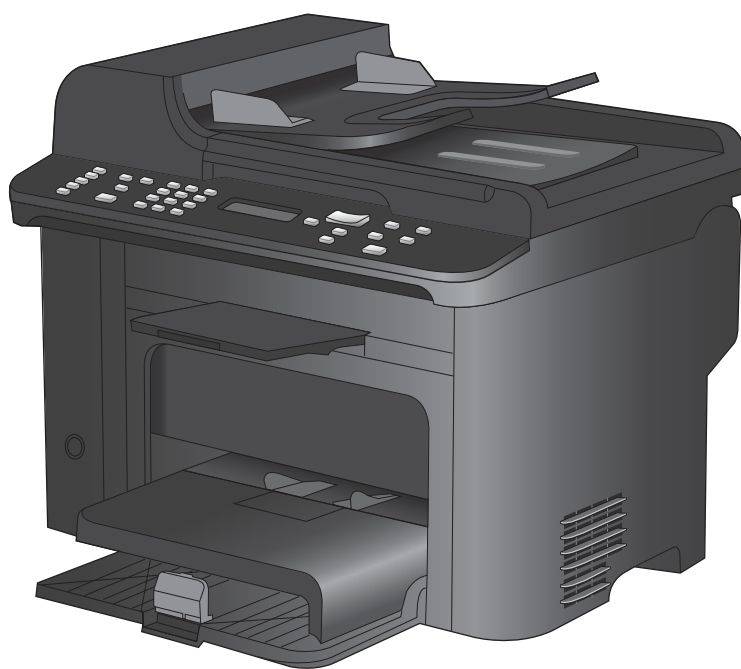






HP LaserJet Pro M1530 MFP Series

Service Manual

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Conventions used in this guide

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

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

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

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

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1 Removal and replacement

- [Introduction](#)
- [Removal and replacement strategy](#)
- [Electrostatic discharge](#)
- [Required tools](#)
- [Service approach](#)
- [Removal and replacement procedures](#)

Introduction

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

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

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

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

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

Removal and replacement strategy

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

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

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

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

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

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

Electrostatic discharge

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

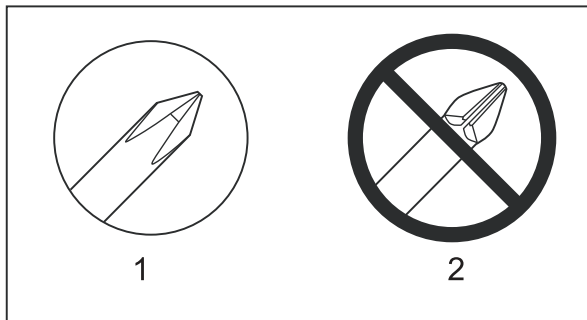
Protect the ESD-sensitive parts by placing them in ESD pouches when they are out of the product.

Required tools

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

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

Figure 1-1 Phillips and Pozidriv screwdriver comparison



Service approach

Before performing service

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

After performing service

- Plug in the power cable.
- Reinstall the print cartridge.
- Load paper in the product.

Post-service test

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

Print-quality test

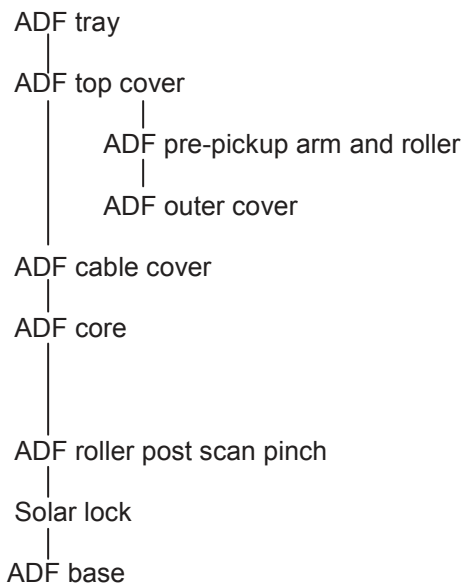
1. Verify that you have completed the necessary reassembly steps.
2. Make sure that the tray contains clean, unmarked paper.
3. Attach the power cord and interface cable or interface cables, and then turn on the product.
4. Verify that the expected startup sounds occur.
5. Print a configuration page,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

Parts removal order

 **NOTE:** In the following list, parts shown with blue text should be removed only in a clean-room environment. See the Service Manual Addendum for details about removing and replacing these parts.

Figure 1-2 Parts removal order: Scanner and document feeder

Automatic document feeder assembly



Scanner assembly

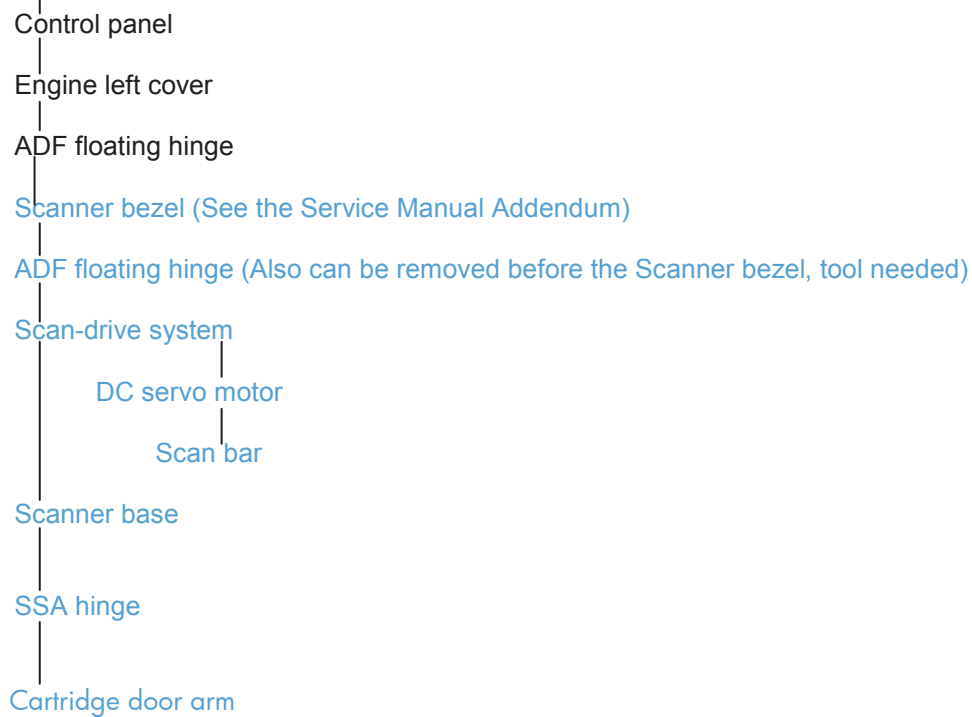
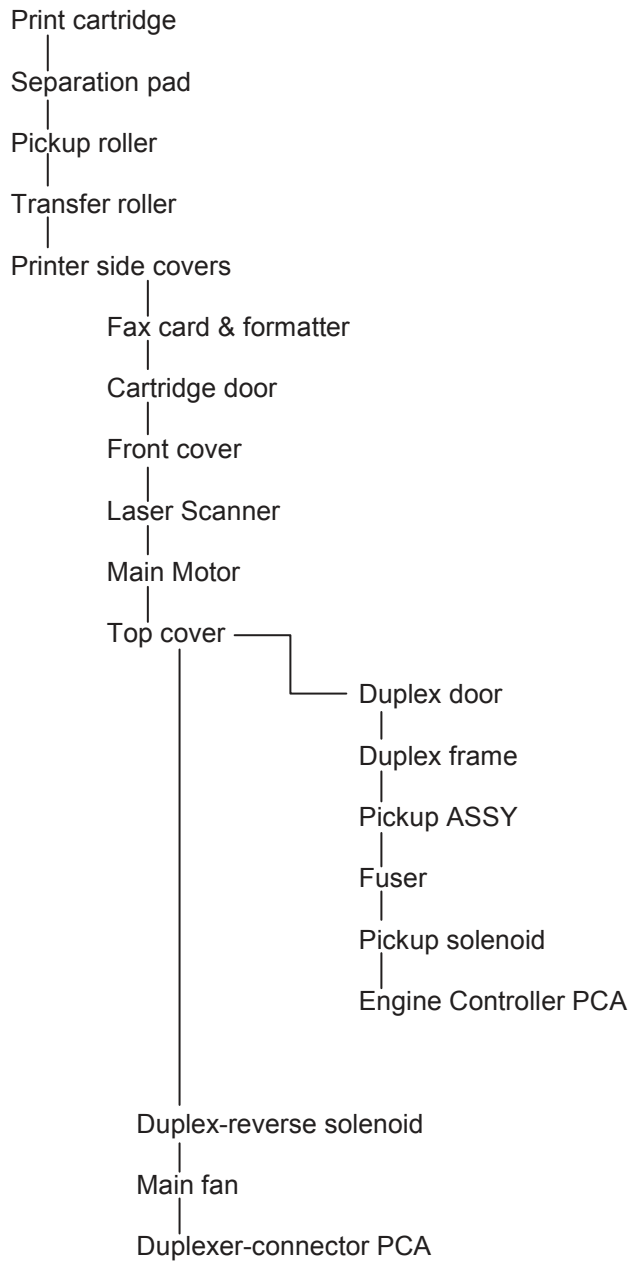


Figure 1-3 Parts removal order: Product base



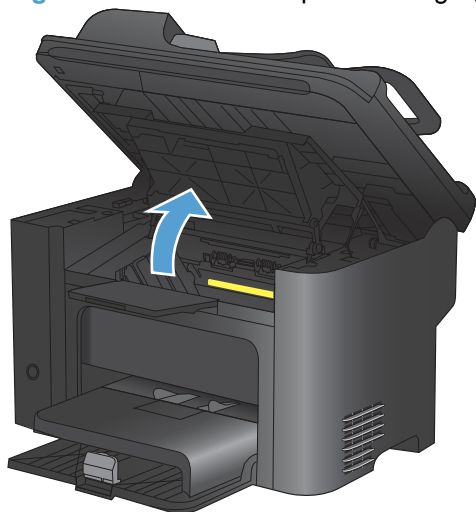
Removal and replacement procedures

 **NOTE:** Many of the figures in the following procedures show the product with the scanner assembly removed. However, removal of the scanner assembly is necessary only when specified in the steps.

Print cartridge

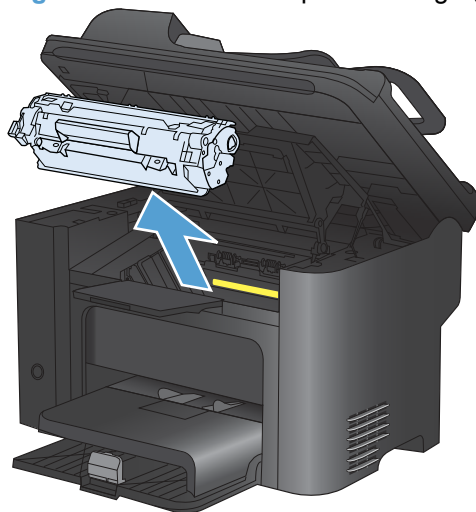
1. Lift the scanner assembly, and then open the cartridge door.

Figure 1-4 Remove the print cartridge (1 of 2)



2. Remove the print cartridge.

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

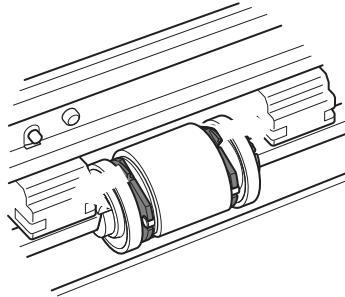


Pickup roller

CAUTION: Do not touch the sponge portion of the roller. Skin oils can cause paper handling problems.

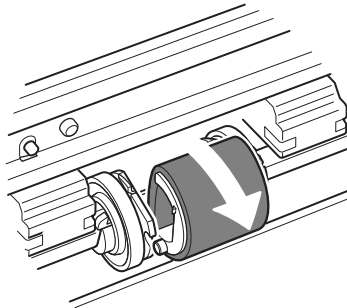
1. Remove the print cartridge. See [Print cartridge on page 7](#).
2. Release the two tabs between the wheels and the sides of the pick up roller.

Figure 1-6 Remove the pickup roller (1 of 2)



3. Rotate the roller away from the product to remove it.

Figure 1-7 Remove the pickup roller (2 of 2)



Separation pad

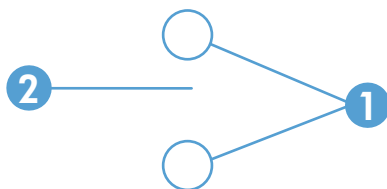
CAUTION: Do not touch the sponge portion of the pad. Skin oils can cause paper handling problems.

1. Place the product on its side to access the separation pad assembly.

CAUTION: Do not scratch the product covers. Place the product on a cloth or other clean surface to avoid scratches from dirt and debris.

2. Remove two screws (callout 1), and then remove the separation pad assembly (callout 2).

Figure 1-8 Remove the separation pad assembly



Transfer roller

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

1. Remove the print cartridge. See [Print cartridge on page 7](#).
2. Release two tabs (callout 1), and then remove the transfer roller (callout 2).

Figure 1-9 Remove the transfer roller

Covers

Main tray

Open the tray, carefully flex the tray to release the hinges, and then remove the tray.

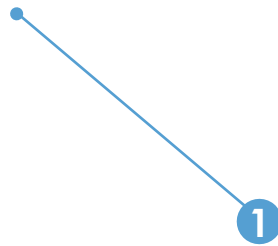
Figure 1-10 Remove the tray



Output bin extension

Lift the output bin extension (callout 1) up to remove it.

Figure 1-11 Remove the output bin extension



Left cover

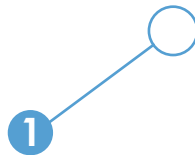
Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).

Remove the left cover

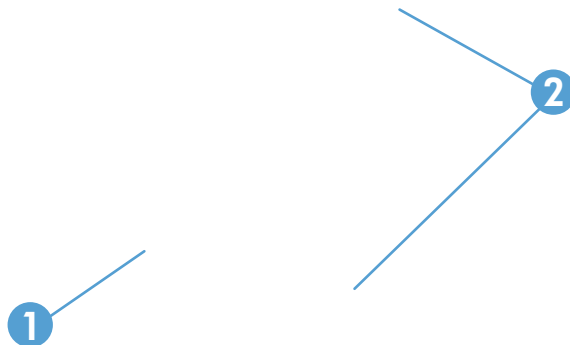
1. Remove one screw (callout 1).

Figure 1-12 Remove the left cover (1 of 5)



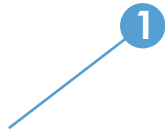
2. Open the duplex door (callout 1), and then release two tabs (callout 2).

Figure 1-13 Remove the left cover (2 of 5)



3. Release one tab (callout 1) at the bottom edge of the cover.

Figure 1-14 Remove the left cover (3 of 5)



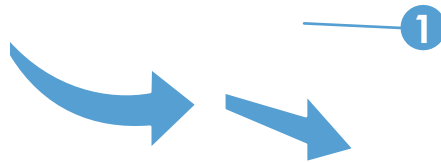
4. Release one tab (callout 1).

Figure 1-15 Remove the left cover (4 of 5)



5. Rotate the back edge of the cover away from the product, and then remove the cover (callout 1).

Figure 1-16 Remove the left cover (5 of 5)



Scanner assembly

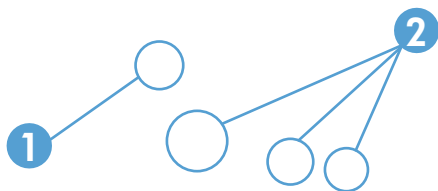
Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).

Remove the scanner assembly

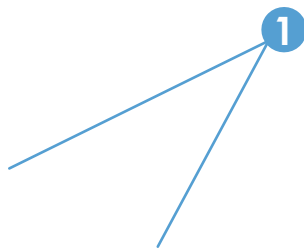
1. Remove one screw (callout 1), and then disconnect three FFCs (callout 2).

Figure 1-17 Remove the scanner assembly (1 of 5)



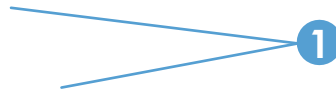
2. Remove two FFCs from the ferrite cores (callout 1).

Figure 1-18 Remove the scanner assembly (2 of 5)



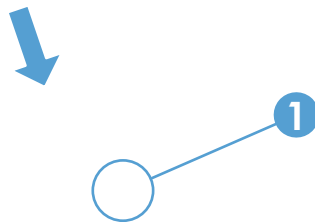
3. Remove the white FFC from its guide, and then carefully remove three FFCs from the upper guide (callout 1).

Figure 1-19 Remove the scanner assembly (3 of 5)



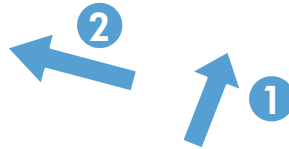
4. Release the tabs inside the hinges (callout 1) to allow the scanner assembly to slide down on the hinges.

Figure 1-20 Remove the scanner assembly (4 of 5)



5. Lift the scanner assembly up (arrow 1) and away from the hinges (arrow 2).

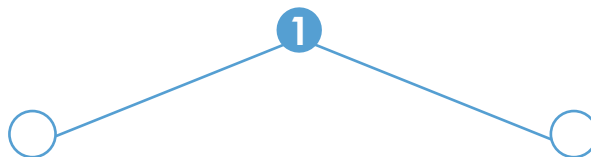
Figure 1-21 Remove the scanner assembly (5 of 5)



Scanner hinges

1. Remove the scanner assembly. See [Scanner assembly on page 15](#).
2. Remove one screw (callout 1) from each hinge.

Figure 1-22 Remove the scanner hinges (1 of 2)



3. Lift each hinge up to remove it.

Figure 1-23 Remove the scanner hinges (2 of 2)



Right cover

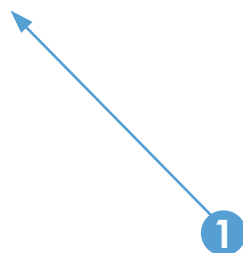
Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).

Remove the right cover

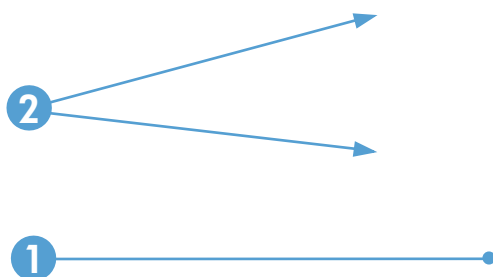
1. Remove one screw (callout 1).

Figure 1-24 Remove the right cover (1 of 5)



2. Open the duplex door (callout 1), and then release two tabs (callout 2).

Figure 1-25 Remove the right cover (2 of 5)



3. Release one tab (callout 1) at the bottom edge of the cover.

Figure 1-26 Remove the right cover (3 of 5)

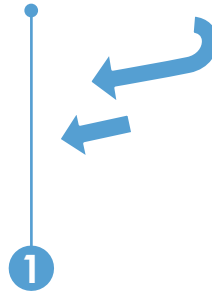
4. Release one tab (callout 1) at the top of the right cover.

Figure 1-27 Remove the right cover (4 of 5)



5. Pull the rear edge of the cover away from the product, slide the cover toward the front of the product to release it, and then remove the cover (callout 1).

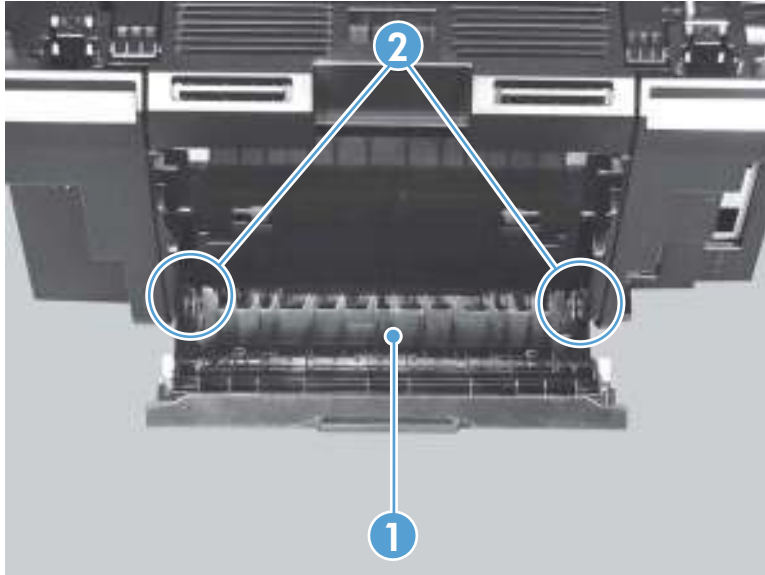
Figure 1-28 Remove the right cover (5 of 5)



Duplex door

Open the duplex door (callout 1), release one of the hinges (callout 2) by pushing inward on the door retainer. Swing the door away from the product to release the second hinge, and then remove the door.

Figure 1-29 Remove the duplex door



Duplex frame

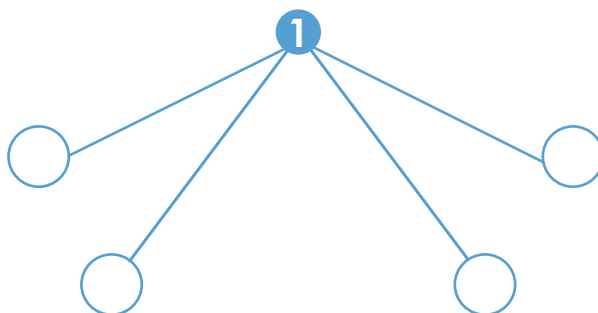
Before proceeding, remove the following components:

- Left cover. See [Left cover on page 12](#).
- Right cover. See [Right cover on page 19](#).
- Duplex door. See [Duplex door on page 22](#).

Remove the duplex frame

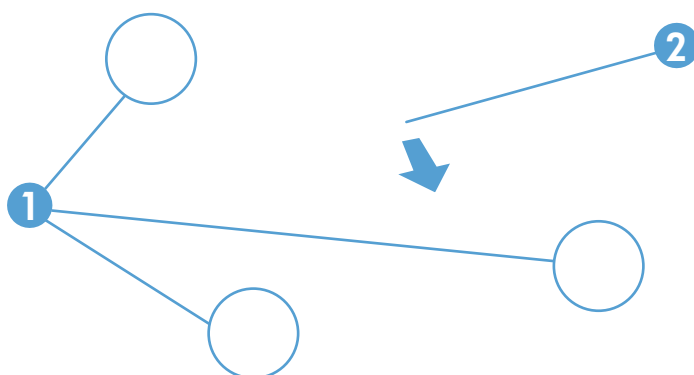
1. Remove four screws (callout 1).

Figure 1-30 Remove the duplex frame (1 of 2)



2. Release three tabs (callout 1), slide the duplex frame down (callout 2), and then remove the duplex frame.

Figure 1-31 Remove the duplex frame (2 of 2)



Cartridge door

Before proceeding, remove the following components:

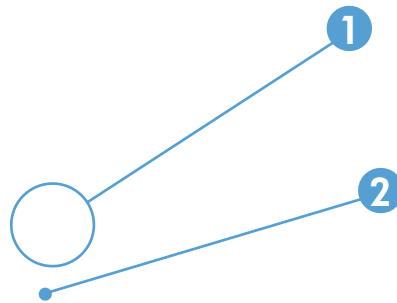
- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Scanner assembly. See [Scanner assembly on page 15](#).

Remove the cartridge door

CAUTION: The cartridge door connecting arms can easily come apart once the cartridge door is removed. Do not lose the cartridge door arms while servicing the product.

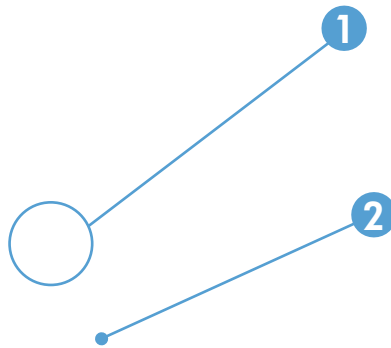
1. Open the cartridge door, and then squeeze together the tabs (callout 1) on the right side link arm (callout 2).

Figure 1-32 Remove the cartridge door (1 of 5)



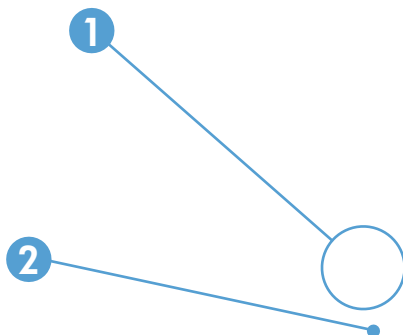
2. Squeeze together the tabs (callout 1) on the cartridge door open indicator arm (callout 2) to release it from the door.

Figure 1-33 Remove the cartridge door (2 of 5)



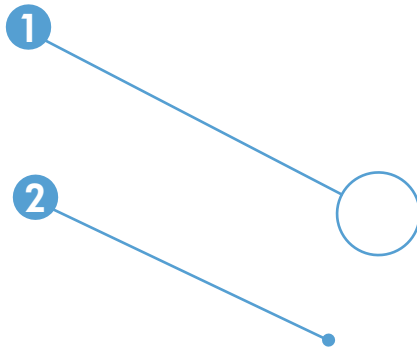
3. Squeeze together the tabs (callout 1) on the left side link arm (callout 2) to release it from the door.

Figure 1-34 Remove the cartridge door (3 of 5)



4. Squeeze together the tabs (callout 1) on the cartridge door lift arm (callout 2) to release it from the door.

Figure 1-35 Remove the cartridge door (4 of 5)



5. Lift the cartridge door straight up (callout 1), and then remove it .

Figure 1-36 Remove the cartridge door (5 of 5)



Front cover

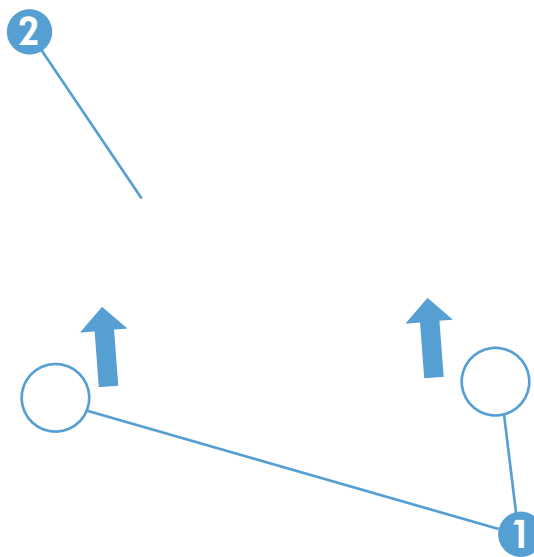
Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Right cover. See [Right cover on page 19](#).

Remove the front cover

- ▲ Release two tabs (callout 1), and then pull the bottom edge of the front cover (callout 2) away from the product to remove it.

Figure 1-37 Remove the front cover



Upper cover

Before proceeding, remove the following components:

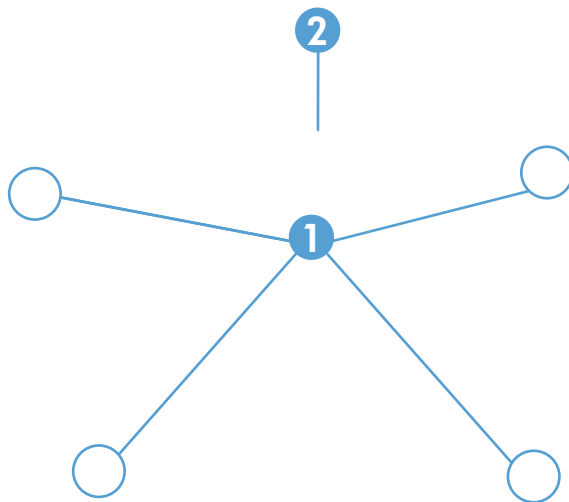
- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Right cover. See [Right cover on page 19](#).
- Scanner assembly. See [Scanner assembly on page 15](#).
- Cartridge door. See [Cartridge door on page 24](#).
- Front cover. See [Front cover on page 27](#).

Remove the upper cover

- ▲ Remove four screws (callout 1), and then remove the upper cover (callout 2).

CAUTION: Do not lose the cartridge door arms while servicing the product. The cartridge door connecting arms can easily come apart once the cartridge door is removed.

Figure 1-38 Remove the upper cover



Main assemblies

Formatter PCA

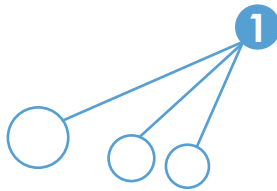
Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).

Remove the formatter PCA

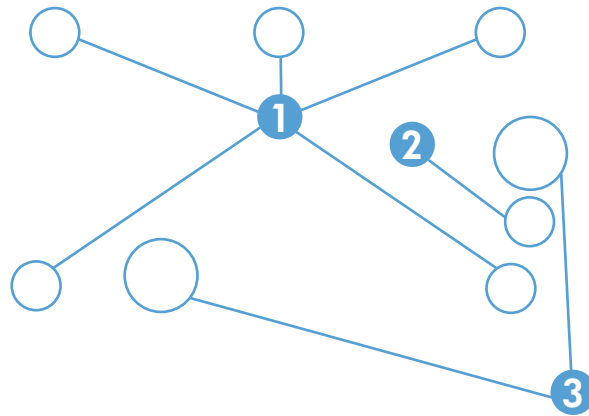
1. Disconnect three FFCs (callout 1).

Figure 1-39 Remove the formatter PCA (1 of 2)



2. Remove five screws (callout 1), disconnect one connector (callout 2), disconnect two FFCs (callout 3), and then remove the formatter PCA.

Figure 1-40 Remove the formatter PCA (2 of 2)



Fax PCA

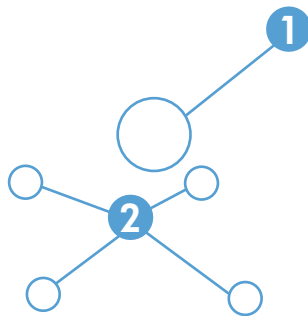
Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).

Remove the fax PCA

- ▲ Remove one FFC (callout 1), remove four screws (callout 2), and then remove the fax PCA.

Figure 1-41 Remove the fax PCA



Laser scanner assembly

Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Scanner assembly. See [Scanner assembly on page 15](#).
- Right cover. See [Right cover on page 19](#).
- Front cover. See [Front cover on page 27](#).
- Cartridge door. See [Cartridge door on page 24](#).
- Upper cover. See [Upper cover on page 28](#).

Remove the laser scanner assembly

1. Release one tab (callout 1), and then slide the holder (callout 2) forward to remove it.

Figure 1-42 Remove the laser scanner assembly (1 of 5)

2. Remove four screws (callout 1), and then remove the laser scanner cover (callout 2) and the sheet-metal plate (callout 3) together.

CAUTION: The laser scanner cover (callout 2) and sheet-metal plate (callout 3) can be easily separated. Do not lose the plate while servicing the product.

 **TIP:** When the cover is reinstalled, make sure that the black screws (callout 4) are installed in the correct holes.

Figure 1-43 Remove the laser scanner assembly (2 of 5)

3. Disconnect one FFC (callout 1), and then remove four screws (callout 2).

Figure 1-44 Remove the laser scanner assembly (3 of 5)

4. Slide the laser scanner assembly to the left, and then remove the dust-proof sponge (callout 1).

Figure 1-45 Remove the laser scanner assembly (4 of 5)

5. Disconnect one connector (callout 1), and then remove the laser scanner assembly (callout 2).

Figure 1-46 Remove the laser scanner assembly (5 of 5)

Reinstall the laser scanner assembly

- ▲ When the holder is reinstalled (callout 1), make sure that the lever arm (callout 2) is correctly positioned in the slot in the holder.

Figure 1-47 Reinstall the laser scanner assembly

Pickup assembly

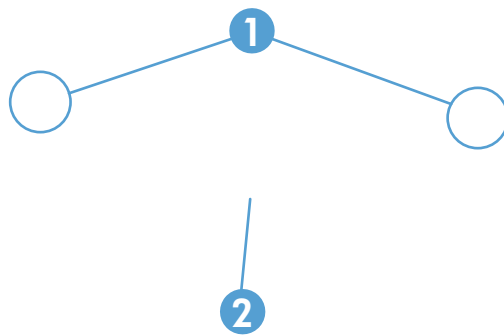
Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Separation pad. See [Separation pad on page 9](#).
- Left cover. See [Left cover on page 12](#).
- Scanner assembly. See [Scanner assembly on page 15](#).
- Formatter PCA. See [Formatter PCA on page 29](#).
- Fax modem. See [Fax PCA on page 31](#).
- Right cover. See [Right cover on page 19](#).
- Duplex frame. See [Duplex frame on page 23](#).
- Cartridge door. See [Cartridge door on page 24](#).
- Front cover. See [Front cover on page 27](#).
- Upper cover. See [Upper cover on page 28](#).

Remove the pickup assembly

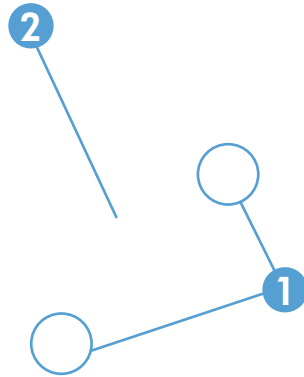
1. Release two tabs (callout 1), and then remove the duplex reverse guide (callout 2).

Figure 1-48 Remove the pickup assembly (1 of 9)



2. Remove two screws (callout 1), and then remove the sheet metal corner brace (callout 2).

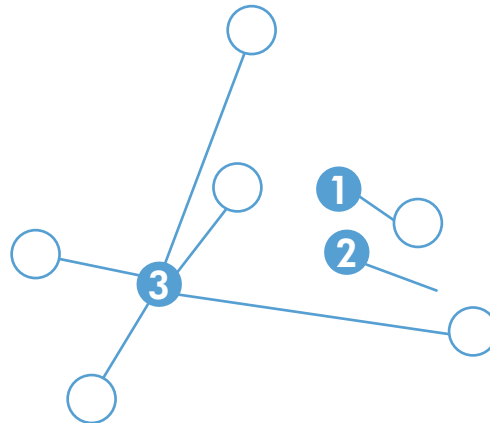
Figure 1-49 Remove the pickup assembly (2 of 9)



3. Disconnect one connector (callout 1), remove the wire harness from the guides (callout 2), and then remove five screws (callout 3).

 **NOTE:** The connector in callout 1 is the lower of the two connectors in this area. The right-most screw in callout 3 is on the front of the product.

