LASERJET ENTERPRISE 500 COLOR MFP

Troubleshooting Manual

M575

HP LaserJet Enterprise 500 color MFP M575 Printers

Troubleshooting Manual

Part number: CD644-90967

Edition 1, 5/2012

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Conventions used in this guide

TIP: Tips provide helpful hints or shortcuts.

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

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

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

Table of contents

List of tables

List of figures

1 Theory of operation

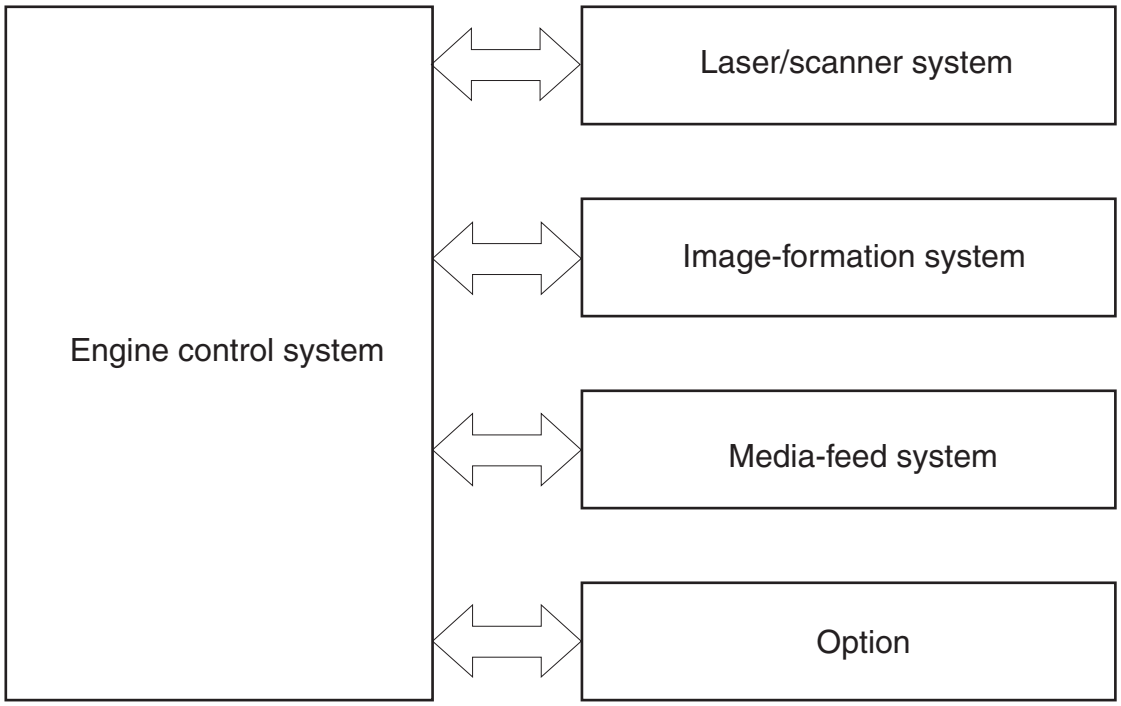
Basic operation

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

The basic product operation comprises the following systems:

- The engine-control system, which includes the power supply and the DC controller printed circuit assembly (PCA)
- The laser/scanner system, which forms the latent image on the photosensitive drum
- The image-formation system, which transfers a toner image onto the paper
- The media feed system, which uses a system of rollers and belts to transport the paper through the product
- Option (optional paper feeder)

Figure 1-1 Relationship between the main product systems



Sequence of operation

The DC controller PCA controls the operating sequence, as described in the following table.

NOTE: The terms fusing and fixing are synonymous.

