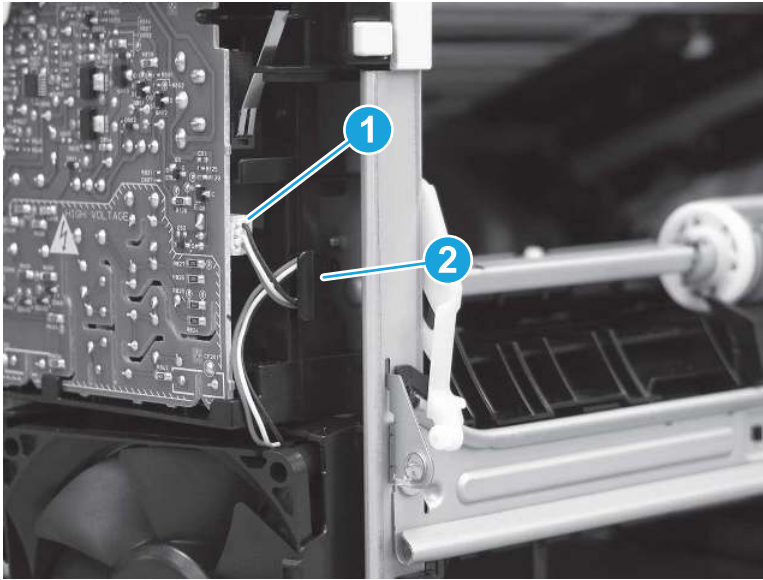


#### 4. Remove the fan (FM1)

Follow these steps to remove the fan (FM1).

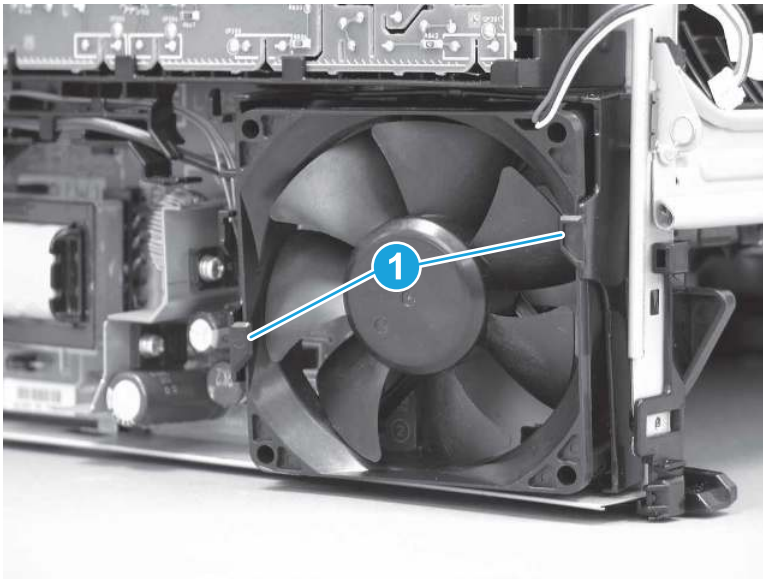
1. Disconnect one connector (callout 1), and then release the wire harness from the retainer (callout 2).

**Figure 5-519** Disconnect one connector



2. Release two tabs (callout 1).

**Figure 5-520** Release two tabs

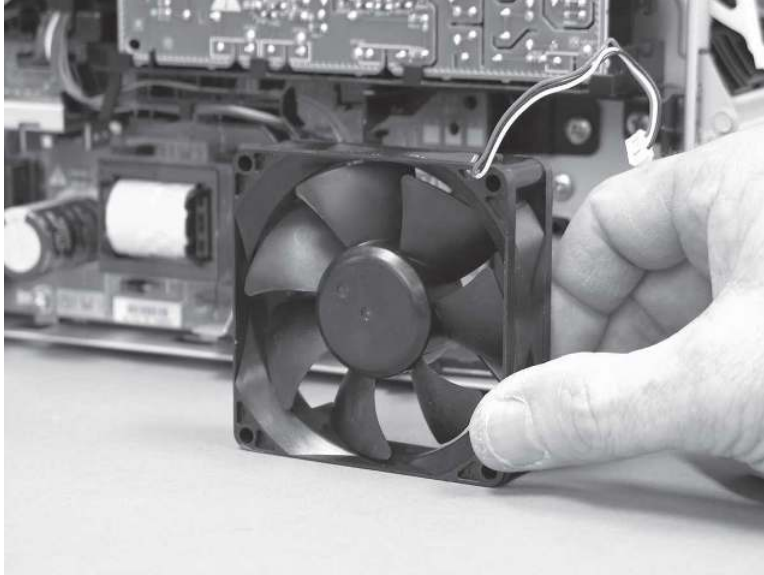


3. Remove the fan.



**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 5-521 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 5-41** 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 5-522 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).

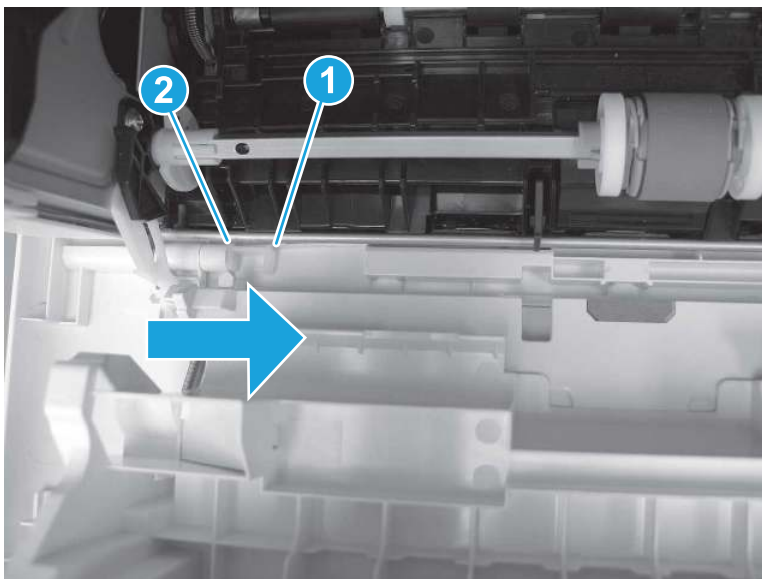
---

 **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.

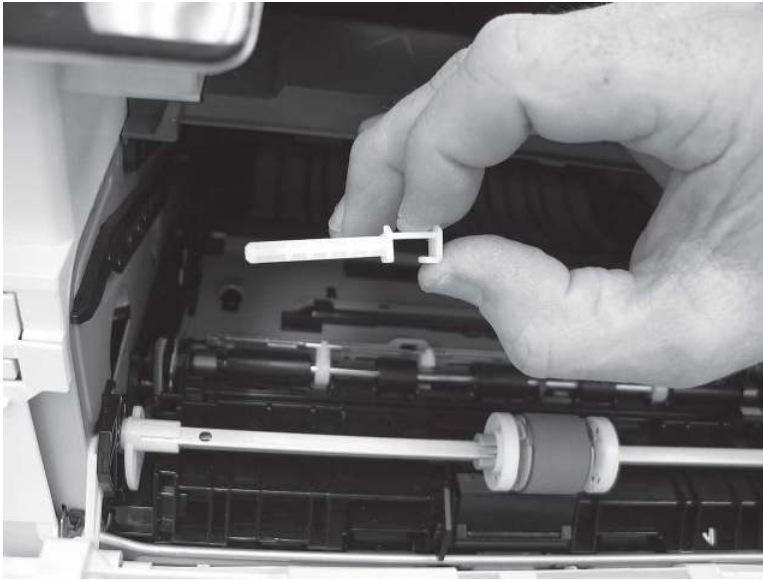
---

Figure 5-523 Release the support shaft



2. Remove the support shaft.

**Figure 5-524** Remove the support shaft



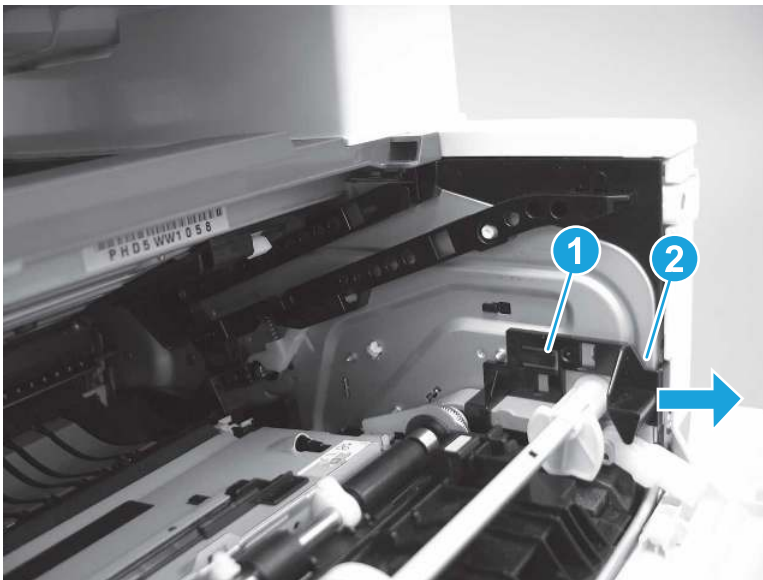
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

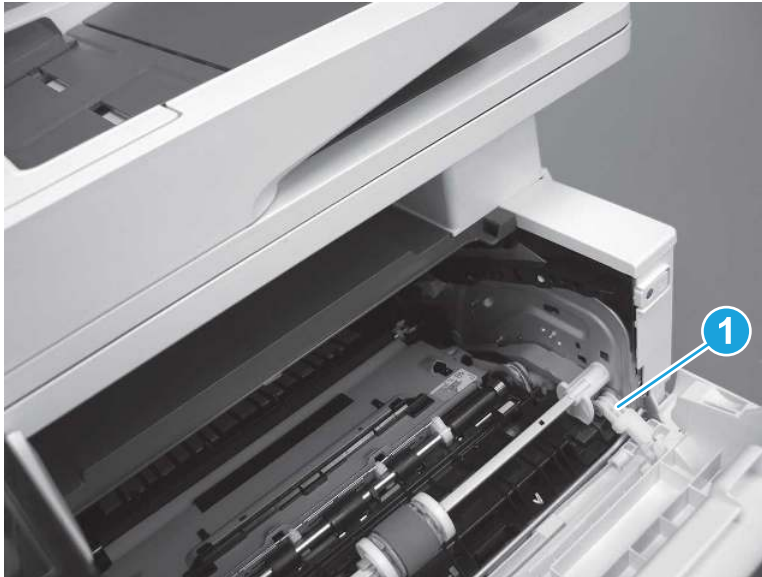
---

**Figure 5-525** 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 5-526** Release the pressure-release link

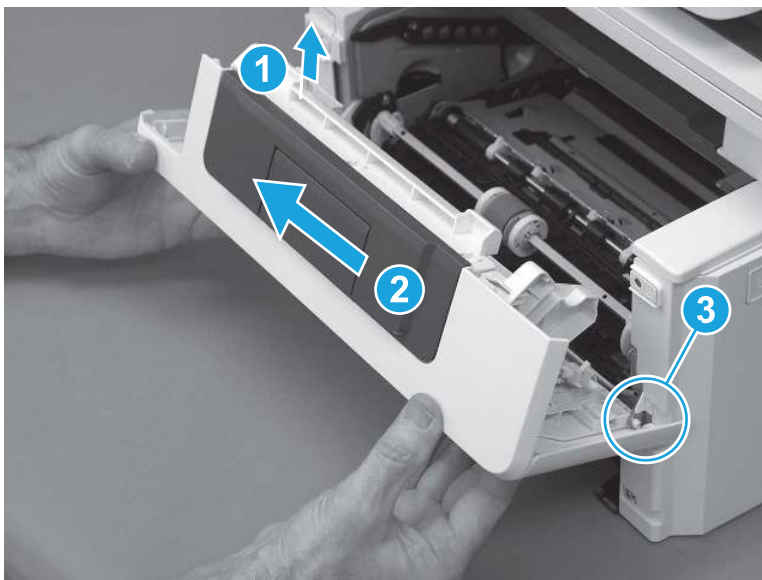


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

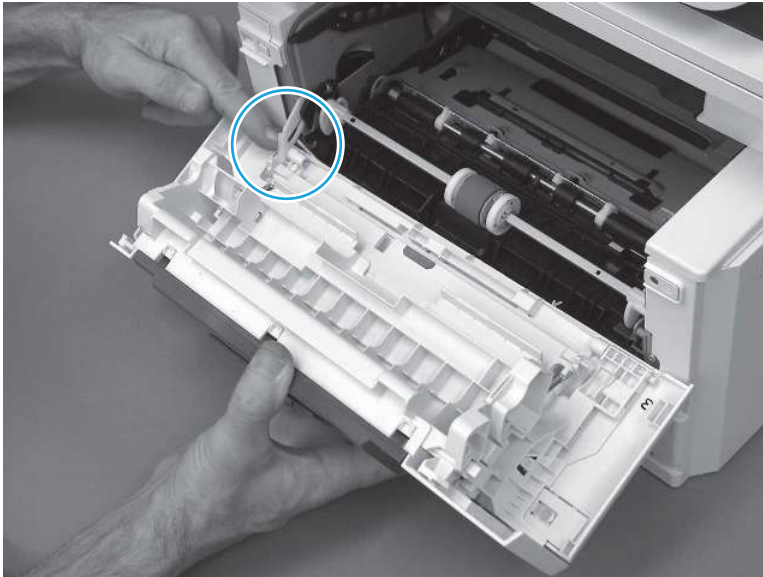
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-527** Release the door



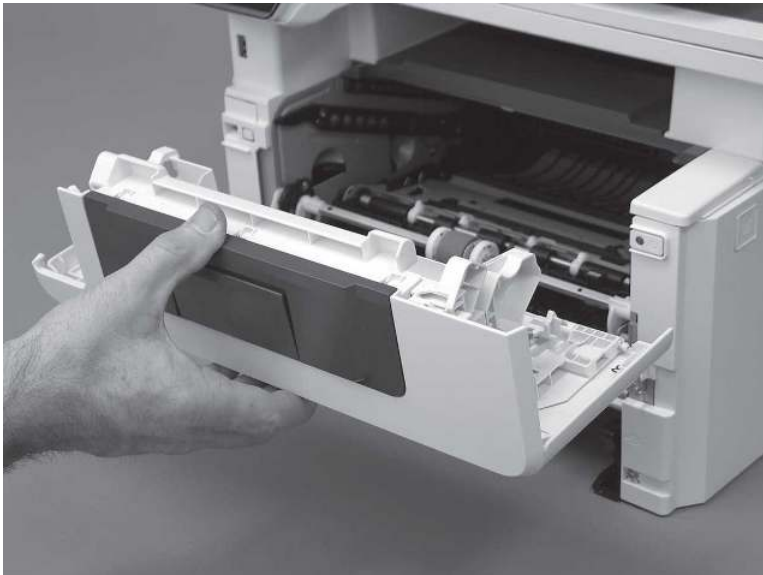
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-528** Release the left-side retainer arm



7. Remove the door.

**Figure 5-529** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

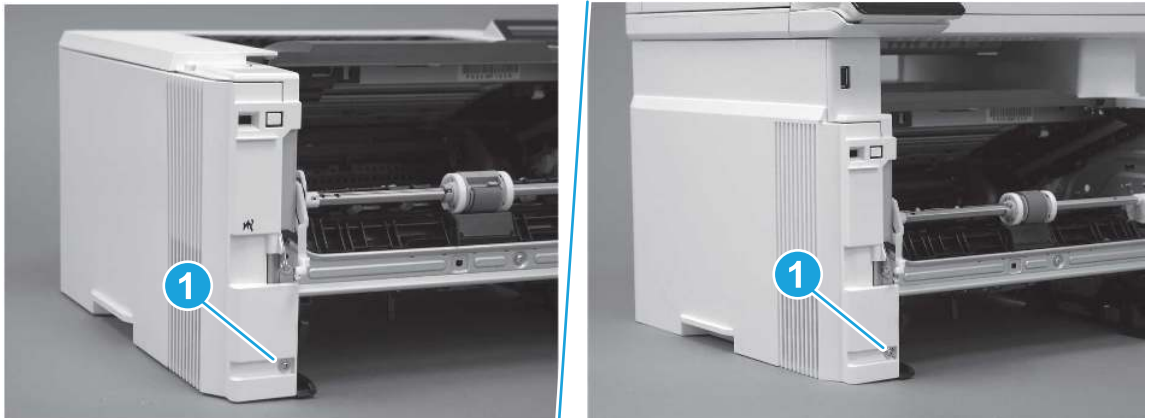
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

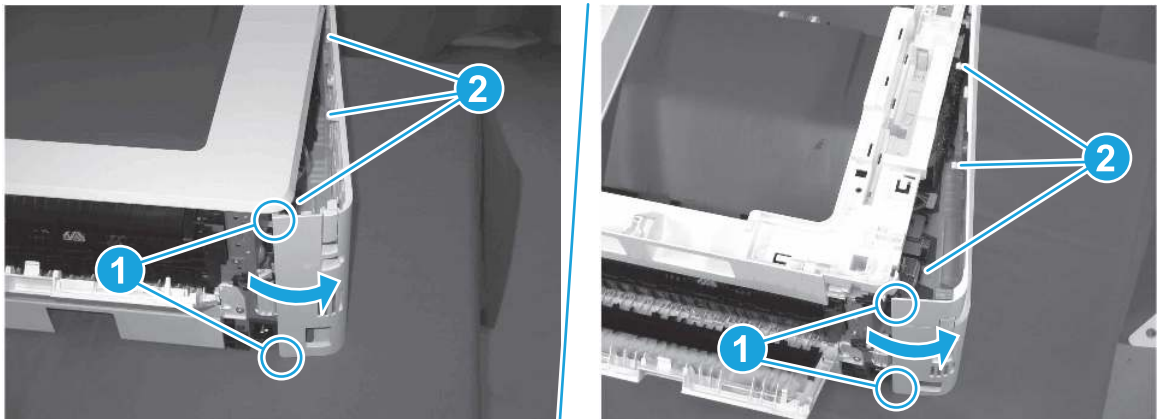
1. Remove one screw (callout 1).

**Figure 5-530** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-531** Release two bosses and three tabs



3. At the front of the printer, do one of the following:

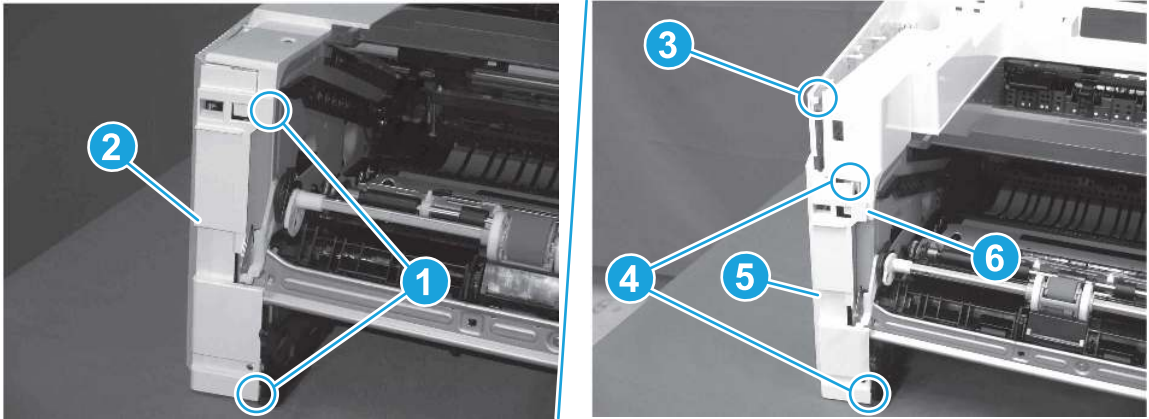
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**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 5-532 Remove the cover

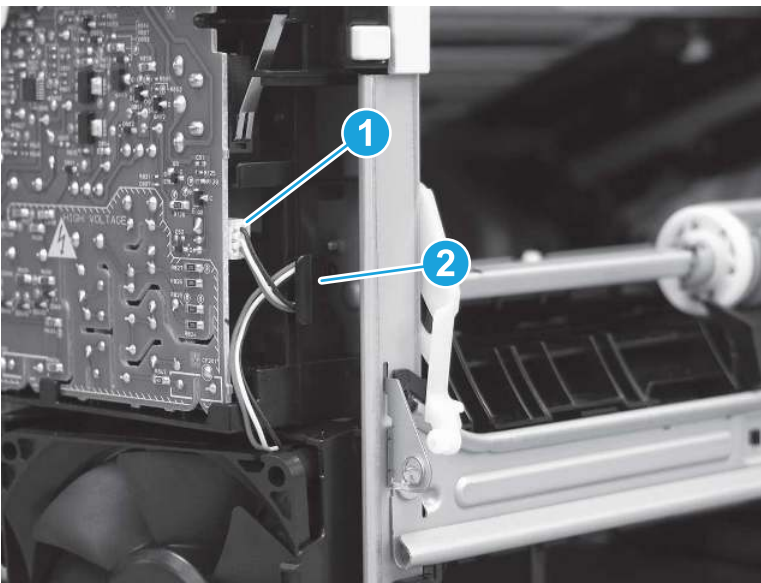


#### 4. Remove the fan (FM1)

Follow these steps to remove the fan (FM1).

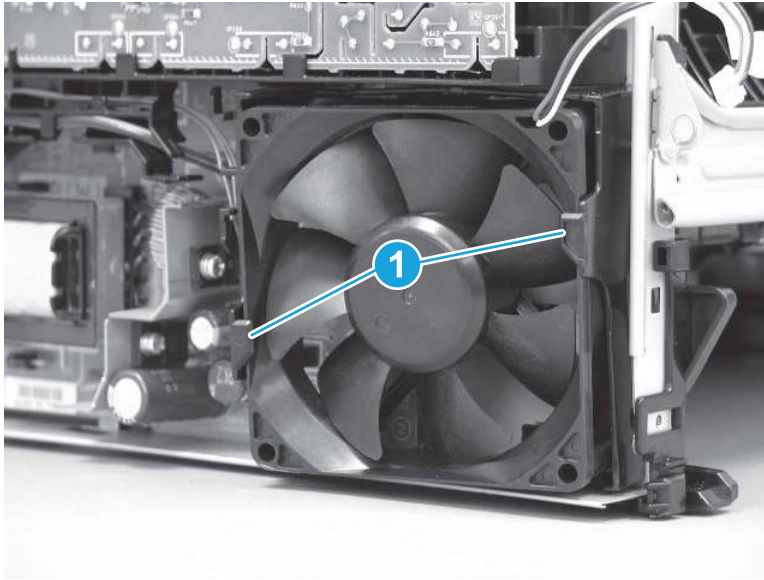
1. Disconnect one connector (callout 1), and then release the wire harness from the retainer (callout 2).

Figure 5-533 Disconnect one connector




2. Release two tabs (callout 1).

**Figure 5-534** Release two tabs



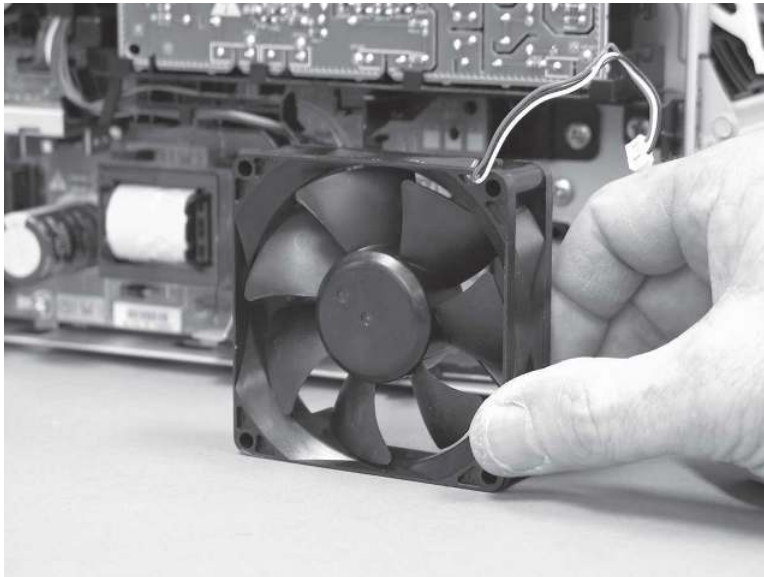
3. Remove the fan.

---

 **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 5-535** 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.

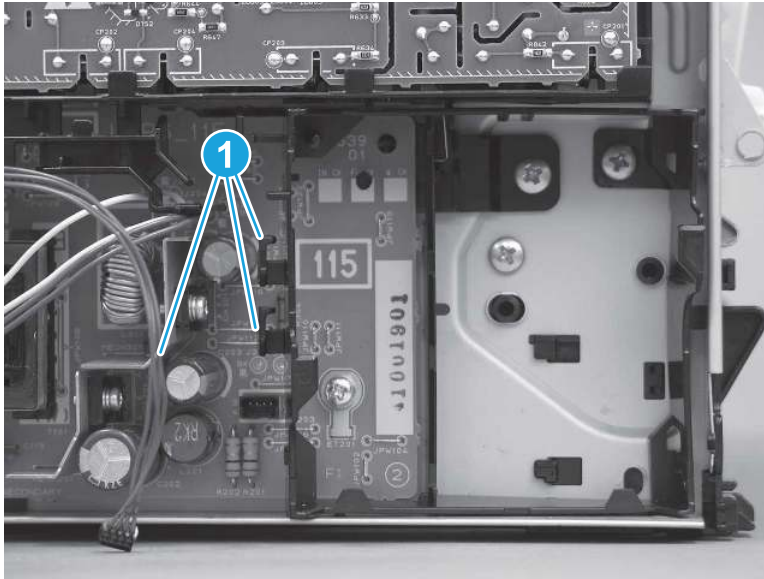
---

 **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.

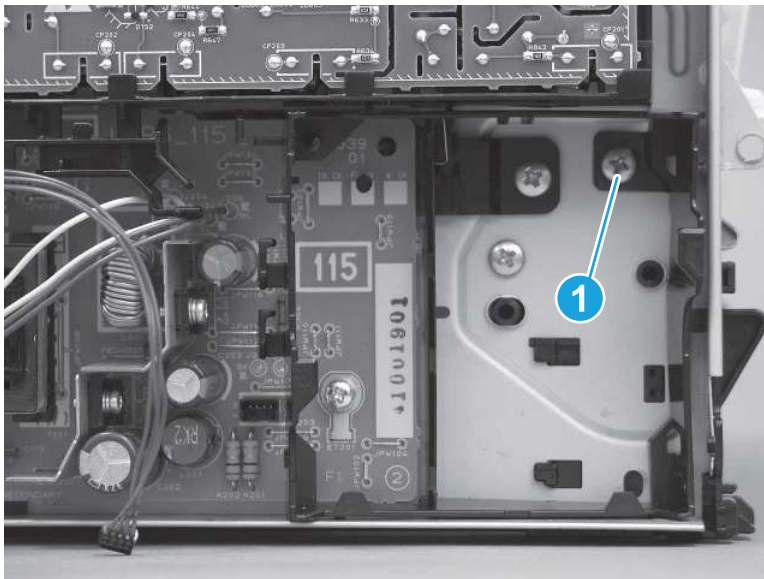
---

**Figure 5-536** Release the wire harness (SFP shown)



2. Remove one screw (callout 1).

**Figure 5-537** Remove one screw



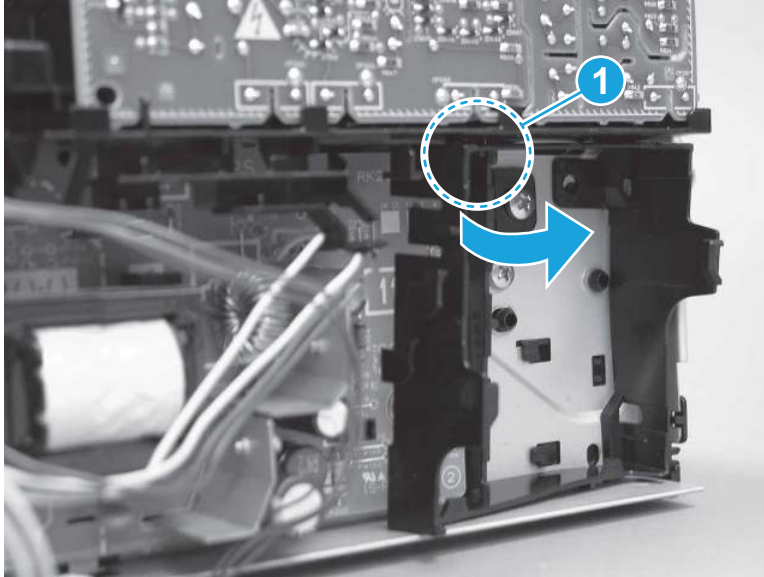
3. Release one tab at the top-left side of the fan holder (callout 1), and then rotate the top-left side corner of the holder away from the printer.

 **TIP:** Use a flat-blade screwdriver to slightly flex the top of the holder down to make it easier to engage this tab.

---

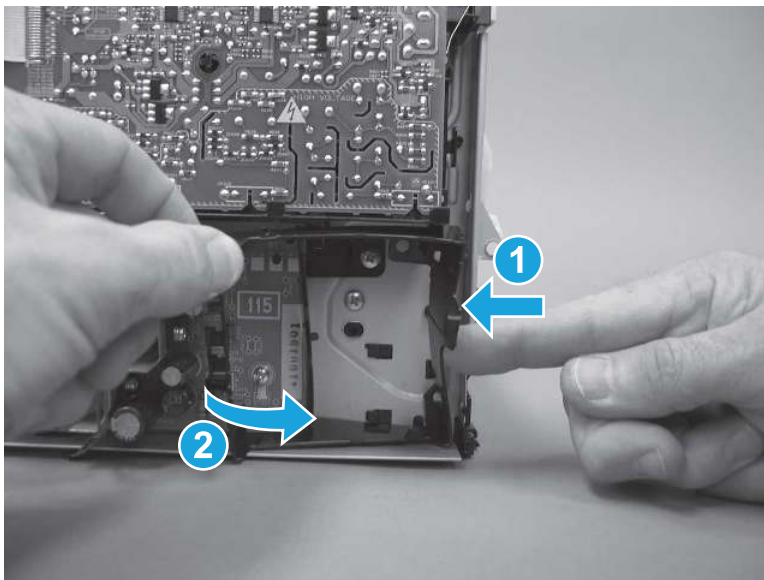


Figure 5-538 Release one tab



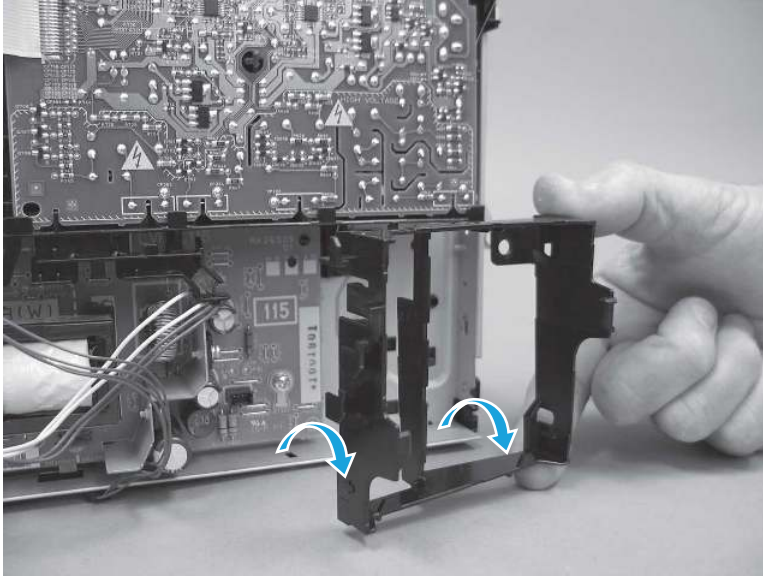
4. Slightly flex the right side of the holder to release one tab (callout 1), and then rotate the top of the holder away from the printer (callout 2).

Figure 5-539 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 5-540** 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 5-42 Part information**

Part number	Part description
RM2-2891-000CN	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 5-541 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).

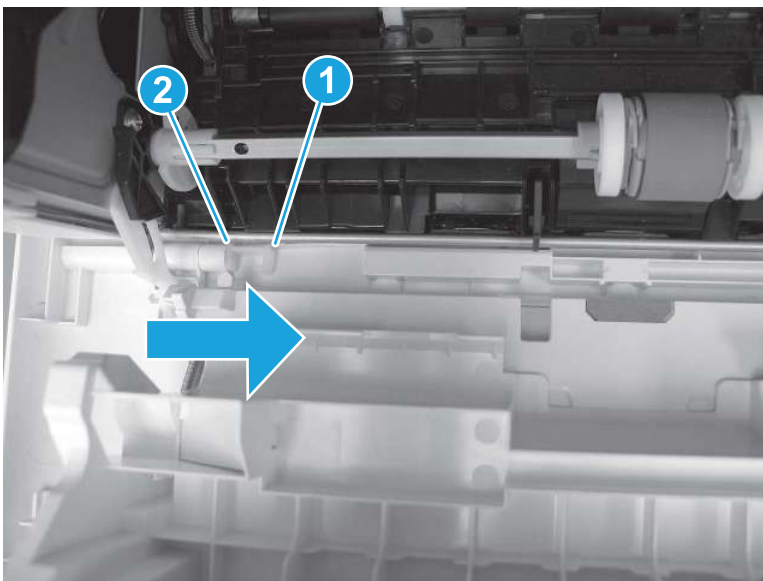
---

 **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.

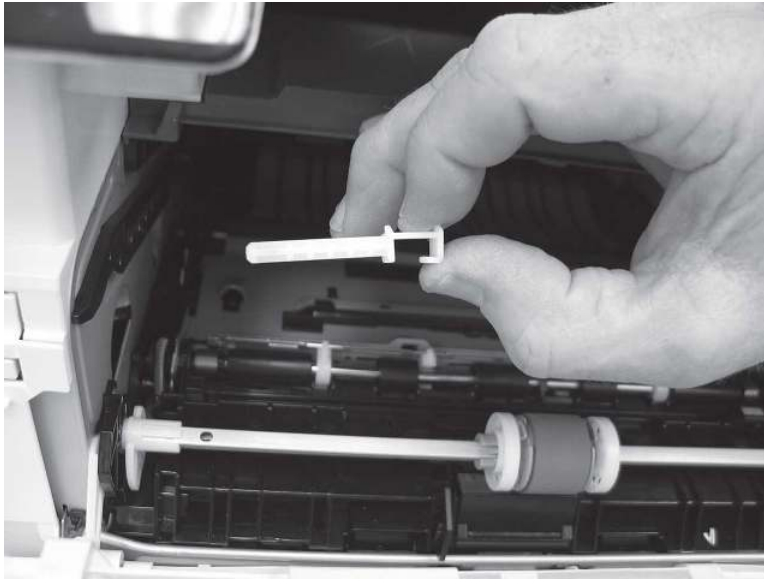
---

Figure 5-542 Release the support shaft



2. Remove the support shaft.

**Figure 5-543** Remove the support shaft



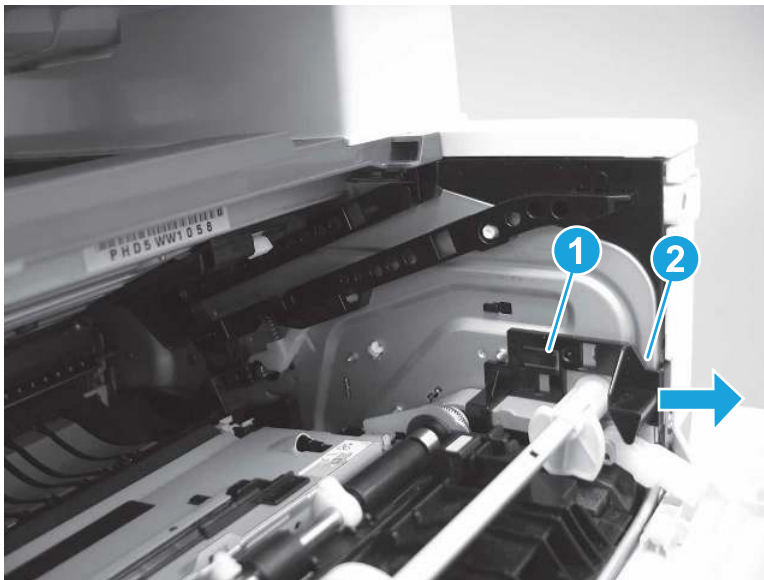
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

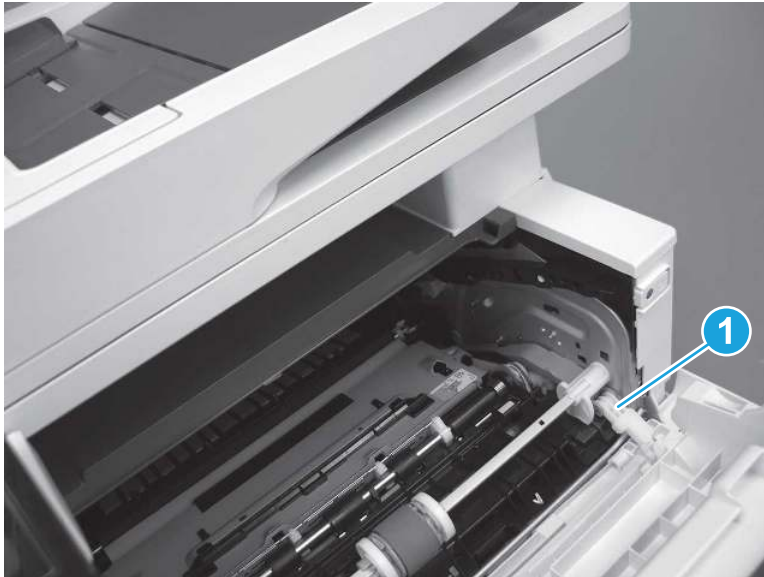
---

**Figure 5-544** 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 5-545** 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).

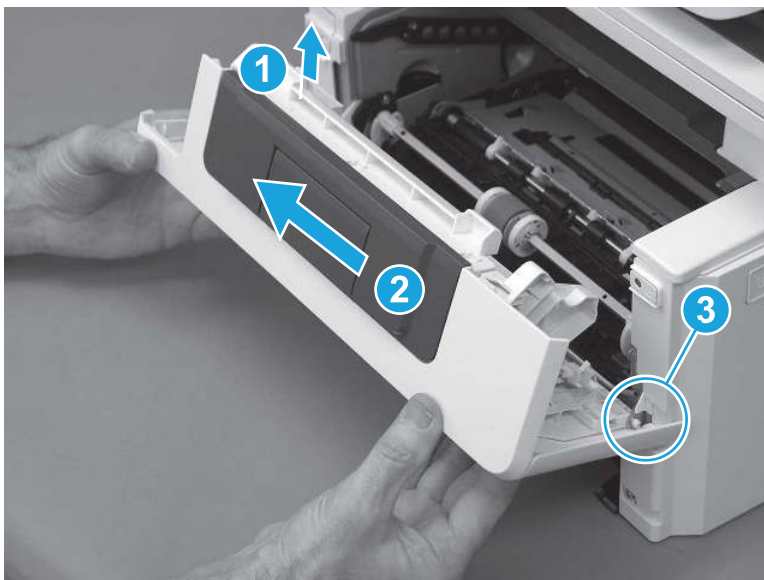
---

**⚠ 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.

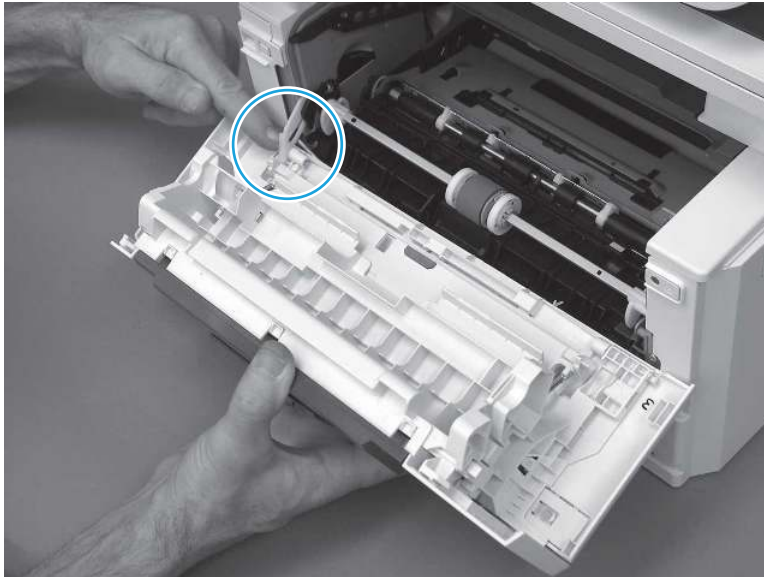
---

**Figure 5-546** Release the door



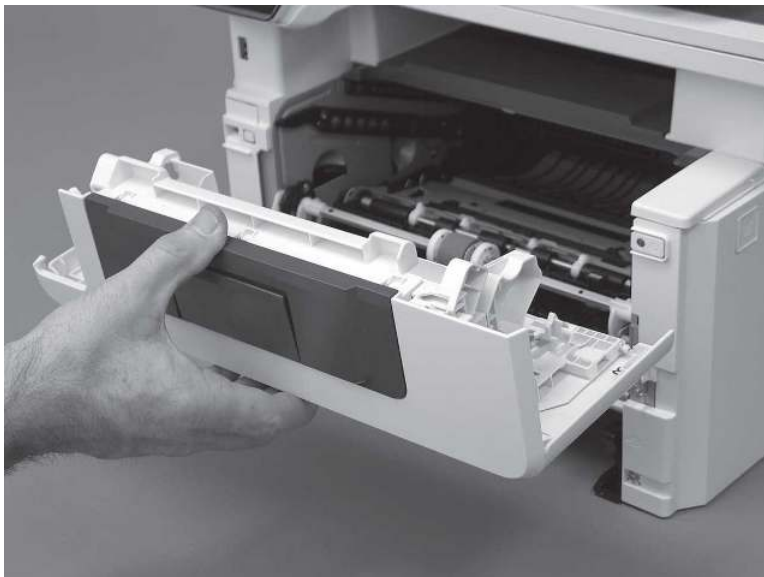
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-547** Release the left-side retainer arm



7. Remove the door.

**Figure 5-548** 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.

---

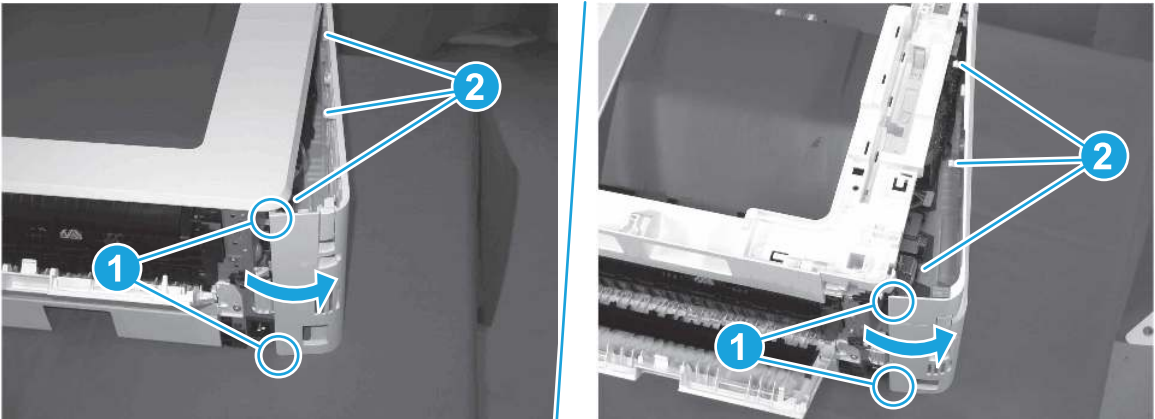
1. Remove one screw (callout 1).

**Figure 5-549** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-550** 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).

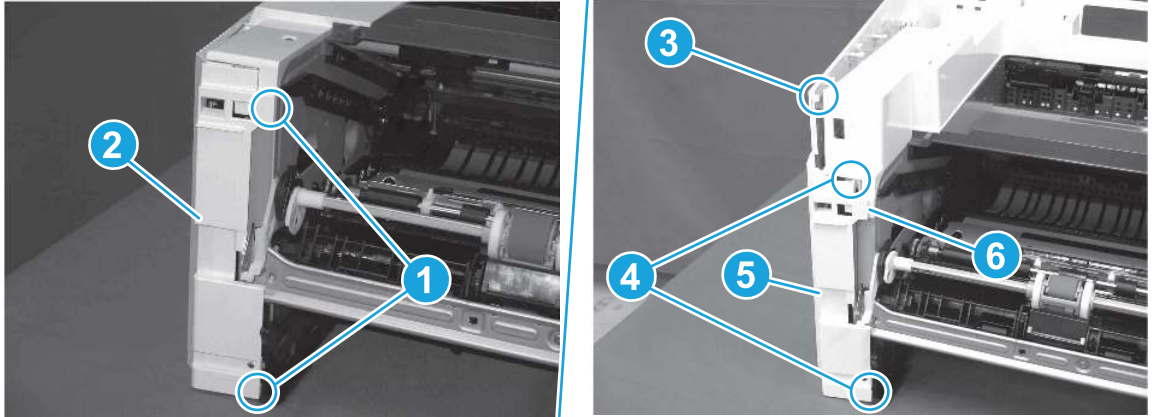
---

**⚠ 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 5-551 Remove the cover



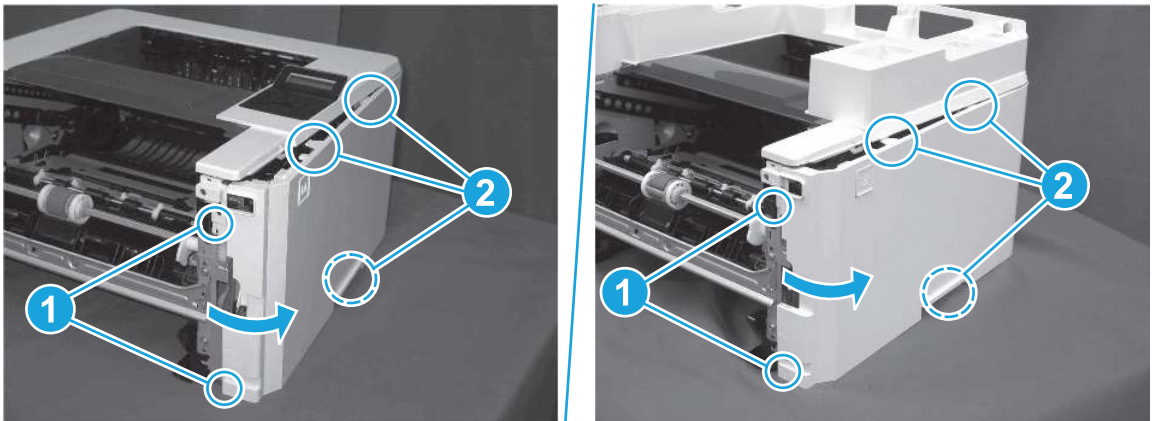
#### 4. Remove the right cover

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).

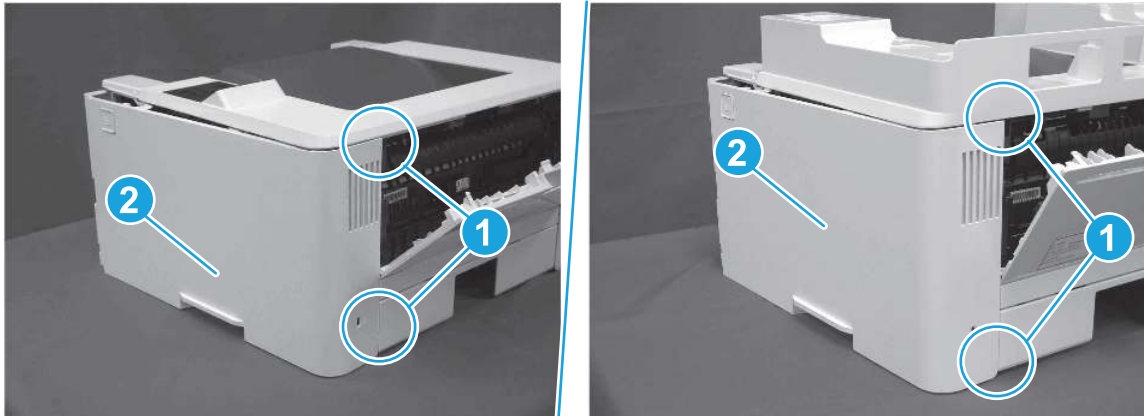
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-552 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-553 Remove the cover



## 5. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

---

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

---

If the control panel is not fully tilted forward, tilt it forward now until it stops.

---

Figure 5-554 Open the ISA



2. Remove one screw (callout 1).

**Figure 5-555** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-556** Release two tabs



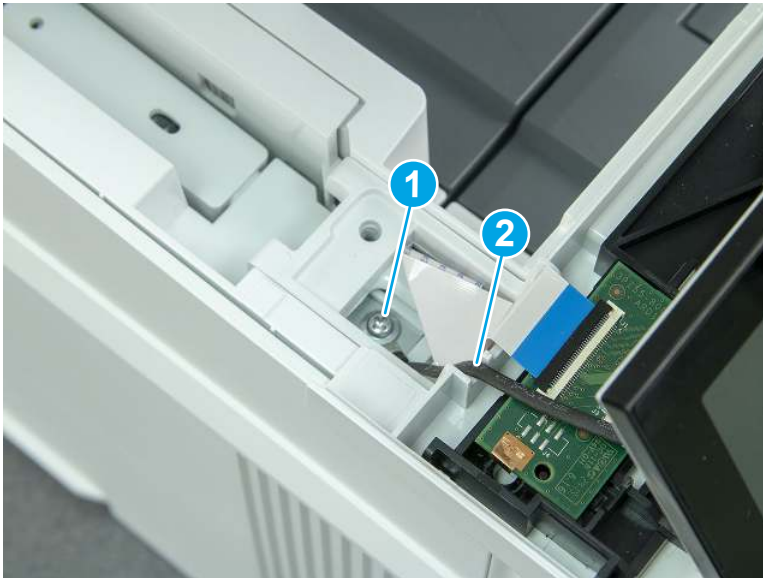
4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-557** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-558** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-559** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-560** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-561** Remove two screws and remove the control panel assembly

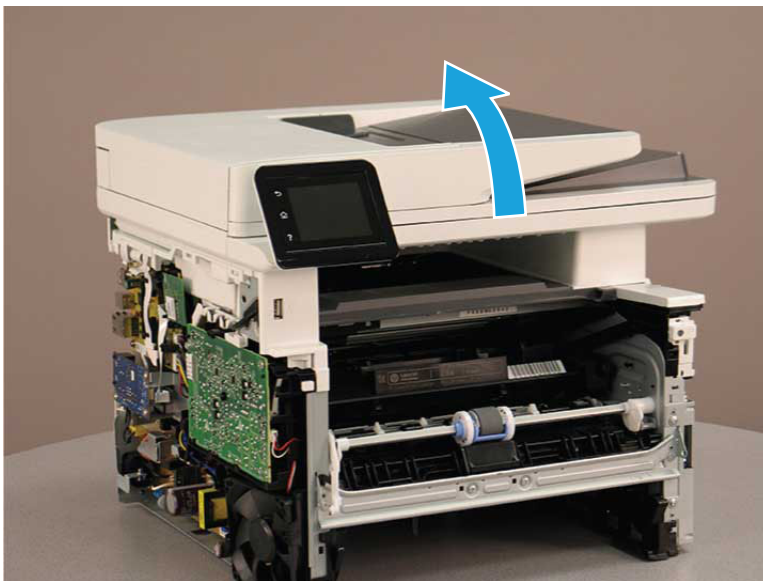


## 6. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

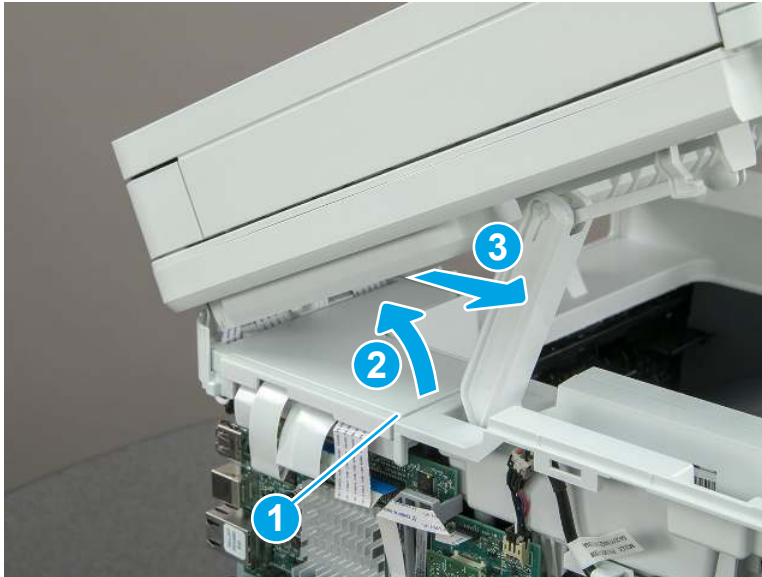
1. If the ISA is not already raised, raise it now.

**Figure 5-562** 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 5-563** Remove the ISA FFC cover

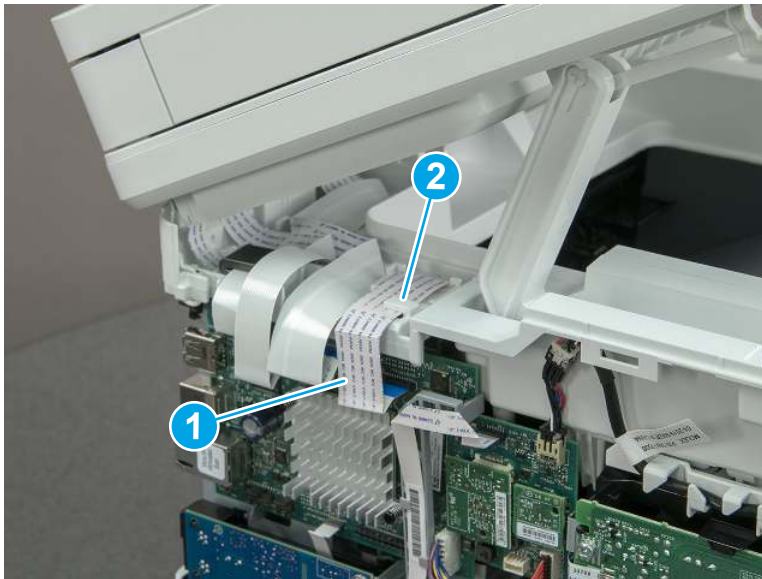


## 7. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

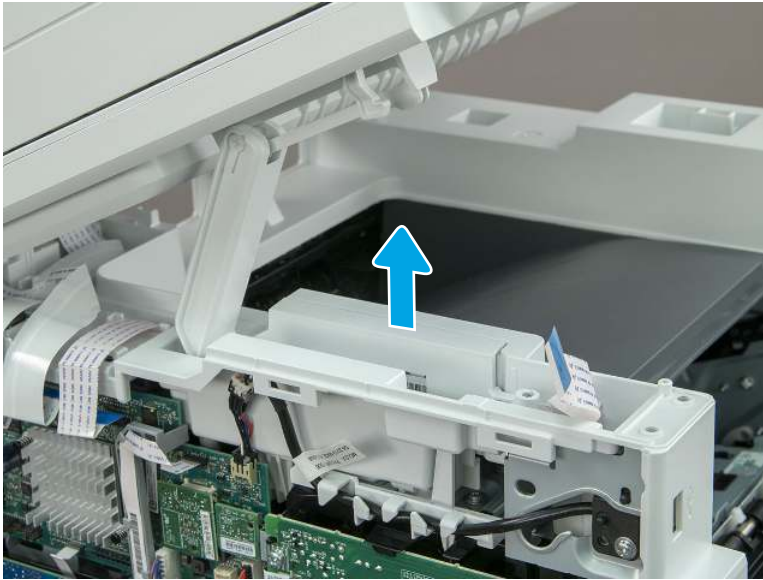
1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

**Figure 5-564** Disconnect one cable



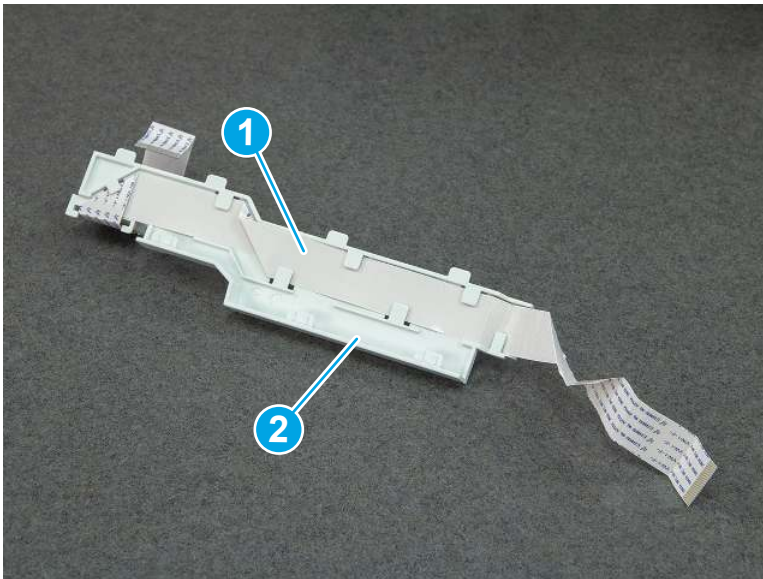
- Lift up the control-panel FFC cover to remove the cover and cable.

**Figure 5-565** Remove the cover and cable



- If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).


**Figure 5-566** Remove the FFC



## 8. 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).

---

- 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 5-567 Disconnect three FFCs



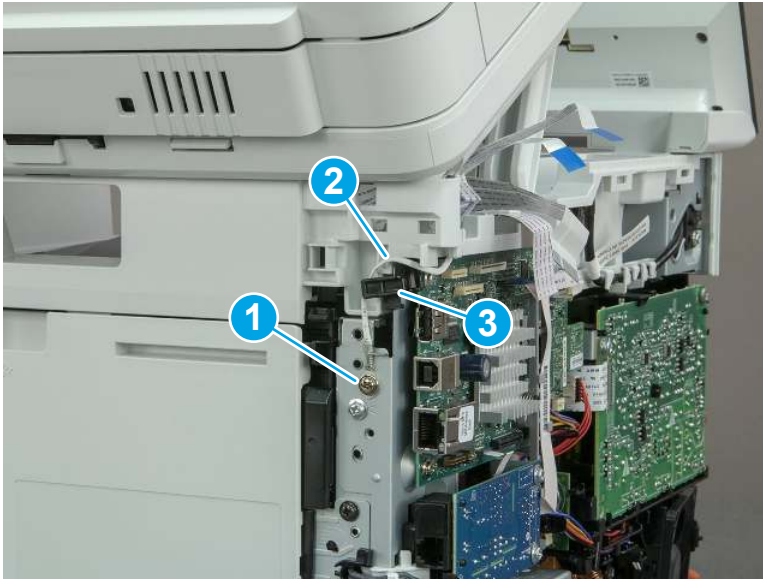
2. Release the tape (callout 1) that holds the flat cables to the top cover.

Figure 5-568 Release the tape



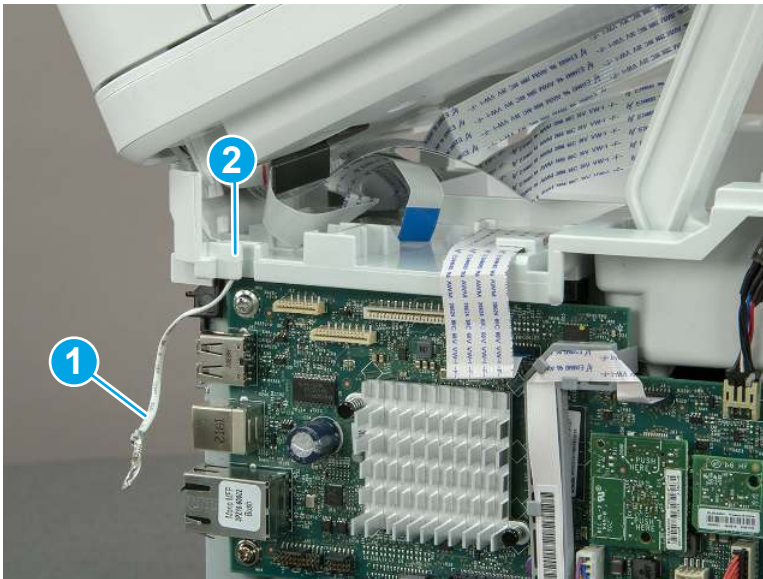
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-569** Release the ground wire



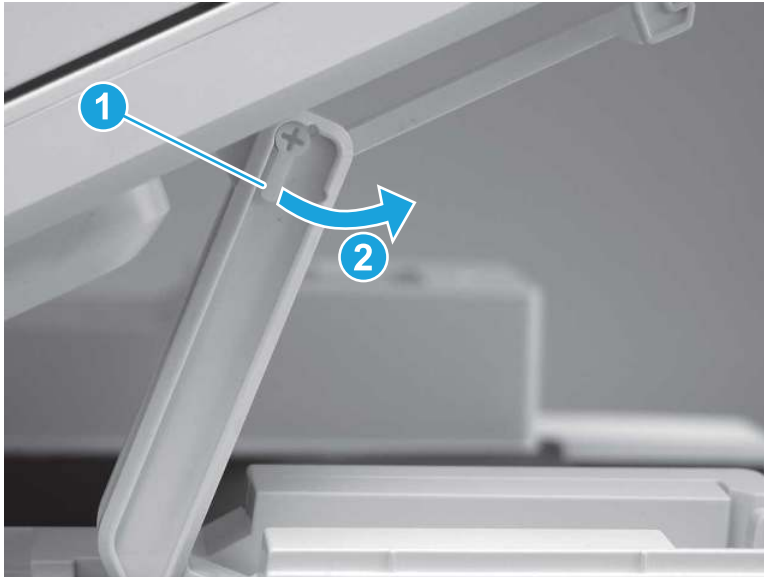
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-570** 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 5-571** 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.

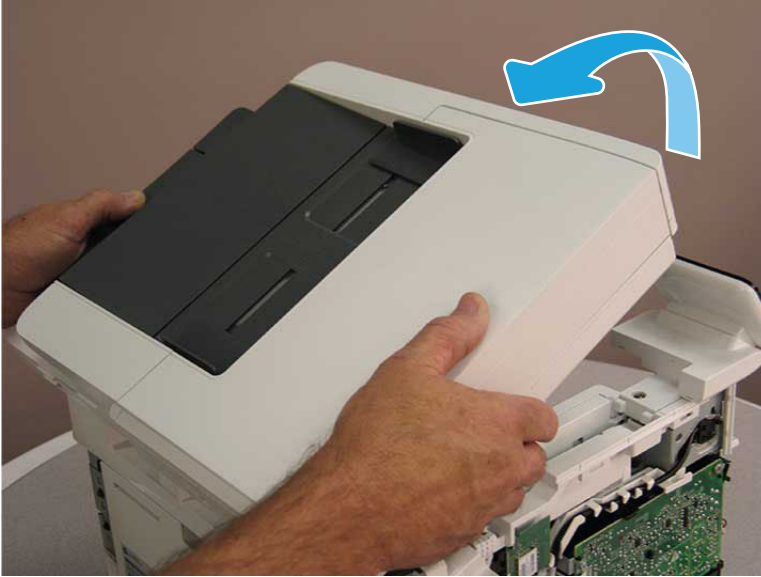
---

**Figure 5-572** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-573** Rotate the ISA towards the rear of the printer



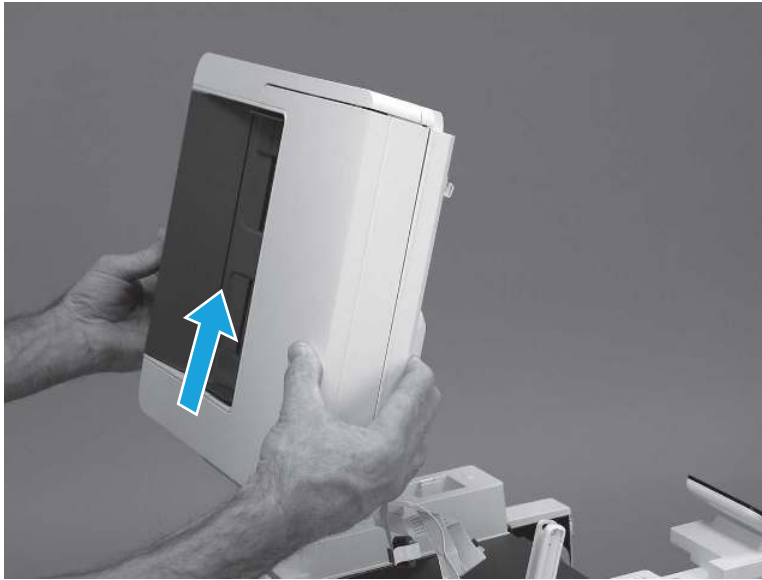
8. Slide the ISA as shown to release it.

**Figure 5-574** Release the ISA



9. Remove the ISA.

Figure 5-575 Remove the ISA

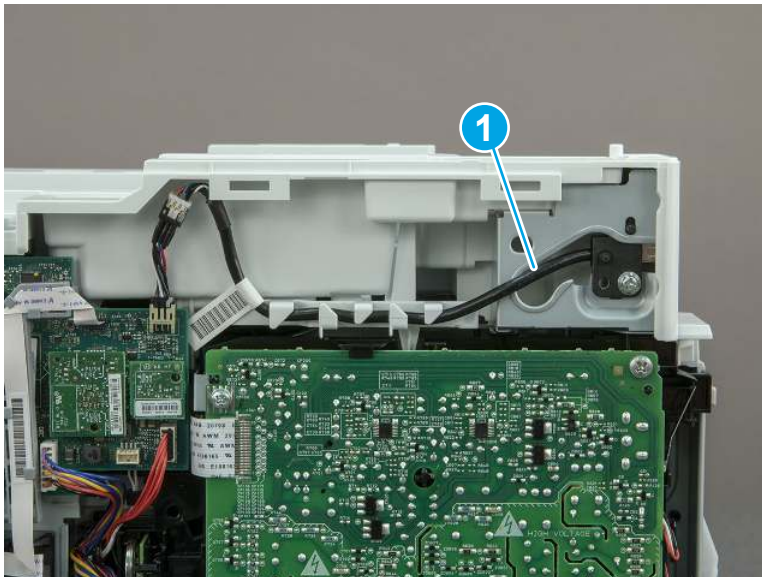


## 9. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

Figure 5-576 Release the USB cable



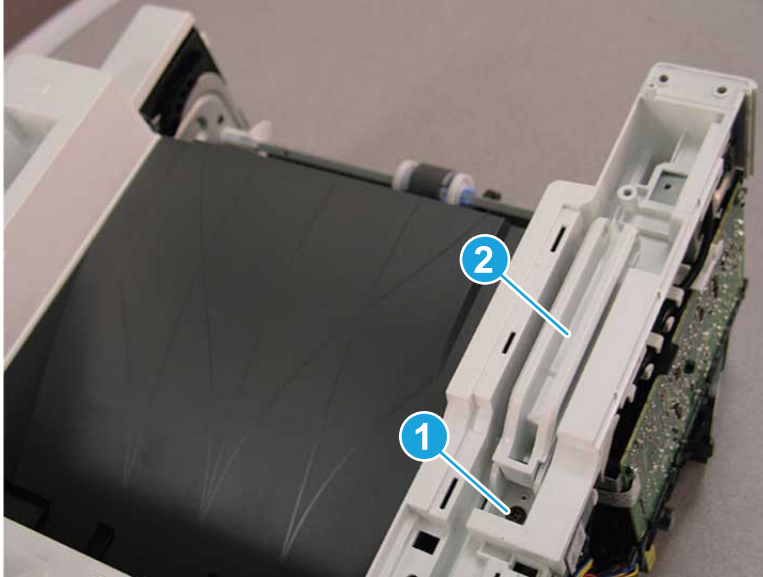
2. Remove one screw (callout 1), and then remove the support arm (callout 2).

---

**⚠ 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.

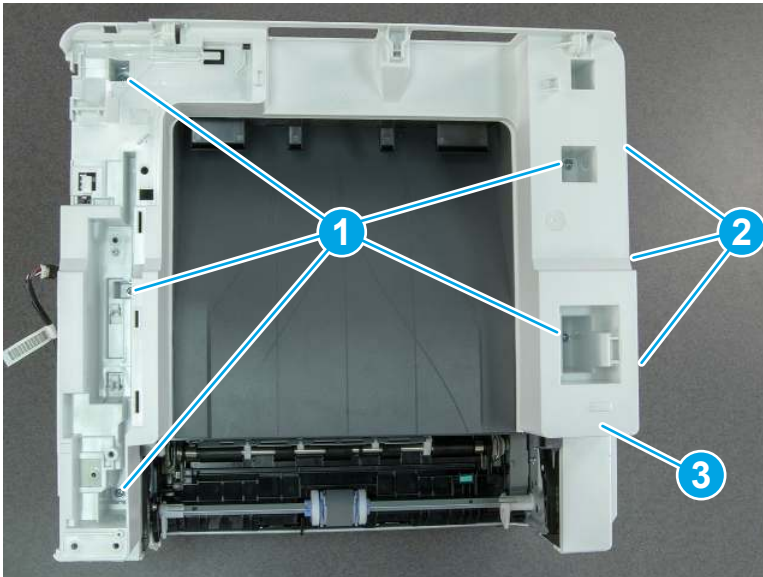
---

**Figure 5-577** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-578** Remove the top cover



## 10. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

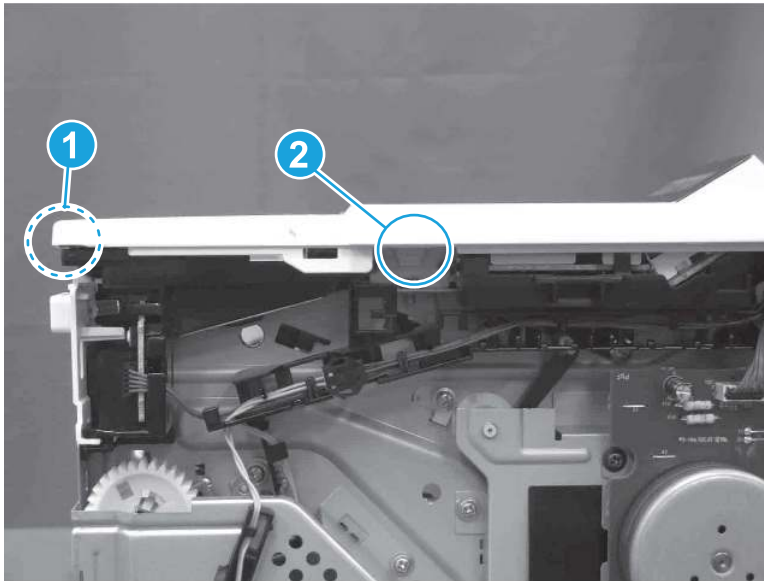
1. Remove one screw.

**Figure 5-579** 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 5-580** Release one boss and one tab



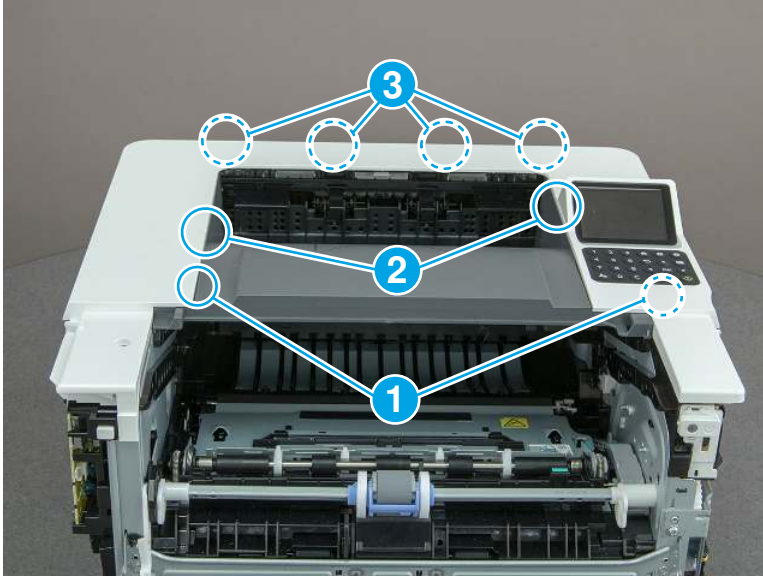
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

Figure 5-581 Remove the cover



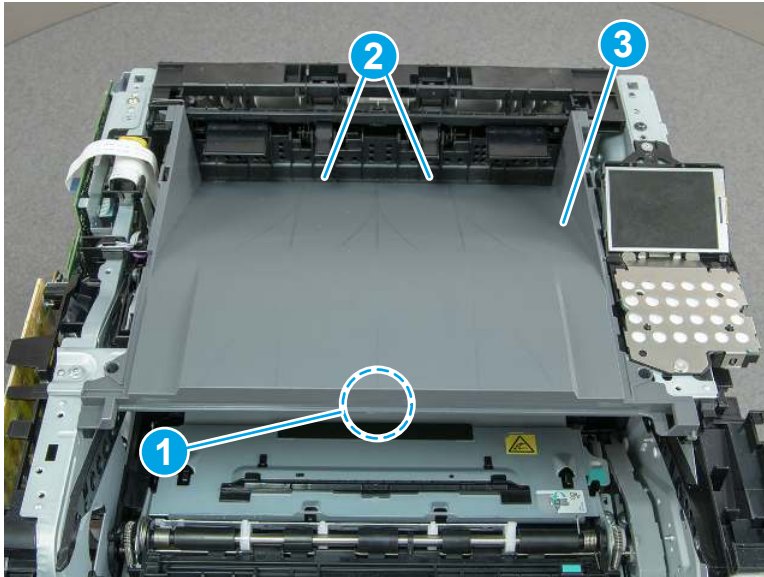
### 11. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).



- ▲ Release one tab (callout 1), release two bosses (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-582 Remove the cover




## 12. Remove the laser scanner assembly

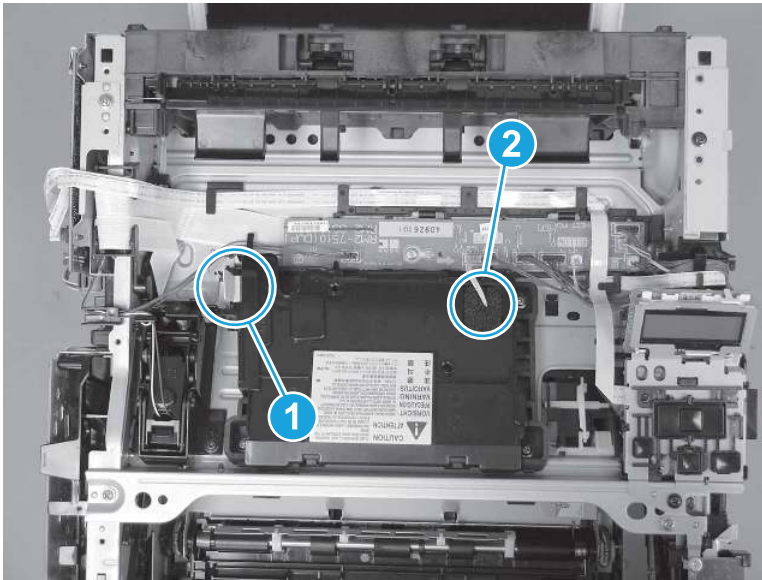
Follow these steps to remove the laser scanner assembly.

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).

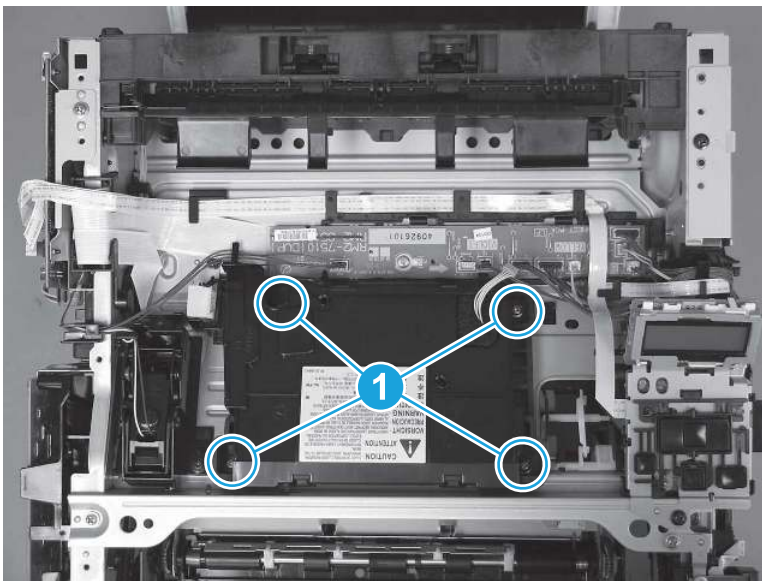
 **Reinstallation tip:** Transfer the antistatic foam pad (callout 2) from the discarded laser/scanner assembly to the replacement assembly.

**Figure 5-583** Disconnect one FFC and one connector



2. Remove four screws (callout 1), and then remove the laser scanner assembly.

**Figure 5-584** Remove the laser scanner



## 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: 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 5-43 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 5-585 Remove the tray





## 2. Remove the cartridge door assembly

Follow these steps to remove the cartridge door assembly.

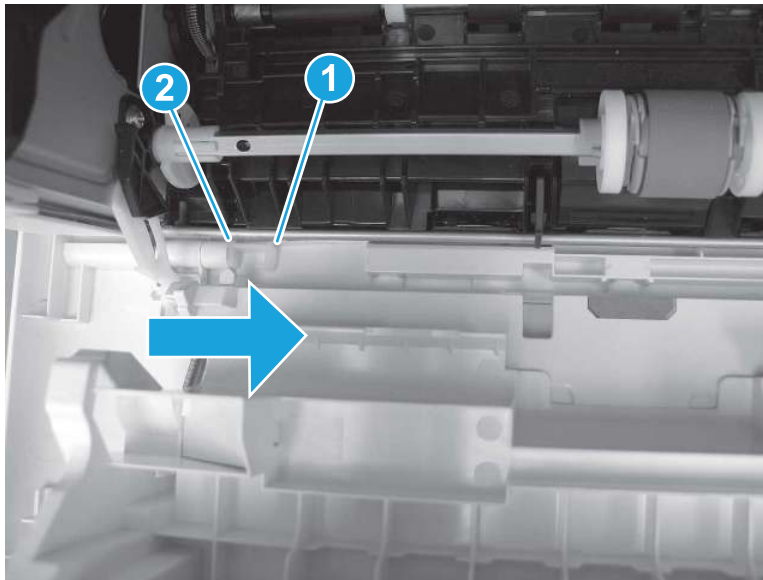
 **NOTE:** If the toner cartridge was not removed prior to servicing the printer, remove it now.

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.

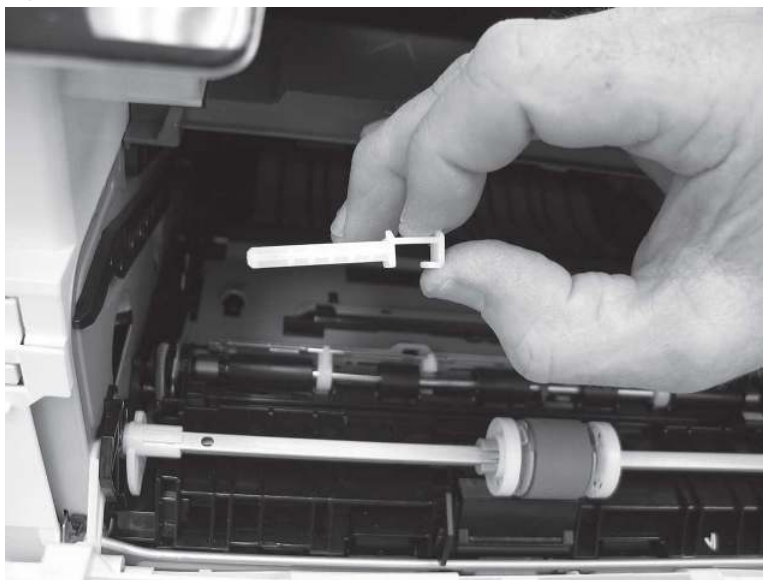
 **Reinstallation tip:** Make sure that the support shaft is fully installed and correctly orientated so that it does not interfere with the door opening and closing.

**Figure 5-586** Release the support shaft



2. Remove the support shaft.

**Figure 5-587** Remove the support shaft



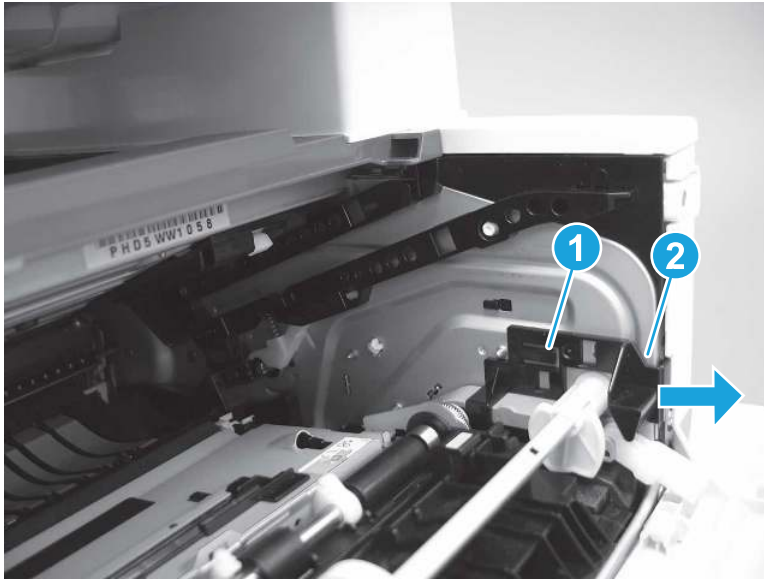
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

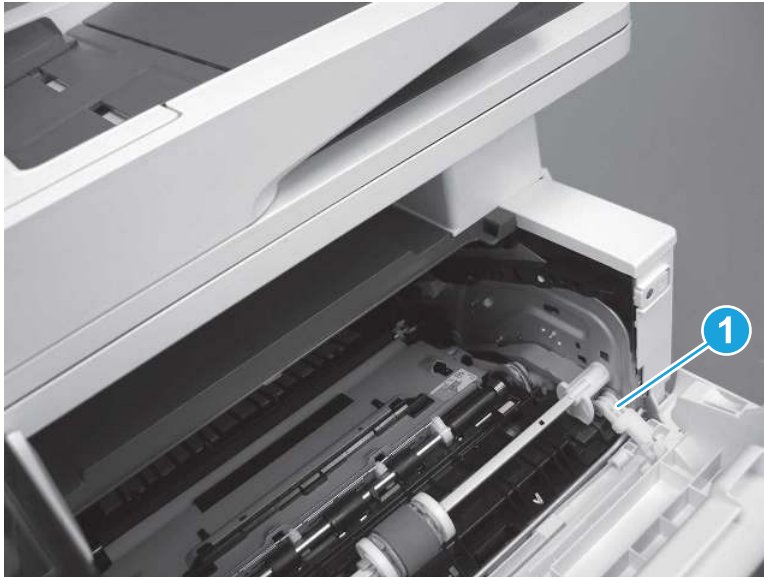
---

**Figure 5-588** 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 5-589** 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).