Figure 1-50 Remove the pickup assembly (3 of 9)



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

Figure 1-51 Remove the pickup assembly (4 of 9)

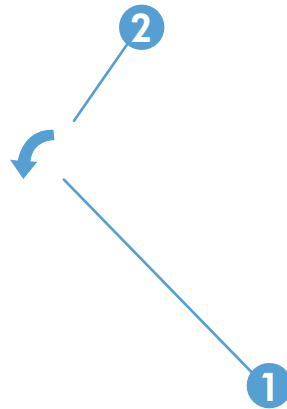
5. Disconnect three connectors (callout 1), and then remove the wire harness (callout 2) from the guide (callout 3).

 **Reinstallation tip** When installing the pickup assembly, place these wire harnesses (callout 2) in the guide first, and then place the wire harness from the ground connector in the previous step. This ensures that the harnesses are long enough to reach the engine controller PCA connectors.

Figure 1-52 Remove the pickup assembly (5 of 9)

6. Remove one bushing (callout 1) by releasing the tab and rotating the bushing counter-clockwise.

Figure 1-53 Remove the pickup assembly (6 of 9)



7. Remove one screw with a star washer (callout 1).

Figure 1-54 Remove the pickup assembly (7 of 9)

8. Remove six screws (callout 1), and then remove the pickup assembly (callout 2).

CAUTION: The ground spring on the assembly is not captive. Do not lose the spring when removing the assembly. See [Reinstall the pickup assembly on page 41](#).

Figure 1-55 Remove the pickup assembly (8 of 9)

9. Remove one gear (callout 1) from the pickup assembly (callout 2).

CAUTION: The gear is not captive. Do not lose the gear while servicing the product.

Figure 1-56 Remove the pickup assembly (9 of 9)

Reinstall the pickup assembly

1. Make sure that the pickup assembly ground spring is positioned correctly when reinstalling the assembly.

Figure 1-57 Reinstall the pickup assembly (1 of 4; correct ground spring position)

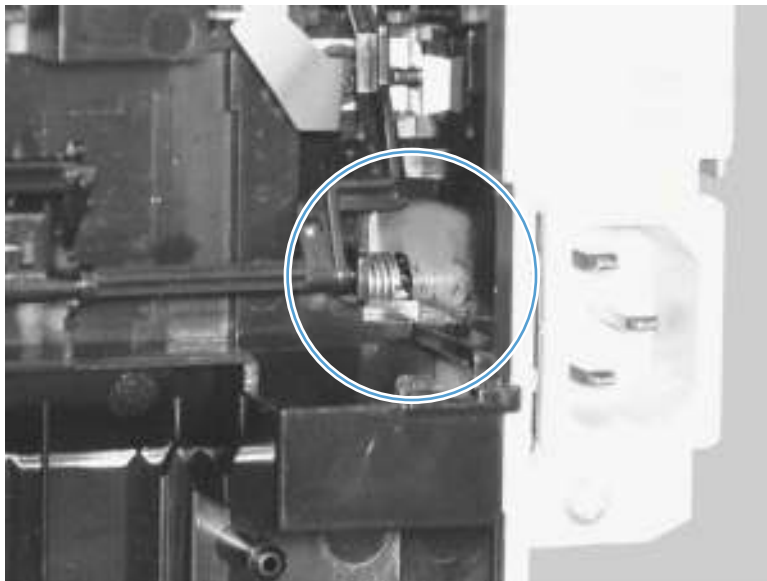


Figure 1-58 Reinstall the pickup assembly (2 of 4; incorrect ground spring position)



2. Push down the lift plate before installing the pickup assembly.

☞ **TIP:** Reach in from the front of the product to push and hold down the lift plate while installing the pickup unit.

Figure 1-59 Reinstall the pickup assembly (3 of 4; lift plate in raised position)

Figure 1-60 Reinstall the pickup assembly (4 of 4; lift plate in lowered position)

Fuser

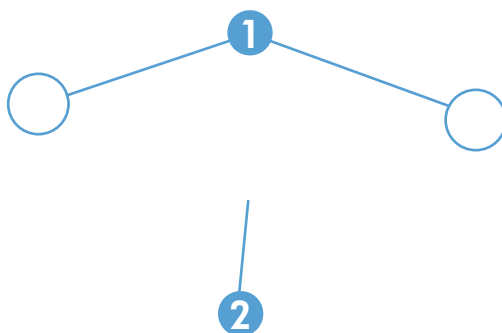
Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Scanner assembly. See [Scanner assembly on page 15](#).
- Formatter PCA. See [Formatter PCA on page 29](#).
- Fax modem. See [Fax PCA on page 31](#).
- Right cover. See [Right cover on page 19](#).
- Duplex frame. See [Duplex frame on page 23](#).
- Front cover. See [Front cover on page 27](#).
- Cartridge door. See [Cartridge door on page 24](#).
- Upper cover. See [Upper cover on page 28](#).

Remove the fuser

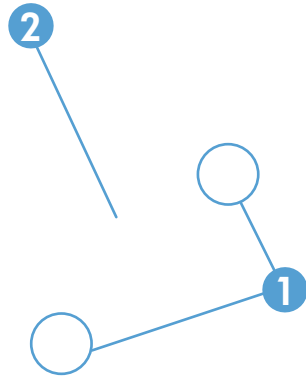
1. Release two tabs (callout 1), and then remove the duplex reverse guide (callout 2).

Figure 1-61 Remove the fuser (1 of 9)



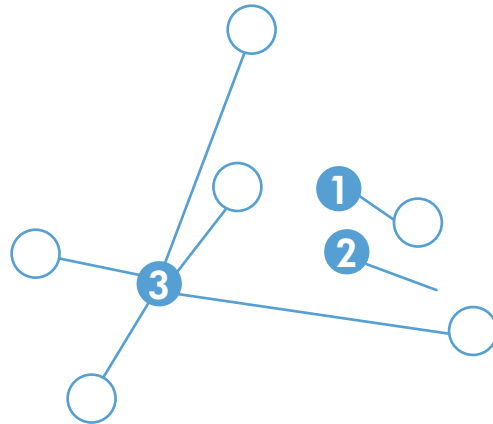
2. Remove two screws (callout 1), and then remove the sheet-metal corner brace (callout 2).

Figure 1-62 Remove the fuser (2 of 9)



3. Disconnect one connector (callout 1), remove one wire harness from the guide (callout 2), and then remove five screws (callout 3) to remove the sheet metal plate.

Figure 1-63 Remove the fuser (3 of 9)



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

Figure 1-64 Remove the fuser (4 of 9)

5. Disconnect four connectors (callout 1), and then release the wire harnesses (callout 2) from the guide (callout 3).

Figure 1-65 Remove the fuser (5 of 9)

6. Disconnect one tab (callout 1), and then remove the guide (callout 2).

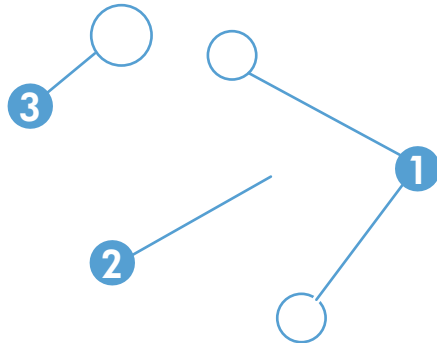
Figure 1-66 Remove the fuser (6 of 9)

7. Release the wire harnesses (callout 1) from the guide (callout 2).

Figure 1-67 Remove the fuser (7 of 9)

8. Remove two screws (callout 1), remove the sheet metal brace (callout 2), and then remove one bushing (callout 3) by releasing the tab and rotating the bushing clockwise.

Figure 1-68 Remove the fuser (8 of 9)



9. Remove three screws (callout 1), and then remove the fuser (callout 2).

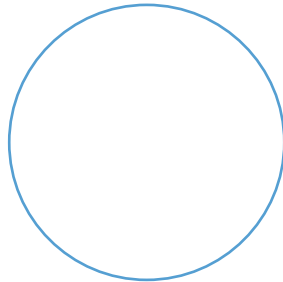
Figure 1-69 Remove the fuser (9 of 9)

Reinstall the fuser

To avoid damage to the wire harnesses, make sure that they are installed correctly.

Figure 1-70 Reinstall the fuser (1 of 2); correct wire harness installation

Figure 1-71 Reinstall the fuser (2 of 2); incorrect wire harness installation



NOTE: Also make sure the gears are meshed correctly before tightening the screws.

Main motor

Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Scanner assembly. See [Scanner assembly on page 15](#).
- Right cover. See [Right cover on page 19](#).
- Cartridge door. See [Cartridge door on page 24](#).
- Front cover. See [Front cover on page 27](#).
- Upper cover. See [Upper cover on page 28](#).

Remove the main motor

1. Release one tab (callout 1), and then slide the holder forward (callout 2), and lift it up to remove it.

Figure 1-72 Remove the main motor (1 of 9)

2. Remove four screws (callout 1), and then remove the laser scanner cover (callout 2) and the sheet-metal plate (callout 3).

 **NOTE:** The laser scanner cover and plate are removed as one assembly.

 **TIP:** Make sure that the black screws (callout 4) are installed in the correct holes when reinstalling the laser scanner cover.

Figure 1-73 Remove the main motor (2 of 9)

3. Disconnect three connectors (callout 1 and callout 2).

Figure 1-74 Remove the main motor (3 of 9)

4. Release two tabs (callout 1), and then slightly separate the motor driver PCA (callout 2) from the product.

CAUTION: The motor driver PCA is still connected to the product by the wire harnesses and an FFC.

Figure 1-75 Remove the main motor (4 of 9)

5. **Duplex models only:** Release one tab (callout 1), and then remove the duplex connector PCA (callout 2).

Figure 1-76 Remove the main motor (5 of 9)

6. Disconnect two connectors (callout 1), and then carefully set the PCA out of the way.

CAUTION: Do not damage the FFC that is attached to the PCA.

Figure 1-77 Remove the main motor (6 of 9)

7. Release the wire harness (callout 1) from the guide (callout 2).

Figure 1-78 Remove the main motor (7 of 9)

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

Figure 1-79 Remove the main motor (8 of 9)

9. Remove two screws (callout 1), and then remove the motor (callout 2).

Figure 1-80 Remove the main motor (9 of 9)

Reinstall the main motor drive belt

- ▲ When the main motor is reinstalled, make sure that the drive belt (callout 1) is positioned correctly over the tensioner roller (callout 2).

Figure 1-81 Main motor drive belt installed correctly

Figure 1-82 Main motor drive belt installed incorrectly

Pickup solenoid

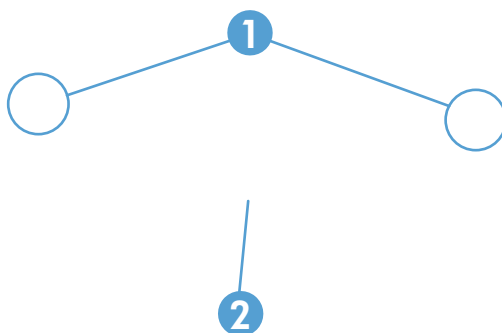
Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Scanner assembly. See [Scanner assembly on page 15](#).
- Formatter PCA. See [Formatter PCA on page 29](#).
- Fax modem. See [Fax PCA on page 31](#).
- Right cover. See [Right cover on page 19](#).
- Duplex frame. See [Duplex frame on page 23](#).
- Cartridge door. See [Cartridge door on page 24](#).
- Front cover. See [Front cover on page 27](#).
- Upper cover. See [Upper cover on page 28](#).

Remove the pickup solenoid

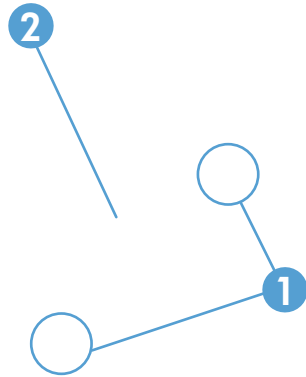
1. Release two tabs (callout 1), and then remove the duplex reverse guide (callout 2).

Figure 1-83 Remove the pickup solenoid (1 of 6)



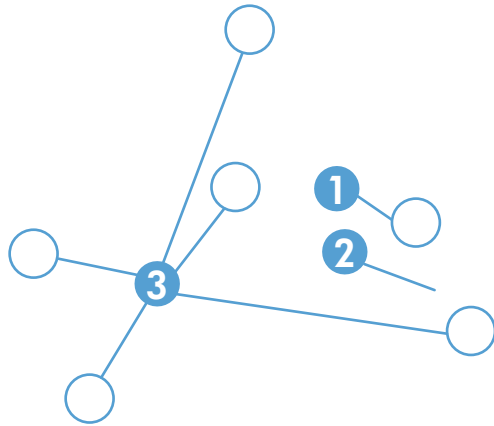
2. Remove two screws (callout 1), and then remove the sheet-metal corner brace (callout 2).

Figure 1-84 Remove the pickup solenoid (2 of 6)



3. Disconnect one connector (callout 1), remove one wire harness from the guide (callout 2), and then remove five screws (callout 3) to remove the sheet metal plate.

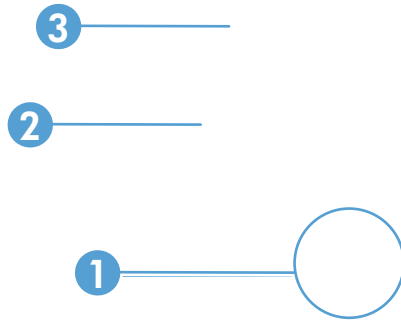
Figure 1-85 Remove the pickup solenoid (3 of 6)



4. Disconnect one connector (callout 1), and then remove the wire harness (callout 2) from the guide (callout 3).

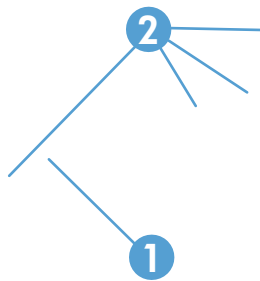
 **NOTE:** Callout 1 indicates three connectors. Disconnect the one that is furthest to the left (J562).

Figure 1-86 Remove the pickup solenoid (4 of 6)



5. Release the wire harness (callout 1) from the guide (callout 2).

Figure 1-87 Remove the pickup solenoid (5 of 6)



6. Remove one screw (callout 1), and then remove the pickup solenoid (callout 2).

Figure 1-88 Remove the pickup solenoid (6 of 6)

Engine controller PCA

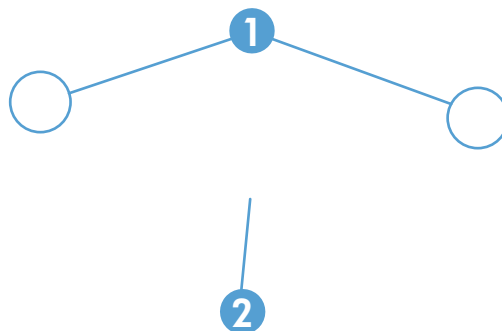
Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Scanner assembly. See [Scanner assembly on page 15](#).
- Formatter PCA. See [Formatter PCA on page 29](#).
- Fax modem. See [Fax PCA on page 31](#).
- Right cover. See [Right cover on page 19](#).
- Duplex frame. See [Duplex frame on page 23](#).
- Cartridge door. See [Cartridge door on page 24](#).
- Front cover. See [Front cover on page 27](#).
- Upper cover. See [Upper cover on page 28](#).

Remove the engine controller PCA

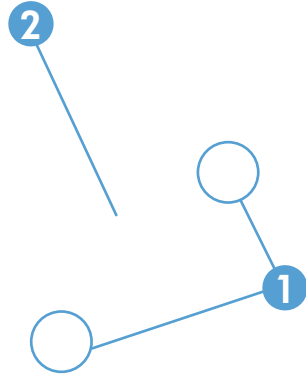
1. Release two tabs (callout 1), and then remove the duplex reverse guide (callout 2).

Figure 1-89 Remove the engine controller PCA (1 of 9)



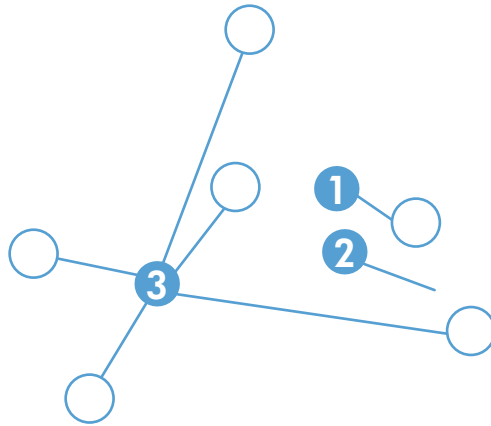
2. Remove two screws (callout 1), and then remove the sheet-metal corner brace (callout 2).

Figure 1-90 Remove the engine controller PCA (2 of 9)



3. Disconnect one connector (callout 1), remove one wire harness from the guide, (callout 2), and then remove five screws (callout 3) to remove the sheet metal plate.

Figure 1-91 Remove the engine controller PCA (3 of 9)



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

Figure 1-92 Remove the engine controller PCA (4 of 9)

5. Disconnect four connectors (callout 1), and then remove the wire harnesses (callout 2) from the guide (callout 3).

Figure 1-93 Remove the engine controller PCA (5 of 9)

6. Release the wire harness (callout 1) from the ground spring (callout 2).

Figure 1-94 Remove the engine controller PCA (6 of 9)

7. Disconnect two connectors (callout 1) and two FFCs (callout 2).

Figure 1-95 Remove the engine controller PCA (7 of 9)

8. Remove one screw with star washer (callout 1), and then remove one more screw (callout 2).

Figure 1-96 Remove the engine controller PCA (8 of 9)

9. Remove three screws with washers (callout 1), and then remove the engine controller PCA (callout 2).

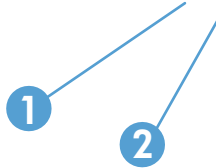
Figure 1-97 Remove the engine controller PCA (9 of 9)

Reinstall the engine controller PCA

 **NOTE:** To install the transfer wire harness correctly, follow these steps in addition to the steps in reverse order of removal.

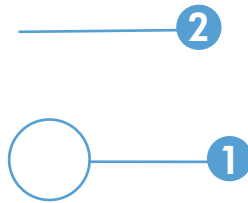
1. Place the engine controller PCA into the product so that the cartridge door switch lever (callout 1) engages correctly with the switch on the PCA (callout 2).

Figure 1-98 Reinstall the engine controller PCA (1 of 5)



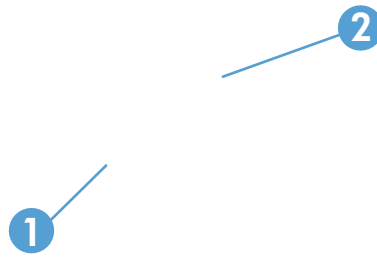
2. Set the ground spring (callout 1) on the transfer wire harness (callout 2).

Figure 1-99 Reinstall the engine controller PCA (2 of 5)



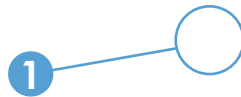
3. Position the transfer wire harness (callout 1) in the guide (callout 2).

Figure 1-100 Reinstall the engine controller PCA (3 of 5)



4. Connect one connector (callout 1).

Figure 1-101 Reinstall the engine controller PCA (4 of 5)



5. Position the transfer wire harness (callout 1) in the guides (callout 2).

Figure 1-102 Reinstall the engine controller PCA (5 of 5)

Duplex reverse solenoid

Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Scanner assembly. See [Scanner assembly on page 15](#).
- Right cover. See [Right cover on page 19](#).
- Cartridge door. See [Cartridge door on page 24](#).
- Front cover. See [Front cover on page 27](#).
- Upper cover. See [Upper cover on page 28](#).

Remove the duplex reverse solenoid

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

Figure 1-103 Remove the duplex reverse solenoid (1 of 5)

2. Remove four screws (callout 1), and then remove the laser scanner cover (callout 2) and the sheet metal plate (callout 3).

 **NOTE:** The laser scanner cover and plate are removed as one assembly.

 **TIP:** When installing the laser scanner cover, make sure that the black screws (callout 4) are in the correct holes.

Figure 1-104 Remove the duplex reverse solenoid (2 of 5)

3. Disconnect two connectors (callout 1), and then release the wire harness (callout 2) from the guides (callout 3).

Figure 1-105 Remove the duplex reverse solenoid (3 of 5)

4. Release one tab (callout 1), and then rotate the cable guide forward to remove it (callout 2).

Figure 1-106 Remove the duplex reverse solenoid (4 of 5)

5. Remove one screw (callout 1), and then remove the duplex reverse solenoid (callout 2).

Figure 1-107 Remove the duplex reverse solenoid (5 of 5)

Main fan

Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Scanner assembly. See [Scanner assembly on page 15](#).
- Right cover. See [Right cover on page 19](#).
- Cartridge door. See [Cartridge door on page 24](#).
- Front cover. See [Front cover on page 27](#).
- Upper cover. See [Upper cover on page 28](#).

Remove the main fan

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

Figure 1-108 Remove the main fan (1 of 5)

2. Remove four screws (callout 1), and then remove the laser scanner cover (callout 2) and the sheet-metal plate (callout 3).

 **NOTE:** The laser scanner cover and plate are removed as one assembly.

 **TIP:** When installing the laser scanner cover, make sure that the black screws (callout 4) are in the correct holes.

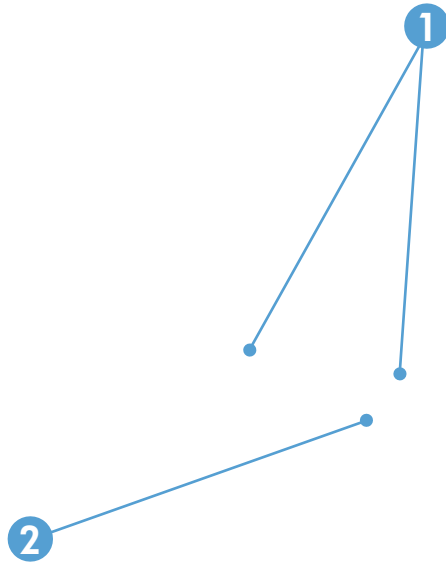
Figure 1-109 Remove the main fan (2 of 5)

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

Figure 1-110 Remove the main fan (3 of 5)

4. Release two tabs (callout 1), and then remove the fan cover (callout 2).

Figure 1-111 Remove the main fan (4 of 5)



5. Release two tabs (callout 1), and then remove the main fan (callout 2).

Figure 1-112 Remove the main fan (5 of 5)

Reinstall the main fan

When the main fan is reinstalled, make sure that the wire harness (callout 1) is correctly positioned, and that the label (callout 2) on the fan faces the inside of the product.

Figure 1-113 Reinstall the main fan

Duplex connector PCA

Before proceeding, remove the following components:

- Main tray. See [Main tray on page 10](#).
- Output bin extension. See [Output bin extension on page 11](#).
- Left cover. See [Left cover on page 12](#).
- Scanner assembly. See [Scanner assembly on page 15](#).
- Right cover. See [Right cover on page 19](#).
- Cartridge door. See [Cartridge door on page 24](#).
- Front cover. See [Front cover on page 27](#).
- Upper cover. See [Upper cover on page 28](#).

Remove the duplex connector PCA

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

Figure 1-114 Remove the duplex connector PCA (1 of 5)

2. Remove four screws (callout 1), and then remove the laser scanner cover (callout 2) and the sheet-metal plate (callout 3).

 **NOTE:** The laser scanner cover and plate are removed as one assembly.

 **TIP:** When installing the laser scanner cover, make sure that the black screws (callout 4) are in the correct holes.

Figure 1-115 Remove the duplex connector PCA (2 of 5)

3. Disconnect three connectors (callout 1)

Figure 1-116 Remove the duplex connector PCA (3 of 5)

4. Release two tabs (callout 1), and then slightly separate the motor driver PCA (callout 2) from the product.

CAUTION: Do not damage the FFC and the connectors that are still connected to the motor driver PCA.

Figure 1-117 Remove the duplex connector PCA (4 of 5)

5. Release one tab (callout 1), and then remove the duplex connector PCA (callout 2).

Figure 1-118 Remove the duplex connector PCA (5 of 5)

Scanner components



NOTE: This section describes replacement and removal of individual scanner components. To remove the complete scanner assembly, see [Scanner assembly on page 15](#).

Document feeder input tray

1. Open the document feeder cover.

Figure 1-119 Remove the document feeder input tray (1 of 2)



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

Figure 1-120 Remove the document feeder input tray (2 of 2)



Document feeder cover

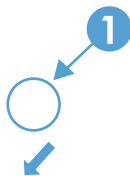
1. Open the document feeder cover.

Figure 1-121 Remove the document feeder cover (1 of 3)



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

Figure 1-122 Remove the document feeder cover (2 of 3)



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

Figure 1-123 Remove the document feeder cover (3 of 3)



Document feeder pick arm assembly

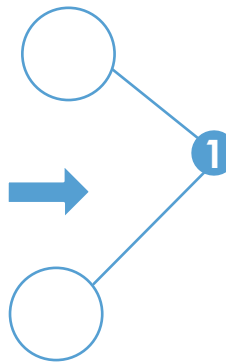
Before proceeding, remove the following components:

- Document feeder tray. See [Document feeder input tray on page 77](#).
- Document feeder cover. See [Document feeder cover on page 78](#).

Remove the document feeder pick arm assembly

1. Release two tabs (callout 1) on each end of the inner cover (for a total of four tabs), and then lift the inner cover out of the outer cover.

Figure 1-124 Remove the document feeder pick arm assembly (1 of 4)



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

Figure 1-125 Remove the document feeder pick arm assembly (2 of 4)



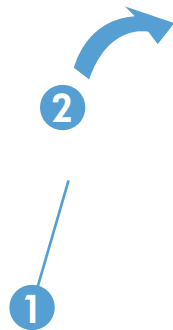
3. Release one tab (callout 1).

Figure 1-126 Remove the document feeder pick arm assembly (3 of 4)



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

Figure 1-127 Remove the document feeder pick arm assembly (4 of 4)



Document feeder core assembly

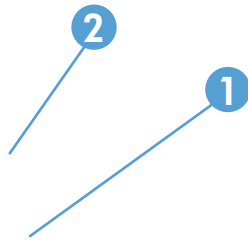
Before proceeding, remove the following components:

- Document feeder tray. See [Document feeder input tray on page 77](#).
- Document feeder cover. See [Document feeder cover on page 78](#).

Remove the document feeder core assembly

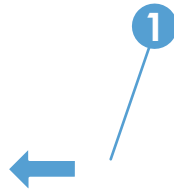
1. Release one tab (callout 1), and then remove the document feeder cable cover (callout 2).

Figure 1-128 Remove the document feeder core assembly (1 of 3)



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

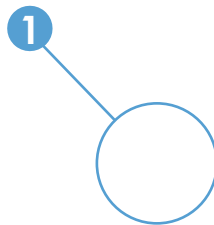
Figure 1-129 Remove the document feeder core assembly (2 of 3)



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

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

Figure 1-130 Remove the document feeder core assembly (3 of 3)



Post scan pinch rollers

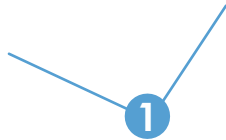
Before proceeding, remove the following components:

- Document feeder tray. See [Document feeder input tray on page 77](#).
- Document feeder cover. See [Document feeder cover on page 78](#).
- Document feeder core. See [Document feeder core assembly on page 82](#).

Remove the post scan pinch rollers

- ▲ Remove the post scan pinch rollers (callout 1).

Figure 1-131 Remove the post scan pinch rollers



Document feeder base assembly

Before proceeding, remove the following components:

- Document feeder tray. See [Document feeder input tray on page 77](#).
- Document feeder cover. See [Document feeder cover on page 78](#).
- Document feeder core. See [Document feeder core assembly on page 82](#).

Remove the document feeder base assembly

1. Release the adhesive FFC protector on the document feeder base (callout 1).

 **TIP:** Use two-sided tape to replace the FFC protector during reassembly.

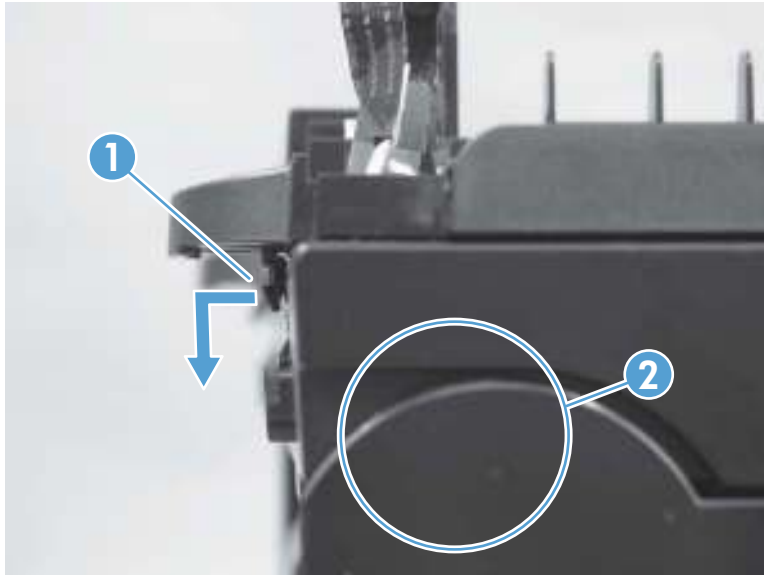
Figure 1-132 Remove the document feeder base assembly (1 of 3)



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

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

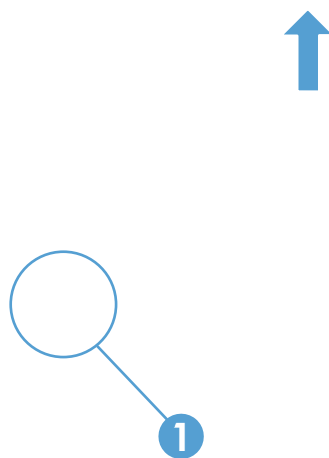
Figure 1-133 Remove the document feeder base assembly (2 of 3)



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

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

Figure 1-134 Remove the document feeder base assembly (3 of 3)



Document feeder floating hinges

 **NOTE:** If you will be removing any scanner sub-assembly components in a clean-room environment, it is easier to remove the floating hinges after removing the scanner bezel. See the service manual addendum for the procedure.

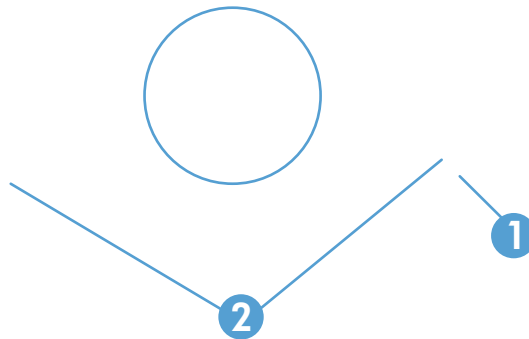
Before proceeding, remove the following components:

- Document feeder tray. See [Document feeder input tray on page 77](#).
- Document feeder cover. See [Document feeder cover on page 78](#).
- Document feeder core assembly. See [Document feeder core assembly on page 82](#).
- Document feeder base assembly. See [Document feeder base assembly on page 85](#).

Remove the document feeder floating hinges

- ▲ Insert a small flat-blade screwdriver along one side of the floating hinge. Rotate the screwdriver down to release the hook at the bottom of the floating hinge (callout 1), and then remove the hinge. Repeat the procedure for each hinge (callout 2).

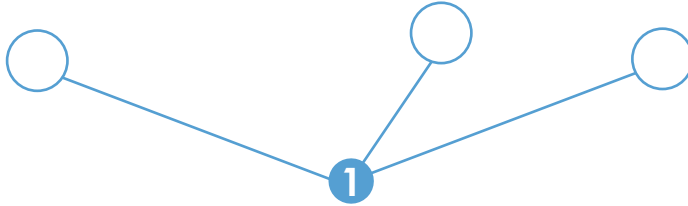
Figure 1-135 Remove the document feeder floating hinges



Control panel

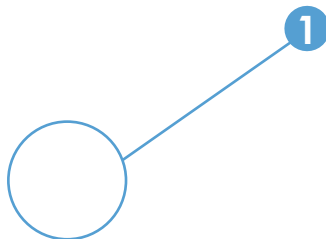
1. Remove three screws (callout 1).

Figure 1-136 Remove the control panel (1 of 2)



2. Lift the control panel to access the FFC (callout 1), and then disconnect the FFC.

Figure 1-137 Remove the control panel (2 of 2)



2 Solve problems

- [Problem-solving checklist](#)
- [Menu map](#)
- [Troubleshooting process](#)
- [Tools for troubleshooting](#)
- [Paper feeds incorrectly or becomes jammed](#)
- [Improve print quality](#)
- [Clean the product](#)
- [The product does not print or it prints slowly](#)
- [Solve connectivity problems](#)
- [Service mode functions](#)
- [Solve fax problems](#)
- [Product updates](#)

Problem-solving checklist

Follow these steps when trying to solve a problem with the product.

- [Step 1: Check that the product power is on](#)
- [Step 2: Check the control panel for error messages](#)
- [Step 3: Test print functionality](#)
- [Step 4: Test copy functionality](#)
- [Step 5: Test the fax sending functionality](#)
- [Step 6: Test the fax receiving functionality](#)
- [Step 7: Try sending a print job from a computer](#)

Step 1: Check that the product power is on

1. Make sure that the product is plugged in and turned on.
2. Make sure that the power button light illuminates. If it does not illuminate, perform the following checks:
 - a. Make sure that the power cable is connected to the product and to the outlet.
 - b. Check the power source by connecting the power cable to a different outlet.
3. Make sure that the print cartridge is installed correctly and that all doors are closed. The control panel displays messages to indicate issues with doors open and with the print cartridge connections.
4. If the document feeder motor does not rotate, open the document feeder cover, and then remove any packing material or shipping tape.
5. If the scanner bulb does not light, check the scanner assembly FFC connections on the formatter PCA. If the scanner bulb still does not light, replace the scanner drive assembly in an approved clean room.

Step 2: Check the control panel for error messages

The control panel indicates ready status under normal conditions. If an error message appears, resolve the error.

Step 3: Test print functionality

1. Open the **Reports** menu, and then select **Config Report** to print the report.
2. If the report does not print, check the following:
3. Make sure that paper is in the tray.
4. Check the control panel for paper jam messages. If the control panel indicates a jam, clear the jam.
5. Make sure that the print cartridge is not empty.

6. Clean the paper pick roller and the separation pad.
7. Replace the paper pick roller or the separation pad.

Step 4: Test copy functionality

1. Place the configuration page into the document feeder, adjust the paper guides, and then make a copy. If paper does not feed through the document feeder smoothly, replace the document feeder pick up arm assembly. If this does not improve the issue, replace the document feeder core assembly.
2. Place the configuration page onto the scanner glass, and then make a copy.
3. If the print quality on the copied pages is not acceptable, clean the scanner glass.

