LaserJet Pro M701/M706

Troubleshooting Manual

HP LaserJet Pro M701/M706

Troubleshooting Manual

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 Theory of operation

This chapter presents an overview of the major components of the HP LaserJet Pro M701/M706 series, and it includes a detailed discussion of the image-formation system.

Basic operation

Major systems

The product contains the following systems:

- Engine-control system
- Laser/scanner system
- Image-formation system
- Paper feed system
- Accessories

Product block diagram

Figure 1-1 Product block diagram

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┌─────────────────────────┐        ┌──────────────────────────────────┐
│                         │  ⟺    │                                  │
│                         │        │        Laser scanner system      │
│                         │        │                                  │
│                         │        └──────────────────────────────────┘
│                         │
│                         │        ┌──────────────────────────────────┐
│                         │  ⟺    │                                  │
│                         │        │       Image-formation system     │
│                         │        │                                  │
│  Engine-control system  │        └──────────────────────────────────┘
│                         │
│                         │        ┌──────────────────────────────────┐
│                         │  ⟺    │                                  │
│                         │        │   Pickup, feed and delivery system │
│                         │        │                                  │
│                         │        └──────────────────────────────────┘
│                         │
│                         │        ┌──────────────────────────────────┐
│                         │  ⟺    │                                  │
│                         │        │            Accessory             │
│                         │        │                                  │
└─────────────────────────┘        └──────────────────────────────────┘
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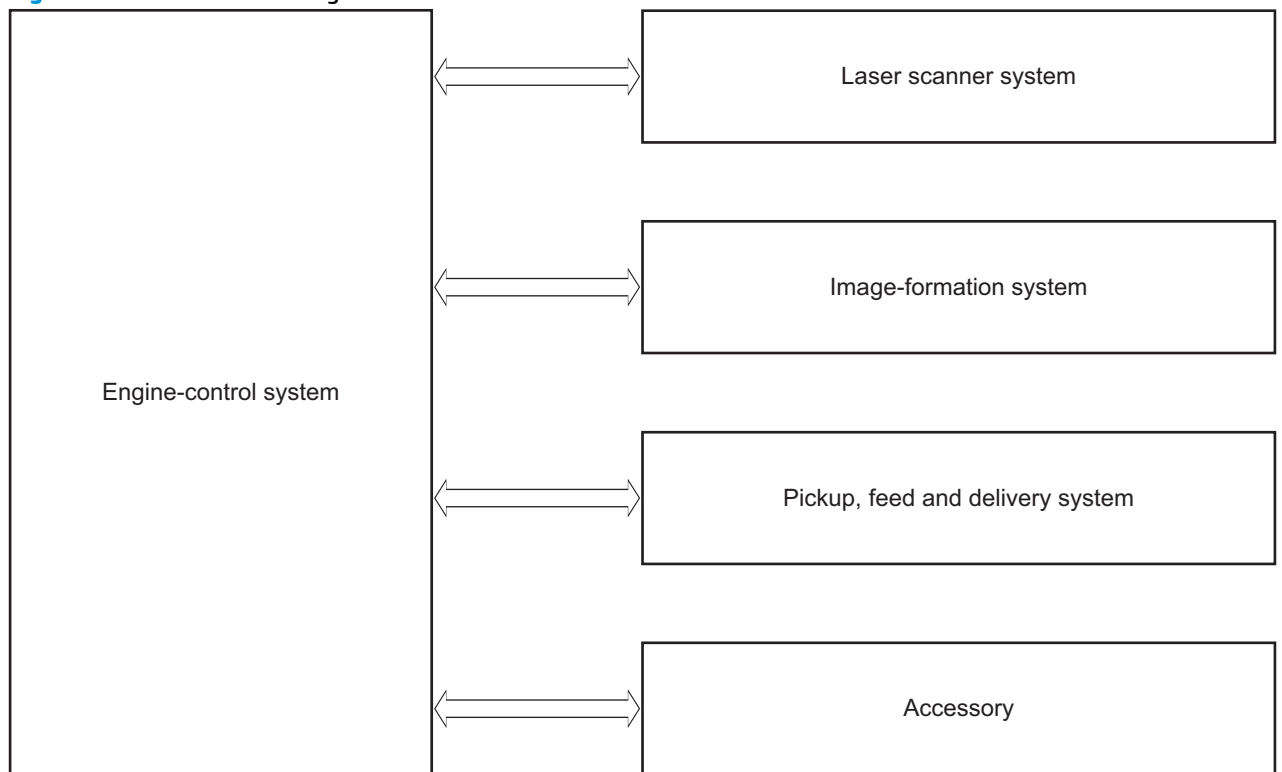
Engine control system

The engine control system coordinates all product functions and drives the other four systems.

The engine control system contains these components:

- DC controller printer circuit assembly (PCA)
- High-voltage power supply PCA
- Low-voltage power supply unit
- Fuser control

Figure 1-2 Engine control system
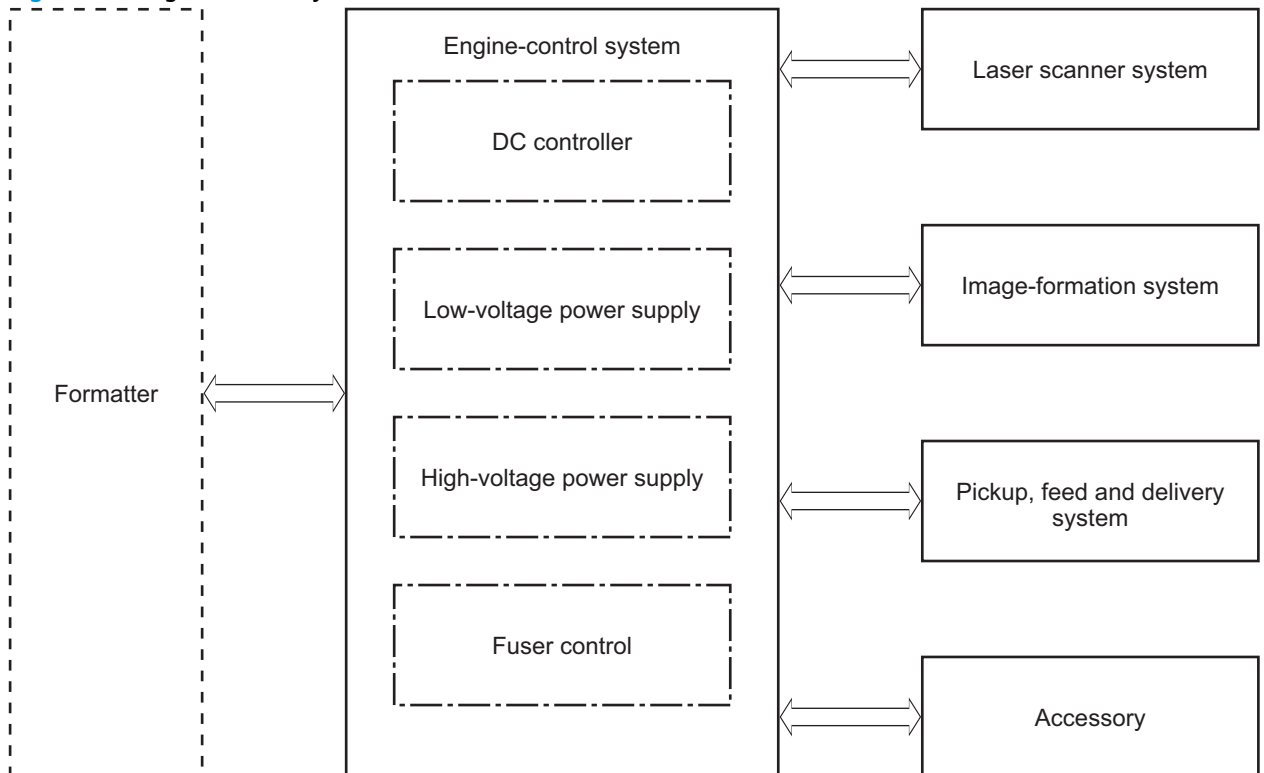
Table 1-1 Sequence of operation

Period	Duration	Purpose	Remarks
WAIT period	From the time the power is turned on until the initial drive for the main motor is complete	Removes the charge that creates a potential difference from the drum surface, and adjusts the drum phase	Detects cartridge presence
STBY (Standby period)	From end of the WAIT or LSTR period until either the print command is received from the formatter or the power is turned off	Maintains the product in readiness for a print command and maintains the heater at a targeted temperature	
INTR (Initial rotation)	From the time the print command is received until the pickup solenoid is turned on	Prepares the photosensitive drum for printing and cleans the transfer charging roller	

Table 1-1 Sequence of operation (continued)

Period	Duration	Purpose	Remarks
PRINT	From the end of INTR period until the fuser paper sensor detects the trailing edge of paper	Forms the images on the photosensitive drum and transfers the toner image to the print media	
LSTR (Last rotation)	From the end of the PRINT period until the fuser motor stops rotating	Moves the last printed sheet out of the product	The product enters the INTR period as soon as the formatter sends another print command

DC controller

Figure 1-3 DC controller
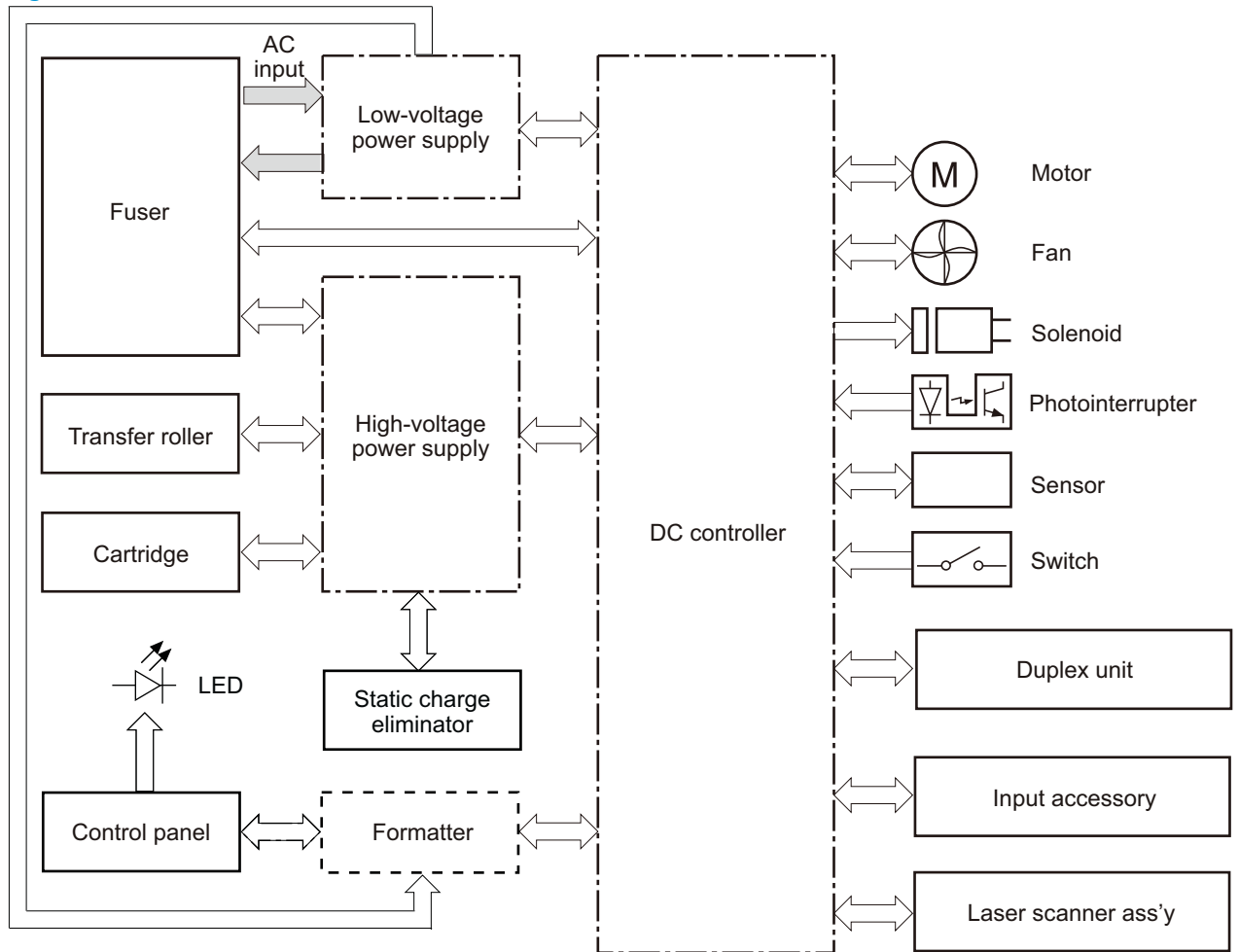
Table 1-2 DC controller components

Component type	Abbreviation	Component name
Motor	M1	Drum motor
	M2	Fuser motor
	M3	Scanner motor

Table 1-2 DC controller components (continued)

Component type	Abbreviation	Component name
Fan	FM1	Main fan
	FM2	Sub fan
Solenoid	SL1	Cassette pickup solenoid
	SL2	MP tray pickup solenoid
Switch	SW1	Front interlock switch
	SW2	Rear interlock switch
	SW3	Cassette-presence switch
	SW4	Cartridge door open detection switch
Photointerruptor	PS1	TOP sensor
	PS2	Loop sensor
	PS3	Fuser delivery sensor
	PS4	Delivery tray paper-full sensor
	PS5	Cassette paper-presence sensor
	PS6	MP tray paper-presence sensor
Sensor		Environment sensor

Low-voltage power supply (LVPS)

The low-voltage power supply (LVPS) converts AC input voltage to DC voltage. The LVPS has two fuses on the PCA. The LVPS 24 V output is interrupted to the fuser and the high-voltage power supply if the cartridge-door interlock switch (SW501) is in the off position (cover open).

⚠ **WARNING!** The product power switch only interrupts DC voltage from the LVPS. The AC voltage is present in the product when the power cable is plugged into a power receptacle and the power switch is in the off position. You must disconnect the product power cable before servicing the product.

Figure 1-4 Low voltage power supply
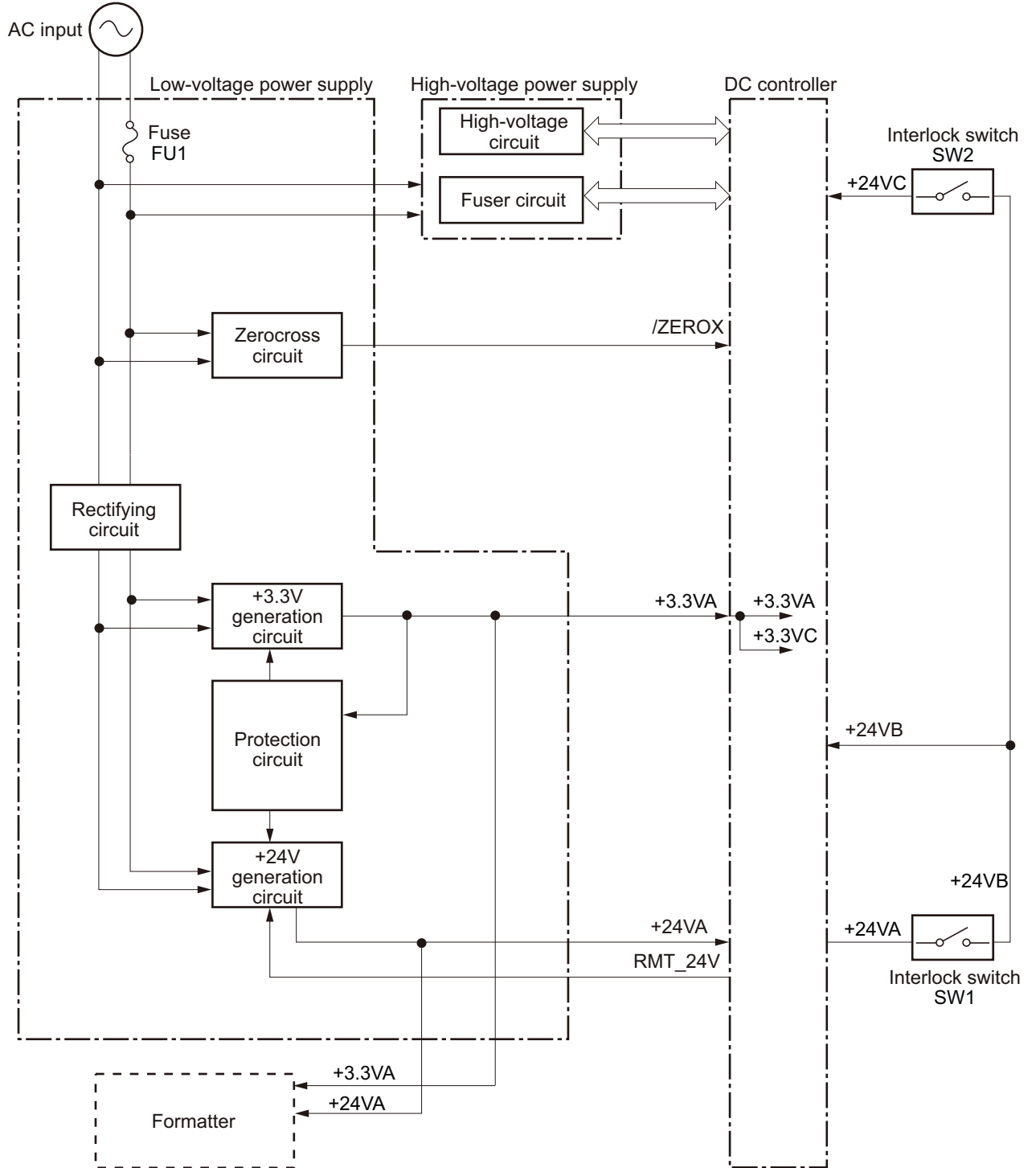
Table 1-3 Low-voltage power supply

Main DC voltage	Sub-voltage	Behavior
+ 24V	+ 24VA	• Constantly supplied • Stopped during Sleep mode
	+ 24VB	• Interrupted when the rear door open • Stopped during Sleep mode
	+ 24VC	• Interrupted when the cartridge door open • Stopped during Sleep mode
+ 3.3V	+ 3.3VA	• Constantly supplied
	+ 3.3VB	• Constantly supplied
	+ 3.3VC	• Constantly supplied • Stopped during Sleep mode

Table 1-4 Low-voltage power supply functions.

Function	Applied
Sleep mode	V
Power supply voltage detection	N/A
Automatic power OFF	V
Automatic power ON/OFF	N/A
Active OFF	V
Inactive OFF	V
Network mode	N/A
Power switch illumination	V
Low-voltage power supply failure detection	V
Power save mode	N/A

Overcurrent/overvoltage protection

The low-voltage power supply has a protective function against overcurrent and overvoltage to prevent failures in the power supply circuit. If the DC power is not being supplied from the low-voltage power supply, the protective function might be running. In that case, turn off the power switch and disconnect the power cable. Do not connect the power cable or turn on the power switch again until the cause is found.

If the DC power is not being supplied from the low-voltage power supply, the protective function might be running. In that case, turn off the power switch and disconnect the power cable. Do not connect the power cable or turn on the power switch again until the cause is found.

WARNING! If you believe the overcurrent or overvoltage protection circuits have been activated, do not connect the product power cable or turn on the product power until the cause of the failure is found and corrected.

In addition, two fuses in the low-voltage power supply protect against overcurrent. If overcurrent flows into the AC line, the fuses melt and cut off the power distribution.

For safety reasons, the product interrupts power (24 V) to the main motor and high-voltage power supply. The interlock switch is turned off to interrupt power when the cartidge door opens (SW260 is turned off). The AC voltage remains present in the product when the power switch is in the off position. Disconnect the power cable when disassembling the product.

NOTE: An accidental electrical short while servicing the product can result in a loss of power to the product causing the control panel to shut down (blank out). Turn the product power off, and then unplug the power cable. Wait at least 15 minutes before plugging the power cable in and turning the product power on.

Fuser control

The fuser-heater control circuit and the fuser-heater safety circuit control the fuser temperature according to commands from the DC controller. The product uses an on-demand fusing method.