Table 1-1 Sequence of operation

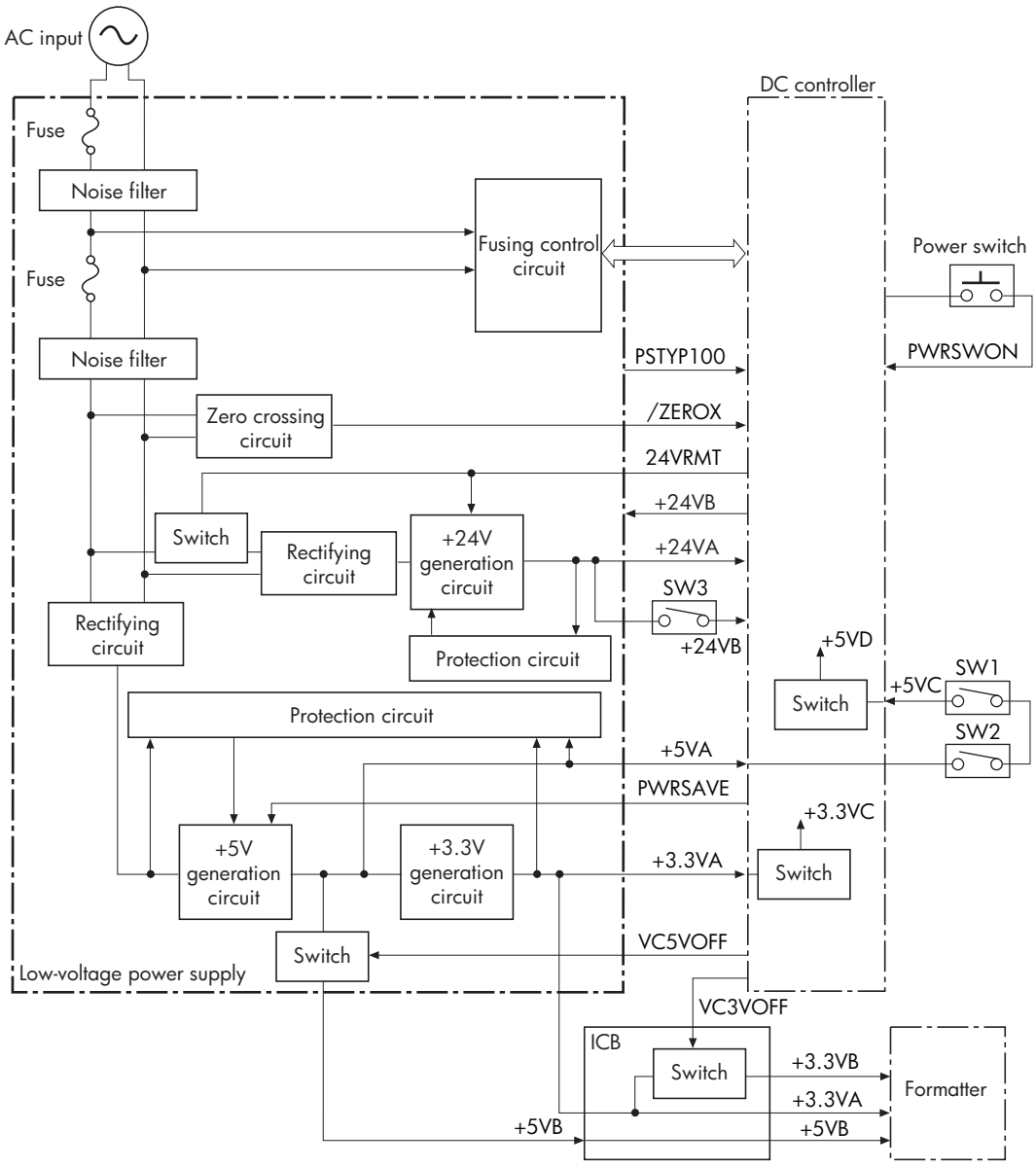
Period	Duration	Description
Waiting	From the time the power is turned on, the door is closed, or when the product exits Sleep mode until the product is ready for printing	• Heats the fuser sleeve • Pressurizes the fuser pressure roller • Detects the toner cartridges • Detects the home position for the primary transfer roller and the developing unit • Cleans the secondary transfer roller
Standby	From the end of the waiting sequence or the last rotation until the formatter receives a print command or until the product is turned off	• Is in the **READY** state • Enters Sleep mode after the specified length of time • Calibrates if it is time for an automatic calibration
Initial rotation	From the time the formatter receives a print command until the paper enters the paper path	• Activates the high-voltage power supply • Prepares each laser/scanner unit • Warms the fuser to the correct temperature
Printing	From the time the first sheet of paper enters the paper path until the last sheet has passed through the fuser	• Forms the image on the photosensitive drums • Transfers the toner to the paper • Fuses the toner image onto the paper • Performs calibration after a specified number of pages
Last rotation	From the time the last sheet of paper exits the fuser until the motors stop rotating	• Moves the last printed sheet into the output bin • Stops each laser/scanner unit • Discharges the bias from the high-voltage power supply