---

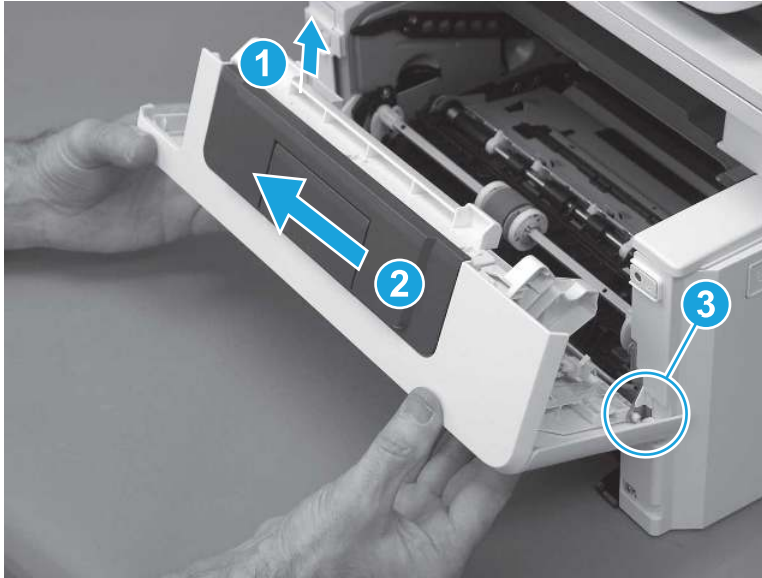
**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

---

 **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.

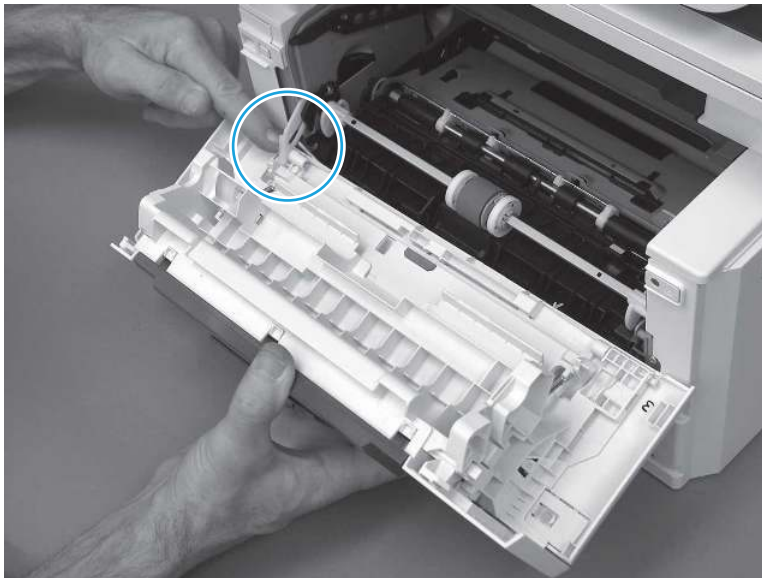
---

**Figure 5-590** Release the door



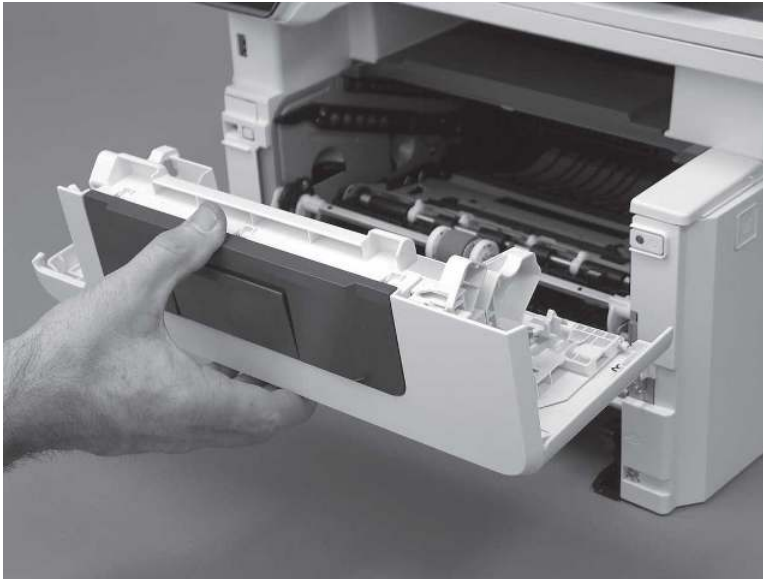
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-591** Release the left-side retainer arm



7. Remove the door.

**Figure 5-592** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

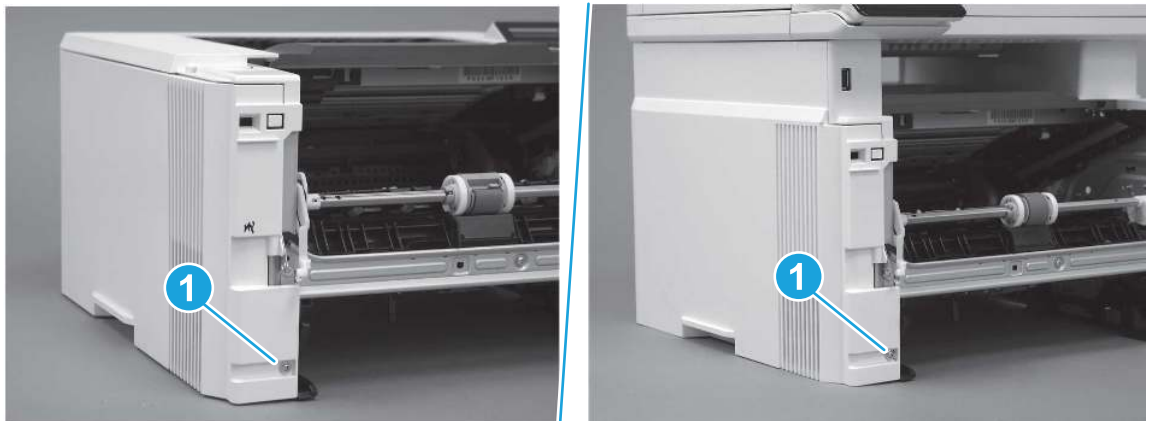
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

1. Remove one screw (callout 1).

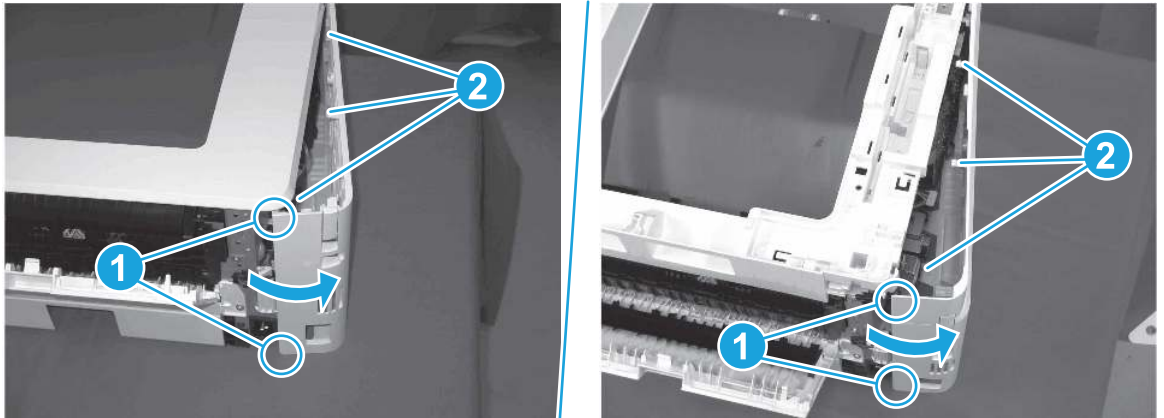
**Figure 5-593** Remove one screw





2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

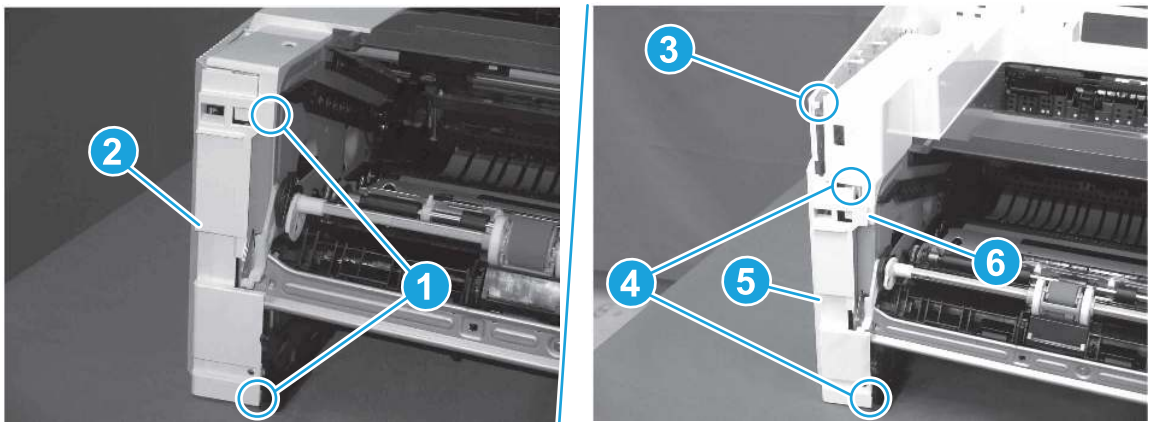
Figure 5-594 Release two bosses and three tabs



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 5-595 Remove the cover



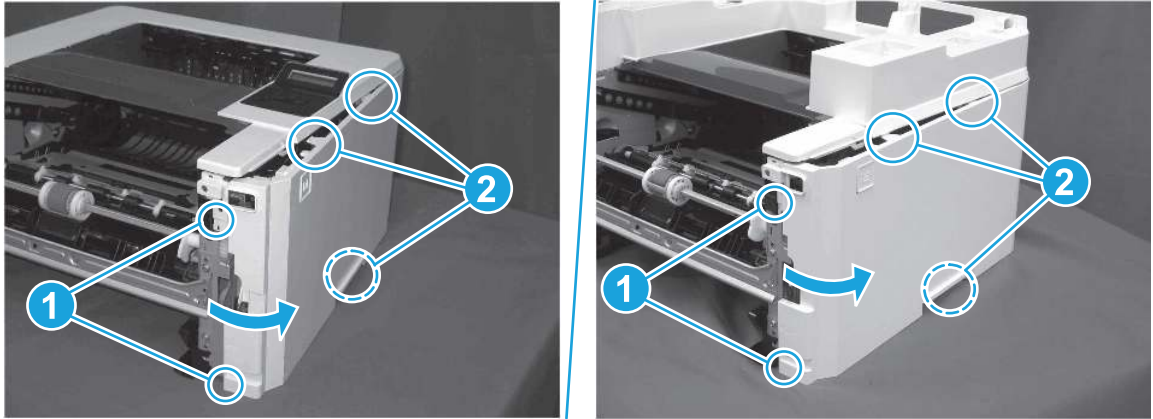
#### 4. Remove the right cover

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).

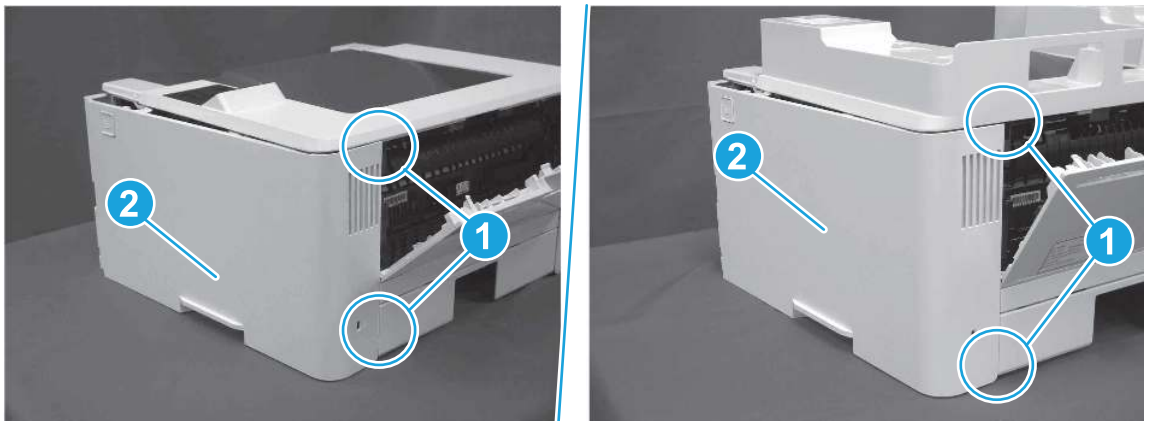
**Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-596 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-597 Remove the cover



## 5. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

If the control panel is not fully tilted forward, tilt it forward now until it stops.

Figure 5-598 Open the ISA



2. Remove one screw (callout 1).

Figure 5-599 Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-600** Release two tabs



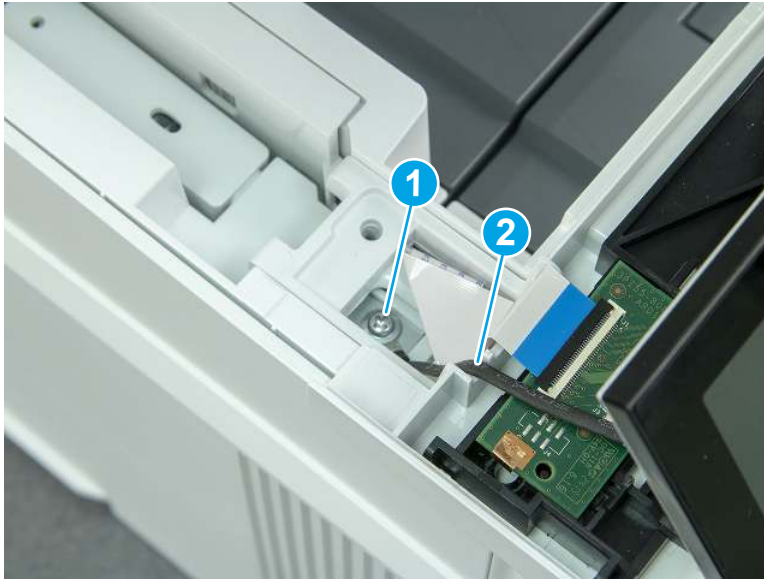
4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-601** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-602** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-603** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-604** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-605** Remove two screws and remove the control panel assembly

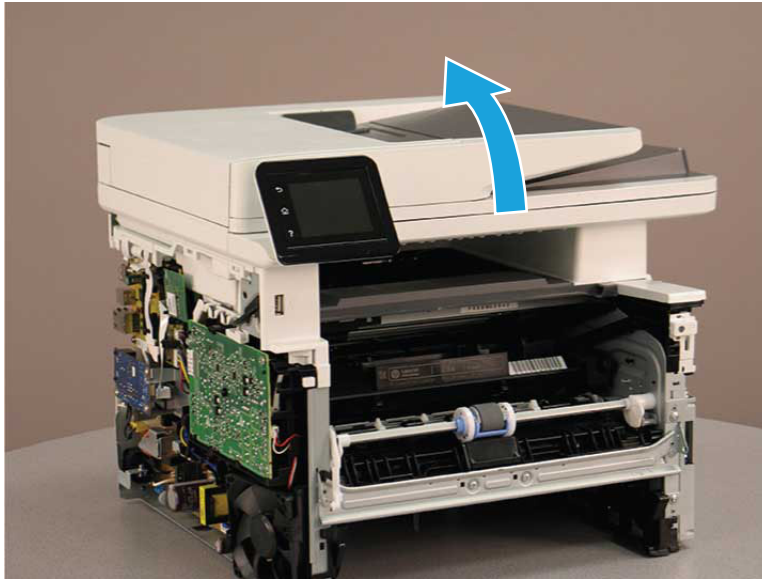


## 6. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

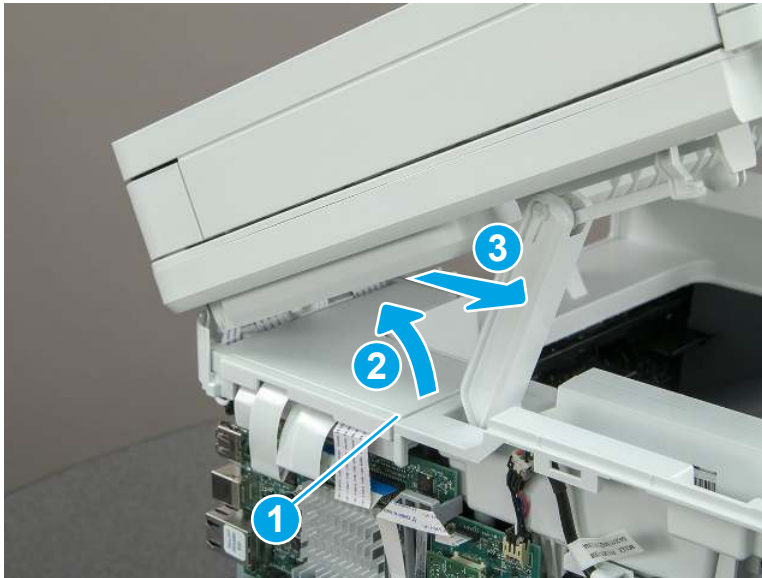
1. If the ISA is not already raised, raise it now.

**Figure 5-606** 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 5-607** Remove the ISA FFC cover

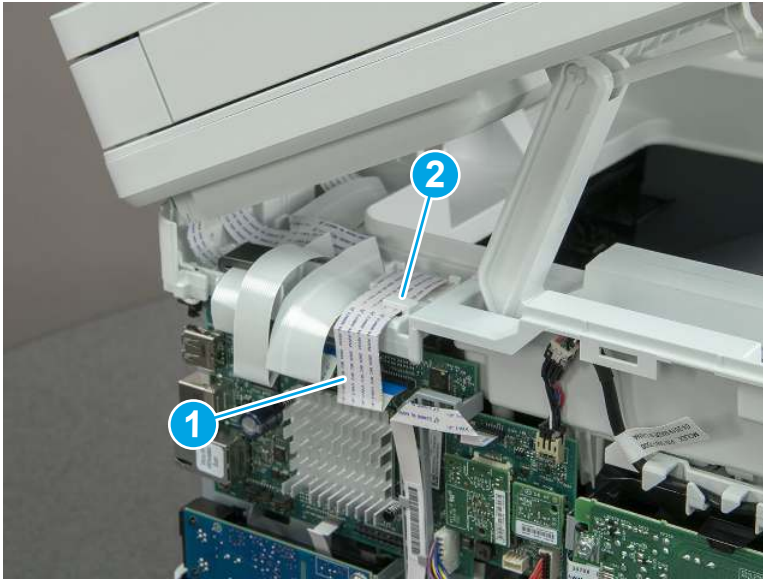


## 7. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

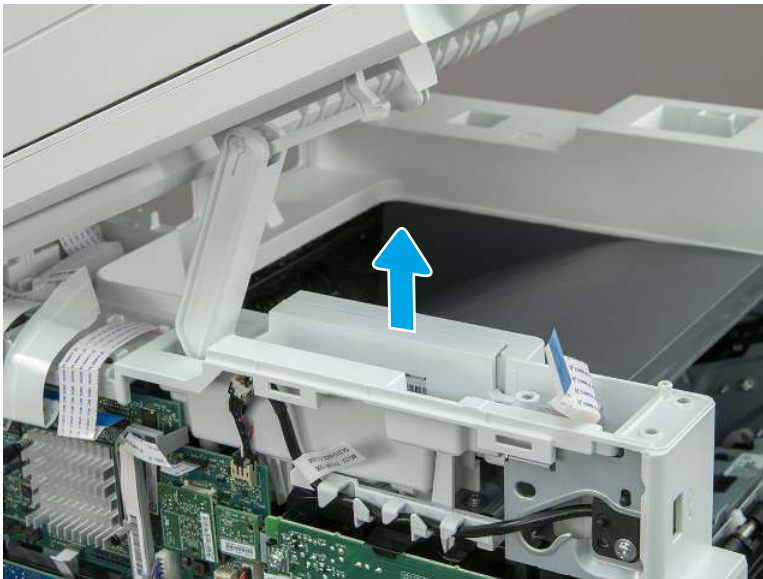
1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

**Figure 5-608** Disconnect one cable



2. Lift up the control-panel FFC cover to remove the cover and cable.

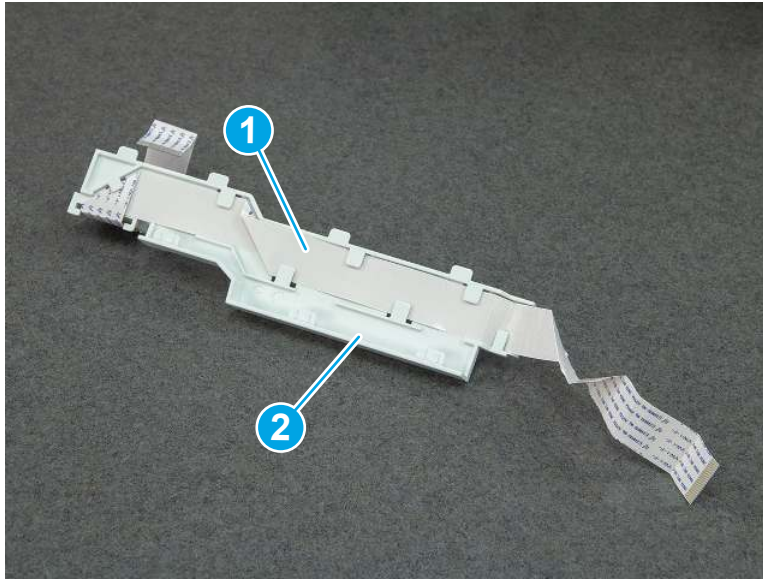
**Figure 5-609** Remove the cover and cable





3. If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).

**Figure 5-610** Remove the FFC



## 8. 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 5-611** Disconnect three FFCs



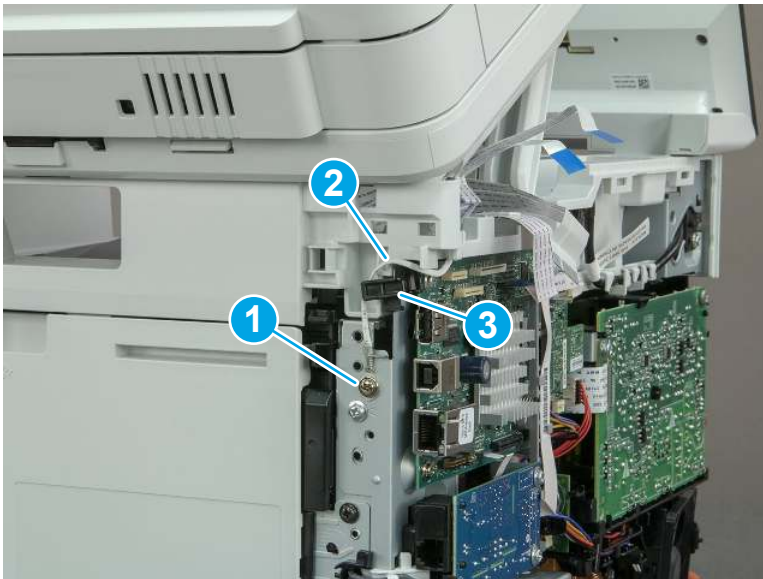
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-612** Release the tape



3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-613** Release the ground wire



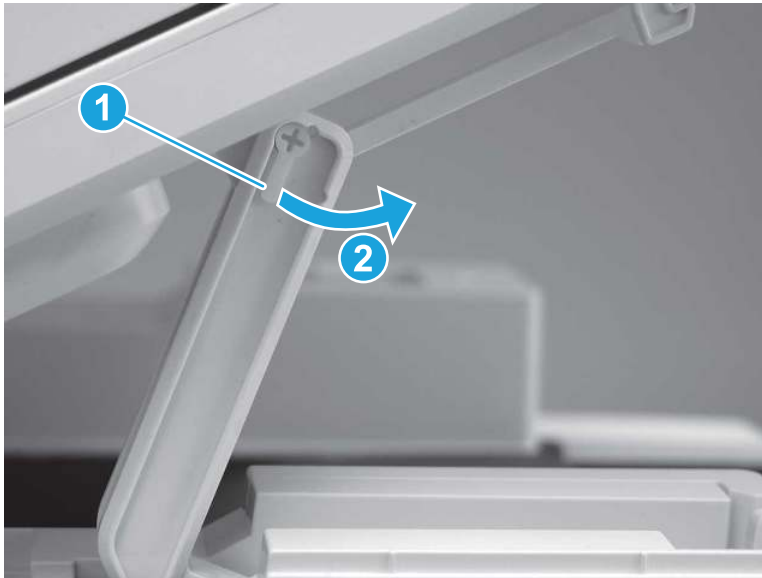
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-614** 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 5-615** 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 5-616** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-617** Rotate the ISA towards the rear of the printer



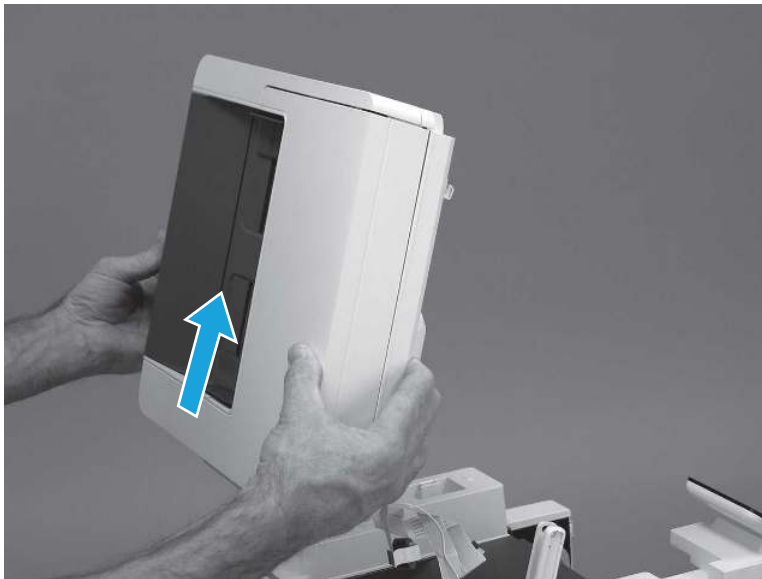
8. Slide the ISA as shown to release it.

**Figure 5-618** Release the ISA



9. Remove the ISA.

**Figure 5-619** Remove the ISA

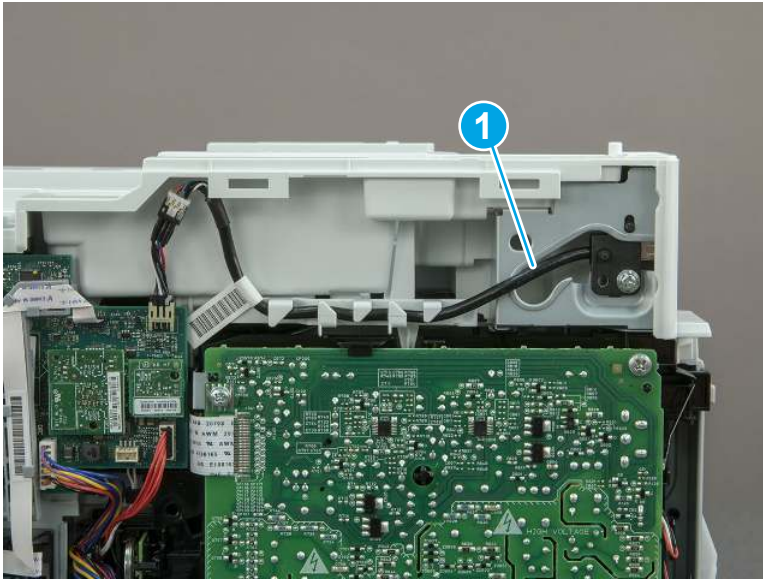


## 9. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

**Figure 5-620** Release the USB cable



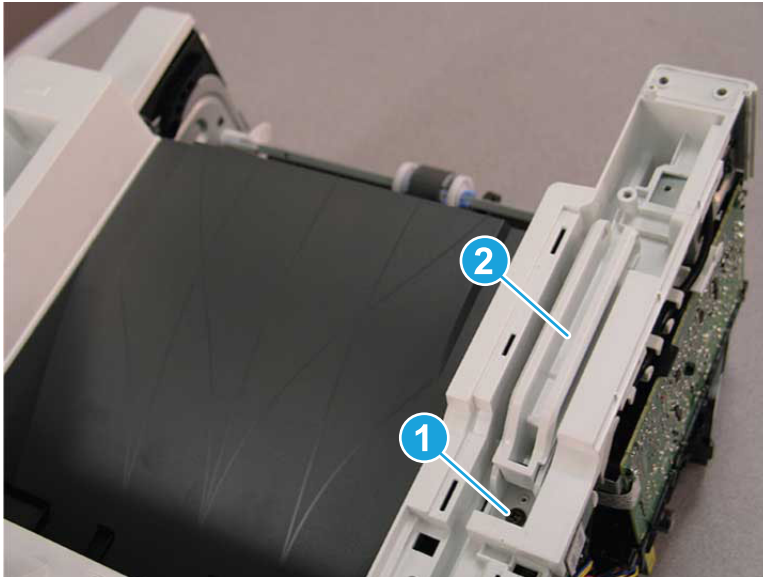
2. Remove one screw (callout 1), and then remove the support arm (callout 2).

---

**⚠ 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.

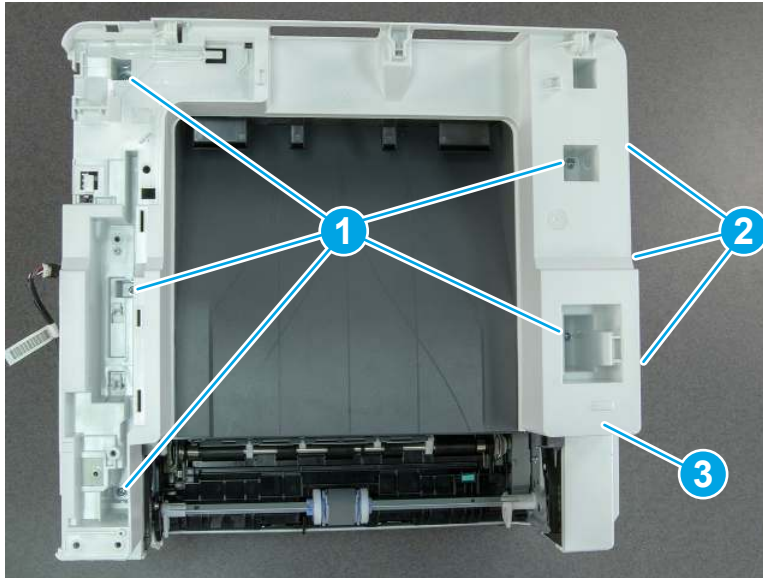
---

**Figure 5-621** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

Figure 5-622 Remove the top cover



## 10. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

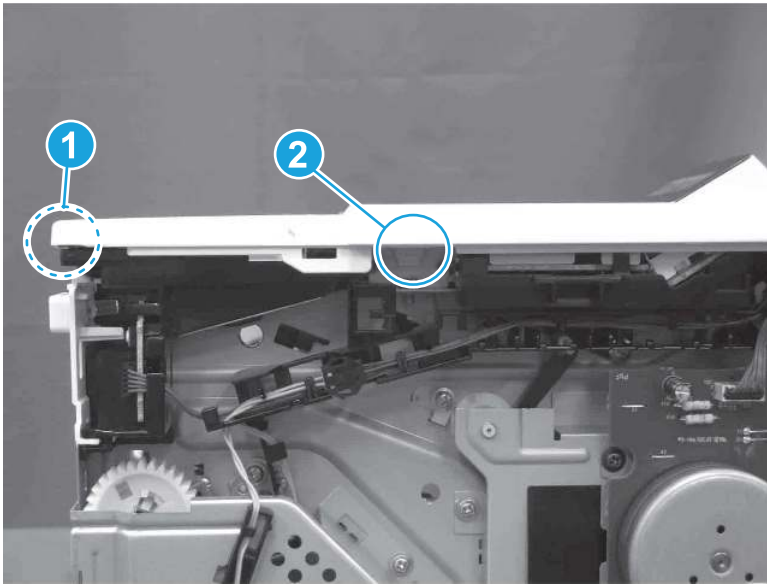
1. Remove one screw.

Figure 5-623 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 5-624** Release one boss and one tab



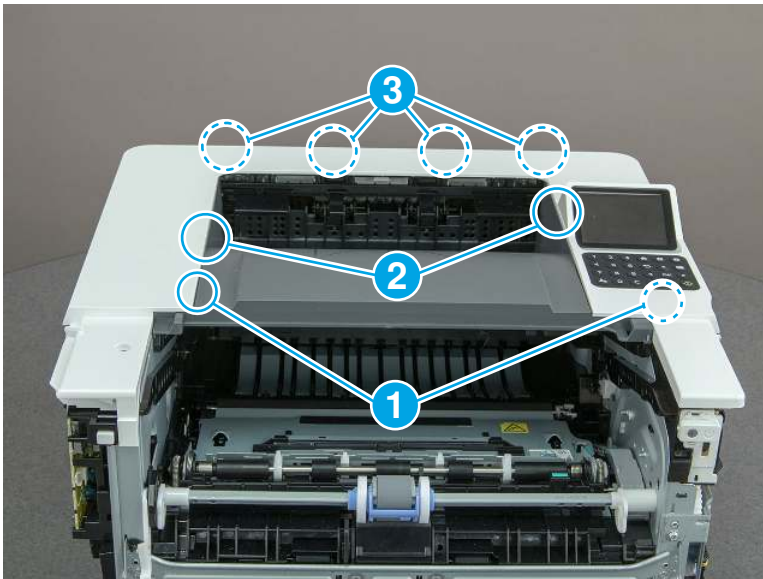
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

**Figure 5-625** Remove the cover



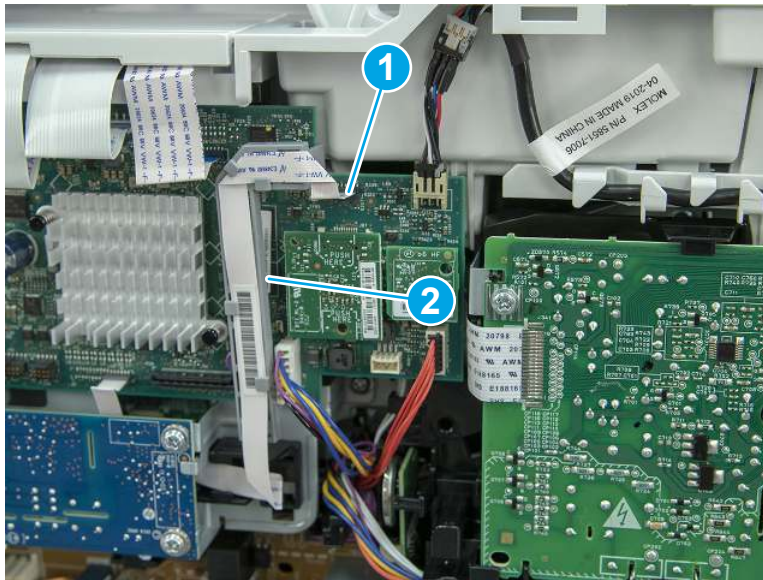
## 11. Remove the fax cable guide and fax PCA (fax models only)

Follow these steps to remove the fax cable guide and fax PCA (fax models only).



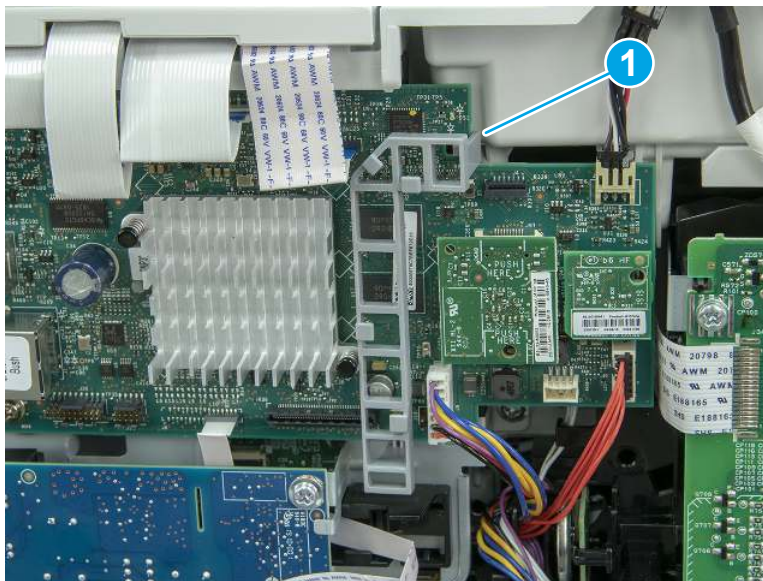
1. Disconnect one connector (callout 1), and then remove the cable from the guide (callout 2).

Figure 5-626 Remove the cable from the guide



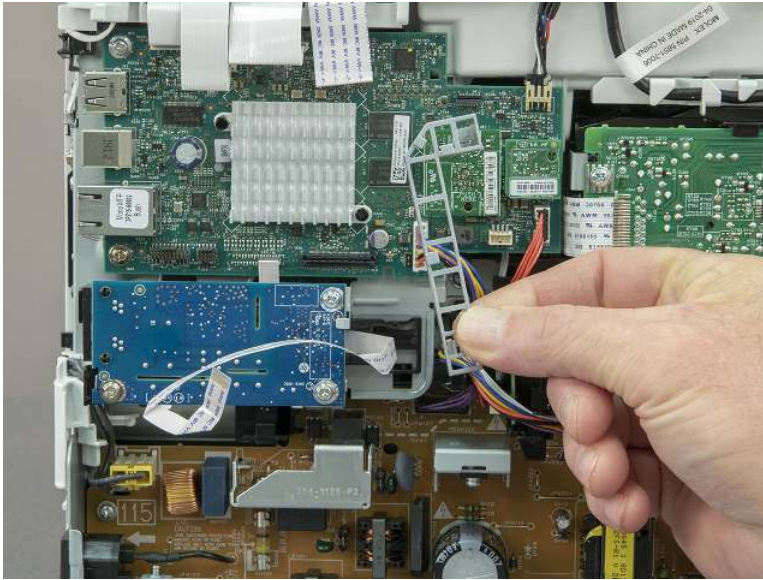
2. Release one tab (callout 1).

Figure 5-627 Release one tab



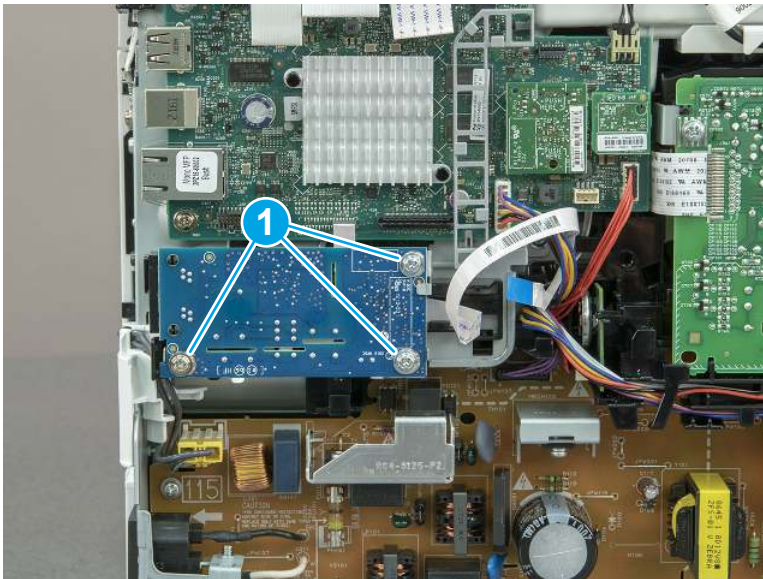
3. Lower the guide to release it from the formatter.

**Figure 5-628** Lower the guide



4. Remove three screws (callout 1), and then remove the fax PCA and cable.

**Figure 5-629** Remove three screws

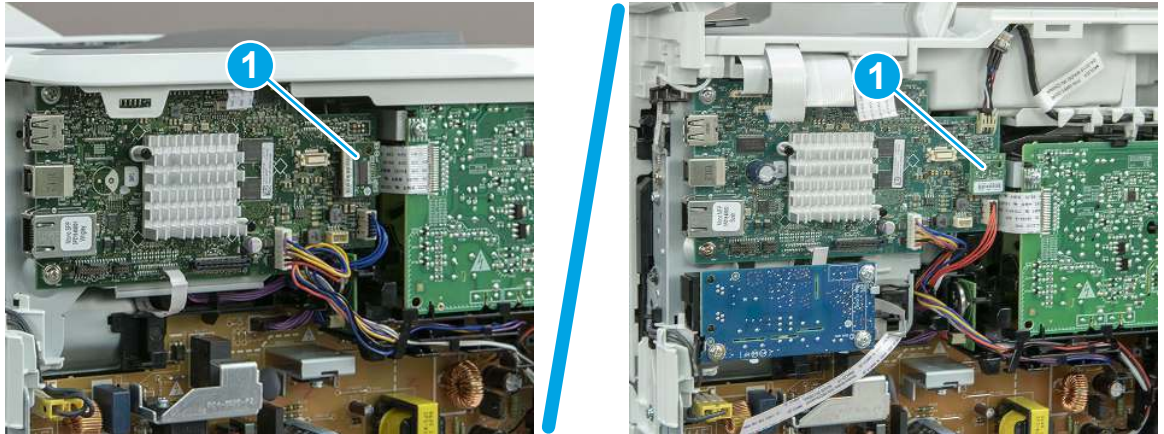


## 12. Remove the Trusted Platform Module (TPM)

Follow these steps to remove the Trusted Platform Module (TPM).

- ▲ Carefully pull the TPM (callout 1) away from the formatter to remove it.

Figure 5-630 Remove the TPM



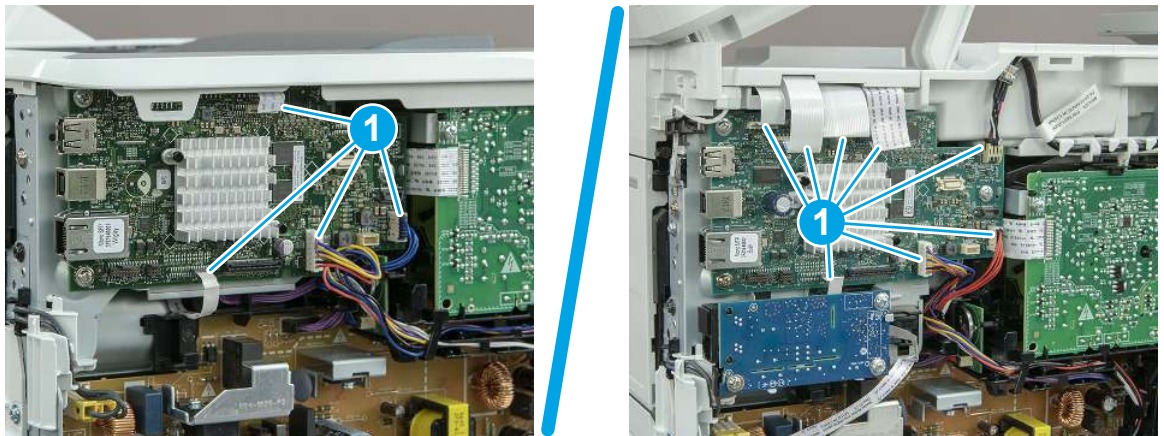
### 13. Remove the formatter PCA

Follow these steps to remove the formatter PCA.

1. Do one of the following:
  - SFP: Disconnect four connectors (callout 1).
  - MFP: Disconnect eight connectors (callout 1).

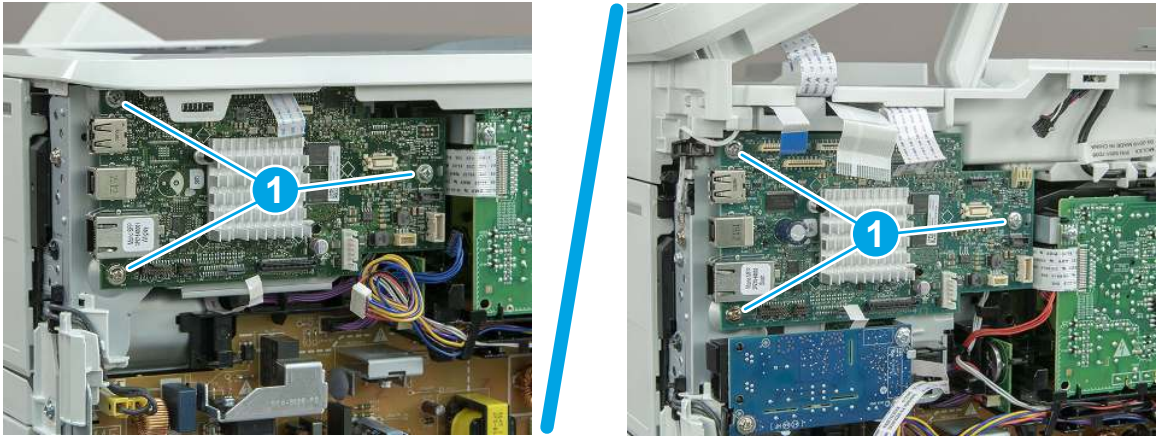
 **IMPORTANT:** Take note of any empty connectors before removing the formatter PCA.

Figure 5-631 SFP/MFP: Disconnect the connectors



2. Remove three screws (callout 1), and then remove the formatter PCA.

Figure 5-632 Remove three screws



## 14. Remove the formatter bracket

Follow these steps to remove the formatter bracket.

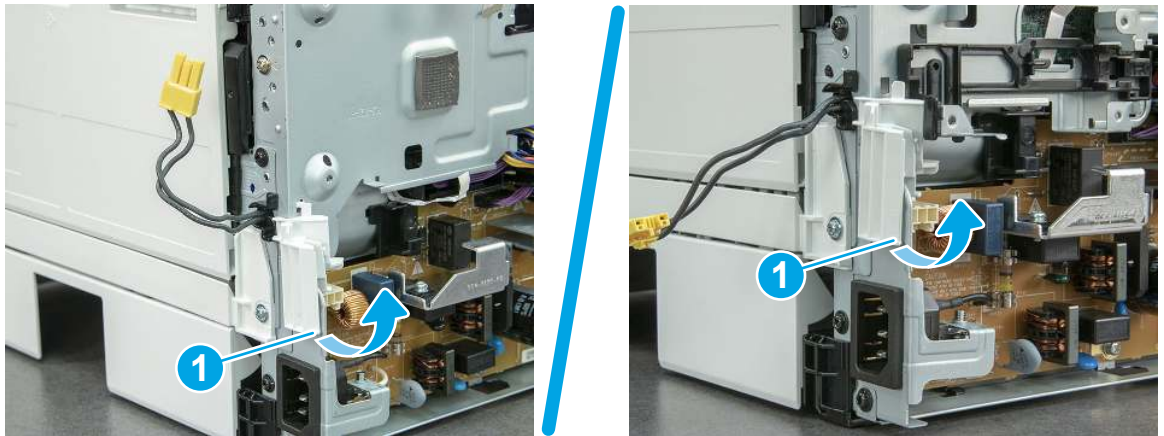
1. Disconnect one connector (callout 1), and then remove the wire harness (callout 2) from the guide (callout 3).

Figure 5-633 SFP/MFP: Remove the wire harness



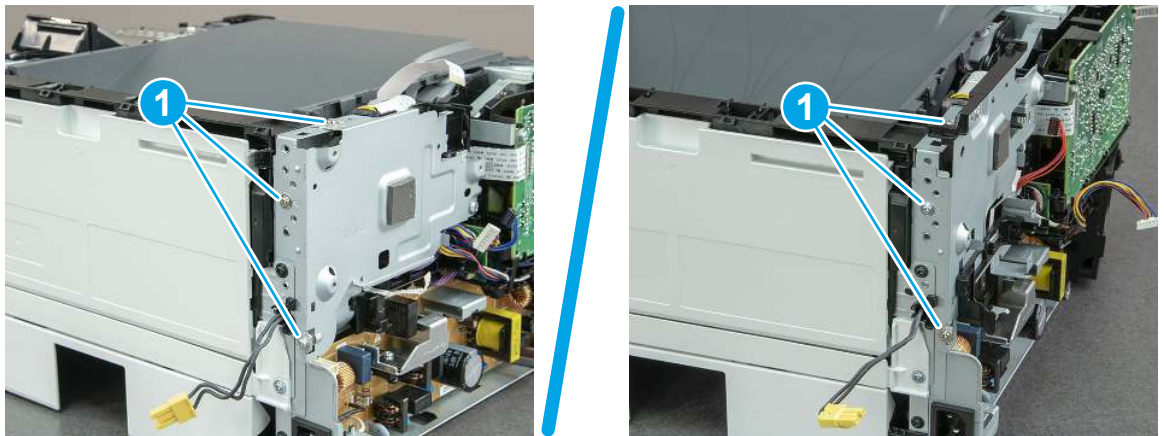
2. Release the front edge (callout 1), and then rotate the wire guide up to remove it.

**Figure 5-634** Remove the wire guide



3. Remove three screws (callout 1).

**Figure 5-635** Remove three screws

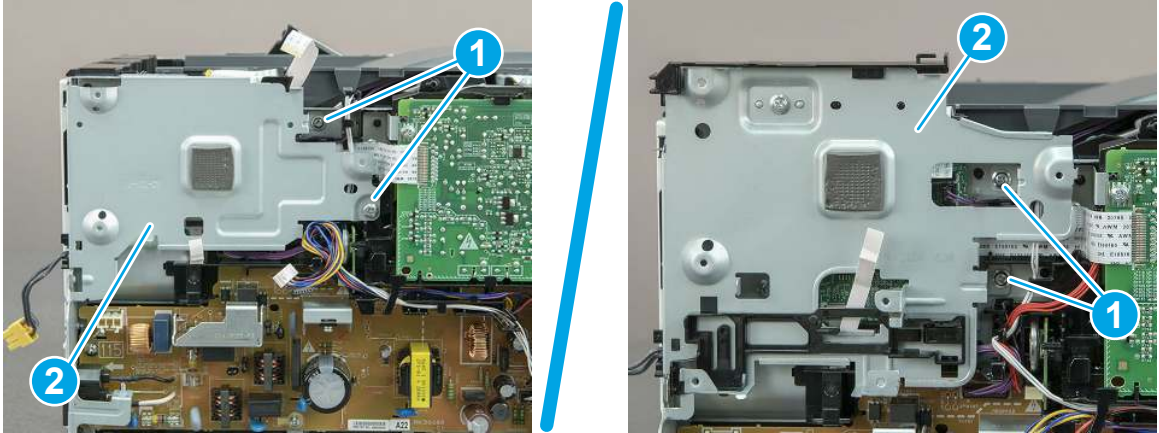


4. Remove two screws (callout 1), and then remove the formatter bracket (callout 2).

 **Reinstallation tip:** Do one of the following:

- **SFP:** One screw is larger than the other screw. Make sure screws are installed in the correct locations.
- **MFP:** These two screws are longer than the previous three screws.

Figure 5-636 Remove two screws



## 15. Remove the formatter FFC

Follow these steps to remove the formatter FFC.

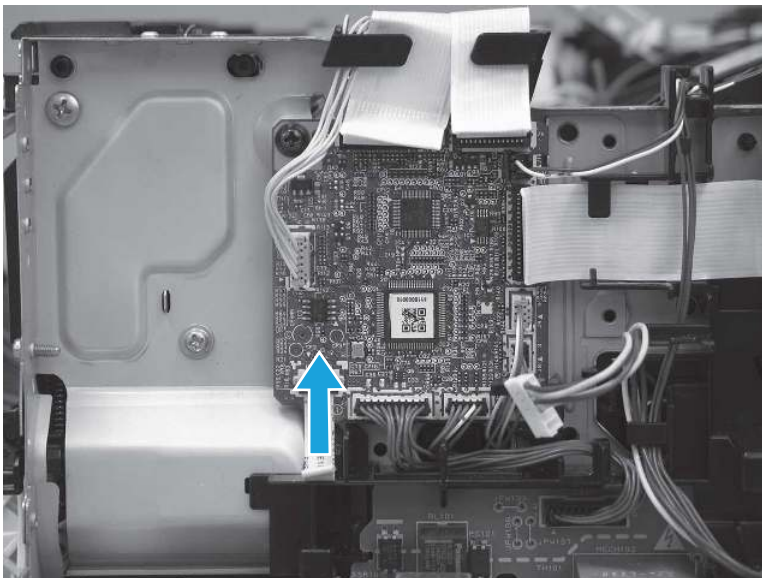
1. Carefully pull up on the FFC (callout 1) to release it from the guide—the FFC is attached to the guide with two-sided tape.

---

**⚠ CAUTION:** The FFC is still attached to the DC controller. Do not attempt to completely remove the FFC.

---

Figure 5-637 Release the FFC



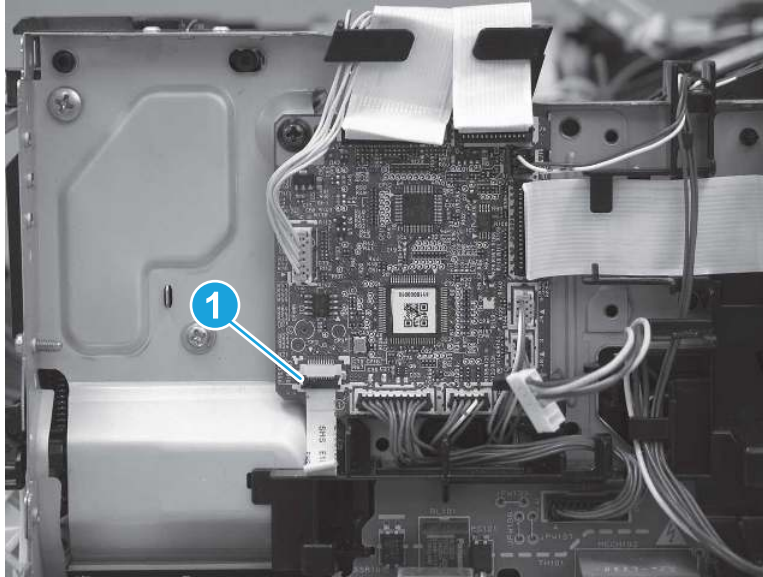
2. Disconnect and remove the formatter FFC (callout 1).

---

**📌 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 5-638 Disconnect and remove the formatter FFC



## 16. 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.

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
RM3-7584-000CN	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 5-639 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).

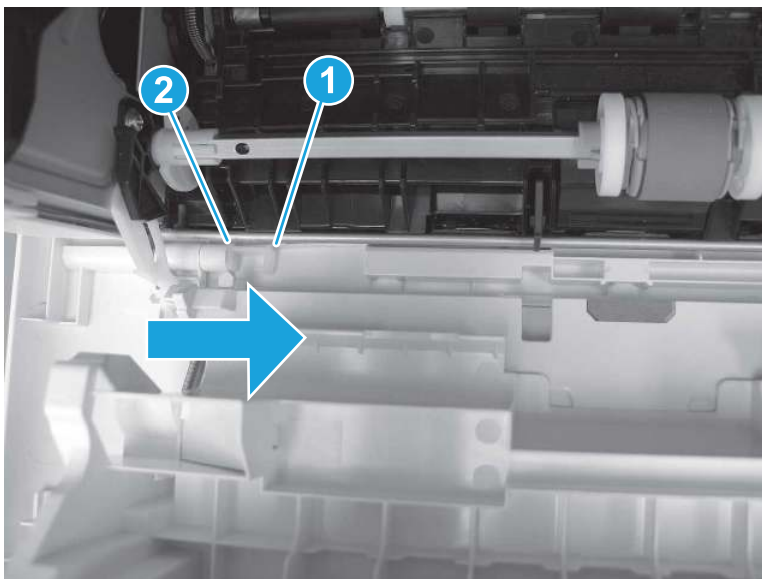
---

 **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.

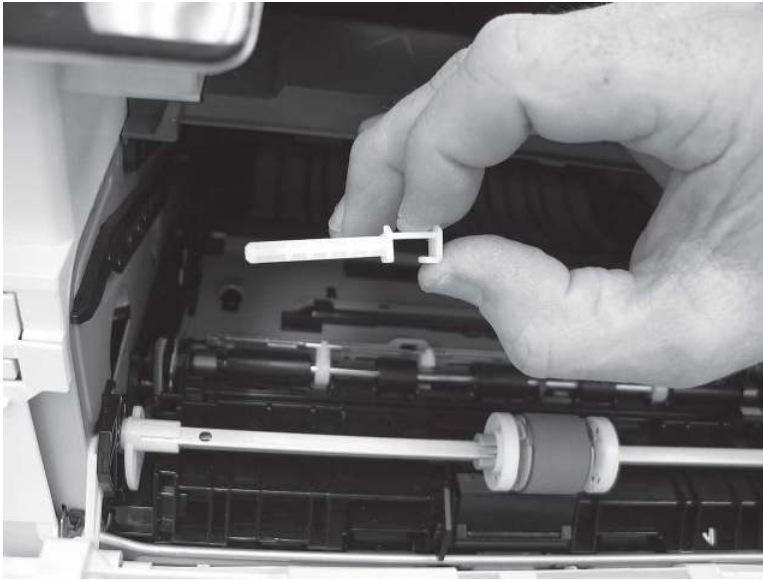
---

Figure 5-640 Release the support shaft



2. Remove the support shaft.

**Figure 5-641** Remove the support shaft



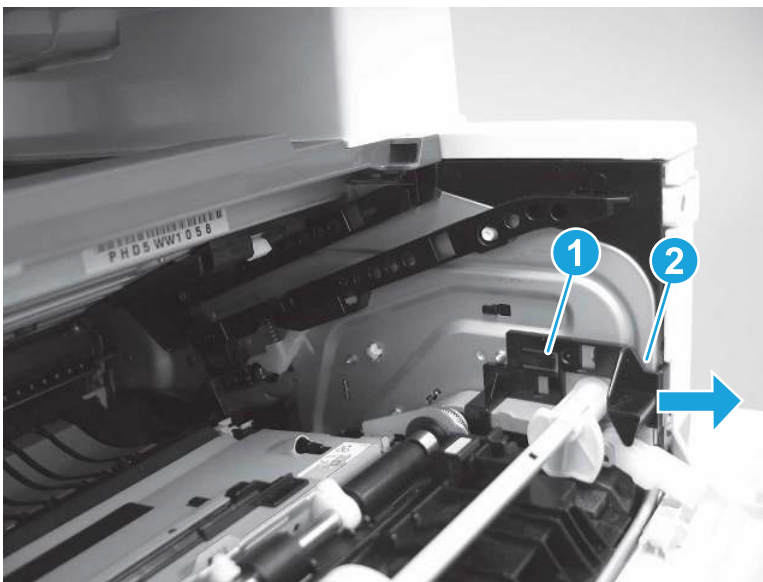
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

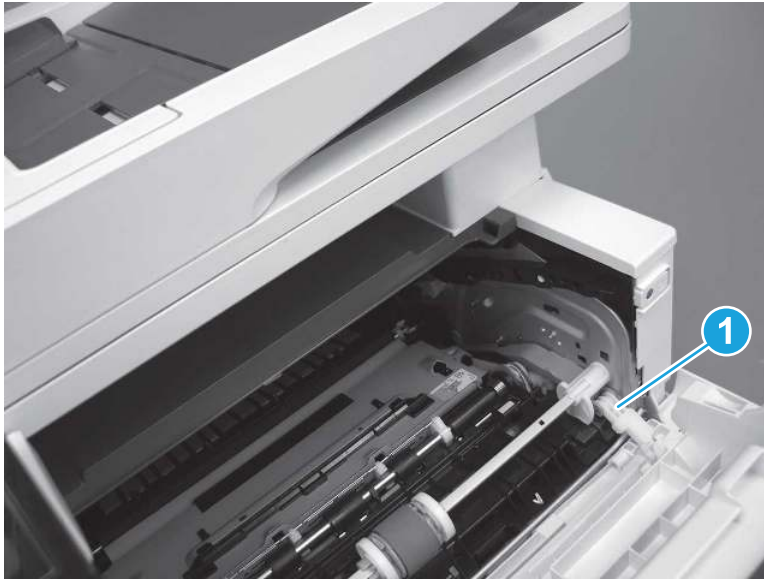
---

**Figure 5-642** 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 5-643** Release the pressure-release link

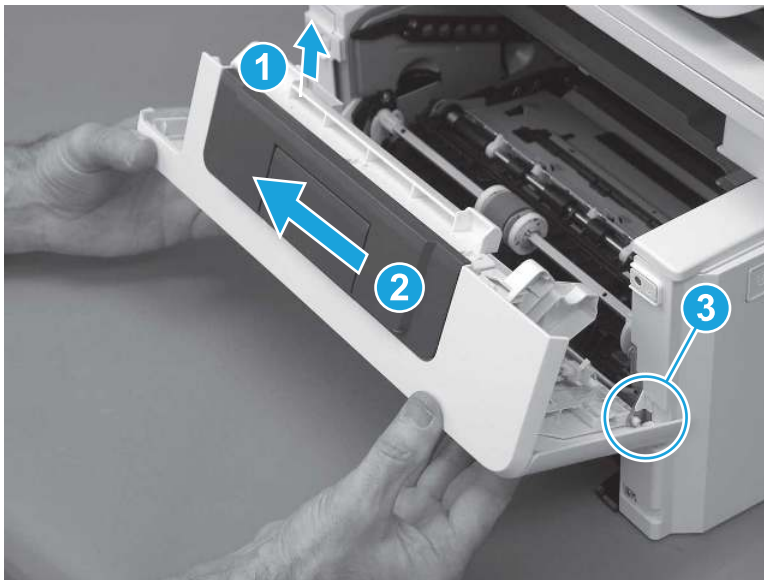


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

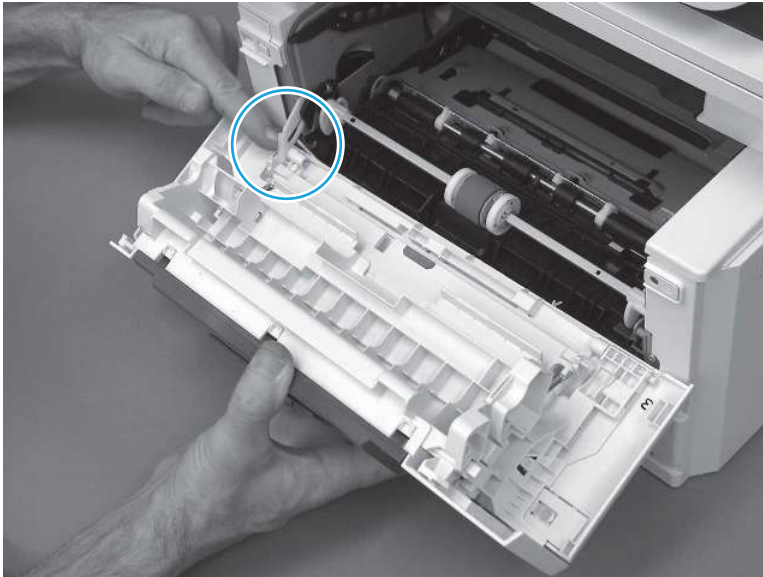
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-644** Release the door



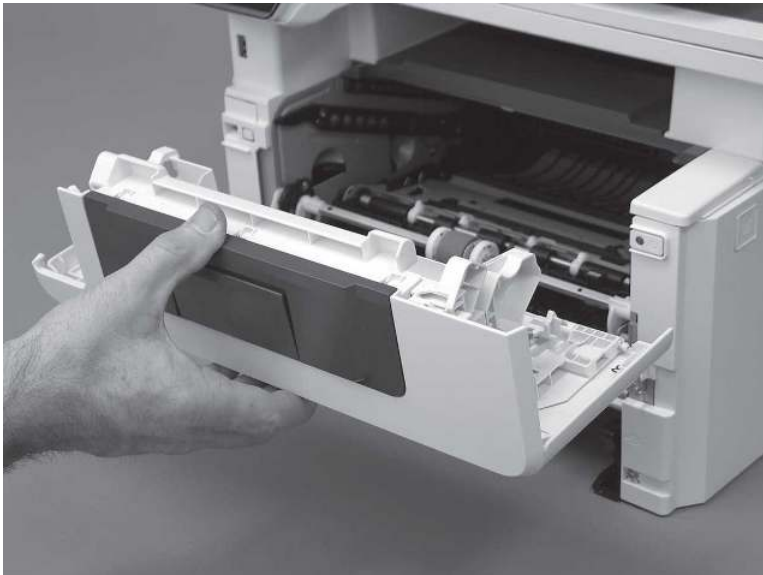
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-645** Release the left-side retainer arm



7. Remove the door.

**Figure 5-646** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

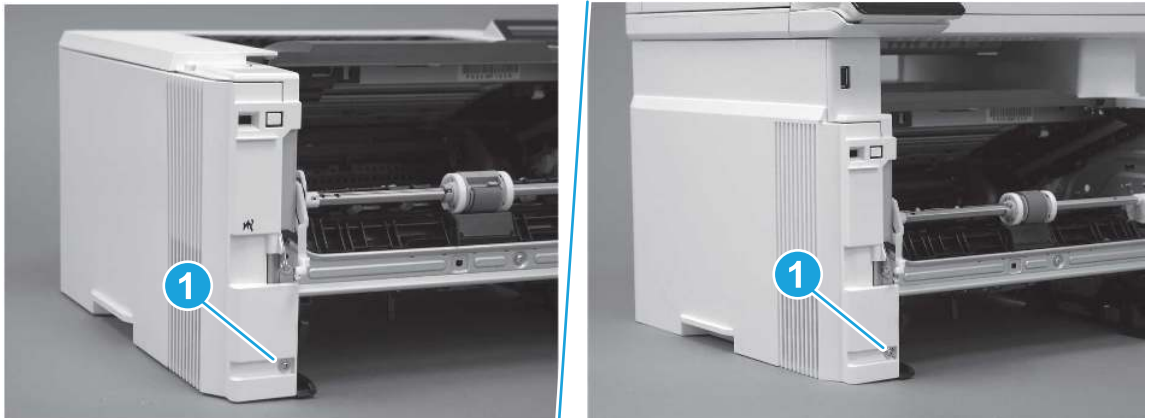
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

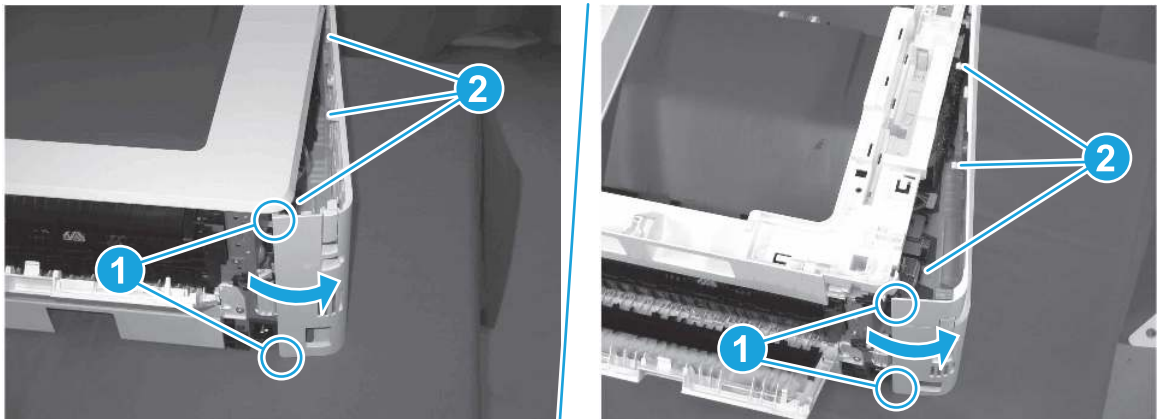
1. Remove one screw (callout 1).

**Figure 5-647** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-648** Release two bosses and three tabs



3. At the front of the printer, do one of the following:

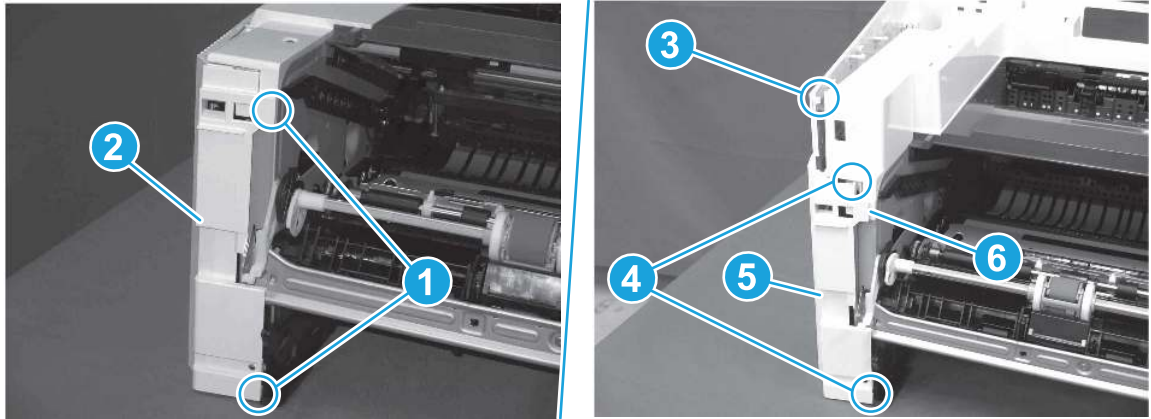
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**⚠ 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 5-649 Remove the cover



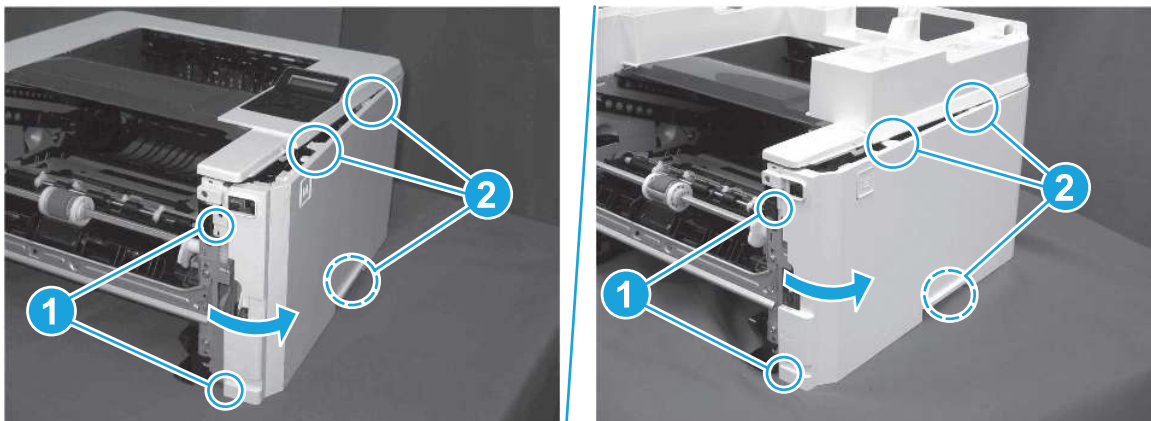
#### 4. Remove the right cover

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).

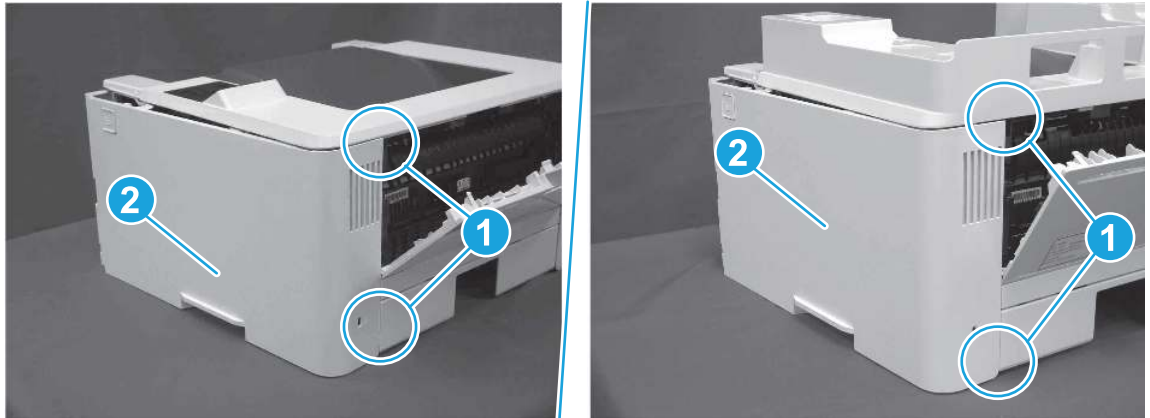
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-650 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-651 Remove the cover



## 5. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

---

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

---

If the control panel is not fully tilted forward, tilt it forward now until it stops.

---

Figure 5-652 Open the ISA



2. Remove one screw (callout 1).

Figure 5-653 Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

Figure 5-654 Release two tabs





4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-655** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-656** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-657** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-658** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-659** Remove two screws and remove the control panel assembly

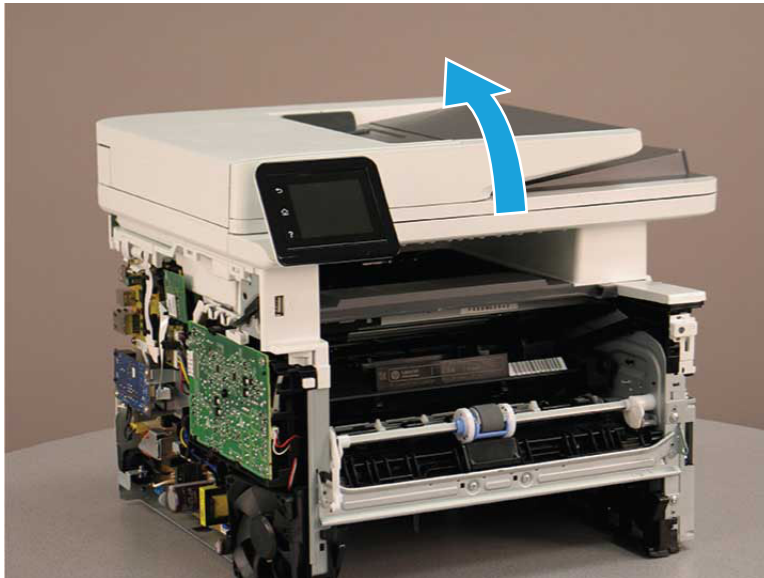


**6. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)**

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

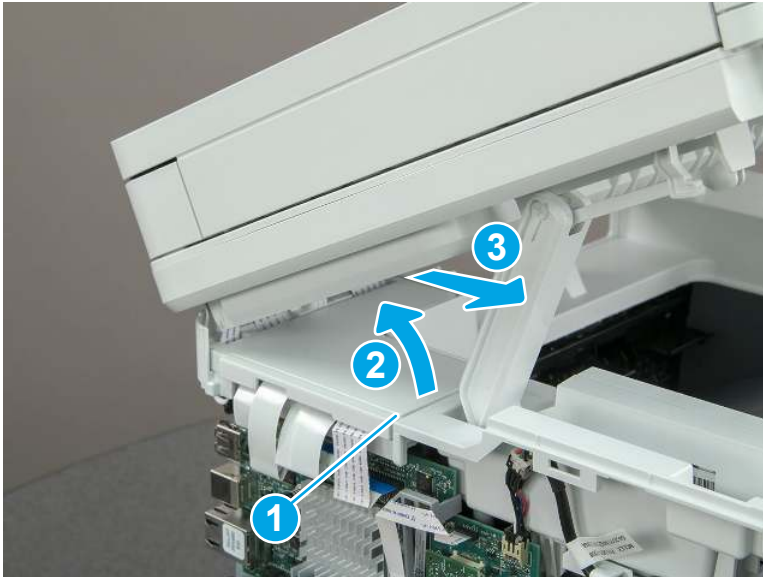
1. If the ISA is not already raised, raise it now.

**Figure 5-660** 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 5-661** Remove the ISA FFC cover

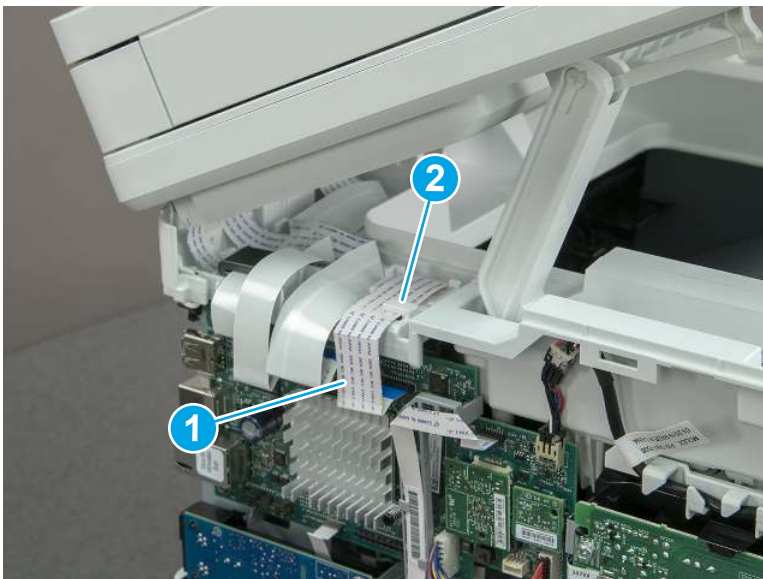


## 7. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

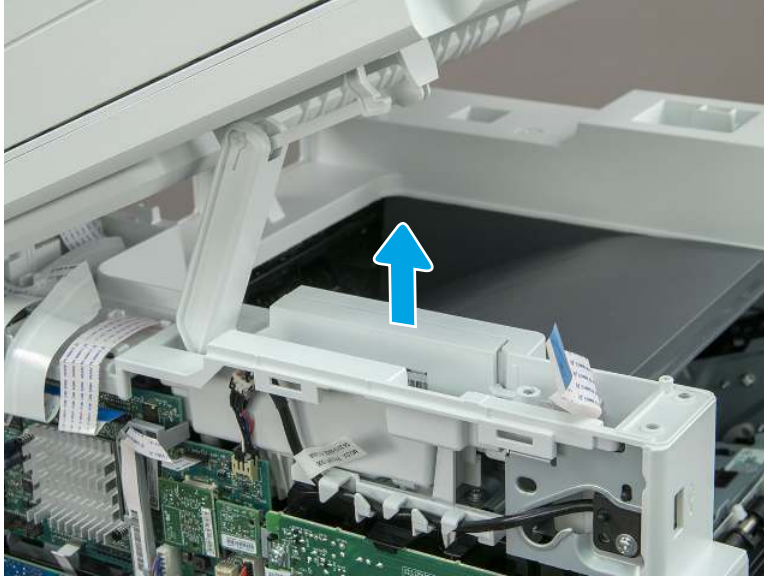
1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

**Figure 5-662** Disconnect one cable



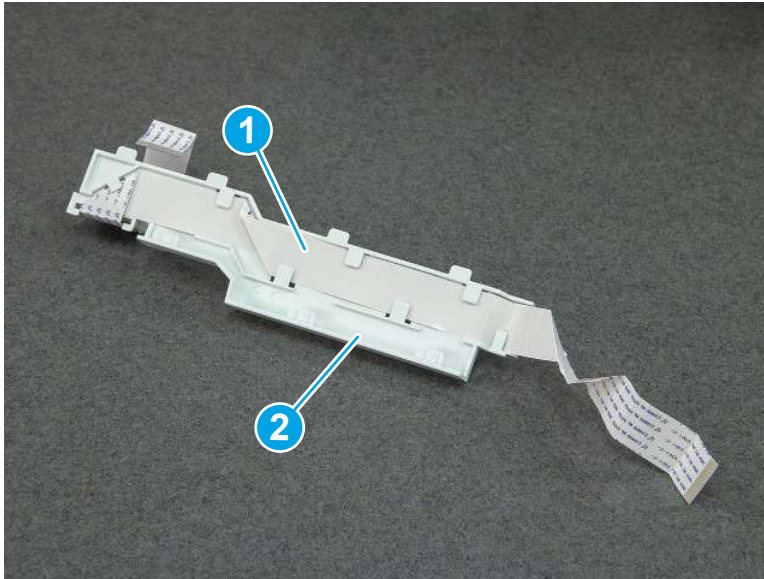
2. Lift up the control-panel FFC cover to remove the cover and cable.

**Figure 5-663** Remove the cover and cable



3. If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).

**Figure 5-664** Remove the FFC



## 8. 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 5-665** Disconnect three FFCs



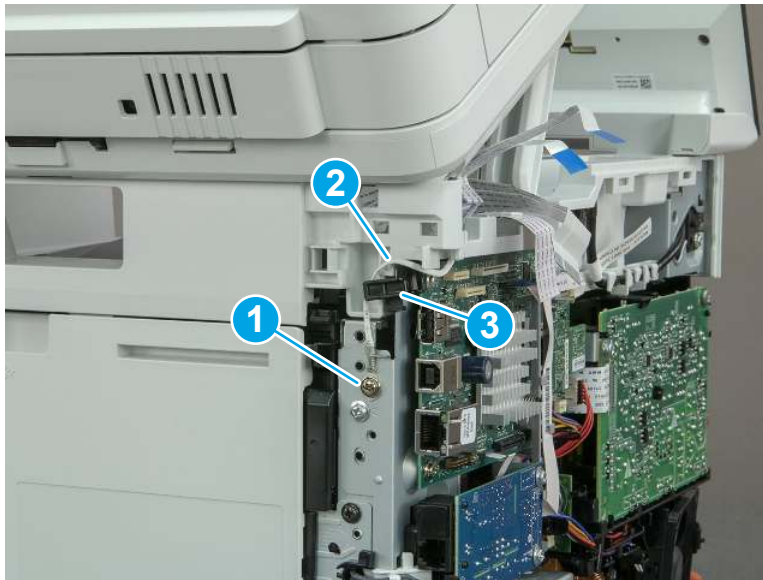
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-666** Release the tape



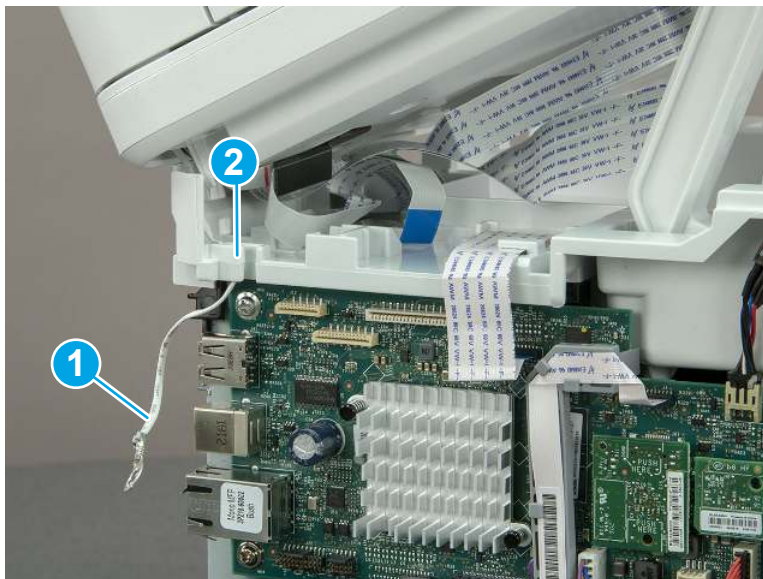
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-667** Release the ground wire



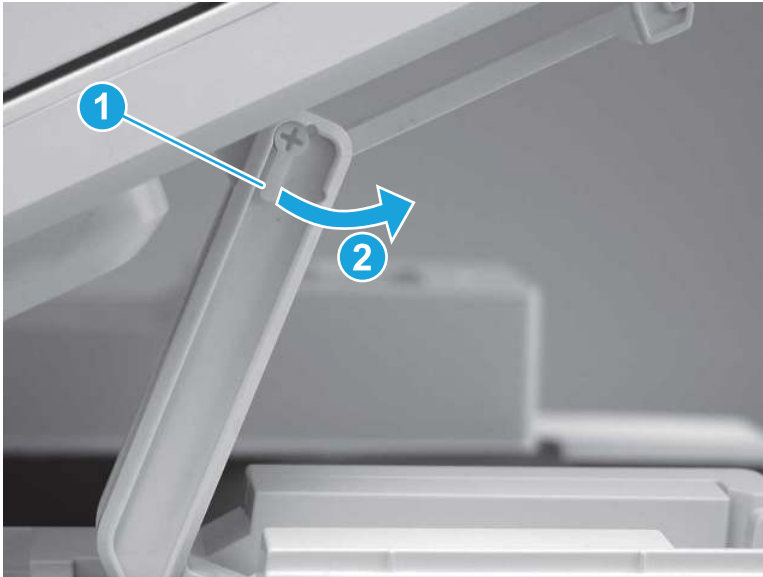
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-668** 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 5-669** Release one tab and rotate the slider pin



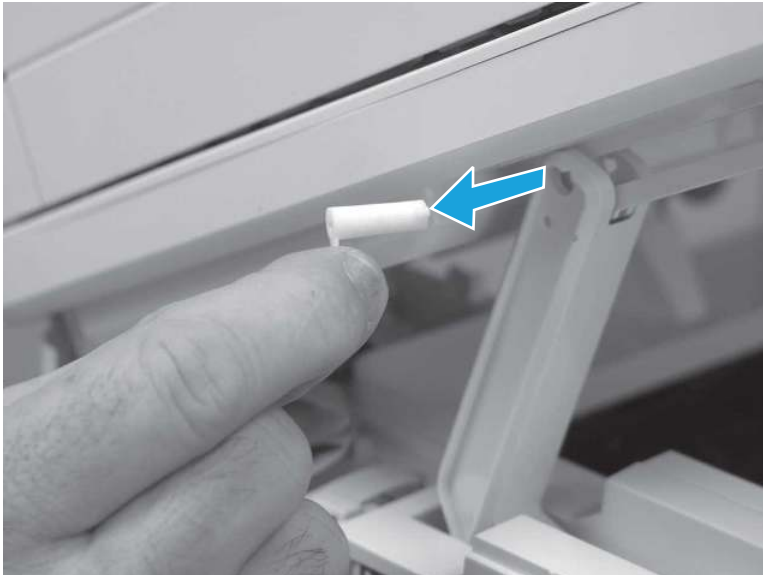
6. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

---

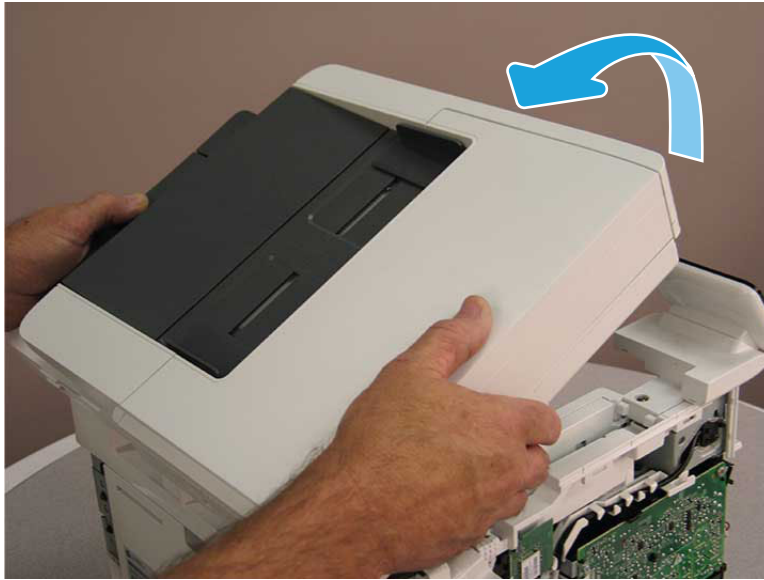
**Figure 5-670** Remove the slider pin





7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-671** Rotate the ISA towards the rear of the printer



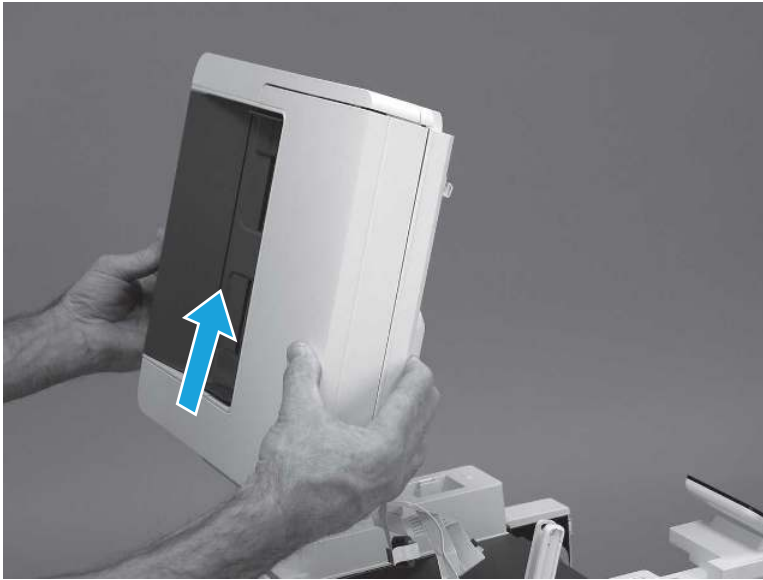
8. Slide the ISA as shown to release it.