Figure 1-5 Fuser components
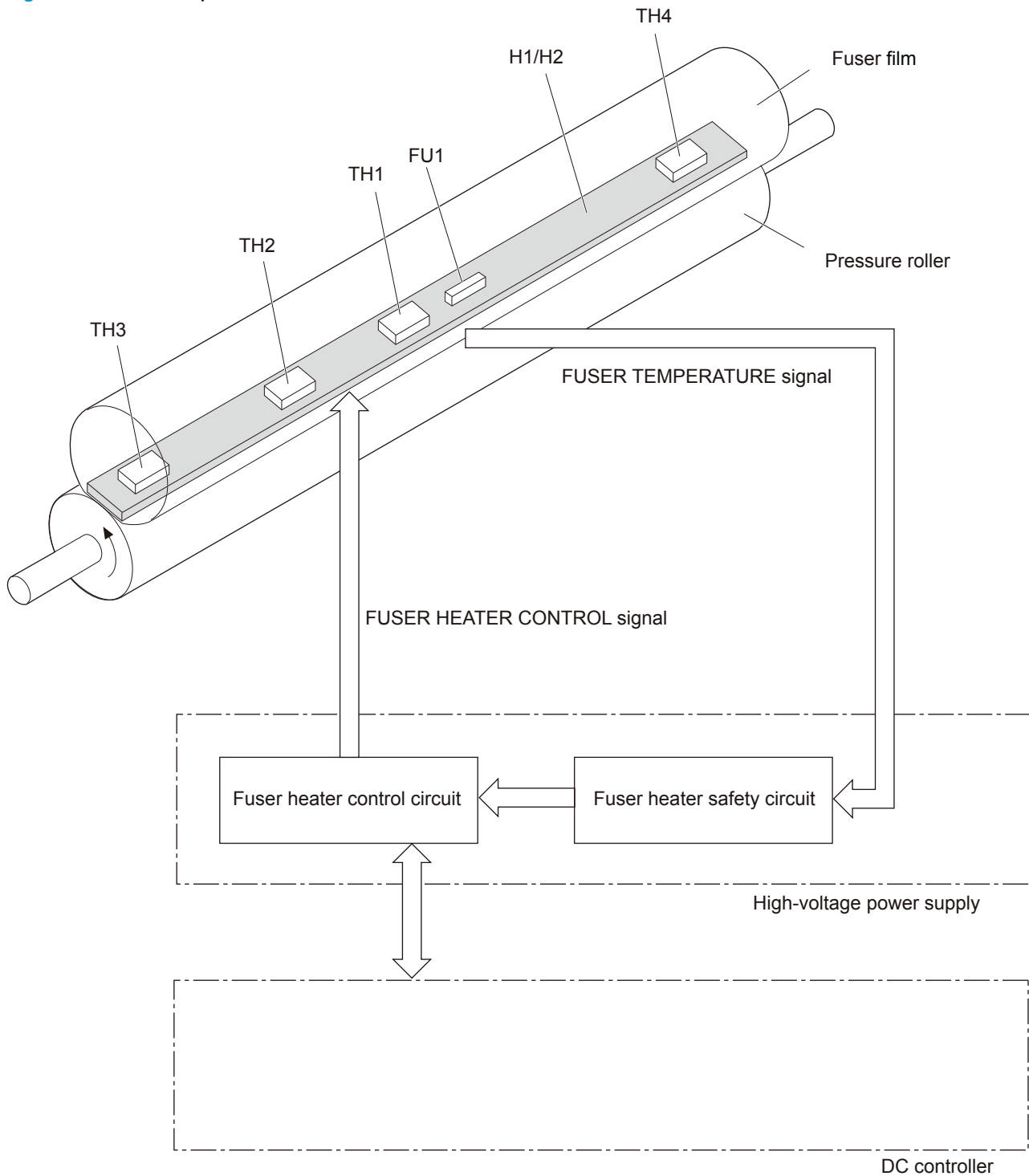
Table 1-5 Fuser control components

Component name		Function
H1	Fuser main heater	Heats the center area of the fuser film
H2	Fuser sub heater	Heats the edge of the fuser film
TH1	Main thermistor	Detects the center temperature of the fuser heater (contact type)
TH2	Sub thermistor 1	Detects the temperature at one end of the fuser heater (contact type)
TH3	Sub thermistor 2	
TH4	Sub thermistor 3	
FU1	Thermal fuse	Prevents an abnormal temperature rise of the fuser heater (non-contact type)

Figure 1-6 Fuser control system
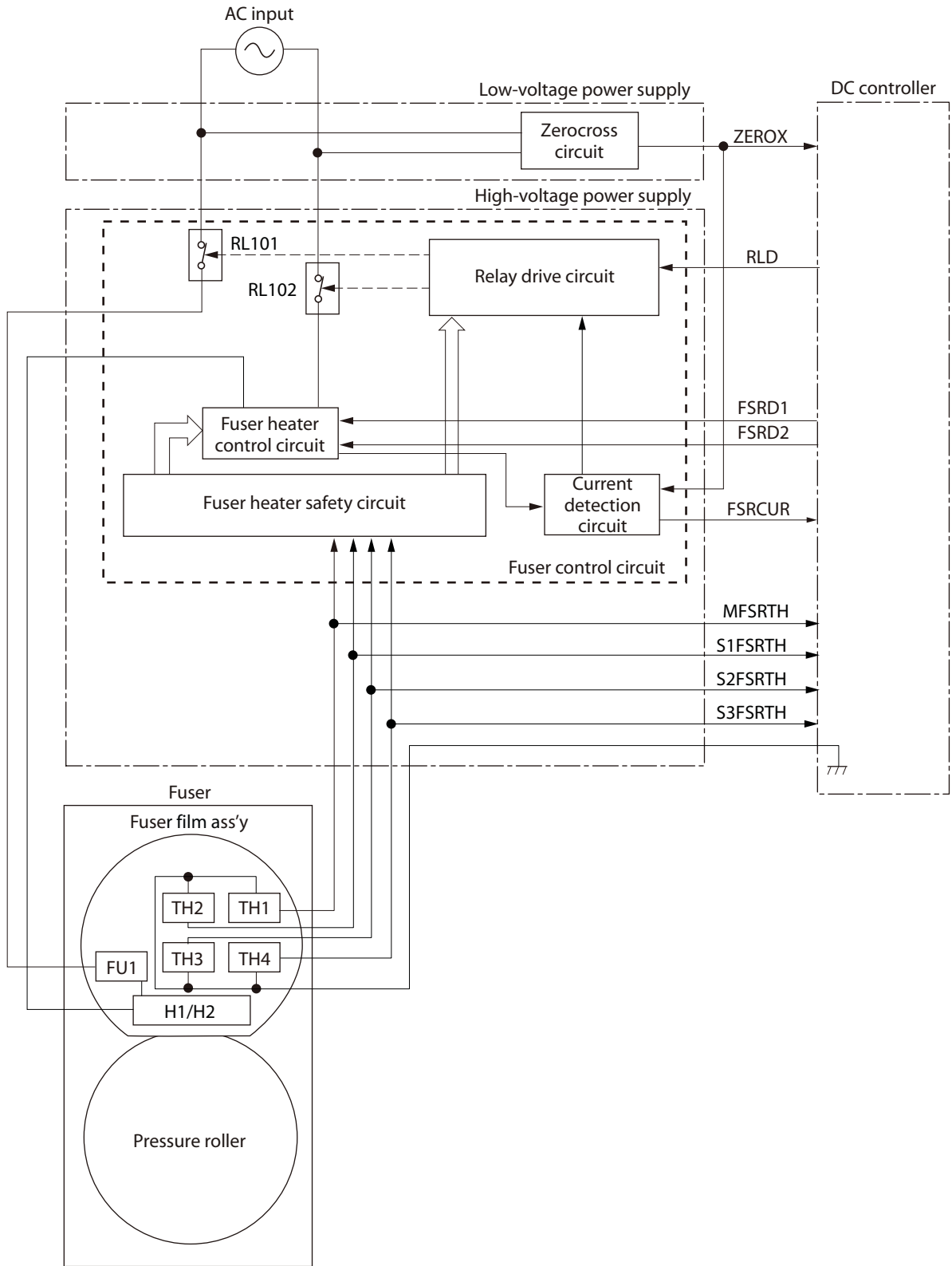
Fuser-heater protective function

The fuser-heater protective function detects an abnormal temperature rise of the fuser and interrupts the power supply to the fuser heater. The following protective components prevent an abnormal temperature rise of the fuser-heater:

- DC controller

  The DC controller monitors the detected temperature of the thermistor. The DC controller deactivates the FUSER HEATER CONTROL signal and releases the relay (RL1001) to interrupt the power supply to the fuser heater when it detects an abnormal temperature.

- Fuser-heater safety circuit

  The fuser-heater safety circuit monitors the detected temperature of the thermistor. The fuser-heater safety circuit releases the relays (RL1001 and RL1002) or deactivates the fuser-heater control circuit to interrupt the power supply to the fuser-heater when it detects an abnormal temperature.

- Thermoswitch

  The contact of the thermoswitch is broken to interrupt the power supply to the fuser heater when the temperature of the fuser heater is abnormally high.

- Current detection circuit

  The current detection circuit monitors the current flowing through the fuser heater control circuit. The current detection circuit releases the relays (RL101, RL102) to interrupt power supply to the fuser heater when it detects an abnormal current value.

  The DC controller deactivates the FUSER HEATER CONTROL signal to interrupt power supply to the fuser heater when the current of the CURRENT DETECTION signal is higher than a specified value.

Fuser control functions

The product has the following fuser control functions.

Table 1-6 **Fuser control functions**

Function	Applied
Fuser temperature control	V
Fuser failure detection	V
Frequency detection circuit failure detection	V
Fuser depressurization mechanism failure detection	N/A
Fuser type discrepancy detection	N/A
Fuser type identification detection	N/A
Fuser presence detection	V
Fuser life detection	N/A
Relay failure detection	N/A
Pressure roller cleaning	V

2   Solve problems

Solve problems checklist

1. Ensure that the product is set up correctly.

   a. Press the power button to turn on the product or to deactivate the Auto-Off mode.

   b. Check the power-cable connections.

   c. Ensure that the line voltage is correct for the product power configuration. (See the label in the cartridge door for voltage requirements.) If you are using a power strip and its voltage is not within specifications, plug the product directly into the wall. If it is already plugged into the wall, try a different outlet.

2. Check the cable connections.

   a. Check the cable connection between the product and the computer. Ensure that the connection is secure.

   b. Ensure that the cable itself is not faulty by using a different cable, if possible.

   c. Check the network connection. Ensure the network light is lit. The network light is next to the network port on the back of the product.

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

3. Check to see if any messages appear on the control panel.

4. Ensure that the paper you are using meets specifications.

5. Ensure that the paper is loaded correctly in the input tray.

6. Ensure that the product software is installed correctly.

7. Verify that you have installed the printer driver for this product, and that you are selecting this product from the list of available printers.

8. Print a configuration page.

   a. If the page does not print, verify that the input tray contains paper and that the paper is properly loaded.

   b. Ensure that the toner cartridge is installed correctly.

   c. If the paper jams in the product, clear the jam.

   d. If the print quality is unacceptable, complete the following steps:

      ● Verify that the print settings are correct for the paper you are using.

      ● Solve the print-quality problems.

9. Print a small document from a different program that has printed in the past. If this solution works, then the problem is with the program you are using. If this solution does not work (the document does not print), complete these steps:

   a. Try printing the job from another computer that has the product software installed.

   b. Check the cable connection. Direct the product to the correct port, or reinstall the software, selecting the connection type you are using.

Menu map

Use the following procedure to print a control panel menu layout map.

1. From the Home screen, press the Setup button.

2. Press the Reports button.

3. Press the Menu Structure button.

Troubleshooting process

When the product malfunctions or encounters an unexpected situation, the product control panel alerts you to the situation. This chapter contains information to help diagnose and solve problems.

- Use the pre-troubleshooting checklist to evaluate the source of the problem and to reduce the number of steps that are required to fix the problem.

- Use the troubleshooting flowchart to pinpoint the root cause of hardware malfunctions. The flowchart guides you to the section of this chapter that contains steps for correcting the malfunction.

Before beginning any troubleshooting procedure, check the following issues:

- Are supply items within their rated life?

- Does the configuration page reveal any configuration errors?

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

Pre-troubleshooting checklist

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

General topic	Questions
Environment	• Is the product installed on a solid, level surface (± 1°)?
	• Is the power-supply voltage within ± 10 volts of the specified power source?
	• Is the power-supply plug inserted in the product and the outlet?
	• Is the operating environment within the 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 a diazo copier) can have an adverse effect on some product components (for example, the toner 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 environmental limits?
Input trays	• Is the amount of paper in the tray within specifications?
	• Is the paper correctly placed in the tray?
	• Are the paper guides aligned with the stack?
	• Is the tray correctly installed in the product?
Toner cartridge	• Is the toner cartridge installed correctly?
Transfer unit and fuser	• Are the transfer unit and fuser installed correctly?
Covers	• Is the front cover closed?

General topic	Questions
Condensation	• Does condensation occur following a temperature change (particularly in winter following cold storage)? If so, wipe affected parts dry or leave the product on for 10 to 20 minutes.
	• Was a toner cartridge opened soon after being moved from a cold to a warm room? If so, allow the toner cartridge to sit at room temperature for 1 to 2 hours.
Miscellaneous	• Check for and remove any non-HP components (toner cartridges, for example) from the product.
	• Remove the product from the network to ensure that the failure is associated with the product before beginning troubleshooting.
	• For any print-quality issues, calibrate the product.

Determine the problem source

When the product malfunctions or encounters an unexpected situation, the product control panel alerts you to the situation. The troubleshooting flowchart helps you diagnose the root cause of the problem. The remainder of this chapter provides steps for correcting problems.

Troubleshooting flowchart

This flowchart highlights the general processes that you can follow to quickly isolate and solve product hardware problems.

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

Table 2-1 Troubleshooting flowchart

1 **Power on**	Is the product on and does a readable message display?		Follow the power-on troubleshooting checks. See Power subsystem on page 21 and Troubleshooting process for product not turning on on page 23.
	Yes ↓	No →	After the control panel display is functional, see step 2.
2 **Control panel messages**	Does the message **Ready** display on the control panel?		1. Follow the control panel message to resolve the problem. 2. If more information is required to troubleshoot the problem, see the troubleshooting section of the product user guide.
	Yes ↓	No →	After the errors have been corrected, go to step 3.
3 **Event log**	Open the Troubleshooting menu and print an event log to see the history of errors for this product. Does the event log print?		If the event log does not print, check for error messages. If paper jams inside the product, see the jams section of the product service manual. If error messages display on the control panel when you try to print an event log, see the control panel message section of the service manual. After successfully printing and evaluating the event log, see step 4.
	Yes ↓	No →	
4 **Information pages**	Open the Reports menu and print the configuration pages to verify that all the accessories are installed. Are all the accessories installed?		If accessories that are installed are not listed on the configuration page, remove the accessory and reinstall it. After evaluating the configuration pages, see step 5.
	Yes ↓	No →	
5 **Image quality**	Does the print quality meet the customer's requirements?		Compare the images with the sample defects in the image defect tables. See the images defects table in the product service manual.
	Yes ↓	No →	After the print quality is acceptable, see step 6.
6 **Interface**	Can the customer print successfully from the host computer?		Verify that all I/O cables are connected correctly and that a valid IP address is listed on the Jetdirect configuration page.
	Yes. This is the end of the troubleshooting process.	No →	If error messages display on the control panel when printing an event log, see the control panel message section of the service manual. When the customer can print from the host computer, the troubleshooting process ends.

Power subsystem

Power-on checks

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

Power-on troubleshooting overview

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

During normal operation, the main cooling fan begins to spin briefly after the product power is turned on. Place your hand over the holes in the right-side cover, near the formatter. If the fan is operating, you will feel air passing out of the product. You can also lean close to the product and hear the fan operating. Place your hand over the hole in the right-rear upper corner. When this fan is operational, the DC side of the power supply is functioning correctly.

After the fan is operating, the main motor turns on (unless the rear or front cover is open, a jam condition is sensed, or the paper-path sensors are damaged). You might be able to visually and audibly determine if the main motor is turned on.

If the fan and main motor are operating correctly, the next troubleshooting step is to isolate print engine, formatter, and control panel problems. Perform an engine test and if the formatter is damaged, it might interfere with the engine test. If the engine test is then successful, the problem is almost certainly with the formatter, the control panel, or the cable that connects them.

See Engine self-test on page 23 for instructions on performing an engine self test.

If the control panel is blank when you turn on the product, check the following items.

1. Make sure that the product is connected directly into an active electrical outlet (not a power strip) that delivers the correct voltage.

2. Make sure that the power switch is in the *on* position.

3. Make sure that the fan runs briefly, which indicates that the power supply is operational.

4. Make sure that the control panel display FFC is connected.

5. Make sure that the formatter is seated and operating correctly. Turn off the product, and then remove and reinstall the formatter.

6. Remove any external solutions, and then try to turn the product on again.

NOTE: If the control panel display is blank, but the main cooling fan runs briefly after the product power is turned on, try printing an engine-test page to determine whether the problem is with the control panel display, formatter, or other product assemblies. See Troubleshooting process for product not turning on on page 23.

Control panel checks

Use the product control panel to conduct tests on the control panel LEDs, display, or buttons.

Figure 2-1 Control panel 2ndary Service test access buttons
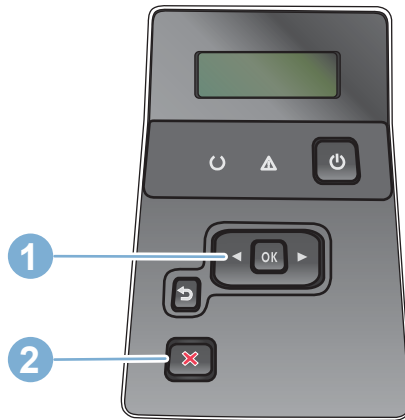
Table 2-2 Control panel 2ndary Service test access buttons

Item	Description
1	Left arrow button
2	Cancel button

1. From the Home screen on the product control panel, press the OK button.

2. Press the left arrow button, and then quickly press the Cancel button. The display should return to Ready status.

3. Press the Setup button again to open the menus. The first menu should be the 2ndary Service menu.

4. Press the 2ndary Service menu, and then scroll to one of the following menu items.

   ● LED Test

   ● Display Test

   ● Button Test

5. Press the menu item to begin the test.

6. After completing the test, return the product to the Ready state, and then press the Cancel ✕ button to remove the 2ndary Service menu from the menu list.

Tools for troubleshooting

The section describes the tools that can help you solve problems with your product.

Engine self-test

Perform an engine self-test

1. Make sure that paper is correctly loaded in the tray.

2. Turn the product off, wait for several seconds, and then turn the product on.

3. Within three to five seconds after turning the product on, open and close the print-cartridge door five times within thirty seconds.

4. If the self-test page prints, then the engine is verified as OK. If the self-test page doesn't print, then the engine is verified as incorrect.

NOTE: The product might display a 49 error during the engine test. A 49 error that occurs during an engine test has no relation to the success or failure of the engine test. To clear a 49 error, turn the product off, then on.

Troubleshooting process for product not turning on

Use the following steps to troubleshoot the product not turning on when the power button is pressed.

1. Before beginning this troubleshooting process, verify the following:

   ● The product is being supplied with normal AC voltage

   ● The product's AC power cord is connected to the product and plugged in to a power source

   ● All internal power cables and wire harnesses are connected securely

2. Replace the engine flat flexible cable, and then press the power button. If the product does not turn on, proceed to step three.

3. Replace the control panel assembly, and then press the power button. If the product does not turn on, proceed to step four.

4. Replace the formatter PCA, and then press the power button. If the product does not turn on, the engine is defective and must be replaced.

Diagrams

Block diagrams

Figure 2-2 Product cross section
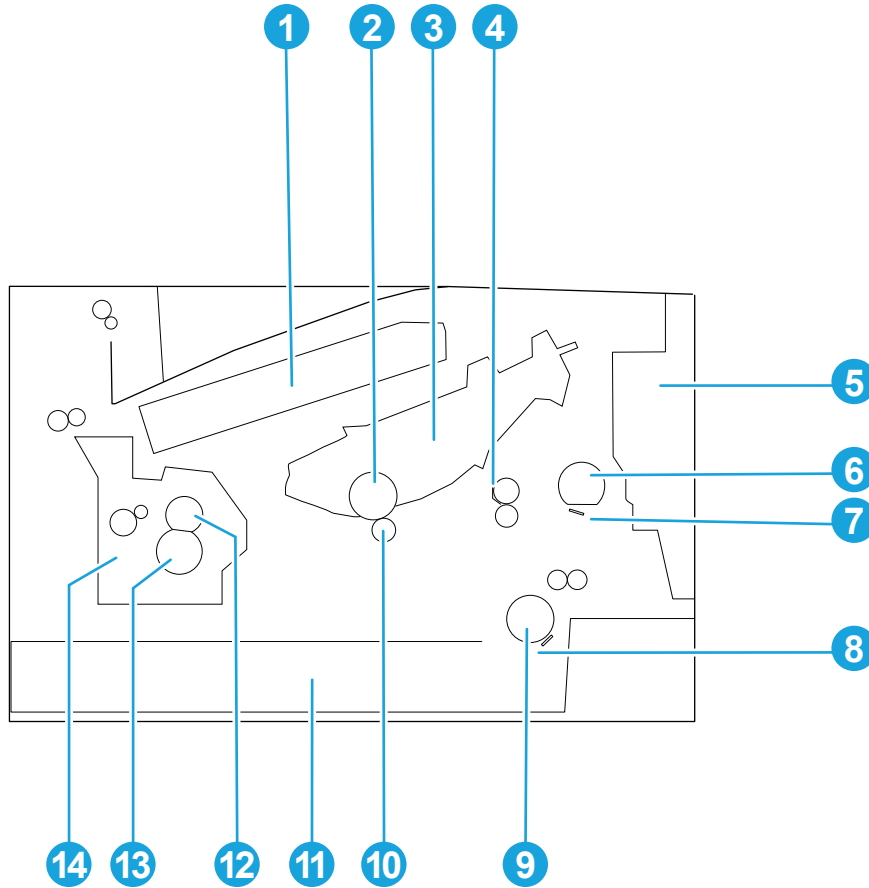
Item	Description	Item	Description
1	Laser/scanner assembly	8	Cassette (Tray 2) separation pad
2	Photosensitive drum	9	Cassette (Tray 2) pickup roller
3	Toner cartridge	10	Transfer roller
4	Registration shutter	11	Tray 2 cassette
5	Tray 1 (multipurpose tray)	12	Fuser film
6	Tray 1 (multipurpose tray) pickup roller	13	Pressure roller
7	Tray 1 (multipurpose tray) separation pad	14	Fuser

Location of connectors

DC controller connections

Figure 2-3 DC controller connections
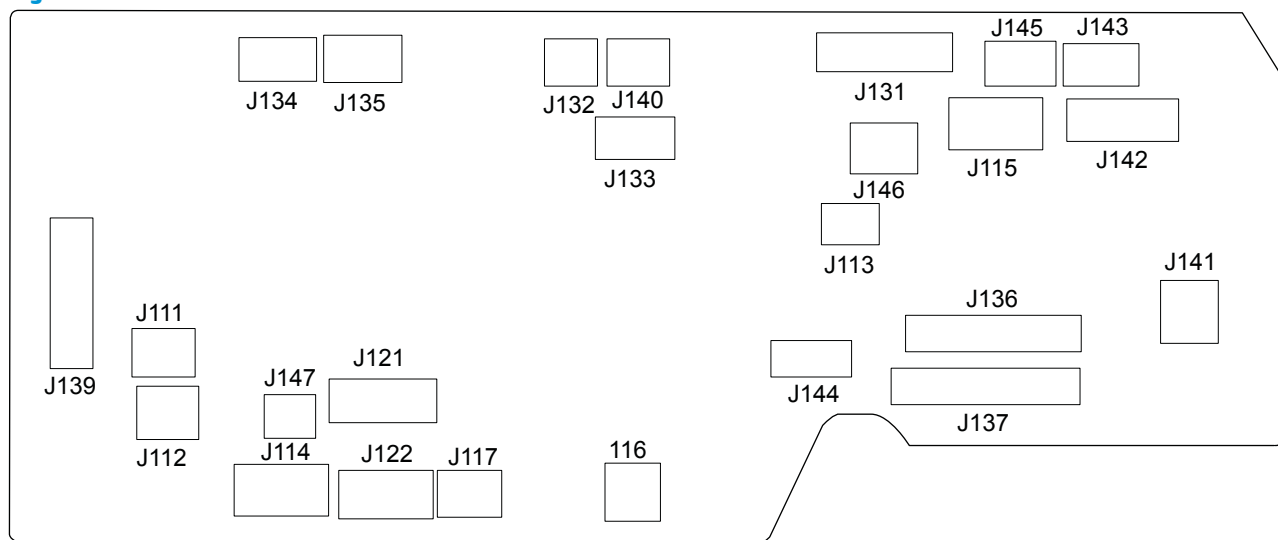
Item	Description	Item	Description
J111	MP tray media-presence sensor	J135	Not used
J112	Cassette media-presence sensor	J136	High-voltage power supply
J113	Delivery tray media-full sensor	J137	
J114	Drum motor	J139	Formatter
J115	Fuser motor	J140	Cartridge door open detection switch
J116	Cassette pickup solenoid	J141	Low-voltage power supply
J117	MP tray pickup solenoid	J142	
J121	Paper feeder	J143	Left fan
J122	Duplex unit	J144	Rear interlock switch
J131	Laser scanner	J145	Scanner motor
J132	E-label	J146	Right fan
J133	Environment sensor	J147	Cassette-presence switch
J134	Not used		