Engine-control system

The engine-control system receives commands from the formatter and interacts with the other main systems to coordinate all product functions. The engine-control system consists of the following components:

- DC controller
- High-voltage power supply
- Low-voltage power supply

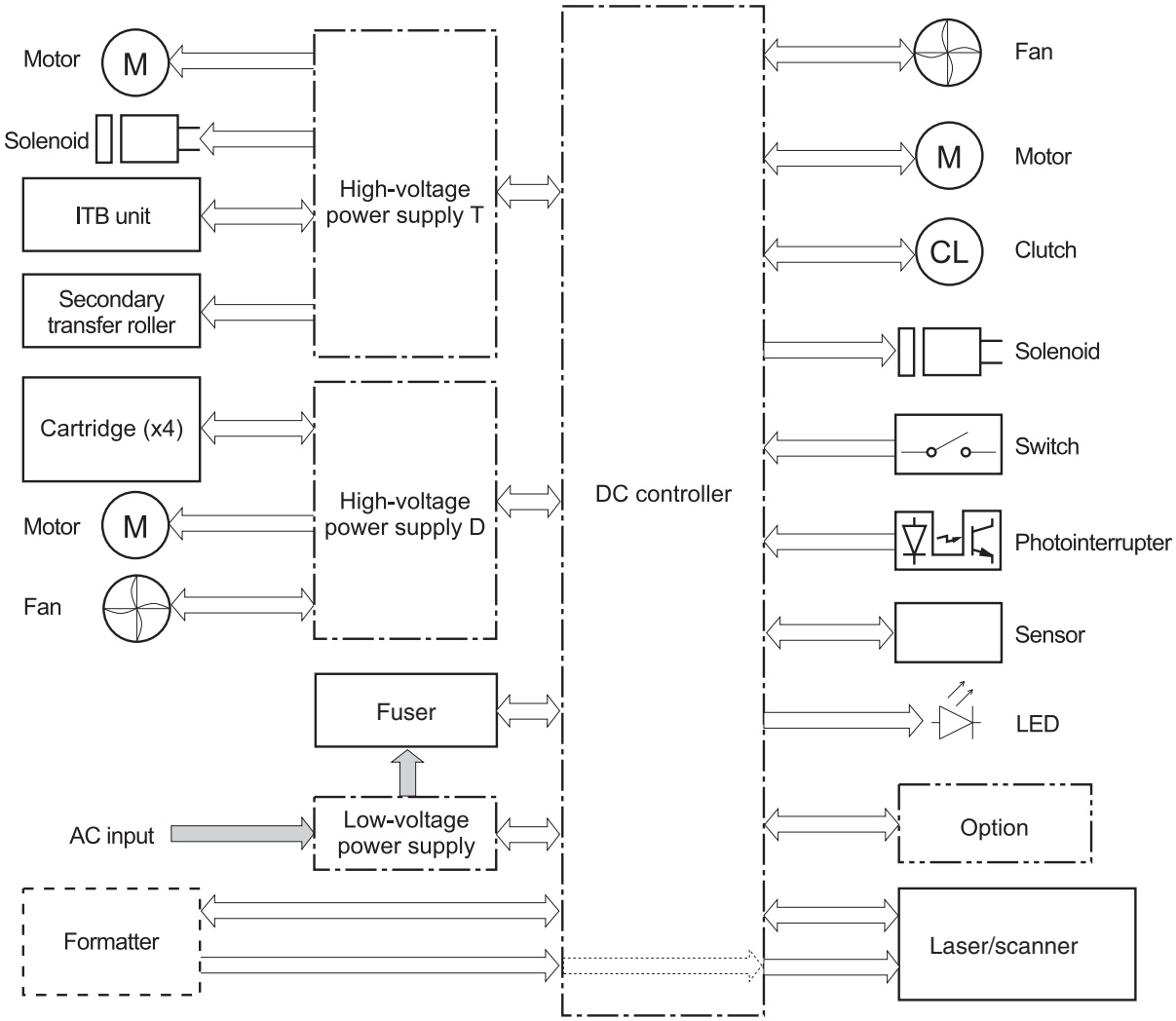
Figure 1-2 Engine-control system



DC controller

The DC controller controls the operational sequence of the printer.