Step 5: Test the fax sending functionality

1. Press the **Start Fax** button on the control panel.
2. Listen for a dial tone.
3. If you do not hear a dial tone, check the telephone connection and the telephone signal source.
4. If the telephone line and the telephone signal source are functional, and you still do not hear a dial tone, check the fax modem FFC.
5. If the fax modem is not operating correctly, replace it.

Step 6: Test the fax receiving functionality

1. Use another fax machine to send a fax to the product.
2. If the product does not receive the fax, make sure that you do not have too many telephone devices connected to the product and that all telephone devices are connected in the correct order.
3. Review and re-configure the fax settings.
4. Turn off the **Private Receive** feature.
5. Check the **PBX Ring Detect** setting in the control panel secondary service menu.

Step 7: Try sending a print job from a computer

1. Use a word processing program to send a print job to the product.
2. If the print job does not print, make sure the program selects the correct printer driver.
3. Reinstall the product software.
4. Make sure that the product is connected correctly to the computer. Check the USB cable or the network connection. Make sure that the product is correctly configured to connect to the network, if applicable.

Menu map

You can print a **Menu Structure** report, which shows the control panel menus and available settings.

1. Press the Setup  button.
2. Use the arrow buttons to select the **Reports** menu, and then press **OK**.
3. Use the arrow buttons to select **Menu Structure**, and then press **OK**.

Troubleshooting process

Determine the problem source

The following table includes basic questions to ask the customer to quickly help define the problem or problems.

General topic	Questions
Environment	• Is the product installed on a solid, level surface ($\pm 1^\circ$)? • Is the power supply voltage within ± 10 volts of the specified power source? • Is the power supply cord inserted all the way into the product connector and the wall outlet? • Is the operating environment within specified parameters? • Is the product exposed to ammonia gas, such as that produced by diazo copiers or office cleaning materials? NOTE: Diazo copiers produce ammonia gas as part of the copying processes. Ammonia gas (from cleaning supplies or from diazo copiers) can have an adverse affect on some product components (for example, the print-cartridge OPC). • Is the product exposed to direct sunlight?
Paper	• Does the customer use only supported paper? • Is the paper in good condition (no curls, folds, or distortion)? • Is the paper stored correctly and within specified environmental limits?
Input trays	• Is the amount of paper in the tray within specifications? • Is the paper placed in the tray correctly? • Are the paper guides aligned with the stack?
Print cartridge	• Is the print cartridge installed correctly?
Transfer roller and fuser	• Are the transfer roller and the fuser installed correctly?
Print-cartridge door and duplex door (duplex models only)	• Is the print cartridge door or the duplex door closed?
Condensation	• Does condensation occur following a temperature change (particularly in winter following storage in cold temperatures)? If so, wipe affected parts dry, or leave the product on for 10 to 20 minutes. • Was the print cartridge opened soon after being moved from a cold place to a warm place? If so, allow the print cartridge to sit at room temperature for 1 to 2 hours.
Miscellaneous	• Check for and remove any non-HP components (for example, a print cartridge) from the product. • Disconnect the product from the network, and then make sure that the failure is with the product before continuing troubleshooting.

Power subsystem

Power-on checks

Turn on the product. If the control panel LEDs do not illuminate, perform the power on checks to find the cause of the problem.

1. Verify that the product is plugged into an active electrical outlet that delivers the correct voltage.
2. Verify that the power button is in the on position.
3. Make sure that the product makes the expected sounds during startup.



NOTE: Make sure that the overcurrent/overvoltage protection circuit is not activated in the low voltage power supply. Turn the product off, disconnect the power cord, wait a few seconds, reconnect the power cord, and then turn the product on. If the product does not function, the fuse melts, or the power supply is malfunctioning, replace the engine controller PCA. See [Engine controller PCA on page 59](#).

Tools for troubleshooting

Individual component diagnostics

Engine diagnostics

Print engine test pages to help determine whether the product and the formatter are functioning. If the formatter is damaged, it can interfere with the engine test. If the engine test page does not print, try removing the formatter, and then perform the engine test again. If the engine test is successful, the problem is likely with the formatter.

 **NOTE:** Information pages also help solve product issues. See the product user guide for information about printing information pages.

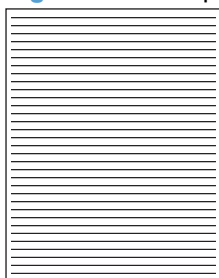
Engine test button

 **NOTE:** The product has a firmware engine test button that is activated by opening and closing the print-cartridge door in a specific pattern.

Perform an engine test

1. Make sure that paper is loaded correctly in the tray.
2. Make sure that the output bin extension is in the open position.
3. Turn the product on. Wait for the product to reach the ready state.
4. Open, and then close the print cartridge door five times at an interval of about two seconds to activate the internal engine test button.
5. If the engine test is successful, an engine test page prints with a series of horizontal lines across the page.

Figure 2-1 Sample engine test page



Components tests

Drum rotation functional check

The photosensitive drum located in the print cartridge must rotate for the print process to work. The photosensitive drum receives its drive from the main drive motor.

 **NOTE:** This test is especially important if refilled print cartridges have been used.

1. Open the print cartridge door.
2. Remove the print cartridge.
3. Mark the drive gear on the cartridge with a felt tipped marker. Note the position of the mark.
4. Replace the print cartridge, and then close the print cartridge door. The startup sequence should rotate the drum enough to move the mark.
5. Open the print cartridge door, and then verify that the marked gear moved.

If the mark did not move, inspect the main drive assembly to make sure that it meshes with the print cartridge gears. If the drive gears appear functional, and the drum does not move, replace the print cartridge.

Half self-test functional check

The half self-test functional check determines which printing process is malfunctioning.

1. Print a configuration page.
2. Open the print cartridge door after the paper advances halfway through the product (about five seconds after the motor begins to rotate). The leading edge of the paper should have advanced past the print cartridge.
3. Remove the print cartridge.
4. Open the print cartridge drum shield to view the drum surface. If a dark and distinct toner image is present on the drum surface, assume that the first two functions of the electrophotographic process are functioning (image formation and development). Troubleshoot the failure as a transfer roller or fusing issue.

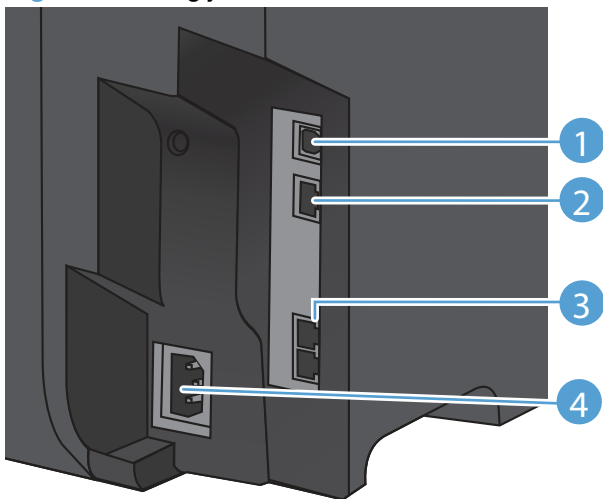
If no image is on the photosensitive drum, perform these checks:

1. Make sure that the entire length of the sealing tape is removed from the print cartridge before you installed the cartridge.
2. Perform a drum rotation functional check to make sure that the drum rotates.
3. Make sure that the high-voltage contacts are clean and not damaged.

Diagrams

Plug/jack locations

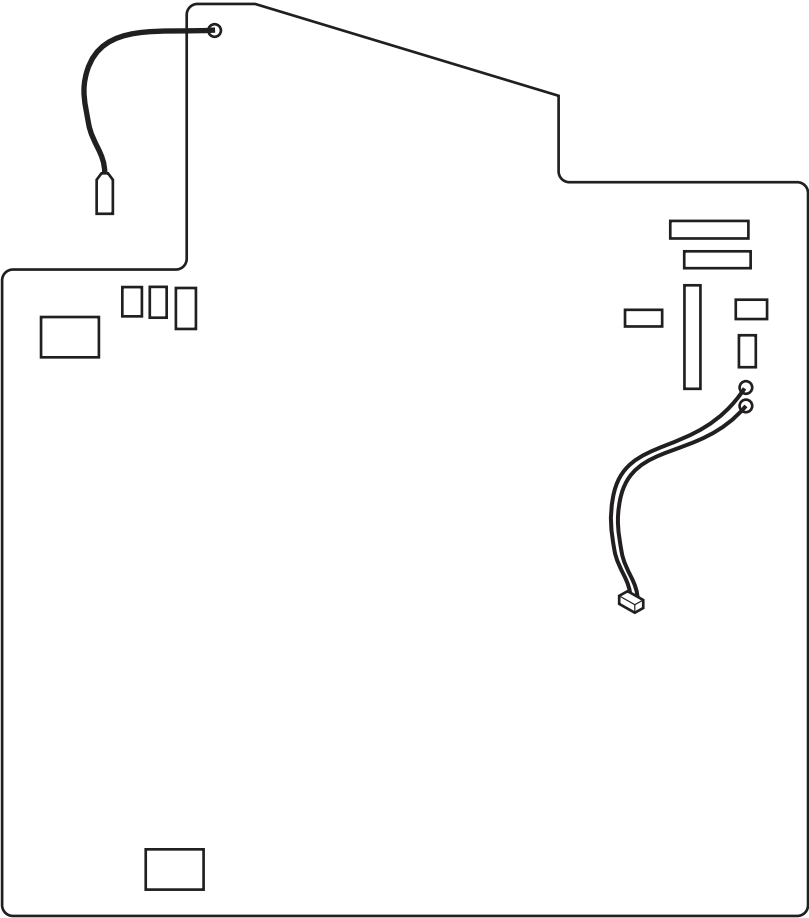
Figure 2-2 Plug/jack locations



Item	Description
1	USB port
2	HP internal network port
3	Telephone ports: The top port is for the phone line. The bottom port is for the telephone handset.
4	Power connector

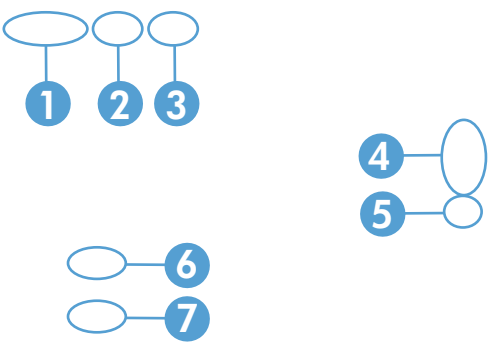
Location of connectors

Figure 2-3 Engine controller PCA connectors



Item	Description	Item	Description
J101	Fuser	J542	Laser/scanner
J104	Power inlet	J551	Top sensor PCA
J304	High voltage	J552	Paper-pickup PCA
J501	Test point	J562	Pickup solenoid
J531	Formatter	J571	Motor drive PCA
J532	24V power supply for formatter	J581	Cartridge memory tag
J533	Power switch		

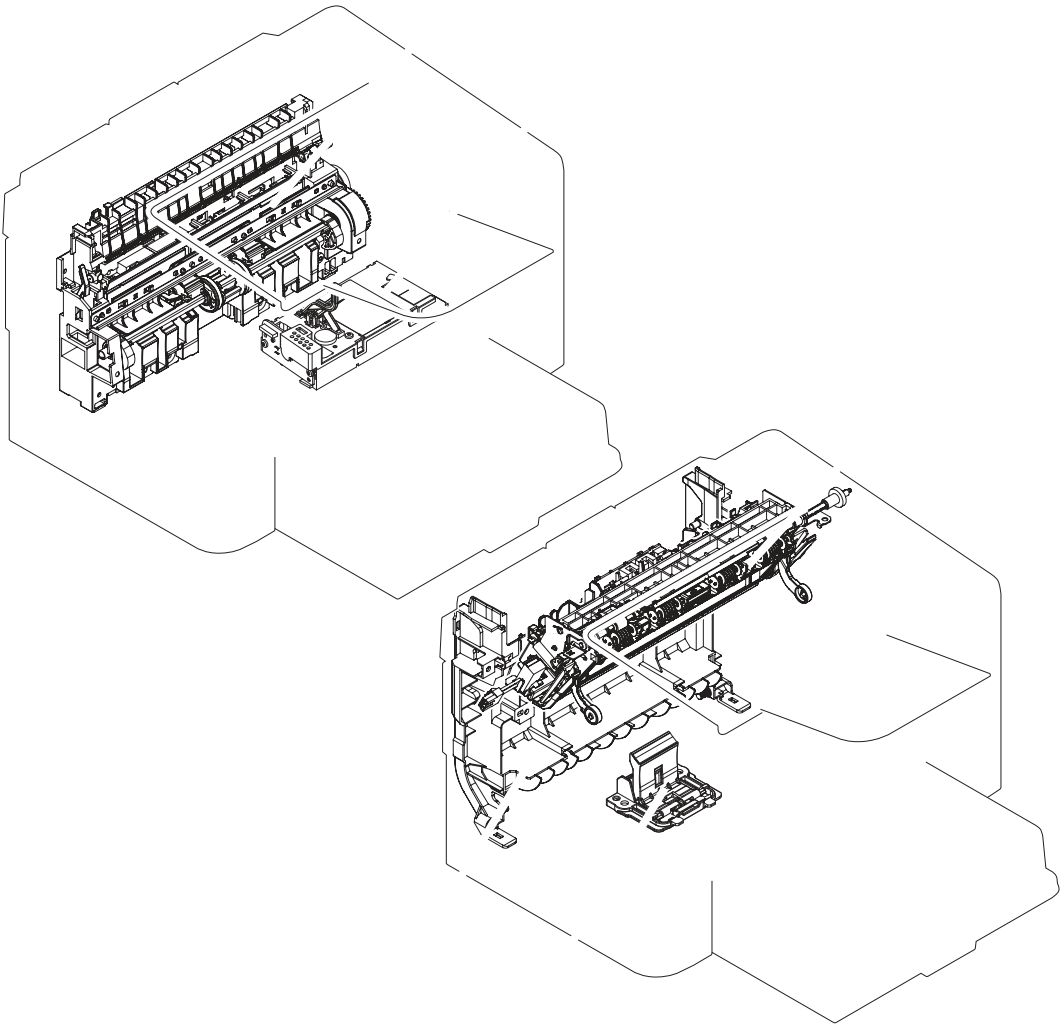
Figure 2-4 Formatter and fax board connectors



1	J3 — Scan bar connector
2	J5 — Control panel connector
3	J6 — Document feeder core connector
4	J10 — Engine controller PCA connector
5	J9 — 24V power supply for engine controller PCA
6	J4 — Connects the formatter to the fax board
7	J2 — Connects the fax board to the formatter

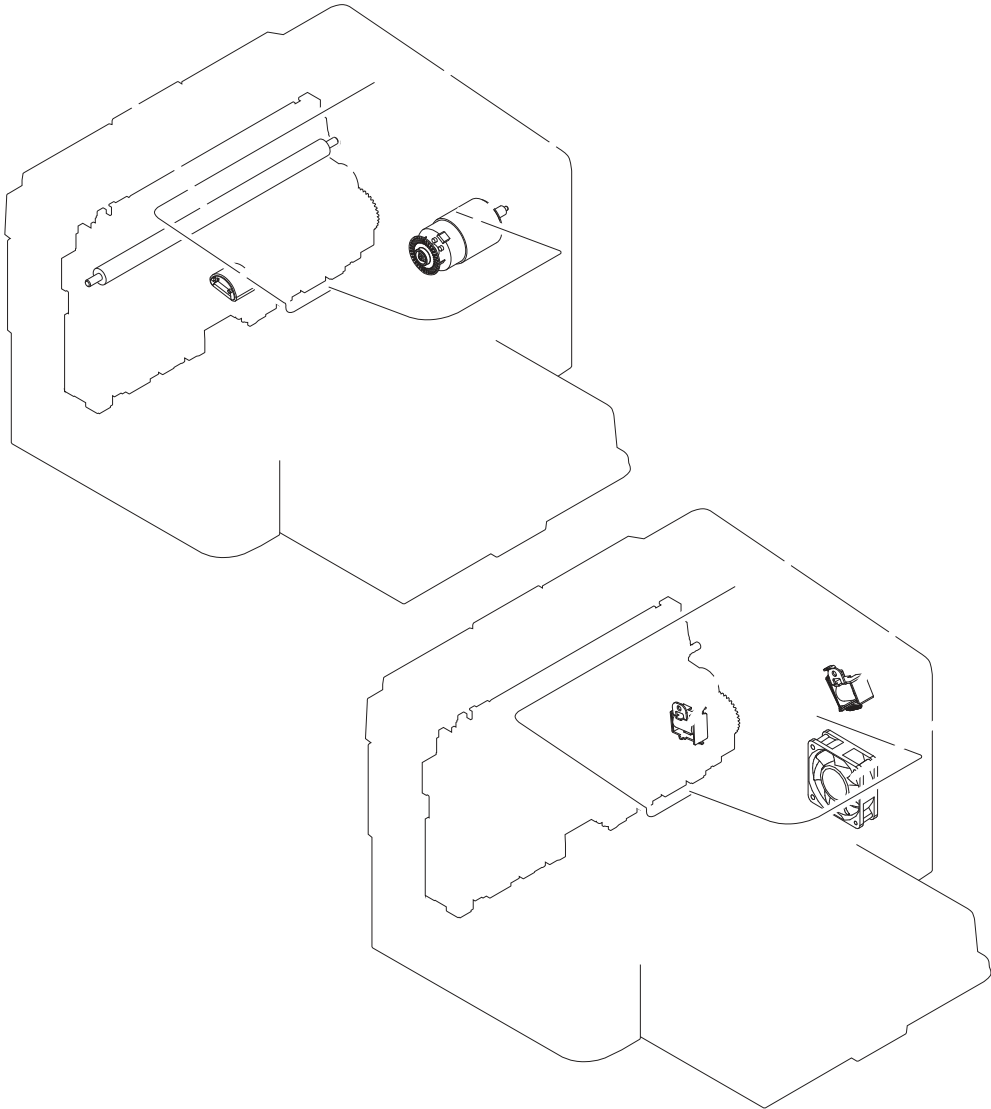
Locations of major components

Figure 2-5 Main assemblies



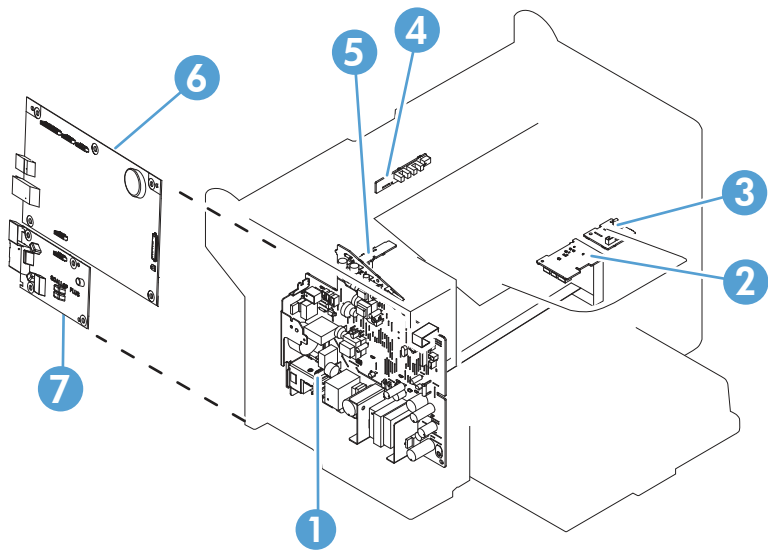
1	Pickup unit
2	Laser scanner unit
3	Fuser
4	Separation pad
5	Duplex frame unit

Figure 2-6 Rollers, solenoids, and fan



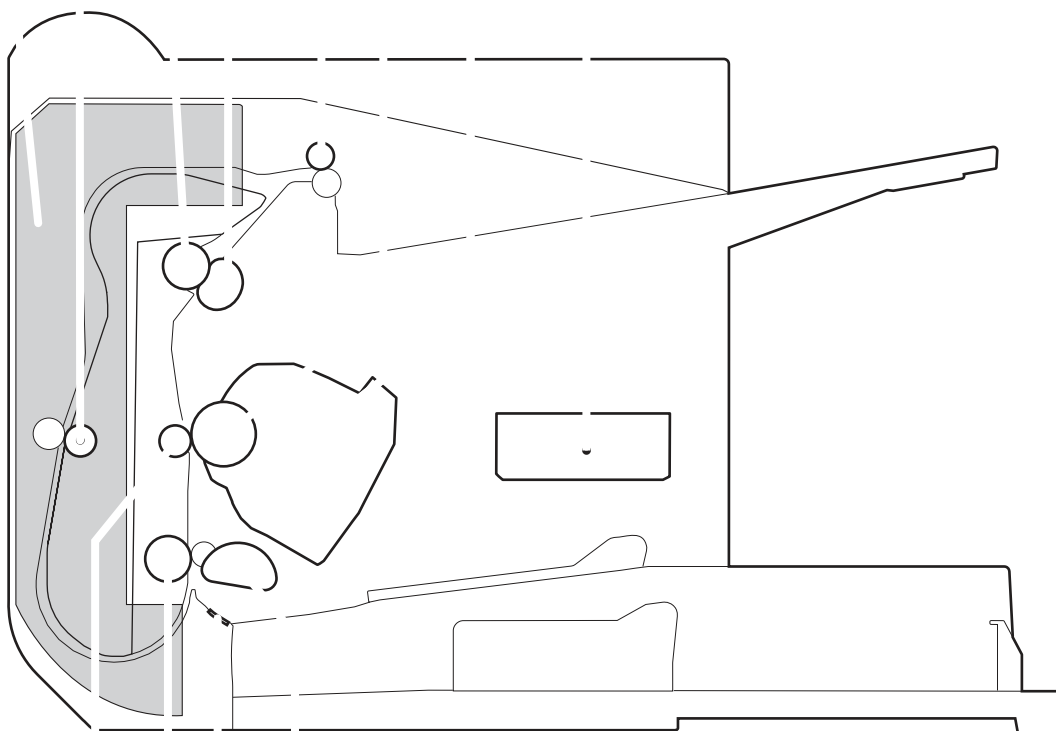
1	Transfer roller
2	Pickup roller
3	Main motor
4	Pickup solenoid
5	Duplex reverse solenoid
6	Main fan

Figure 2-7 PCA locations



1	Engine controller PCA
2	Motor PCA
3	Duplexing PCA
4	Delivery sensor PCA
5	Paper pickup sensor PCA
6	Formatter PCA
7	Fax card PCA

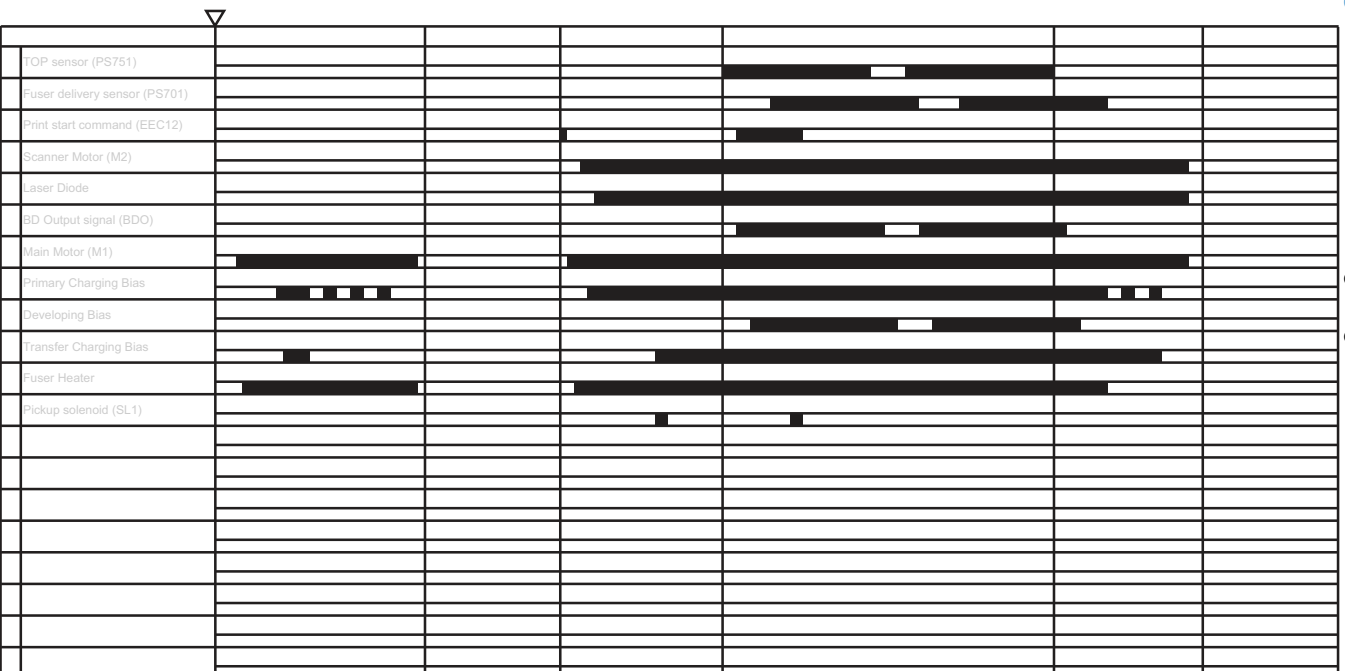
Figure 2-8 Cross-sectional view



Item	Description	Item	Description
1	Duplex feed assembly	7	Print cartridge
2	Duplex feed roller	8	Laser scanner
3	Pressure roller	9	Pickup roller
4	Fuser film assembly	10	Separation pad
5	Delivery roller	11	Feed roller
6	Photosensitive drum	12	Transfer roller

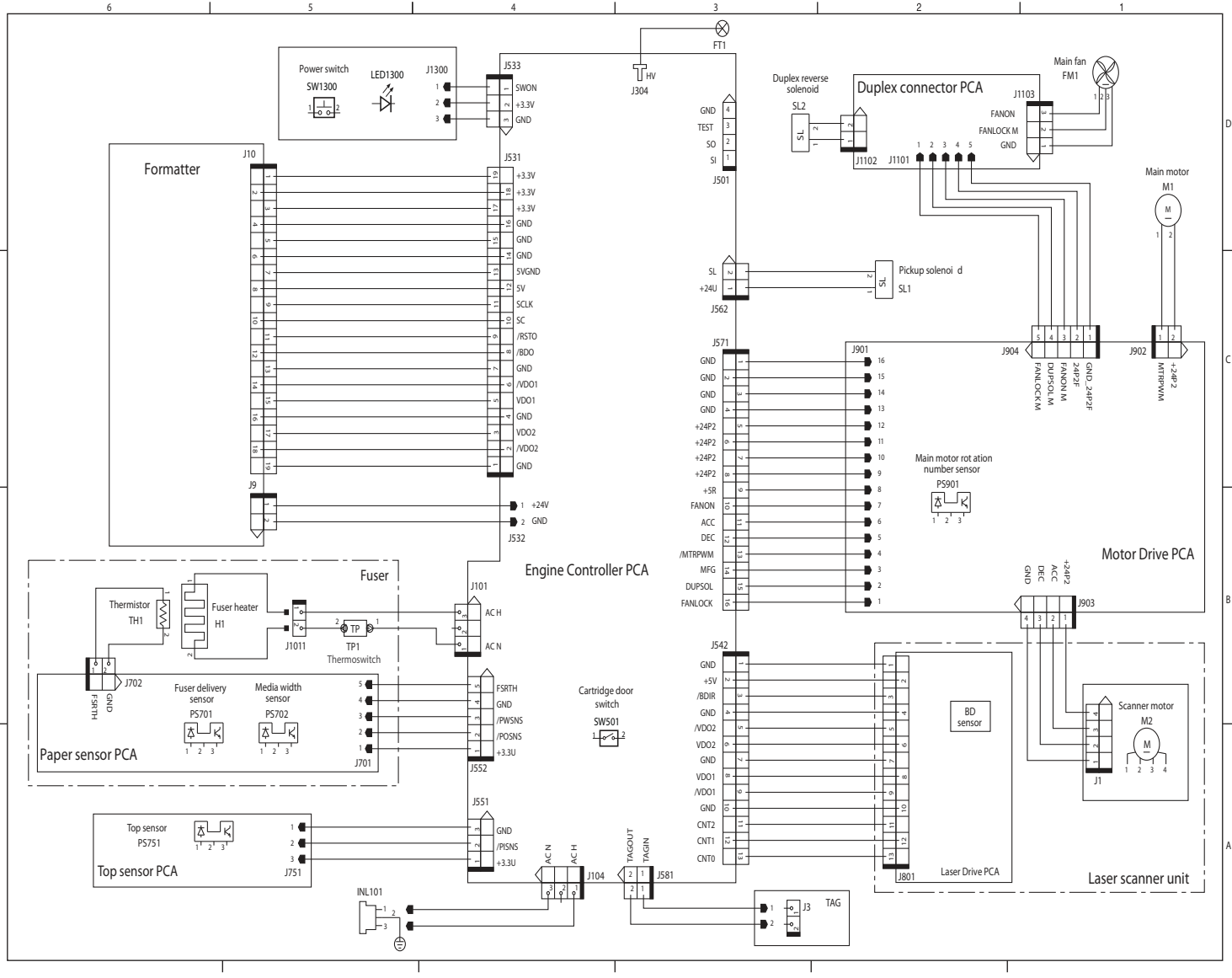
General timing charts

Figure 2-9 General timing diagram



NOTE: This diagram is for the product base only.

Figure 2-10 Circuit diagram



HP ToolboxFX

HP ToolboxFX is a software program that you can use to complete the following tasks:

- Check the product status
- Configure the product settings
- View troubleshooting information
- View online documentation

You can view HP ToolboxFX when the product is connected to a computer directly via USB or via a network. You must perform the recommended full software installation to use HP ToolboxFX.

View HP ToolboxFX

Open HP ToolboxFX in one of these ways:

- Double-click the HP ToolboxFX icon in the Windows system tray or on the desktop.
- On the Windows **Start** menu, click **Programs** (or **All Programs** in Windows XP), click **HP**, click **HP LaserJet Pro M1530 MFP Series**, and then click **HP ToolboxFX**.

Status

The HP ToolboxFX **Status** tab contains links to the following main pages:

- **Device Status.** View product status information. This page indicates product conditions such as a jam or an empty tray. After you correct a problem with the product, click **Refresh status** to update the product status.
- **Supplies Status.** View detailed supplies information such as the estimated percent of life remaining in the print cartridge and the number of pages that have been printed with the current print cartridge. This page also has links to order supplies and to find recycling information.
- **Device Configuration.** View a detailed description of the current product configuration, including the amount of memory installed and whether optional trays are installed.
- **Network Summary.** View a detailed description of the current network configuration, including the IP address and network status.
- **Print Info Pages.** Print the configuration page and various other information pages that are available for the product, such as the supplies status page and the demo page.
- **Event Log.** View a history of product errors. The most recent error is at the top of the list.

Event log

The event log is a table where the product events are logged for your reference. The log contains codes that correspond to the error messages that appear on the product control-panel display. The number in the Page Count column specifies the total number of pages that the product had printed when the error occurred. The event log also contains a brief description of the error.

Fax

Use the HP ToolboxFX **Fax** tab to perform fax tasks from your computer. The **Fax** tab contains links to the following main pages:

- **Fax Tasks.** Set the fax receive mode.
- **Fax Phone Book.** Add, edit, or delete entries in the product phone book.
- **Fax Send Log.** View all of the recent faxes that have been sent from the product.
- **Fax Receive Log.** View all of the recent faxes that have been received by the product.
- **Block Faxes.** Add, delete, or view fax numbers that are blocked.

Fax tasks

The following three options are available when receiving a fax:

- Print the fax. You can also select an option to have a message appear on your computer to notifying you when the fax was printed.
- Receive the fax on your computer. You can also select an option to have a message appear on your computer to notifying you when the fax arrives. If the fax machine is connected to multiple computers, only one computer can be designated to receive faxes.
- Forward the fax to another fax machine.



NOTE: You must click the **Apply** button before the changes take effect.

Fax phone book

Use the HP ToolboxFX fax phone book to add and remove individuals or groups on your speed-dial list, import phone books from a variety of sources, and update and maintain the contact list.

- To add an individual contact to the speed-dial list, select the row of the speed dial number that you want to specify. Type the contact name in the **Contact name** window. Type the fax number in the **Fax number** window. Click **Add**.
- To add a group of contacts to the speed-dial list, select the row of the speed-dial number that you want to specify. Click **Add Group**. Double-click a contact name from the list on the left to move it to the group list on the right, or select a name on the left and then click the appropriate arrow to move it to the group list on the right. You can also use those two methods to move names from right to left. When you have created a group, type a name in the **Group name** window, and then click **OK**.
- To edit an existing individual speed-dial entry, click anywhere on the row containing the contact name to select it, and then click **Update**. Type changes in the appropriate windows, and then click **OK**.
- To edit an existing group-speed-dial entry, click anywhere on the row containing the group name to select it, and then click **Update**. Make any required changes, and then click **OK**.
- To delete an entry from the speed-dial list, select the item, and then click **Delete**.
- To move speed dial entries, select the entry and then click **Move**, or select **Move** and then specify the entry in the dialog box. Either select **Next empty row** or specify the number of the row where you want to move the entry.



NOTE: If you specify a row that is occupied, the new entry will overwrite the existing entry.

- To import contacts from a phone book that exists in Lotus Notes, Outlook, or Outlook Express, click **Import/Export Phone Book**. Select the **Import** option, and then click **Next**. Select the appropriate software program, navigate to the appropriate file, and then click **Finish**. To export contacts from a phone book, click **Import/Export Phone Book**. Select the **Export** option, and then click **Next**. Enter the file name or browse to the file to which you want to export contacts, and then click **Finish**. You can also select individual entries from the phone book instead of importing the entire phone book.
- To delete all entries, click **Delete All**, and then click **Yes**.

In addition to numerical digits, the following are valid characters for fax numbers:

- (
-)
- +
- -
- *
- #
- R
- W
- .
- ,
- <space>



NOTE: You must click **Apply** before the changes take effect.

Fax send log

The HP ToolboxFX fax send log lists all recently sent faxes and information about them, including date and time sent, job number, fax number, page count, and results.

Click any column heading in the fax send log to re-sort the information in that column in ascending or descending order.

The **Results** column provides the fax status. If the fax attempt was unsuccessful, this column provides a description of why the fax was not sent.

Fax receive log

The HP ToolboxFX fax receive log provides a list of all recently received faxes and information about them including the date and time received, job number, fax number, page count, results, and an abbreviated fax image.

The fax receive log can be used to block future faxes. Check the **Block Fax** box next to a received fax listed on the log.