Paper feed driver PCA connections

Figure 2-4 Paper feed driver connections
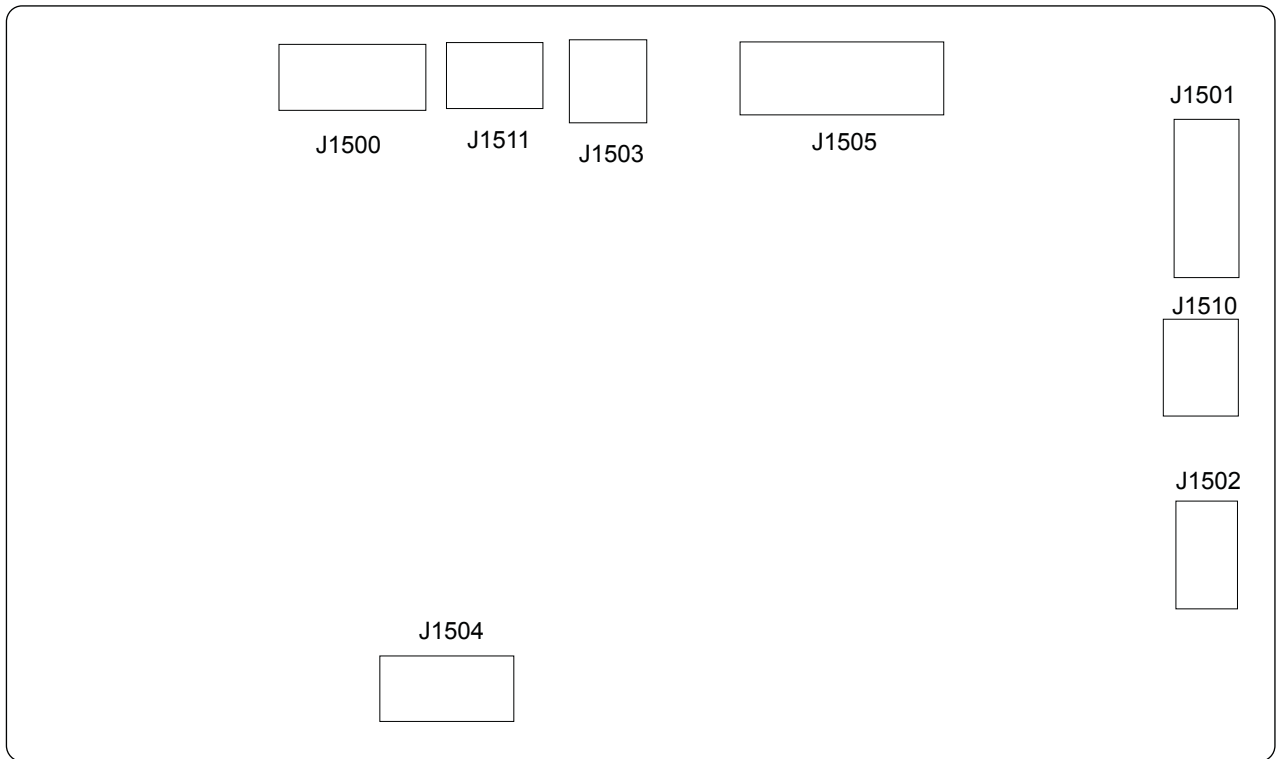
Item	Description	Item	Description
J1500	DC controller	J1504	PF cassette lifter motor
J1501	Paper-feed cassette media surface sensor	J1505	Not used
	Paper feed cassette media-presence sensor	J1510	Paper feed cassette pickup motor
J1502	Paper feed casette-presence switch	J1511	Paper feed media feed sensor
J1503	Paper feed cassette pickup solenoid		

Duplex driver PCA connections

Figure 2-5 Duplex driver PCA connections
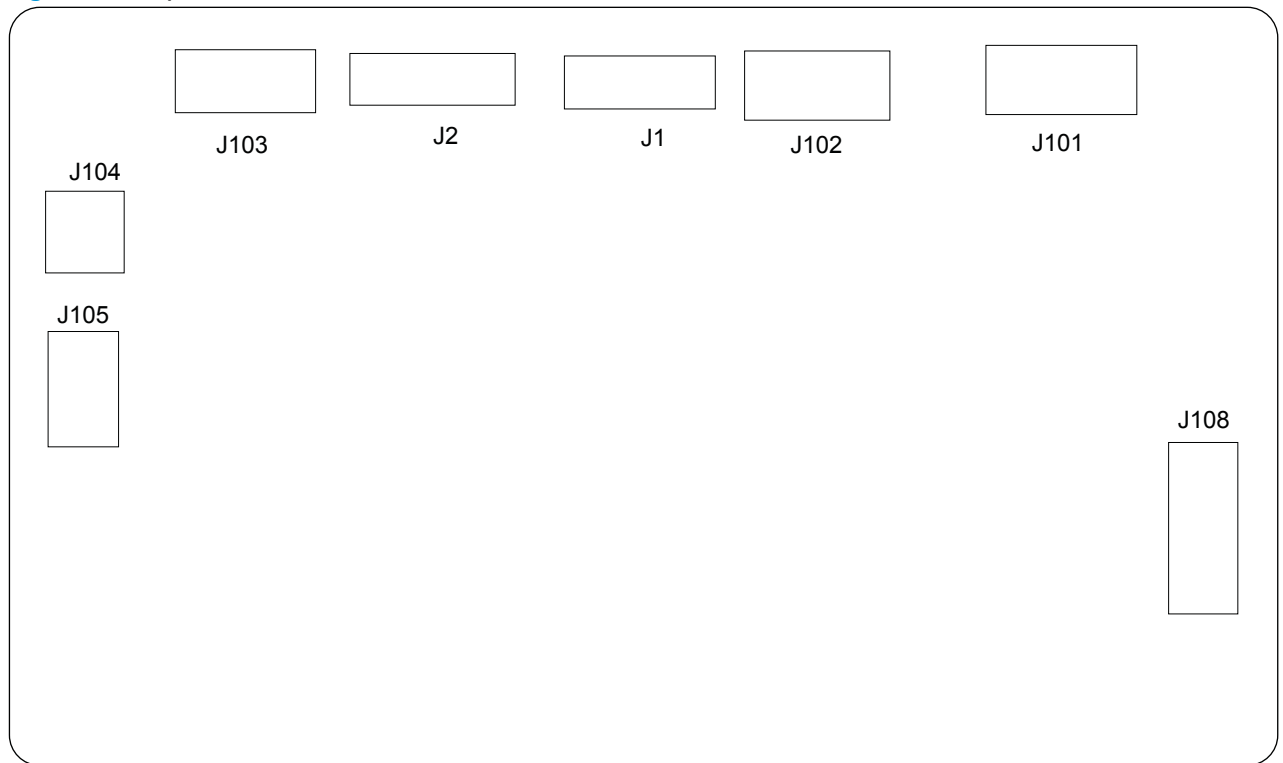
Item	Description	Item	Description
J1	Side misregistration sensor photoreceiver assembly	J103	Duplex feed motor
J2	Side misregistration sensor LED assembly	J104	Duplex feed clutch
J101	DC controller	J105	Duplex fan
J102	Duplex media feed sensor	J108	Not used
	Duplex jam sensor		

Plug and port locations
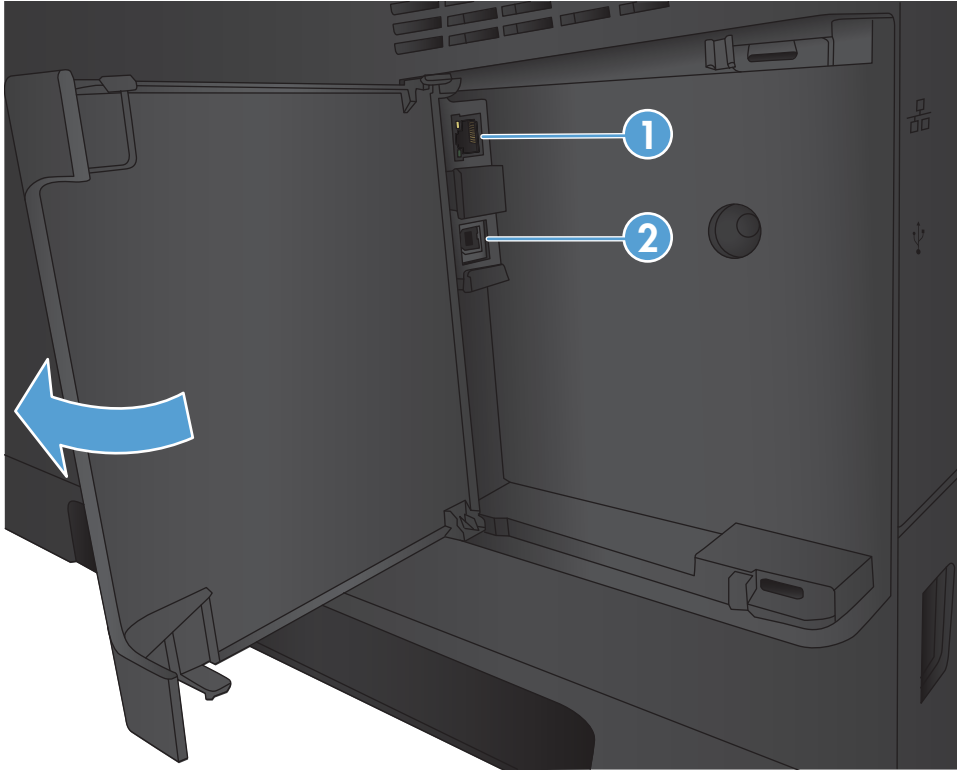
1	Network port
2	Hi-Speed USB 2.0 port

Locations of major assemblies
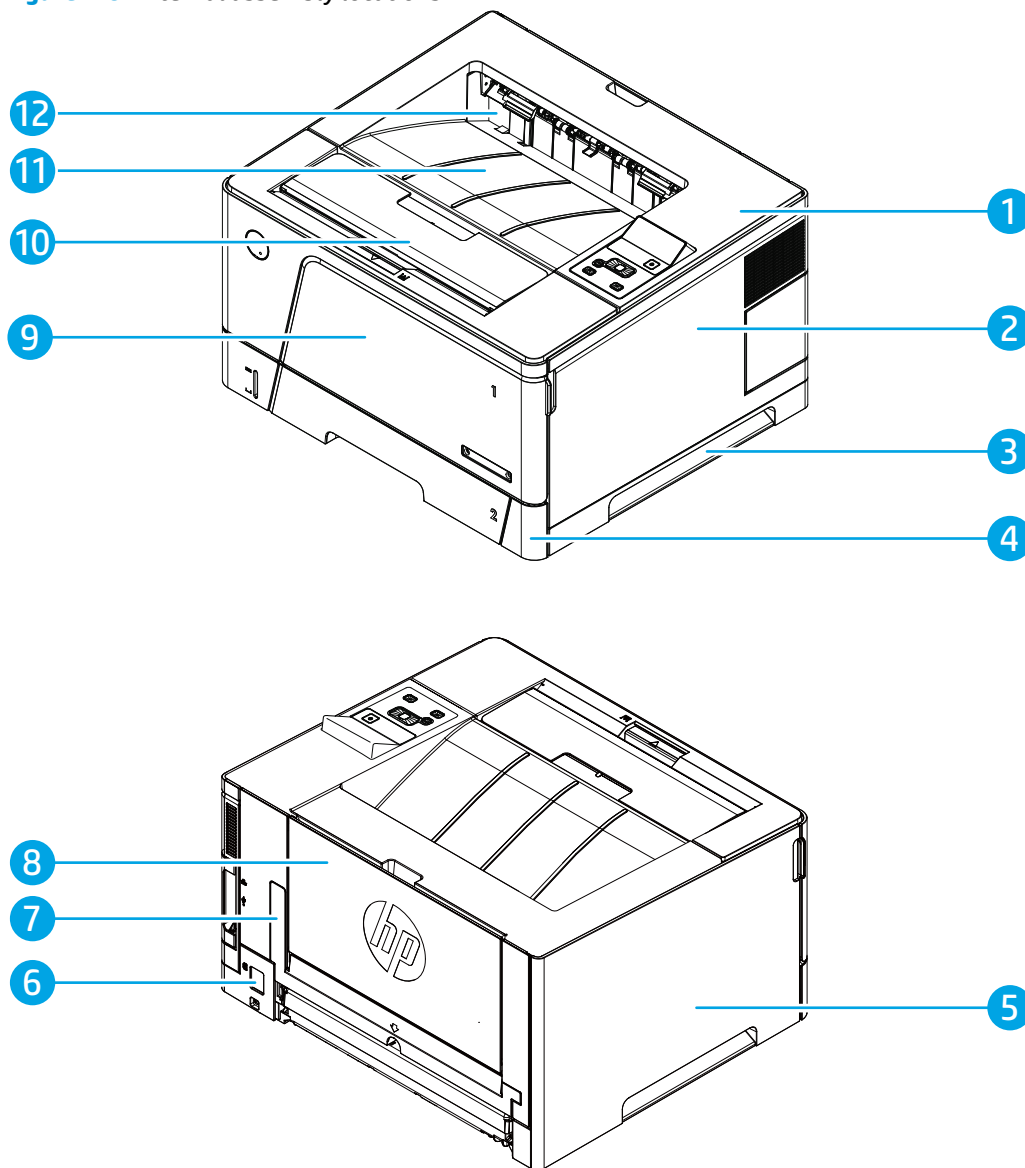
Item	Description	Item	Description
1	Top cover assembly	7	Lower rear cover
2	Right cover assembly	8	Rear cover assembly
3	Right handle cover	9	Multi-purpose tray cover
4	Right front cover	10	Cartridge door assembly
5	Left cover	11	Output bin
6	Power receptacle	12	Face-down cover

Figure 2-7 PCA locations
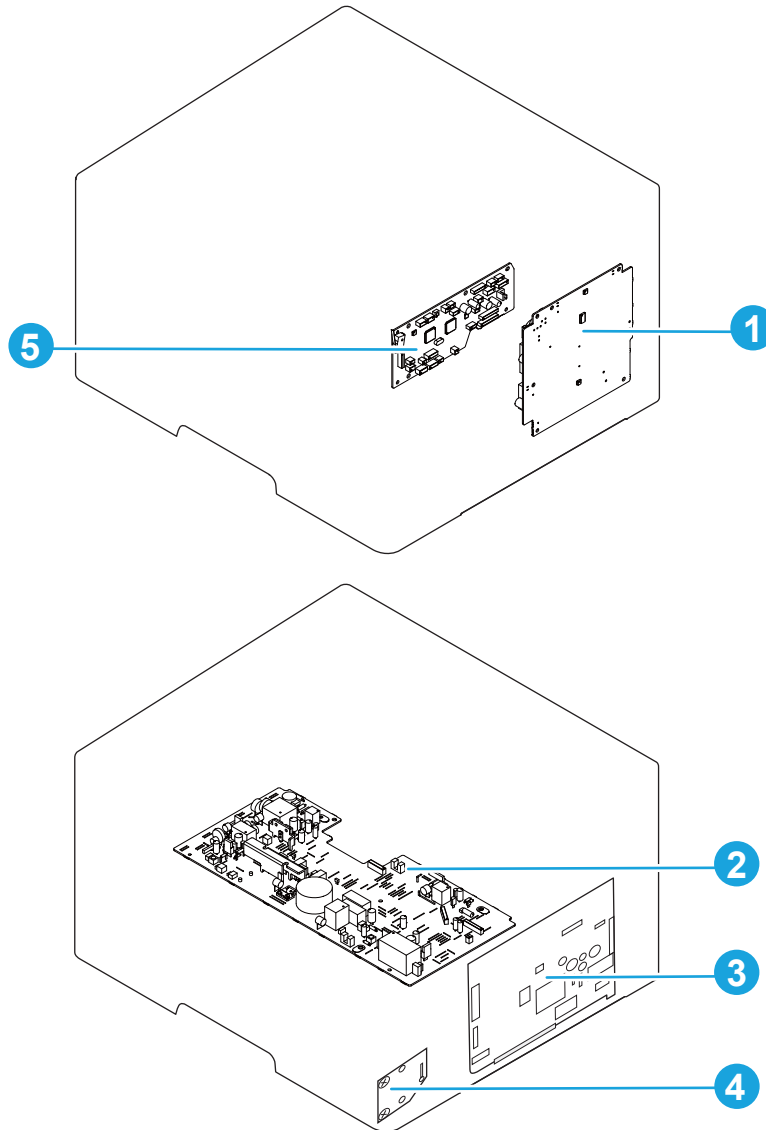
Item	Description
1	Low-voltage power supply PCA
2	High-voltage power supply PCA
3	Formatter PCA
4	Front USB PCA
5	DC controller PCA

Figure 2-8 Motor locations
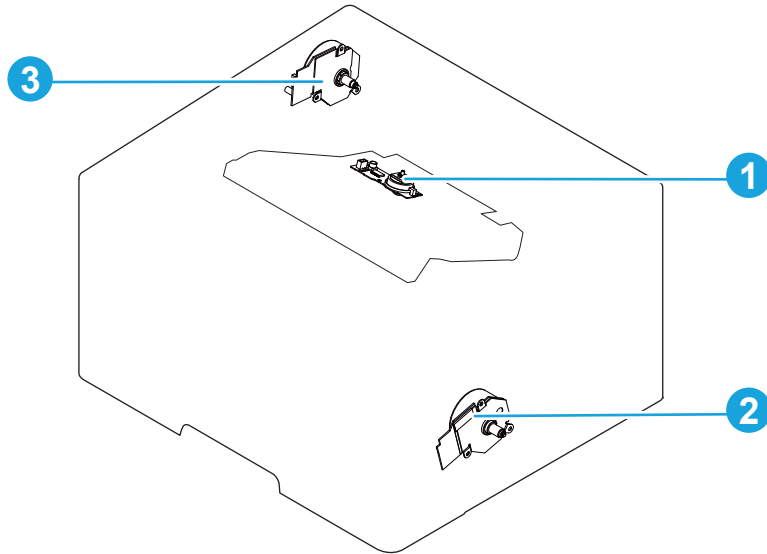
Item	Description
1	Scanner motor
2	Drum motor
3	Fuser motor

Figure 2-9 Fan assembly locations
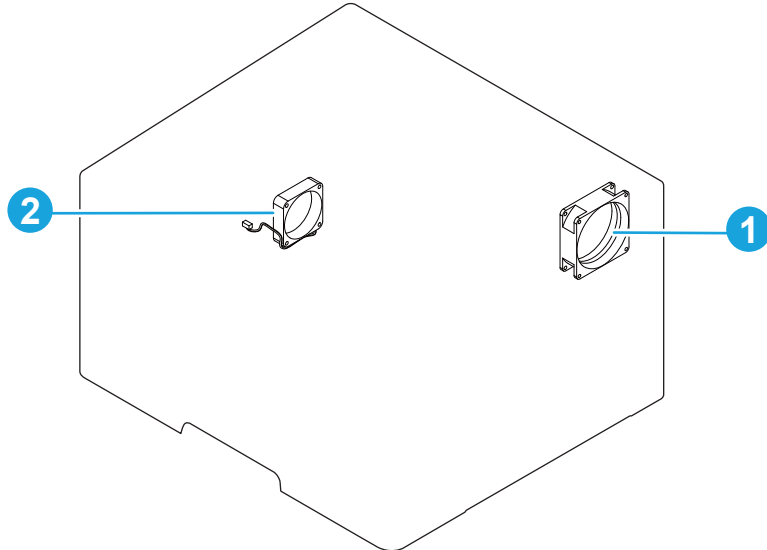
Item	Description
1	Right fan
2	Left fan

Figure 2-10 Solenoid component locations
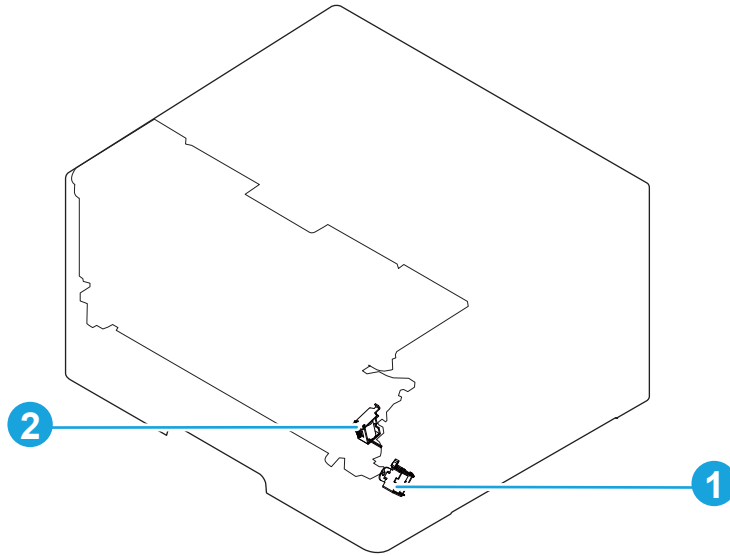
Item	Description
1	Cassette pickup solenoid
2	MP tray pickup solenoid

Switch locations

Figure 2-11 Switch locations
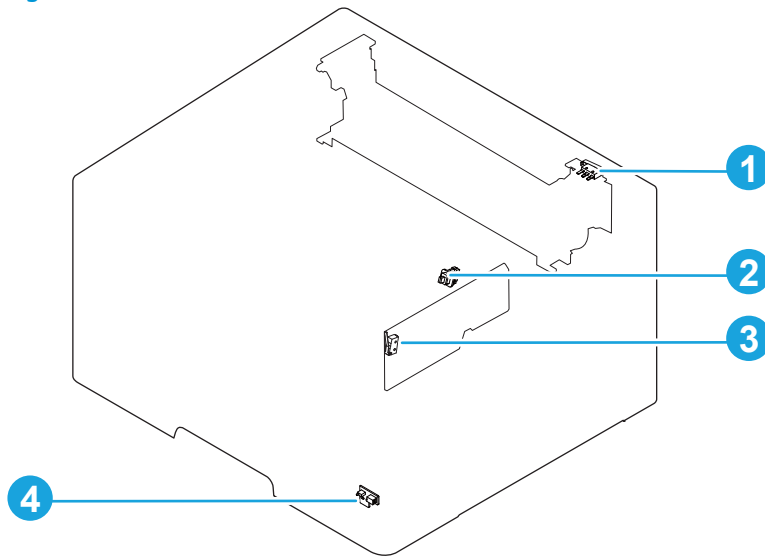
Item	Description
1	Rear interlock switch
2	Cartridge door open detection switch
3	Front interlock switch
4	Cassette-presence switch

