5 Removal and replacement

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Removal and replacement strategy

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**Introduction**

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

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

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

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

**Removal and replacement warnings, cautions, notes and tips**

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

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

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

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

📝 **NOTE:** Your product might not appear exactly as the one shown in the photos in this chapter. For example, the color of the external panels and covers might be different than your product. However, this does not effect the validity of the procedures in this chapter.

💡 **TIP:** To install a self-tapping screw, first turn it counterclockwise to align it with the existing thread pattern, then carefully turn it clockwise to tighten. Do not overtighten.
Electrostatic discharge

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

**Required tools**

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

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

Do *not* pull directly on the wires to disconnect them. **Always** pull on the plastic body of a connector to avoid damaging the connector wires.

**Figure 5-1** Phillips and pozidrive screwdriver comparison

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**Before performing service**

- If possible, print a configuration page (to record customer settings) and menu structure report.
- Remove all media from the product and remove the input tray.
- Turn off the power by using the power switch.
- Unplug the power and interface cables.
● Place the product on an ESD mat, if one is available. If an ESD-protected workstation is not available, discharge body static and ground the print engine chassis before touching an ESD-sensitive part.

● Remove the print cartridge. See Print cartridge on page 27.

After performing service

● Replace the print cartridge and input tray.

● Reload the input tray with media.

● Perform the post-service tests. See Post-service tests on page 73.
Post-service tests

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

Test 1 (print-quality test)

1. Verify that you have completed the necessary reassembly steps.
2. Ensure that the input tray contains clean, unmarked paper.
3. Attach the power cord and interface cable, and then turn on the product.
4. Verify that the expected start-up sounds occur.
5. Perform a control-panel test from the secondary service menu. On fax models only, verify that the control-panel buttons beep when they are pressed.

**NOTE:** On fax models only, if the control-panel buttons do not beep, verify that the user did not disable this function on the product control panel.

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

Test 2 (copy-quality test)

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

Test 3 (fax-quality test)

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

Use the following diagrams to determine which parts of the product must be removed before servicing.

**NOTE:** The scanner assembly might be contaminated if it is opened outside of a cleanroom environment. For this reason, the entire scanner assembly is replaceable only as a unit. Replacing the scanner assembly as an entire assembly replaces the scan module, the scan motor, and the cable.

Figure 5-2 Parts removal order for the scanner and ADF

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

Figure 5-3 Parts removal order for the product (product base)

- Print cartridge
  - Transfer roller
- Media input tray
- Printer side covers
  - Rear cover and fuser cover
  - Power supply
- Scanner assembly
  - Print-cartridge door
  - Front cover
  - Scanner support-frame
    - Engine controller unit
    - Laser/scanner assembly
    - Main motor
    - Fuser assembly
    - Pickup assembly
- Front cover
- Speaker assembly
- Formatter and fax card
Scanner and ADF components

NOTE: Your product might not appear exactly as the one shown in the photos in this chapter. For example, the color of the external panels and covers might be different than your product. However, this does not effect the validity of the procedures in this chapter.

ADF input tray

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

Figure 5-4  Remove the ADF input tray
Flatbed lid

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

Figure 5-5 Remove the flatbed lid (1 of 5)

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

Figure 5-6 ADF cover correctly installed
2. Disconnect two wire connectors (callout 1). Close the ADF cover.

   Figure 5-7  Remove the flatbed lid (2 of 5)

3. Locate the hinge-retainer clip at one end of the flatbed.

   Figure 5-8  Remove the flatbed lid (3 of 5)
4. Lift up on the retainer-clip locking tab, and pull the clip down and away from the flatbed lid. Repeat this step for the hinge-retainer clip at the other end of the flatbed.

Figure 5-9 Remove the flatbed lid (4 of 5)

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

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

Figure 5-10 Remove the flatbed lid (5 of 5)
Link assemblies and scanner support-frame springs

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

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

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

Figure 5-11  Remove the link assemblies and scanner support-frame springs (1 of 4)

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

Figure 5-12  Remove the link assemblies and scanner support-frame springs (2 of 4)
4. Remove the link assembly. Repeat this step with the remaining link.