**Figure 5-672** Release the ISA



9. Remove the ISA.

Figure 5-673 Remove the ISA

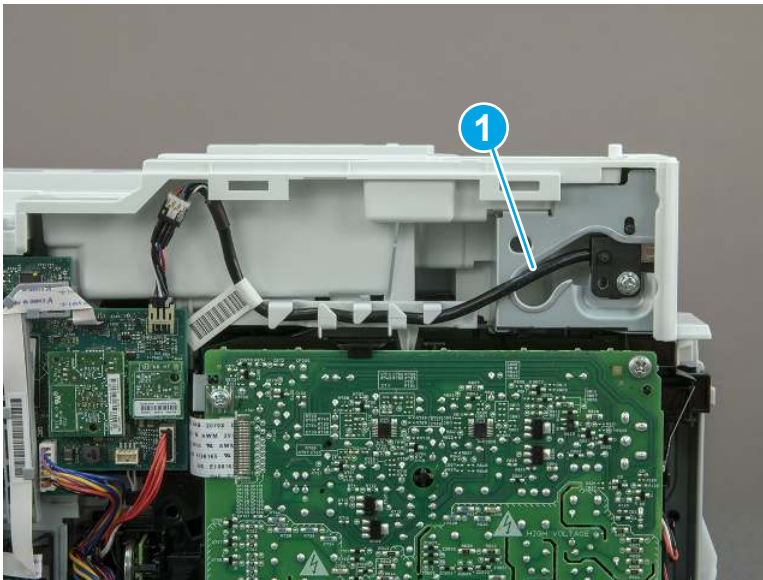


## 9. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

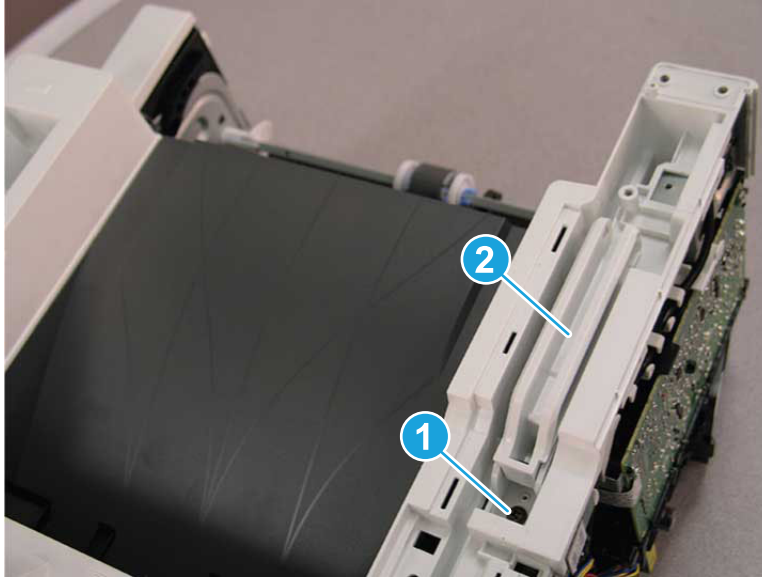
Figure 5-674 Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

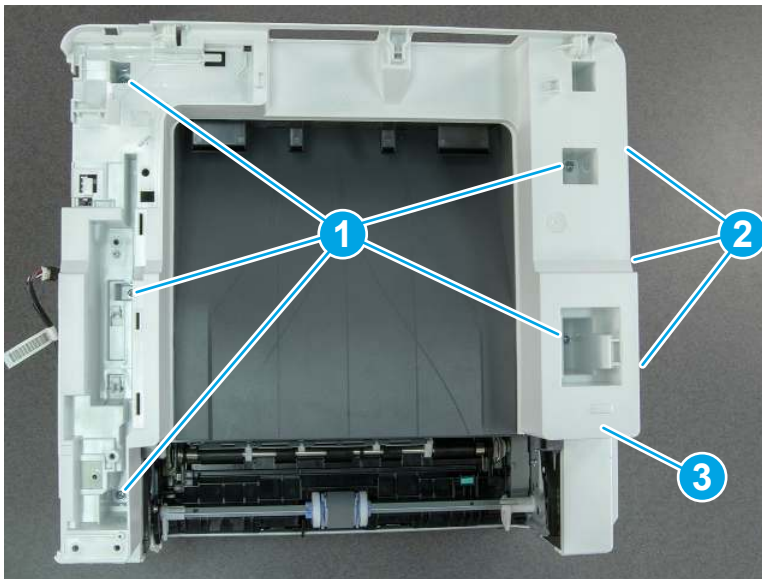
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

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



## 10. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

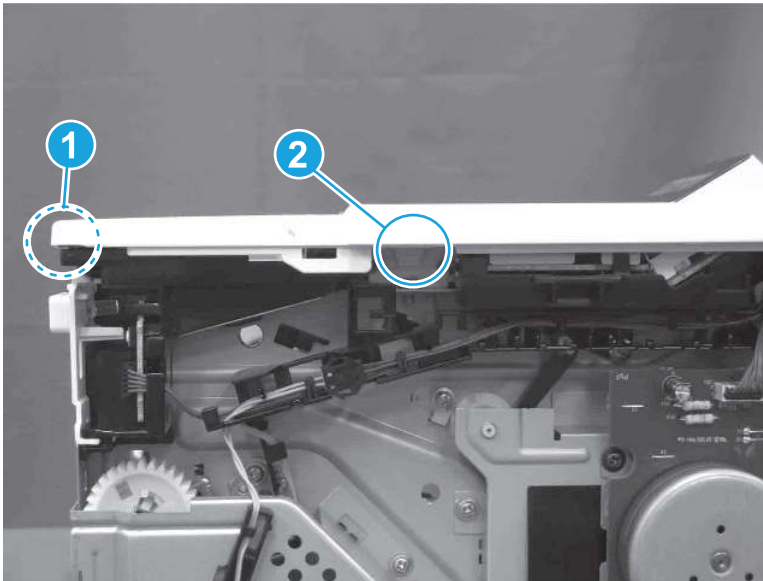
1. Remove one screw.

**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



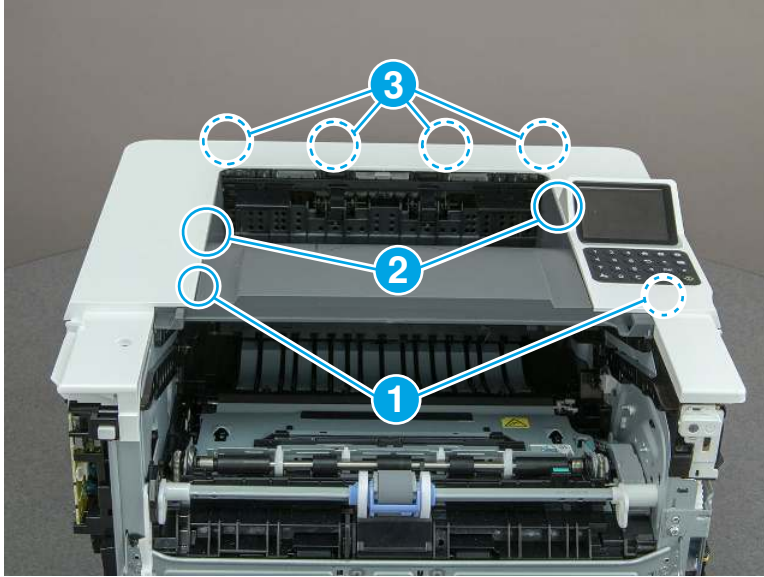
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

Figure 5-679 Remove the cover

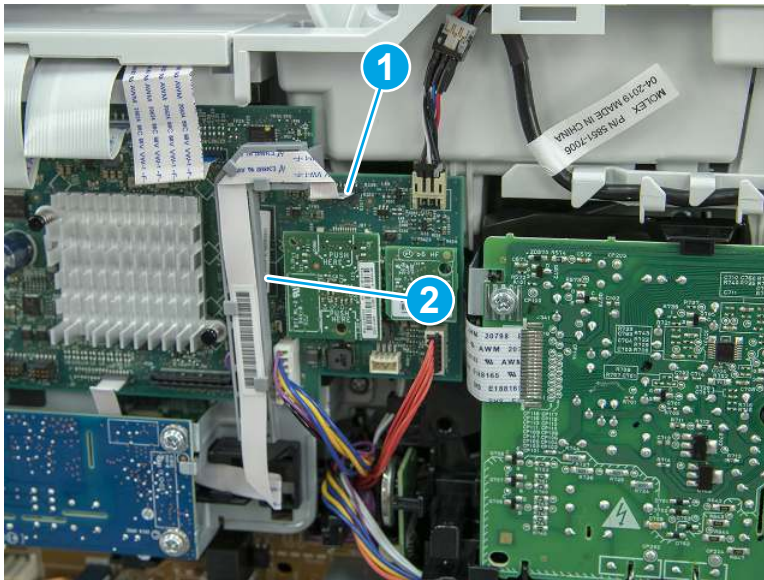


### 11. Remove the fax cable guide and fax PCA (fax models only)

Follow these steps to remove the fax cable guide and fax PCA (fax models only).

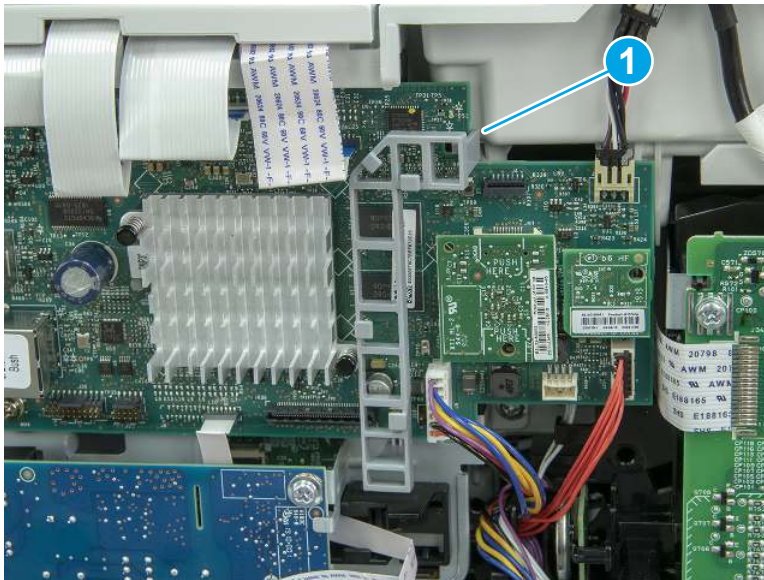
1. Disconnect one connector (callout 1), and then remove the cable from the guide (callout 2).

Figure 5-680 Remove the cable from the guide



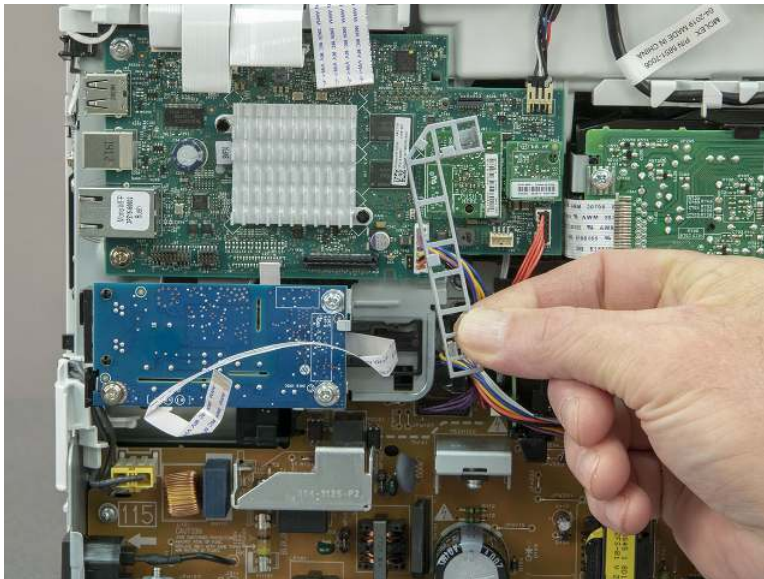
2. Release one tab (callout 1).

Figure 5-681 Release one tab



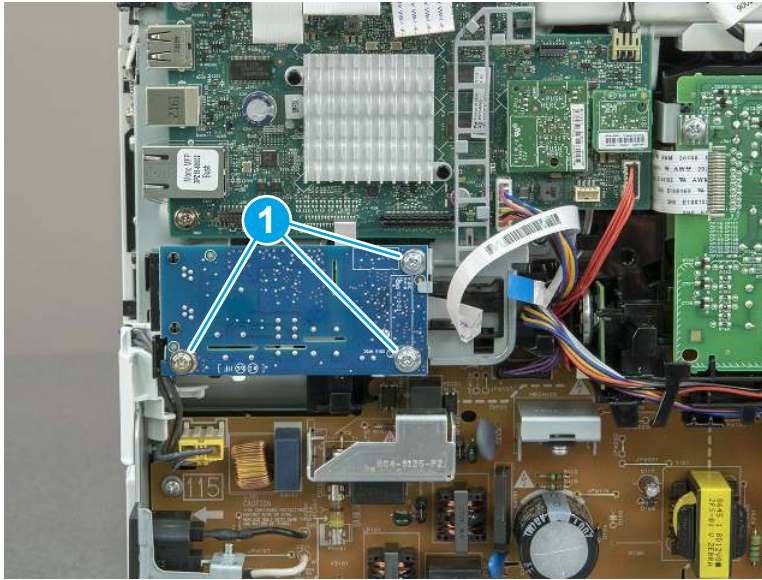
3. Lower the guide to release it from the formatter.

Figure 5-682 Lower the guide



4. Remove three screws (callout 1), and then remove the fax PCA and cable.

Figure 5-683 Remove three screws

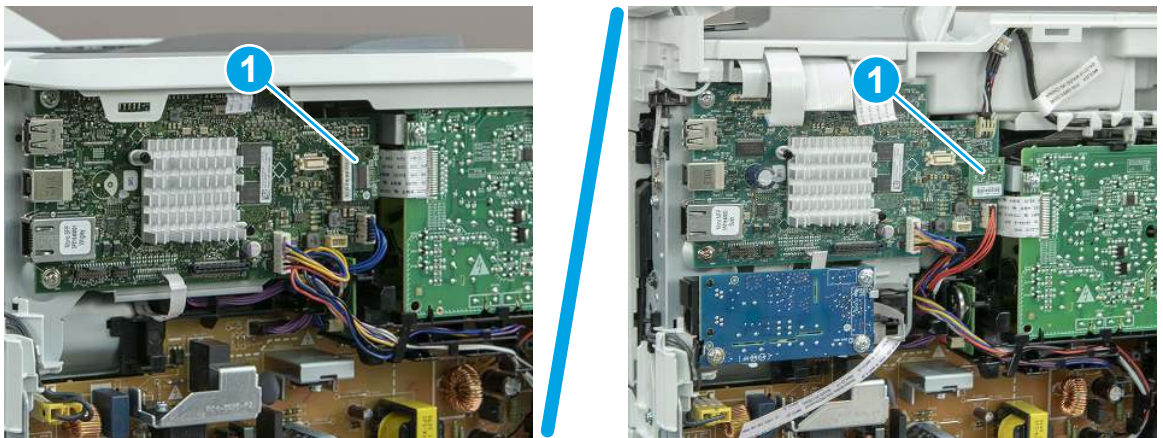


## 12. Remove the Trusted Platform Module (TPM)

Follow these steps to remove the Trusted Platform Module (TPM).

- ▲ Carefully pull the TPM (callout 1) away from the formatter to remove it.

Figure 5-684 Remove the TPM



## 13. Remove the formatter PCA

Follow these steps to remove the formatter PCA.

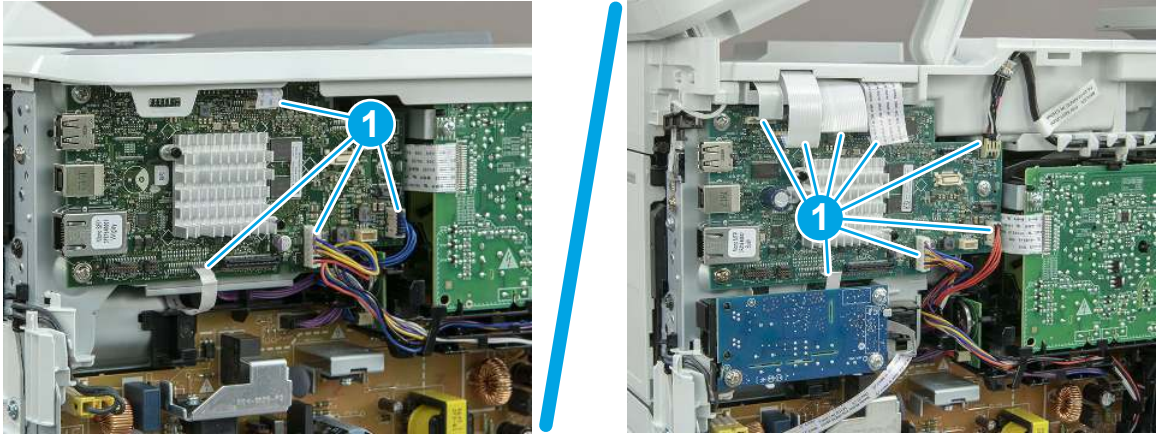
1. Do one of the following:
  - SFP: Disconnect four connectors (callout 1).
  - MFP: Disconnect eight connectors (callout 1).

---

 **IMPORTANT:** Take note of any empty connectors before removing the formatter PCA.

---

Figure 5-685 SFP/MFP: Disconnect the connectors



2. Remove three screws (callout 1), and then remove the formatter PCA.

Figure 5-686 Remove three screws



## 14. Remove the formatter bracket

Follow these steps to remove the formatter bracket.

1. Disconnect one connector (callout 1), and then remove the wire harness (callout 2) from the guide (callout 3).

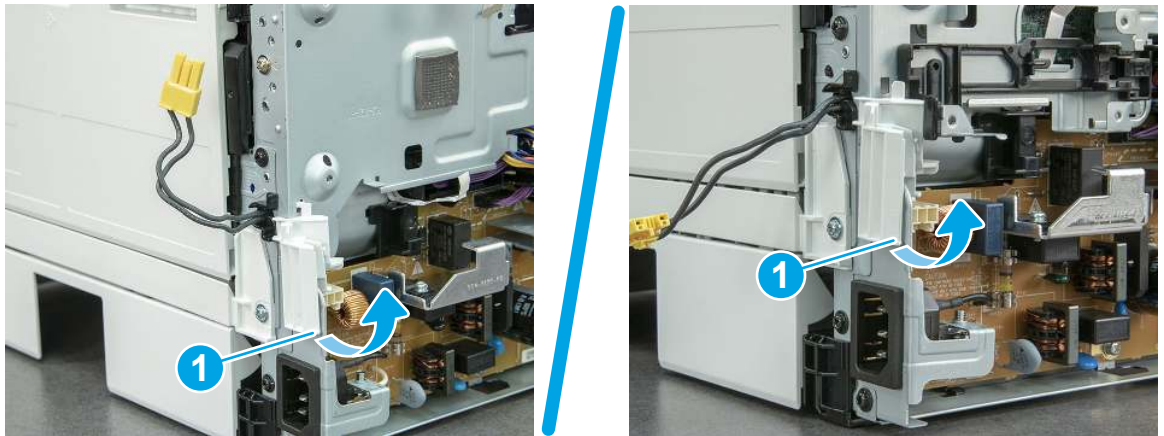
Figure 5-687 SFP/MFP: Remove the wire harness





2. Release the front edge (callout 1), and then rotate the wire guide up to remove it.

**Figure 5-688** Remove the wire guide



3. Remove three screws (callout 1).

**Figure 5-689** Remove three screws

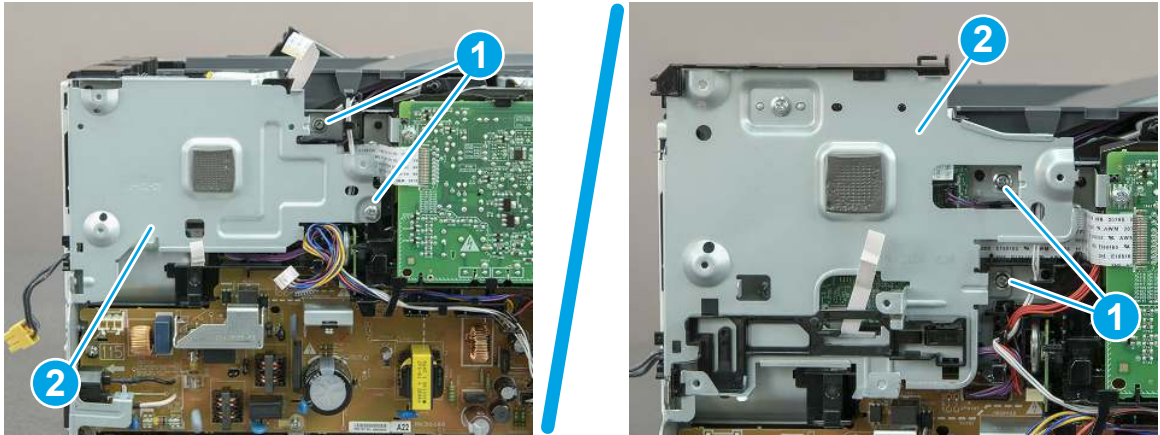


4. Remove two screws (callout 1), and then remove the formatter bracket (callout 2).

 **Reinstallation tip:** Do one of the following:

- **SFP:** One screw is larger than the other screw. Make sure screws are installed in the correct locations.
- **MFP:** These two screws are longer than the previous three screws.

Figure 5-690 Remove two screws



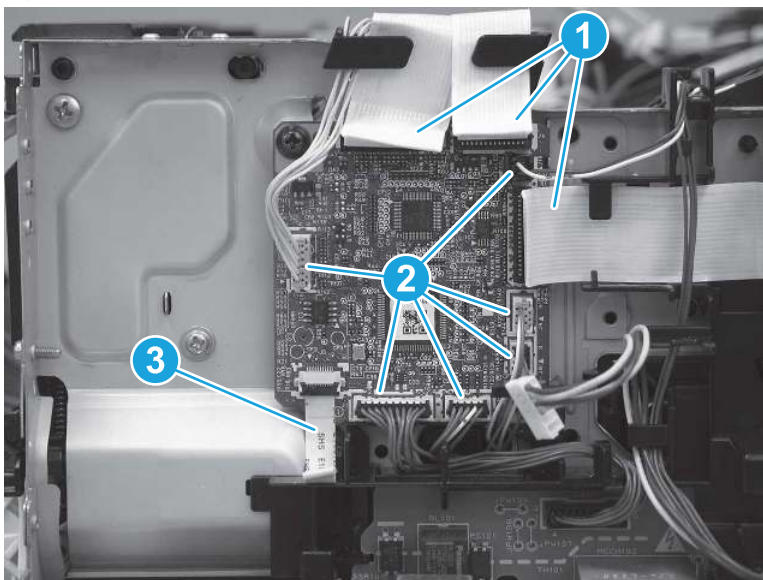
## 15. Remove the DC controller

Follow these steps to remove the DC controller.

1. Disconnect three FFCs (callout 1), and six connectors (callout 2).

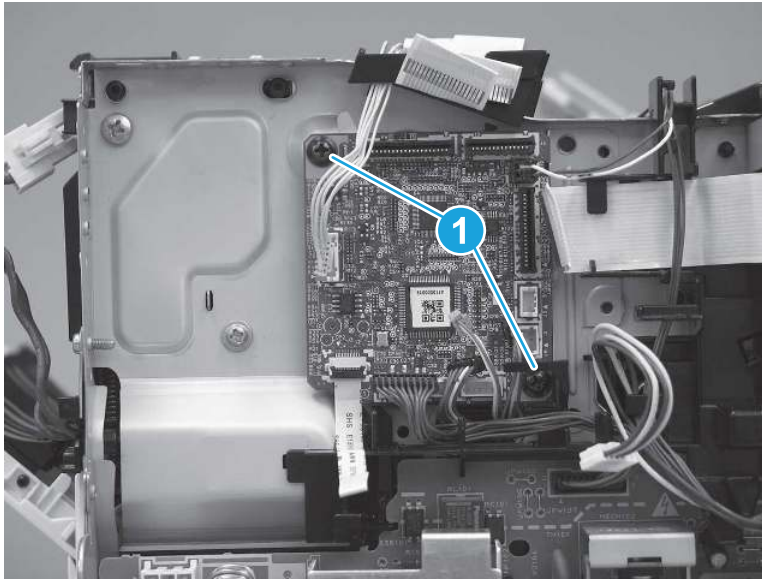
 **IMPORTANT:** One FFC (callout 3) is fastened to the guide with two sided tape. This FFC is removed later in this procedure

Figure 5-691 Disconnect three FFCs and six connectors



2. Remove two screws (callout 1).

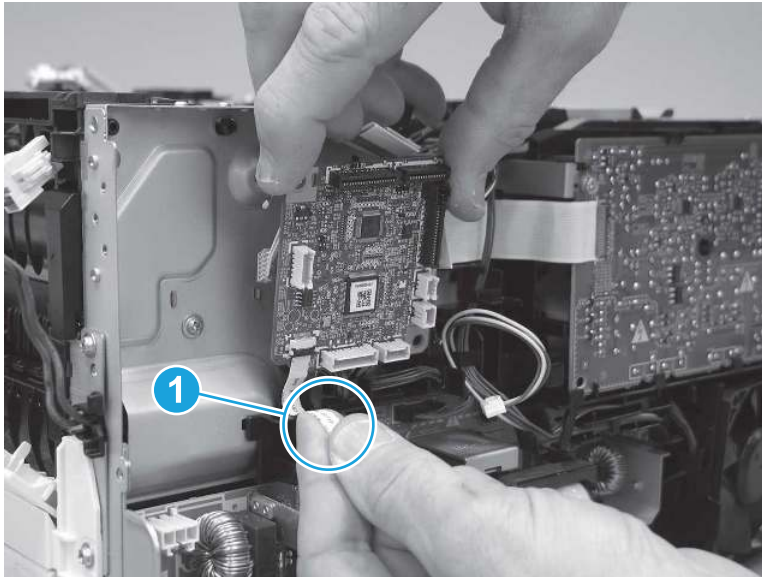
Figure 5-692 Remove two screws



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.

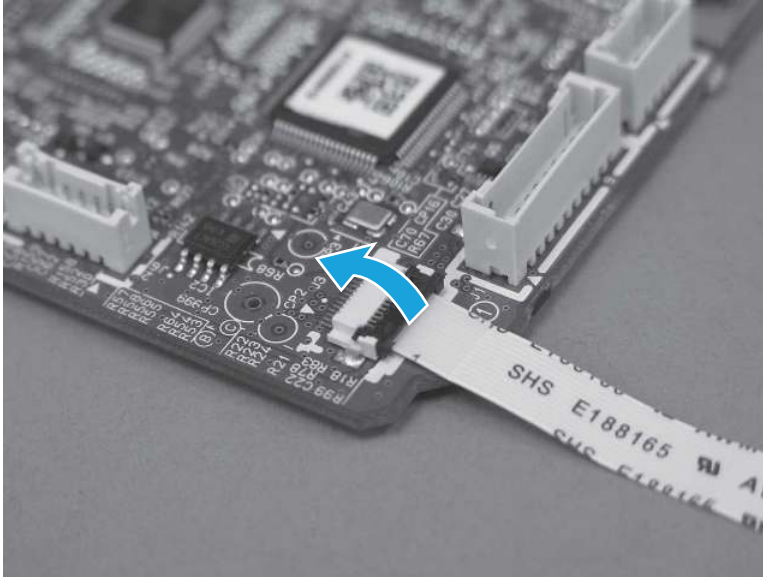
Figure 5-693 Remove the DC controller



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 5-694 Remove the FFC



## 16. 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 5-45** Part information

Part number	Part description
RM2-7510-000CN	Connecting PCA assembly

## 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 5-695 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).

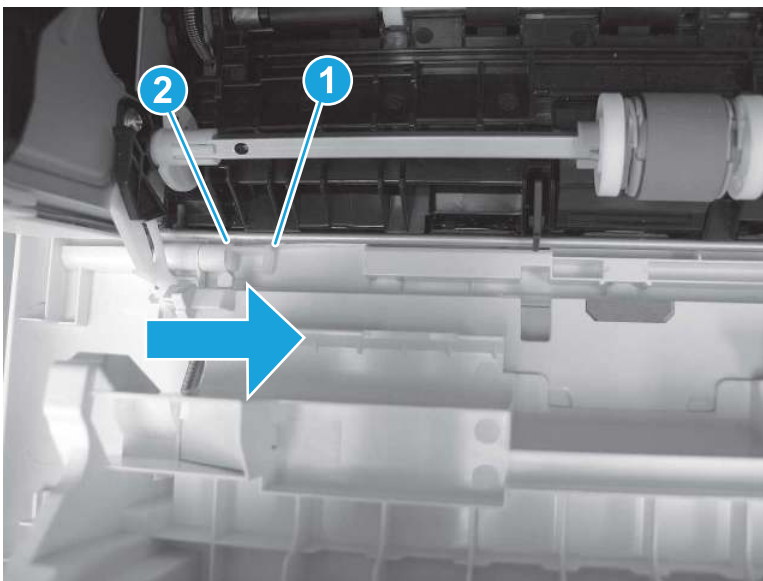
---

 **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.

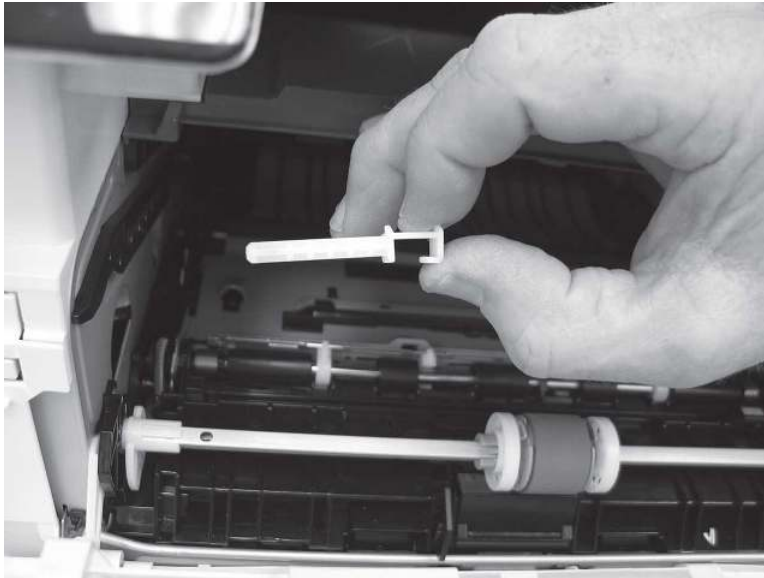
---

Figure 5-696 Release the support shaft



2. Remove the support shaft.

**Figure 5-697** Remove the support shaft



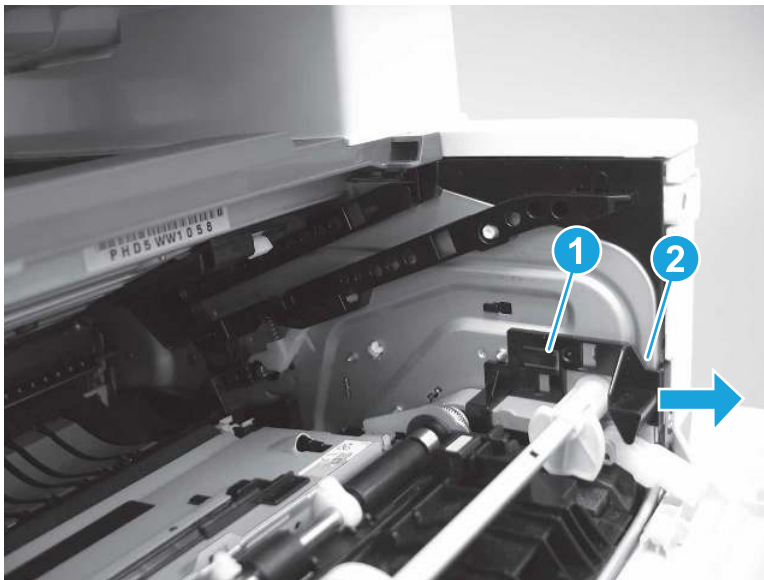
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

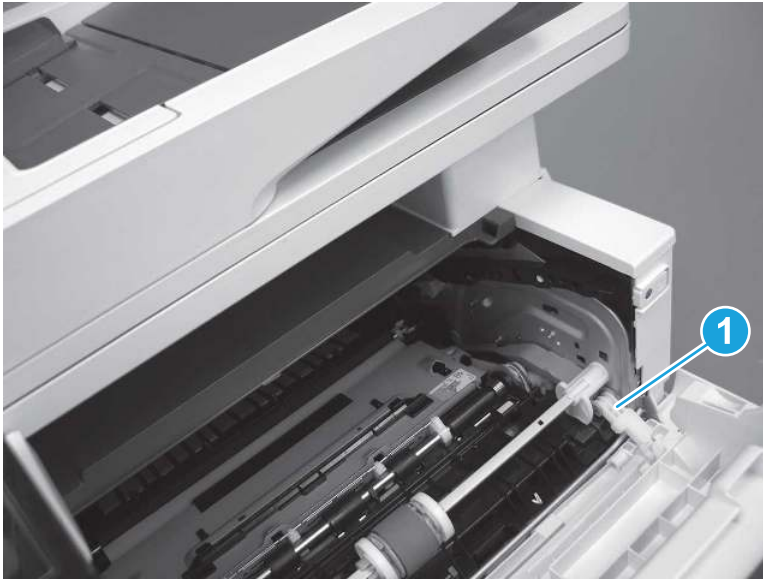
---

**Figure 5-698** 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 5-699** Release the pressure-release link

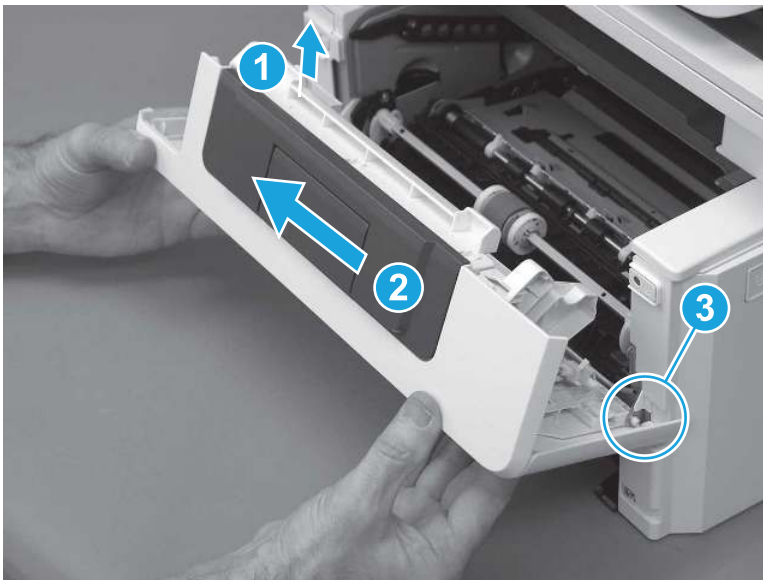


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ 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.

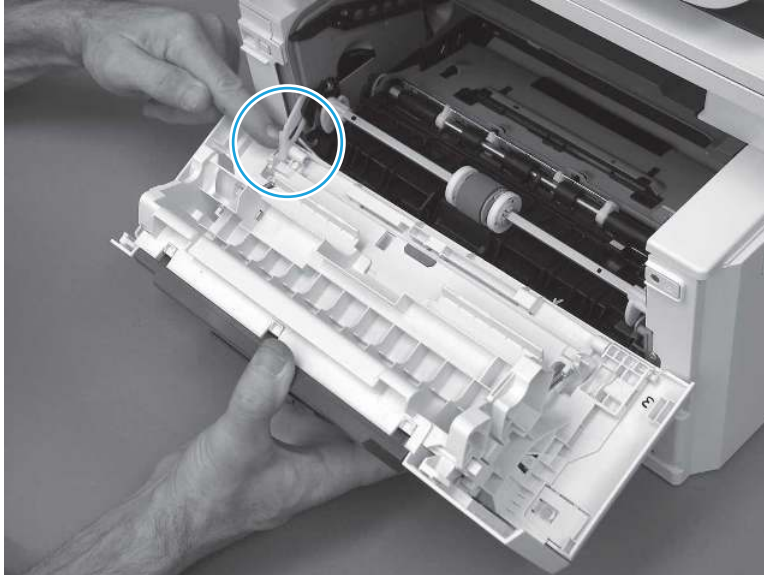
**Figure 5-700** Release the door





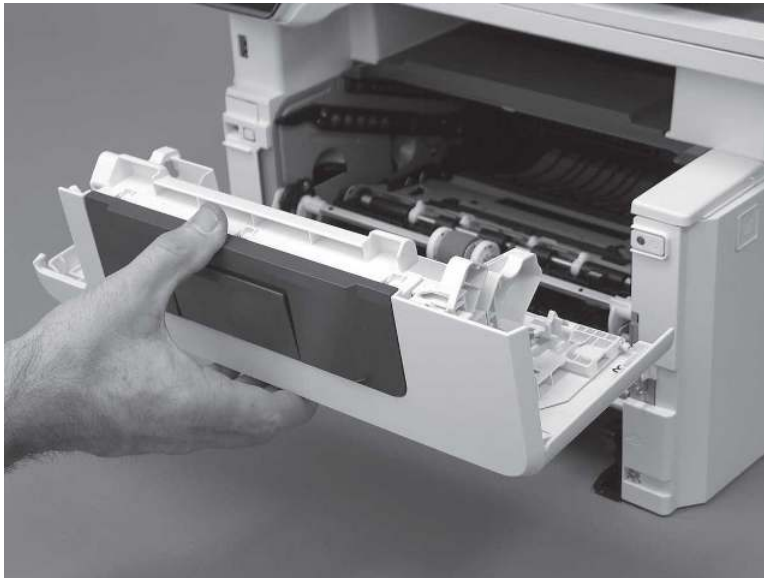
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-701** Release the left-side retainer arm



7. Remove the door.

**Figure 5-702** 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.

---

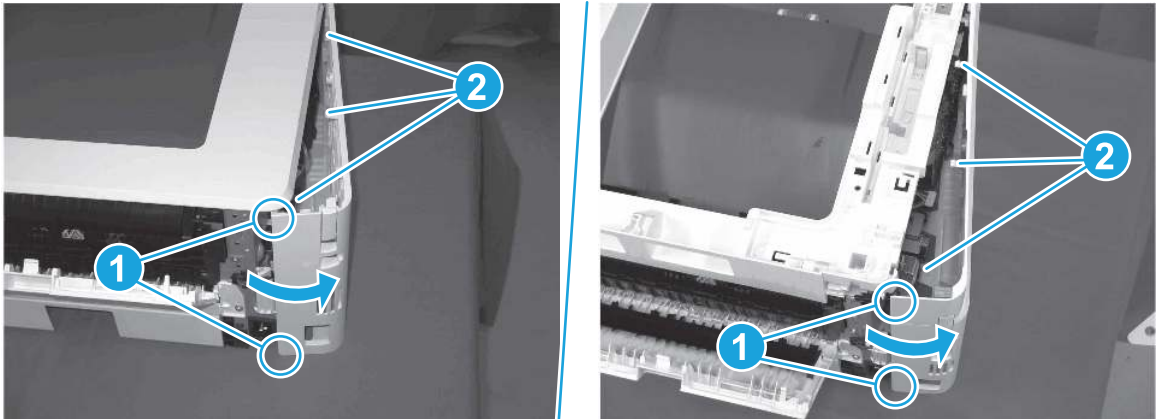
1. Remove one screw (callout 1).

**Figure 5-703** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-704** Release two bosses and three tabs



3. At the front of the printer, do one of the following:

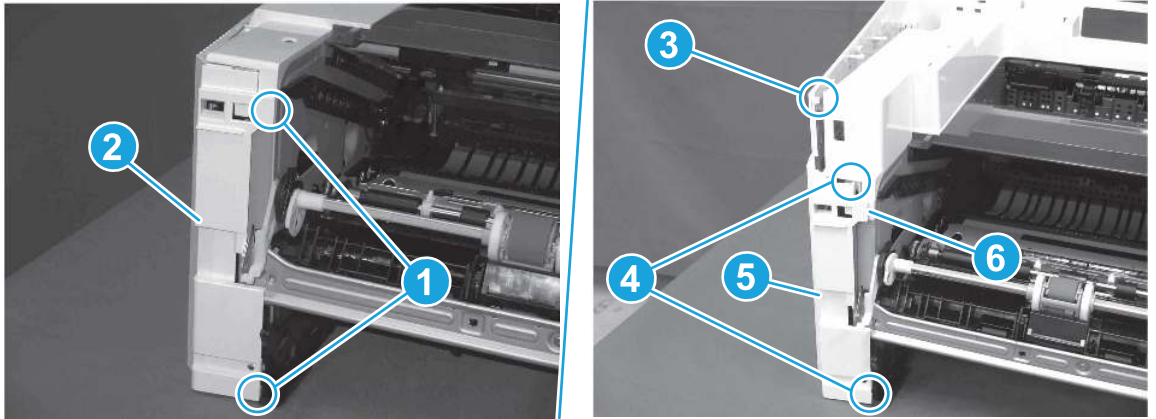
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**⚠ 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 5-705 Remove the cover



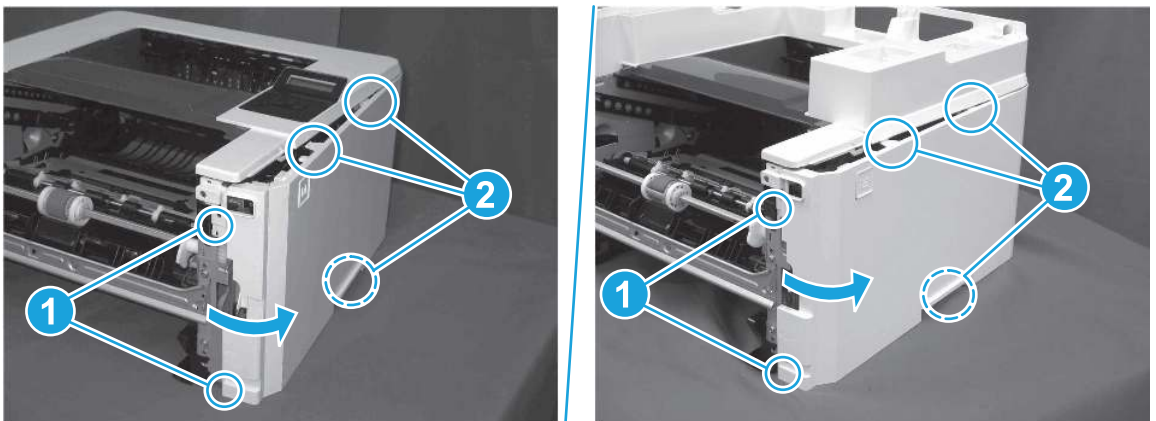
#### 4. Remove the right cover

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).

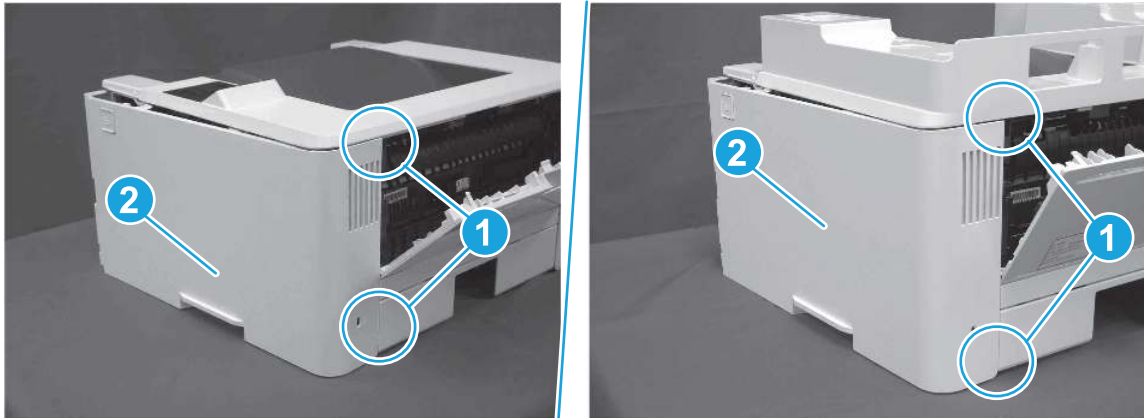
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-706 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-707 Remove the cover



## 5. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

---

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

---

If the control panel is not fully tilted forward, tilt it forward now until it stops.

---

Figure 5-708 Open the ISA



2. Remove one screw (callout 1).

**Figure 5-709** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-710** Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-711** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-712** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-713** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-714** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-715** Remove two screws and remove the control panel assembly

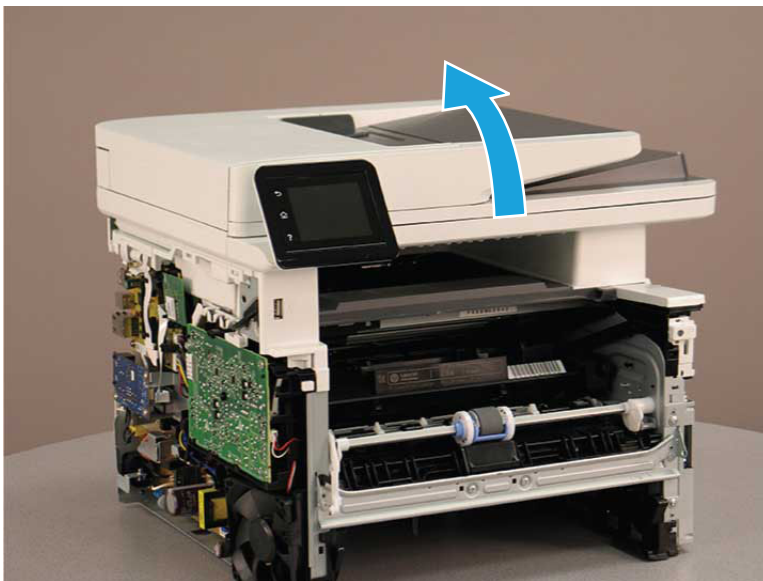


## 6. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

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.

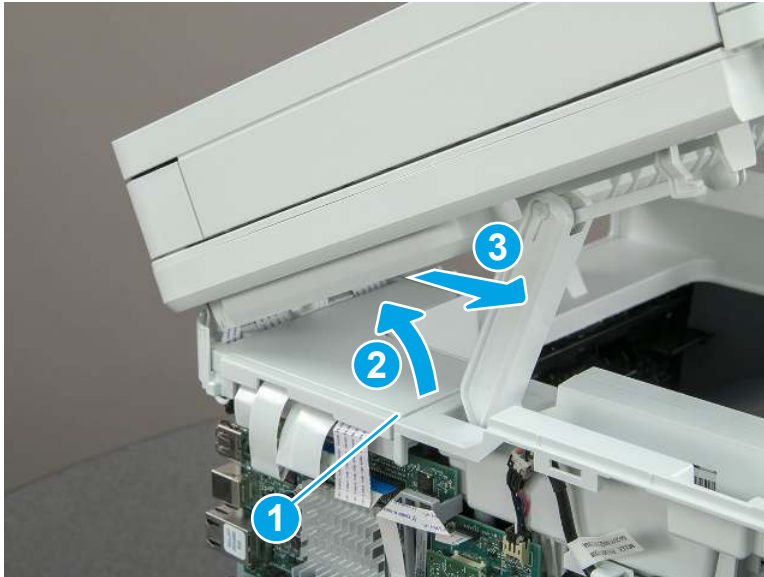
**Figure 5-716** Raise the ISA





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 5-717** Remove the ISA FFC cover

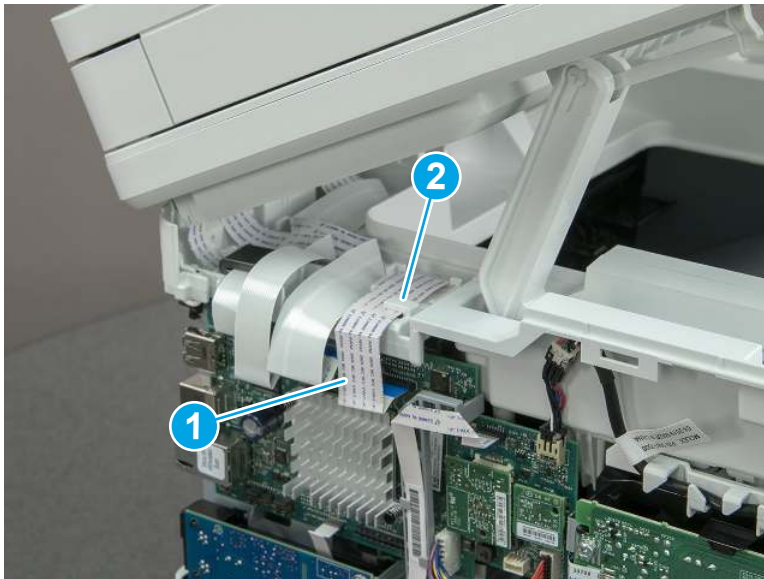


## 7. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

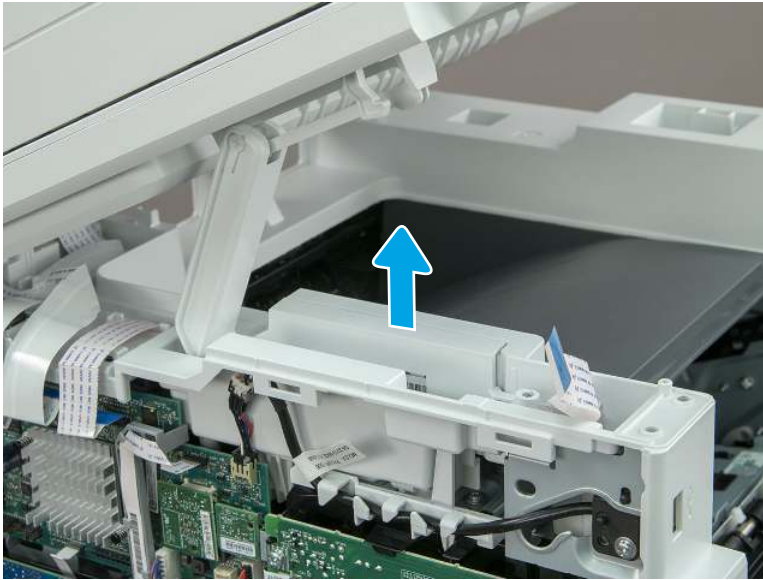
1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

**Figure 5-718** Disconnect one cable



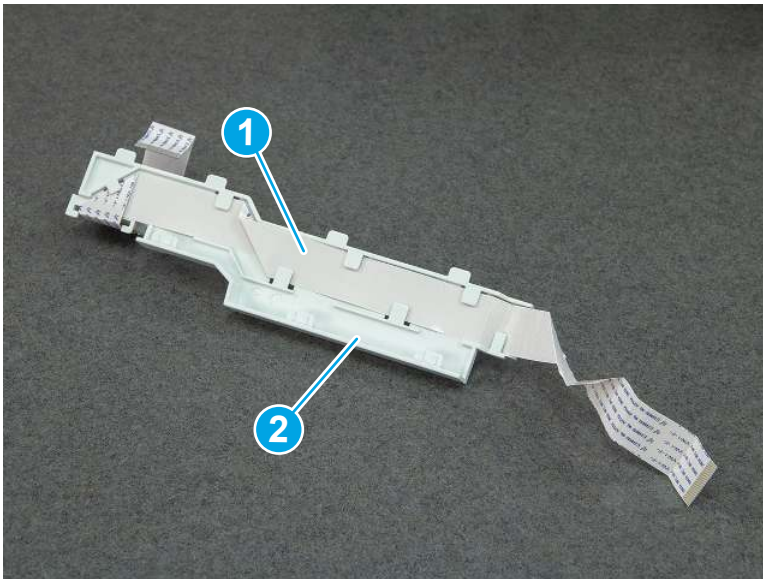
- Lift up the control-panel FFC cover to remove the cover and cable.

**Figure 5-719** Remove the cover and cable



- If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).

**Figure 5-720** Remove the FFC



## 8. 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).

---

- 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 5-721 Disconnect three FFCs



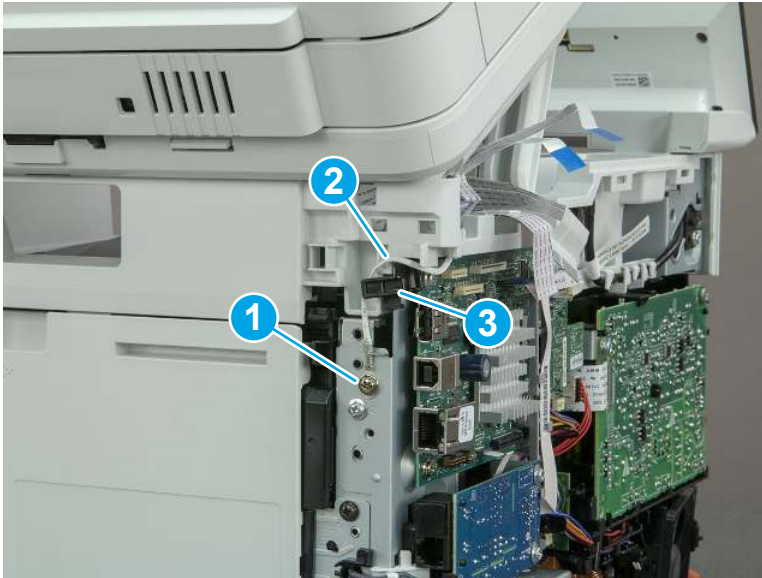
2. Release the tape (callout 1) that holds the flat cables to the top cover.

Figure 5-722 Release the tape



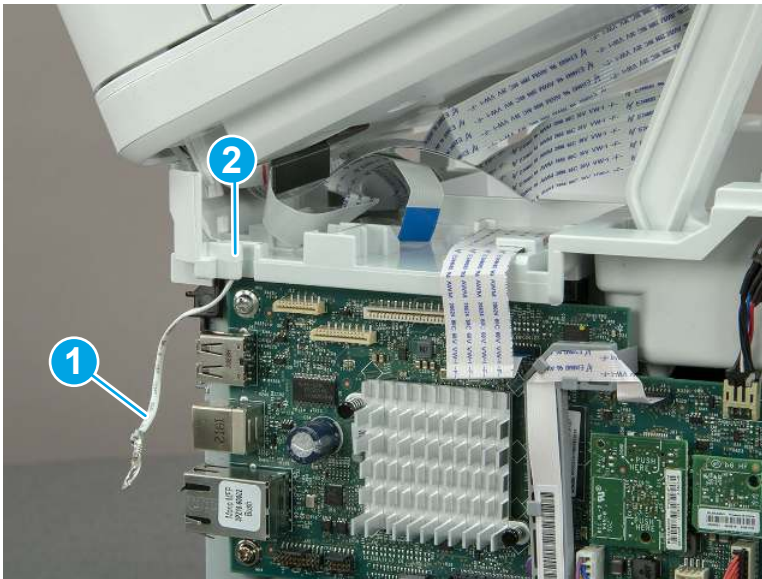
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-723** Release the ground wire



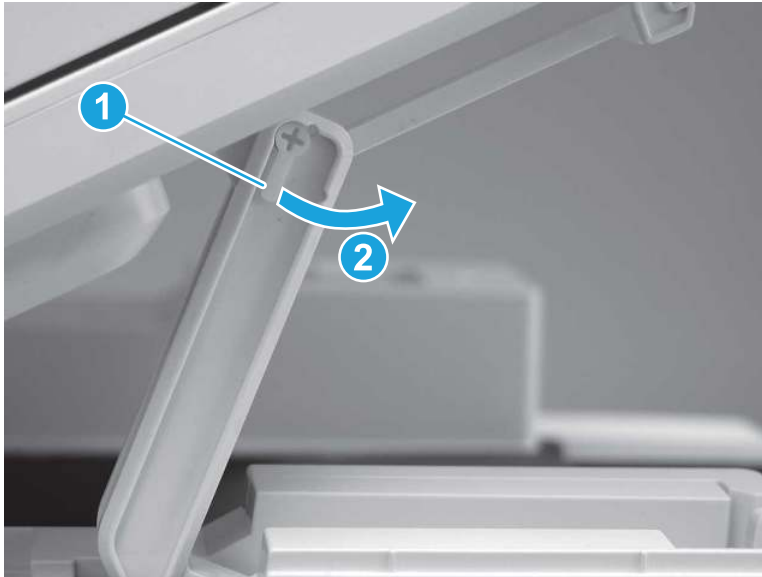
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-724** 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 5-725** Release one tab and rotate the slider pin



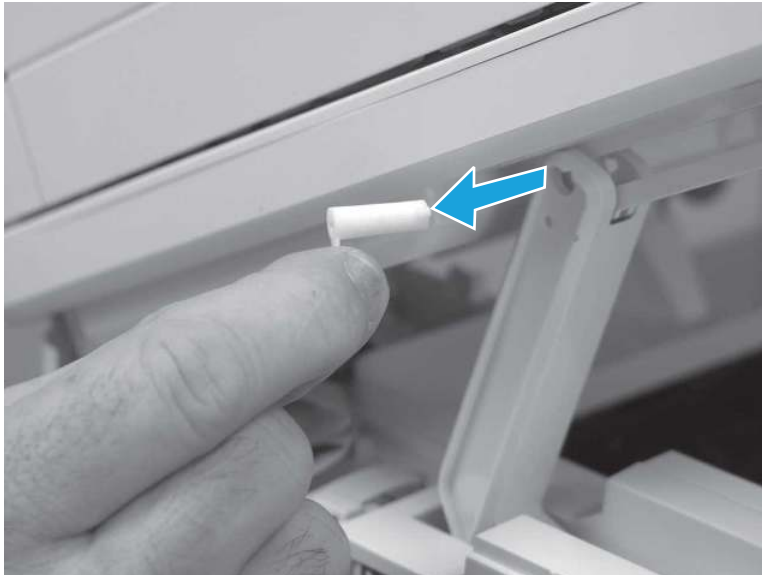
6. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

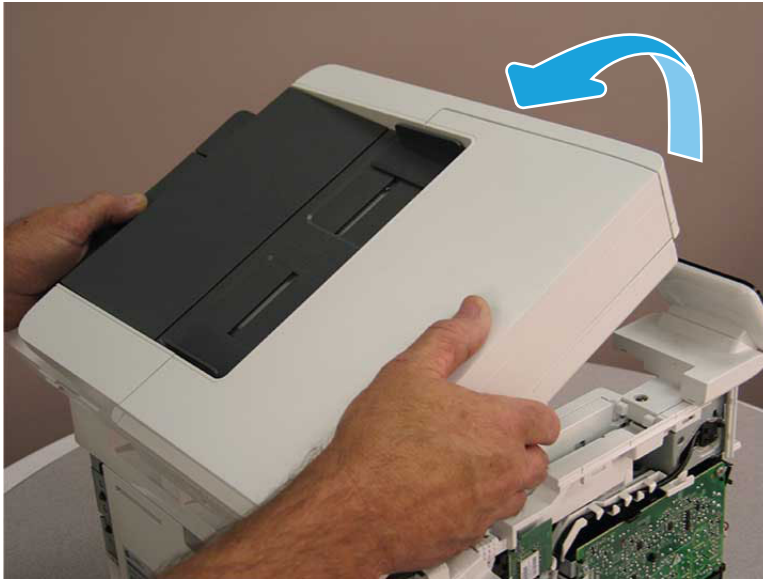
---

**Figure 5-726** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-727** Rotate the ISA towards the rear of the printer



8. Slide the ISA as shown to release it.

**Figure 5-728** Release the ISA



9. Remove the ISA.

Figure 5-729 Remove the ISA

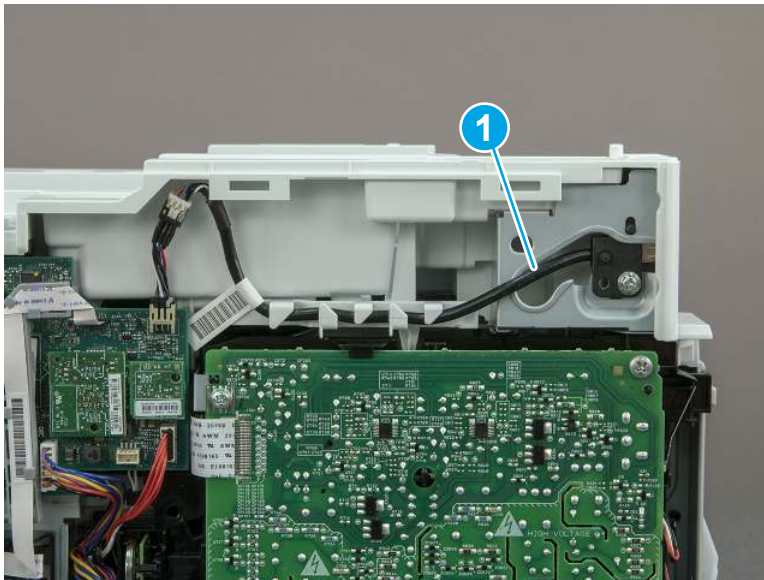


## 9. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

Figure 5-730 Release the USB cable



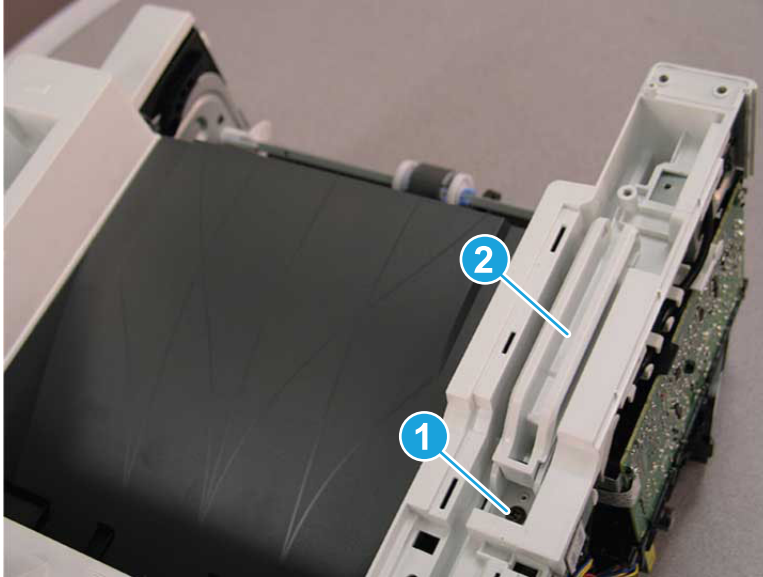
2. Remove one screw (callout 1), and then remove the support arm (callout 2).

---

**⚠ 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.

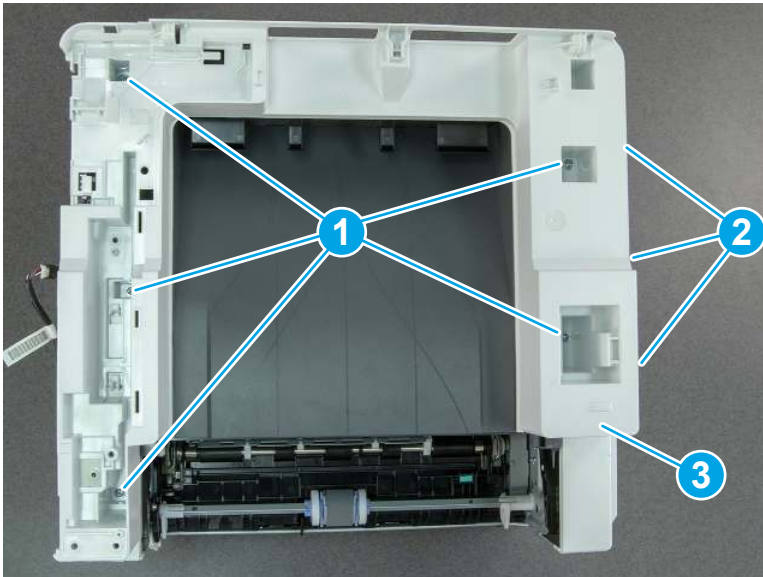
---

**Figure 5-731** Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

**Figure 5-732** Remove the top cover



## 10. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).



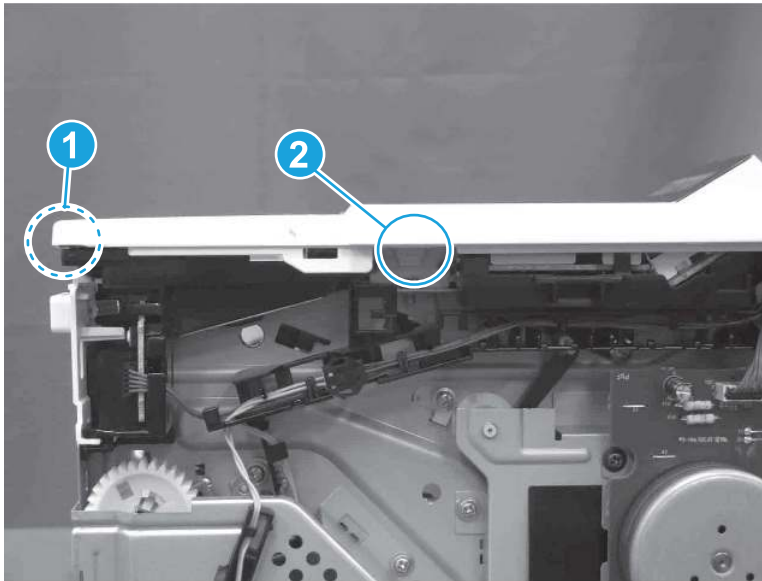
1. Remove one screw.

Figure 5-733 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 5-734 Release one boss and one tab



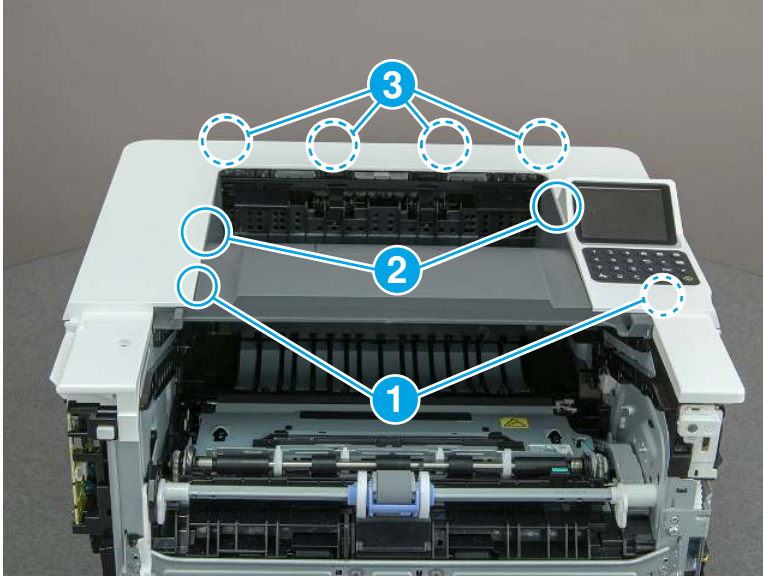
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

Figure 5-735 Remove the cover

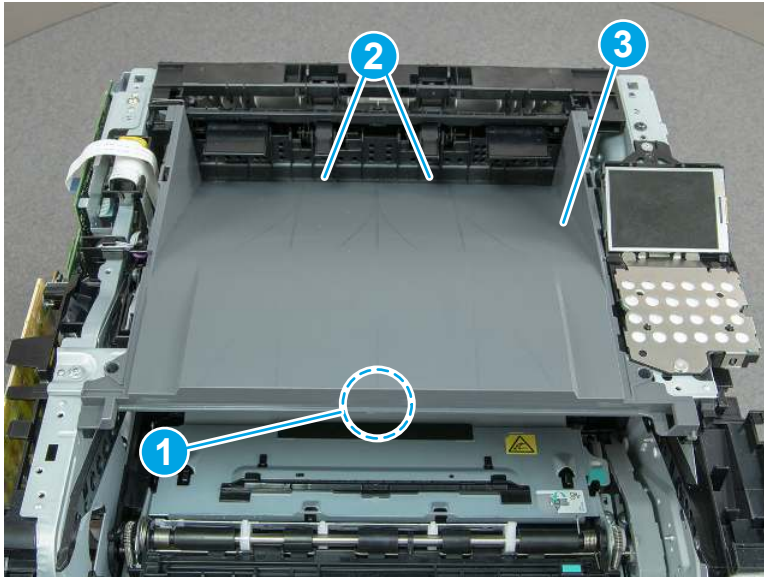


### 11. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

- ▲ Release one tab (callout 1), release two bosses (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-736 Remove the cover

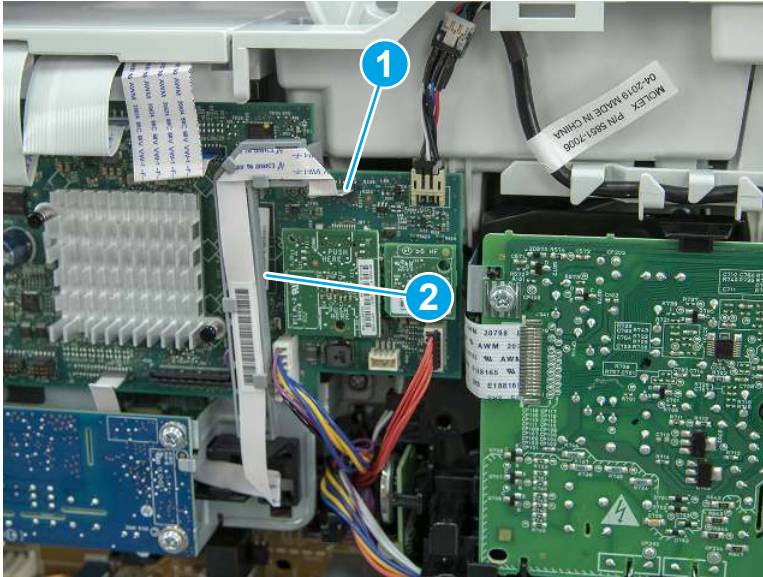


## 12. Remove the fax cable guide and fax PCA (fax models only)

Follow these steps to remove the fax cable guide and fax PCA (fax models only).

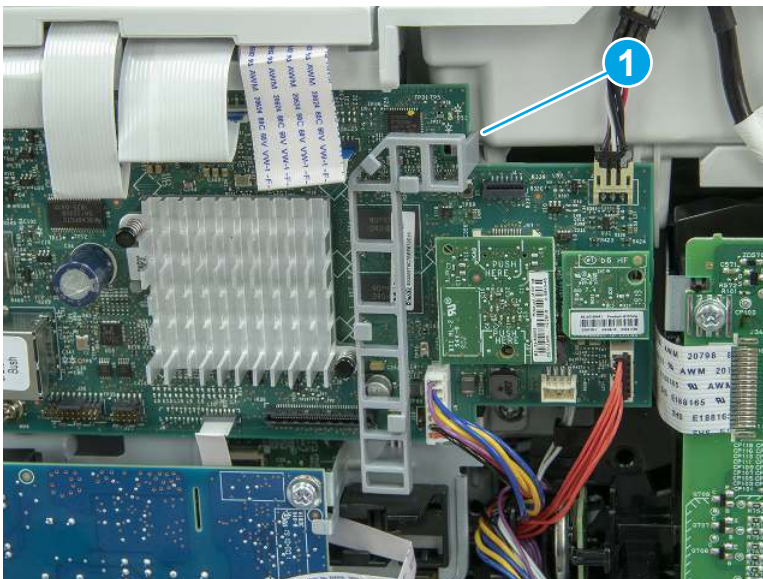
1. Disconnect one connector (callout 1), and then remove the cable from the guide (callout 2).

**Figure 5-737** Remove the cable from the guide



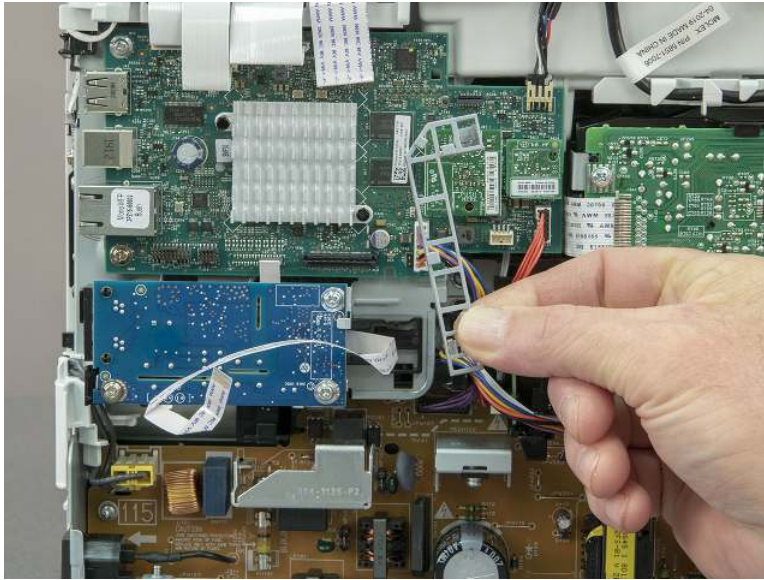
2. Release one tab (callout 1).

**Figure 5-738** Release one tab



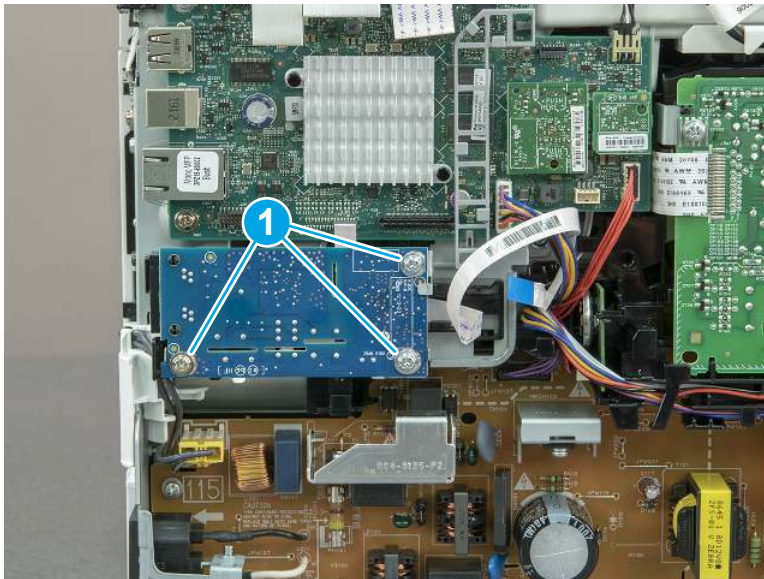
3. Lower the guide to release it from the formatter.

**Figure 5-739** Lower the guide



4. Remove three screws (callout 1), and then remove the fax PCA and cable.

**Figure 5-740** Remove three screws

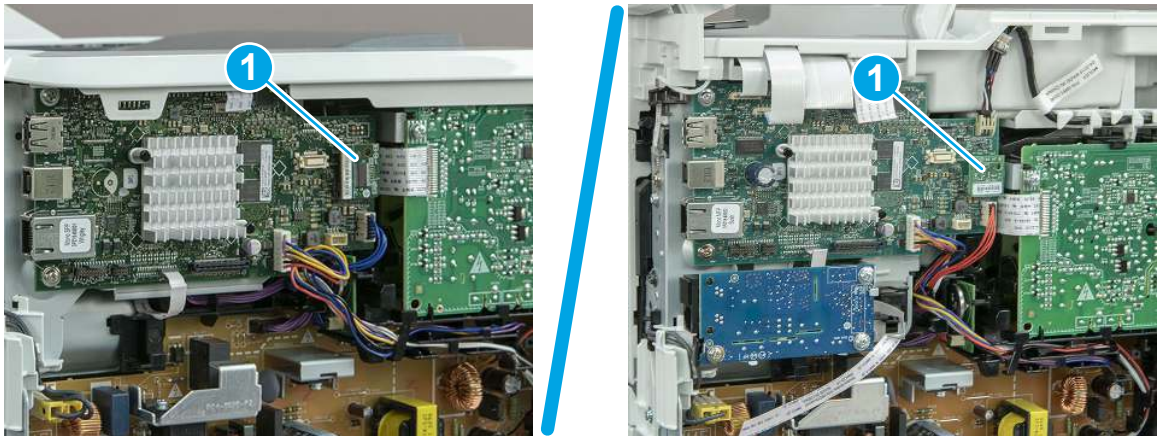


### 13. Remove the Trusted Platform Module (TPM)

Follow these steps to remove the Trusted Platform Module (TPM).

- ▲ Carefully pull the TPM (callout 1) away from the formatter to remove it.

Figure 5-741 Remove the TPM



## 14. Remove the formatter PCA

Follow these steps to remove the formatter PCA.

1. Do one of the following:
  - SFP: Disconnect four connectors (callout 1).
  - MFP: Disconnect eight connectors (callout 1).


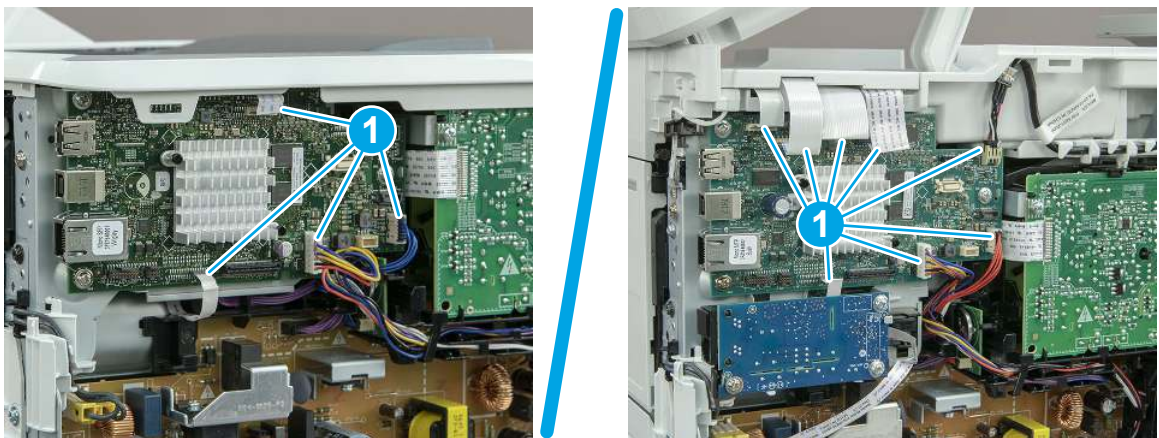
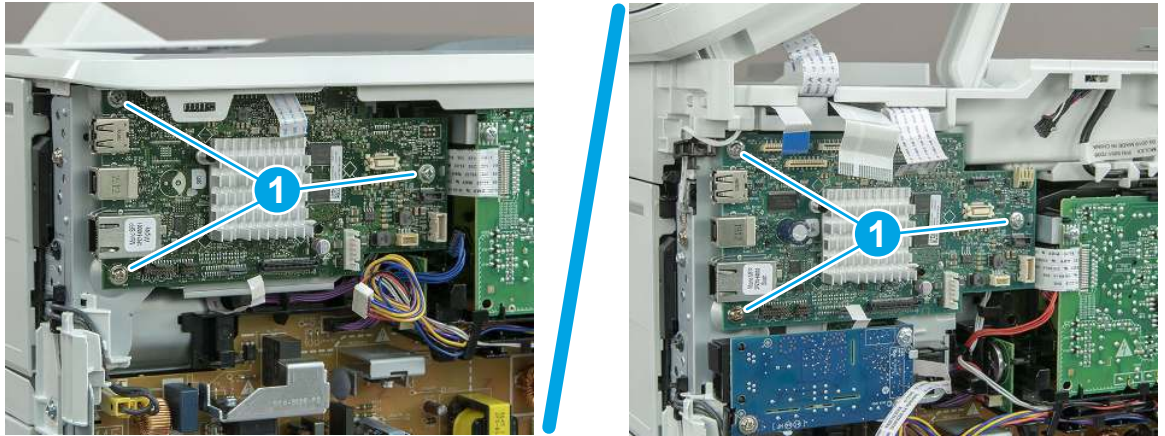
 **IMPORTANT:** Take note of any empty connectors before removing the formatter PCA.

Figure 5-742 SFP/MFP: Disconnect the connectors



2. Remove three screws (callout 1), and then remove the formatter PCA.

Figure 5-743 Remove three screws



## 15. Remove the formatter bracket

Follow these steps to remove the formatter bracket.

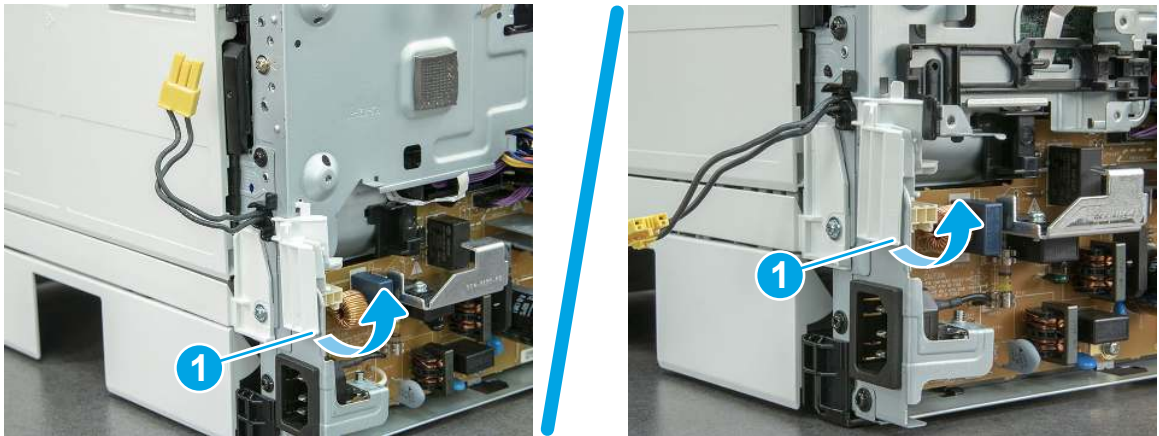
1. Disconnect one connector (callout 1), and then remove the wire harness (callout 2) from the guide (callout 3).