Sensor locations

Figure 2-12 Sensor locations
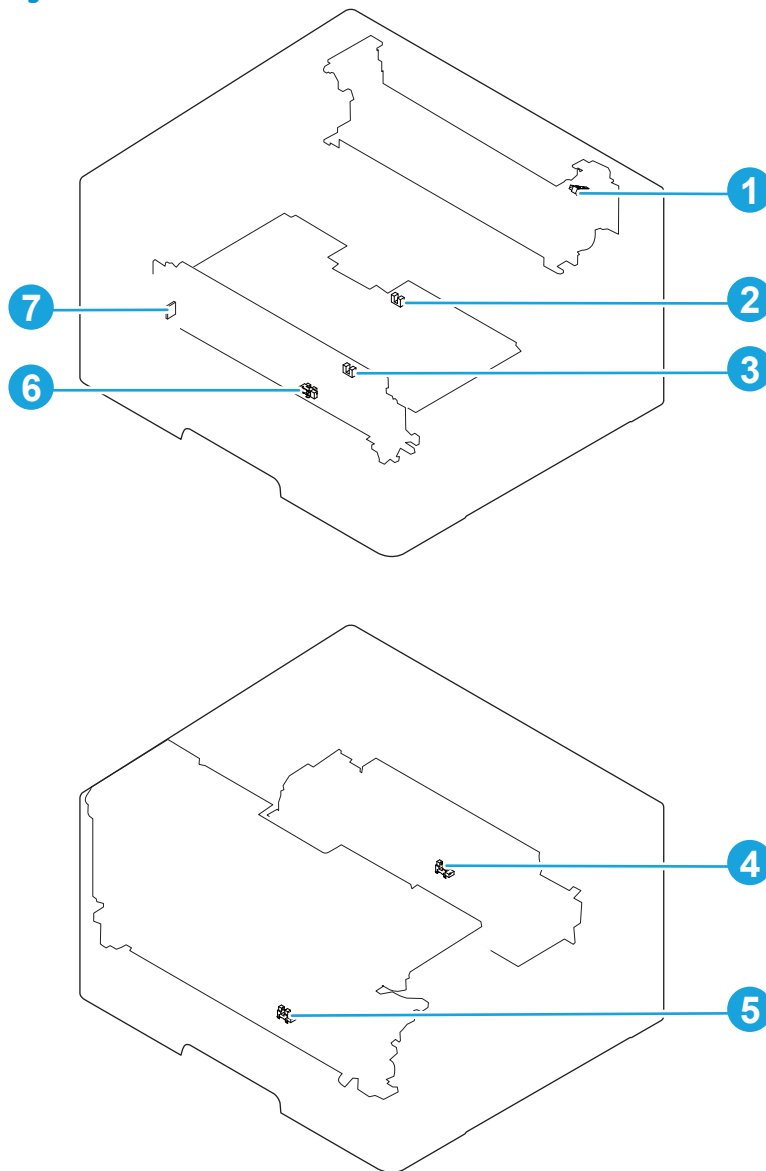
Item	Description
1	Delivery tray media-full sensor
2	Loop sensor
3	TOP sensor
4	Fuser delivery sensor
5	Cassette media-presence sensor
6	MP tray media-presence sensor
7	Environment sensor

500-sheet paper feeder accessory

Figure 2-13 500-sheet paper feeder accessory
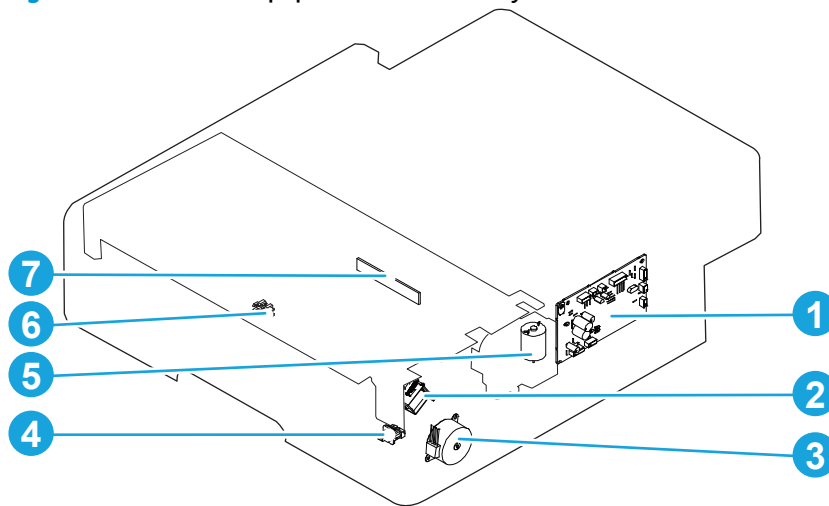
Item	Description
1	Paper feeder driver PCA
2	Paper feeder cassette pickup solenoid
3	Paper feeder cassette pickup motor
4	Paper feeder cassette-presence switch
5	Paper feeder cassette lifter motor
6	Paper feeder media feed sensor
7	Paper feeder cassette media surface sensor and media-presence sensor

Duplex unit

Figure 2-14 Duplex unit
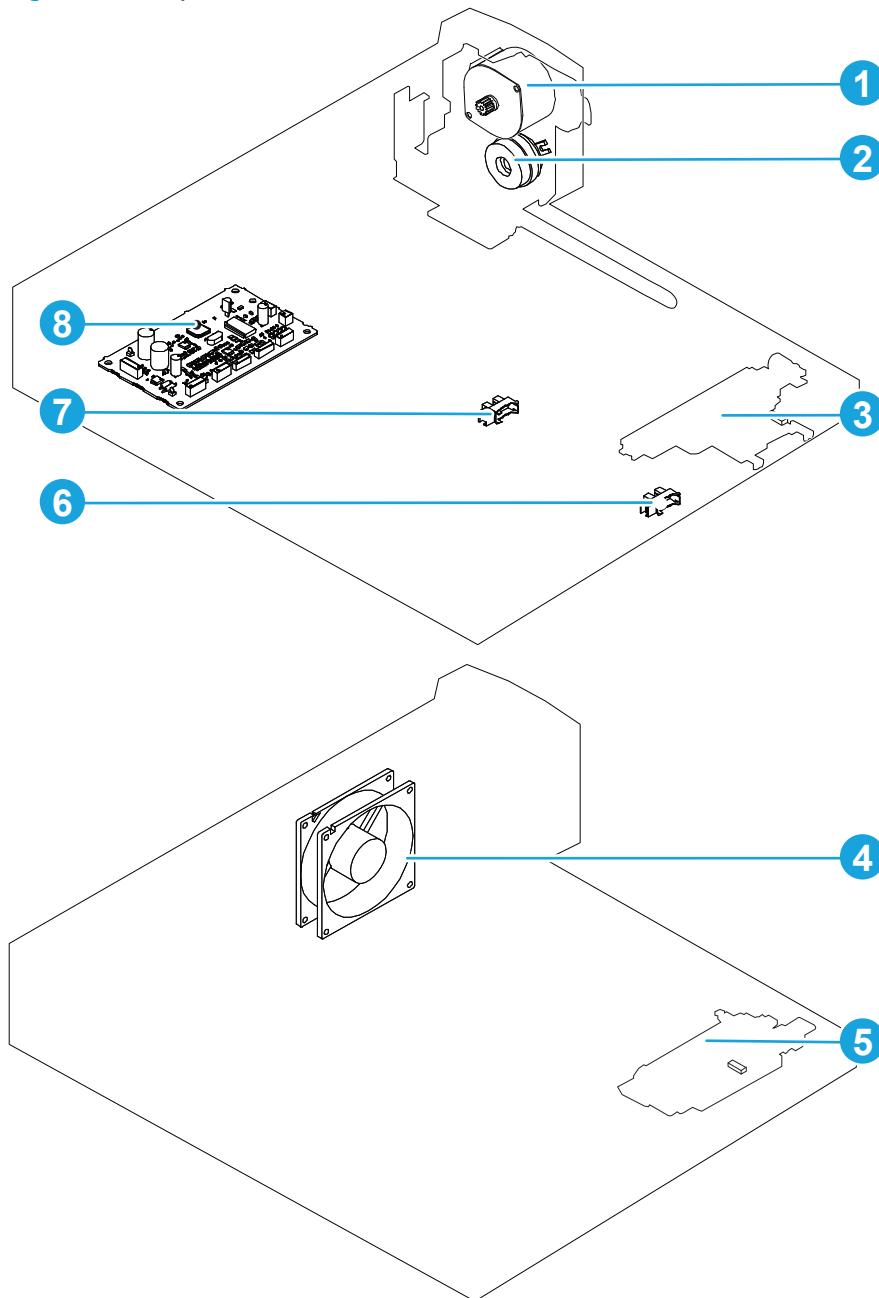
Item	Description
1	Duplex feed motor
2	Duplex feed clutch
3	Side registration sensor LED assembly
4	Duplex fan
5	Side registration sensor photoreceiver assembly
6	Duplex media feed sensor

Item	Description
7	Duplex jam sensor
8	Duplex driver PCA

General timing chart

Figure 2-15 General timing chart

Power ON

	Signal	WAIT	STBY	INTR	PRINT	LSTR	STBY
1	Print command						
2	Cassette pickup solenoid						
3	Top sensor						
4	Fuser delivery sensor						
5	TOP signal						
6	VIDEO signal						
7	Scanner motor						
8	Main motor						
9	Fuser motor						
10	Fuser heater						
11	Primary charging bias						
12	Developing bias						
13	Transfer bias						
14	Static charge eliminator bias						
15	Fuser bias						
16	Right fan						
17	Left fan						
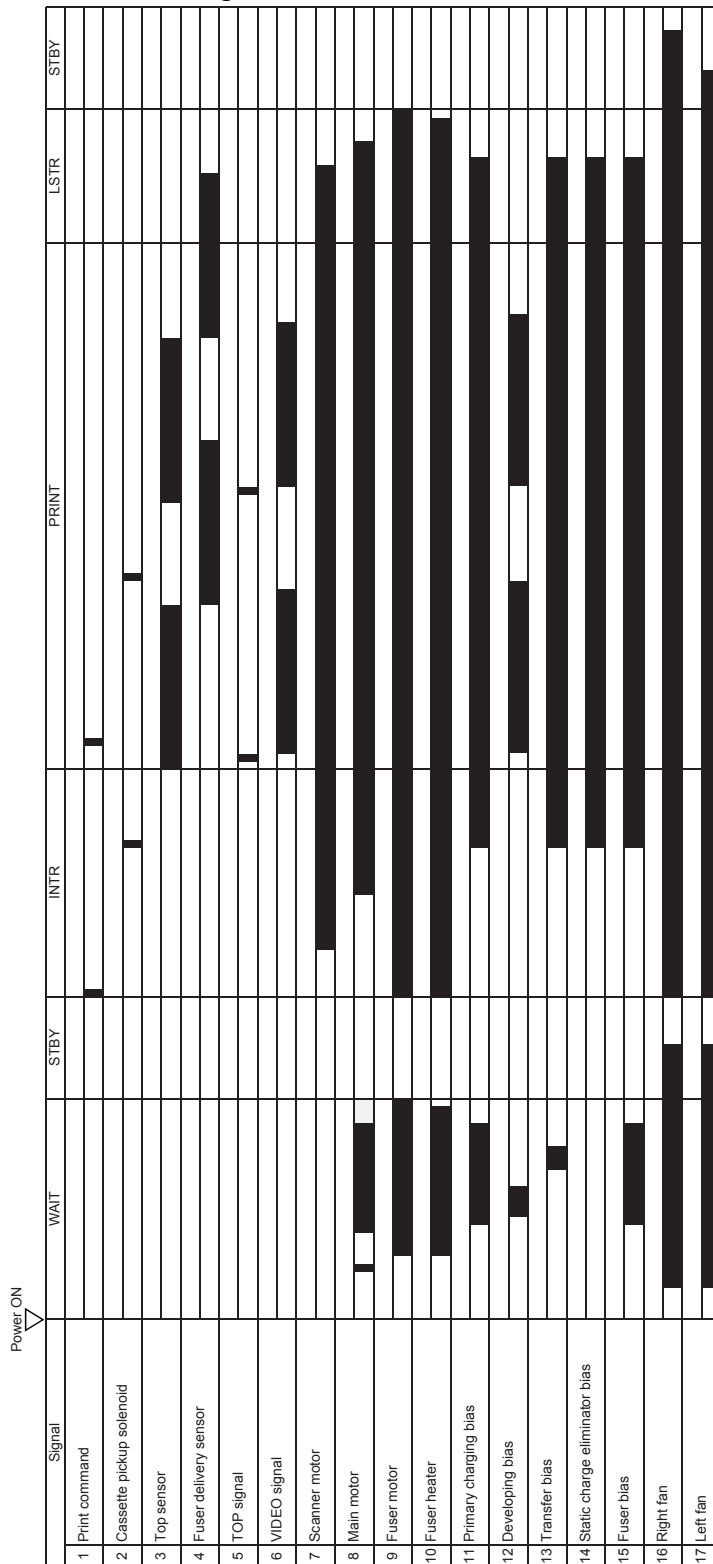
Circuit diagrams

Figure 2-16 General circuit diagram

Figure 2-17 500-sheet paper feeder

Figure 2-18 Duplex unit
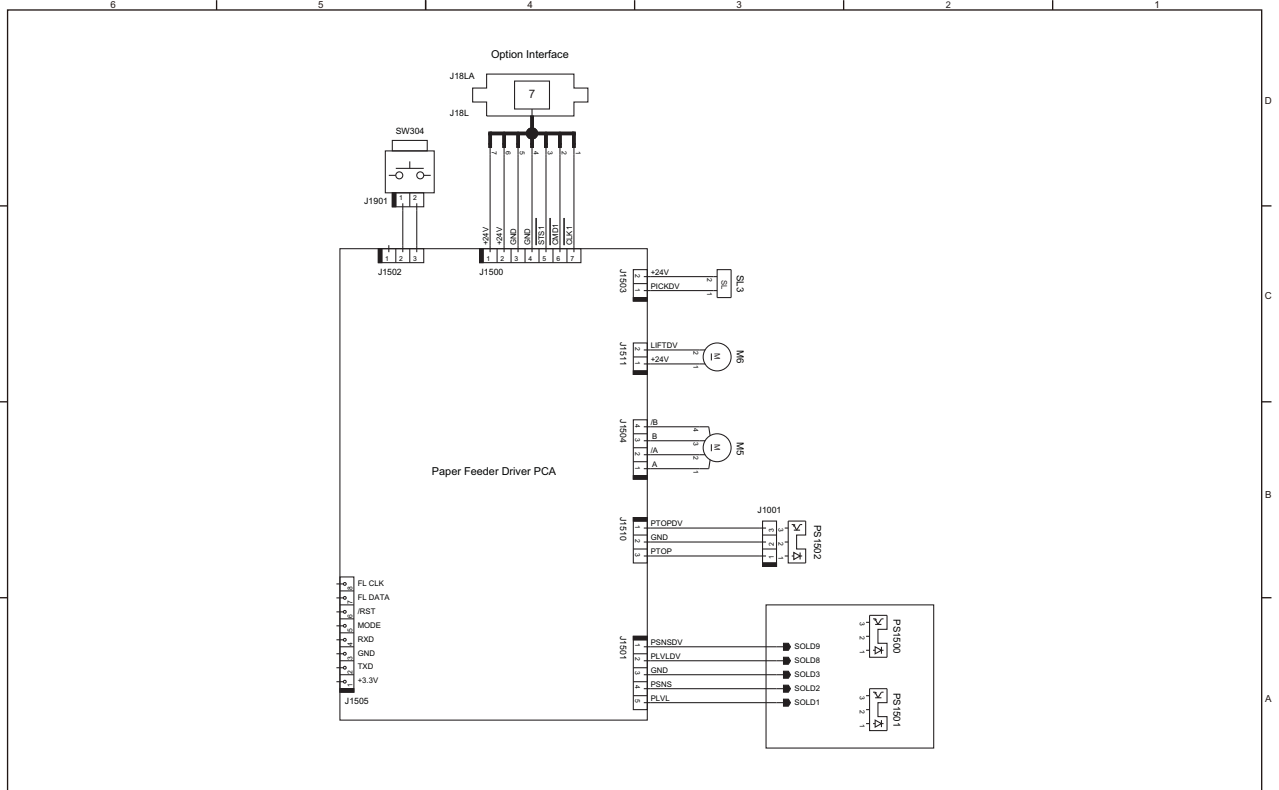
Figure 2-18 Duplex unit
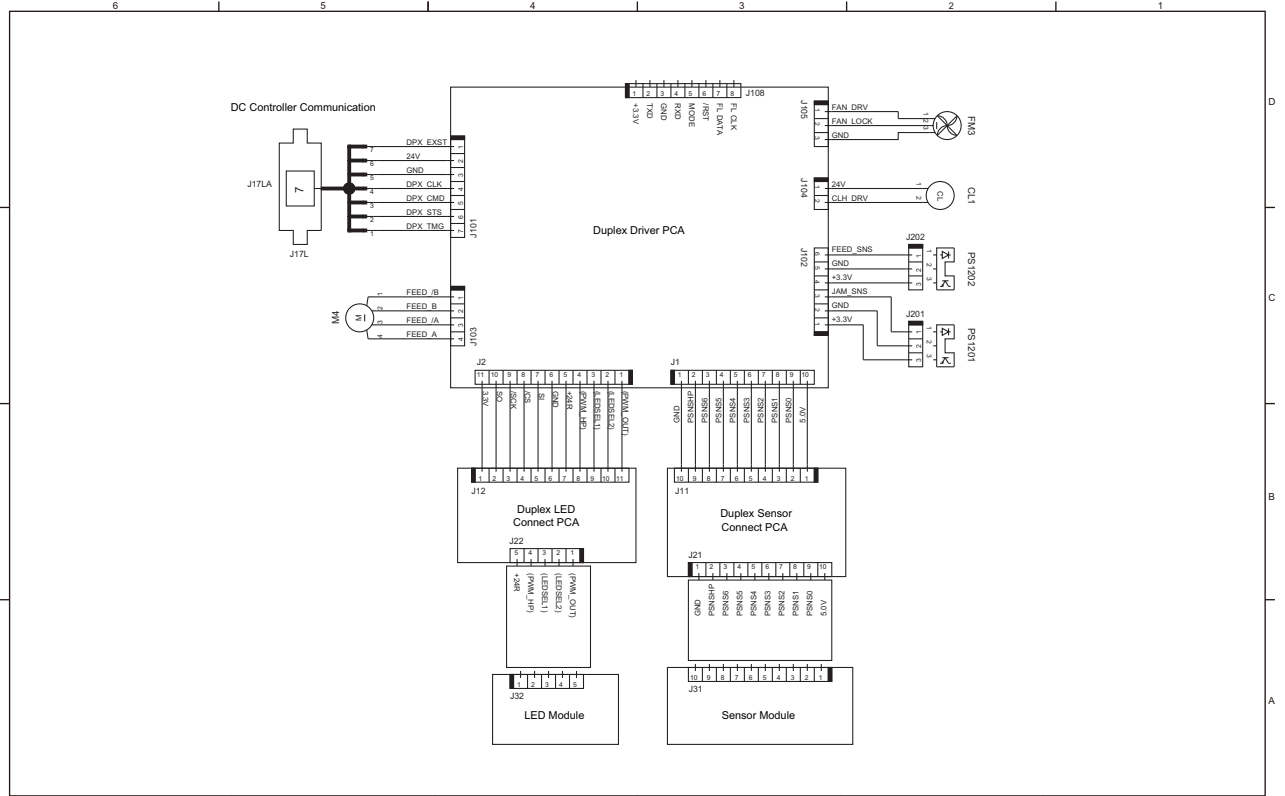
Use HP Device Toolbox (Windows)

Use the **HP Device Toolbox** for Windows to view or change product settings from your computer. This tool opens the HP Embedded Web Server for the product.

> **NOTE:** This tool is available only if you performed a full installation when you installed the product. The HP Embedded Web Server, however, is still available by opening a Web browser and entering the product IP address in the browser address box.

1. Click the **Start** button, and then click the **Programs** item.

2. Click your HP product group, and then click the **HP Device Toolbox** item.

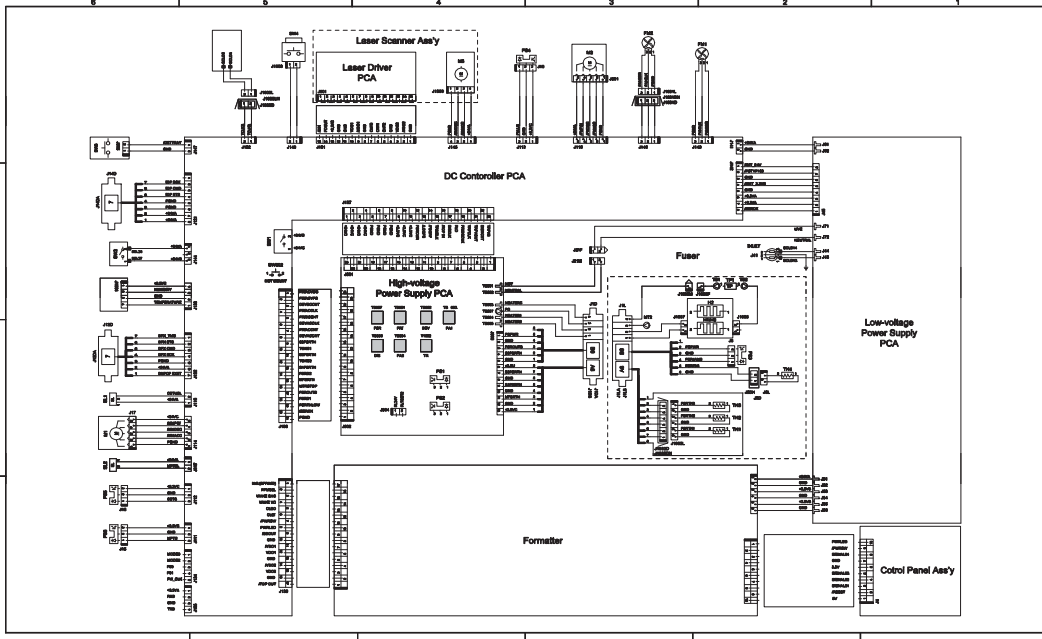| Tab or section	Description
Home tab Provides product, status, and configuration information.	• **Device Status**: Shows the product status and shows the approximate percent life remaining of HP supplies. • **Supplies Status**: Shows the approximate percent life remaining of HP supplies. Actual supply life remaining can vary. Consider having a replacement supply available to install when print quality is no longer acceptable. The supply does not need to be replaced unless the print quality is no longer acceptable. • **Device Configuration**: Shows the information found on the product configuration page. • **Network Summary**: Shows the information found on the product network configuration page. • **Reports**: Allows you to print the configuration and supplies status pages that the product generates. • **Event Log**: Shows a list of all product events and errors.
System tab Provides the ability to configure the product from your computer.	• **Device Information**: Provides basic product and company information. • **Paper Setup**: Allows you to change the paper-handling defaults for the product. • **Print Quality**: Allows you to change the print quality defaults for the product, including calibration settings. • **EcoSMART Console**: Change the default times for entering Sleep mode or Auto Power Down mode. Configure which events cause the product to wake. • **Paper Types**: Allows you to configure print modes that correspond to the paper types that the product accepts. • **System Setup**: Allows you to change the system defaults for the product. • **Service**: Allows you to start the cleaning procedure on the product. • **Save and Restore**: 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. • **Administration**: Set or change the product password. Enable or disable product features. **NOTE:** The **System** tab can be password-protected. If this product is on a network, always consult with the administrator before changing settings on this tab.
Print tab Provides the ability to change default print settings from your computer.	• **Printing**: Change the default product print settings, such as number of copies and paper orientation. These are the same options that are available on the control panel. • **PCL5**: View and change the PCL5 settings. • **PostScript**: Turn off or on the **Print PS Errors** feature.

Tab or section	Description
Networking tab Provides the ability to change network settings from your computer.	Network administrators can use this tab to control network-related settings for the product when it is connected to an IP-based network. It also allows the network administrator to set up wireless direct functionality. This tab does not appear if the product is directly connected to a computer.
HP Web Services tab	Use this tab to set up and use various Web tools with the product.

Internal print-quality test pages

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.

1. From the Home screen on the product control panel, press the OK button.

2. Select the Service menu.

3. Select Cleaning Page.

4. Load plain letter or A4 paper when you are prompted, with long edge toward the product.

5. Press the OK button to print the page.

6. Remove the printed page, follow the control panel message to load the page in Tray 1 again, and then press the OK button to begin the cleaning process.

