HP

LASERJET ENTERPRISE MFP M725
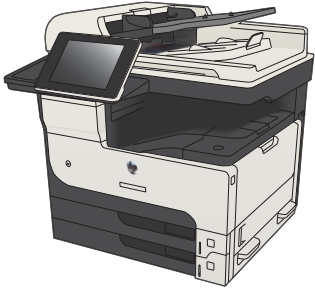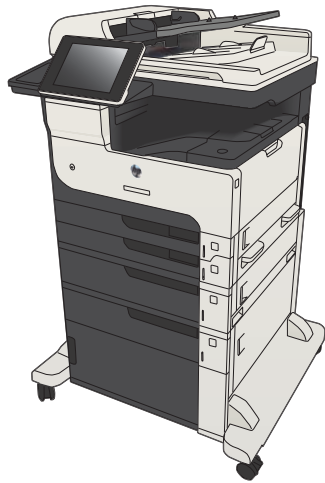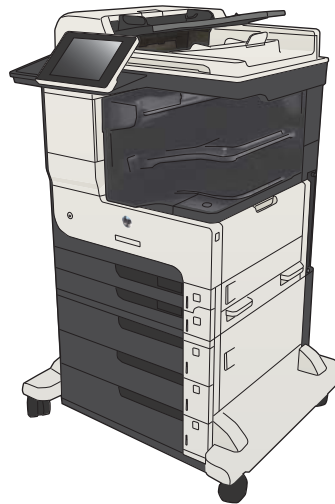
Troubleshooting Manual

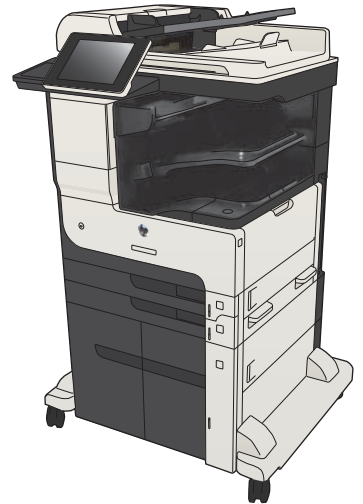| M725dn | M725f | M725z | M725z+ |

HP LaserJet Enterprise MFP M725

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

Basic operation

Function structure

The product contains the following systems:

- Engine control system
- Laser scanner system
- Image-formation system
- Pickup, feed, and delivery system
- Accessory

Figure 1-1 Function structure
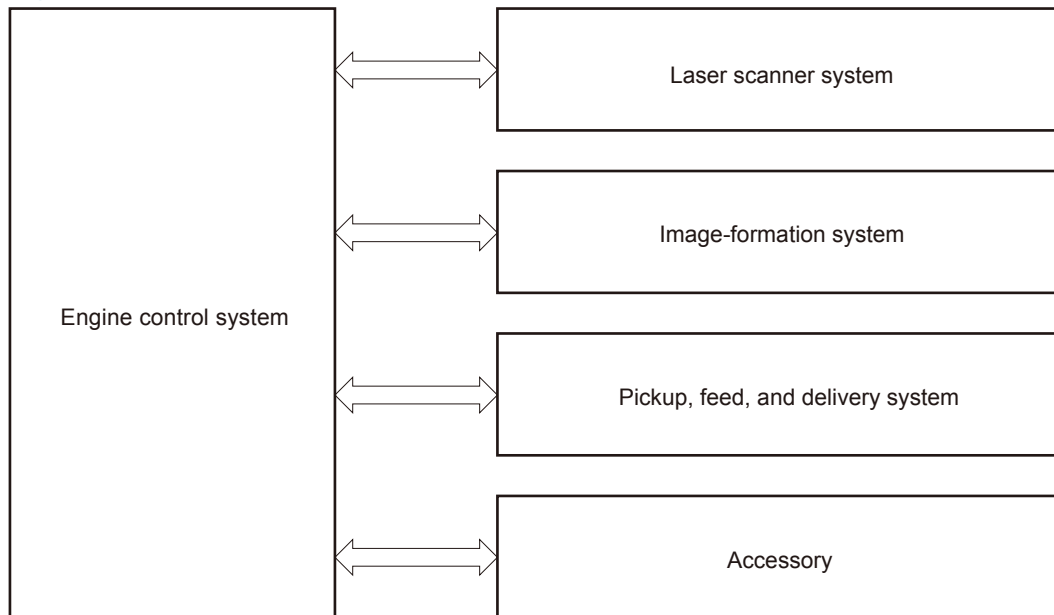
Operation sequence

The DC controller in the engine-control system controls the operational sequences. The following table describes durations and operations for each period of a print operation from when the product is turned on until the motors stop rotating.

Table 1-1 Operation sequence

Period	Duration	Purpose
WAIT period	From the time the power switch is turned on, the door is closed or, product exits Sleep mode until the product is ready for a print operation.	Brings the product to the Ready state. ● Detects the failure of the low-voltage power supply ● Detects the connection with the accessories ● Detects the presence of cartridge ● Rotates and then stops each motor and fan ● Checks the fuser temperature ● Heats the fuser film ● Detects any residual paper and clears it automatically ● Initializes the high-voltage bias ● Cleans the photosensitive drum ● Detects the toner level
STBY (Standby period)	From the end of WAIT or LSTR period until either a print command is sent or the power switch is turned off.	Maintains the product in printable condition. ● Enters Sleep mode if the sleep command is received ● Rotates and then stops each fan
INTR (Initial rotation)	From the time the print command is received until the product picks up the paper.	Prepares the product for a print job. ● Rotate the motors ● Rotate the fans ● Outputs the high-voltage bias ● Starts up the laser scanner assembly ● Warms up the fuser heater
PRINT	From the end of the INTR period until the last sheet is delivered.	Processes the print job. ● Forms the image on the photosensitive drum ● Transfers toner to the paper ● Fuses the toner image onto the paper
LSTR (Last rotation)	From the end of the PRINT period until the motor stops rotating.	Stops each load. ● Stops the motors and fans ● Stops the high-voltage bias ● Stops the laser scanner assembly ● Stops the fuser heater The product enters the INTR period as the LSTR period is complete if, the formatter sends another print command.

Engine control system

The engine-control system coordinates all the other systems, according to commands from the formatter. The engine-control system contains the following components:

- DC controller PCA

- Low-voltage power supply unit

- High-voltage power supply PCA

- Fuser control

Figure 1-2 Engine control system
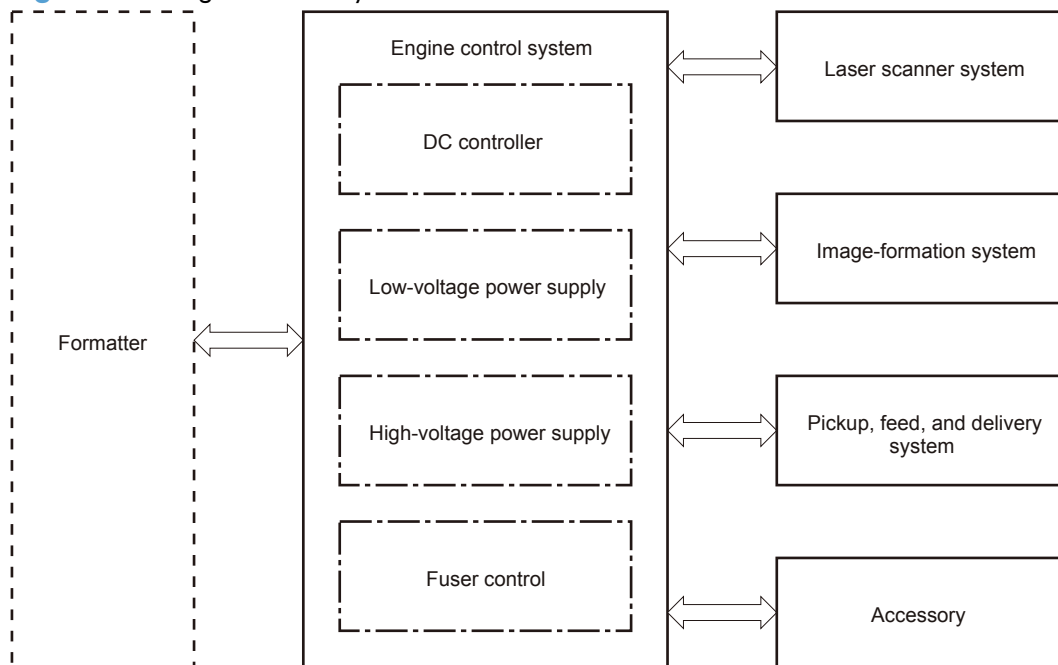
DC controller PCA

The DC controller PCA controls the product operation sequence.

Figure 1-3 DC controller PCA
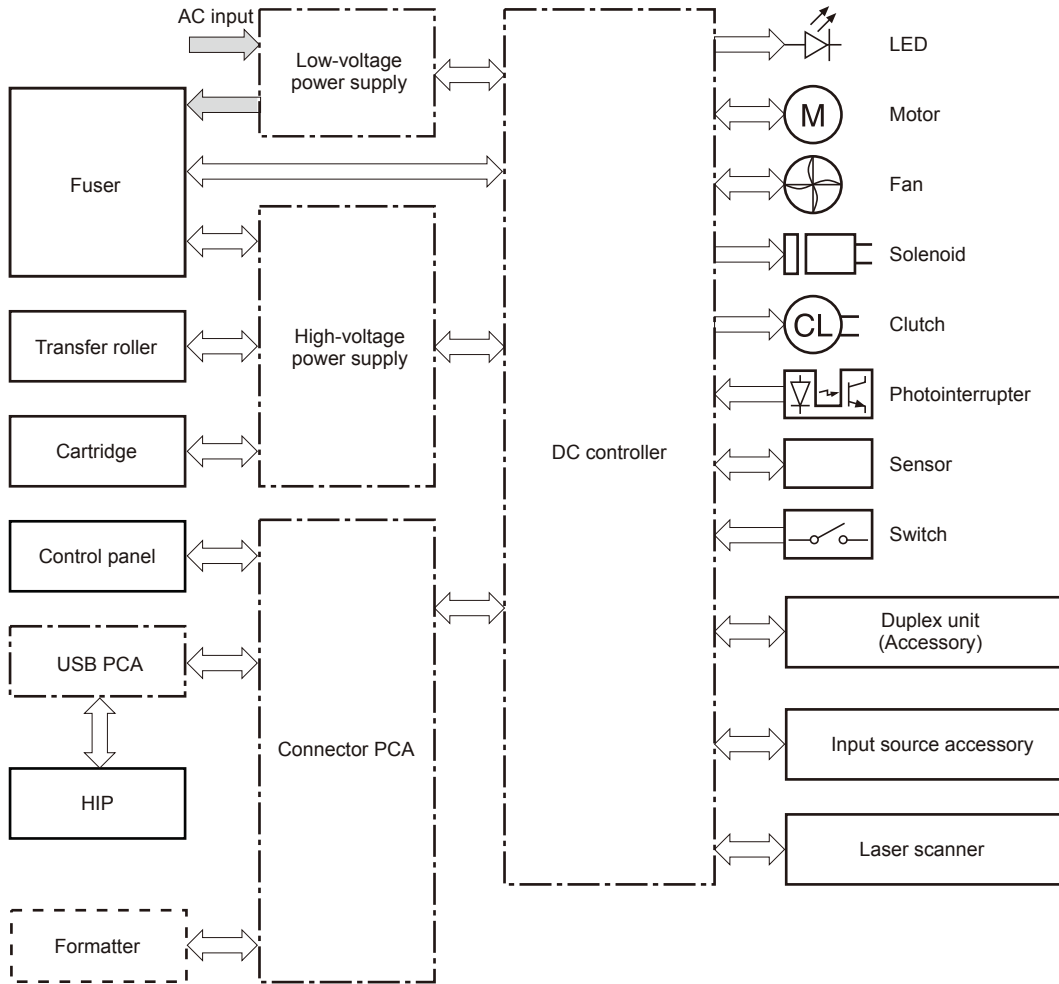
The following table lists the product electrical components.

Component type	Component abbreviation	Component name
Switch	SW1	Left door interlock switch
	SW2	Cartridge door interlock switch
	SW3	Cartridge door open detection switch
	SW4	Upper cassette media width switch
	SW5	Lower cassette media width switch
	SW6	Upper cassette media end switch
	SW7	Lower cassette media end switch
	—	Power switch

Component type	Component abbreviation	Component name
Solenoid	SL1	Tray 1 (MP tray) pickup solenoid
Clutch	CL1	Upper cassette pickup clutch
	CL2	Lower cassette pickup clutch
Fan	FM1	Rear fan
	FM2	Front fan
	FM3	Fuser fan
Photointerrupter	SR1	Cartridge presence sensor
	SR2	MP tray media out sensor
	SR3	Output sensor
	SR4	Output bin media full sensor
	SR5	Lower cassette media out sensor
	SR6	Loop sensor
	SR7	Upper cassette media out sensor
	SR8	Right door sensor
	SR9	TOP sensor
	SR10	Upper cassette lift-up sensor
	SR11	Lower cassette lift-up sensor
	SR12	Fuser output sensor
Sensor	—	Environment sensor
Motor	M1	Drum motor
	M2	Scanner motor
	M3	Fuser motor
	M4	Upper cassette lifter motor
	M5	Lower cassette lifter motor

Motor control

The product uses five motors for the paper-feed and image-formation process.

Motor locations

The following figure shows the product motor locations.

Figure 1-4 Motor locations
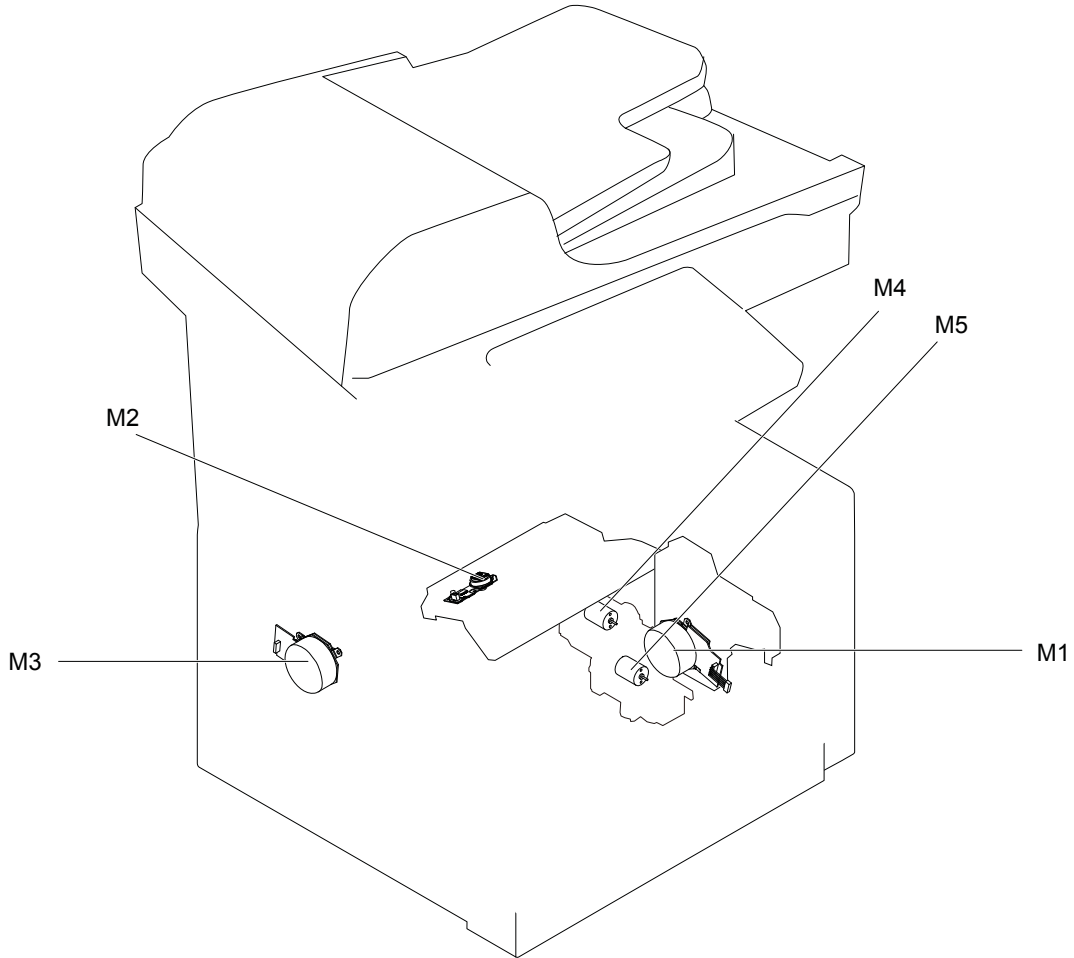
Table 1-2 **Motor locations**

Motor		Components driven by motor
M1	Drum motor	Photosensitive drum, transfer roller, registration roller, MP tray pickup roller, cassette pickup roller, and feed roller
M2	Scanner motor	Laser scanner mirror
M3	Fuser motor	Pressure roller, fuser output roller, intermediate output roller, and paper delivery roller
M4	Upper cassette lifter motor	Lifter for the upper cassette
M5	Lower cassette lifter motor	Lifter for the lower cassette

Failure detection

The DC controller monitors the following motors to determine a motor failure:

● Drum motor

● Scanner motor

● Fuser motor

The DC controller determines if the motor has failed and notifies the formatter when the motor encounters the following conditions:

● Startup failure—The motor does not reach a specified rotational count within a specified time from when the motor starts.

● Rotational failure—The rotational speed of the motor is not in the specified range for a specified time after the motor reaches a specified speed.

The DC controller notifies the formatter of a beam detect (BD) failure when it detects a rotational failure of the scanner motor.

The DC controller monitors the related part condition of the following motors to determine a motor failure:

● Upper cassette lifter motor

● Lower cassette lifter motor

Fan control

The product has three fans to prevent the temperature from rising in the product and to cool down the delivered paper.

Fan locations

The following figure shows the product fan locations.

Figure 1-5 Fan locations
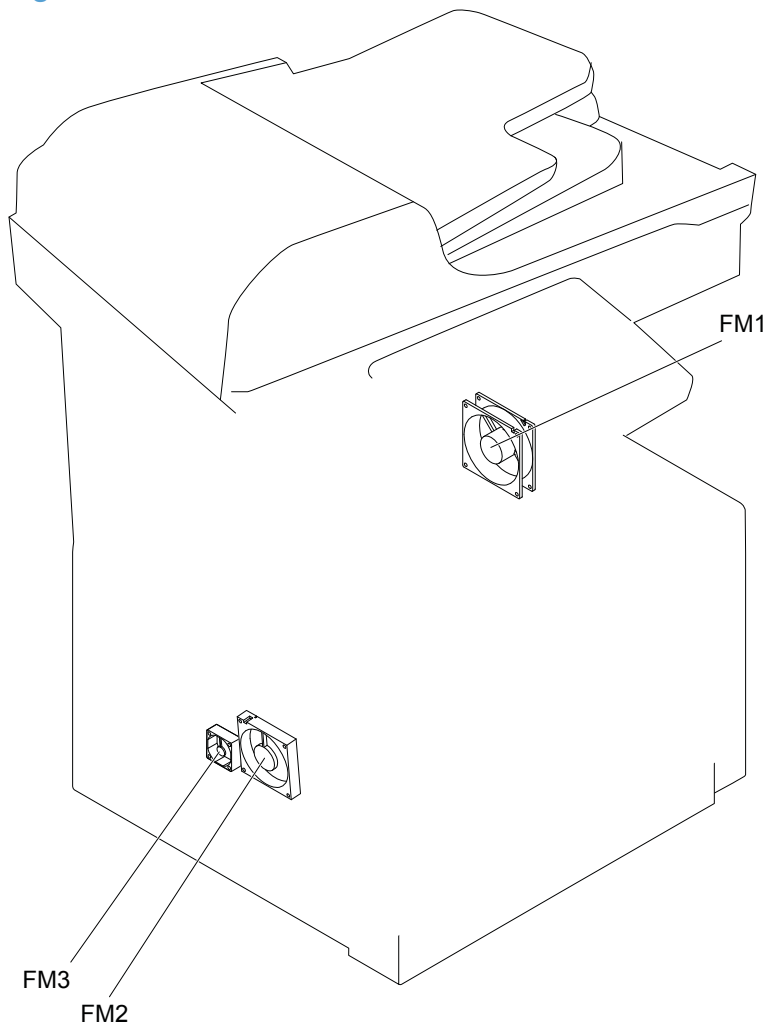
Table 1-3 Fan locations

Fan		Cooling area	Type	Speed
FM1	Rear fan	Product inside and low-voltage power supply area	Exhaust	Full/Mid/Low
FM2	Front fan	Product inside	Intake	Full
FM3	Fuser fan	Fuser area	Intake	Full

Failure detection

The DC controller determines if the fan has failed and notifies the formatter when the fan stops rotating for a specified time during start-up.

Low-voltage power-supply PCA

The low-voltage power supply converts AC power into the DC voltage that product components use.

Figure 1-6 Low-voltage power-supply PCA
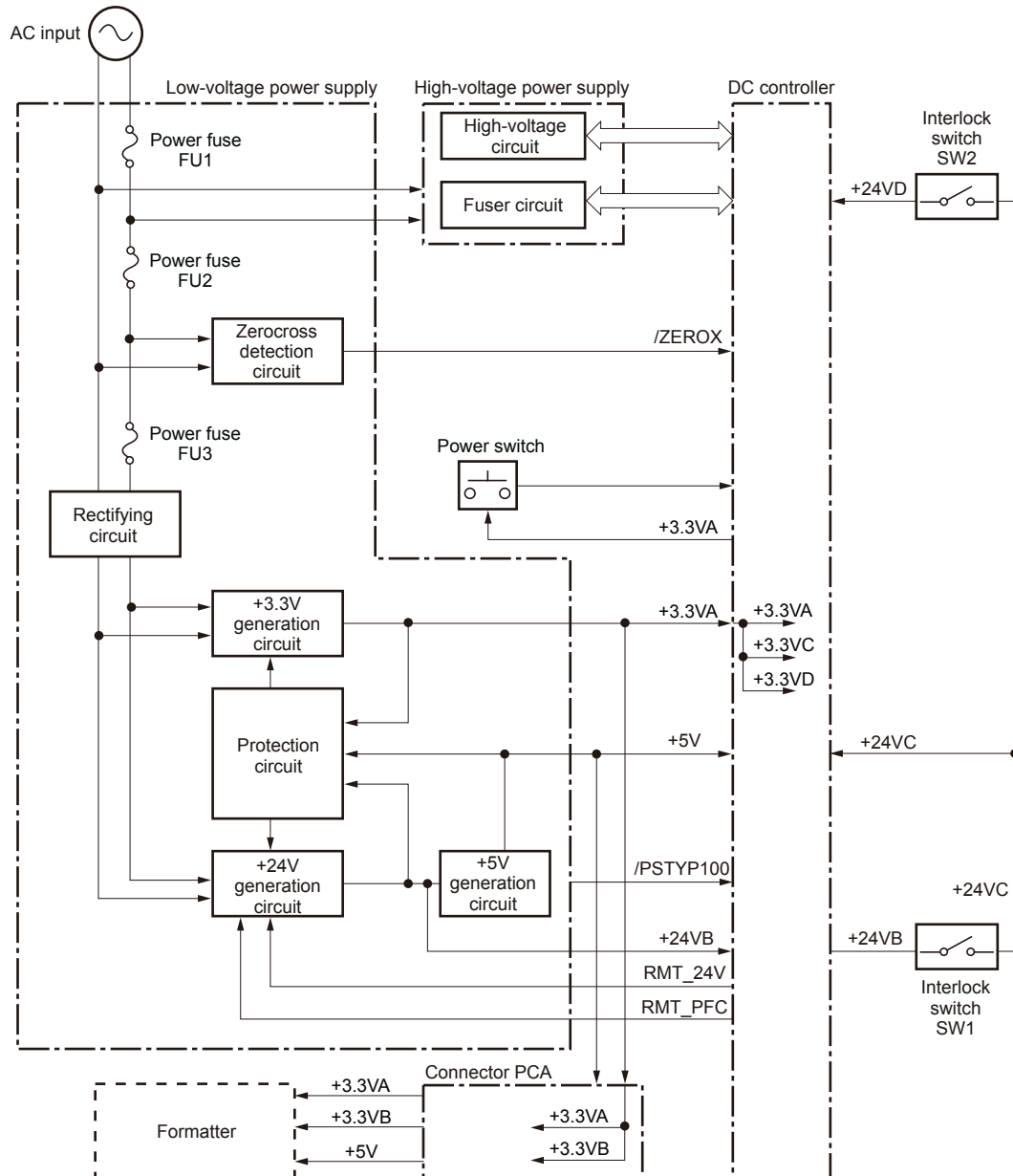
The following table shows the specifications for the DC power supply.

Table 1-4 Low voltage power supply DC power specifications

DC voltage		Behavior
+24V	+24VB	Off during Sleep mode (sleep level1, active off and inactive off)
	+24VC	Off during Sleep mode (sleep level1, active off and inactive off), interrupted when the left door opens
	+24VD	Off during Sleep mode (sleep level1, active off and inactive off), interrupted when the left door or the cartridge door opens
+5V	+5V	Off during Sleep mode (sleep level1, active off and inactive off)
+3.3V	+3.3VA	Constantly supplied
	+3.3VB	Off during Sleep mode (inactive off)
	+3.3VC	Off during Sleep mode (active off and inactive off)
	+3.3VD	Off during Sleep mode (sleep level1, active off and inactive off)

Over-current/over-voltage/overload protection

The over-current/over-voltage protection automatically stops the DC voltage to the product components whenever an excessive current or abnormal voltage is detected. The overload protection automatically stops the DC voltage to the product components whenever the temperature of the low-voltage power supply PCA rises to a specified temperature.

The low-voltage power supply has a protective circuit against over-current, over-voltage, and overload to prevent failures in the power supply circuit. If DC voltage is not being supplied from the low-voltage power supply, the protective function might be running. In this case, turn the power off, and then unplug the power cord. Do not turn the product switch on until the root cause is found and corrected.

The DC controller determines a low-voltage power supply failure and notifies the formatter when the protective function runs.

In addition, the low-voltage power supply has three fuses to protect against over-current. If over-current flows into the AC line, the fuse blows to stop AC power.

Safety interruption

For user and service technician safety, the product interrupts the power supply of +24V by turning off the interlock switch. The DC power to the following components is interrupted:

● High-voltage power supply

● Fuser motor

The remote switch control-circuit turns on or off the product so that the ac power flows even if the power switch is turned off. Be sure to unplug the power cord before disassembling the product.

Power supply voltage detection

The power supply voltage detection controls the fuser properly according to the voltage. The DC controller detects whether the low-voltage power supply voltage is 100V or 220V, according to the POWER SUPPLY VOLTAGE signal (/PSTYP100).

Sleep mode

The Sleep mode reduces the power consumption of the product. There are three types of sleep modes:

● Sleep level 1

The DC controller stops the power supply of +24V according to the +24V CONTROL signal (RMT_24V) and POWER FACTOR CORRECTION ACTIVATE signal (RMT_PFC), after a specified period of time from when a sleep command signal is sent from the formatter. The DC controller supplies +24V and the product exits sleep level 1 when a recover signal is sent from the formatter.

● Active off

The DC controller stops the power supply to the formatter, except for +3.3VA and +3.3VB, when an Active off command signal is sent from the formatter during sleep level 1 or STBY period. The DC controller supplies all power supplies and the product exits Active off when a recover signal is sent from the formatter or the power switch is depressed for less than three seconds.

● Inactive off

The DC controller stops the power supplies to the formatter, except for +3.3VA, when an Inactive off command signal is sent from the formatter during sleep level 1 or STBY period. The product enters Inactive off when the power switch is depressed for more than three seconds. The DC controller supplies all power supplies and the product exits Inactive off when a recover signal is sent from the formatter or the power switch is depressed for less than three seconds.

Power supply illumination control

The DC controller changes the light of the LED (power supply illumination) for the power switch according to the power supply condition as follows:

● Lighting-up: STBY period or sleep level 1

● Blinking: Active off

● Lighting-out: Inactive off

High-voltage power-supply PCA

The high-voltage power supply applies positive or negative voltage biases to the following components:

- Primary charging roller
- Developing roller
- Transfer roller
- Static charge eliminator
- Fuser film

Figure 1-7 High-voltage power-supply PCA
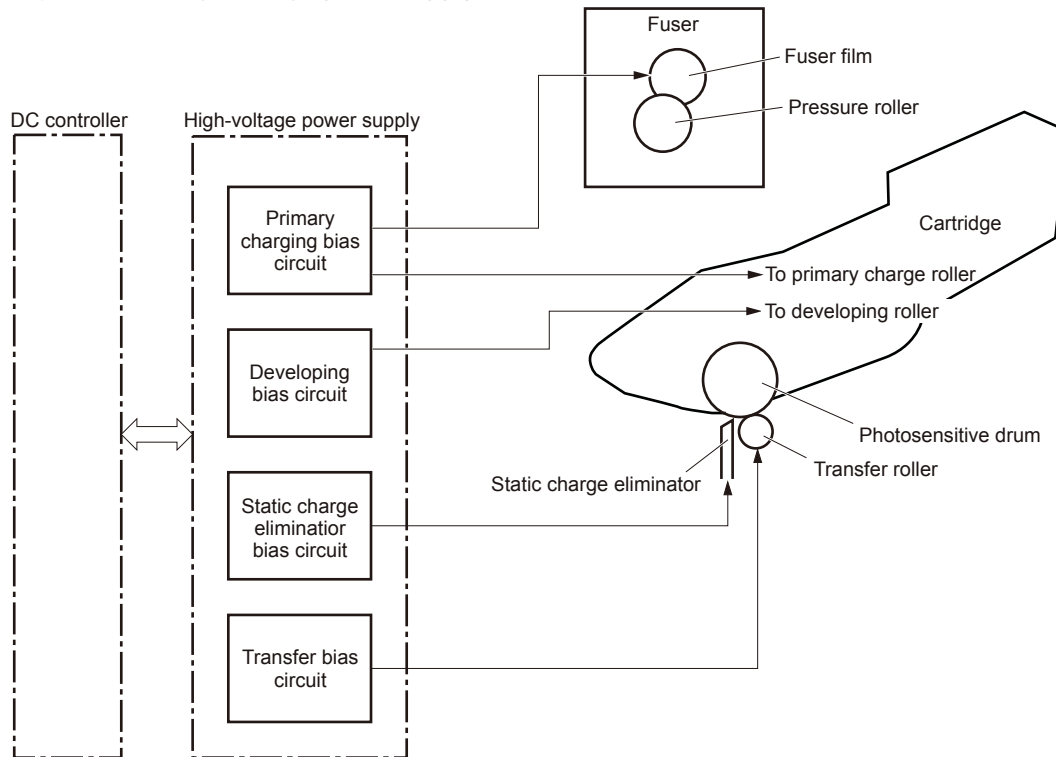
The DC controller controls the high-voltage power supply to generate the following biases.

- Primary charging bias

  The primary charging bias is used to charge the surface of the photosensitive drum evenly to prepare for image formation. The primary charging bias circuit generates the bias.

- Developing bias

  The developing bias is used to adhere toner to an electrostatic latent image formed on the photosensitive drum. The developing bias circuit generates the bias.

- Transfer bias

  The transfer bias is used to transfer the toner from the photosensitive drum onto the paper. The transfer bias circuit generates the bias. The transfer bias circuit also generates the reverse bias to clean the transfer roller.

- Static charge eliminator bias

  The static charge eliminator bias is used to improve the paper-feed performance and image-quality. The static charge eliminator bias circuit generates the bias.

- Fusing bias

  The fusing bias is used to improve the image-quality. The primary charging bias circuit generates the bias.

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 1-8 Fuser components
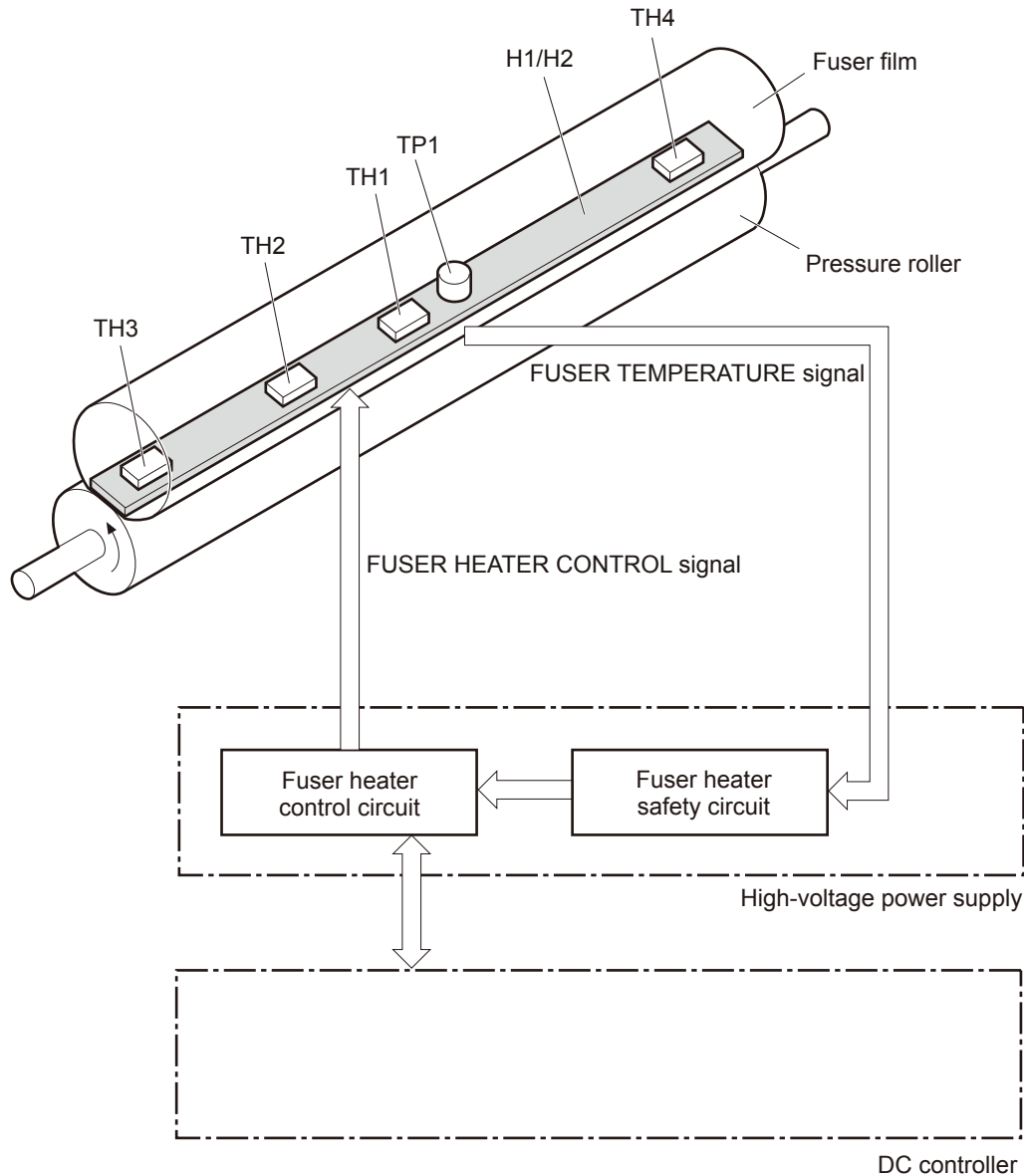
The following table shows the function of each fuser component.

Component		Function
H1	Fuser main heater	Heats center area of the fuser film
H2	Fuser sub heater	Heats both ends of the fuser film
TP1	Thermoswitch	Prevents an abnormal temperature rise of the fuser heater (contact type)
TH1	Main thermistor	Detects the temperature at center of the fuser heater (contact type)

Component		Function
TH2	Sub thermistor 1	Detects the temperature at ends of the fuser heater (contact type)
TH3	Sub thermistor 2	
TH4	Sub thermistor 3	

Figure 1-9 Fuser control system
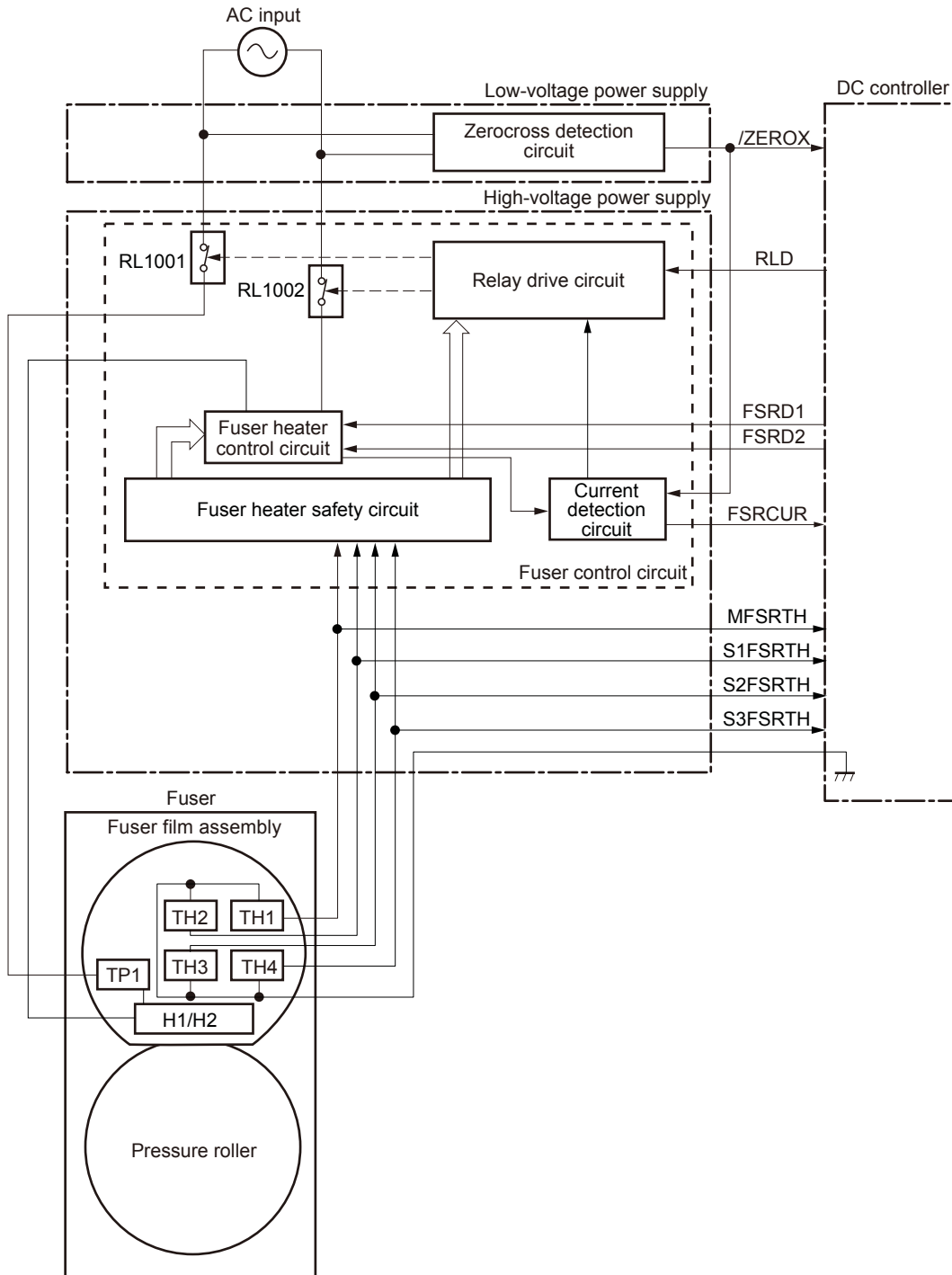
Fuser temperature control

The fuser temperature control maintains the temperature of the fuser heater at its targeted temperature.

The DC controller monitors the FUSER TEMPERATURE signals (MFSRTH, S1FSRTH, S2FSRTH and S3FSRTH), and sends the FUSER HEATER CONTROL signals (FSRD1 and FSRD2). The fuser heater control circuit controls the fuser heater depending on the signals, so that the fuser heater remains at the targeted temperature.

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 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 flow in the fuser heater control circuit, and it releases the relay to interrupt the power supply to the fuser heater when it detects an abnormal current flow.

  The DC controller deactivates the FUSER HEATER CONTROL signal and releases the relays (RL1001 and RL1002) to interrupt the power supply to the fuser heater, when it detects an abnormal current value in the CURRENT DETECTION signal (FSRCUR).

Fuser failure detection

The DC controller determines if the fuser functions properly. The DC controller determines a fuser failure, interrupts the power supply to the fuser heater, and notifies the formatter of a failure state when it encounters the following conditions:

- Abnormally high temperature 1

  The main thermistor detects 240°C (464°F) or higher for a specified period.

- Abnormally high temperature 2

  The sub thermistor 1 detects 230°C (446°F) or higher for a specified period during the WAIT period.

  The sub thermistor 1 detects 230°C (446°F) or higher for a specified period before INTR starts.

  The sub thermistor 1 detects 300°C (572°F) or higher for a specified period.

- Abnormally high temperature 3

  Either one of the sub thermistor 2 or sub thermistor 3 detects 230°C (446°F) or higher for a specified period during the WAIT period.

  Either one of the sub thermistor 2 or sub thermistor 3 detects 230°C (446°F) or higher for a specified period before INTR starts.

  Either one of the sub thermistor 2 or sub thermistor 3 detects 300°C (572°F) or higher for a specified period.

- Abnormally low temperature 1

  The main thermistor detects 60°C (140°F) or lower for a specified period during the WAIT period.

  The main thermistor detects 70°C (158°F) or lower for a specified period during heater temperature control of the INTR period.

  The main thermistor detects the targeted temperature minus 40°C (104°F) or lower for a specified period during heater temperature control or pressure roller cleaning of the PRINT period.

  The main thermistor detects 80°C (176°F) or lower for a specified period during heater temperature control or pressure roller cleaning of the PRINT period.

- Abnormally low temperature 2

  The sub thermistor 1 detects 60°C (140°F) or lower for a specified period during the WAIT period.

- Abnormally low temperature 3

  Either one of the sub thermistor 2 or sub thermistor 3 detects 60°C (140°F) or lower for a specified period during the WAIT period.

- Abnormal temperature rise

  The main thermistor detects the targeted temperature minus 10°C (50°F) or lower for a specified period during heater temperature control of the INTR period.

- Drive circuit failure

  The frequency of the ZEROCROSS signal is not detected in a specified value range within a specified period after power-on.

  The frequency of the ZEROCROSS signal is not detected in a specified value range for a specified period after power-on and once the signal is detected.

- Heater failure

  A specified current value or lower is detected during the heater drive period of the WAIT period or when more than a specified electrical power is input.

Pressure roller cleaning

The pressure roller cleaning clears toner on the pressure roller surface by adhering to the paper according to a command from the formatter. This is executed only when the paper size is A4-R (rotated) or Letter-R (rotated). The operational sequence of the pressure roller cleaning is as follows:

1. The DC controller picks up the paper from the designated input source when a cleaning command is sent from the formatter.

2. When the trailing edge of paper passes through the transfer roller, the fuser motor repeats the rotate-and-stop at regular intervals and the fuser heater turns on-and-off at the same time.

3. The toner on the pressure roller fuses onto the paper and the roller clears.

4. The paper with fused toner is delivered out of the product.

Laser scanner system

The DC controller controls the laser scanner system according to commands from the formatter. The DC controller controls the internal components in the laser scanner system to form the latent electrostatic image on the photosensitive drum according to the VIDEO signals. The following are the main components of the laser scanner system:

- Laser assembly

- Scanner motor assembly

- Beam detect (BD) sensor

- Scanner mirror

Figure 1-10 Laser scanner system
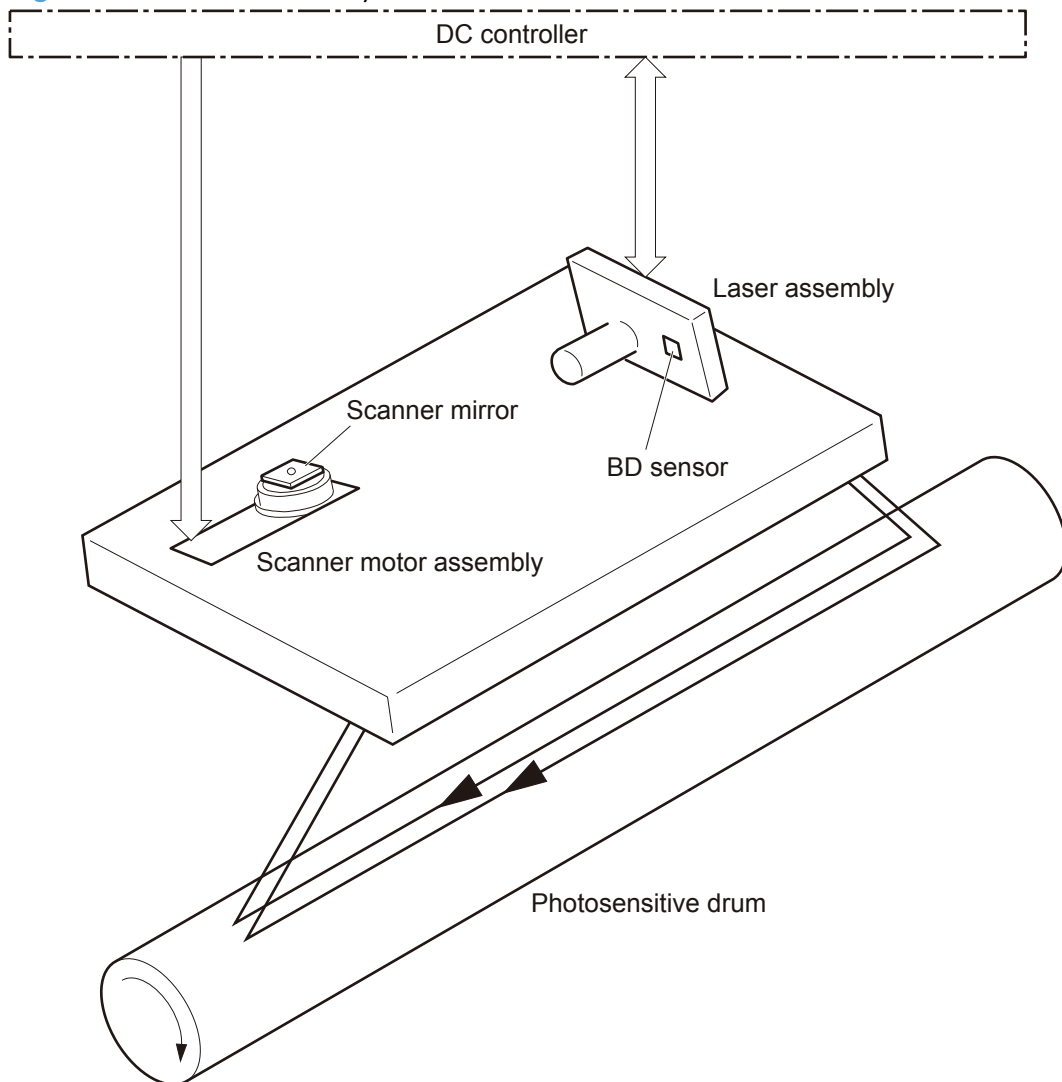
Laser scanner failure detection

The DC controller determines a laser scanner failure and notifies the formatter of the error state when any of the following conditions occurs:

- Beam detect (BD) failure

  A specified BD interval is not detected within a specified period during the scanner motor drive.

- Scanner motor start-up failure

  The scanner motor does not reach a specified rotation within a specified period from when the laser scanner starts driving.

- Laser failure

  A specified laser intensity is not detected.

Laser scanner safety function

The laser scanner has a mechanical shutter. For user and service technician safety, the laser shutter interrupts the optical path of the laser scanner when the cartridge door is open.

Image-formation system

The DC controller controls the image-formation system according to commands from the formatter. The DC controller controls the internal components of the image-formation system to form the toner image on the photosensitive drum surface. The toner image is transferred to the paper and fused.

The following are the main components of the image-formation system:

- Cartridge
- Transfer roller
- Fuser
- Laser scanner
- High-voltage power supply

Figure 1-11 Image-formation system
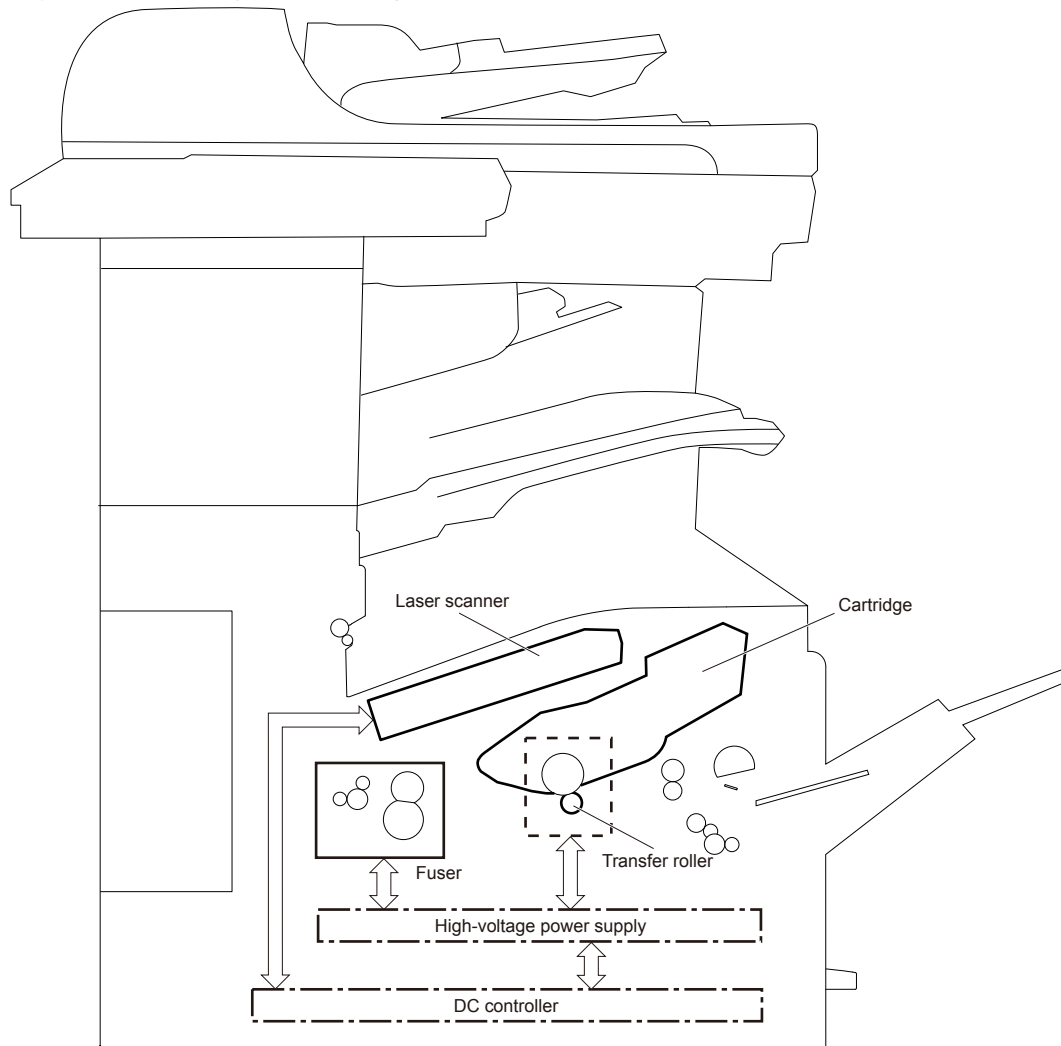
The DC controller rotates the drum motor to drive the following components:

- Photosensitive drum

- Developing roller (follows the photosensitive drum)

- Primary charging roller (follows the photosensitive drum)

- Transfer roller

The DC controller rotates the fuser motor to drive the following components:

- Pressure roller

- Fuser film (follows the pressure roller)

Figure 1-12 Image-formation components
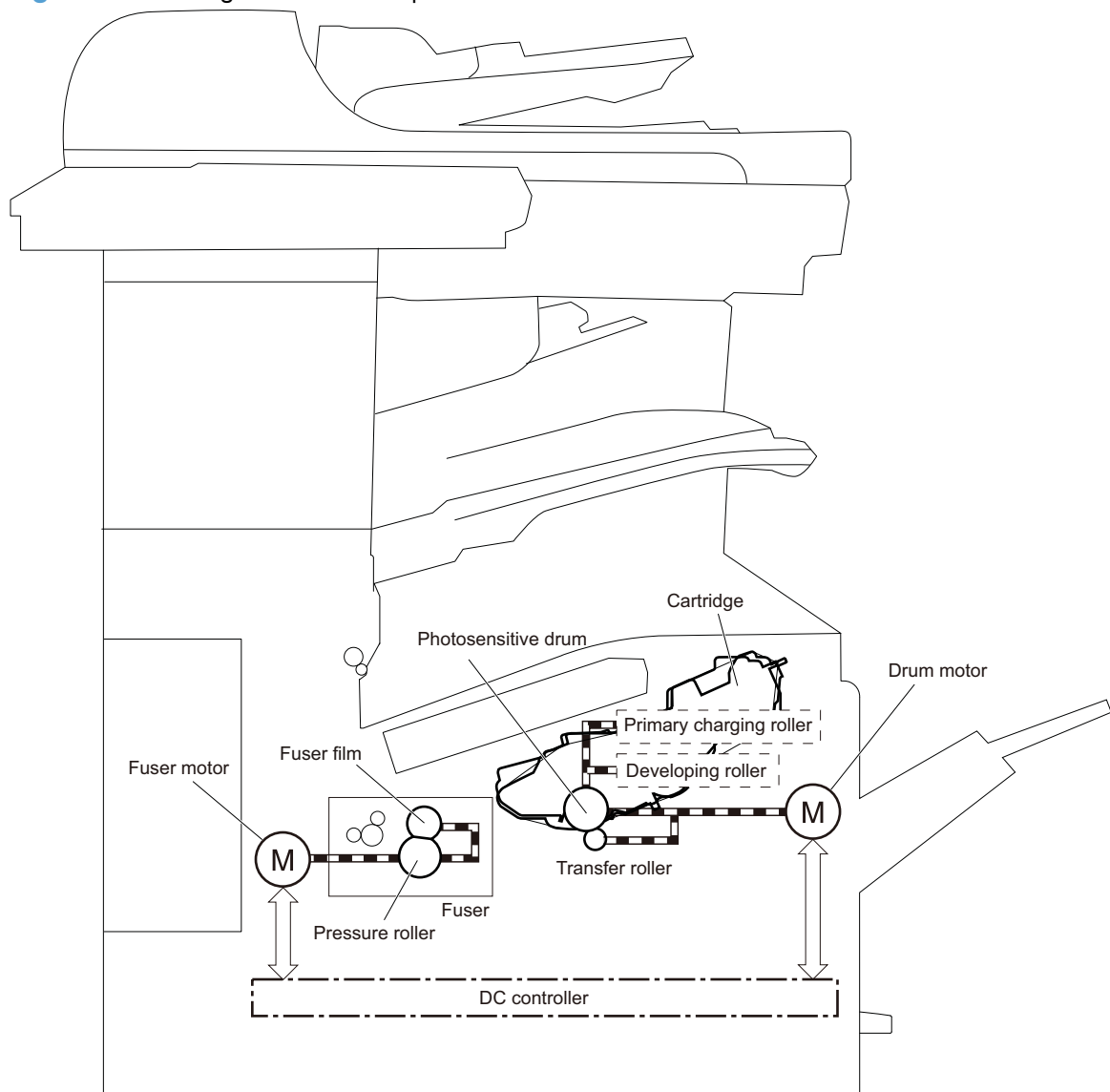
Image-formation process

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

- Latent-image-formation system
  - Step 1: Primary charging
  - Step 2: Laser-beam exposure
- Developing system
  - Step 3: Developing
- Transfer system
  - Step 4: Transfer
  - Step 5: Separation
- Fuser system
  - Step 6: Fusing
- Drum cleaning
  - Step 7: Drum cleaning

Figure 1-13 Image-formation process
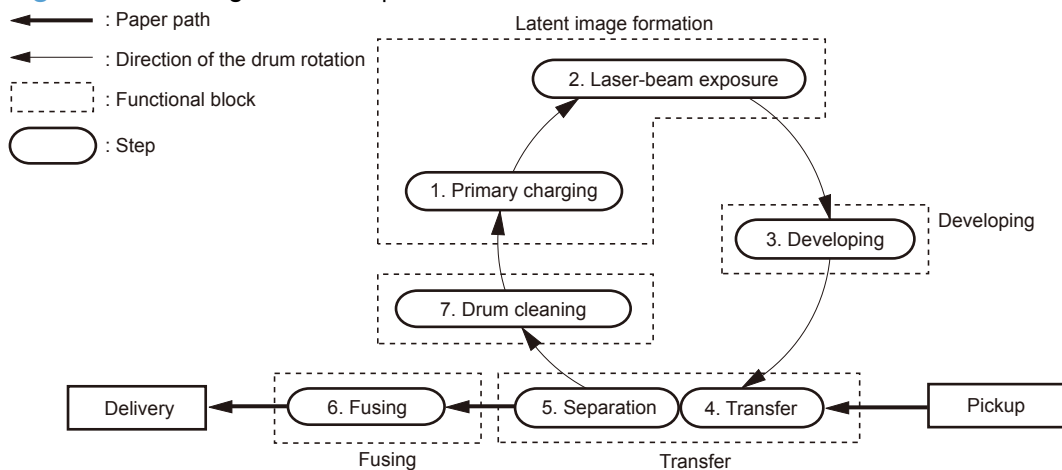
Latent-image formation block

During the two steps that comprise this block, an invisible latent image is formed on the photosensitive drum.

Step 1: Primary charging

To prepare for latent-image formation, the surface of the photosensitive drum is charged with a uniform negative potential. The primary charging roller charges the photosensitive drum directly. The primary

charging bias is applied to the primary charging roller to keep a negative potential on the drum surface.

Figure 1-14 Primary charging
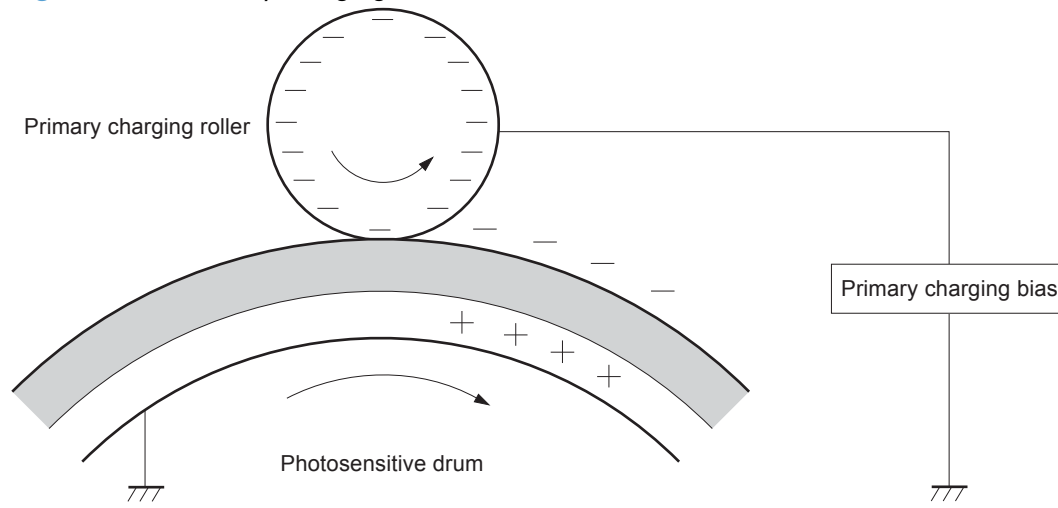
Step 2: Laser-beam exposure

The laser-beam strikes the surface of the photosensitive drum to neutralize the negative charge. An electrostatic latent image forms where the negative charge was neutralized.

Figure 1-15 Laser-beam exposure
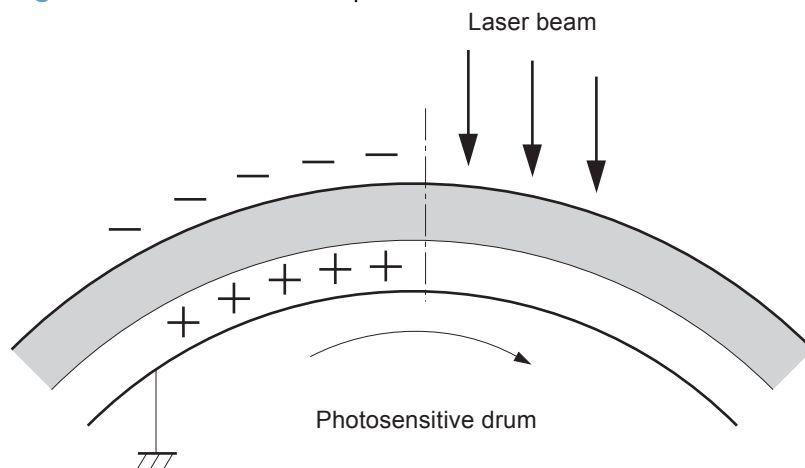
Development block

Toner adheres to the electrostatic latent image on the photosensitive drum, which becomes visible.

Step 3: Developing

Toner acquires a negative charge from the friction that occurs when the developing roller rotates against the developer blade. The developing bias is applied to the developing roller to make a difference in the electric potential of the drum. The negatively charged toner is attracted to the latent

image on the photosensitive drum because the drum surface has a higher potential. The latent image becomes visible on the drum.

Figure 1-16 Developing
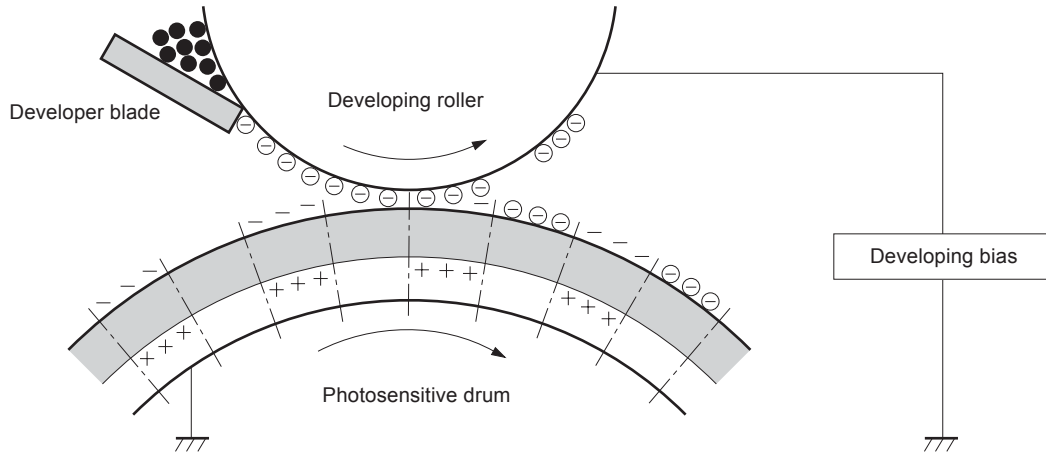
Transfer block

During the two steps that comprise this block, a toner image on the photosensitive drum transfers to the paper.

Step 4: Image transfer

The toner on the photosensitive drum is transferred to the paper. The transfer bias is applied to the transfer roller to charge the paper positive. The negatively charged toner on the drum surface transfers onto the paper.

Figure 1-17 Image transfer
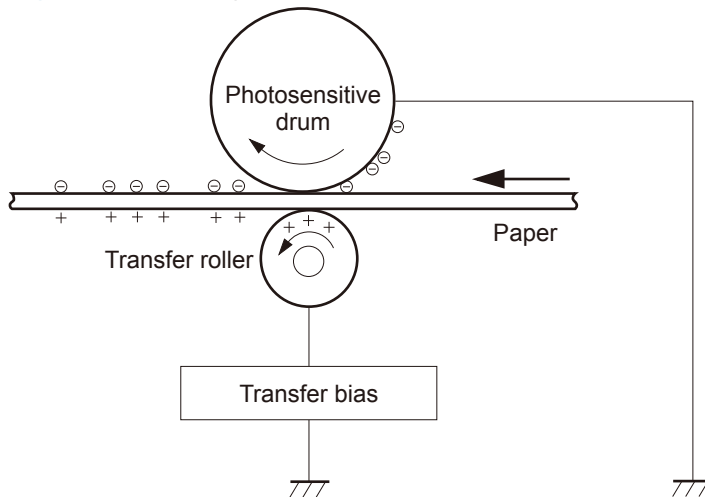
Step 5: Separation from the drum

The elasticity of the paper and the curvature of the photosensitive drum causes the paper to separate from the photosensitive drum. The static charge eliminator bias is applied to the static charge

eliminator. The static charge eliminator reduces backside static discharge of the paper after the transfer process for stable paper-feed and print-quality.

Figure 1-18 Separation from the drum
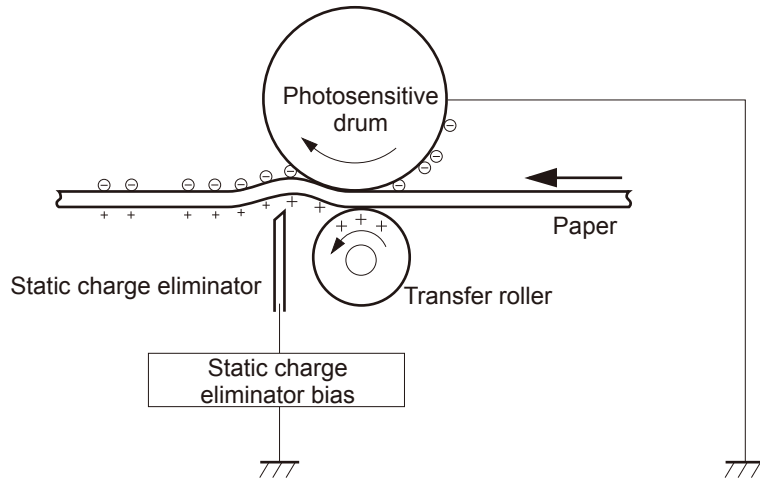
Fuser block

Until the fusing stage is complete, the image is not permanently affixed to the paper. The toner can be easily smudged until the heat and pressure of the fusing process fix the image to the sheet.

Step 6: Fusing

Heat and pressure melt the toner as the paper passes through the rollers. The toner image is permanently fused to the paper. The fusing bias is applied to the fuser film to improve print-quality.

Figure 1-19 Fusing
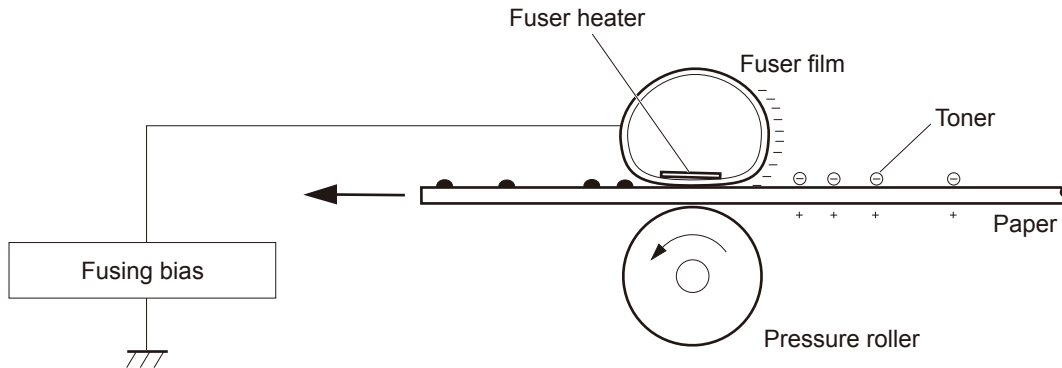
Drum-cleaning block

The residual toner is removed from the photosensitive drum surface.

Step 7: Drum cleaning

The cleaning blade scrapes the residual toner off the surface of the photosensitive drum and toner is deposited in the toner collection box.

Figure 1-20 Drum cleaning
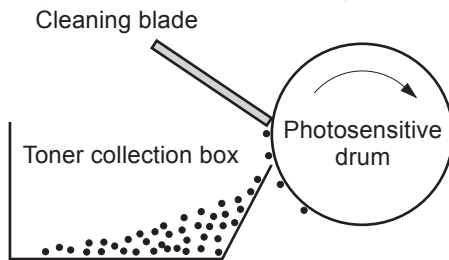
Toner cartridge

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

● Photosensitive drum

● Developing roller

- Primary charging roller

- Memory tag

Figure 1-21 Toner cartridge components
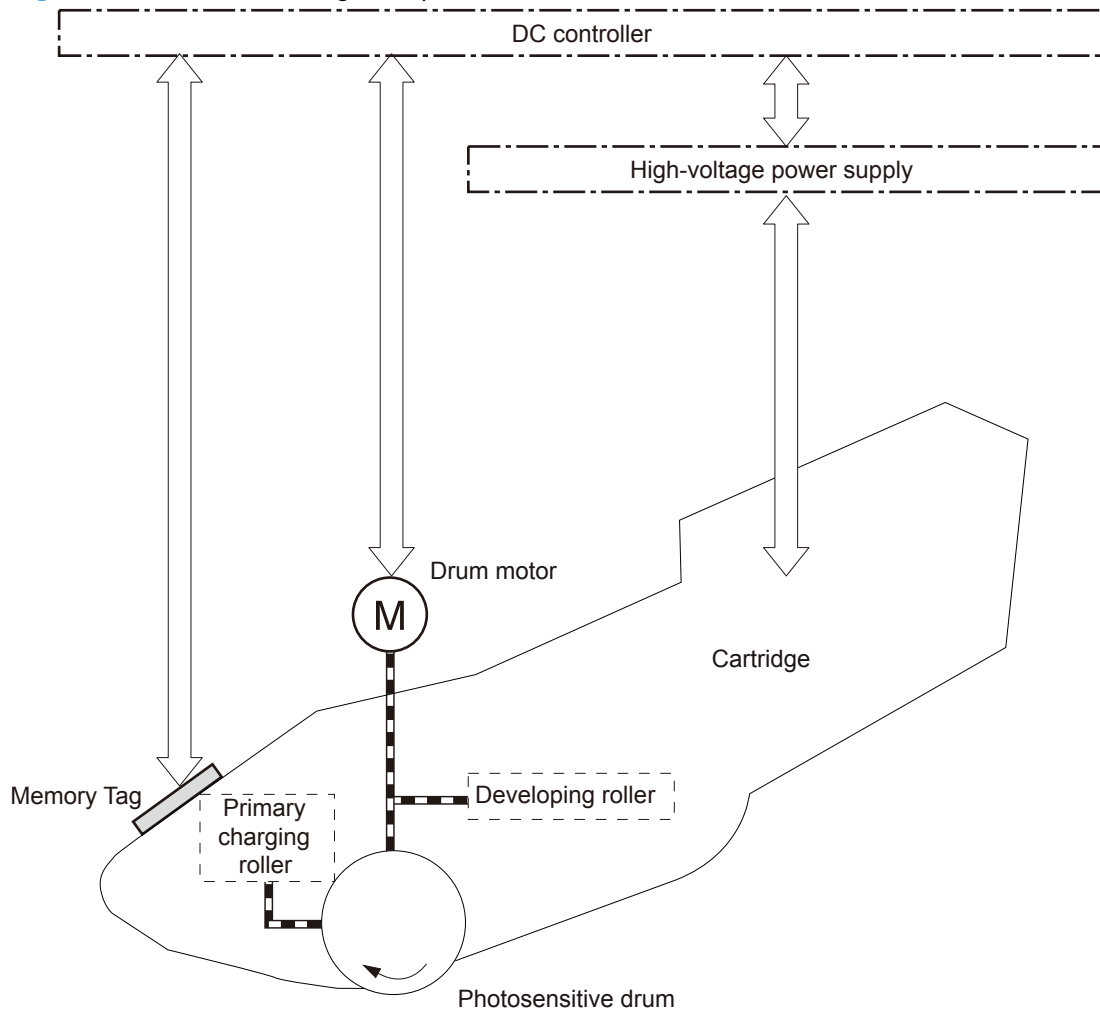
The cartridge serves a role in the following functions:

- Memory tag

    The memory tag is a non-volatile memory module in the cartridge and the DC controller controls it. The memory tag stores information about usage for the cartridge and the DC controller reads and writes the data in the memory tag. The DC controller determines a memory tag error and notifies the formatter when it fails to either read from or write to the memory tag.

- Cartridge-presence detection

    The DC controller detects whether the cartridge is installed in the product by monitoring the cartridge presence sensor. The DC controller notifies the formatter when it determines a cartridge absence.

- Toner-level detection

The DC controller detects the remaining toner level in a cartridge according to the TONER LEVEL signal. The DC controller determines a cartridge low warning or cartridge end-of-life when the toner level drops below a specified level and notifies the formatter.

- Cartridge-life detection

    The DC controller detects the cartridge life. The DC controller determines cartridge end-of-life and notifies the formatter when the toner out.

Other image-formation functions

Drum discharge

The drum discharge is a feature to remove residual charge on the photosensitive drum surface for preventing uneven image density. The laser-beam strikes the surface of the photosensitive drum to remove the residual charge.

The drum discharge is performed during the LSTR period.

Figure 1-22 Drum discharge
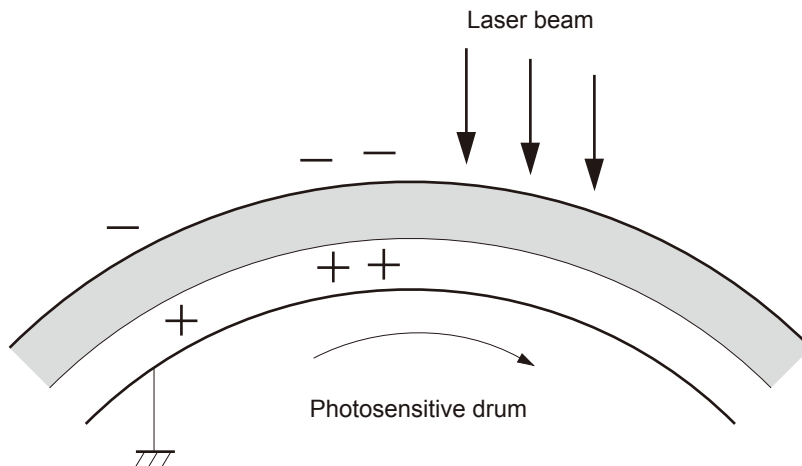
Transfer roller cleaning

The transfer roller cleaning is a feature to remove residual toner on the transfer roller surface to prevent the back-side toner stain of the paper.

The residual toner reverse-transfers to the photosensitive drum by applying the reverse transfer bias to the transfer roller. The residual toner is deposited in the toner collection box.

The transfer roller cleaning is performed during the WAIT period, INTR period, LSTR period, and after forming the image for the front side of the page when duplex printing.

Figure 1-23 Transfer roller cleaning
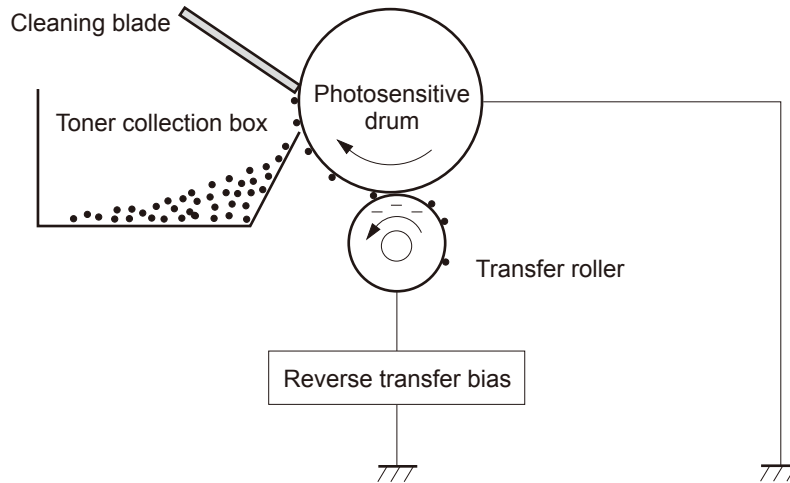
Environment change control

The environment change control calibrates each high-voltage bias to obtain an appropriate image according to the environment changes.

The DC controller determines the environment, where the product is installed, based on the surrounding temperature and humidity data from the environment sensor. It adjusts the high-voltage biases to accommodate environmental changes.

The DC controller determines an environment sensor abnormality and notifies the formatter when it detects out of specified range data from the environment sensor.

Pickup, feed, and delivery system

The DC controller controls the pickup, feed, and delivery system according to commands from the formatter. The DC controller controls each block to pickup, feed, and deliver the paper. The pickup, feed, and delivery system consists of following three functional blocks:

- Pickup-and-feed block

- Fuse-and-delivery block

- Duplex block

Figure 1-24 Pickup, feed, and delivery system
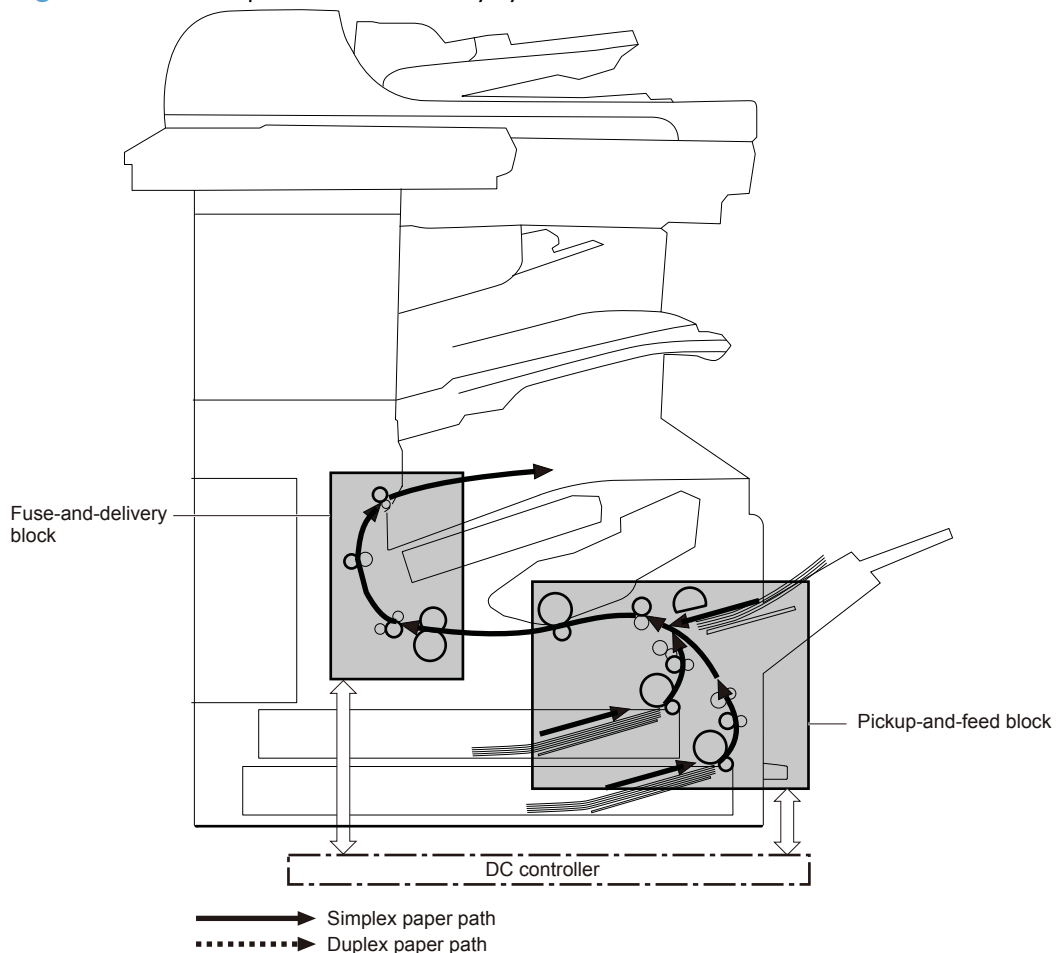
The figure below shows the sensors and switches for the pickup, feed, and delivery system.

Figure 1-25 Pickup, feed, and delivery system sensors and switches
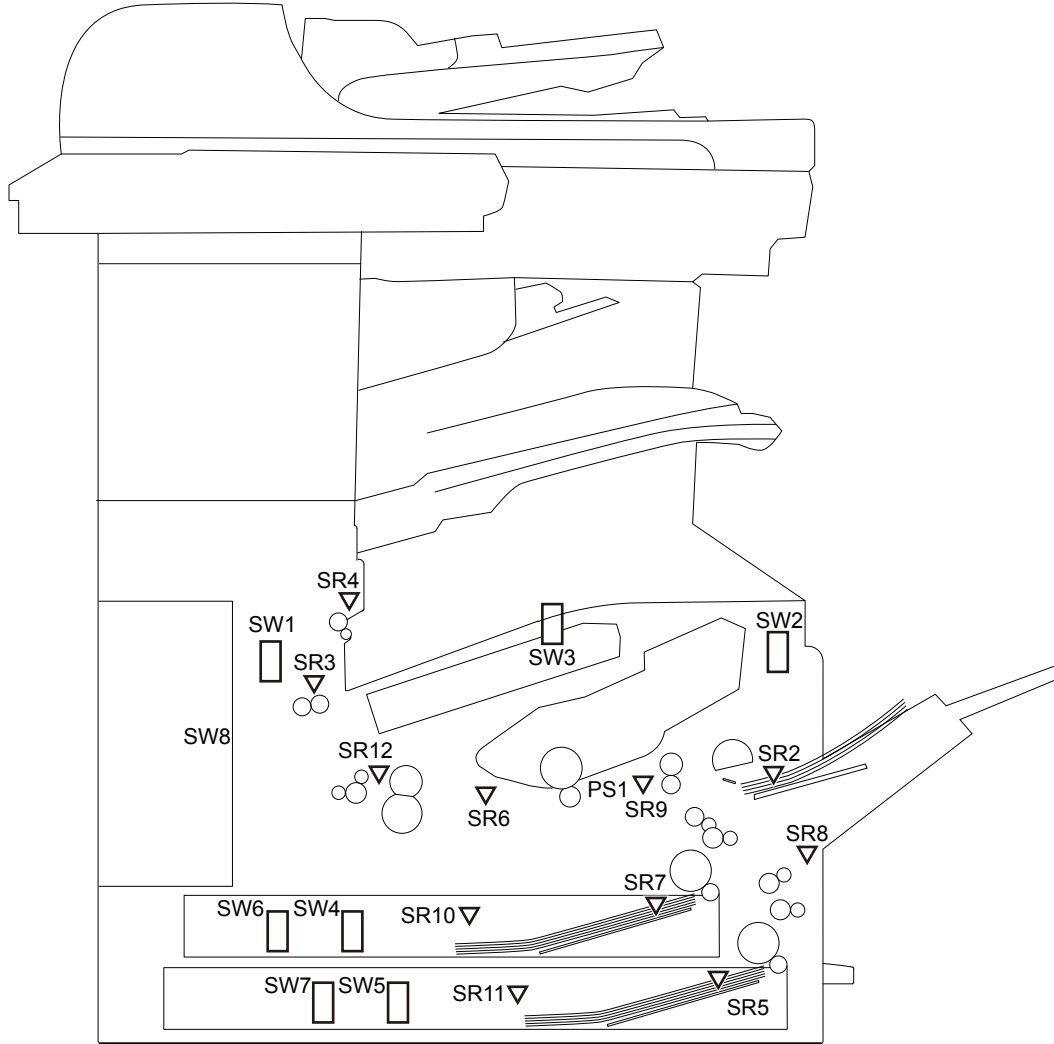
Table 1-5 Pickup, feed, and delivery system sensors and switches

Component		Signal
SW1	Left door interlock switch	LEFT DOOR OPEN DETECTION signal
SW2	Cartridge door interlock switch	CARTRIDGE DOOR OPEN DETECTION signal
SW3	Cartridge door open detection switch	CARTRIDGE DOOR OPEN DETECTION signal
SW4	Upper cassette media width switch	UPPER CASSETTE MEDIA WIDTH signal
SW5	Lower cassette media width switch	LOWER CASSETTE MEDIA WIDTH signal
SW6	Upper cassette media end switch	UPPER CASSETTE MEDIA END signal
SW7	Lower cassette media end switch	LOWER CASSETTE MEDIA END signal
SR2	MP tray media out sensor	MP TRAY MEDIA OUT signal
SR3	Output sensor	OUTPUT signal
SR4	Output bin media full sensor	OUTPUT BIN MEDIA FULL signal

Component		Signal
SR5	Lower cassette media out sensor	LOWER CASSETTE MEDIA OUT signal
SR6	Loop sensor	LOOP LEVEL signal
SR7	Upper cassette media out sensor	UPPER CASSETTE MEDIA OUT signal
SR8	Right door sensor	RIGHT DOOR OPEN DETECTION signal
SR9	TOP sensor	TOP signal
SR10	Upper cassette lift-up sensor	UPPER CASSETTE LIFT-UP signal
SR11	Lower cassette lift-up sensor	LOWER CASSETTE LIFT-UP signal
SR12	Fuser output sensor	FUSER OUTPUT signal

The figure below shows the solenoid and motors for the pickup, feed, and delivery system.

Figure 1-26 Pickup, feed, and delivery-system solenoid and motors
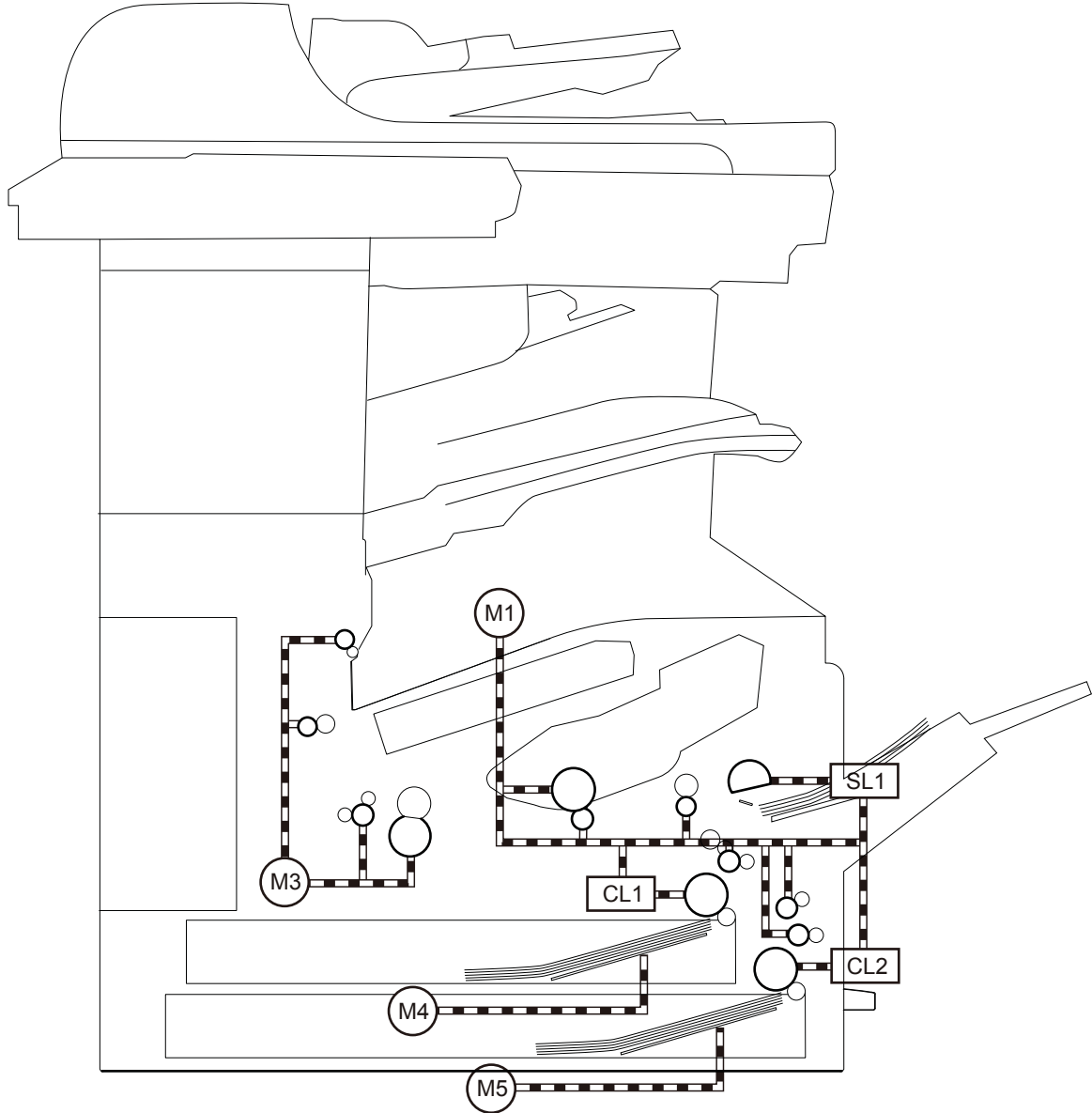
Table 1-6 **Pickup, feed, and delivery system solenoid and motors**

Component		Signal
SL1	MP tray pickup solenoid	MP TRAY PICKUP SOLENOID signal
CL1	Upper cassette pickup clutch	UPPER CASSETTE PICKUP CLUTCH signal
CL2	Lower cassette pickup clutch	LOWER CASSETTE PICKUP CLUTCH signal
M1	Drum motor	DRUM MOTOR CONTROL signal
M3	Fuser motor	FUSER MOTOR CONTROL signal
M4	Upper cassette lifter motor	UPPER CASSETTE LIFTER MOTOR CONTROL signal
M5	Lower cassette lifter motor	LOWER CASSETTE LIFTER MOTOR CONTROL signal

Pickup-and-feed block

The pickup-and-feed block picks one sheet of paper from the cassette or the MP tray and feeds it into the fuser.

Figure 1-27 Pickup-and-feed block
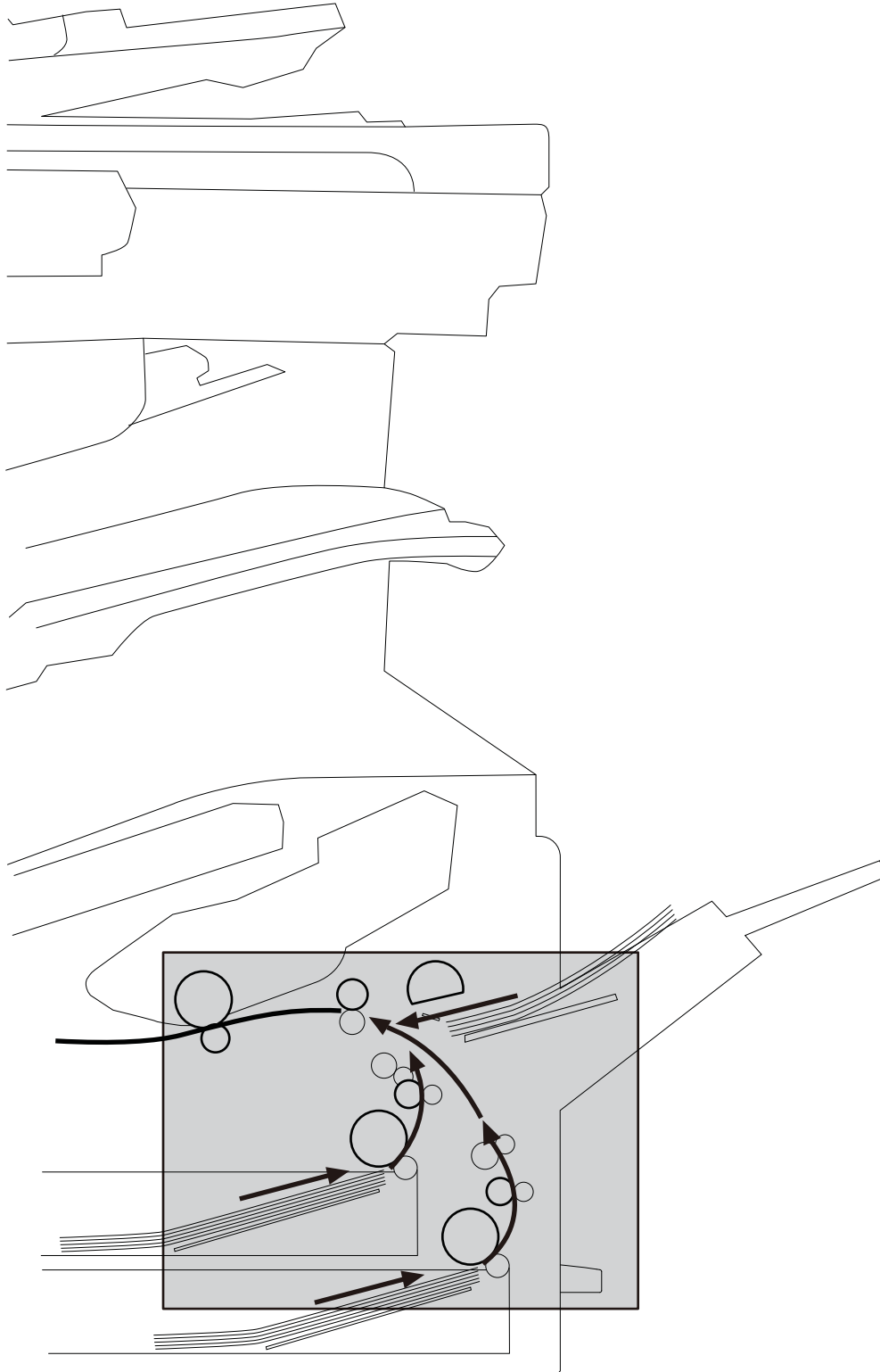
Cassette pickup

The product picks up one sheet of paper from the cassette. The following figure shows the cassette pickup mechanism. Both trays have the same mechanism.

Figure 1-28 Cassette pickup mechanism
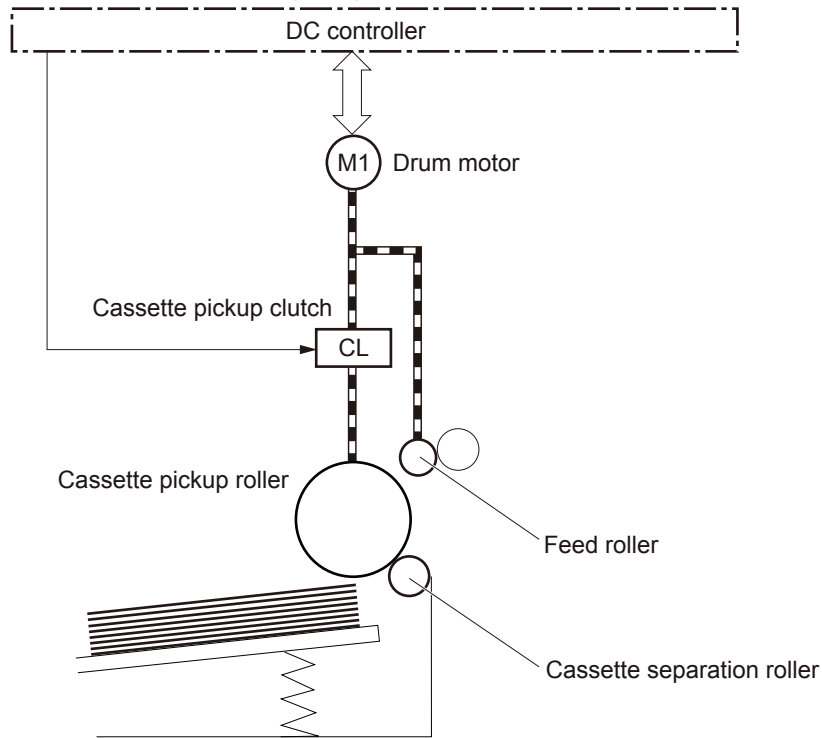
The operational sequence of the cassette pickup is as follows:

1. The DC controller rotates the drum motor when it receives a print command from the formatter.

2. The feed roller rotates.

3. The cassette pickup solenoid is driven at a specified timing.

4. The cassette pickup roller rotates and picks up the top paper.

5. The cassette separation roller removes any multiple-fed sheets.

6. One sheet of paper is fed into the product.

Cassette media-size detection and cassette-presence detection

The DC controller determines the size of the paper loaded in the cassette and also whether the cassette is installed in the product by monitoring the cassette media-width switch and the cassette media-end switch.