When a computer that is connected to the product receives a fax, the fax contains a **View** link. Clicking this link opens a new page that provides information about the fax.

Click on any column heading in the fax receive log to re-sort the information in that column in ascending or descending order.

The **Results** column provides the fax status. If the fax attempt was unsuccessful, this column provides a description of why the fax was not received.



NOTE: You must click the **Apply** button before the changes take effect.

Block Faxes

Block Faxes provides a list of all numbers that are blocked. Add, modify, or delete blocked fax numbers on this tab.

Help

The HP ToolboxFX **Documentation** tab contains links to the following main pages:

- **Troubleshooting**
- **Animated demonstrations**
- **User Guide.** View information about the product usage, warranty, specifications, and support. The user guide is available in HTML and PDF formats.

System Settings

The HP ToolboxFX **System Settings** tab contains links to the following main pages:

- **Device Information.** View information about the product, such as the product description and a contact person.
- **Paper Handling.** Change the product paper handling settings, such as default paper size and default paper type.
- **Print Quality.** Change the product print quality settings.
- **Paper Types.** Change the product mode settings for each media type, such as letterhead, prepunched, or glossy paper.
- **System Setup.** Change the product system settings, such as product language and jam recovery.
- **Service.** Gain access to various procedures required to maintain the product.
- **Device Polling.** Change the product polling settings, which determine how often HP ToolboxFX collects data from the product.
- **Save/Restore Settings.** Save the current settings for the product to a file on the computer. Use this file to load the same settings onto another product or to restore these settings to this product at a later time.
- **Password.** Set, change, or clear the product security password.

 **NOTE:** A single password can be set from the control panel, HP ToolboxFX, or the embedded Web server.

Device information

The HP ToolboxFX Device information page stores data about the product for future reference. The information that you type in these fields appears on the Configuration page. You can type any character in each of these fields.

 **NOTE:** You must click the **Apply** button before the changes take effect.

Paper handling

Use the HP ToolboxFX paper-handling options to configure the default settings. These are the same options that are available on the product control-panel.

Three options are available for handling print jobs when the product is out of media:

- Select **Wait for paper to be loaded**.
- Select **Cancel** from the **Paper out action** drop-down list to cancel the print job.
- Select **Override** from the **Paper out time** drop-down list to send the print job to another paper tray.

The **Paper out time** field specifies how long the product waits before acting on the selections. You can specify from 0 to 3600 seconds.



NOTE: You must click the **Apply** button before the changes take effect.

Print quality

Use the HP ToolboxFX print-quality options to improve the appearance of print jobs. These are the same options that are available on the product control panel.

The four options provided for controlling print quality are resolution, REt (Resolution Enhancement technology), print density, and EconoMode.

- **Resolution.** Select 600 resolution for average print jobs and Fast Res 1200 for higher-quality print jobs.
- **REt.** You can turn on REt, which HP provides for improved print quality.
- **Print density.** For increased print density, select a higher number. For decreased print density, select a lower number.
- **EconoMode.** Turn EconoMode on when you are printing average print jobs. EconoMode is a feature that allows the product to use less toner per page. Selecting this option might extend the life of the toner supply and might reduce cost per page. However, it will also reduce print quality. The printed image is lighter, but it is adequate for printing drafts or proofs. HP does not recommend full-time use of EconoMode. If EconoMode is used full-time, it is possible that the toner supply will outlast the mechanical parts in the print cartridge. If print quality begins to degrade under these circumstances, you will need to install a new print cartridge, even if there is toner supply remaining in the cartridge.



NOTE: You must click the **Apply** button before the changes take effect.

Paper types

Use the HP ToolboxFX **Paper types** options to configure print modes that correspond to the various media types. Select **Restore Modes** to reset all modes to the factory settings.



NOTE: You must click the **Apply** button before the changes take effect.

System setup

Use the HP ToolboxFX system settings options to configure global settings for copy, fax, scan, and print, such as jam recovery and auto-continue.



NOTE: You must click the **Apply** button before the changes take effect.

Service

During the printing process, paper, toner and dust particles can accumulate inside the product. Over time, this buildup can cause print-quality problems such as toner specks or smearing. HP ToolboxFX provides an easy method for cleaning the paper path.

Device polling

You can turn off HP ToolboxFX device polling to reduce network traffic, but doing so also disables some HP ToolboxFX features: pop-up alerts, fax log updates, and the ability to receive faxes to this computer.



NOTE: You must click the **Apply** button before the changes take effect.

Print Settings

The HP ToolboxFX **Print Settings** tab contains links to the following main pages:

- **Printing.** Change the default product print settings, such as number of copies and paper orientation.
- **PCL5e.** View and change the PCL5 settings.
- **PostScript.** View and change the PS settings.

Printing

Use the HP ToolboxFX printing settings options to configure the settings for all print functions. These are the same options that are available on the product control panel.



NOTE: You must click the **Apply** button before the changes take effect.

PCL 5e

Use the PCL 5 options to configure the settings when you are using the PCL 5 print personality. These are the same options that are available on the **PCL5** menu on the control panel.



NOTE: You must click the **Apply** button before the changes take effect.

PostScript

Use the PostScript option when you are using the HP postscript level 3 emulation print personality. When the **Print PostScript error** option is turned on, the PostScript error page automatically prints when HP postscript level 3 emulation errors occur.



NOTE: You must click the **Apply** button before the changes take effect.

Network Settings

The network administrator can use the HP ToolboxFX **Network Settings** tab to control the network-related settings for the product when it is connected to an IP-based network.

Internal print quality test pages

Print a cleaning page

Print a cleaning page to remove dust and excess toner from the paper path if you are having any of the following problems:

- Specks of toner on the printed pages.
- Toner smearing on the printed pages.
- Repeated marks on the printed pages.

Print a cleaning page:

1. On the control panel, press Setup .
2. Use the arrow buttons to select the **Service** menu.
3. Use the arrow buttons to select **Cleaning Page**.
4. Load plain letter or A4 paper when prompted.
5. Press **OK** to begin the cleaning process.

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

Configuration page

The configuration page lists current product settings and properties. This page also contains a status log report.

1. On the control panel, press Setup .
2. Use the arrow buttons to select the **Reports** menu, and then press **OK**.
3. Use the arrow buttons to select **Config Report**, and then press **OK**.

A second page also prints showing the Fax Menu section, which provides details about the fax settings.

Print quality troubleshooting tools

Repetitive defect ruler

If the printed output shows a consistent, repetitive defect, then use the table in this section to determine which parts to replace based on the measured distance between the repetitions of the defect.

Component	Distance between defects (mm)	Type of defects
Primary charging roller	About 27	Dirt on page
		Dropouts
Photosensitive drum	About 75	Dirt on page
		Dropouts
Developing roller	About 34	Dirt on page
		Dropouts
Transfer roller	About 39	Dropouts
		Dirt on the back of page
Fuser film	About 57	Dirt on page
		Dropouts
		Loose toner
Pressure roller	About 56	Dirt on the back of page
		Loose toner

Control panel menus

Setup menu

To open the setup menu, press the Setup  button. The display shows the following sub menus:

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

Quick Forms menu

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

Reports menu

Menu Item	Description
Demo Page	Prints a page that demonstrates print quality.
Menu Structure	Prints a control-panel menu layout map. The active settings for each menu are listed. It also prints a Fax Menu map.
Config Report	Prints a list of all the product settings. Includes network information when the product is connected to the network.
Supplies Status	Prints the print-cartridge status. Includes the following information: • Estimated pages remaining • Serial number • Number of pages printed
Network Summary	Displays status for: • Network hardware configuration • Enabled features • TCP/IP and SNMP information • Network statistics
Usage Page	Displays the number of pages printed, faxed, copied, and scanned by the product.
PCL Font List	Prints a list of all installed PCL 5 fonts.
PS Font List	Prints a list of all installed PS fonts.
PCL6 Font List	Prints a list of all installed PCL 6 fonts.
Service Page	Displays supported paper types, copy settings, and miscellaneous product settings.

Fax Setup

Menu Item	Sub-menu item	Sub-menu item	Description
Basic Setup	Time/Date	(Settings for time format, current time, date format, and current date.)	Sets the time and date setting for the product.
	Fax Header	Your Fax Number Company Name	Sets the identifying information that is sent to the receiving product.
	Answer Mode	Automatic Manual TAM Fax/Tel	Sets the type of answer mode. The following options are available: Automatic: The product automatically answers an incoming call on the configured number of rings. TAM: A telephone answering machine (TAM) is attached to the Aux phone port of the product. The product will not pick up any incoming call, but only listen for fax tones after the answering machine has picked up the call. Fax/Tel: The product must automatically pick up the call and determine if the call is a voice or fax call. If the call is a fax call, the product handles the call as usual. If the call is a voice call, an audible synthesized ring is generated to alert the user of an incoming voice call. Manual : The user must press the Start Fax  button or use an extension phone to make the product answer the incoming call.
	Rings to Answer	(Range of 1-9)	Sets the number of rings that must occur before the fax modem answers.
	Distinctive Ring	All Rings Single Double Triple Double&Triple	Allows a user with distinctive-ring phone service to set which rings are answered by the fax device. All Rings: The product answers any calls that come through the telephone line. Single: The product answers any calls that produce a single-ring pattern. Double: The product answers any calls that produce a double-ring pattern. Triple: The product answers any calls that produce a triple-ring pattern. Double&Triple: The product answers any calls that produce a double-ring or triple-ring pattern.
	Dial Prefix	On Off	The On setting specifies that a prefix number will be dialed automatically when sending faxes from the product.

Menu Item	Sub-menu item	Sub-menu item	Description
Advanced Setup	Fax Resolution	Standard	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.
		Fine	
		Superfine	
		Photo	
		Light/Dark	Sets the darkness of outgoing faxes. The setting is a range from 1 to 11. Setting the slider to 6 (the default setting) will result in no change to the faxed copy.
		Fit to Page	Shrinks 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 is set to Off , faxes larger than Letter or A4 will print on multiple pages.
		On	
		Off	
	Glass Size	Letter	Sets the default paper size for documents being scanned from the flatbed scanner.
		A4	
	Dialing Mode	Tone	Sets whether the product should use tone or pulse dialing.
		Pulse	
	Redial if Busy	On	Sets whether or not the product should attempt to redial if the recipient fax number is busy.
		Off	
Advanced Setup (continued)	Redial-No Answer	On	Sets whether the product should attempt to dial if the recipient fax number does not answer.
		Off	
	Redial Comm. Error	On	Sets whether the product should attempt to redial the recipient fax number if a communication error occurs.
		Off	
	Detect Dial Tone	On	Sets whether the product should check for a dial tone before sending a fax.
		Off	
	Billing Codes	Off	Enables the use of billing codes when set to On . A prompt will appear that asks you to enter the billing code for an outgoing fax.
		On	
	Extension Phone	On	When this feature is enabled, the user can press the 1-2-3 buttons on the extension phone to cause the product to answer an incoming fax call.
		Off	
	Stamp Faxes	Off	Sets product to add the date, time, sender's phone number, and page number to each page of the faxes that this product receives.
		On	

Menu Item	Sub-menu item	Sub-menu item	Description
	Private Receive	On Off	Setting Private Receive to On requires you to have set a password in product security. After the password is set, the following options are set: • Private Receive is turned on. • All old faxes are deleted from memory. • Forward Fax or Receive to PC are set to On and are not allowed to be set. • All incoming faxes are stored in memory.
		Print Faxes	Prints stored faxes when the private-receive feature is on. This menu item appears only when the private-receive feature is turned on.
	Confirm Fax #	On Off	Sets whether an outgoing fax requires you to confirm the number to which you are sending the fax. This feature is useful in ensuring that faxes that contain sensitive information go to the correct destination.
	Allow Reprint	On Off	Sets whether all received faxes stored in available memory can be reprinted.
	F/T Ring Time	(A range that depends on the country/region in which the product operates)	Sets when the product should stop sounding the Fax/Tel audible ring to notify the user of an incoming voice call.
	Print Duplex	Off On	Sets whether incoming faxes are printed on both sides of the paper.
	Fax Speed	Fast(V.34) Medium(V.17) Slow(V.29)	Increases or decreases the allowed fax communication speed.

System Setup menu

Menu Item	Sub-menu item	Sub-menu item	Description
Language	(List of available control-panel display languages.)		Sets the language in which the control panel displays messages and product reports.

Menu Item	Sub-menu item	Sub-menu item	Description
Paper Setup	Def. Paper Size	Letter	Sets the size for printing internal reports or any print job that does not specify a size.
		A4	
		Legal	
	Def. Paper Type	Lists available media types.	Sets the type for printing internal reports or any print job that does not specify a type.
	Tray 1	Paper Type	Sets the default size and type for tray 1.
		Paper Size	
	Paper Out Action	Wait Forever	Determines how the product reacts when a print job requires a media size or type that is unavailable or when a specified tray is empty. - Select Wait Forever to make the product wait until the correct media is loaded. - Select Override to print on a different size paper after a specified delay. - Select Cancel to automatically cancel the print job after a specified delay. - If either Override or Cancel is chosen, the control panel prompts for the number of seconds to delay. Use the arrow keys to either decrease the time or increase the time up to 3600 seconds.
		Cancel	
		Override	
Print Density	(Range of 1-5)		Sets how much toner the product should apply to thicken lines and edges.
Volume Settings	Alarm Volume	Soft	Sets the volume levels for the product. Each volume-type has the same four volume settings.
	Ring Volume	Medium	
	Key-Press Volume	Loud	
	Phoneline Volume	Off	
Time/Date	(Settings for time format, current time, date format, and current date.)		Sets the time and date setting for the product.
Product Security	On		Sets the product-security feature. When the setting is set to On , you must set a personal identification number (PIN).
	Off		
Disable Fax	On		Disables the product fax features. If a password has been set under the Product Security setting, you must enter the password to disable the fax features. If a password has not been set, you will be prompted to create one.
	Off		
At Very Low	Black Cartridge	Stop	Sets how the product reacts when it detects that the print cartridge is out.
		Prompt	
		Continue	
User-Defined Low	Black	(Range of 1-20)	Sets the percentage at which the control panel generates a low-toner message.

Menu Item	Sub-menu item	Sub-menu item	Description
Courier Font	Regular		Sets Courier font values.
	Dark		
Quiet Mode	On		Sets the Quiet Mode setting for the product.
	Off		

Service menu

Menu item	Sub-menu item	Description
Fax Service	Clear Saved Faxes	Clears all faxes in memory. These include any received faxes (including non-printed, non-sent PC upload, and non-forwarded faxes), unsent faxes (including delayed faxes), and any printed faxes that are still in memory. Deleted faxes cannot be recovered. For each deleted item, the fax activity log is updated.
	Run Fax Test	Performs a fax test to verify that the phone cord is plugged in the correct outlet and that there is a signal on the phone line. A fax test report is printed indicating the results.
	Print T.30 Trace	Never If error At End of Call Now Prints or schedules a report that is used to troubleshoot fax transmission issues.
	Error Correction	The error correction mode allows the sending device to re-transmit data if it detects an error signal. The default setting is on.
	Fax Service Log	The fax service log prints out the last 40 entries in the fax log.
	Cleaning Page	Cleans the product when specks or other marks appear on printed output. The cleaning process removes dust and excess toner from the paper path. When selected, the product prompts you to load plain Letter or A4 paper in Tray 1. Press the OK button to begin the cleaning process. Wait until the process completes. Discard the page that prints.
USB Speed	High Full	Sets the USB speed. The High setting is the default setting.
Less Paper Curl	On Off	When printed pages are consistently curled, this option sets the product to a mode that reduces curl. The default setting is Off .

Menu item	Sub-menu item	Description
Archive Print	On	When printing pages that will be stored for a long time, this option sets the product to a mode that reduces toner smearing and dusting.
	Off	
		The default setting is Off .
Firmware Date		Displays the current firmware date code.
Restore Defaults		Sets all settings to the factory default values.

Network Setup menu

Menu item	Sub-menu item	Description
TCP/IP Config	Automatic	Automatic automatically configures all the TCP/IP settings via DHCP, BootP or AutoIP. Manual requires you to manually configure the IP address, subnet mask, and default gateway. The control panel prompts you to specify values for each address section. Use the arrow buttons to increase or decrease the value. Press the OK button to accept the value and move the cursor to the next field. As each address is completed, the product prompts for address confirmation before moving to the next one. After all three addresses are set, the product automatically restarts.
	Manual	
Auto Crossover	On	Sets the auto crossover function.
	Off	
Network Services	IPv4	Sets whether the product will use either IPv4 or IPv6 protocol.
	IPv6	
Show IP Address	Yes	Sets whether the product displays the IP address on the control panel.
	No	
Link Speed	Automatic	Sets the link speed manually if needed.
	10T Full	After setting the link speed, the product automatically restarts.
	10T Half	
	100TX Full	
	100TX Half	
Restore Defaults		Resets all network configurations to their factory defaults.

Function-specific menus

The product features function-specific menus for copying and faxing. To open these menus, touch the button for the function on the control panel.

Copy

Menu item	Sub-menu item	Description
# of copies		Sets the default number of copies to be printed.
ID Copy		Copies both sides of identification cards, or other small-size documents, onto the same side of one sheet of paper.
Reduce/Enlarge	Original=100% Legal to Letter=78% Legal to A4=83% A4 to Letter=94% Letter to A4=97% Full Page=91% Fit to Page 2 pages per sheet 4 pages per sheet Custom: 25 to 400%	Sets the default percentage to reduce or enlarge a copied document.
Light/Dark		Specifies the contrast of the copy.
Optimize	Auto Mixed Picture Photograph Text	Adjusts the copy quality settings in order to best capture the original document quality.
Paper	Paper Size Paper Type	Sets the output paper size and type.
Multi-Page Copy	On Off	Sets the default multi-page flatbed copy option.
Collation	On Off	Sets the default collation option.
Tray Select	Auto Select Tray 1	Sets the input tray that the product will pull paper from when printing a copy.
Two-Sided	1 to 1 sided 1 to 2 sided	Sets the product two-sided printing conditions for the original and copied documents.
Draft Mode	On Off	Sets the copy print quality to the draft print mode.

Menu item	Sub-menu item	Description
Set as New Defaults		Saves any changes you have made to this menu as the new defaults.
Restore Defaults		Sets all customized copy settings to the factory default values.

Fax

Menu Item	Sub-menu item	Sub-menu item	Description
Fax Reports	Fax Confirmation	Never	Sets whether or not the product prints a confirmation report after a successful sending or receiving job.
		Send fax only	
		Receive Fax	
		Every Fax	
	Include 1st page	On Off	Sets whether or not the product includes a thumbnail image of the first page of the fax on the report.
	Fax Error Report	Every Error	Sets whether or not the product prints a report after a failed sending or receiving job.
		Send error	
		Receive error	
		Never	
	Last Call Report		Prints a detailed report of the last fax operation, either sent or received.
	Fax Activity Log	Print Log Now	Print Log Now: Prints a list of the faxes that have been sent from or received by this product. Auto Log Print: Select On to automatically print a report after every fax job. Select Off to turn off the automatic print feature.
		Auto Log Print	
	Phone Book		Prints a list of the speed dials that have been set up for this product.
	Junk Fax List		Prints a list of phone numbers that are blocked from sending faxes to this product.
	Billing Report		Prints a list of billing codes that have been used for outgoing faxes. This report shows how many sent faxes were billed to each code. This menu item appears only when the billing codes feature is turned on.
	All Fax Reports		Prints all fax-related reports.

Menu Item	Sub-menu item	Sub-menu item	Description
Send Options	Send a Fax	Fax Number	Sends a fax from the product.
	Send Fax Later	Send Time	Sends a delayed fax at the time and date, and to the fax number, that you provide at the product.
		Send Date	
		Fax Number	
	Fax Job Status		Displays lists of fax jobs waiting to be sent, forwarded, or printed.
	Fax Resolution	Standard	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.
		Fine	
		Superfine	
		Photo	
Receive Options	Print Faxes		Prints fax jobs that were stored for private receiving. This menu item appears only if the Private Receive setting is activated. You must enter the password to print private faxes.
	Block Junk Faxes	Add Number	Modifies the blocked fax list. The blocked fax list can contain up to 30 numbers. When the product 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.
		Delete Number	
		Delete All	
		Junk Fax List	
	Reprint Faxes		Reprint faxes that the product received previously. This menu item appears only if the Allow Reprint setting is activated.
	Forward Fax	Off	Sets product to send all received faxes to another fax machine.
		On	
	Polling Receive		Allows the product to call another fax machine that has polling send enabled.
Phone Book Setup	Individual Setup	Add/Edit	Edits the fax phone book speed dials and group-dial entries. The product supports up to 120 phone book entries, which can be either individual or group entries.
		Delete	
	Group Setup	Add/Edit Group	
		Delete Group	
		Del. # in group	
	Delete All		
	Print Report Now		Prints the phone book report.

Interpret control panel messages

The majority of the control panel messages are to guide users through typical operations. The control panel messages indicate the status of the current operation and include a page count on the second line of the display where applicable. When the product receives fax data, print data, or scan commands, control panel messages indicate status. They also indicate alert messages, warning messages, and critical error messages that might require action from the user.

Control panel message types

Alert and warning messages appear temporarily and might require you to acknowledge the message by pressing **OK** to resume or press **Cancel** **X** to cancel the job. With certain warnings, the job might not complete, or the print quality might be affected. If the alert or warning message is related to printing, and the auto-continue feature is on, the product will attempt to resume the print job after the warning has appeared for 10 seconds without acknowledgement.

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

Control panel messages

Control panel message	Description	Recommended action
10.0000 Supply memory error	There is a communication failure with the print cartridge.	• Press the power button to turn the product off. • Verify that the print cartridge is installed correctly. Remove and reinstall the print cartridge. • If the error persists, reconnect the J581 connector on the engine controller PCA. • If the error persists, replace the print cartridge.
10.0004 Supply Error 10.1004 Supply memory error	There is a communication failure with the photosensitive drum.	• Press the power button to turn the product off. • If a surge protector is being used, remove it. Plug the power cord directly into a wall outlet. • Wait at least 30 seconds, turn the product on, and then wait for the product to initialize. • If the error persists, reconnect the J581 connector on the engine controller PCA. • If the error persists, replace the print cartridge.

Control panel message	Description	Recommended action
49 Error Turn off then on	The product has experienced a firmware error.	1. Press the power button to turn the product off. 2. If a surge protector is being used, remove it. Plug the power cord directly into a wall outlet. 3. Wait at least 30 seconds, turn the product on, and then wait for the product to initialize. 4. If the error persists, disconnect and then reconnect the FFCs and the connectors on the formatter PCA. 5. If the error persists, replace the formatter PCA.
50.X Fuser Error Turn off then on	The product has an internal hardware error.	1. Press the power button to turn the product off. 2. If a surge protector is in use, remove it. Connect the power cord directly into a wall outlet. 3. Wait at least 25 minutes, turn the product on, and then wait for the product to initialize. 4. If the error persists, reconnect J101 and J552 on the engine controller PCA. 5. If the error persists, check the power source. Make sure that the power source meets the minimum system requirements (40Hz to 70Hz). 6. If the error persists, replace the fuser. 7. If the error persists, replace the engine controller PCA.
52 Scanner Error Turn off then on	The product has a scanner error.	1. Press the power button to turn the product off. 2. If a surge protector is in use, remove it. Connect the power cord directly into a wall outlet. 3. Wait at least 30 seconds, turn the product on, and then wait for the product to initialize. 4. If the issue persists, reconnect the J1 and J801 connectors on the laser scanner PCA and the J542 connector on the engine controller PCA. 5. If the issue persists, replace the laser scanner assembly.

Control panel message	Description	Recommended action
57 Fan Error	The product has a general fan error.	1. Press the power button to turn the product off. 2. If a surge protector is in use, remove it. Connect the power cord directly into a wall outlet. 3. Wait at least 30 seconds, turn the product on, and then wait for the product to initialize. 4. If the error persists, reconnect the J1103 connector on the duplex connector PCA. 5. If the error persists, replace the main fan.
79 Error Turn off then on	The product has experienced a firmware error	1. Press the power button to turn the product off. 2. If a surge protector is in use, remove it. Connect the power cord directly into a wall outlet. 3. Wait at least 30 seconds, turn the product on, and then wait for the product to initialize. 4. If the error persists, disconnect and then reconnect the FFCs and the connectors on the formatter PCA. 5. If the issue persists, replace the formatter PCA.
ADF door is open	The document feeder door is open.	1. Close the document feeder door. 2. If the error persists, reconnect the FFC between the document feeder core assembly and the formatter PCA. 3. If the error persists, replace the document feeder core assembly. 4. If the error persists, replace the formatter PCA.

Control panel message	Description	Recommended action
Comm. Error	A fax communication error occurred between the product and the sender or receiver.	Allow the product to retry sending the fax. Unplug the product telephone cord from the wall, plug in a telephone, and try making a call. Plug the product phone cord into a jack for another phone line. Try a different phone cord. Set the Fax Speed option to the Slow(V.29) setting or disable the Fast(V.34) setting. Turn off the Error Correction feature to prevent automatic error correction. NOTE: Turning off the Error Correction feature can reduce image quality. Print the Fax Activity Log report from the control panel to determine if the error occurs with a specific fax number. If the error persists, replace the fax PCA.
Doc. feeder jam	The product has experienced a document feeder jam.	1. Clear the document feeder jam. 2. If the error persists, and no paper is jammed in the document feeder, check the paper sensor lever on the document feeder core assembly. 3. If the paper sensor lever is broken or missing, replace the document feeder core assembly. 4. If the error persists, reconnect the FFC between the document feeder and the formatter PCA. 5. If the error persists, replace the formatter PCA.
Document feeder door is open. Canceled fax.	The cover at the top of the document feeder is open, and the product cannot send the fax.	Close the cover, and send the fax again.
Door open	The print cartridge door is open.	1. Close the print cartridge door. 2. If the error persists, check the tab that engages with the cartridge door open sensor on the cartridge door. 3. If the tab is broken or missing, replace the cartridge door. 4. If the tab is present, replace the engine controller PCA.

Control panel message	Description	Recommended action
Engine comm. Error	The product has experienced an internal hardware error.	1. Press the power button to turn the product off. 2. If a surge protector is in use, remove it. Connect the power cord directly into a wall outlet. 3. Wait at least 30 seconds, turn the product on, and then wait for the product to initialize. 4. If the error persists, reconnect the FFCs and the connectors on the formatter PCA. 5. If the error persists, reconnect the connectors and the FFCs on the engine controller PCA. 6. If the error persists, replace the formatter PCA. 7. If the error persists, replace the engine controller PCA.
Fax is busy Canceled send	The fax line to which you were sending a fax was busy. The product has canceled sending the fax.	Call the recipient to ensure that the fax machine is on and ready. Check that you are dialing the correct fax number. Check that the Redial if Busy option is enabled. Check for a dial tone on the phone line by touching the Start Fax  button. Make sure that the phone is working by disconnecting the product, plugging in a telephone to the phone line, and making a voice call. Plug the product phone cord into a jack for another phone line, and then try sending the fax again. Try a different phone cord. If the error persists, replace the fax PCA.

Control panel message	Description	Recommended action
Fax is busy Redial Pending	The fax line to which you were sending a fax was busy. The product automatically redials the busy number.	Allow the product to retry sending the fax. Call the recipient to ensure that the fax machine is on and ready. Check that you are dialing the correct fax number. Check for a dial tone on the phone line by touching the Start Fax  button. Make sure that the phone is working by disconnecting the product, plugging in a telephone to the phone line, and making a voice call. Plug the product phone cord into a jack for another phone line, and try sending the fax again. Try a different phone cord. If the error persists, replace the fax PCA.
Fax memory full Canceling rcv.	During the fax transmission, the product ran out of memory. Only the pages that fit into memory will be printed.	Print all of the faxes, and then have the sender resend the fax. Have the sender divide the fax job into multiple jobs before resending. Cancel all fax jobs or clear the faxes from memory.
Fax memory full Canceling send	During the fax job, the memory filled. All pages of the fax have to be in memory for a fax job to work correctly. Only the pages that fit into memory were sent.	Print all received faxes or wait until all pending faxes are sent. Ask the sender to send the fax again. Ask the sender to divide a large fax job into smaller sections, and then fax them individually. Make sure that the resolution of the sending fax machine is not set to the Photo setting or the Superfine setting. Cancel all fax jobs or clear the faxes from memory.

Control panel message	Description	Recommended action
Fax recv. error	An error occurred while trying to receive a fax.	Ask the sender to resend the fax.
		Try faxing back to the sender or another fax machine.
		Check for a dial tone on the phone line by touching the Start Fax  button.
		Check that the telephone cord is securely connected by unplugging and replugging the cord.
		Make sure that you are using the telephone cord that came with the product.
		Make sure that the phone is working by disconnecting the product, plugging in a telephone to the phone line, and making a voice call.
		Decrease the fax speed. Ask the sender to resend the fax.
		Turn off the Error Correction feature to prevent automatic error correction.
		NOTE: Turning off the Error Correction feature can reduce image quality.
		Connect the product to a different phone line.
Fax Send error	An error occurred while trying to send a fax.	If the error persists, replace the fax PCA.
		Try resending the fax.
		Try faxing to another fax number.
		Check for a dial tone on the phone line by touching the Start Fax  button.
		Check that the telephone cord is securely connected by unplugging and replugging the cord.
		Make sure that you are using the telephone cord that came with the product.
		Make sure that the phone is working by disconnecting the product, plugging in a telephone to the phone line, and making a voice call.
		Connect the product to a different phone line.
		Set the fax resolution to Standard instead of the default of Fine .
		If the error persists, replace the fax PCA.

Control panel message	Description	Recommended action
Jam in <location> alternates with Open door and clear jam	The product has detected a jam in the location indicated in the message.	1. Clear the jam from the area indicated in the message, and then follow the control-panel instructions. Clearing some jams requires you to open the print cartridge door and remove the print cartridge. 2. If the product displays a jam error message, but no paper is jammed in the area indicated, continue with the following steps until the error is resolved: 3. Clear the jam from the paper path, and then follow the control panel instructions. 4. If the error persists, check the sensor lever in the upper part of the paper pickup assembly. 5. If the sensor lever is stuck, clean it and make sure that it moves smoothly. 6. If the sensor lever is broken or damaged, replace the paper pickup assembly. 7. If the error persists, reconnect J551 on the engine controller PCA. 8. If the error persists, replace the paper pickup assembly. 9. If the error persists, check the sensor lever in the fuser inlet area. 10. If the sensor lever is stuck, clean it, and then make sure it moves smoothly. 11. If the sensor lever is broken or missing, replace the fuser. 12. If the error persists, reconnect J552 on the engine controller PCA. 13. If the error persists, replace the fuser.

Control panel message	Description	Recommended action
Jam in cartridge area	The product has detected a paper jam in the print cartridge area.	1. Clear the jam from the area indicated in the message, and then follow the control panel instructions. 2. If the error persists, clean the fuser inlet guide. If the inlet guide is scratched, replace the fuser. 3. If the error persists, check the sensor lever in the fuser inlet area. 4. If the sensor lever is stuck, clean it, and then make sure it moves smoothly. 5. If the sensor lever is broken or missing, replace the fuser. 6. If the error persists, reconnect J552 on the engine controller PCA. 7. If the error persists, replace the fuser.

Control panel message	Description	Recommended action
Jam in output bin	The product has detected a paper jam in the output bin area.	1. Clear the jam from the area indicated in the message, and then follow the control panel instructions. 2. If the error persists, check the duplex delivery rollers. 3. If the delivery rollers are worn or damaged, replace the duplex frame. 4. Reconnect J1102 on the duplex connector PCA. 5. If the error persists, replace the duplex reverse solenoid. 6. If the error persists, check the sensor lever in the fuser inlet area. 7. If the sensor lever is stuck, clean it, and then make sure it moves smoothly. 8. If the sensor lever is broken or missing, replace the fuser. 9. If the error persists, reconnect J552 on the engine controller PCA. 10. If the error persists, replace the fuser. 11. If the error persists, check the sensor lever in the upper part of the paper pickup assembly. 12. If the sensor lever is stuck, clean it and make sure that it moves smoothly. 13. If the sensor lever is broken or damaged, replace the paper pickup assembly. 14. If the error persists, reconnect J551 on the engine controller PCA. 15. If the error persists, replace the paper pickup assembly.

Control panel message	Description	Recommended action
Jam in print paper path	The product has detected a paper path jam.	1. Clear the jam from the paper path, and then follow the control panel instructions. 2. If the error persists, check the sensor lever in the upper part of the paper pickup assembly. 3. If the sensor lever is stuck, clean it and make sure that it moves smoothly. 4. If the sensor lever is broken or damaged, replace the paper pickup assembly. 5. If the error persists, reconnect J551 on the engine controller PCA. 6. If the error persists, replace the paper pickup assembly. 7. If the error persists, check the sensor lever in the fuser inlet area. 8. If the sensor lever is stuck, clean it, and then make sure it moves smoothly. 9. If the sensor lever is broken or missing, replace the fuser. 10. If the error persists, reconnect J552 on the engine controller PCA. 11. If the error persists, replace the fuser.
Jam in tray 1	The product has detected a jam in the tray.	1. Clear the jam from tray 1, and then follow the control panel instructions. 2. If the error persists, replace the pickup roller. 3. If the error persists, replace the transfer roller. 4. If the error persists, reconnect J571 on the engine controller. 5. If the error persists, replace the main motor.
Load tray 1 <TYPE>, <SIZE>	The tray is empty.	1. Load the tray with the correct type and size of paper. 2. If the issue persists, reconnect the connectors on the engine controller PCA. 3. If the issue persists, replace the paper pickup assembly. 4. If the issue persists, replace the engine controller PCA.

Control panel message	Description	Recommended action
Load tray 1 PLAIN <SIZE> alternates with Cleaning Page [OK] to start	The product is performing a cleaning cycle.	Load the tray with plain paper of the size indicated. Press OK to start the cleaning cycle.
Manual duplex alternates with Load tray 1 Press [OK]	The product is processing a manual duplex job.	To print the second side, place the pages face down in the tray with the top edge first.
Manual feed <SIZE>, <TYPE> alternates with Press [OK] for available media	The product is set for the manual feed mode.	Load the tray with the correct size and type of paper, or press OK to use the paper that is in the tray.
Memory is low Canceling recv.	The memory available for storing faxes is insufficient for an incoming fax.	Clear faxes from memory. Open the System Setup menu, and then open the Service menu. In the Fax Service menu, select the Clear Saved Faxes option. Turn off the Allow Reprint feature. When this feature is off, the product does not store received faxes in memory. Open the System Setup menu, and then open the Fax Setup menu. In the Advanced Setup menu, select the Allow Reprint option and turn it off.
Memory is low Press [OK]	The product does not have enough memory to process the job.	If the product is processing other jobs, send the job again after those jobs have finished. If the problem continues, turn off the power by using the power switch, and then wait at least 30 seconds. Turn on the power and wait for the product to initialize.
Memory is low. Only 1 copy made. Press [OK] to continue.	Product memory is too low to complete this job.	Either copy fewer pages at a time or turn off collation. If the error persists, turn the product off, and then turn it on.
Misprint Press [OK]	The product has experienced an internal hardware error.	1. Reprint the pages. 2. If the error persists, turn the product off, and then turn it on. 3. Print the pages again. 4. If the error persists, clean the rollers in the paper pick assembly, the duplexer door, and the duplexer frame.