Figure 1-3 DC controller block diagram



Solenoids

Table 1-2 Solenoids

Component abbreviation	Component name
SL1	Primary transfer roller disengagement solenoid
SL2	Duplex reverse solenoid
SL3	Multipurpose-tray pickup solenoid
SL4	Tray pickup solenoid

Clutches

Component abbreviation	Component name
CL1	Duplex re-pickup clutch

Switches

Table 1-3 Switches

Component abbreviation	Component name
SW1, SW2	5V interlock switch
SW3	24V interlock switch
SW4	Power switch
	Test print switch

Sensors

Table 1-4 Sensors

Component abbreviation	Component name
SR1	Drum home position sensor 1
SR2	Drum home position sensor 2
SR3	Drum home position sensor 3
SR5	Fuser (fixing) delivery sensor
SR6	Delivery tray media full sensor
SR7	Fuser (fixing) pressure release sensor
SR8	TOP (top of page) sensor
SR9	Tray-media-stack surface sensor
SR11	Developing home position sensor
SR13	Tray presence sensor
SR14	Loop sensor 1
SR15	Loop sensor 2
SR17	Primary-transfer-roller disengagement sensor
SR20	Tray-media presence sensor
SR21	MP-tray-media-presence sensor
SR22	Duplex re-pickup sensor
	OHT sensor (in)
	OHT sensor (out)
	RD sensor (front)
	RD sensor (rear)
	Environmental sensor (temperature and humidity)
	Yellow toner-level sensor
	Magenta toner-level sensor
	Cyan toner-level sensor
	Black toner-level sensor
	Toner collection-box-full sensor
	Fuser (fixing) home-position sensor

Motors and fans

The product has 11 motors and three fans. The motors drive the components in the paper-feed and image-formation systems. The fan motors cool the inside of the product.

Table 1-5 Motors

Abbreviation	Name	Purpose	Type	Failure detection
M2	Fuser (fixing) motor	Drives the fuser (fixing) roller, the delivery roller, and the fuser (fixing) pressure roller	DC motor	Yes
M3	Drum motor 1	Drives the photosensitive drum (yellow/magenta), developing unit (yellow), and primary charging roller (yellow/magenta)	DC motor	Yes
M4	Drum motor 2	Drives the photosensitive drum (cyan), developing unit (magenta/cyan), and primary charging roller (cyan)	DC motor	Yes
M5	Drum motor 3	Drives the photosensitive drum (black), developing unit (black), and ITB drive roller, and secondary transfer roller	DC motor	Yes
M7	Lifter motor	Drives the lifter for the tray	DC motor	Yes
M8	Cyan/black scanner motor	Drives the scanner mirror in the cyan/ black laser scanner	DC motor	Yes
M9	Yellow/magenta scanner motor	Drives the scanner mirror in the yellow/ magenta laser scanner	DC motor	Yes
M10	Developing disengagement motor	Drives the developing unit disengagement	Stepping motor	No
M11	Duplex reverse motor	Drives the duplex reverse roller and duplex feed roller	Stepping motor	No

Table 1-5 Motors (continued)

Abbreviation	Name	Purpose	Type	Failure detection
M12	Residual toner-feed motor	Drives the residual toner feed screw	DC motor	Yes
M13	Pickup motor	Drives the tray pickup roller, MP tray pickup roller, feed roller, registration roller, and re-pickup roller	Stepping motor	No

Table 1-6 Fans

Abbreviation	Name	Cooling area	Type	Speed
FM1	Power supply fan	Around the power supply unit	Intake	Full/half
FM2	Cartridge fan	Around the cartridges	Intake	Full/half
FM3	Delivery fan	Around the delivery unit	Intake	Full/half