Figure 5-744 SFP/MFP: Remove the wire harness



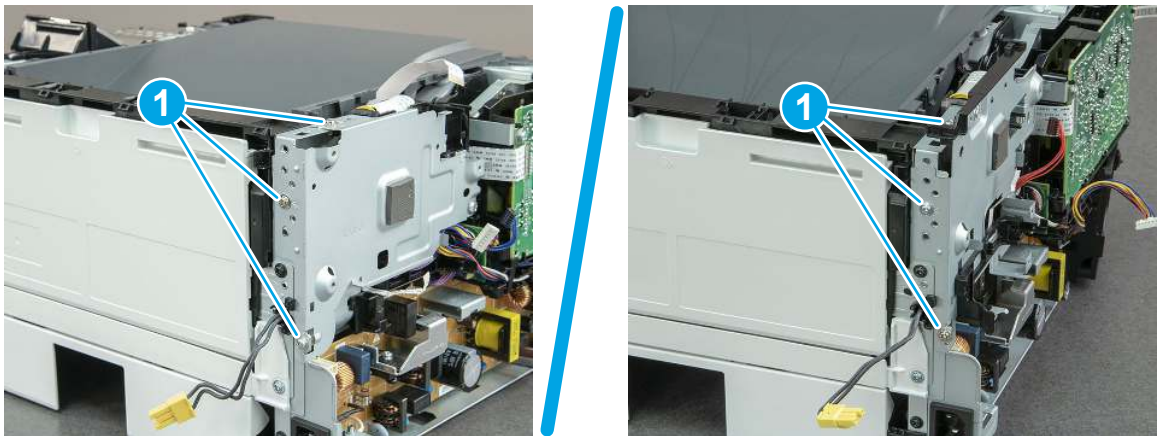
2. Release the front edge (callout 1), and then rotate the wire guide up to remove it.

**Figure 5-745** Remove the wire guide



3. Remove three screws (callout 1).

**Figure 5-746** Remove three screws



4. Remove two screws (callout 1), and then remove the formatter bracket (callout 2).

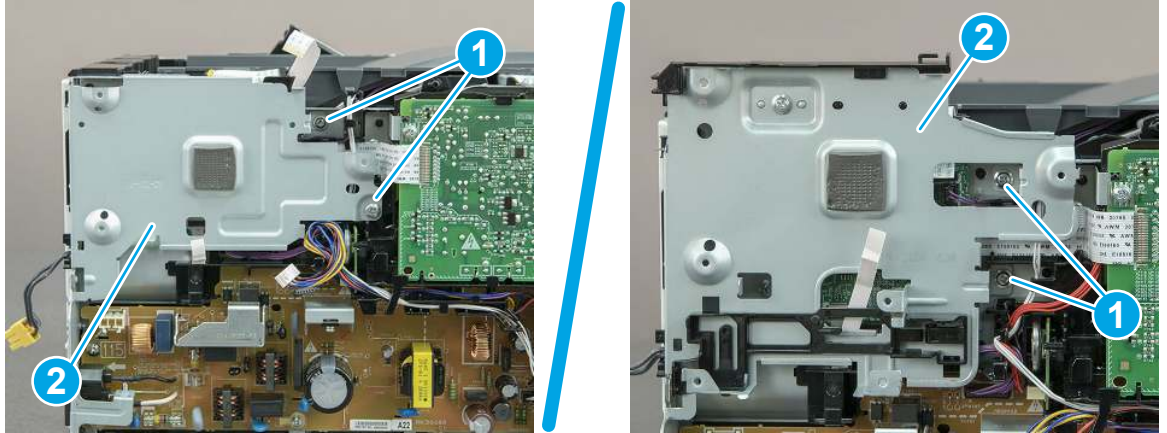
---

 **Reinstallation tip:** Do one of the following:

- **SFP:** One screw is larger than the other screw. Make sure screws are installed in the correct locations.
  - **MFP:** These two screws are longer than the previous three screws.
-



Figure 5-747 Remove two screws

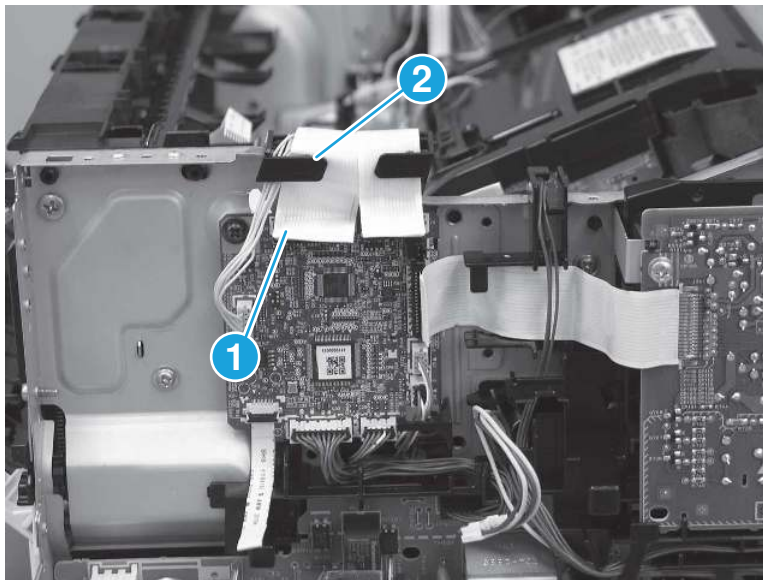


## 16. Remove the connecting PCA

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 5-748 Disconnect one FFC



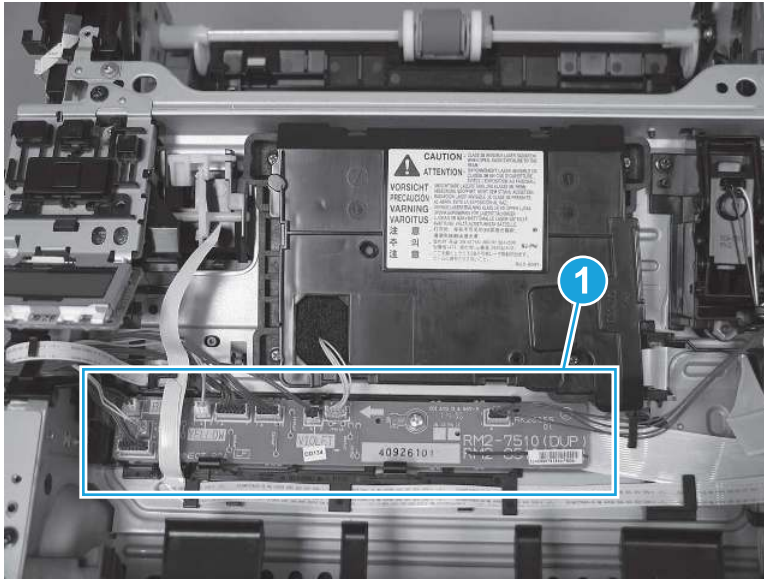
2. Disconnect nine connectors (callout 1).

---

 **TIP:** Some of these connectors might be easier to disconnect if the wire harnesses are removed from the guides.

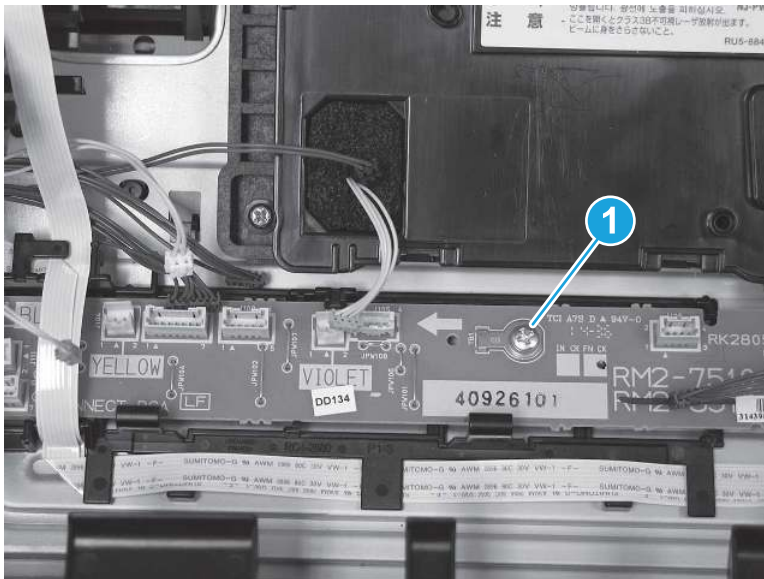
---

Figure 5-749 Disconnect nine connectors



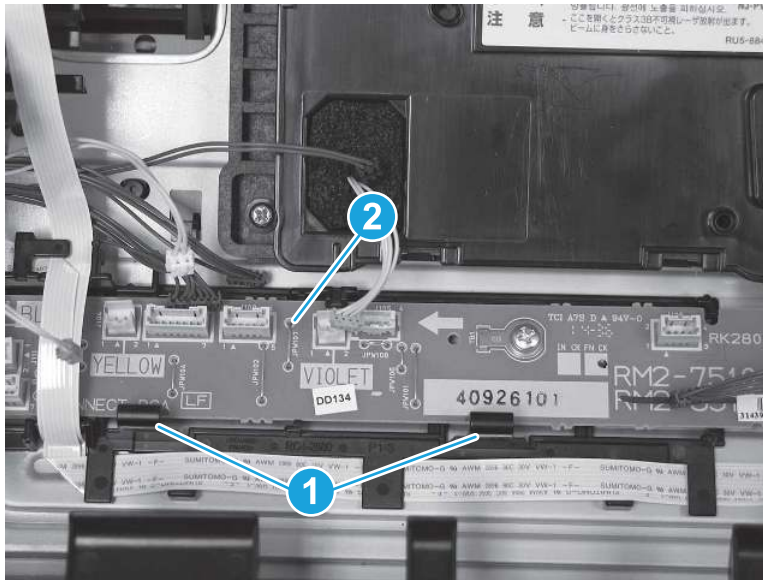
3. Remove one screw (callout 1).

Figure 5-750 Remove one screw



4. Release two holders (callout 1), and then remove the connecting PCA (callout 2).

Figure 5-751 Remove the connecting PCA



## 17. 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 5-46** Part information

Part number	Part description
Not orderable	Laser scanner FFC

## 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 5-752 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).

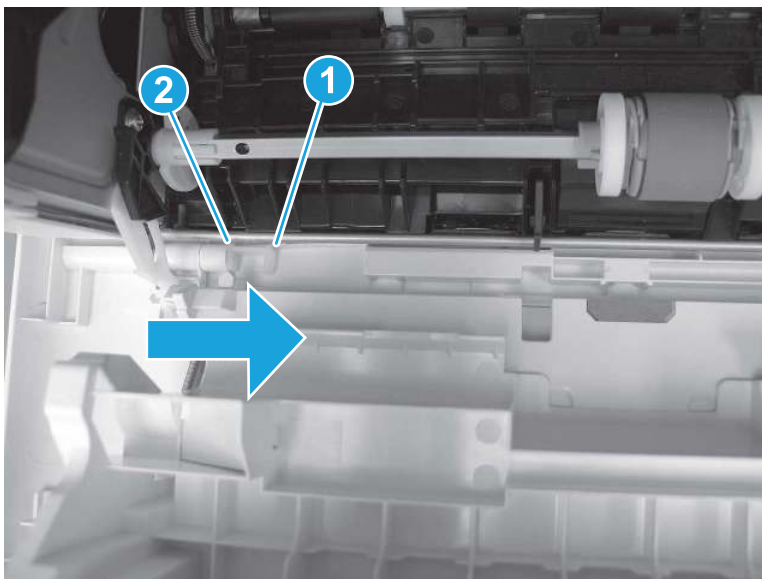
---

 **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.

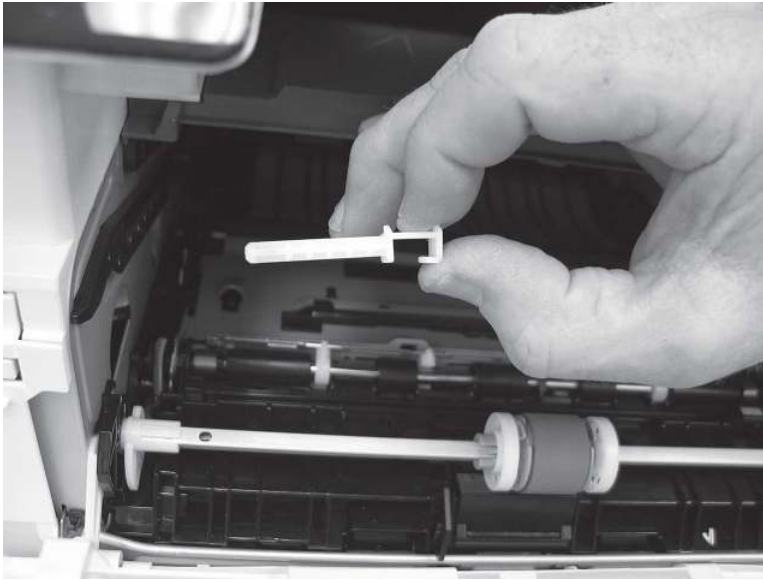
---

Figure 5-753 Release the support shaft



2. Remove the support shaft.

**Figure 5-754** Remove the support shaft



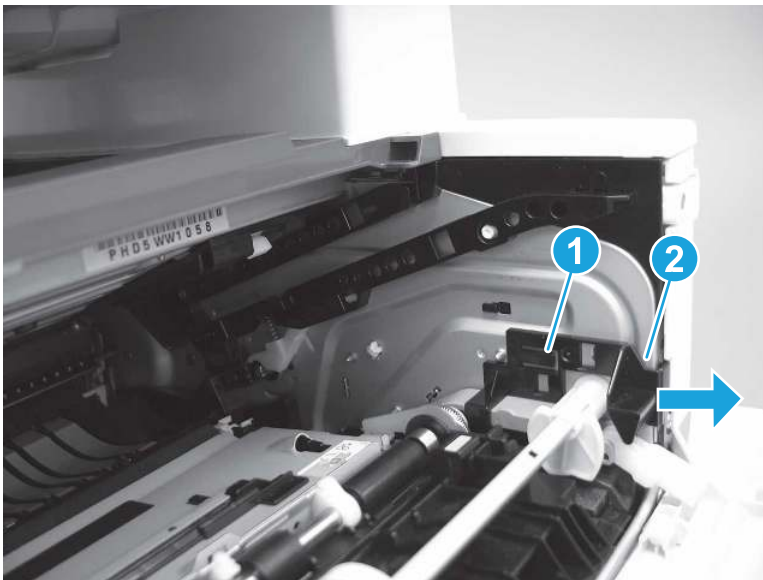
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

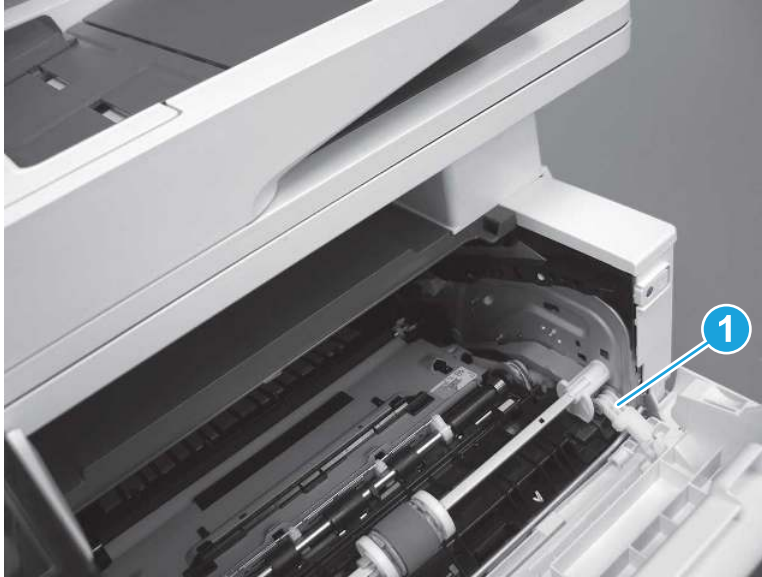
---

**Figure 5-755** 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 5-756** Release the pressure-release link

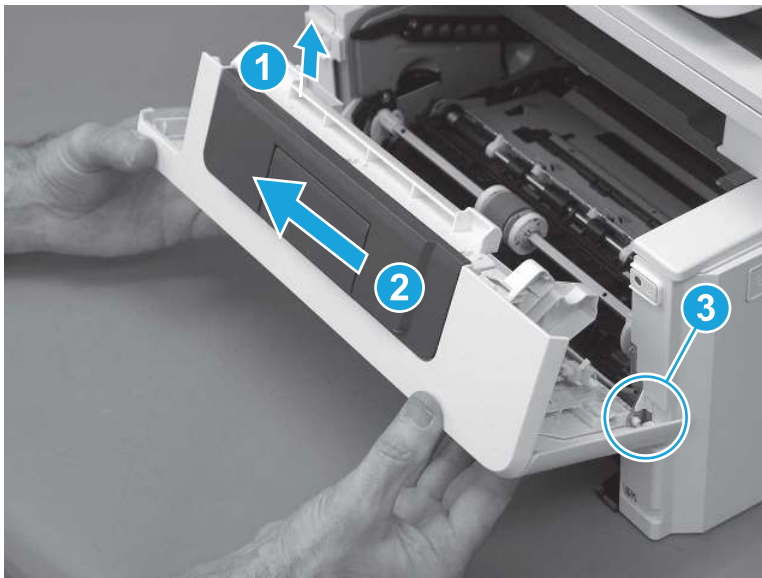


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

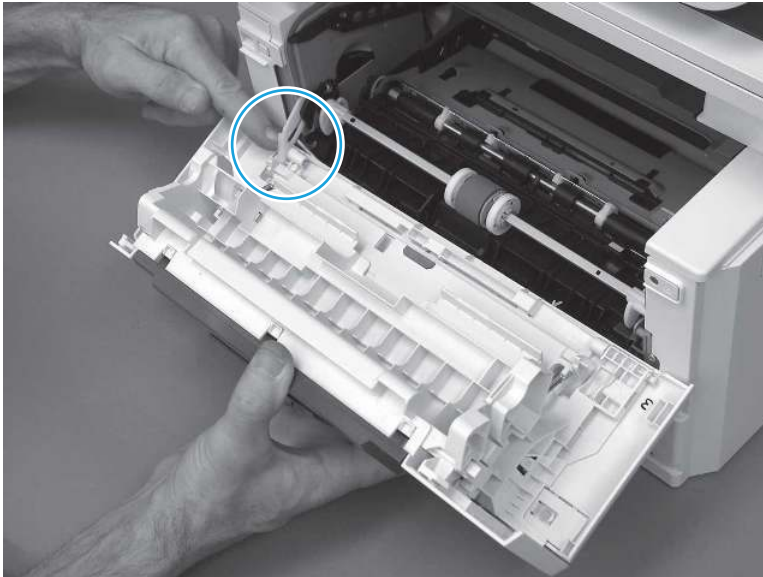
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-757** Release the door



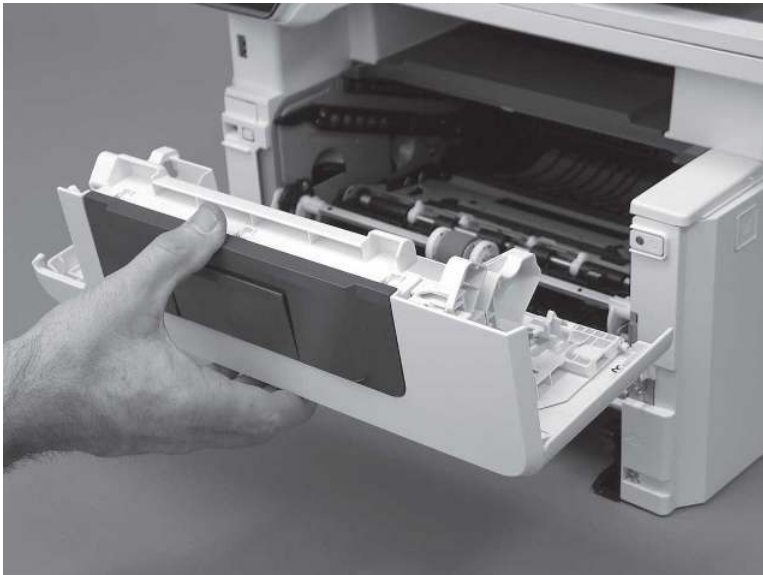
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-758** Release the left-side retainer arm



7. Remove the door.

**Figure 5-759** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

---

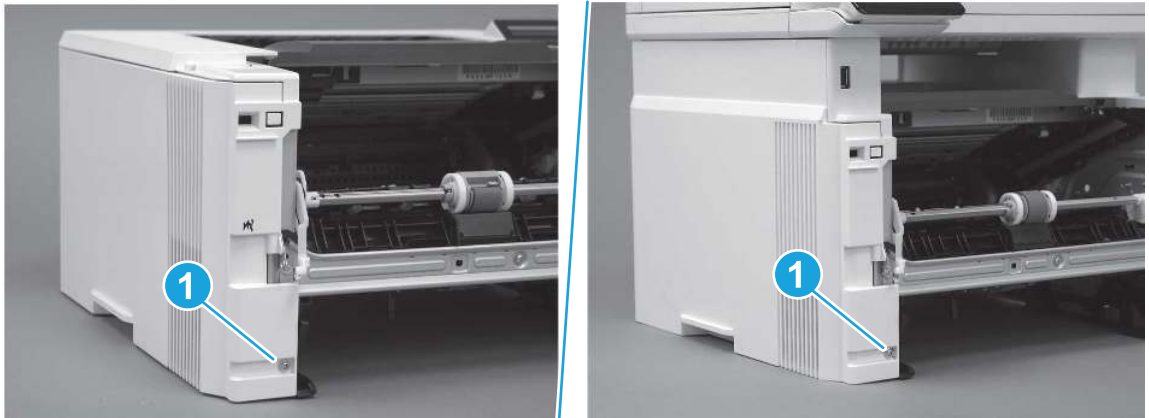
 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---



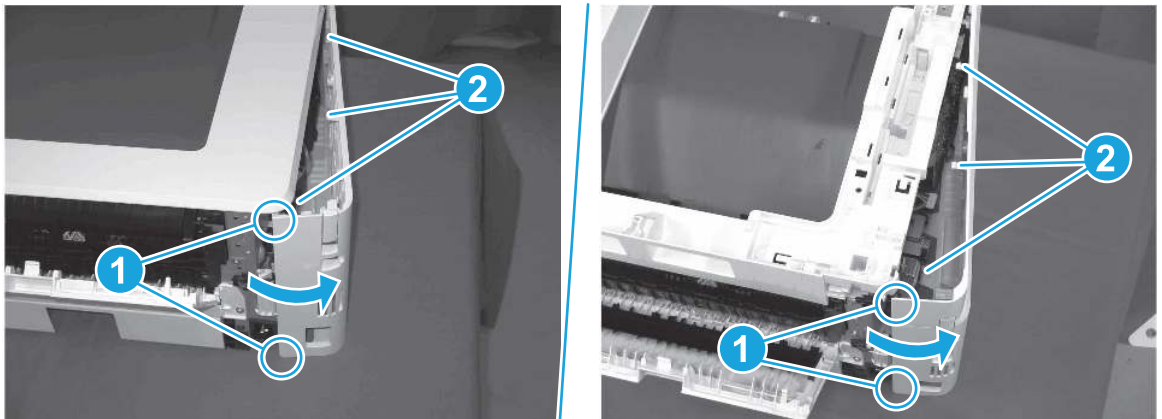
1. Remove one screw (callout 1).

**Figure 5-760** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-761** Release two bosses and three tabs



3. At the front of the printer, do one of the following:

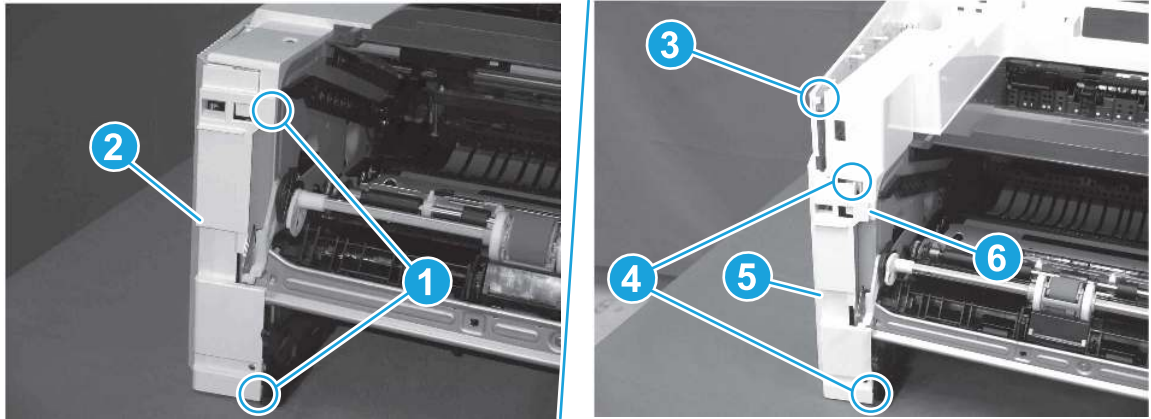
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**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 5-762 Remove the cover



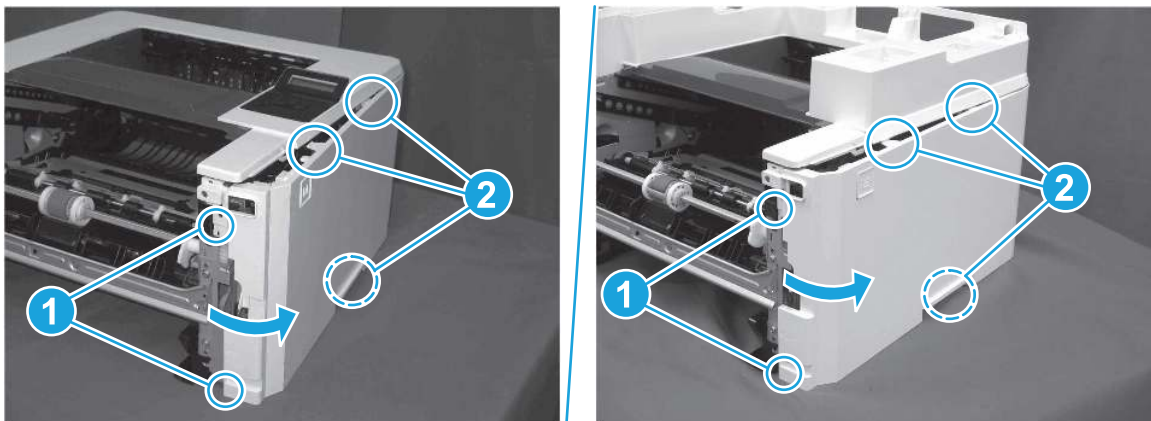
#### 4. Remove the right cover

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).

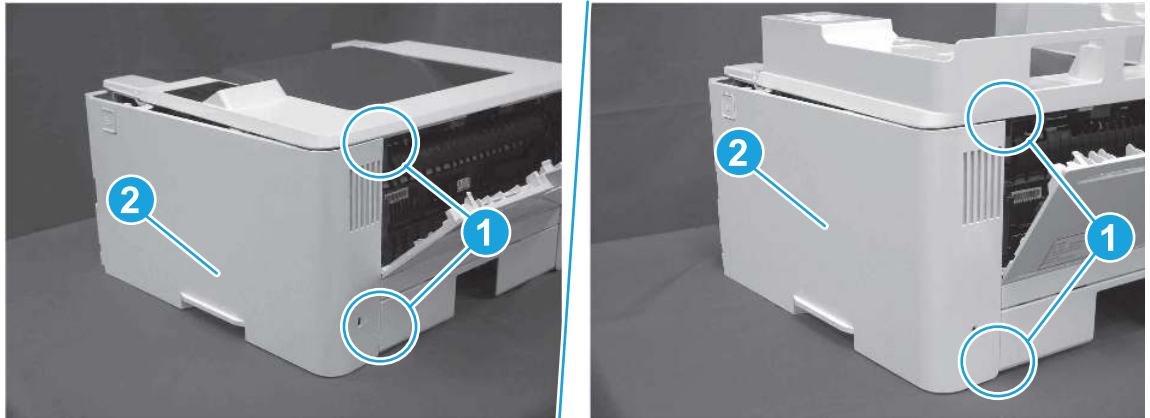
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-763 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-764** Remove the cover



## 5. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

---

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

---

If the control panel is not fully tilted forward, tilt it forward now until it stops.

---

**Figure 5-765** Open the ISA



2. Remove one screw (callout 1).

**Figure 5-766** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-767** Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-768** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-769** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-770** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-771** Remove the ICB



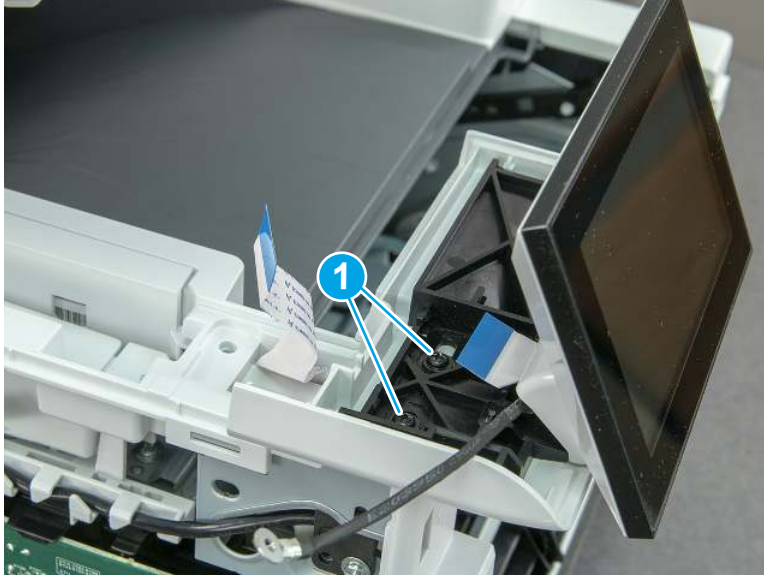
8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**⚠ CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-772** Remove two screws and remove the control panel assembly

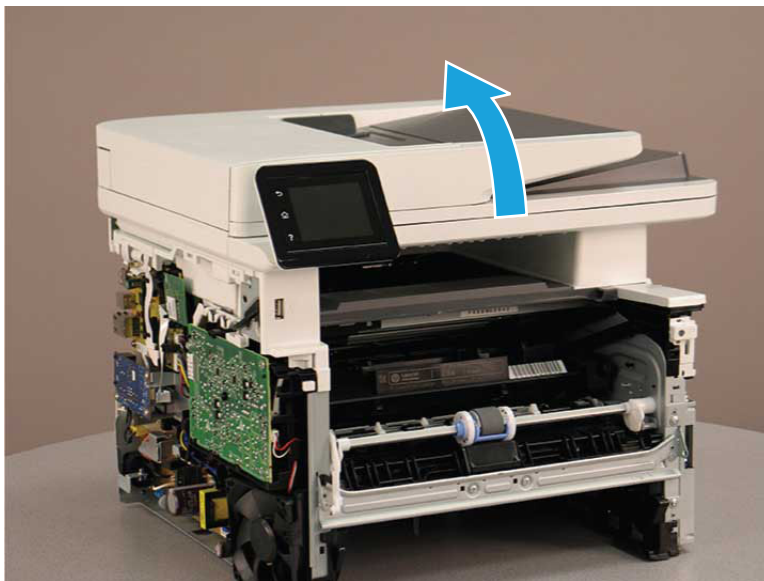


#### **6. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)**

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

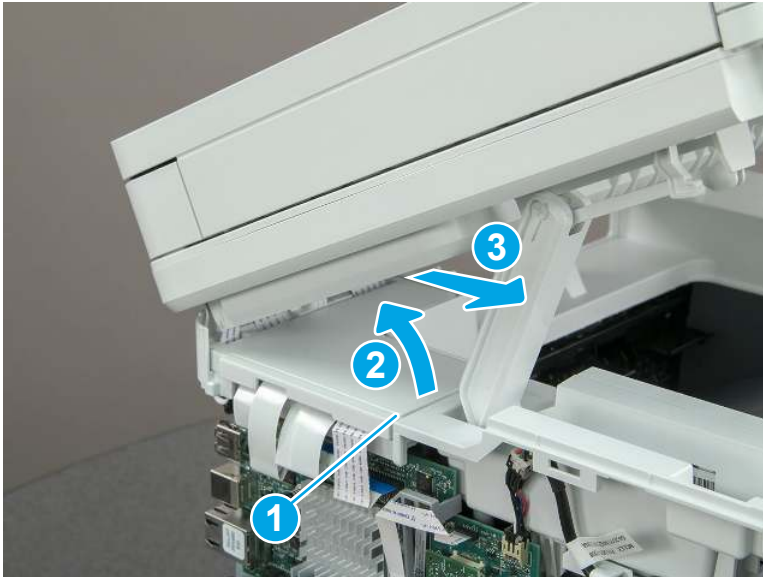
1. If the ISA is not already raised, raise it now.

**Figure 5-773** 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 5-774** Remove the ISA FFC cover

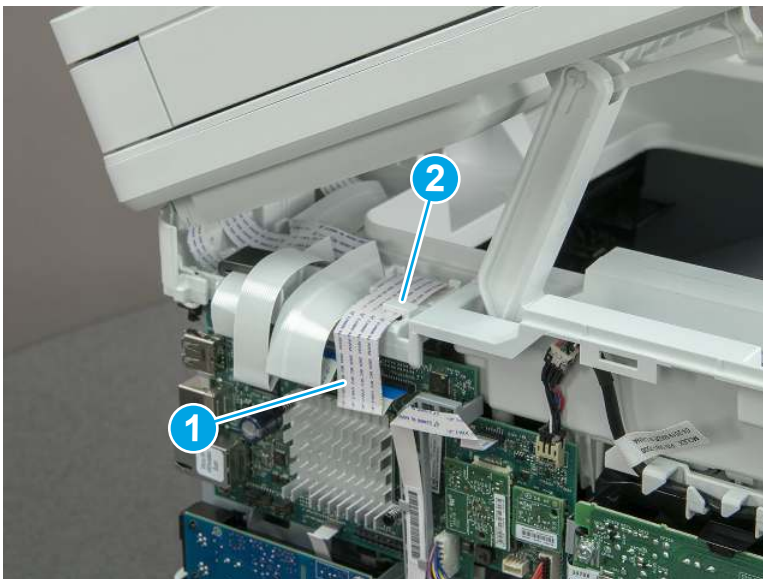


## 7. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

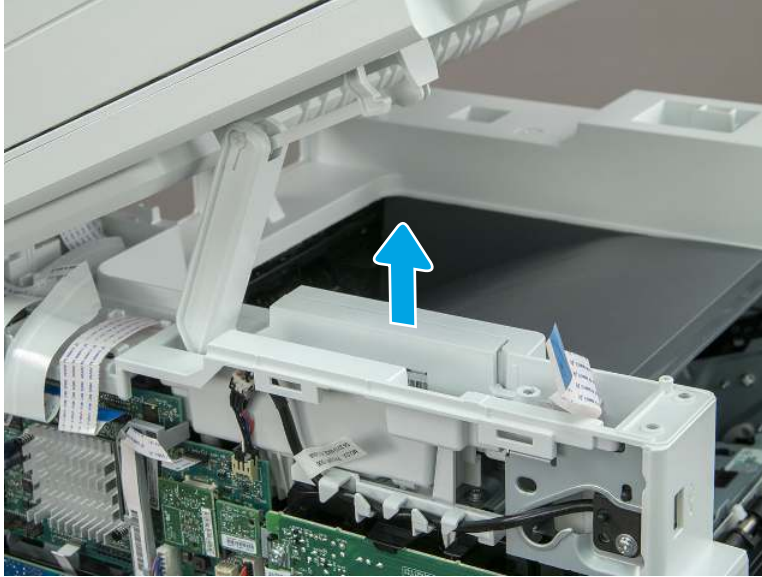
**Figure 5-775** Disconnect one cable





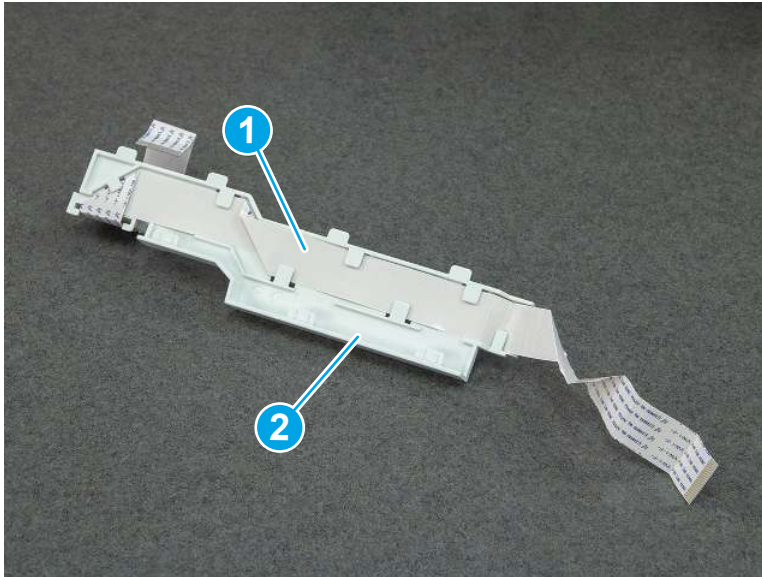
2. Lift up the control-panel FFC cover to remove the cover and cable.

**Figure 5-776** Remove the cover and cable



3. If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).

**Figure 5-777** Remove the FFC



## 8. 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 5-778** Disconnect three FFCs



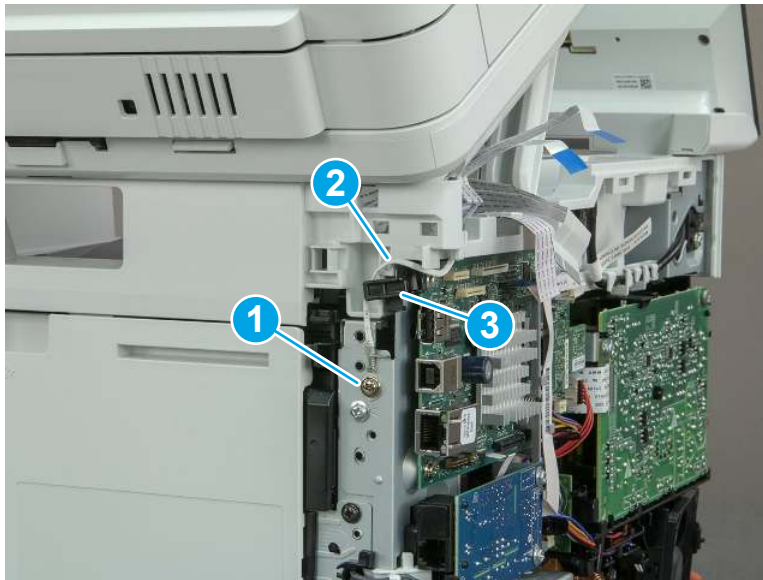
2. Release the tape (callout 1) that holds the flat cables to the top cover.

**Figure 5-779** Release the tape



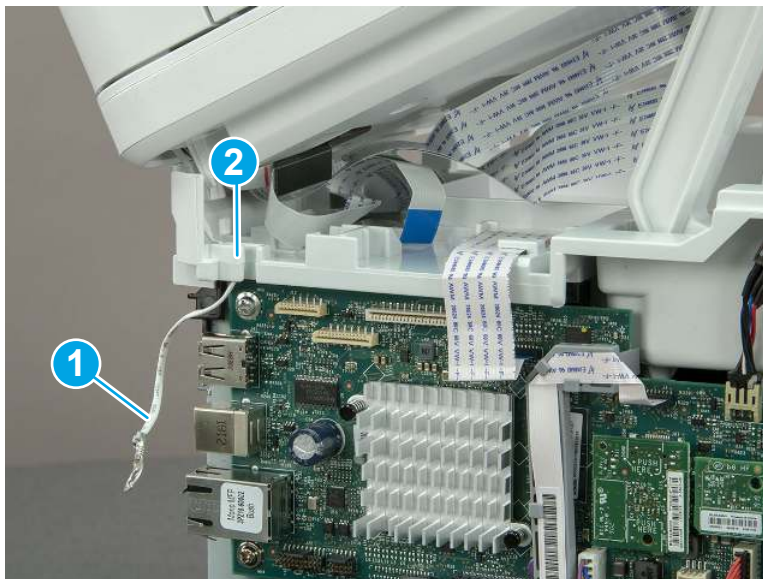
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-780** Release the ground wire



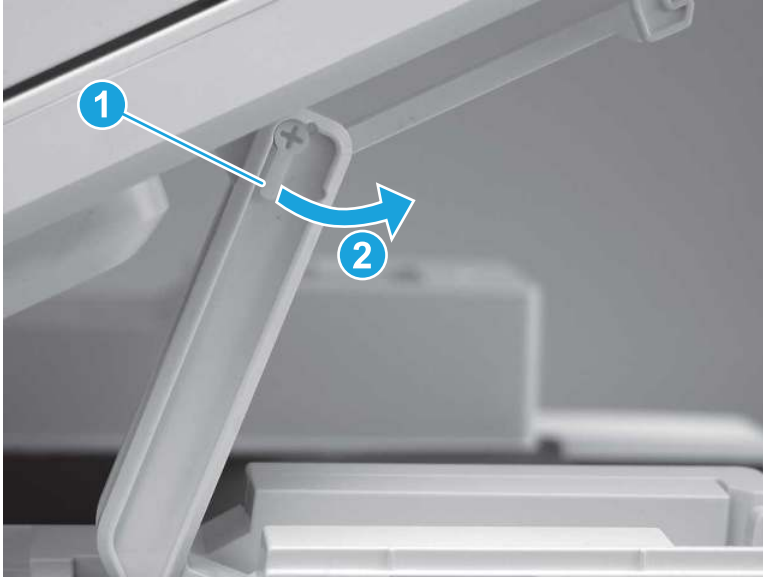
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-781** 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 5-782** 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.

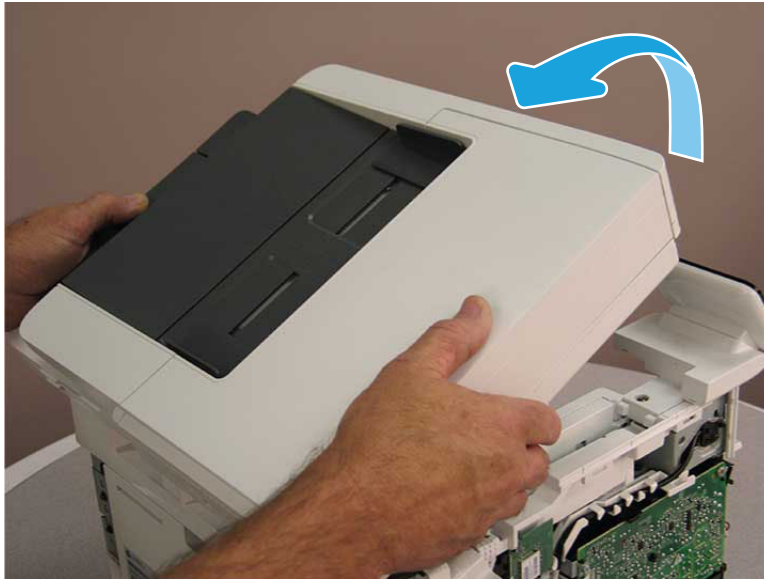
---

**Figure 5-783** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-784** Rotate the ISA towards the rear of the printer



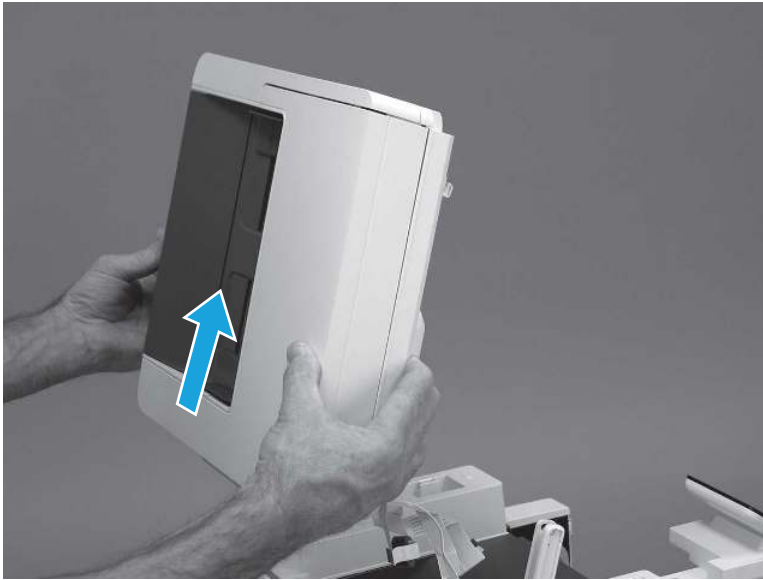
8. Slide the ISA as shown to release it.

**Figure 5-785** Release the ISA



9. Remove the ISA.

**Figure 5-786** Remove the ISA

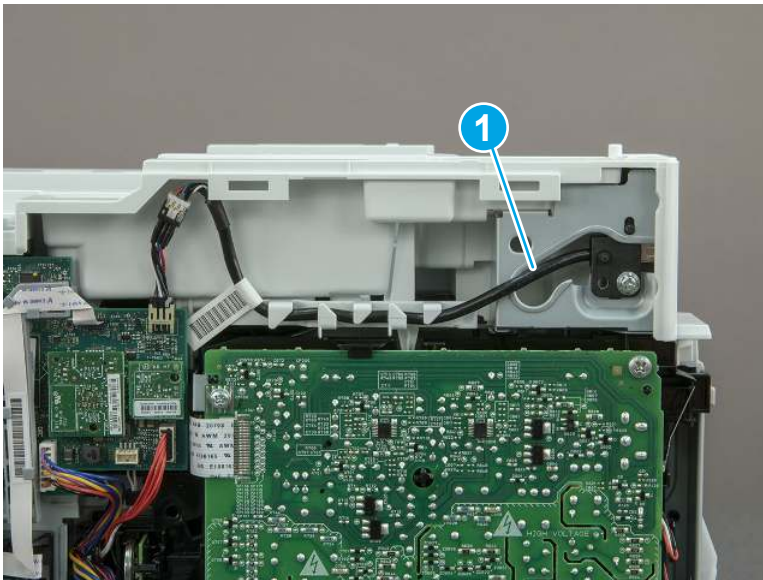


## 9. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

**Figure 5-787** Release the USB cable



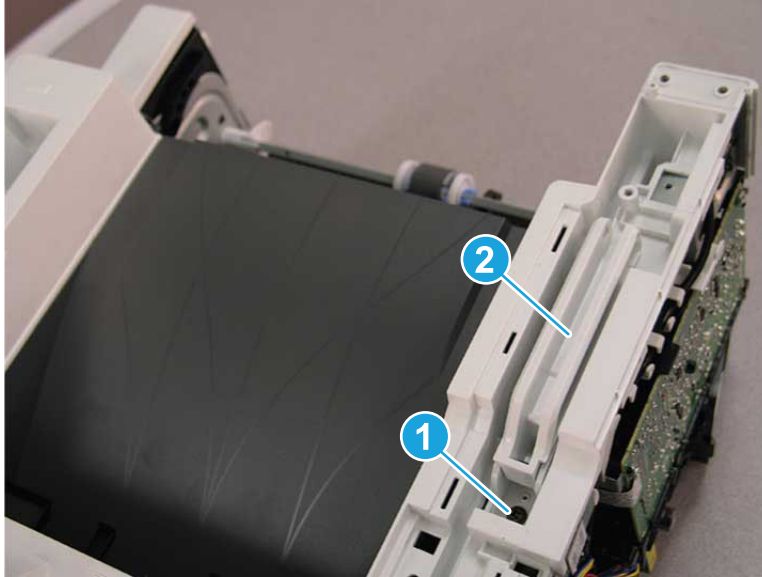
2. Remove one screw (callout 1), and then remove the support arm (callout 2).

---

**⚠ 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.

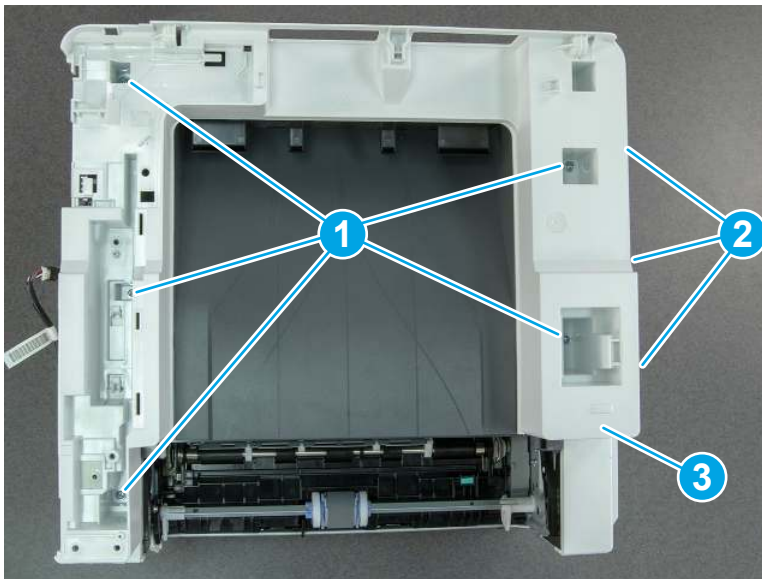
---

Figure 5-788 Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

Figure 5-789 Remove the top cover



## 10. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

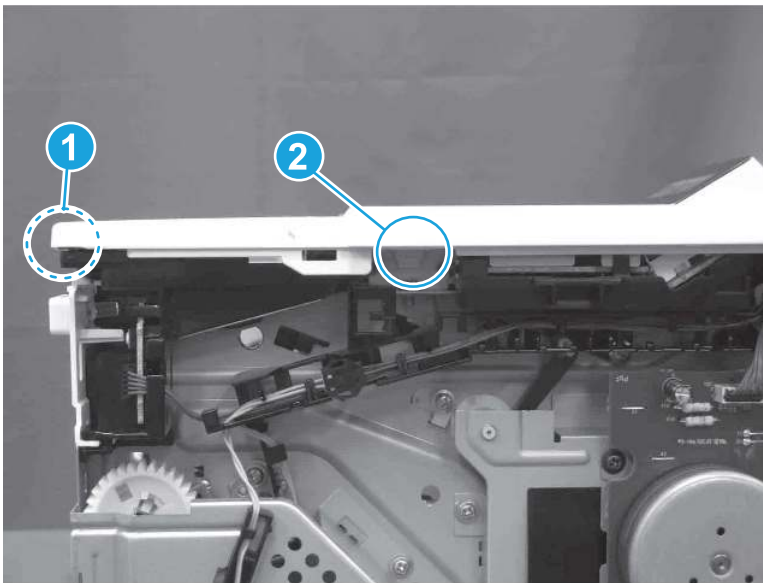
1. Remove one screw.

**Figure 5-790** 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 5-791** Release one boss and one tab



3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

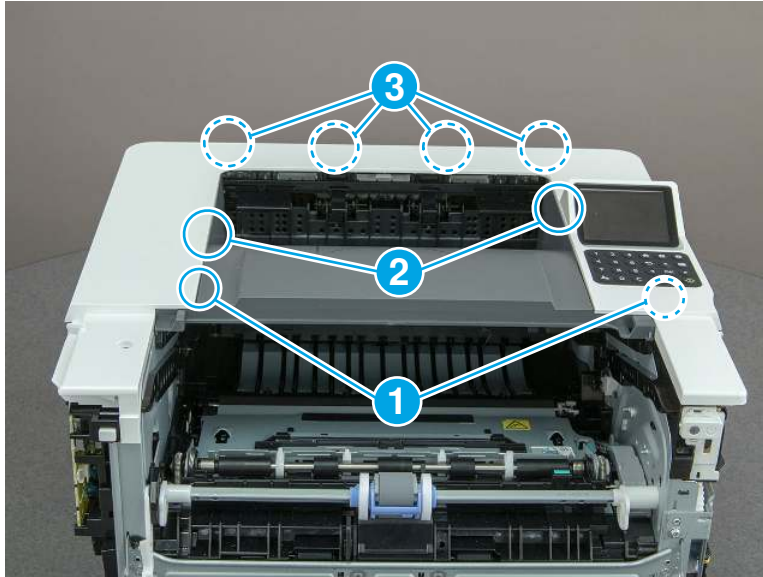
---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---



Figure 5-792 Remove the cover

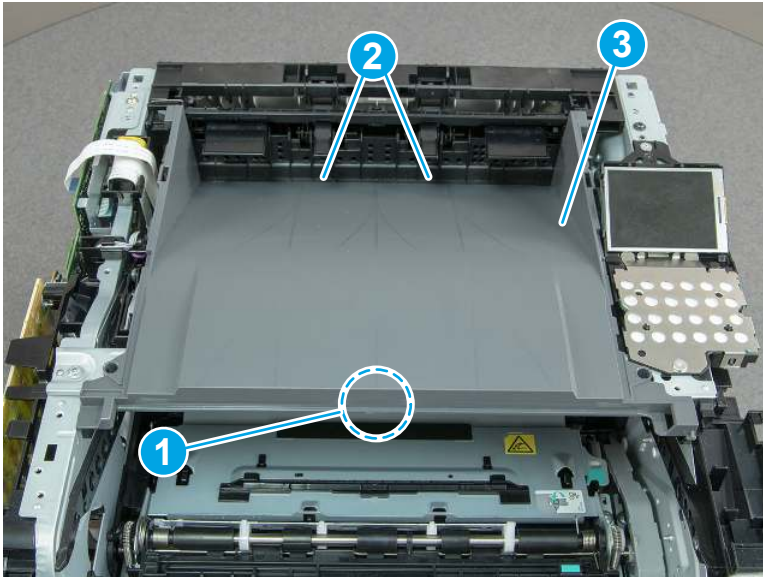


### 11. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

- ▲ Release one tab (callout 1), release two bosses (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-793 Remove the cover

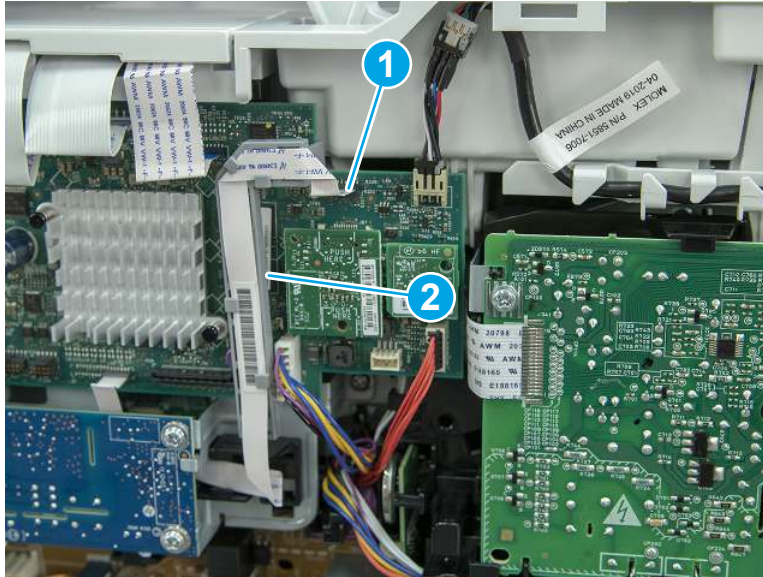


## 12. Remove the fax cable guide and fax PCA (fax models only)

Follow these steps to remove the fax cable guide and fax PCA (fax models only).

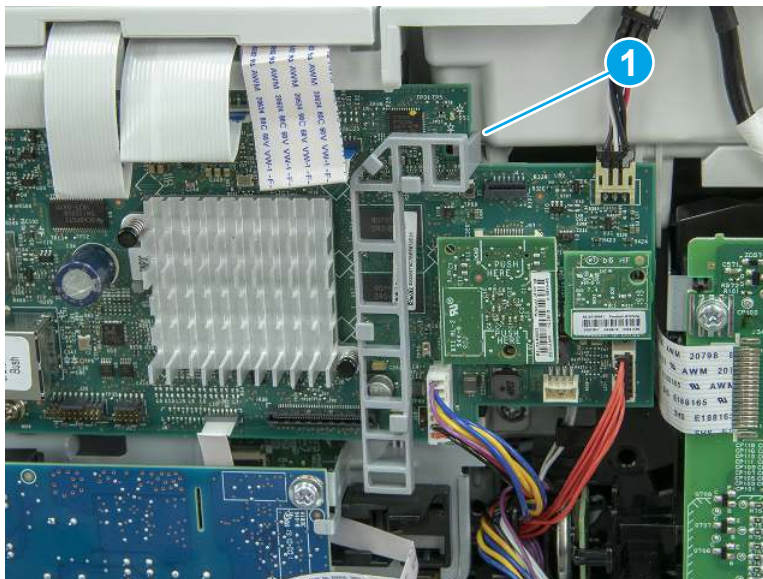
1. Disconnect one connector (callout 1), and then remove the cable from the guide (callout 2).

**Figure 5-794** Remove the cable from the guide



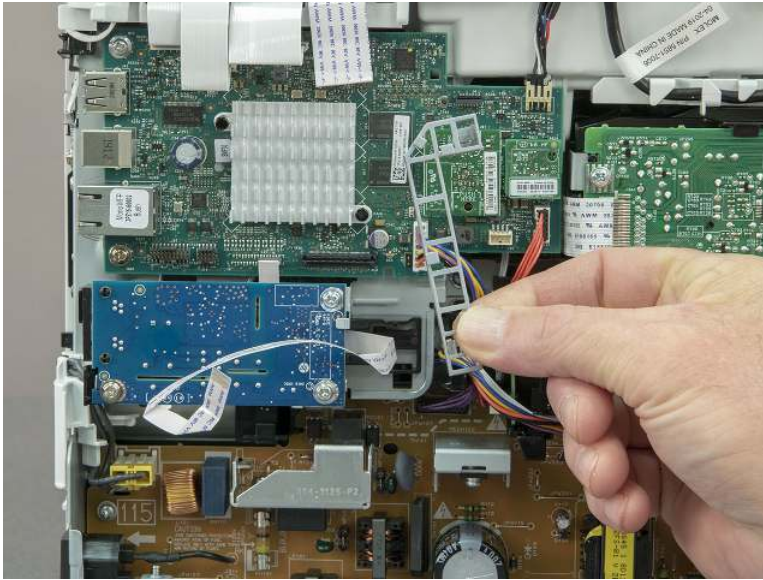
2. Release one tab (callout 1).

**Figure 5-795** Release one tab



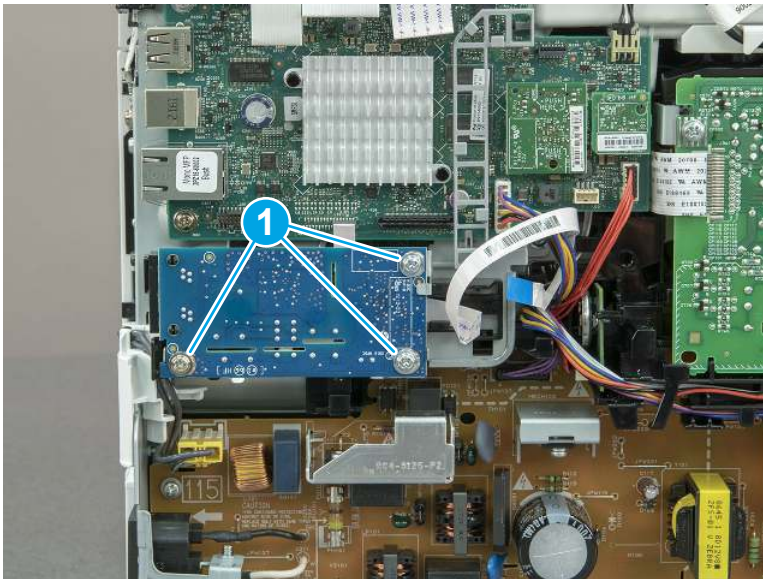
3. Lower the guide to release it from the formatter.

**Figure 5-796** Lower the guide



4. Remove three screws (callout 1), and then remove the fax PCA and cable.

**Figure 5-797** Remove three screws

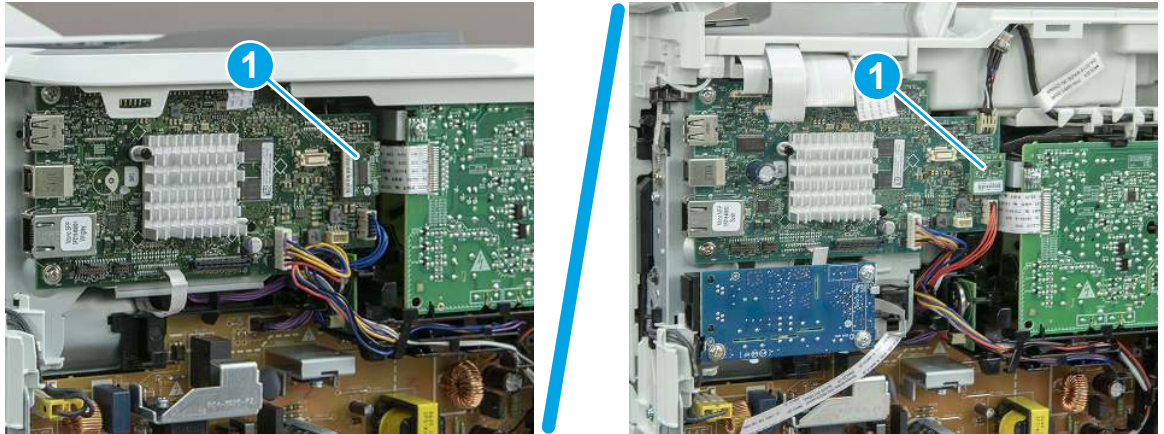


### 13. Remove the Trusted Platform Module (TPM)

Follow these steps to remove the Trusted Platform Module (TPM).

- ▲ Carefully pull the TPM (callout 1) away from the formatter to remove it.

Figure 5-798 Remove the TPM



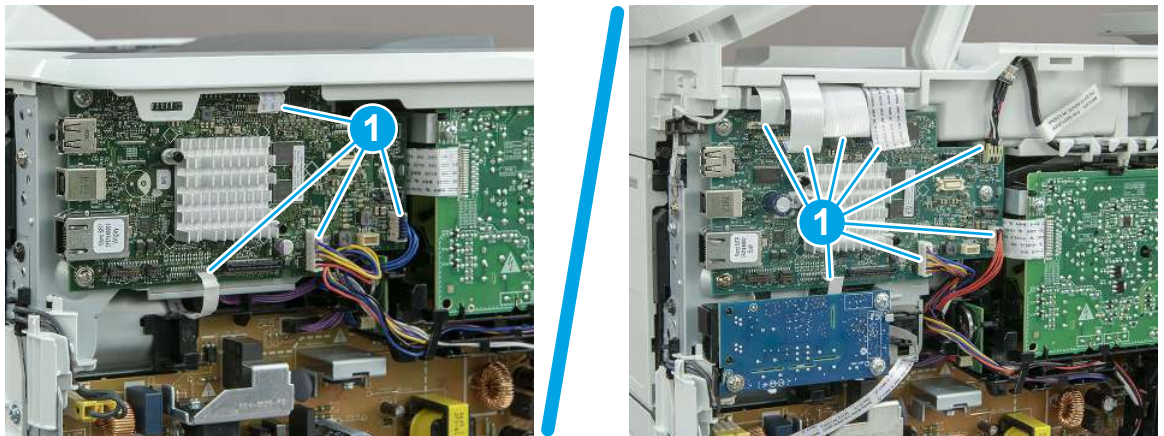
## 14. Remove the formatter PCA

Follow these steps to remove the formatter PCA.

1. Do one of the following:
  - SFP: Disconnect four connectors (callout 1).
  - MFP: Disconnect eight connectors (callout 1).

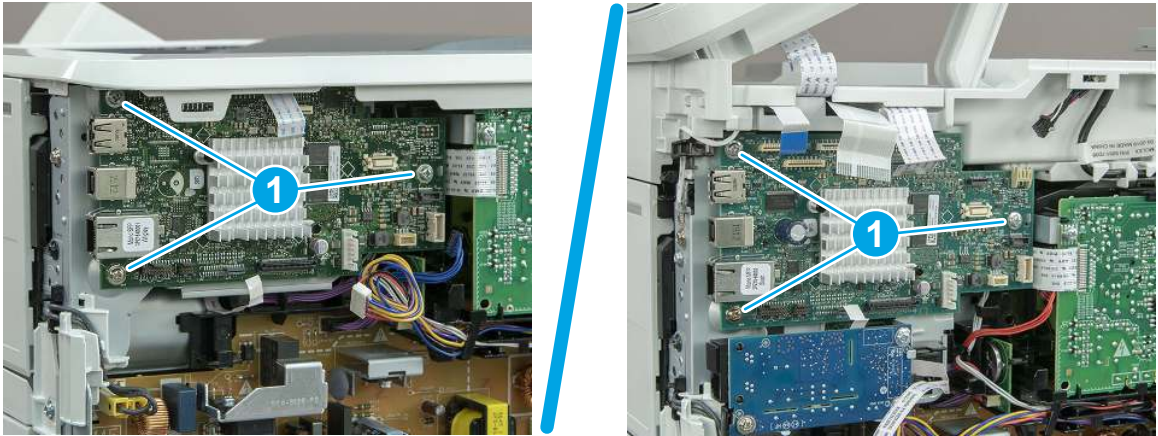
 **IMPORTANT:** Take note of any empty connectors before removing the formatter PCA.

Figure 5-799 SFP/MFP: Disconnect the connectors



2. Remove three screws (callout 1), and then remove the formatter PCA.

**Figure 5-800** Remove three screws



## 15. Remove the formatter bracket

Follow these steps to remove the formatter bracket.

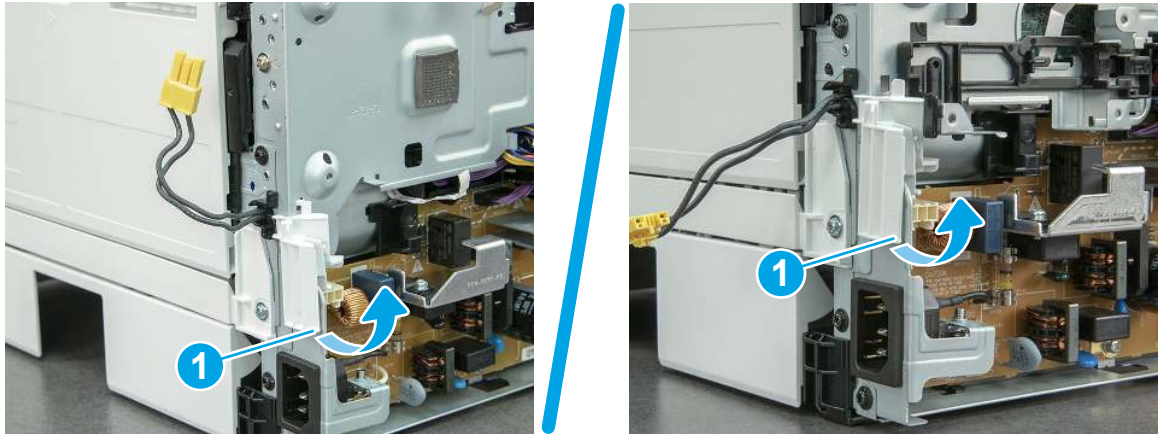
1. Disconnect one connector (callout 1), and then remove the wire harness (callout 2) from the guide (callout 3).

**Figure 5-801** SFP/MFP: Remove the wire harness



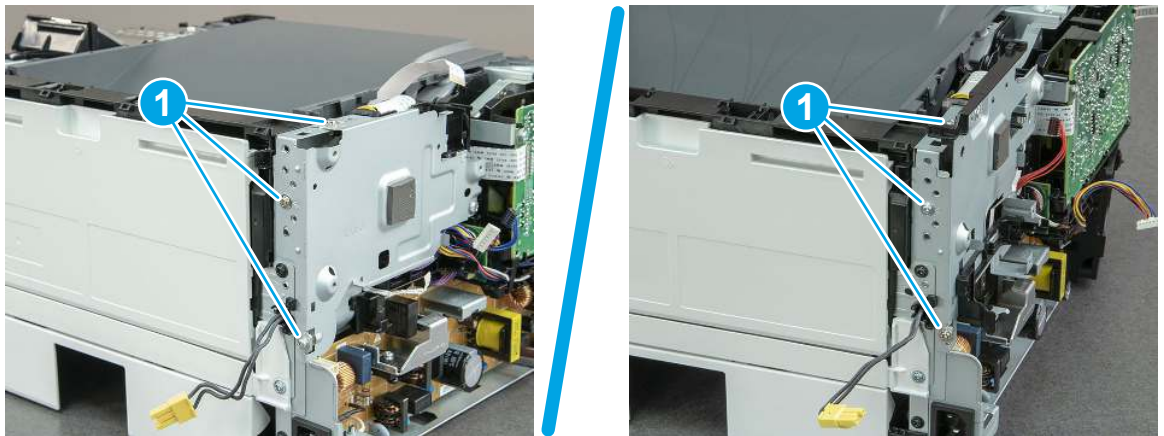
2. Release the front edge (callout 1), and then rotate the wire guide up to remove it.

**Figure 5-802** Remove the wire guide



3. Remove three screws (callout 1).

**Figure 5-803** Remove three screws

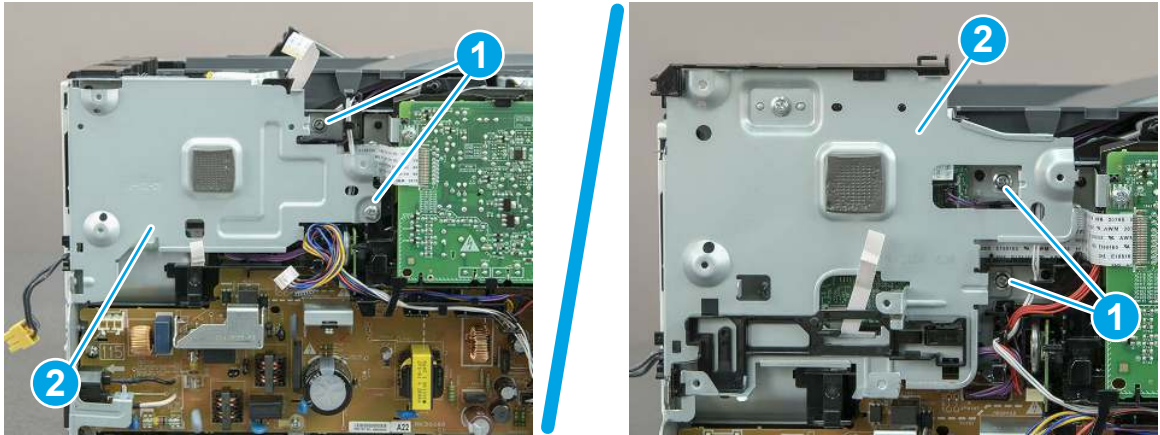


4. Remove two screws (callout 1), and then remove the formatter bracket (callout 2).

 **Reinstallation tip:** Do one of the following:

- **SFP:** One screw is larger than the other screw. Make sure screws are installed in the correct locations.
- **MFP:** These two screws are longer than the previous three screws.

Figure 5-804 Remove two screws

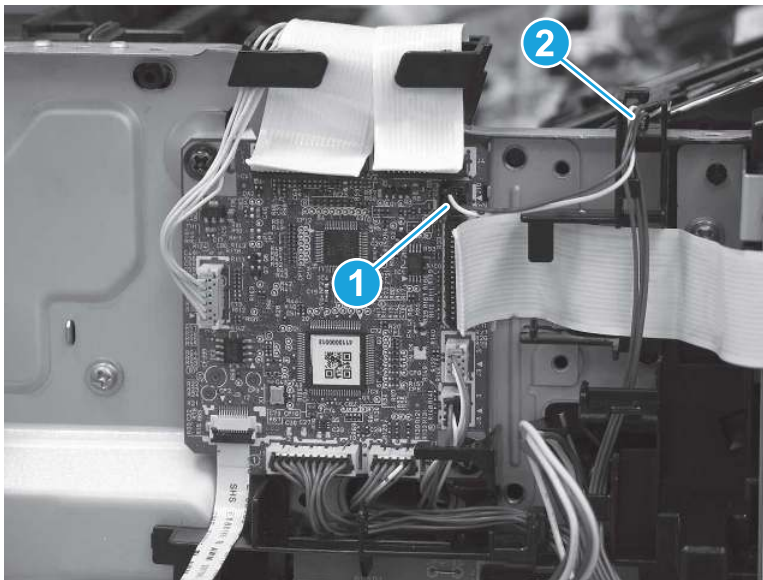


## 16. Remove the tag-cable assembly (toner-cartridge memory)

Follow these steps to remove the tag-cable assembly (toner-cartridge memory).

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

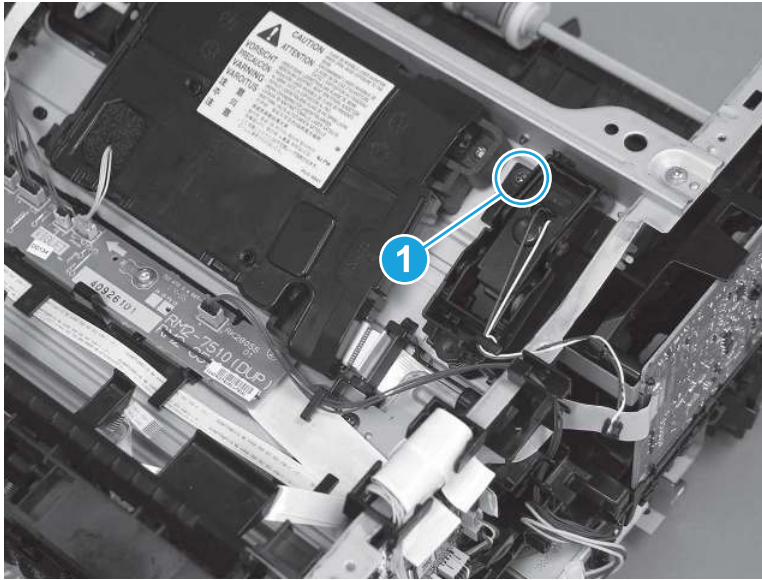
Figure 5-805 Disconnect one connector





2. Remove one screw (callout 1).

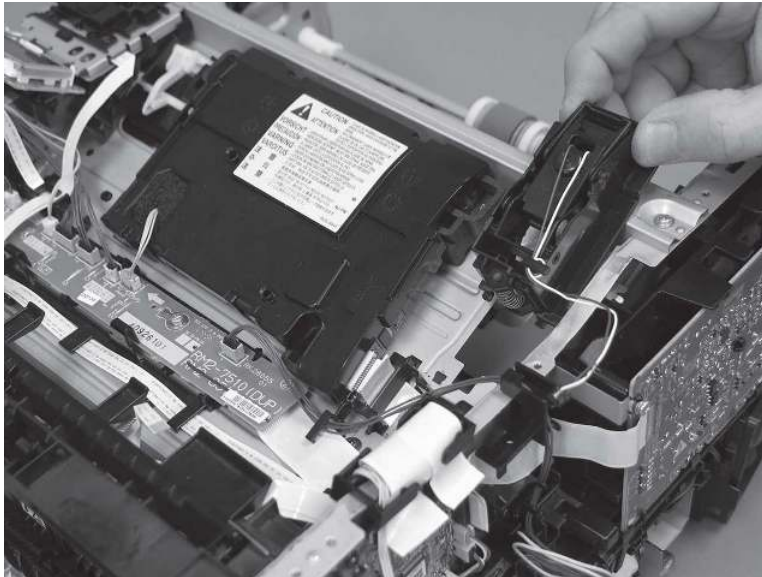
**Figure 5-806** Remove one screw



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 5-807** Remove the tag-cable assembly

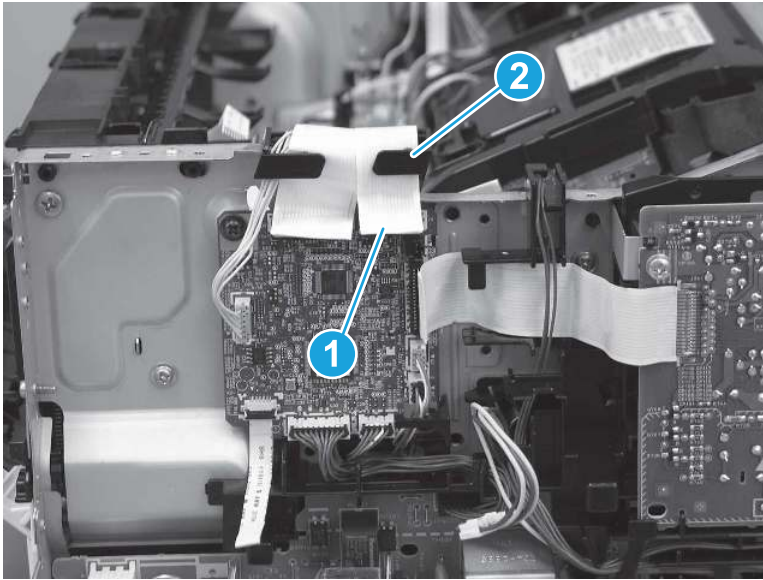


## 17. Remove the laser scanner FFC

Follow these steps to remove the laser scanner FFC.

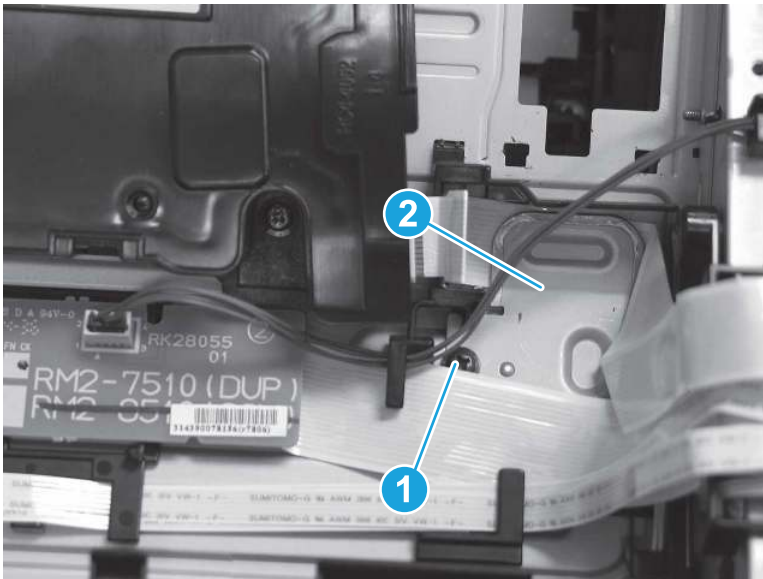
1. Disconnect one FFC (callout 1), and then release it from the guide (callout 2).

**Figure 5-808** Disconnect one FFC



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

**Figure 5-809** Remove one screw and the sheet-metal plate



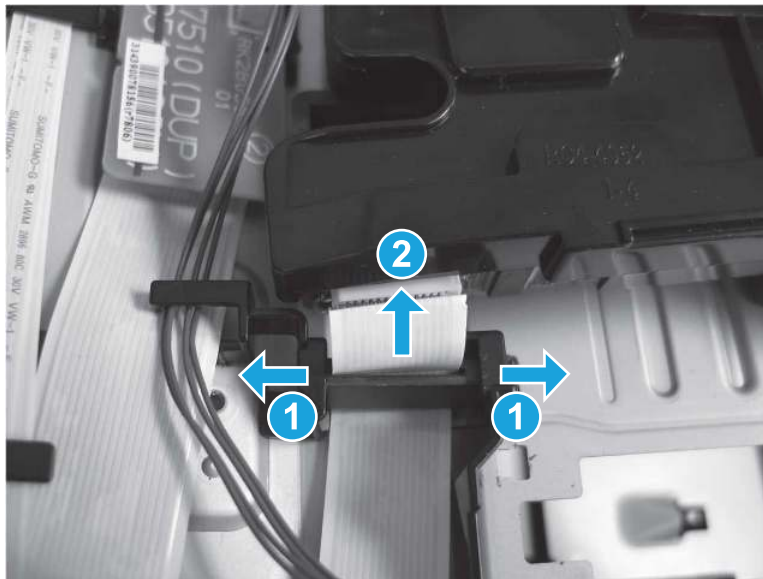
3. Disconnect one FFC (callout 1).

Figure 5-810 Disconnect one FFC



4. Slightly flex the holder (callout 1), and then release the FFC ferrite (callout 2).

Figure 5-811 Release the ferrite



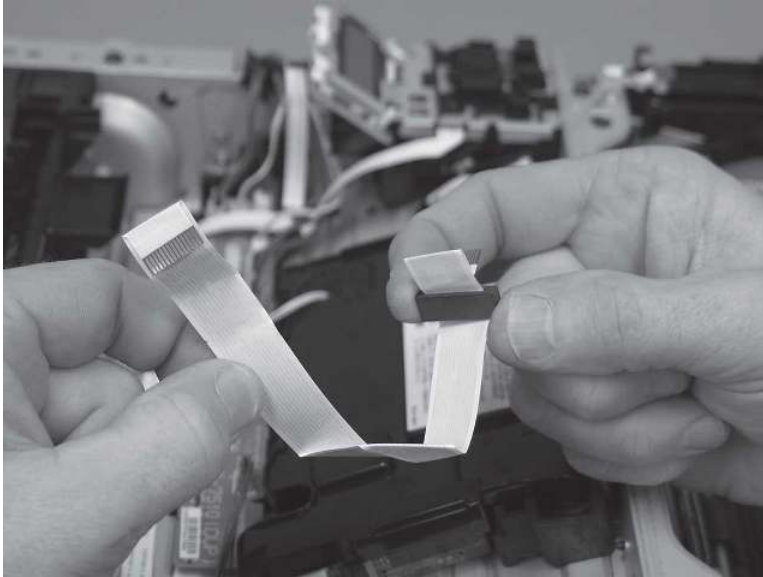
5. Remove the FFC.

---

 **Reinstallation tip:** Install the ferrite on the replacement FFC.

---

Figure 5-812 Remove the FFC



## 18. 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 5-47** Part information

Part number	Part description
RM2-7508-000CN	HV 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 5-813 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).

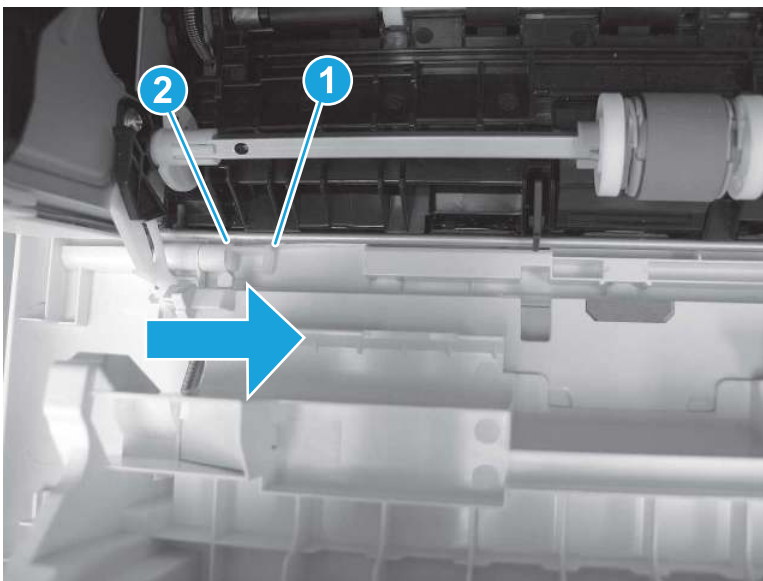
---

 **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.

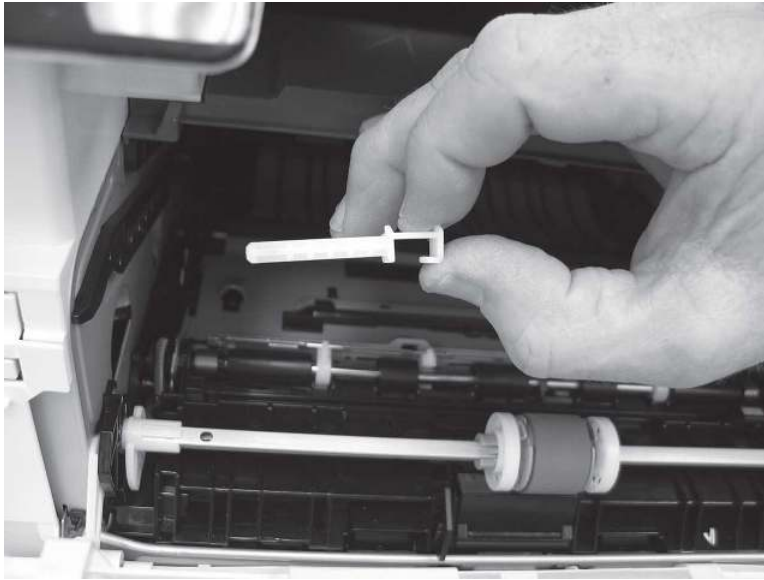
---

Figure 5-814 Release the support shaft



2. Remove the support shaft.

**Figure 5-815** Remove the support shaft



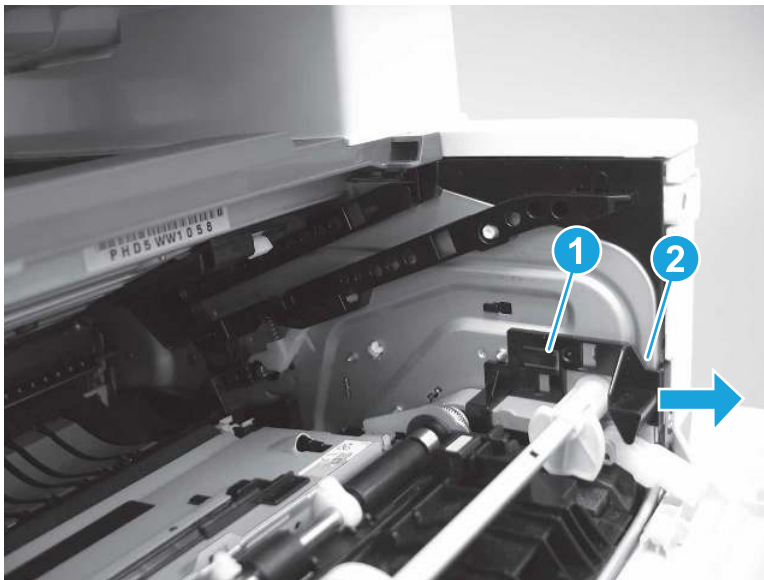
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

**Figure 5-816** 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 5-817** 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).