   Figure 5-13 Remove the link assemblies and scanner support-frame springs (3 of 4)

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

   Figure 5-14 Remove the link assemblies and scanner support-frame springs (4 of 4)
Control-panel bezel

Gently pry the outside edges (callout 1) of the control-panel bezel away from the product to release it. Continue to pry up the bezel (callout 2), working toward the center of the bezel (callout 3).

Figure 5-15  Remove the control-panel bezel
Control-panel assembly

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

1. Remove the control-panel bezel. See Control-panel bezel on page 81.

2. Push in on the control-panel assembly latch (callout 1), and then slide the assembly to the left to release it.

![Figure 5-16 Remove the control-panel assembly (1 of 2)]

3. Slightly lift up the control panel and disconnect one FFC (callout 2). Remove the control-panel assembly.

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

![Figure 5-17 Remove the control-panel assembly (2 of 2)]
ADF separation pad

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

1. Open the ADF cover and lift up the ADF pickup-roller assembly.

2. Use a #8 torx screwdriver to remove two torx screws (callout 1) and remove the ADF separation-pad assembly.

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

*Figure 5-18* Remove the ADF separation pad
ADF input-tray flag

1. Open the ADF cover.

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

![Figure 5-19 Remove the ADF input-tray flag](image)

**TIP:** When reinstalling the ADF input-tray flag, make sure that the long, straight end of the spring is tucked under the lip on the flag and that the bent end of the spring threads through the hole in the plastic rib that retains the spring.

Make sure that the ADF input-tray flag can move freely.
ADF pickup roller assembly

1. Open the ADF cover.

   Figure 5-20  Replacing the ADF pickup roller assembly (1 of 6)

2. Lift the load spring off of the post on the ADF pickup roller assembly.

   Figure 5-21  Replacing the ADF pickup roller assembly (2 of 6)
3. Rotate the ADF pickup roller assembly.

**Figure 5-22** Replacing the ADF pickup roller assembly (3 of 6)

4. Lift the ADF pickup roller assembly, slide the assembly toward the front of the product to disengage the gear-end of the assembly, and then lift the assembly off of the product.

**Figure 5-23** Replacing the ADF pickup roller assembly (4 of 6)
5. Insert the gear-end of the replacement ADF pickup roller assembly into the product and then lower the assembly into place.

**Figure 5-24** Replacing the ADF pickup roller assembly (5 of 6)

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

**Figure 5-25** Replacing the ADF pickup roller (6 of 6)
ADF scanner glass

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

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

   **Figure 5-26** Remove the ADF scanner glass (1 of 3)

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

   **Figure 5-27** Remove the ADF scanner glass (2 of 3)
3. Slide the black glass-locking lever toward the back of the product to release the glass, and then carefully remove the glass.

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

**Figure 5-28** Remove the ADF scanner glass (3 of 3)
Scanner assembly

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

📝 **NOTE:** It is not necessary to remove the flatbed lid before removing the scanner assembly. However, removing the flatbed lid will make the scanner assembly lighter and easier to handle when it is removed. To remove the flatbed lid, see Flatbed lid on page 76.

1. Remove the ADF input tray. See ADF input tray on page 75.
2. Remove one screw (callout 1).

   **Figure 5-29** Remove the scanner assembly (1 of 10)

3. Release one tab on the back side of the cover.

   **Figure 5-30** Remove the scanner assembly (2 of 10)
4. Release the bottom tab (callout 2).

**Figure 5-31** Remove the scanner assembly (3 of 10)

5. Rotate the back side of the cover away from the product, and then slide the cover toward the front of the product to remove it.

**Figure 5-32** Remove the scanner assembly (4 of 10)
6. Push the print-cartridge door button to release the scanner assembly, and then raise the assembly until it locks open.

Figure 5-33  Remove the scanner assembly (5 of 10)

7. Disconnect two wire-harnesses and two FFCs (callout 3; J2, J33, J4, and J27) on the formatter, and then remove the harnesses and FFC from the retainers.

Remove one screw (callout 4) to release the ground wire.

⚠️ **CAUTION:** The ferrite and bracket are not captive when the ground screw is removed and can be dislodged if the product is tilted or moved.

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

Figure 5-34  Remove the scanner assembly (6 of 10)
8. Grasp the tab on the gear-drive arm bracket and carefully flex it away from the scanner assembly to release the bracket.