The cassette media-width switch and the cassette media-end switch contain three sub-switches each. The DC controller detects the size of paper and the presence of the cassette according to the combination of the switches and notifies the formatter.

The cassette media-size detection and the cassette-presence detection are not performed during Sleep mode. The following table lists the combination of the switches.

Table 1-7 Media switch combinations

Paper size	Cassette media width switch			Cassette media end switch		
	Top	**Center**	**Bottom**	**Top**	**Center**	**Bottom**
Cassette absence	OFF	OFF	OFF	—	OFF	OFF
A5-R	OFF	OFF	OFF	—	ON	ON
B5-R	ON	ON	OFF	—	ON	ON
Executive-R	OFF	ON	OFF	—	ON	ON
Letter-R	OFF	ON	ON	—	ON	ON
A4-R	ON	ON	ON	—	ON	ON
8.5 x 13 in	OFF	OFF	OFF	—	ON	OFF
Legal	OFF	OFF	OFF	—	OFF	ON
B4	ON	ON	OFF	—	OFF	ON
Ledger	OFF	ON	ON	—	OFF	ON
A3	ON	ON	ON	—	OFF	ON

Cassette lift operation

There are two types of cassette lift operation: cassette lift-up and cassette lift-down. The paper stack surface is lifted up to the pickup position. The lifting plate is lifted down when the pickup operation is not performed. The lift-up and lift-down operations are described in the following. Both upper and lower cassettes perform the same operation.

Lift-up operation

The DC controller rotates the cassette lifter motor until the cassette lift-up sensor detects the lifter rack. Accordingly, the lifter moves up and the lifting plate moves up to the pickup position. The lift-up operation is performed when the product is turned on or when the cassette is installed.

The DC controller determines a cassette lifter motor failure and notifies the formatter when the cassette lift-up sensor does not detect the lifter rack within a specified period from when the lift-up operation starts.

Lift-down operation

The paper loaded in the cassette presses against the cassette pickup-roller when the lifting plate is in the pickup position. If this condition is kept for a long time, the paper can be deformed, and a pickup failure might occur. Therefore, the lifting plate is moved down to release the paper from the pickup roller when a print operation is not performed.

When a print job is not sent for a specified period, the DC controller reverses the cassette lifter motor until the cassette lift-up sensor stops sensing the lifter rack.

When the casette lift-up sensor keeps sensing the lifter rack for a specified period from when the lift-down operation starts, the DC controller determines a cassette lifter motor failure and notifies the formatter.

The following figure shows the mechanism of the cassette lift operation for the upper cassette. Both upper and lower cassettes have the same mechanism.

Figure 1-29 Cassette lift operation
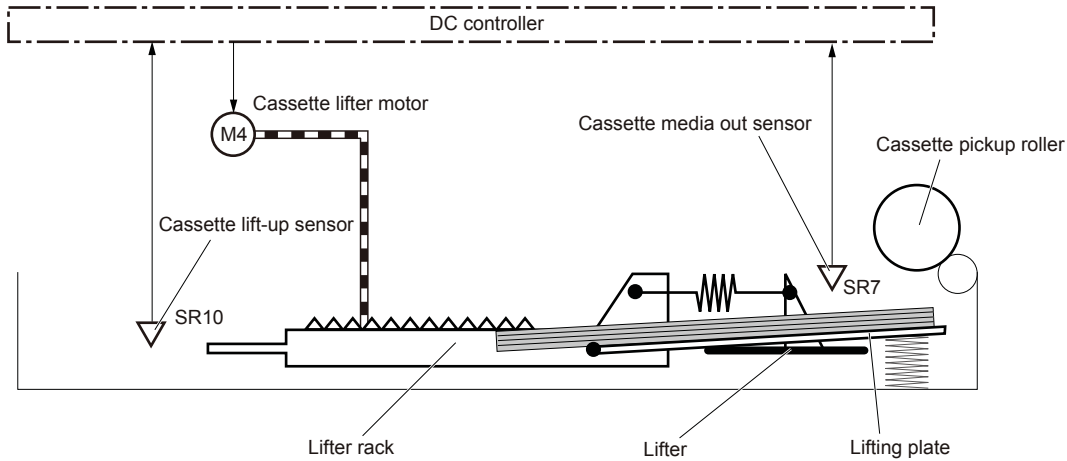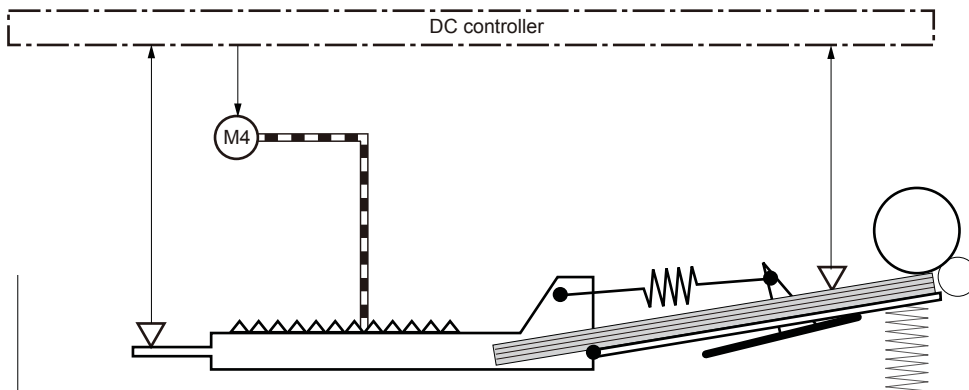
Cassette media-presence detection

The DC controller detects whether paper is loaded in the cassette by monitoring the cassette media out sensor. The cassette media-presence detection is not performed during Sleep mode. The DC controller determines a media-absence and notifies the formatter when the cassette media out sensor does not detect the paper.

Cassette multiple-feed prevention

The product uses a cassette separation roller to prevent multiple sheets of paper from entering into the product at one time. The cassette separation roller follows the rotation of the cassette pickup roller.

When multiple sheets are picked up, the cassette separation roller does not rotate and only one sheet is fed into the product.

Figure 1-30 Cassette multiple-feed prevention
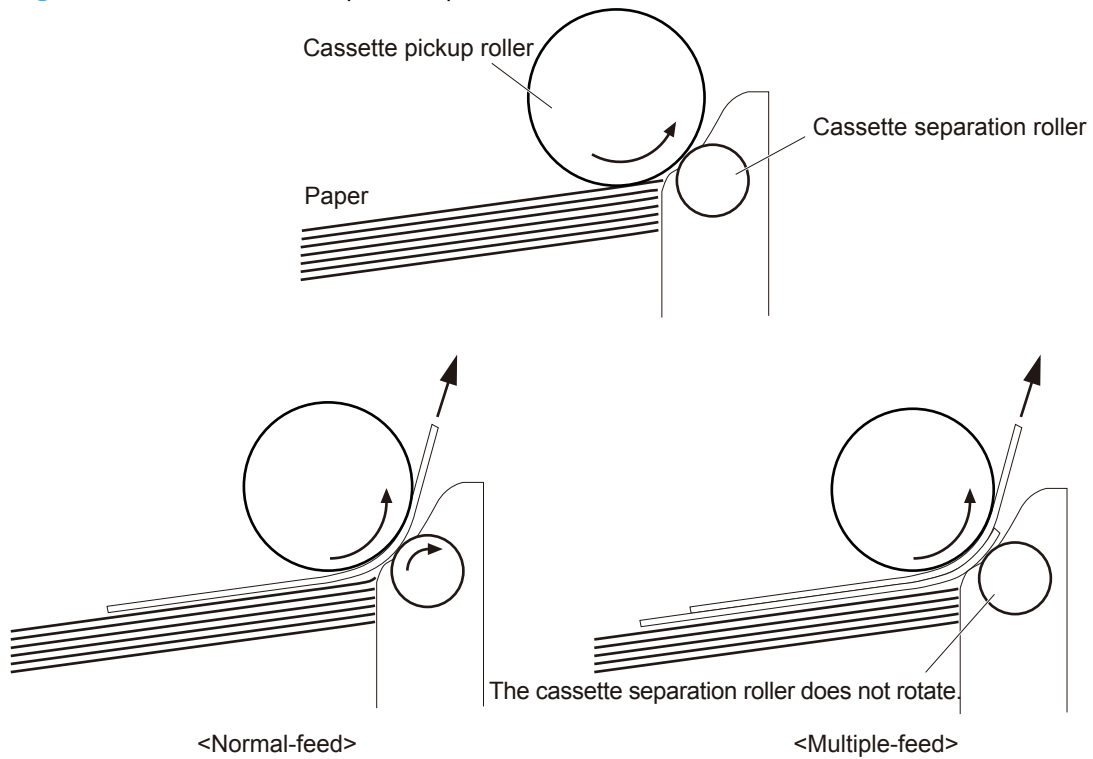
MP tray pickup

The product picks up one sheet of paper from the MP tray.

Figure 1-31 MP tray pickup
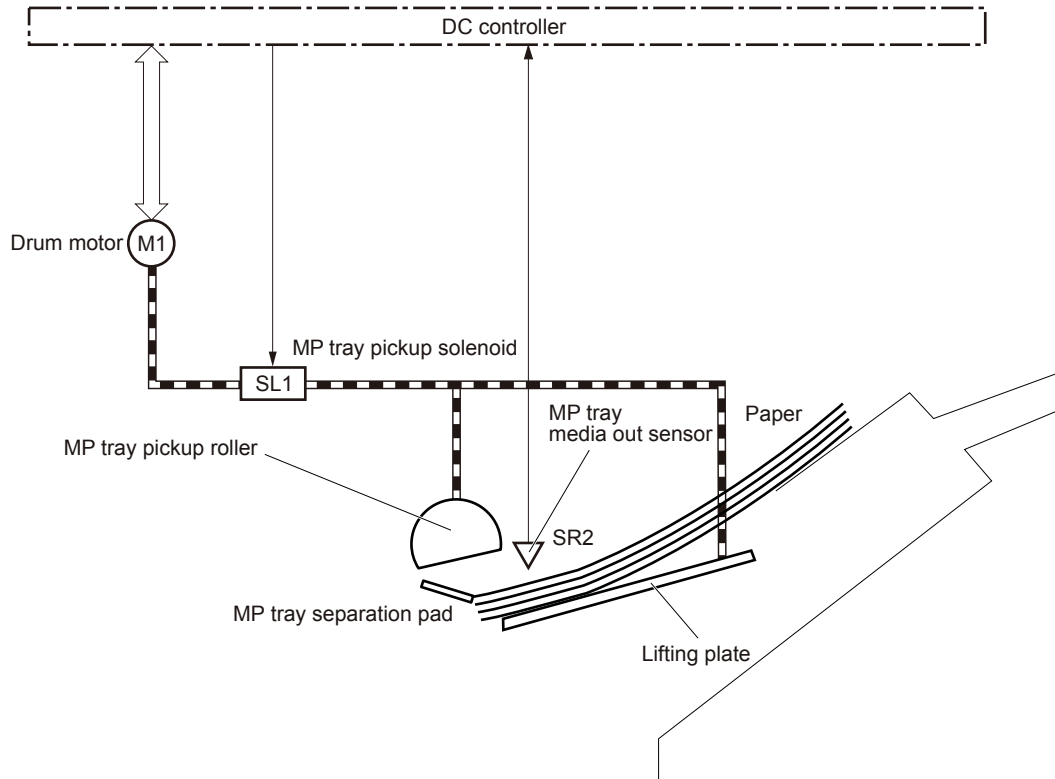
The operational sequence of the MP tray pickup is as follows:

1. The DC controller rotates the drum motor when it receives a print command from the formatter.

2. The MP tray pickup solenoid is driven at a specified timing.

3. The MP tray pickup roller rotates.

4. The lifting plate moves up.

5. The MP tray pickup roller picks up the top paper.

6. The MP tray separation pad removes any multiple-fed sheets.

7. One sheet of paper is fed into the product.

MP tray media-presence detection

The DC controller detects whether paper is loaded in the MP tray by monitoring the MP tray media out sensor. The MP tray media-presence detection is not performed during Sleep mode. The DC controller determines a media-absence and notifies the formatter when the MP tray media out sensor does not detect any paper.

MP tray multiple-feed prevention

The product uses a MP tray separation pad to prevent multiple sheets of paper from entering into the product at one time. When multiple sheets are picked up, multiple sheets stop due to the friction against the MP tray separation pad, and only one page is fed into the product.

Figure 1-32 MP tray multiple-feed prevention
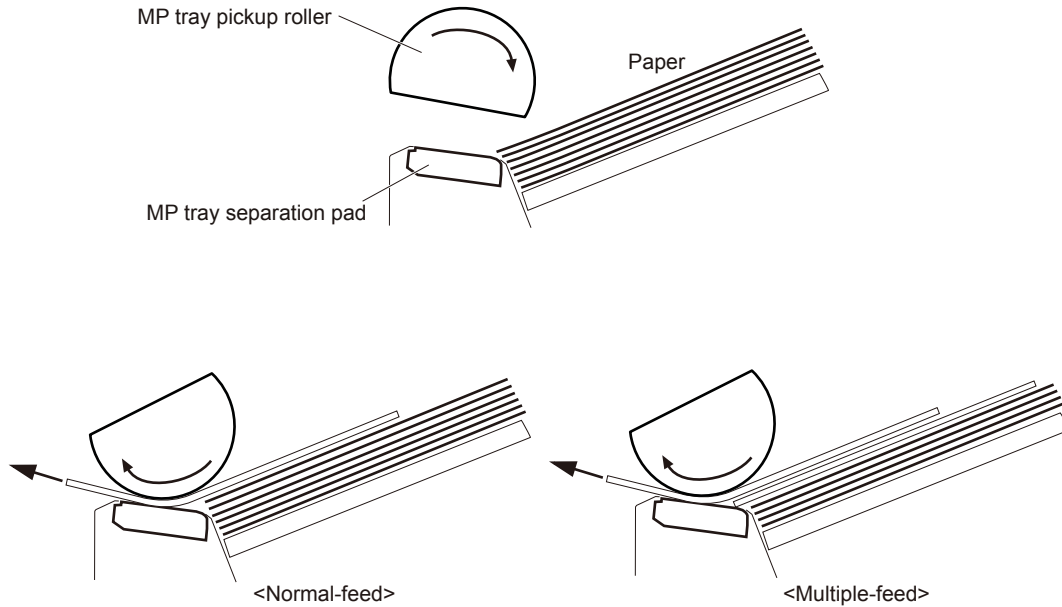
Feed-speed control

The feed-speed control adjusts the paper feeding speed to improve the print-quality depending on the paper types. The DC controller feeds the paper at a specified speed according to the print mode designated by the formatter.

The following table shows the print mode and corresponding feed-speed.

Print mode	Feed-speed
Auto	—
Normal	1/1, 1/2 [1]
Heavy media 1	1/1
Heavy media 2	1/2
Heavy media 3	—
Light media 1	1/1
Light media 2	1/1
Light media 3	—
Glossy media 1	—
Glossy media 2	—

Print mode	Feed-speed
Glossy media 3	—
Glossy film	—
Photo media 1	—
Photo media 2	—
Photo media 3	—
Envelope 1	1/1
Envelope 2	1/2
Envelope 3	—
OHT	1/2
Label	—
Designated media 1	—
Designated media 2	—
Designated media 3	—

[1] The product will run at half speed in Normal mode when the specific print-quality optimize mode for reducing toner explosions is selected.

Skew-feed prevention

The product uses a registration shutter to correct the skew feed without decreasing the feeding speed.

Figure 1-33 Skew-feed prevention
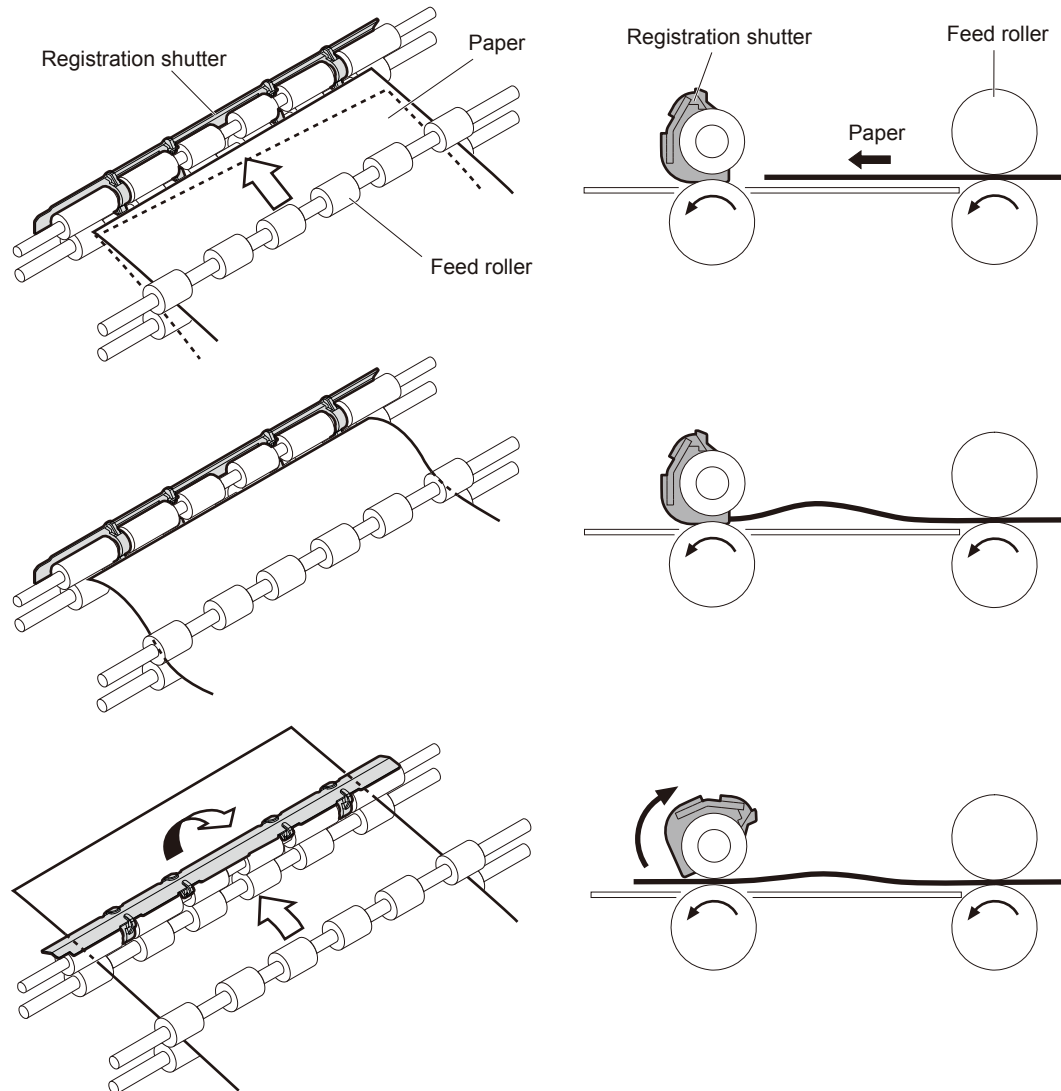
The operational sequence of the skew-feed prevention is as follows:

1. The leading edge of paper strikes the registration shutter as the paper is fed.

2. The leading edge of paper is aligned with the shutter.

3. As the feed roller keeps pushing the paper, the paper warps.

4. The stiffness of the paper pushes up the registration shutter.

5. The paper passes through the registration shutter and straightens.

Media-length detection

The DC controller detects the length of paper to prevent toner stain on the transfer roller and also to minimize jam occurrences in the duplexer. The DC controller measures the length of paper by monitoring the time from when the leading edge of paper reaches the TOP sensor until the trailing edge passes through, and then determines the paper size.

The DC controller determines a media-size mismatch and notifies the formatter when the detected paper size meets the following conditions:

● The detected paper size is different from the size designated by the formatter.

● The detected paper size is different from the size detected by the cassette media size switch.

Fuse and delivery block

The fuse and delivery block fuses the toner image onto the paper and delivers the printed page to the face-down output bin.

Figure 1-34 Fuse and delivery block

Output bin
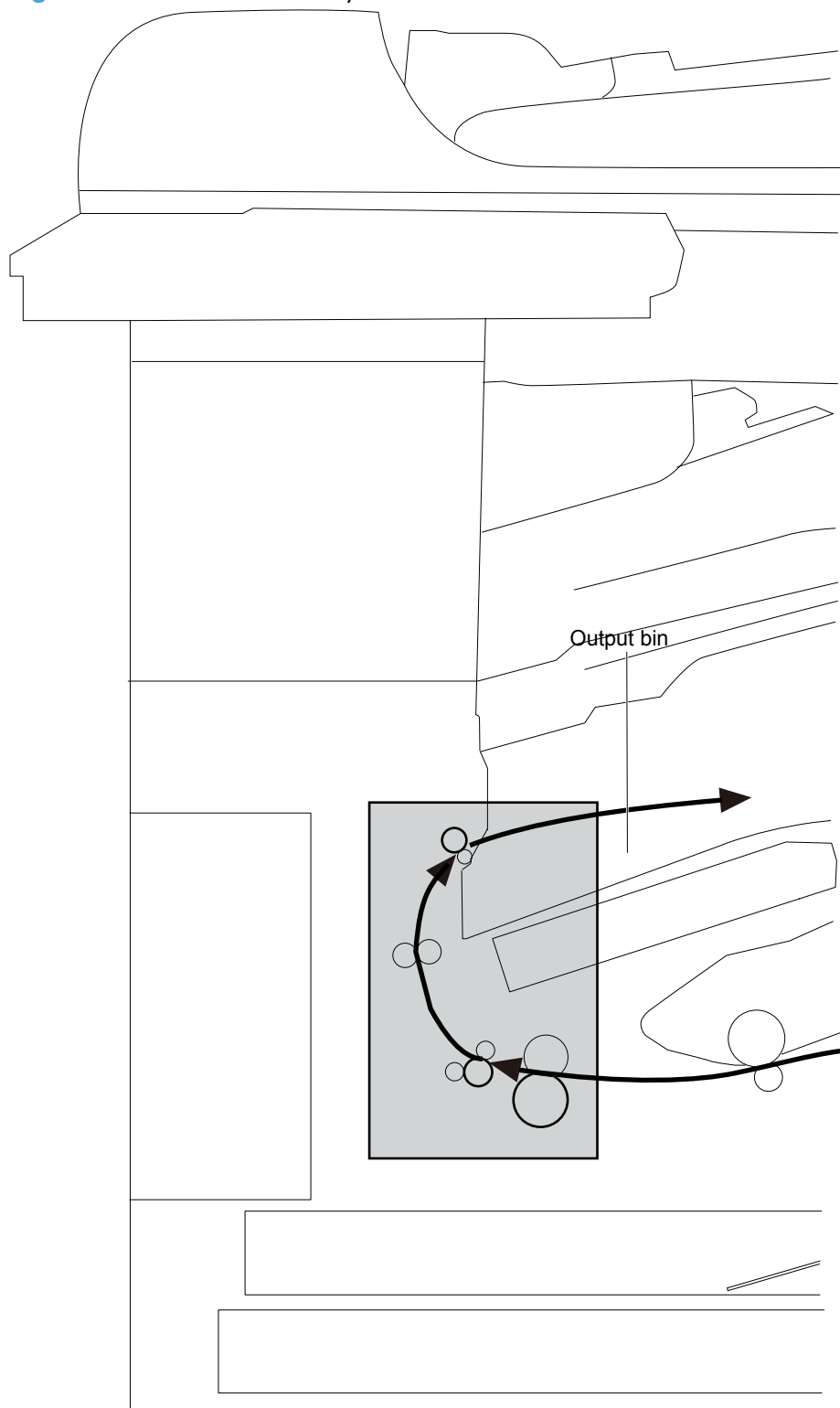
Loop control

The product controls the loop of paper to prevent print-quality and paper-feed defects.

- If the fuser film/pressure roller rotates slower than the photosensitive drum/transfer roller, the paper loop increases.

- If the fuser film/pressure roller rotates faster than the photosensitive drum/transfer roller, the paper loop decreases.

The DC controller detects the loop amount by monitoring the loop sensor and controls the rotational speed of the fuser motor.

Figure 1-35 Loop control

Fuser film/Pressure roller rotates slower than photosensitive drum/transfer roller.
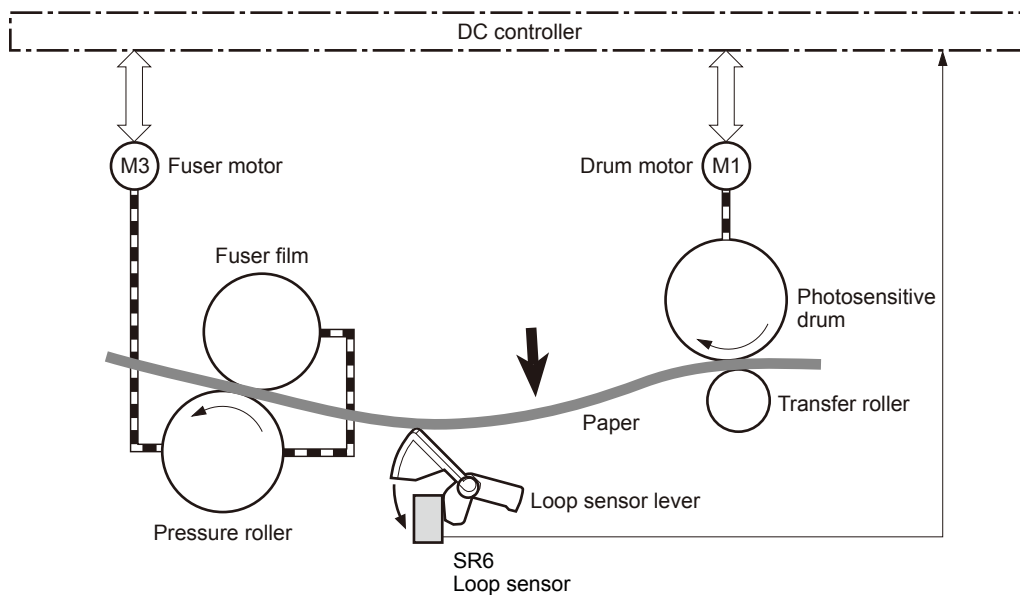
Fuser film/Pressure roller rotates faster than photosensitive drum/transfer roller.
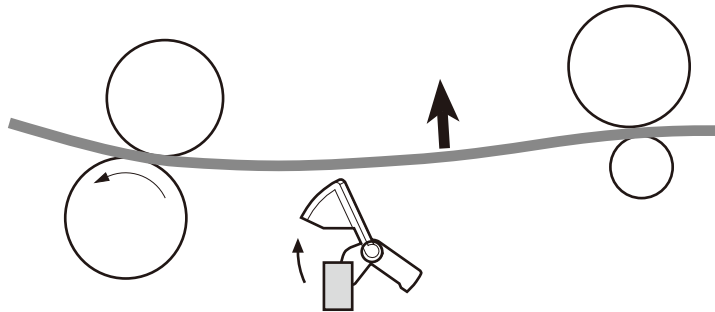
Output bin media-full detection

The DC controller detects whether the output bin is full by monitoring the output bin media full sensor.

Figure 1-36 Output bin media-full detection
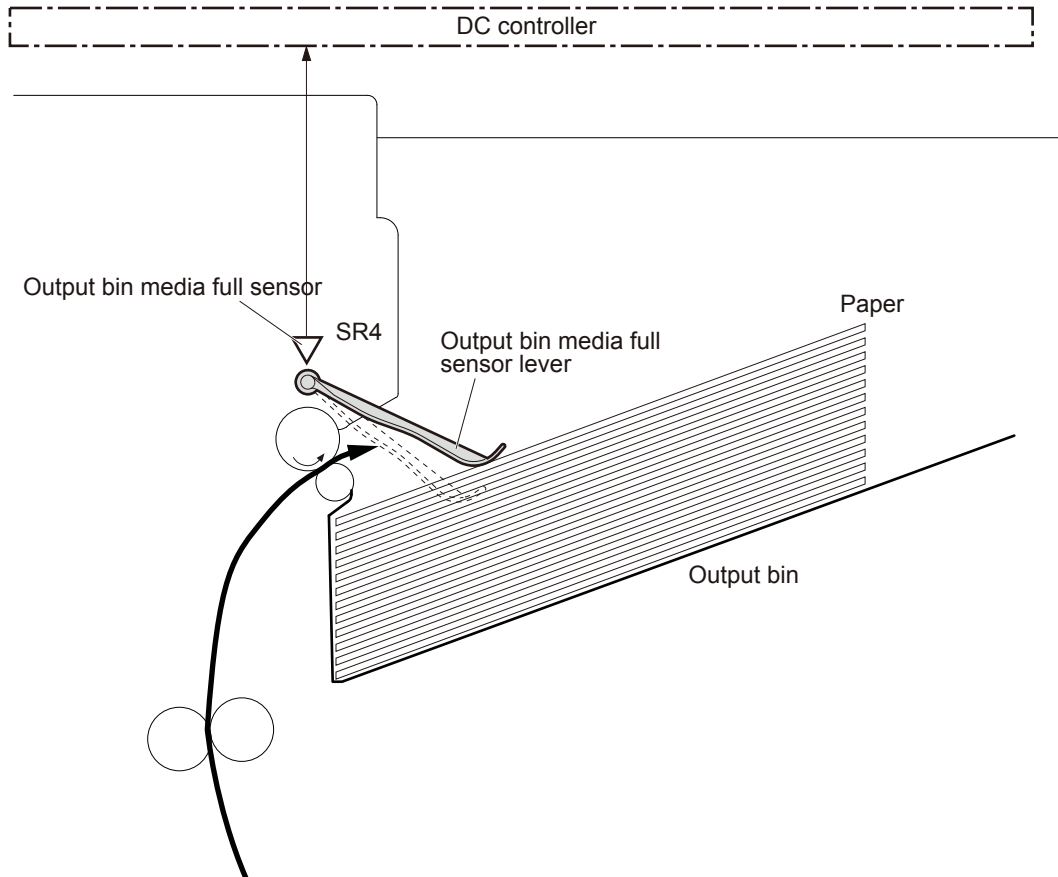
When the output-bin media-full sensor detects paper for a specified period during a print operation, the DC controller determines that the output bin is full and notifies the formatter.

Jam detection

The product uses the following sensors and switches to detect the presence of paper and to check whether the paper is being fed correctly or has jammed:

- Left door interlock switch (SW1)

- Cartridge door interlock switch (SW2)

- Cartridge door open detection switch (SW3))

- TOP sensor (SR9)

- Loop sensor (SR6)

- Fuser output sensor (SR12)

- Output sensor (SR3)

- Output bin media full sensor (SR4)

- Right door sensor (SR8)

Figure 1-37 Product engine jam detection sensors and switches
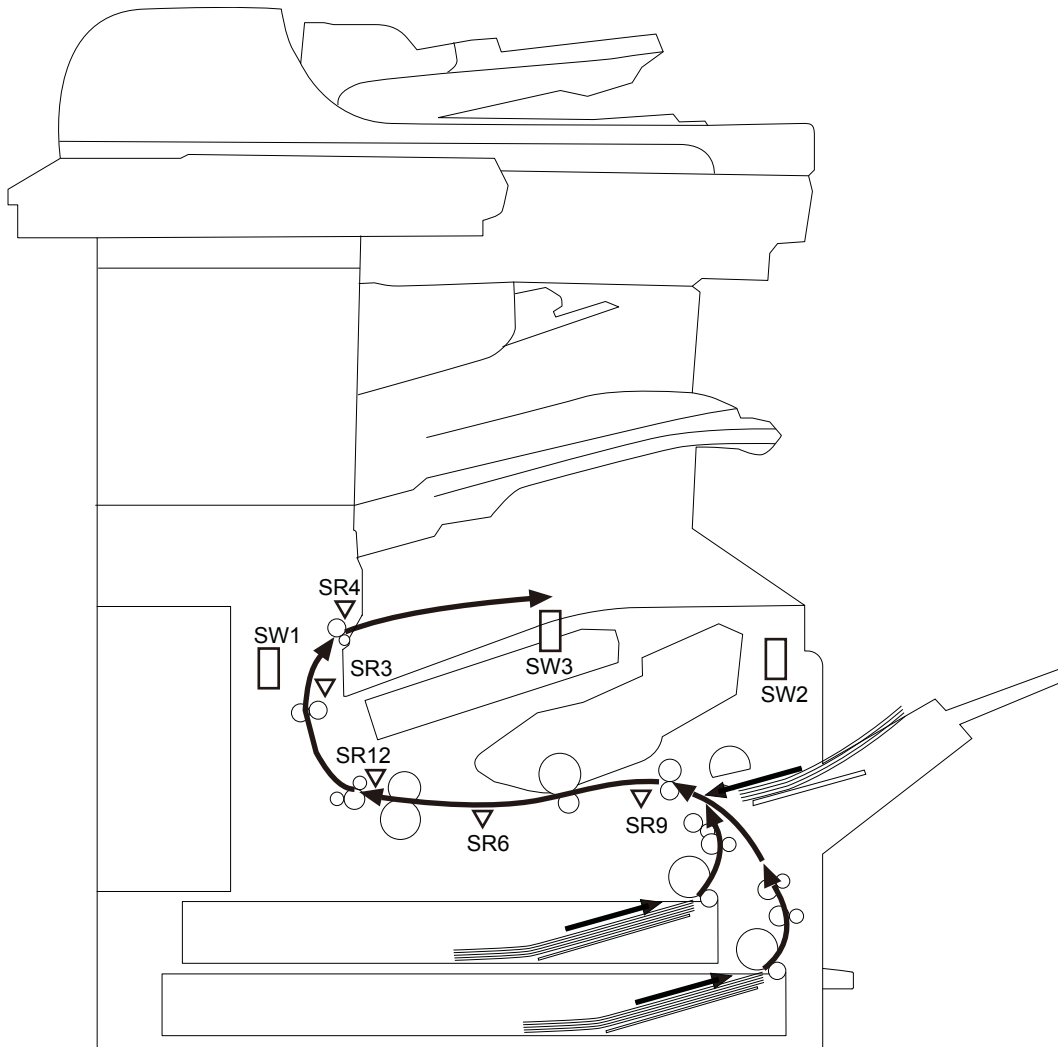
No pick jam 1

- MP tray

  The TOP sensor does not detect the leading edge of paper within a specified period (including two retries) from when the MP tray pickup solenoid is turned on.

- Standard cassette

  The TOP sensor does not detect the leading edge of paper within a specified period (including two retries) from when the cassette pickup clutch is driven.

- Duplexer

The TOP sensor does not detect the leading edge of paper within a specified period from when the paper passes through the duplex waiting position.

- Input accessory

  The TOP sensor does not detect the leading edge of paper within a specified period from when the following sensors detect the leading edge, depending on the input accessory that is installed.

  - 500-sheet paper feeder: PF cassette media feed sensor

  - 1x500-sheet paper deck: PD cassette 1 media feed sensor

  - 3x500-sheet paper deck: PD cassette 1 media feed sensor

  - 3,500-sheet paper deck: HCI cassette media feed sensor

Feed stay jam 1

The TOP sensor does not detect the trailing edge of paper within a specified period from when it detects the leading edge.

Fuser output delay jam 1

The fuser output sensor does not detect the leading edge of paper within a specified period from when the TOP sensor detects the leading edge.

Fuser output stay jam 1

The fuser output sensor does not detect the trailing edge of paper within a specified period from when the TOP sensor detects the trailing edge.

Output delay jam 1

The output sensor does not detect the leading edge of paper within a specified period from when the TOP sensor detects the leading edge.

Output delay jam 2

The output bin media full sensor does not detect the leading edge of paper within a specified period from when the TOP sensor detects the leading edge.

Output stay jam 1

The output sensor does not detect the trailing edge of paper within a specified period from when the fuser TOP sensor detects the trailing edge.

Residual paper jam 1

Either one of the following sensors detects a paper-presence when the product is turned on or when the door is closed:

- TOP sensor
- Loop sensor
- Fuser output sensor

Either one of the following sensors detects a paper-presence when the automatic delivery is complete:

- TOP sensor
- Loop sensor
- Fuser output sensor
- Output sensor

Fuser wrap jam 1

The fuser output sensor detects a paper-absence within a specified period from when it detects the leading edge of paper.

Door open jam 1

Either one of the following switches or sensor detects a door open during a paper feed operation:

- Left door interlock switch
- Cartridge door interlock switch
- Cartridge door open detection switch
- Right door sensor

Multiple-feed jam 1

The sub thermistor 1 detects 300°C (572°F) or higher for a specified period from when the multiple fed sheets pass through the TOP sensor.

Automatic delivery

The product automatically clears the paper if the output sensor detects the residual paper when the product is turned on or when the door is closed.

Scanning/image capture system

Scanner

The scanner is a carriage-type platen scanner which includes the frame, glass, LED optics, and a scanner controller board (SCB) attached to the back of the assembly. The scanner has two sensors to detect legal and ledger/A3 sized media and a switch to indicate when the document feeder is open.

The document feeder and control-panel assembly are attached to the scanner assembly. If the scanner fails, it can be replaced as a whole unit. The scanner replacement part does not include the document feeder, SCB, or control-panel assembly.

Automatic document feed system

- Simplex single pass

- Duplex three pass

- Length-short and length-long sensing flag

- Pick and feed roller assembly with separation pad

- Mechanical deskew

- Step glass for document feeder scanning

- Jam clearance door with sensing

- LED indication when original is placed on input tray

Sensors in the document feeder

The document feeder contains the following sensors:

- **Document feeder-cover sensor:** Detects whether the document feeder cover is open or closed.

- **Paper length sensors**: Detects whether there is a letter/A4, legal, or ledger/A3 size original.

- **Pick success sensor:** Detects the top of the page before sending a page through the document feeder and the end of the page after feeding/scanning is complete.

- **Paper-present sensor:** Detects whether a document is present in the document feeder. If paper is present in the document feeder when copies are made, the product scans the document using the document feeder. If no paper is present when copies are made, the product scans the document using the scanner glass.

- **Deskew sensor:** Detects the top of the page as it enters the deskew rollers.

- **Path sensor 1:** Detects the top of the page as it approaches the document feeder glass.

Document feeder paper path

The document feeder feeds documents past the document feeder glass for scanning.

Figure 1-38 Document feeder path for single-sided documents
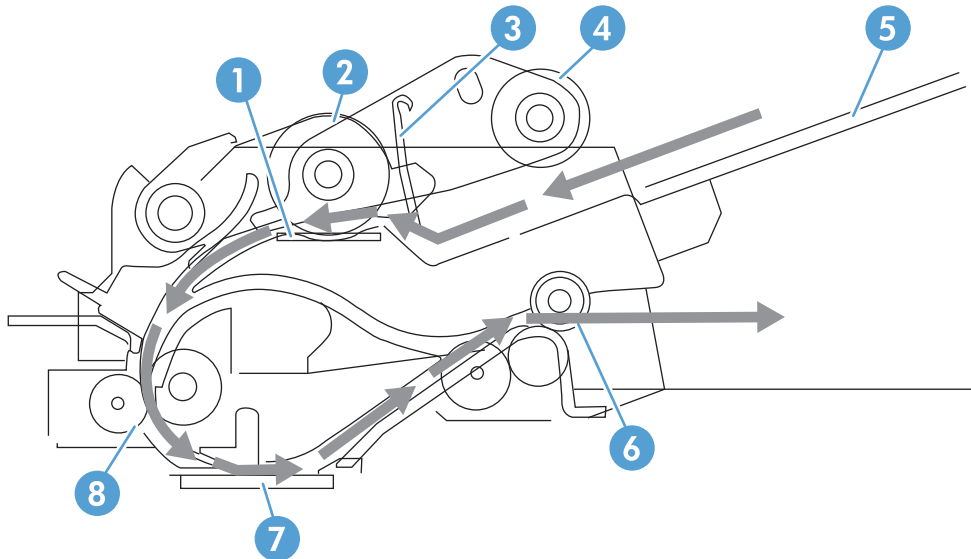
1	Separation pad	5	Document feeder input tray
2	Pickup roller	6	Delivery/duplex-feed rollers
3	Stack stop	7	Document feeder glass
4	Pre-pick roller	8	Document feeder feed rollers

For two-sided documents, the delivery rollers reverse the direction of each page to feed the second side of the document past the document feeder glass.

Figure 1-39 Document feeder path for two-sided documents

500-sheet paper feeder (Tray 4)

The paper feeder is optionally installed at bottom of the product. It picks up the paper and feeds it to the product. The paper feeder controller controls the operational sequence of the paper feeder.

Figure 1-40 500-sheet paper feeder paper path

PF cassette pickup roller   500-sheet paper feeder   PF cassette separation roller

PF cassette feed roller
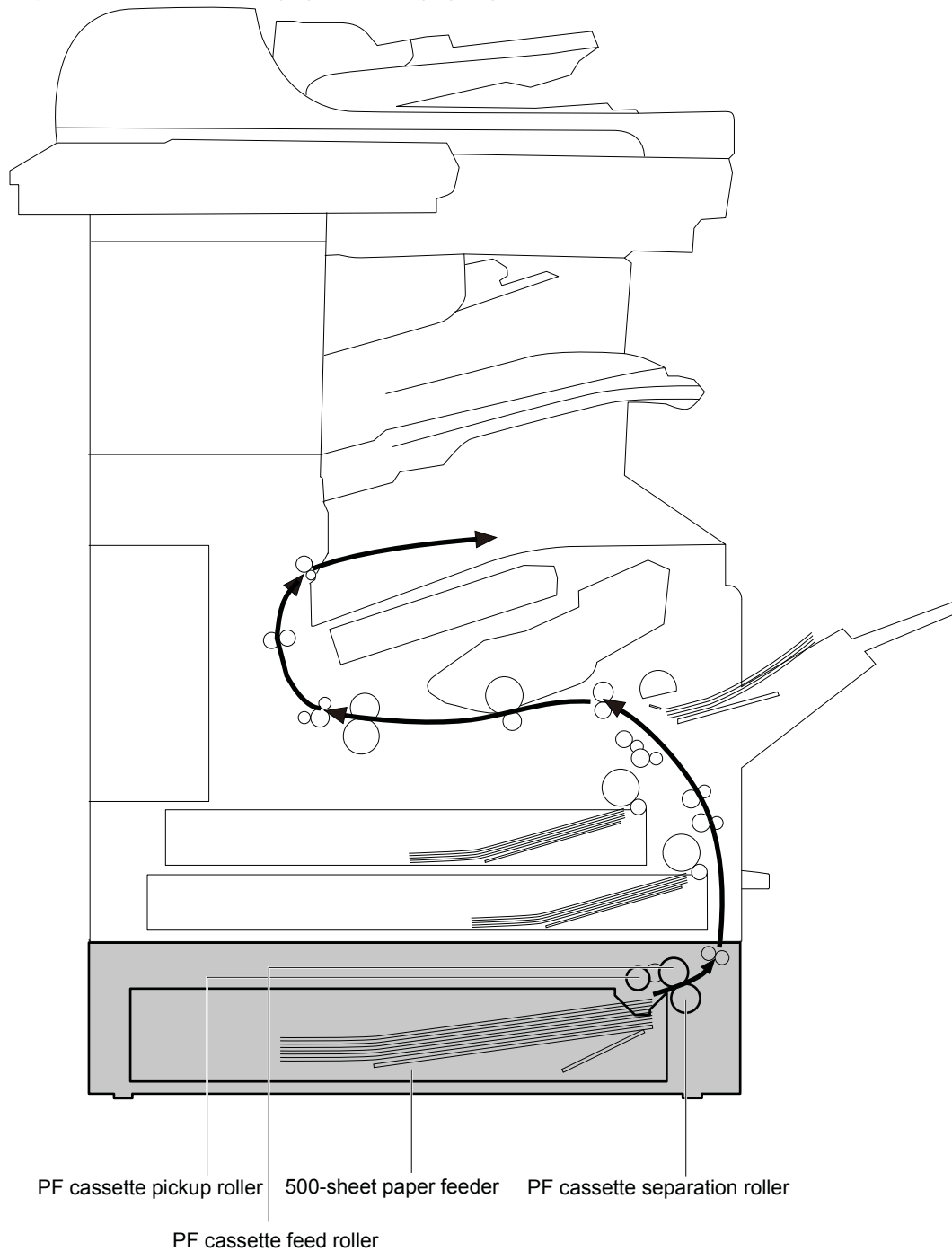
Figure 1-41 500-sheet paper feeder signal flow
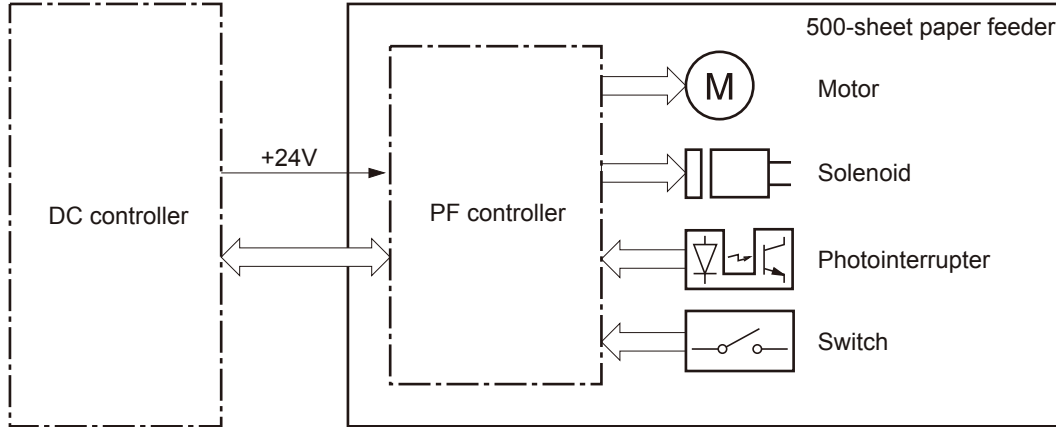
Table 1-8 **500-sheet paper feeder electrical components**

Component	Abbreviation	Component name
Motor	M1	PF cassette pickup motor
	M2	PF cassette lifter motor
Solenoid	SL1	PF cassette pickup solenoid
Photointerrupter	SR1	PF cassette media feed sensor
	SR2	PF cassette media stack surface sensor
	SR3	PF cassette media out sensor
Switch	SW1	PF right door open detection switch
	SW2	PF cassette media width switch
	SW3	PF cassette media end switch

500-sheet paper feeder motor control

The paper feeder has two motors for the paper-feed and cassette lift-up.

Figure 1-42 500-sheet paper feeder motor locations
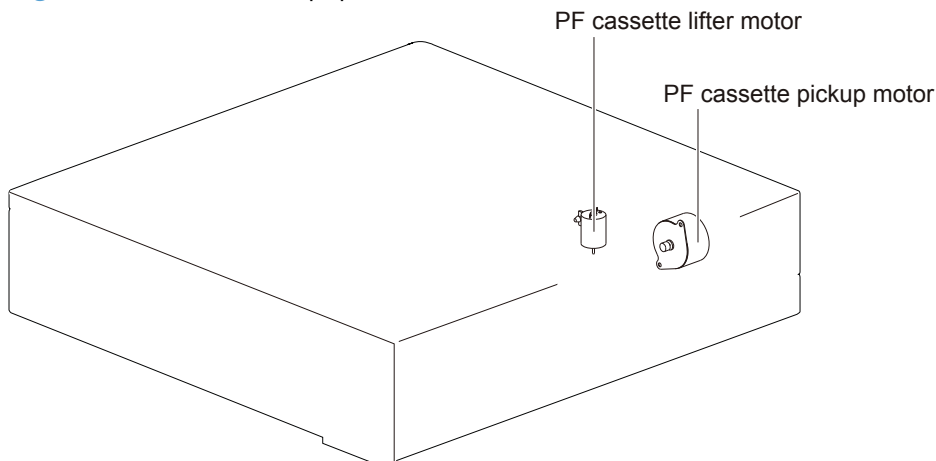
Table 1-9 **500-sheet paper feeder motors**

Motor		Components driven
M1	PF cassette pickup motor	Pickup roller, separation roller, and feed roller for the PF cassette
M2	PF cassette lifter motor	Lifter for the PF cassette

500-sheet paper feeder failure detection

The paper feeder controller determines a cassette lifter motor failure according to the condition of the related part. The paper feeder controller does not determine if the cassette pickup motor has failed; therefore, a jam occurs when the motor fails.

500-sheet paper feeder pickup and feed operation

The pickup-and-feed operation picks up one sheet of paper in the paper feeder cassette and feeds it to the product.

Figure 1-43 500-sheet paper feeder pickup and feed components
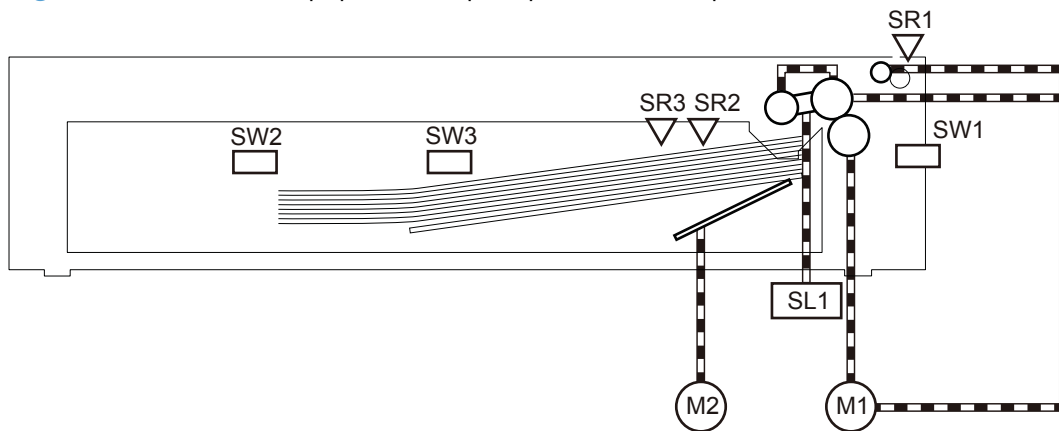
Table 1-10 **500-sheet paper feeder pickup and feed components**

Component		Signal
M1	PF cassette pickup motor	PF CASSETTE PICKUP MOTOR CONTROL signal
M2	PF cassette lifter motor	PF CASSETTE LIFTER MOTOR CONTROL signal
SL1	PF cassette pickup solenoid	PF CASSETTE PICKUP SOLENOID signal
SR1	PF cassette media feed sensor	PF CASSETTE MEDIA FEED signal
SR2	PF cassette media stack surface sensor	PF CASSETTE MEDIA STACK SURFACE signal
SR3	PF cassette media out sensor	PF CASSETTE MEDIA OUT signal
SW1	PF right door open detection switch	PF RIGHT DOOR OPEN DETECTION signal
SW2	PF cassette media width switch	PF CASSETTE MEDIA WIDTH signal
SW3	PF cassette media end switch	PF CASSETTE MEDIA END signal

500-sheet paper feeder cassette pickup

The paper feeder picks up one sheet of paper from the cassette.

Figure 1-44 500-sheet paper feeder pickup and feed cassette pickup
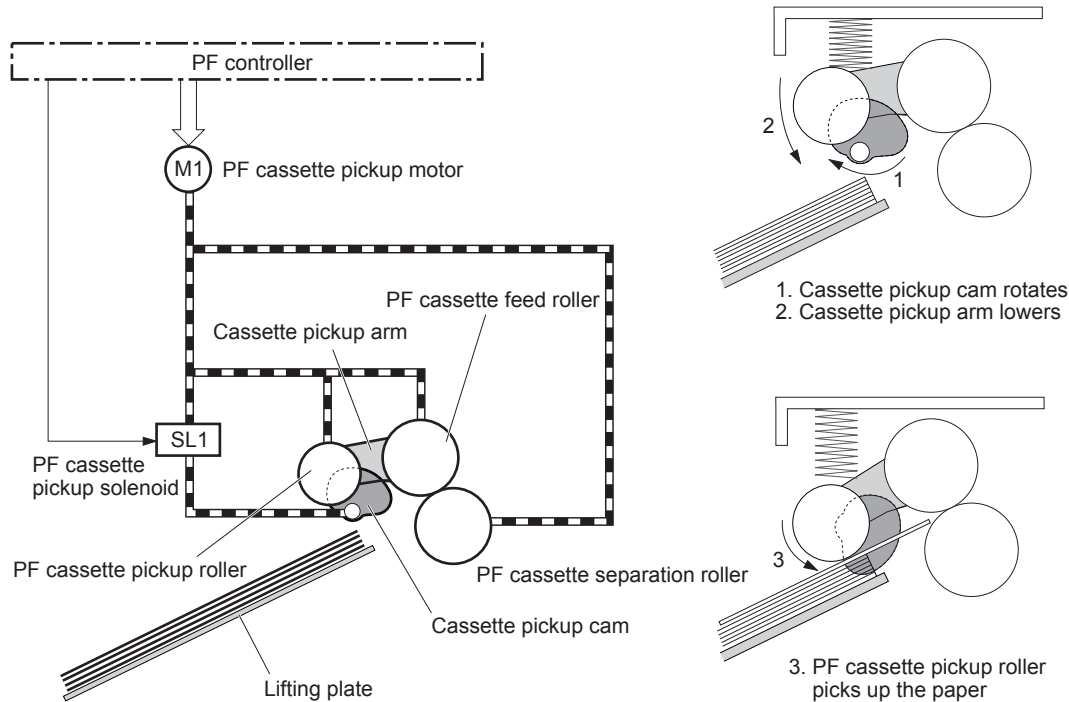
The operational sequence of the cassette pickup is as follows:

1. The paper feeder controller rotates the PF cassette pickup motor when it receives a print command from the formatter.

2. The PF cassette pickup roller, PF cassette feed roller, and PF cassette separation roller rotate.

3. The PF cassette pickup solenoid is driven at a specified timing.

4. The cassette pickup cam rotates.

5. The cassette pickup arm lowers and the PF cassette pickup roller picks up the top paper.

6. The PF cassette separation roller removes any multiple-fed sheets.

7. One sheet of paper is fed into the product.

500-sheet paper feeder cassette media-size detection and cassette-presence detection

The paper feeder controller determines the size of paper loaded in the cassette and also whether the cassette is installed in the paper feeder by monitoring the PF cassette media-width switch and the PF cassette media-end switch.

The PF cassette media-width switch and the PF cassette media-end switch contain three sub-switches each. The paper feeder controller detects the size of paper and the presence of the cassette according to the combination of the sub-switches, and then notifies the formatter.

The cassette media-size detection and the cassette-presence detection are not performed during Sleep mode.

Table 1-11 500-sheet paper feeder media switch combinations

Paper size	Cassette media width switch			Cassette media end switch		
	Top	**Center**	**Bottom**	**Top**	**Center**	**Bottom**
Cassette absence	OFF	OFF	OFF	OFF	OFF	OFF
A5-R	ON	ON	OFF	ON	ON	ON
B5-R	OFF	ON	OFF	ON	ON	ON
Executive-R	OFF	ON	ON	ON	ON	ON
Letter-R	OFF	OFF	ON	ON	ON	ON
A4-R	OFF	OFF	OFF	ON	ON	ON
8.5 x 13 in	ON	ON	OFF	OFF	ON	ON
Legal	ON	ON	OFF	OFF	OFF	ON
B4	OFF	ON	OFF	OFF	OFF	ON
Ledger	OFF	OFF	ON	OFF	OFF	ON
A3	OFF	OFF	OFF	OFF	OFF	ON

500-sheet paper feeder lift-up operation

The paper feeder performs the lift-up operation to keep the surface of paper at the pickup position whenever the following occurs:

●   The product is turned on

●   The cassette is installed

●   The paper stack surface lowers by pickup operation

Figure 1-45 500-sheet paper feeder lift-up operation
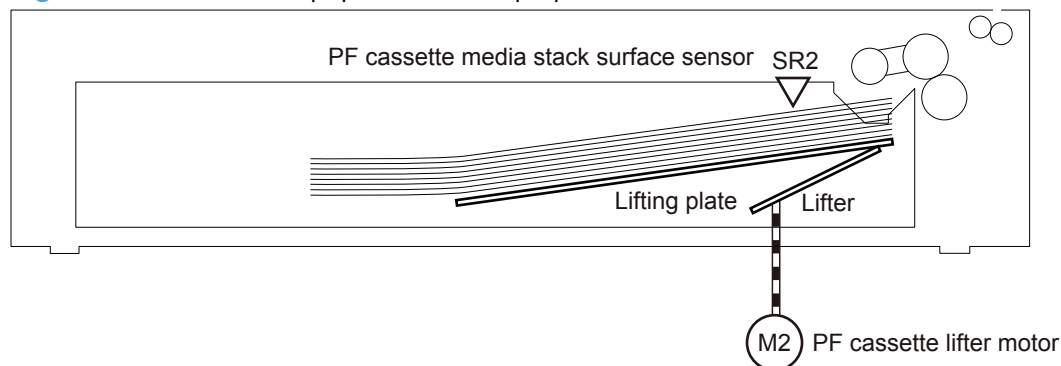
The operational sequence of the lift-up is as follows:

1. The lifter motor rotates to raise the lifter.

2. The lifter motor stops when the PF cassette media stack surface sensor detects the paper surface.

3. The lifter motor rotates again when the PF cassette media stack surface sensor detects that the stack surface lowers during a print operation.

When the PF cassette media stack surface sensor does not detect the paper surface within a specified period from when the PF cassette lifter motor starts rotating, t he paper feeder controller determines a PF cassette lifter motor failure, and it notifies the formatter through the DC controller.

500-sheet paper feeder cassette media-presence detection

The paper feeder controller detects whether the paper is loaded in the cassette by monitoring the PF cassette media out sensor.

The cassette media-presence detection is not performed during Sleep mode.

When the PF cassette media out sensor does not detect paper, the paper feeder controller determines a media-absence, and it notifies the formatter through the DC controller.

500-sheet paper feeder cassette multiple-feed prevention

The paper feeder uses a PF cassette separation roller to prevent the multiple sheets of paper from entering to the product.

The PF cassette separation roller transmits its driving force so that the roller rotates in the same direction with the PF cassette feed roller.

- When one sheet of paper is picked up, driving force from the PF cassette feed roller transmits through the single sheet of paper because the torque limiter functions and the PF cassette separation roller follows the PF cassette feed roller. Therefore, a single sheet is fed into the product.

- When multiple sheets of paper are picked up, driving force from the PF cassette feed roller becomes weak due to low friction between the sheets. The PF cassette separation roller rotates by

its own driving force and the multiple-fed sheets are pushed back to the cassette. Therefore, a single sheet is fed into the product.

Figure 1-46 500-sheet paper feeder multiple-feed prevention

<Normal-feed>   <Multiple-feed>
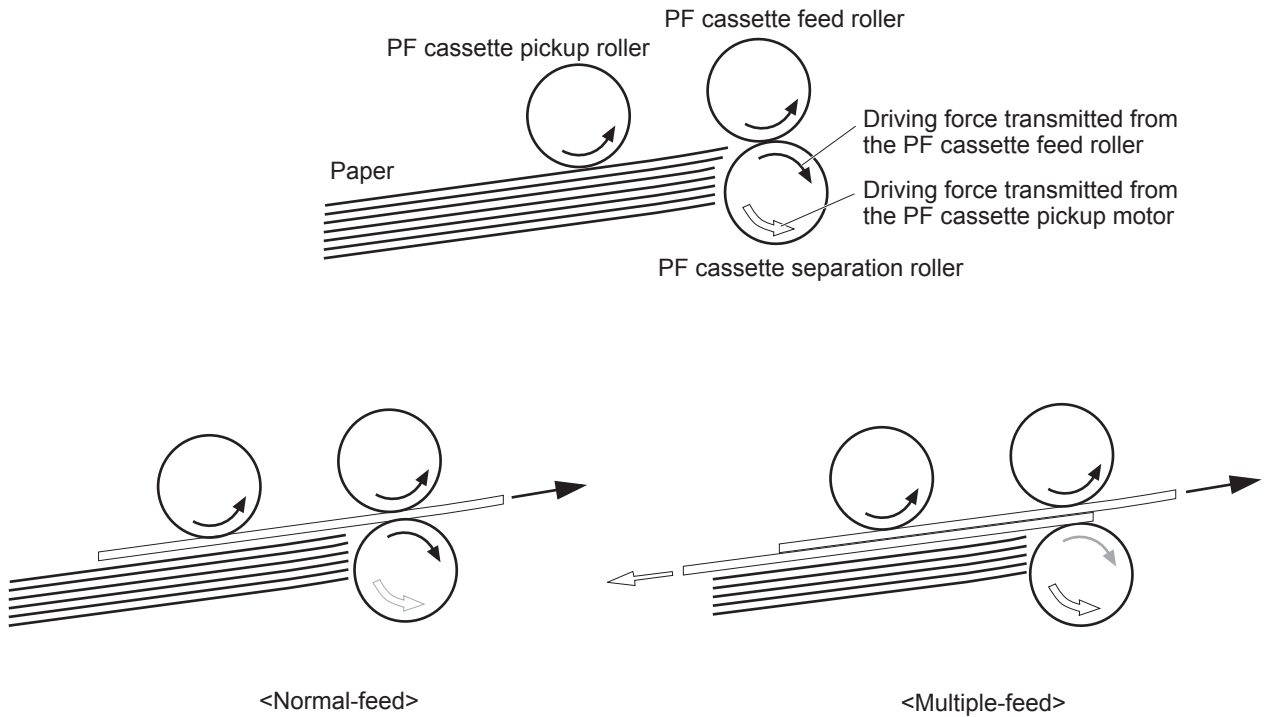
500-sheet paper feeder jam detection

The paper feeder uses the PF cassette media feed sensor (SR1) to detect the presence of paper and to check whether paper is being fed correctly or has jammed.

Figure 1-47 500-sheet paper feeder cassette jam detection sensor
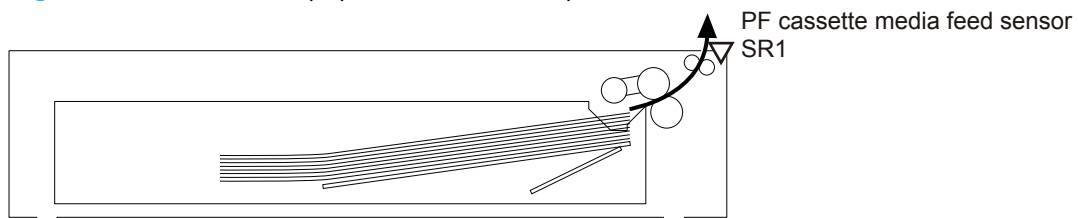
No pick jam 2

The PF cassette media feed sensor does not detect the leading edge of paper within a specified period (including 2 retries) from when the PF cassette pickup solenoid is turned on.

Residual paper jam 1

The PF cassette media feed sensor detects a paper-presence when the automatic delivery is complete.

Door open jam 1

A PF right door open is detected during a paper feed operation.

500-sheet paper feeder automatic delivery

The paper feeder automatically clears the paper if the paper feeder cassette media feed sensor detects the residual paper when the product is turned on or when the door is closed.

1x500 and 3x500 paper feeder and stand

The 1x500-sheet paper deck is optionally installed at bottom of the product or the 500-sheet paper feeder. The 3x500-sheet paper deck is optionally installed at bottom of the product only. Each of the paper decks picks up the paper and feeds it to the product. The paper deck controller controls the operational sequence of the paper deck.

Figure 1-48 Paper deck paper path

Cassette 1

Cassette 2

Cassette 3

PD cassette feed roller

PD cassette pickup roller   3x500-sheet paper deck   PD cassette separation roller
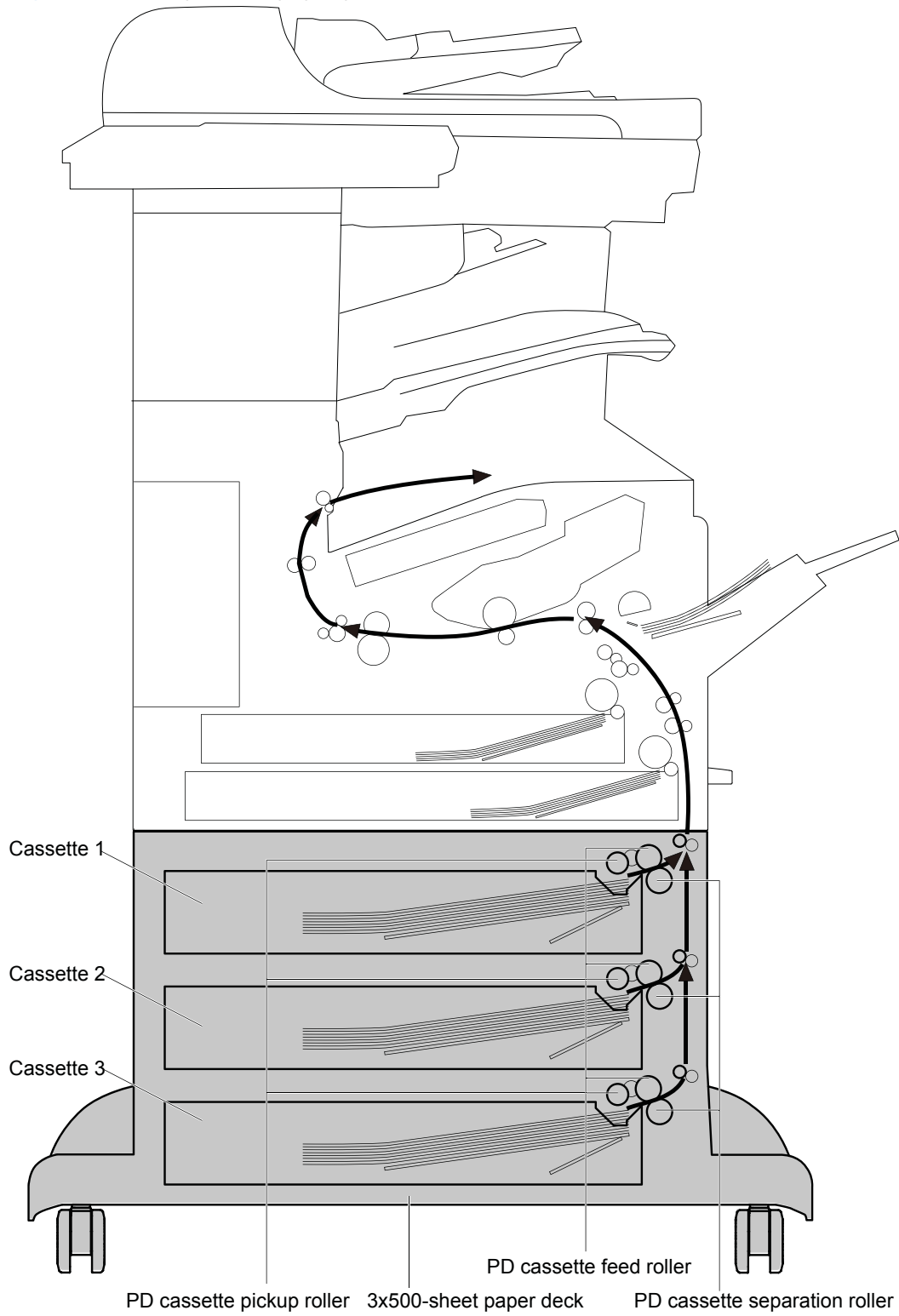
Figure 1-49 Paper deck signal flow
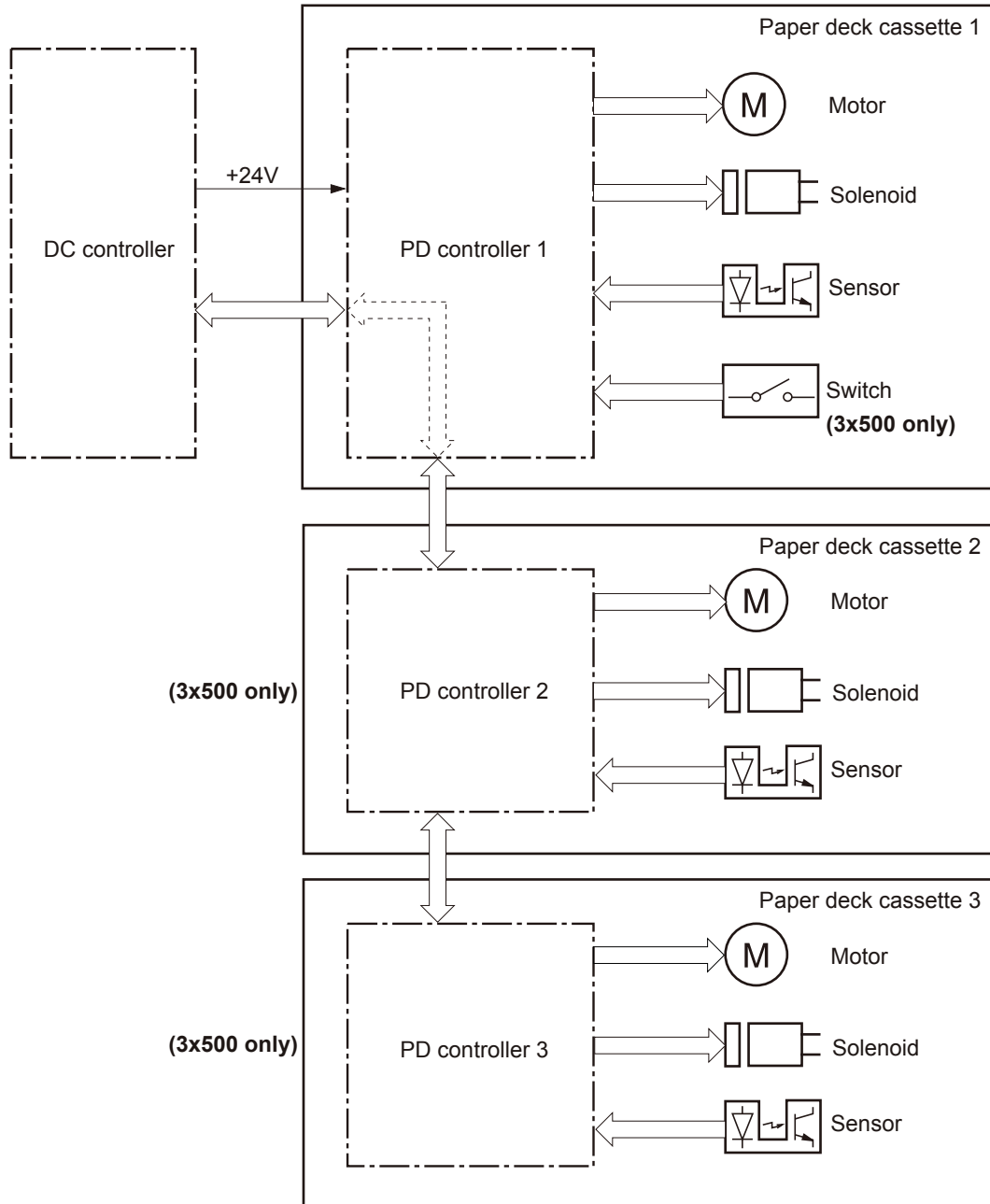
Table 1-12 **Paper deck electrical components**

Component	Abbreviation	Component name
Motor	M1	PD cassette 1 pickup motor
	M2	PD cassette 1 lifter motor
	M81	PD cassette 2 pickup motor[1]
	M82	PD cassette 2 lifter motor[1]
	M91	PD cassette 3 pickup motor[1]
	M92	PD cassette 3 lifter motor[1]

Table 1-12 Paper deck electrical components (continued)

Component	Abbreviation	Component name
Solenoid	SL1	PD cassette 1 pickup solenoid
	SL82	PD cassette 2 pickup solenoid[1]
	SL92	PD cassette 3 pickup solenoid[1]
Photointerrupter	SR1	PD cassette 1 media feed sensor
	SR1	PD cassette 1 media feed sensor
	SR3	PD cassette 1 media out sensor
	SR81	PD cassette 2 media feed sensor[1]
	SR82	PD cassette 2 media stack surface sensor[1]
	SR83	PD cassette 2 media out sensor[1]
	SR91	PD cassette 3 media feed sensor[1]
	SR92	PD cassette 3 media stack surface sensor[1]
	SR93	PD cassette 3 media out sensor[1]
Switch	SW1	PD right door open detection switch[1]
	SW2	PD cassette 1 media width switch
	SW3	PD cassette 1 media end switch
	SW82	PD cassette 2 media width switch[1]
	SW83	PD cassette 2 media end switch[1]
	SW92	PD cassette 3 media width switch[1]
	SW93	PD cassette 3 media end switch[1]

[1] Applies to the 3x500 paper deck only.

Paper deck motor control

The paper deck has two motors in each cassette for the paper-feed and cassette lift-up.

Figure 1-50 Paper deck motors

PD cassette lifter motor

PD cassette pickup motor
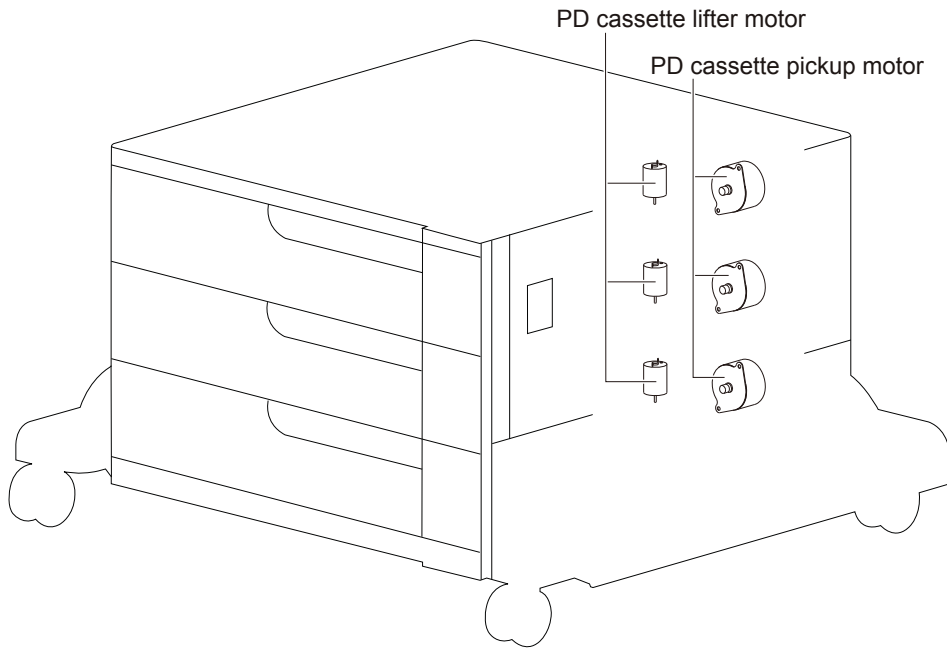
Table 1-13 **Paper deck motors**

Motor		Components driven
M1	PD cassette 1 pickup motor	Pickup roller, separation roller, and feed roller for the PD cassette 1
M2	PD cassette 1 lifter motor	Lifter for the PD cassette 1
M81	PD cassette 2 pickup motor	Pickup roller, separation roller, and feed roller for the PD cassette 2
M82	PD cassette 2 lifter motor	Lifter for the PD cassette 2
M91	PD cassette 3 pickup motor	Pickup roller, separation roller, and feed roller for the PD cassette 3
M92	PD cassette 3 lifter motor	Lifter for the PD cassette 3

Paper deck failure detection

The paper deck controller determines a PD cassette lifter motor failure according to the condition of the related part.

The paper deck controller does not determine if the PD cassette pickup motor has failed; therefore, a jam occurs when the motor fails.

Paper deck pickup-and-feed operation

The pickup-and-feed operation picks up one sheet of paper in the paper deck cassette and feeds it to the product.

Figure 1-51 Paper deck pickup-and-feed components
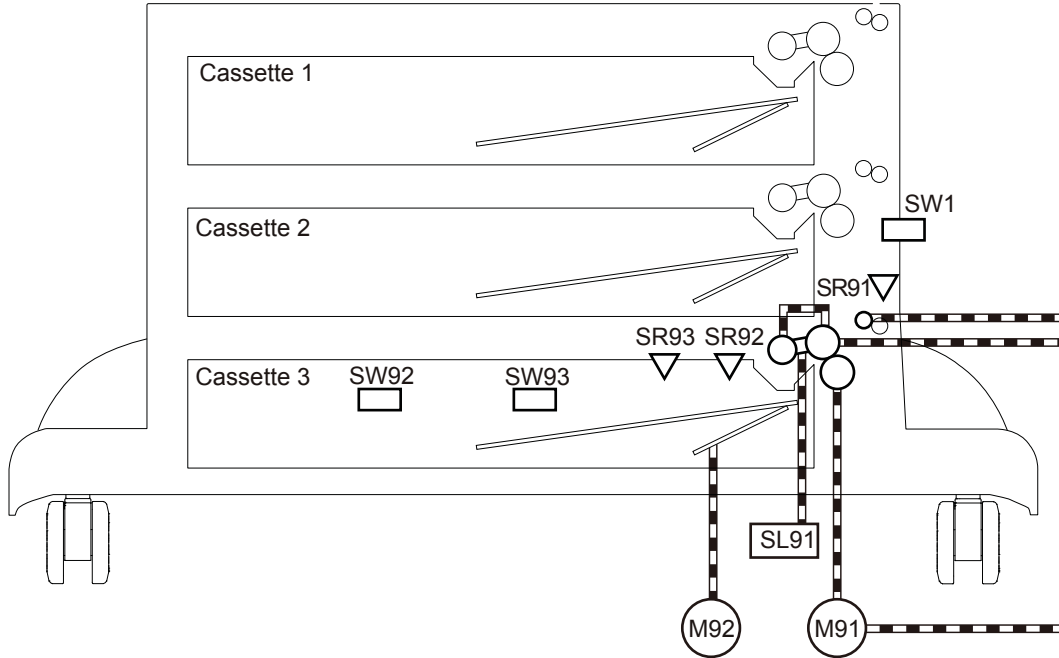
Table 1-14 **Paper deck pickup-and-feed operation components**

Abbreviation	Component	Signal
M1	PD cassette 1 pickup motor	PD CASSETTE 1 PICKUP MOTOR CONTROL signal
M2	PD cassette 1 lifter motor	PD CASSETTE 1 LIFTER MOTOR CONTROL signal
SL1	PD cassette 1 pickup solenoid	PD CASSETTE 1 PICKUP SOLENOID signal
SR1	PD cassette 1 media feed sensor	PD CASSETTE 1 MEDIA FEED signal
SR2	PD cassette 1 media stack surface sensor	PD CASSETTE 1 MEDIA STACK SURFACE signal
SR3	PD cassette 1 media out sensor	PD CASSETTE 1 MEDIA OUT signal
SW1	PD right door open detection switch	PD RIGHT DOOR OPEN DETECTION signal
SW2	PD cassette 1 media width switch	PD CASSETTE 1 MEDIA WIDTH signal
SW3	PD cassette 1 media end switch	PD CASSETTE 1 MEDIA END signal
M81	PD cassette 2 pickup motor	PD CASSETTE 2 PICKUP MOTOR CONTROL signal
M82	PD cassette 2 lifter motor	PD CASSETTE 2 LIFTER MOTOR CONTROL signal
SL81	PD cassette 2 pickup solenoid	PD CASSETTE 2 PICKUP SOLENOID signal
SR81	PD cassette 2 media feed sensor	PD CASSETTE 2 MEDIA FEED signal
SR82	PD cassette 2 media stack surface sensor	PD CASSETTE 2 MEDIA STACK SURFACE signal
SR83	PD cassette 2 media out sensor	PD CASSETTE 2 MEDIA OUT signal
SW82	PD cassette 2 media width switch	PD CASSETTE 2 MEDIA WIDTH signal

Table 1-14 Paper deck pickup-and-feed operation components (continued)

Abbreviation	Component	Signal
SW83	PD cassette 2 media end switch	PD CASSETTE 2 MEDIA END signal
M91	PD cassette 3 pickup motor	PD CASSETTE 3 PICKUP MOTOR CONTROL signal
M92	PD cassette 3 lifter motor	PD CASSETTE 3 LIFTER MOTOR CONTROL signal
SL91	PD cassette 3 pickup solenoid	PD CASSETTE 3 PICKUP SOLENOID signal
SR91	PD cassette 3 media feed sensor	PD CASSETTE 3 MEDIA FEED signal
SR92	PD cassette 3 media stack surface sensor	PD CASSETTE 3 MEDIA STACK SURFACE signal
SR93	PD cassette 3 media out sensor	PD CASSETTE 3 MEDIA OUT signal
SW92	PD cassette 3 media width switch	PD CASSETTE 3 MEDIA WIDTH signal
SW93	PD cassette 3 media end switch	PD CASSETTE 3 MEDIA END signal

Paper deck cassette media-size detection and cassette-presence detection

The paper deck controller detects the size of paper loaded in the cassette and also whether the cassette is installed to the paper deck by monitoring the PD cassette media-width switch and the PD cassette media-end switch.

The PD cassette media-width switch and the PD cassette media-end switch contain three sub-switches each. The paper deck controller detects the size of paper and the presence of the cassette according to the combination of the sub-switches, and then notifies the formatter.

The cassette media-size detection and the cassette-presence detection are not performed during Sleep mode.

Table 1-15 Paper deck media switch combinations

Paper size	Cassette media-width switch			Cassette media-end switch		
	Top	Center	Bottom	Top	Center	Bottom
Cassette absence	OFF	OFF	OFF	OFF	OFF	OFF
A5-R	ON	ON	OFF	ON	ON	ON
B5-R	OFF	ON	OFF	ON	ON	ON
Executive-R	OFF	ON	ON	ON	ON	ON
Letter-R	OFF	OFF	ON	ON	ON	ON
A4-R	OFF	OFF	OFF	ON	ON	ON
8.5 x 13 in	ON	ON	OFF	OFF	ON	ON
Legal	ON	ON	OFF	OFF	OFF	ON
B4	OFF	ON	OFF	OFF	OFF	ON

Table 1-15 Paper deck media switch combinations (continued)

Paper size	Cassette media-width switch			Cassette media-end switch		
	Top	Center	Bottom	Top	Center	Bottom
Ledger	OFF	OFF	ON	OFF	OFF	ON
A3	OFF	OFF	OFF	OFF	OFF	ON

Paper deck lift-up operation

The paper deck lifts up the tray to keep the surface of paper at the pickup position whenever the following occurs:

● The product is turned on

● The cassette is installed

● The paper stack surface lowers by pickup operation

NOTE: The following figure illustrates the mechanism for paper deck cassette 3, but each paper deck cassette has the same mechanism.

Figure 1-52 Paper deck lift-up operation
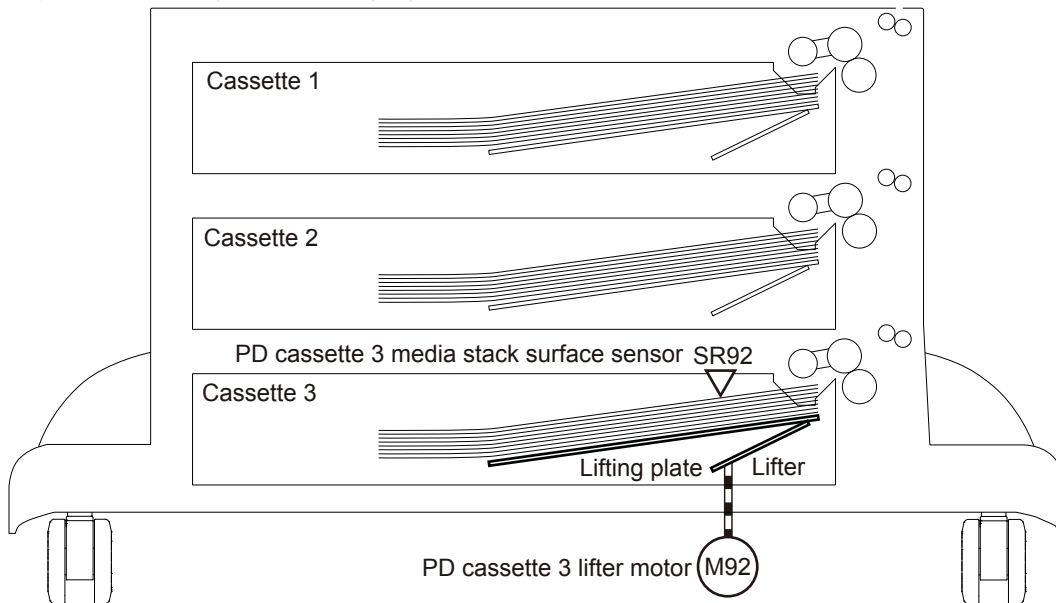
The operational sequence of the lift-up is as follows:

1. The PD cassette 3 lifter motor rotates to raise the lifter.

2. The PD cassette 3 lifter motor stops when the PD cassette 3 media stack surface sensor detects the paper surface.

3. The PD cassette 3 lifter motor rotates again when the PD cassette 3 media stack surface sensor detects that the stack surface lowers during a print operation.

The paper deck controller 3 determines a PD cassette 3 lifter motor failure and notifies the formatter through the DC controller when the PD cassette 3 media stack surface sensor does not detect the paper surface within a specified period from when the PD cassette 3 lifter motor starts rotating.

Paper deck cassette media-presence detection

The paper deck controller detects whether the paper is loaded in the cassette by monitoring the PD cassette media out sensor.

The cassette media-presence detection is not performed during Sleep mode.

The paper deck controller determines a media-absence and notifies the formatter through the DC controller when the PD cassette media out sensor does not detect the paper.

Paper deck jam detection

The paper deck uses the following sensors to detect the presence of paper and to check whether paper is being fed correctly or has jammed:

- PD cassette 1 media feed sensor (SR1)

- PD cassette 2 media feed sensor (SR81) (3x500-sheet paper deck only)

- PD cassette 3 media feed sensor (SR91) (3x500-sheet paper deck only)

Figure 1-53 Paper deck jam detection sensors
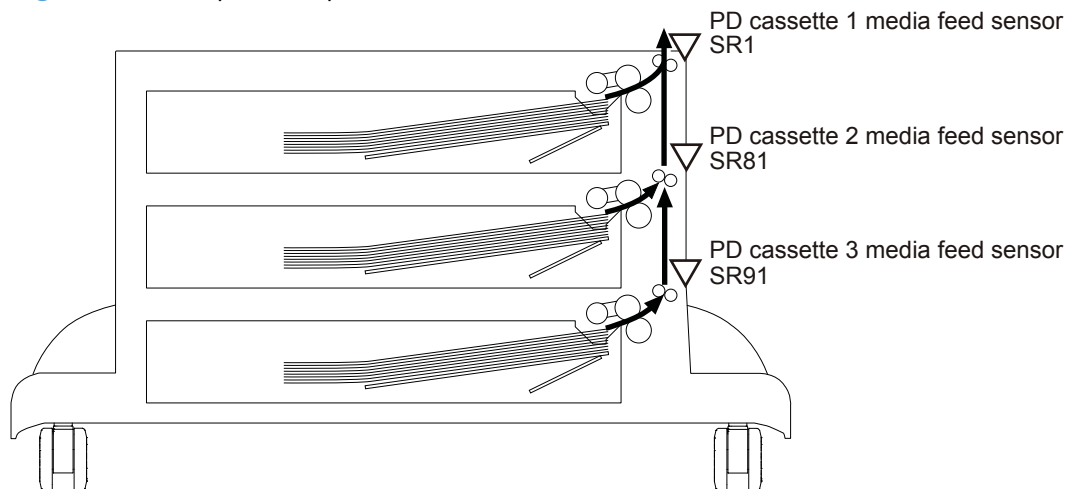
No pick jam 2

The PD cassette 1 media feed sensor does not detect the leading edge of paper within a specified period (including two retries) from when the PD cassette 1 pickup solenoid is turned on.

The PD cassette 1 media feed sensor does not detect the leading edge of paper within a specified period from when the PD cassette 2 media feed sensor detects the leading edge. (3x500-sheet paper deck only)

The PD cassette 1 media feed sensor does not detect the leading edge of paper within a specified period from when the PD cassette 3 media feed sensor detects the leading edge. (3x500-sheet paper deck only)

No pick jam 3 (3x500-sheet paper deck only)

The PD cassette 2 media feed sensor does not detect the leading edge of paper within a specified period (including two retries) from when the PD cassette 2 pickup solenoid is turned on.

The PD cassette 3 media feed sensor does not detect the leading edge of paper within a specified period (including two retries) from when the PD cassette 3 pickup solenoid is turned on.

Residual paper jam 1

The following sensor detects a paper-presence when the automatic delivery is complete.

- PD cassette 1 media feed sensor

- PD cassette 2 media feed sensor (3x500-sheet paper deck only)

- PD cassette 3 media feed sensor (3x500-sheet paper deck only)

Door open jam 1

A PD right door open is detected during a paper feed operation.

Paper deck automatic delivery

The paper deck automatically clears the paper if one of the following sensors detects the residual paper when either the product is turned on or the door is closed:

- PD cassette 1 media feed sensor

- PD cassette 2 media feed sensor (3x500-sheet paper deck only)

- PD cassette 3 media feed sensor (3x500-sheet paper deck only

3,500-sheet high-capacity input (HCI) feeder

The 3,500-sheet paper deck is optionally installed at bottom of the product or the 500-sheet paper feeder. It picks up the paper and feeds it into the product. The HCI controller controls the operational sequence of the 3,500-sheet paper deck.

Figure 1-54 HCI paper path

3,500-sheet paper deck

Right cassette

Left cassette

HCI cassette pickup roller   HCI cassette separation roller

HCI cassette feed roller
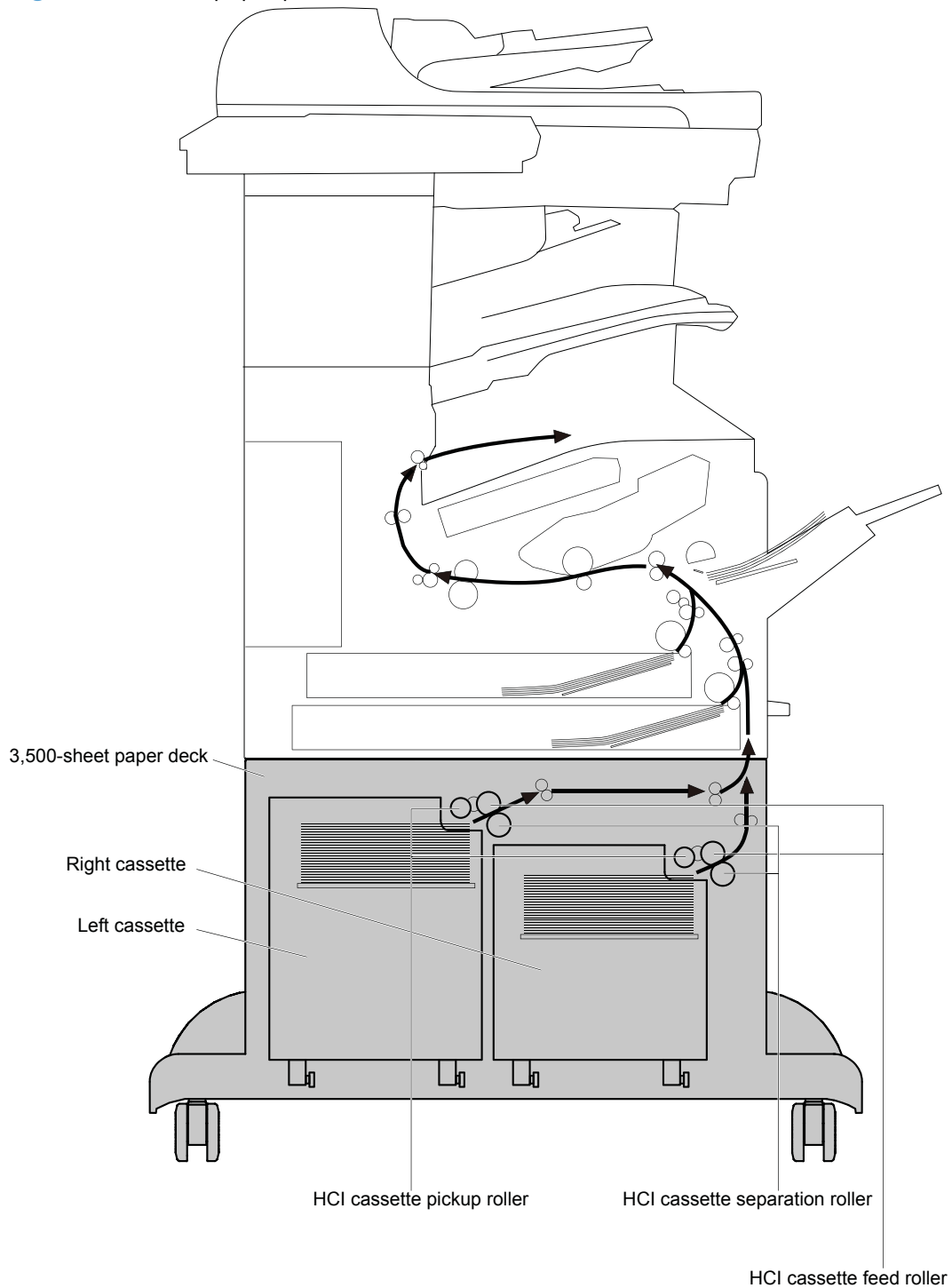
Figure 1-55 HCI signal flow
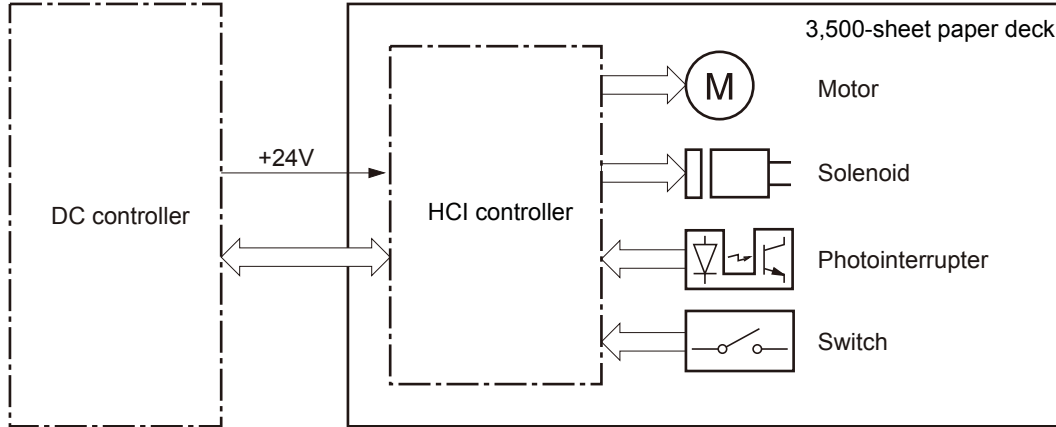
Table 1-16 HCI electrical components

Component	Abbreviation	Component name
Motor	M3301	HCI right cassette pickup motor
	M3302	HCI right cassette lifter motor
	M3303	HCI left cassette lifter motor
	M3304	HCI left cassette pickup motor
Solenoid	SL3301	HCI right cassette pickup solenoid
	SL3302	HCI left cassette pickup solenoid
Photointerrupter	PS3101	HCI right cassette media stack surface 2 sensor
	PS3102	HCI right cassette media stack surface 1 sensor
	PS3103	HCI right cassette media out sensor
	PS3201	HCI left cassette media stack surface 2 sensor
	PS3202	HCI left cassette media stack surface 1 sensor
	PS3203	HCI left cassette media out sensor
	PS3301	HCI media feed sensor
	PS3302	HCI right cassette media feed sensor
	PS3303	HCI right cassette media size sensor
	PS3304	HCI left cassette media size sensor
	PS3305	HCI left cassette media feed sensor
	PS3306	HCI long edge feed guide open detection sensor
Switch	SW3301	HCI right door open detection switch
	SW3302	HCI right cassette open detection switch
	SW3303	HCI left cassette open detection switch

HCI motor control

The HCI uses two motors in each cassette for paper-feed and cassette lift-up.