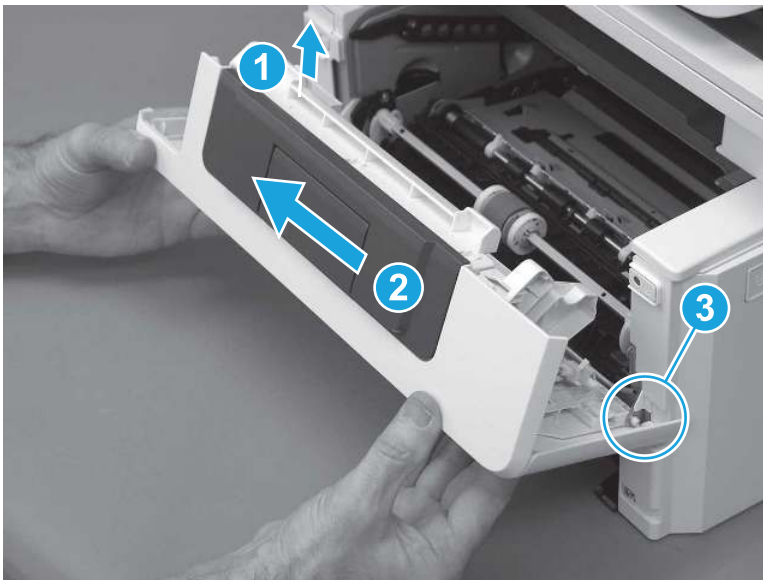
---

**⚠ 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.

---

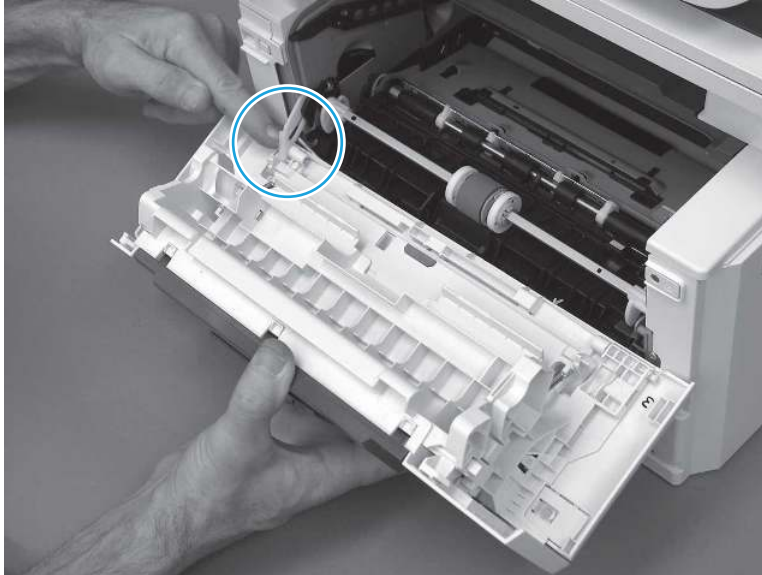
**Figure 5-818** Release the door





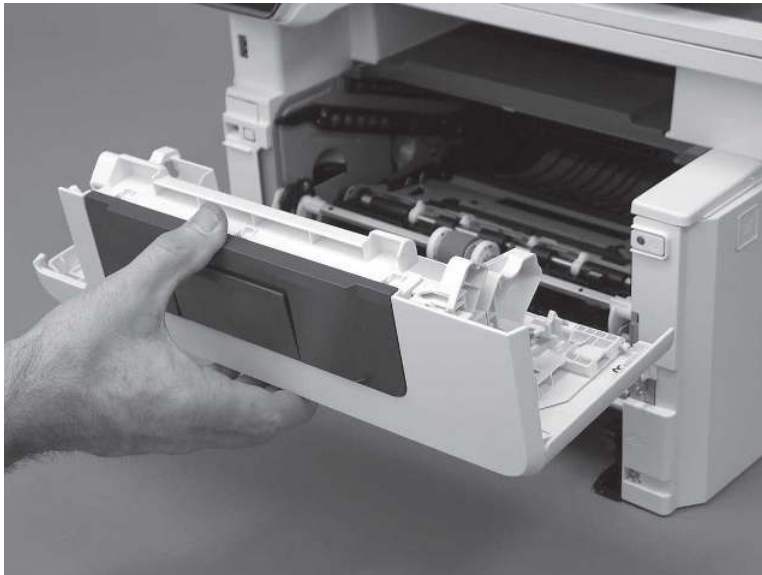
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-819** Release the left-side retainer arm



7. Remove the door.

**Figure 5-820** 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.

---

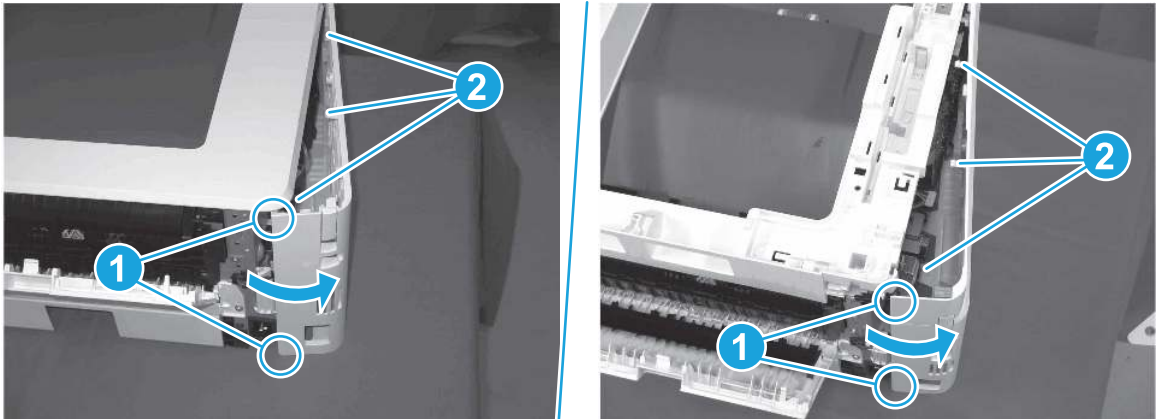
1. Remove one screw (callout 1).

**Figure 5-821** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-822** Release two bosses and three tabs



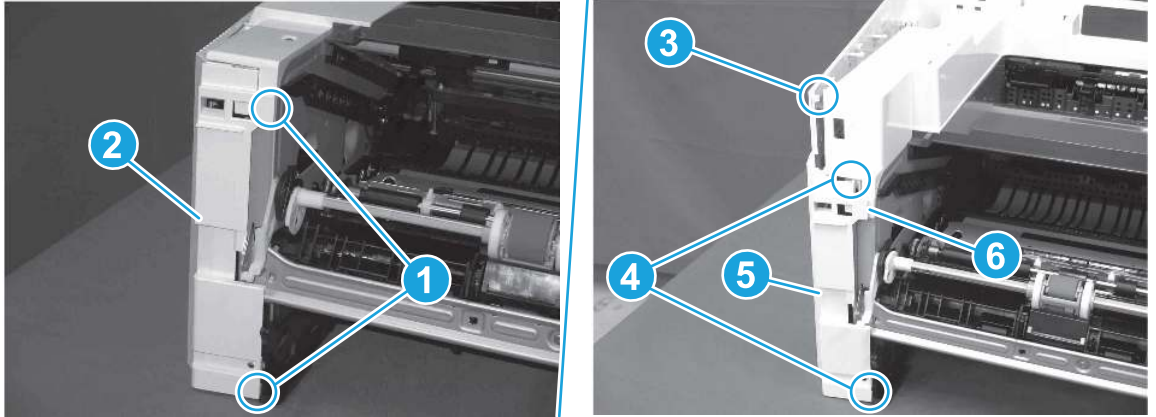
3. At the front of the printer, do one of the following:
  - **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
  - **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**⚠ 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 5-823 Remove the cover



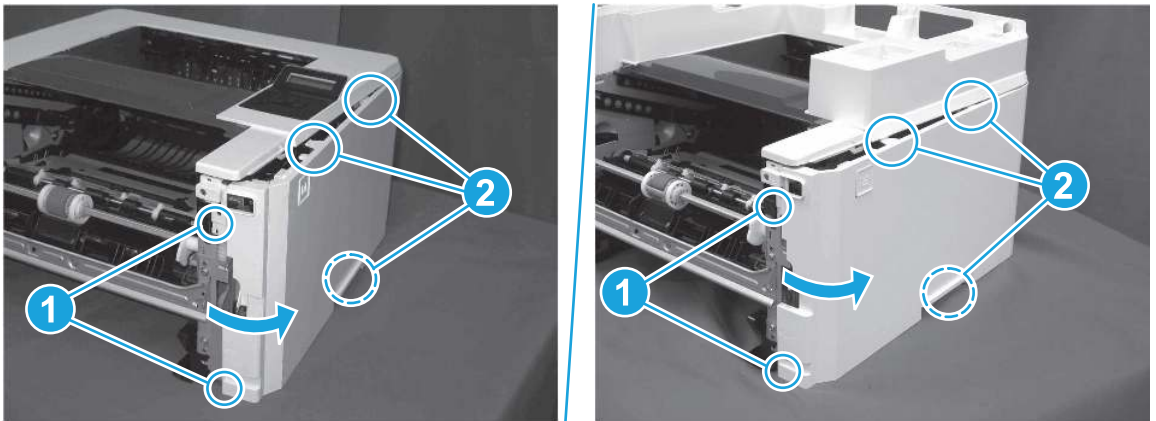
#### 4. Remove the right cover

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).

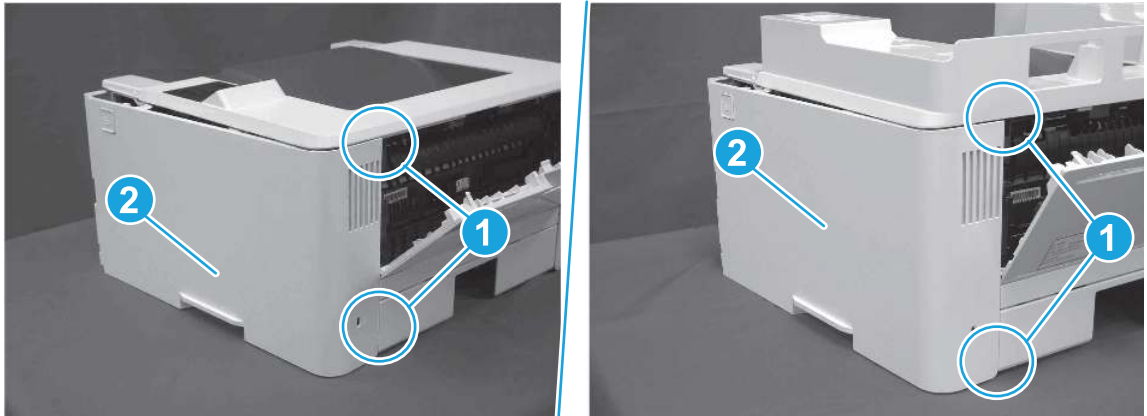
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-824 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-825 Remove the cover



## 5. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

If the control panel is not fully tilted forward, tilt it forward now until it stops.

Figure 5-826 Open the ISA



2. Remove one screw (callout 1).

Figure 5-827 Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

Figure 5-828 Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-829** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-830** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-831** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-832** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-833** Remove two screws and remove the control panel assembly

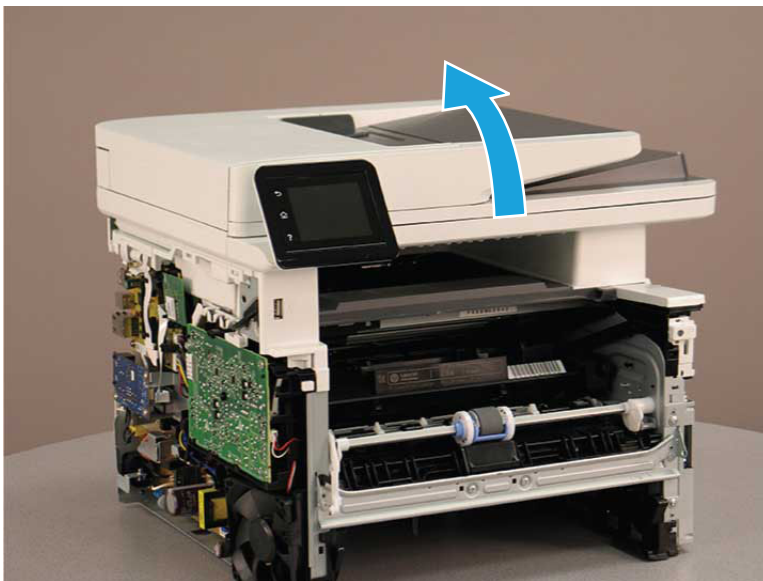


## 6. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

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.

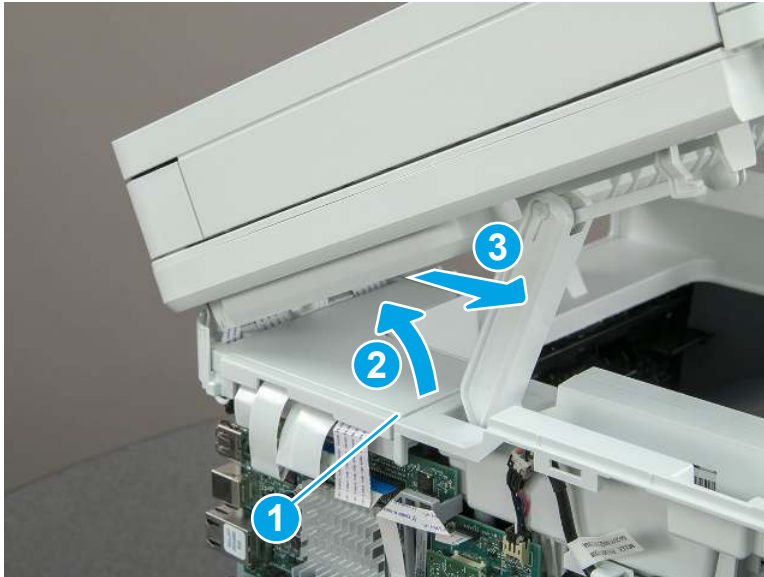
**Figure 5-834** Raise the ISA





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 5-835** Remove the ISA FFC cover

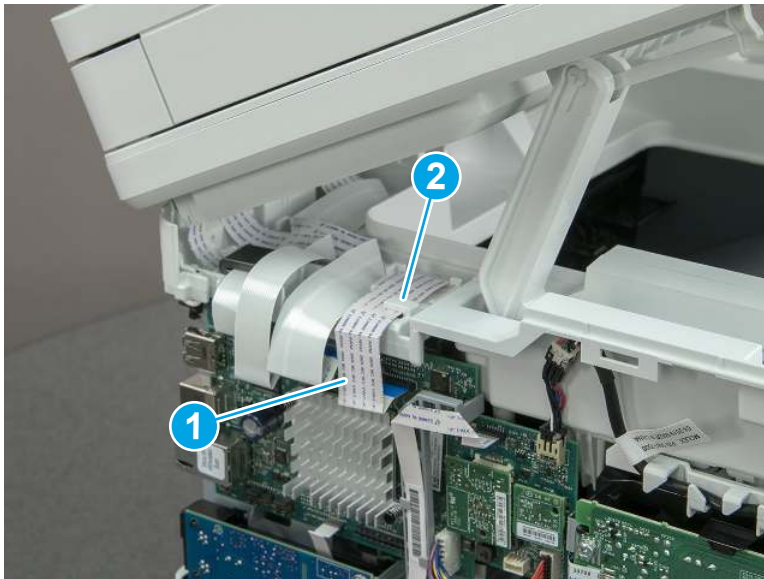


## 7. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

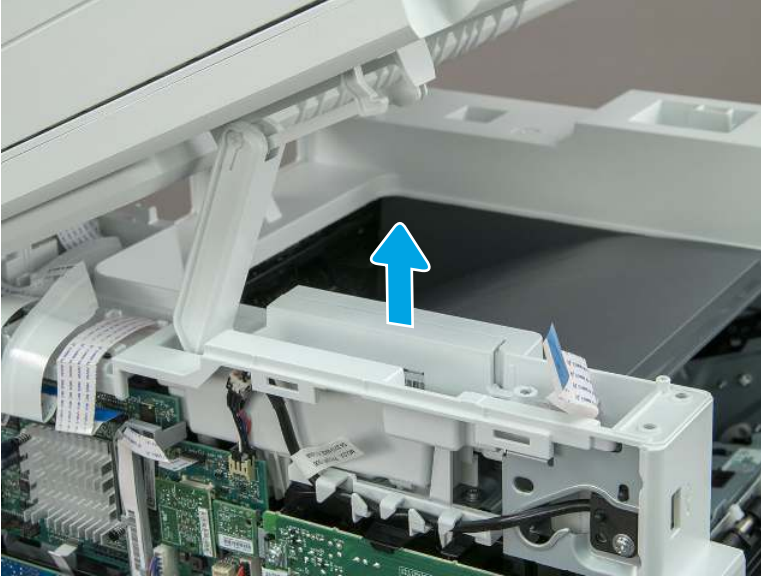
1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

**Figure 5-836** Disconnect one cable



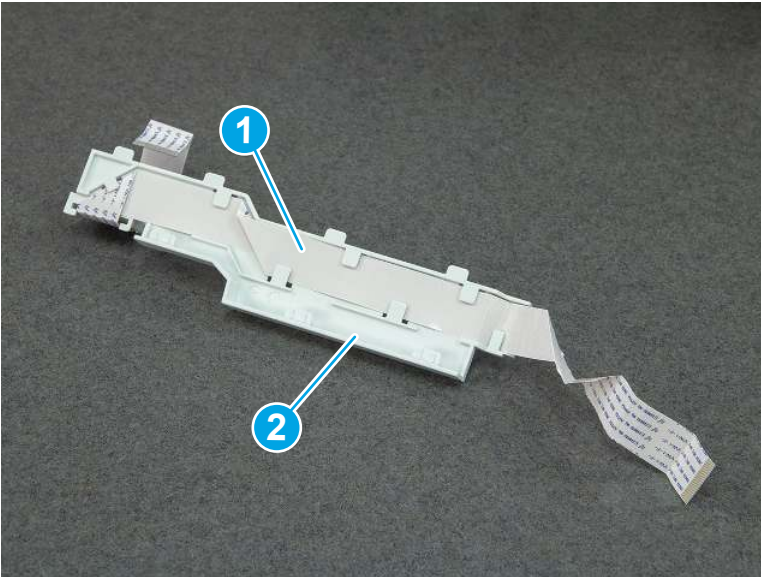
2. Lift up the control-panel FFC cover to remove the cover and cable.

**Figure 5-837** Remove the cover and cable



3. If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).

**Figure 5-838** Remove the FFC



## 8. 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 5-839 Disconnect three FFCs



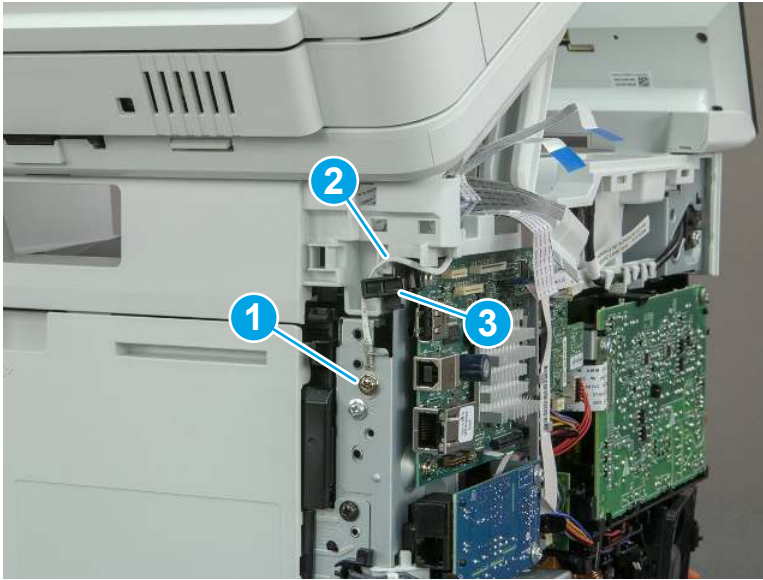
2. Release the tape (callout 1) that holds the flat cables to the top cover.

Figure 5-840 Release the tape



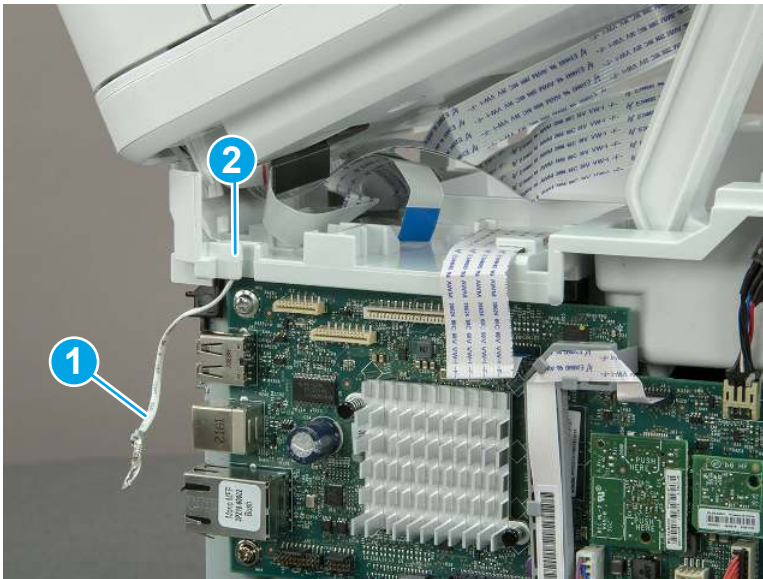
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-841** Release the ground wire



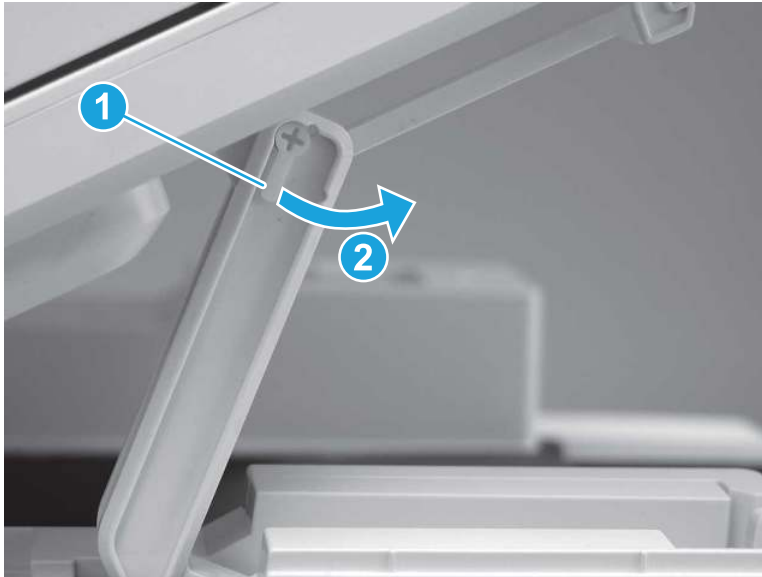
4. Release the ground wire (callout 1) from the guide (callout 2).

**Figure 5-842** 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 5-843** Release one tab and rotate the slider pin



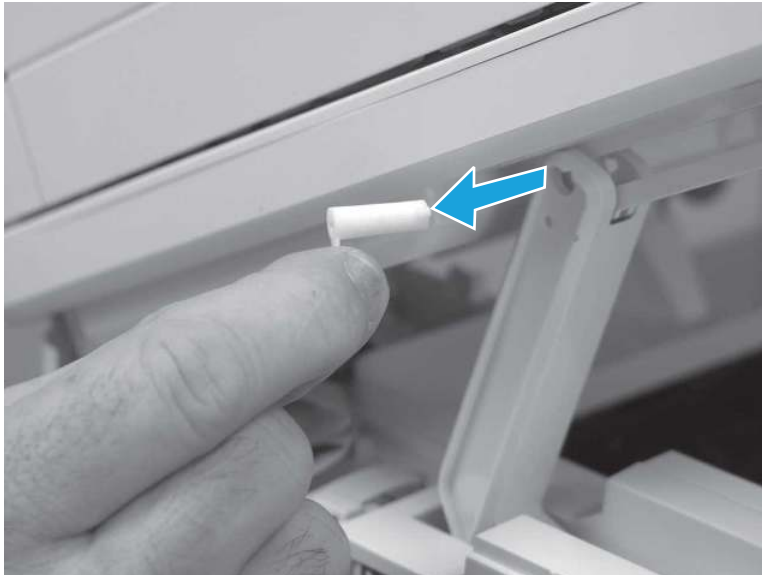
6. Remove the slider pin.

---

 **Reinstallation tip:** Align the keyed portion of the locking pin with the slot and hole in the support arm.

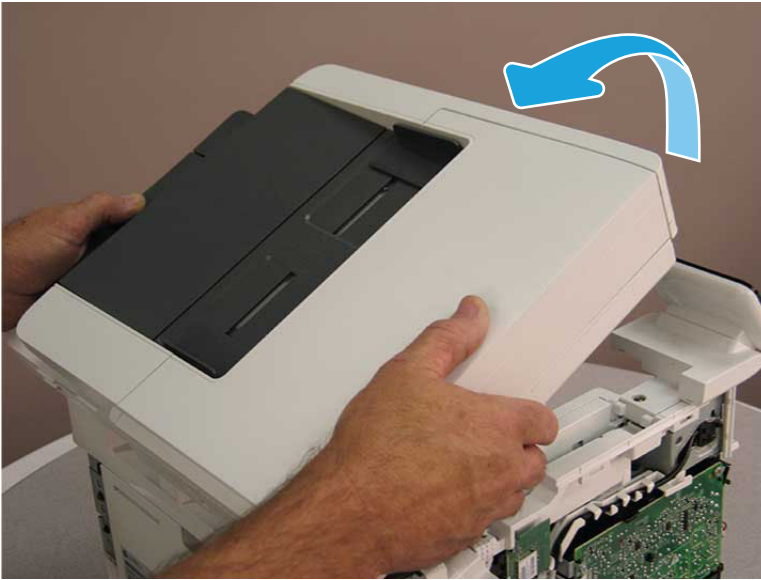
---

**Figure 5-844** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-845** Rotate the ISA towards the rear of the printer



8. Slide the ISA as shown to release it.

**Figure 5-846** Release the ISA



9. Remove the ISA.

Figure 5-847 Remove the ISA

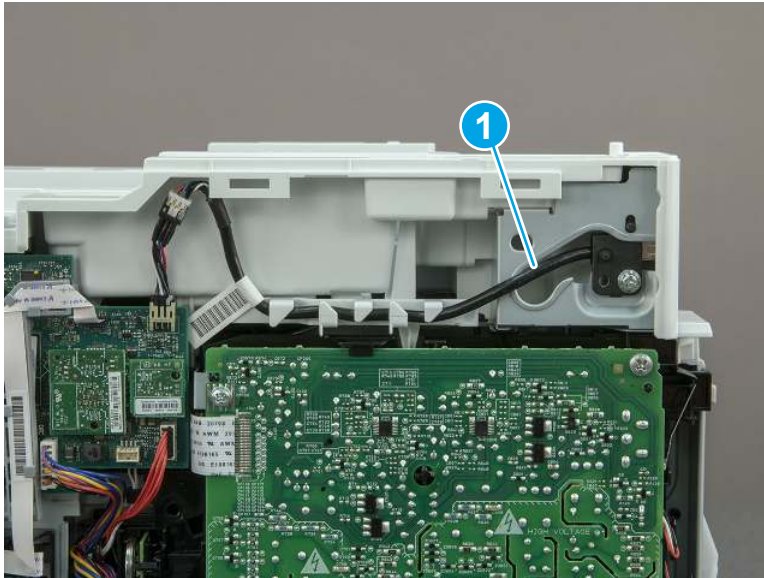


## 9. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

Figure 5-848 Release the USB cable



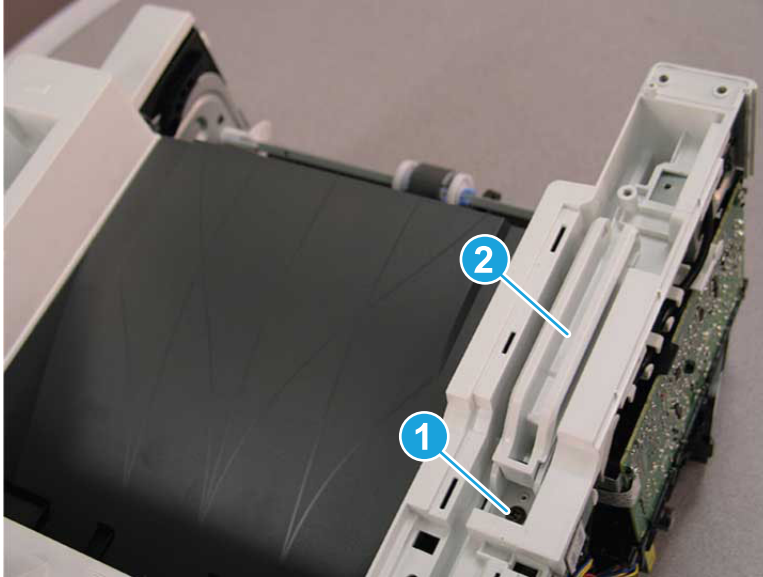
2. Remove one screw (callout 1), and then remove the support arm (callout 2).

---

**⚠ 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.

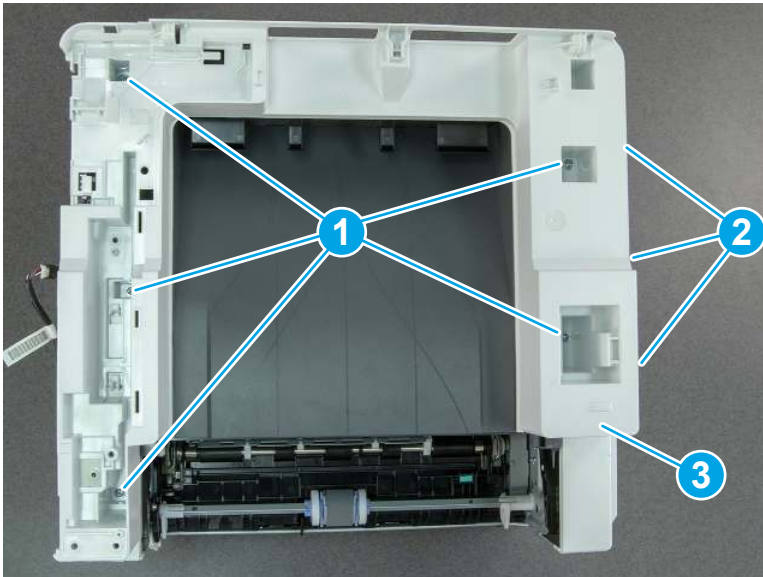
---

Figure 5-849 Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

Figure 5-850 Remove the top cover



## 10. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).



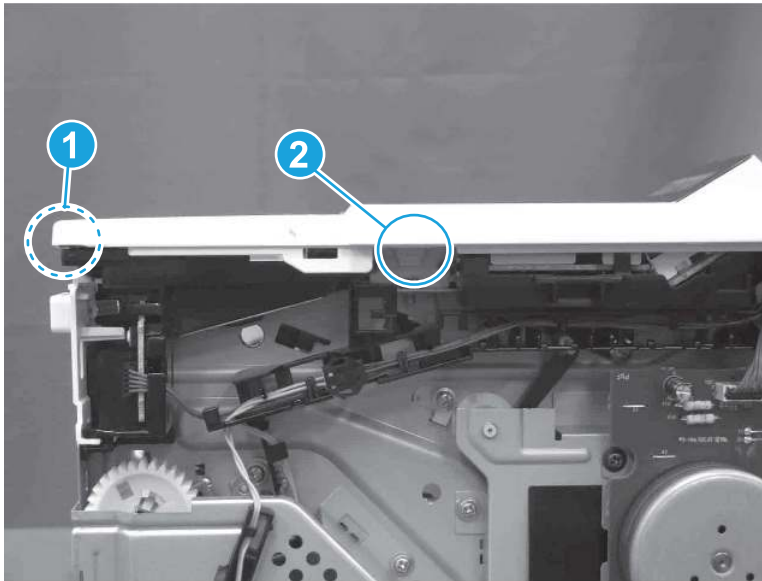
1. Remove one screw.

**Figure 5-851** 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 5-852** Release one boss and one tab



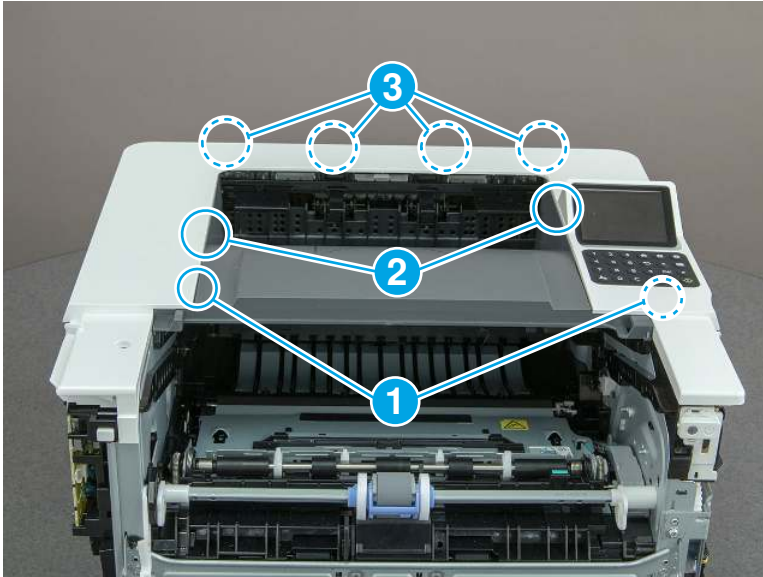
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

Figure 5-853 Remove the cover

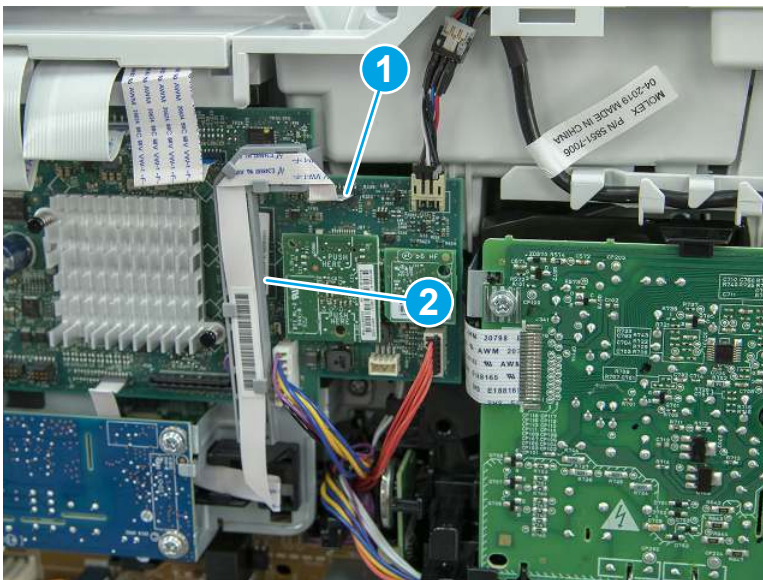


## 11. Remove the fax cable guide and fax PCA (fax models only)

Follow these steps to remove the fax cable guide and fax PCA (fax models only).

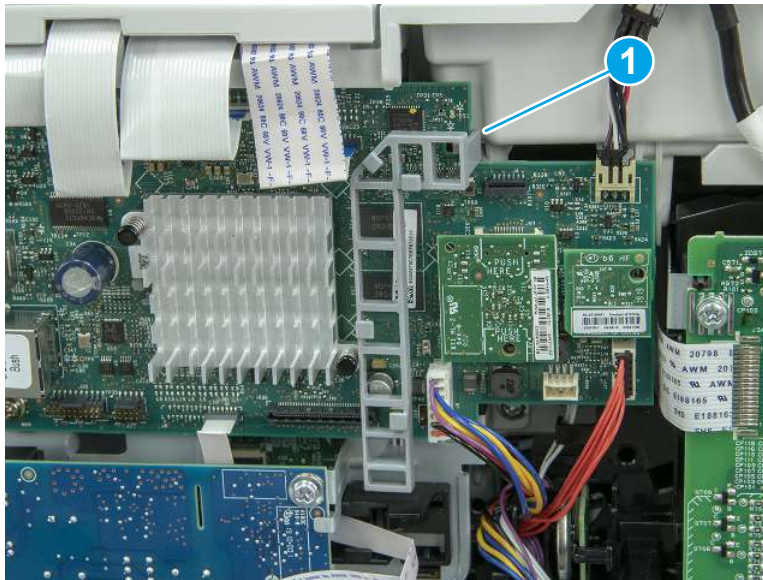
1. Disconnect one connector (callout 1), and then remove the cable from the guide (callout 2).

Figure 5-854 Remove the cable from the guide



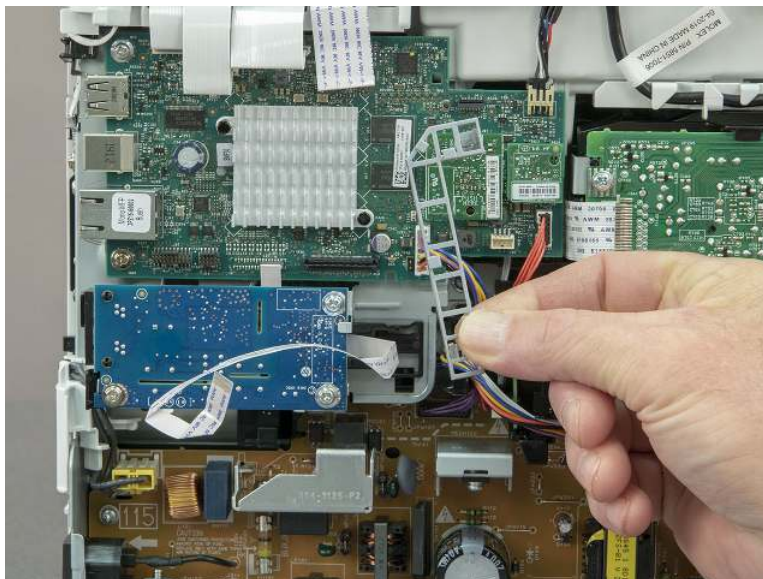
2. Release one tab (callout 1).

**Figure 5-855** Release one tab



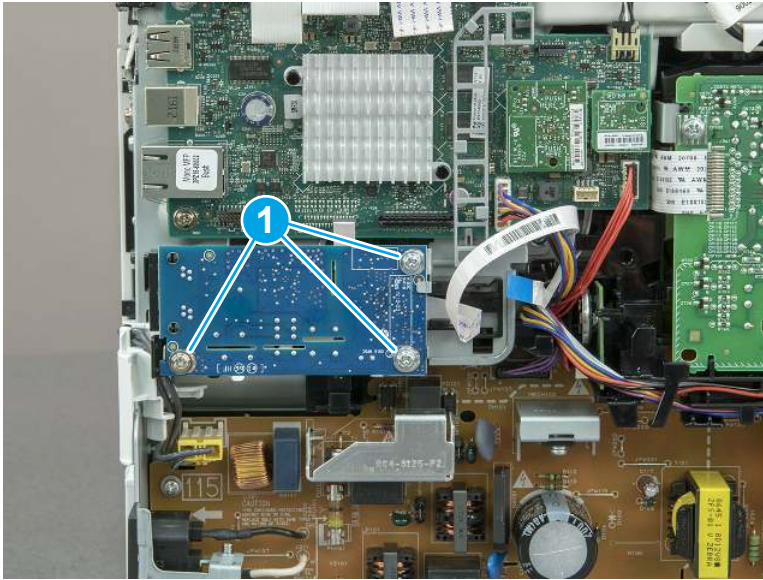
3. Lower the guide to release it from the formatter.

**Figure 5-856** Lower the guide



4. Remove three screws (callout 1), and then remove the fax PCA and cable.

Figure 5-857 Remove three screws

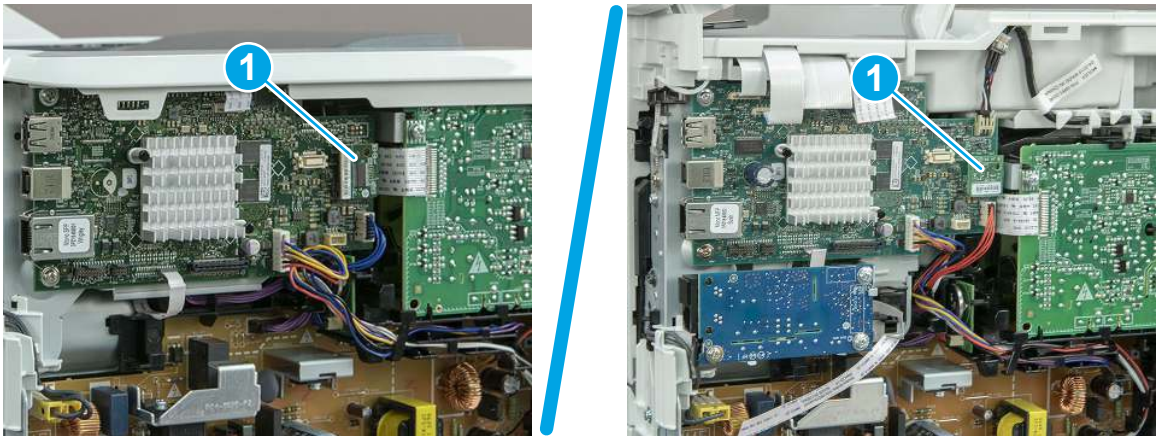


## 12. Remove the Trusted Platform Module (TPM)

Follow these steps to remove the Trusted Platform Module (TPM).

- ▲ Carefully pull the TPM (callout 1) away from the formatter to remove it.

Figure 5-858 Remove the TPM



## 13. Remove the formatter PCA

Follow these steps to remove the formatter PCA.

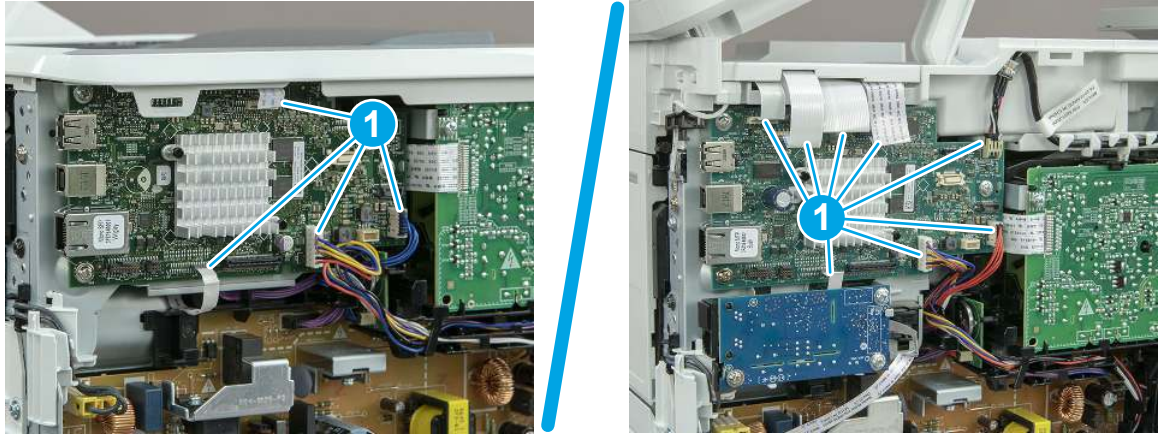
1. Do one of the following:
  - **SFP:** Disconnect four connectors (callout 1).
  - **MFP:** Disconnect eight connectors (callout 1).

---

 **IMPORTANT:** Take note of any empty connectors before removing the formatter PCA.

---

Figure 5-859 SFP/MFP: Disconnect the connectors



2. Remove three screws (callout 1), and then remove the formatter PCA.

Figure 5-860 Remove three screws



## 14. Remove the formatter bracket

Follow these steps to remove the formatter bracket.

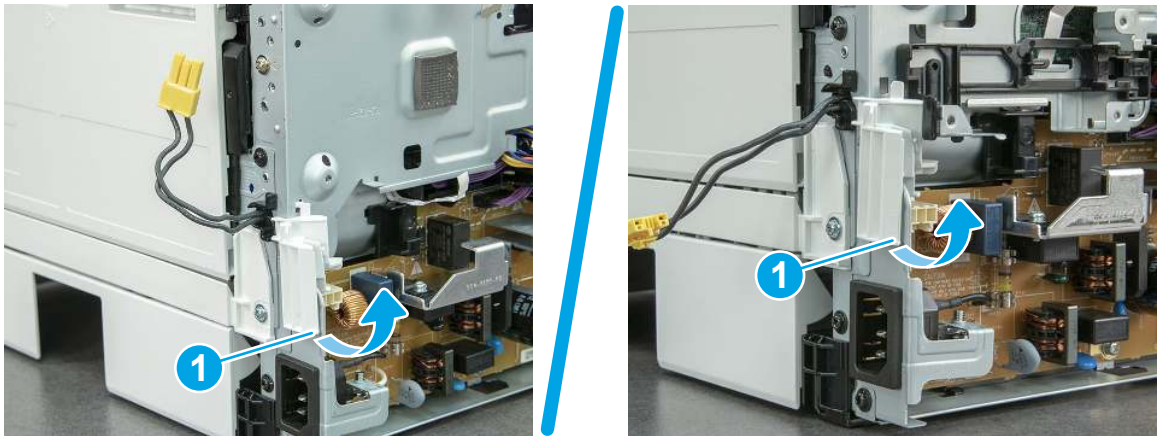
1. Disconnect one connector (callout 1), and then remove the wire harness (callout 2) from the guide (callout 3).

Figure 5-861 SFP/MFP: Remove the wire harness



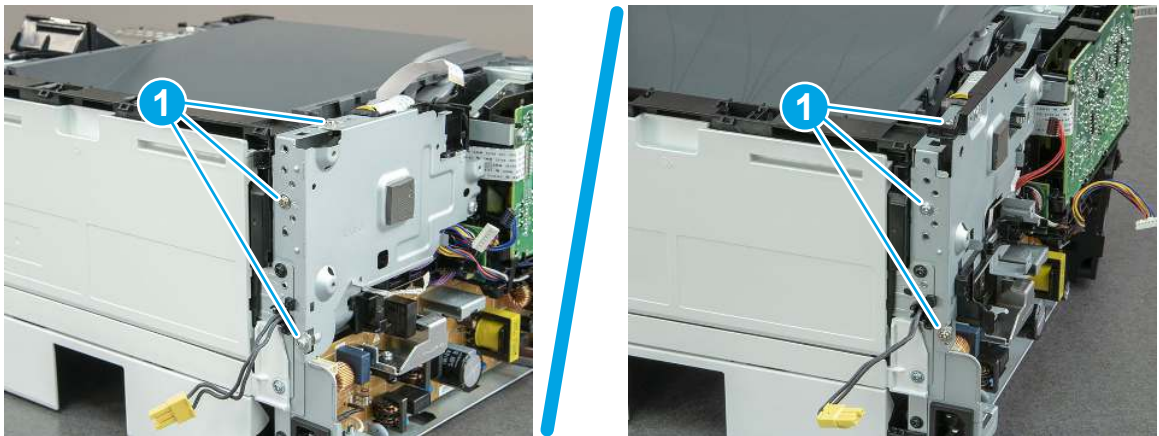
2. Release the front edge (callout 1), and then rotate the wire guide up to remove it.

**Figure 5-862** Remove the wire guide



3. Remove three screws (callout 1).

**Figure 5-863** Remove three screws



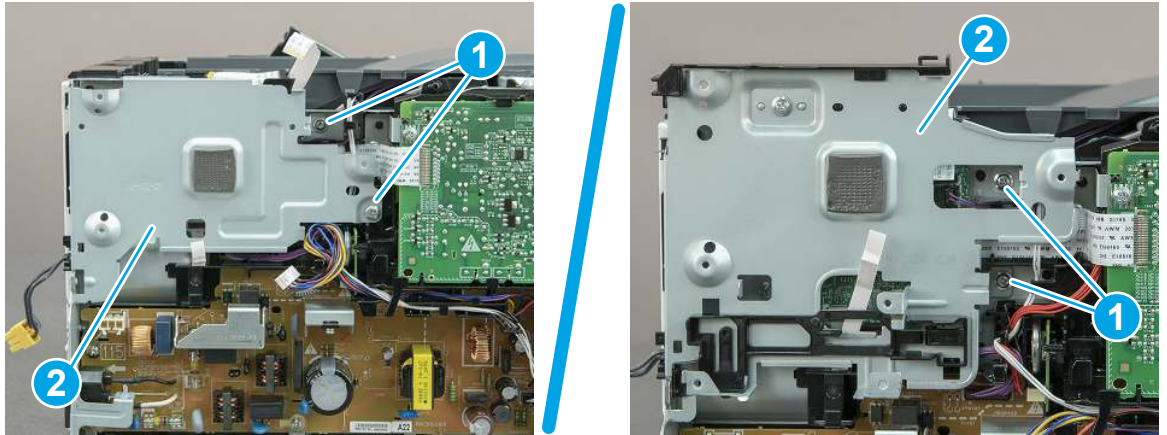
4. Remove two screws (callout 1), and then remove the formatter bracket (callout 2).

---

 **Reinstallation tip:** Do one of the following:

- **SFP:** One screw is larger than the other screw. Make sure screws are installed in the correct locations.
  - **MFP:** These two screws are longer than the previous three screws.
-

Figure 5-864 Remove two screws

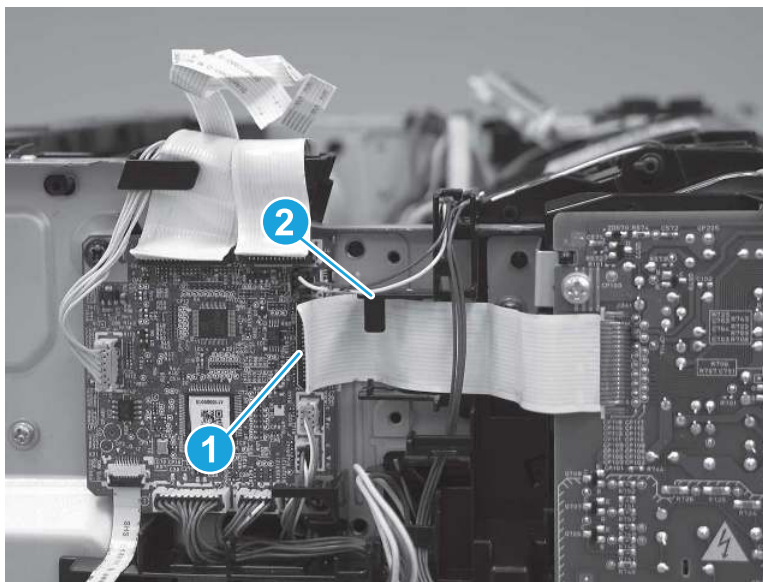


## 15. Remove the HVPS

Follow these steps to remove the HVPS.

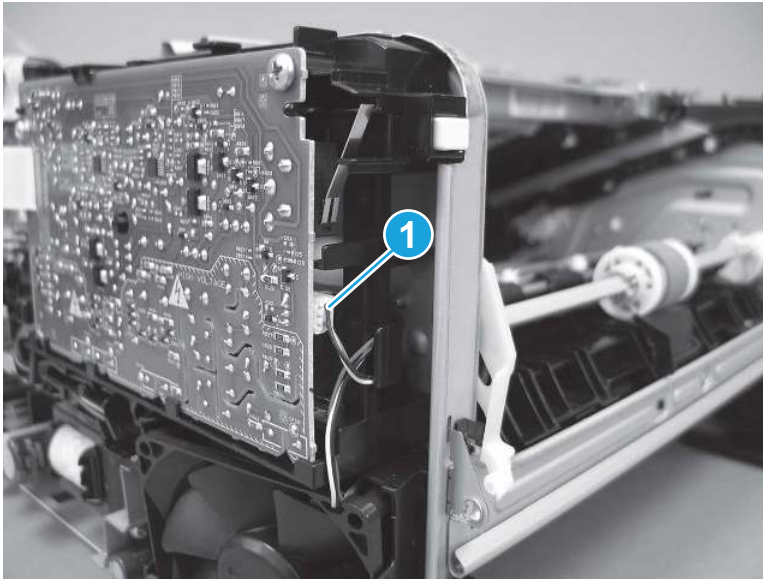
1. Disconnect one FFC (callout 1) on the DC controller, and then release it from the guide (callout 2).

Figure 5-865 Disconnect one FFC



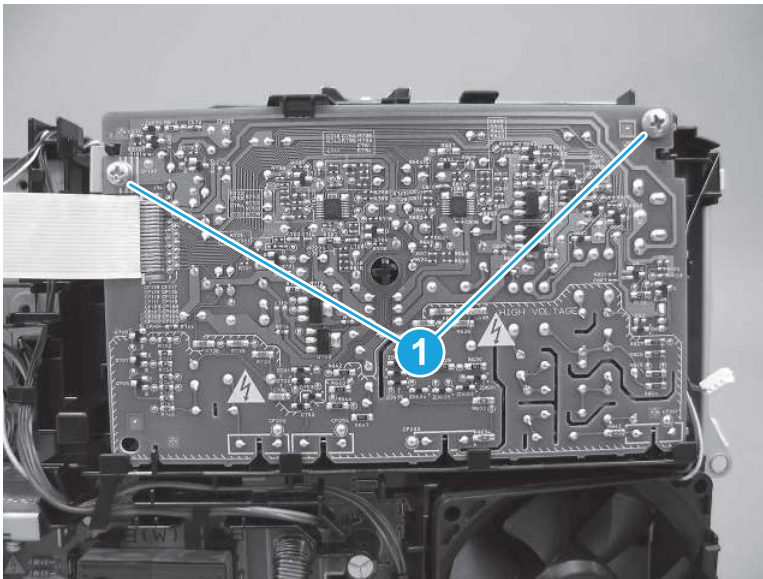
2. Disconnect one connector (callout 1).

**Figure 5-866** Disconnect one connector



3. Remove two screws (callout 1).

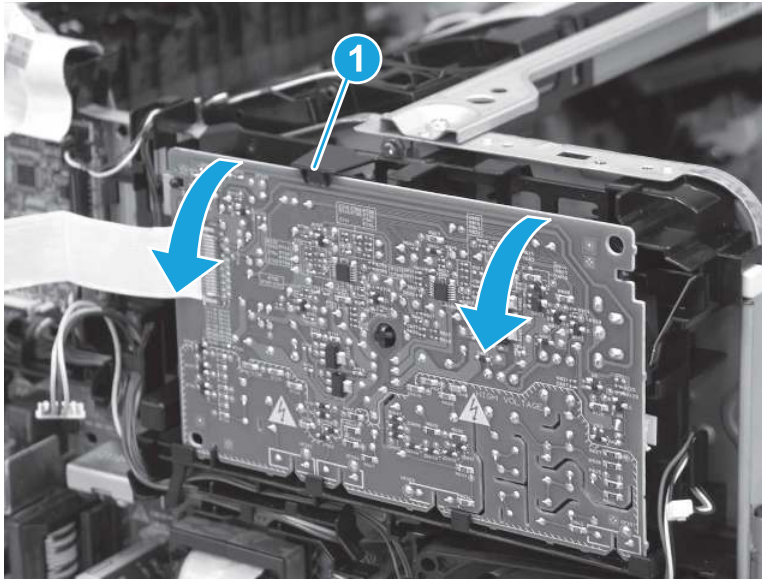
**Figure 5-867** Remove two screws





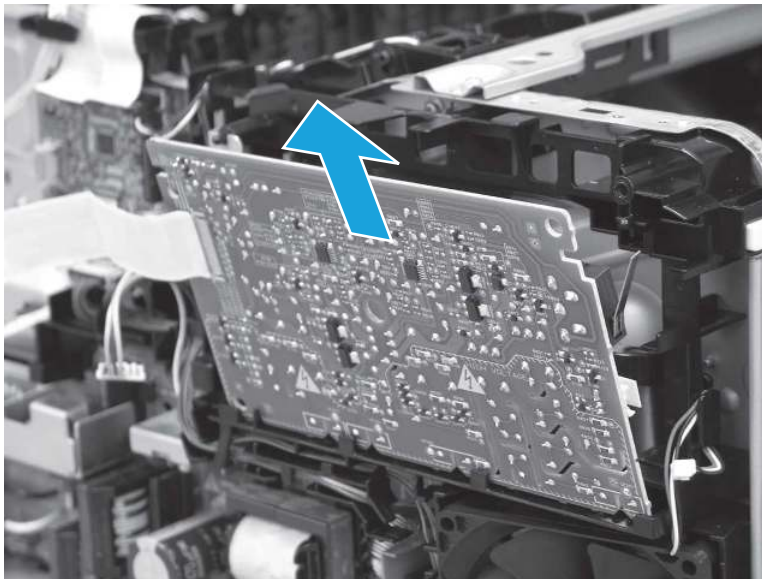
4. Release one tab (callout 1), and then rotate the top of the HVPS away from the printer.

Figure 5-868 Release one tab



5. Slide the HVPS up and away from the holder to remove it.

Figure 5-869 Remove the HVPS



## 16. 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 5-48 Part information**

Part number	Part description
RM3-7417-000CN	LV power supply PCA (110-127V)
RM3-7418-000CN	LV power supply PCA (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 5-870** 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.

---

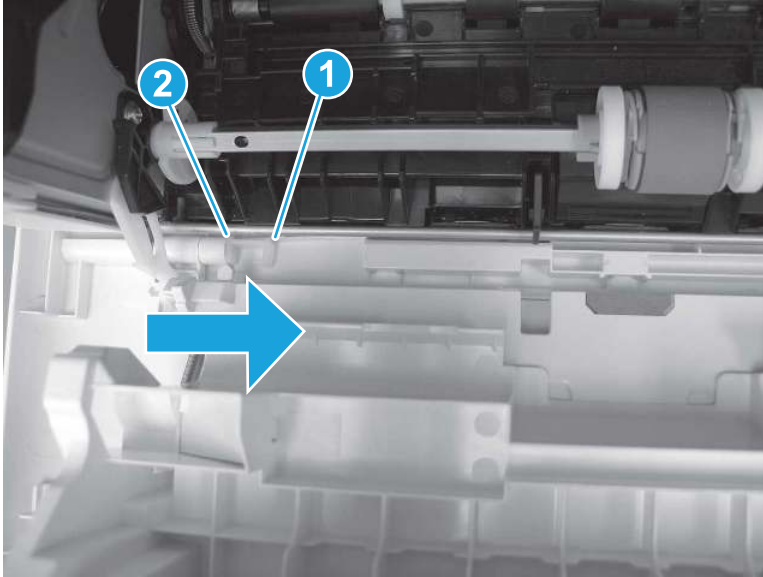
1. Release the support shaft (callout 1), and then slide it toward the center of the door (callout 2).

 **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.

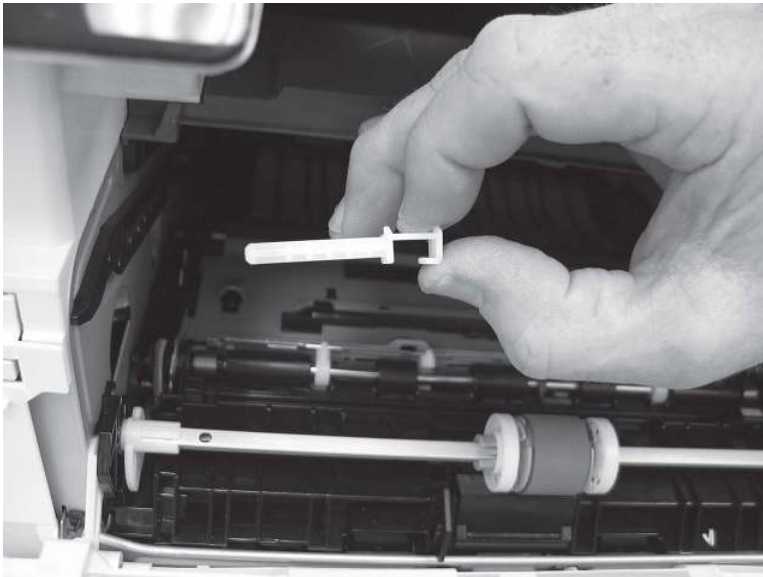
---

**Figure 5-871** Release the support shaft



2. Remove the support shaft.

**Figure 5-872** Remove the support shaft



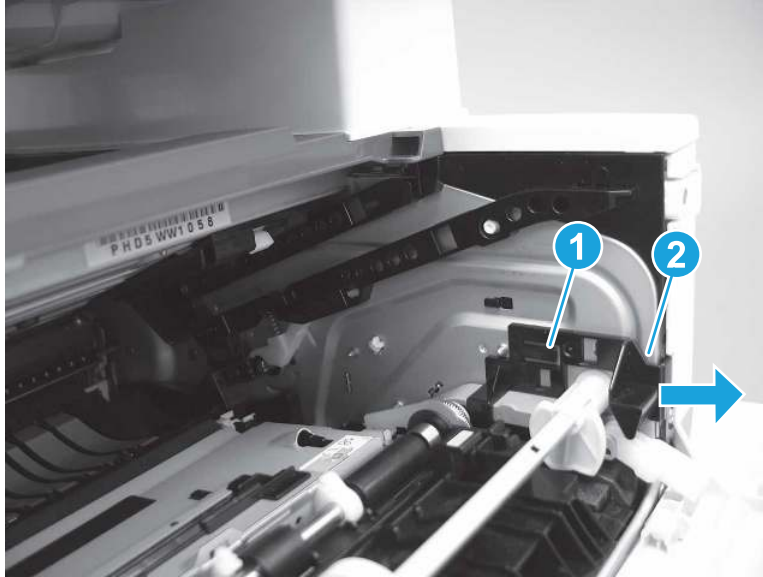
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

---

Figure 5-873 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 5-874 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).

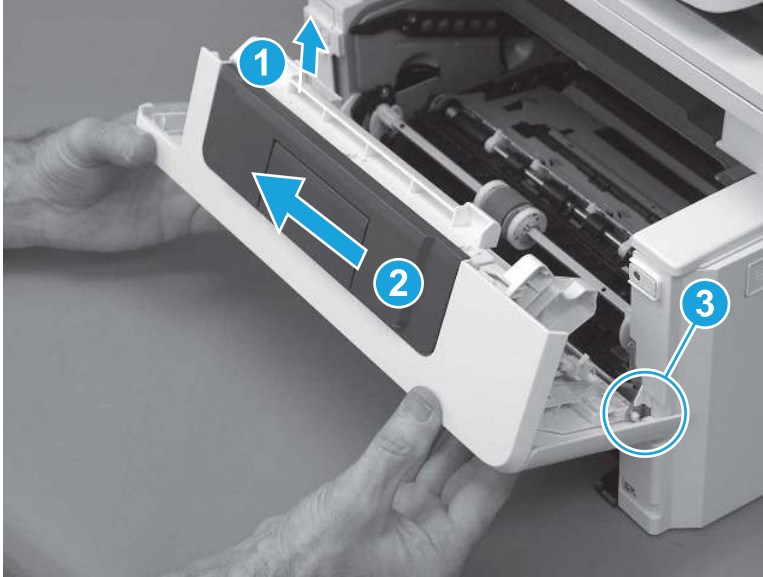
---

**⚠ 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.

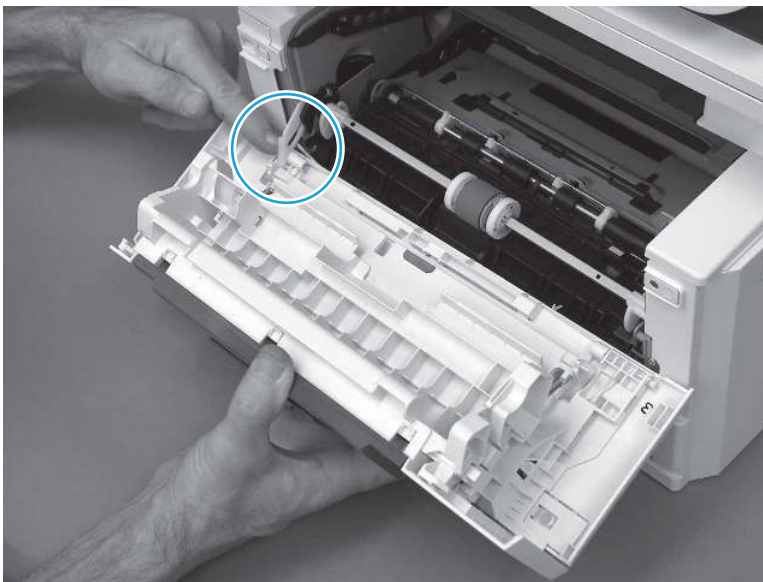
---

**Figure 5-875** Release the door



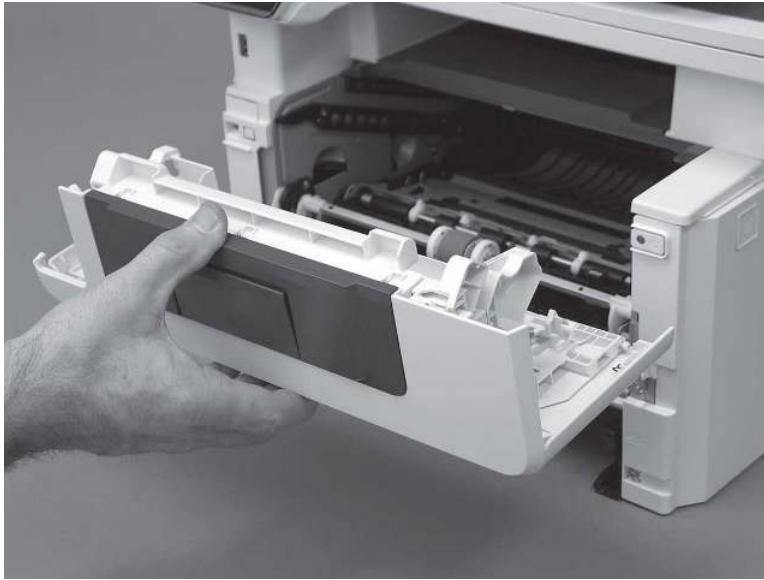
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-876** Release the left-side retainer arm



7. Remove the door.

**Figure 5-877** Remove the door



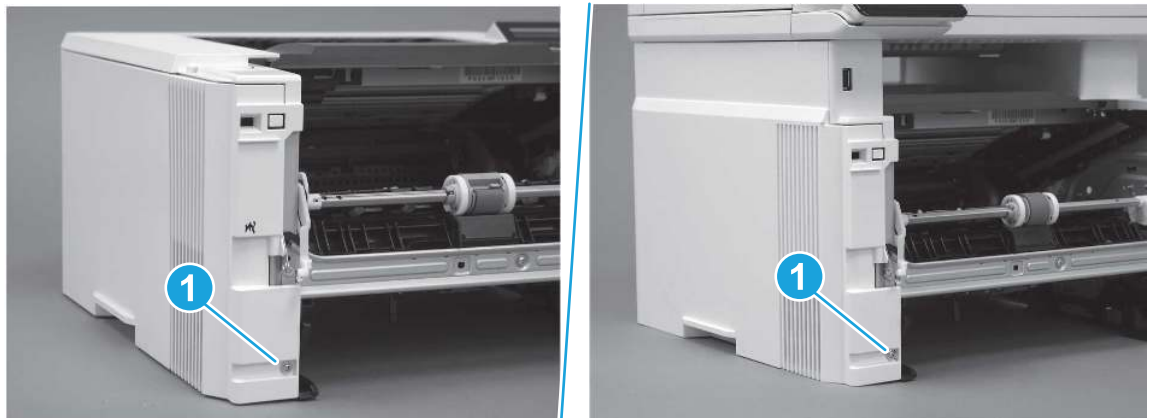
### 3. Remove the left cover

Follow these steps to remove the left cover.

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

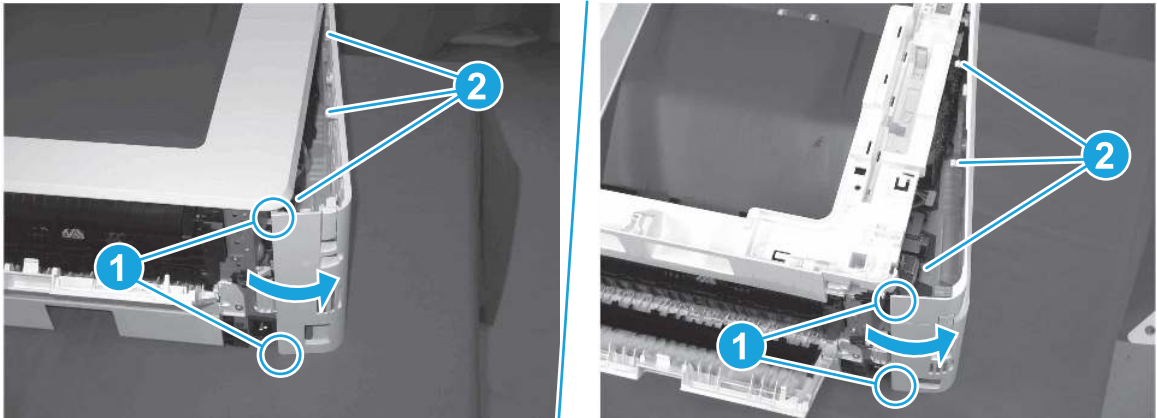
1. Remove one screw (callout 1).

**Figure 5-878** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

Figure 5-879 Release two bosses and three tabs

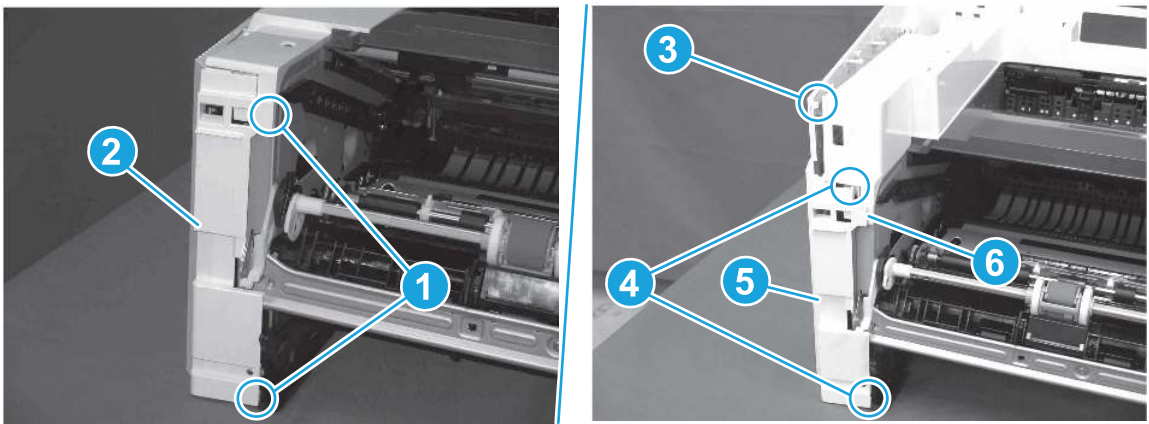


3. At the front of the printer, do one of the following:

- **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 5-880 Remove the cover



#### 4. Remove the right cover

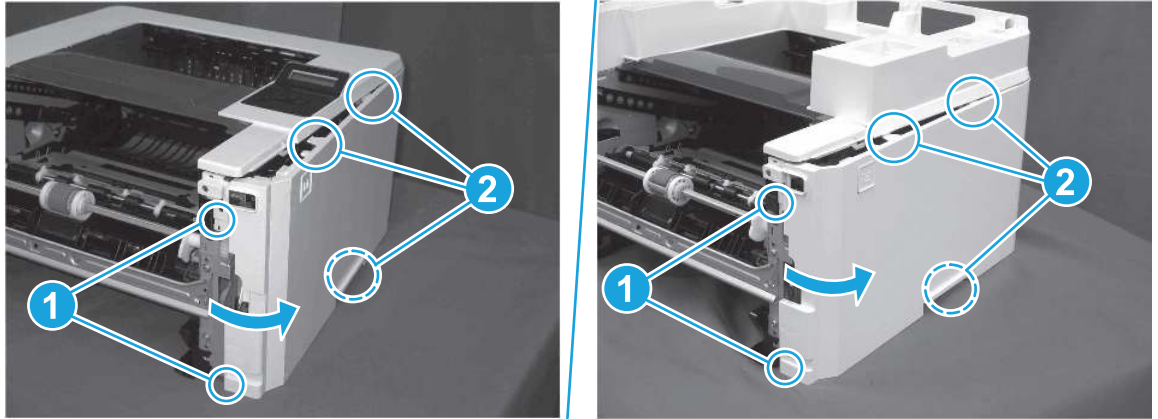
Follow these steps to remove the right cover.

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.

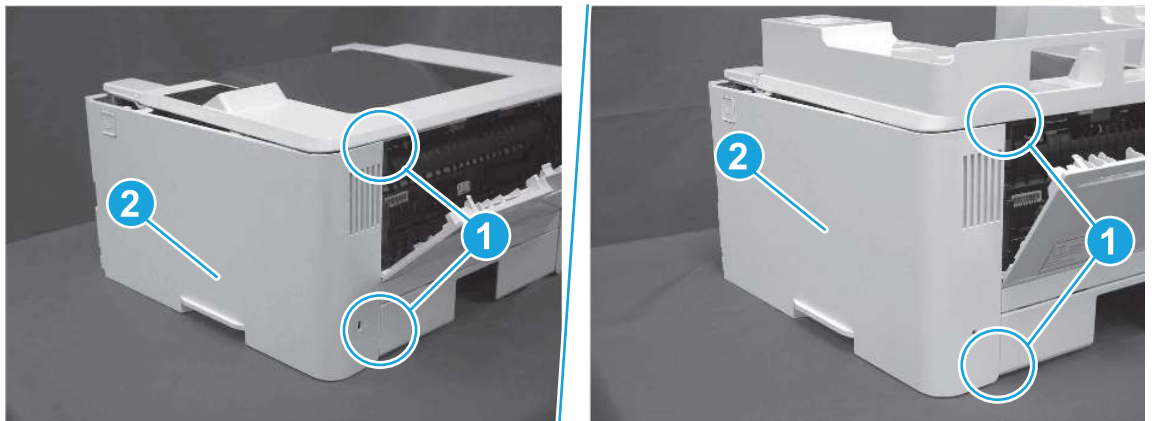


Figure 5-881 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

Figure 5-882 Remove the cover



## 5. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

---

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

If the control panel is not fully tilted forward, tilt it forward now until it stops.

---

**Figure 5-883** Open the ISA



2. Remove one screw (callout 1).

**Figure 5-884** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-885** Release two tabs



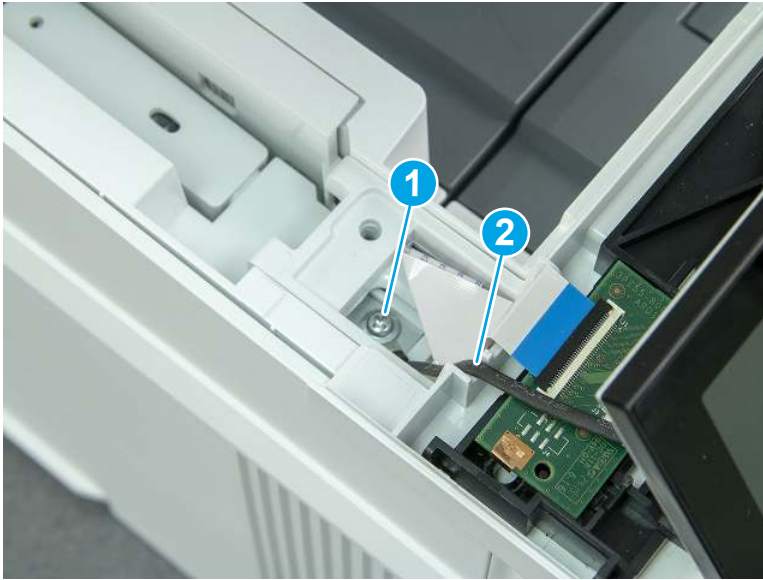
4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-886** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-887** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-888** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-889** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**⚠ CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-890** Remove two screws and remove the control panel assembly

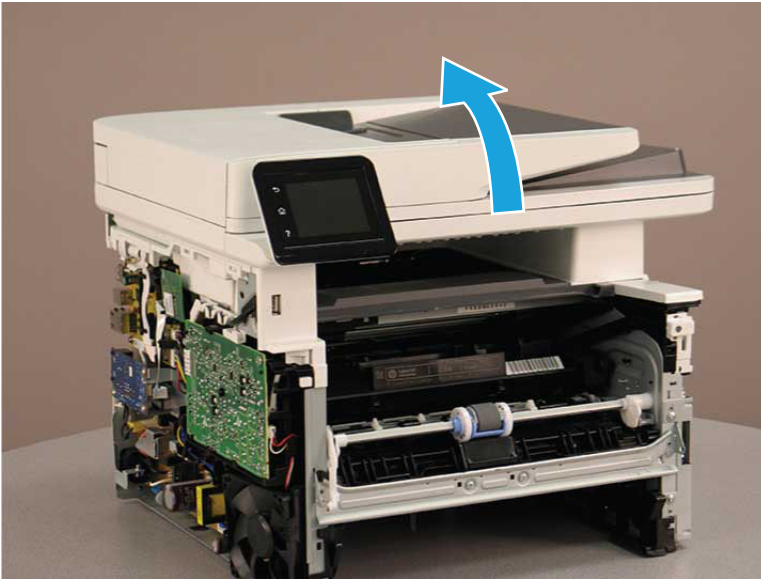


## 6. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

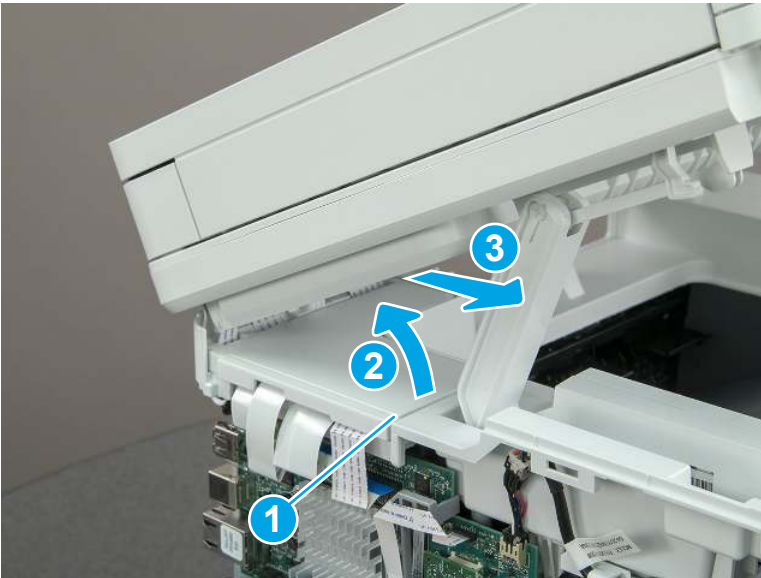
1. If the ISA is not already raised, raise it now.

**Figure 5-891** 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 5-892** Remove the ISA FFC cover



## 7. 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 5-893 Disconnect three FFCs



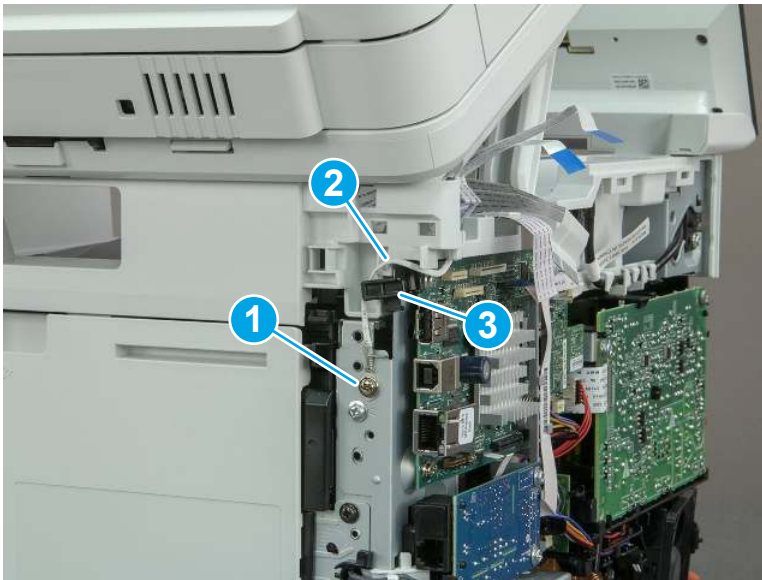
2. Release the tape (callout 1) that holds the flat cables to the top cover.

Figure 5-894 Release the tape



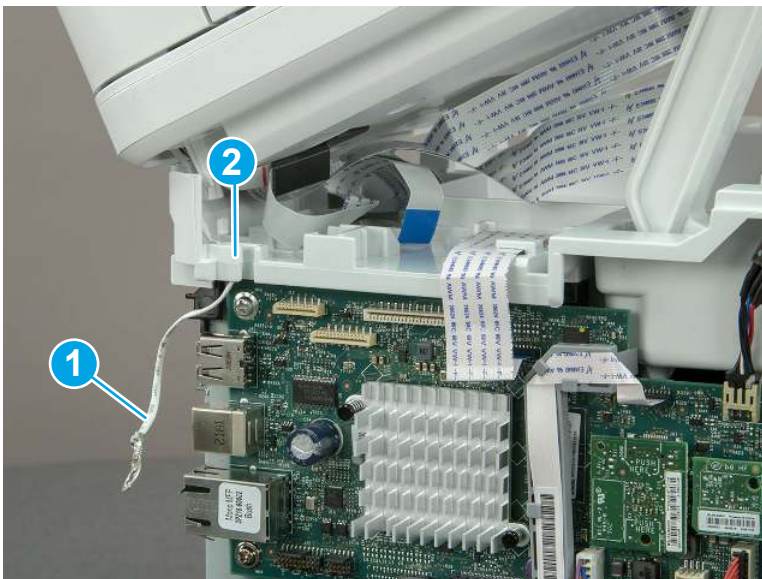
3. Remove one screw (callout 1), and then release the ground wire (callout 2) from the guide (callout 3).

**Figure 5-895** Release the ground wire



4. Release the ground wire (callout 1) from the guide (callout 2).

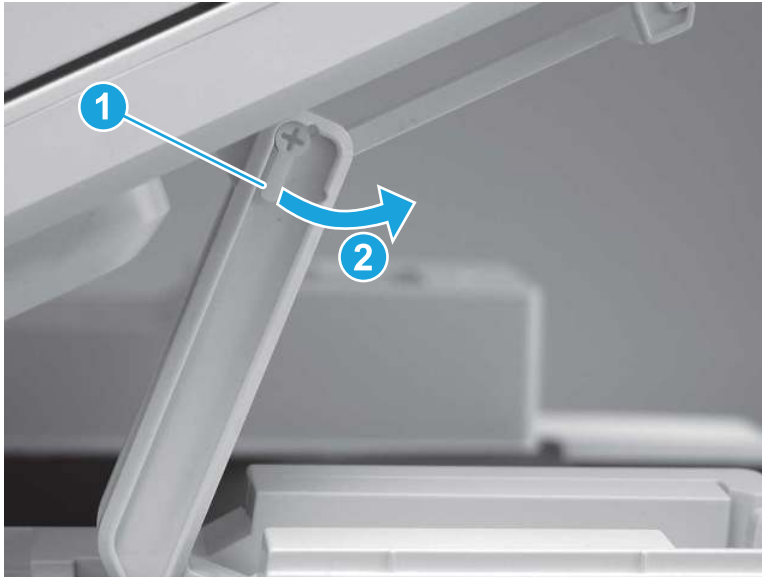
**Figure 5-896** Release the ground wire





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 5-897** 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.