**Figure 5-35** Remove the scanner assembly (7 of 10)

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

**Figure 5-36** Remove the scanner assembly (8 of 10)
10. Use a small flat-blade screwdriver to release the hinge tabs on each front hinge.

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

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

Figure 5-37 Remove the scanner assembly (9 of 10)

11. Rotate the scanner assembly toward the rear of the product until the rear hinges clear the chassis hinge pins. Lift the scanner assembly off of the product base.

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

⚠️ **NOTE:** Do not lose the two scanner cushions in the scanner support-frame corners (one shown; callout 5).

Figure 5-38 Remove the scanner assembly (10 of 10)
Product base

**NOTE:** Your product might not appear exactly as the one shown in the photos in this chapter. For example, the color of the external panels and covers might be different than your product. However, this does not effect the validity of the procedures in this chapter.

Print cartridge

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

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

   **Figure 5-39** Remove the print cartridge (1 of 2)

2. Pull the print cartridge up and out of the product.

   **Figure 5-40** Remove the print cartridge (2 of 2)
Separation pad (product base)

1. Position the product with the rear side facing you.

2. Support the product and tip it forward. Remove two screws (callout 1).
   
   Figure 5-41  Remove the product separation pad (1 of 2)

3. Remove the product separation pad and frame.

   Figure 5-42  Remove the product separation pad (2 of 2)
Pickup roller (product base)

1. Remove the print cartridge and locate the product pickup roller. See Print cartridge on page 95.

   Figure 5-43  Remove the product pickup roller (1 of 5)

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

   CAUTION: Do not touch the black-sponge transfer roller inside the product. Touching the transfer roller can damage the product.

   Use gentle pressure to release the small white tabs to avoid breaking them.

   Figure 5-44  Remove the product pickup roller (2 of 5)
3. Gently pull the roller up and out of the product.

   **Figure 5-45** Remove the product pickup roller (3 of 5)

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

   **Figure 5-46** Remove the product pickup roller (4 of 5)
5. Rotate the top of the pickup roller into position until the white tabs on each side of the roller snap into place.

**Figure 5-47** Remove the product pickup roller (5 of 5)
Scanner cushions

1. Open the print-cartridge door.

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

**Figure 5-48** Installing the scanner cushions
Media input tray

1. Open the media input tray lid.
   
   Figure 5-49  Remove the media input tray (1 of 3)

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

   Figure 5-50  Remove the media input tray (2 of 3)
3. Depress the pickup-tray locking tabs to release the media input tray, and then pull it out and away from the product.

**Figure 5-51** Remove the media input tray (3 of 3)
Transfer roller

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

1. Open the print-cartridge door and remove the print cartridge.

2. Release the two small tabs on the transfer roller and then slide the roller to the right to release the left end of the roller shaft. Remove the transfer roller.

*Figure 5-52*  Remove the transfer roller
NOTE: The procedure for removing the right-side and left-side covers is identical. The right-side cover is shown in the following procedure.

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

   Figure 5-53 Remove the side covers (1 of 4)

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

   Figure 5-54 Remove the side covers (2 of 4)
3. Release the bottom tab (callout 3).

**Figure 5-55** Remove the side covers (3 of 4)

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

**Figure 5-56** Remove the side covers (4 of 4)
Print-cartridge door

1. Remove the scanner assembly. See Scanner assembly on page 90.

2. Fully open the print-cartridge door and gently pull downward on both print-cartridge swing arms to release them. (In Figure 5-57 Remove the print-cartridge door (1 of 2) on page 106, the left arm is disengaged).

   △ CAUTION: Be careful when releasing the swing arms. They can easily break.

   Figure 5-57 Remove the print-cartridge door (1 of 2)

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

   Figure 5-58 Remove the print-cartridge door (2 of 2)
Rear cover and fuser cover

1. Remove the right-side and left-side covers. See Side covers on page 104.

2. Remove one screw (callout 1).

   Figure 5-59 Remove the rear cover and fuser cover (1 of 3)

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

   Figure 5-60 Remove the rear cover and fuser cover (2 of 3)
4. Rotate the bottom of the fuser cover away from the product, and remove the fuser cover.

Figure 5-61 Remove the rear cover and fuser cover (3 of 3)
Front cover

1. Remove the right-side and left-side covers. See Side covers on page 104.

2. Release the lower left-side front-cover locking tab and slightly pry the lower-left corner of the front cover away from the product.