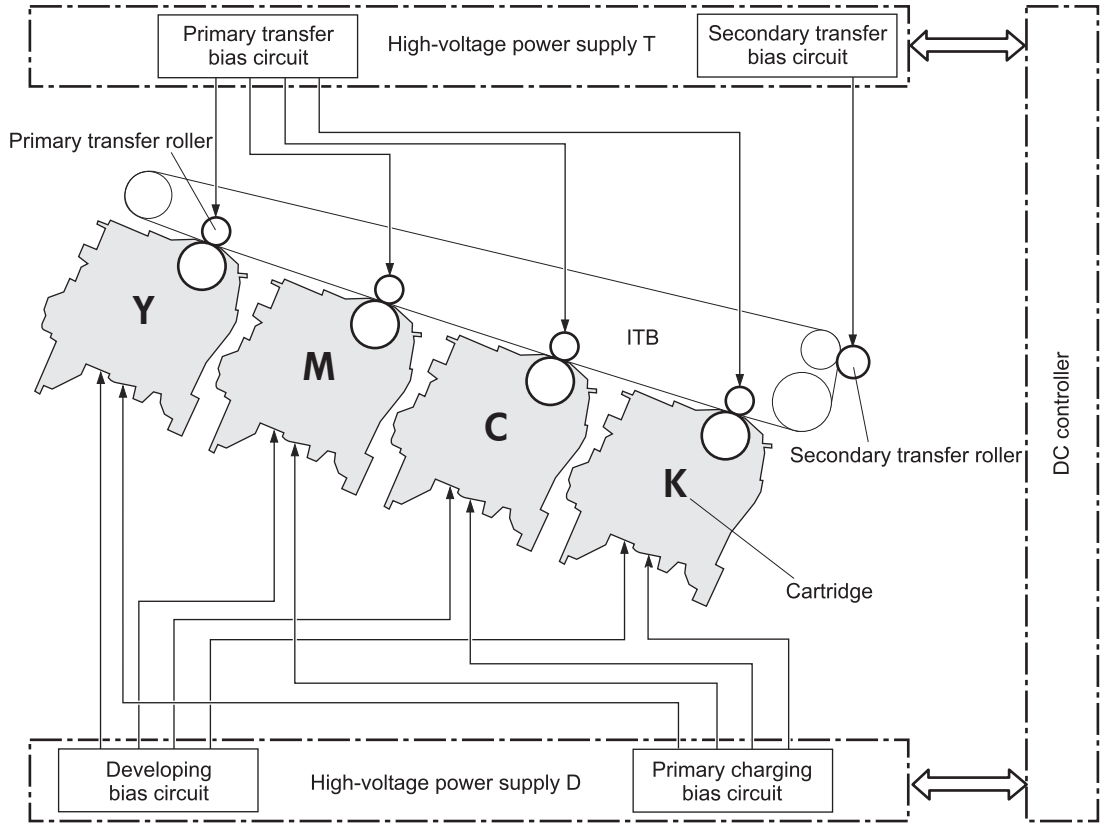
High-voltage power supply

The high-voltage power supply delivers the high-voltage biases to the following components used to transfer toner during the image-formation process:

- Primary-charging roller (in the cartridge)
- Developing roller (in the cartridge)

- Primary-transfer roller
- Secondary-transfer roller

Figure 1-4 High-voltage power supply circuits



The high-voltage power supply contains several separate circuits.