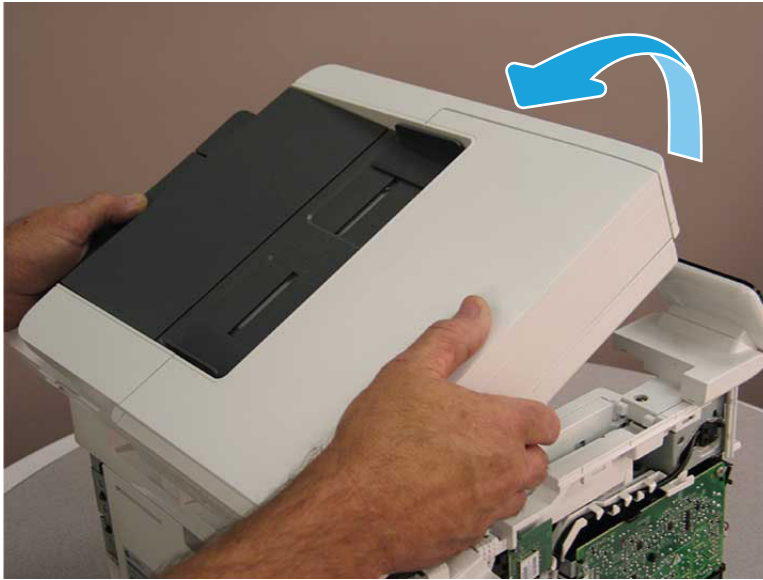
---

**Figure 5-898** Remove the slider pin



7. Rotate the ISA towards the rear of the printer until it stops.

**Figure 5-899** Rotate the ISA towards the rear of the printer



8. Slide the ISA as shown to release it.

**Figure 5-900** Release the ISA



9. Remove the ISA.

Figure 5-901 Remove the ISA

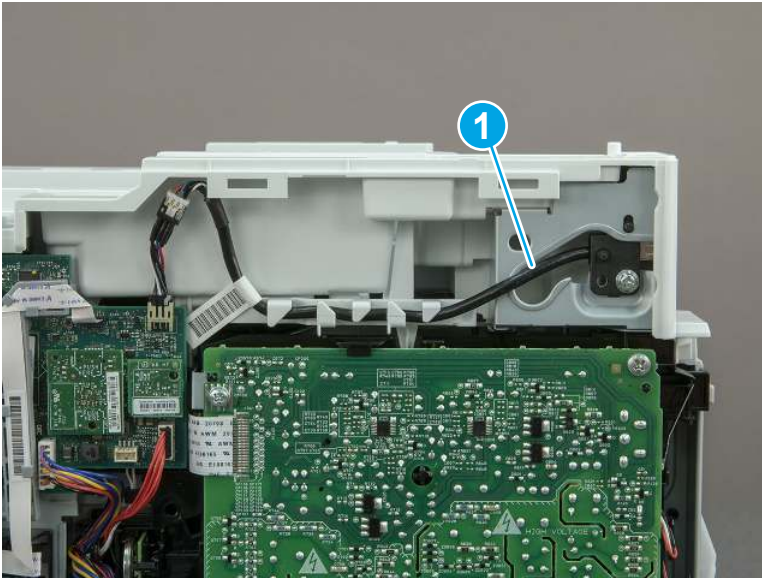


## 8. Remove the top cover (MFP)

Follow these steps to remove the top cover (MFP).

1. Release the USB cable (callout 1) from the cable guide.

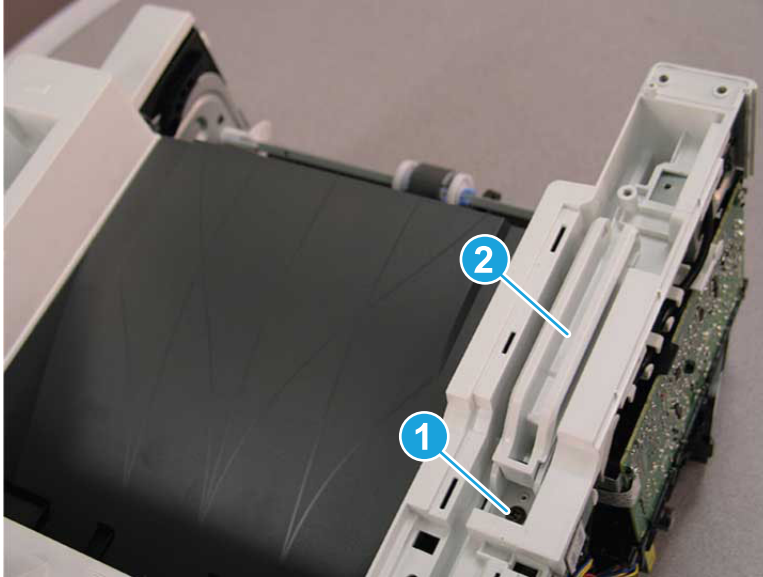
Figure 5-902 Release the USB cable



2. Remove one screw (callout 1), and then remove the support arm (callout 2).

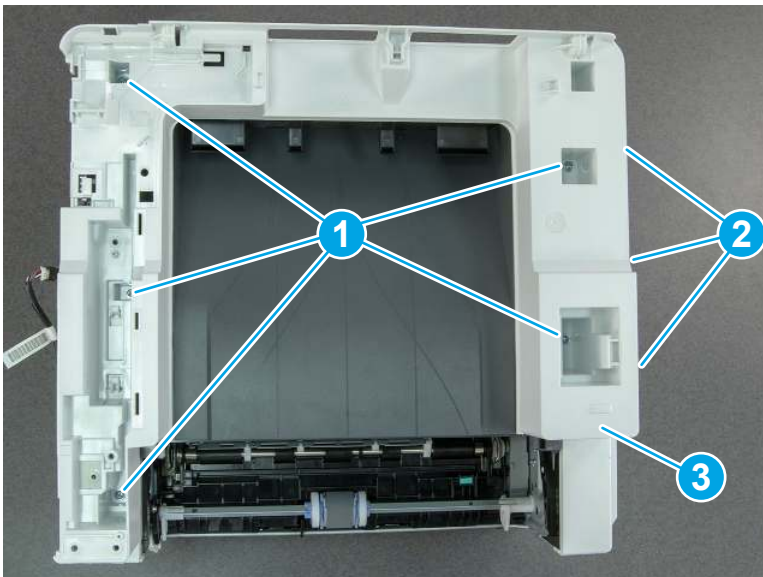
**⚠ CAUTION:** The support arm is spring loaded and can unexpectedly spring into the open position. To avoid injury, do not place a finger in the screw well when the support arm is in the closed position.

Figure 5-903 Remove the support arm



3. Remove five screws (callout 1), release three bosses (callout 2), and then remove the top cover (callout 3).

Figure 5-904 Remove the top cover



## 9. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

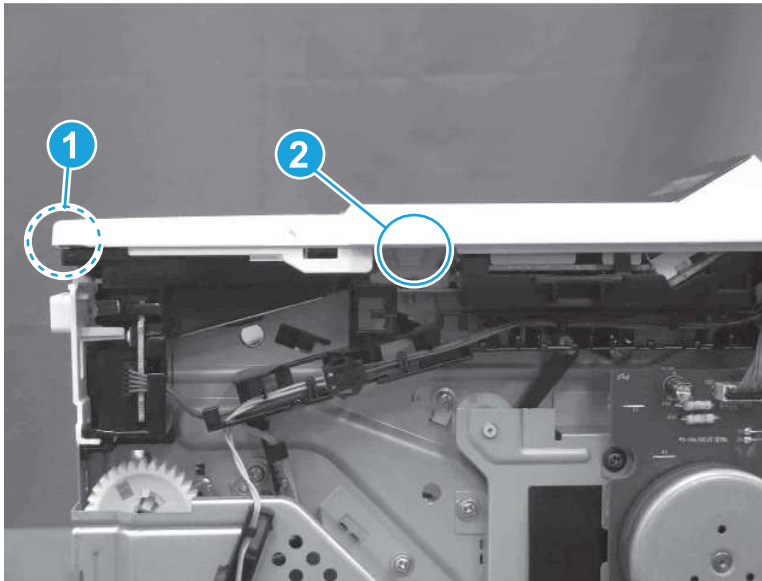
1. Remove one screw.

**Figure 5-905** 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 5-906** Release one boss and one tab



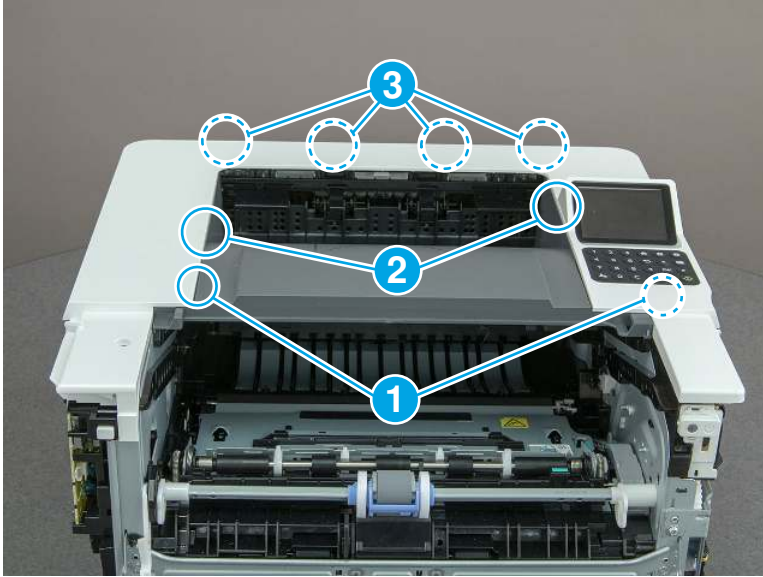
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

Figure 5-907 Remove the cover

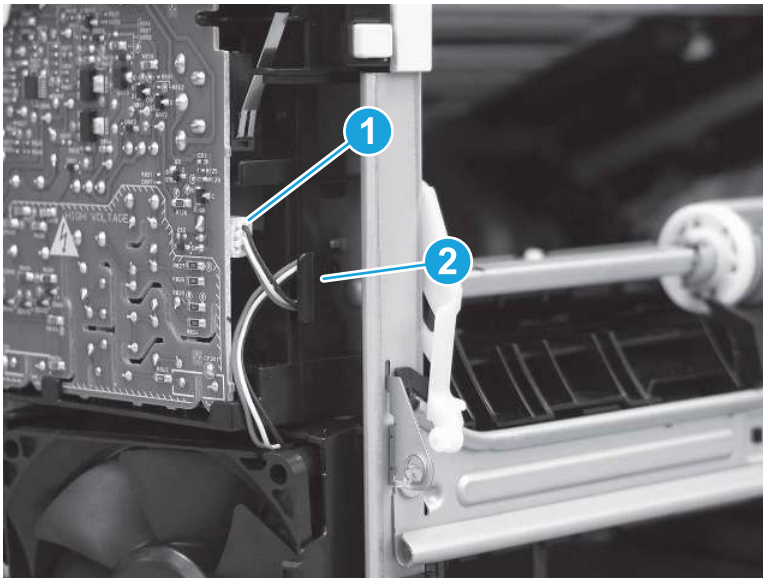


## 10. Remove the fan (FM1)

Follow these steps to remove the fan (FM1).

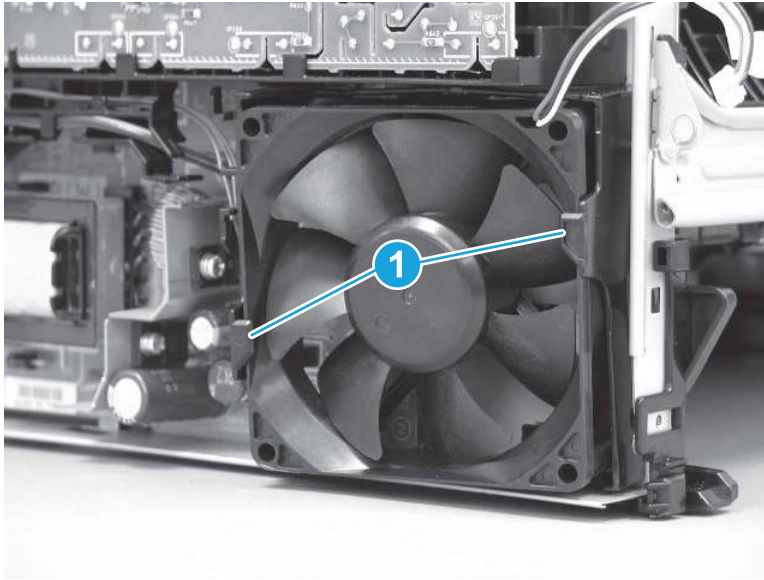
1. Disconnect one connector (callout 1), and then release the wire harness from the retainer (callout 2).

Figure 5-908 Disconnect one connector




2. Release two tabs (callout 1).

**Figure 5-909** Release two tabs



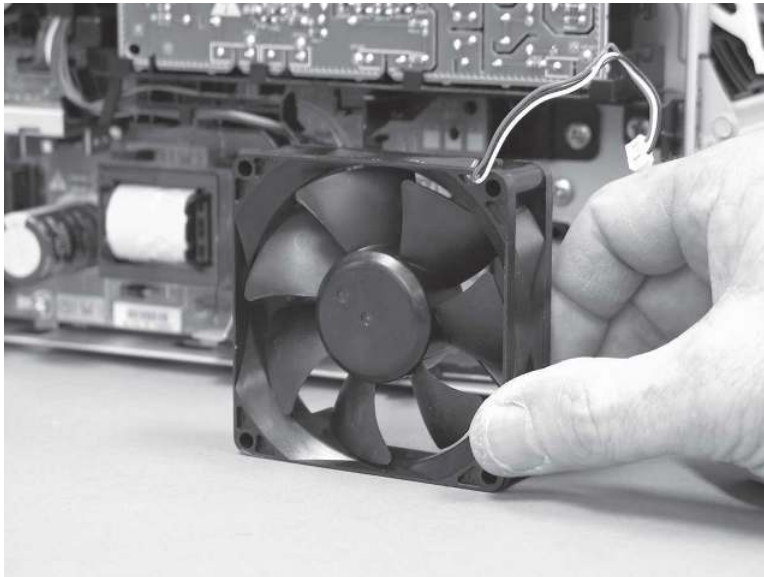
3. Remove the fan.

---

 **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 5-910** Remove the fan

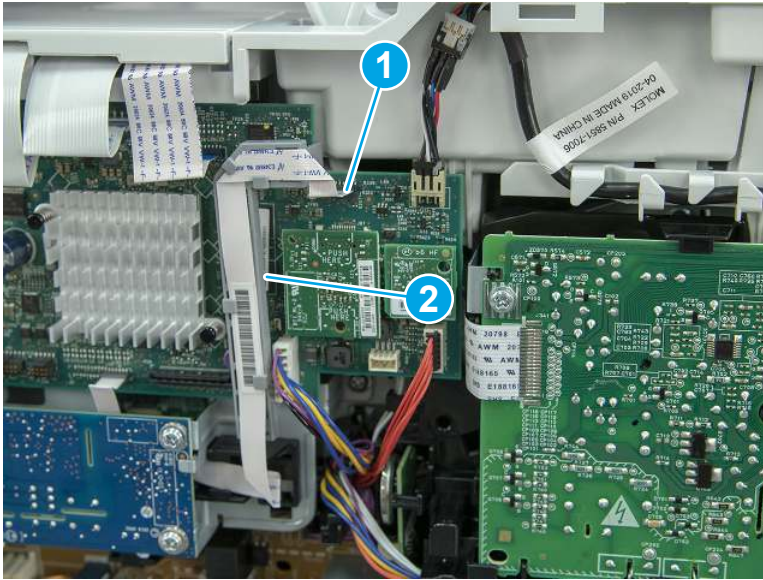


## 11. Remove the fax cable guide and fax PCA (fax models only)

Follow these steps to remove the fax cable guide and fax PCA (fax models only).

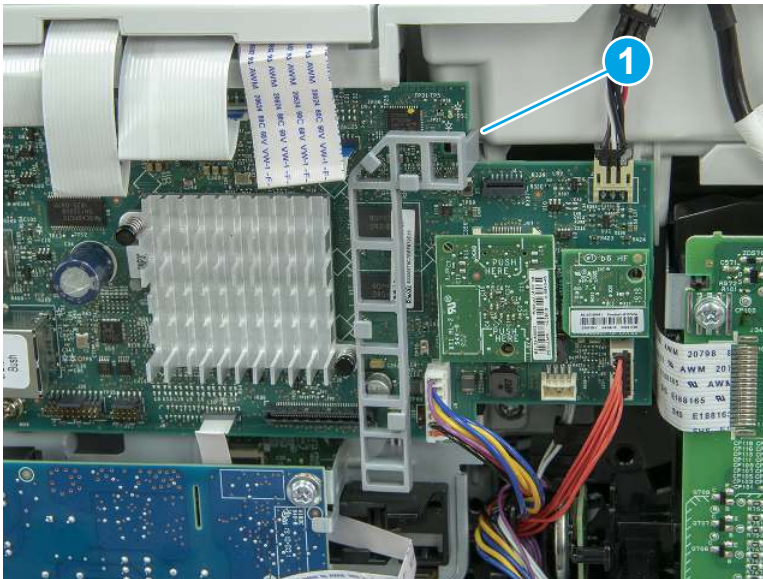
1. Disconnect one connector (callout 1), and then remove the cable from the guide (callout 2).

**Figure 5-911** Remove the cable from the guide



2. Release one tab (callout 1).

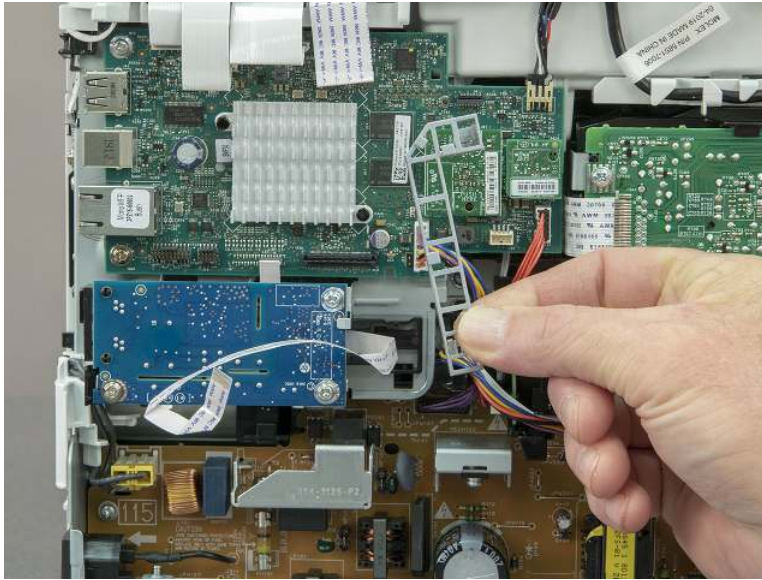
**Figure 5-912** Release one tab





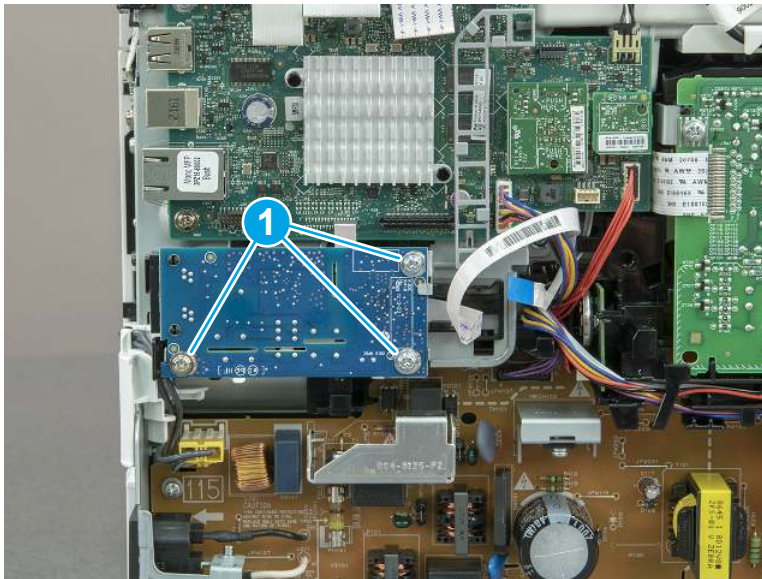
3. Lower the guide to release it from the formatter.

**Figure 5-913** Lower the guide



4. Remove three screws (callout 1), and then remove the fax PCA and cable.

**Figure 5-914** Remove three screws

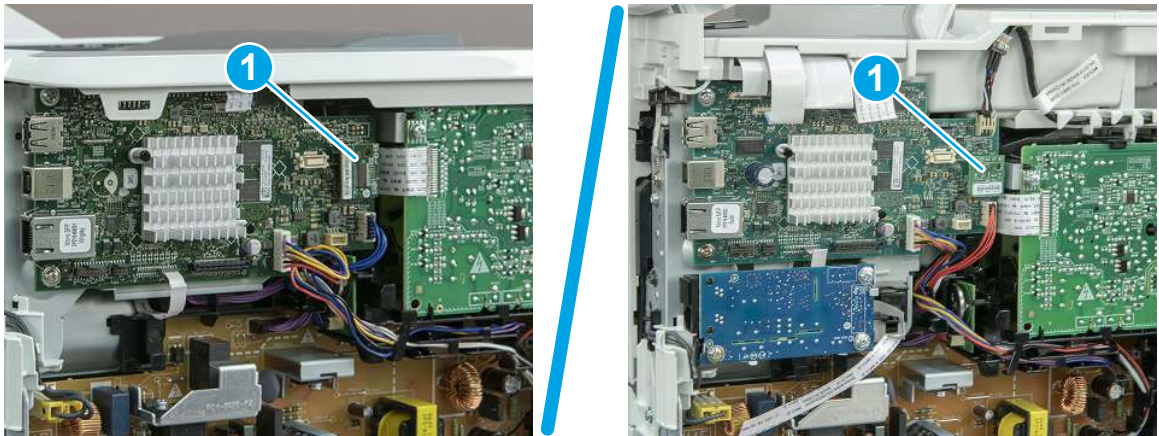


## 12. Remove the Trusted Platform Module (TPM)

Follow these steps to remove the Trusted Platform Module (TPM).

- ▲ Carefully pull the TPM (callout 1) away from the formatter to remove it.

Figure 5-915 Remove the TPM



### 13. Remove the formatter PCA

Follow these steps to remove the formatter PCA.

1. Do one of the following:
  - SFP: Disconnect four connectors (callout 1).
  - MFP: Disconnect eight connectors (callout 1).


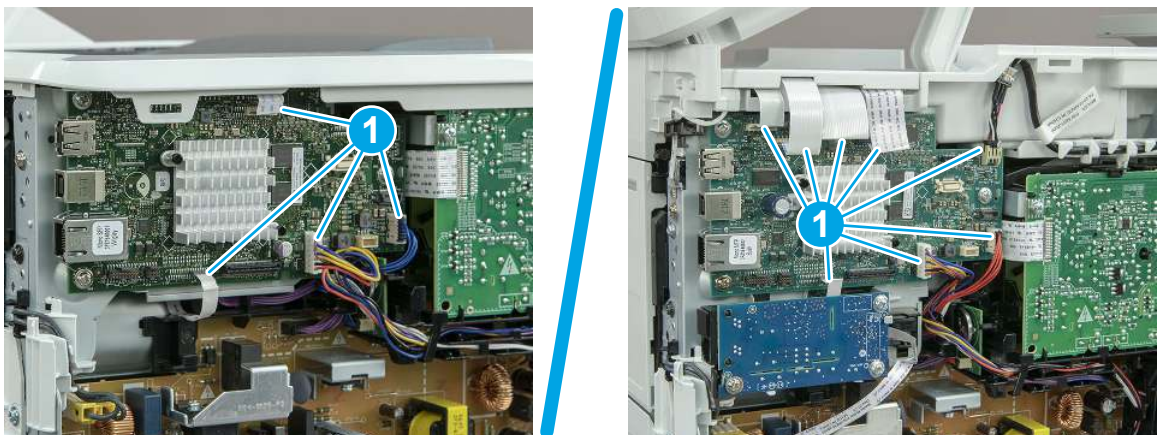
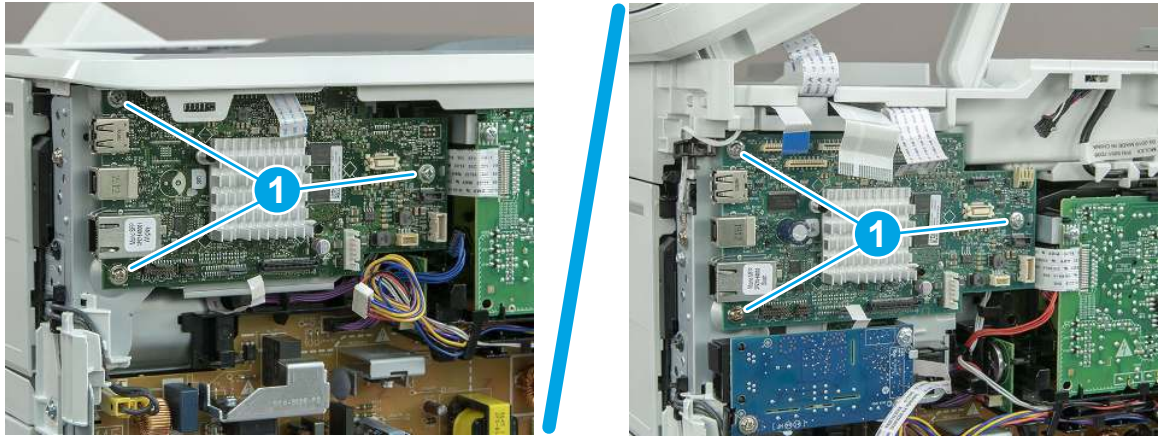
 **IMPORTANT:** Take note of any empty connectors before removing the formatter PCA.

Figure 5-916 SFP/MFP: Disconnect the connectors



2. Remove three screws (callout 1), and then remove the formatter PCA.

Figure 5-917 Remove three screws



## 14. Remove the formatter bracket

Follow these steps to remove the formatter bracket.

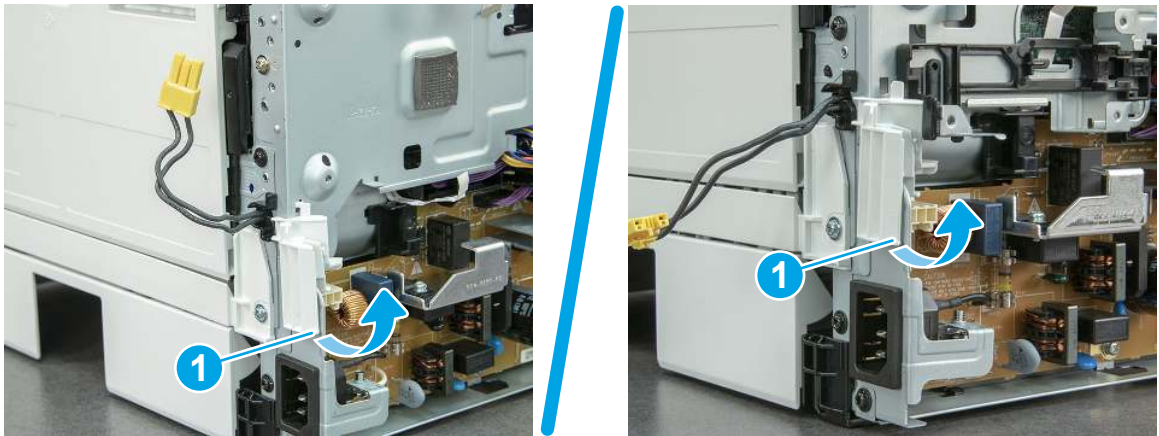
1. Disconnect one connector (callout 1), and then remove the wire harness (callout 2) from the guide (callout 3).

Figure 5-918 SFP/MFP: Remove the wire harness



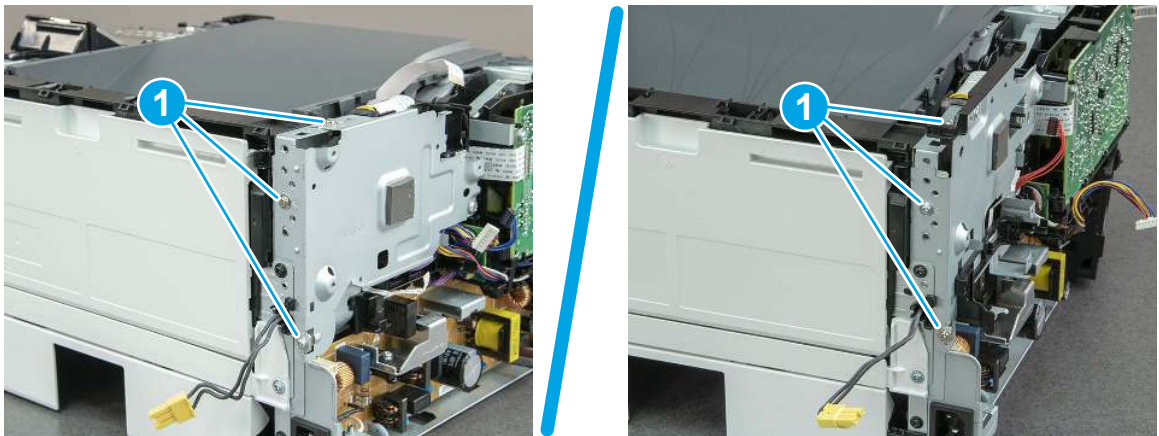
2. Release the front edge (callout 1), and then rotate the wire guide up to remove it.

**Figure 5-919** Remove the wire guide



3. Remove three screws (callout 1).

**Figure 5-920** Remove three screws



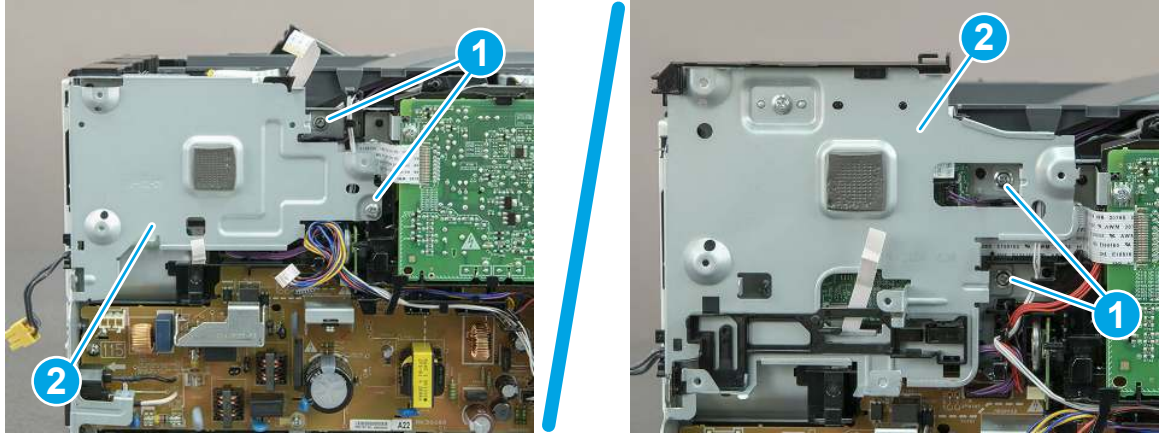
4. Remove two screws (callout 1), and then remove the formatter bracket (callout 2).

---

 **Reinstallation tip:** Do one of the following:

- **SFP:** One screw is larger than the other screw. Make sure screws are installed in the correct locations.
  - **MFP:** These two screws are longer than the previous three screws.
-

Figure 5-921 Remove two screws

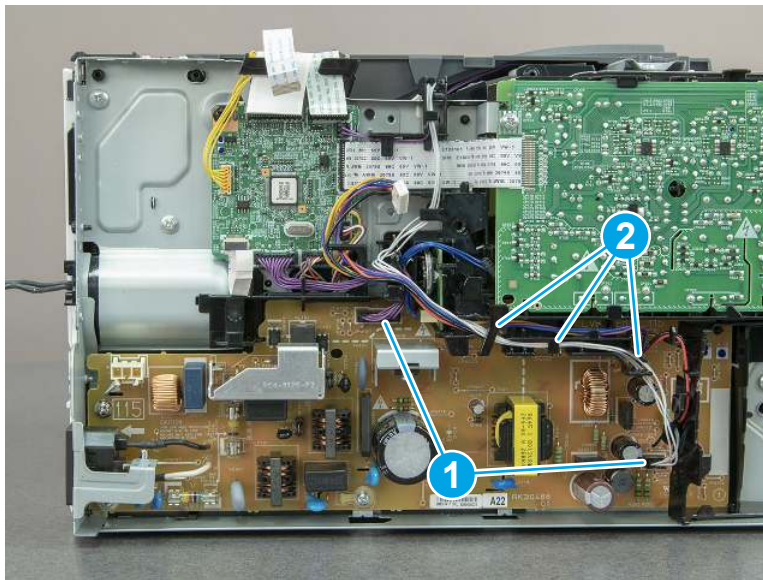


## 15. Remove the LVPS

Follow these steps to remove the LVPS.

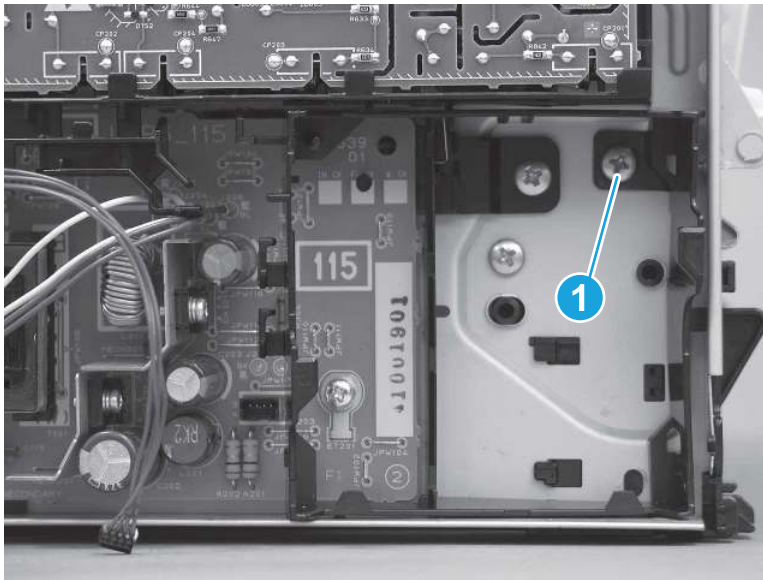
1. Disconnect two connectors (callout 1) on the LVPS, and then release the wire harnesses from the guides (callout 2).

Figure 5-922 Disconnect two connectors



2. Remove one screw (callout 1).

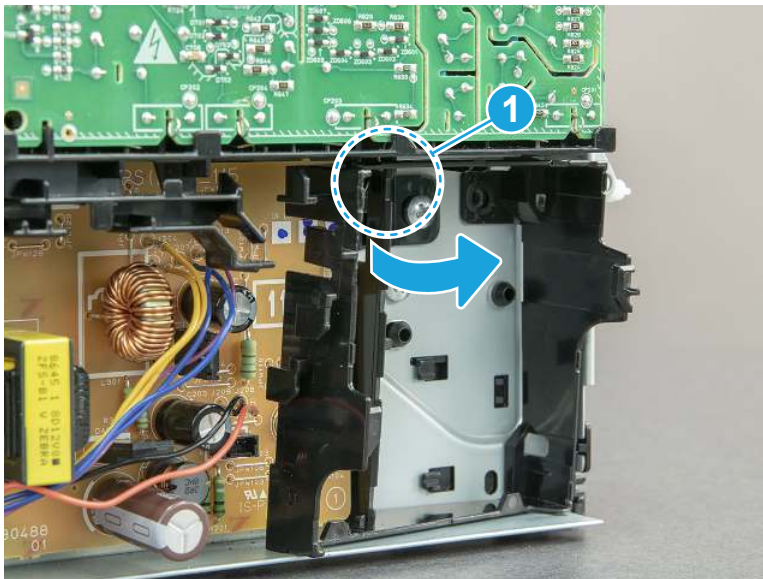
Figure 5-923 Remove one screw



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.

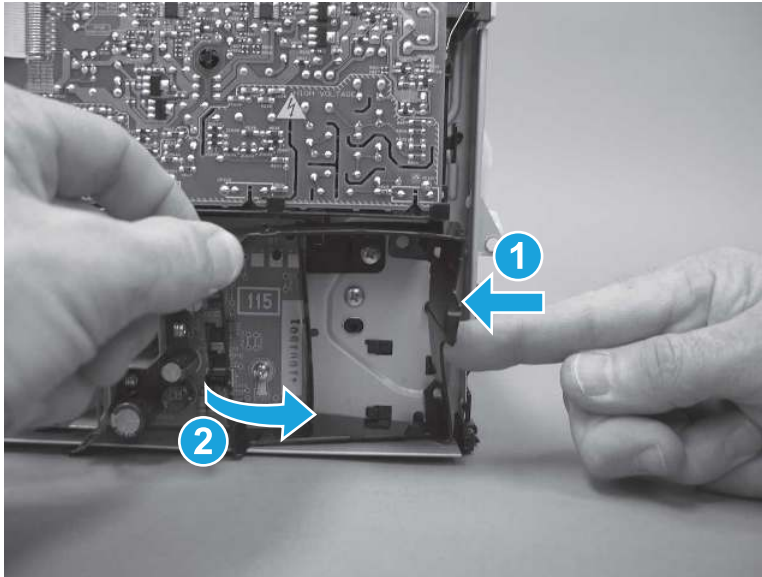
 **Reinstallation tip:** Use a flat blade screwdriver to slightly flex the top of the holder down to make it easier to disengage this tab.

Figure 5-924 Release one tab



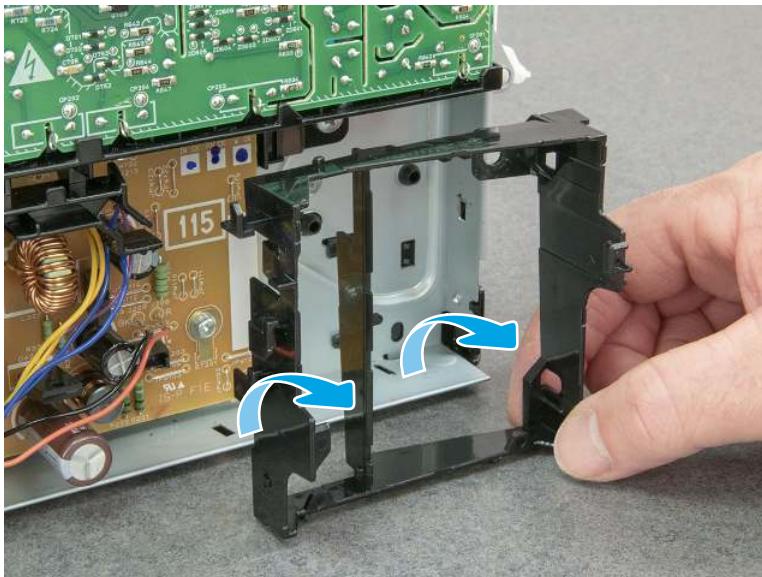
4. Slightly flex the right side of the holder to release one tab (callout 1), and then rotate the top of the holder away from the printer (callout 2).

Figure 5-925 Release one tab



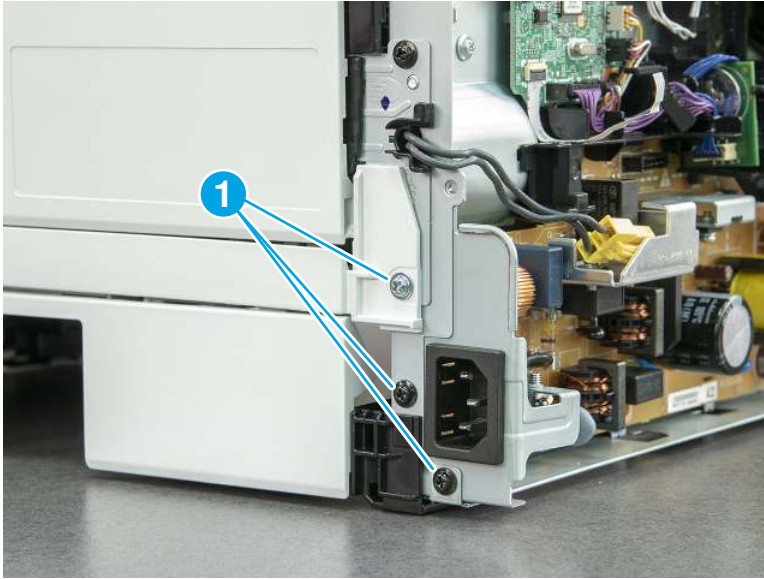
5. Lift the holder up to release two alignment tabs on the bottom of the holder, and then remove the holder.

Figure 5-926 Remove the holder



6. Remove three screws (callout 1).

Figure 5-927 Remove three screws



7. Remove two screws (callout 1).

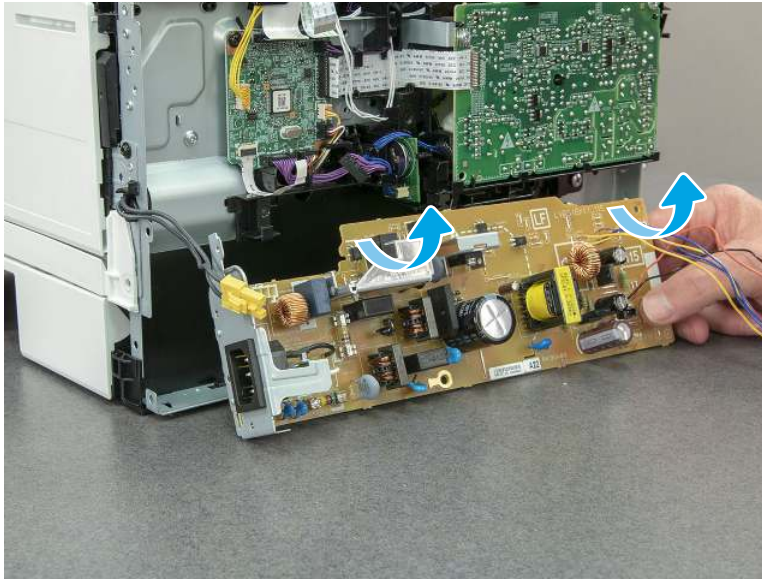
Figure 5-928 Remove two screws





8. Rotate the bottom of the LVPS away from the printer, and then remove the LVPS.

**Figure 5-929** Remove the LVPS



## 16. 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 5-49** Part information

Part number	Part description
RM2-2959-000CN	Control panel kypd/FFC 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 5-930 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).

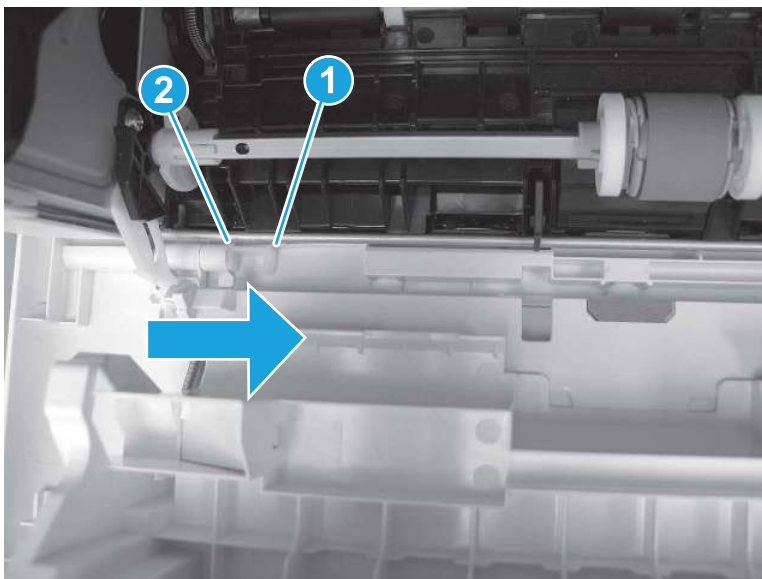
---

 **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.

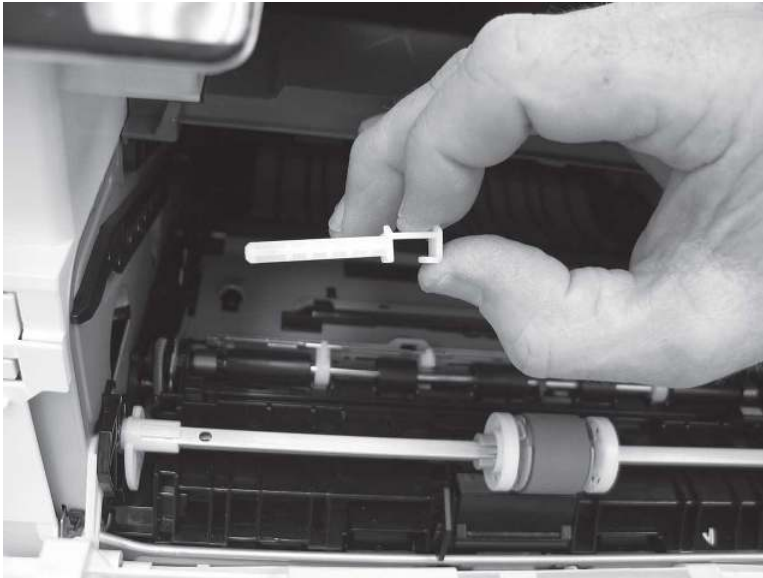
---

Figure 5-931 Release the support shaft



2. Remove the support shaft.

**Figure 5-932** 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.

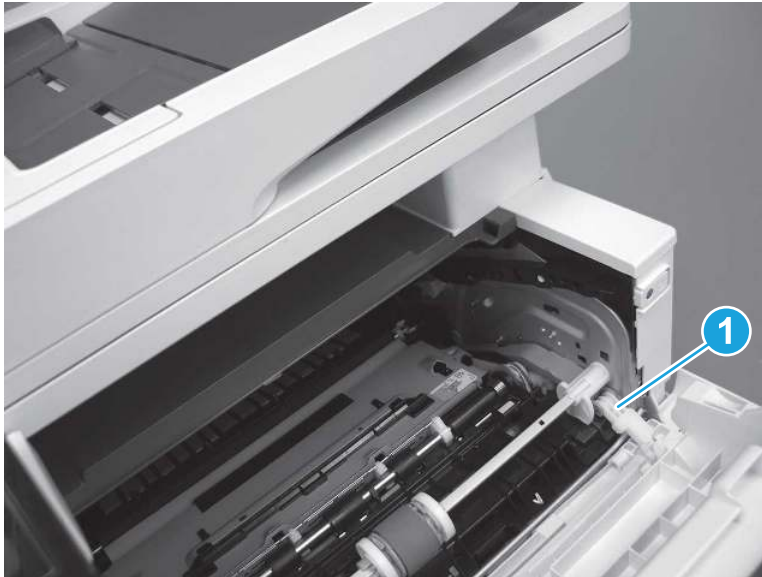
---

**Figure 5-933** 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 5-934** Release the pressure-release link

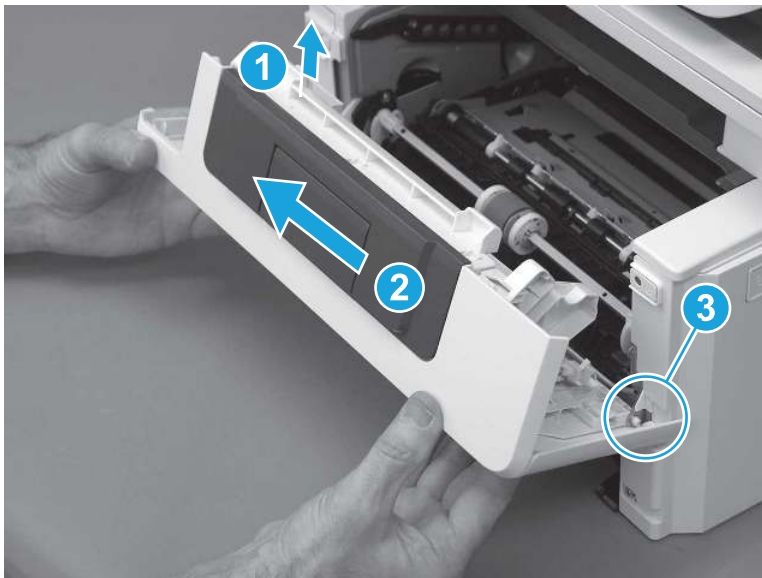


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

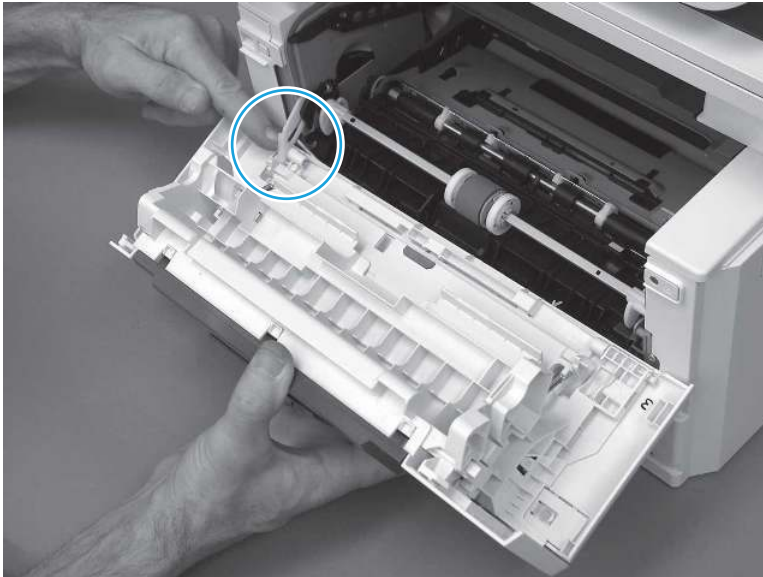
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-935** Release the door



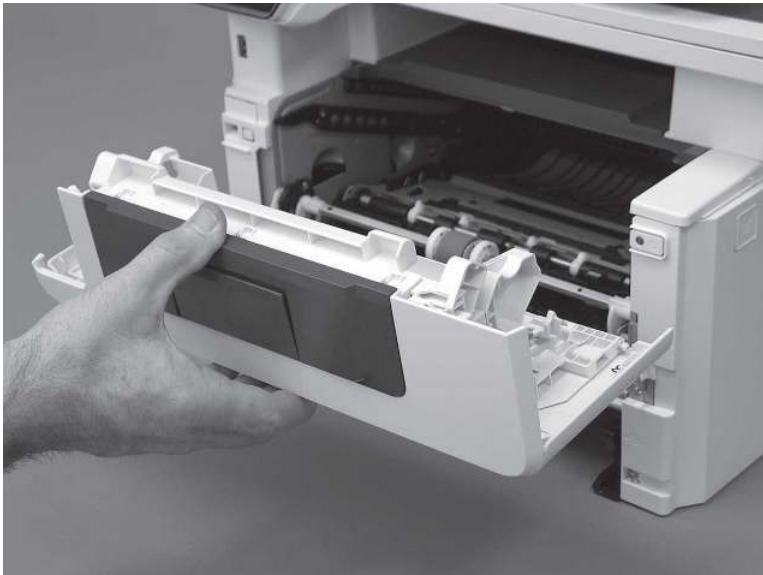
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-936** Release the left-side retainer arm



7. Remove the door.

**Figure 5-937** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

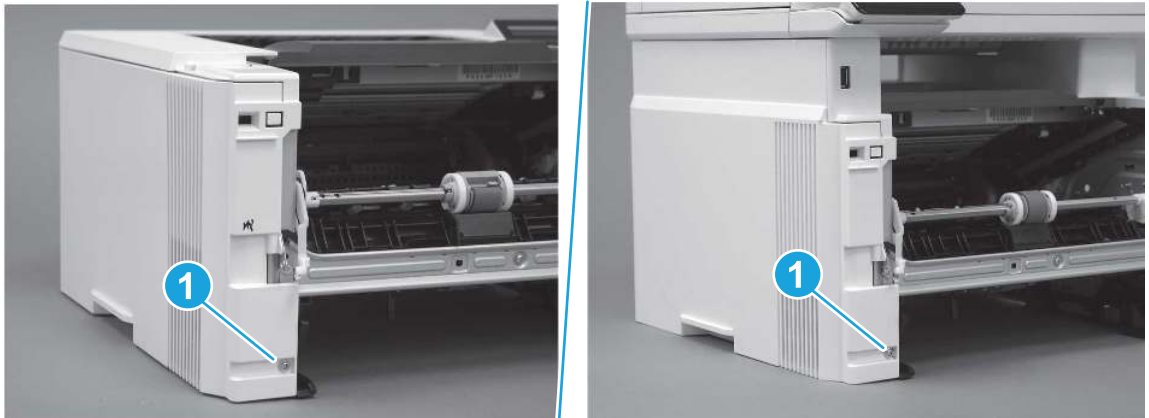
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

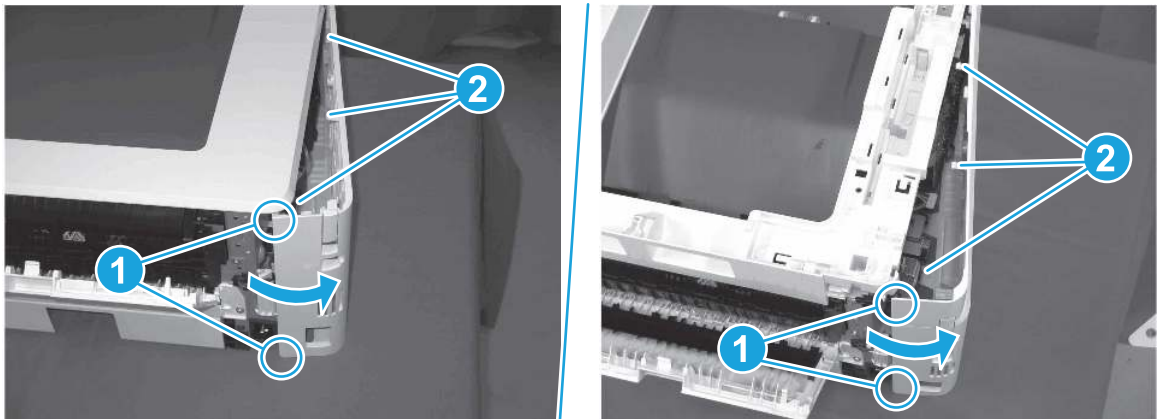
1. Remove one screw (callout 1).

**Figure 5-938** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-939** Release two bosses and three tabs



3. At the front of the printer, do one of the following:

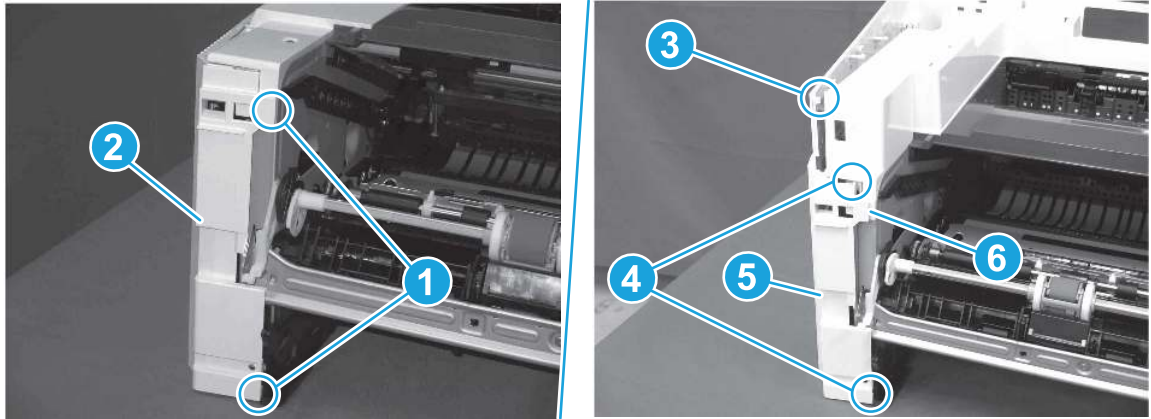
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**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 5-940 Remove the cover



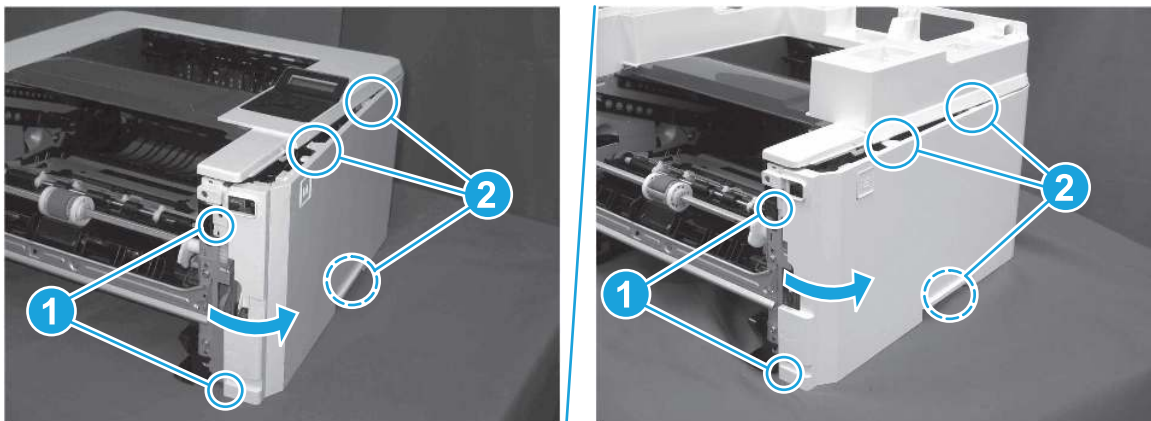
#### 4. Remove the right cover

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.

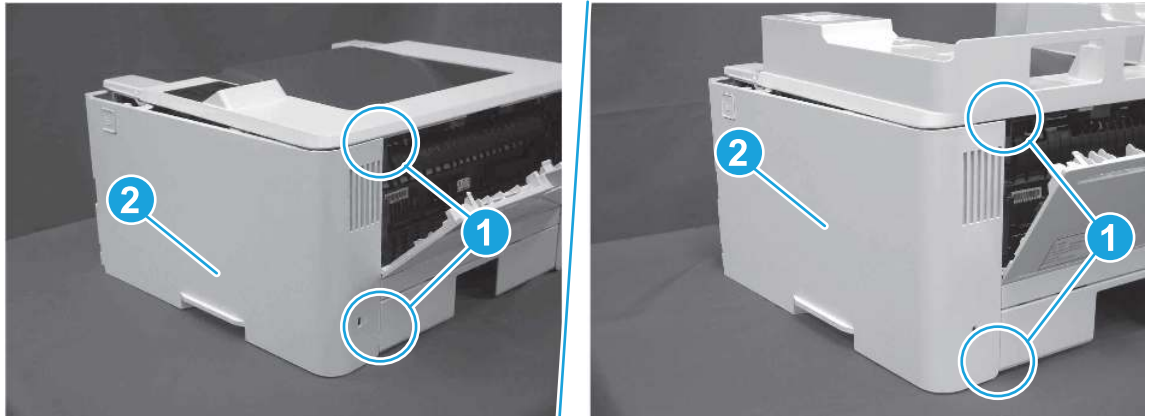
Figure 5-941 Release two bosses and three tabs





2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-942** Remove the cover



## 5. Remove the top cover (SFP only)

Follow these steps to remove the top cover (SFP only).

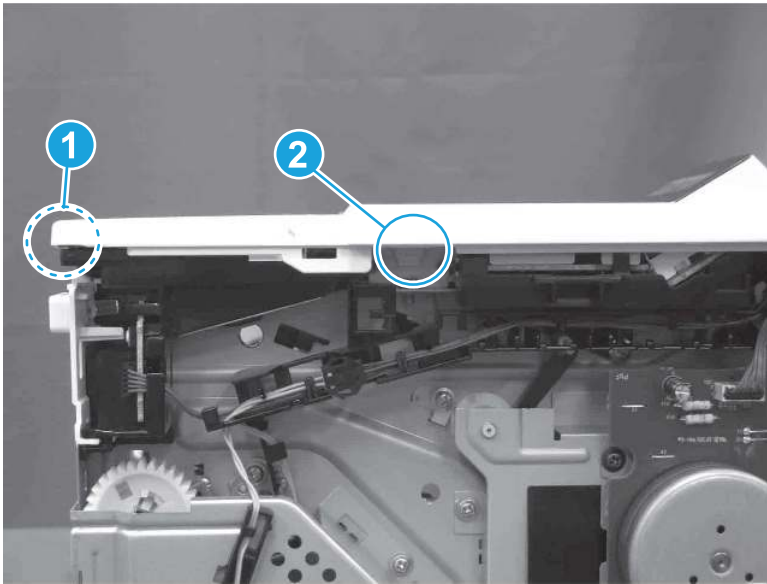
1. Remove one screw.

**Figure 5-943** 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 5-944** Release one boss and one tab



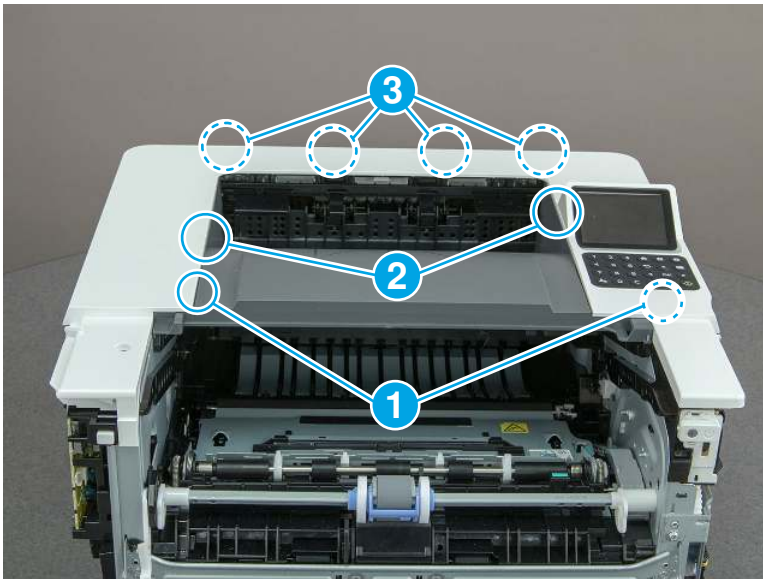
3. Starting at the front of the printer, lift the cover to release two tabs (callout 1), release two tabs along the center of the cover (callout 2), and then release four bosses (callout 3) to remove the top cover.

---

 **TIP:** Open the rear door to make releasing the bosses (callout 3) easier.

---

**Figure 5-945** Remove the cover

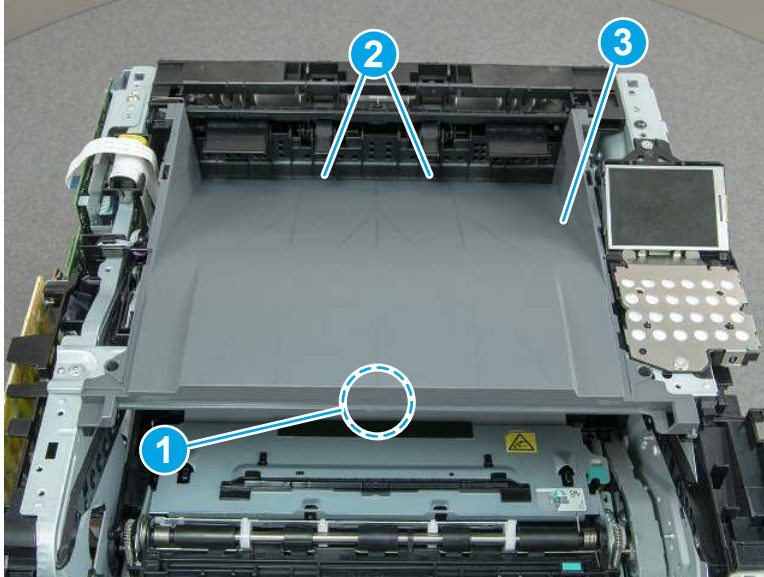


## 6. Remove the paper delivery tray (output bin)

Follow these steps to remove the paper delivery tray (output bin).

- ▲ Release one tab (callout 1), release two bosses (callout 2), and then remove the paper delivery tray (output bin; callout 3).

Figure 5-946 Remove the cover

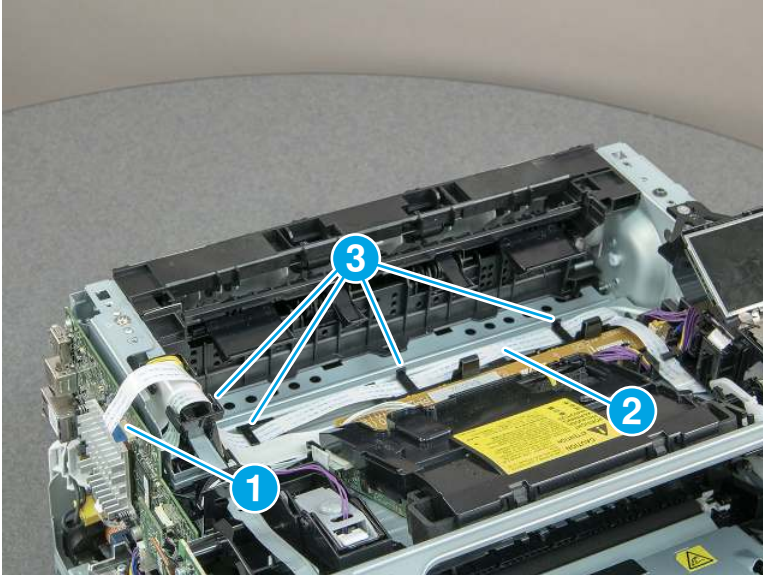


## 7. Remove the control-panel assembly (SFP)

Follow these steps to remove the control-panel assembly (SFP).

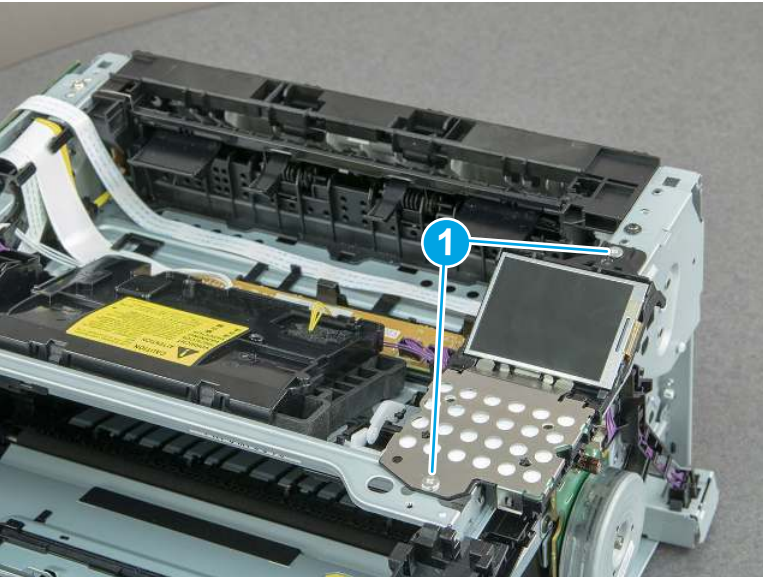
1. Disconnect one FFC (callout 1), and then remove the FFC (callout 2) from the guide (callout 3).

**Figure 5-947** Remove the FFC from the guide



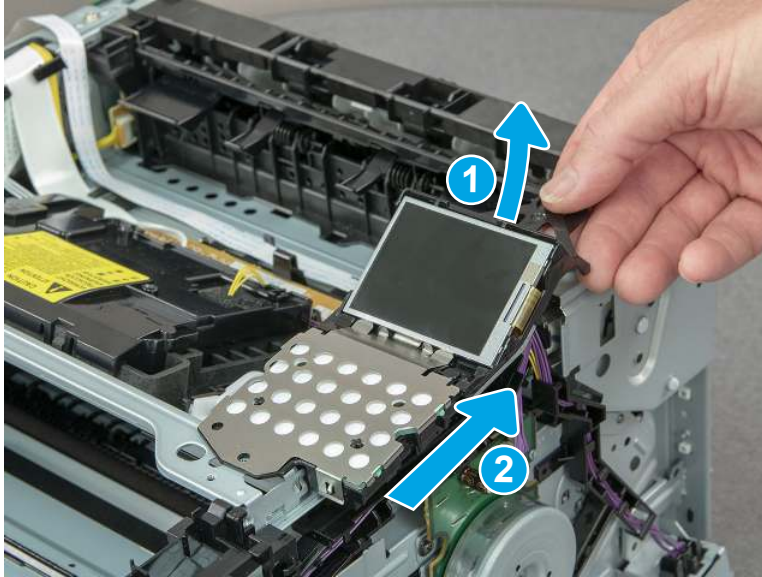
2. Remove two screws (callout 1).

**Figure 5-948** Remove two screws



3. Lift the back edge of the control panel assembly (callout 1), and then slide it toward the rear of the printer to remove it (callout 2).

**Figure 5-949** Remove the control panel assembly



## 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)

Learn how to remove and replace the control panel assembly (MFP).

[View a video of how to remove and replace the control-panel assembly.](#)

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 5-50** Part information

Part number	Part description
3PZ55-67901	Control panel 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 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 5-950 Open the ISA



2. Remove one screw (callout 1).

Figure 5-951 Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

Figure 5-952 Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

Figure 5-953 Remove the cover



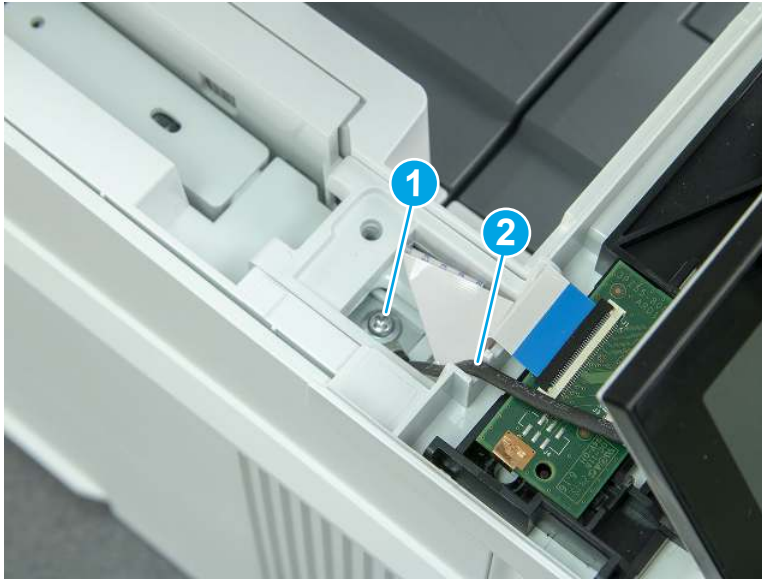
## 2. Remove the control panel (MFP only)

Follow these steps to remove the control panel (MFP only).



1. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-954** Remove one screw



2. Lift the latch to disconnect one FFC (callout 1).

**Figure 5-955** Disconnect one flat cable



3. Slide the control panel assembly to the right.

**Figure 5-956** Slide the control panel display



4. Rotate the assembly toward the front of the printer, and then remove the assembly.

**Figure 5-957** Remove the control-panel 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.

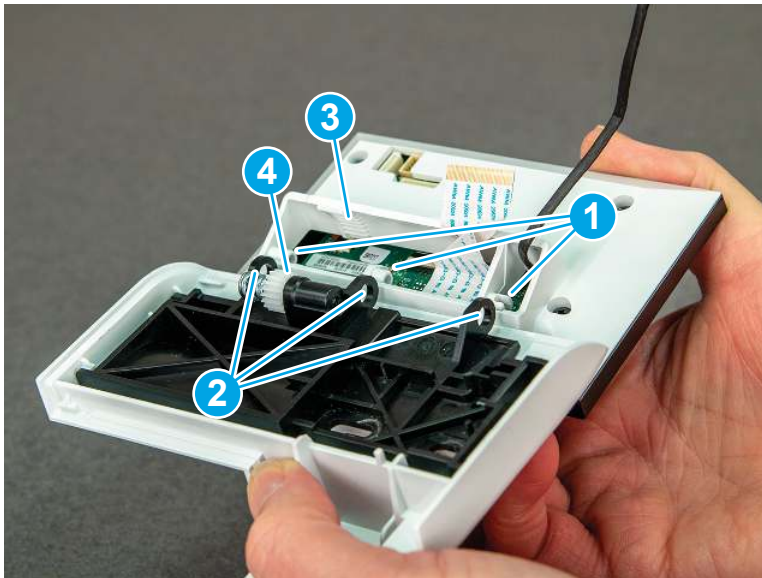
#### 4. Reverse the removal steps to install the assembly

Also use the following **special installation instructions**.

Install the control panel assembly.

- ▲ When installing the MFP control panel assembly, align the hinge pins (callout 1) on the assembly with the hinge guides (callout 2) on the control panel base, and then align the grooves (callout 3) on the control panel assembly with the teeth (callout 4) on the gear on the control panel base.

**Figure 5-958** Install the control panel assembly



### Removal and replacement: Control panel interconnect board (MFP)

Learn how to remove and replace the MFP control panel interconnect board (ICB).

[View a video of how to remove and replace the control panel ICB.](#)

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 5-51** Part information

Part number	Part description
3PZ55-67903	CP interconnect board and ground clip kit

## 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 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 5-959 Open the ISA



2. Remove one screw (callout 1).

Figure 5-960 Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-961** Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-962** Remove the cover

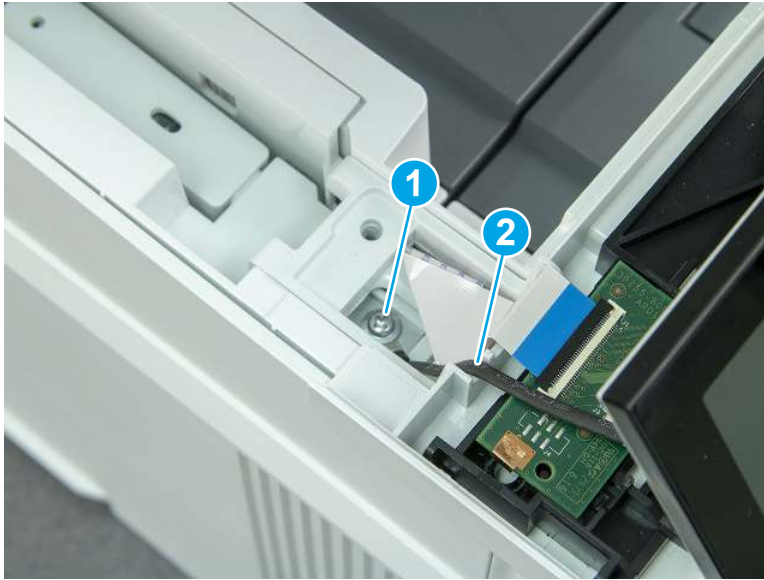


## 2. Remove the control panel interconnect board (ICB)

Follow these steps to remove the control panel interconnect board (ICB).

1. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-963** Remove one screw



2. Disconnect two FFC (callout 1).

**Figure 5-964** Disconnect two FFC



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

**Figure 5-965** Remove the ICB



### 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. Reverse the removal steps to install the assembly

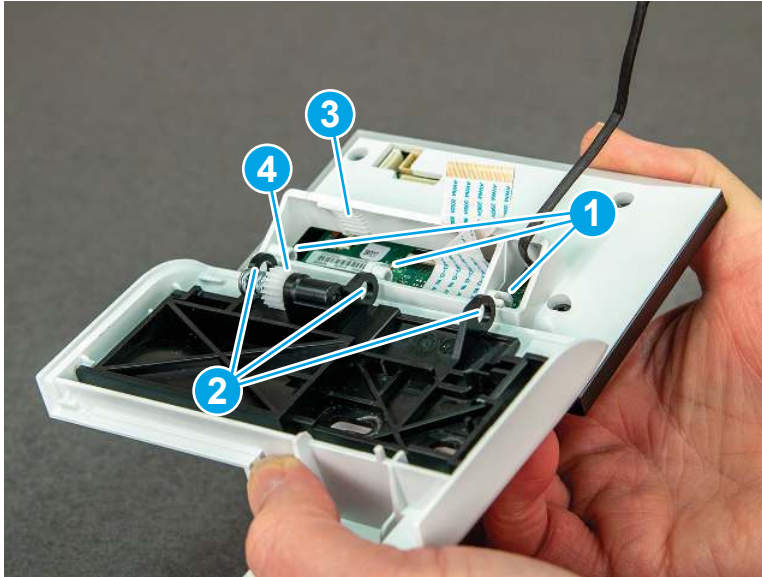
Also use the following **special installation instructions**.



Install the control panel assembly.

- ▲ When installing the MFP control panel assembly, align the hinge pins (callout 1) on the assembly with the hinge guides (callout 2) on the control panel base, and then align the grooves (callout 3) on the control panel assembly with the teeth (callout 4) on the gear on the control panel base.

**Figure 5-966** Install the control panel assembly



## Removal and replacement: Control panel mount base and interconnect board chassis (MFP)

Learn how to remove and replace the MFP control panel mount base and the interconnect board (ICB) chassis mount.

[View a video of how to remove and replace the control panel mount base and the ICB chassis mount.](#)

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 5-52** Part information

Part number	Part description
3PZ55-67904	Control panel ICB chassis mount
3PZ55-67984	Control panel mount base

## 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 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 5-967** Open the ISA



2. Remove one screw (callout 1).

**Figure 5-968** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-969** Release two tabs



4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-970** Remove the cover

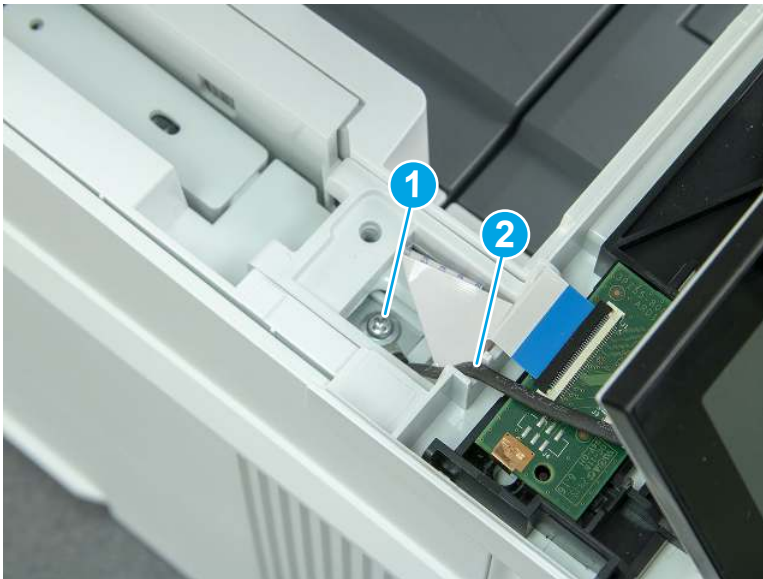


## 2. Remove the control panel (MFP only)

Follow these steps to remove the control panel (MFP only).

1. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-971** Remove one screw



2. Lift the latch to disconnect one FFC (callout 1).

**Figure 5-972** Disconnect one flat cable



3. Slide the control panel assembly to the right.

**Figure 5-973** Slide the control panel display



4. Rotate the assembly toward the front of the printer, and then remove the assembly.

**Figure 5-974** Remove the control-panel assembly

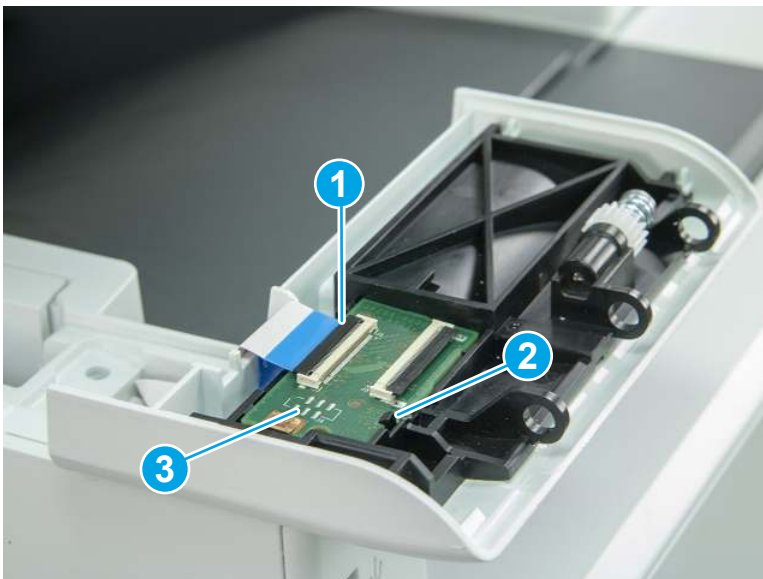


### 3. Remove the control panel mount base (MFP only)

Follow these steps to remove the control panel mount base (MFP only).

1. Release one connector (callout 1), release one tab (callout 2), and then remove the interconnect board (ICB) (callout 3).

**Figure 5-975** Remove the ICB



2. Remove two screws (callout 1).

**Figure 5-976** Remove two screws



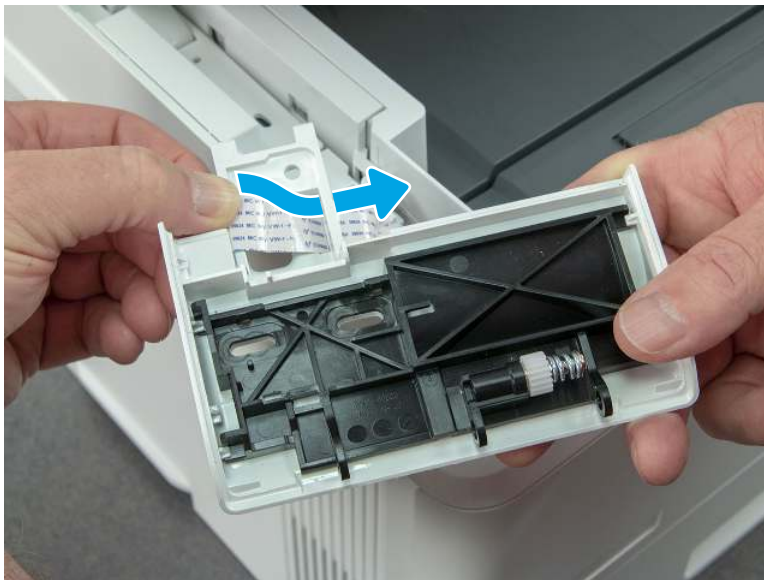
3. Lift the control panel mount base to remove it.

---

**⚠ CAUTION:** Carefully unfold the flat cables and release them through the opening in the mount base.

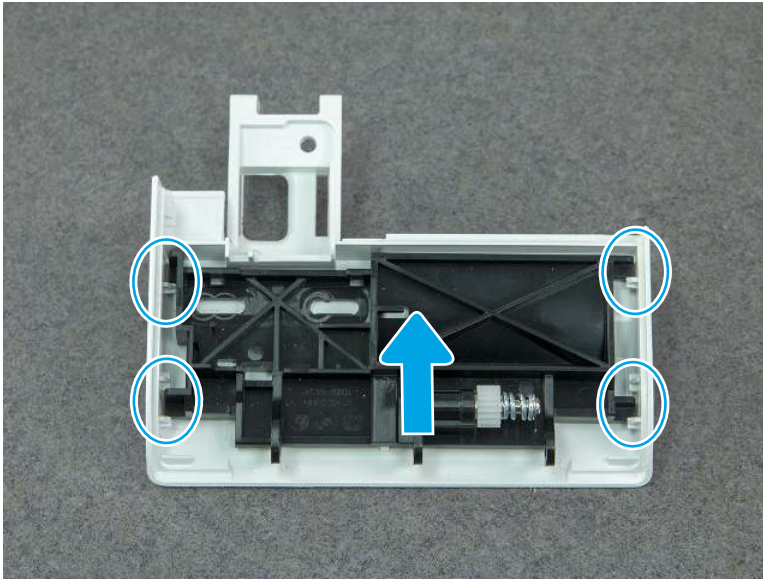
---

**Figure 5-977** Remove control panel mount base



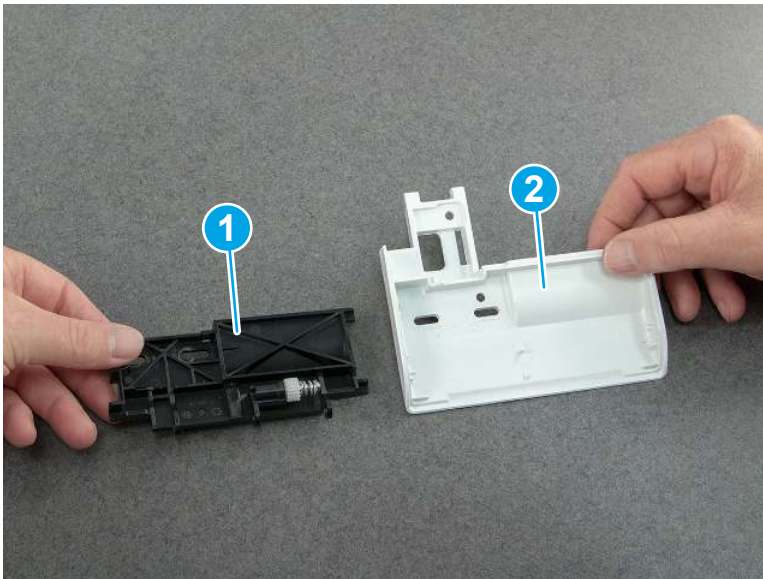
- Slide the chassis mount assembly toward the back of the control panel base to release it from four bosses.