   Figure 5-62  Remove the front cover (1 of 4)

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

   Figure 5-63  Remove the front cover (2 of 4)
4. Pry up and pull out on the front cover to release it from the product.

   **Figure 5-64** Remove the front cover (3 of 4)

5. Remove the front cover.

   **Figure 5-65** Remove the front cover (4 of 4)
Speaker assembly

1. Remove the left cover. See Side covers on page 104.

2. Disconnect one wire-harness connector (callout 1; J32) and remove the wire-harness from one wire retainer (callout 2).

3. Remove one screw (callout 3) and the sheet-metal bracket (callout 4).

![Figure 5-66 Remove the speaker assembly (1 of 2)](image)

4. Release the speaker from the retaining clips and carefully slip the speaker out of the product chassis.

⚠️ **CAUTION:** The speaker will pass through the opening in the product chassis, but it is a tight fit and you must carefully handle the speaker. Do not damage the paper cone of the speaker or pull on the speaker wires.

![Figure 5-67 Remove the speaker assembly (2 of 2)](image)
5. Make sure that the replacement speaker is correctly position when it is installed.

**NOTE:** The front cover is shown off for clarity. You do not need to remove the front cover to remove the speaker.

- Make sure that the speaker electrical wires (callout 5) are positioned at the bottom of the chassis, and that the retainer clip fits over both sides of the speaker frame (callout 6).

- Make sure that the speaker is retained by the clips in the product chassis.
Formatter and fax card

⚠️ CAUTION: The formatter and fax card are ESD-sensitive devices.

1. Remove the left cover. See Side covers on page 104.

2. Disconnect all FFCs and wire-harness from the formatter and fax card.

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

💡 NOTE: The scanner assembly is shown removed in this procedure. If the scanner assembly is installed, there will be additional FFCs and wire-harness connected to the formatter. You do not need to remove the scanner assembly to remove the formatter and fax card.

3. Remove five screws from the formatter PCA (callout 1). Remove three screws (callout 2) from the fax card. Remove the formatter and fax card.

Figure 5-68 Remove the formatter
Power supply

1. Remove the following assemblies:
   - Right and left covers. See Side covers on page 104.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 107.
   - Front cover. See Front cover on page 109.
   - Speaker assembly. See Speaker assembly on page 111.
   - Formatter and fax card. See Formatter and fax card on page 113.

2. Disconnect one spade connector (callout 1) and remove three screws (callout 2).

   Figure 5-69 Remove the power supply (1 of 7)
3. Remove six screws (callout 3) and the sheet-metal plate (callout 4).

Figure 5-70  Remove the power supply (2 of 7)

4. Disconnect three FFCs (callout 5) and six wire-harness connectors (callout 6).

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

Figure 5-71  Remove the power supply (3 of 7)
5. Release the ground wire from the retainer (callout 7) on the product chassis.

**NOTE:** You might need to slightly pry up on the scanner support frame to release the wire from the retainer.

Figure 5-72  Remove the power supply (4 of 7)

6. Release the wire-harness from the retainer (callout 8) on the power supply.

Figure 5-73  Remove the power supply (5 of 7)
7. Unclip two clips (callout 9) and remove one plastic bracket (callout 10).

⚠️ **CAUTION:** The wire-harness (callout 11) attached to the bracket is not captive. Do not lose this wire-harness when the bracket is removed.

![Figure 5-74](image1.png) Remove the power supply (7 of 7)

8. Remove three screws (callout 12). Remove the power supply.

![Figure 5-75](image2.png) Remove the power supply (7 of 7)
Scanner support-frame

1. Remove the following assemblies:
   - Scanner assembly. See Scanner assembly on page 90.
   - Right and left cover. See Side covers on page 104.
   - Print-cartridge door. See Print-cartridge door on page 106.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 107.
   - Front cover. See Front cover on page 109.

2. Remove six screws (callout 1).

⚠️ **CAUTION:** Be careful not to drop any screws into the product.

⚠️ **NOTE:** If you turn over the scanner support-frame after you remove it, the two scanner cushions (callout 2) might fall out and be misplaced.