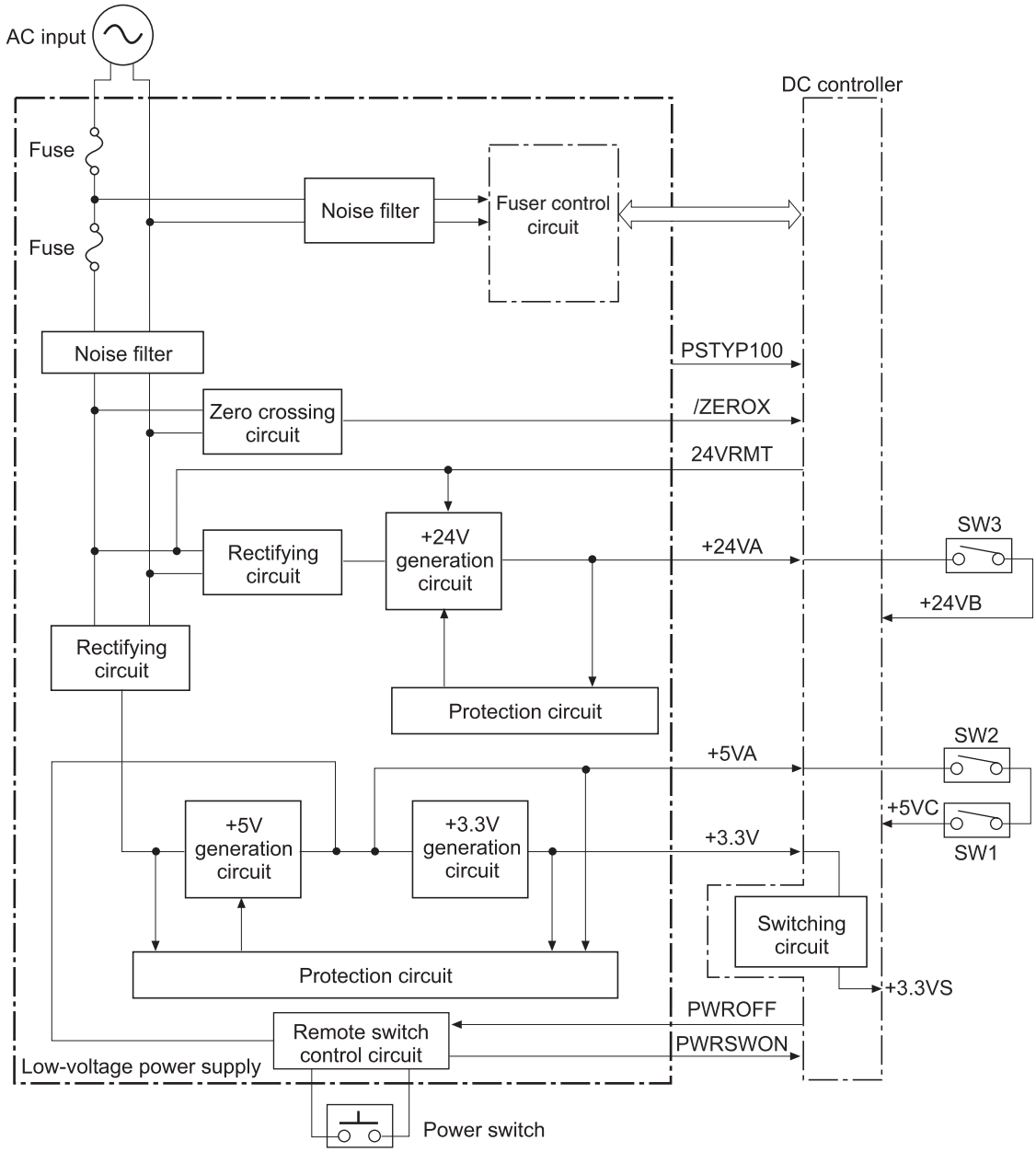
Table 1-7 High-voltage power supply circuits

Circuit	Description
Primary-charging-bias generation	DC negative bias is applied to the surface of the photosensitive drum to prepare it for image formation.
Developing-bias generation	DC negative bias adheres the toner to each photosensitive drum during the image-formation process.
Primary-transfer-bias generation	DC positive bias transfers the latent toner image from each photosensitive drum onto the ITB.
Secondary-transfer-bias generation	Two DC biases, one positive and one negative, transfer the toner from the ITB onto the paper.

Low-voltage power supply

The low-voltage power-supply circuit converts the AC power from the wall receptacle into the DC voltage that the product components use. The product has two low-voltage power-supplies for 110 Volt or 220 Volt input.

Figure 1-5 Low-voltage power-supply circuit



The low-voltage power supply converts the AC power into three DC voltages, which it then subdivides, as described in the following table.

Table 1-8 Converted DC voltages

Main DC voltage	Sub-voltage	Behavior
+24V	+24VA	Stopped during Sleep (powersave) mode
	+24VB	Interrupted when the front door or right door open Stopped during Sleep (powersave) mode
+5V	+5VA	Constantly supplied 3.3V is supplied during Sleep mode 2 or Sleep mode 3
	+5VB	3.3V is supplied during Sleep mode 2 Stopped during Sleep mode 3 Power for the formatter
	+5VC	3.3V is supplied during Sleep mode 2 or Sleep mode 3 Interrupted when the front door or right door open (SW1/SW2)
	+5VD	Stopped during Sleep mode Interrupted when the front door or right door open (SW1/SW2)
+3.3 V	3.3VA	Constantly supplied
	3.3VB	Stopped only when the power is off Power for the formatter
	3.3VC	Stopped during Sleep mode 2 or Sleep mode 3

- 24V Power Supply (24VRMT) signal: Controls supply or interruption of +24VA
- 5V Power supply (VC5VOFF) signal: Controls supply or interruption of +5VB
- 3V Power supply (VC3VOFF) signal: Controls supply or interruption of +3.3VB
- Voltage conversion (PWRSAVE) signal: Converts output voltage of +5VA, +5VB and +5VC into +3.3V

Overcurrent/overvoltage protection

The low-voltage power supply stops supplying the DC voltage to the product components whenever it detects excessive current or abnormal voltage from the power source.