**Figure 5-978** Release the chassis mount assembly



- Separate the chassis mount assembly (callout 1) from the mount base (callout 2).

**Figure 5-979** Remove the chassis mount assembly



#### 4. Unpack the replacement assembly

Follow these steps to unpack the replacement assembly.

- 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.

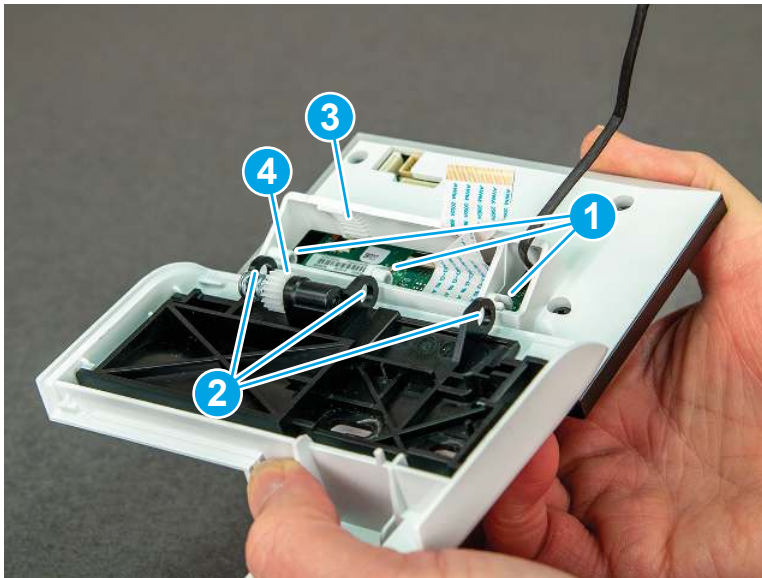
## 5. Reverse the removal steps to install the assembly

Also use the following **special installation instructions**.

Install the control panel assembly.

- ▲ When installing the MFP control panel assembly, align the hinge pins (callout 1) on the assembly with the hinge guides (callout 2) on the control panel base, and then align the grooves (callout 3) on the control panel assembly with the teeth (callout 4) on the gear on the control panel base.

**Figure 5-980** Install the control panel assembly



## Removal and replacement: Control panel cable and cable cover (MFP)

Learn how to remove and replace the MFP control panel cable and cover.

[View a video of how to remove and replace the control panel cable and cover.](#)

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 5-53** Part information

Part number	Part description
3PZ55-67910	Cable, flexible flat control panel to frmtr
3PZ55-67905	Cover, control-panel 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.

## 1. Remove Tray 2

Follow these steps to remove Tray 2.

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

Figure 5-981 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).

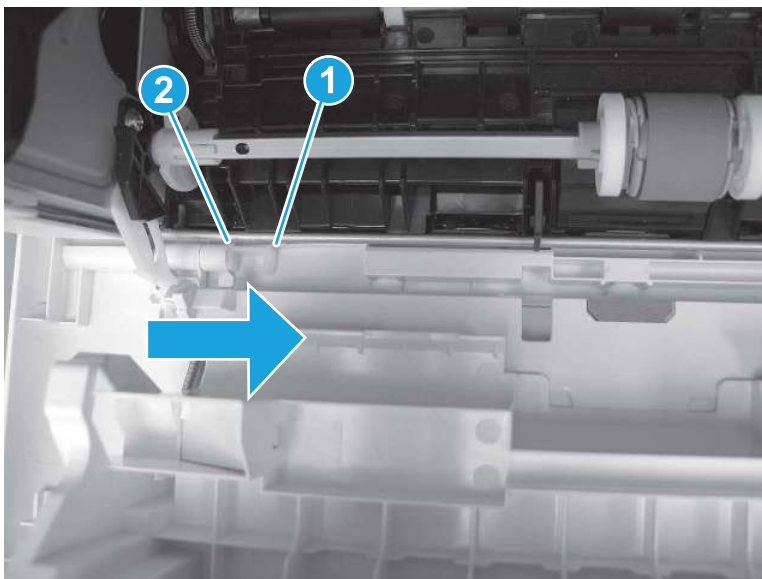
---

 **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.

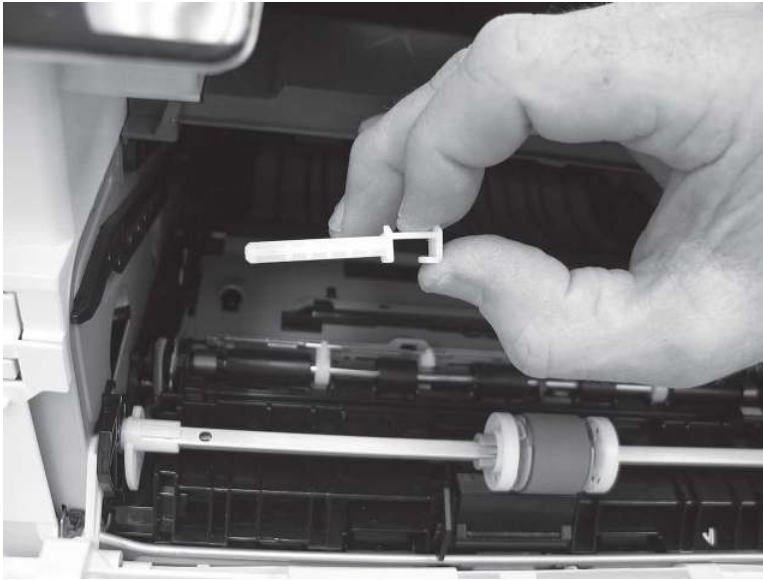
---

Figure 5-982 Release the support shaft



2. Remove the support shaft.

**Figure 5-983** 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.

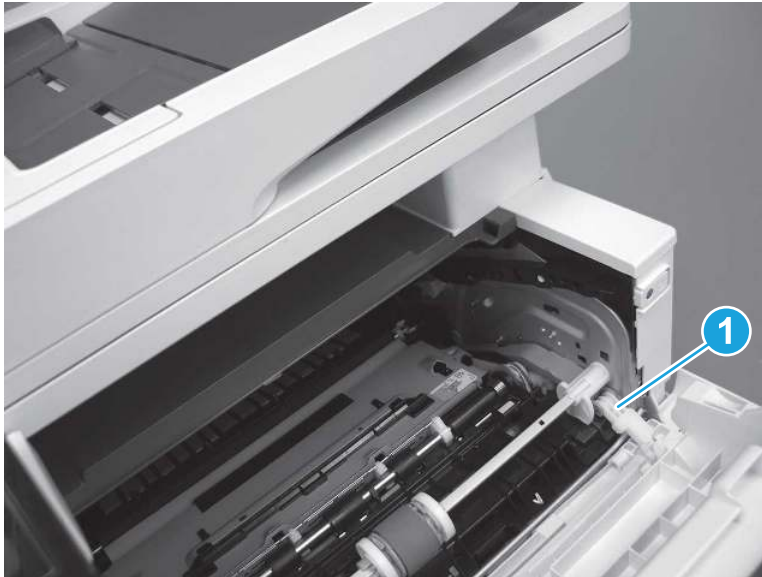
---

**Figure 5-984** 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 5-985** Release the pressure-release link

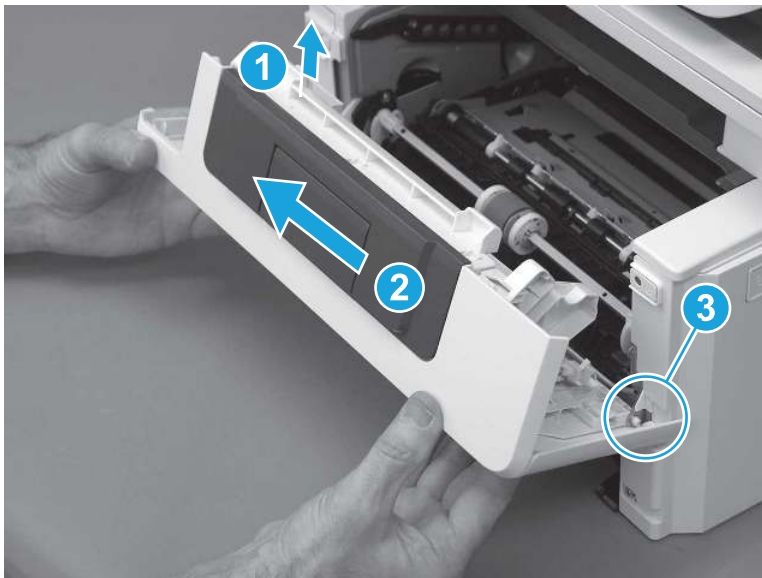


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

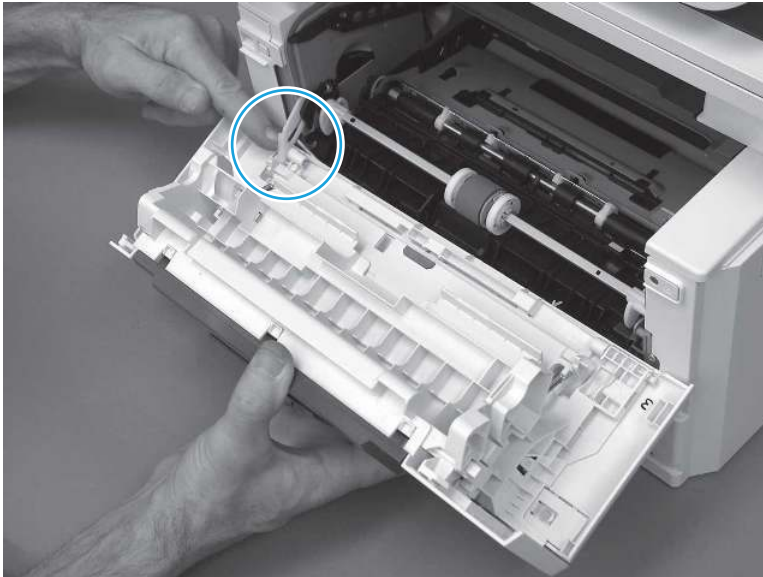
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-986** Release the door



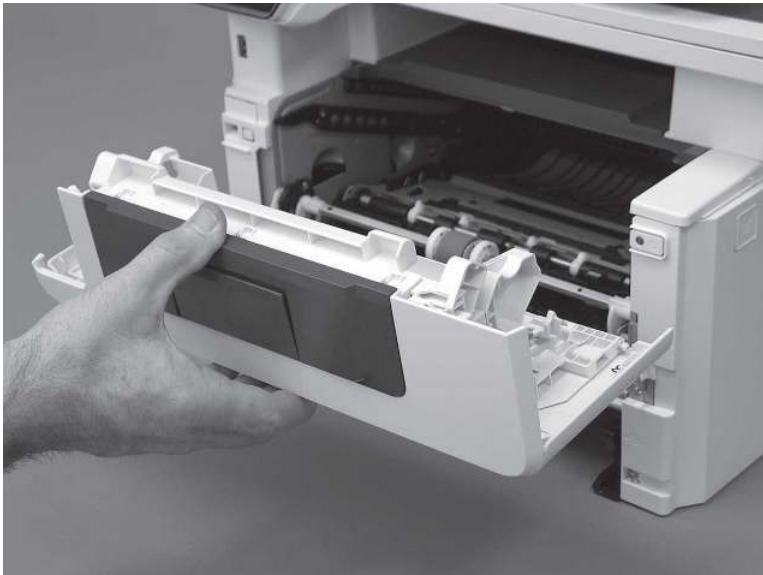
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-987** Release the left-side retainer arm



7. Remove the door.

**Figure 5-988** Remove the door



### 3. Remove the left cover

Follow these steps to remove the left cover.

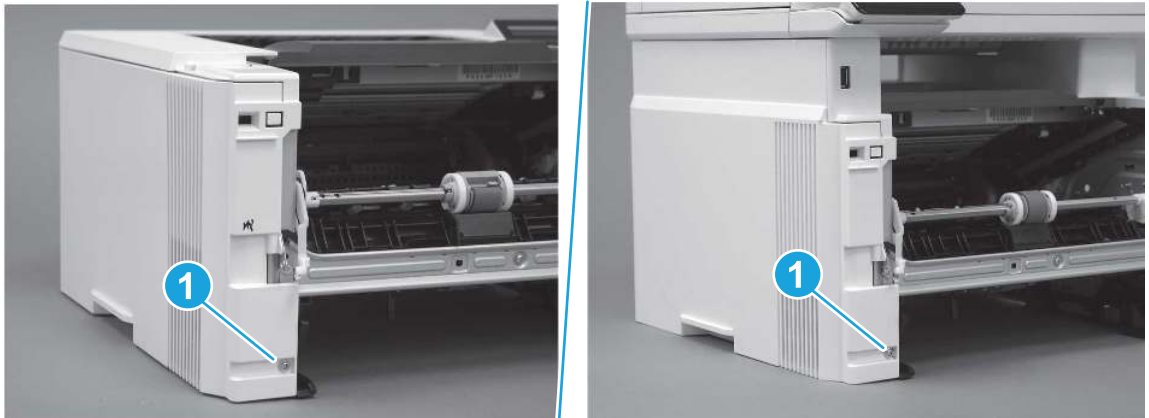
---

 **NOTE:** If installed, the rear USB cover and network cover must be removed.

---

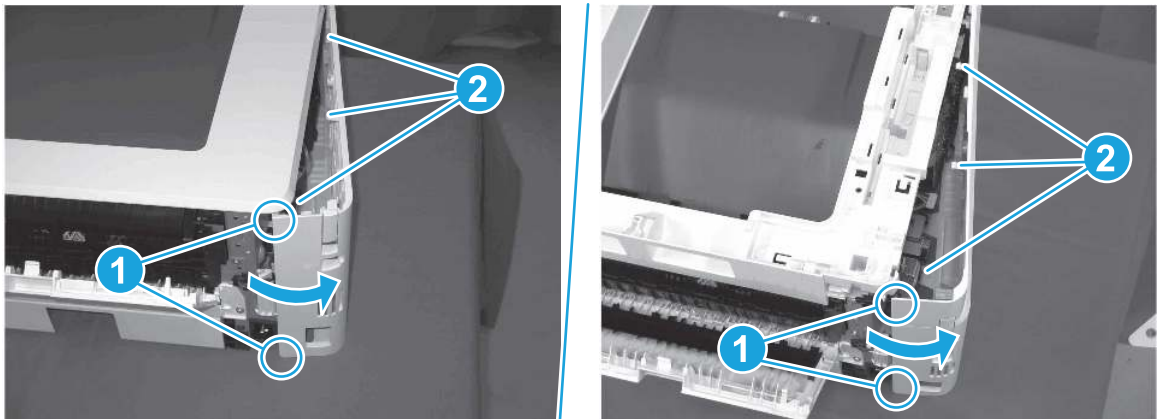
1. Remove one screw (callout 1).

**Figure 5-989** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-990** Release two bosses and three tabs



3. At the front of the printer, do one of the following:

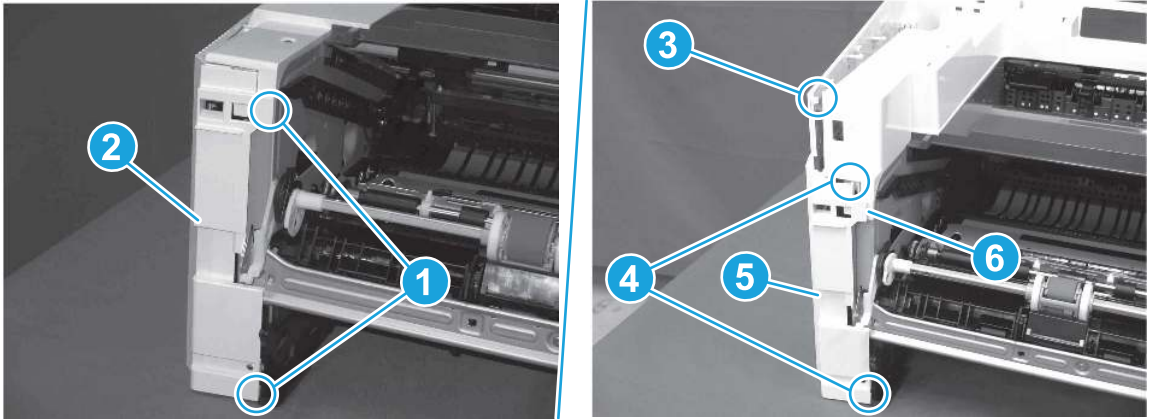
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**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 5-991 Remove the cover



#### 4. Remove the control panel display and mount base (MFP only)

Follow these steps to remove the control panel display and mount base (MFP only).

1. Open the integrated scanner assembly (ISA).

---

 **NOTE:** The ISA might already have been removed. If so, skip ISA related steps.

If the control panel is not fully tilted forward, tilt it forward now until it stops.

---

Figure 5-992 Open the ISA





2. Remove one screw (callout 1).

**Figure 5-993** Remove one screw



3. Use a small flat-blade screwdriver to release two tabs (callout 1) on the control-panel mount cover.

**Figure 5-994** Release two tabs



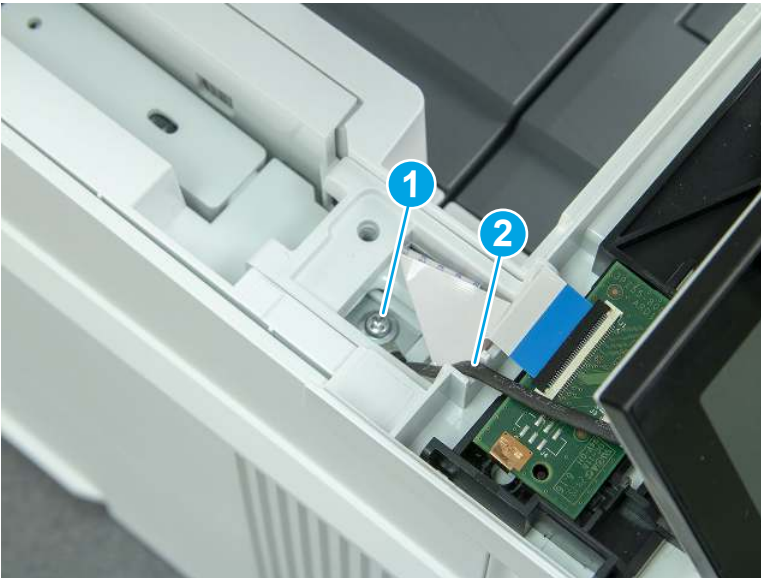
4. Rotate the control-panel mount cover up towards the control panel to release it, and then remove the cover.

**Figure 5-995** Remove the cover



5. Remove one grounding screw (callout 1), and then move the ground cable (callout 2) out of the way.

**Figure 5-996** Remove one screw



6. Disconnect two FFC (callout 1).

**Figure 5-997** Disconnect two FFC



7. Release one tab (callout 1), and then remove the interconnect board (ICB).

**Figure 5-998** Remove the ICB



8. Remove two screws (callout 1), and then lift the control panel display and mount base together to remove them.

---

**CAUTION:** Carefully unfold the FFC and release it through the opening in the mount base.

---

**Figure 5-999** Remove two screws and remove the control panel assembly

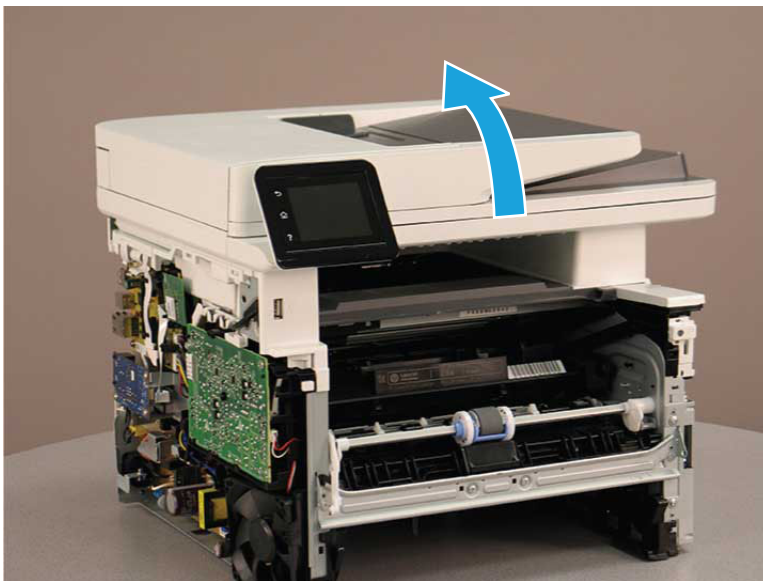


### 5. Remove the integrated scanner assembly (ISA) FFC cover (MFP only)

Follow these steps to remove the integrated scanner assembly (ISA) FFC cover (MFP only).

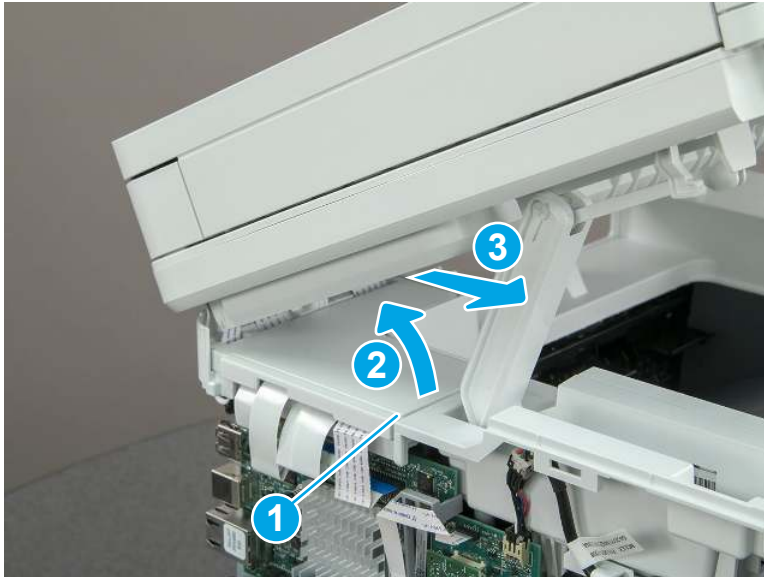
1. If the ISA is not already raised, raise it now.

**Figure 5-1000** 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 5-1001** Remove the ISA FFC cover

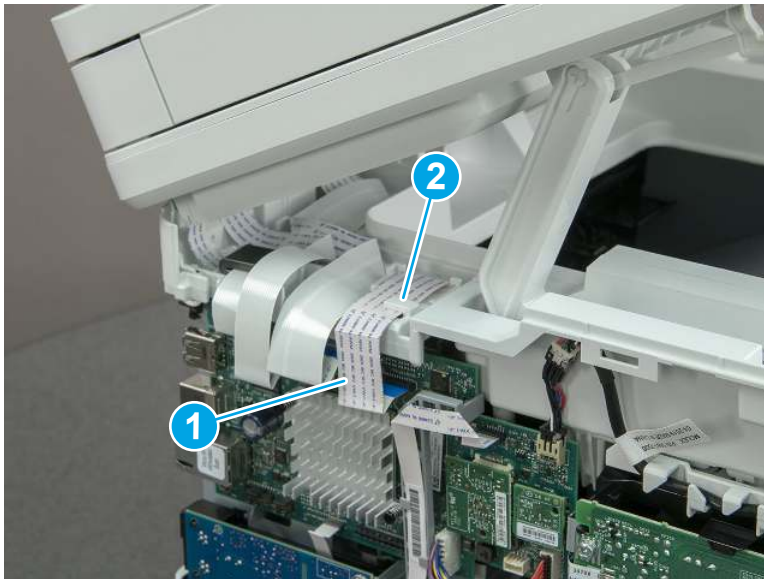


## 6. Remove the control panel flat cable and cover (MFP only)

Follow these steps to remove the control panel flat cable and cover (MFP only).

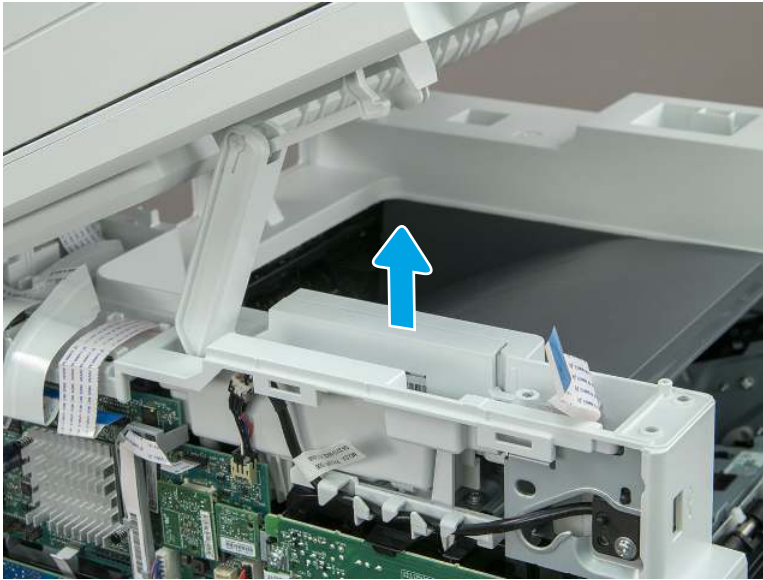
1. Disconnect one FFC (callout 1), and then release the cable from the guides (callout 2).

**Figure 5-1002** Disconnect one cable



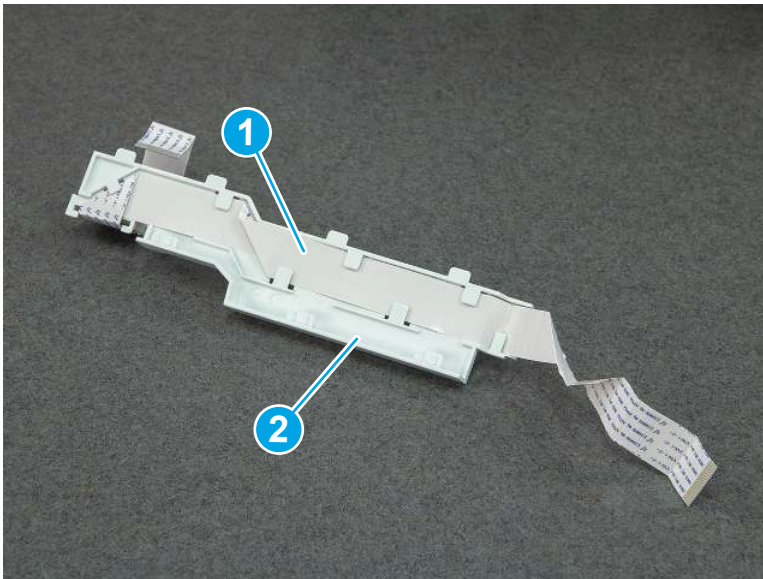
2. Lift up the control-panel FFC cover to remove the cover and cable.

**Figure 5-1003** Remove the cover and cable



3. If you are replacing the FFC or the cover, remove the FFC (callout 1) from the cover (callout 2).

**Figure 5-1004** Remove the FFC



## 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.

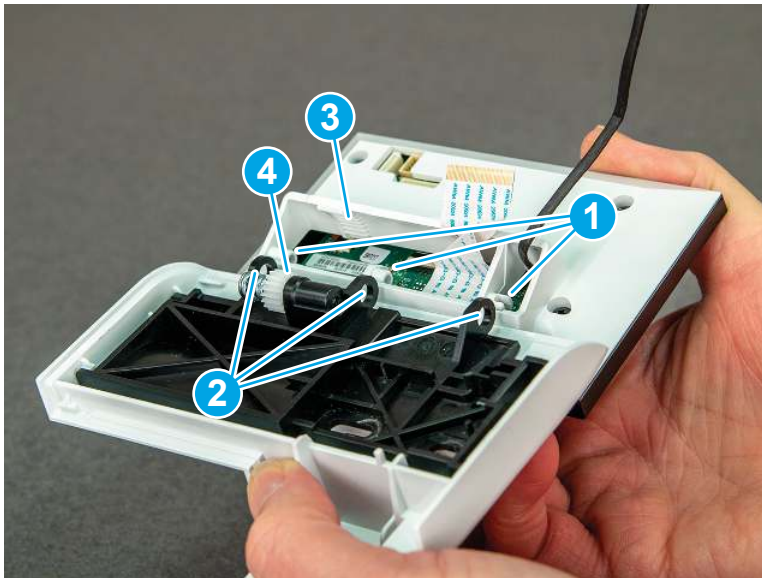
## 8. Reverse the removal steps to install the assembly

Also use the following **special installation instructions**.

Install the control panel assembly.

- ▲ When installing the MFP control panel assembly, align the hinge pins (callout 1) on the assembly with the hinge guides (callout 2) on the control panel base, and then align the grooves (callout 3) on the control panel assembly with the teeth (callout 4) on the gear on the control panel base.

**Figure 5-1005** Install the control panel assembly



## 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 5-54** 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 5-1006 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).

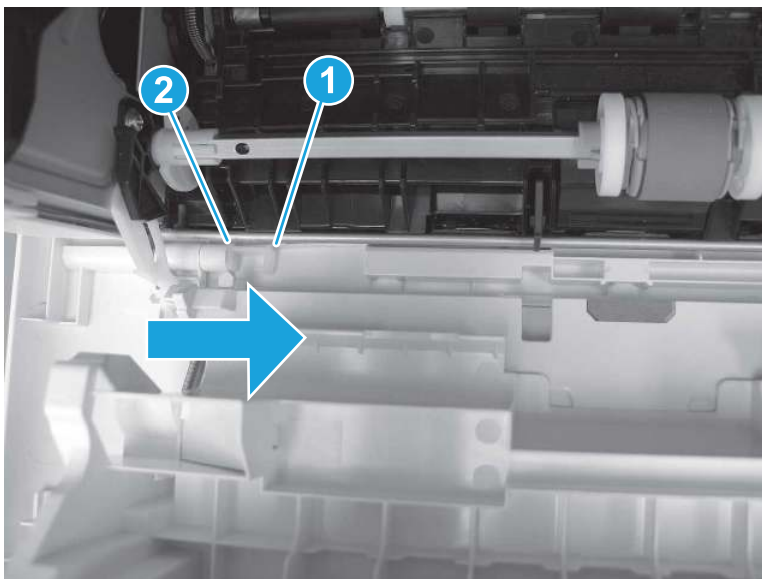
---

 **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.

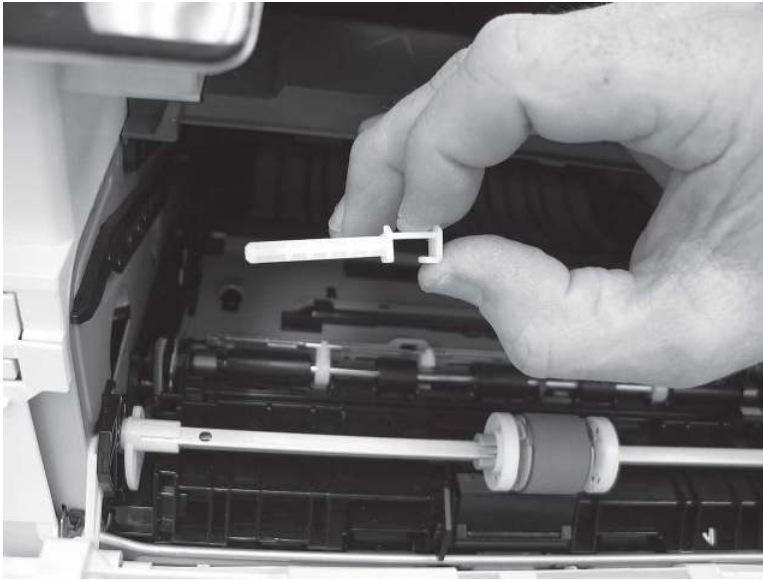
---

Figure 5-1007 Release the support shaft



2. Remove the support shaft.

**Figure 5-1008** Remove the support shaft



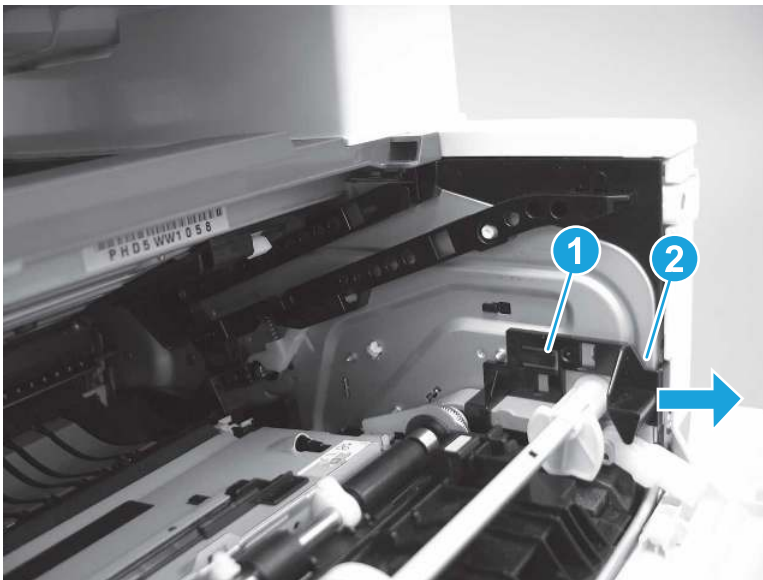
3. Release one tab (callout 1), and then slide the guide out of the printer (callout 2).

---

**⚠ CAUTION:** Be careful, the tab (callout 1) can be easily broken.

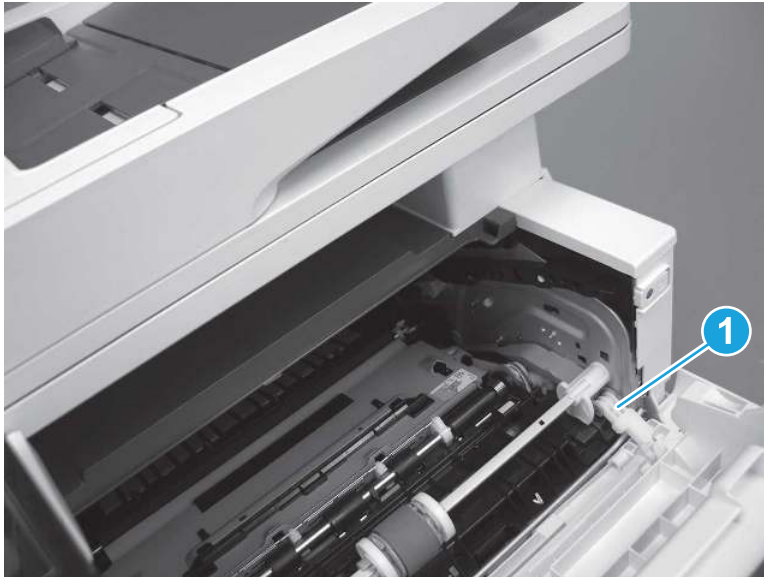
---

**Figure 5-1009** 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 5-1010** Release the pressure-release link

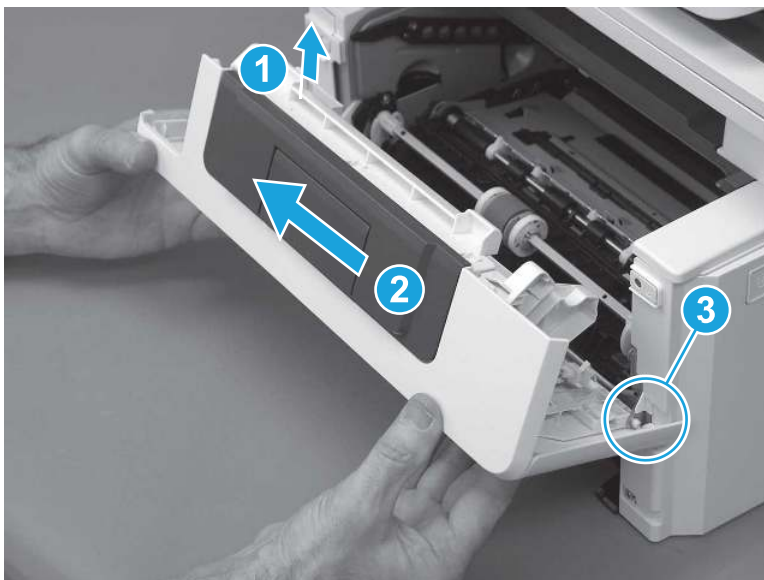


5. With the door in the partially closed position, slightly raise the left end (callout 1; raise it over the sheet-metal hinge boss), and then slide the door to the left (callout 2) to release the right hinge (callout 3).

**⚠ CAUTION:** The door is still attached to the printer by the left-side retainer arm. Do not attempt to completely remove the door.

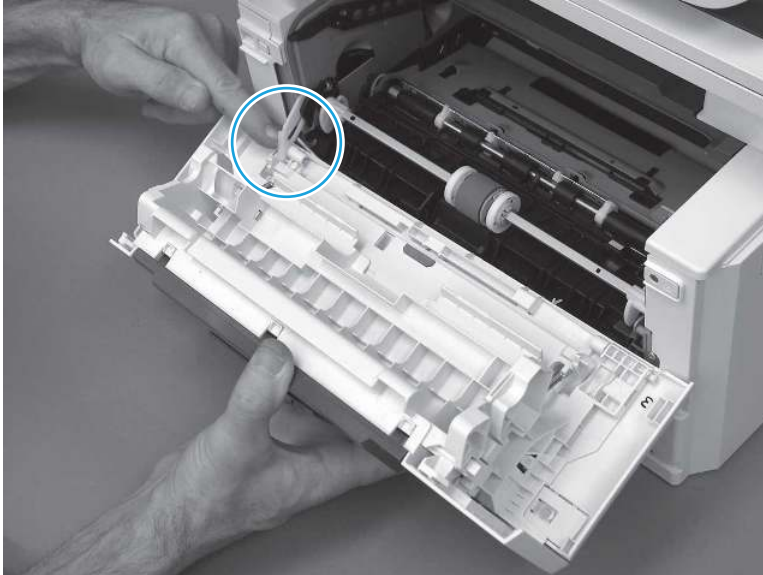
**💡 Reinstallation tip:** When reinstalling the door, there are two right-side hinge pins (not shown in callout 3). Keep a finger pressed on the left-side retainer arm so that it does not disengage from the door.

**Figure 5-1011** Release the door



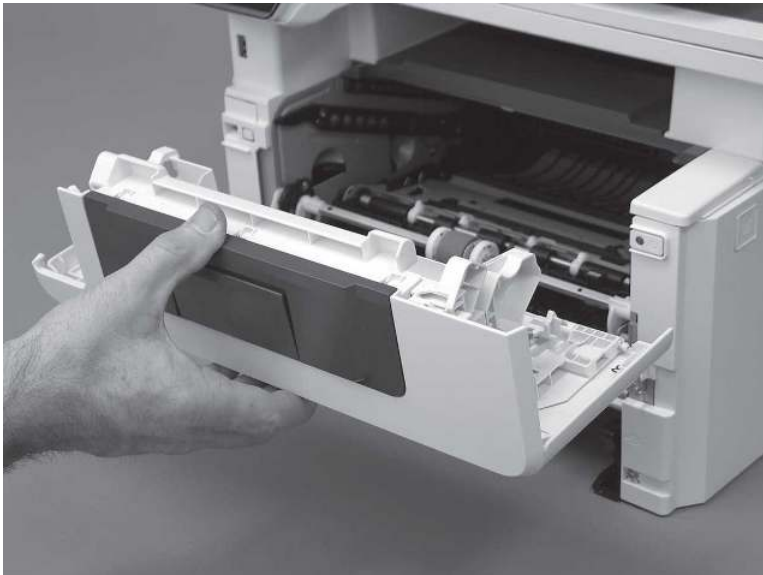
6. Rotate the door away from the printer until the keyed pin on the left-side retainer arm can disengage from the door.

**Figure 5-1012** Release the left-side retainer arm



7. Remove the door.

**Figure 5-1013** 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.

---

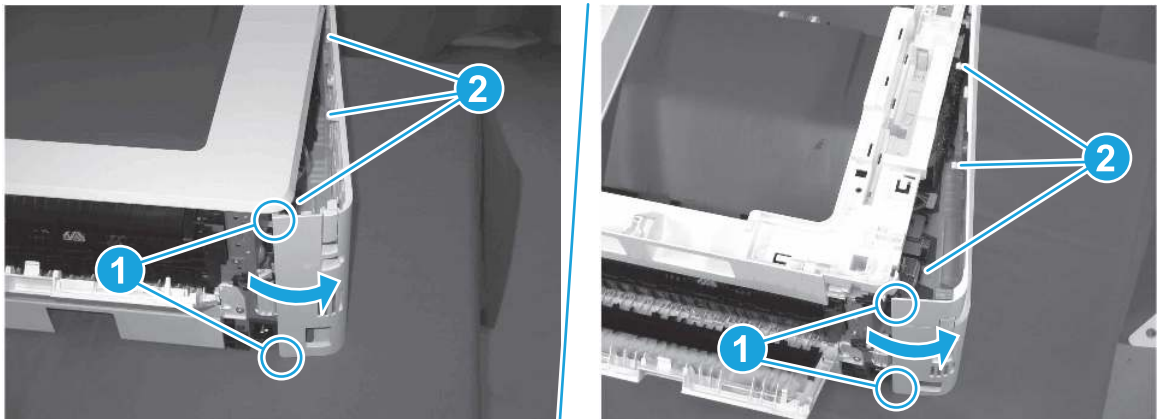
1. Remove one screw (callout 1).

**Figure 5-1014** Remove one screw



2. Open the rear door, release two bosses (callout 1), and then release three tabs (callout 2).

**Figure 5-1015** Release two bosses and three tabs



3. At the front of the printer, do one of the following:

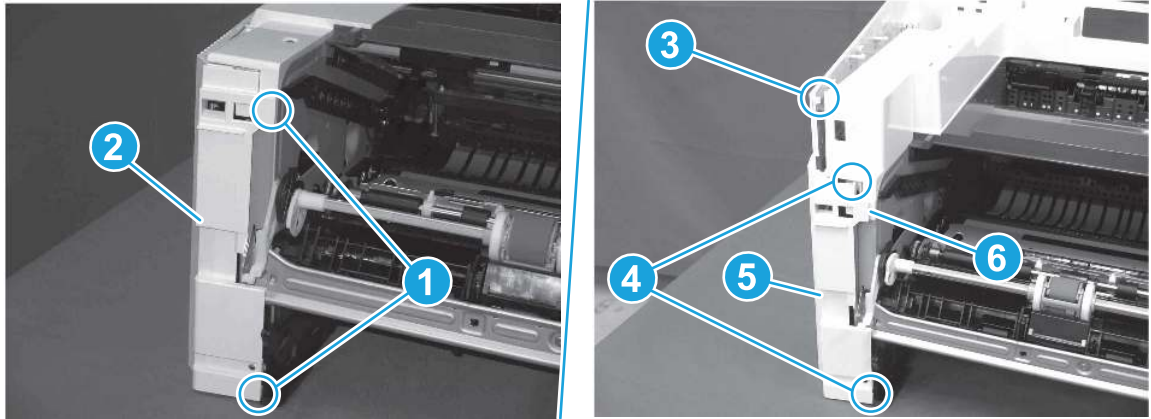
- **SFP:** Release two bosses (callout 1), and then remove the cover (callout 2).
- **MFP:** Release one tab (callout 3), two bosses (callout 4), and then remove the cover (callout 5).

---

**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 5-1016 Remove the cover



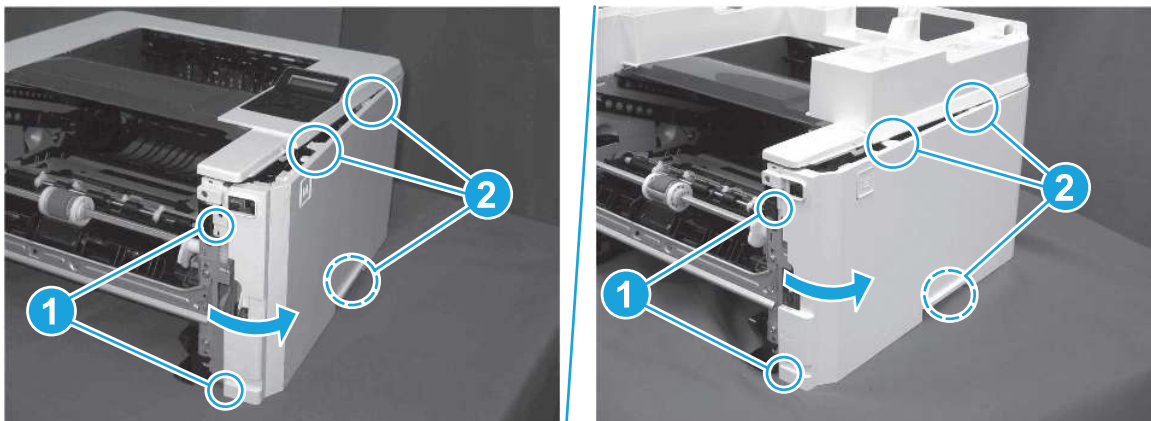
#### 4. Remove the right cover

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).

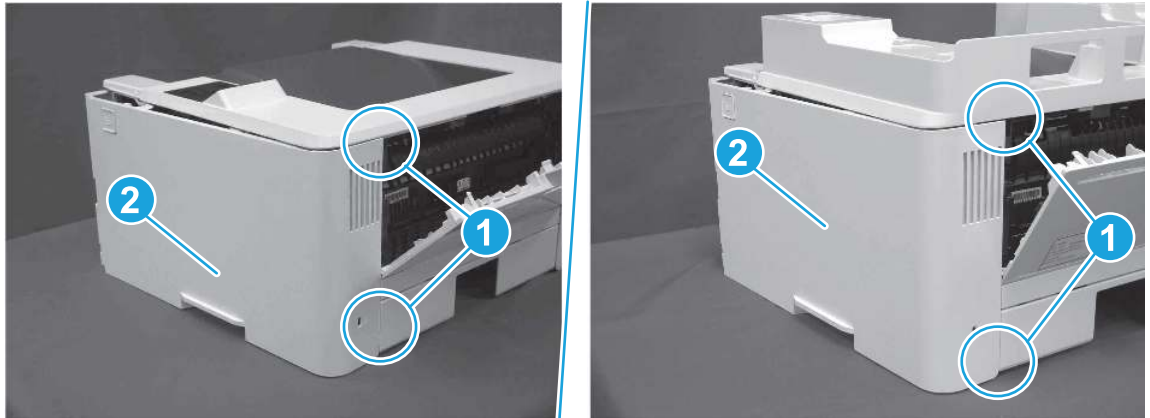
 **Reinstallation tip:** Remove, and then reinstall the cover if the switch or button does not correctly function.

Figure 5-1017 Release two bosses and three tabs



2. Open the rear door, release two bosses (callout 1), and then remove the cover (callout 2).

**Figure 5-1018** 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 5-1019** Rotate the Tray 1 pickup roller shaft



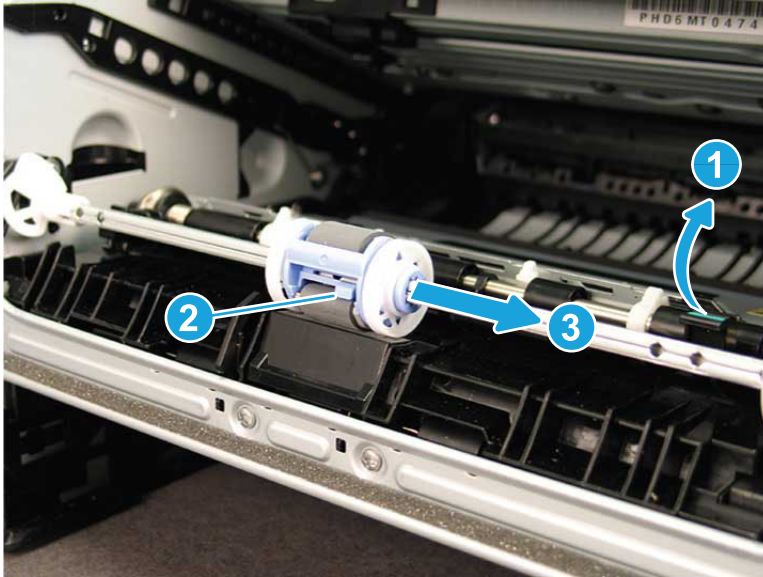
2. Raise the jam access door (callout 1), release one tab (callout 2), and then slide the roller and holder as shown (callout 3) to move it out of the way.

---

 **CAUTION:** Do not touch the spongy portion of the roller. Skin oils on the roller can cause paper handling problems. HP recommends washing your hands before handling the assembly.

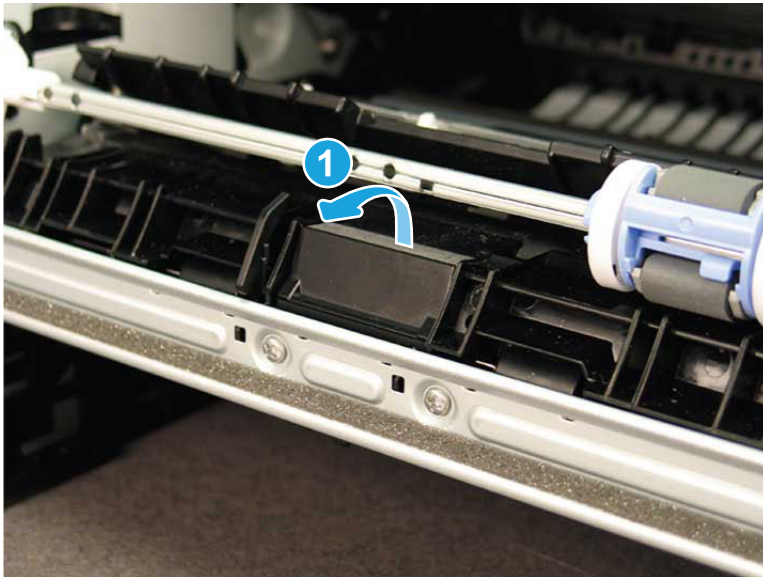
---

**Figure 5-1020** Slide the roller and holder out of the way




3. Remove the Tray 1 separation pad (callout 1).

**Figure 5-1021** 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).

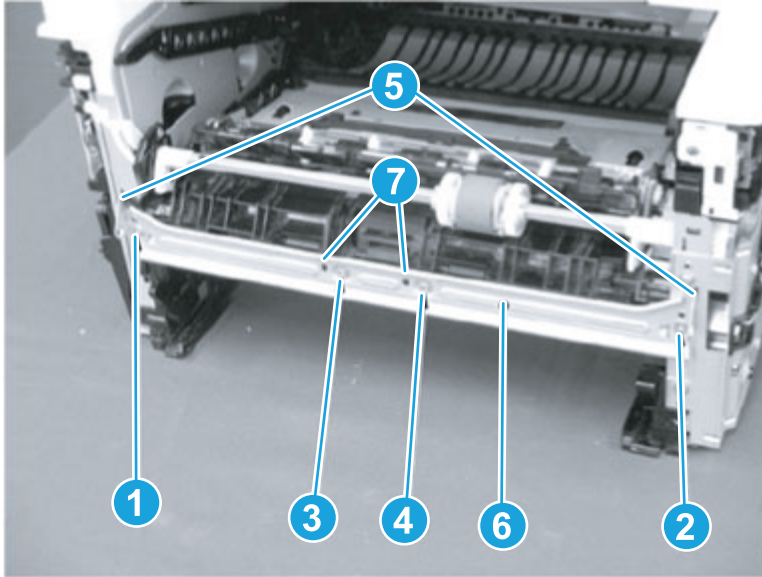
---

 **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 5-1022 Remove the front stay



5. Rotate each spring (callout 1) down, and then unhook the springs from the hooks (callout 2).

Figure 5-1023 Remove the springs (1 of 2)

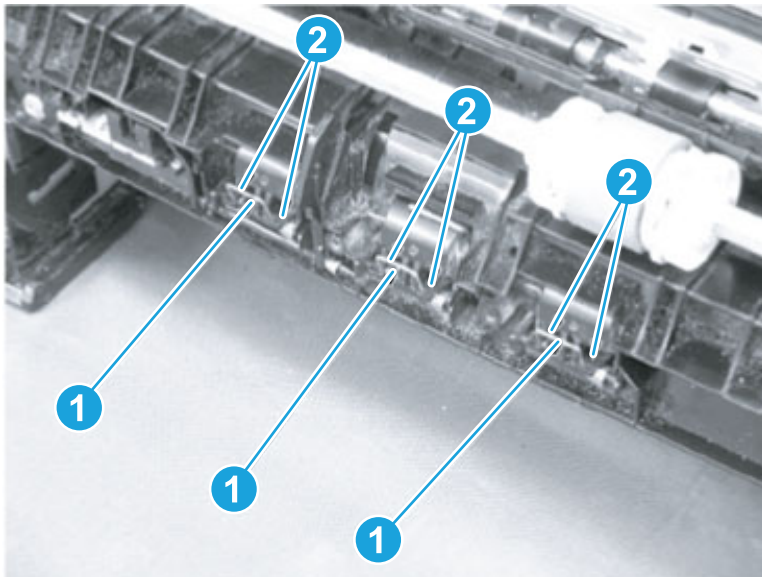
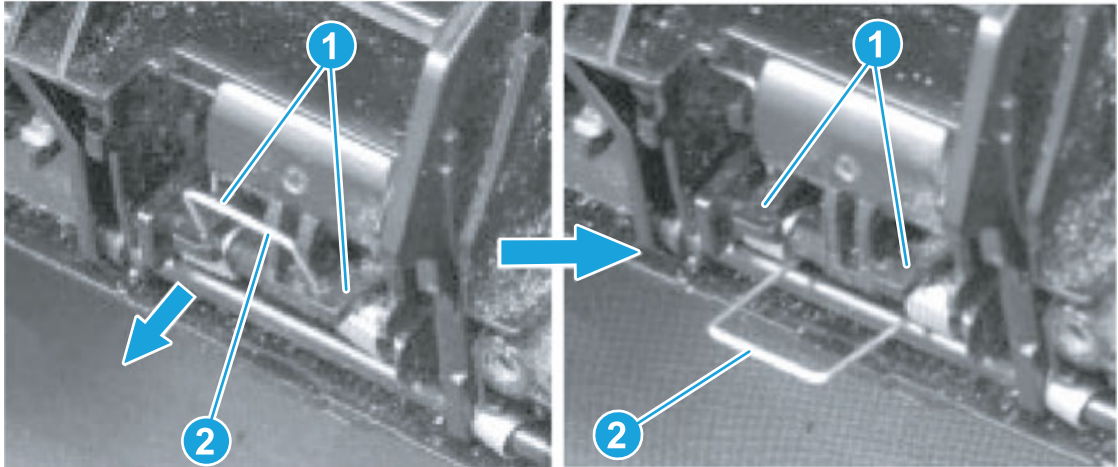
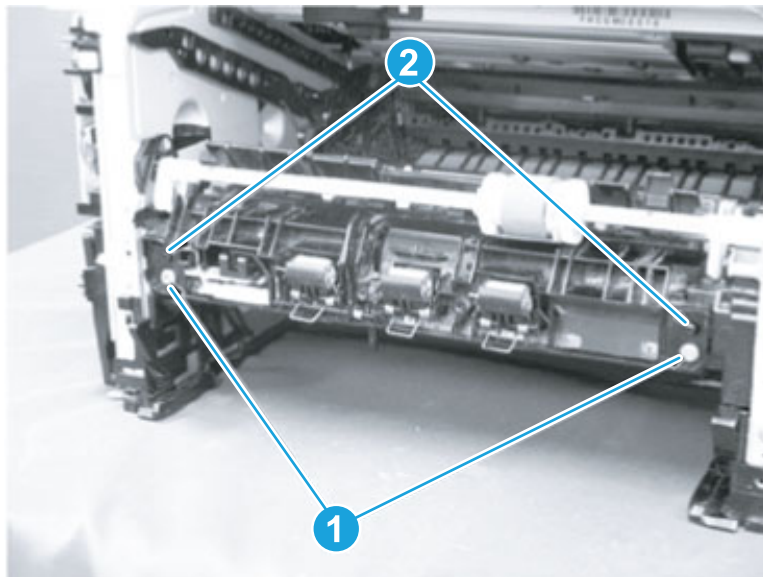


Figure 5-1024 Remove the springs (2 of 2)



6. Remove two screws (M4 tapping; callout 1), and then release two bosses (callout 2).

Figure 5-1025 Remove two screw and release two bosses



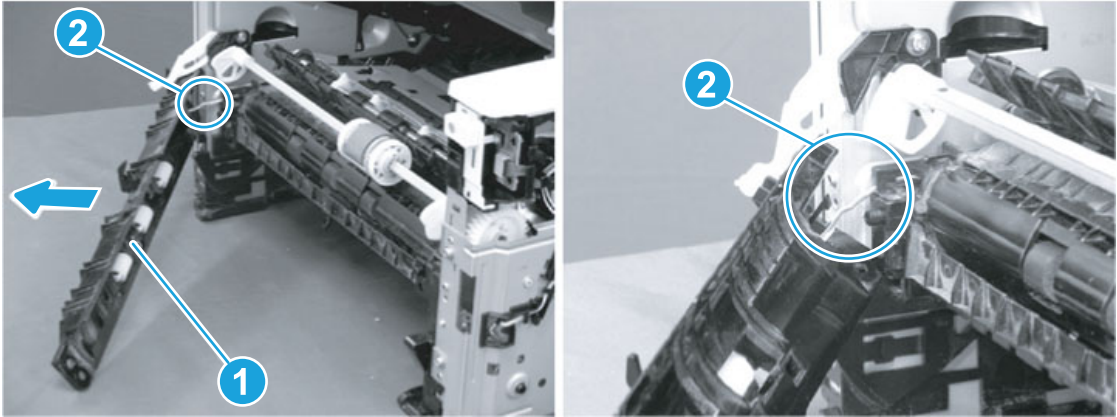
7. Separate the Tray 1 pickup assembly (callout 1) from the printer (as shown below).

---

**⚠ CAUTION:** Do not attempt to completely remove the assembly. The assembly is still connected to the printer by a wire harness (callout 2).

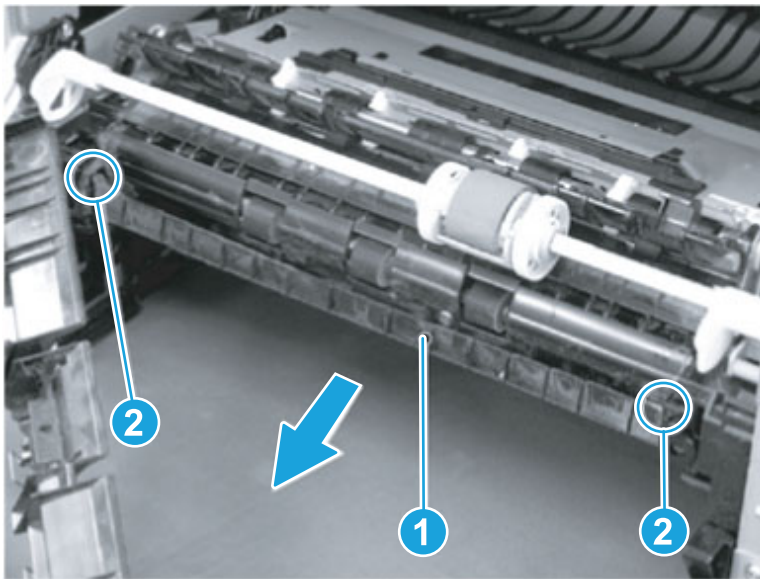
---

Figure 5-1026 Separate the Tray 1 pickup assembly from the printer



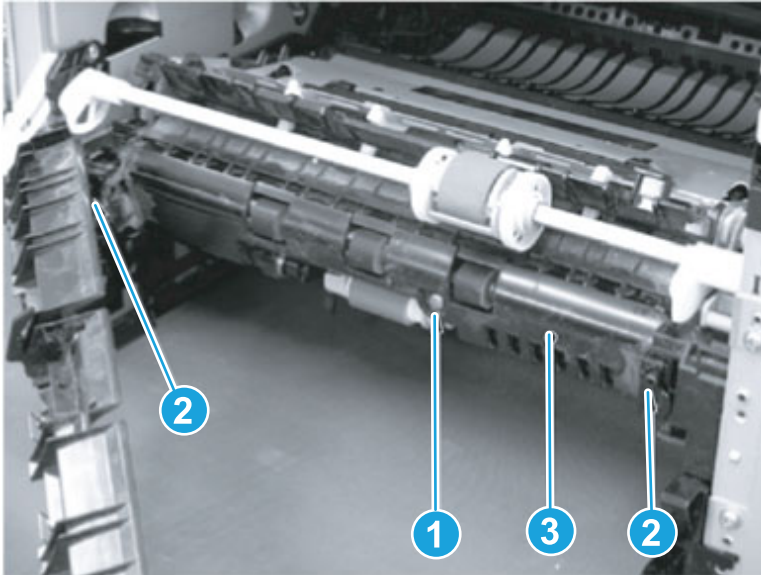
8. Slightly flex the pickup guide (callout 1) to release the left-side and right side bosses (callout 2), and then remove the pickup guide.

Figure 5-1027 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 5-1028** Remove the guide and sensor lever assembly



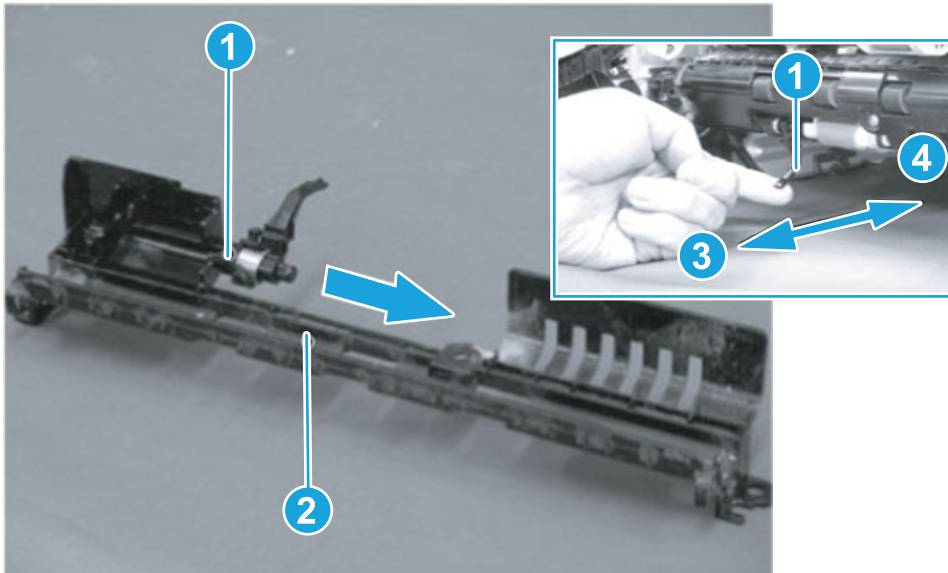
10. Slide the sensor lever (callout 1) as shown, and then remove it from the guide (callout 2).

**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 5-1029** 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.

## Removal and replacement: 550-sheet paper feeder

Learn how to remove and replace the 550-sheet paper feeder 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 5-55 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

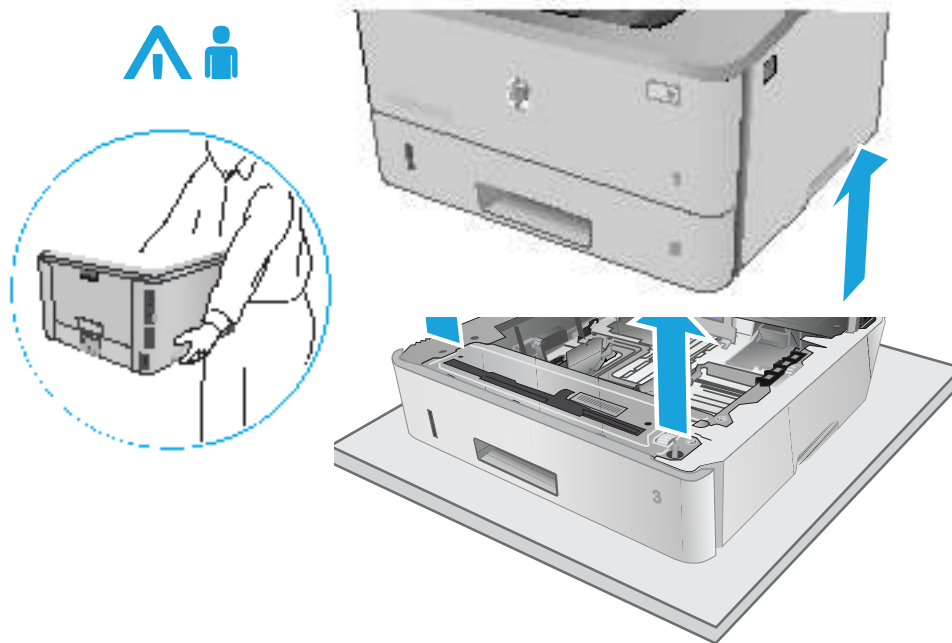
Print any pages necessary to make sure the printer is functioning correctly.

### 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 5-1030 Remove the printer



## 2. Remove the accessory from its package

Follow these steps to remove the accessory from its package.

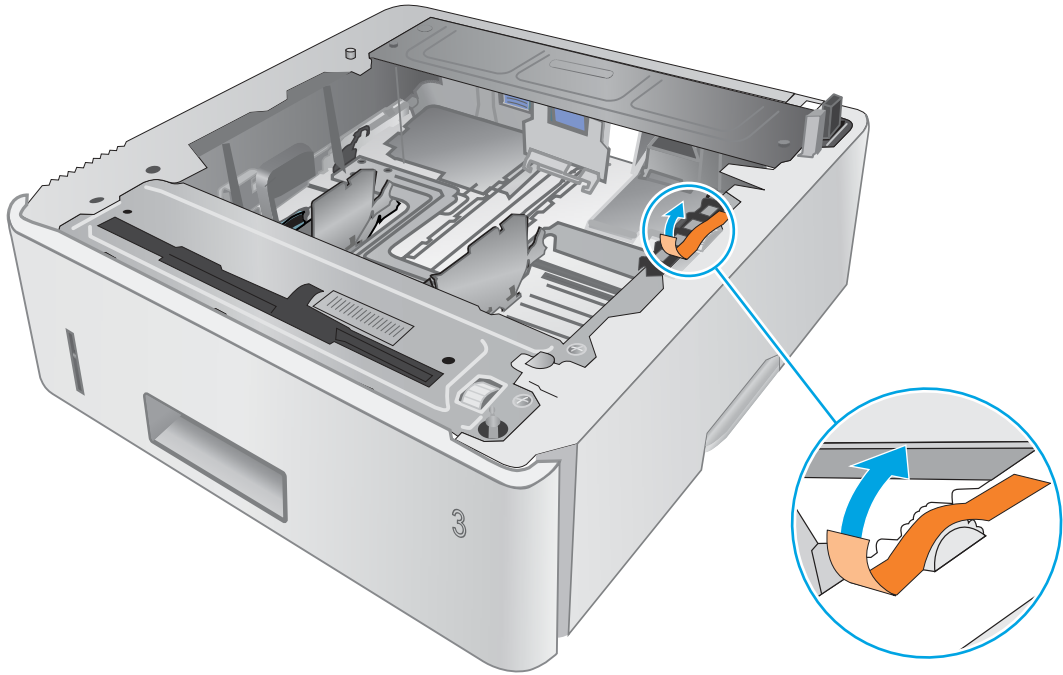
1. Save all packaging for recycling.
2. For complete information about HP recycling programs, go to <http://www8.hp.com/us/en/hp-information/environment/product-recycling.html>.

## 3. Install the optional 550-sheet feeder Tray 3

Follow these steps to install the optional 550-sheet feeder Tray 3.

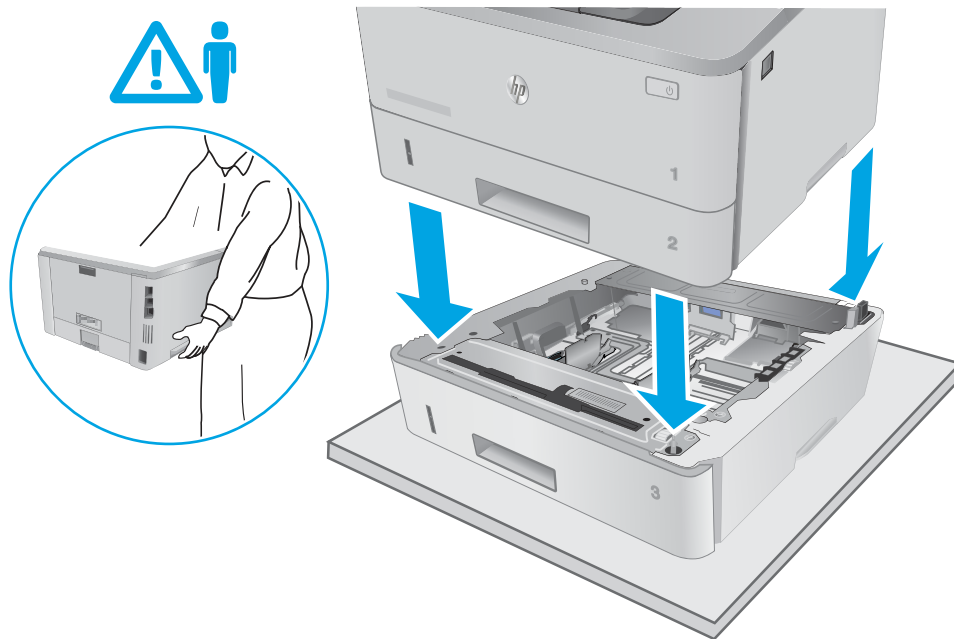
1. Remove the orange shipping tape.

Figure 5-1031 Remove shipping tape



2. Carefully place the printer on the paper feeder assembly.

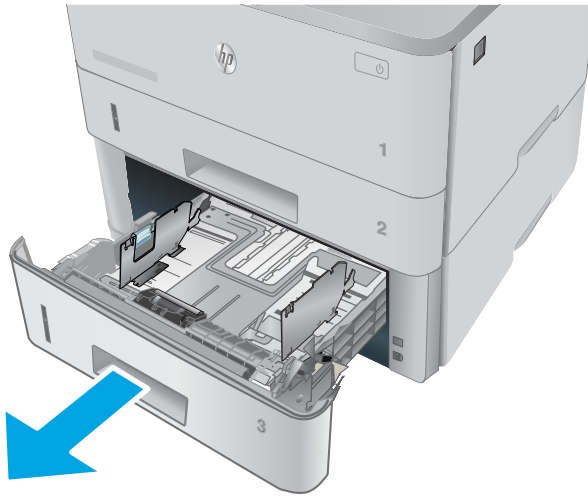
Figure 5-1032 Install the printer





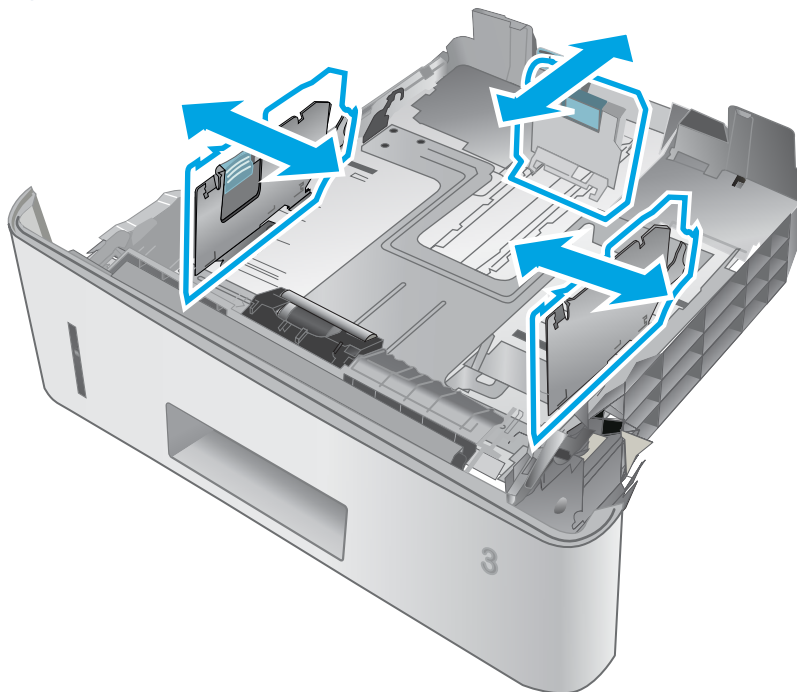
3. Pull Tray 3 out of the paper feeder assembly to remove it.

**Figure 5-1033** Remove Tray 3



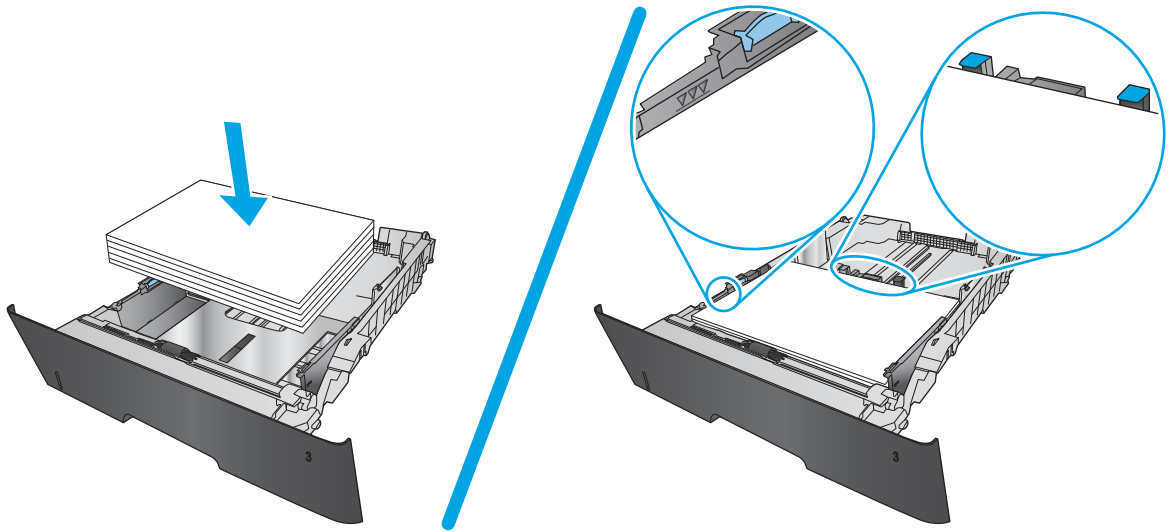
4. Adjust the Tray 3 sliding paper guides.

**Figure 5-1034** Adjust the paper guides



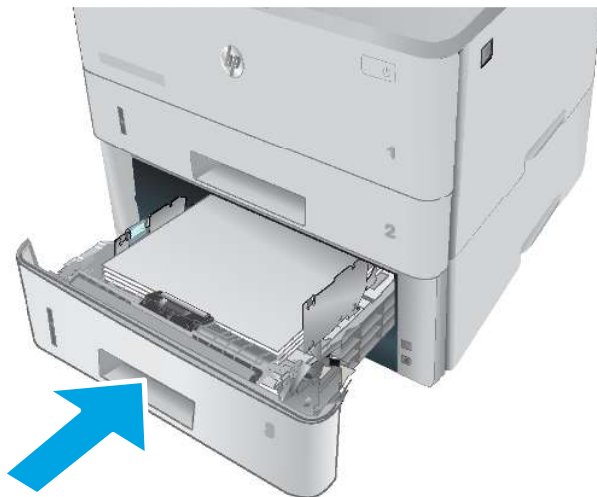
5. Load paper in Tray 3.

Figure 5-1035 Load paper



6. Slide Tray 3 into the paper feeder assembly to install it.

Figure 5-1036 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 5-56** 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

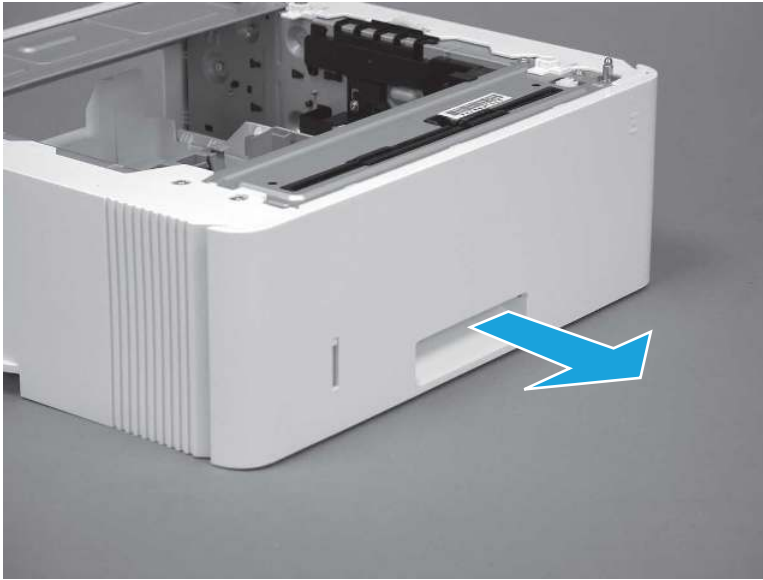
Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

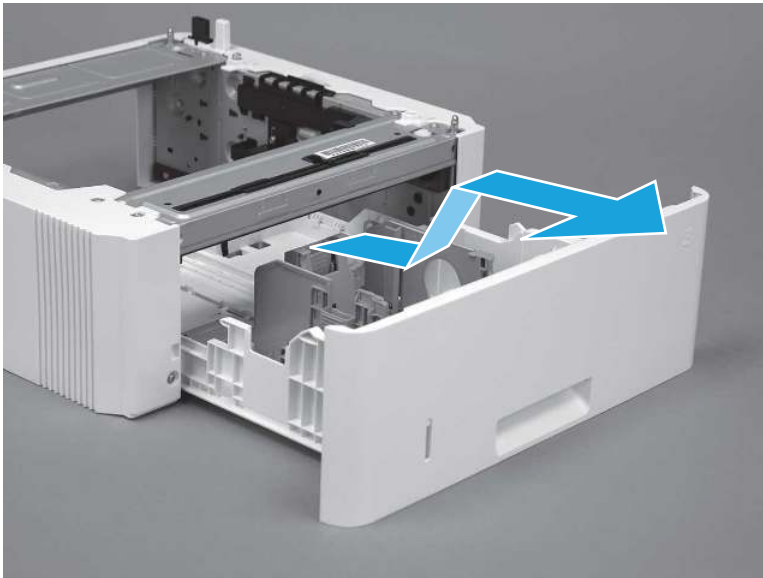
1. Pull the tray straight out of the printer until it stops.

**Figure 5-1037** 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 5-1038** 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.

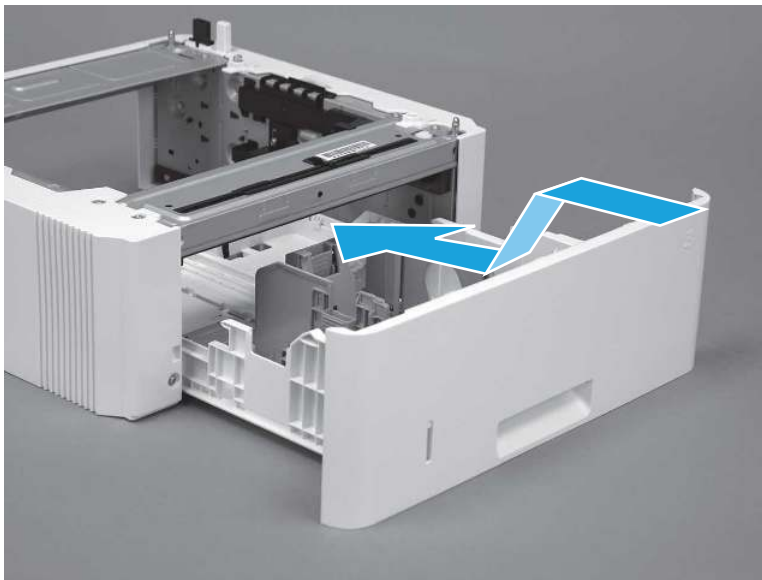
---

### 3. Install optional Tray 3

Follow these steps to install optional Tray 3.

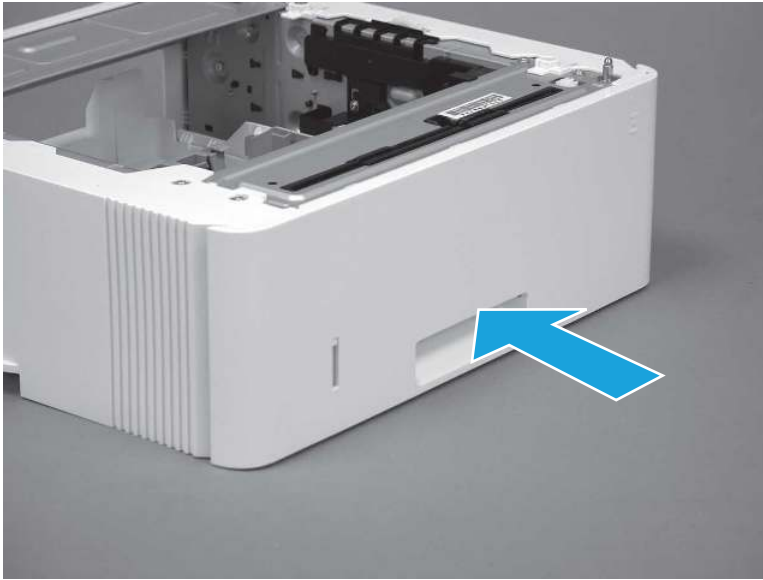
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-1039** Install the tray



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

**Figure 5-1040** 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 5-57** 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

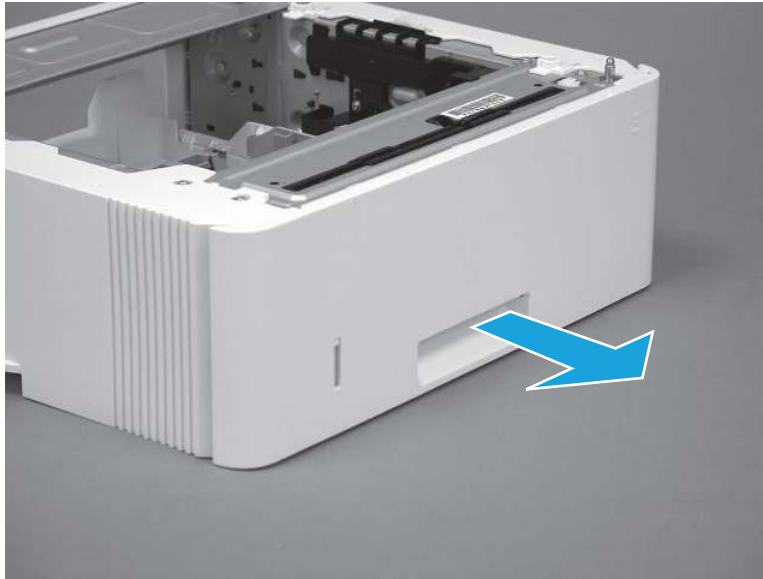
Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

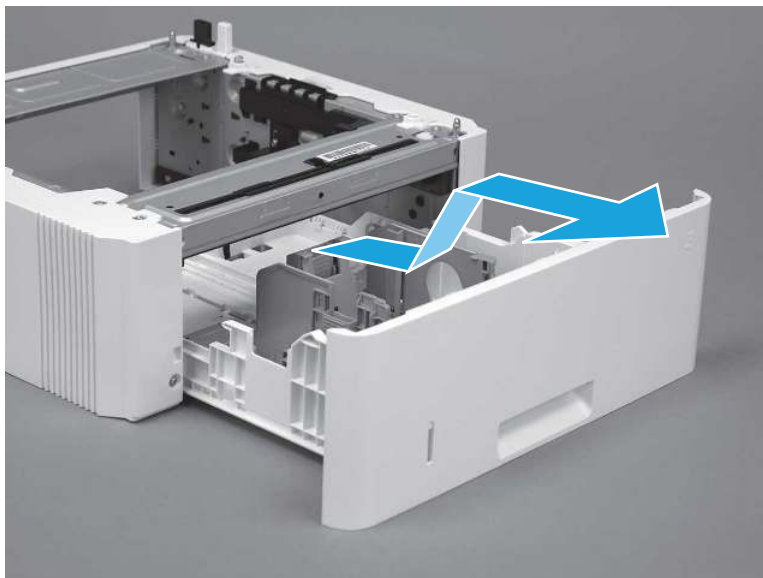
1. Pull the tray straight out of the printer until it stops.