Control panel message	Description	Recommended action
No dial tone	The product could not detect a dial tone.	Check for a dial tone on the phone line by touching the Start Fax  button. Unplug the telephone cord from both the product and the wall and replug the cord. Make sure that you are using the telephone cord that came with the product. Unplug the product telephone cord from the wall, plug in a telephone, and try making a voice call. Make sure that the phone cord from the wall telephone jack is plugged into the line  port. Plug the product phone cord into a jack for another phone line. Check the phone line by using the Run Fax Test option from the Service menu on the control panel. If the error persists, replace the fax PCA.
No fax answer Canceled send	Attempts to redial a fax number failed, or the Redial-No Answer option was turned off.	Call the recipient to ensure that the fax machine is on and ready. Check that you are dialing the correct fax number. Check that the redial option is enabled. Unplug the telephone cord from both the product and the wall and replug the cord. Unplug the product telephone cord from the wall, plug in a telephone, and try making a voice call. Make sure that the phone cord from the wall telephone jack is plugged into the line  port. Plug the product phone cord into a jack for another phone line. If the error persists, replace the fax PCA.

Control panel message	Description	Recommended action
No fax answer Redial Pending	The receiving fax line did not answer. The product attempts to redial after a few minutes.	Allow the product to retry sending the fax. Call the recipient to ensure that the fax machine is on and ready. Check that you are dialing the correct fax number. If the product continues to redial, unplug the product telephone cord from the wall, plug in a telephone, and try making a voice call. Make sure that the phone cord from the wall telephone jack is plugged into the line  port. Plug the product phone cord into a jack for another phone line. Try a different phone cord. If the error persists, replace the fax PCA.
No fax detected	The product answered the incoming call but did not detect that a fax machine was calling.	Allow the product to retry receiving the fax. Try a different phone cord. Plug the product phone cord into a jack for another phone line. If the error persists, replace the fax PCA.
No paper pickup Press [OK]	The product has experienced an internal hardware error.	1. Verify that the media was inserted far enough into the input tray. 2. Load the tray with the correct size of paper for your job. 3. Make sure that 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. 4. Check the product control panel to see if the product is waiting for you to acknowledge a prompt to feed the paper manually. Load paper, and continue. 5. If the error persists, clean the pickup roller. 6. If the error persists, replace the pickup roller.

Control panel message	Description	Recommended action
Print failure	The product experienced an internal communication error.	1. Press the power button to turn the product off. 2. If a surge protector is in use, remove it. Connect the power cord directly into a wall outlet. 3. Wait at least 30 seconds, turn the product on, and then wait for the product to initialize. 4. Resend the print job. 5. If the error persists, clean the pick up roller and the duplexer rollers. 6. If the error persists, check the sensor lever in the fuser inlet area. 7. If the sensor lever is stuck, clean it, and then make sure it moves smoothly. 8. If the sensor lever is broken or damaged, replace the fuser. 9. If the error persists, check the sensor lever in the upper part of the paper pickup assembly. 10. If the sensor lever is stuck, clean it and make sure that it moves smoothly. 11. If the sensor lever is broken or damaged, replace the paper pickup assembly. 12. If the error persists, reconnect J551 on the engine controller PCA. 13. If the error persists, replace the paper pickup assembly.
Remove shipping lock from cartridge	A shipping lock remains on the print cartridge.	Remove the print cartridge, remove the shipping lock, and then reinstall the cartridge.
Remove shipping material from duplex door	Shipping material remains on the back of the product.	Open the duplex door, and then remove all shipping material.
Replace Black Cartridge	The product is configured to stop when the print cartridge level is very low.	Replace the print cartridge, or configure the settings to continue printing after the print cartridge reaches the very low level.
Replace Supplies	The product is configured to stop when the print cartridge level is very low.	Replace the print cartridge, or configure the settings to continue printing after the print cartridge reaches the very low level.
Resend Upgrade	A firmware upgrade was interrupted.	1. Resend the upgrade file to the product. 2. If the error persists, replace the formatter PCA.

Control panel message	Description	Recommended action
Scanner Error X	The product experienced a general scanner error.	1. Press the power button to turn the product off. 2. If a surge protector is in use, remove it. Connect the power cord directly into a wall outlet. 3. Wait at least 30 seconds, turn the product on, and then wait for the product to initialize. 4. If the error persists, reconnect FFCs from the scanner assembly to the engine controller PCA. 5. If the error persists, replace the engine controller PCA.
Sensor Error	The product experienced a paper sensor error.	1. Press the power button to turn the product off. 2. If a surge protector is in use, remove it. Connect the power cord directly into a wall outlet. 3. Wait at least 30 seconds, turn the product on, and then wait for the product to initialize. 4. If the error persists, check the connections between the paper sensors and the engine controller PCA. 5. If the error persists, check the sensor lever in the fuser inlet area. 6. If the sensor lever is stuck, clean it, and then make sure it moves smoothly. 7. If the sensor lever is broken or damaged, replace the fuser. 8. If the error persists, check the sensor lever in the upper part of the paper pickup assembly. 9. If the sensor lever is stuck, clean it and make sure that it moves smoothly. 10. If the sensor lever is broken or damaged, replace the paper pickup assembly. 11. If the error persists, reconnect J551 on the engine controller PCA. 12. If the error persists, replace the paper pickup assembly.
Settings cleared	The product has cleared job settings.	Re configure the job settings.

Control panel message	Description	Recommended action
Unexpected size in tray 1	The paper in the tray does not match the size needed for the current print job.	1. Load paper that is the correct size, and verify that the tray is set to the correct size. 2. If the issue persists, reconnect the J551 connector on the engine controller unit. 3. If the issue persists, replace the paper pickup assembly.
Used cartridge is installed.	A used supply is installed.	No action necessary. Product repair that is required from using used print cartridges is not covered under warranty. Supply status and features that depend on it are unavailable with used cartridges.

Paper feeds incorrectly or becomes jammed

The product does not pick up paper

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

1. Open the product and remove any jammed sheets of paper.
2. Load the tray with the correct size of paper for your job.
3. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides so they are touching the paper stack without bending it.
4. Check the product control panel to see if the product is waiting for you to acknowledge a prompt to feed the paper manually. Load paper, and continue.

The product picks up multiple sheets of paper

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

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

Prevent paper jams

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

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

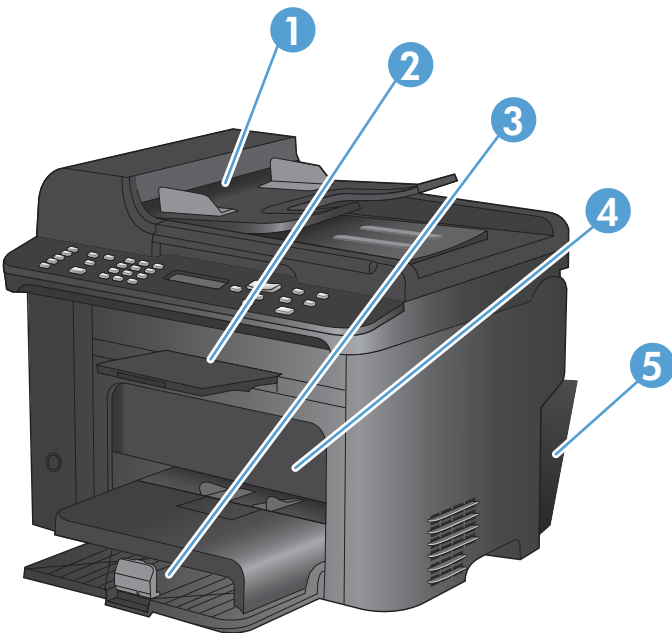
Clear jams

When clearing jams, be very careful not to tear jammed paper. If a small piece of paper remains in the product, it could cause additional jams.

CAUTION: Before clearing jams, turn the product off, and then disconnect the power cord.

Jam locations

Jams can occur at the following locations in the product.



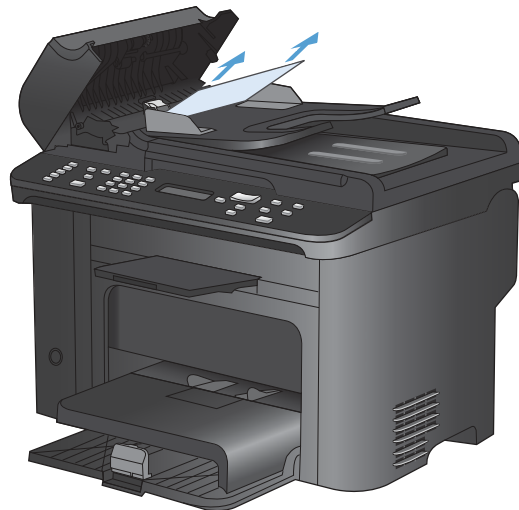
1	Document feeder
2	Output bins
3	Input trays
4	Print cartridge area
5	Rear door and duplexer

Clear jams from the document feeder

1. Open the document feeder cover.



2. Lift the side lever to open the pickup assembly, and then gently pull the jammed paper out.

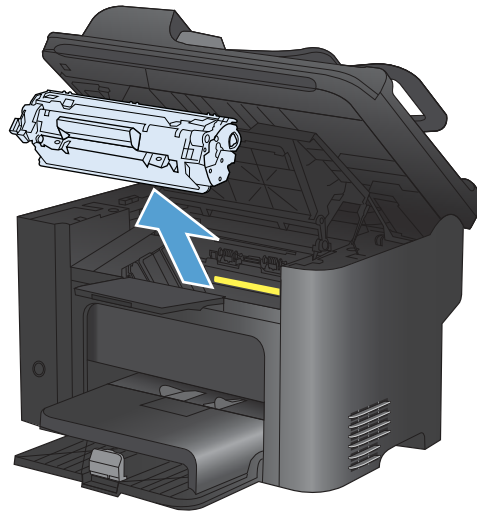


3. Close the pickup assembly and the document feeder cover.

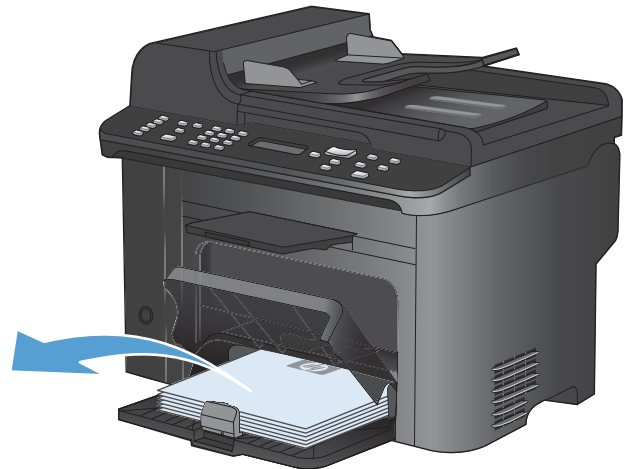


Clear jams from the input trays

1. Open the print cartridge door, and then remove the print cartridge.



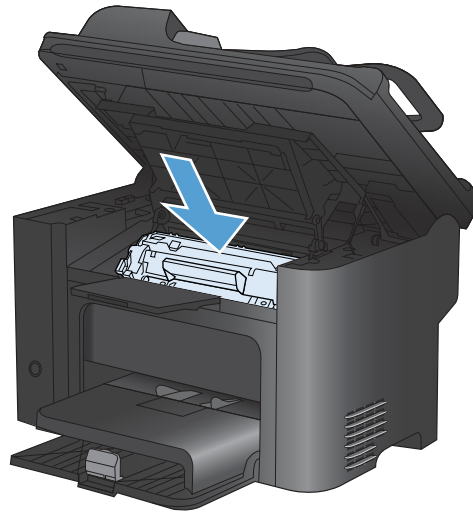
2. Remove all media from the main tray and the priority input slot.



3. With both hands, grasp the side of the jammed media that is most visible (this includes the middle), and carefully pull it free from the product.



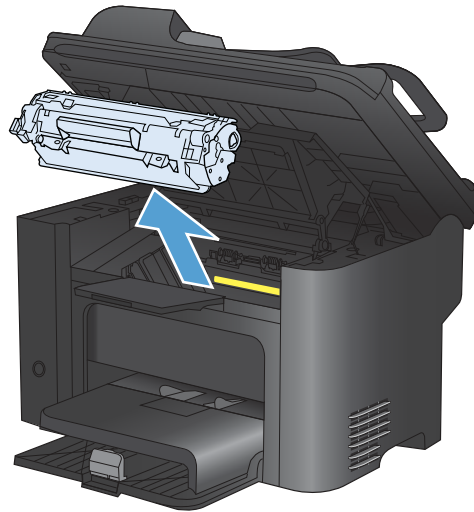
4. Reinstall the print cartridge and close the print cartridge door.



Clear jams from inside the product

1. Open the print cartridge door, and then remove the print cartridge.

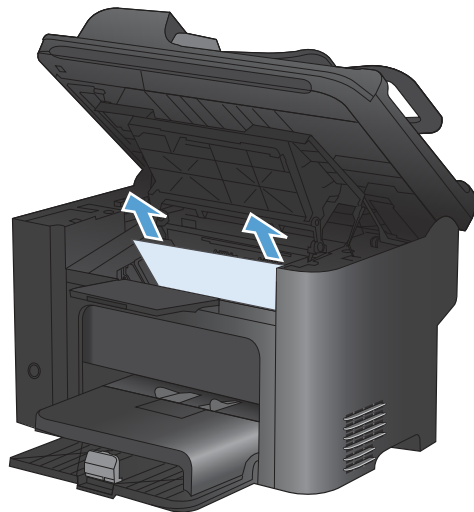
CAUTION: To prevent damage, do not expose the print cartridge to light. Cover it with a piece of paper.



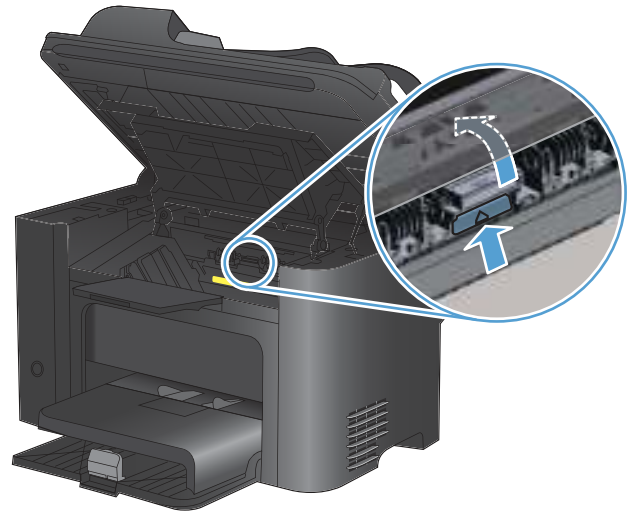
2. If you can see the jammed paper, carefully grasp the jammed paper, and then slowly pull it out of the product.

NOTE: If you can not see the jammed paper, continue go to the next step.

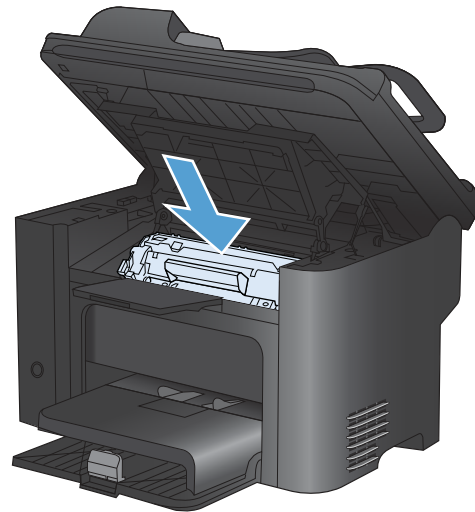
If you successfully removed the jammed paper, skip the next step.



3. Press the green tab, open the jam access door, carefully grasp the jammed paper, and then slowly pull the paper out of the product. Close the jam access door.



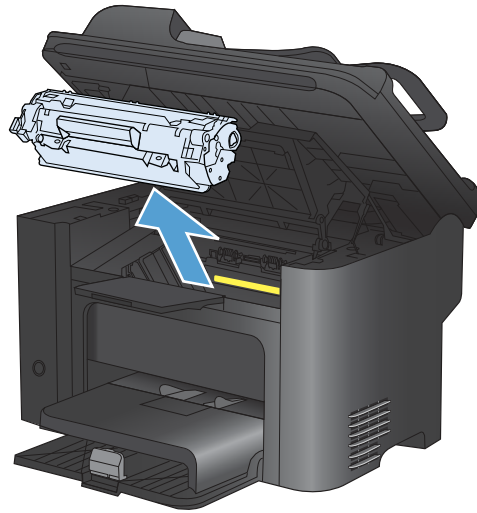
4. Reinstall the print cartridge, and then close the print cartridge door.



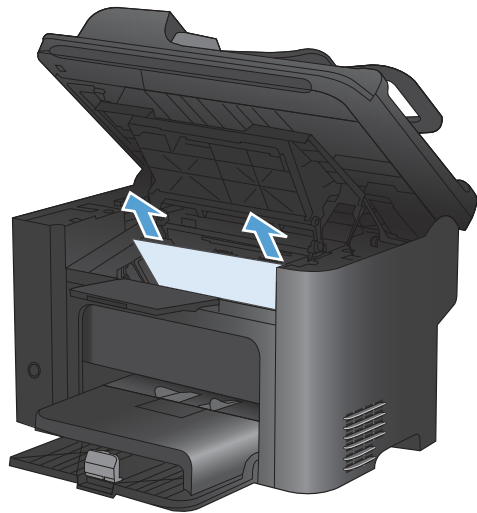
Clear jams from the output areas

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

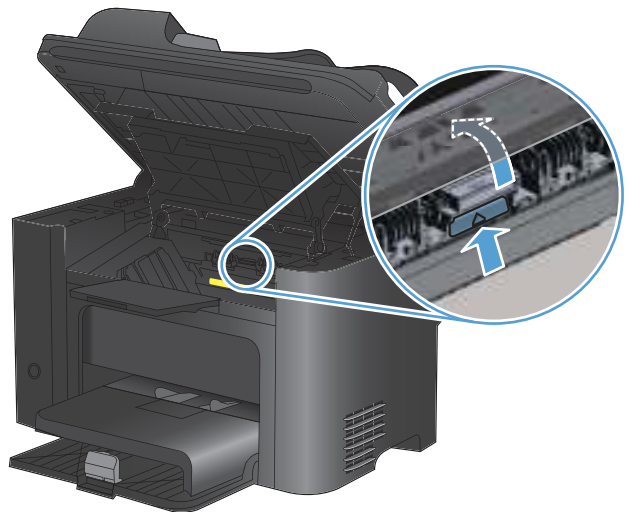
1. Open the print cartridge door, and then remove the print cartridge.



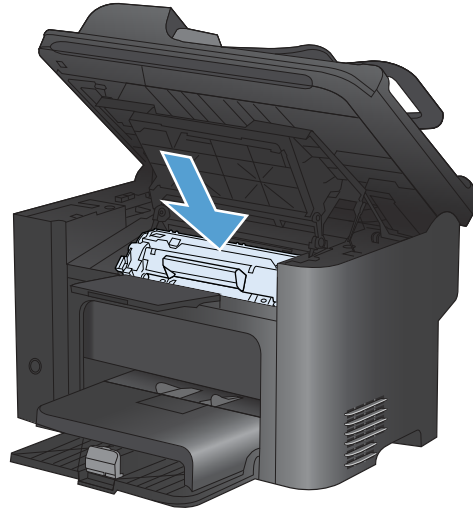
2. Keep the print cartridge door open, and then use both hands to grasp the side of the jammed media that is most visible (this includes the middle). Carefully pull the paper free from the product.



3. Press the green tab, and then open the jam access door.

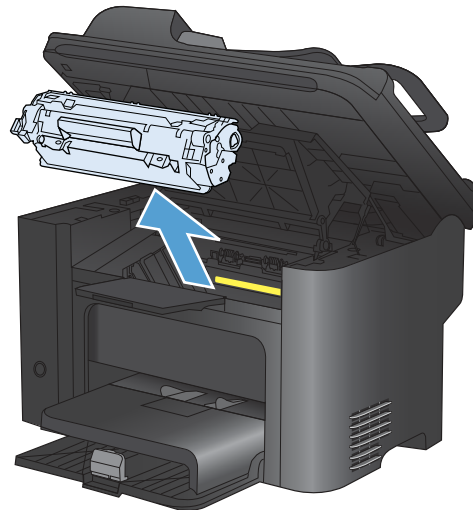


4. Carefully grasp the jammed paper, and then slowly pull it out of the product. Close the jam access door.
5. Reinstall the print cartridge, and then close the print cartridge door.



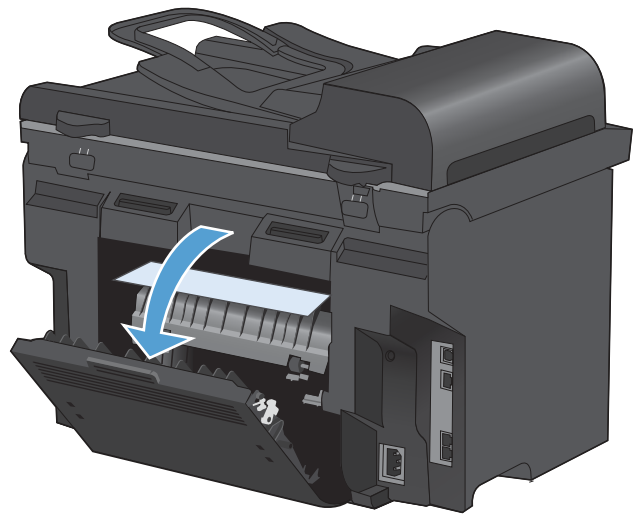
Clear jams from the duplexer

1. Open the print cartridge door, and then remove the print cartridge.

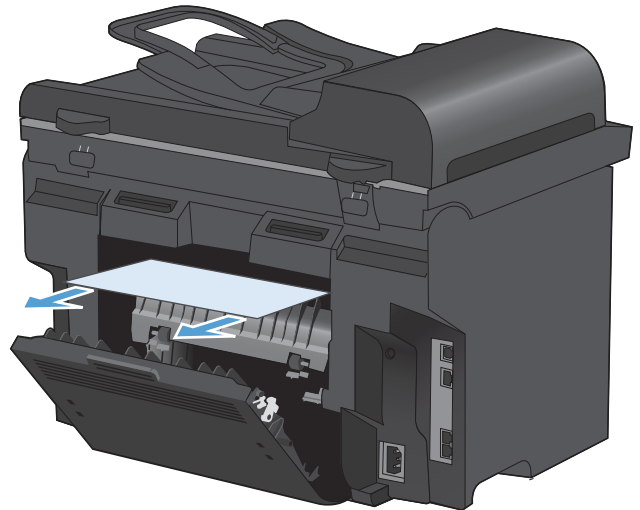


2. Open the duplexer door.

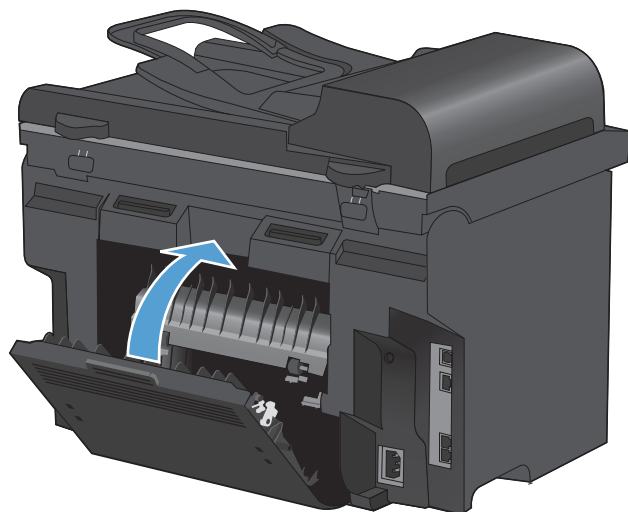
CAUTION: The fuser area can be hot while the product is in use. Wait for the fuser to cool.



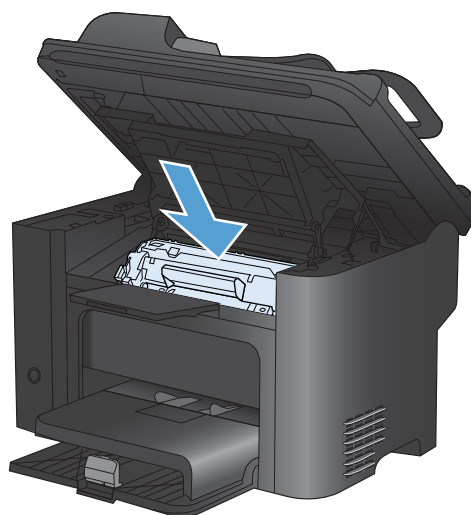
3. Carefully grasp the jammed paper, and then slowly pull it out of the product



4. Close the duplexer door.



5. Reinstall the print cartridge, and then close the print cartridge door.



Improve print quality

You can prevent most print-quality problems by following these guidelines.

- Use the correct paper type setting in the printer driver.
- Use paper that meets HP specifications for this product.
- Clean the product as necessary.
- Replace print cartridges when they are reaching the end of their estimated life and print quality is no longer acceptable.
- Use the printer driver that best meets your printing needs.

Select a paper type

1. Open the printer driver, click the **Properties** or **Preferences** button, and then click the **Paper/Quality** tab.
2. Select a type from the **Type is** drop-down list.
3. Click the **OK** button.

Use paper that meets HP specifications

Use different paper if you are having any of the following problems:

- The printing is too light or seems faded in areas.
- Specks of toner are on the printed pages.
- Toner is smearing on the printed pages.
- Printed characters seem misformed.
- Printed pages are curled.

Always use a paper type and weight that this product supports. In addition, follow these guidelines when selecting paper:

- 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 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.

Print a cleaning page

Print a cleaning page to remove dust and excess toner from the paper path if you are having any of the following problems:

- Specks of toner are on the printed pages.
- Toner is smearing on the printed pages.
- Repeated marks occur on the printed pages.

Use the following procedure to print a cleaning page.

1. On the product control panel, press the Setup  button.
2. Use the arrow buttons to select the **Service** menu.
3. Use the arrow buttons to select the **Cleaning Page** item.
4. Load plain letter or A4 paper when you are prompted.
5. Press the **OK** button to begin the cleaning process.

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

Check the print cartridge

Check the print cartridge, and replace it if necessary, if you are having any of the following problems:

- The printing is too light or seems faded in areas.
- Printed pages have small unprinted areas.
- Printed pages have streaks or bands.



NOTE: If you are using a draft or EconoMode print setting, the printing might appear light.

If you determine that you need to replace a print cartridge, print the supplies status page to find the part number for the correct genuine HP print cartridge.

Type of print cartridge	Steps to resolve the problem
Refilled or remanufactured print cartridge	Hewlett-Packard Company cannot recommend the use of non-HP supplies, either new or remanufactured. Because they are not HP products, HP cannot influence their design or control their quality. If you are using a refilled or remanufactured print cartridge and are not satisfied with the print quality, replace the cartridge with a genuine HP cartridge that has the words "HP" or "Hewlett-Packard" on it, or has the HP logo on it.
Genuine HP print cartridge	1. The product control panel or the supplies status page indicates Very Low status when the cartridge has reached the end of its designated life. Replace the print cartridge if print quality is no longer acceptable. 2. Visually inspect the print cartridge for damage. See the instructions that follow. Replace the print cartridge if necessary. 3. If printed pages have marks that repeat several times at the same distance apart, print a cleaning page. If this does not solve the problem, use the repeating defects information in this document to identify the cause of the problem.

Print the Supplies Status page

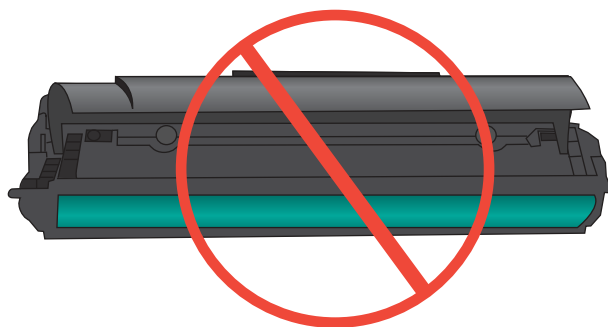
The **Supplies Status** page indicates the estimated life remaining in print cartridges. It also lists the part number for the correct genuine HP print cartridge for your product so you can order a replacement print cartridge, as well as other useful information.

1. On the product control panel, open the **Reports** menu.
2. Select the **Supplies Status** page to print it.

Inspect the print cartridge for damage

1. Remove the print cartridge from the product, and verify that the sealing tape has been removed.
2. Check the memory chip for damage.
3. Examine the surface of the green imaging drum on the bottom of the print cartridge.

CAUTION: Do not touch the green roller (imaging drum) on the bottom of the cartridge. Fingerprints on the imaging drum can cause print-quality problems.



4. If you see any scratches, fingerprints, or other damage on the imaging drum, replace the print cartridge.
5. If the imaging drum does not appear to be damaged, rock the print cartridge gently several times and reinstall it. Print a few pages to see if the problem has resolved.

Repeating defects

If defects repeat at any of the following approximate intervals on the page, the print cartridge might be damaged.

- 27 mm
- 29 mm
- 75 mm

Use the printer driver that best meets your printing needs

You might need to use a different printer driver if the printed page has unexpected lines in graphics, missing text, missing graphics, incorrect formatting, or substituted fonts.

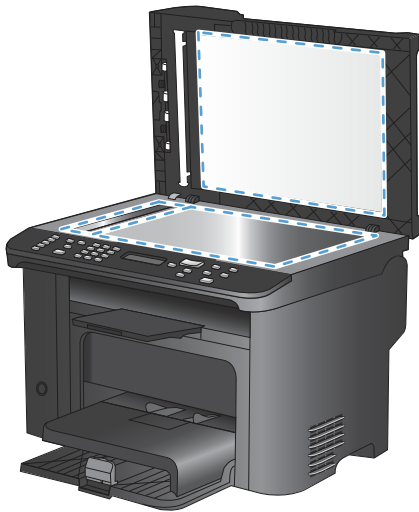
HP PCL 6 driver	• Provided as the default driver. This driver is automatically installed unless you select a different one. • Recommended for all Windows environments • Provides the overall best speed, print quality, and product-feature support for most users • Developed to align with the Windows Graphic Device Interface (GDI) for the best speed in Windows environments • Might not be fully compatible with third-party and custom software programs that are based on PCL 5
HP UPD PS driver	• Recommended for printing with Adobe® software programs or with other highly graphics-intensive software programs • Provides support for printing from postscript emulation needs, or for postscript flash font support
HP UPD PCL 5	• Recommended for general office printing in Windows environments • Compatible with previous PCL versions and older HP LaserJet products • The best choice for printing from third-party or custom software programs • The best choice when operating with mixed environments, which require the product to be set to PCL 5 (UNIX, Linux, mainframe) • Designed for use in corporate Windows environments to provide a single driver for use with multiple printer models • Preferred when printing to multiple printer models from a mobile Windows computer

Download additional printer drivers from this Web site: www.hp.com/go/ljm1530series_software.

Improve print quality for copies

If you encounter print quality problems in copied documents, review the solutions for printed documents listed previously in this document. However, some print-quality problems occur only in copied documents.

- If streaks appear on copies made by using the document feeder, clean the small glass strip on the left side of the scanner assembly.
- If dots or other defects appear on copies made by using the scanner glass, clean the scanner glass and the white plastic backing.



1. Use the power switch to turn off the product, and then unplug the power cord from the electrical socket.
2. Open the scanner lid.
3. Clean the scanner glass and the white plastic backing 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 product; these can damage the product. Do not place liquids directly on the glass or platen. They might seep and damage the product.

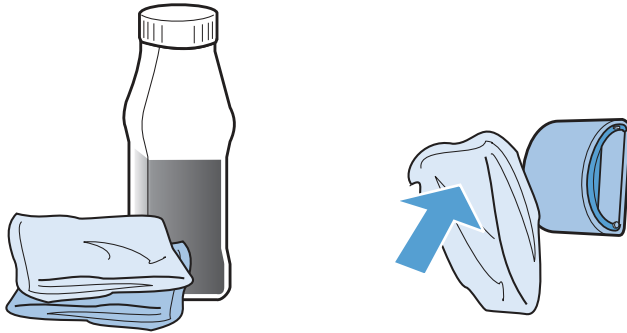
4. Dry the glass and white plastic backing with a chamois or a cellulose sponge to prevent spotting.
5. Plug in the product, and then use the power switch to turn on the product.

Clean the product

Clean the pickup roller

If you want to clean the pickup roller before deciding to replace it, follow these instructions:

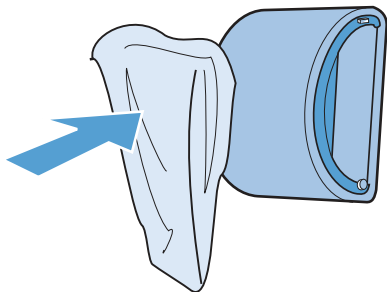
1. Turn off the product, unplug the power cord from the product, and then remove the pickup roller.
2. Dab a lint-free cloth in isopropyl alcohol, and then scrub the roller.



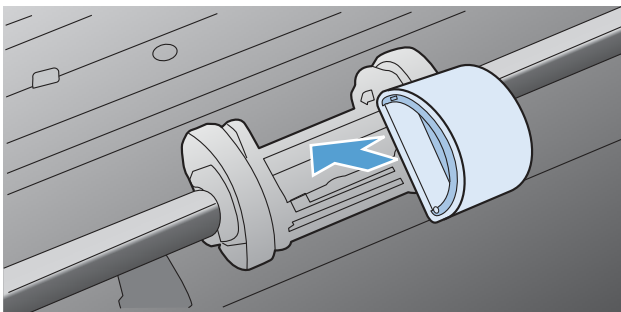
WARNING! Alcohol is flammable. Keep the alcohol and cloth away from an open flame. Before you close the product and plug in the power cord, allow the alcohol to dry completely.