Figure 1-56 HCI motors

HCI cassette pickup motor

HCI cassette lifter motor
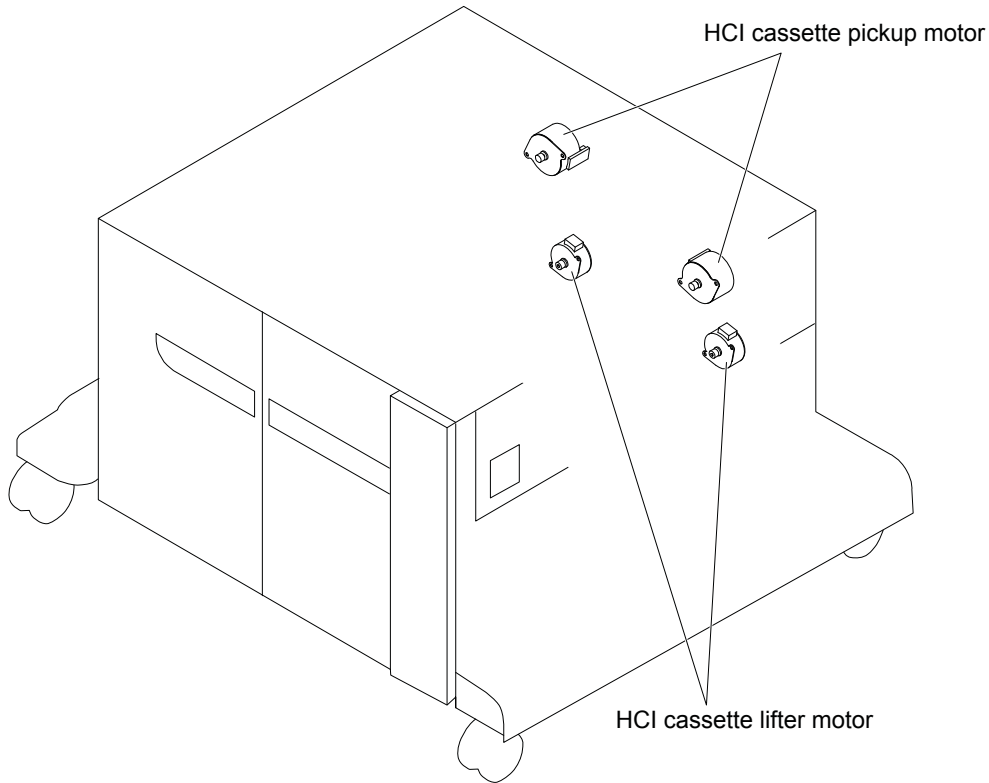
Table 1-17 **HCI motors**

Motor		Components driven
M3301	HCI right cassette pickup motor	Pickup roller, separation roller, and feed roller for the HCI right cassette
M3302	HCI right cassette lifter motor	Lifter for the HCI right cassette
M3303	HCI left cassette lifter motor	Lifter for the HCI left cassette
M3304	HCI left cassette pickup motor	Pickup roller, separation roller, and feed roller for the HCI left cassette

HCI failure detection

The HCI controller determines a lifter motor failure according to the condition of the related part.

The HCI controller does not determine if the HCI cassette pickup motor has failed; therefore, a jam occurs when the motor fails.

HCI pickup-and-feed operation

The pickup-and-feed operation picks up one sheet of paper in the 3,500-sheet paper deck cassette and feeds it into the product.

Figure 1-57 HCI pickup-and-feed operation
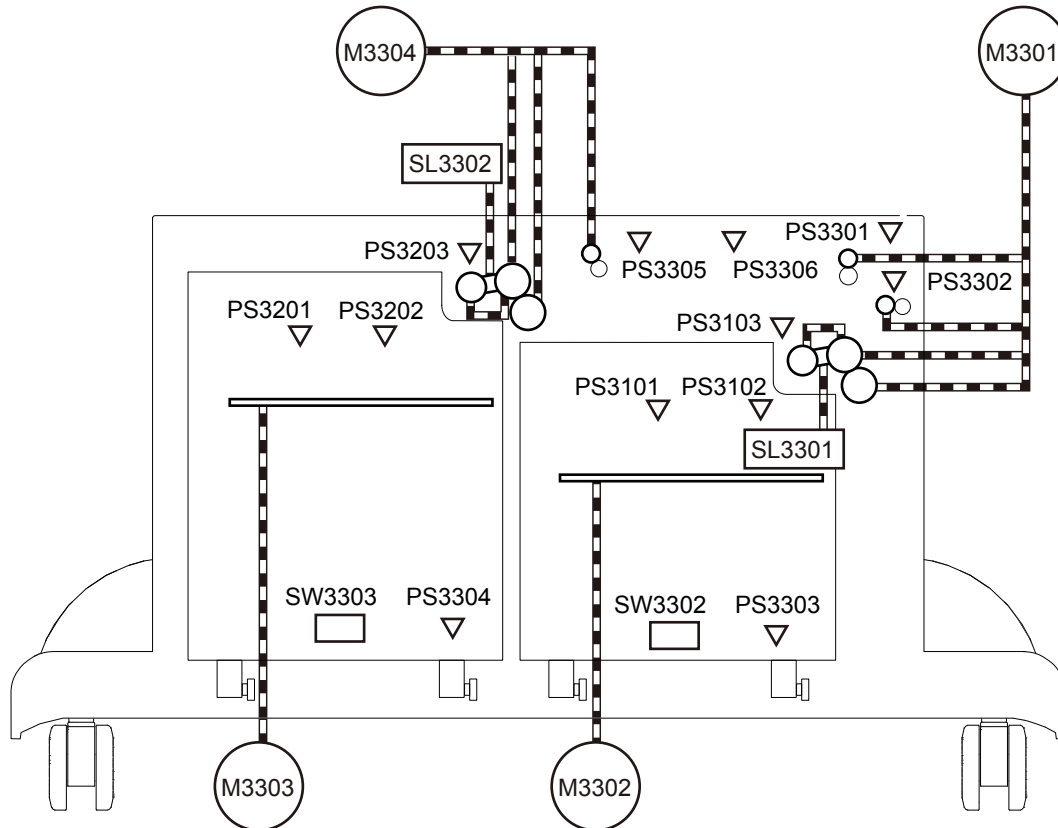
Table 1-18 HCI pickup-and-feed operation components

Abbreviation	Component	Signal
M3301	HCI right cassette pickup motor	HCI RIGHT CASSETTE PICKUP MOTOR CONTROL signal
M3302	HCI right cassette lifter motor	HCI RIGHT CASSETTE LIFTER MOTOR CONTROL signal
M3303	HCI left cassette lifter motor	HCI LEFT CASSETTE LIFTER MOTOR CONTROL signal
M3304	HCI left cassette pickup motor	HCI LEFT CASSETTE PICKUP MOTOR CONTROL signal
SL3301	HCI right cassette pickup solenoid	HCI RIGHT CASSETTE PICKUP SOLENOID signal
SL3302	HCI left cassette pickup solenoid	HCI LEFT CASSETTE PICKUP SOLENOID signal
PS3101	HCI right cassette media stack surface 2 sensor	HCI RIGHT CASSETTE MEDIA STACK SURFACE 2 signal
PS3102	HCI right cassette media stack surface 1 sensor	HCI RIGHT CASSETTE MEDIA STACK SURFACE 1 signal

Table 1-18 HCI pickup-and-feed operation components (continued)

Abbreviation	Component	Signal
PS3103	HCI right cassette media out sensor	HCI RIGHT CASSETTE MEDIA OUT signal
PS3201	HCI left cassette media stack surface 2 sensor	HCI LEFT CASSETTE MEDIA STACK SURFACE 2 signal
PS3202	HCI left cassette media stack surface 1 sensor	HCI LEFT CASSETTE MEDIA STACK SURFACE 1 signal
PS3203	HCI left cassette media out sensor	HCI LEFT CASSETTE MEDIA OUT signal
PS3301	HCI media feed sensor	HCI MEDIA FEED signal
PS3302	HCI right cassette media feed sensor	HCI RIGHT CASSETTE MEDIA FEED signal
PS3303	HCI right cassette media size sensor	HCI RIGHT CASSETTE MEDIA SIZE signal
PS3304	HCI left cassette media size sensor	HCI LEFT CASSETTE MEDIA SIZE signal
PS3305	HCI left cassette media feed sensor	HCI LEFT CASSETTE MEDIA FEED signal
PS3306	HCI long edge feed guide open detection sensor	HCI LONG EDGE FEED GUIDE OPEN DETECTION signal
SW3301	HCI right door open detection switch	HCI RIGHT DOOR OPEN DETECTION signal
SW3302	HCI right cassette open detection switch	HCI RIGHT CASSETTE OPEN DETECTION signal
SW3303	HCI left cassette open detection switch	HCI LEFT CASSETTE OPEN DETECTION signal

HCI cassette media-size detection and cassette-presence detection

The HCI controller detects the size of paper loaded in the cassette by monitoring the HCI cassette media size sensors. It determines whether A4-R or Letter-R is loaded and notifies the formatter through the DC controller. It also detects whether the cassette is installed to the 3,500-sheet paper deck by monitoring the HCI cassette open detection switches and notifies the formatter through the DC controller.

The cassette media-size detection and the cassette-presence detection are not performed during Sleep mode.

HCI lift-up operation

The HCI lifts up the tray to keep the surface of the paper at the pickup position whenever the following occurs:

- The product is turned on

- The cassette is installed

- The paper stack surface lowers by pickup operation

Figure 1-58 HCI lift-up operation
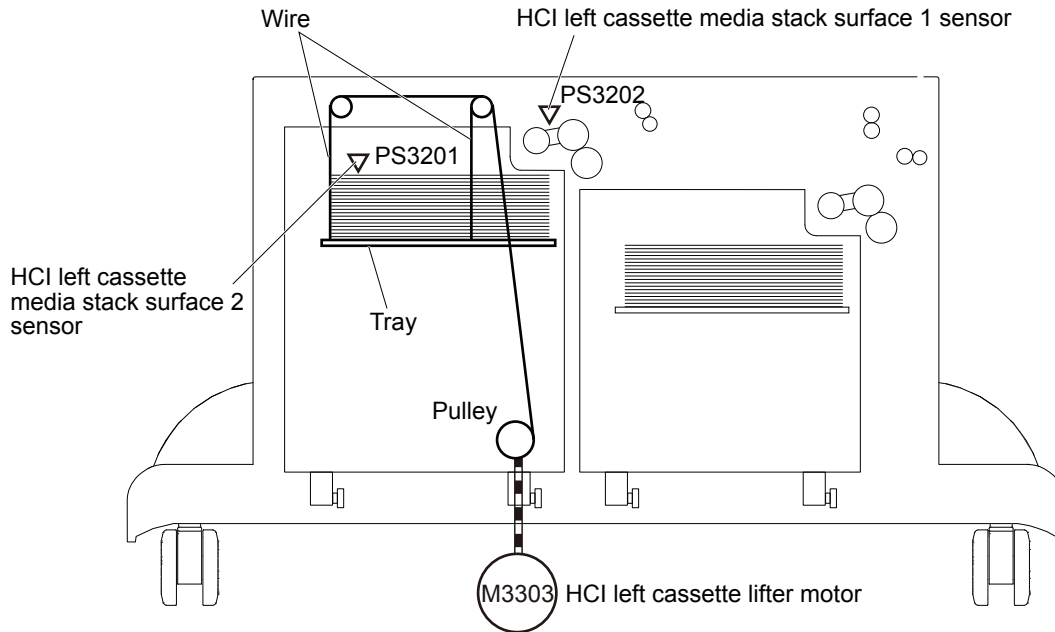
NOTE: The figure above illustrates the mechanism for the left cassette, but each HCI cassette has the same mechanism.

The operational sequence of the lift-up is as follows:

1. The HCI cassette lifter motor rotates the pulley to reel the wire. Accordingly, the tray moves up.

2. The HCI cassette lifter motor stops when the HCI cassette media stack surface 2 sensor detects the paper surface.

3. The HCI cassette lifter motor rotates again when the HCI cassette media stack surface 1 sensor detects that the stack surface lowers during a print operation.

When the HCI cassette media stack surface 2 sensor does not detect the paper surface within a specified period from when the HCI cassette lifter motor starts rotating, the HCI controller determines an HCI cassette lifter motor failure, and it notifies the formatter through the DC controller.

HCI cassette media-presence detection

The HCI controller detects whether paper is loaded in the cassette by monitoring the HCI cassette media out sensor.

The cassette media-presence detection is not performed during Sleep mode.

When the HCI cassette media out sensor does not detect the paper, the HCI controller determines a media-absence, and it notifies the formatter through the DC controller.

HCI jam detection

The HCI uses the following sensors to detect the presence of paper and to check whether paper is being fed correctly or has jammed:

- HCI media feed sensor (PS3301)

- HCI right cassette media feed sensor (PS3302)

- HCI left cassette media feed sensor (PS3305)

Figure 1-59 HCI jam detection sensors
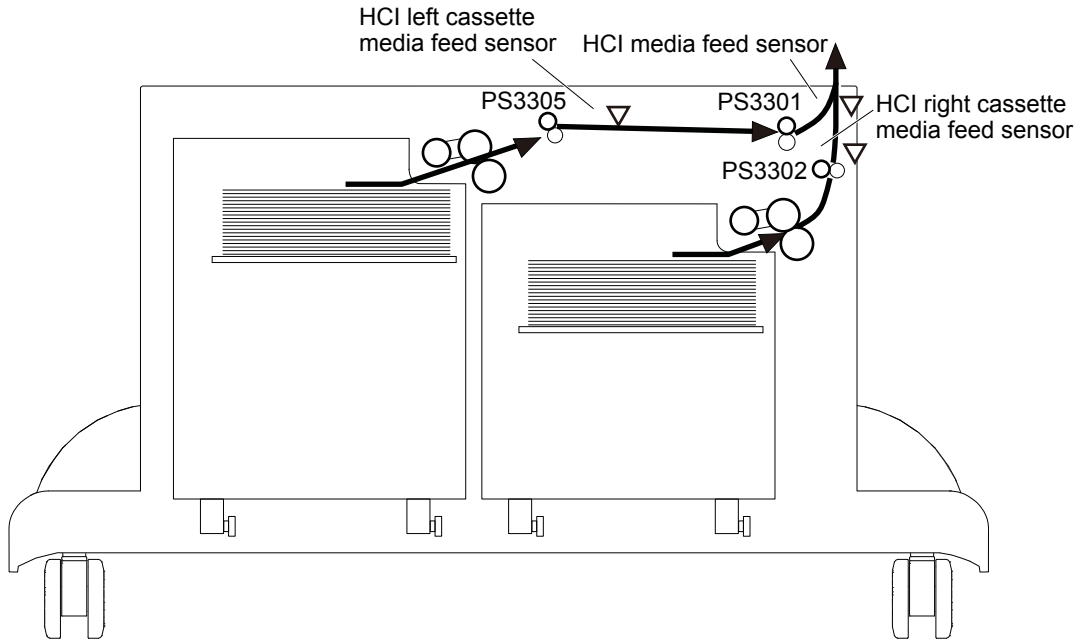
No pick jam 2

The HCI media feed sensor does not detect the leading edge of paper within a specified period from when the HCI right cassette media feed sensor detects the leading edge.

The HCI media feed sensor does not detect the leading edge of paper within a specified period from when the HCI left cassette media feed sensor detects the leading edge.

No pick jam 3

The HCI right cassette media feed sensor does not detect the leading edge of paper within a specified period (including two retries) from when the HCI right cassette pickup solenoid is turned on.

The HCI left cassette media feed sensor does not detect the leading edge of paper within a specified period (including two retries) from when the HCI left cassette pickup solenoid is turned on.

Residual paper jam 1

Either one of the following sensors detects a paper-presence when the automatic delivery is complete:

- HCI media feed sensor

- HCI right cassette media feed sensor

- HCI left cassette media feed sensor

Door open jam 1

An HCI right door open or an HCI long edge feed guide open is detected during a paper-feed operation.

HCI automatic delivery

The HCI automatically clears the paper if one of the following sensors detects the residual paper when either the product is turned on or the door is closed:

- HCI media feed sensor

- HCI right cassette media feed sensor

- HCI left cassette media feed sensor

Duplexer

The optional duplexer is installed on the left side of the product. The duplexer reverses the output roller and intermediate output roller in the product engine, reverses and feeds the paper passed through the fuser. Then, it detects side misregistration to adjust the starting position of the scanning direction for the second side of paper according to the command from the formatter and feeds it to the product engine.

Figure 1-60 Duplexer paper path
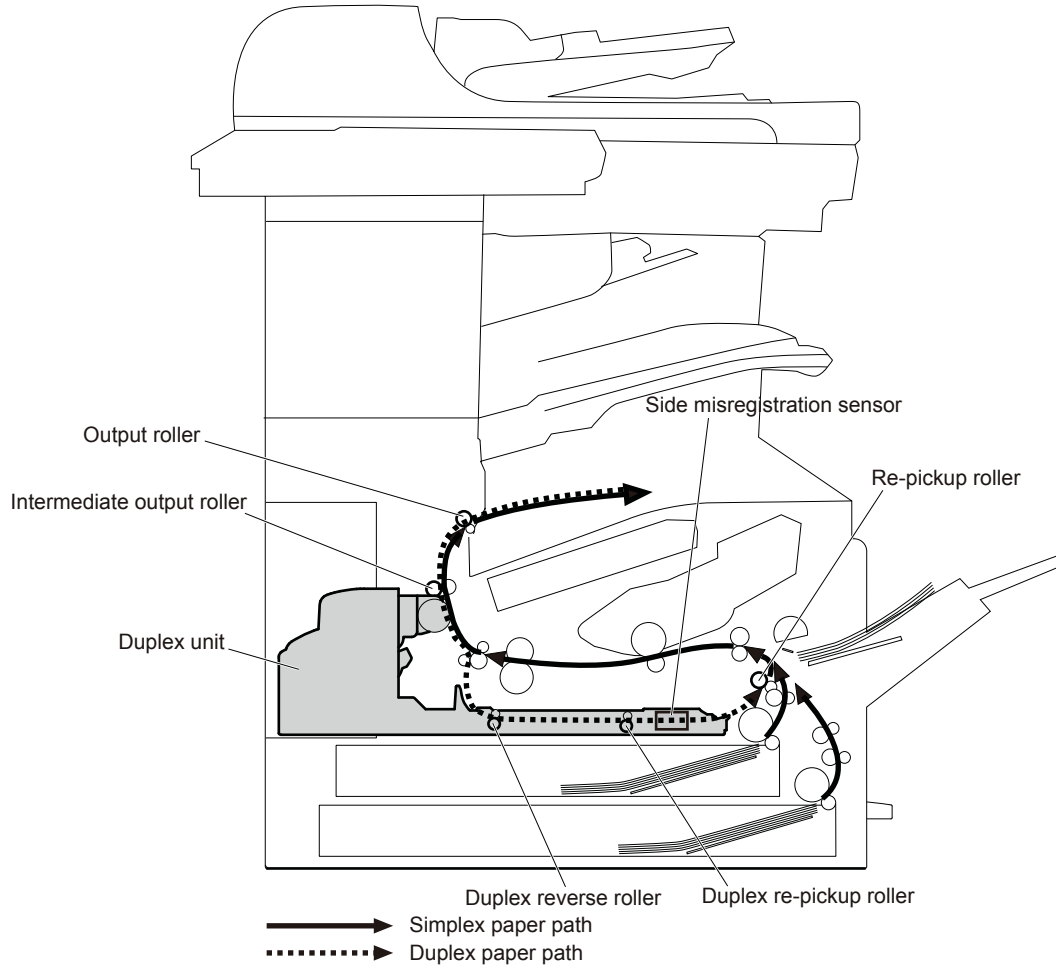
Figure 1-61 Duplexer signal flow
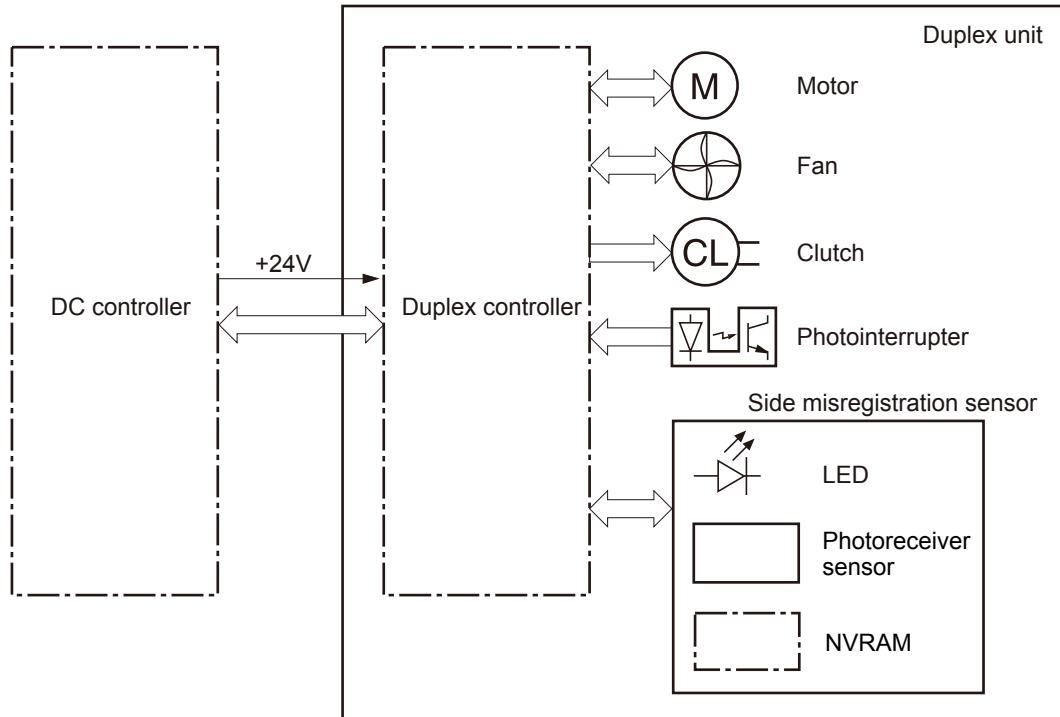
Table 1-19 Duplexer electrical components

Component	Abbreviation	Component name
Motor	M1	Duplex feed motor
Fan	FM1	Duplex fan
Clutch	CL1	Duplex feed clutch
Photointerrupter	SR1	Duplex reverse sensor
	SR2	Duplex re-pickup sensor

Duplexer motor control

The duplexer has one motor. The duplex feed motor reverses the output roller and the intermediate output roller. Also, it drives the duplex reverse roller and the duplex re-pickup roller to feed the paper and to drive the side misregistration sensor and the re-pickup roller.

Figure 1-62 Duplexer motor
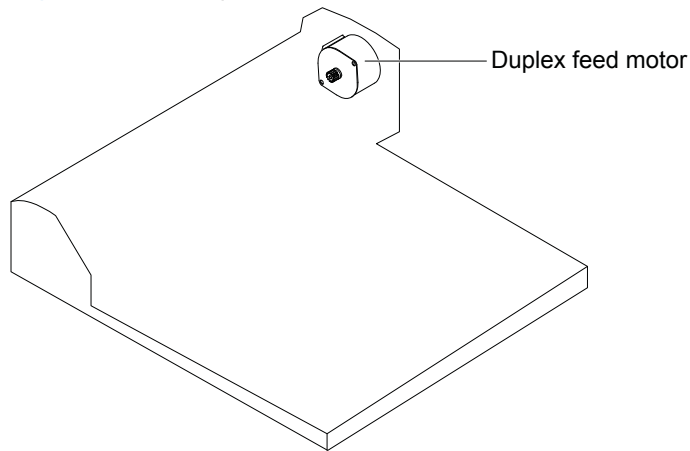
Duplex feed motor

Table 1-20 Duplexer motor

Motor		Components driven
M1	Duplex feed motor	Duplex reverse roller, duplex re-pickup roller, re-pickup roller, output roller, and intermediate output roller

Duplexer motor failure detection

The duplex controller does not determine if the duplex feed motor has failed; therefore, a jam occurs when the motor fails.

Duplexer fan control

The duplex unit has one fan for preventing the temperature from rising in the duplex unit. The duplex controller determines if the duplex fan has failed and notifies the formatter through the DC controller when the fan fails to operate for a specified time during start-up.

Figure 1-63 Duplexer fan
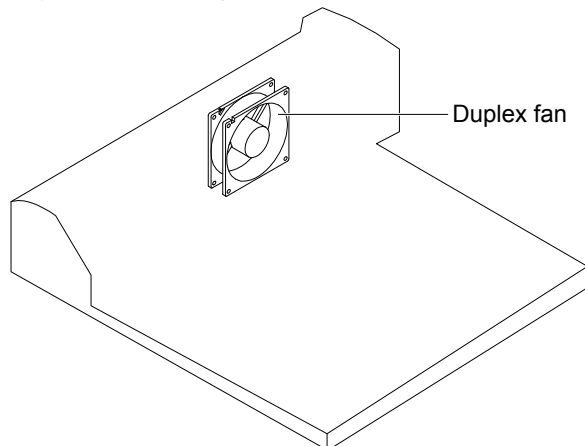
Duplex fan

Table 1-21 **Duplexer fan**

Fan		Cooling area	Type	Speed
FM1	Duplex fan	Duplexer inside	Exhaust	Full

Duplexer fan failure detection

The duplex controller determines if the duplex fan has failed and notifies the formatter when the fan locks for a specified time during start-up.

Duplexer reverse-and-feed operation

The duplexer reverses the feed and delivery rollers in the product to print on both sides. The paper that passed through the fuser unit reverses its feeding direction and is fed to the duplexer. The duplexer feeds the paper and performs horizontal registration to align the starting position of the main scan for the second-side print. Then, the paper is fed into the product engine unit again.

Figure 1-64 Duplexer reverse-and-feed operation
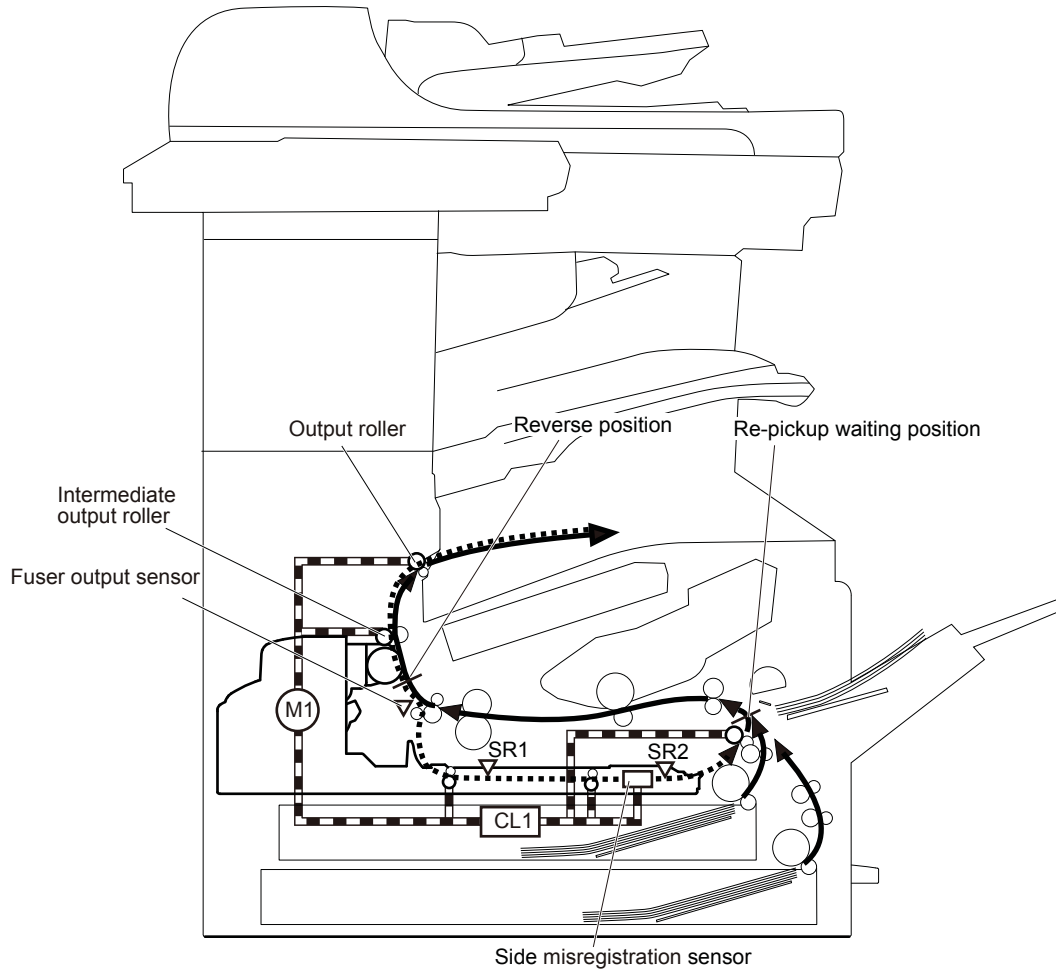
Table 1-22 Duplexer reverse-and-feed components

Component		Signal
M1	Duplex feed motor	DUPLEX FEED MOTOR CONTROL signal
CL1	Duplex feed clutch	DUPLEX FEED CLUTCH signal
SR1	Duplex reverse sensor	DUPLEX FEED signal
SR2	Duplex re-pickup sensor	DUPLEX RE-PICKUP signal

Duplexer reverse-and feed-operation sequence

The operational sequence of the reverse-and-feed operation is as follows:

1. The paper printed on the first side passes through the fuser.

2. The DC controller feeds the paper until the trailing edge of paper reaches the reverse position, after the fuser output sensor detects the trailing edge.

3. The duplex controller reverses the output roller and the intermediate output roller to feed the paper to the duplexer from the reverse position.

4. The duplex controller detects the image starting position according to the side misregistration sensor and feeds the paper to the re-pickup waiting position.

5. The duplex controller stops the paper temporarily at the re-pickup waiting position when the paper is standard size, but shorter than Letter-R. It feeds the paper to the product engine again if a print command is sent from the formatter. If a print command is sent before the paper reaches the re-pickup waiting position, the duplex controller does not stop the paper.

   If the paper is other than standard size, or standard size but longer than Letter-R, and a print command is sent before the paper reaches the re-pickup waiting position, the duplex controller does not stop the paper. If a print command is not sent before the paper reaches the re-pickup waiting position, the duplex controller notifies the formatter of duplex re-pickup jam 3 through the DC controller.

Side misregistration detection

The side misregistration detection is a feature to determine the starting position in scanning direction for the second side printing of the paper fed to the duplexer.

The LED and photoreceiver sensor of the side misregistration sensor are located and paired at the position of right edge of each standard size paper. The side misregistration sensor reciprocates while lighting the LED which corresponds to the paper size. The paper passes through, in between the LED and photoreceiver sensor.

The side misregistration detection is performed when the duplex re-pickup sensor detects the leading edge of the paper. The moving distance of the sensor is measured according to the home-position of the side misregistration sensor and the position where the right edge of paper interrupts the LED light. Then, the side misregistration amount is calculated by subtracting the distance of nominal position (without side misregistration) for each paper size. The side misregistration amount is sent to the

formatter through the DC controller as a correction value of scanning start position for the second side printing.

Figure 1-65 Duplexer side misregistration detection

Outline of LED assʹy

LED for paper right edge detection

LED for home-position detection

LED for A4-R/A3 size detection

LED for Letter-R size detection

Paper

Flag for home-position detection

CL1   M1

Photoreceiver sensor assembly

Side misregistration sensor

LED assembly

1. Detects home-position

Sensor position when detecting the home-position

Sensor position when the paper is in niminal position

Side misregistration

Sensor opsition when side misregistration of paper is detected

2. Detects right edge of paper

Image starting position

Side misregistration failure detection

The duplex controller determines a side misregistration sensor failure and notifies the formatter when it encounters any one of the following condition:

- The photoreceiver sensor does not output as prescribed when the product is turned on, when the duplexer is installed into the product, or when the light intensity is adjusted before the paper is fed to the duplexer.

- The side registration sensor does not detect the home-position.

- An NVRAM data abnormality or communication error occurs when the product is turned on, when the duplexer is installed into the product, or when the light intensity is adjusted and there is a write/read operation on the NVRAM data during duplex printing.

Duplexer jam detection

The duplexer uses the following sensors to detect the presence of paper and to check whether the paper is being fed correctly or has jammed:

● Duplex reverse sensor (SR1)

● Duplex re-pickup sensor (SR2)

Figure 1-66 Duplexer jam detection sensors

SR1   SR2

Simplex paper path

Duplex paper path

Duplex re-pickup sensor

Duplex reverse sensor
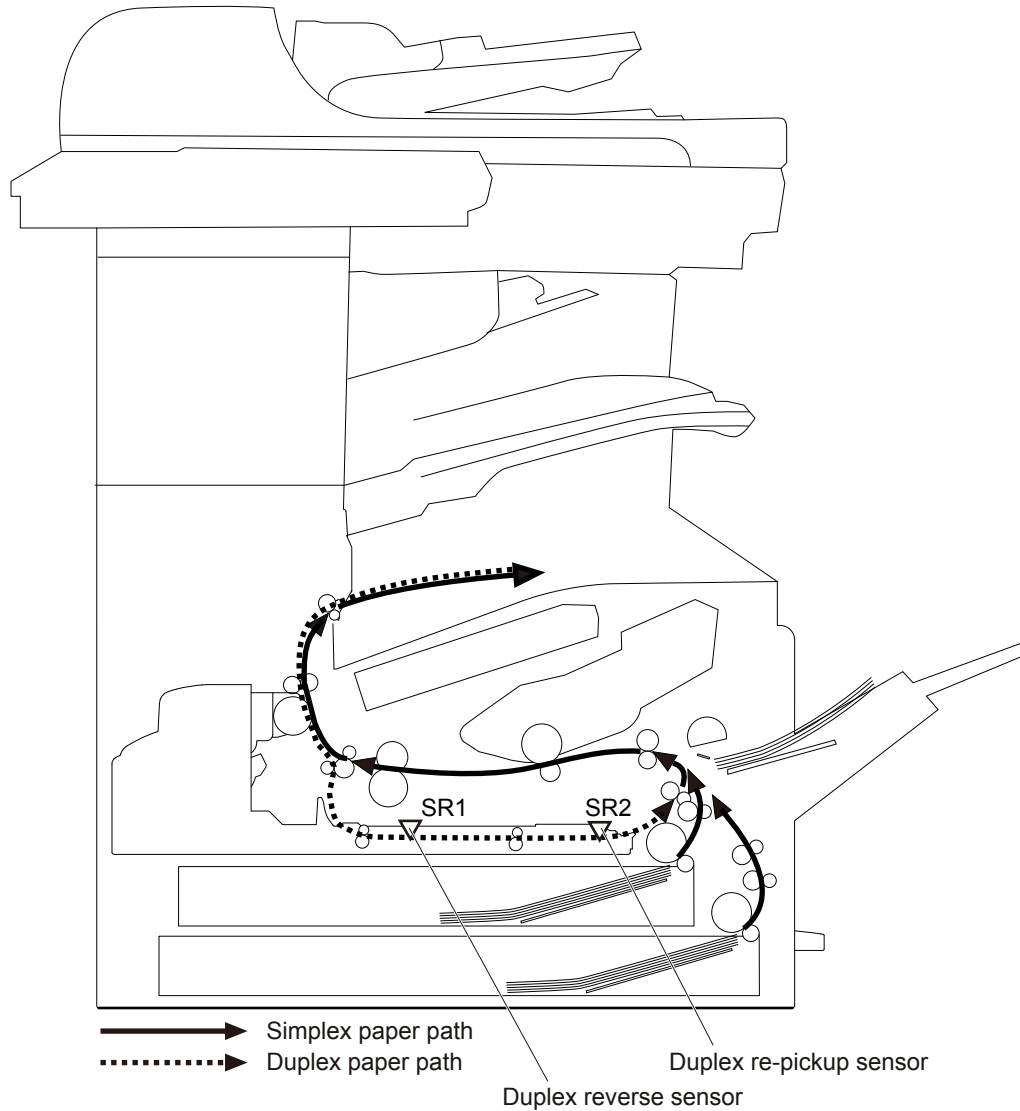
Fuser output stay jam 2

The fuser output sensor does not detect the trailing edge of paper within a specified period from when it detects the leading edge.

Reverse jam 1

The duplex reverse sensor does not detect the leading edge of paper within a specified period from when a reverse operation starts.

Duplex re-pickup jam 1

The duplex re-pickup sensor does not detect the leading edge of paper within a specified period from when the duplex reverse sensor detects the leading edge.

Duplex re-pickup jam 2

The duplexer is removed or the communication with the duplexer fails, during a period from when the reverse operation starts until the paper reaches the re-pickup waiting position.

Duplex re-pickup jam 3

A print command is not sent from the formatter before the paper reaches the re-pickup waiting position, if the paper is other than standard size or standard size, but longer than Letter-R.

Residual paper jam 1

Either one of the following sensors detects a paper-presence when the automatic delivery is complete:

- Duplex reverse sensor
- Duplex re-pickup sensor

Duplexer automatic delivery

The product automatically clears the paper if any one of the following sensors detects the residual paper when the product is turned on or when the door is closed:

- Duplex reverse sensor (SR1)
- Duplex re-pickup sensor (SR2)

Stapler/stacker

The stapler/stacker is an option installed between the product and the scanner assembly. It delivers the printed page directly to the output bin or delivers the printed page after stapling the page. The stapler/stacker controller that is connected to the formatter controls the operational sequence of the stapler/stacker.

Figure 1-67 Stapler/stacker paper path
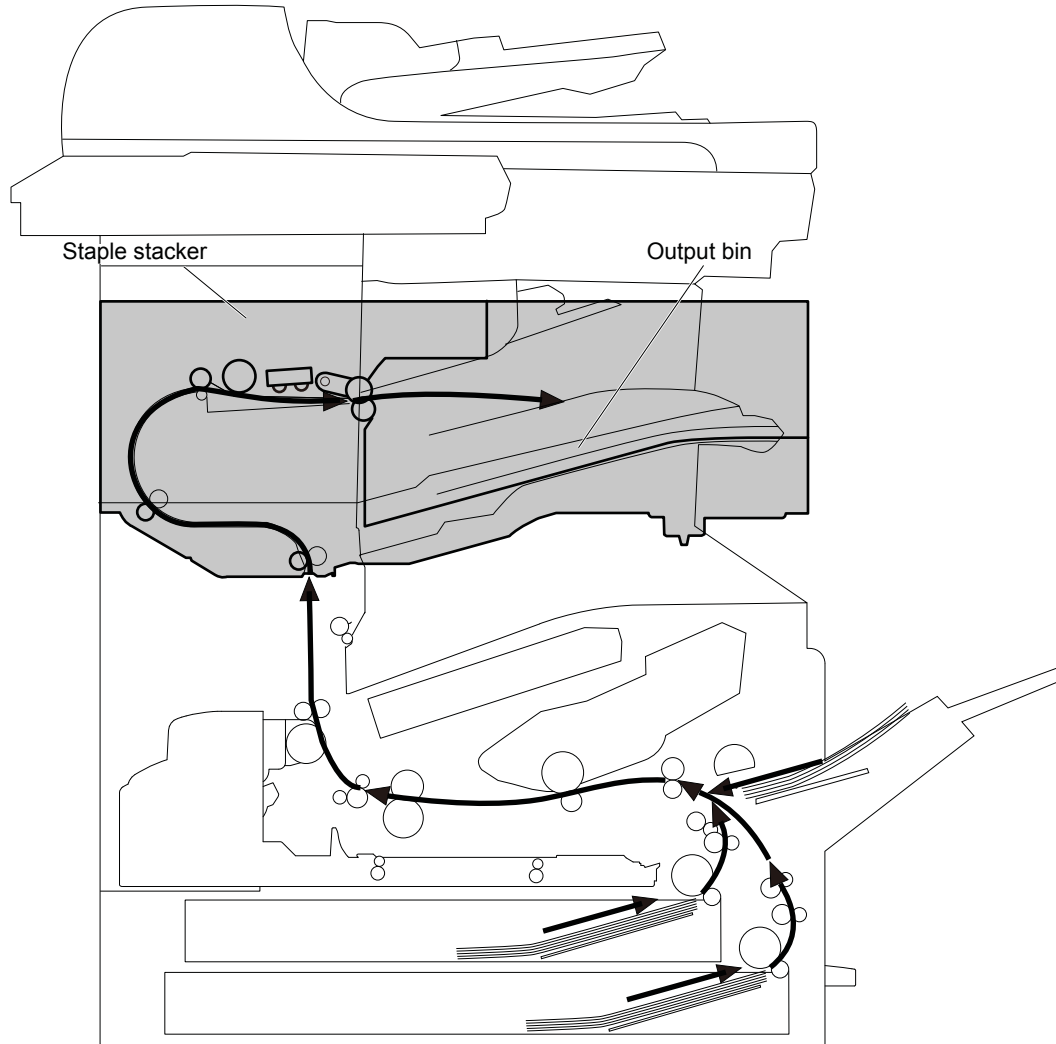
Figure 1-68 Stapler/stacker signal flow
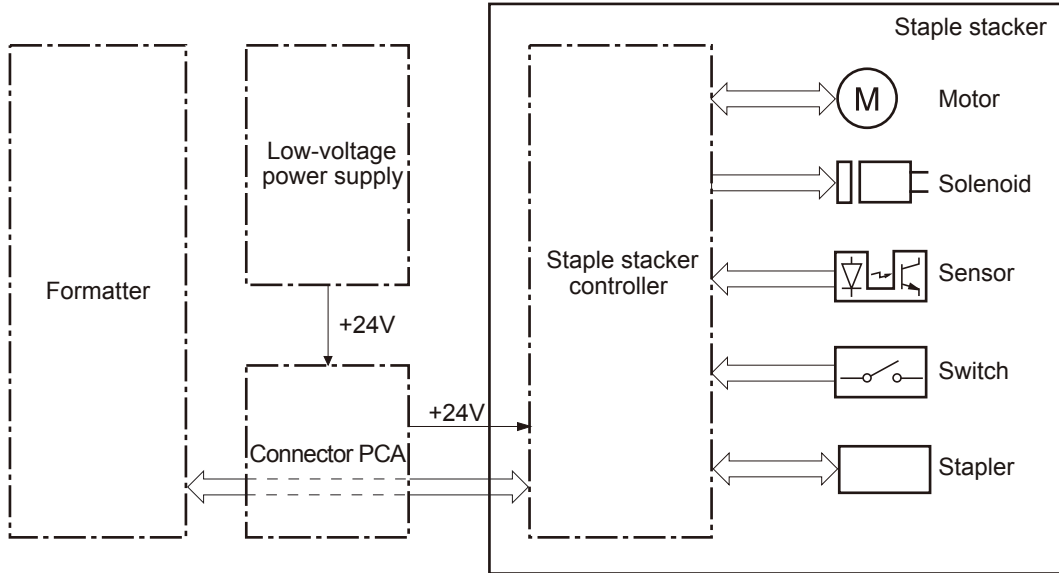
Component	Abbreviation	Component name
Motor	M2100	Jogger motor
	M2101	Feed motor
	M2102	Alignment-alienation motor
	—	Stapler motor
Solenoid	SL2100	Flapper solenoid
	SL2101	Stamp solenoid
	SL2102	Alignment-alienation solenoid
Photointerrupter	SR2100	Inlet sensor
	SR2101	Left door sensor
	SR2102	Jogger position sensor
	SR2103	Output sensor
	SR2105	Swing alienation sensor
	SR2106	Output bin media full sensor
	—	Staple out sensor
	—	Stapler sensor
	—	Staple ready sensor
Switch	SW2100	Stapler door interlock switch

Stapler/stacker motor control

The stapler/stacker has four motors for the paper-feed, alignment and stapling.

Figure 1-69 Stapler/stacker motor locations
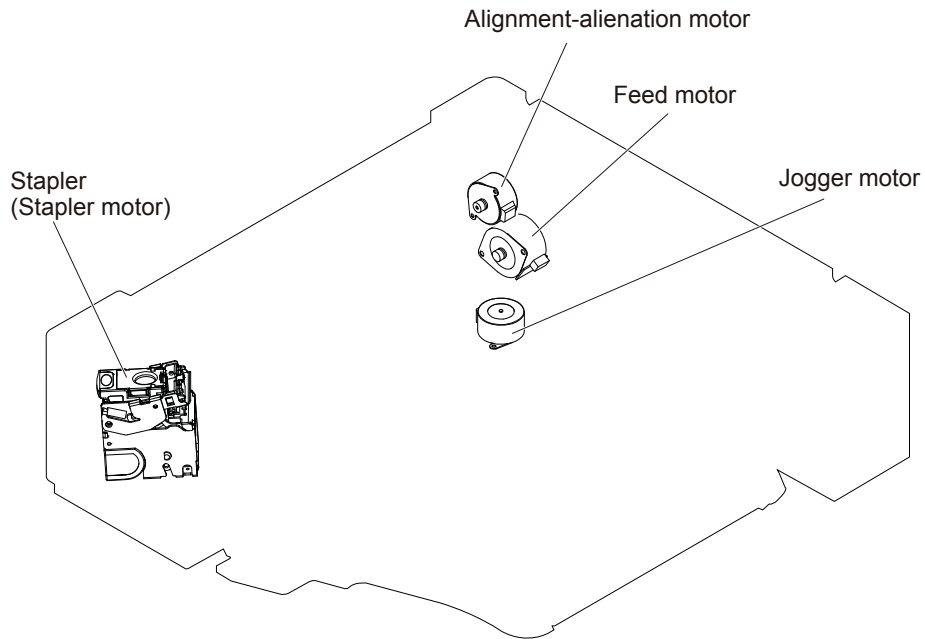
Component name		Components driven
M2100	Jogger motor	Jogger guide
M2101	Feed motor	Feed roller and output lower roller
M2102	Alignment-alienation motor	Leading end alignment roller and output upper roller
—	Stapler motor	Stapler

Stapler/stacker failure detection

The stapler/stacker controller determines a motor failure according to the condition of the following related part:

- Jogger motor failure

  The stapler/stacker controller determines a jogger motor failure and notifies the formatter when it encounters the following conditions:

  ◦ The jogger guide in home-position does not move from its home-position within a specified period from when the jogger motor starts rotating.

  ◦ The jogger guide when out of home-position does not move to its home-position within a specified period from when the jogger motor starts rotating.

- Alignment-alienation motor failure

  The stapler/stacker controller determines an alignment-alienation motor failure and notifies the formatter when it encounters the following condition:

  ◦ The home-position of the output upper roller keeps detecting for a specified period from when an alienation operation of the output upper roller starts.

  ◦ The home-position of the output upper roller is not detected within a specified period from when an engagement operation of the output upper roller starts.

- Stapler motor failure

  The stapler/stacker controller determines a stapler motor failure and notifies the formatter when it encounters the following condition:

  ◦ The home-position of the stapler is not detected within a specified period from when the stapler motor starts rotating during a WAIT period or during recovering from a jam.

  ◦ The stapler is not primed even though the self-priming has been executed for a specified number of times during a stapler self-priming operation.

The stapler/stacker controller cannot determine if the feed motor has failed; therefore, a jam occurs when the motor fails.

Stapler/stacker feed and delivery operation

The stapler/stacker has the following three modes for the feed-and-delivery operation:

- Staple mode: Staples the paper and piles the stacks on the output bin

- Stack align mode: Does not staple the paper, but aligns the paper stack and delivers to the output bin

- Stacker mode: Does not staple and align the paper, but delivers directly to the output bin

Figure 1-70 Stapler/stacker feed and delivery operation
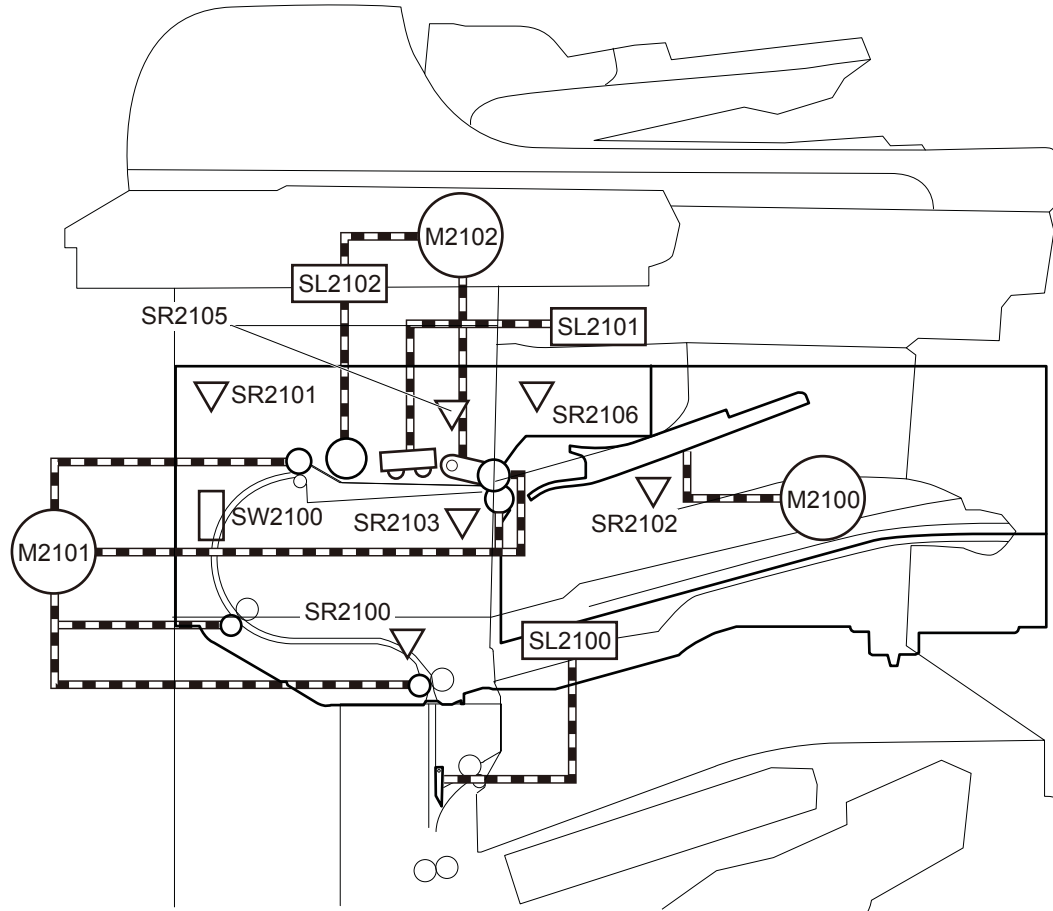
Abbreviation	Component	Signal
M2100	Jogger motor	JOGGER MOTOR CONTROL signal
M2101	Feed motor	FEED MOTOR CONTROL signal
M2102	Alignment-alienation motor	ALIGNMENT-ALIENATION MOTOR CONTROL signal
—	Stapler motor	STAPLER MOTOR CONTROL signal
SL2100	Flapper solenoid	FLAPPER SOLENOID signal
SL2101	Stamp solenoid	STAMP SOLENOID signal
SL2102	Alignment-alienation solenoid	ALIGNMENT-ALIENATION SOLENOID signal

Abbreviation	Component	Signal
SR2100	Inlet sensor	INLET signal
SR2101	Left door sensor	LEFT DOOR OPEN DETECTION signal
SR2102	Jogger position sensor	JOGGER POSITION signal
SR2103	Output sensor	OUTPUT signal
SR2105	Swing alienation sensor	SWING ALIENATION signal
SR2106	Output bin media full sensor	OUTPUT BIN MEDIA FULL signal
—	Staple out sensor	STAPLE OUT signal
—	Stapler sensor	STAPLER signal
—	Staple ready sensor	STAPLE READY signal
SW2100	Stapler door interlock switch	STAPLER DOOR OPEN DETECTION signal

Staple mode/stack align mode

Staple mode aligns, staples the paper stack and then delivers it to the output bin.

Stack align mode aligns the paper stack and delivers the paper to the output bin without stapling. The operation of the stack align mode is the same as the staple mode except for the stapling operation.

The operational sequence of the staple mode is as follows:

1. After receiving the command from the DC controller, the stapler/stacker controller turns on the flapper solenoid to move the output flapper in the product and delivers the paper to the stapler/stacker. At the same time, the stapler/stacker controller drives the alignment-alienation motor to separate the output upper roller from the output lower roller. Accordingly, the output bin media full sensor flag moves up and the jogger operation is available.

Figure 1-71 Staple mode mode begins
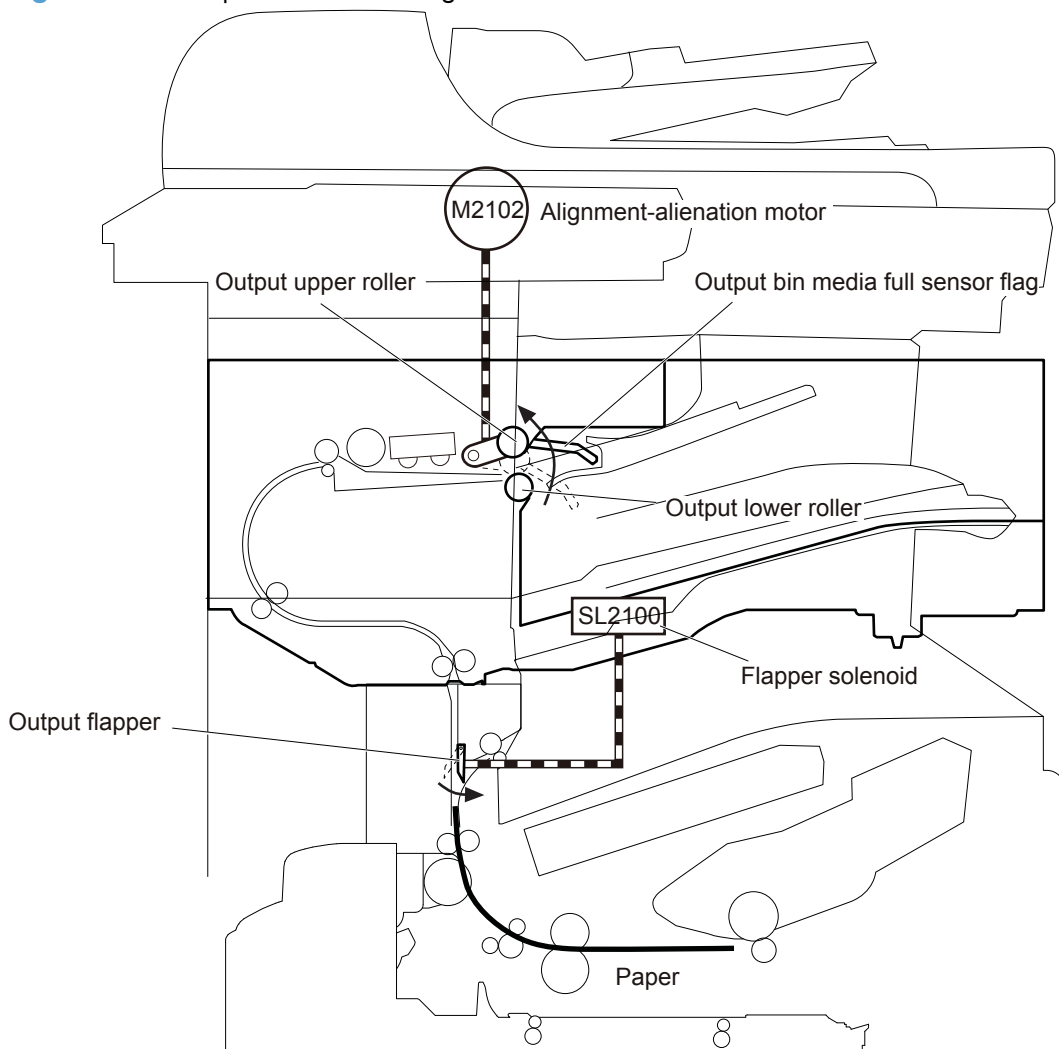
2. After receiving the command from the formatter, the stapler/stacker controller drives the feed motor to rotate the feed roller and the output lower roller.

3. The stapler/stacker controller prompts the jogger motor to move the jogger guide to the waiting position from the turnout position.

Figure 1-72 Jogger guide in the waiting position
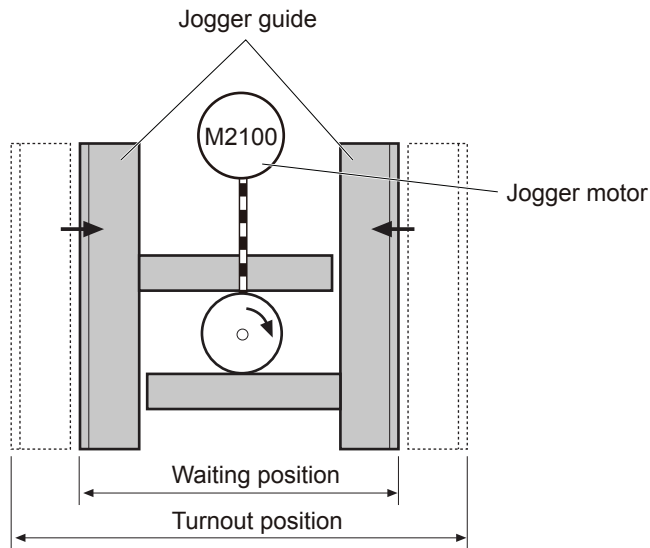
4. After the jogger guide moves to the waiting position, the stapler/stacker controller drives the alignment-alienation motor to engage the output upper roller and the output lower roller. Accordingly, the paper can be fed to the jogger guide.

5. When the paper reaches a specified position in the jogger guide, the stapler/stacker controller drives the alignment-alienation motor to separate the output upper roller from the output lower roller and the paper is released.

Figure 1-73 Alignment-alienation motor separates output rollers
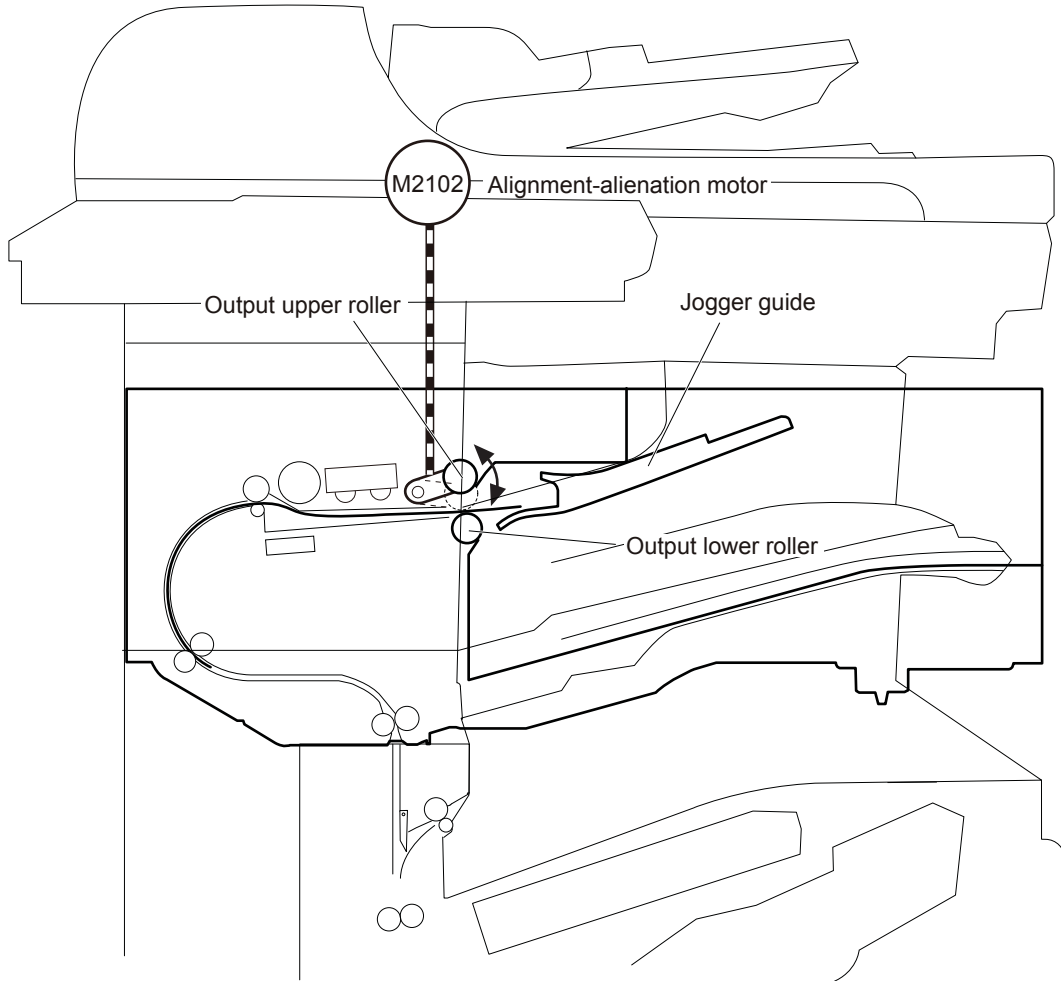
6. When the paper is released, the stapler/stacker controller drives the jogger motor at the same time to move the jogger guide to the alignment position (width of paper) and aligns both sides of the paper.

Figure 1-74 Jogger guide in the alignment position
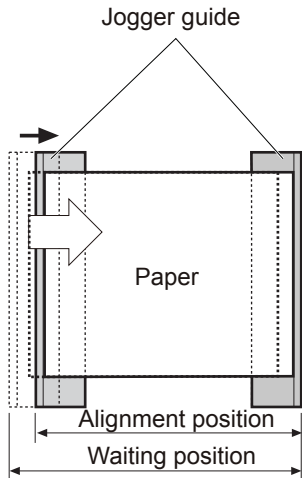
7. The stapler/stacker controller drives the alignment-alienation motor to rotate the leading end alignment roller and lowers the roller by the alienation solenoid. The leading end alienation roller rotates for a specified period to align the leading ends of paper by hitting against the guide.

Figure 1-75 Leading end alienation roller activates
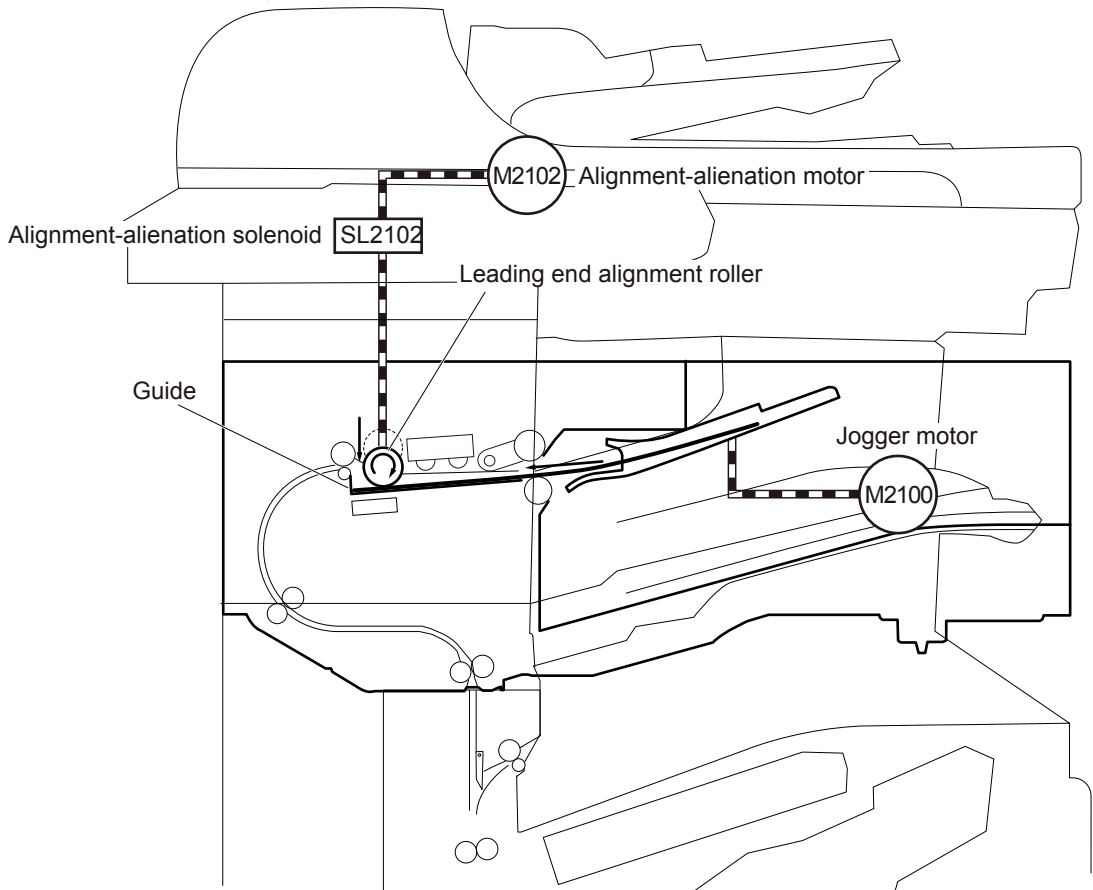
8. After the alignment operation is complete, the stapler/stacker controller turns on the stamp solenoid and the stamp clamps against the paper, so that the paper on the jogger guide is not pushed out by the following paper. At the same time, the stapler/stacker controller moves the jogger guide and the leading end alignment roller to the waiting position.

Figure 1-76 Alignment complete
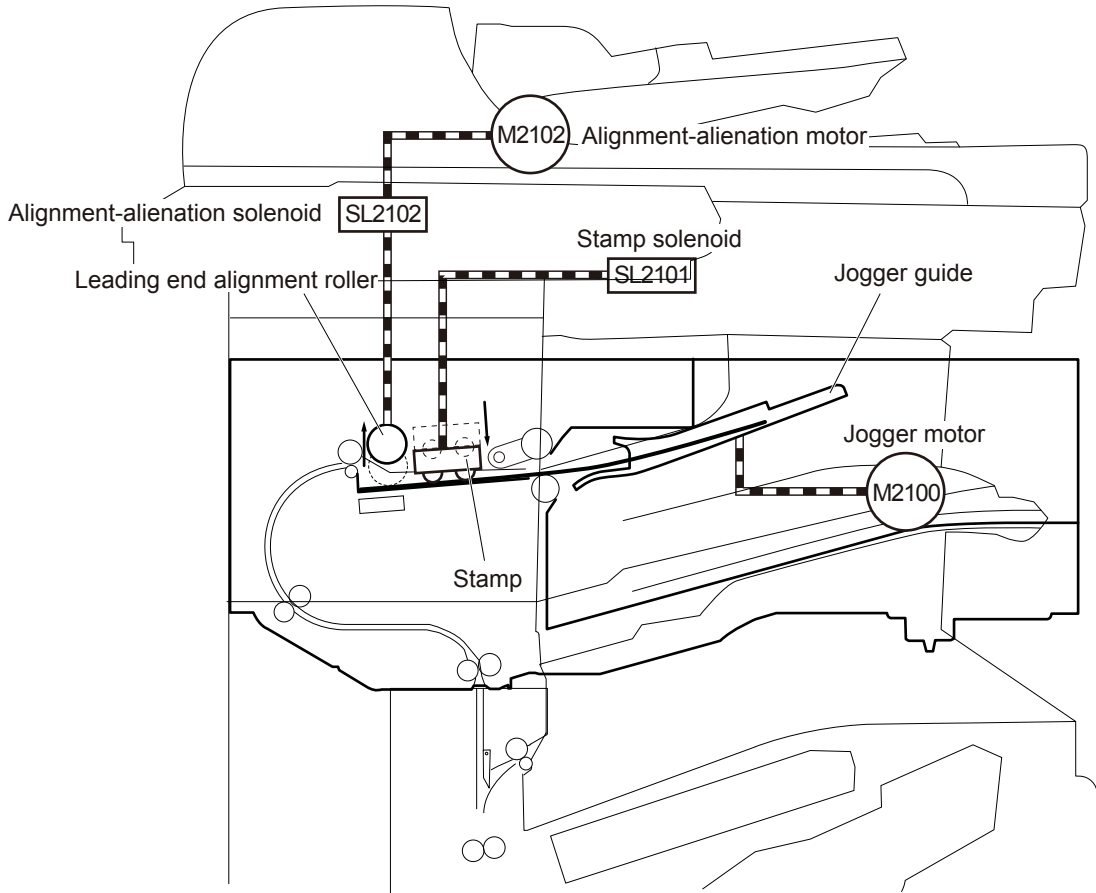
9. The stapler/stacker repeats the preceding steps until the last sheet of the job is fed.

10. When the last sheet of the job is fed, the stapler/stacker controller performs the stapling operation, if the product is in the staple mode. Then, the stapler/stacker controller engages and rotates the output upper roller and the output lower roller to feed the paper stack. If the product is in the stack align mode, the stapler/stacker controller engages and rotates the output upper roller and the output lower roller to feed the paper stack without stapling.

11. The stapler/stacker controller moves the jogger guide to the turnout position.

Figure 1-77 Jogger guide in the turnout position
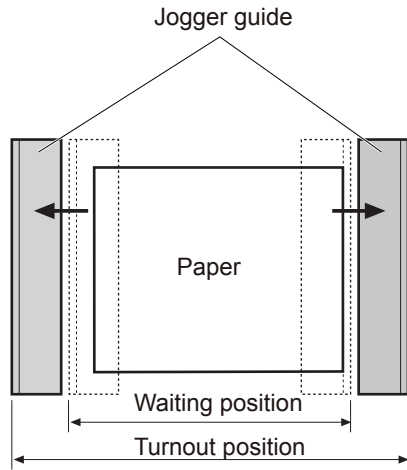
12. The paper stack then drops to the output bin.

Figure 1-78 Paper stack goes to the output bin
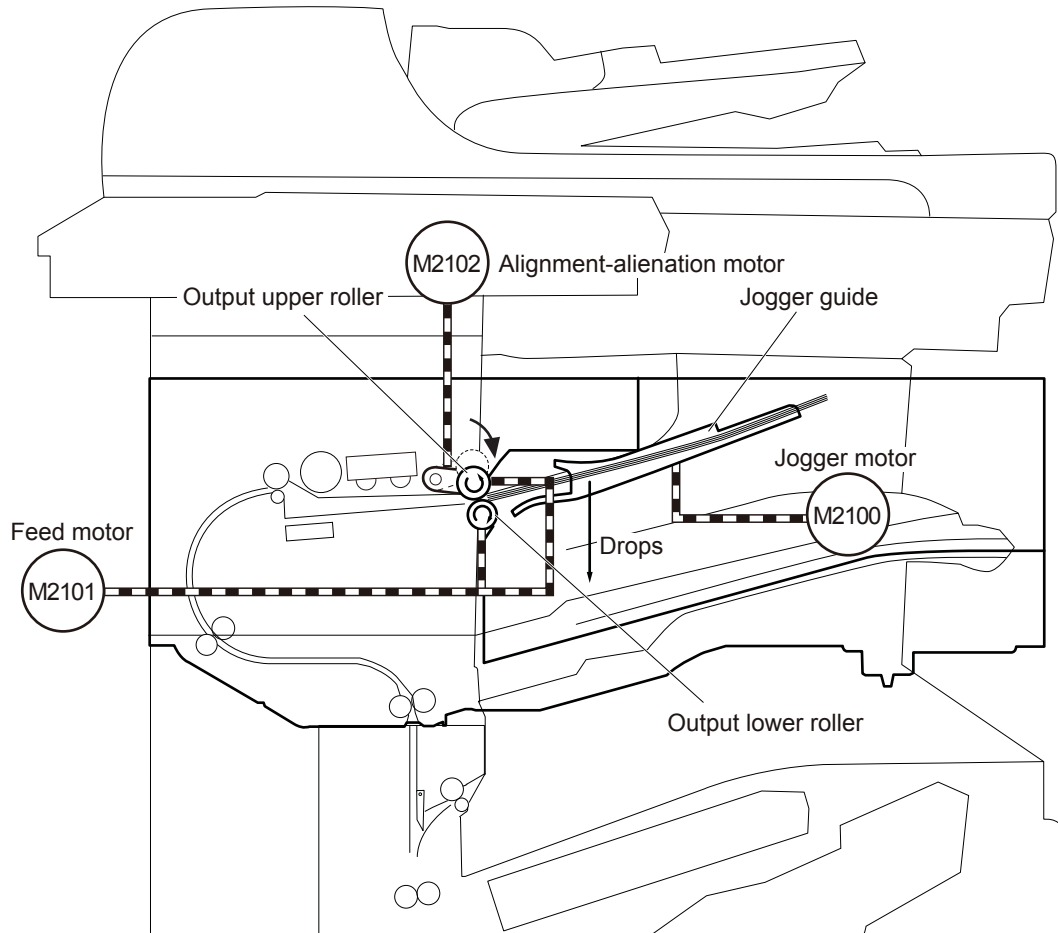
Stacker mode

In stacker mode, the product does not staple the printed page and delivers it directly to the output bin.

Figure 1-79 Paper stack goes to the output bin in stacker mode
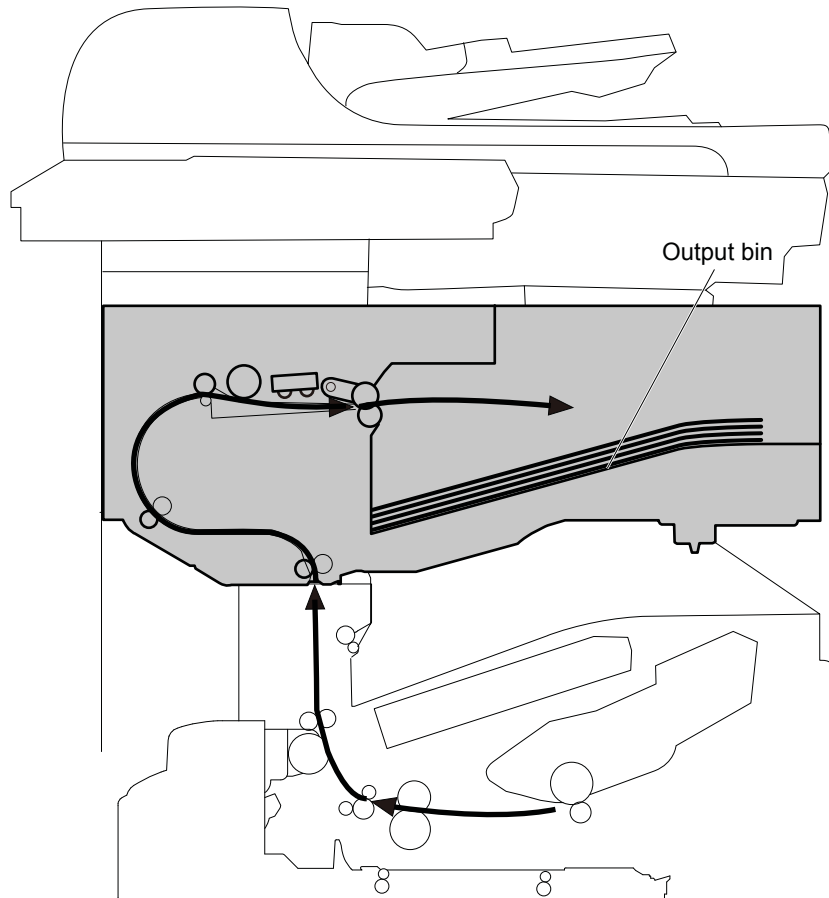
Stapler/stacker jam detection

The stapler/stacker uses the following sensors to detect the presence of paper and to check whether the paper is being fed correctly or has jammed:

- Inlet sensor (SR2100)

- Output sensor (SR2103)

Figure 1-80 Stapler/stacker jam sensors
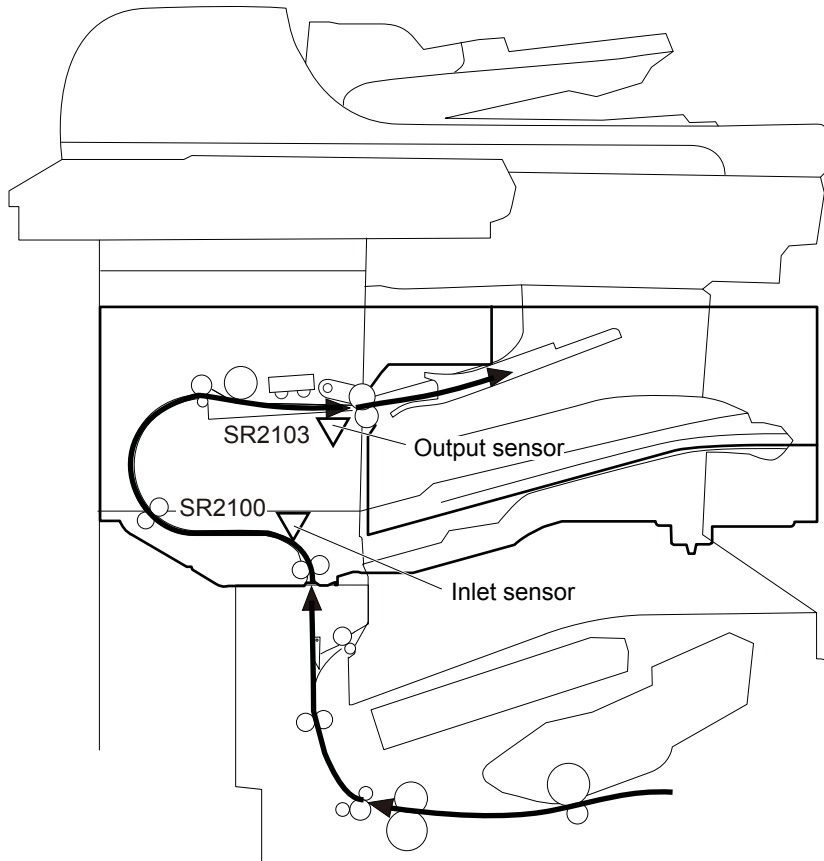
Inlet delay jam

The output sensor does not detect the leading edge of paper within a specified period from when the leading edge reaches the output sensor in the product.

Inlet stay jam

The inlet sensor does not detect the trailing edge of the paper within a specified period from when it detects the leading edge.

Paper stack output stay jam

The output sensor does not detect the trailing edge of the paper stack within a specified period from when the feed motor starts rotating after the staple operation is complete.

Residual paper jam

Either one of the following sensors detects a paper-presence during the WAIT period when the product is turned on, when the door is closed, or when the product exits the power save mode:

- Inlet sensor

- Output sensor

Stapler/stacker automatic delivery

The stapler/stacker automatically clears the paper if any one of the following sensors detects the residual paper during the WAIT period when the product is turned on or when the door is closed:

- Inlet sensor

- Output sensor

Stapler

The stapler staples the printed pages. It consists of the staple cartridge and the stapler assembly.

The staple cartridge holds up to 5,000 staples. The staple out sensor detects the presence of a staple. The staple ready sensor detects whether the staple is in the correct position to staple or not.

The staple assembly is equipped with the stapler motor. When the stapler/stacker controller rotates the stapler motor, the staple arm lowers and staple operation is performed. The stapler sensor detects the position of the staple arm at this time.

Figure 1-81 Stapler components
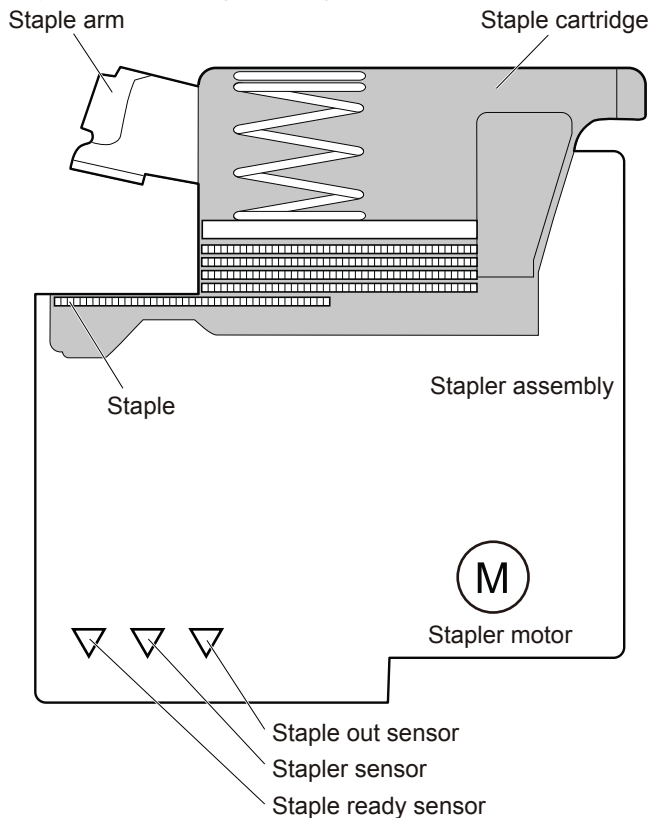
The stapler/stacker controller determines a stapler motor failure and notifies the formatter when the stapler sensor does not sense the condition changes for a specified period after the stapler motor starts rotating.

The stapler/stacker controller determines a stapler jam and notifies the formatter when the stapler sensor senses the condition changes after a specified period from the stapler motor starts rotating, and then if the stapler sensor recovers within a specified period from when the stapler motor reverses.

2 Solve problems

Solve problems checklist

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

1. Control panel is blank or black:

    a. Check the power cable.

    b. Check that the power is turned on.

    c. Make sure that the line voltage is correct for the product power configuration. (See the label that is on the back of the product for voltage requirements.) If you are using a power strip and its voltage is not within specifications, connect the product directly into the electrical outlet. If it is already connected into the outlet, try a different outlet.

2. Control panel displays an error message:

    ▲ Resolve the error by following the troubleshooting procedures. The control panel should indicate a Ready status when there are no errors.

3. The product will not communicate with the computer or network:

    a. Check the cable connection between the product and the computer or network port. Make sure that the connection is secure.

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

    c. Check the network connection.

4. Paper tray issues:

    a. Ensure that the selected paper size and type meet specifications.

    b. Open the Trays menu on the product control panel and verify that the trays are configured correctly for the paper.

5. Print an internal page:

    ▲ Print a configuration page. If the product is connected to a network, an HP Jetdirect page also prints.

        a. From the Home screen on the product control panel, scroll to and touch the Administration button.

        b. Open the following menus:

            ◦ Reports

            ◦ Configuration/Status Pages

            ◦ Configuration page

        c. Touch the Print button to print the page.

    If the pages do not print, check that at least one tray contains paper.

    If the page jams in the product, follow the instructions on the control panel to clear the jam.

If the page does not print correctly, the problem is with the product hardware.

If the page prints correctly, then the product hardware is working. The problem is with the computer you are using, with the print driver, or with the program.

6. Verify the print driver:

   ● Verify that you have installed the print driver for this product. Check the program to make sure that you are using the print driver for this product. The print driver is on the CD that came with the product. You can also download the print driver from www.hp.com/go/ljMFPM725_software.

7. Print using a different program:

   ▲ Print a short document from a different program that has worked in the past. If this solution works, then the problem is with the program. If this solution does not work (the document does not print), complete these steps:

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

      ● If you connected the product to the network, connect the product directly to a computer with a USB cable. Redirect the product to the correct port, or reinstall the software, and select the new connection type that you are using.

Helpful printed pages

Menu map

A printed Menu map can help you navigate the complete Administration menu more easily. To print a Menu map:

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

    ●   Reports

    ●   Configuration/Status Pages

3. Select the Administration Menu Map option.

4. Touch the Print button to print the report.

Current settings pages

Printing the current settings pages provides a map of the user configurable settings that might be helpful in the troubleshooting process.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

    ●   Reports

    ●   Configuration/Status Pages

3. Select the Current Settings Page option.

4. Touch the Print button to print the report.

Preboot menu options

If an error occurs while the product is initializing, an error message displays on the control-panel display. The user can open the Preboot menus. The error menu item will not be seen if an error did not occur.

> **⚠ CAUTION:** The 2 Format Disk option performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) will be completely lost. HP does not recommend this action without contacting HP support first.

Access the Preboot menu

1. Turn the product on.

2. Touch the HP logo that displays in the center of the touchscreen until the Preboot menu opens.

3. Use the arrow buttons on the touchscreen to navigate the Preboot menu.

4. Touch the OK button to select a menu item.

Cold reset using the Preboot menu

1. Turn the product on.

2. Touch the HP logo that displays in the center of the touchscreen until the Preboot menu opens.

3. Use the down arrow ▼ button to highlight 3 Administrator, and then touch the OK button.

4. Use the down arrow ▼ button to highlight 8 Startup Options item, and then touch the OK button.

5. Use the down arrow ▼ button to highlight the 2 Cold Reset item, and then touch the OK button.

6. Touch the Home button to highlight 1 Continue, and then touch the OK button.

> **📝 NOTE:** The product will initialize.

Table 2-1 Preboot menu options (1 of 6)

Menu option	First level	Second level	Third level	Description
1 Continue				Selecting the 1 Continue item exits the Preboot menu and continues the normal boot process.
				If a selection is not made in the initial menu within 30 seconds, the product returns to a normal boot (the same as selecting 1 Continue).
				If the user navigates to another menu, the timeout does not apply.
2 Sign In				Enter the administrator PIN or service PIN, if one is required to open the Preboot menu.

Table 2-1 Preboot menu options (1 of 6) (continued)

Menu option	First level	Second level	Third level	Description
3 Administrator				This item navigates to the 3 Administrator sub menus.

If authentication is required (and the user is not already signed in), the 2 Sign In displays. The user is required to sign in. |
	1 Download	2 Network		This item initiates a preboot firmware download process. A USB device interface or a Network connection can be used to download firmware.
		2 USB		
		3 USB Thumbdrive		
	2 Format Disk			This item reinitializes the disk and cleans all disk partitions.

CAUTION: Selecting the 2 Format Disk item removes **all** data.

A delete confirmation prompt is **not** provided.

The system is **not** bootable after this action—a firmware download must be performed to return the system to a bootable state. |
| | 3 Partial Clean | | | This item reinitializes the disk (removing all data except the firmware repository where the master firmware bundle is downloaded and saved).

CAUTION: Selecting the 3 Partial Clean item removes **all** data except the firmware repository.

A delete confirmation prompt is **not** provided.

This allows the user to reformat the disk by removing the firmware image from the active directory without having to download new firmware code (product remains bootable). |
| | 4 Change Password | | | Select this item to set or change the administrator password. |
| | 5 Clear Password | | | Select the 5 Clear Password item to remove a password from the Administrator menu. Before the password is actually cleared, a message will be shown asking to confirm that the password should be cleared. Press the OK button to confirm the action.

When the confirmation prompt displays, press the OK button to clear the password. |

Table 2-2 **Preboot menu options (2 of 6)**

Menu option	First level	Second level	Third level	Description
3 Administrator continued	6 Manage Disk	1 Clear disk		Select the 1 Clear disk item to enable an external device for job storage. Job storage is normally enabled only for the Boot device. This will be grayed out unless the **99.09.68** error is displayed.
		2 Lock Disk		Select the 2 Lock Disk item to lock (mate) a new secure disk to this product. The secure disk already locked to this product will remain accessible to this product. Use this function to have more than one encrypted disk accessible by the product, when using the disks interchangeably. The data stored on the secure disk locked to this product always remains accessible to this product.
		3 Leave Unlocked		Select the 3 Leave Unlocked item to use a new secure disk in an unlocked mode for a single service event. The secure disk that is already locked to this product will remain accessible to this product and uses the old disk's encryption password with the new disk.
		4 Clear Disk Pwd		Select the 4 Clear Disk Pwd item to continue using the non-secure disk and clear the password associated with the yet to be installed secure disk. **CAUTION:** Data on the missing secure disk will be permanently inaccessible.
		5 Retain Password		Select the 5 Retain Password item to use the non-secure disk for this session only, and then search for the missing secure disk in future sessions.
		6 Boot Device	1 Secure Erase	Select the 1 Secure Erase item to erase all of the data on the disk and unlock it if required. This might take a long time. **NOTE:** The system will be unusable until the system files are reinstalled. The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk. Erases entire disk including firmware. The disk remains an encrypted disk.
			2 Erase/ Unlock	Select the 2 Erase/Unlock item to cryptographically erase all data on the disk and unlock the disk to allow access to it from any product. **NOTE:** The system will be unusable until the system files are reinstalled. The process erases the crypto key. The disk becomes a non-encrypted disk.
			3 Get Status	This item provides disk status information if any is available.

Table 2-3 Preboot menu options (3 of 6)

Menu option	First level	Second level	Third level	Description
3 Administrator continued	6 Manage Disk continued	7 Internal Device		Select the 7 Internal Device item to erase the internal device or get the status of the internal device.
			1 Secure Erase	Select the 1 Secure Erase item to erase all of the data on the disk and unlock it if required. This might take a long time. **NOTE:** The system will be unusable until the system files are reinstalled. The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk. The process erases the entire disk, including firmware. The disk remains an encrypted disk.
			2 Erase/Unlock	Select the 2 Erase/Unlock item to cryptographically erase all data on disk and unlock the disk to allow access to it from any product. **NOTE:** The system will be unusable until the system files are reinstalled. The process erases the HP High Performance Secure Hard Disk. The disk becomes a non-encrypted disk.
			3 Get Status	This item provides disk status information if any is available.
		8 External Device		Select the 8 External Device item to erase the internal device or get the status of the internal device.
			1 Secure Erase	Select the 1 Secure Erase item to erase all of the data on the disk and unlock it if required. This might take a long time. **NOTE:** The system will be unusable until the system files are reinstalled. The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk.
			2 Erase/Unlock	Select the 2 Erase/Unlock item to cryptographically erase all data on the disk and unlock the disk to allow access to it from any product. **NOTE:** The system will be unusable until the system files are reinstalled. This process erases the crypto key. The disk becomes a non-encrypted disk.
			3 Get Status	This item provides disk status information if any is available.

Table 2-4 Preboot menu options (4 of 6)

Menu option	First level	Second level	Third level	Description
3 Administrator continued	7 Configure LAN			Select the 7 Configure LAN item to setup the network settings for the Preboot menu firmware upgrade.
				The network can be configured to obtain the network settings from a DHCP server or as static.
		IP Mode [DHCP]		Use this item for automatic IP address acquisition from the DHCP server.
		IP Mode [STATIC]		Use this item to manually assign the network addresses.
			IP Address	Use this item to manually enter the IP address.
			Subnet Mask	Use this item to manually enter the subnet mask.
			Default Gateway	Use this item to manually enter the default gateway.
			Save	Select the Save item to save the manual settings.

Table 2-5 Preboot menu options (5 of 6)

Menu option	First level	Second level	Third level	Description
3 Administrator continued	8 Startup Options			Select the 8 Startup Options item to specify options that can be set for the next time the product is turned on and initializes to the Ready state.
		1 Show Revision		Not currently functional: Check the 1 Show Revision item to allow the product to initialize and show the firmware version when the product reaches the Ready state.
				Once the product power is turned on the next time, the 1 Show Revision item is unchecked so that the firmware revision is not shown.
		2 Cold Reset		Check the 2 Cold Reset item to clear the IP address and all customer settings (this item also returns all settings to factory defaults).
				NOTE: Items in the Service menu are not reset.
		3 Skip Disk Load		
		4 Skip Cal		Select the 4 Skip Cal item to initialize the product the next time the power is turned on without calibrating.
		5 Lock Service		**CAUTION:** Select the 5 Lock Service item to lock the Service menu access (both in the Preboot menu and the Device Maintenance menu).
				Service personnel must have the administrator remove the 5 Lock Service setting before they can open the Service menu.
		6 Skip FSCK		Select the 6 Skip FSCK item to disable Chkdisk/ScanVolume during startup.

Table 2-5 Preboot menu options (5 of 6) (continued)

Menu option	First level	Second level	Third level	Description
3 Administrator continued	8 Startup Options continued	7 First Power		Not currently functional: This item allows the product to initialize as if it is the first time it has been turned on. For example, the user is prompted to configure first-time settings like date/time, language, and other settings. Check this item so that it is enabled for the next time the product power is turned on. When the product power is turned on the next time, this item is unchecked so that the pre-configured settings are used during configuration, and the first-time setting prompt is not used.
		8 Embedded JetDirect Off		Check the 8 Embedded JetDirect Off item to disable the embedded Jetdirect. By default this item is unchecked so that Jetdirect is always enabled.

Table 2-6 Preboot menu options (6 of 6)

Menu option	First level	Second level	Third level	Description
3 Administrator continued	9 Diagnostics	1 Memory	a Do Not Run	
			b Short	
			c Long	
		2 Disk	a Do Not Run	
			b Short	
			c Long	
			d Optimized	
			e Raw	
			f Smart	
		3 ICB		
		4 CPB		
		5 Interconnect Run Selected		
	A Remote Admin	1 Start Telnet		The A Remote Admin item allows a service technician to access the product remotely to troubleshoot issues.
		2 Stop Telnet		
		3 Refresh IP		
	B System Triage	1 Copy Logs		

Table 2-6 Preboot menu options (6 of 6) (continued)

Menu option	First level	Second level	Third level	Description
4 Service Tools				This item requires the service access code. If the product does not reach the Ready state, you can use this item to print the error logs. The logs can be copied to a USB storage accessory when the product is initialized, and then these encrypted files can be sent to HP to help determine what is causing the problem.
	3 Reset Password			Use this item to reset the administrator password.
	2 Subsystems			For manufacturing use only. Do not change these values.
5 Developer Tools	1 Netexec			

Troubleshooting process

Determine the problem source

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.

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 2-7 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 123.
	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?		After the errors have been corrected, go to step 3.
	Yes ↓	No →	
3 **Event log**	Open the Troubleshooting menu and print an event log to see the history of errors with 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 →	

Table 2-7 Troubleshooting flowchart (continued)

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 you try to print an event log, see the control panel message section of the service manual. When the customer can print from the host computer, this is the end of the troubleshooting process.

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. The main cooling fan should begin to spin briefly after the product power is turned on. Place your hand over the holes in the left-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. You can also place your hand over the hole in the right-rear lower corner. If the fan is operating, you should feel air being drawn into the product. 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 right 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. If the formatter is damaged, it might interfere with the engine test. If the engine-test page does not print, try removing the formatter, and then perform the engine test again. If the engine test is then successful, the problem is almost certainly with the formatter, the control panel, or the cable that connects them.

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 wire harness is connected.

5. Make sure that the formatter is seated and operating correctly. Turn off the product and remove the formatter. Reinstall the formatter, and then verify that the heartbeat LED is blinking.

6. Remove any external accessories or devices, 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.

Control-panel checks

The product includes a diagnostic test mode for the control panel. This mode allows you to troubleshoot issues with the touchscreen, speaker, and Home button.

TIP: To diagnose control-panel problems, see .

NOTE: Some of the diagnostic tests are for factory use only.

Open diagnostic mode

1. Tilt the control panel forward. On the back side of the control panel, use a paperclip to press the button inside the small hole near the center of the control panel.