Print the configuration page

1. From the Home screen on the product control panel, press the OK button.

2. Select the Reports menu.

3. Select Configuration Report to print the report.

Print quality troubleshooting tools

Repetitive defects ruler

Use a ruler to measure occurrences of repetitive image defects to help solve image quality problems. Place the ruler next to the first occurrence of the defect on the page. Find the distance between identical defects and use the figure below to identify the component that is causing the defect.

> **NOTE:** When printing this defect ruler, verify that any scaling options in the print driver are disabled.

Figure 2-19 Repetitive defects ruler
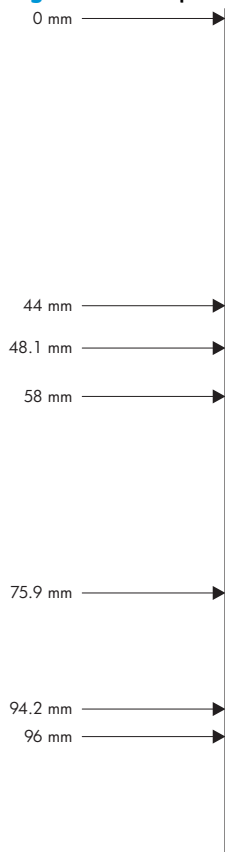
Distance between defects	Product components that cause the defect
44 mm	Toner cartridge (primary charging roller)
48.1 mm	Print engine (transfer roller)
58 mm	Toner cartridge (developer roller)
75.9 mm	Fuser (fuser film)
94.2 mm	Fuser (pressure roller)
96 mm	Toner cartridge (OPC)

Control panel menus

Setup Menu

To open this menu, press the OK button. The following sub menus are available:

- HP Web Services
- Reports
- System Setup
- Service
- Network Setup
- Quick Forms

HP Web Services

Menu item	Description
Print Information Sheet	Use Print Information Sheet to print the instructions for enabling HP Web Services on the product.

Reports menu

Menu item	Description
Menu Structure	Prints a control panel menu layout map.
Configuration Report	Prints a list of the product settings.
Supplies Status	Prints the toner cartridge status and includes the following information: ● Approximate pages remaining ● Supply level ● Serial number ● Pages printed with this supply ● First install date ● Last used date
Network Summary	Prints a list of all product network settings.
Usage Page	Displays the number of pages printed 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	Prints the service page. The service page includes information about supported paper types and other settings that are not included on the configuration page.
Default Info Page	Prints a list of the default settings on the product.

System Setup menu

In the following table, items that have an asterisk (*) indicate the factory default setting.

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.
Paper Setup	Default Paper Size	Letter	Sets the size for printing internal reports or any print job that does not specify a size.
		A4	
		Legal	**NOTE:** The default setting is determined by the choice of location during the initial product setup.
		A3	
		11 x 17 in.	
	Default Paper Type	Lists available paper types.	Sets the type for printing internal reports or any print job that does not specify a type.
	Tray 1	Paper Type	Configures the size and type for the tray.
		Paper Size	
	Tray 2	Paper Type	Configures the size and type for the tray.
		Paper Size	
	Paper Out Action	Wait forever*	Determines how the product reacts when a print job requires a paper size or type that is unavailable or when the tray is empty.
		Cancel	
		Override	• Wait forever: The product waits until you load the correct paper.
			• Override: Print on a different size paper after a specified delay.
			• Cancel: Automatically cancel the print job after a specified delay.
			• If you select either the Override or Cancel item, the control panel prompts you for the number of seconds to delay.

Menu item	Sub-menu item	Sub-menu item	Description
Energy Settings	Sleep Delay	1 minute	Specifies the amount of idle time before the product enters sleep mode.
		5 minutes*	
		15 Minutes	
		30 Minutes	
		1 Hour	
	Auto Power Down	Power Down Delay	Set the amount of elapsed time before the product turns itself off. The options are: ● Never ● 30 Minutes* ● 1 Hour ● 2 Hours ● 4 Hours ● 8 Hours ● 24 Hours
		Wake Events	Select the events that bring the product out of sleep mode. The following events are available for selection: ● USB Job ● LAN Job ● Button Press
Print Density			
Supply Settings	Black Cartridge	Very Low Setting	Stop: The product stops printing until you replace the toner cartridge. Prompt: The product stops printing and prompts you to replace the toner cartridge. You can acknowledge the prompt and continue printing. Continue*: The product alerts you that the toner cartridge is very low, but it continues printing.
		Low Threshold	Enter a percentage for the low threshold setting.
	Store Usage Data		Select where to store the product's usage data, either on the supplies or not on the supplies.
Courier Font	Regular*		Sets Courier font values.
	Dark		

Service menu

In the following table, items that have an asterisk (*) indicate the factory default setting.

Menu item	Sub-menu item	Sub-menu item	Description
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.
			Load plain letter or A4 paper when you are prompted, with the long edge toward the printer. Press the OK button to print the page.
			Remove the printed page, follow the control panel message to load the page in Tray 1 again, and then press the OK button to begin the cleaning process.
USB Speed	High* Full		Sets the USB speed for the USB connection to the computer. For the product to actually operate at high speed, it must have high speed enabled and be connected to an EHCI host controller that is also operating at high speed. This menu item does not reflect the current operating speed of the product.
Less Paper Curl	On Off*		When printed pages are consistently curled, this option sets the product to a mode that reduces curl.
Archive Print	On Off*		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.
Firmware Datecode			Displays the current firmware datecode
Restore Defaults			Sets all settings to the factory default values
Signature Check	Cancel if Invalid* Prompt if Invalid		Validates HP firmware downloads.

Menu item	Sub-menu item	Sub-menu item	Description
LaserJet Update	Check for Updates Now	Install Now	
		Remind Me Later	
		Skip this Update	
	Manage Updates	Allow Downgrade	
		Check Automatically	
		Prompt Before Install	
		Allow Updates	

Network Setup menu

In the following table, items that have an asterisk (*) indicate the factory default setting.

Menu item	Sub-menu item	Description
IPv4 Config Method	DHCP	
	BootP	
	Auto IP	
	Manual	
Network Services	IPv4	Enables or disables the IPv4 and IPv6 protocols. By default, each protocol is enabled.
	IPv6	
Show IP Address		Display IP address on the product control panel.
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	
Security	HTTPS Enforcement	
	Firewall	
	Access Control List	
	802.1X	
	Reset All Security	
Restore Defaults		Resets all network configurations to their factory defaults.

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	

Interpret control panel messages

Control panel message types

Alert and warning messages appear temporarily and might require you to acknowledge the message by pressing the OK button to resume or by pressing the ✕ button 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 printing job after the warning has appeared for 10 seconds without acknowledgement.

Critical error messages can indicate some kind of failure. Turning off and then turning on the power might fix the problem.

Control panel messages

Rear door open

Description

The product rear door is open.

Recommended action

Close the rear doo.

49 Error, Turn off then on

Description

The product experienced an internal error.

Recommended action

Turn the product off, wait at least 30 seconds, and then turn the product on and wait for it to initialize.

If you are using a surge protector, remove it. Plug the product directly into the wall socket. Turn the product power on.

If the message persists, contact HP support.

50.x Fuser Error

Description

The product has experienced an error with the fuser.

Recommended action

Turn the product power off, wait at least 30 seconds, and then turn the product power on and wait for it to initialize.

Turn off the product, wait at least 25 minutes, and then turn on the product.

If you are using a surge protector, remove it. Plug the product directly into the wall socket. Turn the product power on.

If the message persists, contact HP support.

51.XX Error

Description

The product has experienced an internal hardware error.

Recommended action

Turn the product power off, wait at least 30 seconds, and then turn the product power on and wait for it to initialize.

If you are using a surge protector, remove it. Plug the product directly into the wall socket. Turn the product on.

If the message persists, contact HP support.

54.XX Error

Description

The product has experienced an error with one of the internal sensors.

Recommended action

Turn the product power off, wait at least 30 seconds, and then turn the product power on and wait for it to initialize.

If you are using a surge protector, remove it. Plug the product directly into the wall socket. Turn the product power on.

If the message persists, contact HP support.

55.X Error

Description

The product has experienced an internal error.

Recommended action

Turn the product power off, wait at least 30 seconds, and then turn the product power on and wait for it to initialize.

If you are using a surge protector, remove it. Plug the product directly into the wall socket. Turn the product power on.

If the message persists, contact HP support.

57 Fan Error, Turn off then on

Description

The product has experienced a problem with its internal fan.

Recommended action

Turn the product power off, wait at least 30 seconds, and then turn the product power on and wait for it to initialize.

If you are using a surge protector, remove it. Plug the product directly into the wall socket. Turn the product power on.

If the message persists, contact HP support.

59.X Error

Description

The product has experienced a problem with one of the motors.

Recommended action

Turn the product power off, wait at least 30 seconds, and then turn the product power on and wait for it to initialize.

If you are using a surge protector, remove it. Plug the product directly into the wall socket. Turn the product power on.

If the message persists, contact HP support.

79 Error Turn off then on

Description

The product has experienced an internal firmware error.

Recommended action

Turn the product power off, wait at least 30 seconds, and then turn the product power on and wait for it to initialize.

If you are using a surge protector, remove it. Plug the product directly into the wall socket. Turn the product power on.

If the message persists, contact HP support.

Black Cartridge Low

Description

The toner cartridge is nearing the end of its useful life.

Recommended action

Printing can continue, but consider having a replacement toner cartridge on hand.

Black Very Low

Description

The toner cartridge is at the end of its useful life. A customer configurable option on this product is "Prompt to Remind Me in 100 pages, 200 pages, 300 pages, 400 pages, or never." This option is provided as a customer convenience and is not an indication these pages will have acceptable print quality.

Recommended action

To ensure optimal print quality, HP recommends replacing the toner cartridge at this point. You can continue printing until you notice a decrease in print quality. Actual cartridge life may vary.

Once an HP toner cartridge has reached very low, HP's Premium Protection Warranty on that toner cartridge has ended. All print defects or cartridge failures incurred when an HP toner cartridge is used in continue at very low mode will not be considered to be defects in materials or workmanship in the toner cartridge under the HP Print Cartridge Warranty Statement.

Cleaning

Description

The product periodically performs a cleaning procedure to maintain the best print quality.

Recommended action

Wait for the cleaning process to finish.

Device error, press OK

Description

An internal error occurred.

Recommended action

Press the OK button to resume the job.

Front door open

Description

The product front door is open.

Recommended action

Close the front door.

Genuine HP supply installed

Description

A genuine HP toner cartridge was installed.

Recommended action

No action necessary.

Invalid driver Press OK

Description

You are using an incorrect print driver.

Recommended action

Select the correct print driver.

Jam in Tray 1, Clear jam and then press OK

Description

The product has detected a jam.

Recommended action

Clear the jam from the tray, and then press OK.

If the message persists, contact HP support.

Load Tray 1 Press OK for available media

Description

The tray is empty.

Recommended action

Load paper into the tray to continue printing. Press the OK button to select a different tray.

Load Tray 1 <TYPE> <SIZE>, Press OK to use available media

Description

The tray is not configured for the paper type and size that the print job is requesting.

Recommended action

Load the paper required by the job into Tray 1, or press the OK button to use the paper currently in the tray.

Load Tray 1, <PLAIN> <SIZE> / Cleaning mode, OK to start

Description

The product is ready to process the cleaning operation.

Recommended action

Load Tray 1 with plain paper in the size indicated, and then press the OK button.

Manual Duplex Load Tray 1, Press OK

Description

The first side of a manual duplex job has printed, and the page needs to be loaded to process the second side.

Recommended action

Retrieve the printed stack from the output bin, and place it with the printed-side facing down in Tray 1. If prompted, press the appropriate control panel button to continue.

Manual feed <SIZE> <TYPE>, Press OK to use available media

Description

The product is set for manual feed mode.

Recommended action

Press the OK button to use available media *or* load the correct paper into Tray 1.

Memory is low. Press OK.

Description

The product memory is almost full.

Recommended action

Press the OK button to finish the job, or press the ✕ button to cancel the job.

Break the job into smaller jobs that contain fewer pages.

Misprint, Press OK

Description

Paper has been delayed as it moves through the product.

Recommended action

Press the OK button to clear the message.

To avoid this problem, try the following solutions:

1. Verify the paper in the tray matches the paper sized defined in the print job.

2. Adjust the paper guides in the tray. Make sure the front paper guide is pushing the paper against the back edge of the tray.

3. Use paper that meets HP specifications. Store paper unopened in its original packaging.

4. Use the product in an area that meets the environmental specifications for this product.

Print failure, press OK. If error repeats, turn off then on.

Description

The product cannot process the page.

Recommended action

Press the OK button to continue printing the job, but output might be affected.

If the error persists, turn the power off and then on. Resend the print job.

Tray 1 <size> press [OK] to modify

Description

The tray was closed and the current tray size configuration displays.

Recommended action

Press [OK] to change the size configuration or press Cancel to ignore the message and keep the current setting.

> **NOTE:** If no action is taken with fifteen seconds, the message automatically clears and the display returns to Ready status.

Unexpected size in Tray 1 Load <size> Press OK

Description

The product has detected paper in the tray that does not match either the paper size specified by the print job, or the configuration for the tray.

Recommended action

Load the correct paper specified by the print job into the tray, or configure the tray for the size that you have loaded.

Event-log messages

Print the event log

1. Make sure the product is in the Ready state.

2. From the Home screen on the product control panel, press the OK button.

3. Press the left arrow button, and then quickly press the Cancel ✕ button.

4. The product returns to the Ready state. Press the OK button to reopen the menus.

5. Select the 2ndary Service menu.

6. Select the Service Reports menu.

7. Select the Error Report item.

Show an event log

You can use HP Device Toolbox to view the event log from a computer.

> **NOTE:** This tool is available only if you performed a full installation when you installed the product.

1. Click the **Start** button, and then click the **Programs** item.

2. Click your HP product group, and then click the HP Device Toolbox item.

3. Click the **Home** tab, and then click the **Event Log** item. The event log shows a list of all product events and errors.

Event log messages

The following table contains any event log codes for this product that correspond to a control panel error message. To resolve these events, consult the control panel error message.

Table 2-4 Event-log messages

Event code	Description
13.0000	Paper jam
20.0000	Memory out
21.0000	Page misfeed or mispick
41.2000	Beam detect malfunction

Table 2-4 Event-log messages (continued)

Event code	Description
41.3000	Unexpected size
50.0000	Fuser error
50.1000	Low fuser temperature error
50.3000	High fuser temperature error
50.4000	Fuser drive circuit error
51.0000	Beam detect or laser error
52.0000	Engine laser scanner error
55.3000	Engine-formatter communication error
55.4000	Engine communication timeout error
57.0000	Fan motor error
57.0600	Fan motor error

Some product events do not produce a message that displays on the control panel. Instead, they are only recorded in the event log.

Table 2-5 Event-log-only messages

Event code	Description	Solution
50.2000	Slow fuser error	
50.7000	Fuser open error	
	Low sub-thermistor fuser error	
	High sub-thermistor fuser error	
51.2000	Black scanner laser error (inline devices only)	
54.0100	Environmental sensor error	Verify that the DC controller connectors are firmly connected.
		If the error persists, replace the temperature/humidity sensor.
		If the error persists, replace the DC controller.
54.0600	Density sensor error	Verify that the cables between the DC controller is firmly connected.
54.1100	Black density out of range	If the error persists, replace the misregistration sensor.
54.1200	Black density measurement abnormality	If the error persists, replace the DC controller.
54.1800	Black toner level sensor error	1. Turn off the power by using the power switch, and then wait at least 30 seconds. 2. Turn on the power and wait for the product to initialize. If the error persists, replace the DC controller.

Table 2-5 Event-log-only messages (continued)

Event code	Description	Solution
54.2100	Beam detect (BD) error	If the error persists, replace the DC controller.
		If the error persists, replace the product.
54.2500	Top-of-page sensor error	Verify that the DC controller connectors are firmly connected.
		If the error persists, replace the DC controller.

Clear jams

Jam locations

Jams can occur in these locations:
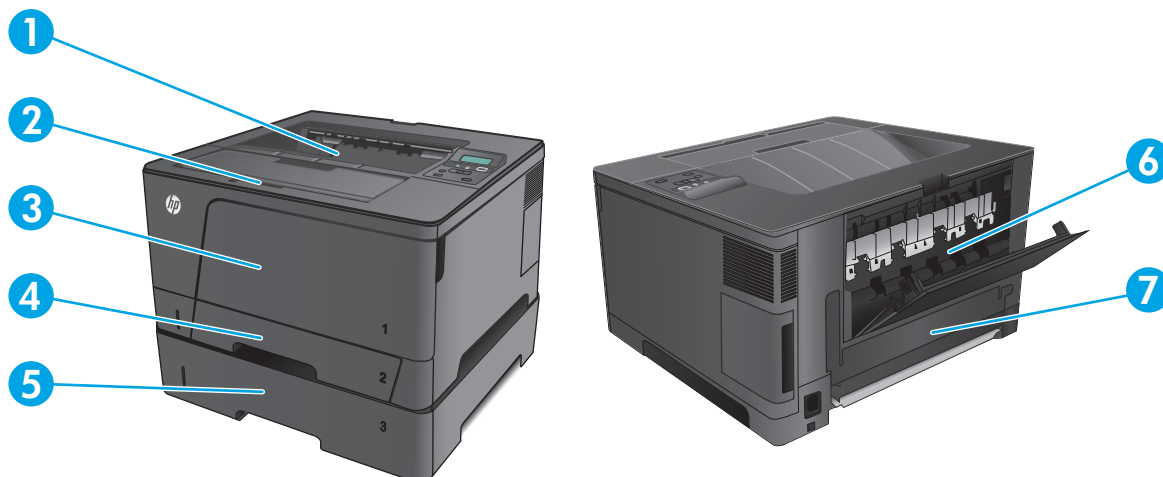
1	Output bin
2	Print cartridge area
3	Tray 1
4	Tray 2
5	Optional Tray 3 (M706n model only)
6	Rear door
7	Duplex unit area (M706n model only)

Loose toner might remain in the product after a jam. This problem typically resolves itself after a few sheets have been printed.

Experiencing frequent or recurring 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.

8. Verify that the tray is configured correctly for the paper type and size.

    a. On the product control panel, press the OK button.

    b. Open the following menus:

        ● **System Setup**

        ● **Paper Setup**

    c. Verify the tray is configured for the paper type and size.

9. Make sure the printing environment is within recommended specifications.

Clear jams in Tray 1

1. If most of the sheet of paper is visible in the tray, slowly pull the jammed paper out of the product using both hands.

    If most of the sheet of paper has been pulled inside the product or no paper is visible, continue with the following steps.
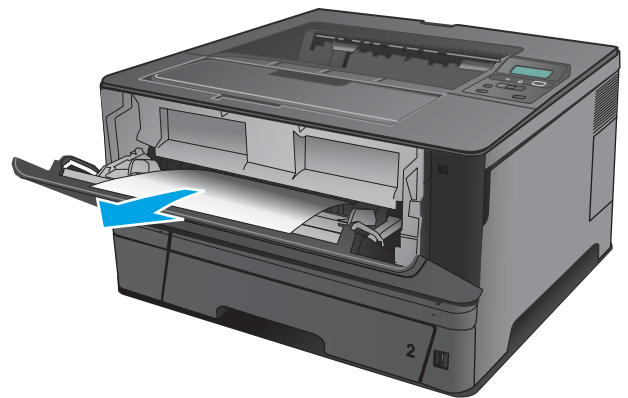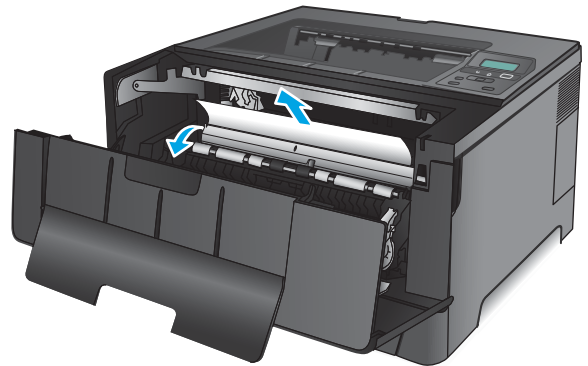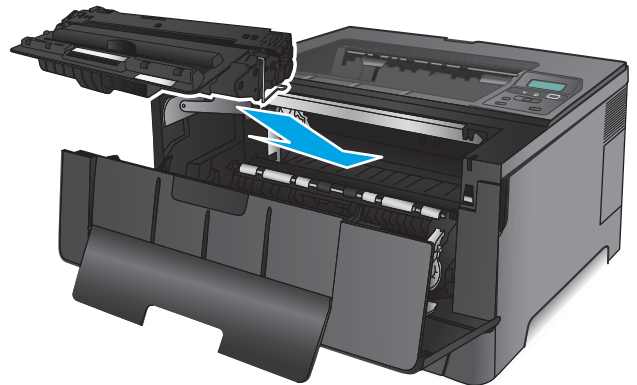
2. Open the front door.
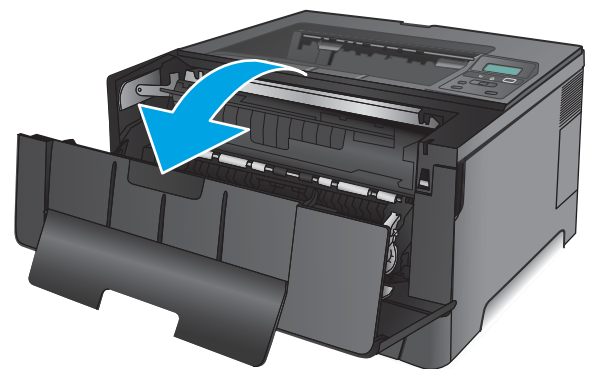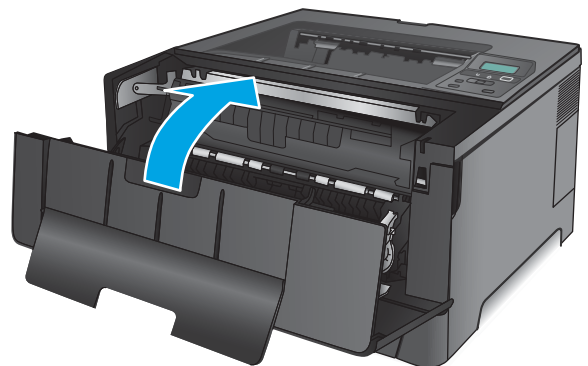
3. Remove the toner cartridge.
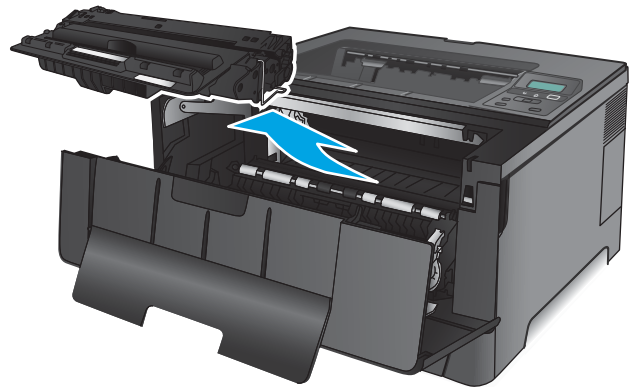
4. Lift the jam-plate and carefully remove any jammed paper. Use both hands to remove jammed paper to avoid tearing the paper.
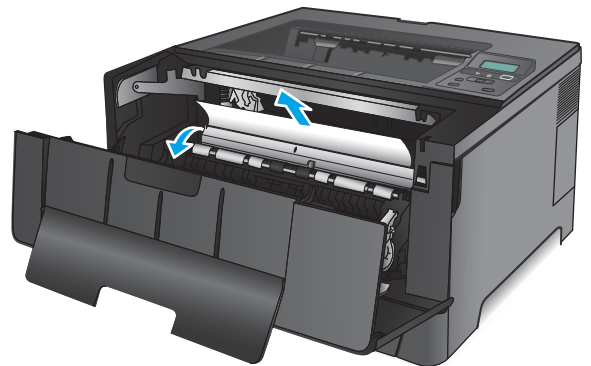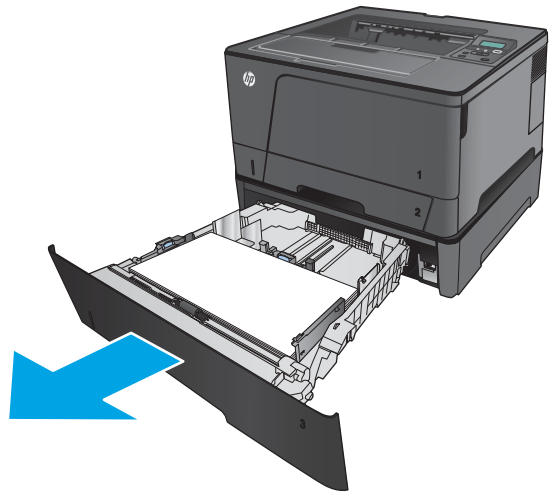
5. Reinsert the toner cartridge.
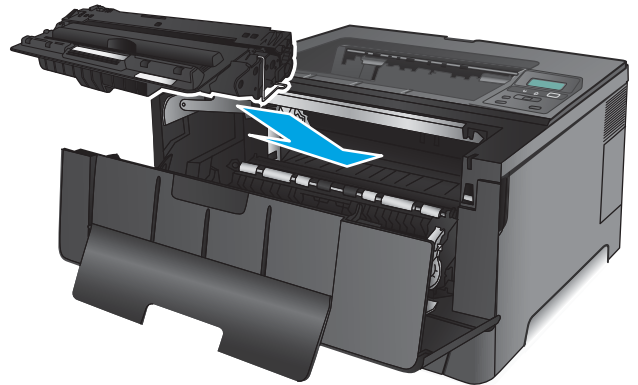
6. Close the front door.
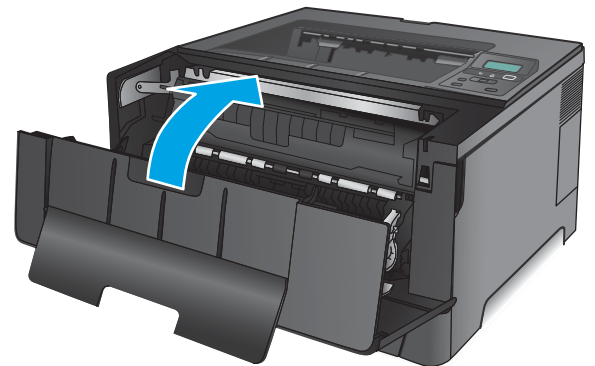
Clear jams in Tray 2