NOTE: In certain areas of California, air pollution control regulations restrict the use of liquid isopropyl alcohol (IPA) as a cleaning agent. In those areas of California, please disregard the previous recommendations and use a dry, lint free cloth, moistened with water, to clean the pickup roller.

3. Use a dry, lint free cloth, to wipe the pickup roller and remove loose dirt.



4. Allow the pickup roller to dry completely before you reinstall it.

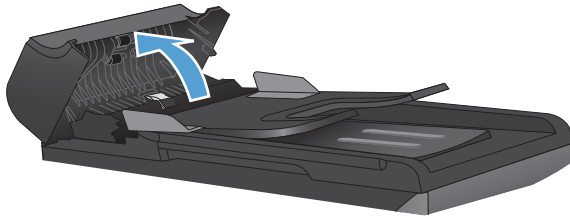


5. Plug the power cord into the product.

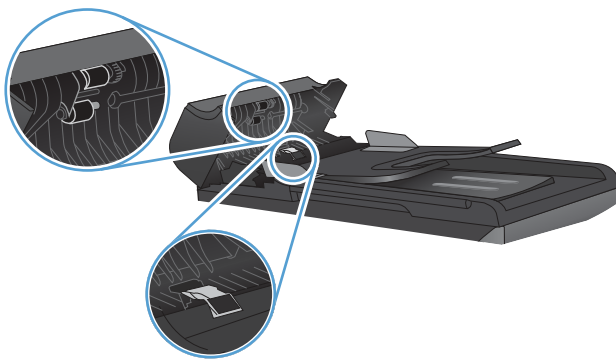
Clean the document feeder pickup rollers and separation pad

If the product document feeder experiences paper-handling problems, such as jams or multiple-page feeds, clean the document feeder rollers and separation pad.

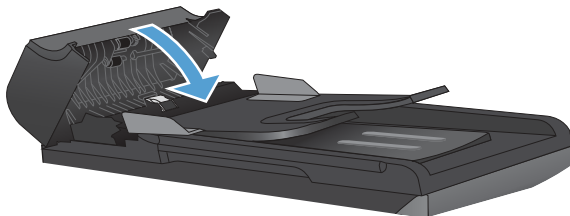
1. Open the document feeder cover.



2. Use a moist, lint-free cloth to wipe both pickup rollers and the separation pad to remove dirt.



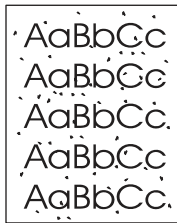
3. Close the document feeder cover.



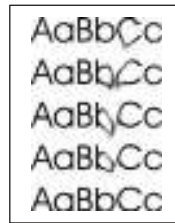
Clean the paper path

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

Specks



Smearing



Clean the paper path from HP ToolboxFX

Use HP ToolboxFX to clean the paper path. This is the recommended cleaning method. If you do not have access to HP ToolboxFX, use the control panel method.

1. Make sure that the product is turned on and in the Ready state and that paper is loaded in the priority input tray or Tray 1.
2. Open HP ToolboxFX, click the product, and then click the **System Settings** tab.
3. Click the **Service** tab, and then click **Start**.

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

Clean the paper path from the control panel

If you do not have access to HP ToolboxFX, you can print a cleaning page from the control panel.

1. Press the Setup  button.
2. Use the arrow buttons to select the **Service** menu, and then press **OK**.
3. Use the arrow buttons to select **Cleaning Page**, and then press **OK**.
4. Load plain letter or A4 paper when prompted.
5. Press **OK** again to confirm and begin the cleaning process.

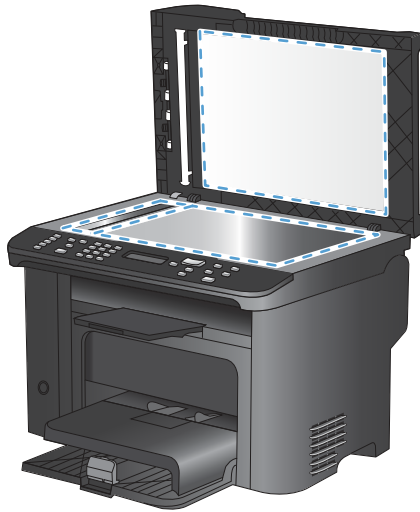
A page feeds through the product slowly. Discard the page when the process is complete.

Clean the scanner glass strip and platen

Over time, specks of debris can collect on the scanner glass and on the white plastic backing. This can affect printing performance. Use the following procedure to clean the scanner glass and the white plastic backing.

1. Use the power switch to turn off the product, and then unplug the power cord from the electrical outlet.
2. Open the scanner lid.

3. Clean the scanner glass and the white plastic backing with a soft cloth or a sponge moistened with nonabrasive glass cleaner.



△ CAUTION: Do not use abrasives, acetone, benzene, ammonia, ethyl alcohol, or carbon tetrachloride on any part of the product. These substances can damage the product. Do not place liquids directly on the glass or the platen. They can seep and damage the product.

4. Dry the glass and the white plastic backing with a chamois or a cellulose sponge to prevent spotting.
5. Plug in the product, and then use the power switch to turn on the product.

The product does not print or it prints slowly

The product does not print

If the product does not print at all, try the following solutions.

1. Make sure that the product is turned on and that the control panel indicates it is ready.
 - If the control panel does not indicate the product is ready, turn the product off, and then turn it on.
 - If the control panel indicates the product is ready, try sending the job again.
2. If the control panel indicates the product has an error, resolve the error, and then try sending the job again.
3. Make sure that all of the cables are connected correctly. If the product is connected to a network, check the following items:
 - Check the light next to the network connection on the product. The light is green if the network is active.
 - Make sure that the network is connected using a network cable rather than a telephone cable.
 - Make sure that the network router, hub, or switch is turned on and that it is working correctly.
4. Install the HP software from the CD that came with the product. Using generic printer drivers can cause delays clearing jobs from the print queue.
5. From the list of printers on the computer, right-click the entry for the product, click **Properties**, and then open the **Ports** tab.
 - If you are using a network cable to connect to the network, make sure that the printer name listed on the **Ports** tab matches the product name on the product configuration page.
 - If you are using a USB cable and are connecting to a wireless network, make sure that the box is checked next to **Virtual printer port for USB**.
6. If the computer has a personal firewall system, it might be blocking communication with the product. Try disabling the firewall temporarily to see if it is the source of the problem.
7. If the computer or the product is connected to a wireless network, low signal quality or interference might be delaying print jobs.

The product prints slowly

If the product prints, but it seems slow, try the following solutions.

1. Make sure that the computer meets the minimum specifications for this product. For a list of specifications, go to this Web site: www.hp.com/support/ljm1530series.
2. When you configure the product to print on some paper types, such as heavy paper, the product prints more slowly so it can fuse the toner correctly 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 computer or the product is connected to a wireless network, low signal quality or interference can delay print jobs.
4. Disable the product **Quiet Mode** setting. When this mode is turned on, the product prints at a slower speed.
5. If the product is connected directly to a computer, change the **USB Speed** setting. An incorrect USB setting can cause slow printing.

Solve connectivity problems

Solve direct-connect 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 5 m (16.4 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 network problems

Check the following items to verify that the product is communicating with the network. Before beginning, print a configuration page from the product control panel and locate the product IP address that is listed on this page.

- [Poor physical connection](#)
- [The computer is using the incorrect IP address for the product](#)
- [The computer is unable to communicate with the product](#)
- [The product is using incorrect link and duplex settings for the network](#)
- [New software programs might be causing compatibility problems](#)
- [The computer or workstation might be set up incorrectly](#)
- [The product is disabled, or other network settings are incorrect](#)

Poor physical connection

1. Verify that the product 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 product, 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 product

1. Open the printer properties and click the **Ports** tab. Verify that the current IP address for the product is selected. The product IP address is listed on the product configuration page.
2. If you installed the product 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 product using a Microsoft standard TCP/IP port, use the hostname instead of the IP address.
4. If the IP address is correct, delete the product and then add it again.

The computer is unable to communicate with the product

1. Test network communication by pinging the network.
 - a. Open a command-line prompt on your computer. For Windows, click **Start**, click **Run**, and then type `cmd`.
 - b. Type `ping` followed by the IP address for your product.
 - 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 product, and the computer are all configured for the same network.

The product is using incorrect link and duplex settings for the network

Hewlett-Packard recommends leaving this setting 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 printer driver.

The computer or workstation might be set up incorrectly

1. Check the network drivers, printer drivers, and the network redirection.
2. Verify that the operating system is configured correctly.

The product 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.

Service mode functions

Secondary service menu

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

Open the secondary service menu

- 1. Ensure the product is in the **Ready** state.
- 2. Press the Setup  button to open the menus.
- 3. Press and hold the Left arrow  button, then press the Cancel  button, and then release them.
- 4. Press the Setup  button again to open the service menus, and then press the **OK** button to open secondary service menu.
- 5. Press the Left arrow  button and the Right arrow  button to navigate through the menus.
- 6. Press the **OK** button to open a sub menu.

Secondary service menu structure

Table 2-1 Secondary Service menu

Menu item	Sub menu item	Description
Location	A list of available locations appears	Configure the location to set certain parameters, such as the default paper size and the symbol set, that are dependent on the location. Press the Right arrow  button or the Left arrow  button to navigate to the desired location, and then press the OK button to configure the location. The product automatically restarts after you configure the location.
LED test	A series of LED display functions appears.	Use this test to verify that the LED display functions, such as the backlight, the ready state light, and the attention light function correctly. Press the OK button to start the test, and then press the OK button to continue the test. Press the Cancel  button to exit the test. Pressing the Cancel  button exits the secondary service menu, but pressing the Setup  button reopens the secondary setup menu.
Display test	A series of character sets appears.	Use this test to verify that the LCDs and characters function correctly. Press the OK button to start the test. Press the OK button to continue the test. The beginning of the test illuminates all LCDs in the top row and then in the bottom row to verify that all LCDs function correctly. The test continues by displaying all possible characters in groups of 16 to verify that the characters display correctly. Press the Cancel  button to exit the test. This also exits the secondary service menu, but pressing the Setup  button reopens the secondary setup menu.
Button test	A series of prompts to test control panel buttons appears.	Use this test to verify that the control-panel buttons function correctly. Press the OK button to start the test. The display prompts you to press each button. As you press each button the test continues.

Table 2-1 Secondary Service menu (continued)

Menu item	Sub menu item	Description
Service Reports	Cont. Self-Test	Print a continuous configuration page.
	Extended Keymap	Print an extended keymap (a list of alternate characters for the number keypad).
	Error report	Print an error report.
PBX ring detect	On or Off	Configure the PBX ring detect setting. Press the OK button to open the menu. Press the Left arrow ► button or the right arrow ◀ button to change the setting. Press the OK button to accept the change and restart the product.

Product resets

To restore the product to the factory-default settings, follow these steps.

1. Turn the product off.
2. Press and hold the Right arrow ► button and the Cancel ✕ button at the same time.
3. While holding down both buttons, turn the product on.
4. Continue to hold both buttons until **Permanent Storage init.** appears on the display, and then release both buttons.

Solve fax problems

Fax troubleshooting checklist

- Several possible fixes are available. After each recommended action, retry faxing to see if the problem is resolved.
 - For best results during fax problem solving, make sure the line from the product is plugged directly into the wall phone port. Disconnect all other devices that are connected to the product.
1. Verify that the telephone cord is plugged into the correct port on the back of the product.
 2. Check the phone line by using the fax test:
 - a. On the control panel, open the **Setup** menu, and then open the **Service** menu.
 - b. Select the **Fax Service** option.
 - c. Select the **Run Fax Test** option. The product prints a fax test report.

The report contains the following possible results:

- **Pass:** The report contains all of the current fax settings for review.
- **Fail:** The cord is in the wrong port. The report contains suggestions for how to resolve the issue.
- **Fail :** The phone line is not active. The report contains suggestions for how to resolve the issue.

3. Verify that the product firmware is current:
 - a. Print a configuration page from the control panel **Reports** menu to obtain the current firmware date code.
 - b. Go to www.hp.com.
 1. Click the **Support & Drivers** link.
 2. Click the **Download drivers and software (and firmware)** link option.
 3. In the **For product** box, type the product model number, and then click the **Go** button.
 4. Click the link for your operating system.
 5. Scroll to the Firmware section of the table.
 - If the listed version matches the version on the configuration page, you have the most current version.
 - If the versions are different, download the firmware upgrade and update the firmware on the product following the instructions onscreen.
-  **NOTE:** The product must be connected to a computer with internet access to upgrade firmware.
- Resend the fax.
4. Verify that the fax was set up when the product software was installed.

From the computer, in the HP program folder, run the Fax Setup Utility.
5. Verify that the telephone service supports analog fax.
 - If using ISDN or digital PBX, contact your service provider for information about configuring to an analog fax line.
 - If using a VoIP service, change the **Fax Speed** setting to **Slow(V.29)** or disable **Fast(V.34)** from the control panel. Ask if your service provider supports fax and for the recommended fax modem speed. Some companies might require an adapter.
 - If using a DSL service, ensure that a filter is included on the phone line connection to the product. Contact the DSL service provider or purchase a DSL filter if you do not have one. If a DSL filter is installed, try another since these filters can be defective.
6. If the error persists, find more detailed problem-solving solutions in the sections that follow this one.

Troubleshoot fax codes and trace reports

View and interpret fax error codes

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

Code number	Description
232	Possible causes include the following: • A communication failure has occurred between the two machines. • The user at the remote machine may have pressed the Stop button. • The power at the remote machine has been interrupted, or deliberately turned off causing the fax session to be interrupted. To solve the issue, try the following steps: 1. Resend the fax at a different time when telephone line conditions have improved. 2. If the error persists, and error correction is in use for the fax session, disable the Error Correction setting.
282	The product has not received any data at the start of a page during reception in error correction mode, but the modem has not detected a remote disconnect. The remote machine is probably transmitting sync frames instead of data and has either jammed or broken. Have the sender resend the fax after first requesting that the sender verify that the sending machine is working correctly.
321	There was a communication error with the receiving fax machine due to poor telephone line conditions. Resend the fax at a different time when telephone line conditions have improved.
344-348	Possible causes include the following: • The remote machine has failed to respond to a fax command from the local machine due to the connection being interrupted. • The user at the remote machine may have pressed the Stop button. • In rare instances, incompatibility between the two machines can cause the remote machine to simply terminate the call. To solve the issue, try the following steps: 1. Resend the fax at a different time when telephone line conditions have improved. 2. If the error persists, and error correction is in use for the fax session, disable the Error Correction setting.
381	Possible causes include the following: • The remote machine has failed to respond to a fax command from the local machine due to the connection being interrupted. • The user at the remote machine may have pressed the Stop button. To solve the issue, try the following steps: 1. Resend the fax at a different time when telephone line conditions have improved. 2. If the error persists, and error correction is in use for the fax session, disable the Error Correction setting.

View the fax trace report

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

1. On the control panel, press the Setup  button.
2. Select the **Service** menu.
3. Select the **Fax Service** option.
4. Select the **Print T.30 Trace** option. The product prints a fax trace report.

Fax logs and reports

Use the following instructions to print fax logs and reports:

Print all fax reports

Use this procedure to print all of the following reports at one time:

- Fax activity log
- Phone book list
- Configuration report
- Junk fax list
- Last call report
- Billing report
- Usage page

1. On the control panel, press the **Fax Menu**  button.



2. Use the arrow buttons to select the **Fax Reports** menu, and then press the **OK** button.
3. Use the arrow buttons to select the **All Fax Reports** option, and then press the **OK** button. The product exits the menu settings and prints the reports.

Print individual fax reports

1. On the control panel, press the **Fax Menu**  button.



2. Use the arrow buttons to select the **Fax Reports** menu, and then press the **OK** button.
3. Use the arrow buttons to select the report to be printed, and then press the **OK** button. The product exits the menu settings and prints the report.

NOTE: If you selected the **Fax Activity Log** report and pressed the **OK** button, press the **OK** button again to select the **Print Log Now** option. The product exits the menu settings and prints the log.

Set the fax activity log to print automatically

1. On the control panel, press the **Fax Menu**  button.



2. Use the arrow buttons to select the **Fax Reports** menu, and then press the **OK** button.
3. Use the arrow buttons to select the **Fax Activity Log** menu, and then press the **OK** button.
4. Use the arrow buttons to select the **Auto Log Print** menu, and then press the **OK** button.
5. Use the arrow buttons to select the **On** option, and then press the **OK** button to confirm the selection.

Set the fax error report

A fax error report is a brief report that indicates the product experienced a fax job error. It can be set to print after the following events:

- Every fax error (the factory-set default)
- Send fax error
- Receive fax error
- Never

 **NOTE:** If you select **Never**, you will have no indication that a fax failed to be transmitted unless you print a fax activity log.

1. On the control panel, press the **Fax Menu**  button.



2. Use the arrow buttons to select the **Fax Reports** menu, and then press the **OK** button.
3. Use the arrow buttons to select the **Fax Error Report** menu, and then press the **OK** button.
4. Use the arrow buttons to select the option for when you want the fax error reports to be printed.
5. Press the **OK** button to save the selection.

Set the fax confirmation report

A confirmation report is a brief report that indicates the product successfully sent or received a fax job. It can be set to print after the following events:

- Every fax job
- Send fax
- Receive fax
- Never (the factory-set default)

1. On the control panel, press the **Fax Menu**  button.



2. Use the arrow buttons to select the **Fax Reports** menu, and then press the **OK** button.
3. Use the arrow buttons to select the **Fax Confirmation** menu, and then press the **OK** button.
4. Use the arrow buttons to select the option for when you want the fax error reports to be printed.
5. Press the **OK** button to save the selection.

Include the first page of each fax on the fax confirmation, fax error, and last call reports

1. On the control panel, press the **Fax Menu**  button.



2. Use the arrow buttons to select the **Fax Reports** menu, and then press the **OK** button.
3. Use the arrow buttons to select the **Include 1st page** menu, and then press the **OK** button.
4. Use the arrow buttons to select the **On** option, and then press the **OK** button to confirm the selection.

Change error correction and fax speed

Set the fax-error-correction mode

Usually, the product monitors the signals on the telephone line while it is sending or receiving a fax. If the product detects an error during the transmission and the error-correction setting is **On**, the product can request that the portion of the fax be resent. The factory-set default for error correction is **On**.

You should turn off error correction only if you are having trouble sending or receiving a fax, and you are willing to accept the errors in the transmission. Turning off the setting might be useful when you are trying to send a fax overseas or receive one from overseas, or if you are using a satellite telephone connection.

1. On the control panel, press the **Setup**  button.
2. Use the arrow buttons to select the **Service** menu, and then press the **OK** button.
3. Use the arrow buttons to select the **Fax Service** menu, and then press the **OK** button.
4. Use the arrow buttons to select the **Error Correction** menu, and then press the **OK** button.
5. Use the arrow buttons to select the **On** or **Off** option, and then press the **OK** button to save the selection.

Change the fax speed

The fax-speed setting is the modem protocol that the product uses to send faxes. It is the worldwide standard for full-duplex modems that send and receive data across telephone lines at up to 33,600 bits per second (bps). The factory-set default for the fax-speed setting is **Fast(V.34)**.

You should change the setting only if you are having trouble sending a fax to or receiving a fax from a particular device. Decreasing the fax speed might be useful when you are trying to send a fax overseas, or receive one from overseas, or if you are using a satellite telephone connection.

1. On the control panel, press the Setup  button.
2. Use the arrow buttons to select the **Fax Setup** menu, and then press the **OK** button.
3. Use the arrow buttons to select the **Advanced Setup** menu, and then press the **OK** button.
4. Use the arrow buttons to select the **Fax Speed** menu, and then press the **OK** button.
5. Use the arrow buttons to select a speed setting, and then press the **OK** button.

Solve problems sending faxes

- [An error message displays on the control panel](#)
- [The control panel displays a Ready message with no attempt to send the fax](#)
- [The control panel displays the message "Storing page 1" and does not progress beyond that message](#)
- [Faxes can be received, but not sent](#)
- [Unable to use fax functions from the control panel](#)
- [Unable to use speed dials](#)
- [Unable to use group dials](#)
- [Receive a recorded error message from the phone company when trying to send a fax](#)
- [Unable to send a fax when a phone is connected to the product](#)

An error message displays on the control panel

The Comm. Error message appears

- Allow the product to retry sending the fax. Re-sending temporarily reduces the fax speed.
- Unplug the product telephone cord from the wall, plug in a telephone, and try making a call. Plug the product phone cord into a jack for another phone line.
- Try a different phone cord.
- From the control panel, change the **Fax Speed** option to the **Medium(V.17)** setting or **Slow(V.29)** setting.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Advanced Setup** menu.
 - d. Open the **Fax Speed** menu.
 - e. Select the correct setting.

- Turn off the **Error Correction** option.
 - a. Open the **Setup** menu.
 - b. Open the **Service** menu.
 - c. Open the **Fax Service** menu.
 - d. Open the **Error Correction** menu.
 - e. Select the **Off** setting.



NOTE: Turning off the **Error Correction** option can reduce image quality.

- If the error persists, replace the fax PCA.

No dial tone

- Make sure that the telephone cord is plugged into the correct port on the product.
- Make sure that the telephone cord from the product is plugged directly into the wall telephone jack.
- Check for a dial tone on the phone line by using the **Start Fax**  button.
- Unplug the product telephone cord from the wall, plug in a telephone, and try making a voice call.
- Unplug the telephone cord from both the product and the wall and replug the cord.
- Make sure that you are using the telephone cord that came with the product.
- Plug the product phone cord into a jack for another phone line.
- Check the phone line by using the **Run Fax Test** option from the **Service** menu on the control panel.
 - a. Open the **Setup** menu.
 - b. Open the **Service** menu.
 - c. Open the **Fax Service** menu.
 - d. Select the **Run Fax Test** item.

The Fax is busy message appears

- Try sending the fax again.
- Call the recipient to ensure that the fax machine is on and ready.
- Check that you are dialing the correct fax number.
- Check for a dial tone on the phone line by using the **Start Fax**  button.
- Make sure that the phone is working by disconnecting the product, plugging in a telephone to the phone line, and making a voice call.
- Plug the product phone cord into a jack for another phone line, and try sending the fax again.
- Try a different phone cord.

- Send the fax at a later time.
- If the error persists, replace the fax PCA.

The No fax answer message appears

- Try to resend the fax.
- Call the recipient to ensure that the fax machine is on and ready.
- Check that you are dialing the correct fax number.
- Unplug the product telephone cord from the wall, plug in a telephone, and try making a voice call.
- Plug the product phone cord into a jack for another phone line.
- Try a different phone cord.
- Make sure that the phone cord from the wall telephone jack is plugged into the line  port.
- Check the phone line by using the **Run Fax Test** option from the **Service** menu on the control panel.
 - a. Open the **Setup** menu.
 - b. Open the **Service** menu.
 - c. Open the **Fax Service** menu.
 - d. Select the **Run Fax Test** item.
- If the error persists, replace the fax PCA.

Document feeder paper jam

- Verify that the paper meets product size requirements. The product does not support pages longer than 381 mm (15 in) for faxing.
- Copy or print the original to letter, A4, or legal size paper, and then resend the fax.

The Fax memory full message appears

- Turn the product off then on.
- Print stored faxes that have not been printed.
 - a. Open the **Fax** menu.
 - b. Open the **Receive Options** menu.
 - c. Select the **Print Faxes** item.
 - d. Provide the PIN, and then select the **Private Receive** item.
- Delete stored faxes from memory.
 - a. Open the **Setup** menu.
 - b. Open the **Service** menu.

- c. Open the **Fax Service** menu.
- d. Select the **Clear Saved Faxes** item.
- Divide the large fax job into smaller sections, and then fax them individually.

Scanner error

- Verify that the paper meets product size requirements. The product does not support pages longer than 381 mm (15 in) for faxing.
- Copy or print the original onto letter, A4, or legal size paper and then resend the fax.

The control panel displays a Ready message with no attempt to send the fax

- Check the fax activity log for errors.
 - a. Open the **Fax** menu.
 - b. Open the **Fax Reports** menu.
 - c. Open the **Fax Activity Log** menu.
 - d. Select the **Print Log Now** option.
- If a phone is connected to the product, make sure that the phone is hung up.
- Disconnect all other lines between the fax and the product.
- Connect the product directly into the wall telephone jack and resend the fax.

The control panel displays the message "Storing page 1" and does not progress beyond that message

- Delete stored faxes from memory.
 - a. Open the **Setup** menu.
 - b. Open the **Service** menu.
 - c. Open the **Fax Service** menu.
 - d. Select the **Clear Saved Faxes** item.

Faxes can be received, but not sent

1. Check for a dial tone on the phone line by using the **Start Fax**  button.
2. Turn the product off then on.
3. Use the control panel to configure the fax time, date, and fax header information.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Basic Setup** menu.

- d. Open the **Fax Header** menu.
 - e. Enter the correct settings.
- 4. Verify that any extension phones on the line are hung up.
- 5. If using a DSL service, make sure that the phone line connection to the product includes a filter.

Unable to use fax functions from the control panel

- The product might be password protected. Use the HP Embedded Web Server, HP Toolbox software, or the control panel to set a password.
- If you do not know the password for the product, contact your system administrator.
- Verify with the system administrator that the fax functionality has not been disabled.

Unable to use speed dials

- Make sure that the fax number is valid.
- If an outside line requires a prefix, turn on the **Dial Prefix** option or include the prefix in the speed dial number.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Basic Setup** menu.
 - d. Open the **Dial Prefix** menu.
 - e. Select the **On** setting.

Unable to use group dials

- Make sure that the fax number is valid.
- If an outside line requires a prefix, turn on the **Dial Prefix** option or include the prefix in the speed dial number.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Basic Setup** menu.
 - d. Open the **Dial Prefix** menu.
 - e. Select the **On** setting.
- Set up all entries in the group with speed dial entries.
 - a. Open an unused speed dial entry.
 - b. Enter the fax number for the speed dial.
 - c. Use the **OK** button to save the speed dial.

Receive a recorded error message from the phone company when trying to send a fax

- Make sure you dial the fax number correctly, and make sure that the phone service is not blocked. For example, some phone services might prevent long distance calling.
- If an outside line requires a prefix, turn on the **Dial Prefix** option or include the prefix in the speed dial number.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Basic Setup** menu.
 - d. Open the **Dial Prefix** menu.
 - e. Select the **On** setting.



NOTE: To send a fax without a prefix, when the **Dial Prefix** option is turned on, send the fax manually.

- Send a fax to an international number
 - a. If a prefix is required, manually dial the telephone number with the prefix.
 - b. Enter the country/region code before dialing the phone number.
 - c. Wait for pauses as you hear the tones on the phone.
 - d. Send the fax manually from the control panel.

Unable to send a fax when a phone is connected to the product

- Make sure that the telephone is hung up.
- Make sure that the telephone is not being used for a voice call when faxing.
- Unplug the phone from the line, and then try sending the fax.

Solve problems receiving faxes

- [The fax does not respond](#)
- [An error message displays on the control panel](#)
- [A fax is received but does not print](#)
- [Sender receives a busy signal](#)
- [No dial tone](#)
- [Cannot send or receive a fax on a PBX line](#)

The fax does not respond

The fax has a dedicated phone line

- Set the **Answer Mode** option to the **Automatic** setting from the control panel.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Basic Setup** menu.
 - d. Open the **Answer Mode** menu.
 - e. Select the **Automatic** setting.

An answering machine is connected to the product

- Set the **Answer Mode** option to the **TAM** setting and plug the answering machine into the “telephone” port.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Basic Setup** menu.
 - d. Open the **Answer Mode** menu.
 - e. Select the **TAM** setting.

If the **TAM** setting is unavailable, set the **Answer Mode** option to the **Automatic** setting.
- Set the **Rings to Answer** setting to at least one ring more than the number of rings for which the answering machine is set.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Basic Setup** menu.
 - d. Open the **Rings to Answer** menu.
 - e. Select the correct setting.

- Plug the answering machine into the “telephone” port.
- If the product has a telephone handset connected, set the **Answer Mode** option to the **Fax/Tel** setting to route calls to the correct device. When detecting a voice call, the product generates a ring tone that alerts you to pick up the telephone handset.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Basic Setup** menu.
 - d. Open the **Answer Mode** menu.
 - e. Select the **Fax/Tel** setting.

A telephone handset is connected to the product

Set the **Answer Mode** option to the **Automatic** setting.

1. Open the **Setup** menu.
2. Open the **Fax Setup** menu.
3. Open the **Basic Setup** menu.
4. Open the **Answer Mode** menu.
5. Select the **Automatic** setting.

The Answer Mode setting is set to the Manual setting

- Press the **Start Fax**  button on the control panel.

Voice mail is available on the fax line

- Add a distinctive ring service to your telephone line and change the **Distinctive Ring** setting on the product to match the ring pattern supplied by the telephone company. Contact your telephone company for information.
 - a. Verify that the answer mode is set to the **Automatic** setting.
 - b. Open the **Setup** menu.
 - c. Open the **Fax Setup** menu.
 - d. Open the **Basic Setup** menu.
 - e. Open the **Distinctive Ring** menu.
 - f. Select the correct setting.
- Buy a dedicated line for faxing.
- Set the **Answer Mode** option to the **Manual** setting.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Basic Setup** menu.

- d. Open the **Answer Mode** menu.
- e. Select the **Manual** setting.

 **NOTE:** You must be present to receive faxes.

The product is connected to a DSL phone service

- Check the installation and features. The fax unit in the product requires a filter on the phone line connection to the DSL modem. Contact your DSL service provider for a filter or buy a filter.
- Verify that the filter is plugged in.
- Replace the existing filter to make sure that it is not defective.

The product uses a fax over IP or VoIP phone service

- Set the **Fax Speed** option to the **Slow(V.29)** setting, or disable the **Fast(V.34)** setting.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Advanced Setup** menu.
 - d. Open the **Fax Speed** menu.
 - e. Select the correct setting.
- Contact your service provider to make sure that fax is supported and for a recommended fax speed settings. Some companies might require an adapter.

An error message displays on the control panel

The No fax detected message appears

 **NOTE:** This error does not always refer to a missed fax. If a voice call is made to a fax number by mistake and the caller hangs up, the **No fax detected** message appears on the control panel.

- Ask the sender to resend the fax.
- Make sure that the telephone cord from the product is plugged into the wall telephone jack.
- Try a different phone cord.
- Plug the product phone cord into a jack for another phone line.
- Make sure the telephone line and phone wall jack are active by plugging in a telephone and checking for a dial tone.
- Make sure that the telephone cord is plugged into the “line” port on the product.
- Check the phone line by running a fax test from the control panel.
- If the error persists, replace the fax PCA.

The Comm. Error message appears

- Ask the sender to send the fax again or send at a later time when line conditions have improved.
- Unplug the product telephone cord from the wall, plug in a telephone, and try making a call. Plug the product phone cord into a jack for another phone line.
- Try a different phone cord.
- Set the **Fax Speed** option to the **Slow(V.29)** setting or disable the **Fast(V.34)** setting.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Advanced Setup** menu.
 - d. Open the **Fax Speed** menu.
 - e. Select the correct setting.
- Turn off the **Error Correction** feature to prevent automatic error correction.
 - a. Open the **Setup** menu.
 - b. Open the **Service** menu.
 - c. Open the **Fax Service** menu.
 - d. Open the **Error Correction** menu.
 - e. Select the **Off** setting.



NOTE: Turning off the **Error Correction** feature can reduce image quality.

- Print the **Fax Activity Log** report from the control panel to determine if the error occurs with a specific fax number.
 - a. Open the **Fax** menu.
 - b. Open the **Fax Reports** menu.
 - c. Open the **Fax Activity Log** menu.
 - d. Select the **Print Log Now** option.
- If the error persists, replace the fax PCA.

The Fax memory full message appears

- Turn the product off then on.
- Print all of the faxes, and then have the sender resend the fax.
- Ask the sender to divide a large fax job into smaller sections, and then fax them individually.

- Make sure that the resolution of the sending fax machine is not set to the **Photo** setting or the **Superfine** setting.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Advanced Setup** menu.
 - d. Open the **Fax Resolution** menu.
 - e. Select the correct setting.
- Cancel all fax jobs or clear the faxes from memory.

The Fax is busy message appears

- The product cannot receive a fax while attempting to send one. Cancel the fax send and try sending at a later time.
- Allow the product to try sending the fax again.

A fax is received but does not print

The Private Receive feature is on

- When the **Private Receive** feature is activated, received faxes are stored in memory. A personal identification number (PIN) or password is required to print the stored faxes.
- Enter the PIN or password to print the fax. If you do not know the PIN or password, contact the product administrator.



NOTE: Memory errors might occur if the faxes are not printed. The product will not answer if the memory is full.

The Receive to PC feature is enabled

- Make sure that the **Receive to PC** option is set up. You must use HP Toolbox software to configure the feature.
 - a. At the computer, open HP ToolboxFX.
 - b. Select the product.
 - c. Click **Fax**.
 - d. Click **Fax Tasks**.
 - e. Under **Fax Receive Mode**, select **Receive faxes to this computer**.
- Check communication with the product.

Sender receives a busy signal

A handset is connected to the product

- Make sure the phone is hung up.
- Change the **Answer Mode** option to match the product setup.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Basic Setup** menu.
 - d. Open the **Answer Mode** menu.
 - e. Select the setting that matches the product setup.

Set the **Answer Mode** option to the **Fax/Tel** setting to automatically receive faxes. The **Fax/Tel** setting automatically detects whether the incoming transmission is a fax or a voice call and routes the call to the appropriate device.

A phone line splitter is being used

- If you are using a phone line splitter, remove the splitter and set up the phone as a downstream phone.
- Make sure the phone is hung up.
- Make sure the phone is not being used for a voice call when faxing.

No dial tone

- If using a phone line splitter, remove the phone line splitter and set up the phone as a downstream phone.

Cannot send or receive a fax on a PBX line

- If you are using a PBX phone line, contact your PBX administrator to configure an analog fax line for your product.

Solve general fax problems

- [Faxes are sending slowly](#)
- [Fax quality is poor](#)
- [Fax cuts off or prints on two pages](#)

Faxes are sending slowly

The product is experiencing poor phone line quality.

- Retry sending the fax when the line conditions have improved.
- Check with the phone service provider that the line supports fax.
- Turn off the **Error Correction** setting.
 - a. Open the **Setup** menu.
 - b. Open the **Service** menu.
 - c. Open the **Fax Service** menu.
 - d. Open the **Error Correction** menu.
 - e. Select the **Off** setting.



NOTE: This can reduce image quality.

- Use white paper for the original. Do not use colors such as gray, yellow, or pink.
- Increase the **Fax Speed** setting.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Advanced Setup** menu.
 - d. Open the **Fax Speed** menu.
 - e. Select the correct setting.
- Divide large fax jobs into smaller sections, and then fax them individually.
- Change the fax settings on the control panel to a lower resolution.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Advanced Setup** menu.
 - d. Open the **Fax Resolution** menu.
 - e. Select the correct setting.