*Figure 5-76  Remove the scanner support-frame (1 of 5)*
3. Rotate the gear-drive bracket until the retainer on the gear-drive arm aligns with the opening in the bracket, and remove the bracket.

Figure 5-77 Remove the scanner support-frame (2 of 5)

4. Remove one screw (callout 3) and the ferrite and bracket (callout 4).

Figure 5-78 Remove the scanner support-frame (3 of 5)
5. Lift the scanner support-frame up and off of the product.

Figure 5-79  Remove the scanner support-frame (4 of 5)

6. If you are removing the scanner support-frame to gain access to the fuser, remove two screws (callout 5) and the chassis reinforcement bracket (callout 6).

Figure 5-80  Remove the scanner support-frame (5 of 5)
Laser/scanner assembly

1. Remove the following assemblies:
   - Scanner assembly. See Scanner assembly on page 90.
   - Right and left cover. See Side covers on page 104.
   - Print-cartridge door. See Print-cartridge door on page 106.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 107.
   - Front cover. See Front cover on page 109.
   - Scanner support-frame. See Scanner support-frame on page 118.

2. Remove three screws (callout 1) and one sheet-metal bracket (callout 2).

Figure 5-81 Remove the laser/scanner (1 of 7)
3. Release one tab and one spring (callout 3) and then remove right-side scanner-assembly locking lever.

**Figure 5-82** Remove the laser/scanner (2 of 7)

![Image showing callout 3]

4. Push the shaft to the left to disengage it (you might need to release the left-side locking lever spring), and then rotate the shaft towards the front of the product until the left-side scanner-assembly locking lever is in the down position.

**NOTE:**

When the shaft is reinstalled, make sure that the locking levers and the cartridge-door button (mounted to the shaft near the right-side locking lever) are correctly positioned. Verify that the locking-lever tension springs are engaged in the slots in the chassis.

**Figure 5-83** Remove the laser/scanner (3 of 7)

![Image showing callouts 1 and 2]
5. Lift the laser/scanner cover up and out of the product to remove it.

**NOTE:** When this cover is reinstalled, make sure that the slots (callout 4; one shown) in the lower portion of the cover fit over the edge of the laser/scanner mounting shelf so that the cover is secure and correctly fits inside the product.

![Figure 5-84 Remove the laser/scanner (4 of 7)](image)

6. Disconnect one FFC (callout 5).

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

![Figure 5-85 Remove the laser/scanner assembly (5 of 7)](image)
7. Remove four screws (callout 6).

**NOTE:** These four screws are longer than most of the other screws used in the product. Do not get them mixed up with screws from previously removed components.

**Figure 5-86** Remove the laser/scanner assembly (6 of 7)

8. Carefully slide the laser/scanner assembly away from the main-motor PCA bracket and then disconnect one wire-harness connector (callout 7). Remove the laser/scanner assembly.

**Figure 5-87** Remove the laser/scanner assembly (7 of 7)
Main motor

1. Remove the following assemblies:
   - Scanner assembly. See Scanner assembly on page 90.
   - Formatter. See Formatter and fax card on page 113.
   - Right and left cover. See Side covers on page 104.
   - Print-cartridge door. See Print-cartridge door on page 106.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 107.
   - Front cover. See Front cover on page 109.
   - Scanner support-frame. See Scanner support-frame on page 118.
   - Laser/scanner assembly. See Laser/scanner assembly on page 121.

2. Remove one screw (callout 1) and then carefully disconnect one wire-harness connector (callout 2).

Figure 5-88  Remove the main motor (1 of 4)
3. Carefully release two tabs (callout 3) and separate the main motor PCA from the mounting bracket.

**Figure 5-89** Remove the main motor (2 of 4)

4. Remove the main motor wire-harness from the retainers (callout 4) on the mounting bracket. Remove the bracket (callout 5).

**Figure 5-90** Remove the main motor (3 of 4)
5. Remove two screws (callout 6). Carefully slip the main-motor drive belt off of the motor shaft (callout 7), and then remove the main motor.

**Figure 5-91** Remove the main motor (4 of 4)

![Image of motor being removed](image)

**TIP:** When the main motor is reinstalled, make sure that the wire-harness is located toward the top of the motor so that the harness can be correctly positioned in the retainers on the motor PCA mounting bracket.