2. Repeatedly pressing the button will scroll through additional screens on the control-panel display. Continue to press the button to scroll back to the diagnostic-mode main test screen.

Exit diagnostic mode

Do one of the following:

● Touch the Stop ⊗ button.

● Wait 20 seconds and the control panel will return to the Home screen.

✕ Cancel	Exits a test
1 2 3 4 5 6 7 8 9 0 ← Backspace	Selects test settings
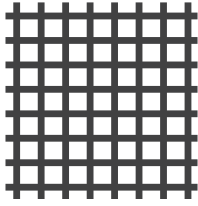
	Verifies that all areas respond to a touch
	Checks calibration
	Selects a test pattern to view on the display.
	Tests sounds
	Shows the firmware version
	Factory use only
	Only applicable for models with keyboards
	Adjusts the backlight
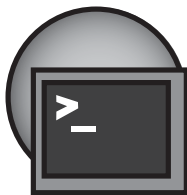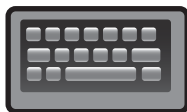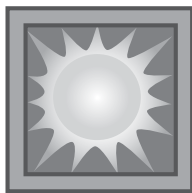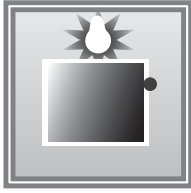
	Checks the ambient light sensor
	Tests the home button

Control-panel diagnostic flowcharts

☀ **TIP:** To open the diagnostic mode: Tilt the control panel forward. On the back side of the control panel, use a paperclip to press the button inside the small hole near the center of the control panel.

Use the flowcharts in this section to troubleshoot the following control panel problems.

- Touchscreen blank, white, or dim (no image)

- Touchscreen is slow to respond or requires multiple presses to respond

- Touchscreen has an unresponsive zone

- No control-panel sound

- Home button is unresponsive

- Hardware integration pocket (HIP) is not functioning (control panel functional)

Touchscreen black, white, or dim (no image)

Figure 2-1 Touchscreen blank, white, or dim (no image)
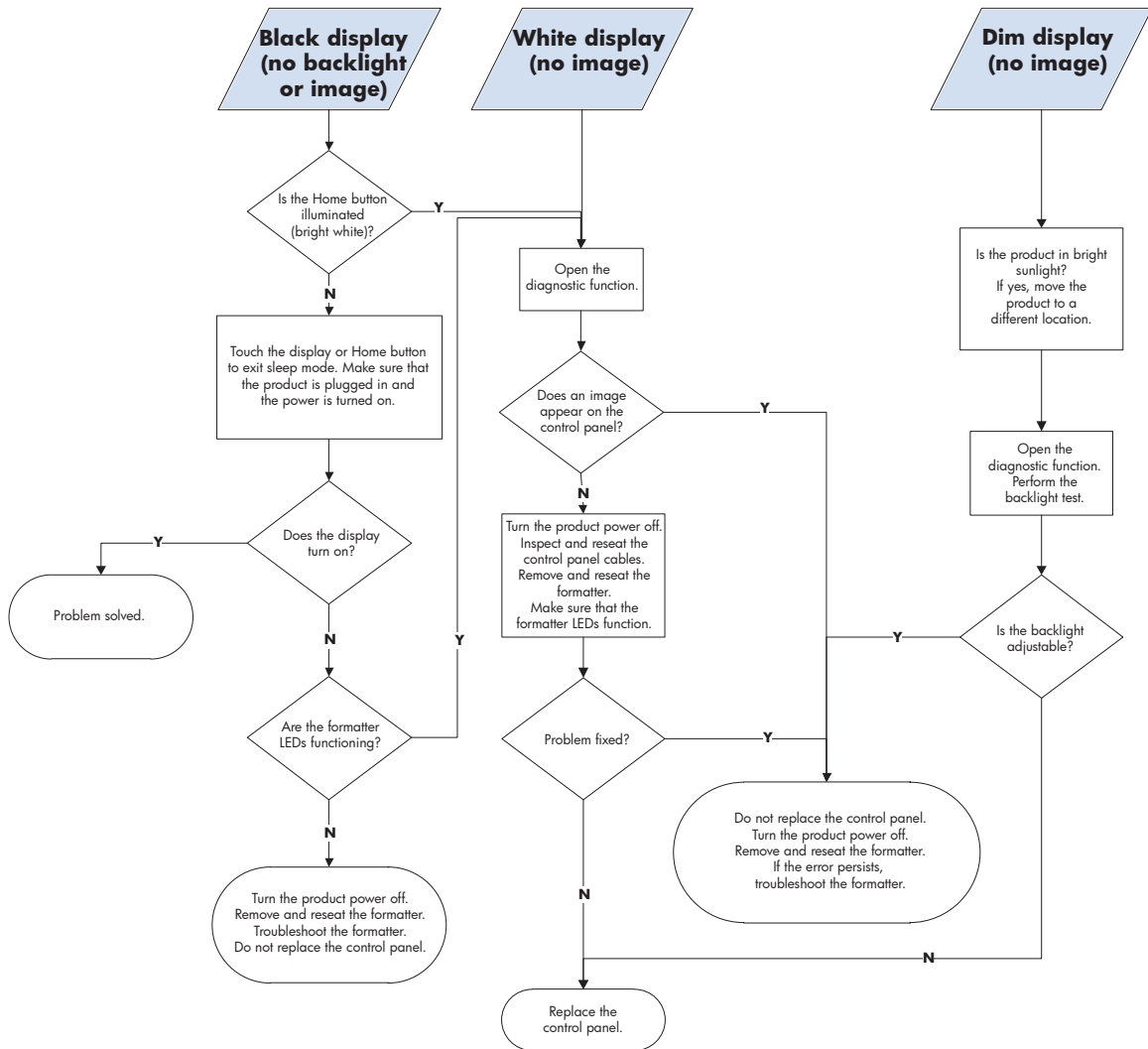
Touchscreen is slow to respond or requires multiple presses to respond

TIP: Use the red-grid touch test to verify that all areas of the touchscreen are correctly functioning. See Control-panel checks on page 124.

Figure 2-2 Touchscreen is slow to respond or requires multiple presses to respond
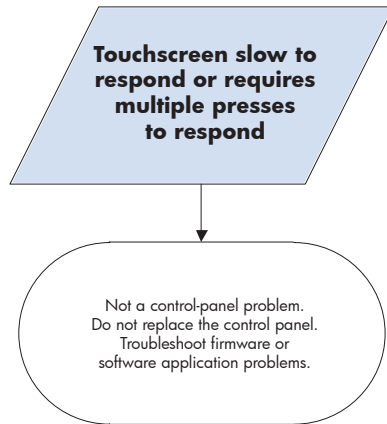
Touchscreen has an unresponsive zone

Figure 2-3 Touchscreen has an unresponsive zone
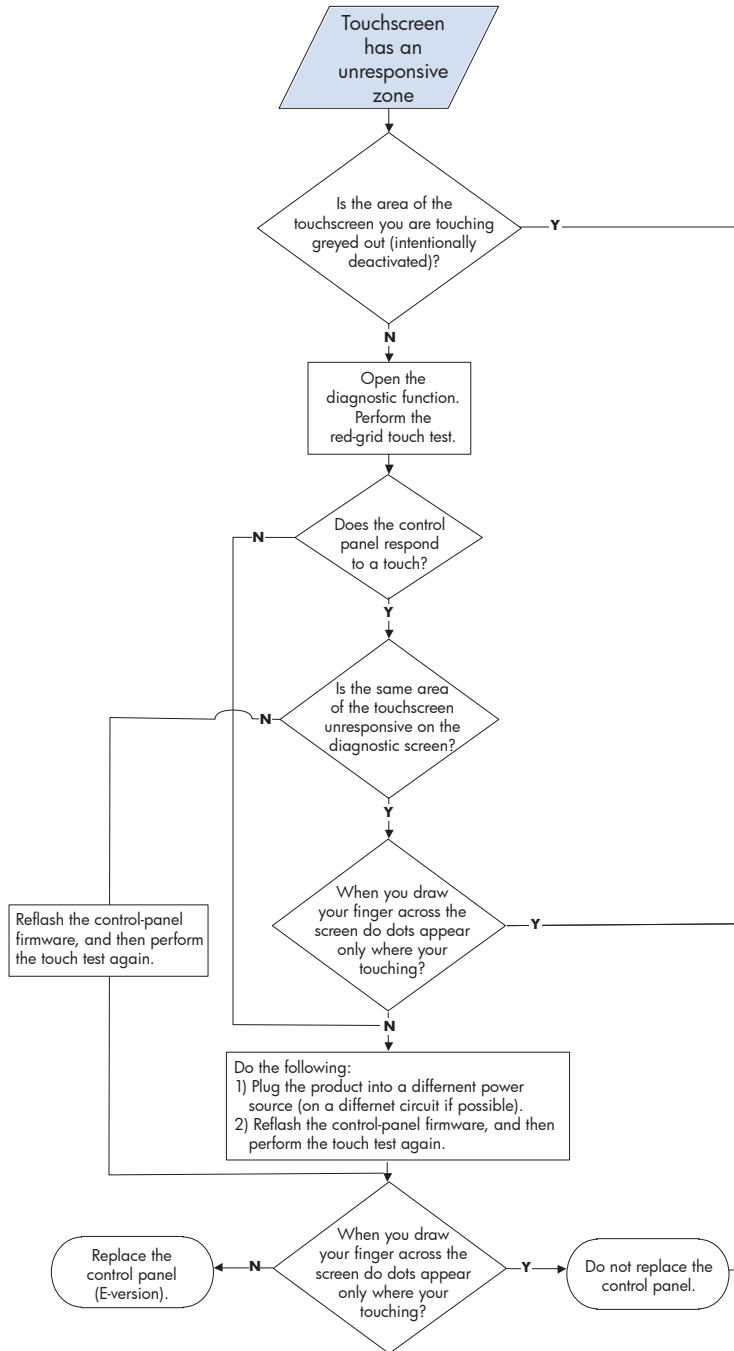
No control-panel sound

Figure 2-4 No control-panel sound

Home button is unresponsive

```
┌─────────────────┐
│  Home button    │
│  unresponsive   │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│    Open the     │
│ diagnostic      │
│ function.       │
│ Perform the Home│
│ button test.    │
└─────────────────┘
         │
         ▼
      ◇ Does the virtual LED
      illuminate green when
      the Home button is pressed? ──── Y
         │
         N
         │
         ▼
┌─────────────────┐
│ Turn the product│
│ power off,      │
│ and then on     │
│ again.          │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│    Open the     │
│ diagnostic      │
│ function.       │
│ Perform the     │
│ Home button test│
└─────────────────┘
         │
         ▼
      ◇ Does the virtual LED
      illuminate green when
      the Home button is pressed? ──── Y
         │
         N
         │
         ▼
   ( Replace the        ( Do not replace the
     control panel. )     control panel. )
```
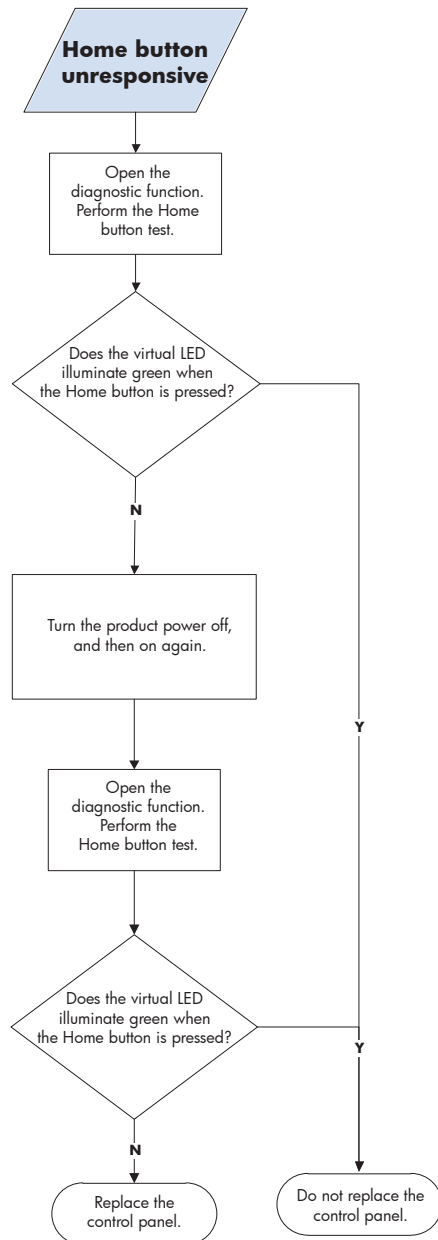
Hardware integration pocket (HIP) is not functioning (control panel functional)

Figure 2-6 Hardware integration pocket (HIP) is not functioning (control panel functional)

Hardware integration pocket (HIP) not functional (control panel functional)

↓

Check that all installed hardware integration pocket devices are within HP specifications. The control panel provides only 0.5 Amps to the port. If an installed device attempts to draw more power than is provided, the port is automatically disabled. Troubleshoot third-party devices with the device manufacturer.
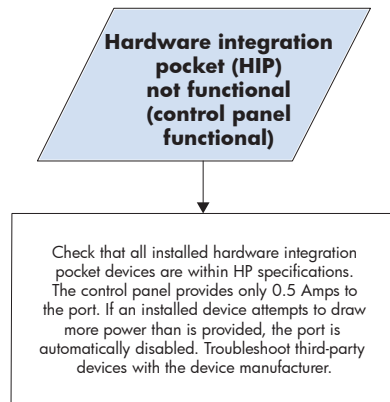
Scanning subsystem

Calibrate the scanner

Use this procedure to properly position the copied image on the page.

TIP: This adjustment might be required after the scanner or document feeder are replaced.

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.

2. Touch the Calibration/Cleaning button.

3. Touch the Calibrate Scanner button, and then follow the instructions provided on the screen.

Tools for troubleshooting

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

Individual component diagnostics

LED status

Understand lights on the formatter

The LEDS on the formatter indicate basic product functionality and may be used for troubleshooting.
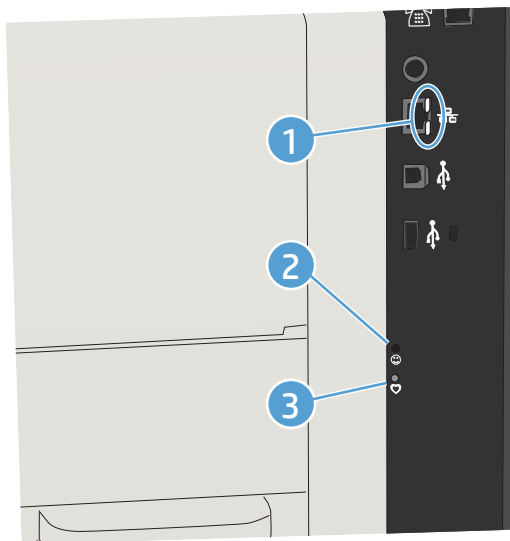
1	HP Jetdirect LEDs
2	Connectivity LED
3	Heartbeat LED

Heartbeat LED

The heartbeat LED provides information about product operation. If a product error occurs, the formatter displays a message on the control-panel display. However, error situations can occur causing the formatter to control panel communication to be interrupted.

NOTE: HP recommends fully troubleshooting the formatter and control panel before replacing either assembly. Use the heartbeat LED to troubleshoot formatter and control panel errors to avoid unnecessarily replacing these assemblies.

Heartbeat LED

The heartbeat LED operates according to the product state.

Table 2-8 Heartbeat LED, status

LED color	Description

Green	• Solid—During part of boot up initialization and Pre-boot menu
	
	• Slow blinking—During normal operation/sleep mode
	
	   ◦ Formatter is operating normally
	
	   ◦ Firmware is operating normally
	
	   ◦ Control panel is connected

Yellow	• Fast blinking—Formatter cannot connect to the control panel
	
	   ◦ Check control panel connections
	
	   ◦ Verify control panel functionality

Red	• Solid—Formatter error or failure (initially red for one second during power on)
	
	   ◦ Serial peripheral interface (SPI) flash memory boot error
	
	   ◦ Power on self test (formatter) failed
	
	   ◦ Diagnostic (formatter) failed

Off	The power cable is disconnected, or the product power switch is in the off position.
	
	• Firmware or system freeze, re-boot the product, reload or upgrade the firmware
	
	   ◦ Check control panel for an error message
	
	   ◦ Control panel failure or the product power switch is in the off position
	
	NOTE: This condition is not usually caused by a formatter failure. Turn the power off, and then on again. If the error persists, perform a firmware upgrade.

Connectivity LED

If the connectivity LED is solid green, it indicates that the formatter assembly is correctly plugged in and powered up.

TIP: If the connectivity LED is illuminated, the formatter is fully seated and the power is on. The pins for the LED circuit in the formatter connector are recessed so that this LED will not illuminate unless the formatter is fully seated.

HP Jetdirect LEDs

The embedded HP Jetdirect print server has two LEDs. The yellow LED indicates network activity, and the green LED indicates the link status. A blinking yellow LED indicates network traffic. If the green LED is off, a link has failed.

For link failures, check all the network cable connections. In addition, you can try to manually configure the link settings on the embedded print server by using the product control-panel menus.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

   ● Network Settings

   ● Embedded Jetdirect Menu

   ● Link Speed

3. Select the appropriate link speed, and then touch the OK button.

Engine diagnostics

The product contains extensive internal engine diagnostics that help in troubleshooting print-quality, paper path, noise, assembly, and timing issues.

Engine-test button

To verify that the product engine is functioning, print an engine-test page.

Print the engine test pages

1. On the rear cover, locate the port for the engine test button (callout 1) located below the rear pocket cover.

   Figure 2-7 Locating the engine-test-page switch

2. Use a paper clip or very small screwdriver to press the engine test-page button.

   - The test page should have a series of horizontal lines.

   - The test page prints from the last tray that the product used to print, unless the product has been turned off and then turned on again since the most recent print job.

   - If the product has been turned off and then on again since the most recent print job, then the page will print from Tray 2.

   - The product continuously prints test pages as long as the test-page switch is depressed.

   - The product will not print a test page if it is in Sleep mode.

Print formatter test pages

If the engine test was successful with the formatter removed, reinstall the formatter, and then print a configuration page to test the functionality of the formatter.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

    -   Troubleshooting

    -   Print Quality Pages

    -   Fuser Test Page

3. Touch the Print button.

Paper path test

This diagnostic test generates one or more test pages that you can use to isolate the cause of jams.

To isolate a problem, specify which input tray to use, specify whether to use the duplex path, and then specify the number of copies to print. Multiple copies can be printed to help isolate intermittent problems. The following options become available after you start the diagnostic feature:

- Print Test Page: Run the paper-path test from the default settings: Tray 2, no duplex, and one copy. To specify other settings, scroll down the menu and select the setting, and then scroll back up and select Print Test Page to start the test.

- Source Tray: Select Tray 1, Tray 2, or the optional tray.

- Output Bin: Select All bins, Face down, or Face up.

- Test Duplex Path: Enable or disable two-sided printing.

- Number of Copies: Set the numbers of copies to be printed; the choices are 1,10, 50, 100, or 500.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

    - Troubleshooting

    - Diagnostic Tests

    - Paper Path Test

3. Select the paper-path test options for the test you want to run.

Paper path sensor tests

This test displays the status of each paper-path sensor and allows viewing of sensor status while printing internal pages.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

   - Troubleshooting

   - Diagnostic Tests

   - Paper Path Sensors

NOTE: Exiting the Paper Path Sensors menu and then reentering it will clear the test values from the previous test.

Table 2-9 Paper-path sensors

Sensor name	Sensor number	Replacement part number	Replacement part description	Paper-path sensor test name
Top of page sensor	SR9	RM2-7538-000CN (110V) RM2-7539-000CN (220V)	High-voltage power supply	SR9 Top sensor
Fuser output sensor	SR12	CF235-67921 (110V) CF235-67922 (220V)	Fuser assembly	SR12 Fuser output sensor
Loop sensor	SR 6	RM2-7538-000CN (110V) RM2-7539-000CN (220V)	High-voltage power supply	SR6 Fuser loop 1 sensor
Duplexer refeed sensor	SR2	CF235-67913	Duplexer	SR2 Duplexer Refeed
Duplexer switchback sensor	SR1	CF235-67913	Duplexer	SR1 Duplexer switchback sensor
Output sensor	SR3	CF066-67909	Paper delivery assembly	SR3 Output sensor
Tray 4 paper feed sensor (if optional Tray 4 is installed)	SR1	RM1-9415-000CN	Tray 4 paper pick-up assembly	SR1 Tray 4 feed

Manual sensor tests

Performs tests to determine whether the paper-path sensors are operating correctly.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

   ● Troubleshooting

   ● Diagnostic Tests

   ● Manual Sensor Test

Table 2-10 Manual sensor tests

Sensor or switch name	Sensor number	Replacement part number	Replacement part description	Paper-path sensor test name	Testing of sensor
Cartridge-door switch	SW3	WC2-5637-000CN	Toner cartridge door switch	SW3 Cartridge Door	Open the cartridge door.
Left door switch	SW1	RM1-3474-000CN	Left door open switch	SW1 Left Door	Open the left door.
Right door sensor	SR8	WG8-5935-000CN	Right door open sensor	SR8 Right door	Open the right door.
Cartridge install sensor	SR1	WG8-5935-000CN	Toner cartridge installed sensor	SR1 Cartridge install sensor	Open the cartridge door, and then remove the toner cartridge.
TOP sensor	SR9	RM2-7538-000CN (110V) RM2-7539-000CN (220V)	High voltage power supply	Sr9 Top Sensor	Open the cartridge door, remove the toner cartridge, raise the registration shutter, and then use a small flat-blade screwdriver to activate the sensor.
Loop sensor	SR6	RM2-7538-000CN (110V) RM2-7539-000CN (220V)	High voltage power supply	SR6 Fuser loop 1 sensor	Open the cartridge door, remove the toner cartridge, and then press the sensor lever.
Fuser output sensor	SR12	CF235-67921 (110V) CF235-67922 (220)	Fuser	SR12 Fuser output sensor	Open the left door, pull down the fuser shutter, and then use a screwdriver to activate the sensor.
Duplex refeed sensor	SR2	CF235-67913	Duplexer	SR2 Duplexer refeed	Remove the duplexer, insert a sheet of paper so that it covers the refeed sensor, and then reinstall the duplexer.

Table 2-10 Manual sensor tests (continued)

Sensor or switch name	Sensor number	Replacement part number	Replacement part description	Paper-path sensor test name	Testing of sensor
Duplex switchback sensor	SR1	CF235-67913	Duplexer	SR1 Duplexer switchback sensor	Remove the duplexer, insert a sheet of paper so that it covers the switchback sensor, and then reinstall the duplexer.
Tray 4 feed sensor (Optional 500-sheet feeder only)	SR1	RM1-9415-000CN	Tray 4 paper pick-up assembly	SR1 Tray 4 feed	Open the lower right door, and use a small flat-blade screwdriver to activate the sensor.
Output sensor	SR3	CF066-67909	Paper delivery assembly	SR3 Output sensor	Open the left door and press the sensor lever.

Cartridge door switch (SW3)

1. Open the cartridge door to activate the sensor.

    Figure 2-8 Test the cartridge door switch
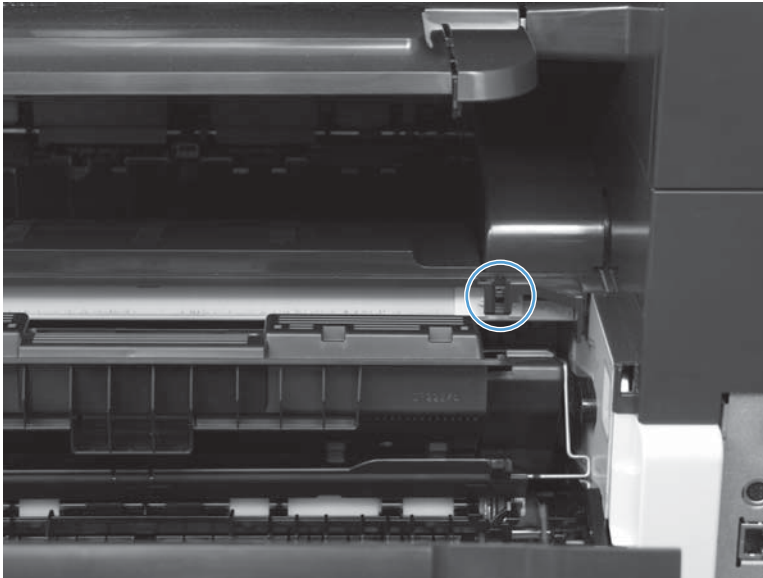
2. Check the control-panel display for sensor response.

3. If there is no response, make sure that the sensor-actuator tab on the door is not damaged or missing.

    If necessary, replace the cartridge-door switch.

Left door switch (SW1)

1. Open the left door, gently release the door arm and lower the door until it is fully open, and then use a small flat-blade screwdriver to activate the switch.

   Figure 2-9 Test the left door switch
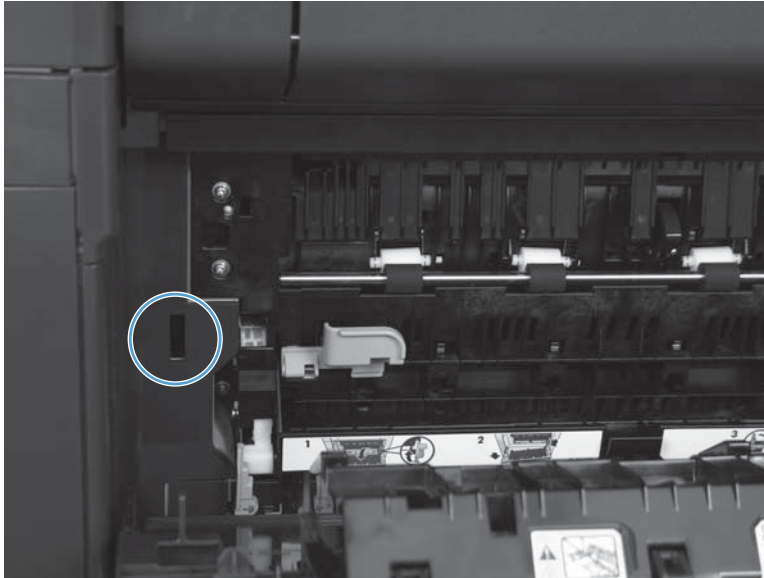
2. Check the control-panel display for sensor response.

3. If there is no response, make sure that the sensor-actuator tab on the door is not damaged or missing.

   If necessary, replace the switch.

Right door sensor (SR8)

1. Open the right door, and then press the sensor.
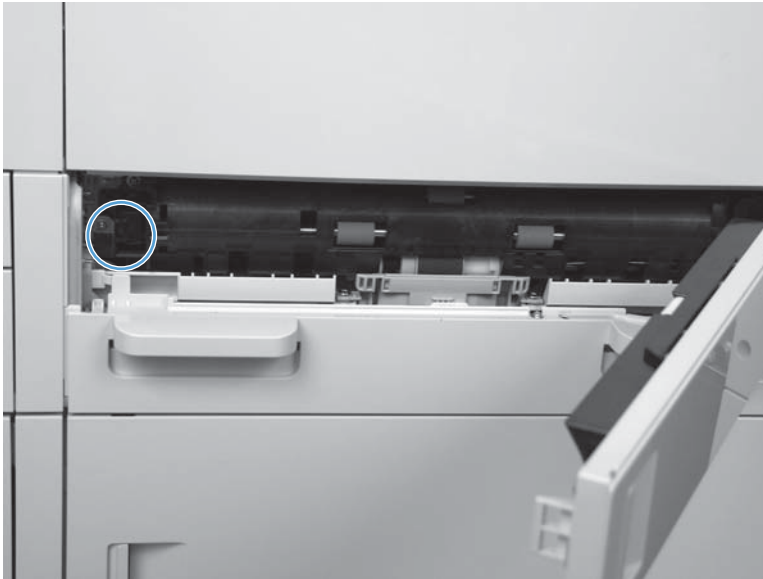
2. Check the control-panel display for sensor response.

3. If there is no response, make sure that the sensor-actuator tab on the door is not damaged or missing.

   If necessary, replace the sensor.

Cartridge install sensor (SR1)

1. Open the cartridge door, remove the print cartridge, and then activate the sensor on the left side of the cartridge cavity.
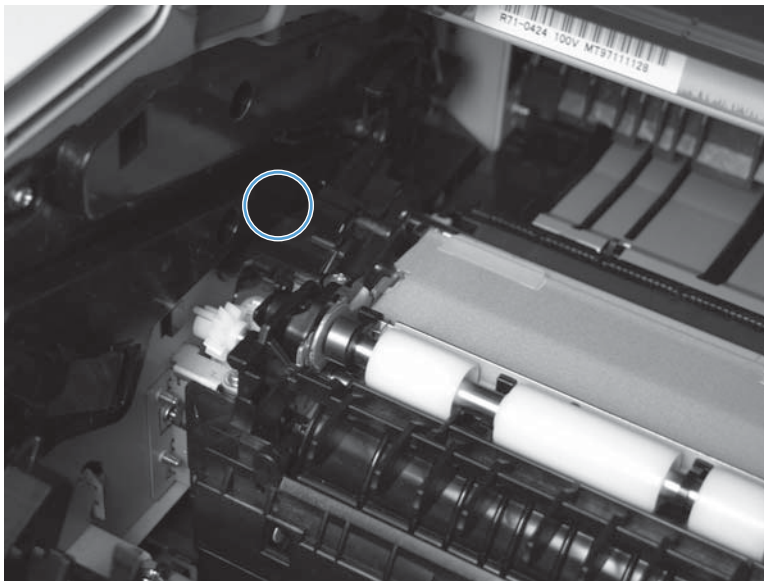
2. Check the control-panel display for sensor response.

3. If necessary, replace the sensor.

TOP (top-of-page) sensor (SR9)

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

2. Raise the registration shutter.

3. Use a small screwdriver to activate the top sensor.

   Figure 2-10 Test the top sensor
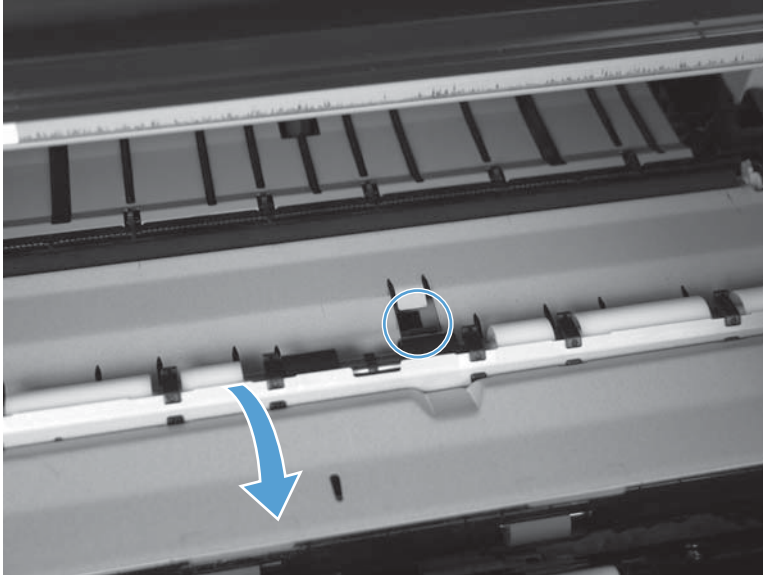
4. Check the control-panel display for sensor response.

5. If there is no response, replace the high-voltage power supply (HVPS).

Fuser loop sensor (SR6)

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

2. Press the sensor lever to activate the sensor.

Figure 2-11 Fuser loop sensor

3. Check the control-panel display for a sensor response.

4. If there is no response, replace the high-voltage power supply (HVPS).

Fuser output sensor (SR12)

1. Open the left door.

2. Pull down the fuser shutter, and then use a small flat-blade screwdriver to pull the sensor lever toward you.

   Figure 2-12 Fuser output sensor
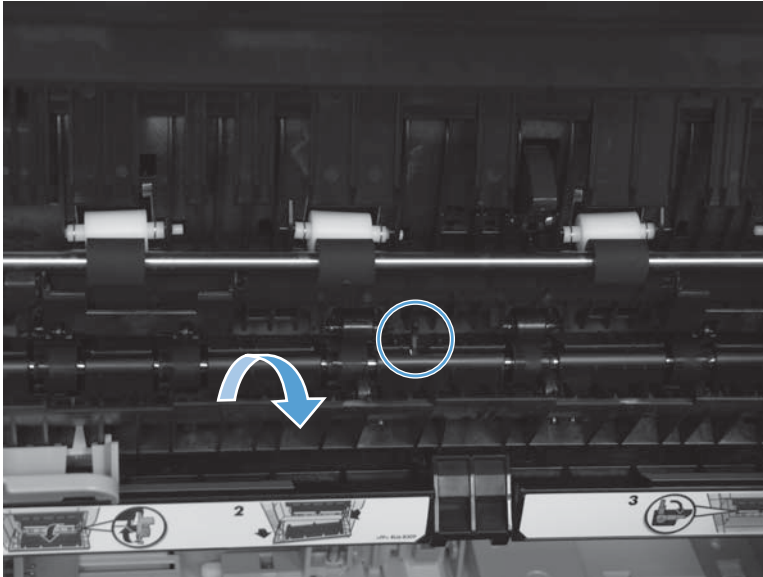
3. Check the control-panel display for a sensor response.

4. If there is no response, replace the fuser.

Duplex switchback sensor (SR1)

1. Remove the duplexer from the product.

2. Insert a sheet of paper in the duplexer until the sheet covers the sensor.

Figure 2-13 Duplex switchback sensor
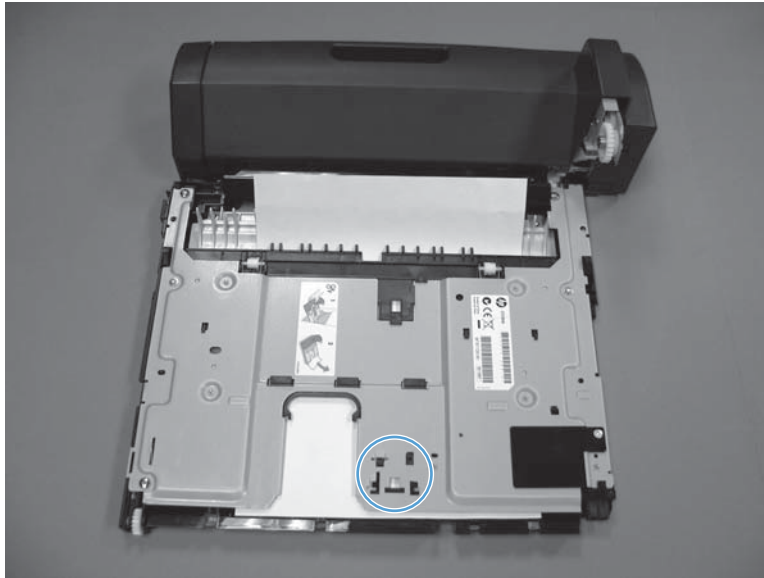
3. Reinstall the duplexer, and then check the control-panel display for sensor response.

4. If there is no response, replace the duplexer.

Duplexer refeed sensor (SR2)

1. Remove the duplexer from the product.

2. Insert a sheet of paper in the duplexer until the sheet covers the sensor.

   Figure 2-14 Duplexer refeed sensor
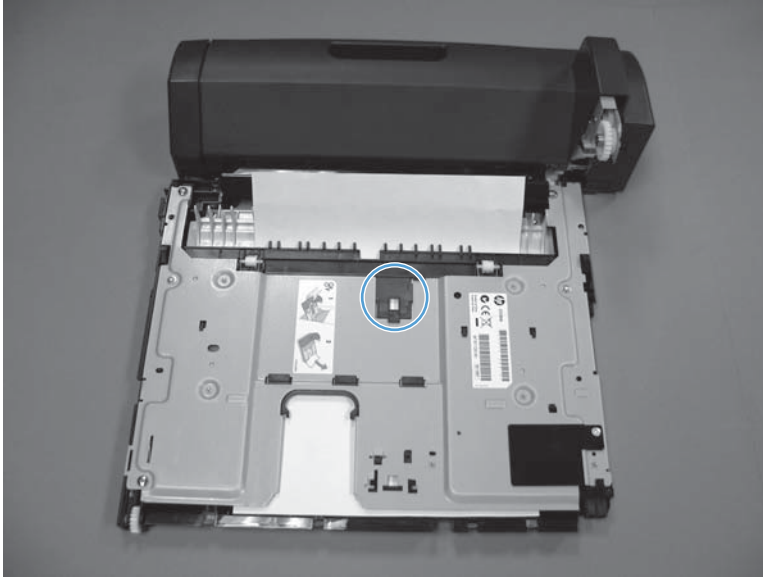
3. Reinstall the duplexer, and then check the control-panel display for sensor response.

4. If there is no response, replace the duplexer.

Tray 4 feed sensor (SR1)

1. Open the lower right door.

2. Use a small flat-blade screwdriver to activate the sensor.

Figure 2-15 Tray 4 feed sensor
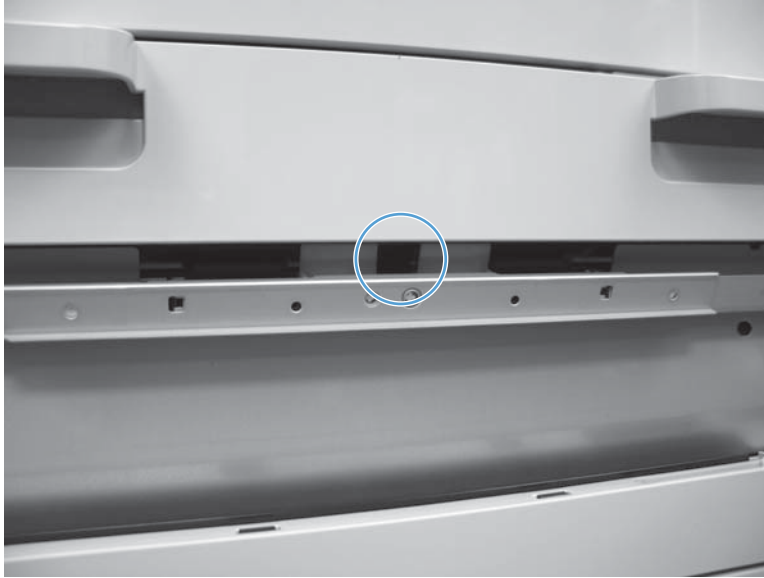
3. Check the control-panel display for sensor response.

4. If there is no response, replace the paper pickup assembly.

Output sensor (SR3)

1. Open the left door, and then press the output sensor lever.

   Figure 2-16 Output sensor
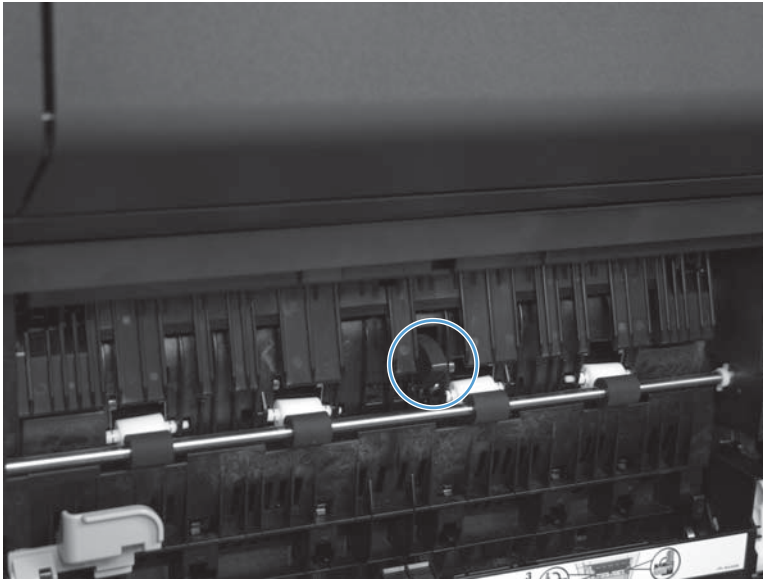
2. Check the control-panel display for sensor response.

3. If there is no response, replace the paper delivery assembly.

Tray/bin manual sensor tests

Use this test to test paper-path sensors and the paper-size switches manually. The following illustrations and table show the locations of these sensors.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

    ●   Troubleshooting

    ●   Diagnostic Tests

    ●   Tray/Bin Manual Sensor Test

Table 2-11 Tray/bin manual sensor test

Sensor or switch name	Sensor number	Replacement part number	Replacement part description	Paper-path sensor test name	Testing of sensor
Multipurpose tray paper-presence sensor	SR1	RM1-8660-000CN	Cartridge door	SR1 Tray 1 paper	Push the sensor lever and hold it there for 3 seconds.
Tray 2 paper-presence sensor	SR7	RM2-0182-000CN	Tray 2 paper pick-up assembly	SR7 Tray 2 paper	Remove Tray 2 and Tray 3, and then push the sensor lever on the right side of the tray cavity.
Tray 2 paper surface sensor	SR10	RM1-2969-000CN	Lifter drive assembly	SR10 Tray 2 paper surface	Remove Tray 2 and Tray 3, and then push the sensor at the back of the tray cavity.
Tray 2 paper size switches	SW 4, SW6	RM1-2969-000CN	Lifter drive assembly	SW4, 6 Tray 2 Paper Size	Remove Tray 2 and Tray 3, and then push the switches at the back of the tray cavity.
Tray 3 paper-presence sensor	SR5	RM2-0183-000CN	Tray 3 paper pick-up assembly	SR5 Tray 3 paper	Remove Tray 2 and Tray 3, and then push the sensor lever on the right side of the tray cavity.
Tray 3 paper surface sensor	SR11	RM1-2969-000CN	Lifter drive assembly	SR11 Tray 3 paper surface	Remove Tray 2 and Tray 3, and then push the sensor at the back of the tray cavity.
Tray 3 paper size switches	SW5, SW7	RM1-2969-000CN	Lifter drive assembly	SW5, 7 Tray 3 Paper Size	Remove Tray 2 and Tray 3, and then push the switches at the back of the tray cavity.

Table 2-11 Tray/bin manual sensor test (continued)

Sensor or switch name	Sensor number	Replacement part number	Replacement part description	Paper-path sensor test name	Testing of sensor
Tray 4 paper-presence sensor	SR3	RM1-9415-000CN	Tray 4 paper pick-up assembly	SR3 Tray 4 paper	Remove Tray 4, and then push the sensor lever.
Tray 4 paper surface sensor	SR2	RM1-3819-000CN	Tray 4 lifter drive assembly	SR2 Tray 4 paper surface	Remove Tray 4, and then push the sensor at the back of the tray cavity.
Tray 4 paper size switches	SW2, SW3	RM1-3819-000CN	Tray 4 lifter drive assembly	SW2, 3 Tray 4 Paper Size	Remove Tray 4, and then push the switches at the back of the tray cavity.
Tray 4 feed sensor	SR1	RM1-9415-000CN	Tray 4 paper pick-up assembly	SR1 Tray 4 feed	Open the lower right door, and then activate the feed sensor with a small flat-blade screwdriver.
Lower right door switch	SW1	WC2-5512-000CN	Lower right door switch	SW1 Lower right door 1 sensor	Open the lower right door, and then activate the door switch with a small flat-blade screwdriver.
Output bin full sensor	SR4	CF066-67909	Paper delivery assembly	SR4 Output Bin Full	Lift the output bin sensor levers.

Base product trays

Tray 1 paper sensor (SR1)

1. Open Tray 1, push the sensor lever down, and hold it for 3 seconds to activate the sensor.

   Figure 2-17 Tray 1 paper sensor

2. Check the control-panel display for sensor response.

3. If there is no response, replace the cartridge door assembly.

Tray 2 Paper sensor (SR7)

1. Remove Tray 2 and Tray 3, and then push the sensor levers on the right side of the cavity to activate the sensor.

   Figure 2-18 Tray 2 paper sensor
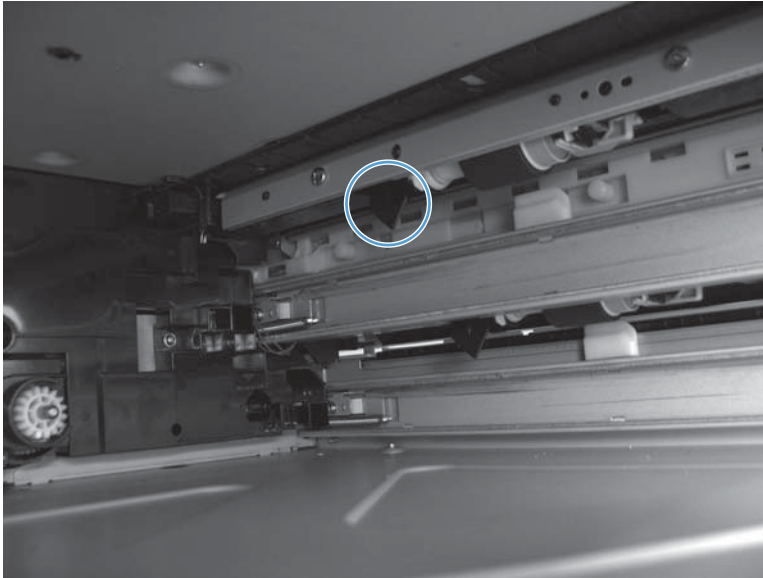
2. Check the control-panel display for sensor response.

3. If there is no response, replace the upper cassette pickup assembly.

Tray 2 paper surface sensor (SR10)

1. Remove Tray 2 and Tray 3, and then push the sensor at the back of the tray cavity.

   Figure 2-19 Tray 2 paper surface sensor

2. Check the control-panel display for sensor response.

3. If there is no response, replace the lifter drive assembly.

Tray 2 paper size switches (SW4, SW6)

1. Remove Tray 2 and Tray 3, and then push the switches at the back of the tray cavity.

    Figure 2-20 Tray 2 paper size switches
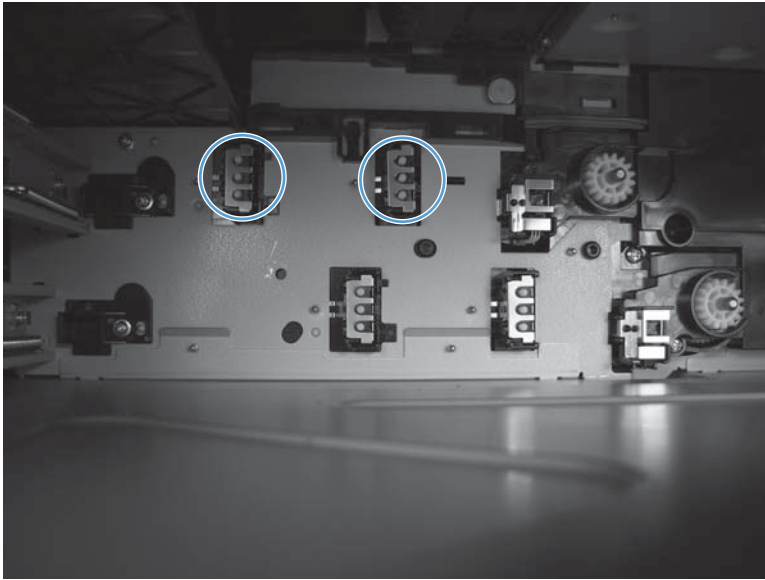
2. Check the control-panel display for sensor response.

3. If there is no response, replace the lifter drive assembly.

Tray 3 paper sensor (SR5)

1. Remove Tray 2 and Tray 3, and then push the sensor lever on the right side of the cavity to activate the sensor.

   Figure 2-21 Tray 3 paper sensor
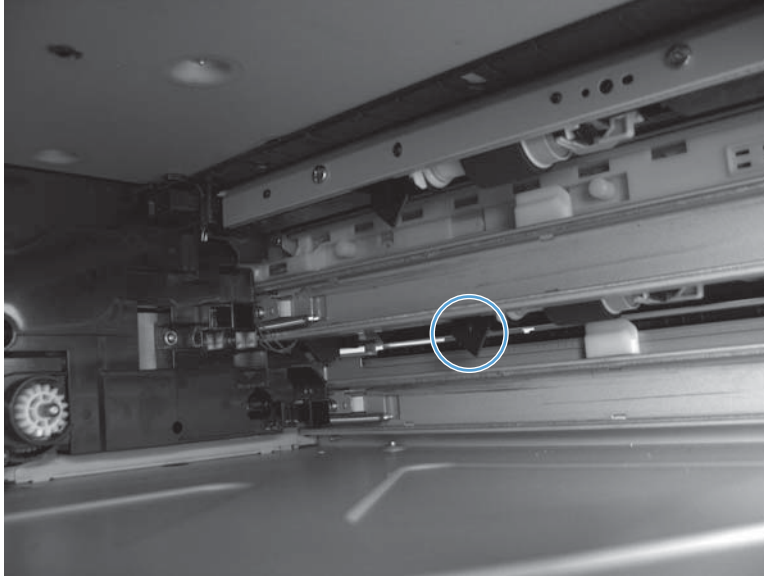
2. Check the control-panel display for sensor response.

3. If there is no response, replace the lower cassette pickup assembly.

Tray 3 paper surface sensor (SR11)

1. Remove Tray 2 and Tray 3, and then push the sensor at the back of the tray cavity.

Figure 2-22 Tray 3 paper surface sensor
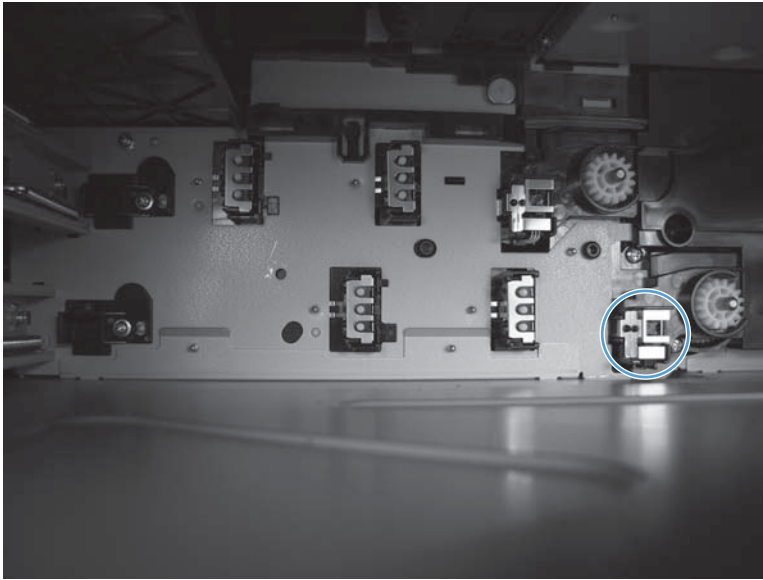
2. Check the control-panel display for sensor response.

3. If there is no response, replace the lifter drive assembly.

Tray 3 paper size switches (SW5, SW7)

1. Remove Tray 2 and Tray 3, and then push the switches at the back of the tray cavity.

Figure 2-23 Tray 3 paper size switches
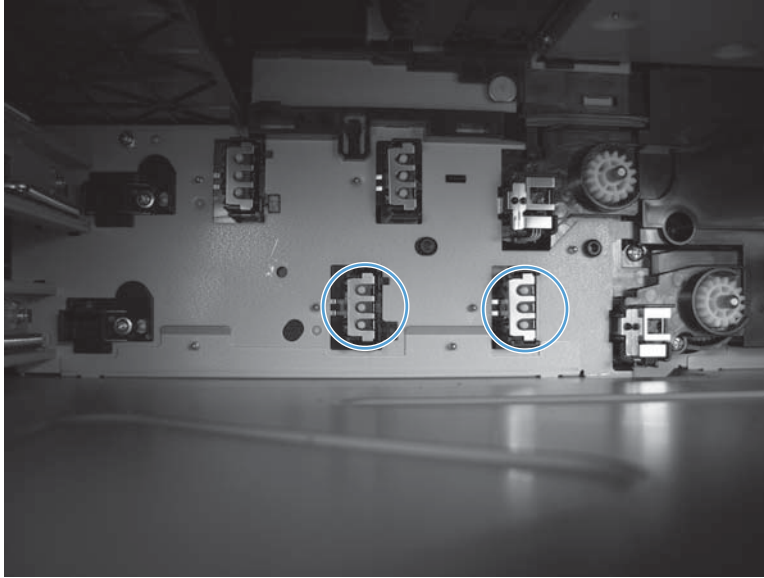
2. Check the control-panel display for sensor response.

3. If there is no response, replace the lifter drive assembly.

Output bin full sensor (SR4)

1. Raise and then lower the output-bin levers to activate the sensor.

Figure 2-24 Output bin full sensor

2. Check the control-panel display for sensor response.

3. If there is no response, replace the paper delivery assembly.

Optional 500-sheet paper tray (Tray 4)

Tray 4 paper sensor (SR3)

1. Remove the Tray 4 cassette, and then push the sensor lever on the right side of the cavity to activate the sensor.

    Figure 2-25 Tray 4 paper sensor
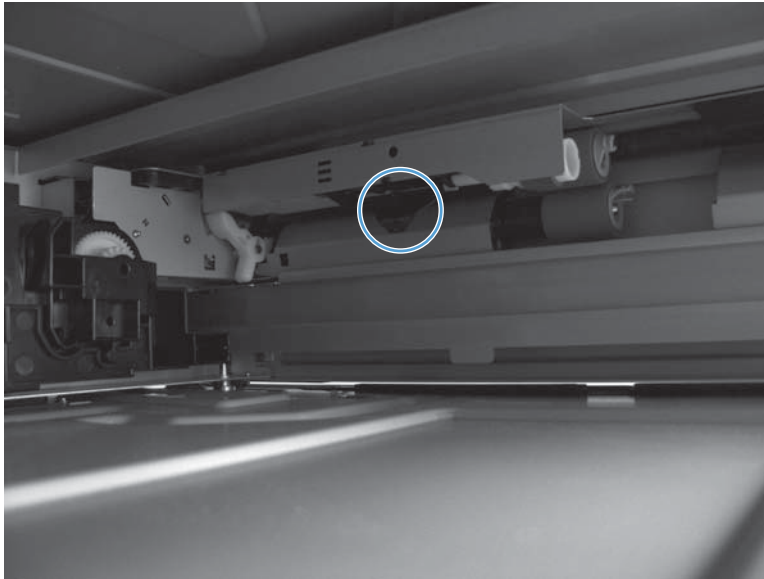
2. Check the control-panel display for sensor response.

3. If there is no response, replace the paper pickup assembly.

Tray 4 paper surface (SR2)

1. Remove Tray 4, and then press the sensor lever in the back right corner of the tray cavity to activate the sensor.

   Figure 2-26 Tray 4 paper surface sensor
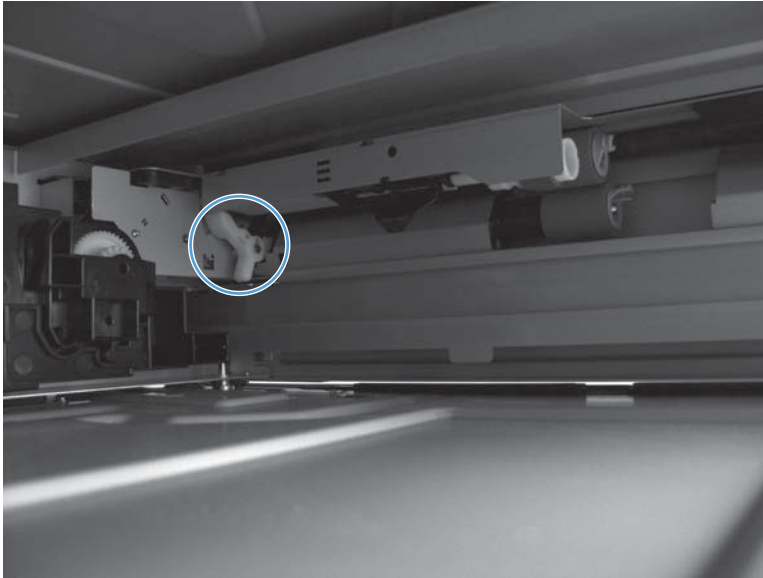
2. Check the control-panel display for sensor response.

3. If there is no response, replace the lifter drive assembly.

Tray 4 paper size switches (SW2, SW3)

1. Remove Tray 4, and then push the switches at the back of the tray cavity.

    Figure 2-27 Tray 4 paper size switches
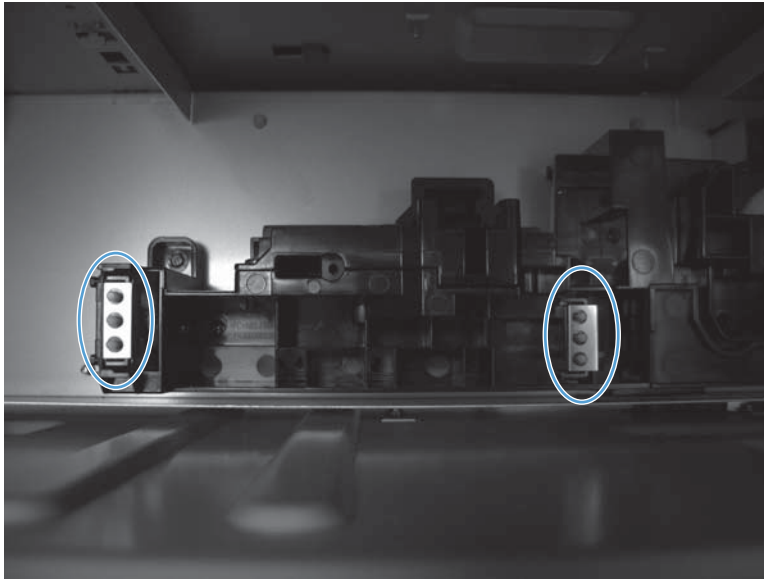
2. Check the control-panel display for sensor response.

3. If there is no response, replace the lifter drive assembly.

Tray 4 Feed sensor (SR1)

1. Open the lower right door.

2. Use a small flat-blade screwdriver to activate the sensor.

Figure 2-28 Tray 4 feed sensor
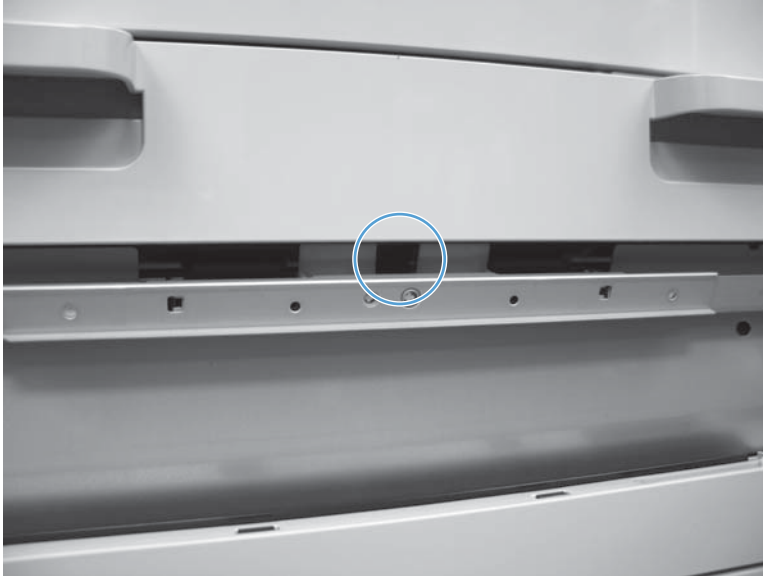
3. Check the control-panel display for sensor response.

4. If there is no response, replace the Tray 4 paper pick-up assembly.

Lower right door sensor (SW1)

1. Open the lower right door, and then use a small screwdriver to activate the sensor.

Figure 2-29 Lower right door sensor

2. Check the control-panel display for sensor response.

3. If there is no response, replace the Tray 4 right door sensor.

1x500 and 3x500 paper deck trays

Tray 4 paper sensor (SR3)

See .

Tray 4 paper surface sensor (SR2)

See .

Tray 4 paper size switches (SW2, SW3)

See .

Tray 4 feed sensor (SR1)

See .

Tray 4 door opening/closing door switch (SW1)

📝 **NOTE:** Tray 4, Tray 5, and Tray 6 use the same door switch (SW1).

1. Open and then close the paper-feeder door to ensure that the tab on the door (callout 1) activates the switch (callout 2).

Figure 2-30 Test the Tray 4 door switch
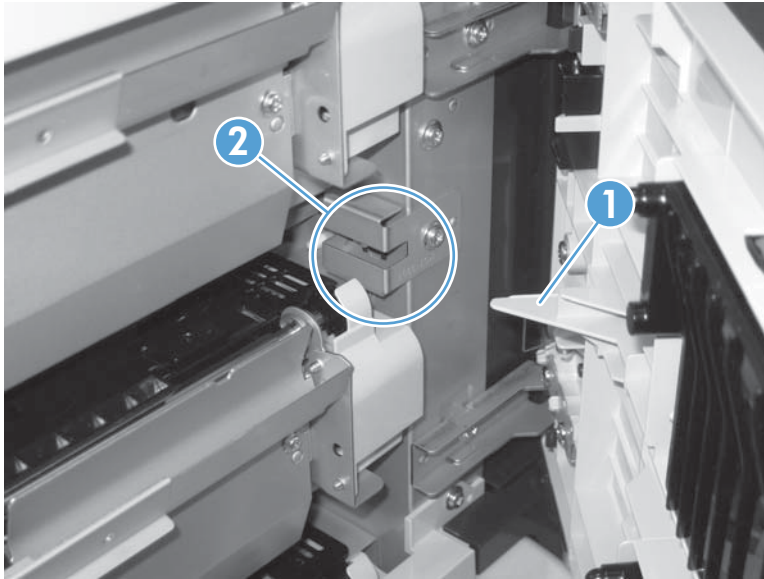
2. Check the control-panel display for sensor response.
3. If no response, replace the button switch.

Tray 5 paper sensor (SR83)

See .

Tray 5 paper surface sensor (SR82)

See .

Tray 5 paper size switches (SW82, SW83)

See .

Tray 5 feed sensor (SR81)

See .

Tray 5 door opening/closing switch (SW1)

See .

Tray 6 paper sensor (SR93)

See .

Tray 6 paper surface sensor (SR92)

See .

Tray 6 paper size switches (SW92, SW93)

See .

Tray 6 feed sensor (SR91)

See .

Tray 6 door opening/closing switch (SW1)

See .

HCI trays

> **NOTE:** For the purposes of this section, the tray numbers reflect a base unit with the HCI installed. If your product has an optional 500-sheet paper feeder (Tray 4) installed, the tray numbers in this section will differ. In this section, Tray 4 refers to the right tray, and Tray 5 refers to the left tray.

Tray 4 paper sensor (PS3103)

1. Remove Tray 4 from the HCI.

2. In the tray cavity, press and hold the tray presence switch (callout 1), and then lift the paper sensor lever (callout 2).

   Figure 2-31 Tray 4 paper sensor
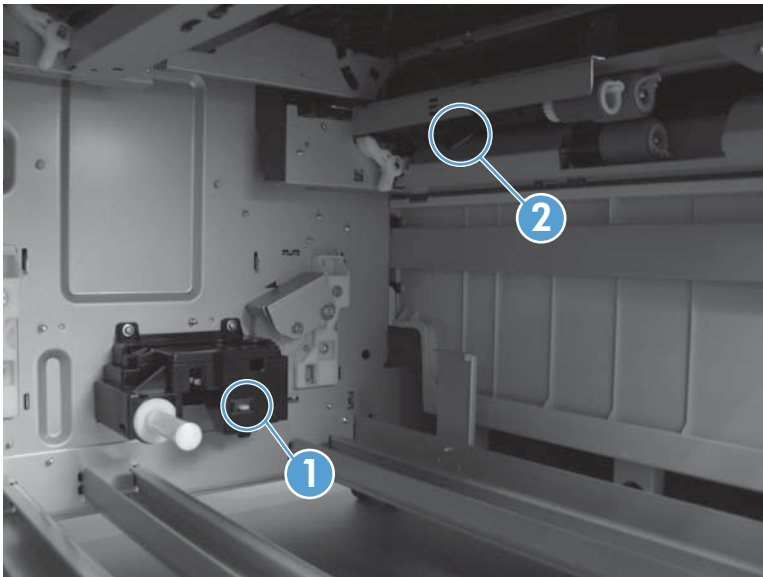
3. Check the control-panel display for sensor response.

4. If there is no response, replace the paper pick-up assembly (right).

Tray 4 paper surface sensor (PS3101 and PS3102)

1. Remove Tray 4 from the HCI.

2. In the tray cavity, in the upper right-hand corner, toggle the sensor lever.

   Figure 2-32 Tray 4 paper surface sensor
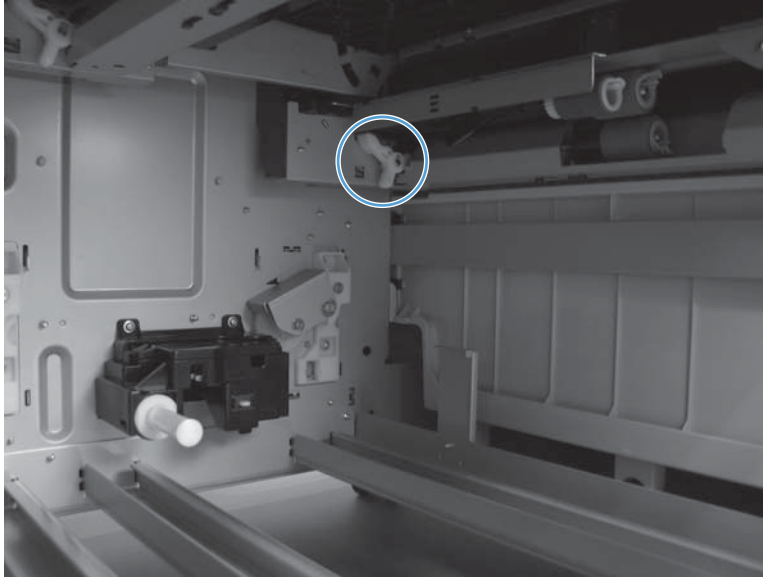
3. Check the control-panel display for sensor response.

4. If there is no response, replace the paper pick-up assembly (right).

Tray 4 paper size sensor (PS3303)

1. Remove Tray 4 from the HCI.

2. In the tray cavity, press and hold the tray presence switch (callout 1), and then lift the paper size sensor lever (callout 2).

   Figure 2-33 Tray 4 paper size sensor
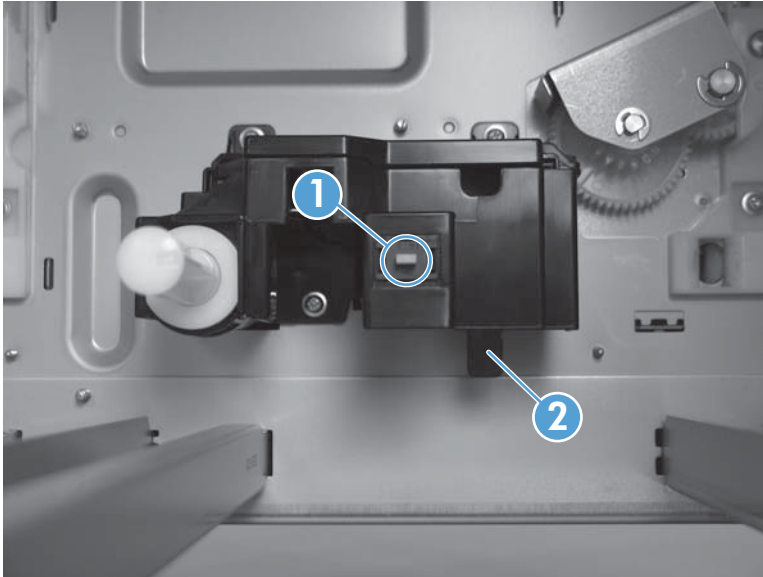
3. Check the control-panel display for sensor response.

4. If there is no response, replace the auto-close assembly.

Tray 4 paper feed sensor (PS3302)

1. Remove Tray 4 from the HCI.

2. Place a business card between the feed roller and the separation roller as far as it will go to activate the feed sensor.

Figure 2-34 Tray 4 paper feed sensor
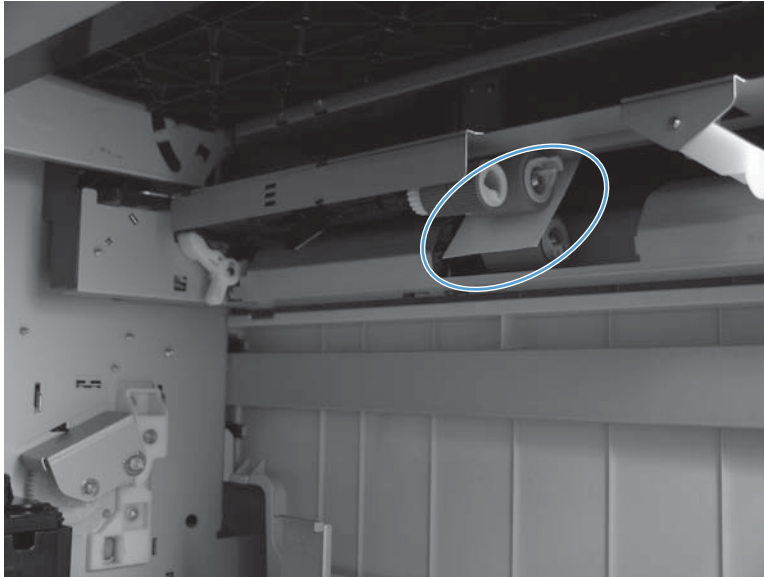
3. Check the control-panel display for sensor response.

4. If there is no response, replace the paper pick-up assembly (right).

Tray 4 door open sensor (SW3301)

1. Open the HCI right door.

2. Use a small flat-blade screwdriver to activate the door sensor.

   Figure 2-35 Tray 4 door open sensor
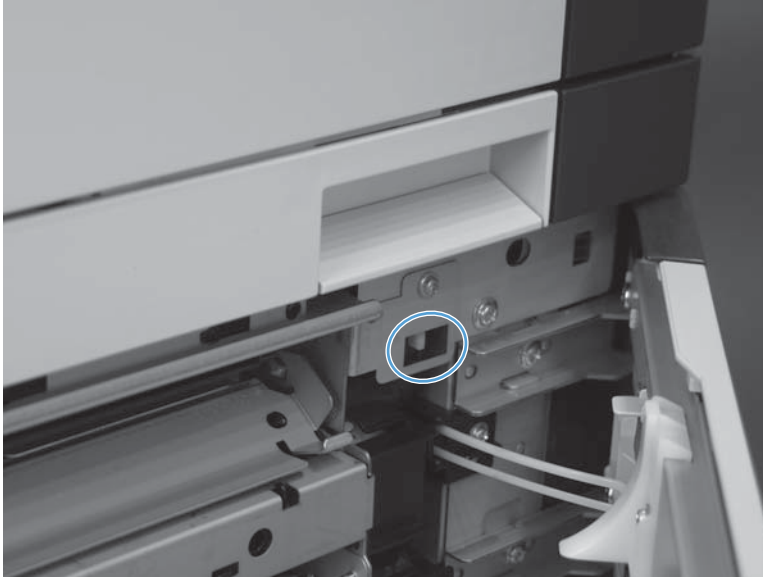
3. Check the control-panel display for sensor response.

4. If there is no response, replace the crossing paper feed assembly.

Tray 5 paper sensor (PS3203)

1. Remove Tray 5 from the HCI.

2. In the tray cavity, press and hold the tray presence switch (callout 1), and then lift the paper sensor lever (callout 2).

Figure 2-36 Tray 5 paper sensor
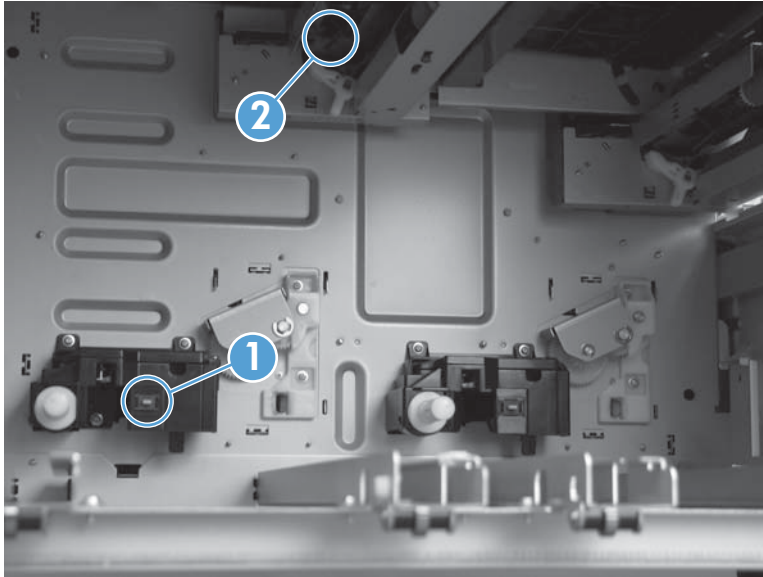
3. Check the control-panel display for sensor response.

4. If there is no response, replace the paper pick-up assembly (left).

Tray paper surface sensor (PS3201 and PS3202)

1. Remove Tray 5 from the HCI.

2. At the back of the tray cavity, toggle the sensor lever.

   Figure 2-37 Tray paper surface sensor
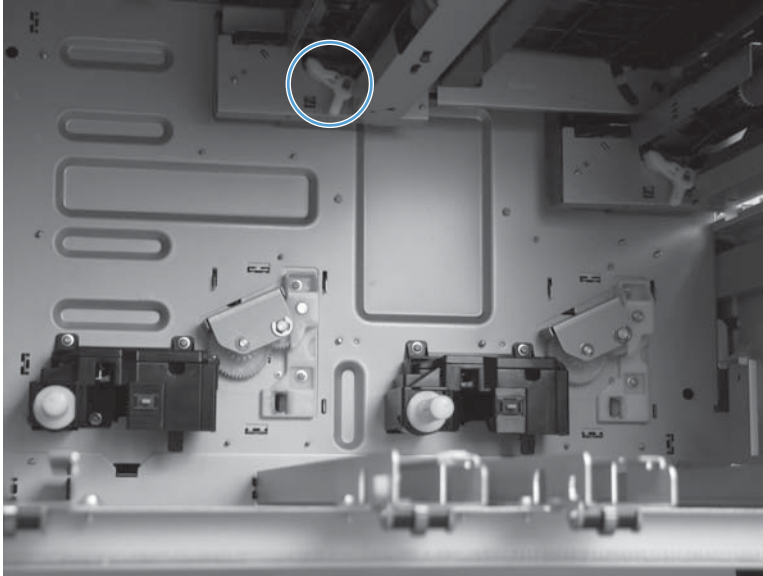
3. Check the control-panel display for sensor response.

4. If there is no response, replace the paper pick-up assembly (left).

Tray 5 paper size sensor (PS3304)

1. Remove Tray 5 from the HCI.

2. In the tray cavity, press and hold the tray presence switch (callout 1), and then lift the paper size sensor lever (callout 2).

Figure 2-38 Tray 5 paper size sensor
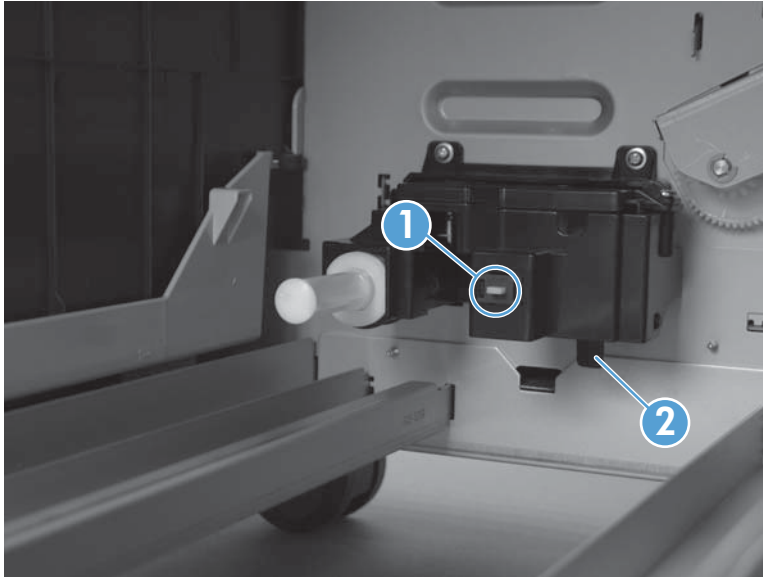
3. Check the control-panel display for sensor response.

4. If there is no response, replace the auto-close assembly.

Tray 5 feed sensor (PS3305)

1. Remove Tray 5 from the HCI.

2. Place a business card between the feed roller and the separation roller as far as it will go to activate the feed sensor.

Figure 2-39 Tray 5 feed sensor
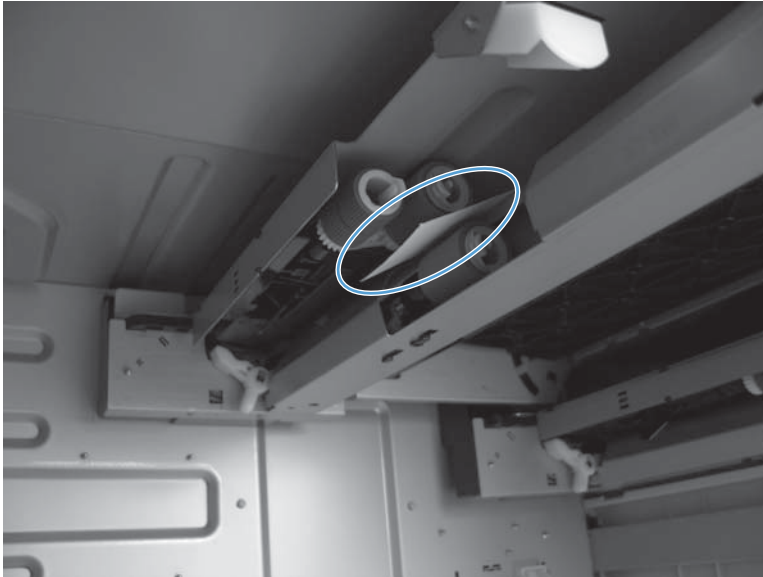
3. Check the control-panel display for sensor response.

4. If there is no response, replace the paper pick-up assembly (left).

HCI exit sensor (PS3301)

1. Open the HCI right door.

2. Use a small flat-blade screwdriver to lift the sensor lever (callout 2).

   Figure 2-40 HCI exit sensor
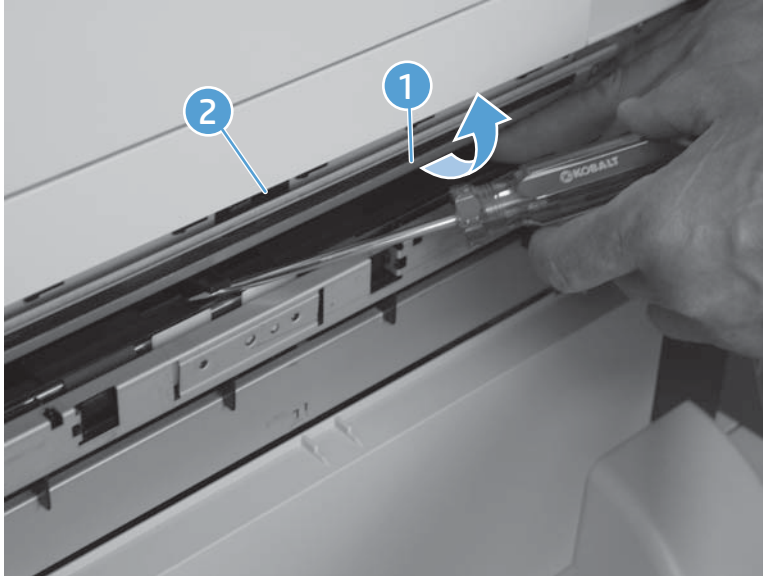
3. Check the control-panel display for sensor response.

4. If there is no response, replace the crossing paper feed assembly.

Scanner sensor tests

Use these diagnostic tests to manually test the document feeder and scanner sensors.

This section lists the sensors available in the Scanner Tests menu.

The Scanner Tests screen shows the sensor name, sensor state (active or inactive), and the number of times the sensor has been toggled (activated).

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

   ● Troubleshooting

   ● Diagnostic Tests

   ● Scanner Tests

   ● Sensors

3. Touch the sensor name on the Scanner Tests screen to display a sensor location graphic on the control-panel display.

4. Activate the desired sensor, and then check the control-panel display to verify the sensor state (active or inactive).

 ● The State virtual LED next to the sensor number and sensor name illuminates green when the sensor is active.

 ● The Toggle virtual LED next to the sensor number and sensor name illuminates green after the sensor is activated and increments by one each time the sensor is interrupted (activated or deactivated).

   For example, opening the flatbed cover increments the Flatbed cover Toggle item count two times—once when the door is opened, and once when the door is closed.

5. Touch the Reset Sensors button to reset the Toggle count item.

   -or-

   Touch the Cancel button to exit the Scanner Tests screen, and then touch the Cancel button again to return to the Diagnostic Tests menu.

Scanner tests sensors

 ● ADF paper present
 ● ADF (length) short
 ● ADF (length) long
 ● ADF slider 1
 ● ADF slider 2
 ● ADF slider 3
 ● ADF jam cover
 ● ADF paper path deskew
 ● ADF paper path pick success
 ● Paper path sensor 1 (unreachable)
 ● Flatbed Y (length) short
 ● Flatbed Y (length) long
 ● Flatbed cover

Print/stop test

Use this diagnostic test to isolate the cause of problems such as image-formation defects and jams within the engine. During this test you can stop the paper anywhere along the product paper path. You can program the test to stop printing internal pages or an external print job when the paper reaches a certain position. You can also program the test to stop from 0 to 60,000 ms. If the timer is set to a value that is greater than the job-print time, you can recover the product in one of two ways.

1. From the Home screen, scroll to and touch the Administration button.

2. Touch the Troubleshooting button.

3. Touch the Diagnostic Tests button.

4. Scroll to and touch the Print/Stop Test button.

5. Enter a range, and then touch the OK button.

- After the print job is completed, press the OK button to return to the Troubleshooting menu before the timer times out.

- After the timer times out, touch the Stop button. Activate the door switch to restart the engine and return it to a normal state.

NOTE: Do not try to perform a print/stop test while the product is calibrating because you might be required to restart the product. If a jam message displays on the control panel during testing, activate the door switch.

Component tests

Control-panel tests

Open the following menus:

- Administration

- Troubleshooting

- Diagnostic Tests

Available control-panel tests

- LEDs: test the LEDs on the control panel.

- Display: sequence through display tests.

- Buttons: test the key pad and other buttons.

- Touchscreen: test the control-panel touchscreen.

For more control-panel diagnostics, see control-panel checks in the tools for troubleshooting section of the Troubleshooting Manual.

Half self-test

Perform a half self-test to determine which image-formation process might be malfunctioning.

NOTE: It might be easier to perform the print/stop test to stop the product during the printing process. See Print/stop test on page 183.

1. Print a configuration page from the control panel.

2. Open the cartridge door after the paper advances half-way through the product, which is about 3 to 5 seconds after the main motor begins to rotate. The leading edge of the paper should have advanced past the toner cartridge.

3. Remove the toner cartridge.

4. Open the toner cartridge drum shield to view the drum surface.

   If a dark and distinct toner image is present on the drum surface, assume that the cleaning, conditioning, writing, and developing functions of the electrophotographic process are functioning correctly. Troubleshoot the failure as a transfer or fusing problem. If no image is present on the drum, perform the drum rotation test check.

Drum rotation test check

> **NOTE:** This test is especially important if refilled toner cartridges are in use.

The photosensitive drum, which is located in the toner cartridge, must rotate in order for the print process to work. The photosensitive drum receives its drive from the main gear assembly. Use this procedure to determine whether the drum is rotating.

1. Open the cartridge door.

2. Remove the toner cartridge.

3. Mark the cartridge drive gear with a felt-tipped marker. Note the position of the mark.

4. Install the toner cartridge, and then close the cartridge door. The start-up sequence should rotate the drum enough to move the mark on the gear.

5. Open the product and inspect the mark on the cartridge drive gear.

    Verify that the mark moved. If there was no movement, inspect the main gear assembly to make sure that it connects with the toner-cartridge gears. If the drive gears function, but the drum does not move, replace the toner cartridge.

Component test (special-mode test)

This test activates individual parts independently to isolate problems.

Each component test can be performed once or repeatedly. If you turn on the Repeat option from the drop-down menu, the test cycles the component on and off. This process continues for two minutes, and then the test terminates.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

    ● Troubleshooting

    ● Diagnostic Tests

    ● Component Test

3. Select the component test options for the test you want to run.

Table 2-12 Component tests

Component test	Item	Control-panel display message	Description
Main motor test	M8001	Drum Motor	Activates the main motor for 10 seconds.
Fuser motor test	M8002	Fuser Motor	Activates the fuser motor for 10 seconds.
Tray 1 (multipurpose tray) pickup solenoid test	SL1	Tray 1 Pickup Solenoid	Activates the Tray 1 pickup solenoid for 10 seconds.
Tray 2 pickup solenoid test	SL2	Tray 2 Pickup Solenoid	Activates the Tray 2 cassette pickup solenoid for 10 seconds.

Table 2-12 Component tests (continued)

Component test	Item	Control-panel display message	Description
Clutch drive test	CL1	Feed Roller Clutch	Activates the main motor to activate the paper feeder pickup clutch for 10 seconds.
Scanner motor test	NA	Laser Scanner Motor	Activates the laser/scanner motor for 10 seconds.
Tray 3 pickup solenoid test	SL3[1]	Tray 3 Pickup Solenoid	Activates the Tray 3 cassette pickup solenoid for 10 seconds.
Tray 4 pickup solenoid test	SL3[1]	Tray 4 Pickup Solenoid	Activates the Tray 4 cassette pickup solenoid for 10 seconds.

[1] Tray 3 and Tray 4 both use a SL3.