1. Remove the tray from the product.
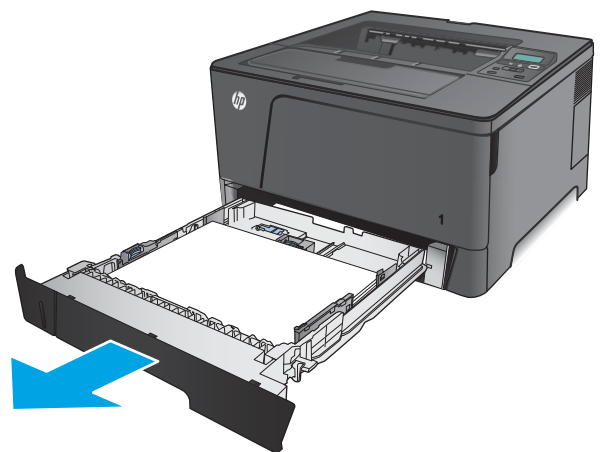
2. Remove the paper from the tray, and discard any damaged paper.
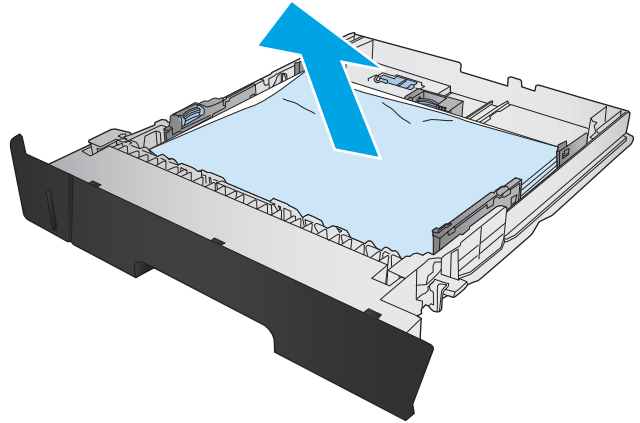
3. Make sure the paper guides are adjusted for the correct paper size. If necessary, unlock the tray using the slide lock at the rear of the tray, and then adjust to the correct paper size.
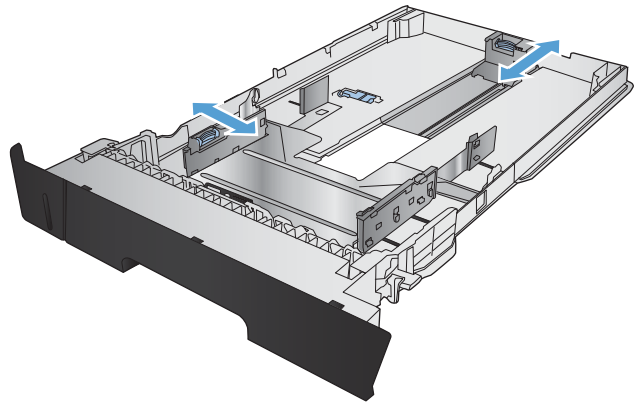
4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.
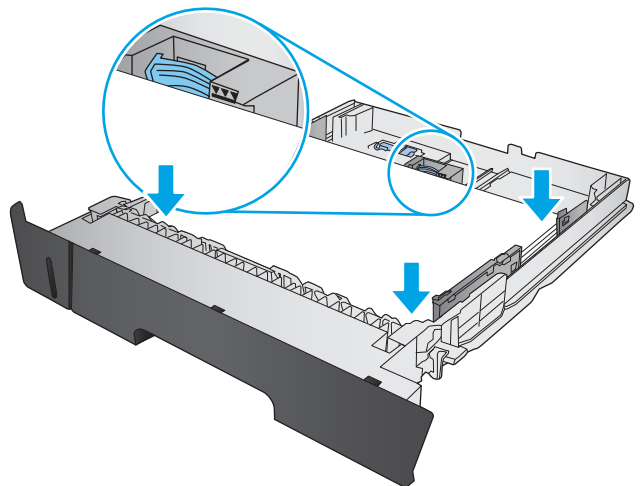
5. Reinsert and close the tray.
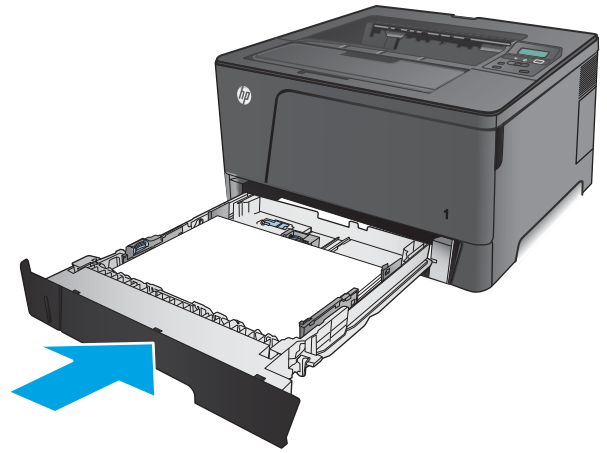
6. Open the front door.
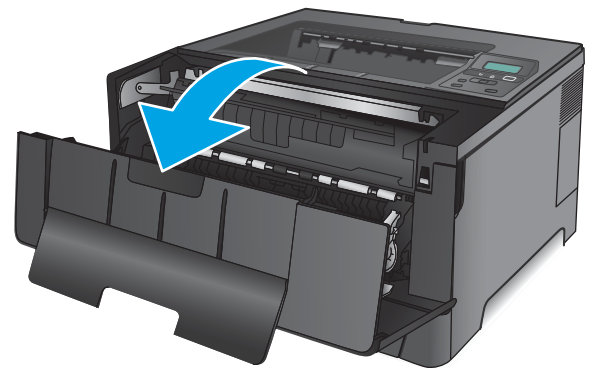
7. Remove the toner cartridge.
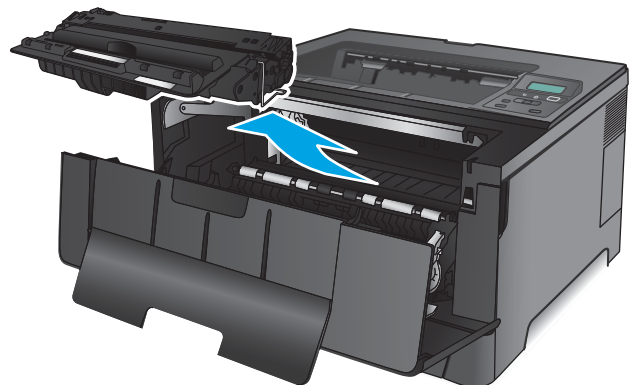
8. Lift the jam-plate and carefully remove any jammed paper. Use both hands to remove jammed paper to avoid tearing the paper.

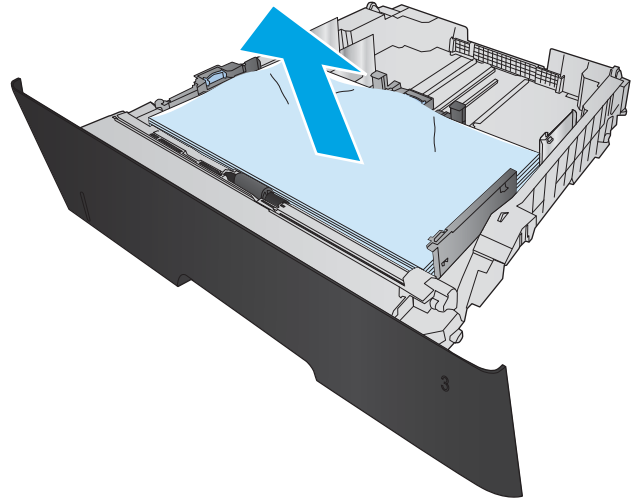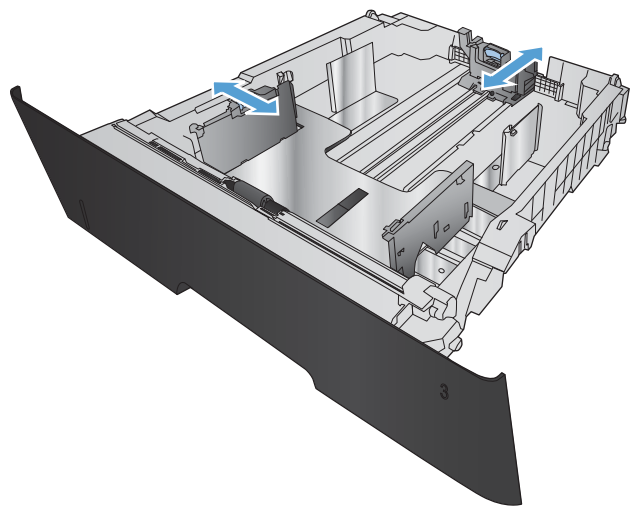**9.** Reinsert the toner cartridge.

10. Close the front door.

Clear jams in Tray 3 (M706n model only)

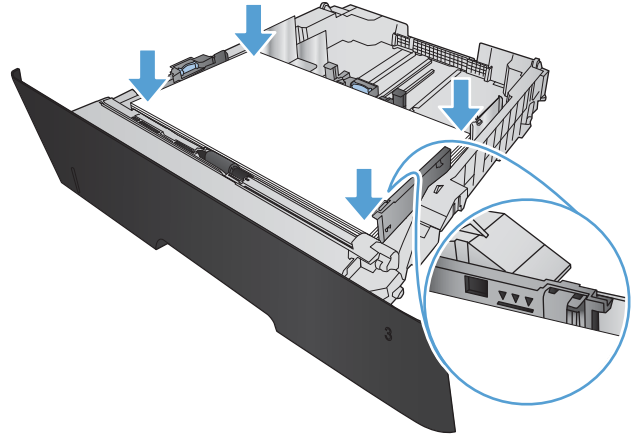1. Remove the tray from the product.

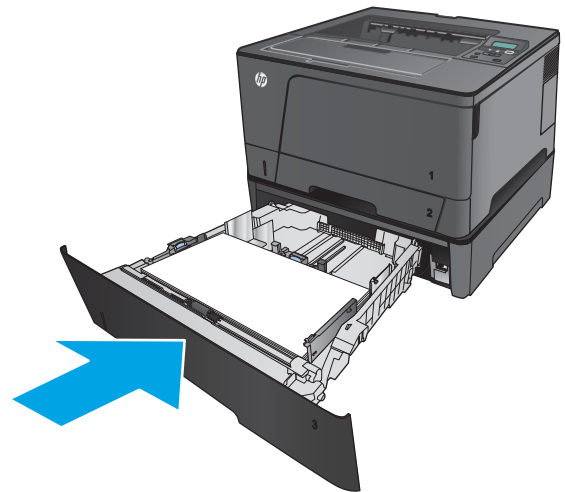2. Remove the paper from the tray, and discard any damaged paper.

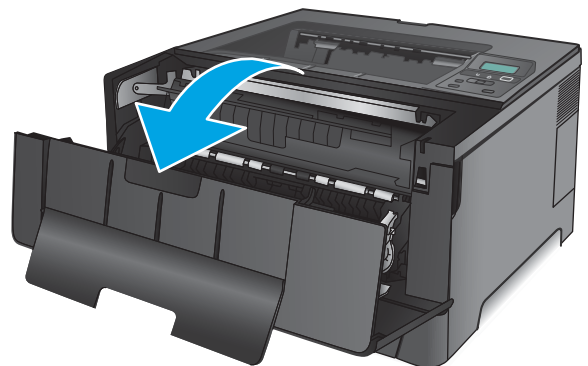3. Make sure the paper guides are adjusted for the correct paper size.

4. Load the paper into the tray. Make sure that the stack is flat at all four corners and that the top of the stack is below the maximum-height indicators.
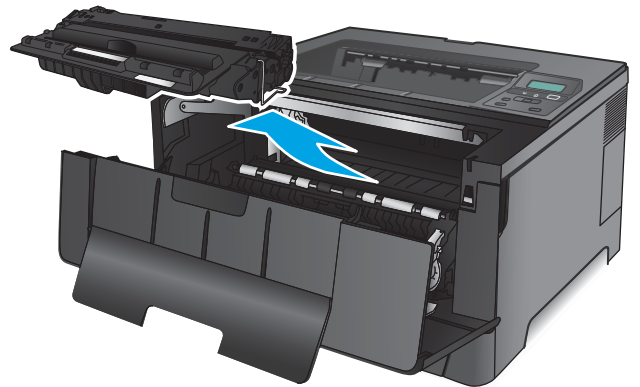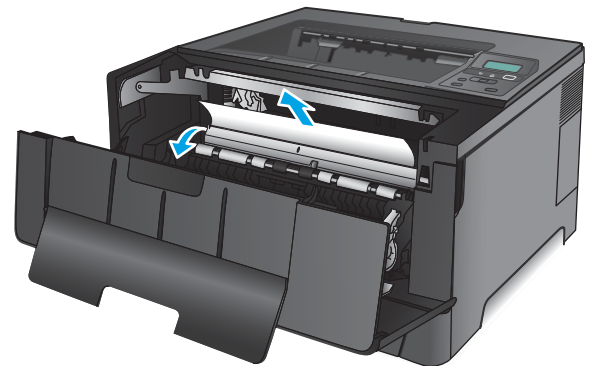
5. Reinsert and close the tray.

6. Open the front door.

7. Remove the toner cartridge.

8. Lift the jam-plate and carefully remove any jammed paper. Use both hands to remove jammed paper to avoid tearing the paper.

9. Reinsert the toner cartridge.

10. Close the front door.

Clear jams in the toner-cartridge area
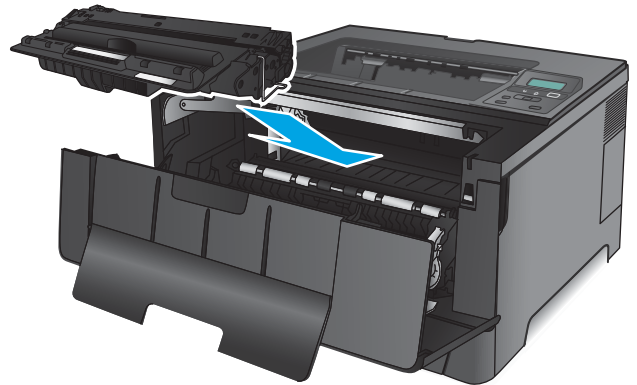
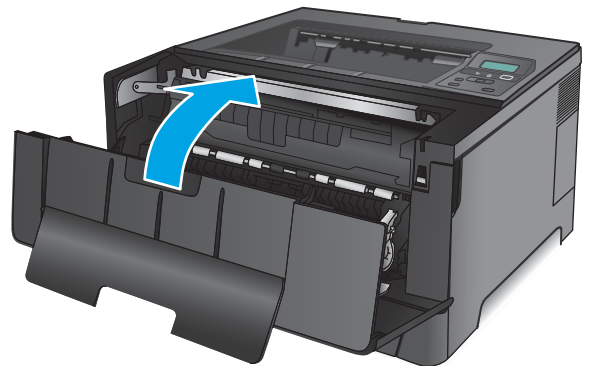**1.** Open the front door.

2. Remove the toner cartridge.
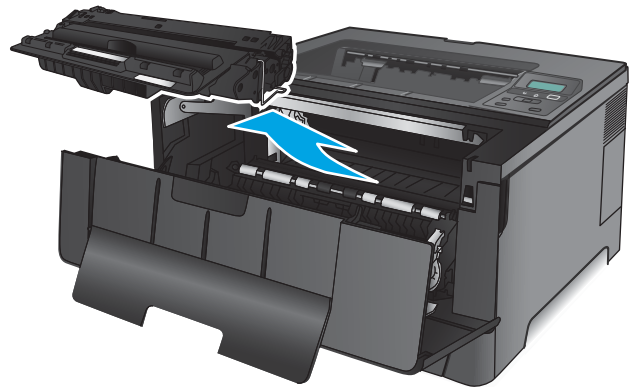
3. Lift the jam-plate and carefully remove any jammed paper. Use both hands to remove jammed paper to avoid tearing.
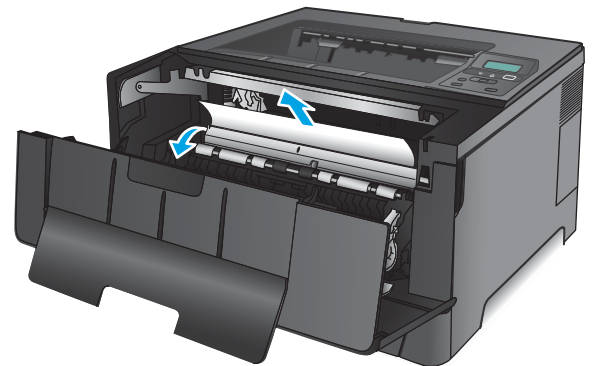
4. Reinsert the toner cartridge.