When you reinstall the main-motor drive belt, make sure that it is correctly positioned on top of the spring loaded tension idler and that it is not twisted (the groves in the belt should face inwards when the belt is correctly positioned).

Make sure that the FFC that is attached to the motor PCA is correctly positioned under the lower motor mounting bracket so that it will not interfere with the motor cooling fan blade on the rear of the motor shaft.
Fuser

1. Remove the following assemblies:
   - Scanner assembly. See Scanner assembly on page 90.
   - Right and left covers. See Side covers on page 104.
   - Print-cartridge door. See Print-cartridge door on page 106.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 107.
   - Front cover. See Front cover on page 109.
   - Formatter and fax card. See Formatter and fax card on page 113.
   - Scanner support-frame and chassis reinforcement plate. See Scanner support-frame on page 118.

2. Remove six screws (callout 1) and the power supply sheet-metal plate (callout 2).

   **Figure 5-92** Remove the fuser (1 of 6)
3. Disconnect two wire-harness connectors (callout 3; J102, and J552) and remove the harnesses from the retainer (callout 4).

**NOTE:** You might need to disconnect and remove other wire-harness to remove the required harness from the retainer.

*Figure 5-93* Remove the fuser (2 of 6)

4. Release the wire-harness from the retainer (callout 5) near the top of the fuser and disconnect the ground wire (callout 6) from the back of the product.

*Figure 5-94* Remove the fuser (3 of 6)
5. Release one tab (callout 7) and then remove the wire-harness retainer (callout 8).

   Figure 5-95  Remove the fuser (4 of 6)

6. Remove three screws (callout 9).

   Figure 5-96  Remove the fuser assembly (5 of 6)
7. Lift up the right side of the fuser assembly to release it from the chassis, and then remove the fuser assembly.

**Figure 5-97** Remove the fuser assembly (6 of 6)

**NOTE:** When replacing the fuser assembly, be sure to transfer the delivery-sensor PCA from the old fuser to the new one.
Paper-pickup assembly

1. Remove the following assemblies:
   - Product base separation pad. See Separation pad (product base) on page 96.
   - Scanner assembly. See Scanner assembly on page 90.
   - Transfer roller. See Transfer roller on page 103.
   - Right and left cover. See Side covers on page 104.
   - Print-cartridge door. See Print-cartridge door on page 106.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 107.
   - Front cover. See Front cover on page 109.
   - Formatter and fax card. See Formatter and fax card on page 113.
   - Fuser. See Fuser on page 128.

2. Release one tab (callout 1). Rotate the paper-pickup drive-shaft locking clip until the clip retainers align with the holes in the chassis, and then remove the clip.

Figure 5-98  Remove the paper-pickup assembly (1 of 4)
3. Disconnect two wire-harnesses (callout 2; J551 and J556).

**Figure 5-99** Remove the paper-pickup assembly (2 of 4)

4. Remove six screws (callout 3).

**Figure 5-100** Remove the paper-pickup assembly (3 of 4)
5. Separate the assembly from the chassis and remove it.

Figure 5-101 Remove the paper-pickup assembly (4 of 4)
Drive-gear assembly and drive belt

1. Release one tab (callout 1). Rotate the paper-pickup drive shaft locking clip until the clip retainers align with the holes in the chassis, and then remove the clip.

   Figure 5-102  Remove the Drive-gear assembly and drive belt (1 of 4).

2. Carefully slip the drive belt off of the motor shaft (callout 2) and then remove four screws (callout 3).

   Figure 5-103  Remove the Drive-gear assembly and drive belt (2 of 4).
3. Remove the drive-gear assembly.

⚠️ **CAUTION:** Not all of the gears and springs are captive when you remove the drive-gear assembly. Make sure that you do not lose any of the springs or gears when the assembly is removed.

**Figure 5-104** Remove the Drive-gear assembly and drive belt (3 of 4).

4. Remove one gear (callout 4) and carefully slip the drive belt (callout 5) off of the drive gear.

.flowLayoutPanel

⚠️ **TIP:** When you reinstall the main-motor drive belt, make sure that it is correctly positioned on top of the spring loaded tension idler and that it is not twisted (the groves in the belt should face inwards when the belt is correctly positioned.

**Figure 5-105** Remove the Drive-gear assembly and drive belt (4 of 4).