Diagrams

Block diagrams

Product cross section
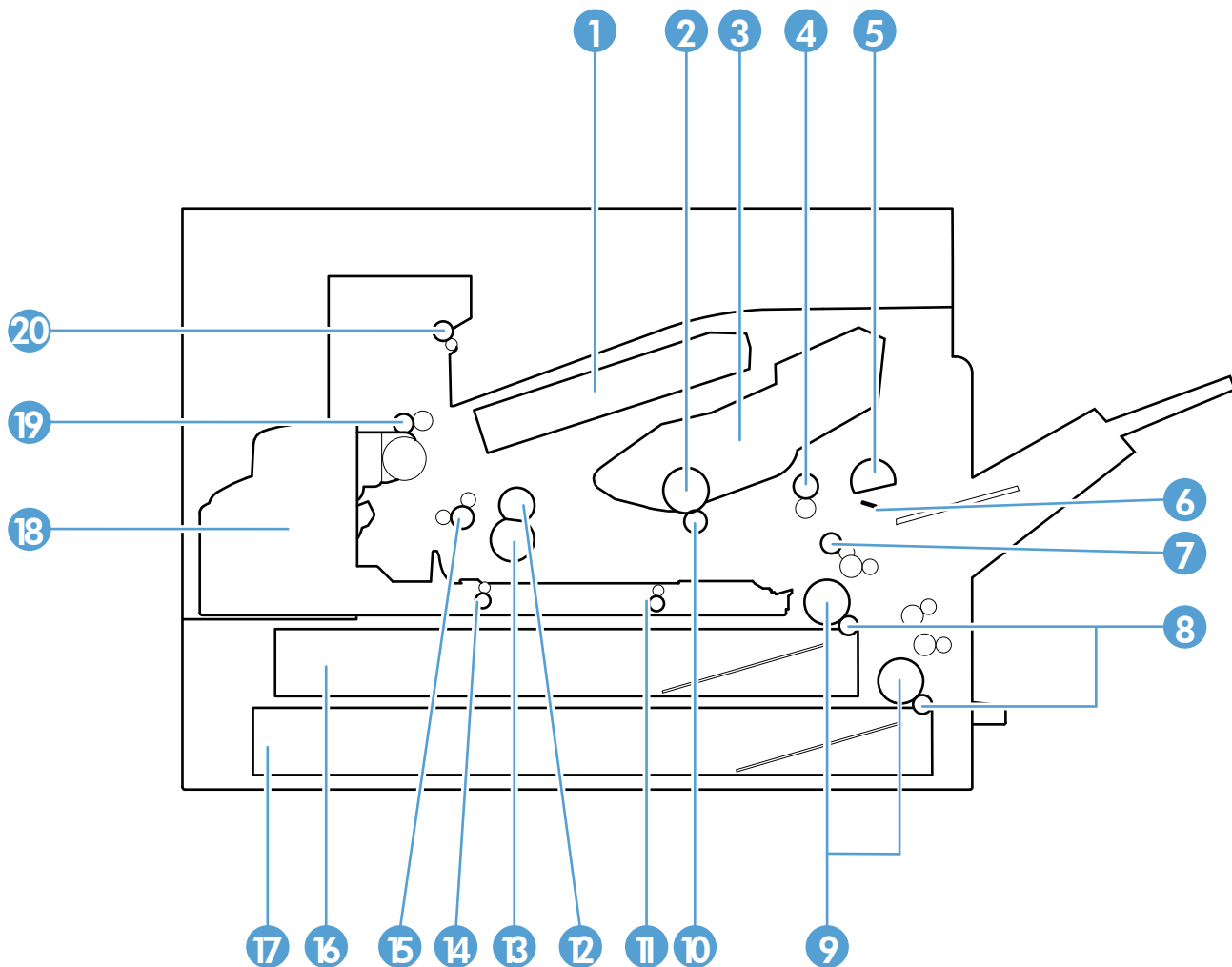
Item	Description	Item	Description
1	Laser/scanner	11	Duplex re-pickup roller
2	Photosensitive drum	12	Fuser film
3	Toner cartridge	13	Pressure roller
4	Registration roller	14	Duplex reverse roller
5	Tray 1 (multipurpose tray) pickup roller	15	Fuser output roller
6	Tray 1 (multipurpose tray) separation pad	16	Upper cassette (Tray 2)
7	Re-pickup roller	17	Lower cassette (Tray 3)
8	Cassette separation roller	18	Duplex unit

Item	Description	Item	Description
9	Cassette pickup roller	19	Intermediate output roller
10	Transfer roller	20	Output roller

Figure 2-42 Optional paper feeder (Tray 3 and Tray 4) cross section
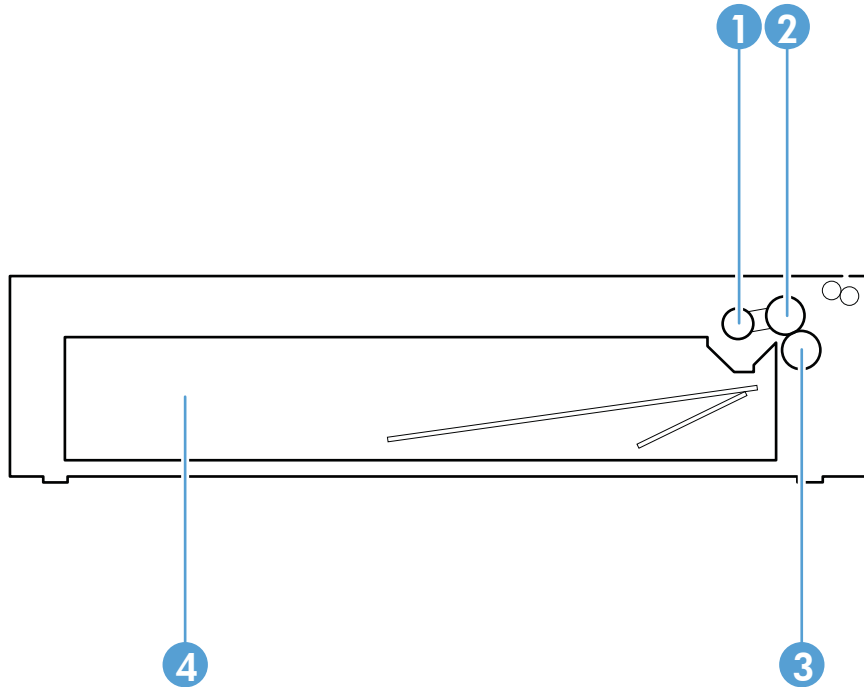
Item	Description
1	Pickup roller
2	Feed roller
3	Separation pad

Figure 2-43 1x500-sheet paper deck cross section
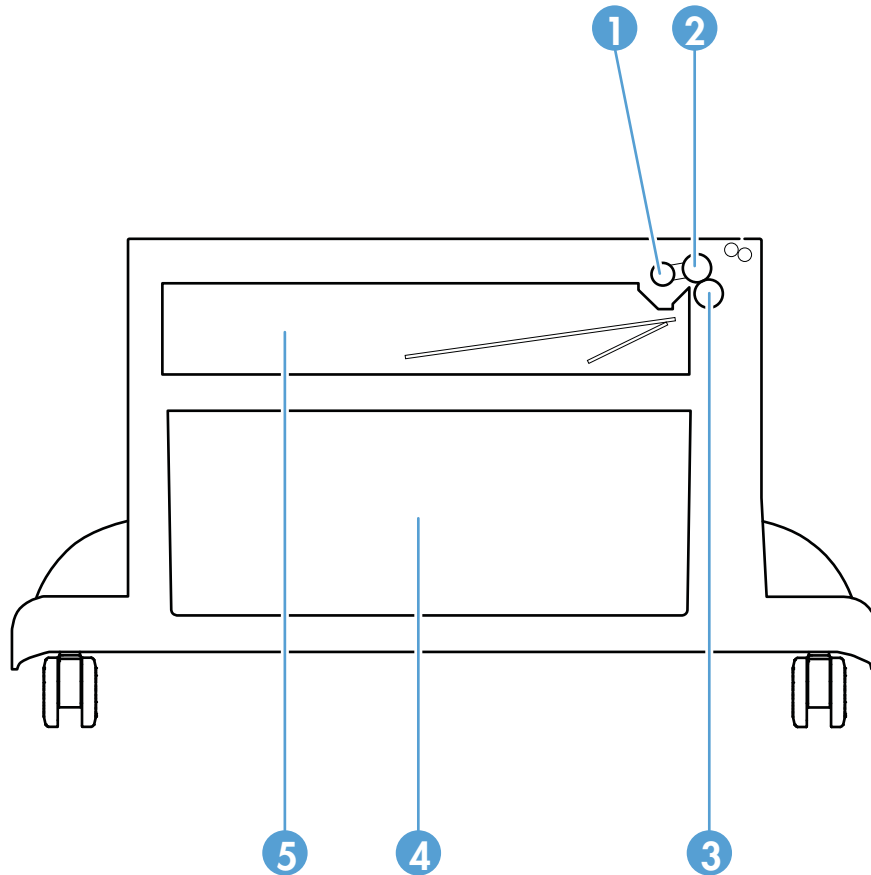
Table 2-13 1x500-sheet paper deck cross section

Item	Description	Item	Description
1	Pickup roller	4	Storage box
2	Feed roller	5	Cassette
3	Separation roller		

Figure 2-44 3x500-sheet paper deck cross section
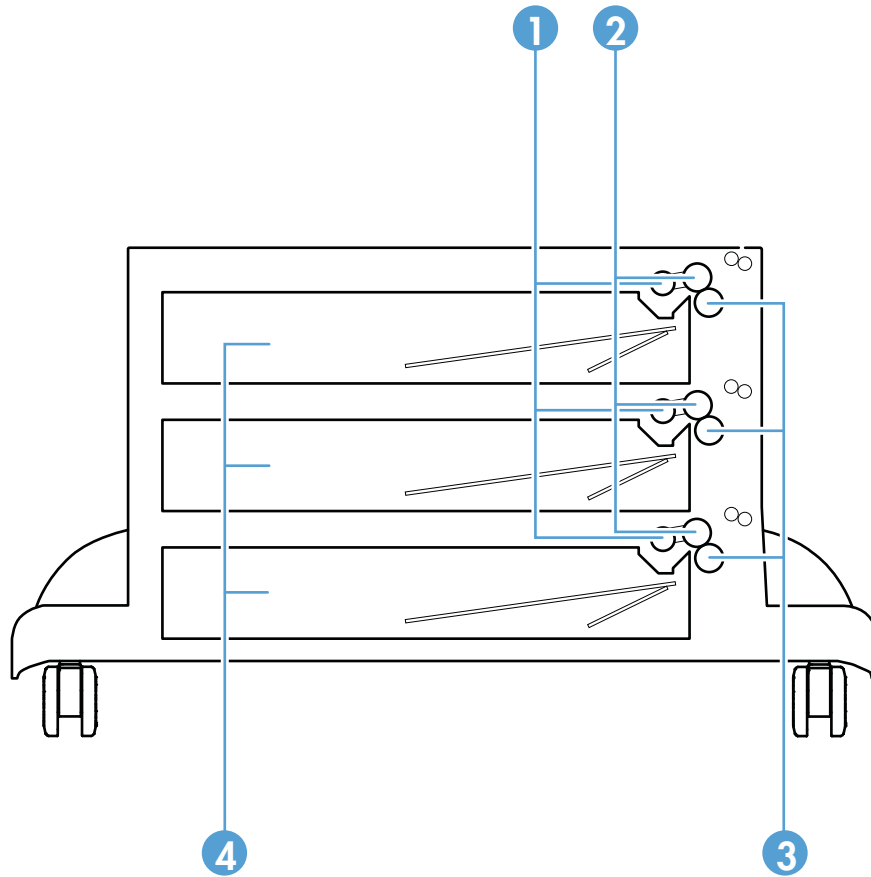
Table 2-14 3x500-sheet paper deck cross section

Item	Description	Item	Description
1	Pickup roller	3	Separation roller
2	Feed roller	4	Cassette

Figure 2-45 3,500-sheet HCI cross section
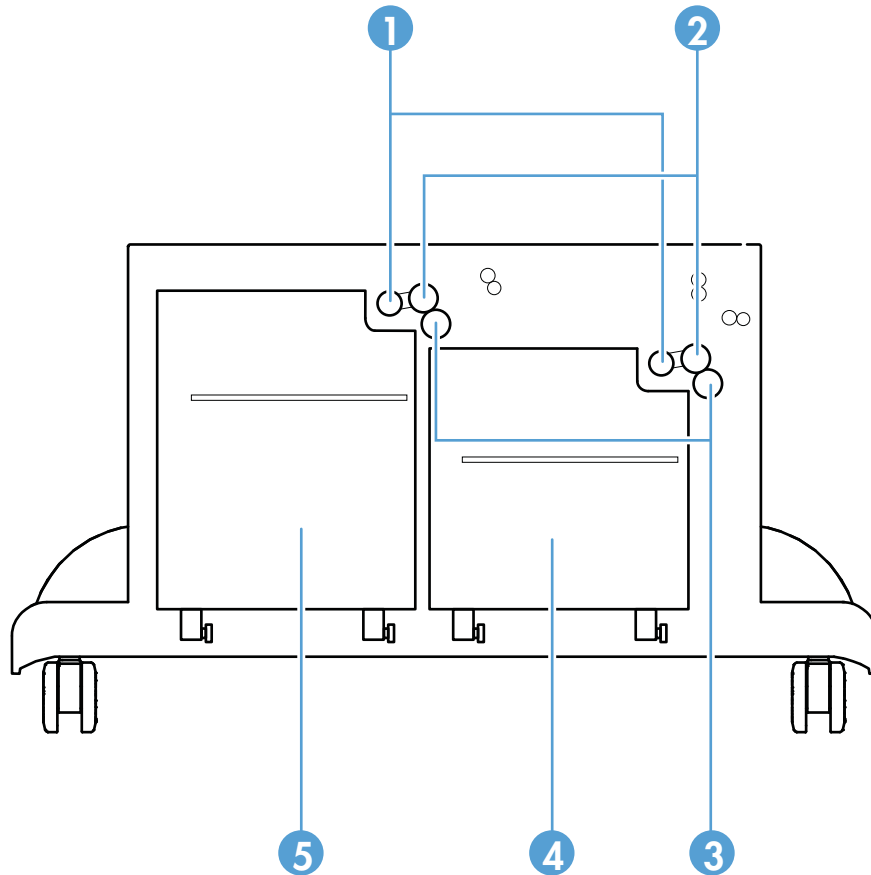
Table 2-15 3,500-sheet HCI cross section

Item	Description	Item	Description
1	Pickup roller	4	Right cassette
2	Feed roller	5	Left cassette
3	Separation roller		

Location of connectors

DC controller connections

Figure 2-46 DC controller connections

Item	Description	Item	Description	Item	Description
J31	LVPS	J44	Right door sensor SR8	J54	Paper deck
J32	LVPS	J45	Output sensor SR3 Output bin full sensor SR4	J61	HVPS
J33	Rear fan FM1	J46	Drum motor M1	J62	HVPS
J34	Power switch	J47	Fuser motor M3	J63	Environmental sensor
J35	Left door interlock switch SW1	J48	Upper cassette pickup clutch CL1 Upper cassette media out sensor SR7	J71	Laser driver PCA
J36	Cartridge door interlock switch SW2	J49	Tray 1 (MP) pickup solenoid SL1	J73	Connector PCA
J37	Cartridge presence sensor SR1 Front fan FM2 Fuser fan FM3 Scanner motor M2	J51	Upper cassette lifter motor M4 Lower cassette lifter motor M5 Upper cassette lift sensor SR10 Lower cassette lift sensor SR11 Upper cassette media width switch SW4 Lower cassette media width switch SW5	J74	E-lable Cartridge door open detection switch SW3

Item	Description	Item	Description	Item	Description
J41	SR2	J52	Duplexer		
J43	Lower cassette pickup clutch CL2	J53	Upper cassette media end switch SW6		
	Lower cassette media out sensor SR5		Lower cassette media end switch SW7		

Plug/jack locations
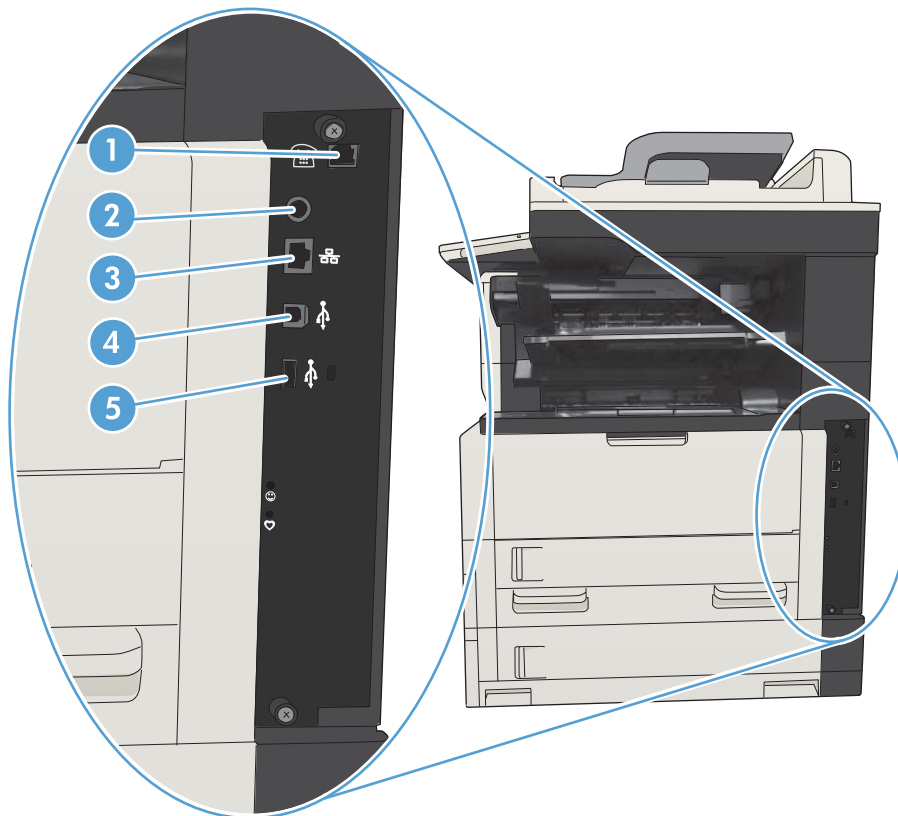
1	Fax port
2	Foreign Interface Harness (FIH) port (for connecting third-party devices)
3	Local area network (LAN) Ethernet (RJ-45) network port
4	Hi-Speed USB 2.0 printing port
5	Host USB port (for connecting third-party devices)

Locations of major components

Figure 2-47 Base product external components
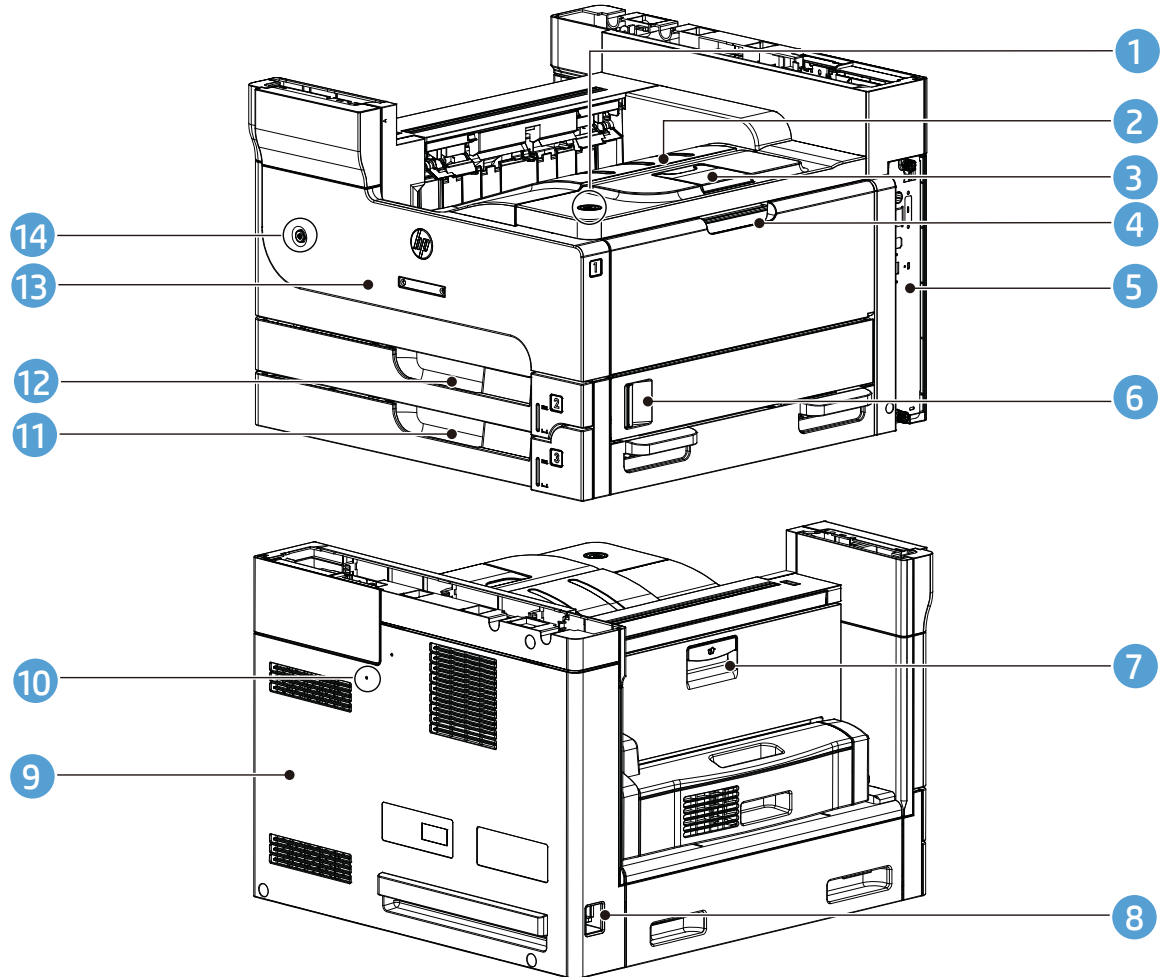
Item	Description	Item	Description
1	Toner-cartridge door	8	Power receptacle
2	Face-down output bin	9	Rear cover
3	Face-down output bin extension tray	10	Test print switch
4	Tray 1	11	Lower cassette
5	Formatter	12	Upper cassette
6	Right door	13	Front cover
7	Left door	14	Power switch

Figure 2-48 1x500-sheet paper feeder external components
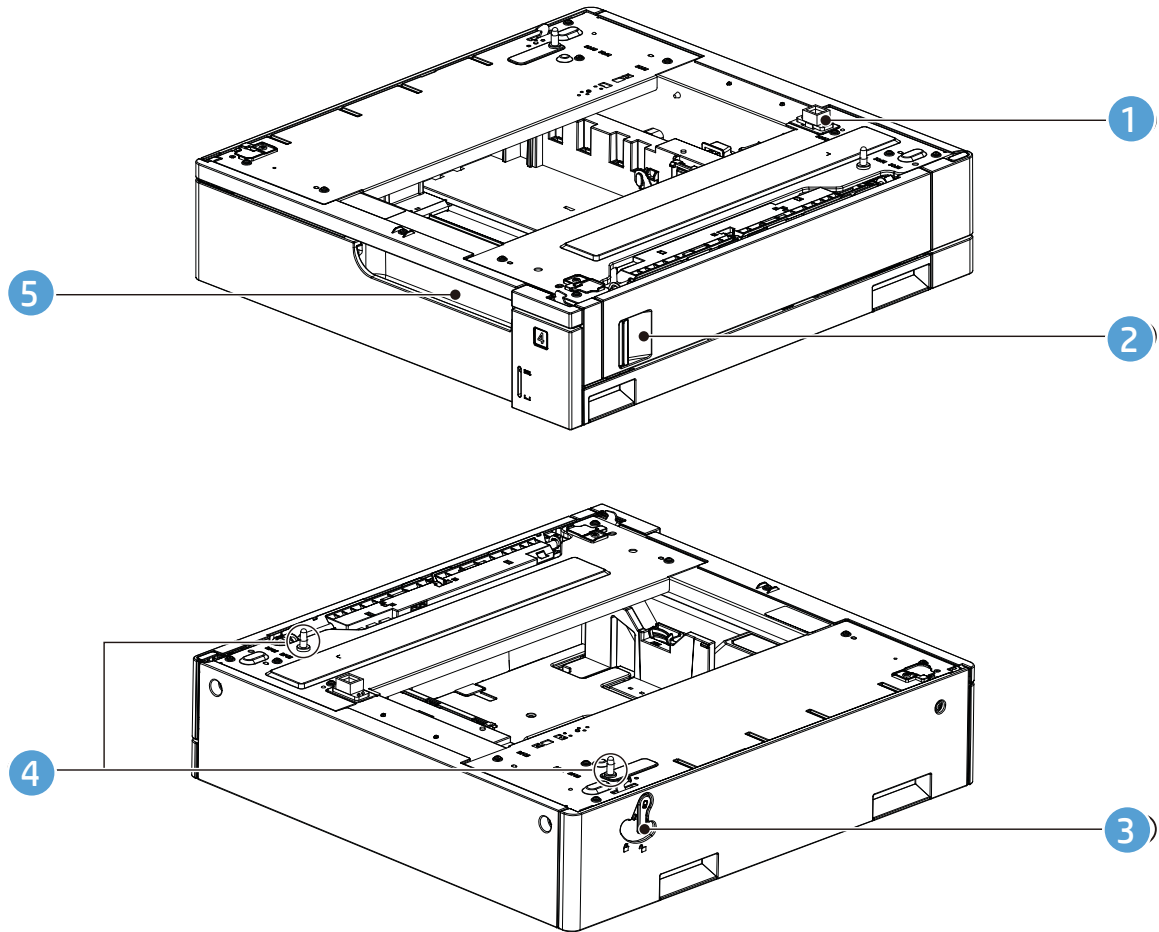
Item	Description	Item	Description
1	Connector	4	Positioning pins
2	Right door	5	Cassette
3	Lock lever		

Figure 2-49 1x500-sheet paper deck external components
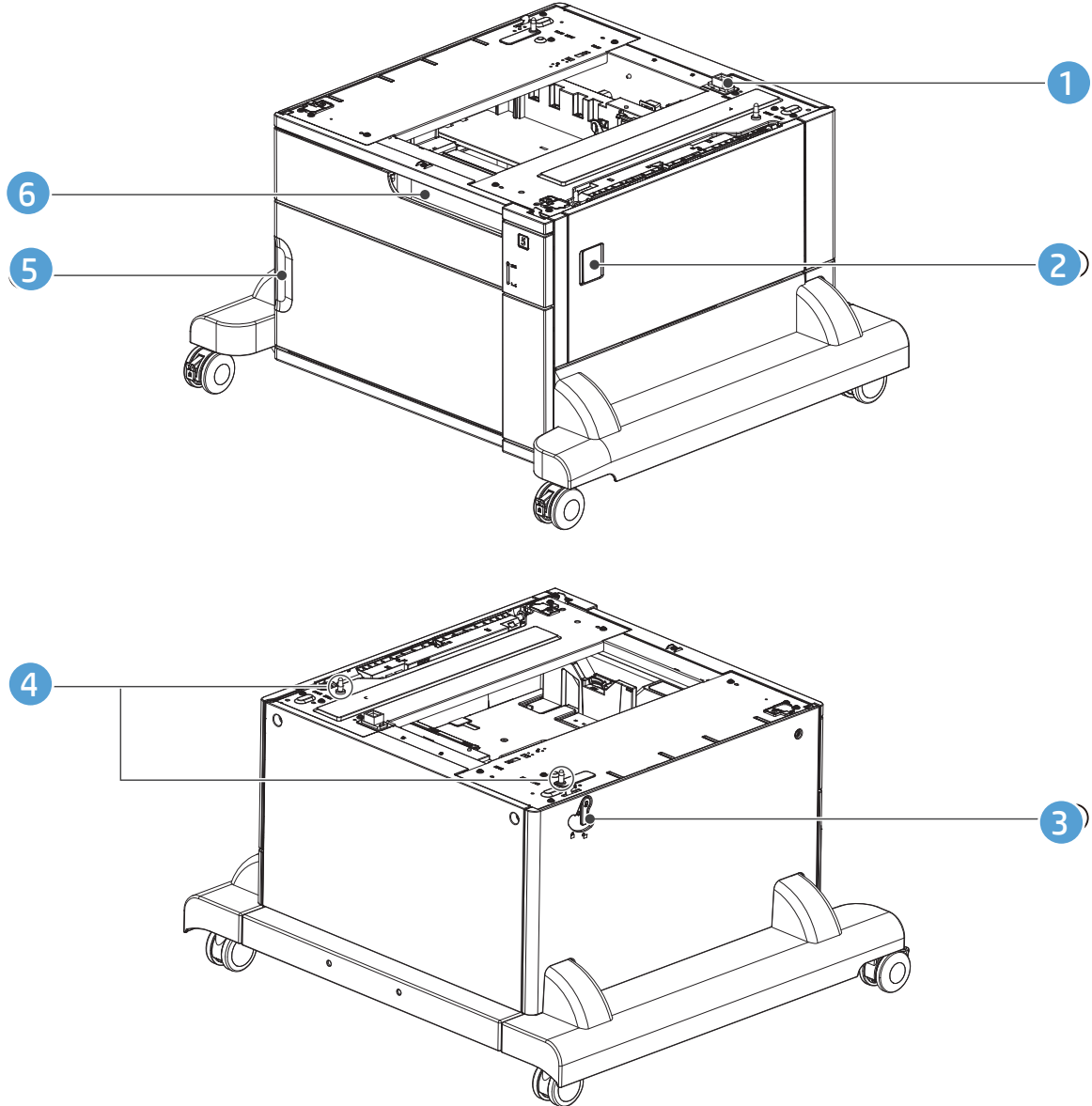
Item	Description	Item	Description
1	Connector	4	Positioning pins
2	Right door	5	Front door
3	Lock lever	6	Cassette

Figure 2-50 3x500-sheet paper deck external components
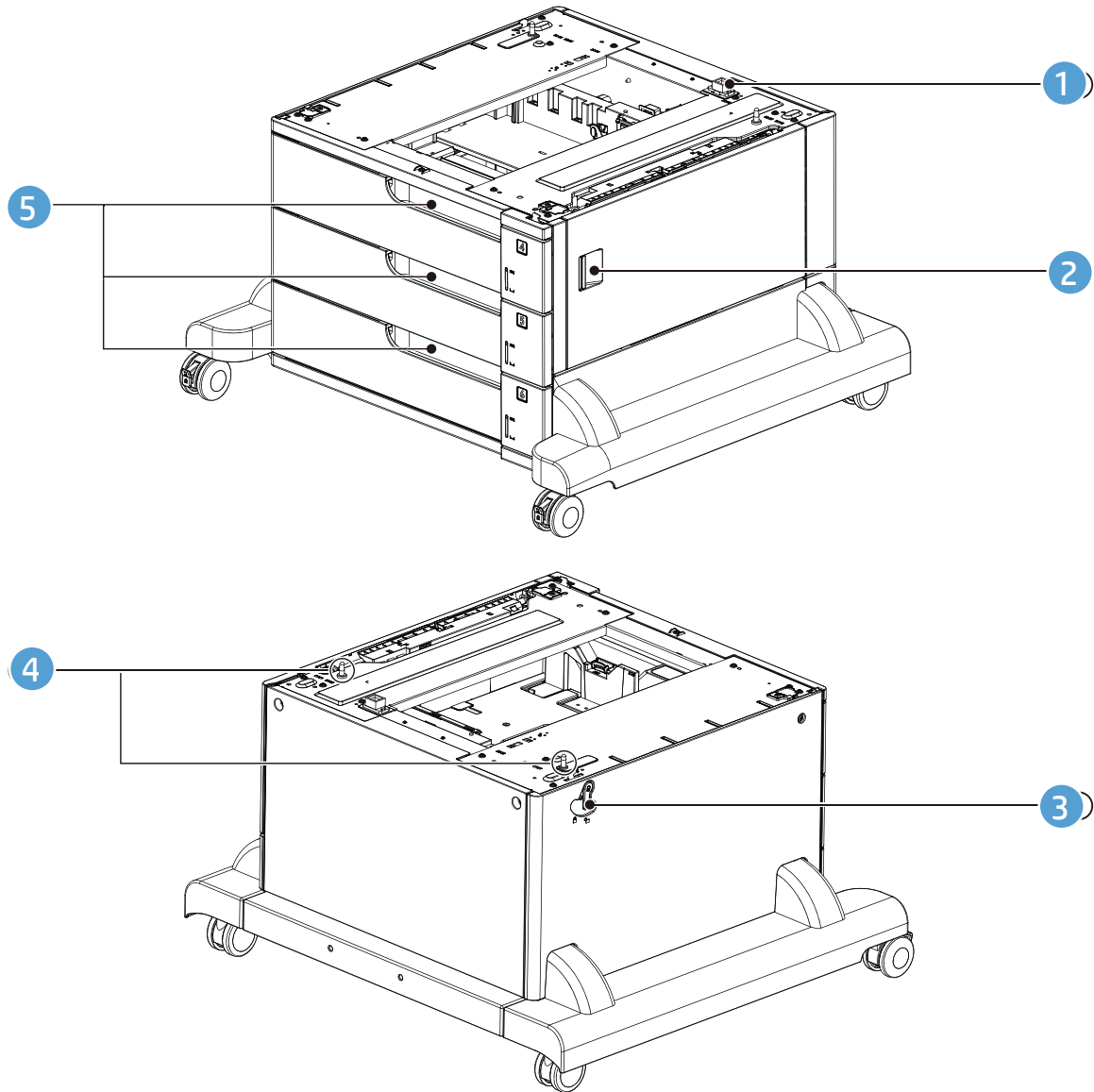
Item	Description	Item	Description
1	Connector	4	Positioning pins
2	Right door	5	Cassettes
3	Lock lever		

Figure 2-51 3500-sheet paper deck (HCI) external components
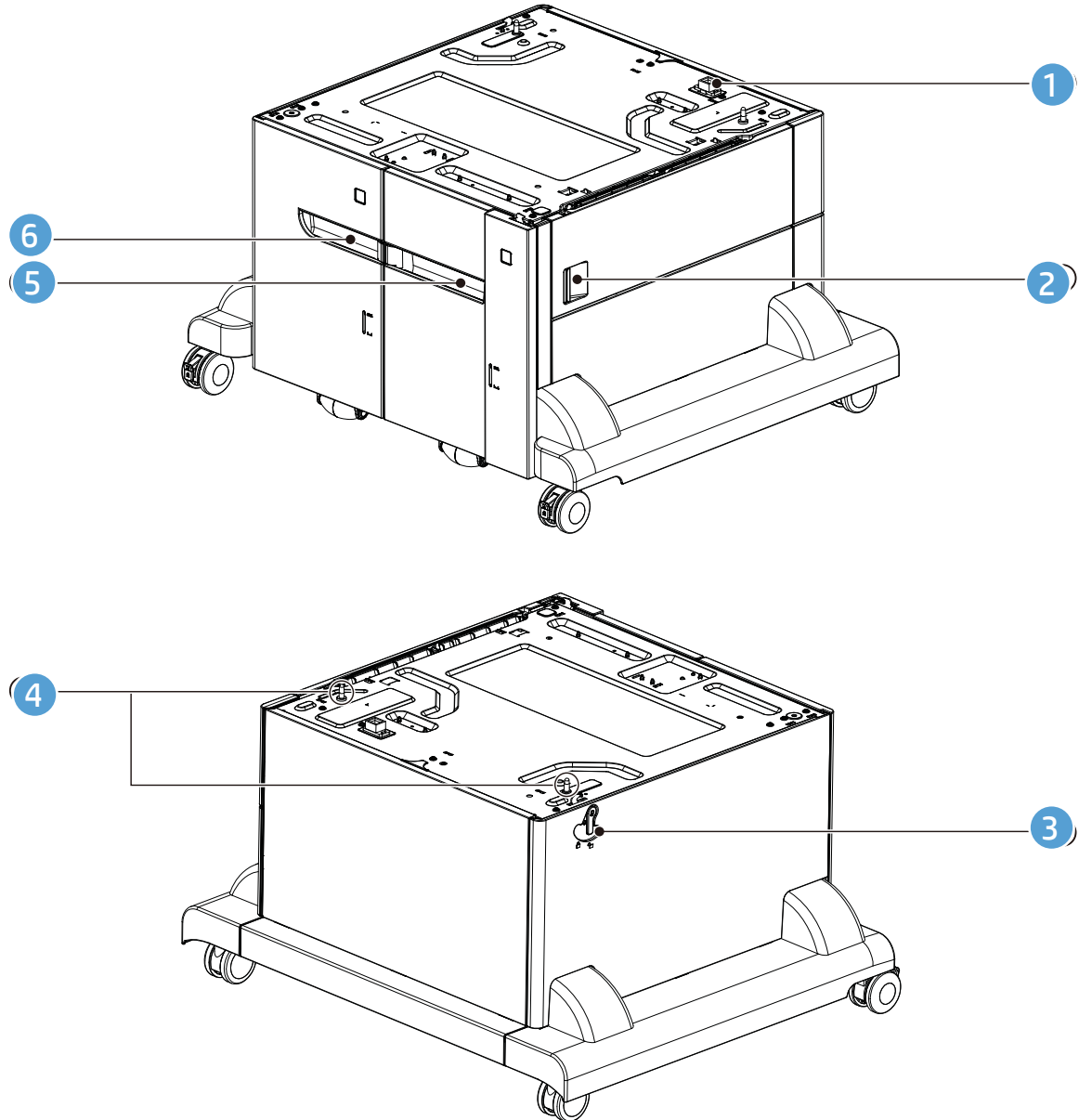
Item	Description	Item	Description
1	Connector	4	Positioning pins
2	Right door	5	Right cassette
3	Lock lever	6	Left cassette

Figure 2-52 Duplexer external components
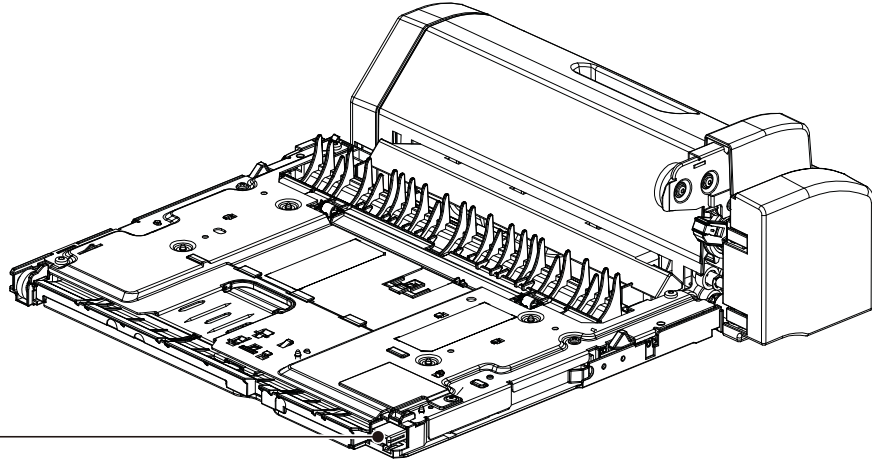
Item	Description	Item	Description
1	Connector		

Figure 2-53 Stapler/stacker external components
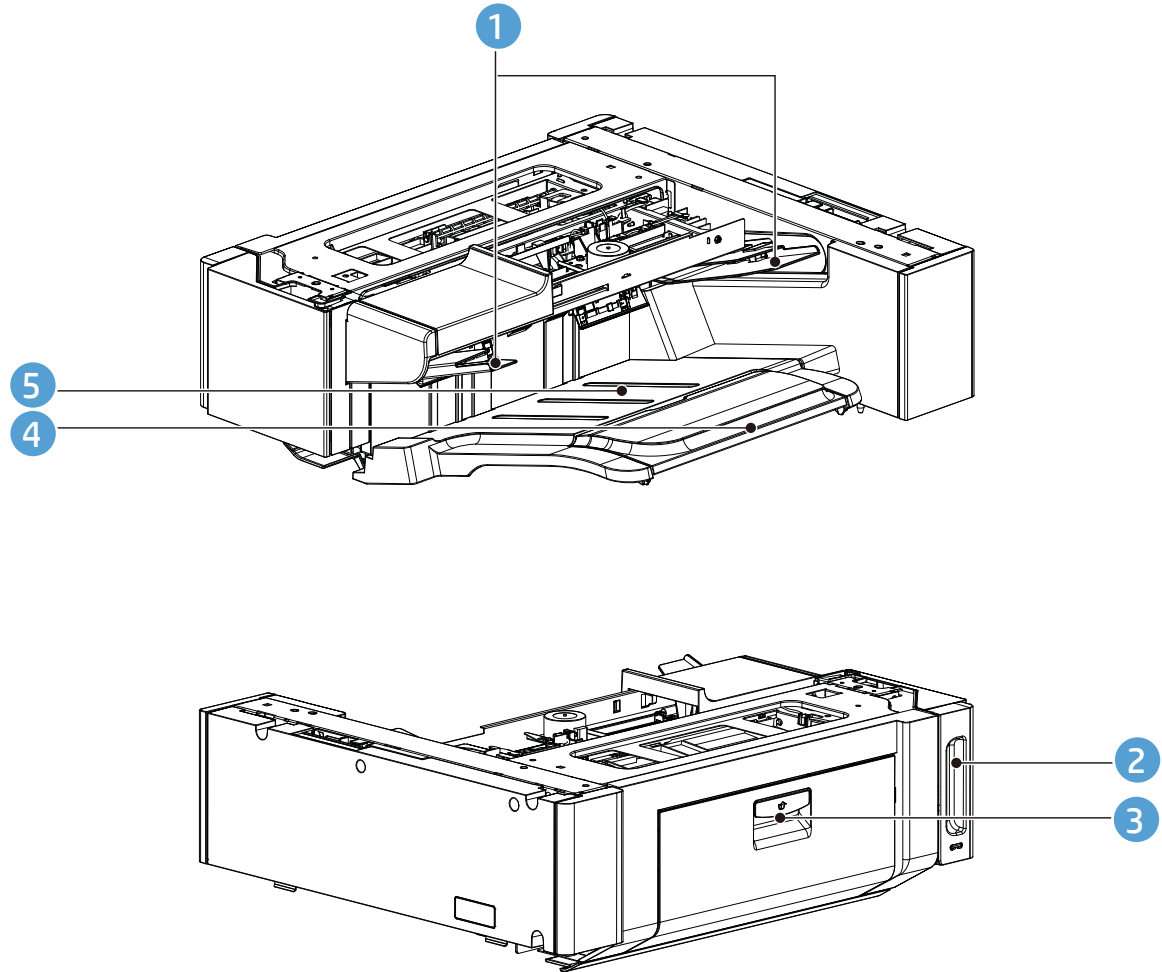
Item	Description	Item	Description
1	Jogger guide	4	Output bin extension tray
2	Stapler door	5	Output bin
3	Left door		

Figure 2-54 Major component locations (1 of 3)
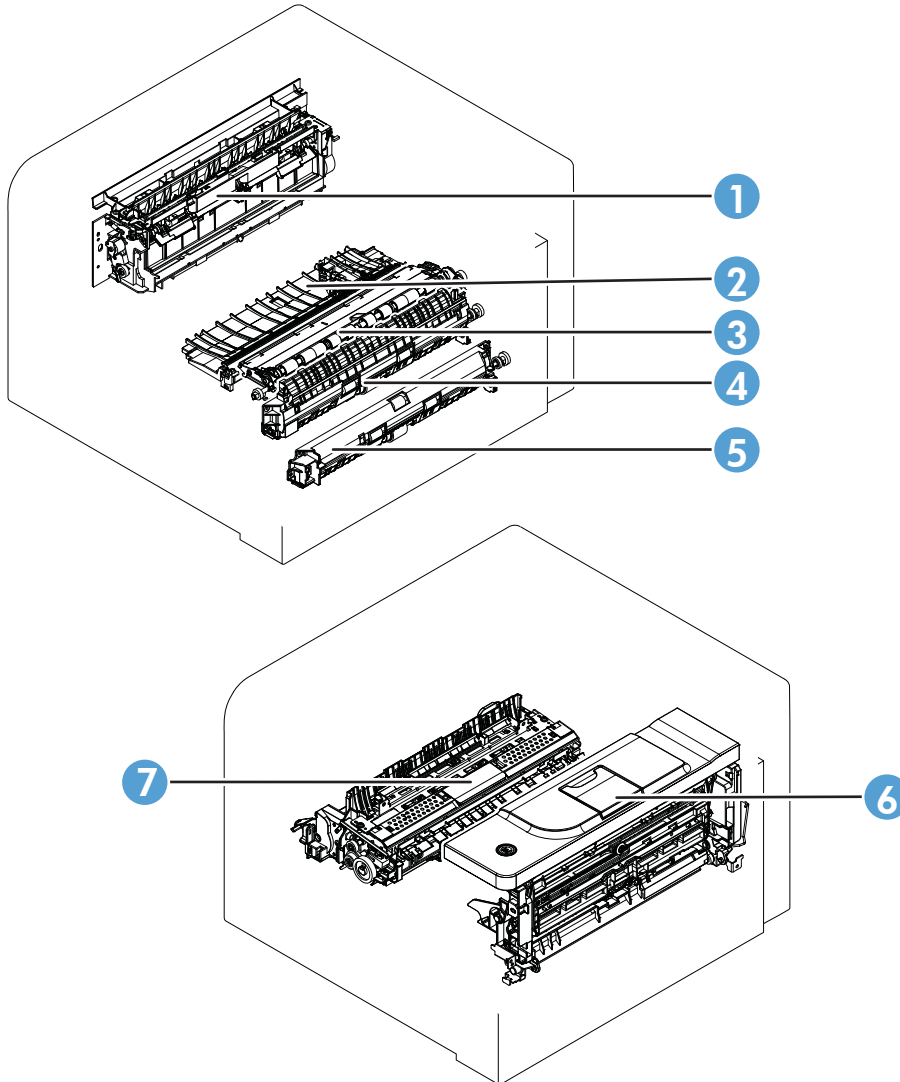
Item	Description	Item	Description
1	Output assembly	5	Lower cassette pickup assembly
2	Feed assembly	6	Toner-cartridge door assembly
3	Registration assembly	7	Fuser
4	Upper cassette pickup assembly		

Figure 2-55 Major component locations (2 of 3)
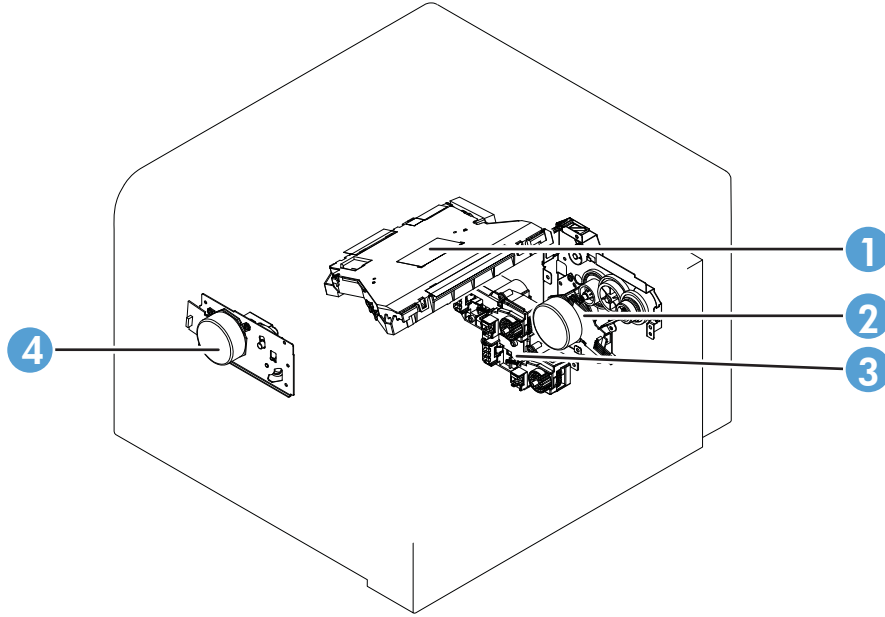
Item	Description	Item	Description
1	Laser/scanner assembly	3	Lifter drive assembly
2	Main drive assembly	4	Fuser drive assembly

Figure 2-56 Major component locations (3 of 3)
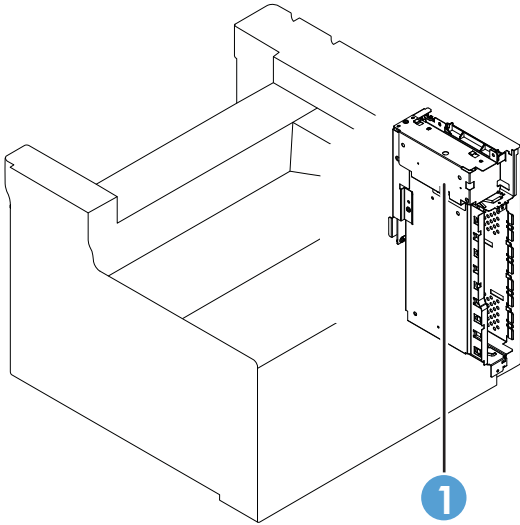
Item	Description
1	Formatter

Figure 2-57 PCA component locations
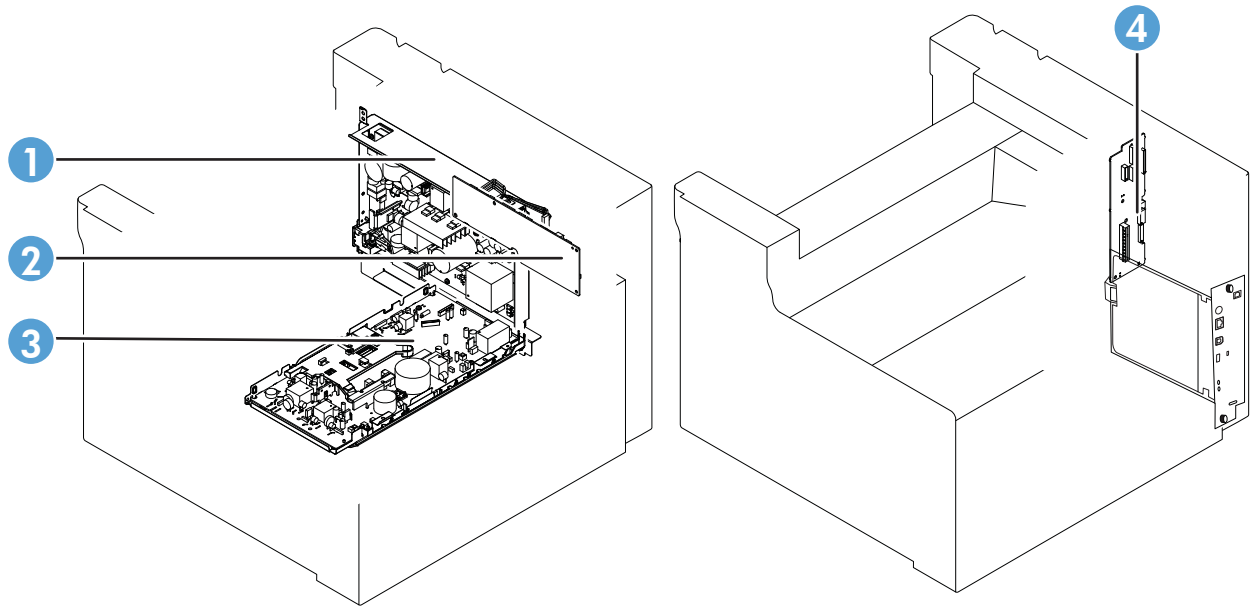
Item	Description	Item	Description
1	Low-voltage power supply	3	High-voltage power supply
2	DC controller	4	Connector PCA

Figure 2-58 Motor locations
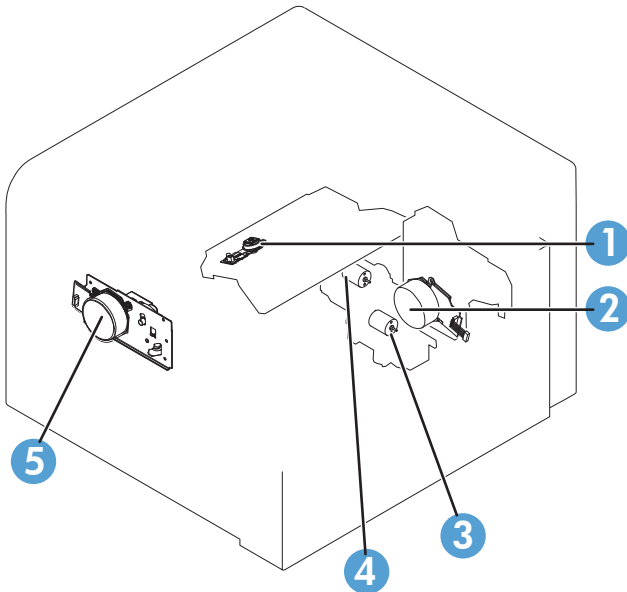
Item	Description	Item	Description
1	Scanner motor	4	Lower cassette lifter motor
2	Drum motor	5	Fuser motor
3	Upper cassette lifter motor		

Figure 2-59 Fan locations
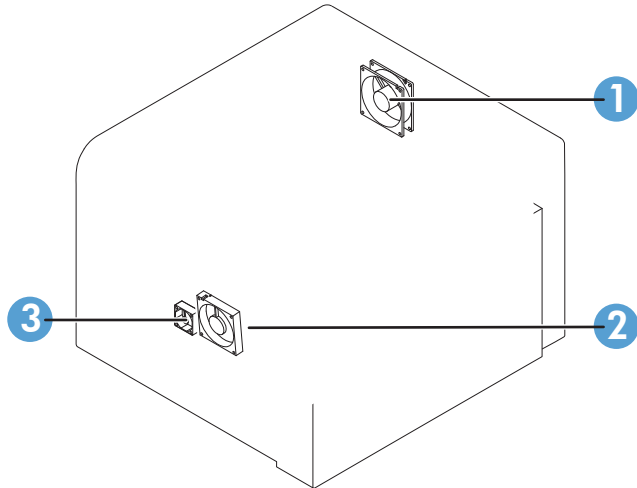
Item	Description
1	Rear fan
2	Front fan
3	Fuser fan

Figure 2-60 Roller locations
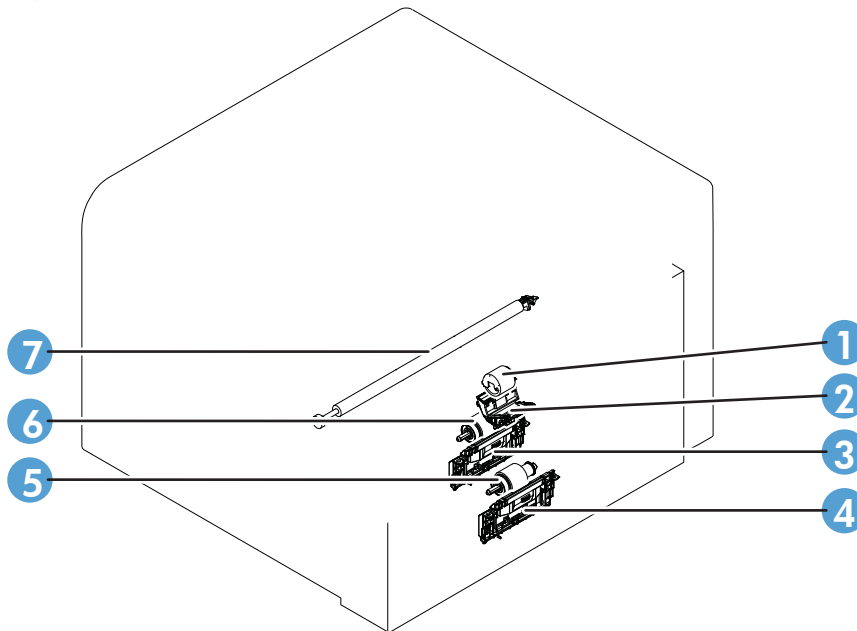
Item	Description	Item	Description
1	Tray 1 pickup roller	5	Lower cassette pickup roller
2	Tray 1 separation pad	6	Upper cassette pickup roller

Item	Description	Item	Description
3	Upper cassette separation roller	7	Transfer roller
4	Lower cassette separation roller		

Figure 2-61 Sensor locations (base product)
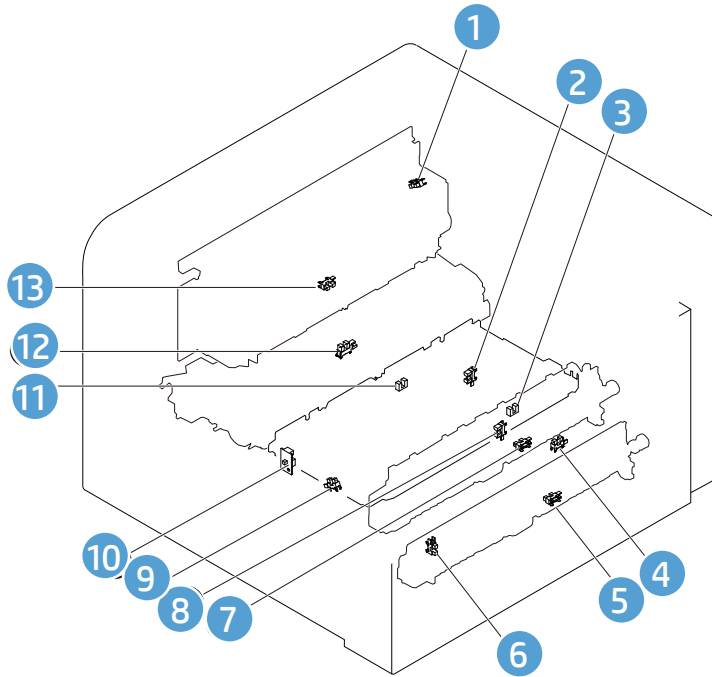
Item	Description	Item	Description
1	Output bin media-full sensor	8	Lower cassette lift-up sensor
2	Upper cassette lift-up sensor	9	Cartridge presence sensor
3	TOP sensor	10	Environmental sensor
4	Tray 1 media-out sensor	11	Loop sensor
5	Lower cassette media-out sensor	12	Fuser output sensor
6	Right door sensor	13	Output sensor
7	Upper cassette media-out sensor		

Figure 2-62 Switch locations (base product)
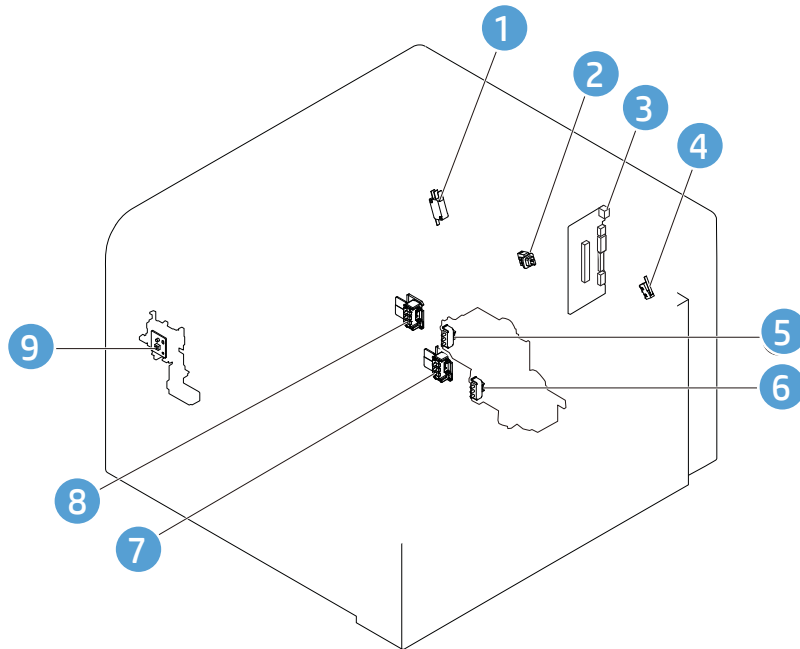
Item	Description	Item	Description
1	Left door interlock switch	6	Lower cassette media-width switch
2	Cartridge door-open detection switch	7	Lower cassette media-end switch
3	Test print switch	8	Upper cassette media-end switch
4	Cartridge door interlock switch	9	Power switch
5	Upper cassette media-width switch		

Figure 2-63 Solenoid location (base product)
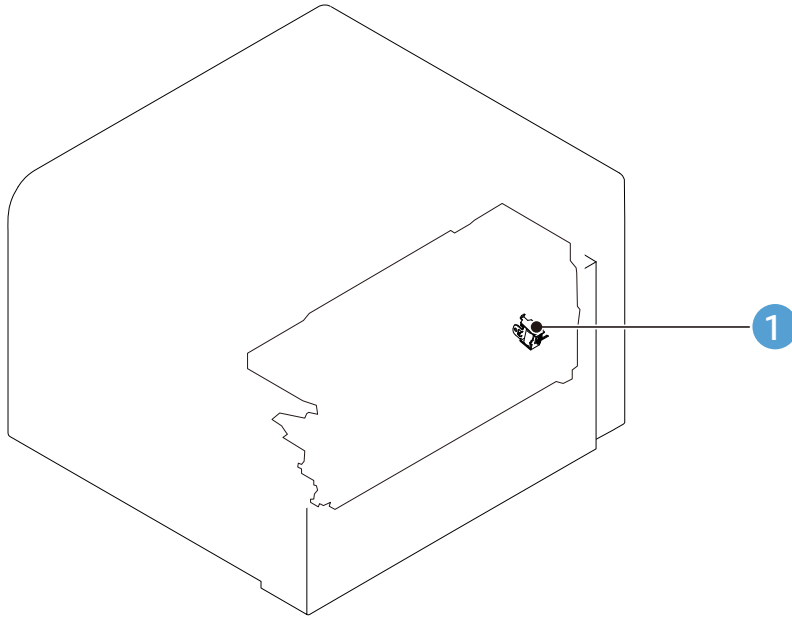
Item	Description
1	Tray 1 pickup solenoid

Figure 2-64 Clutch location (base product)
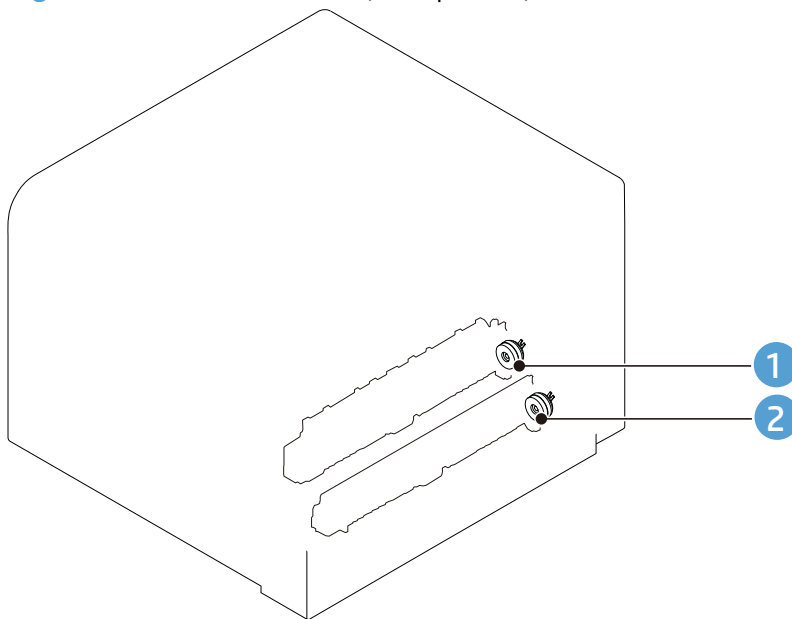
Item	Description
1	Upper cassette pickup clutch
2	Lower cassette pickup clutch

Figure 2-65 1x500 paper feeder internal component locations
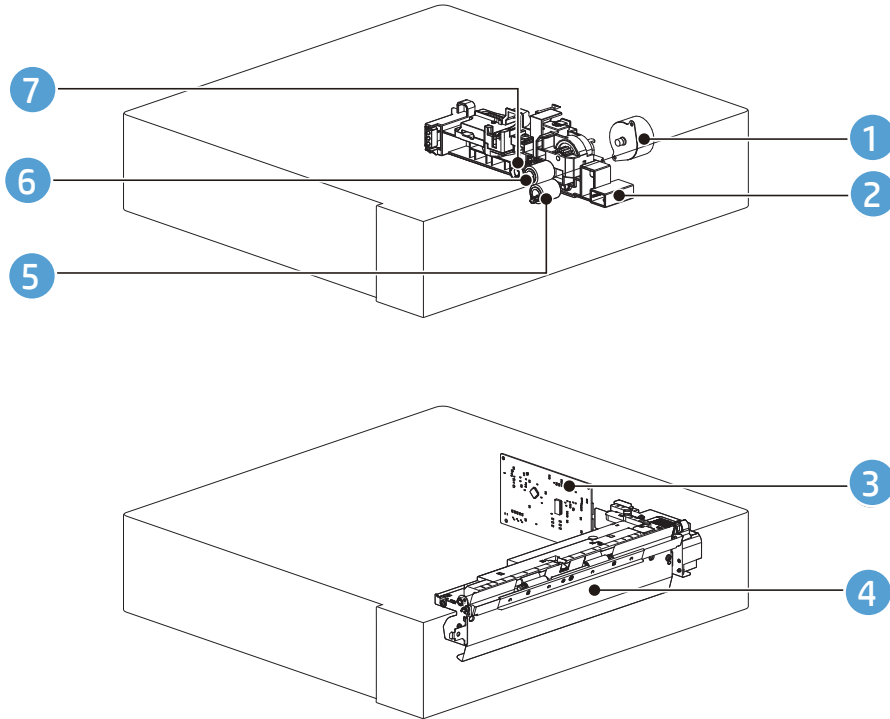
Item	Description	Item	Description
1	Cassette pickup motor	5	Cassette separation roller
2	Lifter drive assembly	6	Cassette feed roller
3	Controller PCA	7	Cassette pickup roller
4	Cassette pickup assembly		

Figure 2-66 1x500 paper deck internal component locations
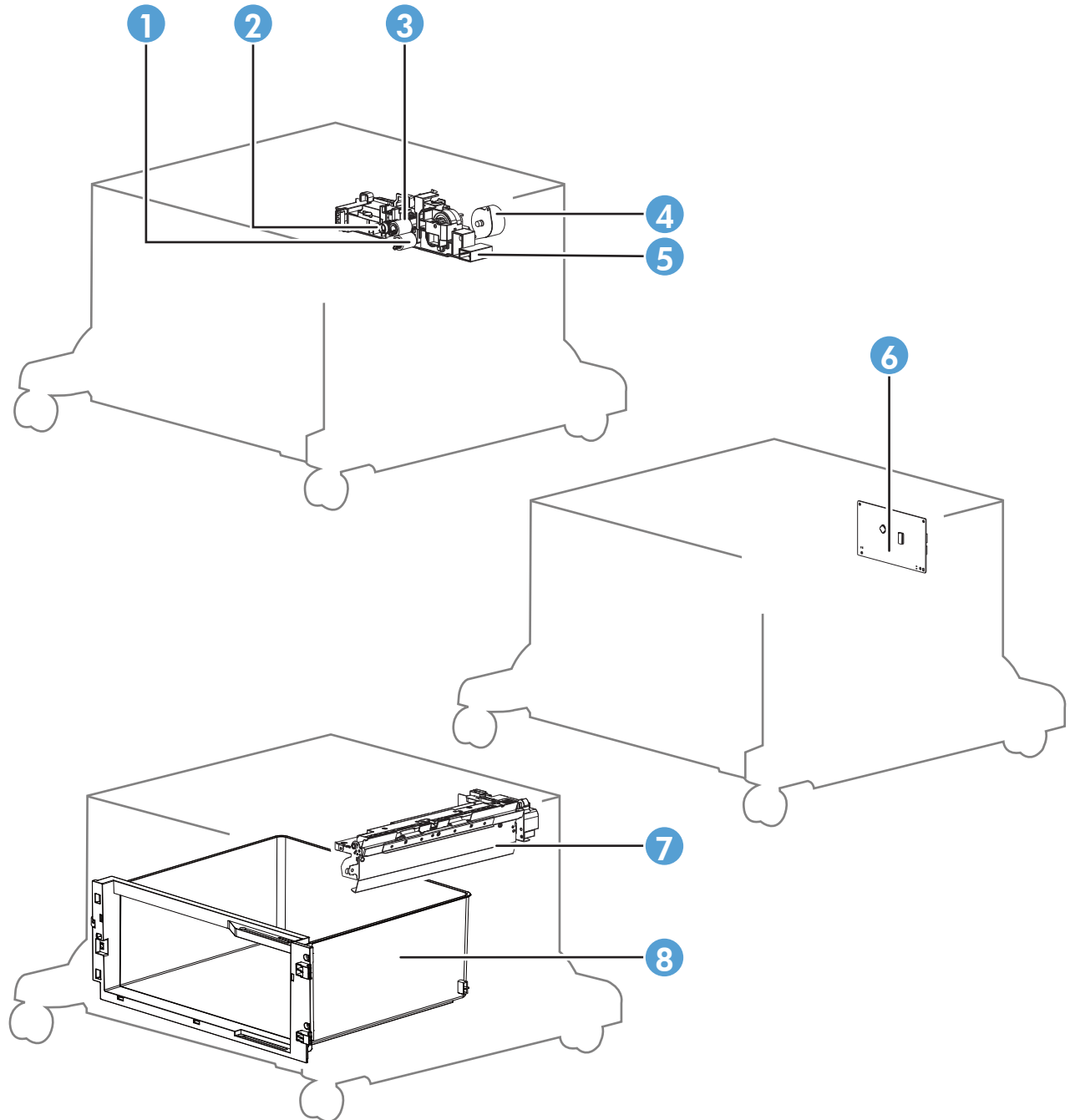
Item	Description	Item	Description
1	Cassette separation roller	5	Cassette lifter drive assembly
2	Cassette pickup roller	6	Controller PCA
3	Cassette feed roller	7	Cassette pickup assembly
4	Cassette pickup motor	8	Storage box assembly

Figure 2-67 3x500 paper deck internal component locations
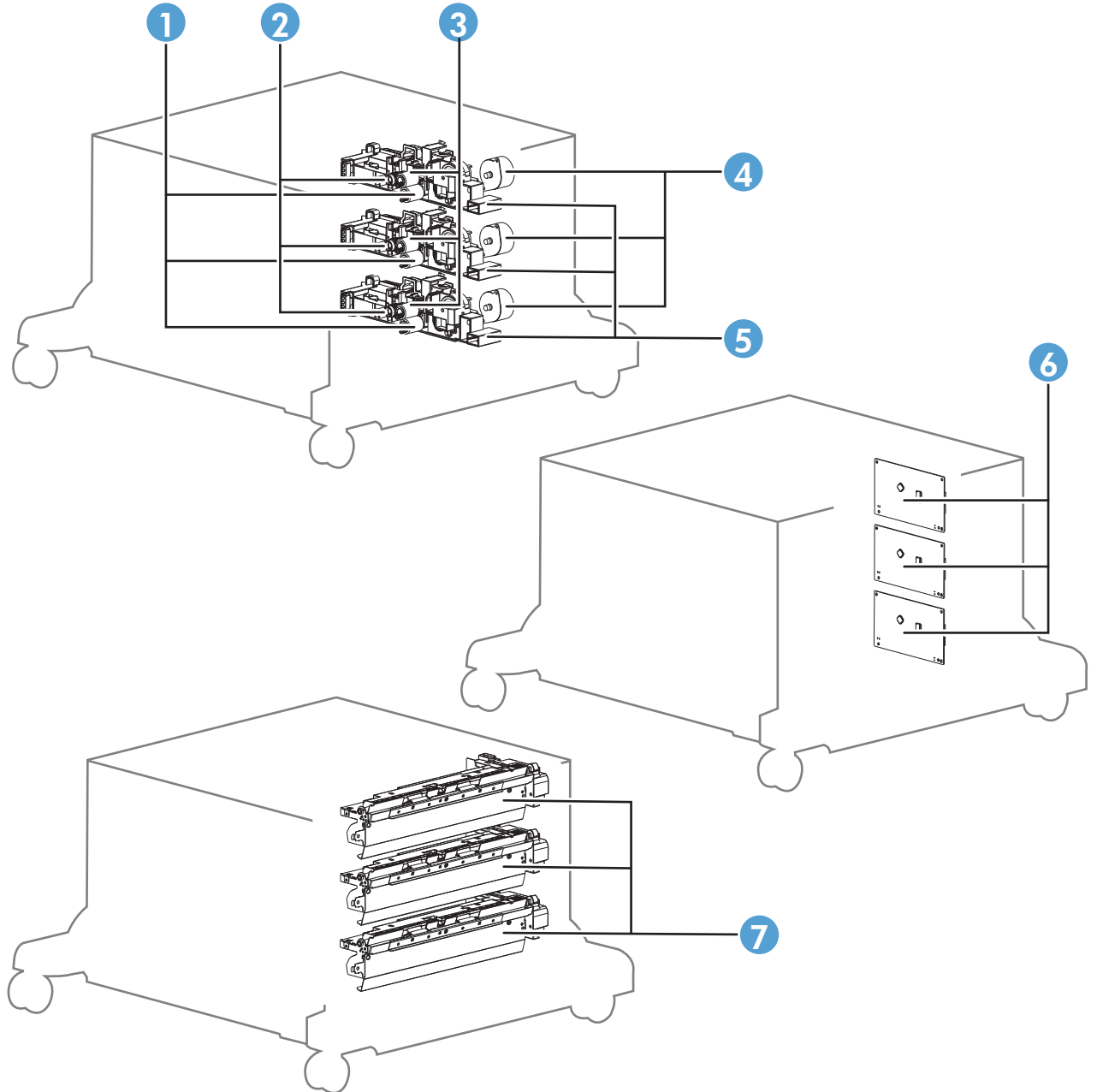
Item	Description	Item	Description
1	Cassette separation rollers	5	Lifter drive assemblies
2	Cassette pickup rollers	6	Controller PCAs
3	Cassette feed rollers	7	Cassette pickup assemblies
4	Cassette pickup motors		

Item	Description
1	Left cassette pickup assembly
2	Right cassette pickup assembly
3	Controller PCA
4	Merge assembly

Figure 2-69 3500-sheet paper deck (HCI) internal component locations (2 of 2)
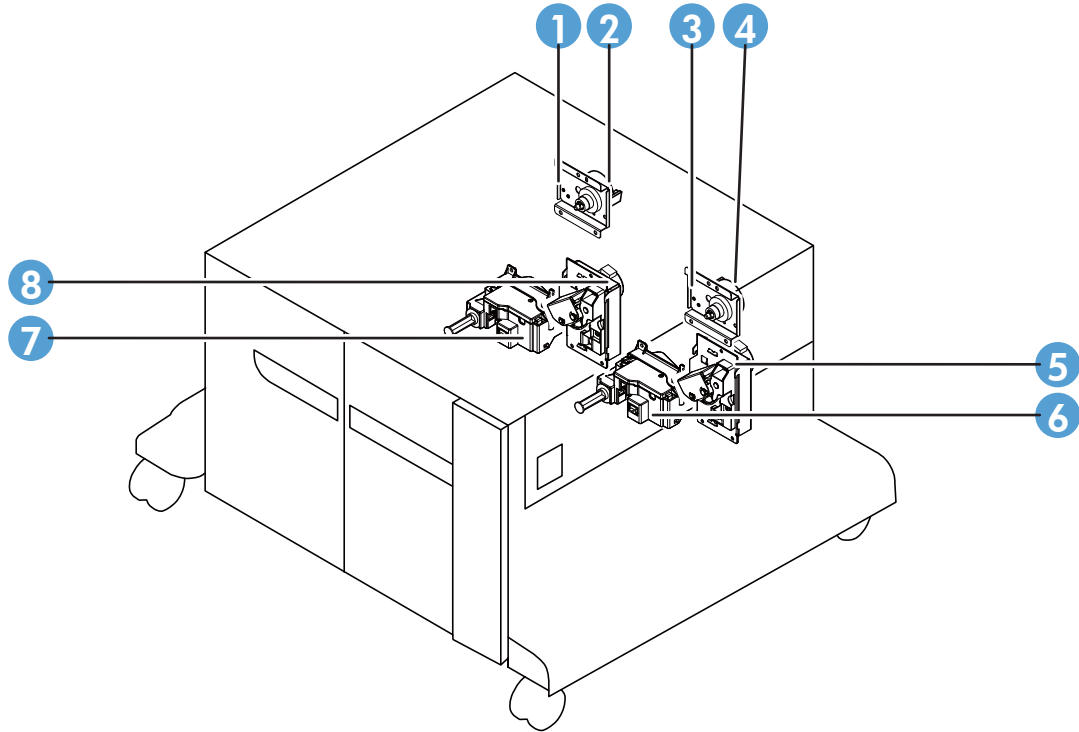
Item	Description	Item	Description
1	Left cassette pickup drive assembly	5	Right cassette lifter drive assembly
2	Left cassette pickup motor	6	Right cassette automatic close assembly
3	Right cassette pickup drive assembly	7	Left cassette automatic close assembly
4	Right cassette pickup motor	8	Left cassette lifter drive assembly

Figure 2-70 Stapler/stacker internal component locations
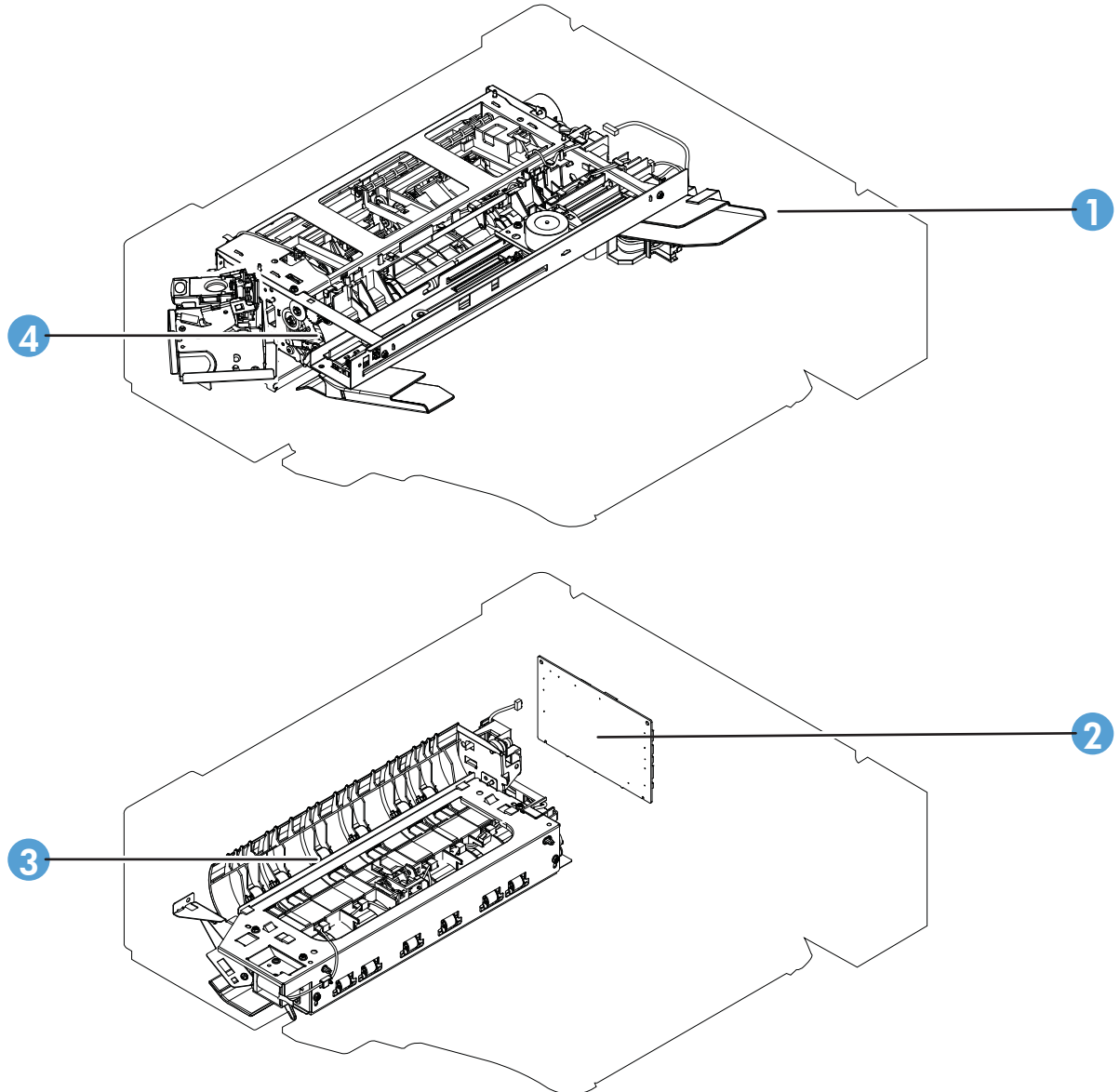
Item	Description
1	Alignment assembly
2	Controller PCA
3	Feed assembly
4	Stapler assembly

General timing charts

Figure 2-71 General timing chart

Circuit diagrams

Figure 2-72 General circuit diagram (1 of 2)

Figure 2-73 General circuit diagram (2 of 2)
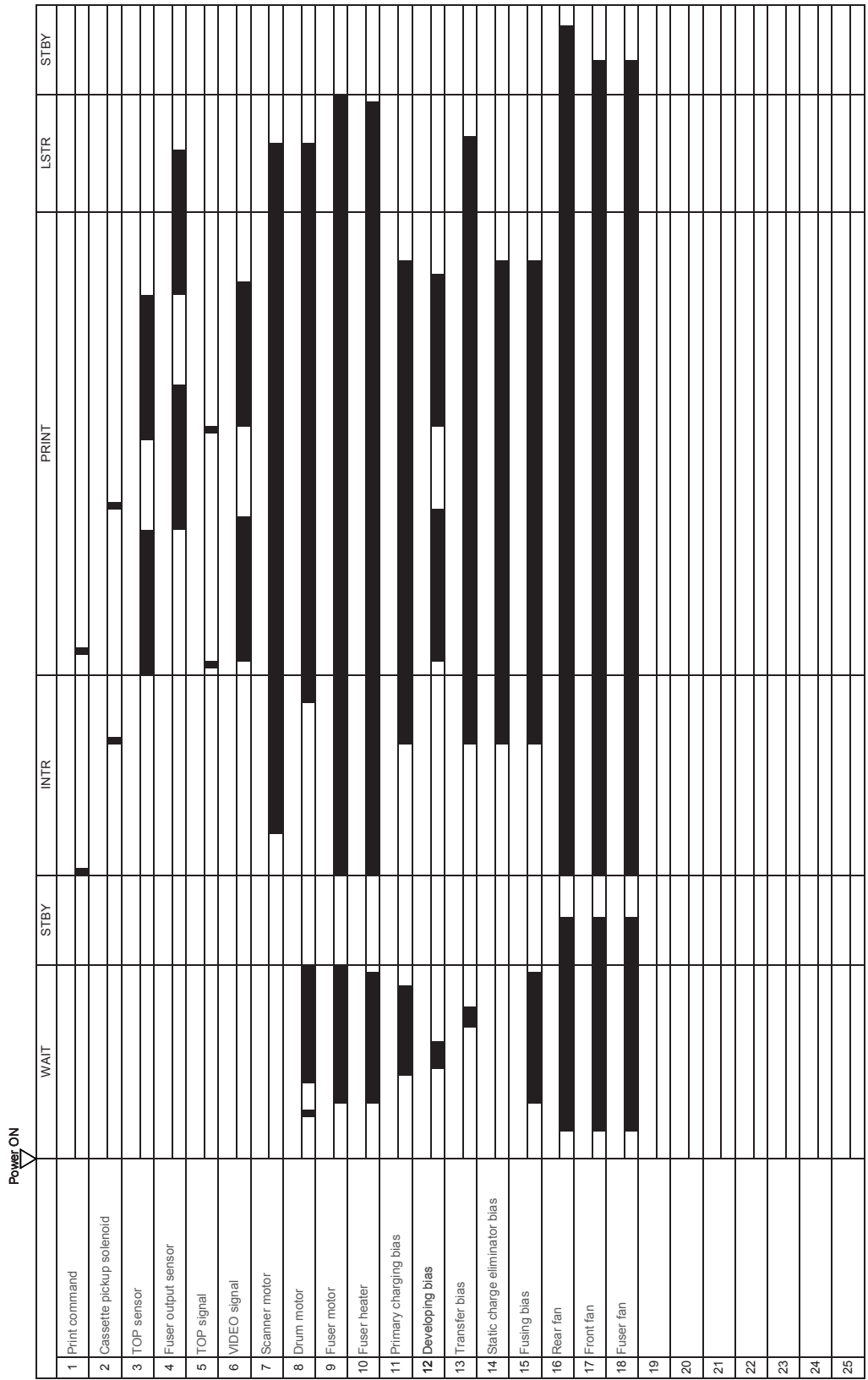
Internal print-quality test pages

Clean the paper path

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.

2. Open the following menus:

   - Calibration/Cleaning

   - Cleaning Page

3. Touch the Print button to print the page.

4. The cleaning process can take several minutes. When it is finished, discard the printed page.

Set up an auto cleaning page

Use the procedure in this section to set up an automatic cleaning page.

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.

2. Open the following menus:

   - Calibration/Cleaning

   - Cleaning Settings

3. Select the Auto Cleaning item, and then select values for the Cleaning Interval option and the Cleaning Size option. Touch the OK button.

Print a configuration page

Depending on the model, up to three pages print when you print a configuration page. In addition to the main configuration page, the embedded Jetdirect configuration pages print.

Configuration page

Use the configuration page to view current product settings, to help troubleshoot product problems, or to verify installation of optional accessories, such as memory (DIMMs), paper trays, and product languages.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

   ● Reports

   ● Configuration/Status Pages

3. Touch Configuration Page to select it.

4. Touch the View button to view the information on the control panel, or touch the Print button to print the pages.

Figure 2-74 Configuration page

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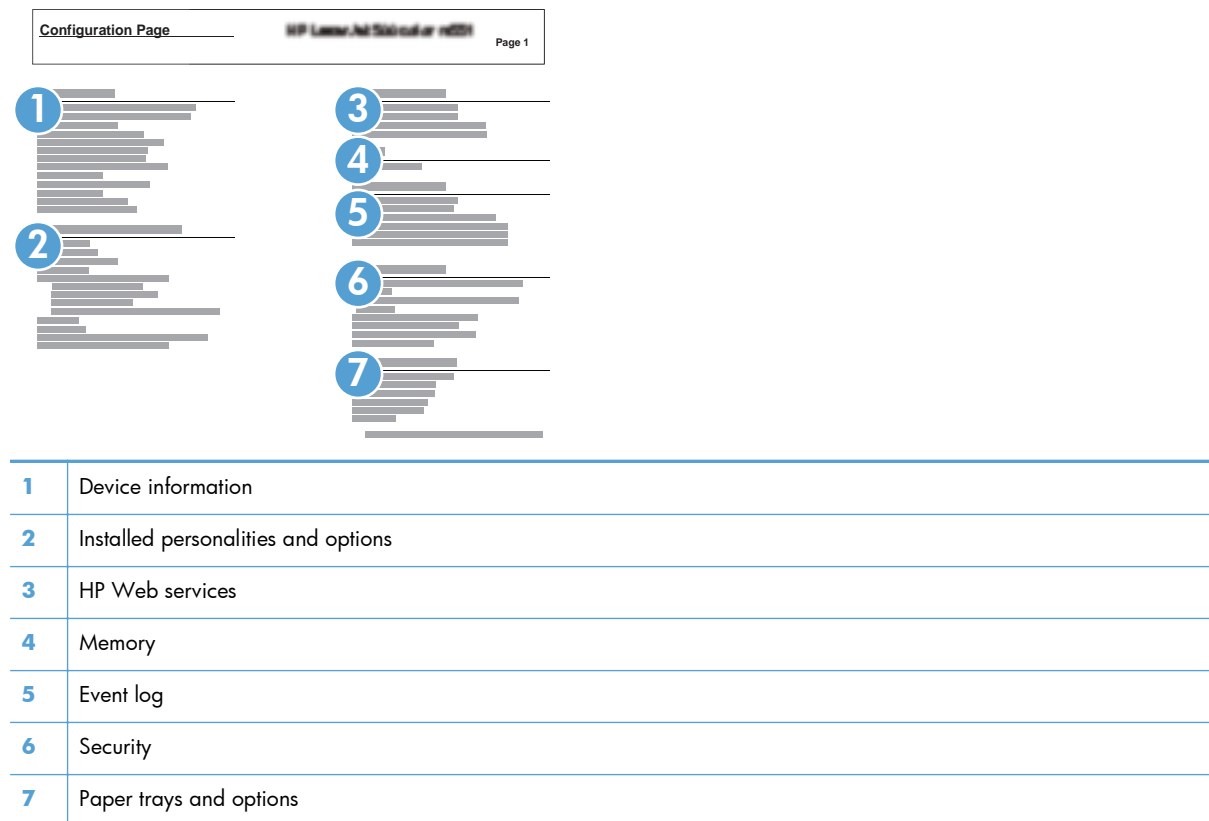
HP embedded Jetdirect page

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

Always make sure the status line under the general information line indicates "I/O Card Ready."

Figure 2-75 HP embedded Jetdirect page
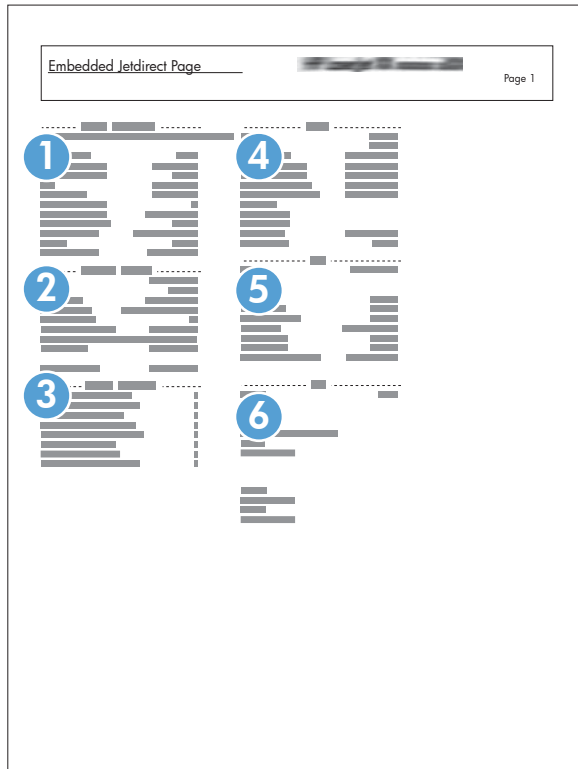
1	**General Information** indicates the product status, model number, hardware firmware version, port select, port configuration, auto negotiation, manufacturing identification, and manufactured date.
2	**Security Settings** information
3	**Network Statistics** indicates the total packets received, unicast packets received, bad packets received, framing errors received, total packets transmitted, unsendable packets, transmit collisions, and transmit late collisions.
4	**TCP/IP** information, including the IP address
5	**IPv4** information
6	**IPv6** information

Finding important information on the configuration pages

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

Table 2-16 Important information on the configuration pages

Type of information	Specific information	Configuration page
Firmware date codes When you use the remote firmware upgrade procedure, all of these firmware components are upgraded.	DC controller	Look on the main configuration page, under "Device Information."
	Firmware datecode	Look on the main configuration page, under "Device Information."
	Embedded Jetdirect firmware version	Look on the embedded Jetdirect page, under "General Information."
Accessories and internal storage All optional devices that are installed on the product should be listed on the main configuration page. In addition, separate pages print for the optional paper handling devices and the fax accessory. These pages list more-detailed information for those devices.	External disk (optional)	Look on the main configuration page, under "Installed Personalities and Options." Shows model and capacity.
	Embedded HP Jetdirect	Look on the main configuration page, under "Installed Personalities and Options." Shows model and ID.
	Total RAM	Look on the main configuration page, under "Memory."
	Duplex unit	Look on the main configuration page, under "Paper Trays and Options."
Additional 500-sheet feeders	Additional 500-sheet feeders	Look on the main configuration page, under "Paper Trays and Options."
Engine cycles and event logs Total page counts and maintenance kit counts are important for ongoing product maintenance. The configuration page lists only the three most recent errors. To see a list of the 50 most recent errors, print an event log from the Diagnostics menu.	Engine cycles	Look on the main configuration page, under "Device Information."
Event-log information	Event-log information	Look on the main configuration page, under "Event log."

Control panel menus

Administration menu

You can perform basic product setup by using the Administration menu. Use the HP Embedded Web Server for more advanced product setup. To open the HP Embedded Web Server, enter the product IP address or host name in the address bar of a Web browser.

Reports menu

To display: At the product control panel, select the Administration menu, and then select the Reports menu.

Table 2-17 Reports menu

First level	Second level	Values	Description
Configuration/Status Pages	Administration Menu Map	Print View	Shows a map of the entire Administration menu and the selected values for each setting.
	Current Settings Page	Print View	Print a summary of the current settings for the product. This might be helpful if you plan to make changes and need a record of the present configuration.
	Configuration Page	Print View	Shows the product settings and installed accessories.
	Supplies Status Page	Print View	Shows the approximate remaining life for the supplies; reports statistics on total number of pages and jobs processed, serial number, page counts, and maintenance information. HP provides approximations of the remaining life for the supplies as a customer convenience. The actual remaining supply levels might be different than the approximations provided.
	Usage Page	Print View	Shows a count of all paper sizes that have passed through the product; lists whether they were simplex, duplex, monochrome, or color; and reports the page count.
	File Directory Page	Print View	Shows the file name and folder name for files that are stored in the product memory.

Table 2-17 Reports menu (continued)

First level	Second level	Values	Description
	Web Services Status Page	Print View	Shows the detected Web Services for the product.
Fax Reports	Fax Activity Log	Print View	Contains a list of the faxes that have been sent from or received by this product.
	Billing Codes Report	Print View	Provides a list of billing codes that have been used for outgoing faxes. This report shows how many sent faxes were billed to each code.
	Blocked Fax List	Print View	A list of phone numbers that are blocked from sending faxes to this product.
	Speed Dial List	Print View	Shows the speed dials that have been set up for this product.
	Fax Call Report	Print View	A detailed report of the last fax operation, either sent or received.
Other Pages	PCL Font List	Print	Prints the available PCL fonts.
	PS Font List	Print	Prints the available PS fonts.

General Settings menu

To display: At the product control panel, select the Administration menu, and then select the General Settings menu.

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

Table 2-18 General Settings menu

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

Table 2-18 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Event Type	Wake Sleep	Select whether to add or edit a Wake event or a Sleep event, and then select the time and the days for the wake or sleep event.
			Event Time		
			Event Days	Select days of the week from a list.	
	Sleep Timer Settings	Sleep Mode/Auto Off After		Range: 1 to 120 minutes Default = 60 minutes	Set the number of minutes after which the product enters Sleep or Auto Off mode. Use the arrow buttons on the control panel to increase or decrease the number of minutes.
	Wake/Auto On to These Events			All Events* Network port Power button only	

Table 2-18 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Print Quality	Image Registration	Adjust Tray <X>	Print Test Page		Shift the margin alignment to center the image on the page from top to bottom and from left to right. You can also align the image on the front with the image printed on the back.
					Use the Adjust Tray <X> menu to adjust the registration settings for each tray. Before adjusting these values, print a registration test page. It provides alignment guides in the X and Y directions so you can determine which adjustments are necessary. You can adjust values for X1 Shift, X2 Shift, Y1 Shift, and Y2 Shift.
					Use the Print Test Page option to print a page to test the image registration. It provides alignment guides in the X and Y directions so you can determine which adjustments are necessary.

Table 2-18 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			X1 Shift	-5.00 mm to 5.00 mm	The direction that is perpendicular to the way the paper passes through the product is referred to as X. This is also known as the scan direction. X1 is the scan direction for a single-sided page or for the second side of a two-sided page. X2 is the scan direction for the first side of a two-sided page.
			Y1 Shift		
			X2 Shift		
			Y2 Shift		
					The direction that the paper feeds through the product is referred to as Y. Y1 is the feed direction for a single-sided page or for the second side of a two-sided page. Y2 is the feed direction for the first side of a two-sided page.
	Adjust Paper Types	Select from a list of paper types that the product supports. The available options are the same for each paper type.	Print Mode	Select from a list of print modes.	Changing the Print Mode setting is usually the first thing to try to resolve print-quality problems. Problems can include toner not sticking well to the page, a faint image of the page repeated on the same or following page, incorrect gloss level, etc.

Table 2-18 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Resistance Mode	Normal Up Down	Use this setting to correct print quality problems in low-humidity environments and highly resistive paper. Use the Up option to solve print quality problems that are related to poor toner-transfer. Use the Down option in the event that small, "pin-hole" defects occur.
			Humidity Mode	Normal Alternate 1 Alternate 2 Alternate 3	
			Line Detail	Normal Alternate 1 Off	
	Optimize	Environment		Normal* Low Temp	Enable if the product is operating in a low temperature environment and you are having problems with print quality such as blisters in the printed image.
		Restore Optimize			Use to return all the settings in the Optimize menu to the factory-default values.
	Resolution			300 x 300 dpi 600 x 600 dpi FastRes 1200 ProRes	Sets the resolution at which the product prints.
	REt			On Off	

Table 2-18 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Economode				On
					Off
	Toner density			Default	Lighter print
					Darker print
Jam Recovery				Auto*	This product provides a jam recovery feature that reprints jammed pages. Select one of the following options:
				Off	Auto: The product attempts to reprint jammed pages when sufficient memory is available. This is the default setting.
				On	Off: The product does not attempt to reprint jammed pages. Because no memory is used to store the most recent pages, performance is optimal.
					NOTE: When using this option, if the product runs out of paper and the job is being printed on both sides, some pages can be lost.
					On: The product always reprints jammed pages. Additional memory is allocated to store the last few pages printed. This might cause overall performance to suffer.
Auto Recovery				Enabled	The product attempts to reprint jammed pages when sufficient memory is available. This is the default setting.
				Disabled*	

Table 2-18 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Manage Stored Jobs	Sort Stored Jobs By			Job Name* Date	This option allows you list the jobs either Alphabetically or Chronologically.
	Quick Copy Job Held Timeout			Off* 1 Hour 4 Hours 1 Day 1 Week	Sets a maximum storage-time limit for stored Quick Copy and Proof and Hold jobs. If a stored job is not printed during this period, it is deleted.
	Quick Copy Job Storage Limit			1-100 Default = 32	Configure global settings for jobs that are stored in the product memory. The Quick Copy Job Storage Limit feature specifies the number of Quick Copy and Proof and Hold jobs that can be stored on the product. The maximum allowed value is 100.
	Default Folder Name				Type the name for the stored jobs folder that is accessible to all users.
Enable Retrieve from USB				Enabled Disabled*	Enables the product to open a file from a USB device.

Table 2-18 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Hold Off Print Job				Enabled* Disabled	Enable this feature if you want to prevent print jobs from starting while a user is initiating a copy job from the control panel. Held print jobs start printing after the copy job is finished, provided that no other copy job is in the print queue.
Restore Factory Settings				Address Book Copy Digital Send E-mail Fax General Print Security	Use to restore all product settings to their factory defaults.

Copy Settings menu

To display: At the product control panel, select the Administration menu, and then select the Copy Settings menu.

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

Table 2-19 Copy Settings menu

First level	Second level	Third level	Values	Description
Copies			1–9999 Default = 1	Configure the default options for copy jobs. If the user does not specify the job options when creating the job, the default options are used.
Sides			1-sided original, 1-sided output* 2-sided original, 2-sided output 1-sided original, 2-sided output 2-sided original, 1-sided output	Use to indicate whether the original document is printed on one or both sides, and whether the copies should be printed on one or both sides. For example, select 1-sided original, 2- sided output when the original is printed on one side, but you want to make two-sided copies.
	Orientation	Portrait*		Specify portrait or landscape orientation and select the way the second sides are printed. Portrait orientation means the short edge of the page is along the top.
		Landscape		Landscape orientation means the long edge of the page is along the top.

Table 2-19 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
		2-Sided Format	Book-style	If you are making two-sided copies, select a 2-sided format option.
			Flip-style	
			Book-style original; Flip-style copy	Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge.
			Flip-style original; Book-style copy	
				Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge.
				Book-style original; Flip-style copy: The back side of the original is printed right-side-up, but the back side of the copy is printed upside-down. Use this option when the original is bound along the left edge, but you want the copies to be bound along the top edge.
				Flip-style original; Book-style copy: The back side of the original is printed upside-down, but the back side of the copy is printed right-side-up. Use this option when the original is bound along the top edge, but you want the copies to be bound along the left edge.

Table 2-19 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Collate			Collate on (Sets in page order)* Collate off (Pages grouped)	If you are making more than one copy, select the Collate on (Sets in page order) option to assemble the pages in the correct order in each set of copies. Select the Collate off (Pages grouped) option to group the same pages together. For example, if you are making five copies of an original document that has two pages, all five first pages would be grouped together and all five second pages would be grouped together.
Reduce/Enlarge	Scaling		Auto* 100% 75% 50% 125% 150% 200% Range X-Y (25-400%)	Use to scale the size of the document up or down. Select one of the predefined percentages, or select the Scaling field and type a percentage between 25 and 400. The Auto option automatically scales the image to fit the paper size in the tray. **NOTE:** To reduce the image, select a scaling percentage that is less than 100. To enlarge the image, select a scaling percentage that is greater than 100.
	Auto Include Margins			The product reduces the image slightly to fit the entire scanned image within the printable area on the page.
Paper Selection			Manually feed Automatic Tray 1: [Type], [Size] Tray <X>: [Type], [Size]	For the best color and image quality, select the appropriate paper type from the control panel menu or from the print driver.

Table 2-19 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Image Adjustment	Darkness		Select a value using the slide bar, or touch Automatic.	Use to improve the overall quality of the copy. Adjust the Darkness setting to increase or decrease the amount of white and black in the colors.
	Contrast		Select a value using the slide bar, or touch Automatic.	Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page.
	Background Cleanup		Select a value using the slide bar, or touch Automatic.	Adjust the Background Cleanup setting if you are having trouble copying a faint image.
	Sharpness		Select a value using the slide bar, or touch Automatic.	Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
	Default			Select this to make the selected Image Adjustment setting the default value.
Content Orientation	Orientation		Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top.

Table 2-19 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
	2-Sided Format		Book-style	If you are making two-sided copies, select a 2-sided format option.
			Flip-style	
			Book-style original; Flip-style copy	Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge.
			Flip-style original; Book-style copy	
				Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge.
				Book-style original; Flip-style copy: The back side of the original is printed right-side-up, but the back side of the copy is printed upside-down. Use this option when the original is bound along the left edge, but you want the copies to be bound along the top edge.
				Flip-style original; Book-style copy: The back side of the original is printed upside-down, but the back side of the copy is printed right-side-up. Use this option when the original is bound along the top edge, but you want the copies to be bound along the left edge.
Output Bin			Automatic	
			Standard bin (correct order)	
			Rear bin (straightest path)	

Table 2-19 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Optimize Text/Picture	Manually adjust*		Optimize For slider	Use this setting to optimize the output for a particular type of content.
			Text Printed picture Photograph	Manually adjust: Use to manually optimize the setting for each document. Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books. If you see bands of irregular color or intensity on copies, try selecting the Printed picture setting to improve the quality. Photograph: Use for photographic prints.
Pages per Sheet			One (1) Two (2) Four (4)	Copies multiple pages onto one sheet of paper. NOTE: Before using this screen, use the Content Orientation screen to describe the original document orientation.
	Page Order		Right, then down Down, then right	If you are printing four pages per sheet, select the page order. To print the pages in rows, select the Right, then down option. To print the pages in columns, select the Down, then right option.
	Add Page Borders			If you are printing two or more pages per sheet and you want to print a border around each page, select the Add Page Borders option.
Original Size			Select from a list of sizes that the product supports.	Describes the page size of the original document.

Table 2-19 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Booklet Format	Booklet		Booklet off Booklet on	Use to copy two or more pages onto one sheet of paper so you can fold the sheets in the center to form a booklet. The product arranges the pages in the correct order. For example, if the original document has eight pages, the product prints pages 1 and 8 on the same sheet.
	Original Sides		1-sided 2-sided	Select the 1-sided option if the original document is printed on only one side. Select the 2-sided option if the original document is printed on two sides.
	Borders on Each Page			To print a border around each page, select the Borders on Each Page option.
Edge-to-Edge			Normal (recommended)* Edge-to-Edge output	Use to avoid shadows that can appear along the edges of copies when the original document is printed close to the edges. Combine with the Reduce/Enlarge feature to ensure that the entire page is printed on the copies. When the Edge-to-Edge feature is turned on, the product minimizes margins and prints as close to the edge of the paper as possible.
Job Build			Job Build off* Job Build on	Use to combine several original documents into one job. Also use this feature to scan an original document that has more pages than the document feeder can accommodate at one time. The product temporarily saves all the scanned images. After you have scanned all the pages for the job, touch the Finish option to finish the job.

Scan/Digital Send Settings menu

To display: At the product control panel, select the Administration menu, and then select the Scan/Digital Send Settings menu.