Fax quality is poor

Fax is blurry or light.

- Increase fax resolution when sending faxes. Resolution does not affect received faxes.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Advanced Setup** menu.
 - d. Open the **Fax Resolution** menu.
 - e. Select the correct setting.



NOTE: Increasing resolution slows transmission speed.

- Turn on the **Error Correction** setting from the control panel.
 - a. Open the **Setup** menu.
 - b. Open the **Service** menu.
 - c. Open the **Fax Service** menu.
 - d. Open the **Error Correction** menu.
 - e. Select the **On** setting.
- Check the print cartridges and replace if necessary.
- Ask the sender to darken the contrast setting on the sending fax machine, and then resend the fax.

Fax cuts off or prints on two pages

- Set the **Def. Paper Size** setting. Faxes print on a single size of paper based on the **Def. Paper Size** settings.
 - a. Open the **Setup** menu.
 - b. Open the **System Setup** menu.
 - c. Open the **Paper Setup** menu.
 - d. Open the **Def. Paper Size** menu.
 - e. Select the correct setting.
- Set the paper type and size for the tray used for faxes.
- Turn on the **Fit to Page** setting to print longer length faxes on letter or A4 size paper.
 - a. Open the **Setup** menu.
 - b. Open the **Fax Setup** menu.
 - c. Open the **Advanced Setup** menu.

- d. Open the **Fit to Page** menu.
- e. Select the **On** setting.



NOTE: If the **Fit to Page** setting is off and the **Def. Paper Size** setting is set to letter, a legal size original prints on two pages.

Product updates

Software and firmware updates and installation instructions for this product are available at www.hp.com/support/ljm1530series. Click **Downloads and drivers**, click the operating system, and then select the download for the product.

3 Parts and diagrams

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

Order parts by authorized service providers

Order replacement parts

Table 3-1 Order parts, accessories, and supplies

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

Related documentation and software

Table 3-2 Related documentation and software

Item	Description	Part number
HP LaserJet Pro M1530 MFP Series Printer User Guide	Product user guide	CE538-90909
HP LaserJet Pro M1530 MFP Series Printer Service Manual	English service manual (this manual)	CE538-90986
HP LaserJet Pro M1530 MFP Series Printer Service Manual Addendum	English service manual addendum, which includes procedures for removing and replacing scanner sub-assembly components	CE538-90937

Supplies part numbers

Table 3-3 Supplies part numbers

Item	Description	Part number
HP LaserJet print cartridge	Print cartridge	CE278A (new)
		CE278-67901 (service)

Whole unit replacement part numbers

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

Table 3-4 Whole unit replacement part numbers

Item	Description	Part number
HP LaserJet M1536dnf	110 V	CE538-67001 (new)
		CE538-69002 (exchange)
	220 V	CE538-67002 (new)
		CE538-69002 (exchange)

Customer self repair parts

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

Item	Description	Part number
Output bin	Output bin	RM1-7498-000CN
	Installation instructions	
Dust cover	Dust cover for the input tray	RC2-9578-000CN
	Installation instructions	
Paper pickup tray assembly	Input tray	RM1-7534-000CN
	Installation instructions	
Pickup roller	Pickup roller	RL1-1497-000CN
	Installation instructions	
Separation pad assembly	Separation pad	RM1-4227-000CN
	Installation instructions	
Document feeder input tray	Document feeder input tray	CE538-60127
	Installation instructions	

Service parts



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

Table 3-6 Service parts

Item	Description	Part number
HP jewel	HP logo	7121-8266
Regulatory label	Blank label	5969-9497

How to use the parts lists and diagrams



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



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

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

Assembly locations

Locations of major components

Figure 3-1 Main assemblies

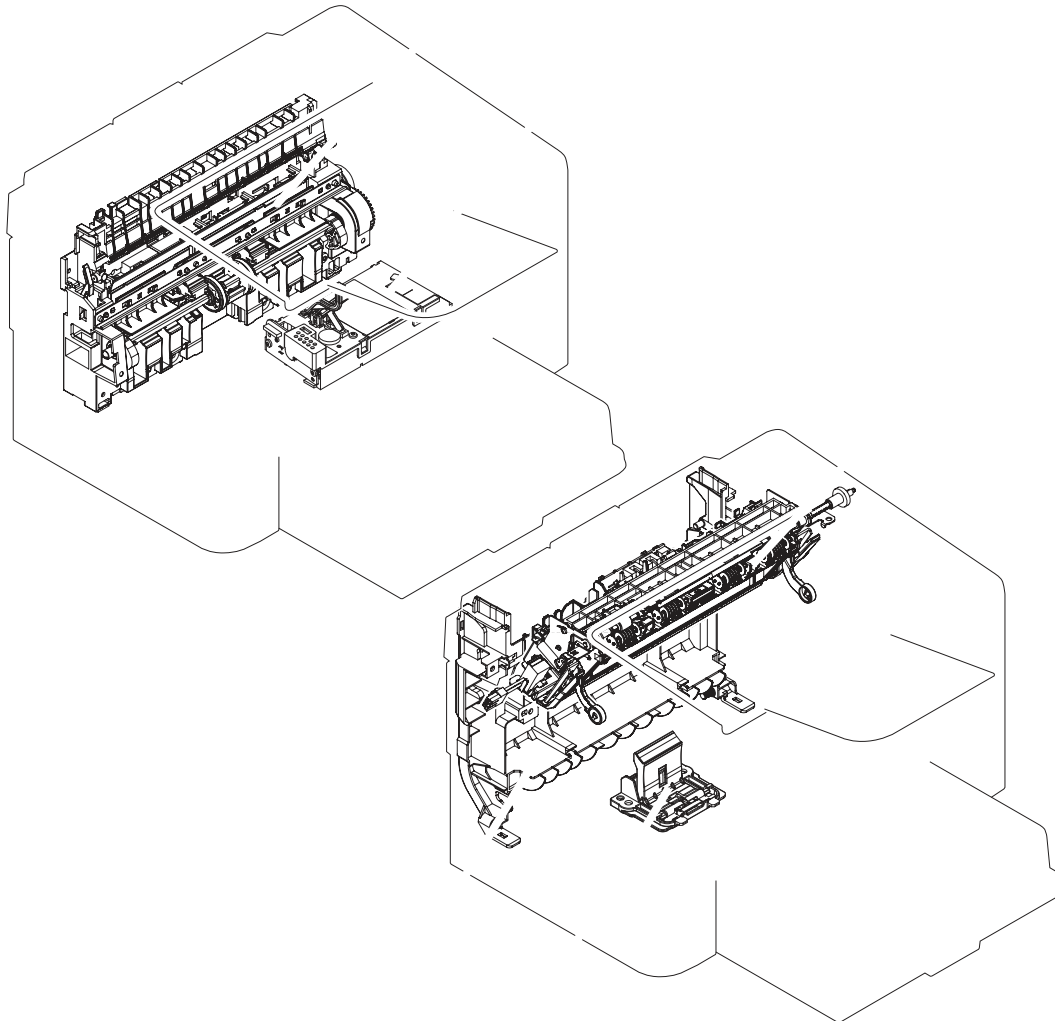


Table 3-7 Locations of major components

1	Pickup unit
2	Laser scanner unit
3	Fuser
4	Separation pad
5	Duplex frame unit

Figure 3-2 Rollers, solenoids, and fan

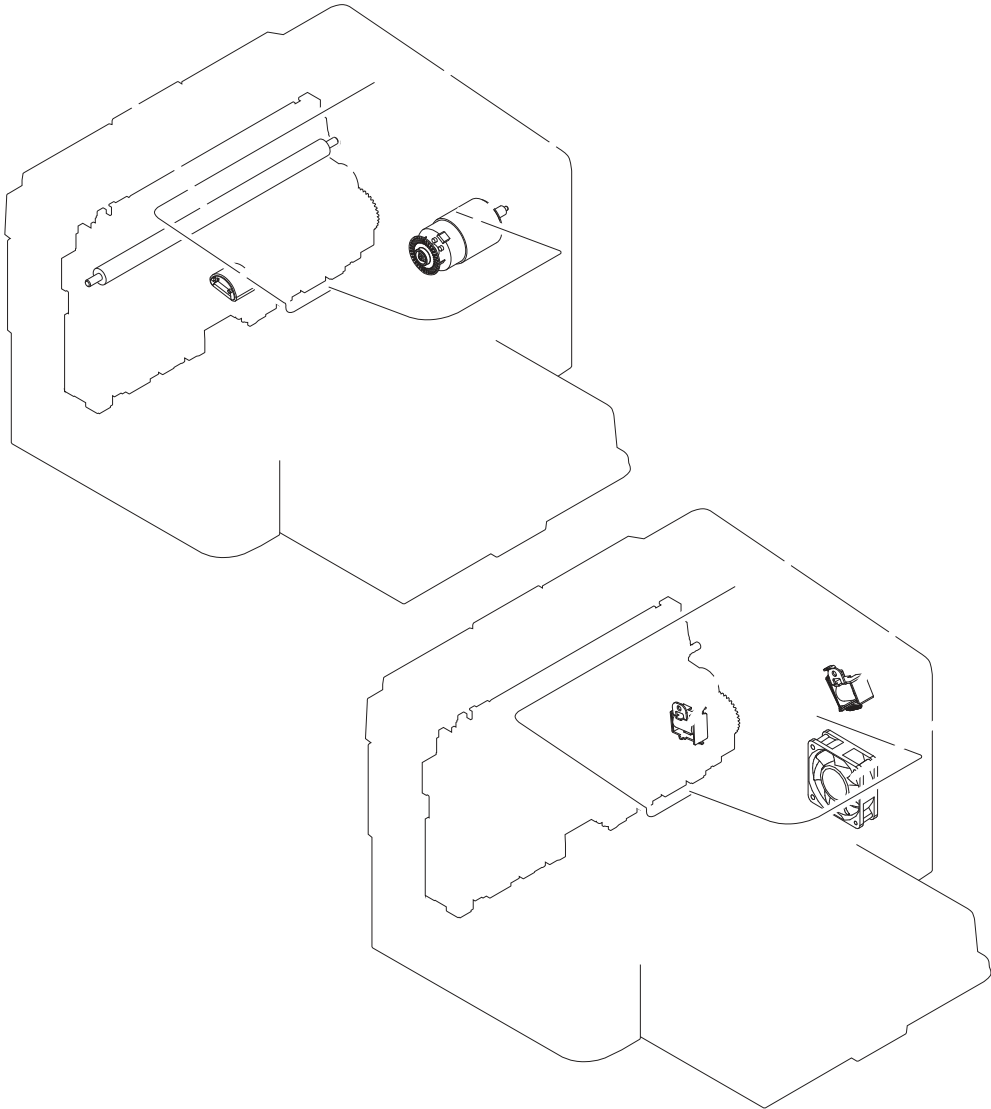
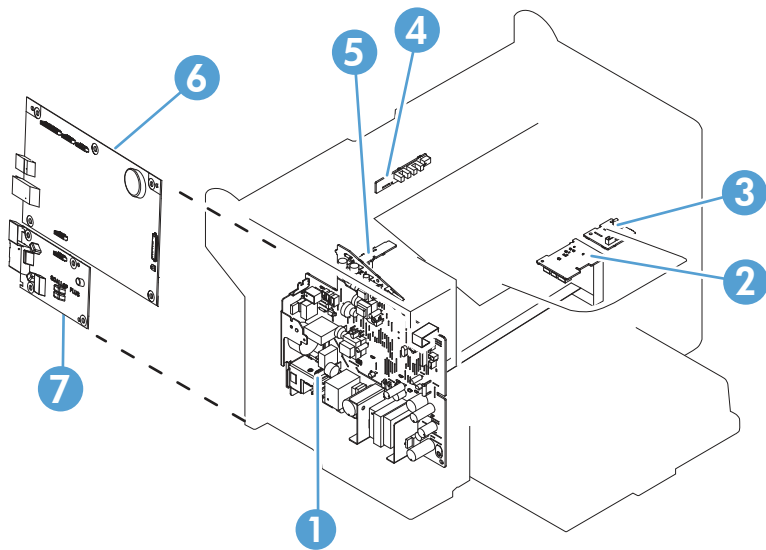


Table 3-8 Rollers, solenoids, and fan

1	Transfer roller
2	Pickup roller
3	Main motor
4	Pickup solenoid
5	Duplex reverse solenoid
6	Main fan

Figure 3-3 PCA locations



1	Engine controller PCA
2	Motor PCA
3	Duplexing PCA
4	Delivery sensor PCA
5	Paper pickup sensor PCA
6	Formatter PCA
7	Fax card PCA

Figure 3-4 Cross-sectional view

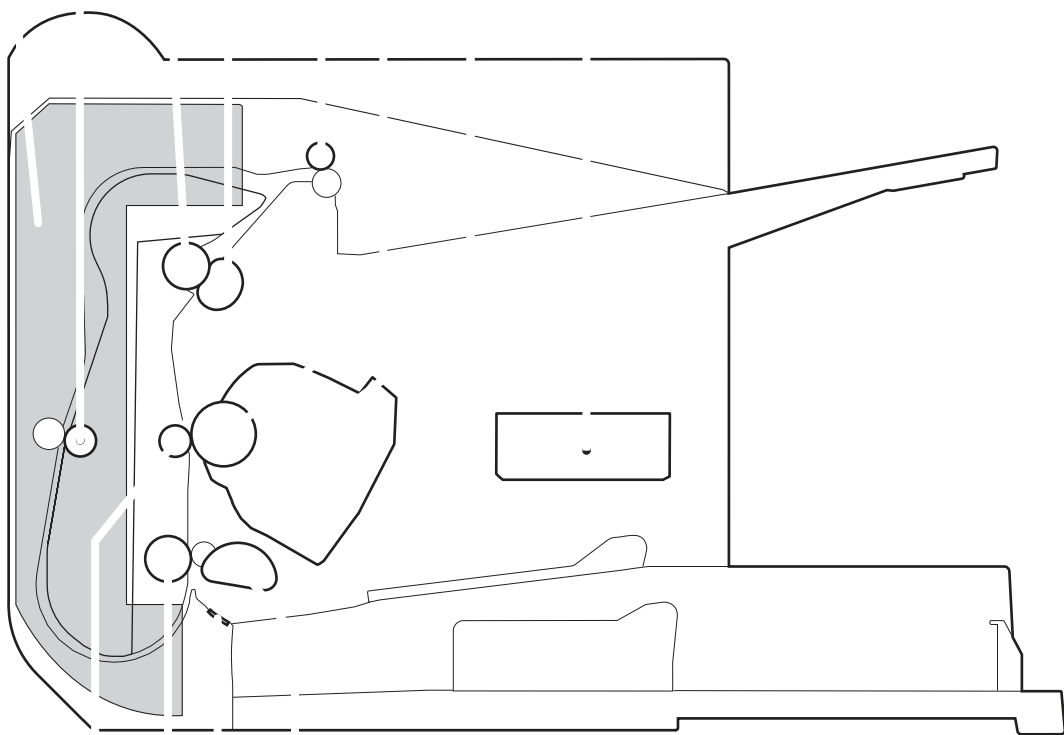


Table 3-9 Cross-sectional view

Item	Description	Item	Description
1	Duplex feed assembly	7	Print cartridge
2	Duplex feed roller	8	Laser scanner
3	Pressure roller	9	Pickup roller
4	Fuser film assembly	10	Separation pad
5	Delivery roller	11	Feed roller
6	Photosensitive drum	12	Transfer roller

Covers

Figure 3-5 Print engine covers

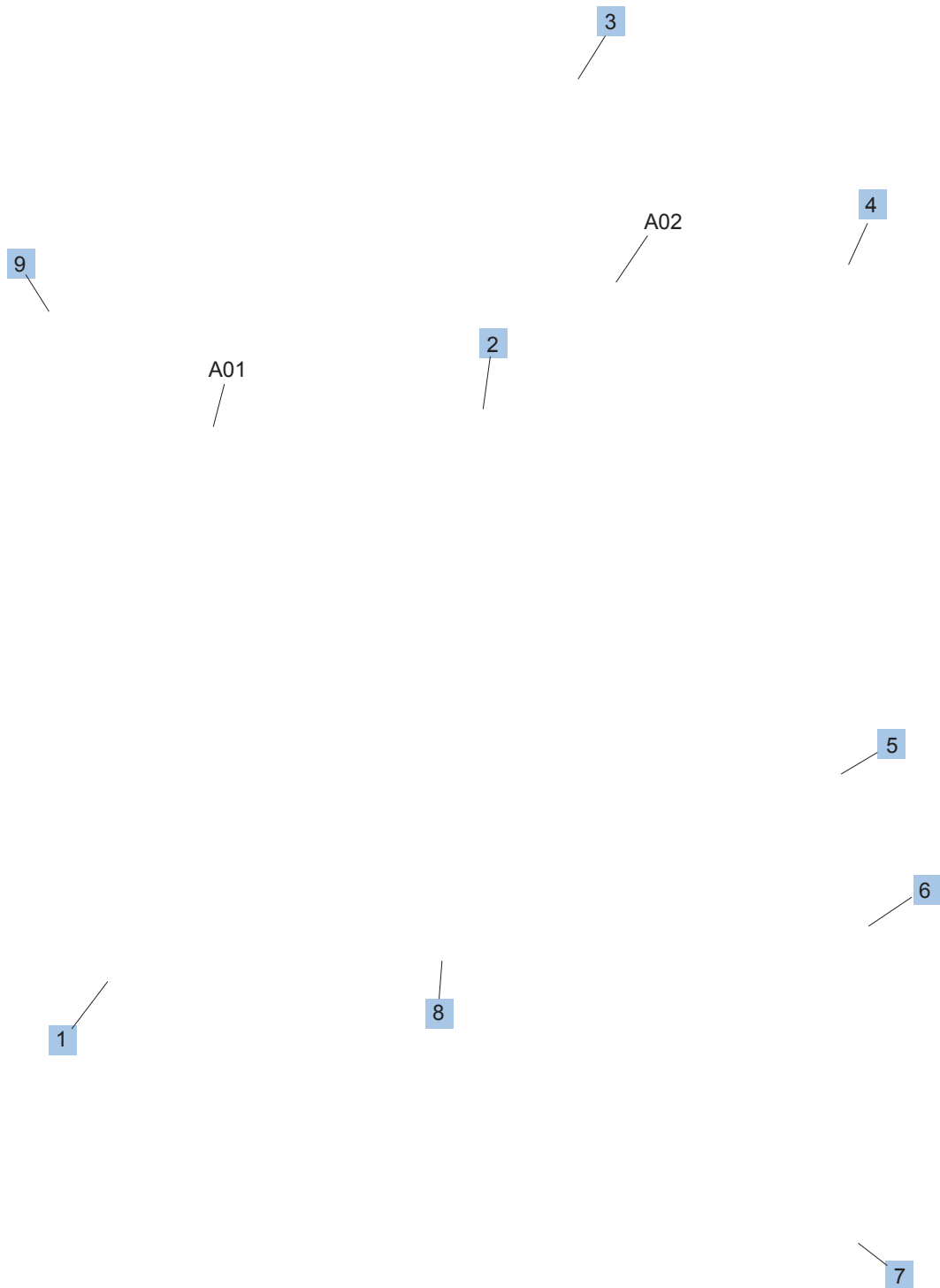


Table 3-10 Print engine covers

Ref	Description	Part number	Qty
1	Cover, left	RC2-9523-000CN	1
2	Cover, top	RC2-9520-000CN	1
3	Cartridge door assembly	RM1-7574-000CN	1
4	Cover, right	RC2-9522-000CN	1
5	Paper delivery tray (output bin) assembly	RM1-7498-000CN	1
6	Cover, dust	RC2-9578-000CN	1
7	Paper pickup tray assembly (input tray)	RM1-7534-000CN	1
8	Cover, front	RL1-2899-000CN	1
9	Duplexing door assembly (rear cover)	RM1-7526-000CN	1

Internal assemblies

Internal assemblies (1 of 4)

Figure 3-6 Internal assemblies (1 of 4)

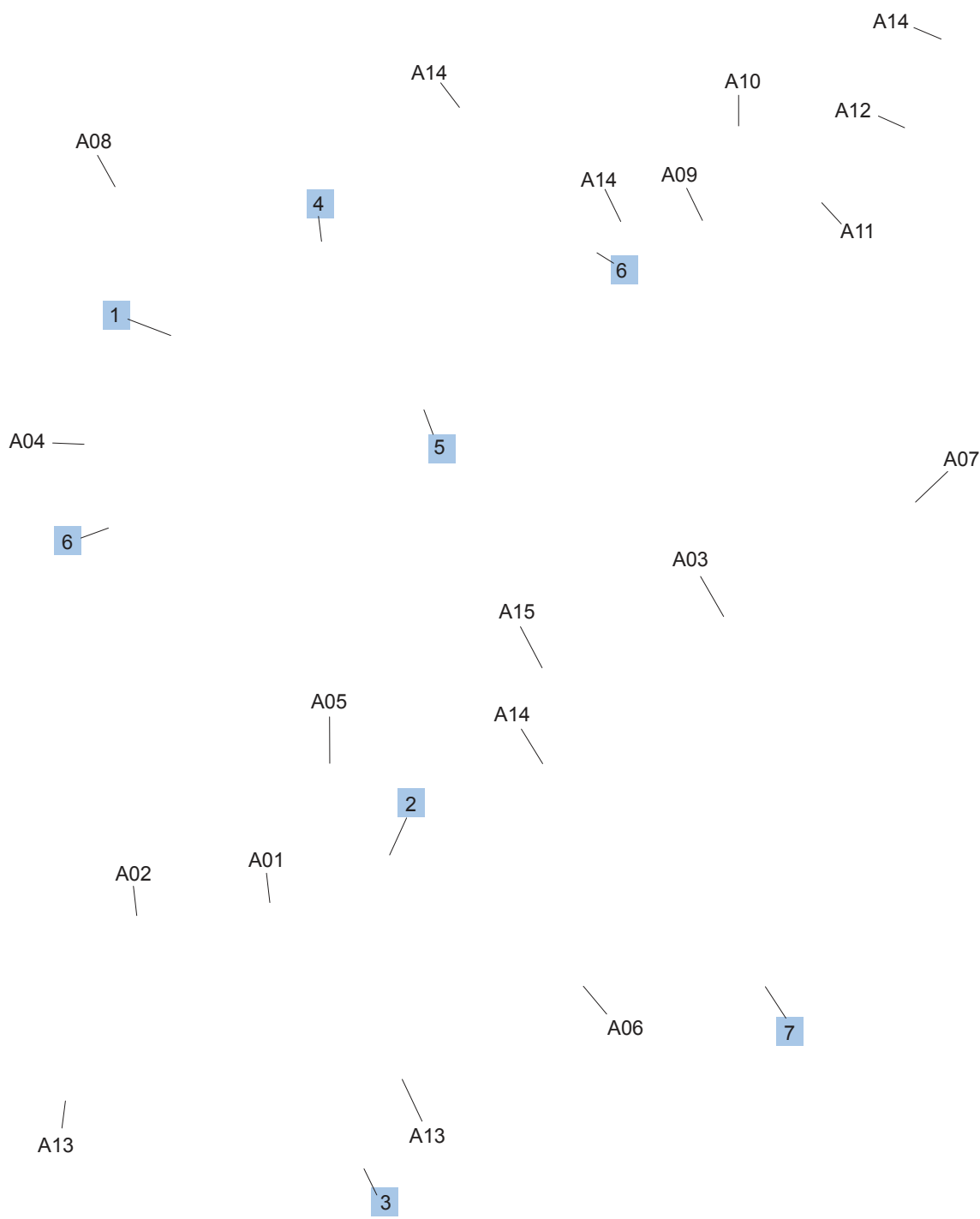


Table 3-11 Internal assemblies (1 of 4)

Ref	Description	Part number	Qty
1	Fuser, 110 volt	RM1-7576-000CN	1
1	Fuser, 220 volt	RM1-7577-000CN	1
2	Engine controller PCA, 110 volt	RM1-7629-000CN	1
2	Engine controller PCA, 220 volt	RM1-7630-000CN	1
3	Power switch assembly	RM1-7573-000CN	1
4	Delivery sensor PCA	RM1-7440-000CN	1
5	Fuser film assembly, 110 volt	RM1-7541-000CN	1
5	Fuser film assembly, 220 volt	RM1-7542-000CN	1
6	Link, pressure release	RC2-9531-000CN	2
7	Switch lever assembly	RM1-7531-000CN	1

Internal assemblies (2 of 4)

Figure 3-7 Internal assemblies (2 of 4)

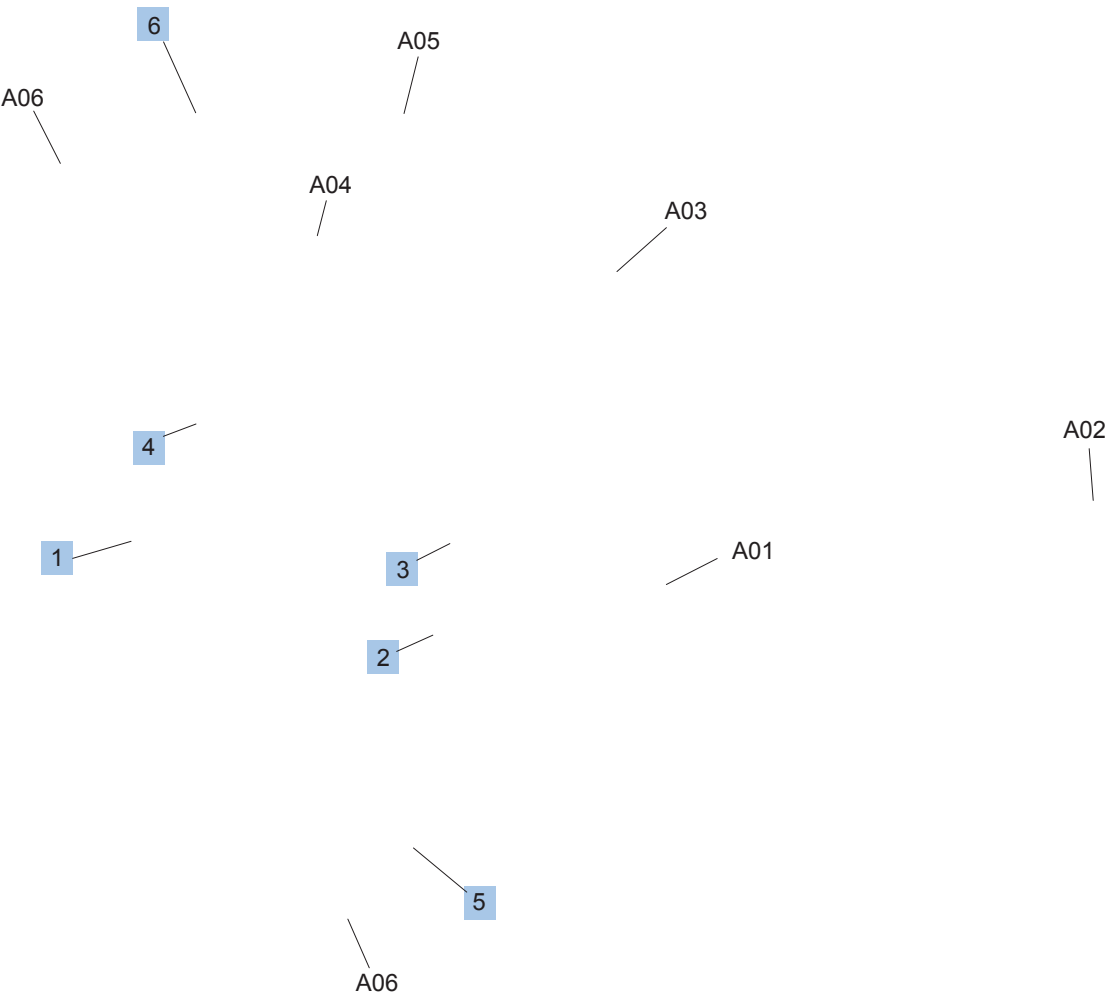


Table 3-12 Internal assemblies (2 of 4)

Ref	Description	Part number	Qty
1	Paper pickup assembly	RM1-7575-000CN	1
2	Transfer roller	RM1-4023-000CN	1
3	Roller, pickup	RL1-1497-000CN	1
4	Paper pickup sensor PCA	RM1-7632-000CN	1
5	Separation pad assembly	RM1-4227-000CN	1
6	Duplex frame assembly	RM1-7525-000CN	1

Internal assemblies (3 of 4)

Figure 3-8 Internal assemblies (3 of 4)

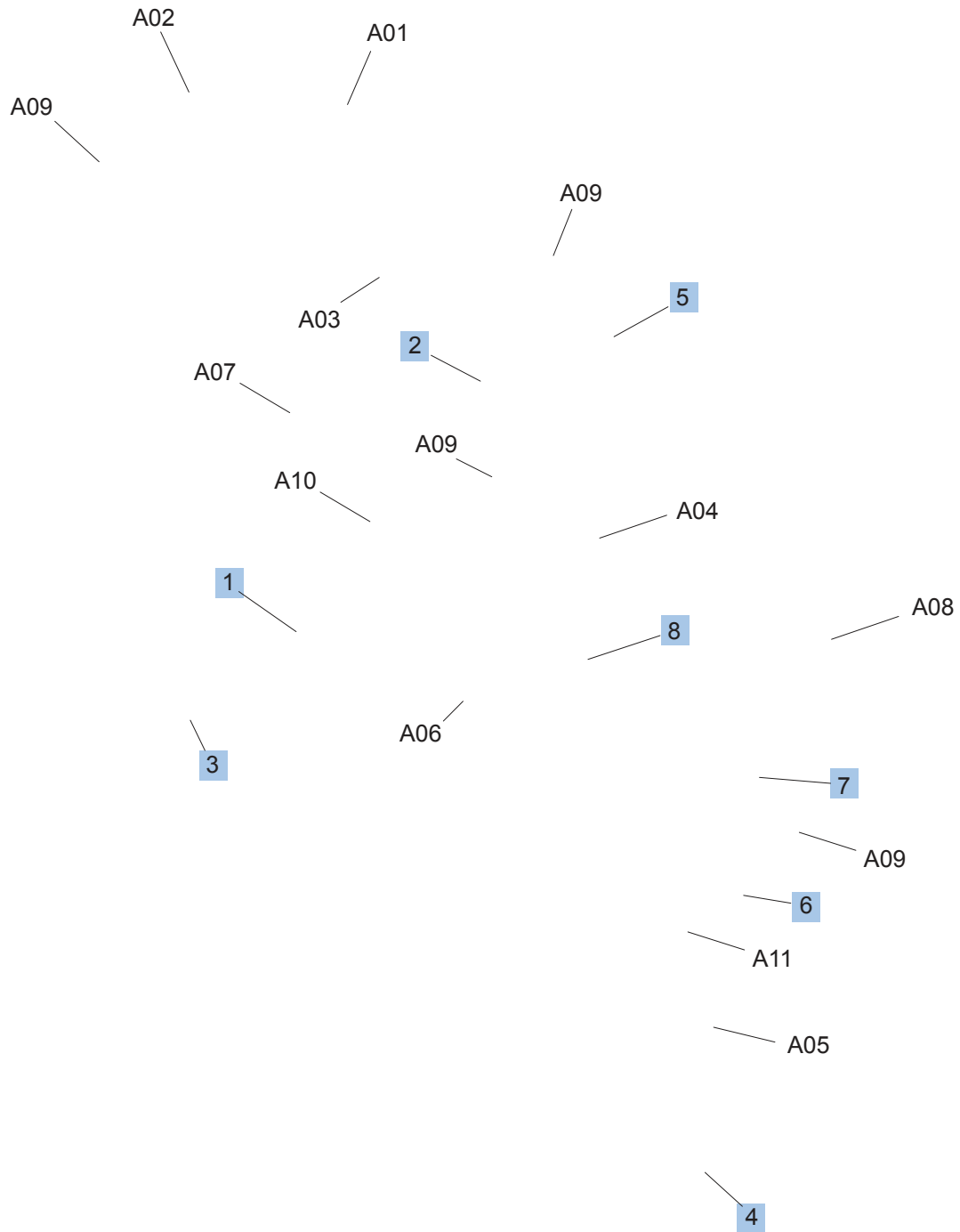


Table 3-13 Internal assemblies (3 of 4)

Ref	Description	Part number	Qty
1	Laser scanner assembly	RM1-7560-000CN	1
2	Motor PCA	RM1-7633-000CN	1
3	Cable, flat	RM1-7739-000CN	1
4	Motor, DC24V	RM1-7544-000CN	1
5	Duplex PCA	RM1-7620-000CN	1
6	Solenoid, duplex	RK2-0420-000CN	1
7	Fan	RK2-3438-000CN	1
8	Link, cartridge door	RC2-9514-000CN	1

Internal assemblies (4 of 4)

Figure 3-9 Internal assemblies (4 of 4)