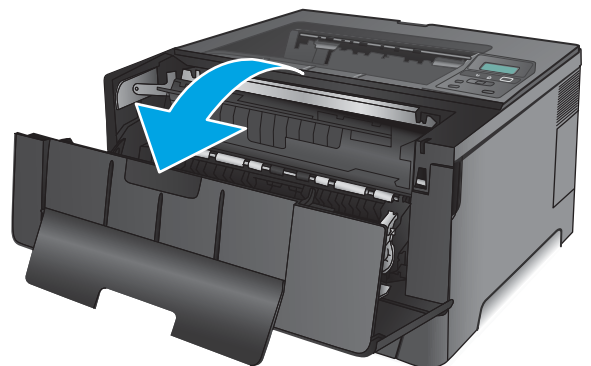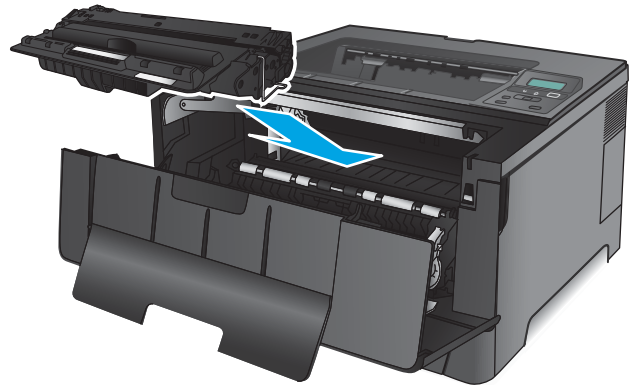**5.** Close the front door.
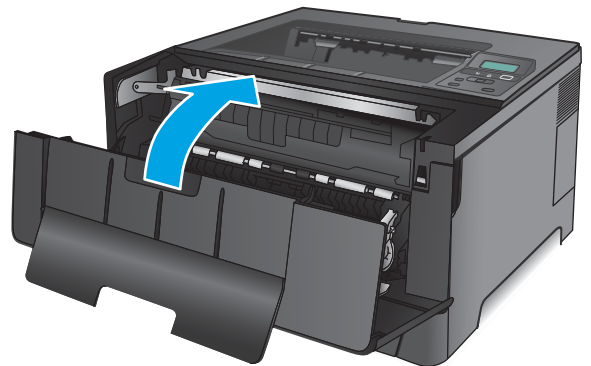
Clear jams in the rear door and fuser area

1. Open the front door.
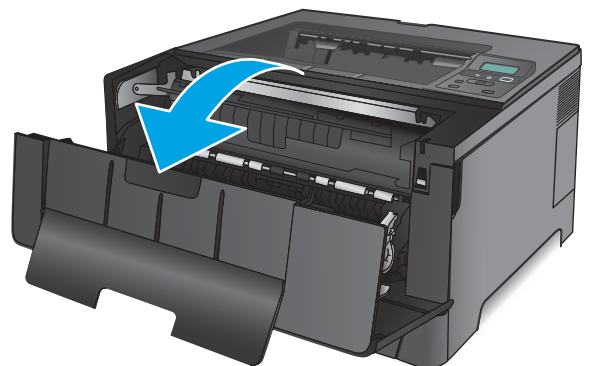
2. Open the rear door to check for jammed paper.
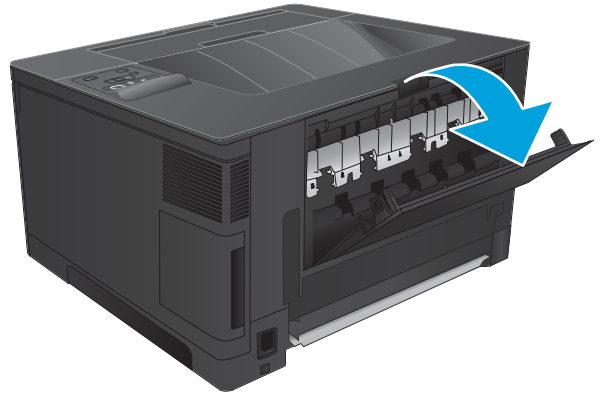
3. Remove any jammed paper. Use both hands to pull out the paper to avoid tearing.
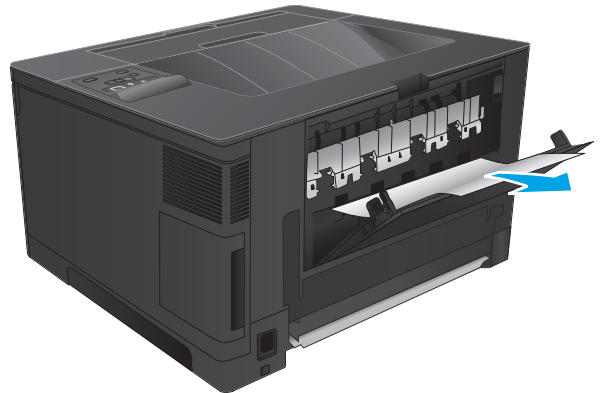
4. Close the rear door.
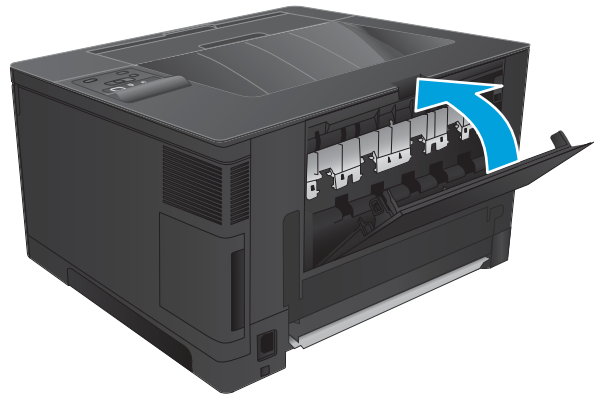
5. Close the front door.
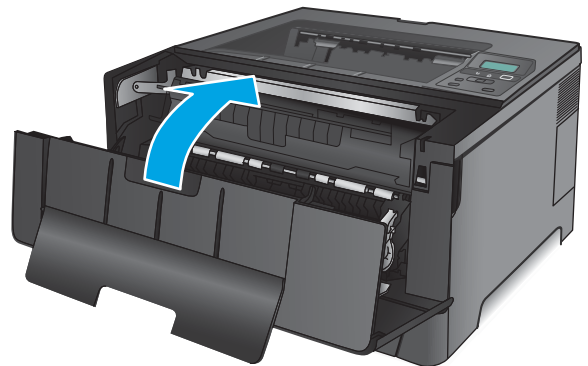
Clear jams in the output bin

1. If paper is visible in the output bin, grasp the leading edge with both hands and slowly remove it.

2. Open the rear door to check for jammed paper.
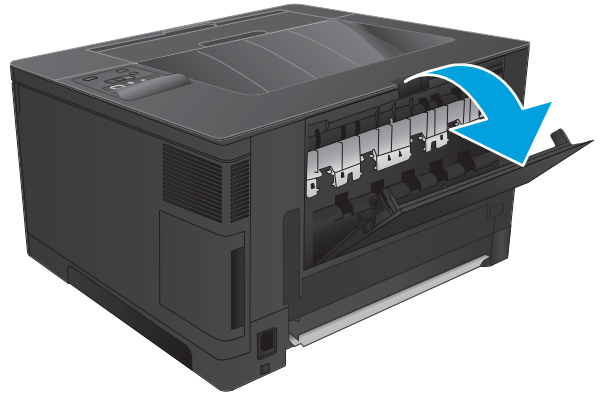
3. Remove any jammed paper. Use both hands to pull out the paper to avoid tearing.
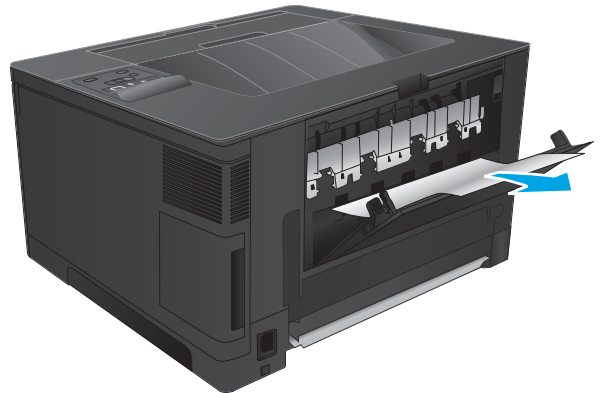
4. Close the rear door.
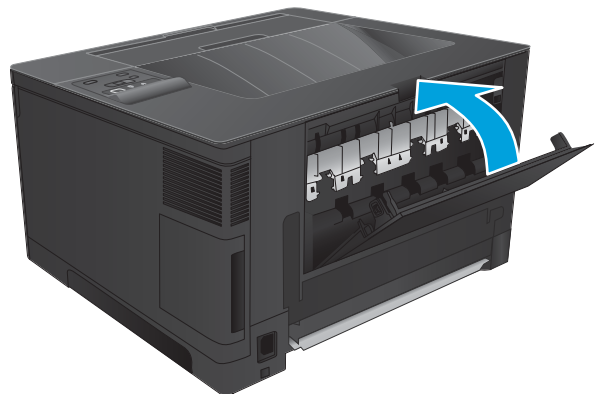
Clear jams in the optional duplexer (M706n model only)

1. Remove the duplexer.

2. Remove any paper from the duplexer.
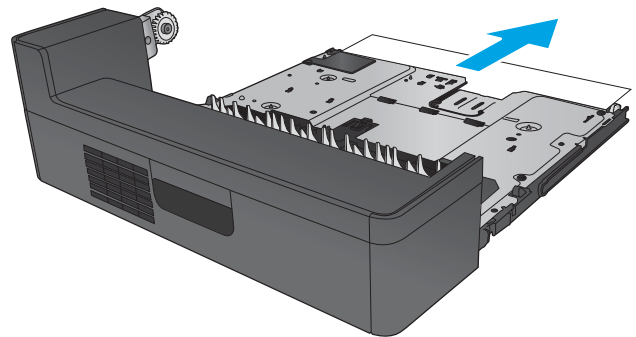
3. Reinstall the duplexer.
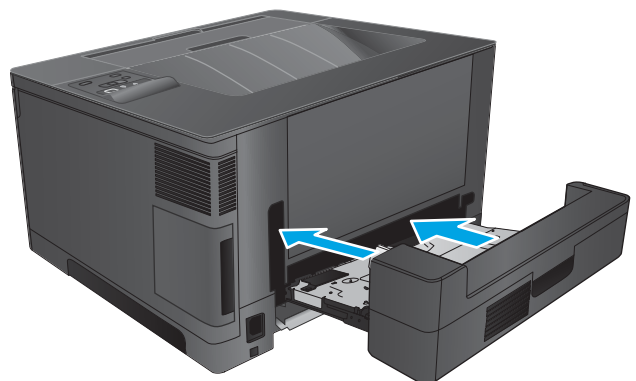
Paper feeds incorrectly or becomes jammed

This section will discuss the following:

- The product does not pick up paper
- The product picks up multiple sheets of paper
- Prevent paper jams from the paper trays

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 size and type are set correctly on the product control panel.
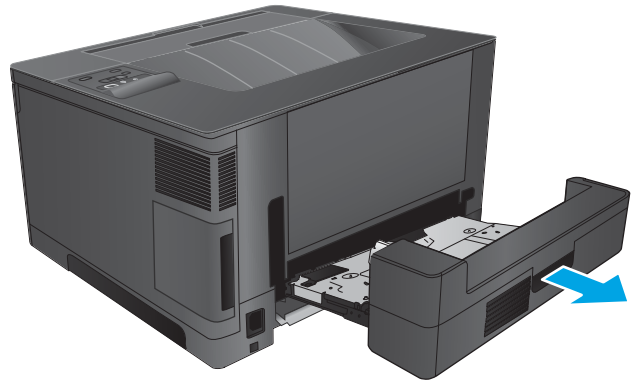
4. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray.

5. Check the 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.

6. The rollers above the tray might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.

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 to the appropriate indentation in the tray.

6. Make sure the printing environment is within recommended specifications.

Prevent paper jams from the paper trays

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.

8. Verify that the tray is configured correctly for the paper type and size and that the paper size matches the size specified in the print job.

9. Make sure the printing environment is within recommended specifications.

Solve image-quality problems

Image defect examples

These examples identify the most common print-quality problems.

Table 2-6 Image defect examples
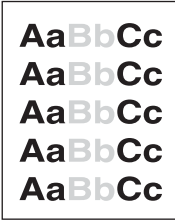
Problem	Image example	Solution
Blank page		1. The laser/scanner shutter on the toner cartridge might be damaged. Replace the toner cartridge.
		2. The laser/scanner shutter on the laser/scanner might be damaged. Replace the laser/scanner.
		3. The laser/scanner might be damaged. Replace the laser/scanner.
		4. Poor developing bias with the cartridge contacts. Clean the contact on the toner cartridge.
		5. The high-voltage power supply might be damaged. Replace the high-voltage power supply.
Light print (partial page)	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	1. Make sure that the toner cartridge is fully installed.
		2. The toner cartridge might be almost empty. Check the supplies status, and replace the toner cartridge if necessary.
		3. The paper might not meet HP specifications (for example, the paper is too moist or too rough).
Light print (entire page)	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	1. Make sure that the toner cartridge is fully installed.
		2. Make sure that the Economode setting is turned off at the control panel and in the print driver. For more information, see the product user guide.
		3. Open the Setup menu at the product control panel. and then open the System Setup menu. Increase the Print Density setting.
		4. Try using a different type of paper.
		5. The toner cartridge might be reaching its estimated end of life. Check the supplies status, and replace the toner cartridge if necessary.

Table 2-6 Image defect examples (continued)

Problem	Image example	Solution
		Perform the following test

Stop a print job during the print operation before it is complete, then remove the toner cartridge. Open the photosensitive drum shield, and look at the toner image on the drum.

- If the image is not fully transferring to the page, replace the transfer roller.

- If the toner on the drum is faint, replace the laser/scanner.

6. The transfer roller shaft might be dirty. Remove the transfer roller and clean the shaft to ensure good contact.

7. If the transfer roller is deformed or damaged, replace the roller.

8. The high-voltage power supply might be damaged. Replace the high-voltage power supply.

9. The laser/scanner might be damaged. Replace the laser/scanner.

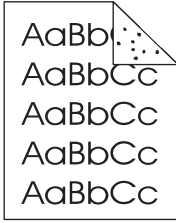If replacing the laser/scanner does not resolve the problem and the high-voltage power supply was not replaced (step 8), replace the high-voltage power supply.

Problem	Image example	Solution
Specks (front or back of the page is dirty)	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	Specks might appear on a page after a jam has been cleared.

1. The paper might be dirty. Use a new package of paper. Make sure that the paper is stored correctly. See your product user guide.

2. Print a few more pages to see if the problem corrects itself.

3. Clean the inside of the product and run a cleaning page to clean the fuser.

4. Try using a different type of paper.

5. Check the toner cartridge for leaks. If the toner cartridge is leaking, replace it.

6. The cassette pickup roller might be dirty. Clean the roller. If it cannot be cleaned, replace the roller.

7. Repetitive dirt marks can be caused by the registration roller, transfer roller, or pressure roller. Use the repetitive defects ruler to identify the problem, and then replace the appropriate assembly.

8. The paper-feed guide, or the fuser-inlet guide might be dirty. Clean the guide.

9. The delivery rollers might be dirty. Clean the rollers.

Problem	Image example	Solution
Dropouts	A	1. Make sure that the environmental specifications for the product are being met.

2. Try using a smoother paper.

3. If the transfer roller is deformed or damaged, replace the roller.

4. The high-voltage contact of the static eliminator with the toner cartridge might be dirty. Clean the contact.

5. The photosensitive drum, primary charging roller, or developing roller might be damaged. Replace the toner cartridge.

6. The fuser film might be scratched or dirty. Replace the fuser.

7. The high-voltage power supply might be damaged. Replace the high-voltage power supply.
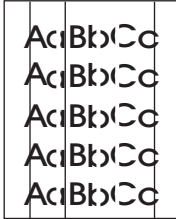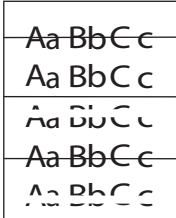
Table 2-6 Image defect examples (continued)

Problem	Image example	Solution
Lines	AaBbCc (image with vertical lines)	1. Print a few more pages to see if the problem corrects itself. 2. Clean the inside of the product and run a cleaning page to clean the fuser. 3. The photosensitive drum might be scratched. Replace the toner cartridge. 4. The fuser-inlet guide might be dirty. Clean the guide. 5. The fuser film might be scratched. Replace the fuser.
Horizontal lines	Aa BbC c (image with horizontal lines)	1. The photosensitive drum might be scratched. Replace the toner cartridge. 2. The fuser film might be dirty or damaged. Replace the fuser.

Gray background (image is obviously dark)	AaBbCc (image with gray background)	1. Do not use paper that has already been run through the product.
		2. Try using a different type of paper.
		3. Print a few more pages to see if the problem corrects itself.
		4. Turn over the paper in the tray. Also, try rotating the paper 180°.
		5. Open the Setup menu at the product control panel. and then open the System Setup menu. Increase the Print Density setting.
		6. Make sure that the environmental specifications for the product are being met.
		7. The toner cartridge might need to be replaced.
		8. The toner-cartridge ground or bias contacts might be dirty. Clean the contacts.
		9. Stop a print job before it is complete, and then remove the toner cartridge. Open the photosensitive drum shield, and look at the toner image on the drum.
		   ● If the image is not fully transferring to the page, replace the transfer roller.
		   ● If the toner on the drum is faint, replace the laser/scanner.
		10. The high-voltage power supply might be damaged. Replace the high-voltage power supply.

Toner smear	AaBbCc (image with toner smear)	1. Print a few more pages to see if the problem corrects itself. 2. Try using a different type of paper. 3. Make sure that the environmental specifications for the product are being met. 4. Clean the inside of the product and run a cleaning page to clean the fuser. 5. The toner cartridge might need to be replaced.

Table 2-6 Image defect examples (continued)

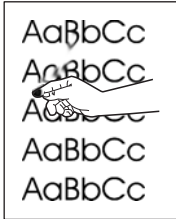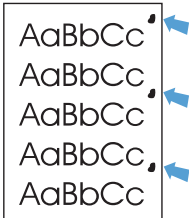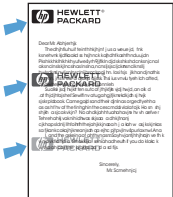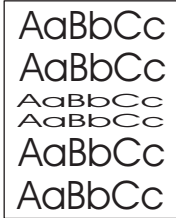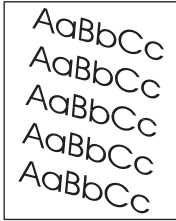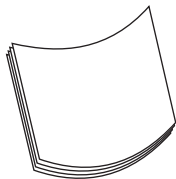| Problem	Image example	Solution
Loose toner	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	Loose toner, in this context, is defined as toner that can be rubbed off the page. 1. If you have observed a rougher texture on one side of your paper, try printing on the smoother side. 2. Make sure that the environmental specifications for the product are being met. 3. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 4. The pressure roller is dirty, the fuser film is scratched, or a foreign substance is on the fuser film. Use the Fuser Test Page option in the Troubleshooting menu to test the fuser. If the error persists, replace the fuser.
Repeat defects	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	1. Print a few more pages to see if the problem corrects itself. 2. Clean the inside of the product and run a cleaning page to clean the fuser. 3. Use the repetitive defect ruler to determine if the defect is caused by the fuser or the toner cartridge. • If the toner cartridge is causing the defect, run the print/stop test at the 500 msec setting. If the test shows a defect, replace the toner cartridge. • Use the Fuser Test Page option in the Troubleshooting menu to test the fuser. If the error persists, replace the fuser.
Repeat image	HEWLETT PACKARD	This type of defect might occur when using preprinted forms or a large quantity of narrow paper. Verify that the preprinted ink used on forms meet HP specifications for use in laser printers. 1. Print a few more pages to see if the problem corrects itself. 2. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 3. Verify that the product is configured for the correct paper type. 4. Use the Fuser Test Page option in the Troubleshooting menu to test the fuser. If the error persists, replace the fuser.
Misformed characters	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	1. Print a few more pages to see if the problem corrects itself. 2. Make sure that the environmental specifications for the product are being met. 3. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide. 4. The laser/scanner wire connectors might have poor contact. Reconnect the connectors. 5. The laser/scanner might be damaged. Replace the laser/scanner.

Table 2-6 Image defect examples (continued)

Problem	Image example	Solution
Page skew		1. Print a few more pages to see if the problem corrects itself.
		2. Verify that no torn pieces of paper are inside the product.
		3. Make sure that paper is loaded correctly and that all adjustments have been made. Make sure that the guides in the tray are not too tight or too loose against the paper.
		4. Turn over the paper in the tray. Also, try rotating the paper 180°.
		5. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide.
		6. Make sure that the environmental specifications for the product are being met.
Curl or wave		1. Turn over the paper in the tray. Also, try rotating the paper 180°.
		2. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide.
		3. Make sure that the environmental specifications for the product are being met.
		4. Try printing to a different output bin.
Wrinkles or creases		1. Print a few more pages to see if the problem corrects itself.
		2. Make sure that the environmental specifications for the product are being met.
		3. Turn over the paper in the tray. Also, try rotating the paper 180°.
		4. Make sure that paper is loaded correctly and all adjustments have been made. For more information, see the product user guide.
		5. Make sure that the type and quality of the paper you are using meet HP specifications. See the product user guide.
		6. If envelopes are creasing, try storing envelopes so that they lie flat.
Vertical white lines		1. Print a few more pages to see if the problem corrects itself.
		2. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide.
		3. The photosensitive drum might be scratched, or the developing roller might be damaged. Replace the toner cartridge.
		4. The laser beam window might be dirty. Clean the laser beam window on the laser/scanner.
		5. The fuser inlet guide might be dirty. Clean the guide.
		6. The fuser film might be scratched or dirty. Replace the fuser.
		7. The laser/scanner might be damaged. Replace the laser/scanner.

Table 2-6 Image defect examples (continued)

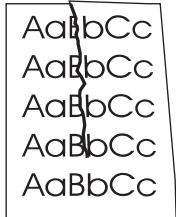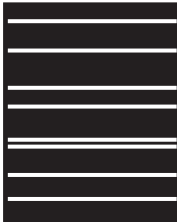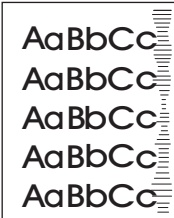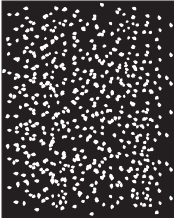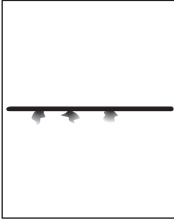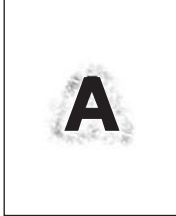| Problem	Image example	Solution
Horizontal white lines		1. The photosensitive drum might be scratched, or the developing roller might be damaged. Replace the toner cartridge.
		2. The fuser film might be damaged. Replace the fuser.
Black page		1. The toner-cartridge ground or bias contacts might be dirty. Clean the contacts.
		2. The primary charging roller might be defective. Replace the toner cartridge.
		3. The high-voltage power supply might be damaged. Replace the high-voltage power supply.
Tire tracks	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	This defect typically occurs when the toner cartridge has far exceeded its estimated life. For example, if you are printing a very large quantity of pages with very little toner coverage.
		1. The toner cartridge might need to be replaced.
		2. Reduce the number of pages that you print with very low toner coverage.
White spots on black or in the image		1. Print a few more pages to see if the problem corrects itself.
		2. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide.
		3. Make sure that the environmental specifications for the product are being met.
		4. The toner cartridge might need to be replaced.
		5. If the transfer roller is deformed or damaged, replace the roller.
		6. The transfer roller shaft might be dirty (poor contact). Remove the transfer roller and clean the shaft.
		7. The high-voltage power supply might be damaged. Replace the high-voltage power supply.
Scattered lines		1. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide.
		2. Make sure that the environmental specifications for the product are being met.
		3. Turn over the paper in the tray. Also, try rotating the paper 180°.
		4. Change the toner density. Open the Setup menu at the product control panel. and then open the System Setup menu. Change the Print Density setting.

Table 2-6 Image defect examples (continued)

Problem	Image example	Solution
Blurred print		1. Make sure that the type and quality of the paper you are using meet HP specifications. For more information, see the product user guide.
		2. Make sure that the environmental specifications for the product are being met.
		3. Turn over the paper in the tray. Also, try rotating the paper 180°.
		4. Do not use paper that already has been run through the product.
		5. Decrease the toner density. Open the Administration menu at the product control panel. Open the General Settings menu and then open the Print Quality menu. Open the Toner Density setting.
Random image repetition		If an image that appears at the top of the page (in solid black) repeats further down the page (in a gray field), the toner might not have been completely erased from the last job. (The repeated image might be lighter or darker than the field it appears in.)
		● Change the tone (darkness) of the field that the repeated image appears in.
		● Change the order in which the images are printed. For example, have the lighter image at the top of the page, and the darker image farther down the page.
		● From your software program, rotate the whole page 180° to print the lighter image first.
		● If the defect occurs later in a print job, turn the product off for 10 minutes, and then turn it on to restart the print job.

Clean the product

Clean the pickup and separation rollers

1. Turn off the product, unplug the power cable from the product, and then remove the rollers.

2. Dab a lint-free cloth in glass cleaner, 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 connect the power cable, allow the alcohol to dry completely.

    📝 **NOTE:**   In certain areas of California (USA), 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 rollers and remove loose dirt.

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.

1. On the product control panel, press the OK button.

2. Scroll to the **Service** menu, and press the OK button.

3. Scroll to the **Cleaning Page** option, and press the OK button.

    A **Cleaning** message displays on the product control panel. The cleaning process takes a few minutes to complete. Do not turn the product off until the cleaning process has finished. When it is finished, discard the printed page.