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

Table 2-20 Scan/Digital Send Settings menu

First level	Second level	Third level	Fourth level	Values	Description
E-mail Settings Default Save to Network Folder Options Default Save to USB Options **NOTE:** The same options are available for each of these features, except where noted.	E-mail Setup **NOTE:** Email Settings only	E-mail Setup Wizard			Use to configure settings that apply to sending documents through email or saving documents to a folder on the network or on a USB flash drive. The E-mail Setup Wizard feature configures the product to send scanned images as email attachments. To open the product HP Embedded Web Server and set up the email notification server, enter the product IP address into a Web browser.

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	Image Preview		Make optional*	Defines the default job options for each function. If you do not specify the job options when creating the job, the default options are used. For complete setup, go to the HP Embedded Web Server by typing the IP address of the product into a Web browser.
				Require preview	
				Disable preview	
					Use the Image Preview feature to scan a document and display a preview before completing the job. Select whether this feature is available on the product.
					Make optional: The feature is optional, depending on the user who is signed in.
					Require preview: Previews are required for all users.
					Disable preview: Previews are disabled for all users.

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Default File Name			The product is shipped with a factory default file name of [Untitled] for any scanned files that are sent or saved. Use this feature to specify a different default file name. If you are saving a file to a network folder or USB storage product and a file with the default file name already exists, a number is appended to the file name, for example, [Untitled]001.

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Document File Type		Select from a list of file types.	PDF provides the best overall image and text quality.
					JPEG is a good choice for most graphics. Most computers have a browser that can view .JPEG files. This file type produces one file per page.
					TIFF is a standard file format that many graphics programs support. This file type produces one file per page.
					MTIFF stands for multi-page TIFF. This file type saves multiple scanned pages in a single file.
					XPS (XML Paper Specification) creates an XAML file that preserves the original formatting of the document and supports color graphics and embedded fonts.
					NOTE: OCR file types are not supported on this product unless attached to DSS.

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Optimize Text/ Picture		Manually adjust* Text Printed picture Photograph	Use to optimize the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture. Manually adjust: Use to manually optimize the setting for text or for pictures. Text: Use to optimize the text portion of the copy when text and/ or pictures are on the original. Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books. Photograph: Best suited for making copies of printed pictures.
		Output Quality		High (large file) Medium* Low (small file)	Use to select the quality for the output. Higher-quality images require a larger file size than lower-quality images. Larger files take more time to send, and some recipients might have trouble receiving larger files.

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Original Sides		1-sided 2-sided	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.
		Orientation		Automatically detect Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation.

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			2-Sided Format	Book-style	Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge.
				Flip-style	
					Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge.
		Resolution		400 dpi	Sets the resolution for sent documents. Higher resolution images have more dots per inch (dpi), so they show more detail. Lower resolution images have fewer dots per inch and show less detail, but the file size is smaller. Some file types, for example a file that will be processed with OCR, require a specific resolution. When these file types are selected, the Resolution setting might automatically change to a valid value.
				300 dpi	
				200 dpi	
				150 dpi*	
				75 dpi	

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Content Orientation	Orientation	Auto detect Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation.
		2-Sided Format		Book-style* Flip-style	Use to configure the default style for 2-sided print jobs. If the Book-style option is selected, the back side of the page is printed the right way up. This option is for print jobs that are bound along the left edge. If the Flip-style option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Color/Black		Automatically detect* Color Black/Gray Black	Use to enable or disable color scanning. Automatically detect: Automatically scans documents in color if at least one page has color. Color: Scans documents in color. Black/Gray: Scans documents in grayscale. Black: Scans documents in black and white with a compressed file size.
		Original Size		Selelct from a list of supported sizes.	Use to describe the page size of the original document.
		Notification		Do not notify* Notify when job completes Notify only if job fails	Configure to receive notification about the status of a sent document. Do not notify: Turns off this feature. Notify when job completes: Select to receive notification for this job only.
				Print E-mail	Notify only if job fails: Select to receive notification only if the job is not sent successfully. Print: Select to print the notification at this product.
			Include Thumbnail		**NOTE:** When sending an analog fax, select Include Thumbnail to receive a thumbnail image of the first page of the fax in your notification.

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Notification E-mail address		E-mail: Select to receive the notification in an email. Touch the text box following E-mail Address, and then type the email address for the notification.
		Image Adjustment	Darkness		Use to improve the overall quality of the copy.
					Adjust the Darkness setting to increase or decrease the amount of white and black in the colors.
			Contrast		Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page.
			Background Cleanup		Adjust the Background Cleanup setting if you are having trouble copying a faint image.
			Sharpness		Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
			Automatic Tone		
			Default		

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Job Build		Job Build off* Job Build on	Use to combine several original documents into one job. Also use to scan an original document that has more pages than the document feeder can accommodate at one time. The product temporarily saves all the scanned images. After you have scanned all the pages for the job, touch Finish to finish the job.
		Cropping Options		Do not crop* Crop to content	Use this menu item to automatically crop the scan for digital sending. Use the Crop to content option to scan the smallest possible area that has detectable content.
		Erase Edges		Use Inches Back side erase Front side erase	Use this menu item to remove blemishes, such as dark borders or staple marks, by cleaning the specified edges of the scanned image. In each of the text boxes enter the measurements, in millimeters or inches, for how much of the top edge, bottom edge, left edge, and right edge to clean.
		Blank Page Suppression		Disabled* Enabled	Use to prevent blank pages in the original document from being included in the output document.

Table 2-20 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Digital Send Service Setup	Allow Usage of Digital Sending Software (DSS) Server			Enabled* Disabled	Configure how the product interacts with the HP Digital Sending Software (DSS) server. HP DSS handles digital sending tasks, such as faxing, emailing, and sending scanned documents to a network folder or USB storage device. Use the Allow Usage of Digital Sending Software (DSS) Server option to configure the product to use HP DSS.
	Allow Transfer to New Digital Sending Software (DSS) Server			Enabled* Disabled	Use the Allow Transfer to New Digital Sending Software (DSS) Server option to specify whether DSS management of a product is transferable to a different DSS.

Fax Settings menu

To display: At the product control panel, select the Administration menu, and then select the Fax Settings menu.

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

Table 2-21 Fax Settings menu

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

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Redial on No Answer	Range: 0 – 2 Default = 0	
			Redial on Busy	Range: 0 – 9 Default = 3	
		General Fax Send Settings	Fax Number Confirmation	Enabled Disabled*	If this feature is enabled, you must enter the fax number twice.
			PC Fax Send	Enabled* Disabled	Enables users who have the correct driver installed to send faxes through the product from their computers.
			JBIG Compression	Enabled* Disabled	The JBIG compression reduces fax-transmission time, which can result in lower phone charges. However, using JBIG compression sometimes causes compatibility problems with older fax machines. If this occurs, turn off the JBIG compression.
			Error Correction Mode	Enabled* Disabled	When error-correction mode is enabled and an error occurs during fax transmission, the product sends or receives the error portion again.
			Fax Header	Prepend* Overlay	Use to prepend or overlay the fax header page.
			Fax Number Speed Dial Matching	Enabled Disabled*	Use this item to match the fax number that you type to numbers that are saved as a speed dial.

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Billing Codes	Enable Billing Codes	Off On*	When billing codes are enabled, a prompt displays that asks the user to enter the billing code for an outgoing fax. This prompt does not appear if the Allow users to edit billing codes check box is not checked. You can also use the billing codes report in the Reports menu to view the list of the billing codes that have been used for faxes that have been sent from the product. The list is grouped by billing code and also shows fax details. This feature can be used for billing or usage tracking.
			Default Billing Code		Specify a default billing code for faxing. If you specify a default billing code, this code displays in the Billing Code field when the user sends an outgoing fax. If this field is blank, no default billing code is provided for the user.
			Minimum Length	Range: 1 – 16 Default = 1	Specify the required length of the billing code. Billing codes can be between 1 and 16 characters long.
			Allow users to edit billing codes	Off On*	

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	Image Preview		Make optional* Require preview Disable preview	Use the Image Preview feature to scan a document and display a preview before completing the job. Select whether this feature is available on the product. Make optional: The feature is optional, depending on the user who is signed in. Require preview Previews are required for all users. Disable preview: Previews are disabled for all users.
		Resolution		Standard (100 x 200dpi)* Fine (200 x 200dpi) Superfine (300 x 300dpi)	Select the resolution for outgoing faxes. If you increase the resolution, faxes might be clearer but they could transmit more slowly. Some file types, for example a file that will be processed with OCR, require a specific resolution. When these file types are selected, the Resolution setting might be automatically changed to a valid value.

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Original Sides		1-sided* 2-sided	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.
		Orientation		Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait: This setting means the short edge of the page is along the top. Landscape: This setting means the long edge of the page is along the top.

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			2-Sided Format	Book-style* Flip-style	Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge. Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge.
		Notification		Do not notify* Notify when job completes Notify only if job fails	Use to receive notification about the status of a sent document. Do not notify: Turns off this feature. Notify when job completes: Select to receive notification for this job only. Notify only if job fails: Select to receive notification only if the job is not sent successfully.
				Print E-mail	Print: Select to print the notification at this product. E-mail: Select to receive the notification in an email. Touch the text box following E-mail Address, and then enter the email address for the notification.

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Include Thumbnail		When sending an analog fax, select Include Thumbnail to receive a thumbnail image of the first page of the fax in your notification.
			Notification E-mail address		Provide the email address that will receive notifications.
		Content Orientation	Orientation	Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait: This setting means the short edge of the page is along the top. Landscape: This setting means the long edge of the page is along the top.
			2-Sided Format	Book-style* Flip-style	Use to configure the default style for 2-sided print jobs. If the Book-style option is selected, the back side of the page is printed the right way up. This option is for print jobs that are bound along the left edge. If the Flip-style option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.
		Original Size		Select from a list of sizes that the product supports.	Use to describe the page size of the original document.

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Image Adjustment	Darkness		Use to improve the overall quality of the copy.
					Adjust the Darkness setting to increase or decrease the amount of white and black in the colors.
			Contrast		Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page.
			Background Cleanup		Adjust the Background Cleanup setting if you are having trouble copying a faint image.
			Sharpness		Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
			Automatic Tone		
			Default		

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Optimize Text/ Picture	Manually adjust*	Optimize For Text Printed picture Photograph	Optimizes the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture. Manually adjust: Use to manually optimize the setting for text or for pictures. Text: Use to optimize the text portion of the copy where text and/or pictures are on the original. Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books. Photograph: Best suited for making copies of printed pictures.
		Job Build		Job Build off* Job Build on	Use to divide a complex job into smaller segments. This is useful when you are copying or scanning an original document that has more pages than the document feeder can hold, or when you want to combine pages that have different sizes into one job. You can use either the glass or the document feeder to scan the original documents.
		Blank Page Suppression		Disabled* Enabled	Prevents blank pages in the original document from being included in the output document.

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Fax Receive Settings	Fax Receive Setup	Ringer Volume		Off	Use to configure settings for receiving faxes.
				Low*	
				High	
		Rings To Answer		Range: 1–6	
				Default = 1	
		Fax Receive Speed		Fast*	
				Medium	
				Slow	
		Ring Interval		Range: 220–600 ms	
				Default = 600 ms	
		Ring Frequency		Range: 1–200	
				Default = 68hz	
	Fax Printing Schedule			Always store faxes	If you have concerns about the security of private faxes, use this feature to store faxes rather than having them automatically print. Select Incoming Fax Options, and then you can choose to always store faxes, always print them, or you can set up a schedule for each day of the week.
				Always print faxes*	
				Use Fax Printing Schedule	
		Schedule Touch this to set up a fax printing schedule if you selected the Use Fax Printing Schedule option.	Add (plus sign) Edit Delete	Print incoming faxes Store incoming faxes Time Event Days	If you are using a fax printing schedule, use this menu to configure when to print faxes.

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Blocked Fax Numbers	Fax Number to Block			The blocked fax list can contain up to 30 numbers. When the product receives a call from one of the blocked fax numbers, it deletes the incoming fax. It also logs the blocked fax in the activity log along with job-accounting information.
					Add blocked numbers: Enter a fax number into the Fax Number to Block field, and then touch the arrow button to add a new number to the blocked fax list.
					Remove blocked numbers: Select a number and touch the Delete button to delete it from the blocked fax list.
					Clear all blocked numbers: Touch the Delete All button to clear all of the numbers from the blocked fax list.
					You can also use the **Blocked Fax List** report in the **Information** menu to view the list of the fax numbers that have been blocked on this product.

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	Notification		Do not notify*	Configure to receive notification about the status of a sent document.
				Notify when job completes	
				Notify only if job fails	Do not notify: Turns off this feature.
					Notify when job completes: Select to receive notification for this job only.
					Notify only if job fails: Select to receive notification only if the job is not sent successfully.
			Print		E-mail: Select to receive the notification in an email. Touch the text box following E-mail Address, and then enter the email address for the notification.
			E-mail*		
			Include Thumbnail		**NOTE:** When sending an analog fax, select Include Thumbnail to receive a thumbnail image of the first page of the fax in your notification.
			Notification E-mail address		
		Stamp Received Faxes		Enabled	Use this option to add the date, time, sender's phone number, and page number to each page of the faxes that this product receives.
				Disabled*	

Table 2-21 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Fit to Page		Enabled* Disabled	Use to shrink faxes that are larger than Letter-size or A4-size so that they can fit onto a Letter-size or A4-size page. If this feature set to Disabled, faxes larger than Letter or A4 will flow across multiple pages.
		Paper Selection		Automatic* Select from a list of the trays.	
		Sides		1-sided* 2-sided	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.
Fax Forwarding	Enable Fax Forwarding			Disabled* Enabled	Use to forward received faxes to another fax machine.
		Type of Fax Job to Forward		All faxes Sent faxes Received faxes	
		Fax Forwarding Number			
	Clear fax activity log				Clears all events from the Fax Activity Log list.

General Print Settings menu

To display: At the product control panel, select the Administration menu, and then select the General Print Settings menu.

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

Table 2-22 General Print Settings menu

First level	Second level	Values	Description
Manual Feed		Enabled Disabled*	Use to enable or disable the manual-feed feature, which allows the user to feed paper into the product by hand. When this feature is enabled, the user can select manual feed from the control panel as the paper source for a job. If a tray is not specified as part of a job, manual feed is selected.
Courier Font		Regular* Dark	Select which version of the Courier font you want to use. The factory default setting is Regular, which uses an average stroke width. The Dark setting can be used if a heavier Courier font is needed.
Wide A4		Enabled Disabled*	Changes the printable area of A4-size paper. If you enable this option, eighty 10-pitch characters can be printed on a single line of A4 paper.
Print PS Errors		Enabled Disabled*	Use this feature to select whether a PostScript (PS) error page is printed when the product encounters a PS error.
Print PDF Errors		Enabled Disabled*	Selects whether a PDF error page is printed when the product encounters a PDF error.
Personality		Auto* PCL POSTSCRIPT PDF	Configures the default print language or personality for the product. Normally you should not change the product language. If you change the setting to a specific product language, the product does not automatically switch from one language to another unless specific software commands are sent to it.

Table 2-22 General Print Settings menu (continued)

First level	Second level	Values	Description
PCL	Form Length	Range: 5 – 128 Default = 60	Controls the PCL print-command options. PCL is a set of productcommands that Hewlett-Packard developed to provide access to productfeatures. Use the Form Length feature to select the user-soft default vertical form length.
	Orientation	Portrait* Landscape	Select the orientation that is most often used for copy or scan originals. Select the Portrait option if the short edge is at the top or select the Landscape option if the long edge is at the top.
	Font Source	Internal*	Selects the font source for the user-soft default font. The list of available options varies depending on the installed product options.
	Font Number	Range: 0 – 110 Default = 0	Specifies the font number for the user-soft default font using the source that is specified in the Font Source menu. The product assigns a number to each font and lists it on the PCL font list. The font number displays in the Font # column of the printout.
	Font Pitch	Range: 0.44 – 99.99 Default = 10	If the Font Source option and the Font Number setting indicate a contour font, then use this feature to select a default pitch (for a fixed-spaced font).
	Font Point Size	Range: 4.00 – 999.75 Default = 12.00	If the Font Source option and the Font Number setting indicate a contour font, then use this feature to select a default point size (for a proportional-spaced font).
	Symbol Set	Select from a list of symbol sets.	Select any one of several available symbol sets from the control panel. A symbol set is a unique grouping of all the characters in a font. The factory default value for this option is PC-8. Either PC-8 or PC-850 are recommended for line-draw characters.

Table 2-22 General Print Settings menu (continued)

First level	Second level	Values	Description
	Append CR to LF	No* Yes	Configure whether a carriage return (CR) is appended to each line feed (LF) encountered in backwards-compatible PCL jobs (pure text, no job control). Select Yes to append the carriage return. The default setting is No. Some environments, such as UNIX, indicate a new line by using only the line-feed control code. This option allows the user to append the required carriage return to each line feed.
	Suppress Blank Pages	No* Yes	This option is for users who are generating their own PCL, which could include extra form feeds that would cause blank pages to be printed. When the Yes option is selected, form feeds are ignored if the page is blank.
	Media Source Mapping	Standard* Classic	Use to select and maintain input trays by number when you are not using the product driver, or when the software program has no option for tray selection. The following options are available: Standard: Tray numbering is based on newer HP LaserJet models. Classic: Tray numbering is based on HP LaserJet 4 and older models.

Default Print Options menu

To display: At the product control panel, select the Administration menu, and then select the Default Print Options menu.

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

Table 2-23 Default Print Options menu

First level	Second level	Values	Description
Number of Copies		Range: 1–32000 Default = 1	Sets the default number of copies for a copy job. This default applies when the Copy function or the Quick Copy function is initiated from the product Home screen.
Default Paper Size		Select from a list of sizes that the product supports.	Configures the default paper size used for print jobs.
Default Custom Paper Size	X Dimension	Range: 3–8.5 inches Default = 8.5 inches	Configures the default paper size that is used when the user selects **Custom** as the paper size for a print job.
	Y Dimension	Range: 5–14 inches Default = 14 inches	
	Use Inches	Enabled* Disabled	
Sides		1-sided* 2-sided	Use to indicate whether the original document is printed on one or both sides, and whether the copies should be printed on one or both sides. For example, select the 1-sided original, 2-sided output option when the original is printed on one side, but you want to make two-sided copies. Select the Orientation setting to specify portrait or landscape orientation and to select the way the second sides are printed.

Table 2-23 Default Print Options menu (continued)

First level	Second level	Values	Description
2-Sided Format		Book-style* Flip-style	Configures the default style for 2-sided print jobs. If the Book-style option is selected, the back side of the page is printed the right way up. This option is for print jobs that are bound along the left edge. If the Flip-style option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.
Edge-to-Edge		Normal (recommended)* Edge-to-Edge output	Use to avoid shadows that can appear along the edges of copies when the original document is printed close to the edges.

Display Settings menu

To display: At the product control panel, select the Administration menu, and then select the Display Settings menu.

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

Table 2-24 Display Settings menu

First level	Second level	Values	Description
Key Press Sound		On* Off	Use to specify whether you hear a sound when you touch the screen or press buttons on the control panel.
Language Settings	Language	Select from a list of languages that the product supports.	Use to select a different language for control-panel messages and specify the default keyboard layout. When you select a new language, the keyboard layout automatically changes to match the factory default for the selected language.
	Keyboard Layout	Each language has a default keyboard layout. To change it, select from a list of layouts.	Select the default keyboard layout that matches the language you want to use.
How to Connect Button		Display* Hide	Use this menu item to display or hide the How to Connect Button on the Home screen.
Date and Time		Show Date and Time* Hide Date and Time	Select whether to display or hide the date and time on the control panel Home screen.
Inactivity Timeout		Range: 10 – 300 seconds Default = 60 seconds	Specifies the amount of time that elapses between any activity on the control panel and when the product resets to the default settings. When the timeout expires, the control-panel display returns to the Home menu, and any user signed in to the product is signed out.

Table 2-24 Display Settings menu (continued)

First level	Second level	Values	Description
Clearable Warnings		On Job*	Use this feature to set the period that a clearable warning displays on the control panel. If the On setting is selected, clearable warnings appear until the Clearable Warnings button is pressed. If the Job setting is selected, clearable warnings stay on the display during the job that generated the warning and disappear from the display when the next job starts.
Continuable Events		Auto-continue (10 seconds)* Touch OK to continue	Use this option to configure the product behavior when the product encounters certain errors. If the Auto-continue (10 seconds) option is selected, the job will continue after 10 seconds. If the Touch OK to continue option is selected, the job will stop and require the user to press the OK button before continuing.

Manage Supplies menu

To display: At the product control panel, select the Administration menu, and then select the Manage Supplies menu.

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

Table 2-25 Manage Supplies menu

First level	Second level	Third level	Fourth level	Values	Description
Supplies Status				Print	
				View	
Supply Settings	Black Cartridge	Low Threshold Settings		1-100% Default = 10%	Set the estimated percentage at which the product notifies you when the toner cartridge is very low.
		Very Low Settings		Stop Prompt to continue* Continue	Specifies how the product notifies you when the toner cartridge is very low. Stop: The product stops until you replace the toner cartridge. Prompt to continue: The product stops and prompts you to replace the toner cartridge. You can acknowledge the prompt and continue printing. Continue: The product alerts you that a toner cartridge is very low, but it continues printing.
	Document Feeder Kit	Low Threshold Settings		1-100% Default = 10%	Set the percentage at which the product notifies you when the document feeder kit is very low.

Table 2-25 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Very Low Settings		Stop Prompt to continue* Continue	Configure how the product responds when the document feeder kit is reaching the end of its estimated life. Stop: The product stops until you replace the document feeder kit. Prompt to continue: The product stops and prompts you to replace the document feeder kit. You can acknowledge the prompt and continue printing Continue: The product alerts you that the document feeder kit is very low, but it continues printing.
	Store Usage Data			On supplies Not on supplies	The Store Usage Data menu provides a way to suppress the toner cartridges from storing most of the information gathered exclusively for the purpose of understanding the usage of the product. Select the On supplies setting to store the data on the toner cartridge memory chip. Select the Not on supplies setting to suppress the information from being stored on the memory chip.

Table 2-25 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Supply Messages		Low Message		On* Off	Use to configure whether a message displays on the control panel when supplies are getting low, but have not yet reached the low threshold.
Reset Supplies	New Document Feeder Kit			Reset Cancel	Select this option if you have installed a new document feeder kit.

Manage Trays menu

To display: At the product control panel, select the Administration menu, and then select the Manage Trays menu.

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

Table 2-26 Manage Trays menu

First level	Values	Description
Use Requested Tray	Exclusively* First	Controls how the product handles jobs that have specified a specific input tray. Two options are available: Exclusively: The product never selects a different tray when the user has indicated that a specific tray should be used, even if that tray is empty. First: The product pulls from another tray if the specified tray is empty, even though the user specifically indicated a tray for the job.
Manually Feed Prompt	Always* Unless loaded	Indicate whether a prompt should appear when the type or size for a job does not match the specified tray and the product pulls from the multipurpose tray instead. Two options are available: Always: A prompt always displays before using the multipurpose tray. Unless loaded: A message displays only if the multipurpose tray is empty.
Size/Type Prompt	Display* Do not display	Controls whether the tray configuration message displays whenever a tray is closed. Two options are available: Display: This option shows the tray configuration message when a tray is closed. The user is able to configure the tray settings directly from this message. Do not display: This option prevents the tray configuration message from automatically appearing.

Table 2-26 Manage Trays menu (continued)

First level	Values	Description
Use Another Tray	Enabled* Disabled	Use to turn on or off the control-panel prompt to select another tray when the specified tray is empty. Two options are available: Enabled: When this option is selected, the user is prompted either to add paper to the selected tray or to choose a different tray. Disabled: When this option is selected, the user is not given the option of selecting a different tray. The product prompts the user to add paper to the tray that was initially selected.
Alternative Letterhead Mode	Disabled* Enabled	Use to load letterhead or preprinted paper into the tray the same way for all print jobs, whether you are printing to one side of the sheet or to both sides of the sheet. When this option is selected, load the paper as you would for printing on both sides. See the user documentation that came with the product for instructions about loading letterhead for printing on both sides. When this option is selected, the product speed slows to the speed required for printing on both sides.
Duplex Blank Pages	Auto* Yes	Control how the product handles two-sided jobs (duplexing). Two options are available: Auto: This option enables Smart Duplexing, which instructs the product not to process blank pages. Yes: This option disables Smart Duplexing and forces the duplexer to flip the sheet of paper even if it is printed on only one side. This might be preferable for certain jobs that use paper types such as letterhead or prepunched paper.
Override A4/Letter	Yes* No	Prints on letter-size paper when an A4 job is sent but no A4-size paper is loaded in the product (or to print on A4 paper when a letter-size job is sent but no letter-size paper is loaded). This option will also override A3 with ledger-size paper and ledger with A3-size paper.

Network Settings menu

To display: At the product control panel, select the Administration menu, and then select the Network Settings menu.

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

Table 2-27 Network Settings menu

First level	Values	Description
I/O Timeout	Range: 5 – 300 sec Default = 15	Use to set the I/O timeout period in seconds. I/O timeout refers to the elapsed time before a print job fails. If the stream of data that the product receives for a print job gets interrupted, this setting indicates how long the product will wait before it reports that the job has failed.
Jetdirect Menu	See the table that follows for details. These menus have the same structure. If an additional HP Jetdirect network card is installed in the EIO slot, then both menus are available.	

Table 2-28 Jetdirect Menu

First level	Second level	Third level	Fourth level	Values	Description
Information	Print Sec Report			Yes No*	Yes: Prints a page that contains the current security settings on the HP Jetdirect print server. No: A security settings page is not printed.
TCP/IP	Enable			On* Off	On: Enable the TCP/IP protocol. Off: Disable the TCP/IP protocol.
	Host Name			Use the arrow buttons to edit the host name. **NPIXXXXXX***	An alphanumeric string, up to 32 characters, used to identify the product. This name is listed on the HP Jetdirect configuration page. The default host name is NPIxxxxxx, where xxxxxx is the last six digits of the LAN hardware (MAC) address.

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	IPV4 Settings	Config Method		Bootp DHCP* Auto IP Manual	Specifies the method that TCP/IPv4 parameters will be configured on the HP Jetdirect print server. Bootp (Bootstrap Protocol): Use for automatic configuration from a BootP server. DHCP (Dynamic Host Configuration Protocol): Use for automatic configuration from a DHCPv4 server. If selected and a DHCP lease exists, the DHCP Release menu and the DHCP Renew menu are available to set DHCP lease options. Auto IP: Use for automatic link-local IPv4 addressing. An address in the form 169.254.x.x is assigned automatically. If you set this option to the Manual setting, use the Manual Settings menu to configure TCP/IPv4 parameters.
		Manual Settings NOTE: This menu is available only if you select the Manual option under the Config Method menu.	IP Address	Enter the address.	(Available only if the Config Method option is set to the Manual option.) Configure parameters directly from the product control panel:
			Subnet Mask	Enter the address.	
			Default Gateway	Enter the address.	

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Default IP		Auto IP* Legacy	Specify the IP address to default to when the print server is unable to obtain an IP address from the network during a forced TCP/IP reconfiguration (for example, when manually configured to use BootP or DHCP). **NOTE:** This feature assigns a static IP address that might interfere with a managed network. Auto IP: A link-local IP address 169.254.x.x is set. Legacy: The address 192.0.0.192 is set, consistent with older HP Jetdirect products.
		Primary DNS		Range: 0 – 255 Default = **xxx.xxx.xx.xx**	Specify the IP address (n.n.n.n) of a Primary Domain Name System (DNS) Server.
		Secondary DNS		Range: 0 – 255 Default = **0.0.0.0**	Specify the IP address (n.n.n.n) of a Secondary DNS Server.
	IPV6 Settings	Enable		Off On*	Use this item to enable or disable IPv6 operation on the print server. Off: IPv6 is disabled. On: IPv6 is enabled.
		Address	Manual Settings	Enable Address	Use this item to enable and manually configure a TCP/IPv6 address.

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		DHCPV6 Policy		Router Specified Router Unavailable* Always	Router Specified: The stateful auto-configuration method to be used by the print server is determined by a router. The router specifies whether the print server obtains its address, its configuration information, or both from a DHCPv6 server. Router Unavailable: If a router is not available, the print server should attempt to obtain its stateful configuration from a DHCPv6 server. Always: Whether a router is available, the print server always attempts to obtain its stateful configuration from a DHCPv6 server.
		Primary DNS			
		Secondary DNS			

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Proxy Server			Select from a provided list.	Specifies the proxy server to be used by embedded applications in the product. A proxy server is typically used by network clients for Internet access. It caches Web pages, and provides a degree of Internet security, for those clients. To specify a proxy server, enter its IPv4 address or fully-qualified domain name. The name can be up to 255 octets. For some networks, you might need to contact your Internet Service Provider (ISP) for the proxy server address.
	Proxy Port			Default = **00080**	Enter the port number used by the proxy server for client support. The port number identifies the port reserved for proxy activity on your network, and can be a value from 0 to 65535.
	Idle Timeout			Default = **0270**	The time period, in seconds, after which an idle TCP print data connection is closed (default is 270 seconds, 0 disables the timeout).

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Security	Secure Web			HTTPS Required* HTTPS Optional	For configuration management, specify whether the HP Embedded Web Server will accept communications using HTTPS (Secure HTTP) only, or both HTTP and HTTPS. HTTPS Required: For secure, encrypted communications, only HTTPS access is accepted. The print server will appear as a secure site.
	IPSEC			Keep Disable*	Specify the IPSec status on the print server. Keep: IPSec status remains the same as currently configured. Disable: IPSec operation on the print server is disabled.
	802.1X			Reset Keep*	Specify whether the 802.1X settings on the print server are reset to the factory defaults. Reset: The 802.1X settings are reset to the factory defaults. Keep: The current 802.1X settings are maintained.

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Reset Security			Yes No*	Specify whether the current security settings on the print server will be saved or reset to factory defaults. Yes: Security settings are reset to factory defaults. No: The current security settings are maintained.

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Diagnostics	Embedded Tests	LAN HW Test		Yes No*	Provides tests to help diagnose network hardware or TCP/IP network connection problems. Embedded tests help to identify whether a network fault is internal or external to the product. Use an embedded test to check hardware and communication paths on the print server. After you select and enable a test and set the execution time, you must select the Execute option to initiate the test. Depending on the execution time, a selected test runs continuously until either the product is turned off, or an error occurs and a diagnostic page is printed. **CAUTION:** Running this embedded test will erase your TCP/IP configuration. This test performs an internal loopback test. An internal loopback test will send and receive packets only on the internal network hardware. There are no external transmissions on your network.

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		HTTP Test		Yes No*	This test checks operation of HTTP by retrieving predefined pages from the product, and tests the HP Embedded Web Server. Select the Yes option to choose this test, or the No option to not choose it.
		SNMP Test		Yes No*	This test checks operation of SNMP communications by accessing predefined SNMP objects on the product. Select the Yes option to choose this test, or the No option to not choose it.
		Data Path Test		Yes No*	This test helps to identify data path and corruption problems on an HP postscript level 3 emulation product. It sends a predefined PS file to the product, However, the test is paperless; the file will not print. Select the Yes option to choose this test, or the No option to not choose it.
		Select All Tests		Yes No*	Use this item to select all available embedded tests. Select the Yes option to choose all tests. Select the No option to select individual tests.

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Execution Time [H]		Range: 1 – 24 hours Default = 1 hour	Specify the length of time (in hours) that an embedded test will be run. If you select zero (0), the test runs indefinitely until an error occurs or the product is turned off. Data gathered from the HTTP, SNMP, and Data Path tests is printed after the tests have completed.
		Execute		No* Yes	No: Do not initiate the selected tests. Yes: Initiate the selected tests.
	Ping Test	Dest Type		IPv4 IPv6	This test is used to check network communications. This test sends link-level packets to a remote network host, then waits for an appropriate response. To run a ping test, set the following items: Dest Type Specify whether the target product is an IPv4 or IPv6 node.
		Dest IPv4		Range: 0 – 255 Default = **127.0.0.1**	Enter the IPv4 address.
		Dest IPv6		Select from a provided list. Default = **: : 1**	Enter the IPv6 address.
		Packet Size		Default = **64**	Specify the size of each packet, in bytes, to be sent to the remote host. The minimum is 64 (default) and the maximum is 2048.

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Timeout		Default = **001**	Specify the length of time, in seconds, to wait for a response from the remote host. The maximum is 100.
		Count		Default = **004**	Specify the number of ping test packets to send for this test. Select a value from 0 to 100. To configure the test to run continuously, select 0.
		Print Results		Yes No*	
		Execute		Yes No*	No: Do not initiate the selected tests. Yes: Initiate the selected tests.
	Ping Results	Packets Sent		Default = **00000**	Shows the number of packets (0 - 65535) sent to the remote host since the most recent test was initiated or completed..
		Packets Received		Default = **00000**	Shows the number of packets (0 - 65535) received from the remote host since the most recent test was initiated or completed. The default is 0.
		Percent Lost		Default = **000**	Shows the percent (0 to 100) of ping test packets that were sent with no response from the remote host since the most recent test was initiated or completed.

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		RTT Min		Default = **0000**	Shows the minimum detected roundtrip-time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		RTT Max		Default = **0000**	Shows the maximum detected roundtrip-time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		RTT Average		Default = **0000**	Shows the average round-trip-time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		Ping In Progress		Yes No*	Shows whether a ping test is in progress. Yes: Indicates a test in progress. No: Indicates that a test completed or was not run.
		Refresh		Yes No*	When viewing the ping test results, this item upgrades the ping test data with current results. Select the Yes option to upgrade the data, or the No option to maintain the existing data. However, a refresh automatically occurs when the menu times out or you manually return to the main menu.

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Link Speed				Auto*	The link speed and communication mode of the print server must match the network. The available settings depend on the product and installed print server. Select one of the following link configuration settings:
					CAUTION: If you change the link setting, network communications with the print server and network product might be lost.
					The print server uses auto-negotiation to configure itself with the highest link speed and communication mode allowed. If auto-negotiation fails, either the 100TX Half feature or the 10T Half feature is set depending on the detected link speed of the hub/switch port. (A 1000T half-duplex selection is not supported.)
				10T Half	10 Mbps, half-duplex operation.
				10T Full	10 Mbps, full-duplex operation.
				10T Auto	100 Mbps, half-duplex operation.
				100TX Half	100 Mbps, full-duplex operation.

Table 2-28 Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
				100TX Full	Limits auto-negotiation to a maximum link speed of 100 Mbps.
				100TX Auto	1000 Mbps, full-duplex operation.

Troubleshooting menu

To display: At the product control panel, select the Administration menu, and then select the Troubleshooting menu.

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

Table 2-29 Troubleshooting menu

First level	Second level	Third level	Fourth level	Values	Description
Event Log				View* Print	Use to print a list of the 1,000 most recent events in the Event Log. For each event, the printed log shows the error number, page count, error code, and description or personality.
Paper Path Page				View* Print	Shows how many pages were printed from each tray.
Fax	Fax T.30 Trace	Print T.30 Report		Print	Use to print or configure the fax T.30 trace report. T.30 is the standard that specifies handshaking, protocols, and error correction between fax machines.
		When to Print Report		Never automatically print* Print after every fax Print only after fax send jobs Print after any fax error Print only after fax send errors Print only after fax receive errors	Configure the T.30 report to print after certain events. You can choose to print the report after every fax job, every fax job sent, every fax job received, every send error, or every receive error.
	Fax V.34			Normal* Off	Use to disable V.34 modulations if several fax failures have occurred or if phone line conditions require it.

Table 2-29 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Fax Speaker Mode			Normal* / Diagnostic	Used by a technician to evaluate and diagnose fax issues by listening to the sounds of fax modulations.
	Fax Log Entries			On / Off*	The standard fax log includes basic information such as the time and whether the fax was successful. The setailed fax log shows the intermediate results of the redial process not shown in the standard fax log.
Print Quality Pages	Fuser Test Page			Print	Use to print pages that help you resolve problems with print quality.
Diagnostic Tests	Paper Path Sensors			Select from a list of the product sensors.	Initiates a test of the paper path sensors.
	Paper Path Test	Print Test Page			
		Source Tray		Select from a list of the available trays.	Generates a test page for testing paper handling features. You can define the path that is used for the test in order to test specific paper paths.
		Output Bin		All bins / Face down / Face up	
		Test Duplex Path		Off* / On	

Table 2-29 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Number of Copies		Range: 1–500 Default = 1	Sets the default number of copies for a copy job. This default applies when the Copy or Quick Copy function is initiated from the product Home screen. The factory default setting is 1.
	Manual Sensor Test			Select from a list of available components. Reset Sensors	Test the product sensors and switches for correct operation. Each sensor is displayed on the control-panel screen, along with its status. Manually trip each sensor and watch for it to change on the screen. Press the Stop button to abort the test.
	Tray/Bin Manual Sensor Test			Select from a list of available components. Reset Sensors	Test the sensors in the trays and bins for correct operation. Each sensor is displayed on the control-panel screen, along with its status. Manually trip each sensor and watch for it to change on the screen. Press the Stop button to abort the test.

Table 2-29 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Component Test			Select from a list of available components.	Use to exercise individual parts independently to isolate noise, leaking, or other issues. To start the test, select one of the components. The test will run the number of times specified by the Repeat option. You might be prompted to remove parts from the product during the test. Press the Stop button to abort the test.
	Print/Stop Test				Specify the length of time in milliseconds (0-60,000).
	Continuous Scan			2-sided	
	Scanner Tests			Sensors	
Retrieve Diagnostic Data				Create device data file	Create files that contain information about the product that can help identify the cause of problems.
				Create zipped debug information file	
				Include crash dump files	
				Clean up debug information	
				Send to E-mail	
				Export to USB	
Generate Debug Data				Start	

Device Maintenance menu

Backup/Restore menu

To display: At the product control panel, select the Device Maintenance menu, and then select the Backup/Restore menu.

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

Table 2-30 Backup/Restore menu

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

Calibration/Cleaning menu

To display: At the product control panel, select the Device Maintenance menu, and then select the Calibration/Cleaning menu.

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

Table 2-31 Calibration/Cleaning menu

First level	Second level	Values	Description
Cleaning Settings	Auto Cleaning	Off* On	Use to select the Auto Cleaning menu or the Cleaning Interval menu.
	Cleaning Interval	Select from a list of cleaning intervals.	Use to set the interval when the cleaning page should be printed. The interval is measured by the number of pages printed.
	Cleaning Size	Select from a list of support sizes.	Select the paper size to use for the cleaning page.
Cleaning Page		Print	Use to process the cleaning page that was created by using the Create Cleaning Page menu. The process takes up to 1.5 minutes.
Calibrate Scanner			Touch Next to calibrate the device scanner. Messages on the control panel display will lead you through the calibration process.
Clean Rollers			Perform automatic cleaning for the document-feeder rollers.
Clean Document Feeder Settings	Low Threshold Settings	Range: 0–100% Default = 10%	Configure cleaning settings for the document feeder.
	Very Low Settings	Stop Prompt to continue* Continue	

USB Firmware Upgrade menu

To display: At the product control panel, select the Device Maintenance menu, and then select the USB Firmware Upgrade menu.

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

Service menu

To display: At the product control panel, select the Device Maintenance menu, and then select the Service menu.

The Service menu is locked and requires a PIN for access. This menu is intended for use by authorized service personnel. See the Service menu in the service mode functions section of the product troubleshooting manual.

Interpret control-panel messages

Control-panel message types

The control-panel messages and event code errors indicate the current product status or situations that might require action.

> **NOTE:** Event log errors may or may not appear on the control-panel display. Access the event log to view or print the event log errors.

Control-panel messages appear temporarily and might require that you acknowledge the message by pressing the OK button to resume printing or by pressing the Stop button to cancel the job. With certain messages, the job might not finish printing or the print quality might be affected. If the message is related to printing and the auto-continue feature is on, the product will attempt to resume printing after the message has appeared for 10 seconds without acknowledgement.

For some messages, restarting the product might fix the problem. If a critical error persists, the product might require service.

Control-panel messages

11.00.YY Internal clock error To continue, touch "OK"

Description

The product real-time clock has experienced an error.

- XX = 01: Clock battery failed

- XX = 02: Real-time clock failed

Recommended action

Whenever the product is turned off and then turned on again, set the time and date at the control panel.

If the error persists, replace the formatter.

13.80.A1 Jam in upper left door

Description

Input stay jam. This jam occurs when the inlet sensor (SR2100) stayed activated too long.

Recommended action

1. Open the upper left door.

2. Remove all paper found.

3. Lower the stacker bin if it is in up position, and then close the door.

4. If the error persists, replace the stapler/stacker paper feed assembly.

13.80.D1 Jam in upper left door

Description

Input delay jam. Paper did not arrive at the jam inlet sensor (SR2100).

Recommended action

1. Open the upper left door

2. Remove all paper found.

3. Close the upper left door.

4. If the error persists, replace the stapler/stacker paper feed assembly.

13.80.FF Jam in upper left door

Description

Input initial jam. At power on, the paper was detected at the inlet sensor (2100).

Recommended action

1. Open the upper left door.

2. Remove all paper found.

3. Lower the stacker bin if it is in the up position, and then close the upper left door.

4. If the error persists, replace the stapler/stacker.

13.84.A1 Jam in upper bin

Description

Exit stay jam. The paper exit sensor (SR2103) at the accumulator stayed activated for too long.

Recommended action

1. Remove all paper in the upper bin.

2. Open the upper left door.

3. Remove all paper found.

4. Close the upper left door.

5. If the error persists, replace the stapler/stacker alignment assembly.

13.84.FF Jam in upper bin

Description

Exit initialization jam. At power on, paper was detected to be present on the exit sensor (SR2103).

Recommended action

1. Remove all paper from the stacker bin area.

2. Open the upper left door.

3. Remove all paper found.

4. Lower the stacker bin if it is in up position, and then close the upper left door.

5. If the error persists, replace the stapler/stacker alignment assembly.

13.89.31 Jam in Stapler

Description

Staple jam. Stapler could not finish its cycle, but it was able to return to home position.

Recommended action

1. Open the front stapler door.

2. Remove the staple cartridge.

3. Remove all paper found.

4. Lift the metal cover on the staple cartridge.

5. Remove the sheet of staples.

6. Close the metal cover.

7. Insert the staple cartridge until it clicks.

8. Close the front stapler door.

9. If the error persists, replace the stapler assembly.

13.A4.D4 Jam in lower right door

Description

This jam occurs when the leading edge passes the source tray feed sensor (PS3302), but does not reach the HCI exit feed sensor (PS3301) in the designated amount of time.

Recommended action

1. Open the lower right door, remove any jammed paper, and then close the lower right door.

2. For the following input device configurations: HCI only, do the following.

    a. Inspect the Tray 4 pick, feed and separation rollers. Clean or replace them if necessary.

    b. Check the connectors on the HCI controller PCA and the paper feed crossing assembly.

    c. Use the Tray/bin manual sensor tests to toggle the Tray 4 feed sensor. If the sensor or lever are not properly functioning, replace the HCI paper pickup assembly.

d. Use the Components tests to toggle the Tray 4 solenoid (listen for the solenoid to move). If the solenoid is not properly functioning, replace the Tray 4 paper pickup assembly.

e. Use the Components tests to activate the Tray 4 pickup motor (listen for the motor to rotate). If the motor is not properly functioning, replace the Tray 4 pickup motor.

13.A4.D4 Jam in tray 4

Description

No pick jam. This jam occurs when the paper does not reach the Tray 4 feed sensor (SR1PF) in the designated amount of time (for the following optional tray configurations).

Optional Tray Configurations

◦ 1x500 stackable only

◦ 1x500 non-stackable only

◦ 3x500 non-stackable only

◦ HCI non-stackable only

◦ 1x500 stackable + 1x500 non-stackable

◦ 1x500 stackable + HCI non-stackable

No pick jam. This jam occurs when the paper does not reach the Tray 4 feed sensor (PS3302) in the designated amount of time (HCI only optional tray configuration).

Recommended action

1. Open Tray 4, remove any jammed paper, and then close Tray 4.

2. For the following input device configurations: 1x500 paper feeder, 1x500 paper deck, 3x500 paper deck, 1x500 paper feeder with 1x500 paper deck, and 1x500 paper feeder with 3500 sheet HCI, HCI only; do the following.

   a. Inspect the Tray 4 pick, feed and separation rollers. Clean or replace them if necessary.

   b. Check the connectors at the feed sensor, solenoid, feed motor, and the controller PCA.

   c. Use the Tray/bin manual sensor tests to toggle the Tray 4 feed sensor. If the sensor is not properly functioning, replace the Tray 4 paper pickup assembly.

   d. Use the Components tests to activate the Tray 4 pickup motor (listen for the motor to rotate). If the motor is not properly functioning, replace the Tray 4 pickup motor.

13.A4.D5 Jam in lower right door

Description

This jam occurs when the leading edge of the sheet exits the source tray, but does not reach the Tray 4 feed sensor (SR1PD) in the designated amount of time.

Recommended action

3x500 paper deck installed.

1. Open the lower right door, remove any jammed paper, and then close the lower right door.

2. Inspect the Tray 5 pick, feed and separation rollers. Clean or replace them if necessary.

3. Check the connectors at the feed sensor, solenoid, feed motor, and the controller PCA.

4. Use the Tray/bin manual sensor tests to toggle the Tray 5 feed sensor. If the sensor or lever are not properly functioning, replace the Tray 5 paper pickup assembly.

5. Use the Components tests to toggle the Tray 5 solenoid (listen for the solenoid to move). If the solenoid is not properly functioning, replace the Tray 5 paper pickup assembly.

6. Use the Components tests to activate the Tray 5 pickup motor (listen for the motor to rotate). If the motor is not properly functioning, replace the Tray 5 pickup motor.

7. Use the Tray/bin manual sensor tests to toggle the Tray 4 feed sensor. If the sensor or lever are not properly functioning, replace the HCI paper pickup assembly.

13.A4.D5 Jam in middle right door

Description

This jam occurs when the leading edge of the sheet exits the source tray, but does not reach the Tray 4 feed sensor (SR1PF) in the designated amount of time.

Recommended action

1x500 paper feeder and 1x500 paper deck installed or a 1x500 paper feeder and HCI installed.

1. Open the middle right door, remove any jammed paper, and then close the middle right door.

2. Inspect the Tray 5 pick, feed and separation rollers. Clean or replace them if necessary.

3. Check the connectors at the feed sensor, solenoid, feed motor, and the controller PCA.

4. Use the Tray/bin manual sensor tests to toggle the Tray 5 feed sensor. If the sensor or lever are not properly functioning, replace the Tray 5 paper pickup assembly.

5. Use the Components tests to toggle the Tray 5 solenoid (listen for the solenoid to move). If the solenoid is not properly functioning, replace the Tray 5 paper pickup assembly.

6. Use the Components tests to activate the Tray 5 pickup motor (listen for the motor to rotate). If the motor is not properly functioning, replace the Tray 5 pickup motor.

7. Use the Tray/bin manual sensor tests to toggle the Tray 4 feed sensor. If the sensor or lever are not properly functioning, replace the HCI paper pickup assembly.

13.A4.D6 Jam in lower right door

Description

This jam occurs when the leading edge of the sheet exits the source tray, but does not reach the Tray 4 feed sensor (SR1PD) in the designated amount of time.

Recommended action

3x500 paper deck installed.

1. Open the lower right door, remove any jammed paper, and then close the lower right door.

2. Inspect the Tray 6 pick, feed and separation rollers. Clean or replace them if necessary.

3. Check the connectors at the feed sensor, solenoid, feed motor, and the controller PCA.

4. Use the Tray/bin manual sensor tests to toggle the Tray 6 feed sensor. If the sensor or lever are not properly functioning, replace the Tray 6 paper pickup assembly.

5. Use the Components tests to toggle the Tray 6 solenoid (listen for the solenoid to move). If the solenoid is not properly functioning, replace the Tray 6 paper pickup assembly.

6. Use the Components tests to activate the Tray 6 pickup motor (listen for the motor to rotate). If the motor is not properly functioning, replace the Tray 6 pickup motor.

7. Use the Tray/bin manual sensor tests to toggle the Tray 4 feed sensor. If the sensor or lever are not properly functioning, replace the HCI paper pickup assembly.

13.A4.D6 Jam in middle right door

Description

This jam occurs when the leading edge of the sheet exits the source tray, but does not reach the Tray 4 feed sensor (SR1PF) in the designated amount of time.

Recommended action

Two 1x500 paper feeders and 1x500 paper deck installed or a 1x500 paper feeder and HCI installed.

1. Open the middle right door, remove any jammed paper, and then close the middle right door.

2. Inspect the Tray 6 pick, feed and separation rollers. Clean or replace them if necessary.

3. Check the connectors at the feed sensor, solenoid, feed motor, and the controller PCA.

4. Use the Tray/bin manual sensor tests to toggle the Tray 6 feed sensor. If the sensor or lever are not properly functioning, replace the Tray 6 paper pickup assembly.

5. Use the Components tests to toggle the Tray 6 solenoid (listen for the solenoid to move). If the solenoid is not properly functioning, replace the Tray 6 paper pickup assembly.

6. Use the Components tests to activate the Tray 6 pickup motor (listen for the motor to rotate). If the motor is not properly functioning, replace the Tray 6 pickup motor.

7. Use the Tray/bin manual sensor tests to toggle the Tray 4 feed sensor. If the sensor or lever are not properly functioning, replace the HCI paper pickup assembly.

13.A4.FF Jam in tray 4 or 13.A4.FF Jam in lower right door or 13.A4.FF Jam in middle right door

Description

Residual paper jam. This jam occurs when paper exists at any of the paper path jam sensors when the product power is turned on or after jam re-evaluation.

Depending on the input device configuration this jam could be at the 1x500 sheet paper feeder, the top tray of the 1x500 sheet paper deck or 3x500 paper deck, the right tray of the HCI, or the HCI exit media feed sensor (SR1PF, SR1PD, PS3302—HCI, PS3301—HCI).

Recommended action

1. Open the appropriate door, remove any jammed paper, and then close the door.

2. Check for jammed paper in Tray 4 and the HCI right tray inner flap.

3. Inspect the connectors at the feed sensor and controller PCA for Tray 4.

4. Check the connectors at the feed sensor, solenoid, feed motor, and the controller PCA.

5. Use the Tray/bin manual sensor tests to toggle the Tray 4 feed sensor and HCI exit media feed sensor (PS3301).

    If the Tray 4 feed sensor or lever are not properly functioning, replace the Tray 4 paper pickup assembly.

    If the HCI media feed sensor is not properly functioning, replace the HCI crossing paper feed assembly.

13.A5.D5 Jam in tray 5

Description

No pick jam. This jam occurs when the paper does not reach the Tray 5 feed sensor in the designated amount of time.

Depending on the input device configuration this could be the second 500 sheet paper feeder, the 1x500 sheet paper deck or 3x500 paper deck, the right or left tray of the HCI, or the HCI exit media feed sensor. (SR81—PD3x500, PS3305—HCI, SR1—1x500PD, PS3302—HCI, PS3301—HCI).

Recommended action

1. Open Tray 5, remove any jammed paper, and then close Tray 5.

2. Inspect the connectors at the feed sensor and controller PCA for Tray 5.

3. Check the connectors at the feed sensor, solenoid, feed motor, and the controller PCA.

4.   Use the Tray/bin manual sensor tests to toggle the Tray 5 feed sensor and HCI exit media feed
     sensor (PS3301).

     If the Tray 5 feed sensor or lever are not properly functioning, replace the Tray 5 paper pickup
     assembly.

     If the HCI media feed sensor is not properly functioning, replace the HCI crossing paper feed
     assembly.

5.   Use the Components tests to toggle the Tray 5 solenoid (listen for the solenoid to move). If the
     solenoid is not properly functioning, replace the Tray 5 paper pickup assembly.

6.   Use the Components tests to activate the Tray 5 pickup motor (listen for the motor to rotate). If the
     motor is not properly functioning, replace the Tray 5 pickup motor.

13.A5.D6 Jam in lower right door

Description

This jam occurs when the leading edge has passed the tray 6 feed sensor (SR91) but does not reach
the tray 5 feed sensor (SR81) in the designated amount of time.

Recommended action

3x500 paper deck installed.

1.   Open the lower right door, remove any jammed paper, and then close the lower right door.

2.   Inspect the Tray 6 pick, feed and separation rollers. Clean or replace them if necessary.

3.   Check the connectors at the feed sensor, solenoid, feed motor, and the controller PCA.

4.   Use the Tray/bin manual sensor tests to toggle the Tray 6 feed sensor. If the sensor or lever are
     not properly functioning, replace the Tray 6 paper pickup assembly.

5.   Use the Components tests to toggle the Tray 6 solenoid (listen for the solenoid to move). If the
     solenoid is not properly functioning, replace the Tray 6 paper pickup assembly.

6.   Use the Components tests to activate the Tray 6 pickup motor (listen for the motor to rotate). If the
     motor is not properly functioning, replace the Tray 6 pickup motor.

13.A5.FF Jam in tray 5 or 13.A5.FF Jam in lower right door or 13.A5.FF Jam tray 4 (inner flap)

Description

Residual paper jam. This jam occurs when paper exists at any of the paper path jam sensors when the
product power is turned on or after jam re-evaluation.

Depending on the input device configuration this jam could be at the 1x500 sheet paper feeder, the
top tray of the 1x500 sheet paper deck or 3x500 paper deck, the right tray of the HCI, or the HCI exit
media feed sensor (SR1PF, SR1PD, PS3302—HCI, PS3301—HCI).

Recommended action

1. Open the appropriate door, remove any jammed paper, and then close the door.

2. Check for jammed paper in Tray 5 and the HCI right tray inner flap.

3. Inspect the connectors at the feed sensor and controller PCA for Tray 5.

4. Use the Tray/bin manual sensor tests to toggle the Tray 5 feed sensor and HCI exit media feed sensor (PS3301).

   If the Tray 5 feed sensor or lever are not properly functioning, replace the Tray 5 paper pickup assembly.

   If the HCI media feed sensor is not properly functioning, replace the HCI crossing paper feed assembly.

13.A6.D6 Jam in tray 6

Description

No pick jam. This jam occurs when the paper does not reach the Tray 6 feed sensor in the designated amount of time.

Depending on the input device configuration this could be the third tray of the 3x500 paper deck, or the left tray of the HCI (SR91—PD3x500, PS3305—HCI).

Recommended action

1. Open Tray 6, remove any jammed paper, and then close Tray 6.

2. Inspect the connectors at the feed sensor and controller PCA for Tray 6.

3. Use the Tray/bin manual sensor tests to toggle the Tray 6 feed sensor. If the Tray 6 feed sensor or lever are not properly functioning, replace the Tray 6 paper pickup assembly.

4. Use the Components tests to toggle the Tray 6 solenoid (listen for the solenoid to move). If the solenoid is not properly functioning, replace the Tray 6 paper pickup assembly.

5. Use the Components tests to activate the Tray 6 pickup motor (listen for the motor to rotate). If the motor is not properly functioning, replace the Tray 6 pickup motor.

13.A6.FF Jam in tray 6 or 13.A6.FF Jam tray 5 (inner flap)

Description

Residual paper jam. This jam occurs when paper exists at any of the paper path jam sensors when the product power is turned on or after jam re-evaluation.

Depending on the input device configuration this could be the third tray of the 3x500 paper deck, or the left tray of the HCI (SR91—PD3x500, PS3305—HCI).

Recommended action

1. Open Tray 5 and the inner flap, remove any jammed paper, and then close Tray 5 and the inner flap.

2. Inspect the connectors at the feed sensor and controller PCA for Tray 6.

3. Use the Tray/bin manual sensor tests to toggle the Tray 6 feed sensor. If the Tray 6 feed sensor or lever are not properly functioning, replace the Tray 6 paper pickup assembly.

13.A7.D5 Jam in lower right door

Description

This jam occurs when the leading edge passes the tray 5 feed sensor (PS3302), but does not reach the HCI exit sensor (PS3301) in the designated amount of time.

Recommended action

1x500 paper feeder and HCI.

1. Open the lower right door, remove any jammed paper, and then close the lower right door.

2. Inspect the Tray 5 pick, feed and separation rollers. Clean or replace them if necessary.

3. Inspect the connectors at the feed sensor and controller PCA.

4. Use the Tray/bin manual sensor tests to toggle the HCI exit sensor (PS3301). If the sensor or lever are not properly functioning, replace the HCI crossing assembly.

5. Use the Components tests to toggle the Tray 5 solenoid (listen for the solenoid to move). If the solenoid is not properly functioning, replace the Tray 5 paper pickup assembly.

6. Use the Components tests to activate the Tray 5 pickup motor (listen for the motor to rotate). If the motor is not properly functioning, replace the Tray 5 pickup motor.

13.A7.D5 Jam tray 4 (inner flap)

Description

This jam occurs when the leading edge passes the tray 5 feed sensor (PS3305), but does not reach the HCI exit sensor (PS3301) in the designated amount of time.

Recommended action

3x500 paper deck installed.

1. Open Tray 4 and the inner flap, remove any jammed paper, and then close Tray 4 and the inner flap.

2. Inspect the HCI Tray 5 pick, feed and separation rollers. Clean or replace them if necessary.

3. Inspect the connectors at the controller PCA and paper feed crossing for the HCI.

4. Use the Tray/bin manual sensor tests to toggle the HCI exit sensor (PS3301). If the sensor or lever are not properly functioning, replace the HCI crossing assembly.

13.A7.D6 Jam tray 5 (inner flap)

Description

This jam occurs when the leading edge passes the tray 6 feed sensor (PS3305), but does not reach the HCI exit sensor (PS3301) in the designated amount of time.

Recommended action

1x500 paper feeder and HCI installed.

1. Open Tray 5 and the inner flap, remove any jammed paper, and then close Tray 5 and the inner flap.

2. Inspect the Tray 6 pick, feed and separation rollers. Clean or replace them if necessary.

3. Inspect the connectors at the feed sensor, solenoid, feed motor, and the controller PCA.

4. Use the Tray/bin manual sensor tests to toggle the HCI exit sensor (PS3301). If the sensor or lever are not properly functioning, replace the HCI crossing assembly.

5. Use the Components tests to toggle the Tray 6 solenoid (listen for the solenoid to move). If the solenoid is not properly functioning, replace the Tray 6 paper pickup assembly.

6. Use the Components tests to activate the Tray 6 pickup motor (listen for the motor to rotate). If the motor is not properly functioning, replace the Tray 6 pickup motor.

13.A7.FF Jam in tray 4 or 13.A7.FF Jam in tray 5 or 13.A7.FF Jam in lower right door

Description

Residual paper jam. This jam occurs when paper exists at any of the paper path jam sensors when the product power is turned on or after jam re-evaluation.

Recommended action

1. Open the lower right door, remove any jammed paper, and then close the lower right door.

    Open the HCI right tray and the inner flap, remove any jammed paper, and then close the inner flap and tray.

2. Inspect the connectors at the feed sensor and controller PCA.

3. Use the Tray/bin manual sensor tests to toggle the HCI exit sensor (PS3301). If the sensor or lever are not properly functioning, replace the HCI crossing assembly.

13.AA.EE Door open jam

Description

Door open jam.

◦   Upper right cover open; AA

◦   FD (left) output door open; EA

◦   Lower right cover 1 open; AB

- ◦ Lower right cover 2 open; AC

- ◦ Lower right cover 3 open; AD

Recommended action

1. Close the upper right door.

2. Check the tab of the upper right door that engages the right door sensor. If it is damaged, replace the right door assembly.

3. Use the Manual sensor tests menu to toggle the upper right door sensor (SR88). If the sensor is not properly functioning, replace the sensor.

4. Check the connectors (J44) on the DC controller PCA and the connector (J21) on the right door sensor.

13.AB.EE Door open jam

Description

Door open jam. Lower right cover 1 open; middle or lower door depending on the input accessory configuration.

Recommended action

1. Close the middle or lower right door.

2. Depending on input tray configuration, check the appropriate tab of the middle or lower right door that engages the door sensor. If it is damaged, replace the appropriate door assembly.

3. Use the Manual sensor tests menu to toggle the middle and lower right door (Tray 4-6) sensors. If a sensor is not properly functioning, replace the sensor.

4. Do one of the following:

   - **500-sheet paper feeder**: check the connectors (J2005) on the PF controller PCA and the connector (J705) on the PF right door open detection switch SW1.

   - **3x500-sheet paper deck**: check the connectors (J2005) on the PD controller PCA and the connector (J705) on the PD right door open detection switch.

   - **High capacity input feeder**: check the connectors (J3006) on the HCI controller PCA and the connector (J905) on the HCI right door open detection switch.

13.AC.EE Door open jam

Description

Door open jam. Lower right cover 2 open; lower right door or HCI inner flap depending on the input accessory configuration.

Recommended action

1. Close the lower right door or HCI inner flap.

2. Depending on input tray configuration, check the tab of the HCI lower right door that engages the door sensor (SW3301). If it is damaged, replace the door assembly.

    Check the HCI inner flap door (above right HCI tray) to verify that it properly opens and closes.

3. Use the Manual sensor tests menu to toggle the lower right door (Tray 4/5) sensors. If a sensor is not properly functioning, replace the sensor.

4. The HCI (long edge feed guide open) inner flap sensor (PS3306) can not be tested using the Manual sensor tests menu. To test the sensor, open the flap (with product in the ready state) and look for a control panel message to close it. The sensor is part of HCI left paper pickup assembly.

5. Do one of the following:

    *   **500-sheet paper deck**: check the connectors (J2005) on the PD controller PCA and the connector (J705) on the PD right door open detection switch.

    *   **High capacity input feeder**: check the connectors (J3006) on the HCI controller PCA and the connector (J905) on the HCI right door open detection switch.

13.AD.EE Door open jam

Description

Door open jam. Lower right cover 3 open (input tray configuration is 1x500 and HCI).

Recommended action

The HCI (long edge feed guide open) inner flap sensor (PS3306) can not be tested using the Manual sensor tests menu. To test the sensor, open the flap (with product in the ready state) and look for a control panel message instructing you to close it. The sensor is a component of the HCI left paper pickup assembly.

13.B2.AD Jam in top cover area

Description

Paper stay jam at top/registration sensor from the duplex path. This jam occurs when picking from duplex path and paper stays at TOP (registration) sensor (SR9).

Recommended action

1. Open the top cover, and then remove the toner cartridge.

    Remove any jammed paper, and then reinstall the toner cartridge.

    Close the top cover.

2. Make sure that the duplexer is seated properly and check for obstructions in the paper path.

3. Use the Components tests to activate the duplex feed motor (listen for the motor to rotate). If the motor is not properly functioning, replace the duplexer.

4. Make sure that the transfer roller is seated properly and not worn or deformed. Replace the transfer roller if necessary.

5. Make sure that the registration assembly shutter is properly functioning. Replace the registration assembly if necessary.

6. Check the toner cartridge for damage. Replace the cartridge if necessary.

7. Use the Manual sensor tests to toggle the TOP sensor (SR9). If the sensor is not properly functioning, replace the high-voltage power supply.

8. Inspect the connector (J62) on the DC controller PCA, and connector (J901) on the high-voltage power supply.

9. Use the Components tests to activate the drum motor (listen for the motor to rotate). If the motor is not properly functioning, replace the main drive assembly.

13.B2.AX Jam in top cover area

Description

Paper stay jam at top/registration sensor from the duplex path. This jam occurs when picking from a tray and paper stays at top/registration sensor (SR9).

X indicates the source tray

- 1 = Tray 1
- 2 = Tray 2
- 3 = Tray 3
- 4 = Tray 4
- 5 = Tray 5
- 6 = Tray 6

Recommended action

1. Open the top cover, and then remove the toner cartridge.

Remove any jammed paper, and then reinstall the toner cartridge.

Close the top cover.

2. Check for obstructions in the paper path from the source tray.

3. Check the pickup, feed, and separation rollers from the source tray. Replace the rollers if they are worn or defective.

4. Make sure that the transfer roller is seated properly and not worn or deformed. Replace the transfer roller if necessary.

5. Make sure that the registration assembly shutter is properly functioning. Replace the registration assembly if necessary.

6. Check the toner cartridge for damage. Replace the cartridge if necessary.

7. Use the Manual sensor tests to toggle the TOP sensor (SR9). If the sensor is not properly functioning, replace the high-voltage power supply.

8. Inspect the connector (J62) on the DC controller PCA, and connector (J901) on the high-voltage power supply.

9. Use the Components tests to activate the drum motor (listen for the motor to rotate). If the motor is not properly functioning, replace the main drive assembly.

10. Use the Components tests to activate the pickup motor and the pickup solenoid/clutch (listen for the motor/solenoid to rotate/move) for the source tray. If the motor or solenoid are not properly functioning, replace the motor or solenoid.

13.B2.D1 Jam in tray 1

Description

Paper stay jam at top/registration sensor from Tray 1. This jam occurs when the paper does not reach the TOP sensor (SR9) within the designated amount of time from Tray 1.

Recommended action

1. Remove any jammed paper from Tray 1, and then touch the OK button.

2. Check for obstructions in the paper path from Tray 1.

3. Check the pickup, feed, and separation rollers for Tray 1. Replace the rollers if they are worn or defective.

4. Make sure that the registration assembly shutter is properly functioning. Replace the registration assembly if necessary.

5. Use the Manual sensor tests to activate the pickup solenoid (listen for the solenoid to move) for Tray 1. If the solenoid is not properly functioning, replace the toner cartridge door.

6. Use the Manual sensor tests to toggle the TOP sensor (SR9). If the sensor is not properly functioning, replace the high-voltage power supply.

7. Inspect the connector (J62) on the DC controller PCA, and connector (J901) on the high-voltage power supply.

8. Use the Components tests to activate the drum motor (listen for the motor to rotate). If the motor is not properly functioning, replace the main drive assembly.

13.B2.D2 Jam in top cover area (tray 2)

Description

Paper stay jam at top/registration sensor from Tray 2. This jam occurs when the paper does not reach the TOP sensor (SR9) within the designated amount of time from Tray 2.

Recommended action

1. Open the top cover, remove any jammed paper, and then close the top cover.

    📝 **IMPORTANT:** Do not remove the toner cartridge. Make sure that you remove any jammed paper from the top cover area before proceeding to avoid tearing partially picked paper.

    Open Tray 2, remove any jammed paper, and then close Tray 2 and the top cover.

2. Check for obstructions in the paper path from Tray 2.

3. Check the pickup, feed, and separation rollers for Tray 2. Replace the rollers if they are worn or defective.

4. Make sure that the registration assembly shutter is properly functioning. Replace the registration assembly if necessary.

5. Use the Manual sensor tests to activate the pickup solenoid/clutch (listen for the solenoid to move) for Tray 2. If the solenoid/clutch is not properly functioning, replace the solenoid/clutch.

6. Use the Manual sensor tests to toggle the TOP sensor (SR9). If the sensor is not properly functioning, replace the high-voltage power supply.

7. Inspect the connector (J48) on the DC controller PCA, and connector (J61) on the Tray 2 upper clutch.

8. Use the Components tests to activate the drum motor (listen for the motor to rotate). If the motor is not properly functioning, replace the main drive assembly.

13.B2.D3 Jam in top cover area (tray 3) (no optional input devices installed)

Description

Paper stay jam at top/registration sensor from Tray 3. This jam occurs when the paper does not reach the TOP sensor (SR9) within the designated amount of time from Tray 3.

Recommended action

1. Open the top cover, and then remove any jammed paper.

    📝 **IMPORTANT:** Do not remove the toner cartridge. Make sure that you remove any jammed paper from the top cover area before proceeding to avoid tearing partially picked paper.

    Open Tray 3, remove any jammed paper, and then close Tray 3 and the top cover.

2. Check for obstructions in the paper path from Tray 3.

3. Check the pickup, feed, and separation rollers for Tray 3. Replace the rollers if they are worn or defective.

4. Make sure that the registration assembly shutter is properly functioning. Replace the registration assembly if necessary.

5. Use the Manual sensor tests to activate the pickup solenoid (listen for the solenoid to move) for Tray 3. If the solenoid is not properly functioning, replace the solenoid.

6. Use the Manual sensor tests to toggle the TOP sensor (SR9). If the sensor is not properly functioning, replace the high-voltage power supply.

7. Inspect the connector (J48) on the DC controller PCA, and connector (J63) on the Tray 3 lower clutch.

8. Use the Components tests to activate the drum motor (listen for the motor to rotate). If the motor is not properly functioning, replace the main drive assembly.

13.B2.D3 Jam in top cover area (tray 3) (optional input devices installed)

Description

Paper stay jam at top/registration sensor from Tray 3. This jam occurs when the paper does not reach the TOP sensor (SR9) within the designated amount of time from Tray 3.

Recommended action

1. Open the top cover, and then remove any jammed paper.

    IMPORTANT: Do not remove the toner cartridge. Make sure that you remove any jammed paper from the top cover area before proceeding to avoid tearing partially picked paper.

    Open the upper right door, and then remove any jammed paper.

    Open Tray 3, remove any jammed paper, and then close Tray 3, the upper right door, and the top cover.

2. Check for obstructions in the paper path from Tray 3.

3. Check the pickup, feed, and separation rollers for Tray 3. Replace the rollers if they are worn or defective.

4. Make sure that the registration assembly shutter is properly functioning. Replace the registration assembly if necessary.

5. Use the Manual sensor tests to activate the pickup solenoid (listen for the solenoid to move) for Tray 3. If the solenoid is not properly functioning, replace the solenoid.

6. Use the Manual sensor tests to toggle the TOP sensor (SR9). If the sensor is not properly functioning, replace the high-voltage power supply.

7. Inspect the connector (J48) on the DC controller PCA, and connector (J63) on the Tray 3 lower clutch.

8. Use the Components tests to activate the drum motor (listen for the motor to rotate). If the motor is not properly functioning, replace the main drive assembly.

13.B2.DD Jam in top cover area

Description

Paper stay jam at top/registration sensor from the duplexer. This jam occurs when the paper does not reach the TOP sensor (SR9) within the designated amount of time from the Duplexer.

Recommended action

1. Open the top cover, remove any jammed paper, and then close the top cover.

   📝 **NOTE:** Do not remove the toner cartridge.

2. Make sure that the duplexer is seated properly and check for obstructions in the paper path.

3. Use the Components tests to activate the duplex feed motor (listen for the motor to rotate). If the motor is not properly functioning, replace the duplexer.

4. Use the Manual sensor tests to toggle the duplexer sensors (SR1DU, SR2DU). If the sensors are not properly functioning, replace the duplexer.

5. Make sure that the registration assembly shutter is properly functioning. Replace the registration assembly if necessary.

6. Check the toner cartridge for damage. Replace the cartridge if necessary.

7. Use the Manual sensor tests to toggle the TOP sensor (SR9). If the sensor is not properly functioning, replace the high-voltage power supply.

8. Inspect the connector (J62) on the DC controller PCA, and connector (J901) on the high-voltage power supply.

9. Use the Components tests to activate the drum motor (listen for the motor to rotate). If the motor is not properly functioning, replace the main drive assembly.

13.B2.DX Jam in top cover area

Description

Paper delay jam at top/registration sensor. This jam occurs when the leading edge of the media does not reach the TOP sensor (SR9) within the designated amount of time from Tray 4, 5, or 6.

X indicates the source tray

- ◦ 4 = Tray 4

- ◦ 5 = Tray 5

- ◦ 6 = Tray 6

Recommended action

1. Open the top cover, and then remove any jammed paper.

   📝 **IMPORTANT:** Do not remove the toner cartridge. Make sure that you remove any jammed paper from the top cover area before proceeding to avoid tearing partially picked paper.

   Close the top cover.

2. Check for obstructions in the paper path from the source tray.

3. Check the pickup, feed, and separation rollers from the source tray. Replace the rollers if they are worn or defective.

4. Make sure that the registration assembly shutter is properly functioning. Replace the registration assembly if necessary.

5. Use the Components tests to activate the pickup motor and the pickup solenoid/clutch (listen for the motor/solenoid to rotate/move) for the source tray. If the motor or solenoid are not properly functioning, replace the motor or solenoid.

6. Use the Manual sensor tests to toggle the TOP sensor (SR9). If the sensor is not properly functioning, replace the high-voltage power supply.

7. Inspect the connector (J62) on the DC controller PCA, and connector (J901) on the high-voltage power supply.

8. Use the Components tests to activate the drum motor (listen for the motor to rotate). If the motor is not properly functioning, replace the main drive assembly.

13.B2.FF Jam in top cover area

Description

TOP sensor (SR9) residual jam. This jam occurs when paper exists at any of the paper path jam sensors when the product power is turned on or after a jam re-evaluation.

Recommended action

1. Open the top cover, and then remove the toner cartridge.

   Remove any jammed paper, and then close the top cover.

2. Use the Manual sensor tests to toggle the TOP sensor (SR9). If the sensor is not properly functioning, replace the high-voltage power supply.

3. Inspect the connector (J62) on the DC controller PCA, and connector (J901) on the high-voltage power supply.

13.B4.FF Jam in top cover area

Description

Loop sensor (SR6) residual jam. This jam occurs when paper exists at any of the paper path jam sensors when the product power is turned on or after a jam re-evaluation.

Recommended action

1. Open the top cover, and then remove the toner cartridge.

   Remove any jammed paper, and then close the top cover.

2. Inspect the connector (J62) on the DC controller PCA, and connector (J901) on the high-voltage power supply.

3. Use the Manual sensor tests to toggle the loop sensor (SR6). If the sensor or lever are not properly functioning, replace the high-voltage power supply.

13.B9.AX Fuser area jam

Description

Fuser or duplexer stay jam. This jam occurs when the engine detects a paper stay jam at the fuser output sensor (SR12). Most likely there is an accordion jam in the fuser exit path.

X indicates the fuser mode

- 2 = Normal
- 3 = Light media 1
- 3 = Light media 2
- 4 = Heavy media 1
- 5 = Heavy media 2
- B = Transparency
- D = Envelope 1
- D = Envelope 2

Recommended action

1. Open the left door, remove any jammed paper, and then close the left door.

2. Check the paper path and rollers at the fuser and at the paper delivery assembly for a blockage or damage. Replace the fuser or paper delivery assembly if necessary.

3. Use the Manual sensor tests to toggle the fuser output sensor (SR12) and the paper delivery output sensor (SR3). If a sensor is not properly functioning, replace the appropriate assembly.

4. Use the Components tests to activate the fuser drive motor and duplex feed motor (listen for the motor to rotate). If the motor is not functioning properly, replace the fuser motor or duplexer.

13.B9.CX Fuser wrap jam

Description

This jam occurs when the paper leaves the fuser output sensor (SR12) before a designated amount of time after the paper reached the fuser output sensor (the paper is wrapped around the fuser roller).

X indicates the fuser mode

- 2 = Normal
- 3 = Light media 1
- 3 = Light media 2
- 4 = Heavy media 1
- 5 = Heavy media 2
- B = Transparency

- ◦ D = Envelope 1

- ◦ D = Envelope 2

Recommended action

1. Remove the duplexer (if installed).

   Remove the left door, and then remove the fuser.

   Remove any jammed paper from the fuser, and then reinstall the fuser.

   NOTE: Remove any other jammed paper from the fuser area.

   Reinstall the left door, and duplexer (if removed).

   Close the left door.

2. Perform a cleaning page procedure to clean the fuser rollers.

3. Use the Manual sensor tests to toggle the fuser output sensor (SR12). If the sensor is not properly functioning, replace the fuser.

4. If the error persist, the fuser pressure roller might be damaged. Replace the fuser.

13.B9.DD Fuser area jam (top cover)

Description

This jam occurs when the leading edge of the page does not reach the fuser output sensor (SR12) in the designated amount of time.

Recommended action

1. Open the left door to release fuser roller pressure.

   IMPORTANT: Do not attempt to remove the jammed paper.

   Open the top cover, and then remove the toner cartridge.

   Remove any jammed paper, and then reinstall the toner cartridge.

   Close the top cover and left door.

2. Check the paper path and rollers at the fuser and duplexer for damage. Replace the fuser or duplexer if necessary.

3. Use the Manual sensor tests to toggle the fuser output sensor (SR12). If the sensor is not properly functioning, replace the fuser.

4. Inspect the following connectors:

   - ● Fuser, J1

   - ● Fuser motor, J1100

- DC controller, J6 and J47

- High-voltage power supply, J902

5. Use the Components tests to activate the duplex feed motor (listen for the motor to rotate). If the motor is not properly functioning, replace the duplexer.

13.B9.FF Jam in left door

Description

Fuser exit sensor (SR12) residual jam. This jam occurs when paper exists at any of the paper path jam sensors when the product power is turned on or after jam re-evaluation.

Recommended action

1. Open the left door, remove any jammed paper, and then close the left door.

2. Inspect the connector (J1) on the fuser, connector (J61) on the DC controller PCA, and connector (J902) on the high-voltage power supply.

3. Use the Manual sensor tests to toggle the fuser exit sensor (SR12). If the sensor is not properly functioning, replace the fuser.

13.BA.EE Door open jam

Description

The top cover was opened during a print job.

Recommended action

1. Close the top cover.

2. Check the tabs of the top cover that engage the top cover switches (SW2, SW3). If they are damaged, replace the top cover assembly.

3. Use the Tray/bin manual sensor tests to toggle the cartridge door switch (SW3). If the switch is not properly functioning, replace the switch.

   📝 **NOTE:** The Tray/bin manual sensor tests can not be used to test SW2 top cover switch. If the error persists and the SW3 top cover switch is properly functioning, try replacing the SW2 top cover switch.

4. Check the connectors (J74 and J36) on the DC controller PCA and the connector (J18) on the cartridge door open detection switch.

13.D1.DX Jam in left door

Description

Late to duplex switchback jam. This jam occurs when the paper reverses direction but fails to reach the duplex switchback sensor (SR1DU) in the designated amount of time.

X indicates the fuser mode

- ◦ 2 = Normal
- ◦ 3 = Light media 1
- ◦ 3 = Light media 2
- ◦ 4 = Heavy media 1
- ◦ 5 = Heavy media 2
- ◦ B = Transparency
- ◦ D = Envelope 1
- ◦ D = Envelope 2

Recommended action

1. Open the left door, remove any jammed paper, and then close the left door.

2. Check the paper path and rollers at the fuser and duplexer for damage. Replace the fuser or duplexer if necessary.

3. Use the Manual sensor tests to toggle the duplexer switchback sensor (SR1DU). If the sensor or lever are not properly functioning, replace the duplexer.

4. Use the Components tests to activate the duplex feed motor (listen for the motor to rotate). If the motor is not properly functioning, replace the duplexer.

13.D1.FF Jam in left door

Description

Duplexer switchback sensor jam. This jam occurs when paper exists at any of the paper path jam sensors at power on or after jam re-evaluation.

Recommended action

1. Open the left door, and clear any jammed paper. Close the left door.

2. Remove duplexer, and clear any jammed paper. Reinstall the duplexer.

3. Make sure duplexer is seated properly.

4. Run the Manual Sensor test and toggle the duplexer switchback sensor (SR1DU).

5. If the duplexer switchback sensor or lever not operating properly replace the duplexer.

13.D3.00 Jam in top cover area

Description

This is a firmware timing issue and not a mechanical jam problem.

Late to duplex exit jam. The engine cannot pause long sheets in the duplex path.

Recommended action

Open the top cover, remove any jammed paper, and then close the top cover.

13.D3.DX Jam in duplexer

Description

Late to duplex exit jam. This jam occurs when the leading edge of the paper reaches the duplex switchback sensor (SR1DU), but fails to reach the duplex reefed sensor (SR2DU). The leading edge is in the duplexer, but the trailing edge might be accessible from the left door.

X indicates the fuser mode

- ◦ 2 = Normal
- ◦ 3 = Light media 1
- ◦ 3 = Light media 2
- ◦ 4 = Heavy media 1
- ◦ 5 = Heavy media 2
- ◦ B = Transparency
- ◦ D = Envelope 1
- ◦ D = Envelope 2

Recommended action

1. Remove the duplexer, remove any jammed paper, and then reinstall the duplexer.

2. Check the paper path and rollers at the fuser and duplexer for damage. Replace the fuser or duplexer if necessary.

3. Use the Manual sensor tests to toggle the duplexer refeed sensor (SR2DU). If the sensor or lever are not properly functioning, replace the duplexer.

4. Use the Components tests to activate the duplex refeed solenoid/clutch (listen for the solenoid to move). If the solenoid/clutch is not properly functioning, replace the duplexer.

13.D3.FF Jam in top cover area

Description

Duplexer refeed sensor (SR2DU) jam. This jam occurs when paper exists at any of the paper path jam sensors when the product power is turned on or after jam re-evaluation.

Recommended action

1. Open the top cover, remove any jammed paper, and then close the top cover.

2. Remove the duplexer, remove any jammed paper, and then reinstall the duplexer.

   📝 **NOTE:** Make sure that the duplexer is fully seated when reinstalled.

3. Use the Manual sensor tests to toggle the duplexer refeed sensor (SR2DU). If the sensor or lever are not properly functioning, replace the duplexer.

13.DE.EE Jam in duplexer (during a print job)

Description

This is a user caused jam, not a mechanical problem. This jam occurs when the duplexer is removed while paper is being delivered in the duplexer.

Recommended action

Remove the duplexer, remove any jammed paper, and then reinstall the duplexer.

13.E1.DX Jam in left door

Description

Late to bin full jam. This jam occurs when the paper fails to reach the face-down bin full sensor (SR4) within a specific time.

X indicates the fuser mode

- ○ 2 = Normal
- ○ 3 = Light media 1
- ○ 3 = Light media 2
- ○ 4 = Heavy media 1
- ○ 5 = Heavy media 2
- ○ B = Transparency
- ○ D = Envelope 1
- ○ D = Envelope 2

Recommended action

1. Open the left door, remove any jammed paper, and then close the left door.

2. Inspect the connector (J55) on the output assembly, and the connector (J45) on the DC controller PCA.

3. Use the Tray/bin manual sensor tests to toggle the output bin full sensor (SR4). If the sensor or lever are not properly functioning, replace the paper delivery assembly.

13.E1.FF Jam in left door

Description

Power on residual paper jam. This jam occurs when paper exists at any of the paper path jam sensors when the product power is turned on or after jam re-evaluation.

Recommended action

1. Open the left door, remove any jammed paper, and then close the left door.

2. Inspect the connectors on the paper delivery assembly.

3. Use the Tray/bin manual sensor tests to toggle the output bin full sensor (SR4). If the sensor or lever are not properly functioning, replace the paper delivery assembly.

13.E6.AX Jam in left door

Description

Stopped at output jam. This jam occurs when the paper fails to clear the output sensor (SR3) within a specific time.

X indicates the fuser mode

- 2 = Normal
- 3 = Light media 1
- 3 = Light media 2
- 4 = Heavy media 1
- 5 = Heavy media 2
- B = Transparency
- D = Envelope 1
- D = Envelope 2

Recommended action

1. Open the left door, remove any jammed paper, and then close the left door.

2. Check the paper path and rollers at the fuser and the paper delivery assembly for damage or wear. Replace the fuser or paper delivery assembly if necessary.

3. Use the Tray/bin manual sensor tests to toggle the output bin full sensor (SR4). If the sensor or lever are not properly functioning, replace the paper delivery assembly.

4. Use the Manual sensor tests to toggle the output sensor (SR3). If the sensor or lever are not properly functioning, replace the paper delivery assembly.

13.E6.BD Jam in left door

Description

Multi-feed from duplexer jam. This jam occurs when the engine detects a multi-feed in the output path from the duplexer.

Recommended action

Check the paper path and rollers at the fuser and the duplexer for damage or wear. Replace the fuser or duplexer if necessary.

13.E6.BX Jam in left door

Description

Multi-fold from Tray 1–6 jam. This jam occurs when the engine detects a multi-feed in the output path from the indicated source tray.

X indicates the source tray

- 1 = Tray 1
- 2 = Tray 2
- 3 = Tray 3
- 4 = Tray 4
- 5 = Tray 5
- 6 = Tray 6

Recommended action

1. Open the left door, remove any jammed paper, and then close the left door.
2. Check the pickup, feed, and separation rollers from the source tray. Replace the rollers if they are worn or defective.

13.E6.DX Jam in left door

Description

Late to output jam. This jam occurs when the paper fails to reach the output sensor (SR3) within a specific time.

X indicates the fuser mode

- 2 = Normal
- 3 = Light media 1
- 3 = Light media 2
- 4 = Heavy media 1

- ◦ 5 = Heavy media 2

- ◦ B = Transparency

- ◦ D = Envelope 1

- ◦ D = Envelope 2

Recommended action

1. Open the left door, remove any jammed paper, and then close the left door.

2. Inspect the connector (J55) on the output assembly, and the connector (J45) on the DC controller PCA.

3. Use the Manual sensor tests to toggle the output sensor (SR3). If the sensor or lever are not properly functioning, replace the paper delivery assembly.

13.E6.FF

Description

Output bin full sensor (SR3) residual jam. This jam occurs when paper exists at any of the paper path jam sensors when the product power is turned on or after jam re-evaluation.

Recommended action

1. Open the left door, remove any jammed paper, and then close the left door.

2. Inspect the connectors on the paper delivery assembly.

3. Use the Manual sensor tests to toggle the output sensor (SR3). If the sensor or lever are not properly functioning, replace the paper delivery assembly.

13.EA.EE Door open jam

Description

Face-down delivery door open jam.

Recommended action

1. Close the face-down delivery door.

2. Check the tab of the face-down delivery door that engages the left door switch (SW1). If they it is damaged, replace the left door assembly.

3. Use the Manual sensor tests to toggle the left door switch (SW1). If the switch is not properly functioning, replace the switch.

4. Inspect the connector (J35) on the DC controller PCA.

13.FF.FF

Description

Power on residual paper jam; multiple sensors. This jam occurs when paper exists at any of the paper path jam sensors when the product power is turned on or after jam re-evaluation.

Recommended action

Multiple sensors are blocked. See the steps for other 13.XX.FF errors to clear this error.

13.WX.YZ Fuser area jam (top cover)

Description

Fuser delay jam from Tray 1-6. This jam occurs when the leading edge of the page does not reach the fuser output sensor (SR12) in designated amount of time.

> 📝 **NOTE:** In the event log, this error appears as 13.B9.DX. "X" indicates the source tray.

Z indicates the source tray

- ◦ 1 = Tray 1
- ◦ 2 = Tray 2
- ◦ 3 = Tray 3
- ◦ 4 = Tray 4
- ◦ 5 = Tray 5
- ◦ 6 = Tray 6

Recommended action

1. Open the left door to release fuser roller pressure.

   > 📝 **IMPORTANT:** Do not attempt to remove the jammed paper.

   Open the top cover, and then remove the toner cartridge.

   Remove any jammed paper, and then reinstall the toner cartridge.

   Close the top cover and left door.

2. Check for obstructions in the paper path and rollers at the fuser for damage. Replace the fuser if necessary.

3. Use the Manual sensor tests to toggle the fuser output sensor (SR12). If the sensor is not properly functioning, replace the fuser.

4. Inspect the following connectors:

   - Fuser, J1
   - Fuser motor, J1100

- DC controller, J6 and J47

- High-voltage power supply, J902

5. Use the Components tests to activate the fuser drive motor (listen for the motor to rotate). If the motor is not properly functioning, replace the fuser.

20.00.00 Insufficient memory: <Device> To continue, touch "OK"

Description

The product has experienced a memory error. You might have tried to transfer too many fonts or macros.

Recommended action

Press the OK button to print the transferred data. Some data might be lost. Reduce the page complexity or add product memory.

21.00.00 Page too complex To continue, touch "OK"

Description

The page decompression process was too slow for the product.

Recommended action

Press the OK button to continue. There may be some data loss.

30.01.01

Description

The flatbed cover sensor was interrupted.

Recommended action

No action necessary. This error message should automatically clear.

If the error persists, open the Scanner Tests to test the Flatbed cover sensor.

30.01.06

Description

A scan control board fan error has occurred.

Recommended action

1. Turn the product off, and then on.

2. Replace the scan control board.

3. If the error persists, replace the scanner assembly.

30.01.08

Description

The flatbed optical assembly cannot find the origin notch.

Recommended action

This is an informational message, and no action is required. If the flatbed optical assembly cannot find the origin notch on the flatbed scanner, the scanned image might be offset on the copied page. The image displacement will be less then 1 mm or pixel off.

30.01.41

Description

The formatter lost connections with the scanner control board or communication was corrupted.

Recommended action

1. Turn the product off, and then on.

2. Reseat the formatter.

3. Upgrade the firmware.

4. Verify that the PCI express cable is connected to the product and to the interconnect board/ formatter and scanner control board.

5. Verify the scanner control board has power.

6. Replace the scanner control board.

7. Replace the formatter.

8. Replace the interconnect board.

9. If the error persists, please escalate this problem to your Global Business unit.

30.01.43

Description

Copy processor board memory check failure during the initial memory check. The copy processor board resides on the scanner control board.

Recommended action

1. Turn the product off, and then on.

2. Replace the scanner control board.

3. Replace the formatter.

30.01.44

Description

A scanner firmware error has occurred.

Recommended action

1. Turn the product off, and then on.

2. Upgrade the firmware.

3. Replace the scanner control board.

4. Replace the formatter.

30.01.45

Description

General code assert error for the copy processor board firmware.

Recommended action

1. Turn the product off, and then on.

2. Upgrade the firmware.

3. Replace the scanner control board.

4. If the error persists, please escalate this problem to your Global Business unit.

30.01.46

Description

The firmware cannot find the copy processor board.

Recommended action

1. Turn the product, off and then on.

2. Re-seat the formatter.

3. Replace the scan control board.

4. If the error persists, please escalate this problem to your Global Business unit.

30.03.14

Description

A non-fatal error has occurred.

A scanner EEPROM (NVM) error has occurred.

Recommended action

This is an informational message, and no action is required.

30.03.20

Description

The copy processor board firmware cannot communicate with the PCA on the optical assembly.

Recommended action

1. Turn the product off, and then on.

2. Verify the FFC cables between scanner and scanner control board are connected.

3. Replace the scanner.

30.03.22

Description

The scan module cannot see the illumination module, or marginal illumination. The optical assembly is not parked under the calibration strip.

Recommended action

1. Turn the product off, and then on.

2. Upgrade the firmware.

3. Check the service event log for other scanner errors, and resolve those errors.

4. Check the scan module FFC connection.

5. Replace the scanner.

6. If the error persists, please escalate this problem to your Global Business unit.

30.03.23

Description

The calibration stitching label shifted or there are bad sensors in the scan module.

Recommended action

1. Turn the product off and then on.

2. Upgrade the firmware.

3. Replace the scanner.

30.03.30

Description

The scanner control board cannot communicate with the flatbed scanner motor.

Recommended action

1. Turn the product off, and then on. As the product turns on, verify the scan head moves.

2. Verify the drive belt is in the correct position.

3. Check for a red LED illuminated on the scanner motor.

4. Check the cable connection to scanner control board.

5. Replace the scanner.

30.03.45

Description

Scanner control board (SCB) firmware assertion failure. SCB firmware assert controls the scan head motor.

Recommended action

1. Turn the product off, and then on.

2. Upgrade the firmware.

3. Replace the scanner control board.

4. Replace the scanner assembly.

31.01.47

Description

The document feeder was not detected. The cable might not be attached.

Recommended action

1. Turn the product off, and then on.

2. Check the cables between the document feeder and scanner control board.

3. Upgrade the firmware.

4. Replace the document feeder.

31.03.30

Description

The document feeder pick motor is not turning.

Recommended action

1. Verify the paper meets the product specifications.

2. Make sure the input tray is not overloaded.

3. Check the event log for document feeder errors, and resolve any errors first.

4. Open and close the top cover to see if the pick motor turns without posting this error. If the motor turns, then the motor is good.

5. Verify the motor cables are connected.

6. Reseat the document feeder to scanner control board.

7. Replace the document feeder.

31.03.31

Description

The document feeder pick motor is not turning.

Recommended action

1. Verify the paper meets the product specifications.

2. Make sure the input tray is not overloaded.

3. Check the event log for document feeder errors, and resolve any errors first.

4. Verify the motor cables are connected.

5. Reseat the document feeder to scanner control board.

6. Replace the document feeder.

31.03.32

Description

The document feeder deskew motor is not turning.

Recommended action

1. Verify the paper meets the product specifications.

2. Make sure the input tray is not overloaded.

3. Check the event log for document feeder errors, and resolve any errors first.

4. Verify the motor cables are connected.

5. Reseat ADF to scanner control board cables.

6. Replace the document feeder.

31.08.A1

Description

An initialization occurred after an abnormal product shutdown.

Recommended action

No action necessary.

31.08.A2

Description

A normal shutdown has occurred.

Recommended action

No action necessary.

31.08.A3

Description

A normal initialization has occurred.

Recommended action

No action necessary.

31.13.01

Description

Paper pick was initiated, but the page didn't make it to the pick success sensor.

Recommended action

1. Open the ADF lid, pull sheets back into input tray, and resume the job.

2. Check the paper guides and make sure they are set to the correct paper width.

3. Make sure the input tray is not overloaded.

4. Check the document feeder page count for roller life.

5. Verify the paper meets the product specifications.

6. Make sure the ADF roller door is completely closed.

7. Check the event log for 31.03.30 errors, and resolve those errors first.

8. Clean the document feeder roller.

9. Open the following menus:

    ●   Administration

    ●   Troubleshooting

    ●   Diagnostic Tests

    ●   Scanner Tests

    Actuate the Pick-success Sensor. If the sensor does not show functionality when tested, replace the Document feeder.

31.13.02

Description

The paper passed the pick success sensor and then jammed in the document feeder paper path.

Recommended action

1. Clear the paper path and try feeding the page again.

2. Verify the paper meets the product specifications.

3. Check the paper guides and make sure they are set to the correct paper width.

4. Verify the paper path is clear.

5. Check for motor stall 31.03.31 and 31.03.32 errors.

6. Open the following menus:

    ●   Administration

    ●   Troubleshooting

    ●   Diagnostic Tests

    ●   Scanner Tests

    Actuate the Paper-path Sensor 1. If the sensor does not show functionality when tested, replace the document feeder.

31.13.13

Description

The jam access door is open.

Recommended action

1. Verify the jam access cover is closed.

2. Try feeding the paper again.

3. Verify the flag is not broken off.

4. Open the following menus:

   ● Administration

   ● Troubleshooting

   ● Diagnostic Tests

   ● Scanner Tests

   Actuate the ADF Jam Cover Sensor. If the sensor does not show functionality when tested, replace the document feeder.

31.13.14

Description

This is a feed jam in the document feeder, and the motor is not turning.

Recommended action

1. Verify the paper meets the product specifications.

2. Make sure the document feeder input tray is not overloaded.

3. Check the event log for document feeder errors, and resolve any errors first.

4. Open and close the top cover to see if the pick motor turns without posting this error. If there is no error, then the motor is good.

5. Verify the motor cables are connected.

6. Reseat the document feeder to scanner control board.

7. Replace the document feeder.

31.13.15

Description

This is a duplex refeed jam in the document feeder. The paper jam occurs on the back-side copy. The duplex refeed does not make it to the deskew sensor.

Recommended action

1. Remove the jammed paper.

2. Verify there is nothing in the paper path of the duplex refeed area.

3. Retry the copy job.

4. Replace the document feeder.

32.1C.XX

Description

- **32.1C.01** (event code)

  NVRAM backup/restore service backup started.

- **32.1C.02** (event code)

  NVRAM backup/restore service restore started.

- **32.1C.03** (event code)

  NVRAM backup/restore administrator backup started.

- **32.1C.04** (event code)

  NVRAM backup/restore administrator restore started.

- **32.1C.05** (event code)

  Backup/restore complete.

- **32.1C.06** (event code)

  Data model failed to clone job ticket.

- **32.1C.07** (event code)

  Backup restore permissions error.

- **32.1C.08** (event code)

  Not enough disk space to perform backup/restore or network share issue.