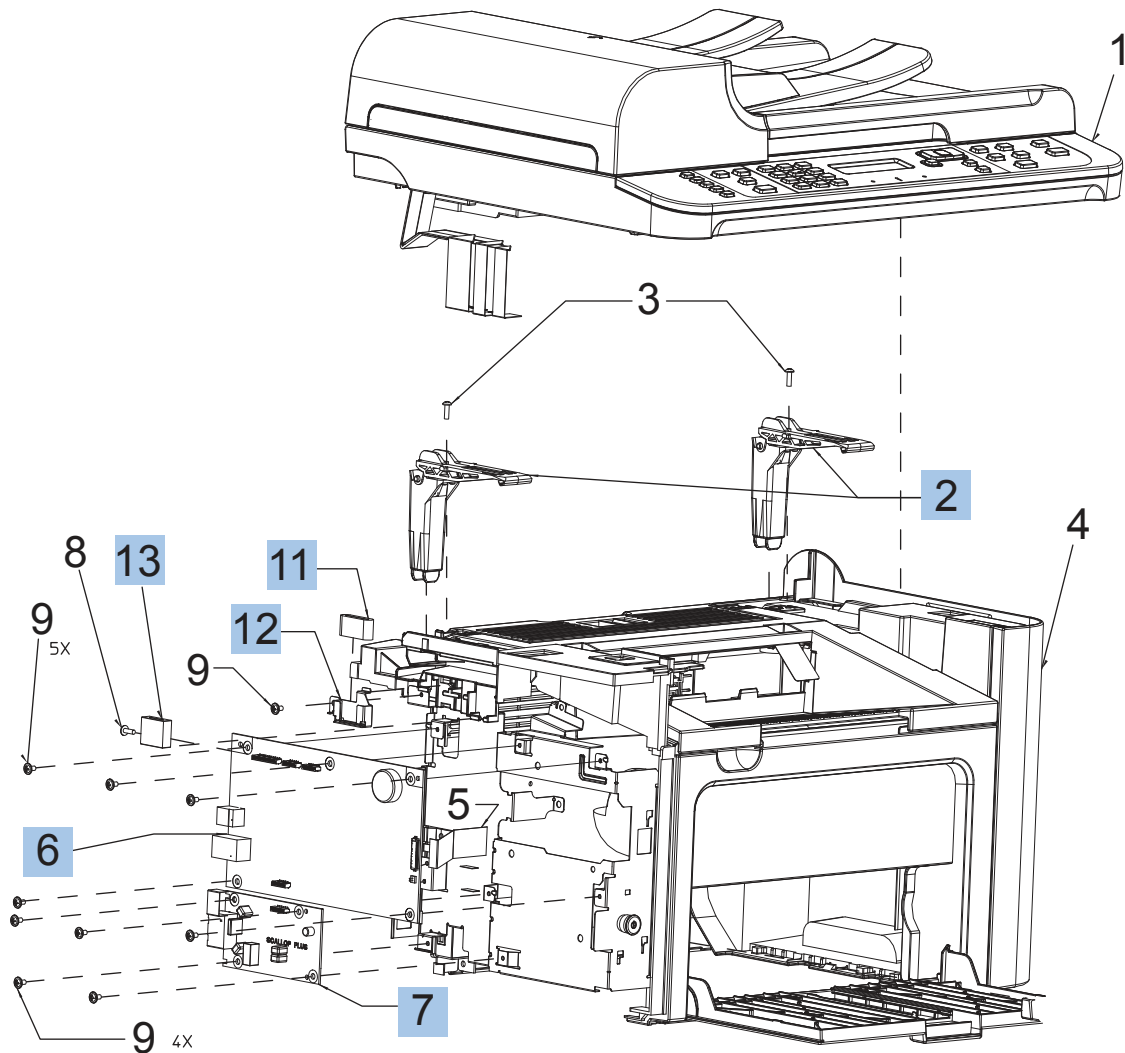


Table 3-14 Internal assemblies (4 of 4)

Ref	Description	Part number	Qty
2	Hinge, scanner sub-assembly	CE538-60135	2
5	Cable, formatter FFC	CE538-60134	1
6	Formatter	CE544-60001	1
7	Fax Board-US	CE682-60001	1
7	Fax Board-EU	CE683-60001	1
11	Core-ferrite flat cable ROHS	9170-2385	1
12	Clip, ferrite	CB534-00010	1
13	Core-ferrite rectangle EMI ROHS	9170-1821	1

Scanner and document feeder (ADF) main assemblies

Figure 3-10 Scanner and document feeder main assemblies

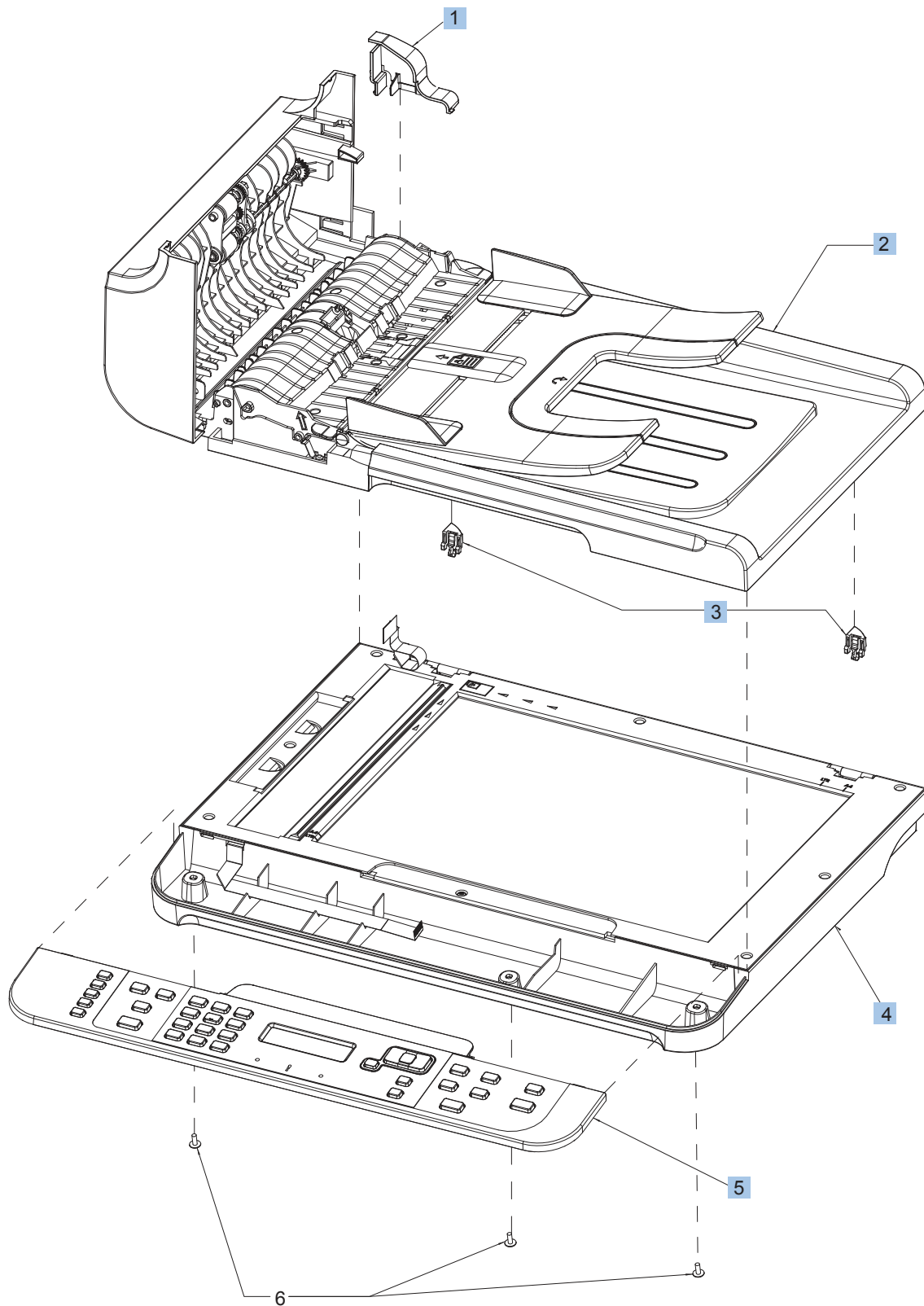


Table 3-15 Scanner and document feeder main assemblies

Ref	Description	Part number	Qty
1	Document feeder (ADF) motor cover	CE538-40015	1
2	Document feeder (ADF) assembly	CE538-60121	1
3	Solar lock, document feeder	CE538-40031	2
4	Scanner assembly	CE538-60118	1
5	Control panel assembly, Western	CE539-60101	1
5	Control panel assembly, Asian	CE539-60102	1
N/A	Hinge, floating (not shown)	CE538-40006	2

Document feeder internal components

Figure 3-11 Document feeder assembly parts

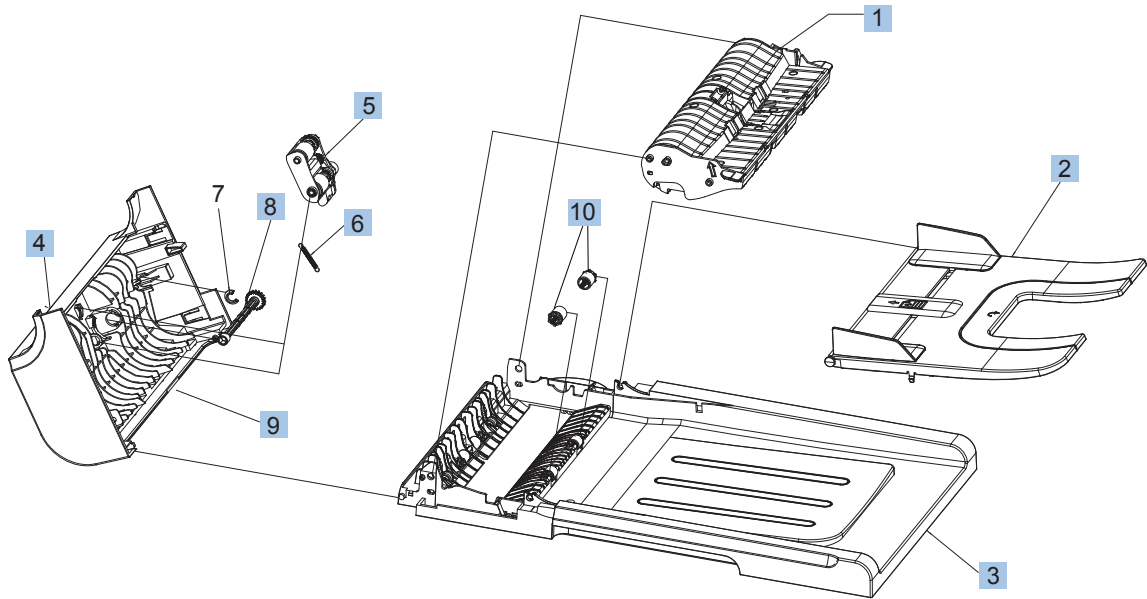


Table 3-16 Document feeder assembly parts

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

Alphabetical parts list

Table 3-17 Alphabetical parts list

Description	Part number	Table and page
Cable, flat	RM1-7739-000CN	Internal assemblies (3 of 4) on page 207
Cable, formatter FFC	CE538-60134	Internal assemblies (4 of 4) on page 209
Cartridge door assembly	RM1-7574-000CN	Print engine covers on page 201
Clip, ferrite	CB534-00010	Internal assemblies (4 of 4) on page 209
Control panel assembly, Asian	CE539-60102	Scanner and document feeder main assemblies on page 211
Control panel assembly, Western	CE539-60101	Scanner and document feeder main assemblies on page 211
Core-ferrite flat cable ROHS	9170-2385	Internal assemblies (4 of 4) on page 209
Core-ferrite rectangle EMI ROHS	9170-1821	Internal assemblies (4 of 4) on page 209
Cover, dust	RC2-9578-000CN	Print engine covers on page 201
Cover, front	RL1-2899-000CN	Print engine covers on page 201
Cover, left	RC2-9523-000CN	Print engine covers on page 201
Cover, right	RC2-9522-000CN	Print engine covers on page 201
Cover, top	RC2-9520-000CN	Print engine covers on page 201
Delivery sensor PCA	RM1-7440-000CN	Internal assemblies (1 of 4) on page 203
Document feeder (ADF) assembly	CE538-60121	Scanner and document feeder main assemblies on page 211
Document feeder (ADF) base	CE538-60126	Document feeder assembly parts on page 213
Document feeder (ADF) core assembly	CE538-60122	Document feeder assembly parts on page 213
Document feeder (ADF) cover, inner	CE538-40008	Document feeder assembly parts on page 213
Document feeder (ADF) cover, outer	CE538-40009	Document feeder assembly parts on page 213
Document feeder (ADF) input tray	CE538-60127	Document feeder assembly parts on page 213
Document feeder (ADF) motor cover	CE538-40015	Scanner and document feeder main assemblies on page 211

Table 3-17 Alphabetical parts list (continued)

Description	Part number	Table and page
Document feeder (ADF) pick arm assembly	CE538-60137	Document feeder assembly parts on page 213
Duplex frame assembly	RM1-7525-000CN	Internal assemblies (2 of 4) on page 205
Duplex PCA	RM1-7620-000CN	Internal assemblies (3 of 4) on page 207
Duplexing door assembly (rear cover)	RM1-7526-000CN	Print engine covers on page 201
Engine controller PCA, 110 volt	RM1-7629-000CN	Internal assemblies (1 of 4) on page 203
Engine controller PCA, 220 volt	RM1-7630-000CN	Internal assemblies (1 of 4) on page 203
Fan	RK2-3438-000CN	Internal assemblies (3 of 4) on page 207
Fax Board-EU	CE683-60001	Internal assemblies (4 of 4) on page 209
Fax Board-US	CE682-60001	Internal assemblies (4 of 4) on page 209
Formatter	CE544-60001	Internal assemblies (4 of 4) on page 209
Fuser film assembly, 110 volt	RM1-7541-000CN	Internal assemblies (1 of 4) on page 203
Fuser film assembly, 220 volt	RM1-7542-000CN	Internal assemblies (1 of 4) on page 203
Fuser, 110 volt	RM1-7576-000CN	Internal assemblies (1 of 4) on page 203
Fuser, 220 volt	RM1-7577-000CN	Internal assemblies (1 of 4) on page 203
Hinge, floating (not shown)	CE538-40006	Scanner and document feeder main assemblies on page 211
Hinge, scanner sub-assembly	CE538-60135	Internal assemblies (4 of 4) on page 209
Laser scanner assembly	RM1-7560-000CN	Internal assemblies (3 of 4) on page 207
Link, cartridge door	RC2-9514-000CN	Internal assemblies (3 of 4) on page 207
Link, pressure release	RC2-9531-000CN	Internal assemblies (1 of 4) on page 203
Motor PCA	RM1-7633-000CN	Internal assemblies (3 of 4) on page 207
Motor, DC24V	RM1-7544-000CN	Internal assemblies (3 of 4) on page 207
Paper delivery tray (output bin) assembly	RM1-7498-000CN	Print engine covers on page 201

Table 3-17 Alphabetical parts list (continued)

Description	Part number	Table and page
Paper pickup assembly	RM1-7575-000CN	Internal assemblies (2 of 4) on page 205
Paper pickup sensor PCA	RM1-7632-000CN	Internal assemblies (2 of 4) on page 205
Paper pickup tray assembly (input tray)	RM1-7534-000CN	Print engine covers on page 201
Power switch assembly	RM1-7573-000CN	Internal assemblies (1 of 4) on page 203
Roller assembly, document feeder (ADF) post-scan pinch	Q7400-60153	Document feeder assembly parts on page 213
Roller, pickup	RL1-1497-000CN	Internal assemblies (2 of 4) on page 205
Scanner assembly	CE538-60118	Scanner and document feeder main assemblies on page 211
Separation pad assembly	RM1-4227-000CN	Internal assemblies (2 of 4) on page 205
Shaft, document feeder (ADF) pick extension	Q7400-40047	Document feeder assembly parts on page 213
Solar lock, document feeder	CE538-40031	Scanner and document feeder main assemblies on page 211
Solenoid, duplex	RK2-0420-000CN	Internal assemblies (3 of 4) on page 207
Spring, document feeder (ADF) extension (pre-pick)	Q7400-00011	Document feeder assembly parts on page 213
Switch lever assembly	RM1-7531-000CN	Internal assemblies (1 of 4) on page 203
Transfer roller	RM1-4023-000CN	Internal assemblies (2 of 4) on page 205

Numerical parts list

Table 3-18 Numerical parts list

Part number	Description	Table and page
9170-1821	Core-ferrite rectangle EMI ROHS	Internal assemblies (4 of 4) on page 209
9170-2385	Core-ferrite flat cable ROHS	Internal assemblies (4 of 4) on page 209
CB534-00010	Clip, ferrite	Internal assemblies (4 of 4) on page 209
CE538-40006	Hinge, floating (not shown)	Scanner and document feeder main assemblies on page 211
CE538-40008	Document feeder (ADF) cover, inner	Document feeder assembly parts on page 213
CE538-40009	Document feeder (ADF) cover, outer	Document feeder assembly parts on page 213
CE538-40015	Document feeder (ADF) motor cover	Scanner and document feeder main assemblies on page 211
CE538-40031	Solar lock, document feeder	Scanner and document feeder main assemblies on page 211
CE538-60118	Scanner assembly	Scanner and document feeder main assemblies on page 211
CE538-60121	Document feeder (ADF) assembly	Scanner and document feeder main assemblies on page 211
CE538-60122	Document feeder (ADF) core assembly	Document feeder assembly parts on page 213
CE538-60126	Document feeder (ADF) base	Document feeder assembly parts on page 213
CE538-60127	Document feeder (ADF) input tray	Document feeder assembly parts on page 213
CE538-60134	Cable, formatter FFC	Internal assemblies (4 of 4) on page 209
CE538-60135	Hinge, scanner sub-assembly	Internal assemblies (4 of 4) on page 209
CE538-60137	Document feeder (ADF) pick arm assembly	Document feeder assembly parts on page 213
CE539-60101	Control panel assembly, Western	Scanner and document feeder main assemblies on page 211
CE539-60102	Control panel assembly, Asian	Scanner and document feeder main assemblies on page 211
CE544-60001	Formatter	Internal assemblies (4 of 4) on page 209
CE682-60001	Fax Board-US	Internal assemblies (4 of 4) on page 209
CE683-60001	Fax Board-EU	Internal assemblies (4 of 4) on page 209

Table 3-18 Numerical parts list (continued)

Part number	Description	Table and page
Q7400-00011	Spring, document feeder (ADF) extension (pre-pick)	Document feeder assembly parts on page 213
Q7400-40047	Shaft, document feeder (ADF) pick extension	Document feeder assembly parts on page 213
Q7400-60153	Roller assembly, document feeder (ADF) post-scan pinch	Document feeder assembly parts on page 213
RC2-9514-000CN	Link, cartridge door	Internal assemblies (3 of 4) on page 207
RC2-9520-000CN	Cover, top	Print engine covers on page 201
RC2-9522-000CN	Cover, right	Print engine covers on page 201
RC2-9523-000CN	Cover, left	Print engine covers on page 201
RC2-9531-000CN	Link, pressure release	Internal assemblies (1 of 4) on page 203
RC2-9578-000CN	Cover, dust	Print engine covers on page 201
RK2-0420-000CN	Solenoid, duplex	Internal assemblies (3 of 4) on page 207
RK2-3438-000CN	Fan	Internal assemblies (3 of 4) on page 207
RL1-1497-000CN	Roller, pickup	Internal assemblies (2 of 4) on page 205
RL1-2899-000CN	Cover, front	Print engine covers on page 201
RM1-4023-000CN	Transfer roller	Internal assemblies (2 of 4) on page 205
RM1-4227-000CN	Separation pad assembly	Internal assemblies (2 of 4) on page 205
RM1-7440-000CN	Delivery sensor PCA	Internal assemblies (1 of 4) on page 203
RM1-7498-000CN	Paper delivery tray (output bin) assembly	Print engine covers on page 201
RM1-7525-000CN	Duplex frame assembly	Internal assemblies (2 of 4) on page 205
RM1-7526-000CN	Duplexing door assembly (rear cover)	Print engine covers on page 201
RM1-7531-000CN	Switch lever assembly	Internal assemblies (1 of 4) on page 203
RM1-7534-000CN	Paper pickup tray assembly (input tray)	Print engine covers on page 201
RM1-7541-000CN	Fuser film assembly, 110 volt	Internal assemblies (1 of 4) on page 203

Table 3-18 Numerical parts list (continued)

Part number	Description	Table and page
RM1-7542-000CN	Fuser film assembly, 220 volt	Internal assemblies (1 of 4) on page 203
RM1-7544-000CN	Motor, DC24V	Internal assemblies (3 of 4) on page 207
RM1-7560-000CN	Laser scanner assembly	Internal assemblies (3 of 4) on page 207
RM1-7573-000CN	Power switch assembly	Internal assemblies (1 of 4) on page 203
RM1-7574-000CN	Cartridge door assembly	Print engine covers on page 201
RM1-7575-000CN	Paper pickup assembly	Internal assemblies (2 of 4) on page 205
RM1-7576-000CN	Fuser, 110 volt	Internal assemblies (1 of 4) on page 203
RM1-7577-000CN	Fuser, 220 volt	Internal assemblies (1 of 4) on page 203
RM1-7620-000CN	Duplex PCA	Internal assemblies (3 of 4) on page 207
RM1-7629-000CN	Engine controller PCA, 110 volt	Internal assemblies (1 of 4) on page 203
RM1-7630-000CN	Engine controller PCA, 220 volt	Internal assemblies (1 of 4) on page 203
RM1-7632-000CN	Paper pickup sensor PCA	Internal assemblies (2 of 4) on page 205
RM1-7633-000CN	Motor PCA	Internal assemblies (3 of 4) on page 207
RM1-7739-000CN	Cable, flat	Internal assemblies (3 of 4) on page 207

A Service and support

- [Hewlett-Packard limited warranty statement](#)
- [HP's Premium Protection Warranty: LaserJet print cartridge limited warranty statement](#)
- [Data stored on the print cartridge](#)
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Hewlett-Packard limited warranty statement

HP PRODUCT	DURATION OF LIMITED WARRANTY
HP LaserJet M1536dnf	One-year product exchange

HP warrants to you, the end-user customer, that HP hardware and accessories will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or equivalent in performance to new.

HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software which does not execute its programming instructions due to such defects.

HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.

HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

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HP's limited warranty is valid in any country/region or locality where HP has a support presence for this product and where HP has marketed this product. The level of warranty service you receive may vary according to local standards. HP will not alter form, fit or function of the product to make it operate in a country/region for which it was never intended to function for legal or regulatory reasons.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE YOUR SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some countries/regions, states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

HP's Premium Protection Warranty: LaserJet print cartridge limited warranty statement

This HP product is warranted to be free from defects in materials and workmanship.

This warranty does not apply to products that (a) have been refilled, refurbished, remanufactured or tampered with in any way, (b) experience problems resulting from misuse, improper storage, or operation outside of the published environmental specifications for the printer product or (c) exhibit wear from ordinary use.

To obtain warranty service, please return the product to place of purchase (with a written description of the problem and print samples) or contact HP customer support. At HP's option, HP will either replace products that prove to be defective or refund your purchase price.

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Data stored on the print cartridge

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

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

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

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

Any third party possessing the print cartridge might have access to the anonymous information on the memory chip. If you prefer to not allow access to this information, you can render the chip inoperable. However, after you render the memory chip inoperable, the memory chip cannot be used in an HP product.

End User License Agreement

PLEASE READ CAREFULLY BEFORE USING THIS SOFTWARE PRODUCT: This End-User License Agreement ("EULA") is a contract between (a) you (either an individual or the entity you represent) and (b) Hewlett-Packard Company ("HP") that governs your use of the software product ("Software"). This EULA does not apply if there is a separate license agreement between you and HP or its suppliers for the Software, including a license agreement in online documentation. The term "Software" may include (i) associated media, (ii) a user guide and other printed materials, and (iii) "online" or electronic documentation (collectively "User Documentation").

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b. Restrictions. You may not rent, lease or lend the HP Software or Use the HP Software for commercial timesharing or bureau use. You may not sublicense, assign or otherwise transfer the HP Software except as expressly provided in this EULA.

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9. U.S. GOVERNMENT CUSTOMERS. If you are a U.S. Government entity, then consistent with FAR 12.211 and FAR 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed under the applicable HP commercial license agreement.

10. COMPLIANCE WITH EXPORT LAWS. You will comply with all laws, rules, and regulations (i) applicable to the export or import of the Software, or (ii) restricting the Use of the Software, including any restrictions on nuclear, chemical, or biological weapons proliferation.

11. RESERVATION OF RIGHTS. HP and its suppliers reserve all rights not expressly granted to you in this EULA.

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Rev. 11/06

Customer support

Get telephone support for your country/region	Country/region phone numbers are on the flyer that was in the box with your product or at www.hp.com/support/ .
Have the product name, serial number, date of purchase, and problem description ready.	
Get 24-hour Internet support	www.hp.com/support/ljm1530series
Get support for products used with a Macintosh computer	www.hp.com/go/macosex
Download software utilities, drivers, and electronic information	www.hp.com/go/ljm1530series_software
Order additional HP service or maintenance agreements	www.hp.com/go/carepack
Register your product	www.register.hp.com

Repack the product

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

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

1. Remove and retain the print cartridge.

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

To prevent damage to the print cartridge, avoid touching the roller on it, and store the print cartridge in its original packing material or so that it is not exposed to light.

2. Remove and retain the power cable, interface cable, and optional accessories, such as an EIO card.
3. If possible, include print samples and 50 to 100 sheets of paper or other print media that did not print correctly.
4. In the U.S., call HP Customer Care to request new packing material. In other areas, use the original packing material, if possible. Hewlett-Packard recommends insuring the equipment for shipment.

B Product specifications

- [Physical specifications](#)
- [Power consumption](#)
- [Acoustic specifications](#)
- [Environmental specifications](#)

Physical specifications

Table B-1 Physical specifications¹

Specification	HP LaserJet Pro M1530 MFP Series
Product weight	11.7 kg (25.8 lbs)
Product height	373 mm (14.7 in)
Product depth	343 mm (13.5 in)
Product width	441 mm (17.4 in)

¹ Values are based on preliminary data. See www.hp.com/support/ljm1530series.

Power consumption

Table B-2 HP LaserJet Pro M1530 MFP Series (average in watts)¹²

Product	Printing	Copying	Ready/Sleep ³	Manual Off
HP LaserJet M1536dnf ⁵	445	325	4.7	0.3

¹ Values are based on preliminary data. See www.hp.com/go/ljm1530series_regulatory for current information.

² Power reported is highest values measured for all product models using all standard voltages.

³ Ready and Sleep mode power consumption is the same with Instant On Fusing technology.

⁴ Typical Electricity Consumption (TEC) = 1.386 kWh/week

⁵ Maximum heat dissipation for all models in Ready Mode = 17 BTU/Hour

Acoustic specifications

Table B-3 HP LaserJet Pro M1530 MFP Series¹²

Sound power level	Declared per ISO 9296
Printing	$L_{WA} = 6.5$ Bels (A) [65 dB(A)]
Ready	Inaudible
Sound pressure level - bystander position	Declared per ISO 9296
Printing	$L_{pAm} = 51$ dB (A)
Ready	Inaudible

¹ Values are based on preliminary data. See www.hp.com/go/ljm1530series_regulatory for current information.

² Configuration tested: HP LaserJet Pro M1536dnf printing on A4-size paper in simplex mode.

Environmental specifications

Table B-4 Environmental specifications

	Operating ¹	Storage ¹
Temperature	10° to 32.5°C (50° to 91°F)	0° to 35°C (32° to 95°F)
Relative Humidity	10% to 80%	10% to 80%

¹ Values are based on preliminary data. See www.hp.com/support/ljm1530series.

C Regulatory information

- [FCC regulations](#)
- [Environmental product stewardship program](#)
- [Declaration of conformity](#)
- [Certificate of Volatility](#)
- [Safety statements](#)
- [Additional statements for telecom \(fax\) products](#)

FCC regulations

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

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



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

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

Environmental product stewardship program

Protecting the environment

Hewlett-Packard Company is committed to providing quality products in an environmentally sound manner. This product has been designed with several attributes to minimize impacts on our environment.

Ozone production

This product generates no appreciable ozone gas (O₃).

Power consumption

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



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

www.hp.com/go/energystar

Toner consumption

EconoMode uses less toner, which might extend the life of the print cartridge.

Paper use

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

Plastics

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

HP LaserJet print supplies

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

HP is committed to providing inventive, high-quality products and services that are environmentally sound, from product design and manufacturing to distribution, customer use and recycling. When you

participate in the HP Planet Partners program, we ensure your HP LaserJet print cartridges are recycled properly, processing them to recover plastics and metals for new products and diverting millions of tons of waste from landfills. Since this cartridge is being recycled and used in new materials, it will not be returned to you. Thank you for being environmentally responsible!

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

Return and recycling instructions

United States and Puerto Rico

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

Multiple returns (more than one cartridge)

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

OR

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

Single returns

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

Shipping

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

Residents of Alaska and Hawaii

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

Non-U.S. returns

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

Paper

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

Material restrictions

This HP product does not contain added mercury.

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

HP LaserJet Pro M1530 MFP Series	
Type	Carbon monofluoride lithium
Weight	0.8 g
Location	On formatter board
User-removable	No



廢電池請回收

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

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



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

Chemical substances

HP is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at: www.hp.com/go/reach.

Material Safety Data Sheet (MSDS)

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

For more information

To obtain information about these environmental topics:

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

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

Declaration of conformity

Declaration of Conformity

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

Manufacturer's Name: Hewlett-Packard Company DoC#: BOISB-0902-01-rel.1.0

Manufacturer's Address: 11311 Chinden Boulevard
Boise, Idaho 83714-1021, USA

declares, that the product

Product Name: HP LaserJet Pro M1536dnf MFP

Regulatory Model Number²⁾ BOISB-0902-01
BOISB-0903-00 – (US-Fax Module LIU)
BOISB-0903-01 – (EURO-Fax Module LIU)

Product Options: ALL

Print Cartridge: CE278A

conforms to the following Product Specifications:

SAFETY: IEC 60950-1:2001 / EN60950-1: 2001 +A11
IEC 60825-1:1993 +A1 +A2 / EN 60825-1:1994 +A1 +A2 (Class 1 Laser/LED Product)
IEC 62311:2007 / EN62311:2008
GB4943-2001

EMC: CISPR22:2005 +A1 / EN55022:2006 +A1 - Class B¹⁾
EN 61000-3-2:2006
EN 61000-3-3:1995 +A1 +A2
EN 55024:1998 +A1 +A2
FCC Title 47 CFR, Part 15 Class B¹⁾ / ICES-003, Issue 4
GB9254-2008, GB17625.1-2003

TELECOM: ES 203 021; FCC Title 47 CFR, Part 68³⁾

ENERGY USE: Regulation (EC) No. 1275/2008:
ENERGY STAR® Qualified Imaging Equipment Typical Electricity Consumption (TEC) Test Procedure

Supplementary Information:

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

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

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

Boise, Idaho USA

March 2010

For regulatory topics only:

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

Certificate of Volatility

Hewlett-Packard Certificate of Volatility			
Model: LJM1536dnf	Part Number: CE538A	Address: 11311 Chinden Blvd. Boise, ID. 83714	
Volatile Memory			
Does the device contain volatile memory (Memory whose contents are lost when power is removed)? ☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below			
Type (SRAM, DRAM, etc): Synchronous DRAM	Size: 128MB	Function: Run-time firmware image, print, fax, scan and copy job info during printing	Steps to clear memory: Power off printer
Type (SRAM, DRAM, etc):	Size:	Function:	Steps to clear memory:
Type (SRAM, DRAM, etc):	Size:	Function:	Steps to clear memory:
Non-Volatile Memory			
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? ☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below			
Type (Flash, EEPROM, etc): EEPROM	Size: 16KB	Function: Printer Specific Data	Steps to clear memory: User cannot, service tools can.
Type (Flash, EEPROM, etc): NAND Flash	Size: 16MB	Function: Printer Driver and Firmware	Steps to clear memory: User cannot, service tools can.
Type (Flash, EEPROM, etc):	Size:	Function:	Steps to clear memory:
Mass Storage			
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? ☐ Yes ☒ No If Yes please describe the type, size, function, and steps to clear the memory below			
Type (HDD, Tape, etc):	Size:	Function:	Steps to clear memory:
Type (HDD, Tape, etc):	Size:	Function:	Steps to clear memory:
Author Information			
Name:	Title: Technical Marketing Engineer	Email:	Business Unit: LaserJet Business
Date Prepared: 03/22/2010			

Safety statements

Laser safety

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

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

Canadian DOC regulations

Complies with Canadian EMC Class B requirements.

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

VCCI statement (Japan)

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取扱説明書に従って正しい取り扱いをして下さい。

Power cord instructions

Make sure your power source is adequate for the product voltage rating. The voltage rating is on the product label. The product uses either 110-127 Vac or 220-240 Vac and 50/60 Hz.

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

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

Power cord statement (Japan)

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

EMC statement (Korea)

B급 기기 (가정용 방송통신기기)	이 기기는 가정용(B급)으로 전자파적합등록을 한 기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.
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Laser statement for Finland

Luokan 1 laserlaite

Klass 1 Laser Apparat

HP LaserJet M1536dnf, laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalissa käytössä kirjoittimen suojakotelointi estää lasersäteen pääsyn laitteen ulkopuolelle. Laitteen turvallisuusluokka on määritetty standardin EN 60825-1 (2007) mukaisesti.

VAROITUS !

Laitteen käyttäminen muulla kuin käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING !

Om apparaten används på annat sätt än i bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

HUOLTO

HP LaserJet M1536dnf - kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

VARO !

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

VARNING !

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

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

GS statement (Germany)

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

Substances Table (China)

有毒有害物质表

根据中国电子信息产品污染控制管理办法的要求而出台

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

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

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

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

Restriction on Hazardous Substances statement (Turkey)

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

Additional statements for telecom (fax) products

EU Statement for Telecom Operation

This product is intended to be connected to the analog Public Switched Telecommunication Networks (PSTN) of European Economic Area (EEA) countries/regions.

It meets requirements of EU R&TTE Directive 1999/5/EC (Annex II) and carries appropriate CE conformity marking.

For more details see Declaration of Conformity issued by the manufacturer in another section of this manual.

However due to differences between individual national PSTNs the product may not guarantee unconditional assurance of successful operation on every PSTN termination point. Network compatibility depends on the correct setting being selected by the customer in preparation of its connection to the PSTN. Please follow the instructions provided in the user manual.

If you experience network compatibility issues, please contact your equipment supplier or Hewlett-Packard help desk in the country/region of operation.

Connecting to a PSTN termination point may be the subject of additional requirements set out by the local PSTN operator.

New Zealand Telecom Statements

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment may not provide for the effective hand-over of a call to another device connected to the same line.

This equipment shall not be set up to make automatic calls to the Telecom "111" Emergency Service.

This product has not been tested to ensure compatibility with the FaxAbility distinctive ring service for New Zealand.

Additional FCC statement for telecom products (US)

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the back of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

The REN is used to determine the quantity of devices, which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all, areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

This equipment uses the following USOC jacks: RJ11C.

An FCC-compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack, which is Part 68 compliant. This equipment cannot be used on telephone company-provided coin service. Connection to Party Line Service is subject to state tariffs.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment, please see the numbers in this manual for repair and (or) warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved.

The customer can do the following repairs: Replace any original equipment that came with the device. This includes the print cartridge, the supports for trays and bins, the power cord, and the telephone cord. It is recommended that the customer install an AC surge arrestor in the AC outlet to which this device is connected. This is to avoid damage to the equipment caused by local lightning strikes and other electrical surges.

Telephone Consumer Protection Act (US)

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of the sending machine or such business, or other entity, or individual. (The telephone number provided cannot be a 900 number or any other number for which charges exceed local or long distance transmission charges).

Industry Canada CS-03 requirements

Notice: The Industry Canada label identifies certified equipment. This certification means the equipment meets certain telecommunications network protective, operational, and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirement document(s). The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible for the equipment to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment. Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution can be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate. The Ringer Equivalence Number (REN) of this device is 0.0.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed five (5.0). The standard connecting arrangement code (telephone jack type) for equipment with direct connections to the telephone network is CA11A.

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