**Figure 5-1041** 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 5-1042** Release and remove the tray

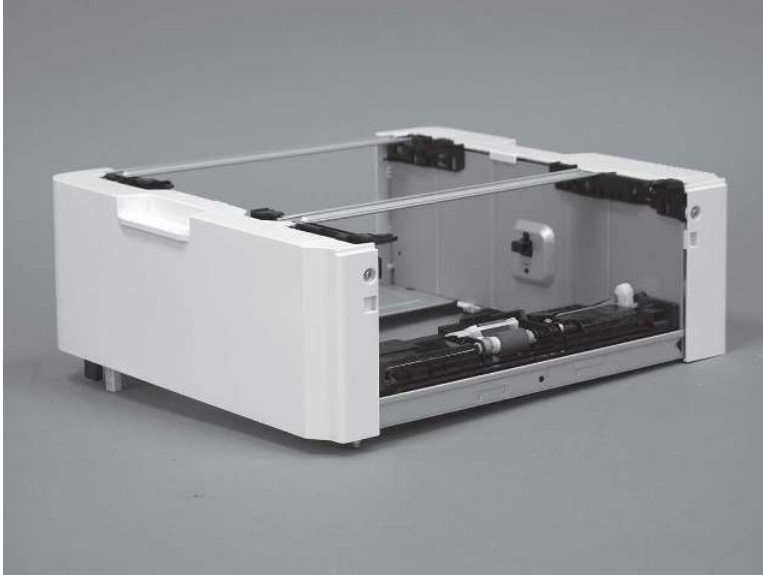


## 2. Remove the pickup roller assembly (optional Tray 3)

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

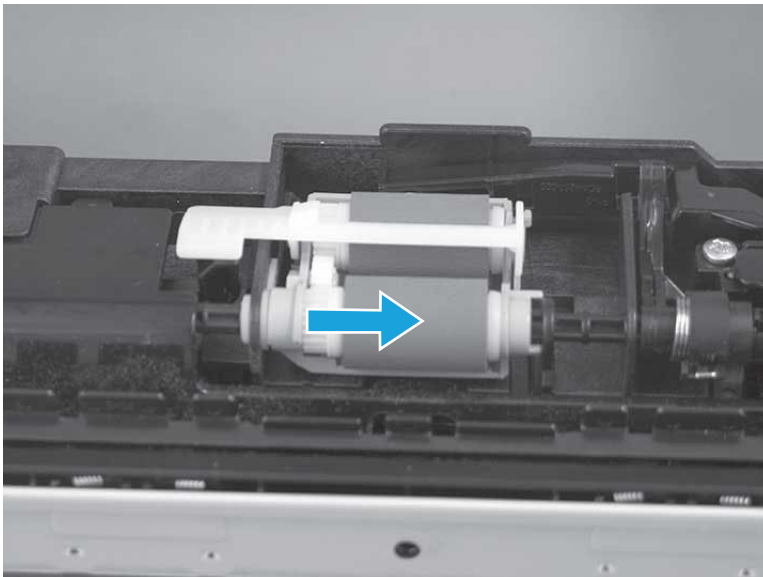
1. Carefully turn the accessory over to expose the roller assembly.

**Figure 5-1043** Turn the accessory over



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

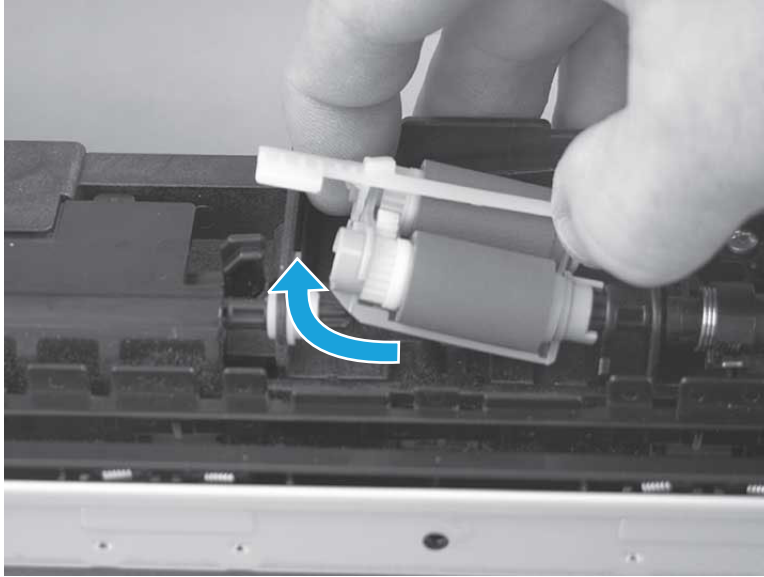
**Figure 5-1044** Release the roller assembly





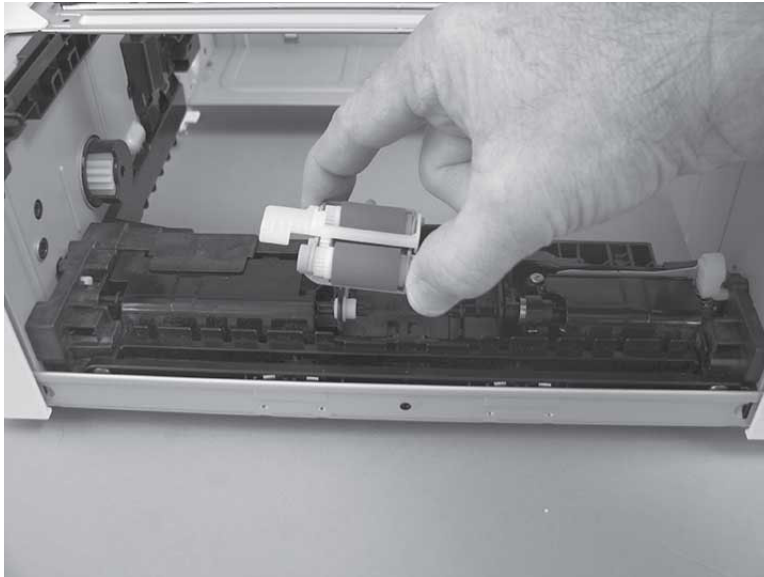
3. Rotate the end of the assembly up and away from the accessory.

**Figure 5-1045** Rotate the assembly up



4. Remove the roller assembly.

**Figure 5-1046** 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 problems. HP recommends washing your hands before handling the assembly.

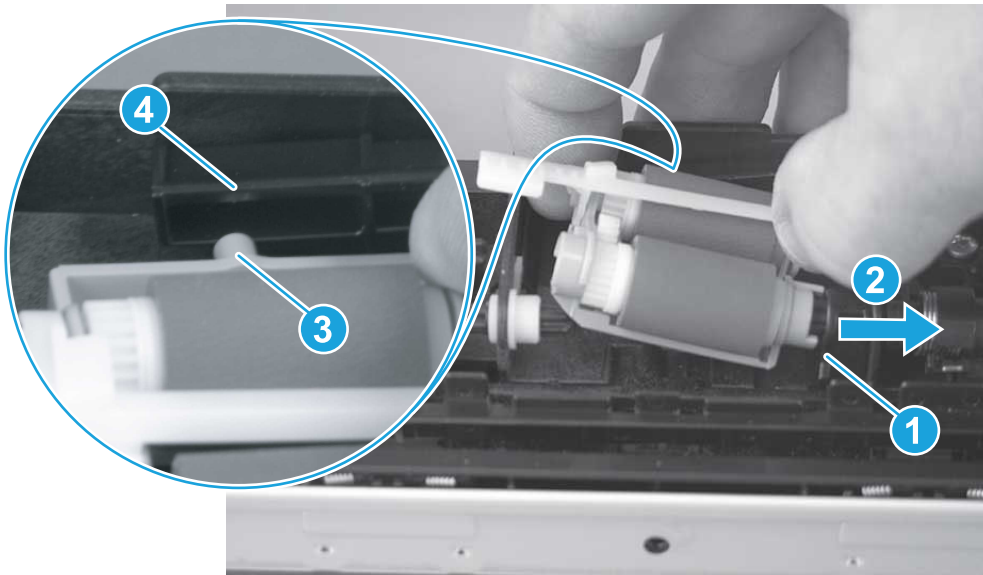
---

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.

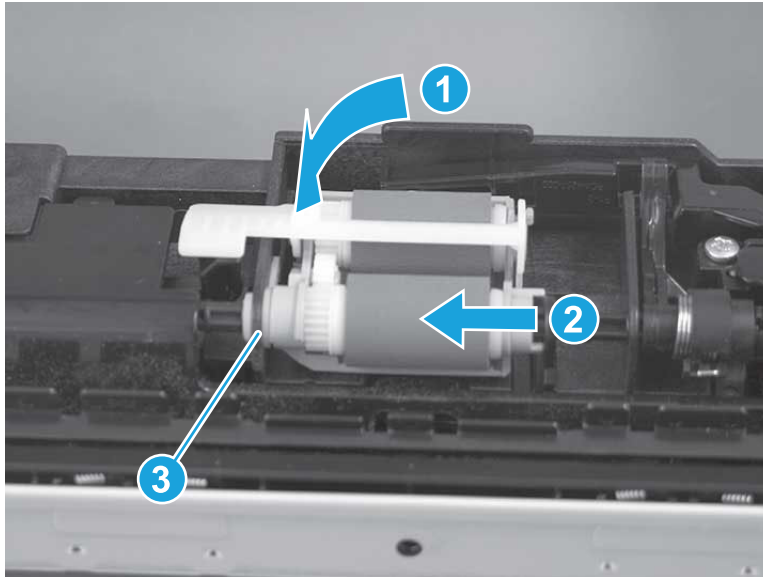
---

Figure 5-1047 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).

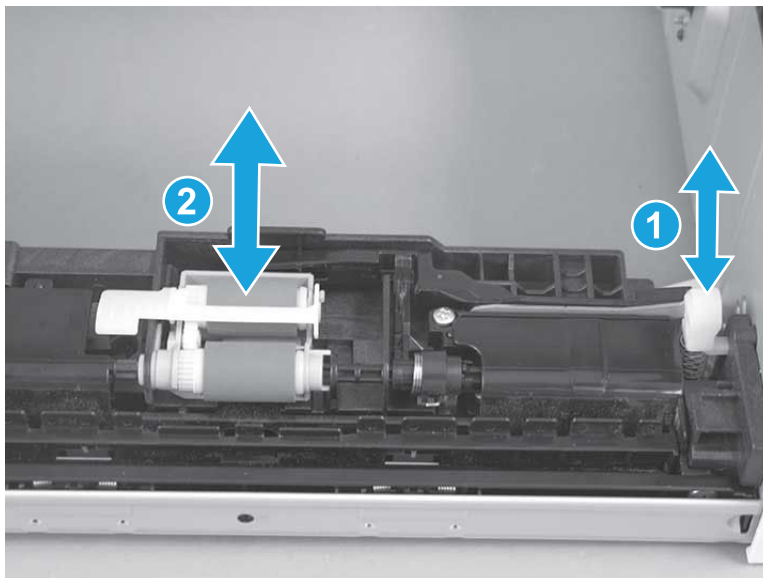
**Figure 5-1048** Engage the assembly



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 5-1049** Check the installation

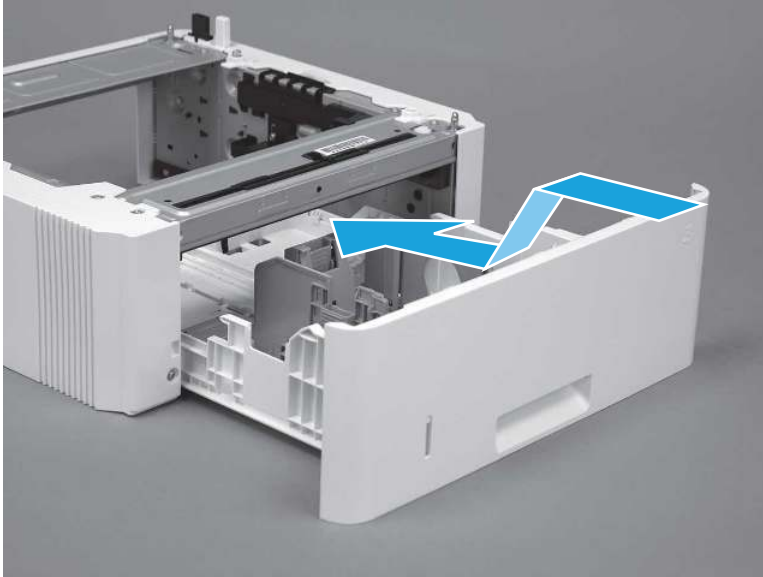


## 5. Install optional Tray 3

Follow these steps to install optional Tray 3.

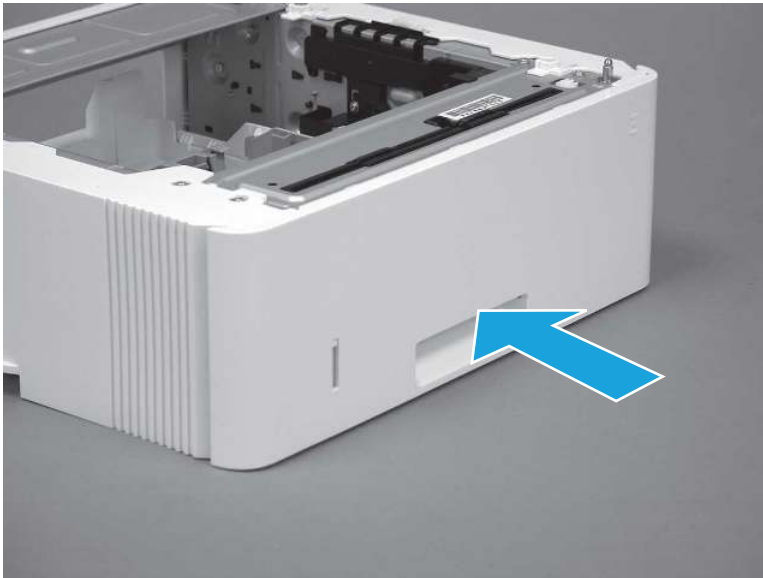
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-1050** Install the tray



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

**Figure 5-1051** 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 5-58** 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

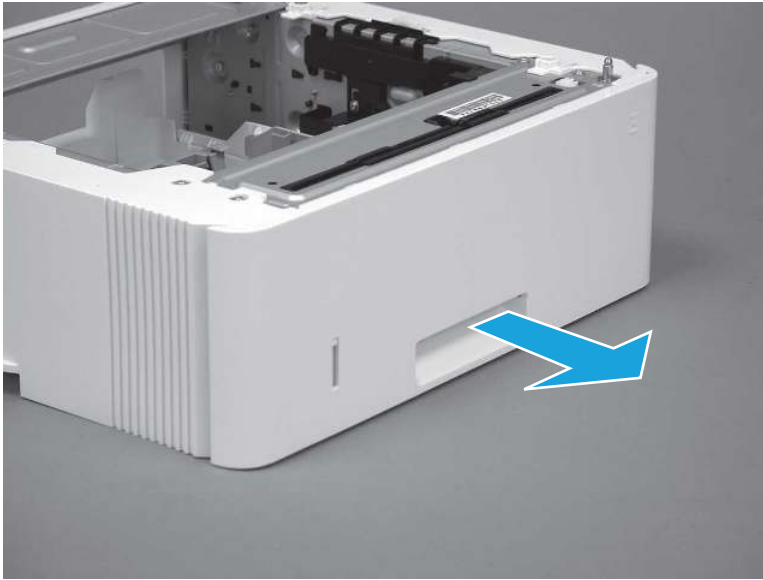
Print any pages necessary to make sure the printer is functioning correctly.

## 1. Remove optional Tray 3

Follow these steps to remove optional Tray 3.

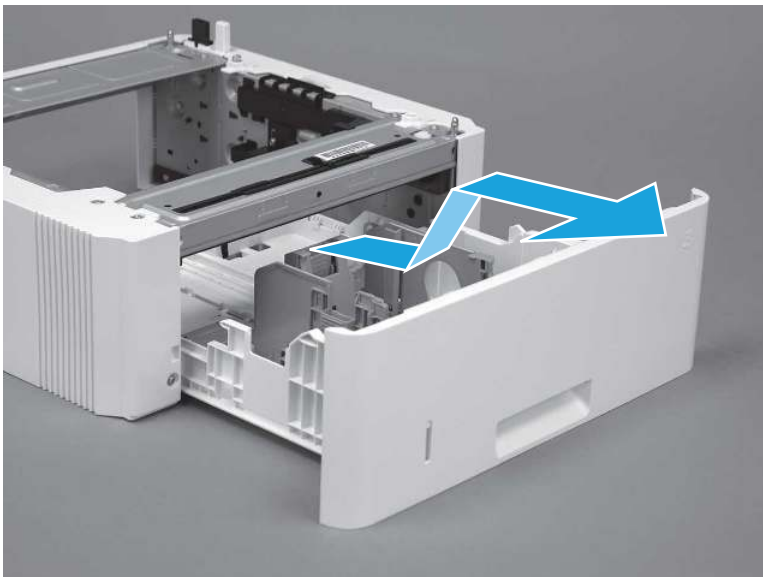
1. Pull the tray straight out of the printer until it stops.

**Figure 5-1052** 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 5-1053** 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).

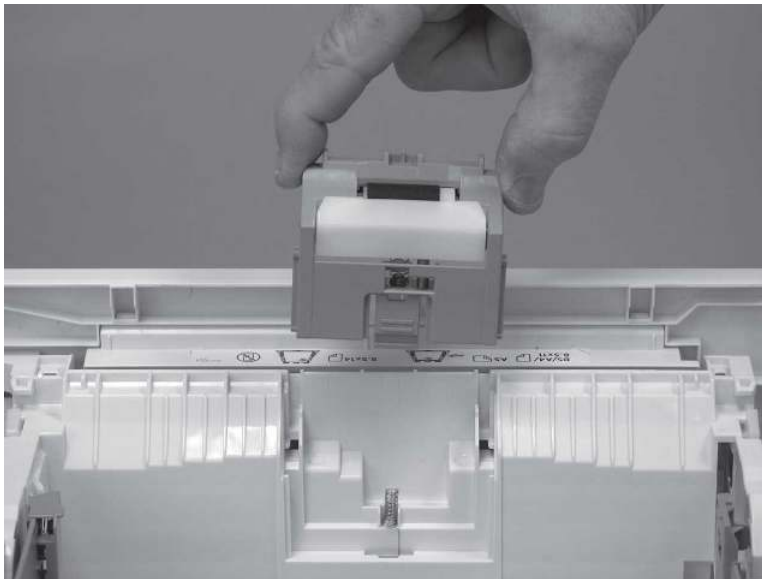
1. Press the locking lever (callout 1), and then pull the separation roller assembly straight up to release it.

**Figure 5-1054** Release the assembly



2. Remove the assembly.

**Figure 5-1055** 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.

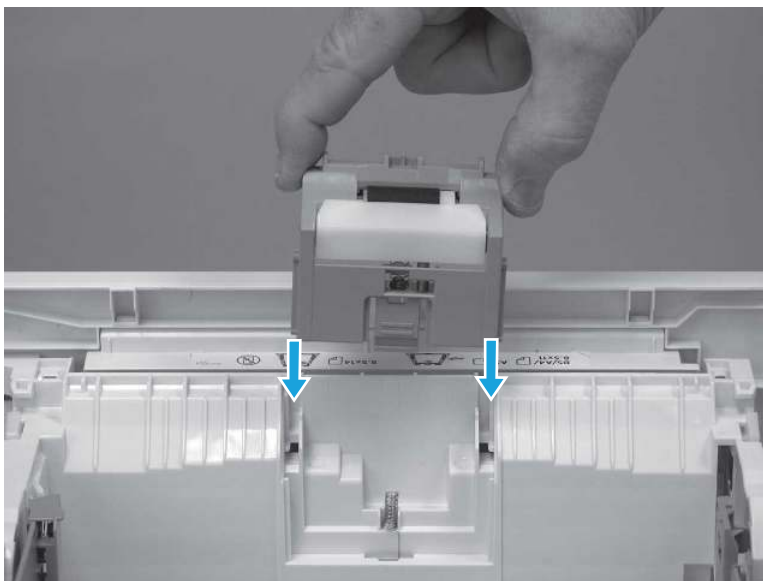
---

#### 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.

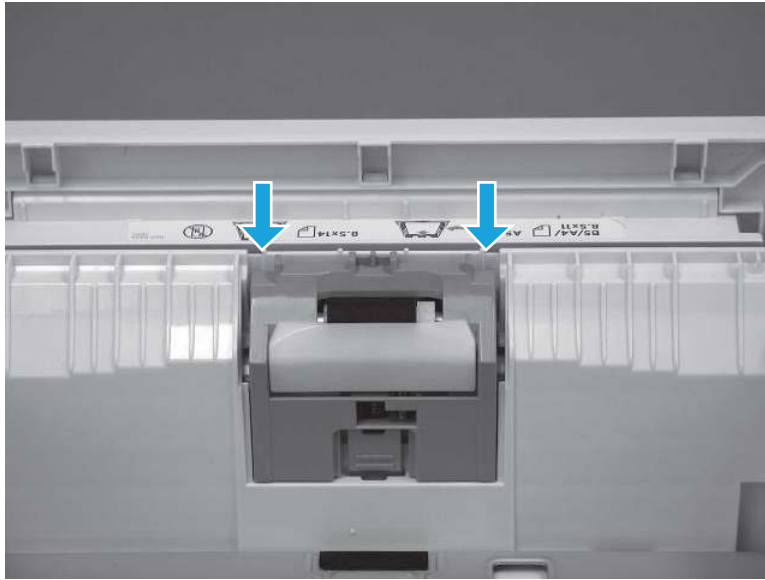
**Figure 5-1056** Install the assembly (1 of 2)





2. Push the separation roller assembly straight down until it snaps into place.

**Figure 5-1057** Install the assembly (2 of 2)

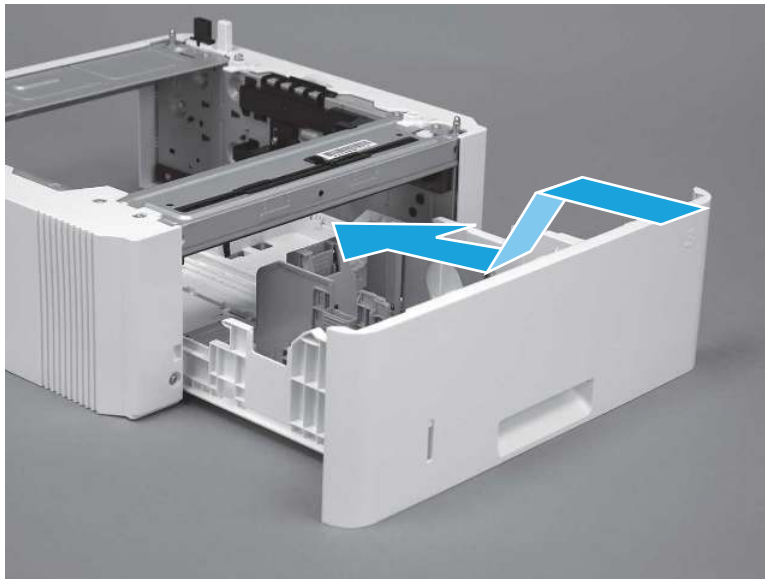


## 5. Install optional Tray 3

Follow these steps to install optional Tray 3.

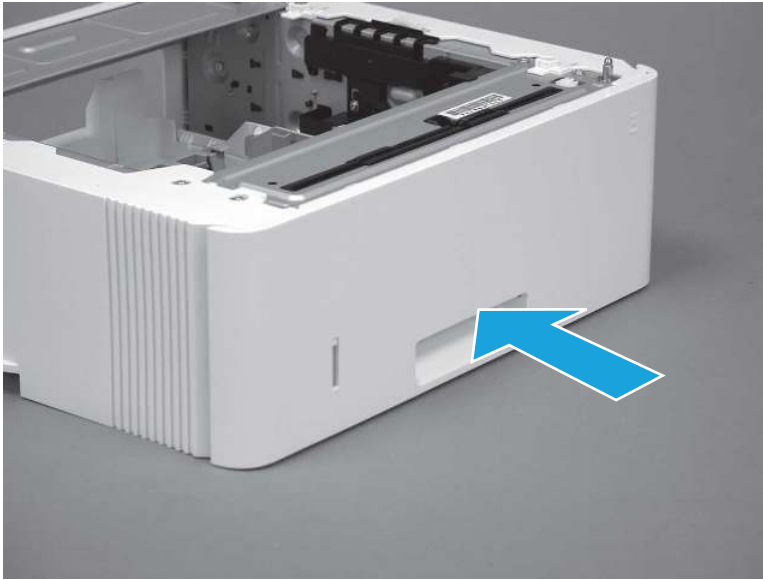
1. With the tray at a slight angle, align the sides of the tray with the rails in the accessory, and then partially slide the tray into the accessory.

**Figure 5-1058** Install the tray



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

**Figure 5-1059** Close the tray





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# 6 Parts and diagrams

Printer parts information including exploded assembly diagrams and part number lists.

## HP service and support

Learn about HP access to additional service and support information.

### Additional service and support for channel partners

Channel partners go to [partner.hp.com](http://partner.hp.com), and then use the steps below to access the HP Web-based Interactive Search Engine (WISE).

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

Access WISE for Channel partners

1. Select [Services & Support](#) (near the top of the screen).
2. Under [Services Delivery](#), select [Technical Support](#).
3. Select [Technical Documentation](#).

Find information about the following topics

- Service manuals
- Service advisories
- Up-to-date control panel message (CPMD) troubleshooting
- Solutions for printer issues and emerging issues
- Remove and replace part instructions and videos
- Install and configure
- Printer specifications
- Warranty and regulatory 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\).](#)

## Order parts by authorized service providers

Find information about ordering parts and supplies for the printer.

### Ordering

Order parts by authorized service providers.

**Table 6-1** Ordering

Item or provider	Description
Order supplies and paper	<a href="http://www.hp.com/go/suresupply">www.hp.com/go/suresupply</a>
Order parts from authorized service providers	<a href="http://www.hp.com/buy/parts">www.hp.com/buy/parts</a> or <a href="http://partsurfer.hp.com">partsurfer.hp.com</a>
Order through service or support providers	Contact an HP-authorized service or support provider.
Order using the HP Embedded Web Server (EWS)	To access, in a supported web browser on your computer, enter the printer IP address or host name in the address/URL field. The EWS contains a link to the HP SureSupply web site, which provides options for purchasing Original HP supplies.

### Orderable parts

Not all of the parts shown in the exploded assembly diagrams are orderable parts.

Refer to the tables following the diagrams or the alphabetical/numerical parts lists to determine if a part is orderable.

### Supplies and accessories

Learn about the supplies and accessories that are available for the printer.

To order cartridges, visit <http://www.hp.com> (some portions of the HP Web site are available in English only). Ordering cartridges online is not supported in all countries/regions. However, many countries/regions have information about ordering by telephone, locating a local store, and printing a shopping list. In addition, go to [hp.com/supplies](http://hp.com/supplies) to obtain information about purchasing HP products in your country/region.

Use only the replacement cartridges that have the same cartridge number as the cartridge that is being replaced. Find the cartridge number in the following places:

- On the label of the cartridge that is being replaced.
- On a sticker inside the printer. Open the cartridge door to locate the sticker.
- Open the printer software (**HP Printer Assistant**), and then click **Shop > Shop For Supplies Online**.
- Open the HP Embedded Web Server (EWS), and then click **Tools > Supply Status** (under the **Product Information** item).

**Table 6-2 Supplies part numbers**

Item	Description	Part number (service)	Product number (new)
Toner cartridge	HP 58A Black Original LaserJet toner cartridge	CF258-67901	CF258A
Toner cartridge	HP 59A Black Original LaserJet toner cartridge	CF259-67901	CF259A
Toner cartridge	HP 76A Black Original LaserJet toner cartridge	CF276-67901	CF276A
Toner cartridge	HP 77A Black Original LaserJet toner cartridge	CF277-67901	CF277A
Toner cartridge	HP 58X High Yield Black Original LaserJet toner cartridge	CF258-67902	CF258X
Toner cartridge	HP 59X High Yield Black Original LaserJet toner cartridge	CF259-67902	CF259X
Toner cartridge	HP 76X High Yield Black Original LaserJet toner cartridge	CF276-67902	CF276X
Toner cartridge	HP 77X High Yield Black Original LaserJet toner cartridge	CF277-67902	CF277X
Toner cartridge	Black, managed toner cartridge	3PZ35-67901	W9024MC


**Table 6-3 Accessories**

Description	Part number (service)	Product number
550-sheet paper feeder	D9P29-67018	D9P29A
HP JetDirect 3100w BLE/NFC/Wireless accessory	3JN69-61001	3JN69A
HP Accessibility Kit	2TD64-61001	2TD64A
HP Accessibility Assistant	2MU47-61001	2MU47A
Locking Tray Guides (managed printers only)	3PZ15-67909	NA
HP Jetdirect LAN Accessory Module	5851-8004	8FP31A

## Customer self-repair parts

Learn about printer customer self-repair parts.

Customer self-repair (CSR) parts are available for many HP LaserJet printers to reduce repair time.

 **NOTE:** More information about the CSR program and benefits can be found at [www.hp.com/go/csr-support](http://www.hp.com/go/csr-support) and [www.hp.com/go/csr-faq](http://www.hp.com/go/csr-faq).

Genuine HP replacement parts can be ordered at [www.hp.com/buy/parts](http://www.hp.com/buy/parts) or by contacting an HP-authorized service or support provider. When ordering, one of the following will be needed: part number, serial number (found on back of printer), product number, or printer name.

- Parts listed as **A**: Easy
- Parts listed as **B**: Difficult and/or require tools
- Parts listed as **Mandatory**: Customer installed self-replacement parts (unless the customer is willing to pay for HP service personnel to perform the repair). For these parts, on-site or return-to-depot support is not provided under the HP printer warranty.
- Parts listed as **Optional**: HP service personnel installed self-replacement parts by customer request for no additional charge during the printer warranty period.


**Table 6-4** Customer self-repair (CSR) parts


Kit name	Description	CSR level	Self-replacement options	Part number
Tray 2	Replacement 250-sheet paper input tray (Tray 2)	A	Mandatory	RM2-5392-010CN
Tray 3	Replacement 550-sheet paper input tray (optional Tray 3)	A	Mandatory	RM2-5413-000CN
Tray 2 Separation Pad	Separation assembly (Tray 2)	A	Mandatory	3PZ15-67964
Tray 3 Separation Pad	Separation assembly (optional Tray 3)	A	Mandatory	3PZ15-67967
Tray 1 Pickup Roller	Tray pickup roller assembly (Multipurpose Tray 1)	A	Mandatory	3PZ15-67966
Tray 2 Pickup Roller	Tray pickup roller assembly (Tray 2)	A	Mandatory	3PZ15-67965
Tray 3 Pickup Roller	Tray pickup roller assembly (optional Tray 3)	A	Mandatory	3PZ15-67968

## How to use parts lists and diagrams

Learn how to use the parts lists and diagrams.

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

 **NOTE:** Be sure to order the correct part. When looking for part numbers for electrical parts, pay careful attention to the voltage that is listed in the part description. Doing so will make sure that the selected part number is for the correct printer model.

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

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# Document feeder and image scanner

Parts diagram and part list for the document feeder and image scanner.

Figure 6-1 Document feeder and image scanner

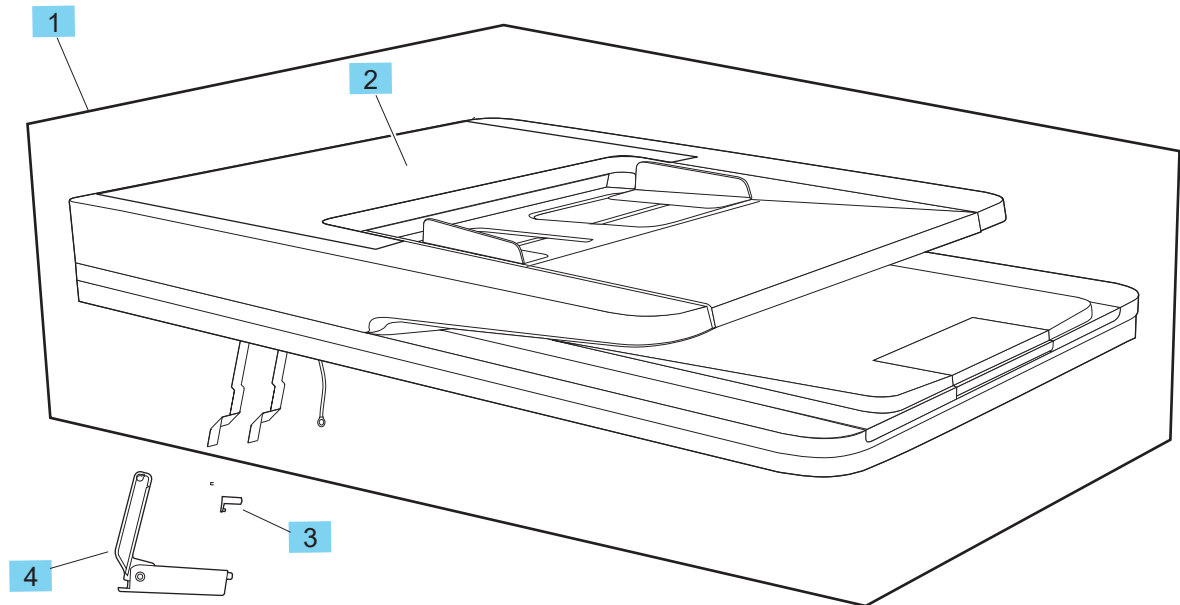


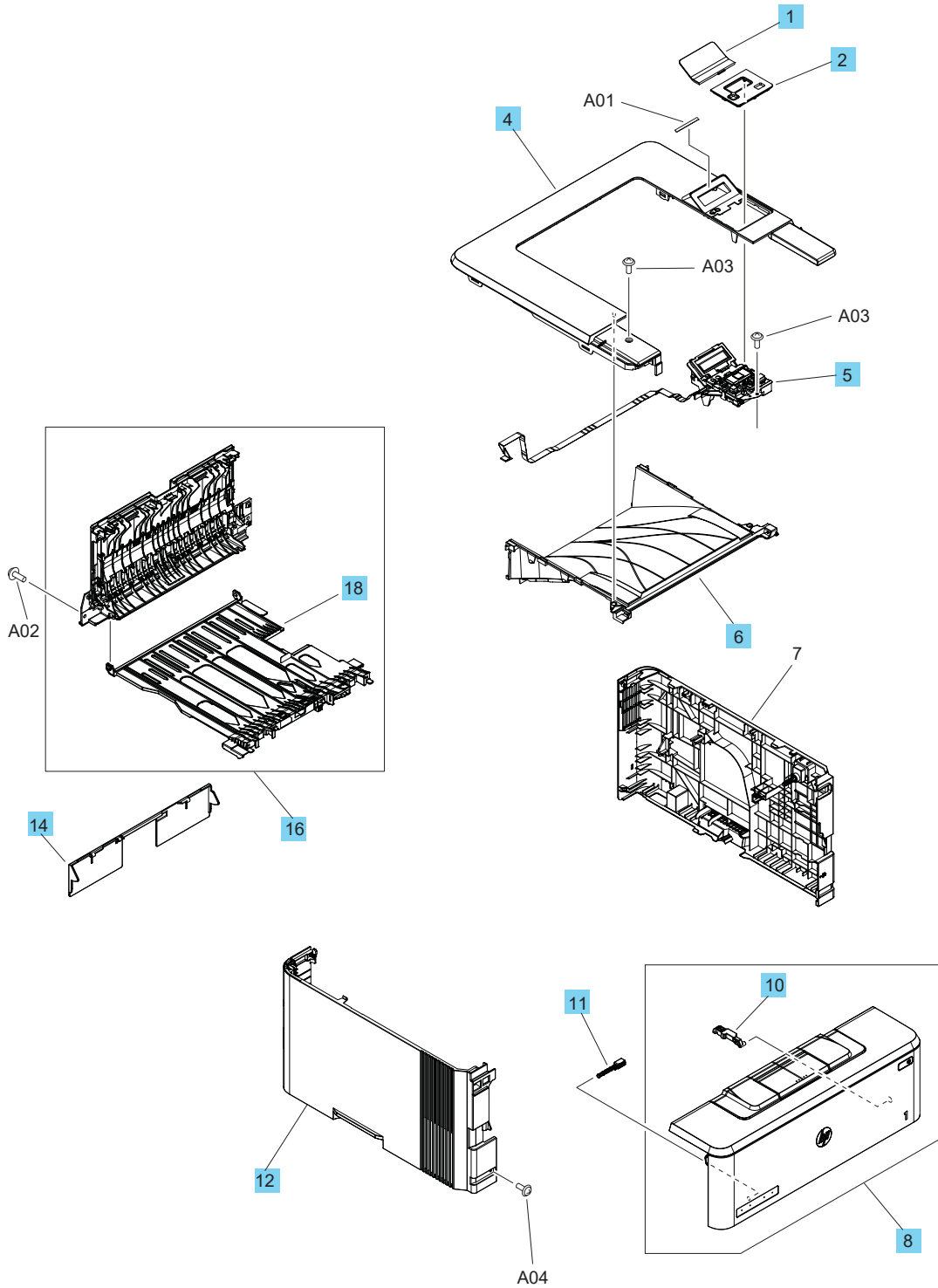
Table 6-5 Document feeder and image scanner

Ref No	Part number	Description	Qty
1	W1A73-60110	ISA assembly scanner/ADF duplex	1
2	W1A77-67903	Document feeder top cover assembly with rollers	1
3	B3Q10-40041	ISA lift slider pin	1
4	B3Q10-60128	ISA lift assembly	1

# Parts and diagrams: Covers (M406/M407/E40040)

Parts diagram and parts list for the SFP printer covers.

Figure 6-2 Covers (M406/M407/E40040)



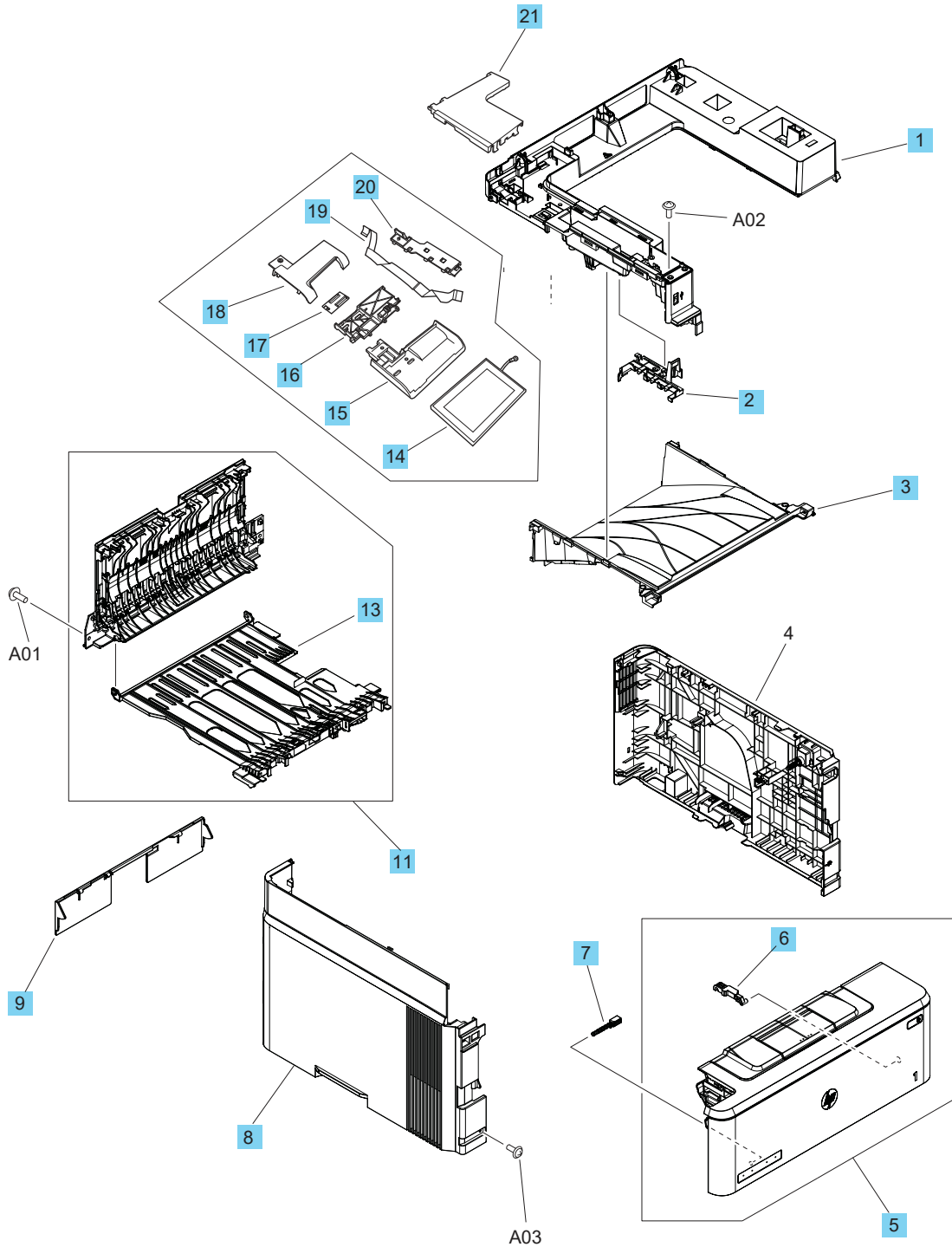
**Table 6-6 Covers (M406/M407/E400405)**

Ref No	Part number	Description	Qty
1	RL2-3790-000CN	Cover, indication	1
2	RC5-7025-000CN	Keypad cover	1
4	RC5-7026-000CN	Cover, top (SFP)	1
5	RM2-2959-000CN	Control panel kypd/FFC assembly	1
6	RC4-3231-000CN	Tray, paper delivery (output bin)	1
8	RM2-2562-000CN	Cartridge (front) door assembly (SFP)	1
10	RC4-4479-000CN	Link, pressure release	1
11	RC4-3002-000CN	Shaft, support	1
12	RM2-2960-000CN	Cover, left (SFP)	1
14	RC4-3082-000CN	Cover, cassette rear	1
16	RM2-5405-000CN	Rear door assembly	1
18	RM2-5666-000CN	Paper re-pick assembly	1
Not shown	7121-8686	HP logo jewel	1

# Parts and diagrams: Covers (M430/M431/E42540)

Parts diagram and parts list for the MFP printer covers.

Figure 6-3 Covers (M430/M431/E42540)



**Table 6-7 Covers (M430/M431/E42540)**

Ref No	Part number	Description	Qty
1	RC4-3207-000CN	Cover, top (MFP)	1
2	RC5-7024-000CN	Guide, USB cable	1
3	RC4-3231-000CN	Tray, paper delivery (output bin)	1
5	RM2-2567-000CN	Cartridge (front) door assembly (MFP)	1
6	RC4-4479-000CN	Link, pressure release	1
7	RC4-3002-000CN	Shaft, support	1
8	RM2-2961-000CN	Cover, left (MFP)	1
9	RC4-3082-000CN	Cover, cassette rear	1
11	RM2-5405-000CN	Rear door assembly	1
13	RM2-5666-000CN	Paper re-pick assembly	1
14	3PZ55-67901	Control panel assembly	1
15	3PZ55-67984	Control panel mount base	1
16	3PZ55-67904	Control panel ICB chassis mount	1
17	3PZ55-67903	CP interconnect board and ground clip kit	1
18	3PZ55-67902	Cover, top control panel mount	1
19	3PZ55-67910	Cable, flexible flat control panel to frmtr	1
20	3PZ55-67905	Cover, control-panel FFC	1
21	3PZ55-67978	Cover, ISA/fax FFC cables	1
not shown	7121-8686	HP logo jewel	1

# Parts and diagrams: Internal assemblies (1 of 3)

Parts diagram and parts list for the internal printer assemblies.

Figure 6-4 Internal assemblies (1 of 3)

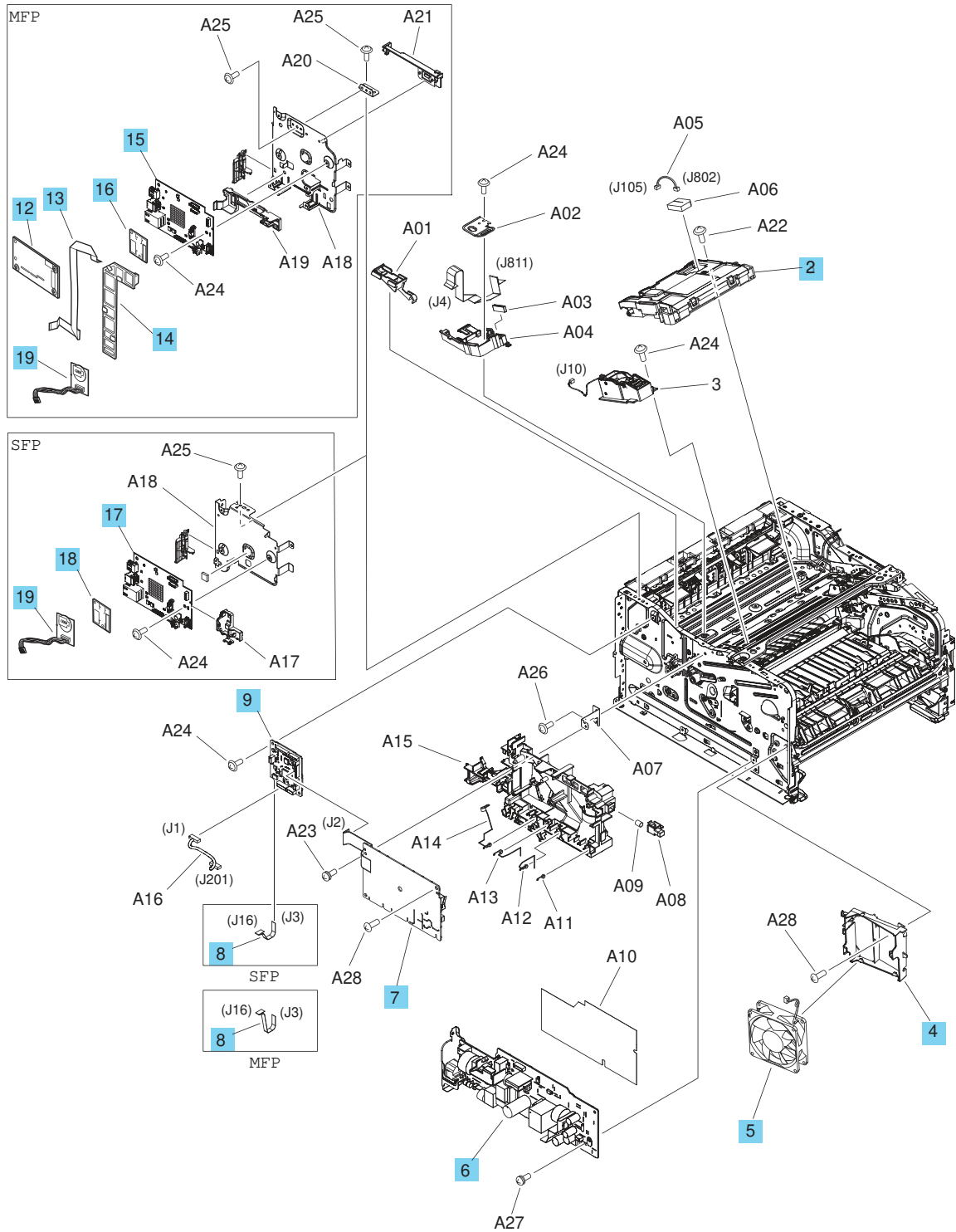


Table 6-8 Internal assemblies (1 of 3)

Ref No	Part number	Description	Qty
2	RM2-2891-000CN	Laser scanner assembly	1
4	RC4-2891-000CN	Duct, fan (FM1)	1
5	RK2-8068-000CN	Fan assembly	1
6	RM3-7417-000CN	LV power supply PCA (110-127V)	1
6	RM3-7418-000CN	LV power supply PCA (220-240V)	1
7	RM2-7508-000CN	HV power supply PCA	1
8	RK2-6931-000CN	Cable, flexible flat Frmtr to DCC (MFP)	1
8	RK2-6920-000CN	Cable, flexible flat Frmtr to DCC (SFP)	1
9	RM3-7584-000CN	DC controller	1
12	3PZ55-67980	Fax PCA with plug kit (USA)	1
12	3PZ55-67981	Fax PCA with plug kit (EURO)	1
12	3PZ55-67982	Fax PCA with plug kit (BRAZIL)	1
12	3PZ55-67983	Fax PCA with plug kit (AP)	1
13	3PZ55-67911	Cable, FFC fax to formatter	1
14	3PZ55-67979	Guide, fax FFC	1
15	3PZ55-67906	Formatter (MFP)	1
15	3PZ55-67907	Formatter (China/India; MFP)	1
16	B5L32-60002	eMMC 16GB (MFP)	1
17	3PZ15-67903	Formatter (SFP)	1
17	3PZ15-67904	Formatter (China/India; SFP)	1
18	3PZ15-67905	eMMC 4GB (SFP)	1
19	3PZ15-67908	Island of Data (IOD)	1

# Parts and diagrams: Internal assemblies (2 of 3)

Parts diagram and parts list for the internal printer assemblies.

Figure 6-5 Internal assemblies (2 of 3)

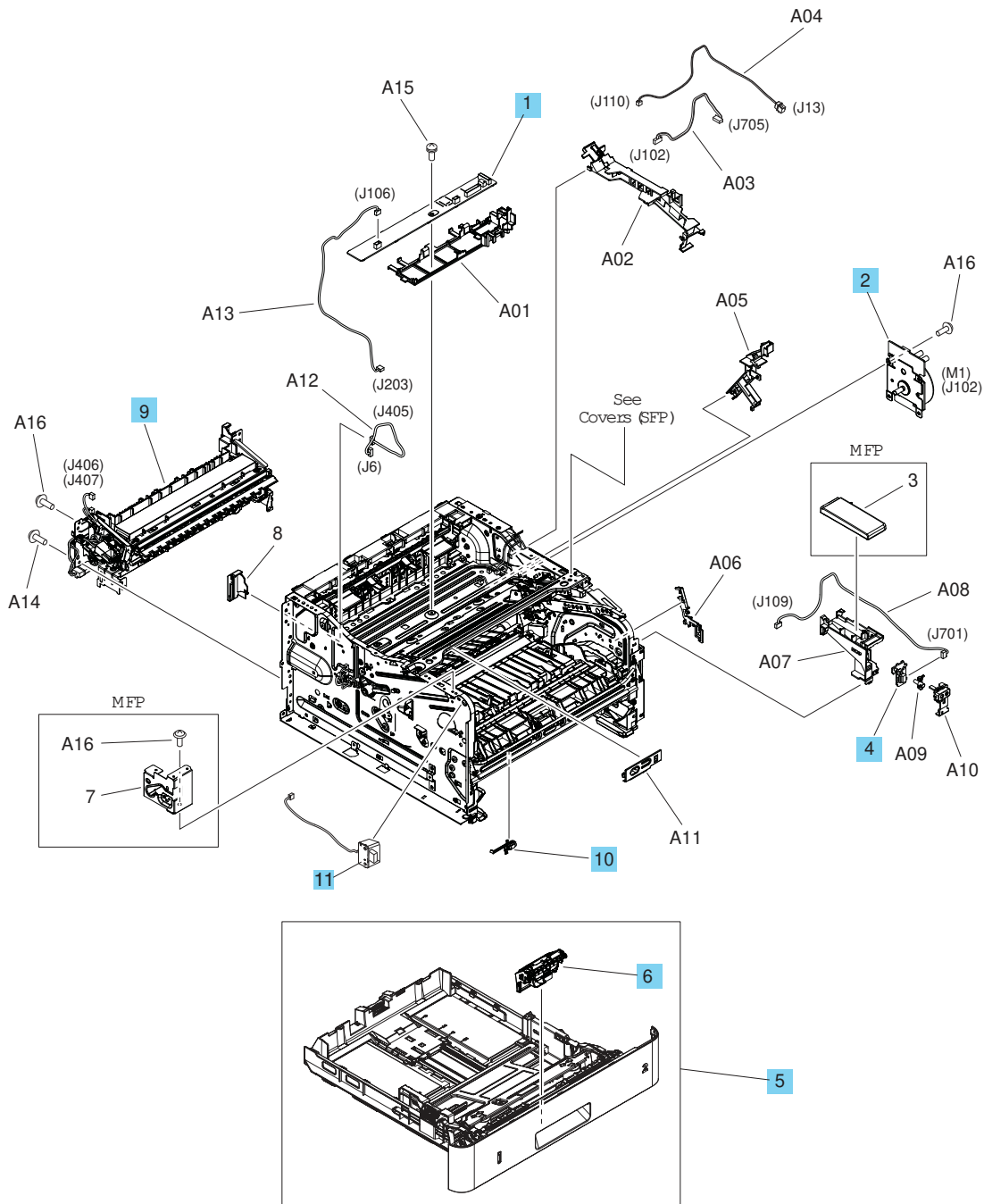


Table 6-9 Internal assemblies (2 of 3)

Ref No	Part number	Description	Qty
1	RM2-7510-000CN	Connecting PCA assembly	1
2	RM2-9531-000CN	Assembly, main motor	1



**Table 6-9** Internal assemblies (2 of 3) (continued)

Ref No	Part number	Description	Qty
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
9	RM2-2554-000CN	Fuser assembly (110-127V)	1
9	RM2-2555-000CN	Fuser assembly (220-240V)	1
10	RM2-5375-000CN	Tray 2 sensor assembly	1
11	5851-7008	USB port and cable (MFP)	1
Not shown	9170-2659	Ferrite, motor	1
Not shown	3PZ15-67909	Locking Tray Guides (managed printers only)	1

# Parts and diagrams: Internal assemblies (3 of 3)

Parts diagram and parts list for the internal printer assemblies.

Figure 6-6 Internal assemblies (3 of 3)

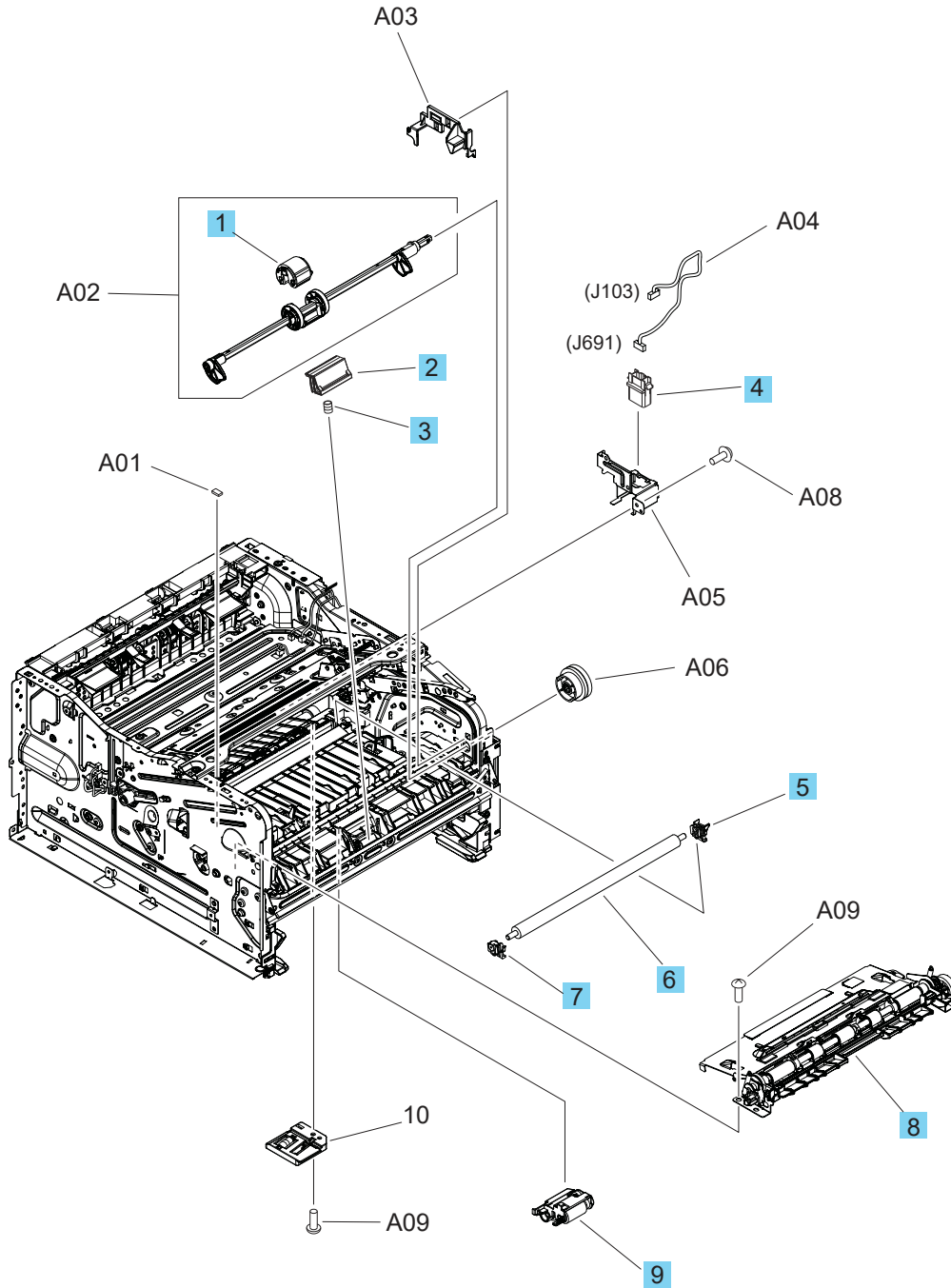


Table 6-10 Internal assemblies (3 of 3)

Ref No	Part number	Description	Qty
1	3PZ15-67966	Tray 1 Pickup Roller	1

Table 6-10 Internal assemblies (3 of 3) (continued)

Ref No	Part number	Description	Qty
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	RM1-4023-000CN	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

# Parts and diagrams: 550-sheet paper feeder covers

Parts diagram and part list for the 550-sheet paper feeder covers.

Figure 6-7 550-sheet paper feeder covers

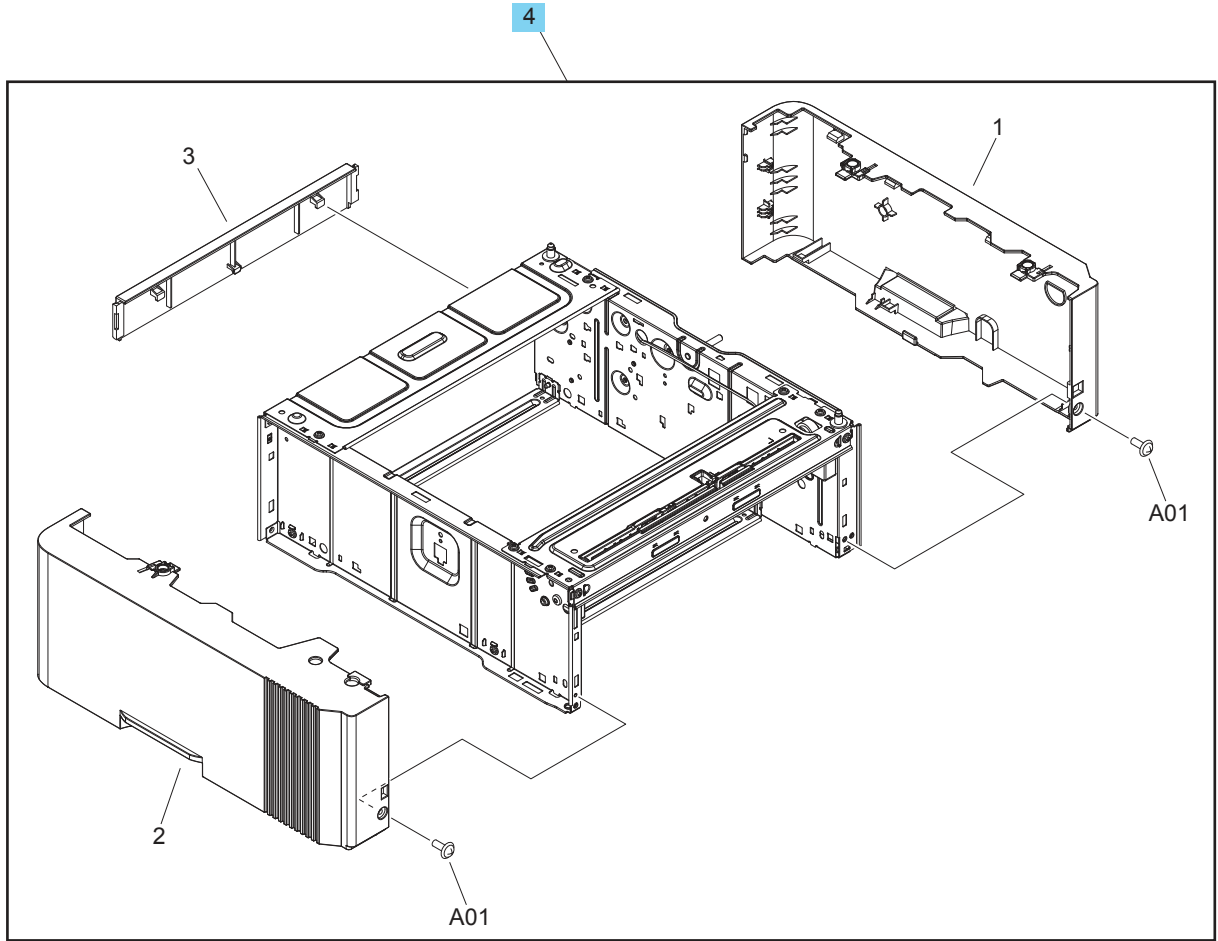


Table 6-11 550-sheet paper feeder covers

Ref No	Part number	Description	Qty
4	D9P29-67018	550-sheet paper feeder	1

# Parts and diagrams: 550-sheet paper feeder main body

Parts diagram and part list for the 550-sheet paper feeder main body.

Figure 6-8 550-sheet paper feeder main body

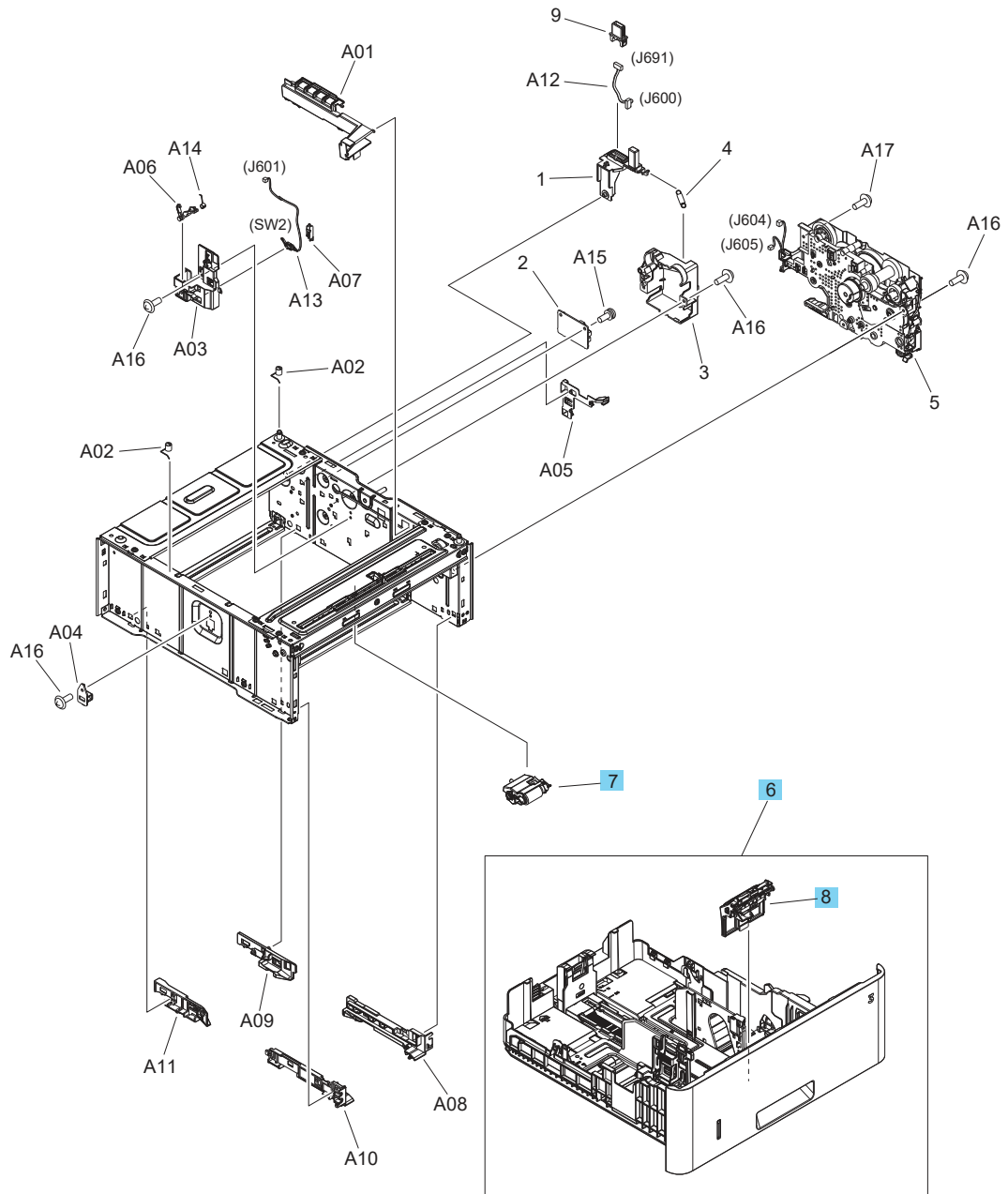


Table 6-12 550-sheet paper feeder main body

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

Table 6-12 550-sheet paper feeder main body (continued)

Ref No	Part number	Description	Qty
Not shown	3PZ15-67909	Locking Tray Guides (managed printers only)	1

# Alphabetical parts list

**Table 6-13** Alphabetical parts list

Description	Part number	Table and page
550-sheet paper feeder	D9P29-67018	<a href="#">550-sheet paper feeder covers on page 958</a>
Assembly, main motor	RM2-9531-000CN	<a href="#">Internal assemblies (2 of 3) on page 954</a>
CP interconnect board and ground clip kit	3PZ55-67903	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Cable, FFC fax to formatter	3PZ55-67911	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Cable, flexible flat Frmtr to DCC (MFP)	RK2-6931-000CN	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Cable, flexible flat Frmtr to DCC (SFP)	RK2-6920-000CN	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Cable, flexible flat control panel to frmtr	3PZ55-67910	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Cartridge (front) door assembly (MFP)	RM2-2567-000CN	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Cartridge (front) door assembly (SFP)	RM2-2562-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Connecting PCA assembly	RM2-7510-000CN	<a href="#">Internal assemblies (2 of 3) on page 954</a>
Connector, drawer	VS1-7258-007CN	<a href="#">Internal assemblies (3 of 3) on page 956</a>
Control panel ICB chassis mount	3PZ55-67904	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Control panel assembly	3PZ55-67901	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Control panel kypd/FFC assembly	RM2-2959-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Control panel mount base	3PZ55-67984	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Cover, ISA/fax FFC cables	3PZ55-67978	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Cover, cassette rear	RC4-3082-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Cover, cassette rear	RC4-3082-000CN	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Cover, control-panel FFC	3PZ55-67905	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Cover, indication	RL2-3790-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Cover, left (MFP)	RM2-2961-000CN	<a href="#">Covers (M430/M431/E42540) on page 951</a>

**Table 6-13** Alphabetical parts list (continued)

Description	Part number	Table and page
Cover, left (SFP)	RM2-2960-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Cover, top (MFP)	RC4-3207-000CN	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Cover, top (SFP)	RC5-7026-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Cover, top control panel mount	3PZ55-67902	<a href="#">Covers (M430/M431/E42540) on page 951</a>
DC controller	RM3-7584-000CN	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Document feeder top cover assembly with rollers	W1A77-67903	<a href="#">Document feeder and image scanner on page 947</a>
Duct, fan (FM1)	RC4-2891-000CN	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Fan assembly	RK2-8068-000CN	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Fax PCA with plug kit (AP)	3PZ55-67983	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Fax PCA with plug kit (BRAZIL)	3PZ55-67982	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Fax PCA with plug kit (EURO)	3PZ55-67981	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Fax PCA with plug kit (USA)	3PZ55-67980	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Ferrite, motor	9170-2659	<a href="#">Internal assemblies (2 of 3) on page 954</a>
Formatter (China/India; MFP)	3PZ55-67907	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Formatter (China/India; SFP)	3PZ15-67904	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Formatter (MFP)	3PZ55-67906	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Formatter (SFP)	3PZ15-67903	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Fuser assembly (110-127V)	RM2-2554-000CN	<a href="#">Internal assemblies (2 of 3) on page 954</a>
Fuser assembly (220-240V)	RM2-2555-000CN	<a href="#">Internal assemblies (2 of 3) on page 954</a>
Guide, USB cable	RC5-7024-000CN	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Guide, fax FFC	3PZ55-67979	<a href="#">Internal assemblies (1 of 3) on page 953</a>
HP logo jewel	7121-8686	<a href="#">Covers (M406/M407/E400405) on page 949</a>



**Table 6-13 Alphabetical parts list (continued)**

Description	Part number	Table and page
HP logo jewel	7121-8686	<a href="#">Covers (M430/M431/E42540) on page 951</a>
HV power supply PCA	RM2-7508-000CN	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Holder, transfer roller left	RC4-3134-000CN	<a href="#">Internal assemblies (3 of 3) on page 956</a>
Holder, transfer roller right	RC4-3133-000CN	<a href="#">Internal assemblies (3 of 3) on page 956</a>
ISA assembly scanner/ADF duplex	W1A73-60110	<a href="#">Document feeder and image scanner on page 947</a>
ISA lift assembly	B3Q10-60128	<a href="#">Document feeder and image scanner on page 947</a>
ISA lift slider pin	B3Q10-40041	<a href="#">Document feeder and image scanner on page 947</a>
Island of Data (IOD)	3PZ15-67908	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Keypad cover	RC5-7025-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
LV power supply PCA (110-127V)	RM3-7417-000CN	<a href="#">Internal assemblies (1 of 3) on page 953</a>
LV power supply PCA (220-240V)	RM3-7418-000CN	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Laser scanner assembly	RM2-2891-000CN	<a href="#">Internal assemblies (1 of 3) on page 953</a>
Link, pressure release	RC4-4479-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Link, pressure release	RC4-4479-000CN	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Locking Tray Guides (managed printers only)	3PZ15-67909	<a href="#">Internal assemblies (2 of 3) on page 954</a>
Locking Tray Guides (managed printers only)	3PZ15-67909	<a href="#">550-sheet paper feeder main body on page 959</a>
Pad, multipurpose separation (Tray 1)	RL2-0657-000CN	<a href="#">Internal assemblies (3 of 3) on page 956</a>
Paper re-pick assembly	RM2-5666-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Paper re-pick assembly	RM2-5666-000CN	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Power switch PC board assembly	RM2-8506-000CN	<a href="#">Internal assemblies (2 of 3) on page 954</a>
Rear door assembly	RM2-5405-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Rear door assembly	RM2-5405-000CN	<a href="#">Covers (M430/M431/E42540) on page 951</a>

**Table 6-13** Alphabetical parts list (continued)

Description	Part number	Table and page
Registration assembly	RM2-2577-000CN	<a href="#">Internal assemblies (3 of 3) on page 956</a>
Roller, transfer	RM1-4023-000CN	<a href="#">Internal assemblies (3 of 3) on page 956</a>
Shaft, support	RC4-3002-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Shaft, support	RC4-3002-000CN	<a href="#">Covers (M430/M431/E42540) on page 951</a>
Spring, compression (mp pad)	RU8-2935-000CN	<a href="#">Internal assemblies (3 of 3) on page 956</a>
Tray 1 Pickup Roller	3PZ15-67966	<a href="#">Internal assemblies (3 of 3) on page 956</a>
Tray 2	RM2-5392-010CN	<a href="#">Internal assemblies (2 of 3) on page 954</a>
Tray 2 Pickup Roller	3PZ15-67965	<a href="#">Internal assemblies (3 of 3) on page 956</a>
Tray 2 Separation Pad	3PZ15-67964	<a href="#">Internal assemblies (2 of 3) on page 954</a>
Tray 2 sensor assembly	RM2-5375-000CN	<a href="#">Internal assemblies (2 of 3) on page 954</a>
Tray 3	RM2-5413-000CN	<a href="#">550-sheet paper feeder main body on page 959</a>
Tray 3 Pickup Roller	3PZ15-67968	<a href="#">550-sheet paper feeder main body on page 959</a>
Tray 3 Separation Pad	3PZ15-67967	<a href="#">550-sheet paper feeder main body on page 959</a>
Tray, paper delivery (output bin)	RC4-3231-000CN	<a href="#">Covers (M406/M407/E400405) on page 949</a>
Tray, paper delivery (output bin)	RC4-3231-000CN	<a href="#">Covers (M430/M431/E42540) on page 951</a>
USB port and cable (MFP)	5851-7008	<a href="#">Internal assemblies (2 of 3) on page 954</a>
eMMC 16GB	B5L32-60002	<a href="#">Internal assemblies (1 of 3) on page 953</a>
eMMC 4GB	3PZ15-67905	<a href="#">Internal assemblies (1 of 3) on page 953</a>

# Numerical parts list

**Table 6-14 Numerical parts list**

Part number	Description	Table and page
3PZ15-67903	Formatter (SFP)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ15-67904	Formatter (China/India; SFP)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ15-67905	eMMC 4GB	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ15-67908	Island of Data (IOD)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ15-67909	Locking Tray Guides (managed printers only)	<a href="#">Internal assemblies (2 of 3) on page 954</a>
3PZ15-67909	Locking Tray Guides (managed printers only)	<a href="#">550-sheet paper feeder main body on page 959</a>
3PZ15-67964	Tray 2 Separation Pad	<a href="#">Internal assemblies (2 of 3) on page 954</a>
3PZ15-67965	Tray 2 Pickup Roller	<a href="#">Internal assemblies (3 of 3) on page 956</a>
3PZ15-67966	Tray 1 Pickup Roller	<a href="#">Internal assemblies (3 of 3) on page 956</a>
3PZ15-67967	Tray 3 Separation Pad	<a href="#">550-sheet paper feeder main body on page 959</a>
3PZ15-67968	Tray 3 Pickup Roller	<a href="#">550-sheet paper feeder main body on page 959</a>
3PZ55-67901	Control panel assembly	<a href="#">Covers (M430/M431/E42540) on page 951</a>
3PZ55-67902	Cover, top control panel mount	<a href="#">Covers (M430/M431/E42540) on page 951</a>
3PZ55-67903	CP interconnect board and ground clip kit	<a href="#">Covers (M430/M431/E42540) on page 951</a>
3PZ55-67904	Control panel ICB chassis mount	<a href="#">Covers (M430/M431/E42540) on page 951</a>
3PZ55-67905	Cover, control-panel FFC	<a href="#">Covers (M430/M431/E42540) on page 951</a>
3PZ55-67906	Formatter (MFP)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ55-67907	Formatter (China/India; MFP)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ55-67910	Cable, flexible flat control panel to frmtr	<a href="#">Covers (M430/M431/E42540) on page 951</a>
3PZ55-67911	Cable, FFC fax to formatter	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ55-67978	Cover, ISA/fax FFC cables	<a href="#">Covers (M430/M431/E42540) on page 951</a>

**Table 6-14 Numerical parts list (continued)**

Part number	Description	Table and page
3PZ55-67979	Guide, fax FFC	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ55-67980	Fax PCA with plug kit (USA)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ55-67981	Fax PCA with plug kit (EURO)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ55-67982	Fax PCA with plug kit (BRAZIL)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ55-67983	Fax PCA with plug kit (AP)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
3PZ55-67984	Control panel mount base	<a href="#">Covers (M430/M431/E42540) on page 951</a>
5851-7008	USB port and cable (MFP)	<a href="#">Internal assemblies (2 of 3) on page 954</a>
7121-8686	HP logo jewel	<a href="#">Covers (M406/M407/E400405) on page 949</a>
7121-8686	HP logo jewel	<a href="#">Covers (M430/M431/E42540) on page 951</a>
9170-2659	Ferrite, motor	<a href="#">Internal assemblies (2 of 3) on page 954</a>
B3Q10-40041	ISA lift slider pin	<a href="#">Document feeder and image scanner on page 947</a>
B3Q10-60128	ISA lift assembly	<a href="#">Document feeder and image scanner on page 947</a>
B5L32-60002	eMMC 16GB	<a href="#">Internal assemblies (1 of 3) on page 953</a>
D9P29-67018	550-sheet paper feeder	<a href="#">550-sheet paper feeder covers on page 958</a>
RC4-2891-000CN	Duct, fan (FM1)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
RC4-3002-000CN	Shaft, support	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RC4-3002-000CN	Shaft, support	<a href="#">Covers (M430/M431/E42540) on page 951</a>
RC4-3082-000CN	Cover, cassette rear	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RC4-3082-000CN	Cover, cassette rear	<a href="#">Covers (M430/M431/E42540) on page 951</a>
RC4-3133-000CN	Holder, transfer roller right	<a href="#">Internal assemblies (3 of 3) on page 956</a>
RC4-3134-000CN	Holder, transfer roller left	<a href="#">Internal assemblies (3 of 3) on page 956</a>
RC4-3207-000CN	Cover, top (MFP)	<a href="#">Covers (M430/M431/E42540) on page 951</a>

**Table 6-14 Numerical parts list (continued)**

Part number	Description	Table and page
RC4-3231-000CN	Tray, paper delivery (output bin)	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RC4-3231-000CN	Tray, paper delivery (output bin)	<a href="#">Covers (M430/M431/E42540) on page 951</a>
RC4-4479-000CN	Link, pressure release	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RC4-4479-000CN	Link, pressure release	<a href="#">Covers (M430/M431/E42540) on page 951</a>
RC5-7024-000CN	Guide, USB cable	<a href="#">Covers (M430/M431/E42540) on page 951</a>
RC5-7025-000CN	Keypad cover	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RC5-7026-000CN	Cover, top (SFP)	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RK2-6920-000CN	Cable, flexible flat Frmtr to DCC (SFP)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
RK2-6931-000CN	Cable, flexible flat Frmtr to DCC (MFP)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
RK2-8068-000CN	Fan assembly	<a href="#">Internal assemblies (1 of 3) on page 953</a>
RL2-0657-000CN	Pad, multipurpose separation (Tray 1)	<a href="#">Internal assemblies (3 of 3) on page 956</a>
RL2-3790-000CN	Cover, indication	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RM1-4023-000CN	Roller, transfer	<a href="#">Internal assemblies (3 of 3) on page 956</a>
RM2-2554-000CN	Fuser assembly (110-127V)	<a href="#">Internal assemblies (2 of 3) on page 954</a>
RM2-2555-000CN	Fuser assembly (220-240V)	<a href="#">Internal assemblies (2 of 3) on page 954</a>
RM2-2562-000CN	Cartridge (front) door assembly (SFP)	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RM2-2567-000CN	Cartridge (front) door assembly (MFP)	<a href="#">Covers (M430/M431/E42540) on page 951</a>
RM2-2577-000CN	Registration assembly	<a href="#">Internal assemblies (3 of 3) on page 956</a>
RM2-2891-000CN	Laser scanner assembly	<a href="#">Internal assemblies (1 of 3) on page 953</a>
RM2-2959-000CN	Control panel kypd/FFC assembly	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RM2-2960-000CN	Cover, left (SFP)	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RM2-2961-000CN	Cover, left (MFP)	<a href="#">Covers (M430/M431/E42540) on page 951</a>

**Table 6-14 Numerical parts list (continued)**

<b>Part number</b>	<b>Description</b>	<b>Table and page</b>
RM2-5375-000CN	Tray 2 sensor assembly	<a href="#">Internal assemblies (2 of 3) on page 954</a>
RM2-5392-010CN	Tray 2	<a href="#">Internal assemblies (2 of 3) on page 954</a>
RM2-5405-000CN	Rear door assembly	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RM2-5405-000CN	Rear door assembly	<a href="#">Covers (M430/M431/E42540) on page 951</a>
RM2-5413-000CN	Tray 3	<a href="#">550-sheet paper feeder main body on page 959</a>
RM2-5666-000CN	Paper re-pick assembly	<a href="#">Covers (M406/M407/E400405) on page 949</a>
RM2-5666-000CN	Paper re-pick assembly	<a href="#">Covers (M430/M431/E42540) on page 951</a>
RM2-7508-000CN	HV power supply PCA	<a href="#">Internal assemblies (1 of 3) on page 953</a>
RM2-7510-000CN	Connecting PCA assembly	<a href="#">Internal assemblies (2 of 3) on page 954</a>
RM2-8506-000CN	Power switch PC board assembly	<a href="#">Internal assemblies (2 of 3) on page 954</a>
RM2-9531-000CN	Assembly, main motor	<a href="#">Internal assemblies (2 of 3) on page 954</a>
RM3-7417-000CN	LV power supply PCA (110-127V)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
RM3-7418-000CN	LV power supply PCA (220-240V)	<a href="#">Internal assemblies (1 of 3) on page 953</a>
RM3-7584-000CN	DC controller	<a href="#">Internal assemblies (1 of 3) on page 953</a>
RU8-2935-000CN	Spring, compression (mp pad)	<a href="#">Internal assemblies (3 of 3) on page 956</a>
VS1-7258-007CN	Connector, drawer	<a href="#">Internal assemblies (3 of 3) on page 956</a>
W1A73-60110	ISA assembly scanner/ADF duplex	<a href="#">Document feeder and image scanner on page 947</a>
W1A77-67903	Document feeder top cover assembly with rollers	<a href="#">Document feeder and image scanner on page 947</a>

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# A Certificate of Volatility

View the product certificates of volatility.

## Certificate of Volatility

Review the certificates of volatility for the printers.

Figure A-1 Certificate of Volatility SFP (1 of 2)

Hewlett-Packard Certificate of Volatility				
Model: HP LaserJet M406 (Enterprise) E40040 (Managed) M407 (Ent. China)	Part Number: <b>Enterprise</b> M406dn = 3PZ15A M407dn = 3PZ16A		<b>Managed</b> E40040 = 3PZ35A	
			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): DDR3 - DRAM	Size: 1024MB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Operation system and print/scan buffer	Steps to clear memory: When the printer is powered off the memory is erased.
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): IOD EEPROM	Size: 32KB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Store customer setting data for backup/restore	Steps to clear memory: There are no steps to clear this data.
Type (Flash, EEPROM, etc): SPI Flash	Size: 8MB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: Contains the boot code and factory product configuration data required for the device to function. User modifications are limited to downloading digitally signed HP firmware images.	Steps to clear memory: There are no steps to clear this data
Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <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 (HDD, Tape, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
EMMC	4GB	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	OS and user data	Firmware update
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				
Print jobs, HP digitally signed firmware upgrades, 3rd party application loading. USB ports can be disabled.				
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				
Diagnostic service logs can be uploaded. Print files can be printed via a USB thumb drive.				
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:				



Figure A-2 Certificate of Volatility SFP (2 of 2)

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:	Effective Radiate Power (ERP):
Modulation:	
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:	

Figure A-3 Certificate of Volatility MFP (1 of 2)

Hewlett-Packard Certificate of Volatility				
Model: HP LaserJet M430 (Enterprise) E42540 (Managed) M431 (Ent. CH/IN)	Part Number: <b>Enterprise</b> M430f = 3PZ55A M431f = 3PZ56A		<b>Managed</b> E42540f = 3PZ75A	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): DDR3 - DRAM	Size: 2048MB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Operation system and print/scan buffer	Steps to clear memory: When the printer is powered off the memory is erased.
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): IOD EEPROM	Size: 32KB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Store customer setting data for backup/restore	Steps to clear memory: There are no steps to clear this data.
Type (Flash, EEPROM, etc): SCAN EEPROM	Size: 32KB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Store Scan/Customer settings	Steps to clear memory: There are no steps to clear this data.
Type (Flash, EEPROM, etc): SPI Flash	Size: 8MB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: Contains the boot code and factory product configuration data required for the device to function. User modifications are limited to downloading digitally signed HP firmware images.	Steps to clear memory: There are no steps to clear this data.
Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <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 (HDD, Tape, etc): EMMC	Size: 16GB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: OS and user data	Steps to clear memory: Firmware update
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				
Print jobs, HP digitally signed firmware upgrades, 3rd party application loading. USB ports can be disabled.				
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				
Diagnostic service logs can be uploaded. Print files can be printed via a USB thumb drive.				
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:	

**Figure A-4** Certificate of Volatility MFP (2 of 2)

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:	
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:	



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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. Function 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 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 are 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 functionality 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.

**Resolution**

The sharpness of an image, 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 are 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.

### **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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