- **32.1C.09** (event code)

  Tried to restore a backup file that was not valid for this product.

- **32.1C.0A** (event code)

  Backup file is invalid.

- **32.1C.0B** (event code)

  Backup is from newer version of firmware than what is currently on the product.

- **32.1C.0C** (event code)

  Backup canceled from the HP Embedded Web Server.

- **32.1C.0D** (event code)

  Backup/restore failed, auto-reboot failed, or the product might be busy.

- **32.1C.0E** (event code)

  Backup/restore time-out while communicating with the formatter.

◦ **32.1C.11** (event code)

Backup/restore time-out while communicating with the engine.

◦ **32.1C.12** (event code)

Backup/restore time-out while communicating with the disk.

◦ **32.1C.13** (event code)

Scheduled backup failure.

◦ **32.1C.14** (event code)

NVRAM restore time-out while communicating with the formatter.

◦ **32.1C.17** (event code)

NVRAM restore time-out while communicating with the engine.

◦ **32.1C.18** (event code)

Copy subsystem backup failed.

◦ **32.1C.19** (event code)

Backup/restore unknown error.

◦ **32.1C.1A** (event code)

Digital Send subsystem backup failed.

◦ **32.1C.1B** (event code)

Backup of print subsystem failed.

◦ **32.1C.1C** (event code)

Backup of networking subsystem failed.

◦ **32.1C.1E** (event code)

Copy subsystem restore failed.

◦ **32.1C.1F** (event code)

Fax subsystem restore failed.

◦ **32.1C.20** (event code)

Digital Send subsystem restore failed.

◦ **32.1C.21** (event code)

Restore of print subsystem failed.

◦ **32.1C.22** (event code)

Restore of networking subsystem failed.

- ◦ **32.1C.23** (event code)

  Failed to restore address book subsystem.

- ◦ **32.1C.24** (event code)

  NVRAM backup/restore successful.

- ◦ **32.1C.25** (event code)

  Copy subsystem reset failed.

- ◦ **32.1C.26** (event code)

  Fax subsystem reset failed.

- ◦ **32.1C.27** (event code)

  Digital Send subsystem reset failed.

- ◦ **32.1C.28** (event code)

  Reset of print subsystem failed.

- ◦ **32.1C.29** (event code)

  Reset of networking subsystem failed.

- ◦ **32.1C.2B** (event code)

  Reset formatter time-out.

- ◦ **32.1C.2E** (event code)

  Reset engine time-out.

- ◦ **32.1C.2F** (event code)

  Reset failure.

Recommended action

- ◦ **32.1C.01** (event code)

  No action necessary

- ◦ **32.1C.02** (event code)

  No action necessary

- ◦ **32.1C.03** (event code)

  No action necessary

- ◦ **32.1C.04** (event code)

  No action necessary

- ◦ **32.1C.05** (event code)

No action necessary

- ◦ **32.1C.06** (event code)

  Retry

- ◦ **32.1C.07** (event code)

  Retry

- ◦ **32.1C.08** (event code)

  Remove stored jobs and retry

  Use larger capacity storage device

  Check network share

- ◦ **32.1C.09** (event code)

  Use a valid backup file

- ◦ **32.1C.0A** (event code)

  Use a valid backup file

  Reboot and observe state of product

  Do a partition clean using the Preboot menu

- ◦ **32.1C.0B** (event code)

  Use a valid backup file, or put correct firmware version on the product

- ◦ **32.1C.0C** (event code)

  No action necessary

- ◦ **32.1C.0D** (event code)

  Reboot and then retry the backup/restore

- ◦ **32.1C.0E** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.11** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.12** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.13** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.14** (event code)

Turn the product off, and then on and retry

- ◦ **32.1C.17** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.1B** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.1C** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.21** (event code)

  Turn the product off, and then on and retry

  If the error persists, clear the firmware image from the active partition by using the Partial Clean item in the Preboot menu.

- ◦ **32.1C.22** (event code)

  Turn the product off, and then on and retry

  If the error persists, clear the firmware image from the active partition by using the Partial Clean item in the Preboot menu.

- ◦ **32.1C.24** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.28** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.29** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.2B** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.2E** (event code)

  Turn the product off, and then on and retry

- ◦ **32.1C.2F** (event code)

  Turn the product off, and then on and retry

32.21.00

Description

Corrupt firmware in external accessory.

Recommended action

Turn the product off, and then on and retry.

If the error persists, clear the firmware image from the active partition by using the Partial Clean item in the **Preboot** menu.

33.01.01

Description

Read back data from ICB and pass to SR clients so that they can recover occurred Information.

Recommended action

This is an informational message, and no action is required.

33.01.02

Description

Save data received from SR clients is written into ICB NVRAM initial-save-occurred Information.

Recommended action

This is an informational message, and no action is required.

33.01.03

Description

Save and Recover functionality OK after previously being disabled. Save/Recover status OK Information.

Recommended action

This is an informational message, and no action is required.

33.01.04

Description

A table from the ICB could not be found in the current firmware. The table data was ignored.

Recommended action

This is an informational message, and no action is required.

33.01.05

Description

A table from the ICB has different data than the table with a matching ID in the current firmware. The table data was ignored.

Recommended action

This is an informational message, and no action is required.

33.02.01

Description

A used part with data was replaced in the device. Used board/disk installed.

Recommended action

Turn the product power off, and then on again.

If the error persists, please escalate this problem to your Global Business unit.

33.02.02

Description

A Save/Recover status error has occurred on the product and one, or both, of the Save/Recover features are disabled.

Recommended action

Turn the product power off, and then on again.

If the error persists, please escalate this problem to your Global Business unit.

33.02.03

Description

The Save/Recover backup feature has failed, and the Save/Recover features are disabled, but the product continues to function.

Recommended action

Turn the product power off, and then on again.

If the error persists, please escalate this problem to your Global Business unit.

33.03.01

Description

The controller encountered an unexpected data length for the Storage ID value.

Recommended action

Turn the product power off, and then on again.

If the error persists, please escalate this problem to your Global Business unit (return the product ICB to the Global Business unit with a full diagnostic log from the product).

33.03.02

Description

The controller encountered an unexpected data length value for the engine to recover the DCC NVRAM value.

Recommended action

Turn the product power off, and then on again.

If the error persists, please escalate this problem to your Global Business unit (return the product ICB to the Global Business unit with a full diagnostic log from the product).

33.WX.YZ Used board/disk installed

Description

An encrypted board or disk with existing data previously locked to a different product has replaced the original. If you continue, data is permanently lost.

Recommended action

◦ To save the data on the board or disk, turn the product off. Replace the board or disk with another board or disk.

◦ To delete the data on the board or disk and continue, press the OK button.

40.00.01 USB I/O buffer overflow To continue, touch "OK"

Description

The USB buffer overflowed during a busy state.

Recommended action

1. Press the OK button to print the transferred data. Some data might be lost.

2. Check the host configuration.

40.00.02 Embedded I/O buffer overflow To continue, touch "OK"

Description

Too much data was sent to the embedded HP Jetdirect print server. An incorrect communications protocol might be in use.

Recommended action

1. Press the OK button to print the transferred data. Some data might be lost.

2. Check the host configuration.

40.00.03 EIO <X> buffer overflow To continue, touch "OK"

Description

The product displays this message when the EIO card in the indicated slot has overflowed its I/O buffer during a busy state.

Recommended action

Press the OK button to continue.

40.00.04 EIO <X> bad transmission To continue, touch "OK"

Description

The product displays this message when a connection with the card in the indicated slot has been abnormally broken.

Recommended action

Press the OK button to continue.

40.00.05 Embedded I/O bad transmission To continue, touch "OK"

Description

The product experienced a temporary printing error. The connection between the product and the EIO card in the specified slot has been broken.

Recommended action

Press the OK button to clear the error message and continue printing.

40.08.0X USB storage accessory removed

Description

X = 0 or 1; information code

Secure file erase is enabled.

Recommended action

No action necessary.

40.0X.05 USB storage accessory removed

Description

X = 1, 2, 3, 5, or 6; information code

The USB storage accessory was removed.

Recommended action

No action necessary.

41.03.YZ Unexpected size in Tray <X>

Description

The product detected a different paper size than expected.

Y = Size mismatch, Z = Source

- ◦ Y = 0: Detected paper is longer or shorter than expected
- ◦ Y = A: Detected paper too long
- ◦ Y = B: Detected paper too short
- ◦ Z = 1: Tray 1
- ◦ Z = 2: Tray 2
- ◦ Z = 3: Tray 3

Recommended action

1. Make sure that the tray is loaded with the correct paper size and that the sliding paper guides are correctly adjusted.

2. Use the Tray/Bin manual sensor test to verify that the tray paper switch is correctly functioning.

3. If the error persists, replace the lifter assembly.

41.03.YZ Unexpected size in Tray <X> To use another tray, touch "Options"

Description

The product detected a different paper size than expected.

Y = Size mismatch, Z = Source

- ◦ Y = 0: Detected paper is longer or shorter than expected
- ◦ Y = A: Detected paper too long
- ◦ Y = B: Detected paper too short
- ◦ Z = 1: Tray 1
- ◦ Z = 2: Tray 2
- ◦ Z = 3: Tray 3

Recommended action

1. Make sure that the tray is loaded with the correct paper size and that the sliding paper guides are correctly adjusted.

2. Use the Tray/Bin manual sensor test to verify that the tray paper switch is correctly functioning.

3. If the error persists, replace the lifter assembly.

41.05.YZ Unexpected type in Tray <X>

Description

The product detected a different paper type than expected.

Y = Expected type, Z = Detected type

- Y = 0: Unknown
- Y = 1: Normal paper
- Y = 3: LBP transparency
- Y = 4 Glossy paper
- Y = 5: Gloss film
- Y = 6: Non-assured transparency
- Y = 7: Heavy paper
- Y = 8: Light paper
- Y = 9: Rough paper
- Y = A: Extra heavy glossy paper (glossy paper 3)
- Y = B: Heavy glossy paper (glossy paper 2)
- Y = C: Heavy paper 3
- Y = D: Heavy paper 2
- Z = 1: Normal paper
- Z = 3: LBP transparency
- Z = 4: Glossy paper
- Z = 5: Gloss film
- Z = 6: Non-assured transparency
- Z = 7: Heavy paper
- Z = 8: Light paper
- Z = 9: Rough paper
- Z = A: Extra heavy glossy paper (glossy paper 3)
- Z = B: Heavy glossy paper (glossy paper 2)
- Z = C: Heavy paper 3
- Z = D: Heavy paper 2

Recommended action

1. Load the tray with the size and type of paper indicated, or use another tray if available.

2. If this message appears and the tray is loaded with the correct paper type, check the print driver settings to make sure that they match the tray type settings.

3. Clean the paper sensor.

4. If the error persists, replace the paper pickup assembly.

41.05.YZ Unexpected type in Tray <X> To use another tray, touch "Options"

Description

The product detected a different paper type than expected and another tray is available for use.

Y = Expected type, Z = Detected type

- ◦ Y = 0: Unknown
- ◦ Y = 1: Normal paper
- ◦ Y = 3: LBP transparency
- ◦ Y = 4 Glossy paper
- ◦ Y = 5: Gloss film
- ◦ Y = 6: Non-assured transparency
- ◦ Y = 7: Heavy paper
- ◦ Y = 8: Light paper
- ◦ Y = 9: Rough paper
- ◦ Y = A: Extra heavy glossy paper (glossy paper 3)
- ◦ Y = B: Heavy glossy paper (glossy paper 2)
- ◦ Y = C: Heavy paper 3
- ◦ Y = D: Heavy paper 2
- ◦ Z = 1: Normal paper
- ◦ Z = 3: LBP transparency
- ◦ Z = 4: Glossy paper
- ◦ Z = 5: Gloss film
- ◦ Z = 6: Non-assured transparency
- ◦ Z = 7: Heavy paper
- ◦ Z = 8: Light paper

- ◦ Z = 9: Rough paper

- ◦ Z = A: Extra heavy glossy paper (glossy paper 3)

- ◦ Z = B: Heavy glossy paper (glossy paper 2)

- ◦ Z = C: Heavy paper 3

- ◦ Z = D: Heavy paper 2

Recommended action

1. Load the tray with the size and type of paper indicated, or use another tray if available.

2. If this message appears and the tray is loaded with the correct paper type, check the print driver settings to make sure that they match the tray type settings.

3. Clean the paper sensor.

4. If the error persists, replace the paper pickup assembly.

41.WX.YZ Error To use another tray, touch "Options"

Description

A printer error has occurred.

WX =

- ◦ 02: Beam detected misprint error

- ◦ 06: ITB top detection error

- ◦ 07: Paper transportation error

- ◦ 08: Optional input source delay

- ◦ 09: Sub-thermistor abnormally high temperature

- ◦ 18: Scan line inclination adjustment request

- ◦ 19: T2 roller HV

- ◦ 20: Image drum HV

Y = fuser mode

- ◦ 0: Photo paper 1, Photo paper 2, Photo paper 3, Designated paper 2, Designated paper 3, or NA, typed or Auto sense

- ◦ 1: Auto sense (normal): special case distinguished from typed Normal

- ◦ 2: Normal, typed (not Auto sense)

- ◦ 3: Light paper 1, 2, or 3, typed or Auto sense

- ◦ 4: Heavy paper 1, typed or Auto sense

◦ 5: Heavy paper 2, typed or Auto sense

◦ 6: Heavy paper 3, typed or Auto sense

◦ 7: Glossy paper 1, typed or Auto sense

◦ 8: Glossy paper 2, typed or Auto sense

◦ 9: Glossy paper 3, typed or Auto sense

◦ A: Glossy film, typed or Auto sense

◦ B: Transparency, typed or Auto sense

◦ C: Label

◦ D: Envelope 1, Envelope 2, Envelope 3

◦ E: Rough (designated paper 1), typed or Auto sense

◦ F: reserved for future fuser mode

Z = source tray

◦ 1: Tray 1

◦ 2: Tray 2

◦ 3: Tray 3

◦ D: Duplexer

Recommended action

1. To clear message, press the OK button.

2. If the message reappears, turn the product off and then on.

3. If the error persists, replace the DC controller PCA.

47.00.00

Description

Print Notification Provider internal error.

Recommended action

Turn the product off, and then on again. Re-send the print job.

47.00.XX

Description

Back channel internal error.

Recommended action

Turn the product off, and then on again. Re-send the print job.

If the error persists, execute the Partial Clean item in the **Preboot** menu.

47.01.XX

Description

Image transformer internal error.

Recommended action

Turn the product off, and then on again. Re-send the print job.

If the error persists, execute the Partial Clean item in the **Preboot** menu.

47.02.XX

Description

Job parser internal error.

Recommended action

Turn the product off, and then on again. Re-send the print job.

If the error persists, execute the Partial Clean item in the **Preboot** menu.

47.03.XX

Description

Print job internal error.

Recommended action

Turn the product off, and then on again. Re-send the print job.

If the error persists, execute the Partial Clean item in the **Preboot** menu.

47.04.XX

Description

Print spooler 9100 internal error.

Recommended action

Turn the product off, and then on again. Re-send the print job.

If the error persists, execute the Partial Clean item in the **Preboot** menu.

47.05.00

Description

Print spooler framework internal error.

Recommended action

Turn the product off, and then on again. Re-send the print job.

If the error persists, execute the Partial Clean item in the **Preboot** menu.

47.06.XX

Description

Print app internal error.

Recommended action

Turn the product off, and then on again. Re-send the print job.

If the error persists, execute the Partial Clean item in the **Preboot** menu.

49.XX.YY Error To continue turn off then on

Description

A firmware error has occurred. This error can be caused by corrupted print jobs, software applications issues, non-product specific print drivers, poor-quality USB or network cables, bad network connections or incorrect configurations, invalid firmware operations, or unsupported accessories.

Recommended action

1. Turn the product off and then on.

2. If the error persists, check the following:

   ● The error might be caused by a network connectivity problem, such as a bad interface cable, a bad USB port, or an invalid network configuration setting.

   ● The error might be caused by the print job, such as an invalid print driver, a problem with the software application, or a problem with the file you are printing.

   ● Upgrading the product firmware might help resolve the error. See the product user guide for more information.

50.WX.YZ Fuser error To continue turn off then on

Description

The product experienced a fuser error.

◦ W = fuser error code

◦ X = fuser mode

- 0: Photo paper 1, 2, 3, Designated paper 2, 3, or NA, typed or Auto-sense

- 1: Auto sense (Normal special case distinguished from typed Normal)

- 2: Normal, typed (not Auto sense)

- 3: Light paper 1, 2, or 3, typed or Auto sense

- 4: Heavy paper 1, typed or Auto sense

- 5: Heavy paper 2, typed or Auto sense

- 6: Heavy paper 3, typed or Auto sense

- 7: Glossy paper 1, typed or Auto sense

- 8: Glossy paper 2, typed or Auto sense

- 9: Glossy paper 3, typed or Auto sense

- A: Glossy film, typed or Auto sense

- B: Transparency, typed or Auto sense

- C: Label

- D: Envelope1, Envelope2, or Envelope3

- E: Rough (designated paper 1), typed or Auto sense

- F: Reserved for future fuser mode

◦ Y = previous product sleep state

◦ Z = next product sleep state

- 0: Printing

- 1: Standby level 1 (no temperature control)

- 2: Standby level 2 (high temperature control)

- 3: Standby level 3 (middle temperature control)

- 4: Standby level 4 (low temperature control)

- 5: Middle sleep

- 6: Deep sleep
- F: Off

Recommended action

W = A: High fuser temperature 2

1. Remove and then reseat the fuser. Make sure there is no residual paper in the fuser. Make sure the product is not located in front of a vent or window where cool air may interfere with the ability of the fuser to heat up.

2. Check the product power source. Make sure the power source meets product requirements. Make sure this is the only device using the circuit.

3. Check the connector (J1) between the fuser and the product. If it is damaged, replace the fuser.

4. If this product was previously serviced, check the connector (J61) on the DC controller PCA.

5. If the error persists, replace the fuser.

W = B: High fuser temperature 3

1. Remove and then reseat the fuser. Remove any residual paper in the product.

2. Check the paper type setting using the product menus and in the print driver. Making sure that they match and are correct for the type of paper being used.

3. If this product was previously serviced, check the connector (J61) on the DC controller PCA.

4. If the error persists, replace the fuser.

W = 1, Low fuser error temperature error

1. Remove and then reseat the fuser.

2. Check the paper type setting using the product menus and in the product driver. Make sure that they match and are correct for the type of paper being used.

3. If this product was previously serviced, check the connector (J61) on the DC controller PCA.

4. If the error persists, replace the fuser.

W = 2, Fuser warm-up failure

1. Reconnect the connector (J61) between the fuser and the DC controller PCA.

2. Turn the product off. Remove the fuser, and then reinstall it.

3. Replace the fuser wire harness.

4. If the error persists, replace the fuser.

W = 3, High fuser temperature 1

1. Remove and then reseat the fuser.

2. Check the paper type setting using the product menus and in the product driver. Make sure that they match and are correct for the type of paper being used.

3. If this product was previously serviced, check the connector (J61) on the DC controller PCA.

4. If the error persists, replace the fuser.

W = 4, Fuser power supply driving circuit error

1. Remove and then reseat the fuser.

2. If this product was previously serviced, check the connector (J61) on the DC controller PCA.

3. If the error persists, replace the fuser.

W = 6, Open fuser, breaking of a heater wire

1. Check the power source. Make sure the power source meets product requirements.

    📝 **NOTE:** If the power source does not meet the power frequency requirement of 43 to 67Hz, the fuser temperature control does not work properly and causes this error.

2. If this product was previously serviced, check the connector (J61) on the DC controller PCA.

3. If the error persists, replace the low-voltage power supply.

W = 7, Fuser pressure-release mechanism failure

1. Remove and then reseat the fuser. Make sure there is no residual paper in the fuser.

2. Check the fuser pressure-release sensor flag. If it is damaged, replace the fuser.

3. Use the fuser pressure-release drive test in the component test to verify that the fuser motor (M3) is properly functioning. If it is not, replace the fuser motor (M3).

4. If this product was previously serviced, check the connector (J61) on the DC controller PCA.

5. If the error persists, replace the fuser.

W = 8, Low fuser temperature 2

1. Remove and then reseat the fuser. Make sure there is no residual paper in the fuser. Make sure the product is not located in front of a vent or window where cool air may interfere with the ability of the fuser to heat up.

2. Check the product power source. Make sure the power source meets product requirements. Make sure this is the only device using the circuit.

3. Check the connector (J1) between the fuser and the product. If it is damaged, replace the fuser.

4. If this product was previously serviced, check the connector (J61) on the DC controller PCA.

5. If the error persists, replace the fuser.

W = 9, High fuser temperature 2

1. Remove and then reseat the fuser. Make sure there is no residual paper in the fuser. Make sure the product is not located in front of a vent or window where cool air may interfere with the ability of the fuser to heat up.

2. Check the product power source. Make sure the power source meets product requirements. Make sure this is the only device using the circuit.

3. Check the connector (J1) between the fuser and the product. If it is damaged, replace the fuser.

4. If this product was previously serviced, check the connector (J61) on the DC controller PCA.

5. If the error persists, replace the fuser.

51.00.YY Error To continue turn off then on

Description

An error with the laser scanner assembly has occurred in the product.

○   YY = 10: Beam detect error

○   YY = 19: Laser malfunction

○   YY = 20: Black laser scanner error

Recommended action

51.00.10

1. Turn the product off and then on.

2. Check the flat flexible cable (FFC) connection to the laser scanner.

3. Check connector J71 at the DC controller, and check the laser scanner connectors.

4. Replace the laser scanner.

51.00.19

1. Turn the product off and then on.

2. Check the connectors on the laser scanner.

3. Replace the laser scanner.

51.00.20

1. Perform the laser scanner component tests in the Troubleshooting menu. Verify that you can hear the motor rotate.

2. If you cannot hear the motor rotate, verify that connector J71 is fully seated on the DC controller PCA.

3. Verify that the connector on the laser scanner assembly is securely attached.

4. If the error persists, replace the laser scanner.

52.00.00 Error To continue turn off then on

Description

A scanner rotation error has occurred.

Recommended action

1. Turn the product off and then on.

2. Perform the laser scanner component tests in the Troubleshooting menu.

3. If the component tests showed a failure, reconnect the connectors of the scanner motor (J1900 and J801) and the DC controller PCA (J71).

4. Replace the laser-scanner assembly.

52.00.20 Error To continue turn off then on

Description

A scanner rotation error has occurred.

Recommended action

1. Turn the product off and then on.

2. Perform the laser scanner component tests in the Troubleshooting menu.

3. If the component tests showed a startup failure, reconnect the connectors of the scanner motor (J1900 and J801) and the DC controller PCA (J71).

4. Replace the laser-scanner assembly.

52.<XX>.00 Error To continue turn off then on

Description

The laser scanner experienced a startup error.

○ XX = 04 or 05: Laser scanner motor startup error

○ XX = 05: Laser scanner rotation error

Recommended action

XX = 04

1. Perform the laser scanner component tests in the Troubleshooting menu.

2. Check the connectors (J1900 and J801) on the laser scanner driver PCA and the connector (J71) on the DC controller PCA.

3. If the error persists, replace the laser scanner.

XX = 05

1. Perform the laser scanner component tests in the Troubleshooting menu.

2. Check the connectors (J1900 and J801) on the laser scanner driver PCA and the connector (J71) on the DC controller PCA.

3. If the error persists, replace the laser scanner.

54.XX.YY Error

Description

A sensor error has occurred.

Recommended action

54.00.03: Environmental sensor failure

1. Turn the product off and then on.

2. If the environment sensor has been removed or replaced. check the connector on the environment sensor and the connector (J63) on the DC controller PCA.

3. If the error persists, replace the environment sensor assembly.

54.00.04: Engine temperature sensor 1 abnormality warning

1. Turn the product off and then on.

55.XX.YY DC controller error To continue turn off then on

Description

The communication link between the formatter and DC controller was lost.

- ○ **55.00.00** (event code): Internal communication error
- ○ **55.00.01** (event code): DC controller memory error
- ○ **55.00.03** (event code): DC controller no engine response
- ○ **55.00.04** (event code): DC controller communications time-out

Recommended action

1. Turn the product off and then on.

2. Perform an engine test.

3. Verify the connectors on the DC controller.

4. If the error persists, replace the DC controller.

56.00.YY Error To continue turn off then on

Description

The product experienced a communication error with the optional paper tray.

- ◦ **56.00.01** (event code): Illegal input, selected paper input tray is unavailable
- ◦ **56.00.02** (event code): Illegal output, selected paper output bin is unavailable

Recommended action

1. Turn the product off and then on.

2. Reseat the optional paper tray.

3. Check the input connectors for damage. If a connector is damaged, replace the connector.

4. Remove any third-party hardware.

5. Upgrade the firmware.

6. If the error persists, replace the DC controller.

57.00.0X Error

Description

A fan error has occurred.

Recommended action

57.00.01: Fan motor 1 (rear) malfunction

1. Turn the product off and then on. Listen for fan noise at the rear of the product. If no noise is heard, replace the power supply fan (FM1).

2. If this part has been removed or replaced, check the connector (J33) on the DC controller PCA.

57.00.02: Fan motor 2 (front) malfunction

1. Turn the product off and then on. Listen for fan noise at the front of the product. If no noise is heard, replace the toner cartridge fan (FM2).

2. If this part has been removed or replaced, check the connector (J37) on the DC controller.

57.00.03: Fan motor 3 (fuser) malfunction

1. Turn the product off and then on. Listen for fan noise at the lower back-center of the product. If no noise is heard, replace the fuser fan (FM3).

2. If this part has been removed or replaced, check the connector J37 on the DCC.

58.00.02 environmental sensor malfunction

Description

The product has experienced an environmental sensor error.

Recommended action

1. Turn the product off and then on.

2. Verify that the connector (J63) on the DC controller PCA and the sensor (J400) are connected correctly and undamaged.

3. If the error persists, replace environmental sensor.

58.00.04 Error To continue turn off then on

Description

The low-voltage power supply is defective.

Recommended action

1. Turn the product off and then on.

2. Check the connectors (J31 and J32) on the DC controller PCA.

3. If the error persists, replace the low voltage power supply.

59.00.00 Error To continue turn off then on

Description

A paper path malfunction error has occurred.

Recommended action

Turn the product off then on.

59.00.20 Error To continue turn off then on

Description

A motor rotation error has occurred.

Recommended action

Turn the product off and then on.

59.00.30 Error To continue turn off then on

Description

A fuser motor startup error has occurred.

Recommended action

1. Turn the product off and then on.

2. Perform the fuser motor component test in the Troubleshooting menu.

3. Reconnect the connector (J47) on the DC controller PCA.

4. Replace the fuser motor.

59.00.40 Error To continue turn off then on

Description

A fuser motor rotational error has occurred.

Recommended action

1. Turn the product off and then on.

2. Perform the fuser motor component test in the Troubleshooting menu.

3. Reconnect the connector (J47) on the DC controller PCA.

4. Replace the fuser motor.

59.05.50 Error To continue turn off then on

Description

The product experienced a drum motor startup error.

Recommended action

1. Perform the drum-motor component test in the Troubleshooting menu.

2. Use the disable toner cartridge check and run the drum motor component test with the toner cartridge removed. If the test passes, replace the toner cartridge. If the test fails, replace the drum motor.

3. If the product was previously serviced, check the connector at the drum motor assembly and the DC controller. See the circuit diagram for details.

59.05.60 Error To continue turn off then on

Description

The product experienced a drum motor rotation error.

Recommended action

1. Perform the drum-motor component test in the Troubleshooting menu.

2. Use the disable toner cartridge check and run the drum motor component test with the toner cartridge removed. If the test passes, replace the toner cartridge. If the test fails, replace the drum motor.

3. If the product was previously serviced, check the connector at the drum motor assembly and the DC controller. See the circuit diagram for details.

60.00.0Y Tray <Y> lifting error

Description

The indicated tray has not lifted into the paper feed position.

Recommended action

60.00.02

Media input Tray 2 lift-up motor (M4) failure

1. Use the Tray 2 paper surface sensor (SR10) test in the Tray/Bin manual sensor test to verify that the sensor is properly functioning. If it is not, replace the lifter drive assembly.

2. Open and close Tray 2 and listen at the back of the product for the sound of the lifer motor (M4) operating. If it does not operate, replace the lifter drive assembly.

3. If the product has been serviced, check the intermediate connector (J56) and the connector (J51) on the DC controller PCA.

4. If the error persists, replace the cassette tray.

60.00.03

Media input Tray 3 lift-up motor (M5) failure.

1. Use the Tray 3 paper surface sensor (SR11) test in the Tray/Bin manual sensor test to verify that the sensor is properly functioning. If it is not, replace the lifter drive assembly.

2. Open and close Tray 3 and listen at the back of the product for the sound of the lifer motor (M5) operating. If it does not operate, replace the lifter drive assembly.

3. If the product has been serviced, check the connector (J57) on the paper feeder controller PCA, the intermediate connector (J51) and the connector (J2006) on the paper feeder controller PCA.

   ☀ **TIP:** Check the connector (J2006) on the paper feeder controller PCA associated with the tray.

4. If the error persists, replace the cassette tray.

60.00.04

Media Tray 4 lift-up motor failure.

📝 **NOTE:** The Tray 4 motors, sensors, and connectors numbers depend on the input device configuration.

1. Use the Tray 4 paper surface sensor (SR2) test in the Tray/Bin manual sensor test to verify that the sensor is properly functioning. If it is not, replace the lifter drive assembly.

2. Open and close Tray 4 and listen at the back of the product for the sound of the lifer motor (M2) operating. If it does not operate, replace the lifter drive assembly.

3. If the product has been serviced, check the connector (J57) on the paper feeder controller PCA, the intermediate connector (J51) and the connector (J2006) on the paper feeder controller PCA.

> ☼ **TIP:** Check the connector (J2006) on the paper feeder controller PCA associated with the tray.

4. If the error persists, replace the cassette tray.

60.00.05 or 60.00.06

Media input Tray 5 lift-up motor (M82) failure or media input Tray 6 lift-up motor (M92) failure

> 📝 **NOTE:** The Tray 5 and Tray 6 motors, sensors, and connectors numbers depend on the input device configuration.

1. Use the Tray 5 paper surface sensor (SR82) or Tray 6 paper surface sensor (SR92) test in the Tray/Bin manual sensor test to verify that the sensor is properly functioning. If it is not, replace the lifter drive assembly.

2. Open and close Tray 5 or Tray 6 and listen at the back of the product for the sound of the lifter motor (M82 or M92) operating. If it does not operate, replace the lifter drive assembly.

3. If the product has been serviced, check the connector (J2003) on the paper feeder controller PCA, the intermediate connector (J702), and the connector (J2006) on the paper feeder controller PCA.

> ☼ **TIP:** Check the connector (J2006) on the paper feeder controller PCA associated with the tray.

4. If the error persists, replace the cassette tray.

60.00.11: Lifter motor failure (M4, M5)

1. Turn the product off and then on.

2. Check the connector (J51) on the DC controller PCA.

3. Check the connectors on the lifter motors.

4. Use the tray surface sensor test in the Manual sensor tests menu to verify that the sensor is properly functioning. If it is not, replace the lifter drive assembly.

5. If the error persists, replace the lifter drive assembly.

60.10.0Y Media input source <Y> pickup mechanism malfunction

Description

- **60.10.01 Media input source 1 pickup mechanism malfunction**
- **60.10.02 Media input source 2 pickup mechanism malfunction**
- **60.10.03 Media input source 3 pickup mechanism malfunction**
- **60.10.04 Media input source 4 pickup mechanism malfunction**
- **60.10.05 Media input source 5 pickup mechanism malfunction**
- **60.10.06 Media input source 6 pickup mechanism malfunction**

Recommended action

1. Turn the product off, and then on again.

2. Use the paper pick-up motor (M1, M4, M5, M92, M3301, M3304) test in the Component test to verify that the pickup motor is properly functioning. If the pickup motor is not functioning, replace the paper pick-up assembly.

    NOTE: Trays 4-6 motor numbers depend on the input device configuration.

62.00.00 No system To continue turn off then on

Description

The product experienced an internal system failure.

Recommended action

1. Turn the product off and then on.

2. Reload the firmware.

3. Perform a firmware upgrade.

4. If the error persists, replace the hard disk.

66.80.02 Output accessory failure To continue turn off then on

Description

Jogger motor malfunction. Home position could not be found.

Recommended action

1. Turn the power off.

2. Make sure that the external paper handling accessory is clear of all packing materials and other obstructions.

3. Turn the power on.

4. If the error persists, replace the stapler/stacker alignment assembly.

66.80.03 Output accessory failure To continue turn off then on

Description

Staple motor malfunction. Stapler could not return to home position.

Recommended action

1. Turn the power off.

2. Make sure that the external paper handling accessory is clear of all packing materials and other obstructions.

3. Turn the power on.

4. If the error persists, replace the stapler assembly.

66.80.19 Output accessory failure To continue turn off then on

Description

Self-priming malfunction. Not able to complete self-priming after 11 attempts.

Recommended action

1. Turn the power off.

2. Make sure that the external paper handling accessory is clear of all packing materials and other obstructions.

3. Turn the power on.

4. If the error persists, replace the stapler assembly.

66.80.33 Output accessory failure To continue turn off then on

Description

Output roller lift motor could not reach home.

Recommended action

1. Turn the power off.

2. Make sure that the external paper handling accessory is clear of all packing materials and other obstructions.

3. Turn the power on.

4. If the error persists, replace the stapler/stacker alignment assembly.

69.11.YY Error To continue, touch "OK"

Description

This message displays to indicate an error during a duplex operation.

Recommended action

Turn the product off and then on.

70.00.00 Error To continue turn off then on

Description

The product experienced a DC controller failure.

Recommended action

1. Turn the product off and then on.

2. If the error persists, replace the DC controller.

80.0X.YY Embedded Jetdirect Error

Description

Embedded HP JetDirect print server critical error.

-   ◦ **80.01.80** (event code)

    No heartbeat

-   ◦ **80.01.81** (event code)

    Reclaim time-out

-   ◦ **80.01.82** (event code)

    Invalid data length

-   ◦ **80.01.8B** (event code)

    Invalid max outstanding packet header field

-   ◦ **80.01.8C** (event code)

    Invalid channel mapping response

-   ◦ **80.03.01** (event code)

    No PGP buffers

-   ◦ **80.03.02** (event code)

    Channel table full

-   ◦ **80.03.03** (event code)

    Producer index not reset

-   ◦ **80.03.04** (event code)

    Consumer index not reset

-   ◦ **80.03.05** (event code)

    Queue position size too small

-   ◦ **80.03.06** (event code)

    Transport overflow

-   ◦ **80.03.07** (event code)

    No overflow packets

- ◦ **80.03.08** (event code)

  Invalid identify response

- ◦ **80.03.09** (event code)

  Invalid channel map return status

- ◦ **80.03.10** (event code)

  Invalid reclaim return status

- ◦ **80.03.12** (event code)

  Datagram invalid buffer

- ◦ **80.03.13** (event code)

  Max stream channels

- ◦ **80.03.14** (event code)

  Max datagram channels

- ◦ **80.03.15** (event code)

  Card reset failed

- ◦ **80.03.16** (event code)

  Self test failure

- ◦ **80.03.17** (event code)

  Unknown PGP packet

- ◦ **80.03.18** (event code)

  Duplicate I/O channel

Recommended action

Turn the product off, and then on.

If the error persists, replace the formatter.

81.WX.00 Wireless Network Error To continue turn off then on

Description

A wireless network component on the product has failed.

Recommended action

1. Turn the product off, and then on.

2. If the error persists, turn the product off, reseat the wireless network component, and then turn the product on.

3. If the error persists, replace the wireless network component.

81.WX.YZ Embedded JetDirect Error To continue turn off then on

Description

The product experienced an embedded HP Jetdirect print server critical error.

- ◦ **81.01.00** (event code): EIO Networking Event <UVWXYZ>

- ◦ **81.02.00** (event code): Wireless Networking Event <UVWXYZ>

- ◦ **81.03.00** (event code): Access Point Wireless Networking Event <UVWXYZ>

- ◦ **81.04.00** (event code): Jetdirect Inside Networking Event <UVWXYZ>

- ◦ **81.06.00** (event code): Internal EIO Networking Event <UVWXYZ>

- ◦ **81.07.00** (event code): Internal Wireless Networking Event <UVWXYZ>

- ◦ **81.08.00** (event code): Internal Access Point Wireless Networking Event <UVWXYZ>

- ◦ **81.09.00** (event code): Internal Jetdirect Inside Networking Event <UVWXYZ>

Recommended action

1. Turn the product off and then on.

2. Turn the product off, reseat the EIO accessory, and then turn the product on.

3. If the error persists, replace the formatter.

81.YY.YY EIO Error To continue turn off then on

Description

An external I/O card has failed on the product.

Recommended action

1. Turn the product off and then on.

2. Turn the product off, reseat the EIO accessory, and then turn the product on.

3. If the error persists, replace the EIO card.

98.00.0X Corrupt data in X volume

Description

Data corruption has occurred in the firmware volume.

- ◦ **98.00.01 Corrupt data in firmware volume Reinstall firmware**

- ◦ **98.00.02 Corrupt data in solutions volume Re-install accessory solutions**

- ◦ **98.00.03 Corrupt data in configuration volume Re-configure the product**

- ◦ **98.00.04 Corrupt data in job data volume All job data was erased**

Recommended action

98.00.01 or 98.00.02 or 98.00.03

1. Turn the product off and then on.

2. Use the 1 Clear disk item in the Preboot menu.

3. Reload the firmware.

98.00.04

1. Turn the product off and then on.

2. Rerun the file erase function.

99.00.01 Upgrade not performed file is corrupt

Description

Remote firmware upgrade (.bdl) was not performed. The file is corrupt.

Recommended action

The firmware file is corrupt. Download the firmware file and attempt the upgrade again.

99.00.02 Upgrade not performed timeout during receive

Description

Remote firmware upgrade (.bdl) was not performed. Time-out during receipt.

Recommended action

The I/O timed out during the firmware download. The most common cause is an issue with the network environment. Ensure a good connection to the product, and attempt the upgrade again or upgrade using the easy-access USB port.

99.00.03 Upgrade not performed error writing to disk

Description

Remote firmware upgrade (.bdl) was not performed. An error occurred when writing to the hard disk.

Recommended action

1. Download the firmware again, and then attempt the upgrade again.

2. If the error persists, perform the clean disk/format disk process.

3. Download the firmware from the **Preboot** menu, and then attempt the upgrade again.

4. If the error persists, replace the hard disk.

99.00.04 Upgrade not performed timeout during receive

Description

A remote firmware upgrade (RFU) was not performed.

I/O time-out when reading rest of header.

Recommended action

The most common cause is an issue with the network environment. Make sure that there is a good connection to the device and attempt the upgrade again, or upgrade using the easy-access USB port.

99.00.05 Upgrade not performed timeout during receive

Description

A remote firmware upgrade (RFU) was not performed.

I/O time-out when reading image data.

Recommended action

The most common cause is an issue with the network environment. Make sure that there is a good connection to the device and attempt the upgrade again, or upgrade using the easy-access USB port.

99.00.06 Upgrade not performed error reading upgrade

Description

A remote firmware upgrade (RFU) was not performed.

Unexpected read error when reading header number and size.

Recommended action

1. Download the RFU file and attempt the upgrade again.

2. If the error persists, replace the hard disk.

99.00.07 Upgrade not performed error reading upgrade

Description

A remote firmware upgrade (RFU) was not performed.

Unexpected read error when reading rest of header.

Recommended action

1. Download the RFU file and attempt the upgrade again.

2. If the error persists, replace the hard disk.

99.00.08 Upgrade not performed error reading upgrade

Description

A remote firmware upgrade (RFU) was not performed.

Unexpected read error when reading image data.

Recommended action

1. Download the RFU file and attempt the upgrade again.

2. If the error persists, replace the hard disk.

99.00.09 Upgrade canceled by user

Description

A remote firmware upgrade (RFU) was not performed.

The RFU was canceled by the user.

Recommended action

Re-send the RFU.

99.00.10 Upgrade canceled by user

Description

A remote firmware upgrade (RFU) was not performed.

Job canceled when reading header number and size.

Recommended action

Re-send the RFU.

99.00.11 Upgrade canceled by user

Description

A remote firmware upgrade (RFU) was not performed.

Job canceled when reading rest of header.

Recommended action

Re-send the RFU.

99.00.12 Upgrade not performed the file is invalid

Description

A remote firmware upgrade (RFU) was not performed.

Header number is 1 but header size doesn't match version 1 size.

Recommended action

Download the RFU file again. Make sure that you download the file for the correct product model. Re-send the RFU.

99.00.13 Upgrade not performed the file is invalid

Description

A remote firmware upgrade (RFU) was not performed.

Header number is 2 but header size doesn't match version 2 size.

Recommended action

Download the RFU file again. Make sure that you download the file for the correct product model. Re-send the RFU.

99.00.14 Upgrade not performed the file is invalid

Description

A remote firmware upgrade (RFU) was not performed.

The file is invalid.

Recommended action

Download the RFU file again. Make sure that you download the file for the correct product model. Re-send the RFU.

99.00.2X

Description

◦ **99.00.20** (event log)

The bundle is not for this product.

◦ **99.00.21** (event log)

The bundle is not signed with the correct signature, or the signature is invalid.

◦ **99.00.22** (event log)

The bundle header version is not supported by this firmware.

◦ **99.00.23** (event log)

The package header version is not supported by this firmware.

◦ **99.00.24** (event log)

The format of the bundle is invalid.

◦ **99.00.25** (event log)

The format of the package is invalid.

◦ **99.00.26** (event log)

A CRC32 check did not pass.

◦ **99.00.27** (event log)

An I/O error occurred while downloading the bundle.

Recommended action

Download the correct firmware file from www.hp.com/go/ljMFPM725_firmware, and then re-send the firmware upgrade.

99.00.27 only: Turn the product off, and then on again. Re-send the firmware upgrade. If the error persists, try the sending the upgrade by another method (USB or HP Embedded Web Server).

99.01.XX

Description

◦ **99.01.00**

◦ **99.01.10**

◦ **99.01.20**

◦ **99.01.21**

A firmware install error has occurred.

Recommended action

Reload the firmware.

99.02.01

Description

Firmware installation was successful.

Recommended action

No action necessary.

99.02.09

Description

Firmware upgrade cancelled by user.

Recommended action

No action necessary.

99.09.60 Unsupported disk

Description

Preboot menu error.

The hard disk currently installed is not recognized or supported by the product.

Recommended action

Install the correct hard disk for this product.

99.09.61 Unsupported disk

Description

Preboot menu error.

The installed disk is installed in a product configured for a encrypted hard disk.

Recommended action

Open the **Preboot** menu, and then select **Lock Disk** to lock the disk.

99.09.62 Unknown disk

Description

Preboot menu error.

The installed disk was previously locked in another product.

Recommended action

Install a new disk or use the **Preboot** menu to unlock this disk. If the disk is to be reused in a different product, execute the **Clean Disk** procedure from the **Preboot** menu, and then reload firmware and lock the disk.

99.09.63 Incorrect disk

Description

A new or blank disk has been installed in a device which previously had an encrypted disk.

Recommended action

Follow the procedure to load firmware on a new hard disk, and then lock it to this product.

99.09.64 Disk malfunction

Description

A fatal hard disk failure has occurred.

Recommended action

Replace the hard disk drive.

99.09.65 Disk data error

Description

Disk data corruption has occurred.

Recommended action

Execute the **Clean Disk** procedure from the **Preboot** menu, and then re-send the RFU.

99.09.66 No disk installed

Description

A disk drive is not installed in the product.

Recommended action

1. Install a compatible hard disk drive.

2. If a compatible hard disk is installed, reseat the hard disk to make sure it is correctly connected.

3. If the error persists, replace the hard disk drive.

99.09.67 Disk is not bootable please download firmware

Description

The product has a non-secure disk (solid state disk) installed as the boot disk, and it has been replaced with a new service part. A new firmware image needs to be downloaded to the device.

Recommended action

1. Press any button to continue to the main **Preboot** menu.

2. Press the Help button to see the help text for the error.

3. Select the Administration menu.

> **NOTE:** If there is a password assigned to the Administrator, a prompt to enter the password displays.

4. Select the Download item.

5. The user can now download a new firmware bundle to the product.

99.09.68

Description

The secondary encrypted disk has been removed from this device.

Recommended action

Reinstall the secondary encrypted storage device.

99.XX.YY

Description

Firmware installation error

Recommended action

Reload the firmware.

<Binname> full Remove all paper from bin

Description

The specified output bin is full.

Recommended action

Empty the bin to continue printing.

Bad optional tray connection

Description

The optional tray is not connected, not connected correctly, or a connection is not working correctly.

Recommended action

1. Turn the product off.

2. Remove and reinstall the optional tray.

3. Reconnect connectors for the tray.

4. Turn the product on.

Black Cartridge low

Description

The toner cartridge is at the low condition.

Recommended action

Actual supply life remaining may vary. Consider having a replacement available to install when print quality is no longer acceptable. The supply does not need to be replaced now.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty ends.

Black Cartridge very low

Description

The toner cartridge has reached the very low condition.

Recommended action

Actual supply life remaining may vary. Consider having a replacement available. The supply does not need to be replaced now unless the print quality is no longer acceptable. Once an HP supply has reached the very low condition, HP's warranty on that supply has ended.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty ends.

Black Cartridge very low To continue, touch "OK"

Description

The toner cartridge has reached the very low condition.

Recommended action

Actual supply life remaining may vary. Consider having a replacement available. The supply does not need to be replaced now unless the print quality is no longer acceptable. Once an HP supply has reached the very low condition, HP's warranty on that supply has ended.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty ends.

Card slot device failure To clear touch "Clear"

Description

The specified device has failed.

Recommended action

Press the Clear button to clear the error.

Card slot file operation failed To clear touch "Clear"

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Press the Clear button to clear the error.

Card slot file system is full To clear touch "Clear"

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Press the Clear button to clear the error.

Card slot is write protected To clear touch "Clear"

Description

The file system device is protected and no new files can be written to it.

Recommended action

Press the Clear button to clear the error.

Card slot not initialized To clear touch "Clear"

Description

This file-storage component must be initialized before use.

Recommended action

Use the embedded Web server or HP Web Jetadmin to initialize the component.

Cartridge ship mode

Description

Manufacturing use only - should not be seen in field.

Recommended action

Contact HP support for steps to resolve this condition.

Chosen personality not available To continue, touch "OK"

Description

A print job requested a product language (personality) that is not available for this product. The job will not print and will be cleared from memory.

Recommended action

Print the job by using a product driver for a different print language, or add the requested language to the product (if possible). To see a list of available personalities, print a configuration page.

Cleaning disk <X>% complete Do not power off

Description

A storage device is being sanitized or cleaned.

Recommended action

Do not turn off the product. The product's functions are unavailable. The product will automatically restart when finished.

Close left door

Description

The left door is open.

Recommended action

1. Close the left door.

2. If the error persists, verify the J35 connector is fully seated on the DC controller PCA.

3. Use the Manual sensor test menu to verify the left-door sensor functionality. If necessary, replace the sensor.

Close right door

Description

A door on the right side of the product is open.

Recommended action

1. Close the right door.

2. If the error persists, use the manual sensor test to verify that the right door opening/closing sensor is properly functioning. If the sensor fails, replace the right door switch.

3. Check the right door sensor flag. If it is damaged, replace the right door.

Close top cover

Description

The cartridge door is open.

Recommended action

1. Close the cartridge door.

2. Make sure that the connectors are fully seated on the cartridge door switch SW3.

3. Make sure that the tab on the cartridge door that activates the switch is not missing or damaged. Replace the cartridge-door assembly if necessary.

4. Replace the door switch.

Data received

Description

The product is waiting for more data to continue the print job.

Recommended action

Press the OK button to print the last page of the job. To print the existing data, press the Print button.

Disk full Delete stored jobs

Description

The disk is out of storage space and there is not enough space to process any jobs.

Recommended action

○ Press the View Jobs option to view and delete the stored jobs.

○ Press the Print option to print and delete stored jobs. Sign in might be required.

The error will automatically clear when there is enough disk space to process jobs.

Disk low Delete stored jobs

Description

The disk is running out of storage space. If the user does not delete stored jobs, the disk will run out of space and there will not be enough space to process any jobs. If the storage space goes lower, an error condition will occur.

Recommended action

○ Press the View Jobs option to view and delete stored jobs.

○ Press the Print option to print and delete stored jobs. Sign in might be required.

To increase available disk space, go to Job Status to cancel scheduled jobs.

EIO <X> disk not functional

Description

The EIO disk in slot indicated is not working correctly.

Recommended action

1. Turn the product off.

2. Remove the EIO disk from the slot indicated.

3. Install a new EIO disk.

4. Turn the product on.

EIO <X> disk spinning up

Description

The EIO disk product in the indicated slot is spinning up. Jobs that require disk access must wait.

◦ X = 1: Slot 1

◦ X = 2: Slot 2

Recommended action

No action is necessary.

EIO device failure To clear touch "Clear"

Description

The specified device failed.

Recommended action

Press the Clear button to clear the message.

EIO file operation failed To clear touch "Clear"

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Press the Clear button to clear the message.

EIO file system is full To clear touch "Clear"

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Press the Clear button to clear the error.

EIO is write protected To clear touch "Clear"

Description

The device is protected and no new files can be written to it.

Recommended action

Press the Clear button to clear the message.

EIO not initialized To clear touch "Clear"

Description

This file-storage component must be initialized before use.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the file system.

Event log is empty

Description

No product events are in the log.

Recommended action

No action is necessary.

Fuser Kit Low

Description

The product indicates when a supply level is low.

Recommended action

Replace the fuser kit.

NOTE: After replacing the fuser kit, reset the fuser page counter by selecting the New Fuser Kit item in the Reset Supplies sub-menu.

Fuser Kit very low

Description

The product indicates when a supply level is very low.

NOTE: After an HP supply has reached the very low threshold, the HP Premium Protection Warranty for that supply has ended.

Recommended action

Replace the fuser kit.

Fuser Kit very low To continue, touch "OK"

Description

The product indicates when a supply level is very low.

Recommended action

Replace the fuser kit.

Incompatible <supply>

Description

The indicated <supply>is not compatible with this product.

- ○   **10.00.35** (event code): Black toner cartridge

- ○   **10.23.35** (event code): Fuser kit

Recommended action

Replace the incompatible supply.

Incompatible supplies

Description

The toner cartridge or other supply items are installed that were not designed for this product. The product cannot print with these supplies installed.

Event codes are supply specific.

Recommended action

Press the OK button to identify the incompatible supplies.

Replace the supplies with those that are designed for this product.

Initializing...

Description

The product is starting.

Recommended action

No action is necessary. Wait until the Ready message appears on the display.

Install Black Cartridge

Description

A supply is either not installed or not correctly installed in the product.

Recommended action

Replace or reinstall the toner cartridge correctly to continue printing.

Install Fuser Unit

Description

The fuser is either not installed or not correctly installed in the product.

Recommended action

⚠ **CAUTION:** The fuser can be hot while the product is in use.

Reseat the fuser.

Install supplies

Description

More than one supply is missing or is installed incorrectly.

- ◦ **10.00.15** (event code): Black toner cartridge
- ◦ **10.23.15** (event code): Fuser kit

Recommended action

1. Press the OK button to identify which supplies need to be replaced.

2. Press the OK button a second time for more information about the specific supply.

3. Insert the supply item or make sure the installed supply item is fully seated.

Internal disk device failure To clear touch "Clear"

Description

The specified device has failed.

Recommended action

Press the Clear button to clear the message.

Internal disk file operation failed To clear touch "Clear"

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Press the Clear button to clear the message.

Internal disk file system is full To clear touch "Clear"

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Press the Clear button to clear the error.

Internal disk is write protected To clear touch "Clear"

Description

The internal disk is protected and no new files can be written to it.

Recommended action

Press the Clear button to clear the message.

Internal disk not found

Description

The product cannot find the hard drive.

Recommended action

Check the hard drive cable connections.

Internal disk not functional

Description

The product internal disk is not working correctly.

Recommended action

1. Turn off the product, and then remove and reinstall the disk. Turn on the product.

2. If the error persists, replace the internal hard drive.

Internal disk not initialized To clear touch "Clear"

Description

This file-storage component must be initialized before use.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the file system.

Internal disk spinning up

Description

Internal disk device is spinning up its platter. Jobs that require disk access must wait.

Recommended action

No action is necessary.

Load Tray 1 [Type] [Size]

Description

Tray 1 is not loaded, but there is not another tray available for the user to use instead.

Recommended action

Load the tray with the requested paper.

Load Tray 1 [Type] [Size] To continue, touch "OK"

Description

Tray 1 is empty.

Recommended action

◦ Load Tray 1 with the requested paper. Or, if paper is already in Tray 1, press the OK button to print.

◦ If paper is in another tray, remove the paper and insert it in Tray 1, and then press the OK button.

Load Tray <X>: [Size]

Description

This message appears even though there is paper loaded in the tray.

Recommended action

1. Load the tray with the requested paper or adjust the paper guides.

2. If the error persists, use the tray paper present sensor test in the **Tray/Bin Manual Sensor Test** to verify that the sensor is correctly functioning.

3. Make sure that the sensor flag on the paper presence sensor is not damaged and moves freely.

4. Reconnect the corresponding connector:

- Tray 1 (multipurpose tray): Connectors (J1) on the Tray 1 paper out sensor and the connector (J41) on the DC controller PCA.

- Input trays: Connectors (J15 and J7) on the tray paper out sensor and the connectors (J43, J48) on the DC controller PCA.

- 1x500-sheet paper feeder tray: Connector (J752) on the paper feeder tray paper out sensor and the connector (J2003) on the paper feeder controller PCA.

- 3x500-sheet paper feeder tray: Connector (J752, J852, J952) on the paper feeder tray paper out sensor and the connector (J2003) on the paper feeder controller PCA.

- HCI: Connector (J3201) on the paper feeder tray paper out sensor and the connector (J3005 or J3015) on the HCI controller PCA.

Load Tray <X>: [Size] To continue, touch "OK"

Description

This message appears when the indicated tray is selected but is not loaded, and other paper trays are available for use. It also appears when the tray is configured for a different paper type or size than the print job requires.

Recommended action

1. Load the correct paper in the tray.

2. If prompted, confirm the size and type of paper loaded.

3. Otherwise, press the OK button to select another tray.

Load Tray <X>: [Size] To use another tray, touch "Options"

Description

This message appears when the indicated tray is selected but is not loaded, and other paper trays are available for use. It also appears when the tray is configured for a different paper type or size than the print job requires.

Recommended action

1. Load the correct paper in the tray.

2. If prompted, confirm the size and type of paper loaded.

3. Otherwise, press the OK button to select another tray.

Load Tray <X>: [Type], [Size]

Description

This message appears even though there is paper loaded in the tray.

Recommended action

1. Load the tray with the requested paper or adjust the paper guides.

2. If the error persists, use the tray paper present sensor test in the **Tray/Bin Manual Sensor Test** to verify that the sensor is correctly functioning.

3. Make sure that the sensor flag on the paper presence sensor is not damaged and moves freely.

4. Reconnect the corresponding connector:

   - Tray 1 (multipurpose tray): Connector (J1) on the Tray 1 paper out sensor and the connector (J41) on the DC controller PCA.

   - Input trays: Connectors (J15 and J7) on the tray paper out sensor and the connectors (J43, J48) on the DC controller PCA.

   - 1x500-sheet paper feeder tray: Connector (J752) on the paper feeder tray paper out sensor and the connector (J2003) on the paper feeder controller PCA.

   - 3x500-sheet paper feeder tray: Connectors (J752, J852, J952) on the paper feeder tray paper out sensor and the connector (J2003) on the paper feeder controller PCA.

   - HCI: Connector (J3201) on the paper feeder tray paper out sensor and the connector (J3005 or J3015) on the HCI controller PCA.

Load Tray <X>: [Type], [Size] To use another tray, touch "Options"

Description

This message appears when the indicated tray is selected but is not loaded, and other paper trays are available for use. It also appears when the tray is configured for a different paper type or size than the print job requires.

Recommended action

1. Load the correct paper in the tray.

2. If prompted, confirm the size and type of paper loaded.

3. Otherwise, press the OK button to select another tray.

Manually feed output stack Then touch "OK" to print second sides

Description

The product has printed the first side of a manual duplex job and is waiting for the user to insert the output stack to print the second side.

Recommended action

The even-numbered pages of the two-sided document have printed. Follow the next steps to print the odd-numbered pages.

1. Maintaining the same orientation, remove the document from the output bin. Do not discard blank pages.

2. Flip the document over so the printed side is up.

3. Load document in Tray 1.

4. Press the OK button to print the second side of the job.

Manually feed: [Size]

Description

This message appears when manual feed is selected, Tray 1 is not loaded.

Recommended action

Load tray with requested paper.

Manually feed: [Size] To continue, touch "OK"

Description

This message appears when manual feed is selected, Tray 1 is not loaded, and other trays are available.

Recommended action

-   Load tray with requested paper.

-   If paper is already in tray, press the Help button to exit the message and then press the OK button to print.

-   To use another tray, clear paper from Tray 1, press the Help button to exit the message and then press the OK button.

Manually feed: [Size] To use another tray, touch "Options"

Description

This message appears when manual feed is selected, Tray 1 is not loaded, and other trays are available.

Recommended action

-   Load tray with requested paper.

-   To use another tray, clear paper from Tray 1, press Options to select a different tray.

Manually feed: [Type], [Size] To continue, touch "OK"

Description

This message appears when manual feed is selected, Tray 1 is not loaded, and other trays are available.

Recommended action

◦ Load tray with requested paper.

◦ If paper is already in tray, press the Help button to exit the message and then press the OK button to print.

◦ To use another tray, clear paper from Tray 1, press the Help button to exit the message and then press the OK button.

Manually feed: [Type], [Size] To use another tray, touch "Options"

Description

This message appears when manual feed is selected, Tray 1 is not loaded, and other trays are available.

Recommended action

◦ Load tray with requested paper.

◦ To use another tray, clear paper from Tray 1, press Options to select a different tray.

Moving solenoid

Description

The solenoid is moving as part of a component test.

Recommended action

To exit press X

Moving solenoid and motor

Description

The solenoid and a motor are moving as part of a component test.

Recommended action

To exit press X

No job to cancel

Description

You have pressed the stop button but the product is not actively processing any jobs.

Recommended action

No action necessary.

Output Bin full

Description

The output bin is full and must be emptied for printing to continue.

Recommended action

1. Empty the bin to continue printing.

2. Make sure that the paper full sensor flag is not damaged and can freely move. If the sensor flag is damaged, replace the top-cover assembly.

3. Make sure that the connector is fully seated on the sensor and connector J45 is fully seated on the DC controller.

4. Use the Manual Sensor Test menu items to test the sensor functionality. If necessary, replace the sensor (PS1).

Paperless mode

Description

This is a test mode used in manufacturing and should not be seen on a normally operating product.

Recommended action

Contact HP support for steps to resolve this condition.

Printing Engine Test...

Description

The product is printing an engine test page.

Recommended action

No action is necessary.

Printing stopped To continue, touch "OK"

Description

Time has expired on the print/stop test.

Recommended action

Press the OK button to continue.

RAM Disk device failure To clear touch "Clear"

Description

The specified device failed.

Recommended action

Press the Clear button to clear the message.

RAM Disk file operation failed To clear touch "Clear"

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Press the Clear button to clear the message.

RAM Disk file system is full To clear touch "Clear"

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Press the Clear button to clear the error.

RAM Disk is write protected To clear touch "Clear"

Description

The product is protected and no new files can be written to it.

Recommended action

Press the Clear button to clear the message.

RAM Disk not initialized To clear touch "Clear"

Description

The RAM disk file system must be initialized before it can be used.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the file system.

Remove cartridge lock

Description

The product has been turned on with a cartridge shipping lock installed on the toner cartridge.

Recommended action

1. Open the top cover and remove the toner cartridge.

2. Pull the orange tab to remove the strip.

3. Remove the paper with the plastic insert.

4. Reinstall cartridge, and then close the top cover.

Remove the toner cartridge

Description

The product is component testing the belt.

Recommended action

◦ To perform the test, remove the toner cartridge.

◦ To cancel the test, press the Stop ◉ button.

Replace Black Cartridge

Description

The black cartridge has reached the out condition.

Recommended action

Install a new toner cartridge.

Replace Fuser Kit

Description

The product indicates when the fuser kit is at its estimated end of life. The actual life remaining might be different than the estimation. Have a replacement fuser kit available to install when print quality is no longer acceptable.

The fuser kit does not need to be replaced now unless the print quality is no longer acceptable.

NOTE: After the fuser kit reaches its approximated end of life, the HP Premium Protection Warranty on that fuser kit ends.

Recommended action

Replace the fuser kit.

WARNING! The fuser can be hot while the product is in use.

Replace supplies

Description

This alert appears only if the product is configured to stop when a supplies reach the very low threshold. Two or more supplies have reached the estimated end of life. The product indicates when a supply level is at its estimated end of life. The actual life remaining might be different than estimated.

The supply does not need to be replaced now unless the print quality is no longer acceptable.

HP recommends that the customer have a replacement supply available to install when print quality is no longer acceptable.

> **NOTE:** When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty on that supply ends.

Recorded event codes depend on which supplies are at the end of life.

- ◦ **10.00.70** (event code): Black toner cartridge

- ◦ **10.23.70** (event code): Fuser kit

- ◦ **10.22.70** (event code): Transfer kit

Recommended action

- ◦ Press the OK button to find out which supplies need to be replaced.

- ◦ Configure the product to continue printing by using the Manage Supplies menu.

ROM disk device failed To clear touch "Clear"

Description

The specified device failed.

Recommended action

Press the Clear button to clear the message.

ROM disk file operation failed To clear touch "Clear"

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Press the Clear button to clear the message.

ROM disk file system is full To clear touch "Clear"

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Press the Clear button to clear the error.

ROM disk is write protected To clear touch "Clear"

Description

The device is protected and no new files can be written to it.

Recommended action

Press the Clear button to clear the message.

ROM disk not initialized To clear touch "Clear"

Description

The ROM disk file system must be initialized before it can be used.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the file system.

Size mismatch in Tray <X>

Description

The paper in the listed tray does not match the size specified for that tray.

Recommended action

1. Load the correct paper.

2. Verify that the paper is positioned correctly.

3. Close the tray and verify that the control panel lists the correct paper size and type. Reconfigure the size and type if necessary.

4. If necessary, use the control-panel menus to reconfigure the size and type settings for the specified tray.

5. Make sure that connectors J513, J507, and J501 are fully seated on the high-voltage power supply.

6. Make sure that connector J601 is fully seated on the DC controller PCA.

7. If the error persists, replace the high-voltage power supply.

8. If the error persists, replace the DC controller PCA.

Standard bin full Remove all paper from bin

Description

The specified output bin is full and must be emptied for printing to continue.

Recommended action

Empty the specified output bin.

Supplies low

Description

Multiple supplies on the product have reached the low threshold.

Recommended action

Replace the supply when print quality is no longer acceptable.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty ends.

Supplies very low To continue, touch "OK"

Description

More than one color supply on the product has reached the very low condition.

Recommended action

◦ Replace the supply when print quality is no longer acceptable.

◦ To continue printing in color, either replace the supply or reconfigure the product by using the Manage Supplies menu on the control panel.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty ends.

Supply memory warning

Description

Unable to read cartridge data.

NOTE: Any repair required as a result of using cartridges with unreadable cartridge data is not covered under warranty.

Recommended action

Replace the cartridge with a genuine HP toner cartridge.

Tray <X> empty: [Size]

Description

The specified tray is empty and needs to be loaded.

Recommended action

Refill the tray.

NOTE: This could be a false message. If the tray is loaded without removing the shipping lock, the product does not sense that the paper is loaded. Remove the shipping lock, and then load the tray.

Tray <X> empty: [Type], [Size]

Description

The specified tray is empty and needs to be loaded, but the current job does not need this tray to print.

Recommended action

Refill the tray at a convenient time.

NOTE: This could be a false message. If the tray is loaded without removing the shipping lock, the product does not sense that the paper is loaded. Remove the shipping lock, and then load the tray.

Tray <X> open

Description

The specified tray is open or not closed completely.

Recommended action

1. Close the tray.

2. If this message appears and the lifter-base assembly was removed or replaced, make sure that the connector on the assembly is correctly connected and fully seated.

3. If the error persists, use the paper size switches (SW2,3 - SW82,83 - SW92,93) test in the **Tray/ Bin Manual Sensor Test** to test the switches. If they do not respond, replace associated the lifter drive assembly.

Tray <X> overfilled Remove excess paper

Description

A tray in the product is overfilled with paper. Printing can continue from a different tray.

Recommended action

Remove enough paper so that the paper stack does not exceed the limit for the tray.

NOTE: If this message appears and the paper-pickup assembly was removed or replaced, make sure that the connector at the back of the assembly is correctly connected and fully seated.

Tray <X> overfilled To use another tray, touch "Options"

Description

Too much paper was loaded into the indicated tray.

Recommended action

Remove enough paper so that the paper stack does not exceed the limit for the tray or press the Options button to use another tray.

NOTE: If this message appears after lifter drive assembly was removed or replaced, make sure that the connector on the assembly is correctly connected and fully seated.

Type mismatch Tray <X>

Description

The specified tray contains a paper type that does not match the configured type.

Recommended action

The specified tray will not be used until this condition is addressed. Printing can continue from other trays.

1. Load the correct paper in the specified tray.

2. At the control panel, verify the type configuration.

Unable to cancel firmware update job

Description

The product is processing of downloading a remote firmware upgrade and cannot cancel it.

Recommended action

Firmware updates cannot be canceled once started. The product will restart automatically to complete the firmware update.

Unable to install the firmware

Description

The product displays this message when one of the following conditions occurs during a firmware upgrade.

◦ A file I/O error occurs when there is an interruption while reading the firmware upgrade file.

◦ A firmware installation is already in progress, possibly by a remote service application.

◦ A firmware installation is pending.

◦ An internal system failure has occurred while doing firmware upgrades.

◦ An unknown error occurs while doing firmware upgrades.

◦ The memory is full when the user is doing firmware upgrades.

◦ The firmware upgrade file does not support this product.

◦ The upgrade file is invalid or corrupted while doing firmware upgrades.

Recommended action

Refer to the walk-up help for each of these error conditions for specific instructions on resolving the error.

Unsupported drive installed

Description

A non-supported hard drive has been installed. The drive is unusable by this product.

Recommended action

Replace the unsupported drive.

Unsupported supply in use

Description

A non-supported supply has been installed.

Or, the toner cartridge is for a different HP product.

◦ **10.00.41** (event code): Black toner cartridge

Recommended action

Install the correct supplies for this product. See the parts chapter in the service manual for supply part numbers.

Unsupported supply installed

Description

The product has one or more HP genuine supplies, designed for a different product, installed. The product will either shut down or slow down unless the user acknowledges the condition.

Recommended action

Press the OK button to continue.

Unsupported supply installed To continue, touch "OK"

Description

One or more genuine HP supplies designed for a different product are installed. These supplies are not supported by the product. The product may either shut down or slow down.

Recommended action

The installed supply was not designed for this product and is not supported. Results may vary when used with this product. To continue printing with the unsupported supply, press the OK button.

Unsupported tray configuration

Description

More than the allowable tray accessories are installed on the product. Printing cannot continue until the extra trays are removed and the product is turned off and then on.

Recommended action

Turn product off and remove the excess tray accessories. Turn the product on.

Unsupported USB accessory detected Remove USB accessory

Description

A non-supported USB accessory has been installed.

Recommended action

Turn the product off, remove the USB accessory, and then turn the product on.

Upgrade complete To continue turn off then on

Description

The firmware upgrade is complete.

Recommended action

Turn the product off and then on.

USB accessory needs too much power Remove USB and turn off then on

Description

A USB accessory is drawing too much electrical current. Printing cannot continue.

Recommended action

Remove the USB accessory, and then turn the product off and then on.

Use a USB accessory that uses less power or that contains its own power supply.

USB accessory not functional

Description

A USB accessory is not working correctly.

Recommended action

1. Turn the product off.

2. Remove the USB accessory.

3. Insert a replacement USB accessory.

USB hubs are not fully supported Some operations may not work properly

Description

Some USB hubs require more power than the product has available.

Recommended action

Remove the USB hub.

USB is write protected To clear touch "Clear"

Description

The device is protected and no new files can be written to it.

Recommended action

Press the Clear button to clear the message.

USB not initialized To clear touch "Clear"

Description

The USB device file system must be initialized before it can be used.

Recommended action

Use the embedded Web server or HP Web Jetadmin to initialize the component.

USB storage accessory removed Clearing any associated data

Description

This message displays for six seconds after removal of the USB storage accessory.

Recommended action

Press the Hide button to remove this message.

USB storage device failure To clear touch "Clear"

Description

The specified device failed.

Recommended action

Press the Clear button to clear the message.

USB storage file operation failed To clear touch "Clear"

Description

A PJL file system command attempted to perform an illogical operation.

Recommended action

Press the Clear button to clear the message.

USB storage file system is full To clear touch "Clear"

Description

A PJL file system command could not store something on the file system because the file system was full.

Recommended action

Press the Clear button to clear the error.

Used supply in use

Description

One or more used supplies have been installed.

Recommended action

◦ Install new supplies.

◦ If you believe you purchased a genuine HP supply, go to www.hp.com/go/anticounterfeit. Any repair required as a result of using used cartridges is not covered under warranty. Supply status and features depending on supply status are not available.

Used supply installed To continue, touch "OK"

Description

The product displays this message when a used supply (a remanufactured or refilled genuine HP or non-HP product) has been installed.

◦ **10.00.34** (event code): Black toner cartridge

Recommended action

◦ Install new supplies.

◦ If you believe you purchased a genuine HP supply, go to www.hp.com/go/anticounterfeit. Any repair required as a result of using used cartridges is not covered under warranty. Supply status and features depending on supply status are not available.

Event log messages

Some messages appear only in the event log. For additional numeric messages, see the control-panel message section of this manual.

Figure 2-76 Sample event log
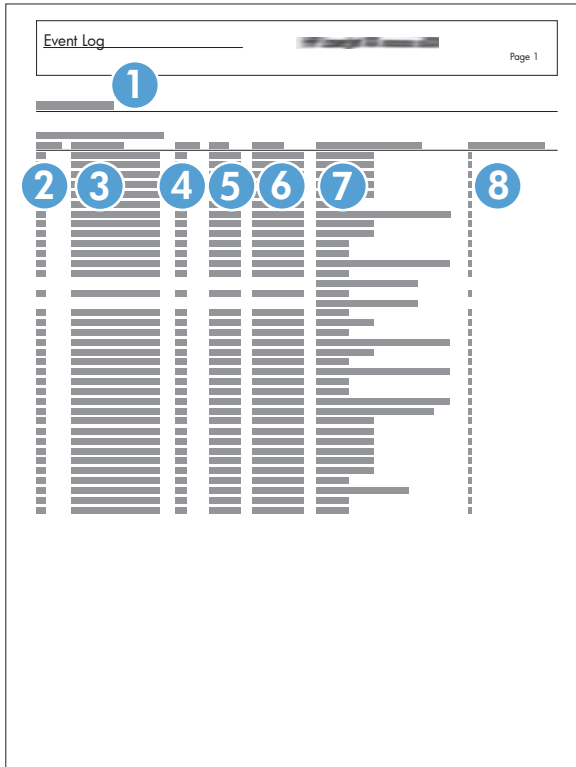
1	Product information
2	Event number
3	Date and time
4	Engine cycles
5	Event log code
6	Firmware version number
7	Description of personality
8	Consecutive Repeats

Print or view an event log

NOTE: The event log in using the Administration menu shows only a subset of events. For a complete event log, use the Service menu.

Print or view the event log from the Administration menu

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

   - Troubleshooting

   - Event Log

3. The event log displays on the screen. To print it, touch the Print button.

Print or view the event log from the Service menu

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.

2. Open the Service menu.

3. On the sign-in screen, select the Service Access Code option from the drop-down list.

4. Enter the following service access code for this product: 05072513.

5. Open the Event Log menu.

6. The event log displays on the screen. To print it, touch the Print button.

Clear an event log

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.

2. Open the Service menu.

3. On the sign-in screen, select the Service Access Code option from the drop-down list.

4. Enter the following service access code for this product: 05072513.

5. Open the Event Log menu.

6. Select the Clear Event Log item, and then touch the OK button.

Event log message table

Event log message	Description	Action
30.03.14	Non-fatal error	This is an informational message, and no action is required.

Event log message	Description	Action
99.00.01	Remote firmware upgrade (.bdl) was not performed. The file is corrupt.	The firmware file is corrupt. Download the firmware file and attempt the upgrade again.
99.00.02	Remote firmware upgrade (.bdl) was not performed. Timeout during receipt.	The IO timed out during the firmware download. The most common cause is an issue with the network environment. Ensure a good connection to the product, and attempt the upgrade again or upgrade using the USB walk-up port.
99.00.03	Remote firmware upgrade (.bdl) was not performed. An error occurred when writing to the hard disk.	1. Download the firmware again. 2. If the error persists, perform the clean disk/format disk process. 3. Download the firmware from the Preboot menu. 4. If the error persists, replace the hard disk.
99.00.04 99.00.05	Remote firmware upgrade (.bdl) was not performed. There was a timeout during the download.	The I/O timed out during the firmware download. The most common cause is an issue with the network environment. Ensure there is a good connection to the product, and attempt the firmware upgrade again or upgrade the firmware using the USB walk-up port.
99.00.06 99.00.07 99.00.08	Remote firmware upgrade (.bdl) was not performed. There was an error reading the firmware file.	1. Download the firmware again. 2. If the error persists, perform the clean disk/format disk process. 3. Download the firmware from the Preboot menu. 4. If the error persists, replace the hard disk.
99.00.09 99.00.10	The firmware upgrade was canceled by the user.	Resend the firmware upgrade to the product.
99.00.11	The preboot partition is full.	1. Download the firmware again. 2. If the error persists, perform the clean disk/format disk process. 3. Download the firmware from the Preboot menu.
99.00.12	Remote firmware upgrade (.bdl) was not performed. An invalid file was sent.	The firmware file sent was not the correct file. Download the firmware file again, making sure to download the file for the correct product model. Attempt the upgrade again.

Event log message	Description	Action
99.00.13 99.00.14	Remote firmware upgrade (.bdl) was not performed. An invalid file was sent.	The firmware file sent was not the correct file. Download the firmware file again, making sure to download the file for the correct product model. Attempt the upgrade again.
99.00.20	The bundle is not for this product.	Download the firmware file again, and attempt the upgrade again.
99.00.21	The bundle is not signed with the correct signature, or the signature is invalid.	
99.00.22	The bundle header version is not supported by this firmware.	
99.00.23	The package header version is not supported by this firmware.	
99.00.24 99.00.25 99.00.26	The format of the firmware bundle not correct.	

Clear jams

Jam locations

Use this illustration to troubleshoot jams in the product.
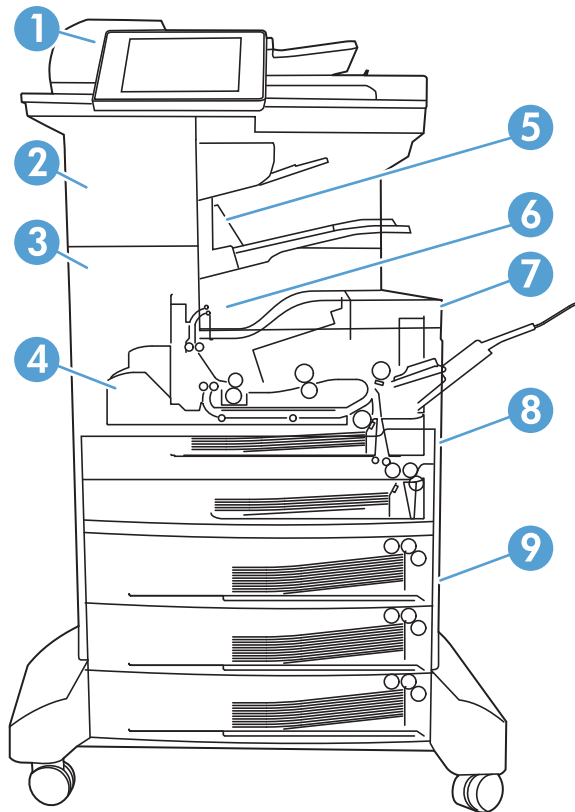
1	Document feeder
2	Stapler/stacker
3	Output path
4	Duplex path (for two-sided printing)
5	Stapler/stacker output bin
6	Output bin
7	Toner cartridge
8	Input trays
9	Optional input trays

Figure 2-77 Product base paper path and sensor locations (1 of 2)
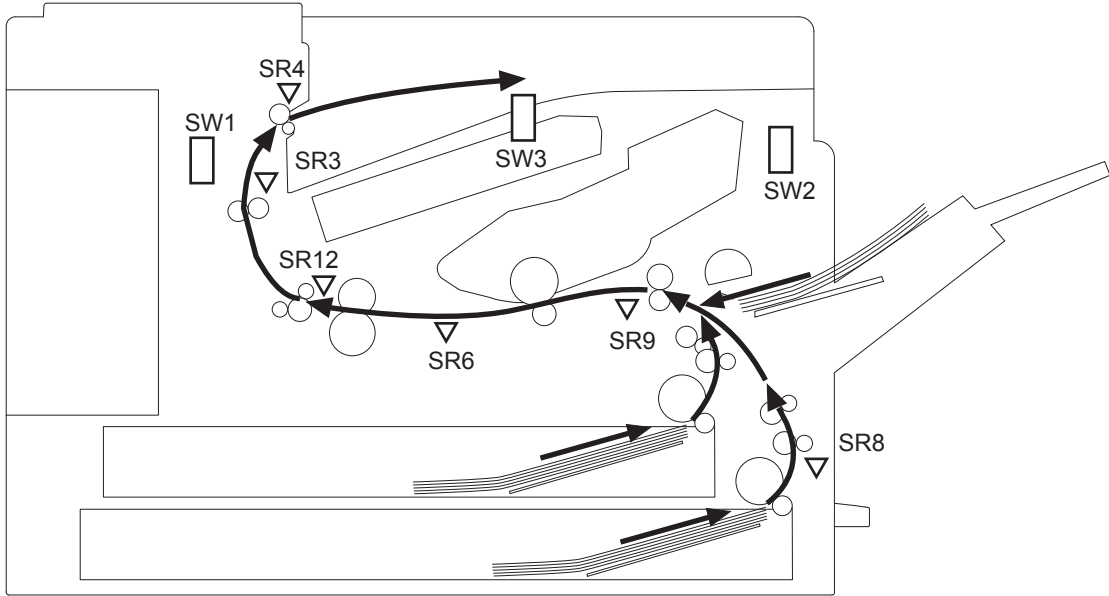
Figure 2-78 Product base paper path and sensor locations (2 of 2)

Simplex paper path
Duplex paper path

Duplex re-pickup sensor

Duplex reverse sensor
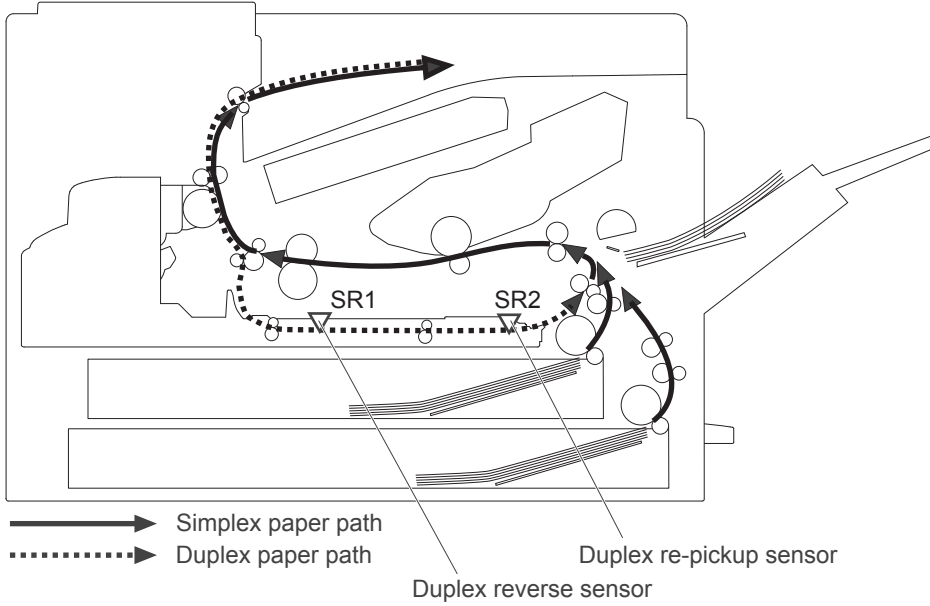
Figure 2-79 1x500 paper feeder paper path and sensor locations

PF cassette media feed sensor
SR1
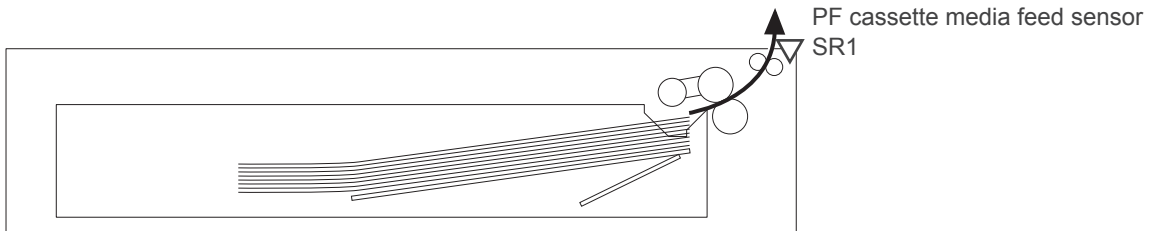
Figure 2-80 1x500 and 3x500 paper deck paper path and sensor locations

PD cassette 1 media feed sensor
SR1 (1x500 and 3x500)

PD cassette 2 media feed sensor
SR81 (3x500 only)

PD cassette 3 media feed sensor
SR91 (3x500 only)
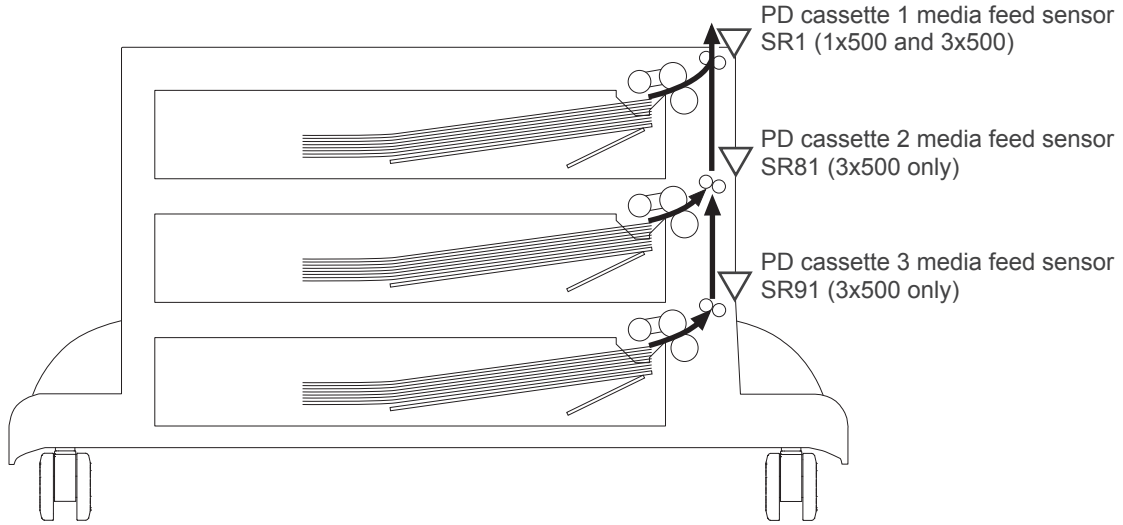
Figure 2-81 High capacity input (HCI) paper path and sensor locations

HCI left cassette
media feed sensor

HCI media feed sensor

PS3305

PS3301

HCI right cassette
media feed sensor

PS3302
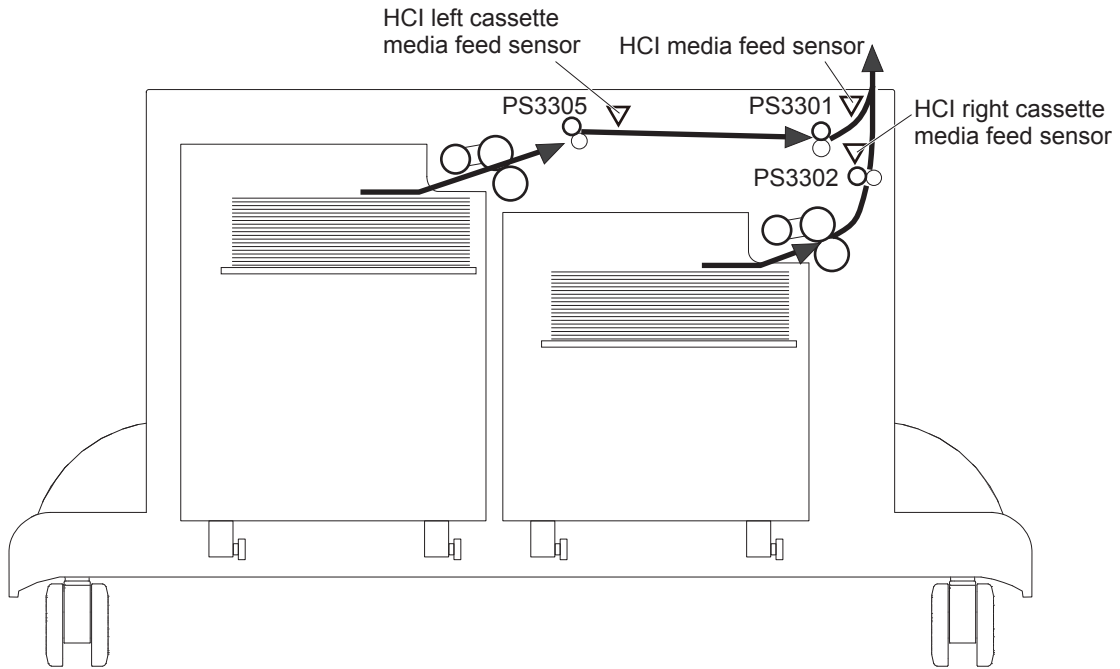
Figure 2-82 Stapler/stacker paper path and sensor locations

SR2103

Output sensor

SR2100

Inlet sensor
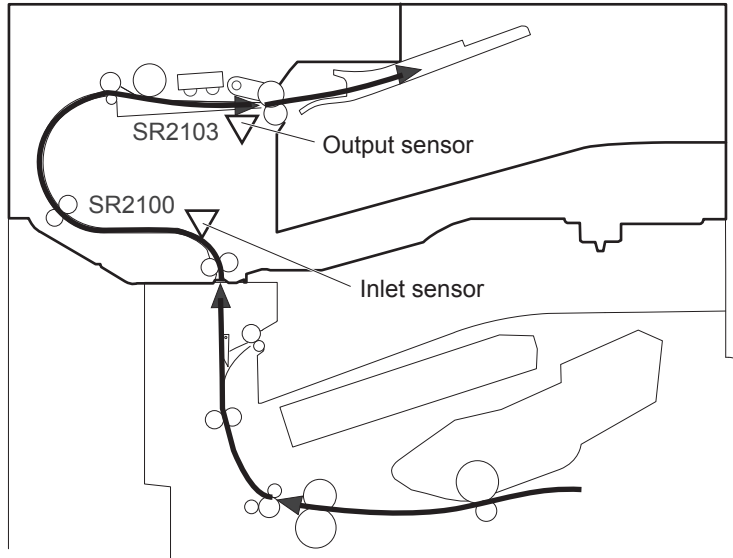
Auto-navigation for clearing jams

The auto-navigation feature assists you in clearing jams by providing step-by-step instructions on the control panel. When you complete a step, the product displays instructions for the next step until you have completed all steps in the procedure.

Clear jams in the document feeder

1.   Lift the latch to release the document-feeder cover.
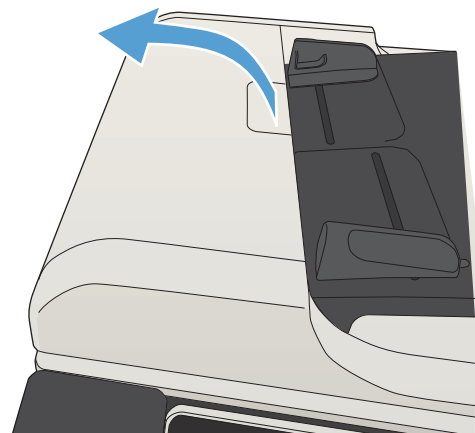
2. Open the document-feeder cover.
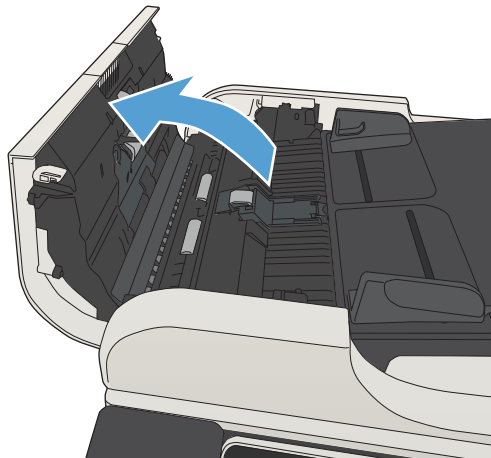
3. Lift the jam-access door, and remove any jammed paper.

If necessary, rotate the green wheel at the front of the document feeder to remove jammed paper.
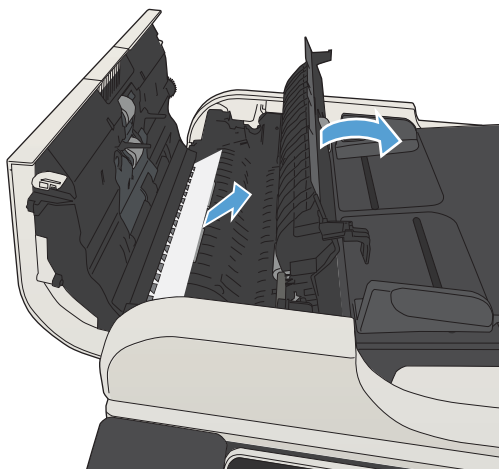
4. Close the document-feeder cover.
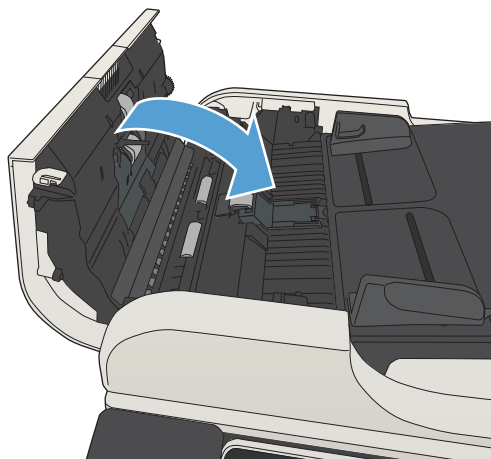
Clear jams in the output-bin area

1. If paper is visible from the output bin, grasp
    the leading edge and remove it.

Clear jams in the stapler/stacker

1. If paper is visible in the stapler/stacker output
    bin, grasp the leading edge of the paper and
    slowly pull the paper out of the product.
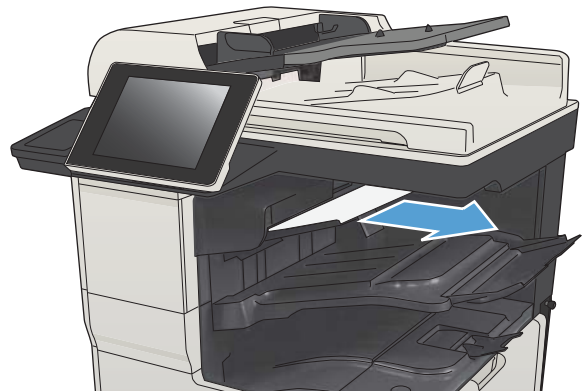
2. Open the upper-left door.
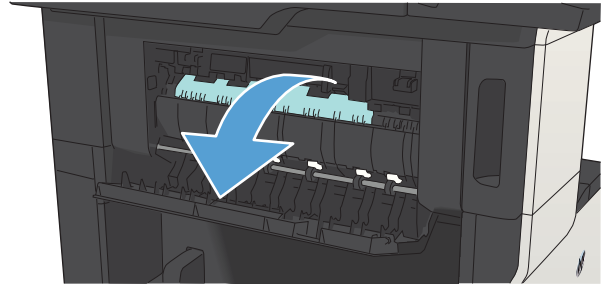
3. Press the green tab down to open the bar.
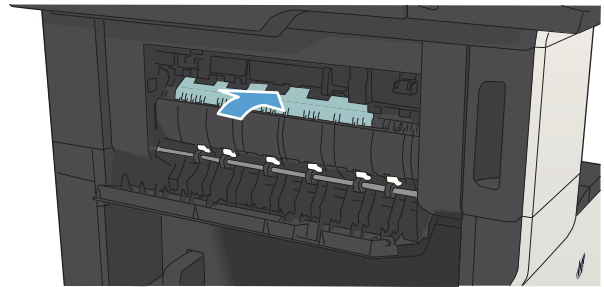
4. Grasp both sides of the paper, and slowly pull the paper out of the product.
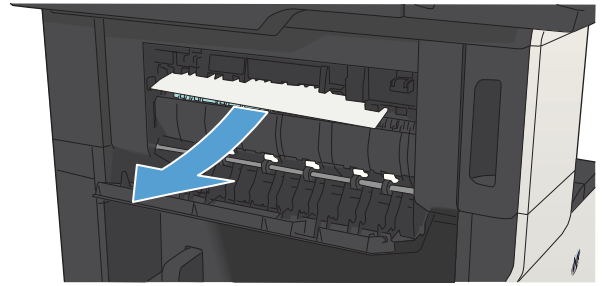
5. Close the upper-left door door. Make sure that both sides of the door snap into place.
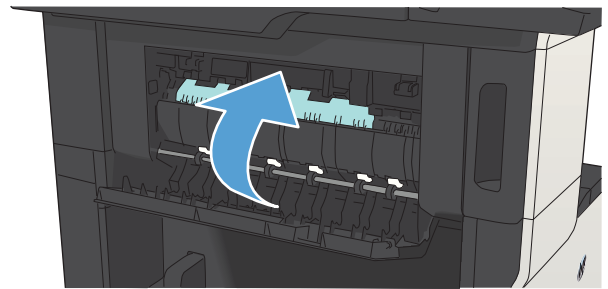
Clear staple jams

To reduce the risk of staple jams, make sure that you staple 30 or fewer pages of paper (80 g/m^2 (20 lb) at a time.

1. Open the stapler door.
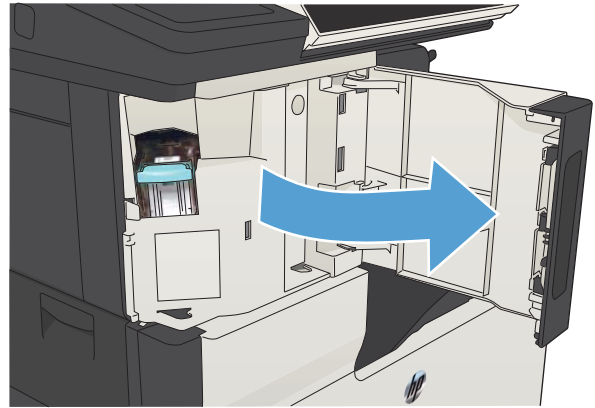
2. Remove the staple cartridge.
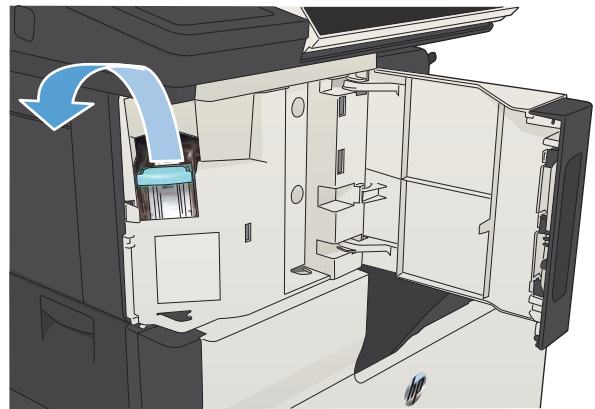
3. Remove any loose staples from the product.