Solve performance problems

Table 2-7 Solve performance problems

Problem	Cause	Solution
Pages print but are totally blank.	The document might contain blank pages.	Check the document that you are printing to see if content displays on all of the pages.
	The product might be malfunctioning.	To check the product, print a configuration page.
Pages print very slowly.	Heavier paper types can slow the print job.	Print on a different type of paper.
	Complex pages can print slowly.	Proper fusing might require a slower print speed to ensure the best print quality.
	Large batches, narrow paper, and special paper such as gloss, transparency, cardstock, and HP Tough Paper can slow the print job.	Print in smaller batches, on a different type of paper, or on a different size of paper.
Pages did not print.	The product might not be pulling paper correctly.	Make sure paper is loaded in the tray correctly.
	The paper is jamming in the product.	Clear the jam.
	The USB cable might be defective or incorrectly connected.	- Disconnect the USB cable at both ends and reconnect it. - Try printing a job that has printed in the past. - Try using a different USB cable.
	Other devices are running on your computer.	The product might not share a USB port. If you have an external hard drive or network switchbox that is connected to the same port as the product, the other device might be interfering. To connect and use the product, you must disconnect the other device or you must use two USB ports on the computer.
Pages printed with image(s) missing.		Verify the paper is correctly oriented in the input tray.

Solve connectivity problems

Solve USB connection problems

If you have connected the product directly to a computer, check the cable.

- Verify that the cable is connected to the computer and to the product.

- Verify that the cable is not longer than 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 wired 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

NOTE: HP does not support peer-to-peer networking, as the feature is a function of Microsoft operating systems and not of the HP print drivers. For more information, go to Microsoft at www.microsoft.com.

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**, type cmd, and then press Enter.

    b. Type ping followed by the IP address for your product, and then press Enter.

        For Mac OS X, open the Network Utility, and then supply the IP address in the correct field in the **Ping** pane.

    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 print driver.

The computer or workstation might be set up incorrectly

1. Check the network drivers, print 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

Service menu

Use the control panel Service menu to troubleshoot product problems.

Service menu settings

The Service menu is used to adjust print settings, restore factory default settings, and clean the print paper path.

The following Service menu items are available:

- Cleaning Page—used to remove dust and toner from the print paper path.

- USB Speed—used to set the USB speed to high or full.

- Less Paper Curl—used to put the product into a mode that reduces paper curl.

- Archive Print—used to put the product into a mode that produces output less susceptible to toner smearing and dusting for preservation and archival.

- Firmware Datecode—used to display the product's firmware date code.

- Restore Defaults—used to reset all customer-accessible menu settings back to the factory default settings (except language) via the control panel or software.

  NOTE: This Service menu item does not reset factory-settable settings, including formatter number, page counts, factory paper settings, language, and so on.

- Signature Check—used to configure how the product proceeds when a firmware update file does not have a valid signature.

- Laser Jet Update—used to manually update the firmware or to set up automatic firmware updates.

  NOTE: The Laser Jet Update feature is only available on M701n and M706n models.

Restore the factory-set defaults

1. From the Home screen on the product control panel, press the OK button.

2. Scroll to and select the Service menu.

3. Scroll to and select the Restore Defaults button, and then press the OK button.

   The product automatically restarts.

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

NOTE: When the menus are accessed, some of the buttons located along the sides of the control panel display are not illuminated. Use the figure below to locate the Cancel ✕ button and the left arrow button to access the control panel tests.

Figure 2-20 Control panel 2ndary Service test access buttons
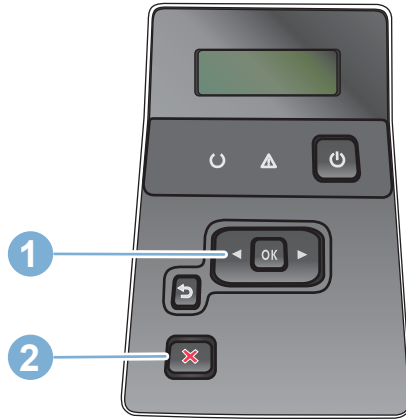
Table 2-8 Control panel 2ndary Service test access buttons

Item	Description
1	Left arrow button
2	Cancel button

1. Make sure the product is in the Ready state.

2. From the Home screen on the product control panel, touch the OK 🔧 button.

3. Press the left arrow button, and then quickly touch the Cancel button.

4. The product returns to the Ready state. Press the OK button to reopen the menus.

5. Select the 2ndary Service menu.

Secondary service menu structure

Table 2-9 Secondary Service menu

Menu item	Sub-menu item	Description
Default Settings		Default service settings for the product.
Location	A list of available locations appears	This item sets certain product parameters that are dependent on the location, such as the default paper size and the symbol set. Scroll to the appropriate location and select the Yes option to set the location. The product automatically restarts after you change the location.
Line Frequency		This item allows the refresh rate of the control panel to be changed between 50 and 60 Hz.
LED Test		This item allows the testing of the different LED Displays.

Table 2-9 Secondary Service menu (continued)

Menu item	Sub-menu item	Description
Display Test		Use this test to verify that the LEDs and characters on the control panel display function correctly.
		At the beginning of the test, each of the LEDs is turned on one-at-time. Press the OK button to continue to the next LED.
		After the LED test is complete, the character test begins by testing the pixels on each line. Then, each of the 255 characters is displayed in groups of 16. Press the OK button to continue to the next group of 16 characters. You can cancel the test at any time by pressing the Cancel button.
Button Test		Use this test to verify that the control panel buttons function correctly. The display prompts you to press each button.
CP FW Version		This item shows the current date code of the firmware.
NAND Reset		This item allows the NAND to be reset.
Service Reports	Cont Self Test	Print a continuous configuration page.

Product resets

NVRAM initialization

⚠ **CAUTION:** Be sure to print a configuration page before performing an NVRAM initialization.

An NVRAM initialization erases all data stored in the unprotected NVRAM sections. Performing an NVRAM initialization resets the following settings and information:

- All menu settings are reset to factory default values.

- All localization settings, including language and country/region, are reset.

After performing an NVRAM initialization, reconfigure any computers that print to this product so that the computers can recognize the product.

1. Turn the product off.

2. Press and hold the right-arrow button. Keep the right-arrow button depressed as you turn the product on.

3. When the **Permanent Storage Init.** message appears on the display, release the buttons.

4. When the product has finished the NVRAM initialization, it returns to the Ready state.

Super NVRAM initialization

A super NVRAM initialization restores the product to the "generic product mode" in which it arrived from the factory. This means that you will have to reset the language and country/region settings when the product starts after the initialization. A super NVRAM initialization erases all data stored in the protected and unprotected NVRAM sections.

1. Turn the product off.

2. Press and hold the left-arrow button. Keep the left-arrow button depressed as you turn the product on.

3. When the **Permanent Storage Init.** message appears on the display, release the buttons.

4. When the super NVRAM initialization has been completed, the product enters the generic product mode.

Product updates

HP offers periodic updates to the product firmware. You can load the firmware updates manually, or you can set the product to automatically load firmware updates.

Manually update the firmware

1. From the Home screen on the product control panel, touch the OK button.

2. Open the following menus:

   ● Service

   ● LaserJet Update

   ● Check For Updates Now

3. Press the Yes button to prompt the product to search for firmware updates. If the product detects an update, it will begin the update process.

Set the product to automatically update the firmware

1. From the Home screen on the product control panel, touch the OK button.

2. Open the following menus:

   ● Service

   ● LaserJet Update

   ● Manage Updates

   ● Prompt Before Install

3. Press the Install automatically option.

A Service and support

- [Hewlett-Packard limited warranty statement](#)
- [HP's Premium Protection Warranty: LaserJet toner cartridge limited warranty statement](#)
- [HP policy on non-HP supplies](#)
- [HP anticounterfeit Web site](#)
- [Data stored on the toner cartridge](#)
- [End User License Agreement](#)
- [OpenSSL](#)
- [Customer self-repair warranty service](#)
- [Customer support](#)

Hewlett-Packard limited warranty statement

HP PRODUCT	DURATION OF LIMITED WARRANTY
HP LaserJet Pro M701/M706	One-year on-site warranty

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.

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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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HP policy on non-HP supplies

Hewlett-Packard Company cannot recommend the use of non-HP toner cartridges, either new or remanufactured.

> **NOTE:** For HP printer products, the use of a non-HP toner cartridge or a refilled toner cartridge does not affect either the warranty to the customer or any HP support contract with the customer. However, if product failure or damage is attributable to the use of a non-HP toner cartridge or refilled toner cartridge, HP will charge its standard time and materials charges to service the product for the particular failure or damage.

HP anticounterfeit Web site

Go to www.hp.com/go/anticounterfeit when you install an HP toner cartridge and the control panel message says the cartridge is non-HP. HP will help determine if the cartridge is genuine and take steps to resolve the problem.

Your toner cartridge might not be a genuine HP toner cartridge if you notice the following:

● The supplies status page indicates that a non-HP supply is installed.

● You are experiencing a high number of problems with the cartridge.

● The cartridge does not look like it usually does (for example, the packaging differs from HP packaging).

Data stored on the toner cartridge

The HP toner 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 toner cartridge was first installed, the date when the toner cartridge was last used, the number of pages printed using the toner 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 toner cartridge memory chip does not contain information that can be used to identify a customer or user of the toner cartridge or their product.

HP collects a sampling of the memory chips from toner 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 toner cartridge might have access to this data, as well.

Any third party possessing the toner cartridge might have access to the anonymous information on the memory chip.

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Rev. 04/09

OpenSSL

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)

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This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Customer self-repair warranty service

HP products are designed with many Customer Self Repair (CSR) parts to minimize repair time and allow for greater flexibility in performing defective parts replacement. If during the diagnosis period, HP identifies that the repair can be accomplished by the use of a CSR part, HP will ship that part directly to you for replacement. There are two categories of CSR parts: 1) Parts for which customer self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service. 2) Parts for which customer self repair is optional. These parts are also designed for Customer Self Repair. If, however, you require that HP replace them for you, this may be done at no additional charge under the type of warranty service designated for your product.

Based on availability and where geography permits, CSR parts will be shipped for next business day delivery. Same-day or four-hour delivery may be offered at an additional charge where geography permits. If assistance is required, you can call the HP Technical Support Center and a technician will help you over the phone. HP specifies in the materials shipped with a replacement CSR part whether a defective part must be returned to HP. In cases where it is required to return the defective part to HP, you must ship the defective part back to HP within a defined period of time, normally five (5) business days. The defective part must be returned with the associated documentation in the provided shipping material. Failure to return the defective part may result in HP billing you for the replacement. With a customer self repair, HP will pay all shipping and part return costs and determine the courier/carrier to be used.

Customer support

Get telephone support for your country/region Have the product name, serial number, date of purchase, and problem description ready.	Country/region phone numbers are on the flyer that was in the box with your product or at www.hp.com/support/.
Get 24-hour Internet support	www.hp.com/support/ljM701 or www.hp.com/support/ljM706
Download software utilities, drivers, and electronic information	www.hp.com/support/ljM701 or www.hp.com/support/ljM706
Order additional HP service or maintenance agreements	www.hp.com/go/carepack
Register your product	www.register.hp.com

B   Product specifications

Physical specifications

Table B-1 Physical specifications

Product	Height	Depth	Width	Weight
HP LaserJet Pro M701/ M706 with all doors and trays closed	295 mm (11.6 in)	425 mm (16.7 in)	500 mm (19.7 in)	17 kg (37.5 lb)

Power consumption, electrical specifications, and acoustic emissions

See www.hp.com/support/ljM701 or www.hp.com/support/ljM706 for current information.

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

Environmental specifications

Table B-2 Operating-environment specifications

Environment	Recommended	Allowed
Temperature	17° to 25°C (62.6° to 77°F)	10° to 32.5°C (50° to 91°F)
Relative humidity	30% to 70% relative humidity (RH)	10% to 80% RH
Altitude	Not applicable	0 to 3048 m (0 to 10,000 ft)

C Regulatory information

- FCC regulations
- Environmental product stewardship program
- Declaration of conformity
- Declaration of conformity
- Certificate of Volatility
- Safety statements

FCC regulations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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 A 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

The airborne emissions of ozone for this product has been measured according to a generally recognized method* and when these emissions data are applied to a "generic office model exposure scenario"**, HP is able to determine there is no appreciable amount of ozone generated during printing that exceeds any current indoor air quality standards or guidelines.

* Test method for the determination of emissions from hardcopy devices with respect to awarding the environmental label for office devices with printing function; RAL-UZ 171 – BAM July, 2012

** Based on ozone concentration when printing 2 hours per day in a 32 cubic meter room with a ventilation rate of 0.72 air changes per hour with HP printing supplies

Power consumption

Power usage drops significantly while in Sleep or Auto-off 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 toner cartridge. HP does not recommend the full-time use of EconoMode. If EconoMode is used full-time, the toner supply might outlast the mechanical parts in the toner cartridge. If print quality begins to degrade and is no longer acceptable, consider replacing the toner cartridge.

Paper use

This product's manual or optional 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 toner cartridges after use—free of charge—with HP Planet Partners. Multilingual program information and instructions are included in every new HP LaserJet toner 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 toner 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 toner 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 toner cartridges after use. Please follow the applicable instructions below.

Multiple returns (more than one cartridge)

1. Package each HP LaserJet toner 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 toner cartridges).

2. Use a single pre-paid shipping label.

Single returns

1. Package the HP LaserJet toner cartridge in its original bag and box.

2. Place the shipping label on the front of the box.

Shipping

For US and Puerto Rico HP LaserJet toner cartridge recycling returns, use the pre-paid, pre-addressed shipping label contained in the box. To use the UPS label, give the package to the UPS driver during your next delivery or pick-up, or take it to an authorized UPS drop-off center. (Requested UPS Ground pickup will be

charged normal pick-up rates) For the location of your local UPS drop-off center, call 1-800-PICKUPS or visit www.ups.com.

If you are returning the package with the FedEx label, give the package to either the U.S. Postal Service carrier or FedEx driver during your next pick-up or delivery. (Requested FedEx Ground pickup will be charged normal pick-up rates). Or, you can drop off your packaged toner cartridge(s) at any U.S. Post Office or any FedEx shipping center or store. For the location of your nearest U.S. Post Office, please call 1-800-ASK-USPS or visit www.usps.com. For the location of your nearest FedEx shipping center/store, please call 1-800-GOFEDEX or visit www.fedex.com.

For more information, or to order additional labels or boxes for bulk returns, visit www.hp.com/recycle or call 1-800-340-2445. 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 does not contain a battery.

Disposal of waste equipment by users

This symbol means do not dispose of your product with your other household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment. For more information, please contact your household waste disposal service, or go to: www.hp.com/recycle.

Electronic hardware recycling

HP encourages customers to recycle used electronic hardware. For more information about recycling programs go to: www.hp.com/recycle.

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.

EPEAT

Many HP products are designed to meet EPEAT. EPEAT is a comprehensive environmental rating that helps identify greener electronics equipment. For more information on EPEAT go to www.epeat.net. For information on HP's EPEAT registered products go to www.hp.com/hpinfo/globalcitizenship/environment/pdf/epeat_printers.pdf.

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.

Declaration of conformity

Manufacturer's Name:	Hewlett-Packard Information Technology DoC#: SHNGC-1300-00 rel2
	R&D (Shanghai) Co., LTD
Manufacturer's Address:	Building 6, No. 690 BiBo Road, ZhangJiang, Shanghai, China
declares, that the product	
Product Name:	HP LaserJet Pro M701a/HP LaserJet Pro M701n
Regulatory Model:[2]	SHNGC-1300-00
Product Options:	All
Toner Cartridges:	CZ192A
conforms to the following Product Specifications:	
SAFETY:	IEC 60950-1:2005 +A1:2009 / EN60950-1: 2006 +A11:2009+A1:2010 +A12:2011
	IEC 60825-1:2007 / EN 60825-1:2007 (Class 1 Laser/LED Product)
	IEC 62479:2010/EN 62479:2010
	GB4943.1-2011
EMC:	CISPR22:2008/ EN55022:2010- Class A[1][3]
	EN 61000-3-2:2006 +A1:2009 +A2:2009
	EN 61000-3-3:2008
	EN 55024:2010
	FCC Title 47 CFR, Part 15 Class A / ICES-003, Issue 5
	GB9254-2008, GB17625.1-2003
RoHS	EN50581:2012

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 RoHS Directive 2011/65/EU and carries the CE-Marking C E 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 marketing names or the product number(s).

3. The product meets the requirements of EN55022 & CNS13438 Class A in which case the following applies: "Warning – This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures".

Shanghai, China

May 24, 2013

For Regulatory Topics only, contact:

European Contact:	Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, HQ-TRE, Herrenberger Straße 140, 71034 Böblingen, Germany www.hp.eu/certificates
USA Contact:	Product Regulations Manager, Hewlett-Packard, 3000 Hanover St., Palo Alto 94304, U.S.A. 1-650-857-1501

Declaration of conformity

Declaration of Conformity

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

Manufacturer's Name:	Hewlett-Packard Information Technology	DoC#: SHNGC-1300-01 rel2
	R&D (Shanghai) Co., LTD	
Manufacturer's Address:	Building 6, No. 690 BiBo Road, ZhangJiang, Shanghai, China	

declares, that the product

Product Name:	HP LaserJet Pro M706n
Regulatory Model:[2]	SHNGC-1300-01
Product Options:	All
Toner Cartridges:	CZ192A

conforms to the following Product Specifications:

SAFETY:	IEC 60950-1:2005 +A1:2009 / EN60950-1: 2006 +A11:2009+A1:2010 +A12:2011
	IEC 60825-1:2007 / EN 60825-1:2007 (Class 1 Laser/LED Product)
	IEC 62479:2010/EN 62479:2010
	GB4943.1-2011
EMC:	CISPR22:2008/ EN55022:2010- Class A[1][3]
	EN 61000-3-2:2006 +A1:2009 +A2:2009
	EN 61000-3-3:2008
	EN 55024:2010
	FCC Title 47 CFR, Part 15 Class A / ICES-003, Issue 5
	GB9254-2008, GB17625.1-2003
RoHS	EN50581:2012

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 RoHS Directive 2011/65/EU and carries the CE-Marking $C\epsilon$ 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 marketing names or the product number(s).

3. The product meets the requirements of EN55022 & CNS13438 Class A in which case the following applies: "Warning – This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures".

Shanghai, China

May 24, 2013

For Regulatory Topics only, contact:

European Contact:	Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, HQ-TRE, Herrenberger Straße 140, 71034 Böblingen, Germany www.hp.eu/certificates
USA Contact:	Product Regulations Manager, Hewlett-Packard, 3000 Hanover St., Palo Alto 94304, U.S.A. 1-650-857-1501

Certificate of Volatility

Figure C-1 Certificate of Volatility (1 of 2)

Hewlett-Packard Certificate of Volatility				
Model: HP LaserJet M701/M706		**Part Number:** M701a=B6S00A M701n=B6S01A M706n=B6S02A		**Address:** Hewlett Packard Company 11311 Chinden Blvd Boise, ID 83714
Volatile Memory				
Does the device contain volatile memory (Memory whose contents are lost when power is removed)? ☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (SRAM, DRAM, etc): SDRAM - DDR3	Size: 256MB	User Modifiable: ☐ Yes ☒ No	Function: Temporarily store print/scan data during job processing	Steps to clear memory: When the printer is powered off, the memory is erased.
Type (SRAM, DRAM, etc):	Size:	User Modifiable: ☐ Yes ☐ No	Function:	Steps to clear memory:
Type (SRAM, DRAM, etc):	Size:	User Modifiable: ☐ Yes ☐ No	Function:	Steps to clear memory:

Non-Volatile Memory				
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? ☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (Flash, EEPROM, etc): EEPROM	Size: 16KB	User Modifiable: ☐ Yes ☒ No	Function: Printer specific data such as page count, configuration etc.	Steps to clear memory: Perform a NVRAM initialization to clear unprotected data as explained in SM (for service person to perform only)
Type (Flash, EEPROM, etc): NAND Flash	Size: 256MB	User Modifiable: ☐ Yes ☒ No	Function: FW code /partial printer configuration information storage.	Steps to clear memory: Perform a NVRAM initialization to clear unprotected data as explained in SM (for service person to perform only)
Type (Flash, EEPROM, etc):	Size:	User Modifiable: ☐ Yes ☐ No	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:	User Modifiable: ☐ Yes ☐ No	Function:	Steps to clear memory:

Figure C-2 Certificate of Volatility (2 of 2)

USB
Does the item accept USB input and if so, for what purpose (i.e Print Jobs, device firmware updates, scan upload)? ☐ Yes ☒ No If Yes please describe below
Can any data other than scan upload be sent to the USB device)? ☐ Yes ☒ No If Yes please describe below

RF/RFID	
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) ☐ Yes ☒ No If Yes please describe below	
Purpose:	
Frequency:	Bandwidth:
Modulation:	Effective Radiate Power (ERP):
Specifications:	

Other Transmission Capabilities	
Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? ☐ Yes ☒ No If Yes please describe below:	
Purpose:	
Frequency:	Bandwidth:
Modulation:	Effective Radiate Power (ERP):
Specifications:	

Other Capabilities
Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? ☐ Yes ☒ No If Yes please describe below:
Purpose:
Specifications: We send fax not data

Author Information			
Name: Frany Yang	Title: Technical Marketing Engineer	Email: Frany.yang@hp.com	Business Unit: IPG
			Date Prepared: 18,Aug,2013

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.

Canada – Industry Canada ICES-003 Compliance Statement

CAN ICES-3(A)/NMB-3(A)

VCCI statement (Japan)

> この装置は、クラスA情報技術装置です。この装置を家庭
> 環境で使用すると電波妨害を引き起こすことがあります。
> この場合には使用者は適切な対策を講ずるよう要求される
> ことがあります。
>
> VCCI-A

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 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 (China)

> 　　此为 A 级产品，在生活环境中，该
> 产品可能会造成无线电干扰。在这种情
> 况下，可能需要用户对其干扰采取切实
> 可行的措施。

EMC statement (Korea)

A급 기기	이 기기는 업무용(A급)으로 전자파적합등록을 한 기
(업무용 방송통신기기)	기이오니 판매자 또는 사용자는 이점을 주의하시기
	바라며, 가정 외의 지역에서 사용하는 것을 목적으
	로 합니다.

EMI statement (Taiwan)

警告使用者：

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻
干擾，在這種情況下，使用者會被要求採取某些適當的對策。

Laser statement for Finland

Luokan 1 laserlaite

Klass 1 Laser Apparat

HP LaserJet Pro M701/M706, 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 Pro M701/M706 - 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 näkymättömällelasersäteilylle 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 m W 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 warden.

Das Gerät ist kein Bildschirmarbeitsplatz gemäß BildscharbV. Bei ungünstigen Lichtverhältnissen (z. B. direkte Sonneneinstrahlung) kann es zu Reflexionen auf dem Display und damit zu Einschränkungen der Lesbarkeit der dargestellten Zeichen kommen.

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	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

0609

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。

SEPA Ecolabel User Information (China)

中国环境标识认证产品用户说明

噪声大于 63.0 dB(A)的办公设备不宜放置于办公室内，请在独立的隔离区域使用。

如需长时间使用本产品或打印大量文件，请确保在通风良好的房间内使用。

如您需要确认本产品处于零能耗状态，请按下电源关闭按钮，并将插头从电源插座断开。

您可以使用再生纸，以减少资源耗费。

Restriction on Hazardous Substances statement (Turkey)

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

Restriction on Hazardous Substances statement (Ukraine)

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057

Eurasian Conformity (Belarus, Kazakhstan, Russia)

EAC

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