4. Lift up the lever on the front of the staple cartridge.
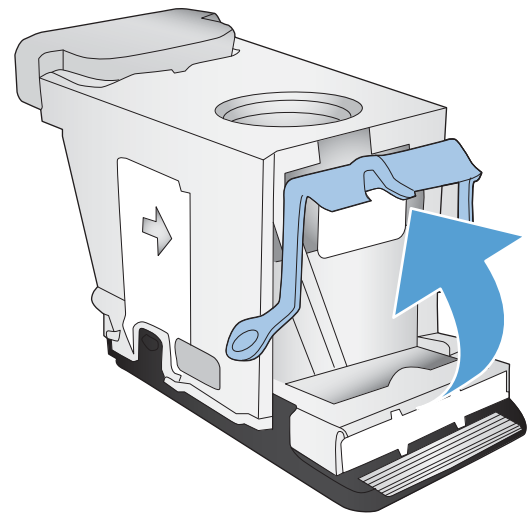
5. Remove the sheet of staples from the stapler.
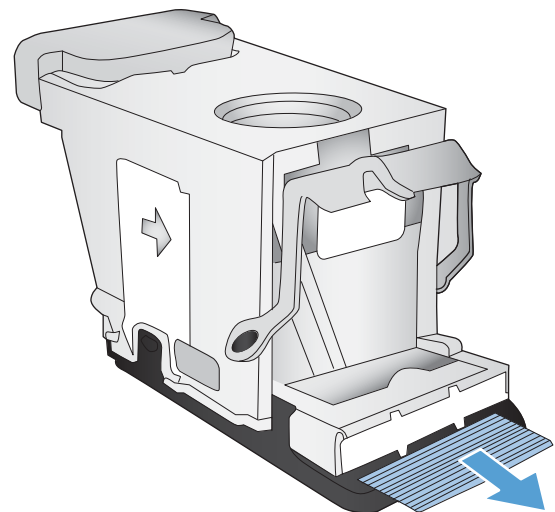
6. Push down the lever on the front of the staple cartridge.
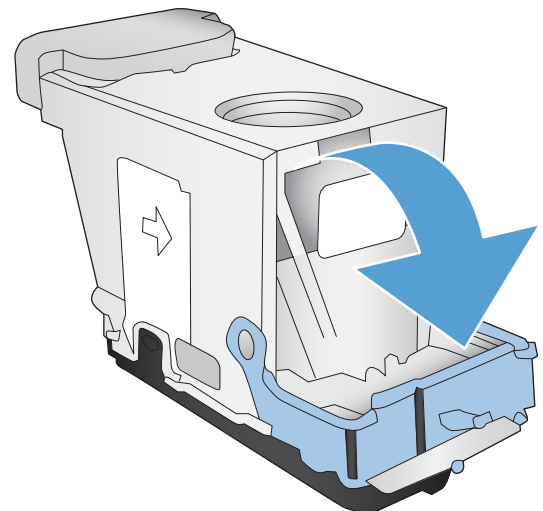
7. Insert the staple cartridge.

8. Close the stapler door.

Clear jams in Tray 1

1. Slowly pull the jammed paper out of the product.
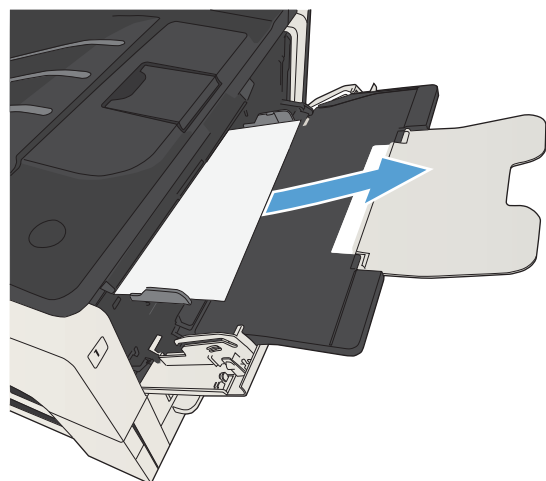
Clear jams in Tray 2 or Tray 3

1. Open the right-side access door. If the jammed page is visible, gently pull it out of the product.
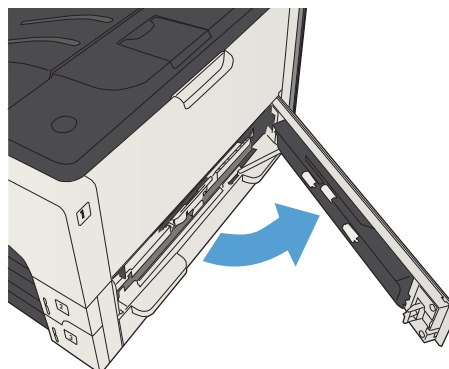
2. If you were not able to clear the jam by using the right-side access door, slide the tray out of the product.
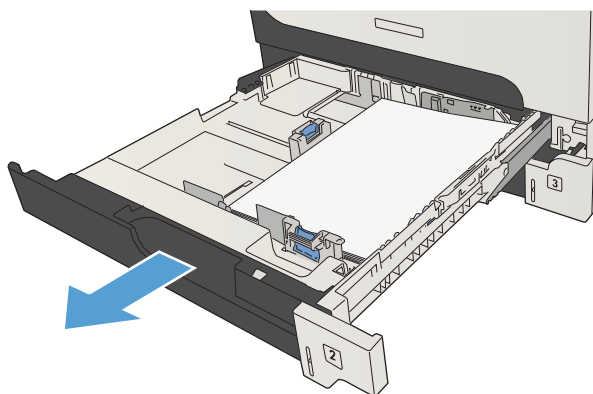
3. Remove any damaged paper from the tray.
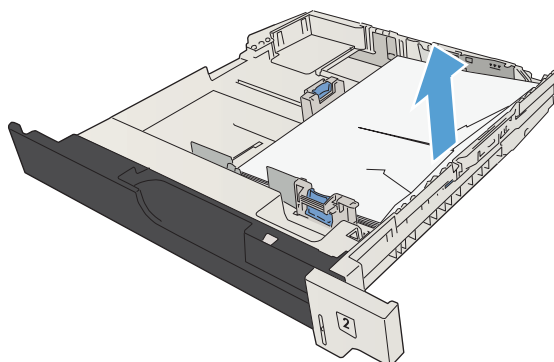
4. If the edge of the paper is visible in the feed area, slowly pull the paper toward the left side and then out of the product.

> **NOTE:** Do not force the paper if it will not move easily. If the paper is stuck in a tray, try removing it through the tray above (if applicable) or through the toner-cartridge area.
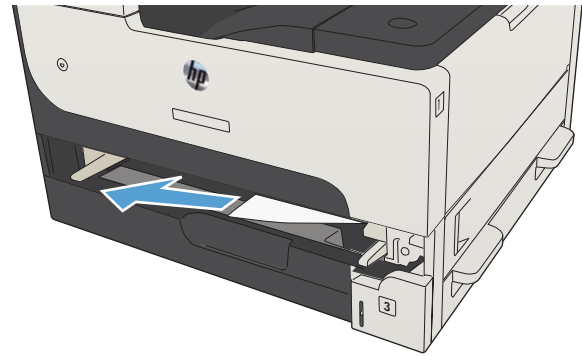
5. Close the tray.

> **NOTE:** Before replacing the tray, make sure the paper is flat in the tray at all four corners and below the tabs on the guides.
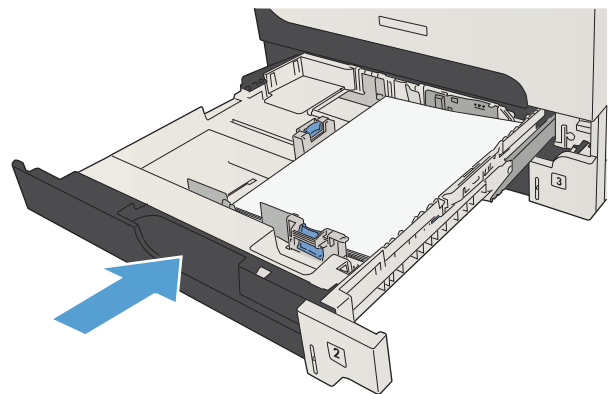
6. Close the right-side access door.
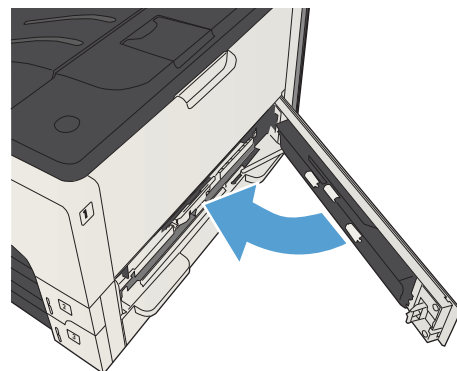
Clear jams in the 500-sheet trays

1. Open the right-side access door and the 500-sheet tray jam-access door.
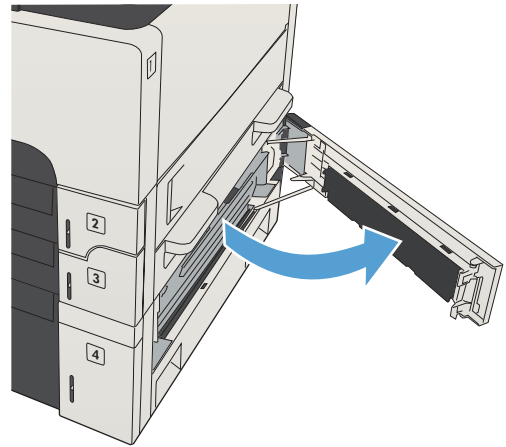
2. Remove the 500-sheet tray.
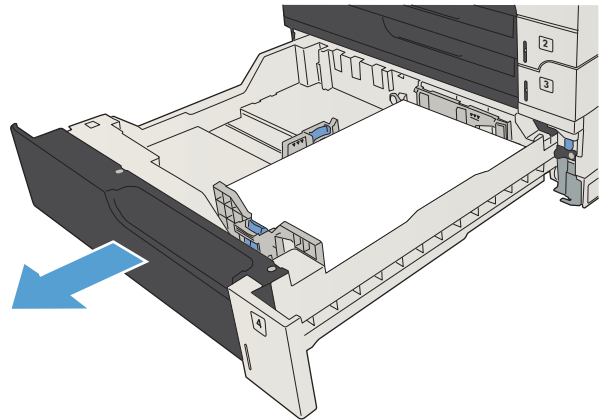
3. If the edge of the paper is visible in the feed area, slowly pull the paper toward the right side and out of the product.

    NOTE: Do not force the paper if it will not move easily. If the paper is stuck in a tray, try removing it through the tray above (if applicable) or through the upper, right door.
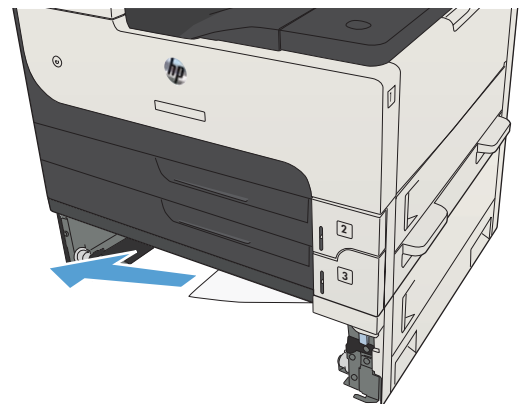
4. Close the 500-sheet tray.
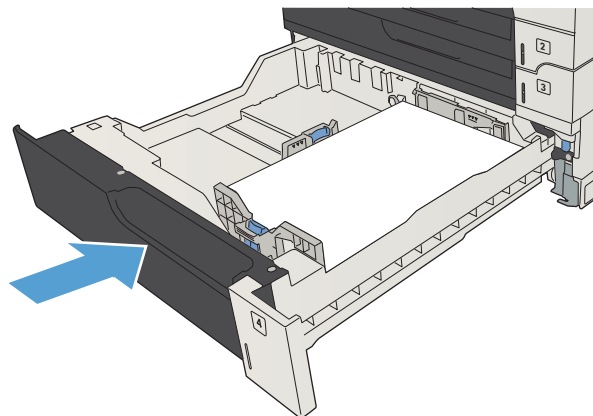
5. Close the right-side access door and the 500-sheet tray jam-access door.
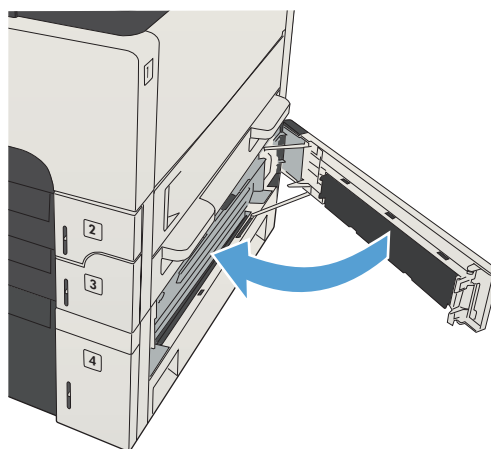
Clear jams in the 3,500-sheet high-capacity tray

1. Open the right and left sides of the tray.
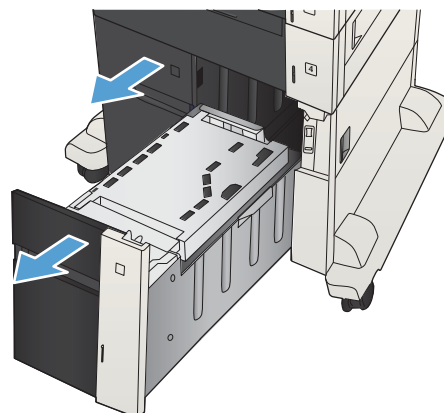
2. Remove any damaged sheets of paper.
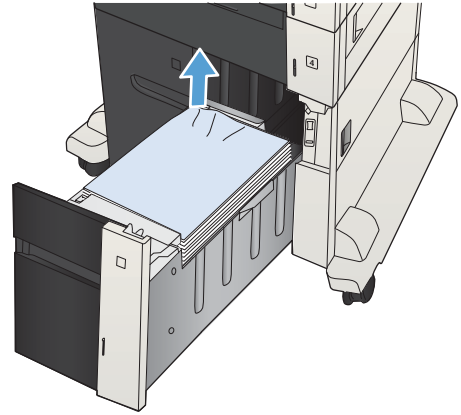
3. Above the right-side tray, press the green button to release the jam-access plate.
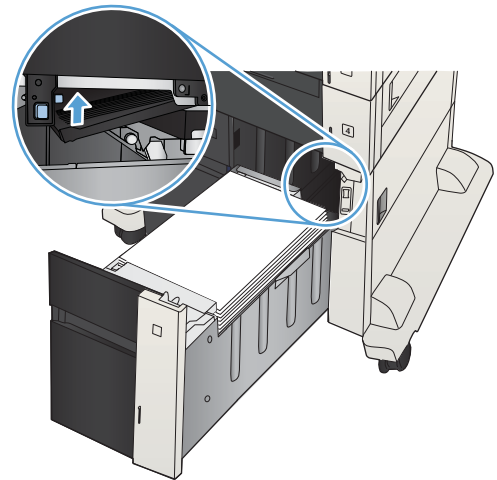
4. If jammed paper is in the feed area, pull it down to remove it.
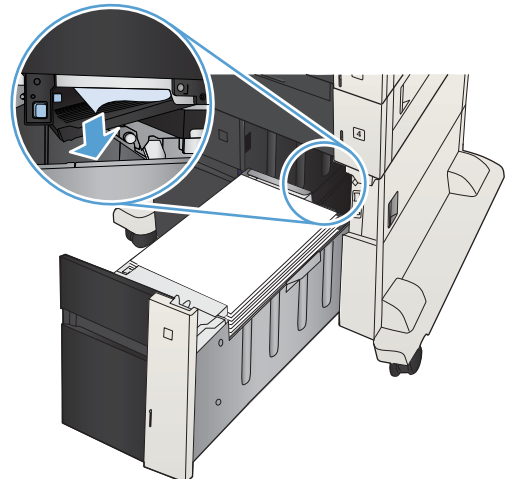
5. Push up on the jam-access plate to close it.
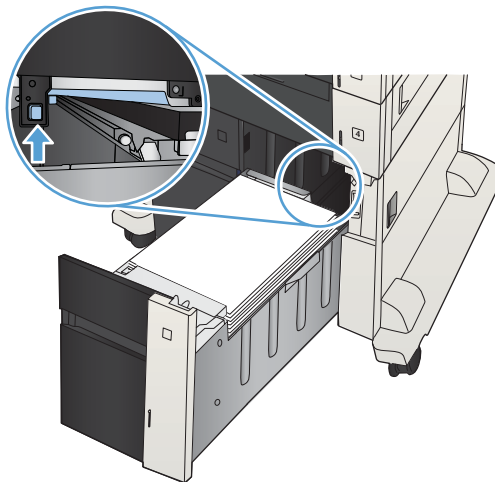
6. Close the right and left sides of the tray.
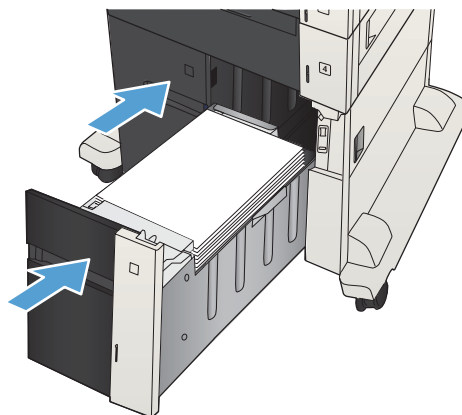
7. Open the jam-access door on the right side of the high-capacity tray cabinet.
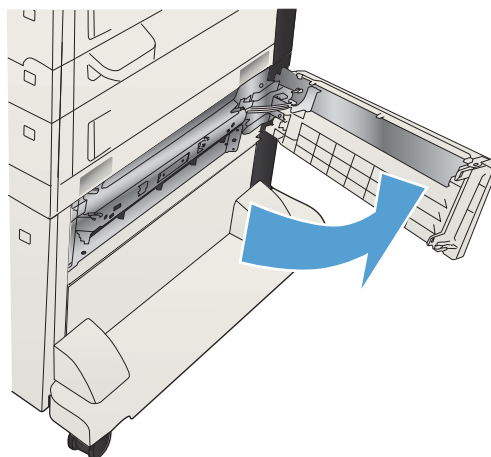
8. Lift up the jam-release plate and remove any jammed paper.
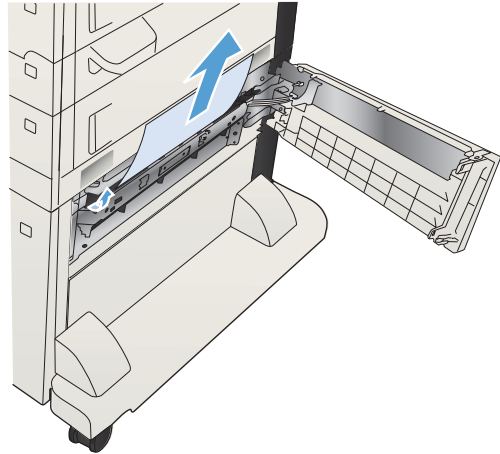
9. Close the jam-access door on the right side of the high-capacity tray cabinet.
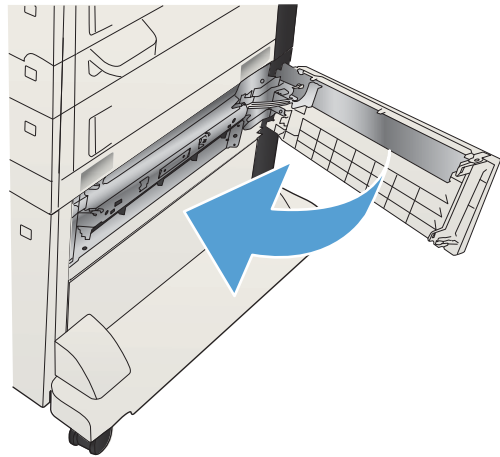
Clear jams from the toner-cartridge area

1. Press the cartridge-door-release button.
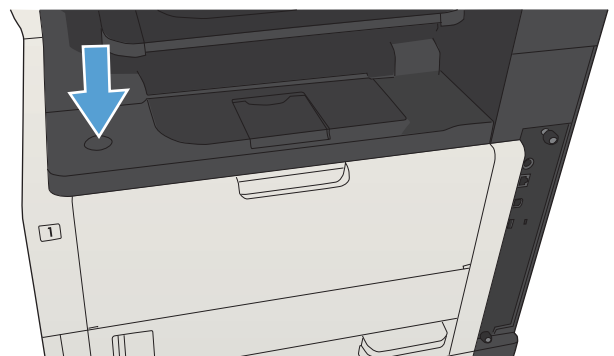
2. Open the cartridge door.
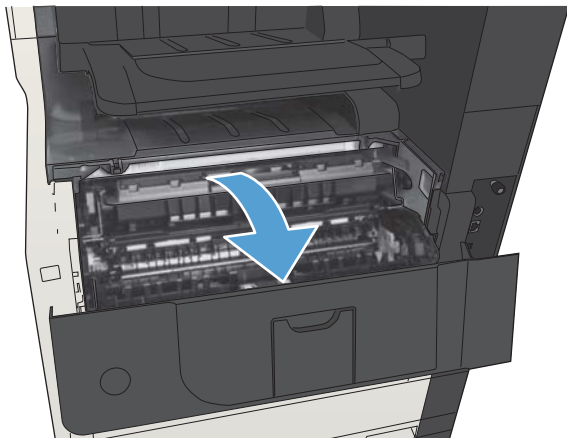
3. Remove the toner cartridge.

>   **CAUTION:** To prevent damage to the toner
>   cartridge, do not expose it to light for more
>   than a few minutes.
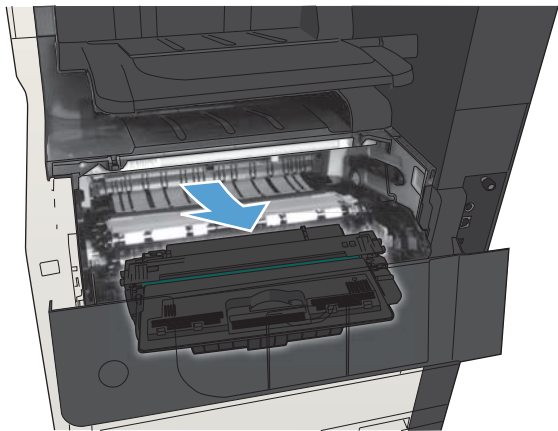
4. Pull the green tab down to open the metal
plate inside the product.
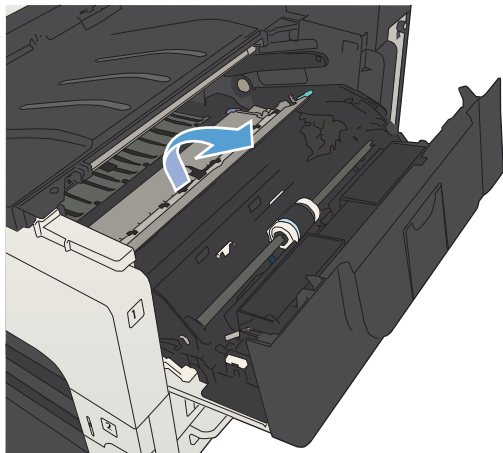
5. Slowly pull the paper out of the product. Be careful to not tear the paper.

    CAUTION: Avoid spilling loose toner. Use a dry, lint-free cloth to clean any toner that might have fallen into the product. If loose toner falls into the product, it might cause temporary problems with print quality. Loose toner should clear from the paper path after a few pages are printed. If toner gets on your clothing, wipe it off with a dry cloth and wash clothing in cold water. (Hot water sets toner into fabric.)
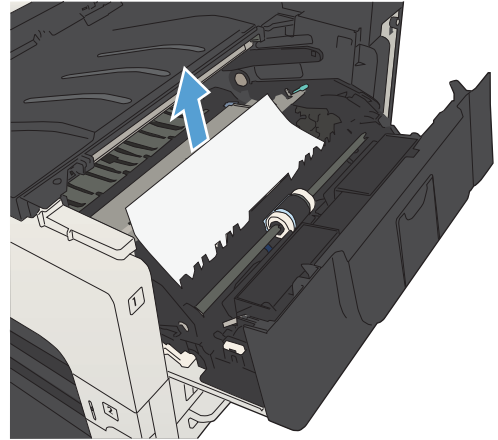
6. Replace the toner cartridge.
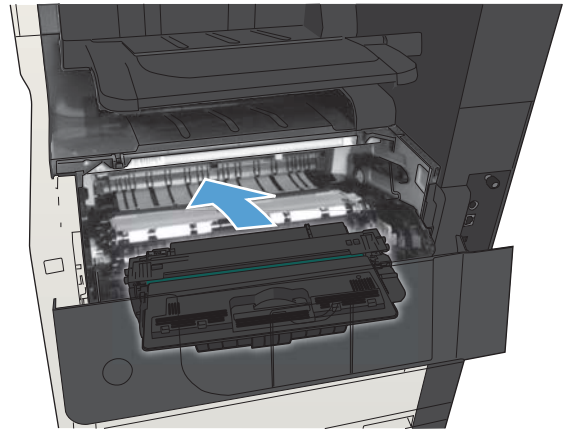
7. Close the cartridge door.
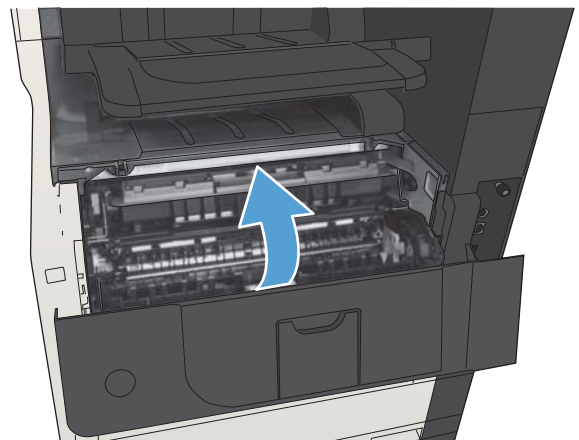
Clear jams in the fuser

1. Open the fuser door on the left side of the
    product.

    CAUTION: The fuser can be hot while the
    product is in use.
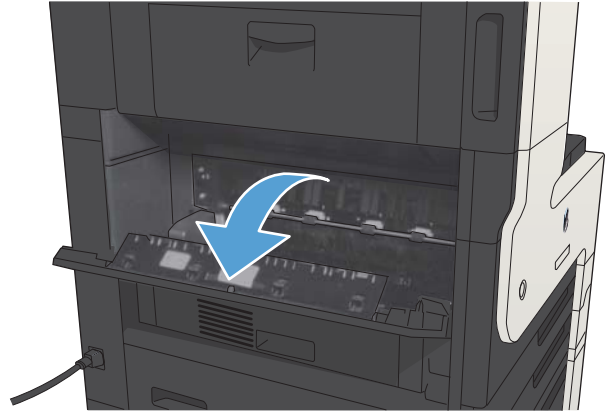
2. Push down on the green tab to open the fuser
    jam-access cover.
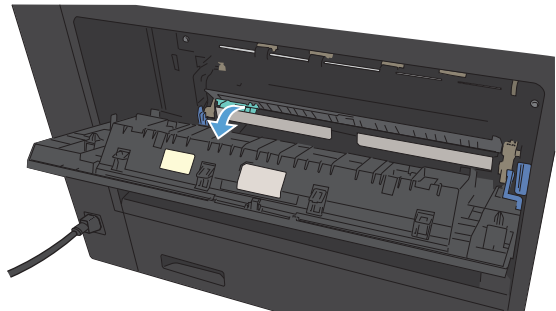
3. Remove any paper from the fuser.
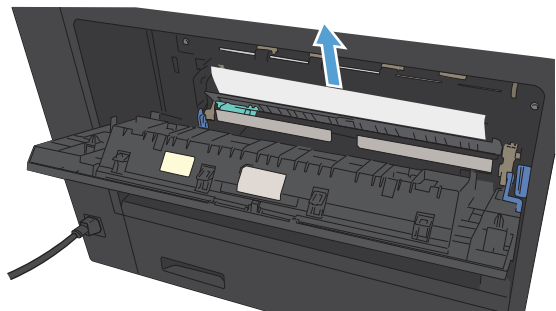
4. Close the fuser jam-access cover.
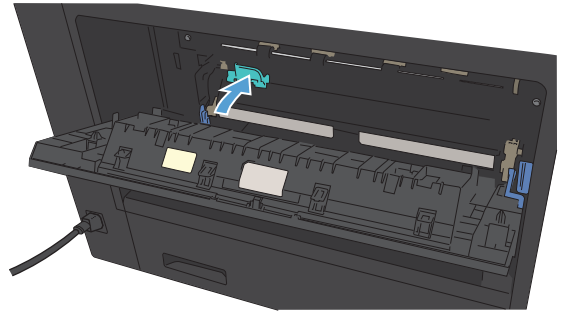
5. Close the fuser door.
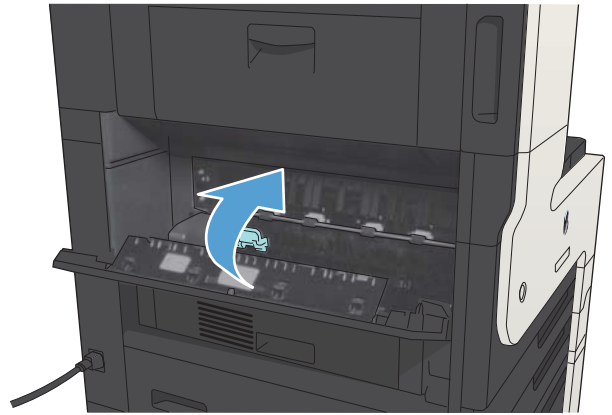
Clear jams from the duplexer

1. Remove the duplexer.
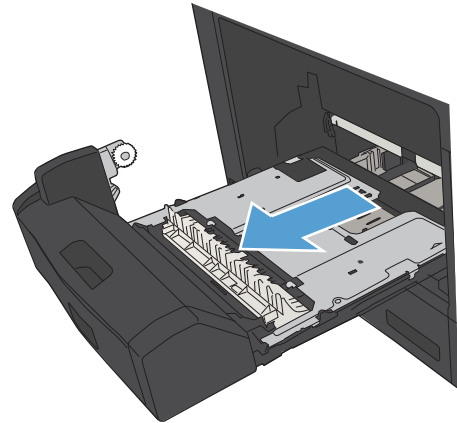
2. Remove any paper from the duplexer.
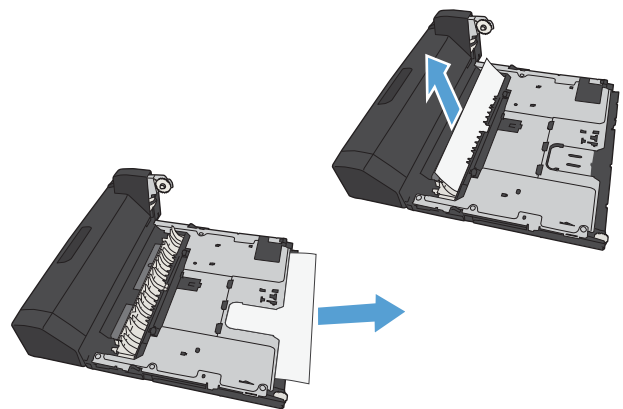
3. Reinstall the duplexer.
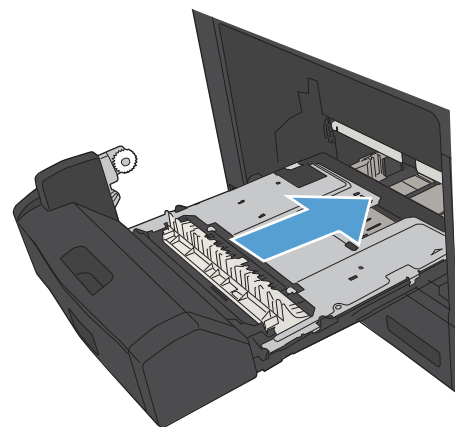
Solve paper-handling problems

- [The product picks up multiple sheets of paper](#)

- [The product does not pick up paper](#)

- [The document feeder jams, skews, or picks up multiple sheets of paper](#)

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.

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 document feeder jams, skews, or picks up multiple sheets of paper

- The original might have something on it, such as staples or self-adhesive notes, that must be removed.

- Check that all rollers are in place and that the roller-access cover inside the document feeder is closed.

- Make sure that the top document-feeder cover is closed.

- The pages might not be placed correctly. Straighten the pages and adjust the paper guides to center the stack.

- The paper guides must be touching the sides of the paper stack to work correctly. Make sure that the paper stack is straight and the guides are against the paper stack.

- The document feeder input tray or output bin might contain more than the maximum number of pages. Make sure the paper stack fits below the guides in the input tray, and remove pages from the output bin.

- Verify that there are no pieces of paper, staples, paper clips, or other debris in the paper path.

- Clean the document-feeder rollers and the separation pad. Use compressed air or a clean, lint-free cloth moistened with warm water. If misfeeds still occur, replace the rollers.

- From the Home screen on the product control panel, scroll to and touch the Supplies button. Check the status of the document-feeder kit, and replace it if necessary.

Use manual print modes

Try the following manual print modes to see if they solve the image-quality problems.

Select a manual print mode

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

    ● General Settings

    ● Print Quality

    ● Adjust Paper Types

3. Select a paper type, and then select the mode to adjust.

4. Select a value for the mode, and then touch the Save button.

Table 2-32 Print modes under the Adjust Paper Types sub menu

Print Mode	
	● Normal mode
	● Heavy Mode
	● Card Stock Mode
	● Transparency Mode
	● Envelope Control
	● Label Mode
	● Extra Heavy Mode
	● Light Mode
	● Extra Light Mode
	● Rough Mode
	● Bond mode
	● Mid-weight mode
	NOTE: Not all print modes are available for all paper types.

Table 2-32 Print modes under the Adjust Paper Types sub menu (continued)

Resistance Mode	Set to Up to resolve print-quality issues caused by poor secondary transfer in low-humidity environments with resistive or rough surface paper.
Humidity Mode	With glossy film, set to High when the product is in a high-humidity environment and print-quality defects occur on HP Tough Paper or Opaque film. With transparencies, set to High when the product is in a high-humidity environment and print-quality defects occur on color transparencies on the first page of a print job. With all other paper types, set to High when the product is in a high-humidity environment and light density occurs on the first page of a print job.

Table 2-33 MP modes under the Optimize submenu

Line Detail	Normal Up Off
Environment	Set to Low Temp if the product is operating in a low-temperature environment and you are having problems with print quality such as blisters in the printed image.
Restore Optimize	Use this item to reset the menu defaults.

Print quality troubleshooting tools

Repetitive defects measurements

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.

Distance between defects	Product components that cause the defect
32 mm	Duplex reverse roller or duplex re-pickup roller
38 mm	Input accessory feed roller
42 mm	Output roller, intermediate output roller
43 mm	Fuser output roller
44 mm	Primary charging roller, cassette separation roller, registration roller, output accessory feed roller 1, re-pickup roller
47 mm	Transfer roller
48 mm	Feed roller
57 mm	Developer roller, output accessory feed roller 2
75 mm	Fuser film
94 mm	Pressure sensitive drum, pressure roller
98 mm	Cassette pickup roller

NOTE: The primary charging roller, photosensitive drum, and developing roller cannot be cleaned. If these rollers are indicated, replace the toner cartridge.

Solve image-quality problems

Image defect examples

These examples identify the most common print-quality problems.

Table 2-34 Image defect examples
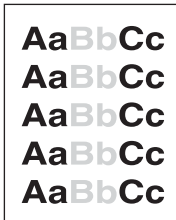
Problem	Image example	Solution
Blank page		1. The laser/scanner shutter on the toner cartridge might be damaged. Replace the toner cartridge.
		2. The laser/scanner shutter on the laser/scanner might be damaged. Replace the laser/scanner.
		3. The laser/scanner might be damaged. Replace the laser/scanner.
		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 Administration menu at the product control panel. Open the General Settings menu, and then open the Print Quality menu. Increase the Toner 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. Try the following:

Table 2-34 Image defect examples (continued)
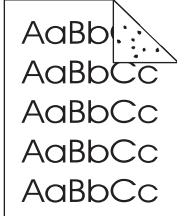
Problem	Image example	Solution
		Stop a print job during the print operation before it is complete, then remove the toner cartridge. Open the photosensitive drum shield, and look at the toner image on the drum.

◦ 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)	AaBb 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 media-feed guide, or the fuser-inlet guide might be dirty. Clean the guide.

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

Table 2-34 Image defect examples (continued)
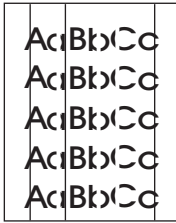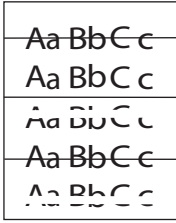
Problem	Image example	Solution
Dropouts		1. Make sure that the environmental specifications for the product are being met. 2. Try using a smoother paper. 3. If the transfer roller is deformed or damaged, replace the roller. 4. The high-voltage contact of the static eliminator with the toner cartridge 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.
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		1. The photosensitive drum might be scratched. Replace the toner cartridge. 2. The fuser film might be dirty or damaged. Replace the fuser.

Table 2-34 Image defect examples (continued)
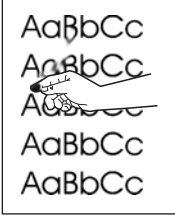
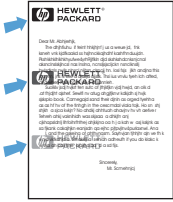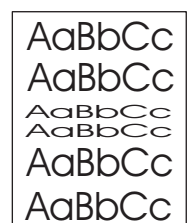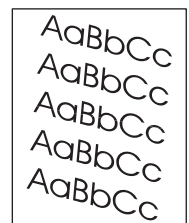| Problem	Image example	Solution
Gray background (image is obviously dark)	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	1. Do not use paper that has already been run through the product. 2. Try using a different type of paper. 3. Print a few more pages to see if the problem corrects itself. 4. Turn over the paper in the tray. Also, try rotating the paper 180°. 5. Open the Administration menu at the product control panel. Open the General Settings menu and then open the Print Quality menu. Increase the Toner 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 print-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 AaBbCc AaBbCc AaBbCc AaBbCc	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.
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.

Table 2-34 Image defect examples (continued)
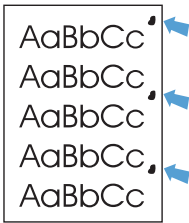
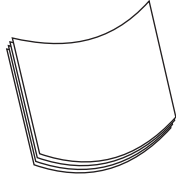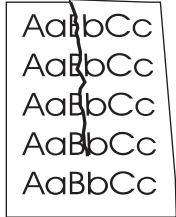| Problem	Image example	Solution

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	*(HP Hewlett Packard letter image)*	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 meets 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 (J12 and J3100). 5. The laser/scanner might be damaged. Replace the laser/scanner.
Page skew	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	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.

Table 2-34 Image defect examples (continued)

Problem	Image example	Solution
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	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. 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.
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.

Table 2-34 Image defect examples (continued)

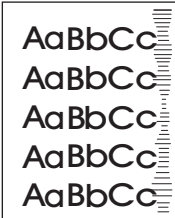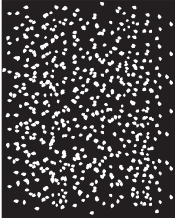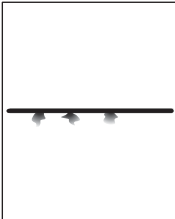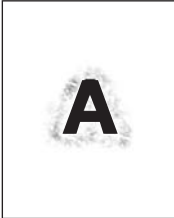| Problem	Image example	Solution
Tire tracks	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	This defect typically occurs when the toner cartridge has far exceeded its estimated life. For example, if you are printing a very large quantity of pages with very little toner coverage. 1. The toner cartridge might need 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 Administration menu at the product control panel. Open the General Settings menu, and then open the Print Quality menu. Change the Toner density setting. 5. Open the Administration menu at the product control panel. Open the General Settings menu, and then open the Print Quality menu. Open the Optimize menu and set the Line Detail setting to Up.

Table 2-34 Image defect examples (continued)

Problem	Image example	Solution
Blurred print	A	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. Decrease the Toner density setting.
Random image repetition	AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	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

Over time, particles of toner and paper accumulate inside the product. This can cause print-quality problems during printing. Cleaning the product eliminates or reduces these problems.

Clean the paper path and print-cartridge areas every time that you change the toner cartridge or whenever print-quality problems occur. As much as possible, keep the product free from dust and debris.

To clean the product exterior, use a soft, water-moistened cloth.

Print a cleaning page

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

● Specks of toner are on the printed pages.

● Toner is smearing on the printed pages.

● Repeated marks occur on the printed pages.

Use the following procedure to print a cleaning page.

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.

2. Open the following menus:

   ● Calibration/Cleaning

   ● Cleaning Page

3. Touch the Print button to print the page.

4. The cleaning process can take several minutes. When it is finished, discard the printed page.

Check the scanner glass for dirt or smudges

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

1. Press the power button to turn off the product, and then disconnect the power cable from the electrical outlet.
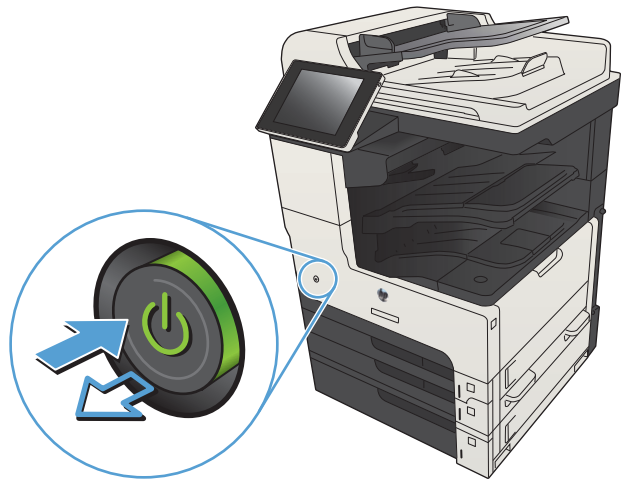
2. Open the scanner lid. Align paper that has copy defects with the scanner glass to identify the locations of dirt or smudges.
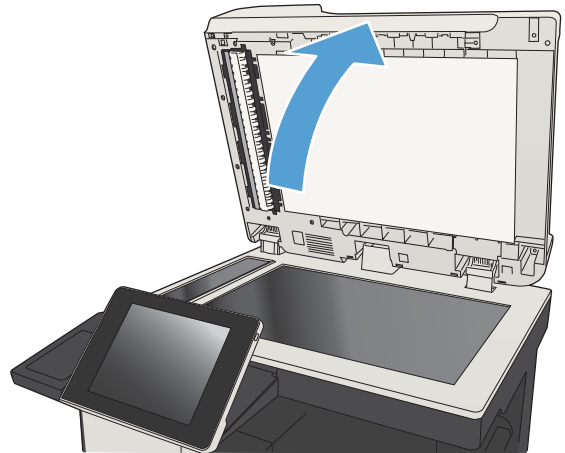
3. Clean the main scanner glass, the document-feeder glass (the small strip of glass on the left side of the scanner), and the white foam backing. Use a soft cloth or sponge that has been moistened with nonabrasive glass cleaner. Dry the glass and white plastic backing by using a chamois or a cellulose sponge to prevent spotting.

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

   NOTE: If you are having trouble with streaks on copies when you are using the document feeder, be sure to clean the small strip of glass on the left side of the scanner.

   NOTE: See this English-language video for a demonstration of how to identify and clean debris that causes streaks on copies: www.youtube.com/watch?v=CGn7FJvH8sE.

4. Connect the power cable to an outlet, and then press the power button to turn on the product.
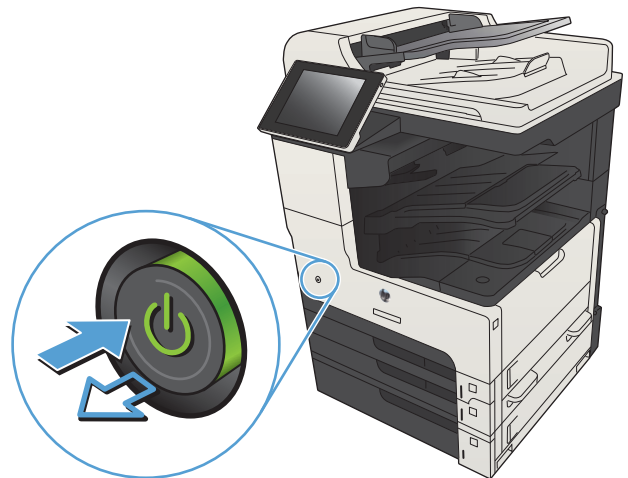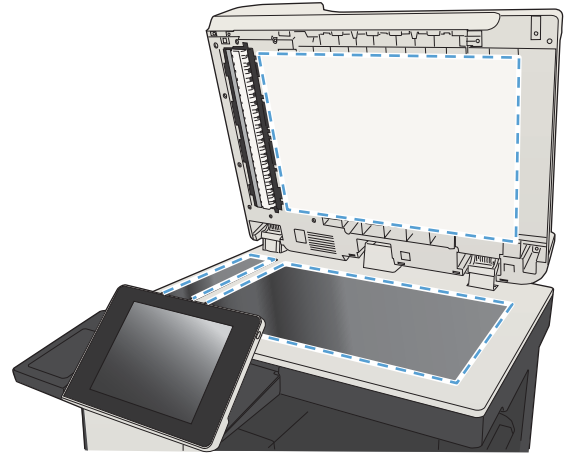
Clean the pickup rollers and separation pad in the document feeder

NOTE: The product displays a prompt when the document feeder rollers require cleaning. The cleaning interval can be configured in the Service menu. Touch the Reset option on the control panel to reset the page count after the rollers have been cleaned.
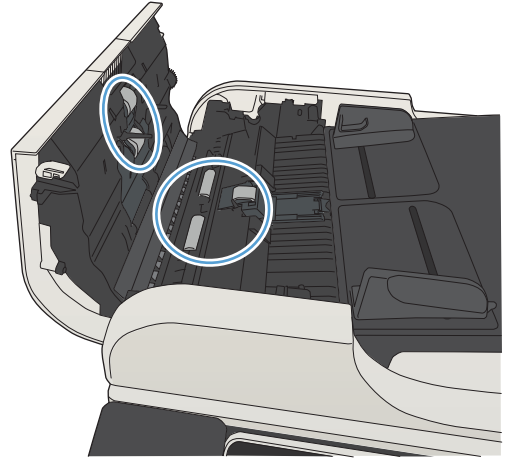
1. Lift the document-feeder latch.
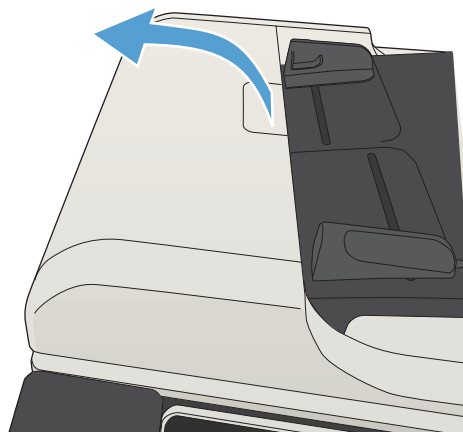
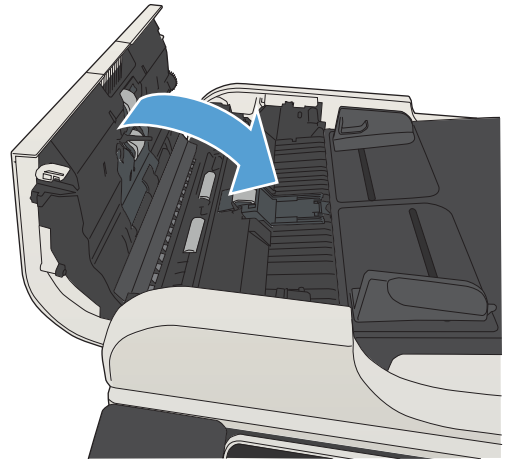2. Open the document-feeder cover.
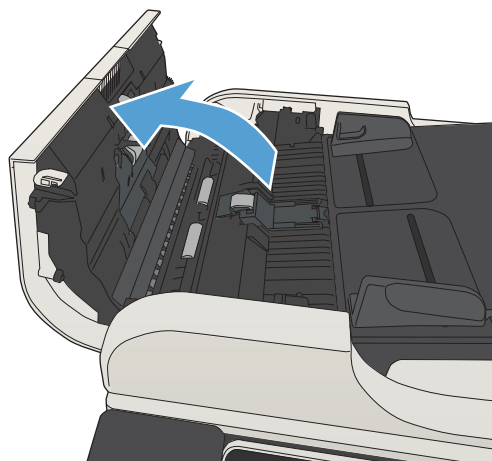
3. Remove any visible lint or dust from each of the feed rollers and the separation pad using compressed air or a clean lint-free cloth moistened with warm water.

> **NOTE:** Lift up the roller assembly so you can clean the second roller.

4. Close the document-feeder cover.

Solve performance problems

Table 2-35 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.

Solve connectivity problems

Solve USB connection problems

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

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

- Verify that the cable is not longer than 2 m (6.65 ft). Try using a shorter cable.

- Verify that the cable is working correctly by connecting it to another product. Replace the cable if necessary.

Solve wired network problems

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.

- The product has a 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

The product has a 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 product.

   a. Open a command-line prompt on your computer. For Windows, click **Start**, click **Run**, and then type `cmd`.

   b. Type `ping` followed by the IP address for your product.

   c. If the window displays round-trip times, the network is working.

2. If the ping command failed, verify that the network hubs are on, and then verify that the network settings, the product, and the computer are all configured for the same network.

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

Hewlett-Packard recommends leaving this setting in automatic mode (the default setting). If you change these settings, you must also change them for your network.

New software programs might be causing compatibility problems

Verify that any new software programs are correctly installed and that they use the correct 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

The Service menu is PIN-protected for added security. Only authorized service people have access to the Service menu. When you select Service from the list of menus, the product prompts you to type an eight-digit personal identification number (PIN).

NOTE: The product automatically exits the Service menu after about one minute if no items are selected or changed.

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.

2. Open the Service menu.

3. On the sign-in screen, select the Service Access Code option from the drop-down list.

4. Enter the following service access code for this product: 05072513.

The following menu items appear in the **Service** menu:

First level	Second level	Value	Description
Event Log			Allows you to print or view the product event log.
Clear Event Log			Use this item to clear the product event log.
Cycle Counts	Total Engine Cycles		
	Refurbish Cycle Count		Use this item to record the page count when the product was refurbished.
	Maintenance kit count		
	Maintenance kit interval		
	Document Feeder Kit Count		Set the total number of pages that have been fed through the document feeder.
	Document Feeder Kit Interval		Total number of pages since the document feeder kit was replaced.
	Clean Rollers Count		
	Clean Rollers Interval		
	ADF Count		Set the total pages fed through the document feeder.
	Flatbed Count		Set the total pages scanned from the flatbed.

First level	Second level	Value	Description
	ADF Simplex Count		Set the total single-sided pages fed through the document feeder.
	ADF Duplex Count		Set the total two-sided pages fed through the document feeder.
	Copy Scan Count		Set the total copy pages that have been scanned.
	Send Scan Count		Set the number of scanned pages sent to email.
	Fax Scan Count		
	Copy Pages Count		Set the number of scanned pages that have been printed.
Scanner Settings	ADF Settings	Leading-edge Trailing-edge Left Side Front Left Side Back	Set the calibration values. **WARNING!** Do not change these values unless instructed to do so.
	Glass Settings	Leading edge glass Left Side Glass	
Serial Number			Set the serial number.
Service ID			Use this item to show the date that the product was first used on the control panel. This eliminates the need for users to keep paper receipts for proof of warranty.
Cold Reset Paper			When you perform a cold reset, the paper size that is stored in NVRAM is reset to the default factory setting. If you replace a formatter board in a country/region that uses A4 as the standard paper size, use this menu to reset the default paper size to A4. LETTER and A4 are the only available values.
New Registration Roller		Yes No	Reset the counter for the registration roller after replacing the registration assembly.
PTT Test Mode (fax models only)			Test the internal modem for the analog fax accessory.

First level	Second level	Value	Description
	Hook Operations	Off Hook	
		On Hook	
	Generate Random Data	Select a value from the list.	
	Generate DTMF Tone Burst	Select a value from the list.	
	Generate DTMF Continuous Tone	Select a value from the list.	
	Generate Pulse Burst	Select a value from the list.	
	Generate Tone Dial Number	Enter dial number.	
	Generate Pulse Dial Number	Enter dial number.	
	Generate Single Modem Tone	Range: 1100–2100 Hz Default = 2100 Hz	
	Line Measurements		
	Fax Transmit Signal Loss		
Test Support	Continuous Scan	2-sided Save to Disk	
	Continuous Copy	2-sided Save to Disk	
	Raw Scan	2-sided Mechanical Calibration	
	Continuous Print from USB		

Product resets

Restore factory-set defaults

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

    ● General Settings

    ● Restore Factory Settings

3. Touch the Reset button.

Restore the service ID

Restore the service ID

If you replace the formatter, the date is lost. Use this menu item to reset the date to the original date that the product was first used. The date format is YYDDD. Use the following formula to calculate the dates:

1. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.

2. Open the Service menu.

3. On the sign-in screen, select the Service Access Code option from the drop-down list.

4. Enter the following service access code for this product: 05072513.

5. Touch the Service ID.

6. To calculate YY, subtract 1990 from the calendar year. For instance, if the product was first used in 2002, calculate YY as follows: 2002 - 1990 = 12. YY = 12.

7. Subtract 1 from 10 (October is the tenth month of the year): 10 - 1 = 9.

    ● Multiply 9 by 30: 9 x 30 = 270 or add 17 to 270: 270 + 17 = 287. Thus, DDD = 287.

Convert the service ID to an actual date

You can use the product Service ID number to determine whether the product is still under warranty. Use the following formula to convert the Service ID into the installation date as follows:

1. Add 1990 to YY to get the actual year that the product was installed.

2. Divide DDD by 30. If there is a remainder, add 1 to the result. This is the month.

3. The remainder from the calculation in step 2 is the date.

Using the Service ID 12287 as an example, the date conversion is as follows:

1. 12 + 1990 = 2002, so the year is 2002.

2. 287 divided by 30 = 9 with a remainder of 17. Because there is a remainder, add 1 to 9 to get 10, which represents October.

3. The remainder in step 2 is 17, so that is the date.

4. The complete date is 17-October-2002.

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

Product cold reset

Cold reset using the Preboot menu

1. Turn the product on.

2. Touch the HP logo that displays in the center of the touchscreen until the **Preboot** menu opens.

3. Use the down arrow ▼ button to highlight 3 Administrator, and then touch the OK button.

4. Use the down arrow ▼ button to highlight 8 Startup Options item, and then touch the OK button.

5. Use the down arrow ▼ button to highlight the 2 Cold Reset item, and then touch the OK button.

6. Touch the Home button to highlight 1 Continue, and then touch the OK button.

NOTE: The product will initialize.

Format Disk and Partial Clean functions

Active and repository firmware locations

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

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

- The Active – where the Operating System and firmware currently are executing

- The Repository – the recovery location

If the Active location is damaged, or a 3 Partial Clean was performed, the product automatically copies over the OS and firmware files from the Repository location and the product recovers.

If both the Active and Repository locations are damaged, or a 2 Format Disk was performed, then both locations are gone and the error message **99.09.67** displays on the control-panel display. The user must upload the firmware to the product in order for it to function again.

CAUTION: The 2 Format Disk option performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) will be completely lost. HP does not recommend this action.

Partial Clean

The 3 Partial Clean option erases all partitions and data on the disk drive, except for the firmware repository where a backup copy of the firmware file is stored. This allows the disk drive to be reformatted without having to download a firmware upgrade file to return the product to a bootable state.

Characteristics of a Partial Clean

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

- Rebooting the product restores the firmware files from the Repository location, but does not restore any customer-defined settings.

- For previous HP products, a Hard Disk Initialization is similar to executing the 3 Partial Clean function for this product.

⚠ **CAUTION:** HP recommends backing-up product configuration data before executing a 3 Partial Clean, if you need to retain customer-defined settings. See the Backup/Restore item in the Device Maintenance menu.

Reasons for performing Partial Clean

- The product continually boots up in an error state.

  📝 **NOTE:** Try clearing the error prior to executing a 3 Partial Clean.

- The product will not respond to commands from the control panel.

- Executing the 3 Partial Clean function is helpful for troubleshooting hard disk problems.

- To reset the product by deleting all solutions and customer-defined settings.

- The product default settings are not properly working.

Execute a 3 Partial Clean

1. Turn the product on.

2. Touch the HP logo that displays in the center of the touchscreen until the **Preboot** menu opens.

3. Touch the down arrow ▼ button to highlight 3 Administrator, and then touch the OK button.

4. Use the down arrow ▼ button to highlight 3 Partial Clean, and then touch the OK button.

5. Touch the OK button again.

6. Touch the Home button to highlight 1 Continue, and then touch the OK button.

   📝 **NOTE:** The product initializes.

Format Disk

The 2 Format Disk option erases the entire disk drive.

⚠ **CAUTION:**   After executing a 2 Format Disk option, the product is *not* bootable.

Characteristics of a Format Disk

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

  📝 **NOTE:**   Rebooting the product *does not* restore the firmware files.

- Rebooting the product restores the firmware files from the Repository location, but does not restore any customer-defined settings.

- After executing the 2 Format Disk function, the message **99.09.67** displays on the control panel.

- After executing the 2 Format Disk function, the product firmware must be reloaded.

⚠ **CAUTION:**   HP recommends that you do not use the 2 Format Disk option unless an error occurs and the solution in the product service manual recommends this solution. After executing the 2 Format Disk function, the product is unusable.

HP recommends backing-up product configuration data before executing a 2 Format Disk, if you need to retain customer-defined settings. See the Backup/Restore item in the Device Maintenance menu.

Reasons for performing a Format Disk

- The product continually boots up in an error state.

  📝 **NOTE:**   Try clearing the error prior to executing a 2 Format Disk.

- The product will not respond to commands from the control panel.

- Executing the 2 Format Disk function is helpful for troubleshooting hard disk problems.

- To reset the product by deleting all solutions and customer-defined settings.

Execute a 2 Format Disk

1. Turn the product on.

2. Touch the HP logo that displays in the center of the touchscreen until the **Preboot** menu opens.

3. Use the down arrow ▼ button to highlight 3 Administrator, and then touch the OK button.

4. Use the down arrow ▼ button to highlight 2 Format Disk, and then touch the OK button.

5. Touch the OK button again.

   📝 **NOTE:**   When the 2 Format Disk operation is complete, you will need to reload the product firmware.

Solve fax problems

Checklist for solving fax problems

Use the following checklist to help identify the cause of any fax-related problems you encounter:

- **Are you using the fax cable supplied with the fax accessory?** This fax accessory has been tested with the supplied fax cable to meet RJ11 and functional specifications. Do not substitute another fax cable; the analog-fax accessory requires an analog-fax cable. It also requires an analog phone connection.

- **Is the fax/phone line connector seated in the outlet on the fax accessory?** Make sure that the phone jack is correctly seated in the outlet. Insert the connector into the outlet until it "clicks."

- **Is the phone wall jack working properly?** Verify that a dial tone exists by attaching a phone to the wall jack. Can you hear a dial tone, and can you make or receive a phone call?

What type of phone line are you using?

- **Dedicated line:** A standard analog fax/phone line assigned to receive or send faxes.

  NOTE: The phone line should be for product fax use only and not shared with other types of telephone devices. Examples include alarm systems that use the phone line for notifications to a monitoring company.

- **PBX system:** A business-environment phone system. Standard home phones and the fax accessory use an analog phone signal. Some PBX systems are digital and might not be compatible with the fax accessory. You need to have access to a standard analog phone connection to be able to send and receive faxes.

- **Roll-over lines:** A phone system feature where a new call "rolls over" to the next available line when the first incoming line is busy. Try attaching the product to the first incoming phone line. The fax accessory answers the phone after it rings the number of times set in the rings-to-answer setting.

  NOTE: Roll-over lines can cause problems with receiving faxes. Using roll-over lines with this product is not recommended.

NOTE: Roll-over lines can cause problems with receiving faxes. Using roll-over lines with this product is not recommended.

Are you using a surge-protection device?

A surge-protection device can be used between the wall jack and the fax accessory to protect the fax accessory against electrical power passed through the phone lines. These devices can cause some fax communication problems by degrading the quality of the phone signal. If you are having problems sending or receiving faxes and are using one of these devices, connect the product directly to the phone jack on the wall to determine whether the problem is with the surge-protection device.

Are you using a phone company voice-messaging service or an answering machine?

If the rings-to-answer setting for the messaging service is lower than the rings-to-answer setting for the fax accessory, the messaging service answers the call, and the fax accessory cannot receive faxes. If the rings-to-answer setting for the fax accessory is lower than that of the messaging service, the fax accessory answers all calls.

Does your phone line have a call-waiting feature?

If the fax telephone line has an activated call-waiting feature, a call-waiting notice can interrupt a fax call in progress, which causes a communication error. Ensure that a call-waiting feature is not active on the fax telephone line.

Check fax accessory status

If the analog-fax accessory does not appear to be functioning, print a Configuration page report to check the status.

1. From the Home screen, scroll to and touch the Administration button.

2. Open the following menus:

   ● Reports

   ● Configuration/Status Pages

   ● Configuration page

3. Touch the Print button to print the report, or touch the View button to view the report on the screen. The report consists of several pages.

   NOTE: The product IP address or host name is listed on the Jetdirect Page.

On the Fax Accessory Page of the Configuration Page, under the Hardware Information heading, check the Modem Status. The following table identifies the status conditions and possible solutions.

NOTE: If the Fax Accessory Page does not print, there might be a problem with the analog fax accessory. If you are using LAN fax or Internet fax, those configurations could be disabling the feature.

Operational / Enabled[1]	The analog-fax accessory is installed and ready.
Operational / Disabled[1]	The fax accessory is installed, but you have not configured the required fax settings yet.
	The fax accessory is installed and operational; however, the HP Digital Sending utility has either disabled the product fax feature or has enabled LAN fax. When LAN fax is enabled, the analog-fax feature is disabled. Only one fax feature, either LAN fax or analog fax, can be enabled at a time.
	NOTE: If LAN fax is enabled, the Fax feature is unavailable on the product control panel.
Non-Operational / Enabled/Disabled[1]	The product has detected a firmware failure. Upgrade the firmware.
Damaged / Enabled/Disabled[1]	The fax accessory has failed. Reseat the fax accessory card and check for bent pins. If the status is still DAMAGED, replace the analog-fax accessory card.

[1] ENABLED indicates that the analog-fax accessory is enabled and turned on; DISABLED indicates that LAN fax is enabled (analog fax is turned off).

General fax problems

Problem	Cause	Solution
The fax failed to send.	JBIG is enabled, and the receiving fax machine does not have JBIG capability.	Turn off the JBIG setting.
An "Out of Memory" status message displays on the product control panel.	The product storage disk is full.	Delete some stored jobs from the disk. From the Home screen on the product control panel, touch the Retrieve from Device Memory button. Open the list of stored jobs or stored faxes. Select a job to delete, and then touch the Delete button.
Print quality of a photo is poor or prints as a gray box.	You are using the wrong page-content setting or the wrong resolution setting.	Try setting the Optimize Text/Picture option to Photograph setting.
You touched the Stop ⊙ button on the product control panel to cancel a fax transmission, but the fax was still sent.	If the job is too far along in the sending process, you cannot cancel the job.	This is normal operation.
No fax address book button displays.	The fax address book feature has not been enabled.	Use the HP MFP Digital Sending Software Configuration utility to enable the fax address book feature.
Not able to locate the Fax settings in HP Web Jetadmin.	Fax settings in HP Web Jetadmin are located under the device's status page drop-down menu.	Select **Digital Sending and Fax** from the drop-down menu.
The header is appended to the top of the page when the overlay option is enabled.	For all forwarded faxes, the product appends the overlay header to the top of a page.	This is normal operation.
A mix of names and numbers is in the recipients box.	Names and numbers can both display, depending on where they are from. The fax address book lists names, and all other databases list numbers.	This is normal operation.
A one-page fax prints as two pages.	The fax header is being appended to the top of the fax, pushing text to a second page.	To print a one page fax on one page, set the overlay header to overlay mode, or adjust the fit-to-page setting.
A document stops in the document feeder in the middle of faxing.	A jam is in the document feeder.	Clear the jam, and send the fax again.
The volume for sounds coming from the fax accessory is too high or too low.	The volume setting needs to be adjusted.	Adjust the volume in the Fax Send Settings menu and the Fax Receive Settings menu.

Use Fax over VoIP networks

VoIP technology converts the analog phone signal into digital bits. These are then assembled into packets which travel on the Internet. The packets are converted and transmitted back to analog signals at or near the destination.

Transmission of information on the Internet is digital instead of analog. Therefore, there are different constraints on the fax transmission that might require different fax settings than the analog Public Switched Telephone Network (PSTN). Fax is very dependent upon timing and signal quality, so a fax transmission is more sensitive to a VoIP environment.

The following are suggested changes in settings for the HP LaserJet Analog Fax Accessory 500 when it is connected to a VoIP service:

- Begin with the fax speed set in Fast (V.34) mode and with Error Correction Mode (ECM) turned on. The V.34 protocol handles any changes in transmission speed needed to accommodate VoIP networks.

- If numerous errors or retries occur with the fax speed set to Fast, set it to Medium (V.17).

- If errors and retries persist, set the fax speed to Slow (V.29) because some VoIP systems cannot handle the higher signal rates associated with fax.

- In rare cases, if errors persist, turn off ECM on the product. The image quality might decrease. Ensure that the image quality is acceptable with ECM off before using this setting.

- If the preceding setting changes have not improved the VoIP fax reliability, contact your VoIP provider for help.

Problems with receiving faxes

Problem	Cause	Solution
Incoming fax calls are not being answered by the fax accessory (no fax detected).	The rings-to-answer setting might not be set correctly.	Check the rings-to-answer setting.
	The fax cable might not be connected correctly, or the fax cable is not working.	Check the installation. Make sure you are using the fax cable that came with the product or with the fax accessory.
	The phone line might not be working.	Disconnect the fax accessory from the phone jack, and then connect a phone. Try to make a phone call to ensure the phone line is working.
	If you are using a PBX system, the ring signals might not be configured correctly.	Check the ring-signal configuration on the PBX system.
	A voice-messaging service might be interfering with incoming faxes.	Do one of the following: ● Discontinue the messaging service. ● Use a phone line dedicated to fax calls. ● Decrease the rings-to-answer for the fax accessory to a number less than the rings-to-answer for the voice mail.
Faxes are being received very slowly.	You might be receiving a complex fax, such as one with many graphics.	Complex faxes take longer to transmit.
	The sending fax machine might have a slow modem speed.	The fax accessory only receives the fax at the fastest modem speed the sending fax machine can use. Wait for the fax transmission to complete.
	The resolution at which the fax was sent or is being received is very high. A higher resolution typically results in better quality, but also requires a longer transmission time.	Ask the sender to decrease the resolution and resend the fax.
	If there is a poor phone-line connection, the fax accessory and the sending fax machine slow down the transmission to adjust for errors.	Ask the sender to resend the fax. Ask the phone company to check the phone line.
Faxes are not printing on the product.	No paper is in the input tray.	Load paper. Any faxes received while the input tray is empty are stored and will print after the tray has paper.
	The Fax Printing Schedule feature is in use.	Faxes print according to the schedule. To print faxes immediately, disable the Fax Printing Schedule feature.

Problem	Cause	Solution
	The product is either low on toner or has run out of toner.	If configured, the product stops printing as soon as it is low on toner or runs out of toner. Any faxes received are stored in memory and print after the toner has been replaced.
	The incoming call might be a voice call.	Incoming voice calls usually show up in the call report as a **No Fax Detected** error. Because these are voice calls and not a fax error, no action is necessary.
	The incoming fax was interrupted.	Verify that the fax telephone line does not have an activated call-waiting feature. A call-waiting notice can interrupt a fax call in progress, which causes a communication error.
	The Fax Printing Schedule feature is set to the Always store faxes option.	Change the Fax Printing Schedule setting to the Always print faxes option.

Problems with sending faxes

Problem	Cause	Solution
Faxes are transmitting very slowly.	You might be sending a complex fax, such as one with many graphics.	Complex faxes take longer to transmit.
	The receiving fax machine might have a slow modem speed.	The fax accessory only sends the fax at the fastest modem speed the receiving fax machine can use. Wait for the fax transmission to complete.
	The resolution at which the fax was sent or is being received is very high. A higher resolution typically results in better quality, but also requires a longer transmission time.	Decrease the resolution and change the Optimize Text/Picture option.
	If there is a poor phone-line connection, the fax accessory and the receiving fax machine slow down the transmission to adjust for errors.	Cancel and resend the fax. Ask the phone company check the phone line.
	The document might have a gray background, which can increase fax transmission time.	Use the Image Adjustment feature to clean up the background shading.
Faxes quit during sending.	The receiving fax machine might be malfunctioning.	Try sending to another fax machine.
	The phone line might not be working.	Disconnect the fax accessory from the phone jack, and connect a phone. Try to make a phone call to ensure the phone line is working.
	The phone line might be noisy or poor quality.	Try using a slower fax speed to improve the reliability of transmission. Use the Fax Dialing Settings menu to set the fax speed for sending faxes.
	A call-waiting feature might be active.	Verify that the fax telephone line does not have an activated call-waiting feature. A call-waiting notice can interrupt a fax call in progress, which causes a communication error.
The fax accessory is receiving faxes but is not sending them.	If the fax accessory is on a PBX system, the PBX system might be generating a dial tone the fax accessory cannot detect.	Disable the detect-dial-tone setting.
	There might be a poor phone connection.	Try again later.
	The receiving fax machine might be malfunctioning.	Try sending to another fax machine.
	The phone line might not be working.	Disconnect the fax accessory from the phone jack, and connect a phone. Try to make a phone call to ensure the phone line is working.

Problem	Cause	Solution
Outgoing fax calls keep dialing.	The fax accessory automatically redials a fax number if the Redial on Busy option is on or if the Redial on No Answer option is on.	This is normal operation. If you do not want the fax to retry, set the Redial on Busy option to 0, set the Redial on No Answer option to 0, and set the Redial on Error option to 0.
Faxes you send are not arriving at the receiving fax machine.	The receiving fax machine might be turned off or might have an error condition, such as being out of paper.	Ask the recipient to make sure the fax machine is turned on and ready to receive faxes.
	A fax might be in memory because it is waiting to redial a busy number, or there are other jobs ahead of it waiting to be sent.	If a fax job is in memory for either of these reasons, an entry for the job displays in the fax log. Print the fax activity log, and check the **Result** column for jobs with a **Pending** designation.

Fax error codes

If a fax problem occurs which prevents or interrupts fax transmission, an error code is generated that can help in determining the cause of the problem. Error codes show up in the fax activity log, the fax call report, and the T.30 Protocol Trace. Print one of these reports to obtain the error code. A detailed description of the error codes and the appropriate action is available at www.hp.com. Search for HP LaserJet Analog Fax Accessory 500.

Fax error messages on the product control panel

If the fax process is interrupted or an error occurs during a fax transmission or reception, a two-part status/error description is generated by the fax subsystem on the product. Normal or successful faxes also generate messages indicating success. The message information consists of a text description and a numeric code (a few messages do not include numeric codes). Only the text part of the message is displayed on the product control panel; however, both the text message and numeric code are listed in the Fax Activity Report, Fax Call Report, and the Fax T.30 Trace. The numeric code is shown in parentheses after the text part of the message in the reports.

The fax modem generates the numeric code. Usually a numeric code of (0) indicates a normal modem response. Some messages always display a numeric code of (0), other messages can have a range of numeric codes, and a few messages have no numeric code. Usually a numeric code of (0) indicates an error was not associated with the fax modem, but occurred in another part of the fax system or other product sytem such as the printing system. Non-zero error codes give further detail into the particular action or process that the modem is executing, and they do not necessarily indicate that there is a problem with the modem.

Persistent error messages with numeric codes different than those listed here require assistance of customer support. Print a Fax T.30 Trace report before contacting customer support to help identify the problem. This report contains details of the last fax call.

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

   - Troubleshooting

   - Fax

   - Fax T.30 Trace

3. Select the Print T.30 Report option to print the report.

Send-fax messages

Table 2-36 Send-fax messages

Message	Error No.	Description	Action
Cancelled	0	Someone cancelled the fax at the product control panel.	None.
Success	n/a	The fax was sent successfully.	None.
Fail Busy	0	The receiving fax machine is busy.	The fax will be retired automatically (if configured), otherwise try resending fax later.
No Answer	0 or 17	The receiving fax machine is not answering the call, or a person answered the call.	The receiving fax machine might be disconnected or turned off; contact the receiver to check the machine. Try resending.
No Dial	0	No dial tone is detected when sending the fax.	Verify the phone line is active; set the sending fax to "not" to detect a dial tone.
Failed	Any	The fax might be corrupted or not sent.	Try resending fax.
Failed	0	Incompatible page width, or page had too many bad lines.	Try resending fax; if the error persists, contact service.
Failed	17 or 36	Lost telephone connection between sender and receiver. The issue might be due to voice calls interrupting the fax, or a person answering the call.	Try resending the fax.
Failed or **Communication Error**	Any besides 17 or 36	General communications issue where the fax transmission was interrupted or did not proceed as expected.	Try resending fax; if the error persists, contact support.
Space Fail	0	Unable to read or write the fax image file to disk; could be corrupt product disk or no space available on the product's disk.	Try resending fax; if the error persists, contact support.
Memory Error	0	Out of memory on product.	If the error persists, delete items from the product memory, such as stored jobs or saved faxes.
Power Failure	0	A power failure occurred on the sending fax product during the fax transmission.	Try resending the fax.

Receive-fax messages

Table 2-37 Receive-fax messages

Message	Error No.	Description	Action
Success	n/a	The fax transmission was successful.	None.
Blocked	n/a	The receiving fax machine is using the blocked-number feature and is blocking this fax.	None.
Failed	Any	The fax might be corrupted or not sent.	Ask the sender to resend the fax; if the error persists, contact support.
Failed	0	Incompatible page width or page had too many bad lines.	Ask the sender to resend the fax; if the error persists, contact support.
Failed	17, 36	Lost telephone connection or interruption between sender/receiver.	Ask the sender to resend the fax (if the sending machine does not automatically retry).
Failed	Any besides 17 or 36	General communications issue where the fax transmission was interrupted or did not proceed as expected.	Ask the sender to resend the fax; if the error persists, contact support.
Space Fail	0	Unable to read or write image file to disk; could be corrupt product disk or no space on disk.	Ask the sender to resend the fax; if the error persists, contact support.
Memory Error	0	Out of memory on product.	If the error persists, delete items from the product memory, such as stored jobs or saved faxes.
Print Fail	0	The received image file cannot be decoded.	Ask the sender to resend the fax; enable Error Correction Mode if it is not already enabled.
Power Failure	0	A power failure occurred during the fax reception.	Ask the sender to resend the fax.
No Fax Detected	17, 36	A voice call was made to the fax.	None

Service settings

These items in the control-panel menus are intended to be used when an HP service representative is assisting you.

Settings in the Troubleshooting menu

1. From the Home screen on the product control panel, scroll to and touch the Administration button.

2. Open the following menus:

    ● Troubleshooting

    ● Fax

Fax T.30 Trace	This is a printed report of all the communications between the sending and receiving fax machines for the last Fax transmission or reception. The report contains detailed error codes and other information that might be useful in troubleshooting a particular problem related to sending or receiving a fax. Print this report before contacting HP customer support.
Fax V.34	This setting controls the modem's method of transmission. The Normal setting allows the modem to select any of the supported fax speeds up to 33,600 bps. The Off setting sets the fax speed to 14,400 bps or lower, depending on the speed settings for sending and receiving.
Fax Speaker Mode	In Normal mode, the modem speaker is turned on during dialing, through the initial connection, and then it turns off. In Diagnostic mode, the speaker is turned on and remains on for all fax communications until the setting is returned to Normal mode.
Fax Log Entries	The Standard fax log includes basic information such as the time and whether the fax was successful. The Detailed fax log shows the intermediate results of the redial process not shown in the Standard fax log.

Product upgrades

To download the most recent firmware upgrade for the product, go to www.hp.com/go/ljMFPM725_firmware.

Determine the installed revision of firmware

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

On the configuration page, look in the section marked Device Information for the firmware datecode and firmware revision.

Firmware datecode and firmware revision examples

- 20100831 (firmware datecode)

- 103067_104746 (firmware revision)

Perform a firmware upgrade

The firmware bundle is a `xxxxxxx.bdl` file. This file requires an interactive upgrade method. You cannot upgrade the product using the traditional FTP, LPR or Port 9100 methods of upgrading. Use one of the following methods to upgrade the firmware for this product.

Embedded Web Server

1. Open a Web browser window on the computer.

2. Enter the product IP address in the address bar, and then press **Enter**.

3. Select the **Firmware upgrade** link from within the **Troubleshooting** tab.

   NOTE: If you get a warning screen, follow the instructions for setting an administrator password from the **Security** tab.

4. Browse to the location that the firmware upgrade file was downloaded to, and then select the firmware file. Select the **Install** button to perform the upgrade.

   NOTE: Do not close the browser window until the Embedded Web Server (EWS) displays the confirmation page.

5. Select **Restart Now** from the EWS confirmation page, or turn the product off, and then on again using the power switch.

USB storage device (Preboot menu)

1. Copy the firmware upgrade file to the root directory of a USB flash drive. The firmware upgrade file has a .bdl extension.

2. Insert the USB flash drive into the USB port on the product control panel.

3. Turn the product on.

4. Touch the HP logo that displays in the center of the touchscreen until the **Preboot** menu opens.

5. Wait for the Pre-Boot menu to appear on the control-panel display, and then touch the down arrow ▼ button to scroll to Administrator. Touch the OK button to select it.

6. Touch the down arrow ▼ button to scroll to Manage Disk. Touch the OK button to select it.

7. Touch the down arrow ▼ button to scroll to Clear Disk Pwd. Touch the OK button to select it.

8. The message **Proceed with Requested Action** displays. Touch the OK button to confirm.

9. Touch the back arrow ↰ button to return to the Pre-boot menu home screen.

10. Touch the down arrow ▼ button to scroll to Administrator. Touch the OK button to select it.

11. Touch the down arrow ▼ button to scroll to Download. Touch the OK button to select it.

12. Touch the down arrow ▼ button to scroll to USB Thumbdrive. Touch the OK button to select it.

13. Several .bdl files might be listed. Touch the down arrow ▼ button to scroll to the firmware upgrade file that you downloaded. Touch the OK button to select it.

    NOTE: If no .bdl files are listed, try saving the file to a different USB flash drive

14. Wait while the file transfers. When the transfer is complete, the message **Complete** displays on the screen.

15. Turn the product off, remove the USB flash drive, and then turn the product on. Wait for several minutes while the product initializes.

    - If the upgrade is unsuccessful, try sending the firmware upgrade file again.

    - If the upgrade fails again, contact HP support at www.hp.com/support/ljMFPM725.

USB storage device (control-panel menu)

1. Copy the `xxxxxxx.bdl` file to a portable USB flash drive.

2. Turn the product on, and then wait until it reaches the Ready state.

3. From the Home screen on the product control panel, scroll to and touch the Device Maintenance button.

4. Touch the USB Firmware Upgrade button.

5. Insert the portable USB storage device with the `xxxxxxx.bdl` file on it into the USB port on the front of the product, and then touch the OK button.

6. Touch the `xxxxxxx.bdl` file, and then touch the Upgrade button.

    TIP: If there is more than one `xxxxxxx.bdl` file on the storage device, make sure that you select the correct file for this product.

7. When the product prompts you to confirm the upgrade, touch the Upgrade button.

    When the upgrade is complete, the product will initialize.

    NOTE: The upgrade process can take up to 10 minutes to complete.

8. When the upgrade process is complete, print a configuration page and verify that the upgrade firmware version was installed.

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 Enterprise MFP M725dn, M725f, M725z, M725z +	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.

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

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

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

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

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

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

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

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

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

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TO THE EXTENT ALLOWED BY LOCAL LAW, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE.

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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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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/ljMFPM725
Download software utilities, drivers, and electronic information	www.hp.com/go/ljMFPM725_software
Order additional HP service or maintenance agreements	www.hp.com/go/carepack
Register your product	www.register.hp.com

B Product specifications

Physical specifications

Product model	Height	Depth	Width	Weight
M725dn	609 mm (24.0 in)	649 mm (25.6 in)	614 mm (24.2 in)	57.4 kg (126.5 lb)
M725f	1160 mm (45.7 in)	681 mm (26.8 in)	745 mm (29.3 in)	91.4 kg (201.5 lb)
M725z	1192 mm (46.9 in)	681 mm (26.8 in)	745 mm (29.3 in)	96.8 kg (213.5 lb)
M725z+	1192 mm (46.9 in)	681 mm (26.8 in)	745 mm (29.3 in)	106 kg (233 lb)
Optional 1x500-sheet feeder tray	125 mm (4.9 in)	585 mm (23.0 in)	568 mm (22.4 in)	11.3 kg (25 lb)
Optional 1x500-sheet feeder and stand	551 mm (21.7 in)	681 mm (26.8 in)	745 mm (29.3 in)	22.7 kg (50 lb)
Optional 3x500-sheet feeder and stand	551 mm (21.7 in)	681 mm (26.8 in)	745 mm (29.3 in)	29.9 kg (66 lb)
Optional 3,500-sheet high-capacity input tray and stand	551 mm (21.7 in)	681 mm (26.8 in)	745 mm (29.3 in)	38.6 kg (85 lb)

Table B-2 **Product dimensions with all doors and trays fully opened**

Product model	Height	Depth	Width
M725dn	955 mm (37.6 in)	1139 mm (44.8 in)	981 mm (38.6 in)
M725f	1506 mm (59.3 in)	1171 mm (46.1 in)	1112 mm (43.8 in)
M725z	1538 mm (60.6 in)	1171 mm (46.1 in)	1112 mm (43.8 in)
M725z+	1538 mm (60.6 in)	1171 mm (46.1 in)	1112 mm (43.8 in)

Power consumption, electrical specifications, and acoustic emissions

See www.hp.com/go/ljMFPM725_regulatory-environmental 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-3 **Operating-environment specifications**

Environment	Recommended	Allowed
Temperature	17° to 25°C (62.6° to 77°F)	15° to 30°C (59° to 86°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 (fax models)
- Certificate of Volatility
- Safety statements
- Additional statements for telecom (fax) products

FCC regulations

This equipment has been tested and found to comply with the limits for a Class 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

This product generates no appreciable ozone gas (O_3).

Power consumption

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

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

www.hp.com/go/energystar

Toner consumption

EconoMode uses less toner, which might extend the life of the 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/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 contains a battery that might require special handling at end-of-life. The batteries contained in or supplied by Hewlett-Packard for this product include the following:

HP LaserJet Enterprise MFP M725	
Type	Carbon monofluoride lithium
Weight	0.8 g
Location	On formatter board
User-removable	No

廢電池請回收

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

Disposal of waste equipment by users
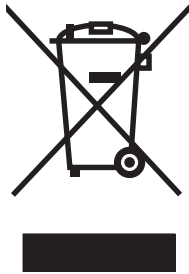
This symbol means do not dispose of your product with your other household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment. For more information, please 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 or www.hp.com/hpinfo/community/environment/productinfo/safety.

For more information

To obtain information about these environmental topics:

● Product environmental profile sheet for this and many related HP products

● HP's commitment to the environment

- HP's environmental management system

- HP's end-of-life product return and recycling program

- Material Safety Data Sheets

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

Declaration of conformity

	Declaration of Conformity	
	according to ISO/IEC 17050-1 and EN 17050-1	
Manufacturer's Name:	Hewlett-Packard Company	DoC#: BOISB-1105-01-Rel.1.0
Manufacturer's Address:	11311 Chinden Boulevard	
	Boise, Idaho 83714-1021, USA	
declares, that the product		
Product Name:	HP LaserJet Enterprise MFP M725dn	
Regulatory Model Numbers:[2]	BOISB-1105-01	
Product Options:	All	
Toner Cartridges:	CF214A, CF214X	
conforms to the following Product Specifications:		
SAFETY:	IEC 60950-1:2005 +A1/ EN60950-1: 2006 +A11:2009 +A1:2010 +A12:2011	
	IEC 60825-1:2007 / EN 60825-1:2007 (Class 1 Laser/LED Product)	
	IEC 62311:2007 / EN 62311:2008	
	GB4943-2001	
EMC:	CISPR22:2008/ EN55022:2010 - Class A[1, 3]	
	EN 61000-3-2:2006 +A1:2009 +A2:2009	
	EN 61000-3-3:2008	
	EN 55024:1998 +A1 +A2	
	FCC Title 47 CFR, Part 15 Class A[1] / ICES-003, Issue 4	
	GB9254-2008, GB17625.1-2003	

Supplementary Information:

The product herewith complies with the requirements of the EMC Directive 2004/108/EC, the Low Voltage Directive 2006/95/EC, and **the EuP Directive 2005/32/EC**, 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, these products are assigned a Regulatory model number. This number should not be confused with the product name or the product number(s).

3. The product includes LAN (Local Area Network) options. When the interface cable is attached to LAN connectors, 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."

Boise, Idaho USA

November 2013

For Regulatory Topics only, contact:

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

Declaration of conformity (fax models)

Declaration of Conformity

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

Manufacturer's Name:	Hewlett-Packard Company	DoC#: BOISB-1105-02-Rel.1.0
Manufacturer's Address:	11311 Chinden Boulevard	
	Boise, Idaho 83714-1021, USA	
declares, that the product		
Product Name:	HP LaserJet Enterprise MFP M725f, HP LaserJet Enterprise MFP M725z, HP LaserJet Enterprise MFP M725z+	
Regulatory Model:[2]	BOISB-1105-02	
	BOISB-0703-00 – Fax Module	
Product Options:	All	
Toner Cartridges:	CF214A, CF214X	
conforms to the following Product Specifications:		
SAFETY:	EC 60950-1:2005 +A1/ EN60950-1: 2006 +A11:2009 +A1:2010 +A12:2011	
	IEC 60825-1:2007 / EN 60825-1:2007 (Class 1 Laser/LED Product)	
	IEC 62311:2007 / EN 62311:2008	
	GB4943-2001	
EMC:	CISPR22:2008/ EN55022:2010 - Class A[1], [3]	
	EN 61000-3-2:2006 +A1:2009 +A2:2009	
	EN 61000-3-3:2008	
	EN 55024:1998 +A1 +A2	
	FCC Title 47 CFR, Part 15 Class A[1] / ICES-003, Issue 4	
	GB9254-2008, GB17625.1-2003	

Supplementary Information:

The product herewith complies with the requirements of the EMC Directive 2004/108/EC, the Low Voltage Directive 2006/95/EC, and **the EuP Directive 2005/32/EC**, 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 includes LAN (Local Area Network) options. When the interface cable is attached to LAN connectors, 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".

Boise, Idaho USA

November 2013

For Regulatory Topics only, contact:

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

Certificate of Volatility

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

<table>
<tr><td colspan="5" align="center">Hewlett-Packard Certificate of Volatility</td></tr>
<tr>
<td colspan="2">Model:
HP LaserJet Enterprise
MFP M725 series</td>
<td colspan="2">Part Number:
M725dn=CF066A, f=CF067A,
z=CF068A, z+=CF069A</td>
<td>Address:
Hewlett Packard Company
11311 Chinden Blvd
Boise, ID 83714</td>
</tr>
<tr><td colspan="5" align="center">Volatile Memory</td></tr>
<tr><td colspan="5">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</td></tr>
<tr>
<td>Type (SRAM, DRAM, etc):
DDR2 - DRAM</td>
<td>Size:
1 GB</td>
<td>User Modifiable:
☐ Yes ☒ No</td>
<td>Function:
Used for temporary storage during the process of jobs, and for applications that are running on the OS.</td>
<td>Steps to clear memory:
When the printer is powered off, the memory is erased.</td>
</tr>
<tr>
<td>Type (SRAM, DRAM, etc):</td>
<td>Size:</td>
<td>User Modifiable:
☐ Yes ☐ No</td>
<td>Function:</td>
<td>Steps to clear memory:</td>
</tr>
<tr>
<td>Type (SRAM, DRAM, etc):</td>
<td>Size:</td>
<td>User Modifiable:
☐ Yes ☐ No</td>
<td>Function:</td>
<td>Steps to clear memory:</td>
</tr>
</table>

<table>
<tr><td colspan="5" align="center">Non-Volatile Memory</td></tr>
<tr><td colspan="5">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</td></tr>
<tr>
<td>Type (Flash, EEPROM, etc):
SPI Flash</td>
<td>Size:
4 MB</td>
<td>User Modifiable:
☒ Yes ☐ No</td>
<td>Function:
Contains the boot code and factory product configuration data required for the device to function. User modifications are limited to downloading digitally signed HP firmware images.</td>
<td>Steps to clear memory:
There are no steps to clear this data.</td>
</tr>
<tr>
<td>Type (Flash, EEPROM, etc):
ICB EEPROM</td>
<td>Size:
32KB</td>
<td>User Modifiable:
☐ Yes ☒ No</td>
<td>Function:
Backup device for critical system counters and product configuration information.</td>
<td>Steps to clear memory:
There are no steps to clear this data.</td>
</tr>
<tr>
<td>Type (Flash, EEPROM, etc):
None</td>
<td>Size:</td>
<td>User Modifiable:
☐ Yes ☒ No</td>
<td>Function:</td>
<td>Steps to clear memory:</td>
</tr>
</table>

<table>
<tr><td colspan="5" align="center">Mass Storage</td></tr>
<tr><td colspan="5">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</td></tr>
<tr>
<td>Type (HDD, Tape, etc):
 Self encrypting Hard drive, SATA2</td>
<td>Size:
320 GB</td>
<td>User Modifiable:
☒ Yes ☐ No</td>
<td>Function:
Stores customer data, OS, applications, digitally signed firmware images, persistent data, and temporary data used for processing and system functions. HDD is standard on all models.</td>
<td>Steps to clear memory:
There are several ways to erase this:
1. Erase and Unlock Encrypted Disk - This changes the encryption keys rendering all data unreadable.
2. Secure Storage Erase - Erases temporary files and job data by overwriting information one or three times
3. Secure Disk Erase - Industry standard ATA Secure Erase. Overwrites all data on the hard drive.
4. Secure File Erase - Erases files when jobs finish processing by overwriting them one or three times.</td>
</tr>
</table>

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

Type (HDD, Tape, etc):	Size:	User Modifiable: ☐ Yes ☐ No	Function:	Steps to clear memory:

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
Print jobs, HP digitally signed firmware upgrades, 3rd party application loading. Restore encrypted backed-up system settings. USB ports can be disabled.
Can any data other than scan upload be sent to the USB device)? ☒ Yes ☐ No If Yes please describe below
Diagnostic service logs can be uploaded. Back-up of encrypted system settings.

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: Fax modem for receipt and sending of faxes
Specifications: 33.6 kbs

Author Information			
Name: Leslie Beets	Title: Security Technical Marketing Engineer	Email:	Business Unit: PPS
			Date Prepared:

Safety statements

Laser safety

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

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

Canadian DOC regulations

Complies with Canadian EMC Class A requirements.

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

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 either 100-127 Vac or 220-240 Vac and 50/60 Hz.

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

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

Power cord statement (Japan)

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

EMC statement (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 (업무용 방송통신기기)	이 기기는 업무용(A급)으로 전자파적합등록을 한 기 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 Enterprise MFP M725dn, M725f, M725z, M725z+, 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 Enterprise MFP M725dn, M725f, M725z, M725z+ - 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
复印机组件	X	0	0	0	0	0
控制面板	0	0	0	0	0	0
塑料外壳	0	0	0	0	0	0
格式化板组件	X	0	0	0	0	0
碳粉盒	X	0	0	0	0	0

0614

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

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

Restriction on Hazardous Substances statement (Turkey)

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

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

Additional statements for telecom (fax) products

EU Statement for Telecom Operation

This product is intended to be connected to the analog Public Switched Telecommunication Networks (PSTN) of European Economic Area (EEA) countries/regions.

It meets requirements of EU R&TTE Directive 1999/5/EC (Annex II) and carries appropriate CE conformity marking.

For more details see Declaration of Conformity issued by the manufacturer in another section of this manual.

However due to differences between individual national PSTNs the product may not guarantee unconditional assurance of successful operation on every PSTN termination point. Network compatibility depends on the correct setting being selected by the customer in preparation of its connection to the PSTN. Please follow the instructions provided in the user manual.

If you experience network compatibility issues, please contact your equipment supplier or Hewlett-Packard help desk in the country/region of operation.

Connecting to a PSTN termination point may be the subject of additional requirements set out by the local PSTN operator.

New Zealand Telecom Statements

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment may not provide for the effective hand-over of a call to another device connected to the same line.

This equipment shall not be set up to make automatic calls to the Telecom "111" Emergency Service.

This product has not been tested to ensure compatibility with the FaxAbility distinctive ring service for New Zealand.

Additional FCC statement for telecom products (US)

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the back of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

The REN is used to determine the quantity of devices, which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all, areas, the sum of the RENs should not exceed five (5.0). To be certain of the

number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

This equipment uses the following USOC jacks: RJ11C.

An FCC-compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack, which is Part 68 compliant. This equipment cannot be used on telephone company-provided coin service. Connection to Party Line Service is subject to state tariffs.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment, please see the numbers in this manual for repair and (or) warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved.

The customer can do the following repairs: Replace any original equipment that came with the device. This includes the toner cartridge, the supports for trays and bins, the power cord, and the telephone cord. It is recommended that the customer install an AC surge arrestor in the AC outlet to which this device is connected. This is to avoid damage to the equipment caused by local lightning strikes and other electrical surges.

Telephone Consumer Protection Act (US)

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of the sending machine or such business, or other entity, or individual. (The telephone number provided cannot be a 900 number or any other number for which charges exceed local or long distance transmission charges).

Industry Canada CS-03 requirements

Notice: The Industry Canada label identifies certified equipment. This certification means the equipment meets certain telecommunications network protective, operational, and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirement document(s). The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible for the equipment to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company

cause to request the user to disconnect the equipment. Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution can be particularly important in rural areas.

⚠ **CAUTION:**   Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate. The Ringer Equivalence Number (REN) of this device is 0.0B.

This product meets the applicable Industry Canada technical specifications. / Le présent matériel est conforme aux specifications techniques applicables d'Industrie Canada.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed five (5.0). / L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas cinq.

The standard connecting arrangement code (telephone jack type) for equipment with direct connections to the telephone network is CA11A.

Vietnam Telecom wired/wireless marking for ICTQC Type approved products

Japan Telecom Mark

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