The low voltage power supply has a protective circuit against overcurrent and overvoltage 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 disconnect the power cable. Do not connect and turn on the product until the root cause is found and corrected. In additon, the low voltage power supply has two fuses (FU100/FU101) to protect against overcurrent. If overcurrent flows into the AC line, the fuse blows to stop AC power.

Safety

For personal safety, the low-voltage power supply interrupts power to the fuser, the high-voltage power supply, and the motors when the front door or right door open.

The product has AC power even when the power switch is turned off because the product uses a soft power switch. Be sure to disconnect the power cable before disassembling the product.

Voltage detection

The printer detects the power supply voltage that is connected to the printer. The DC controller monitors the input voltage from the power source so it can control the voltage to the fuser.

Sleep (powersave) mode

Sleep mode reduces the power consumption of the product. There are three sleep modes depending on the power consumption. The DC controller stops or converts each power supply according to the sleep mode:

- Sleep mode 1: stops +24VA and +24VB
- Sleep mode 2: stops +24VA, +24VB and +5VD. Converts +5VA and +5VC into +3.3V
- Sleep mode 3: stops +24VA, +24VB, +5VB and +5VD. Converts +5VA and +5VC into +3.3V.

	Power consumption	**Status of power button light**	**How to enable mode**	**How to disable mode (put in Ready state)**	**Relative time to Ready state**
Off	Less than 0.5W	Off	Manually: press the power button Automatically: sleep timer expires	Press the power button	Longest
Auto off	Less than 1W	Blinks at 3 second intervals	Sleep timer expires	Printing or network maintenance tasks	Longer than Sleep mode
Sleep	Approximately 6W	Blinks at 3 second intervals	Sleep timer expires	Printing or network maintenance tasks	Shortest

Power supply voltage detection

The product detects the power supply voltage that is connected to the product. The DC controller monitors the POWER SUPPLY VOLTAGE (PSTYP100) signal and detects power supply voltage, whether 100V or 200V, to control the fusing operation properly.

Low-voltage power supply failure

The DC controller determines a low-voltage power supply failure and notifies the formatter when the low-voltage power supply does not supply +24V.

Power Off condition

The DC controller brings the product to a power off condition by 24V POWER SUPPLY (24VRMT) signal, 5V POWER SUPPLY (VC5VOFF) signal, 3V POWER SUPPLY (VC3VOFF) signal, and VOLTAGE CONVERSION (PWRSAVE) signal.

The +5VA and +5VC signals which are converted into +3.3V and +3.3VA, are supplied under the power off condition.

Auto on/Auto off mode

This feature conserves power after the product has been idle for an adjustable period of time. When the product is in this mode, the control-panel backlight is turned off, but the product retains all settings, downloaded fonts, and macros. The setting is disabled by default. The product enters this mode after a 60-minute idle time or by touching the sleep button.

	Power consumption	**Status of power button light**	**How to enable mode**	**How to disable mode (put in Ready state)**	**Relative time to Ready state**	**Control-panel term**
Off	Less than 0.5W	Off	Manually: press the power button Automatically: sleep timer expires	Press the power button	Longest	

	Power consumption	Status of power button light	How to enable mode	How to disable mode (put in Ready state)	Relative time to Ready state	Control-panel term
Auto off	Less than 1W	Blinks at 3 second intervals	Sleep timer expires	Printing or network maintenance tasks Insert or remove paper from the ADF Open or close the scanner Open the cartridge door Touch the control panel touchscreen Press the power button	Longer than Sleep mode	Network port
Sleep (A1W)	Approximately 6W	Blinks at 3 second intervals	Sleep timer expires	Printing or network maintenance tasks Insert or remove paper from the ADF Open or close the scanner Open the cartridge door Touch the control panel touchscreen Press the power button	Shortest	All events

NOTE: Product error messages override the Sleep message. The product enters sleep mode at the appropriate time, but the error message continues to appear.

Fuser (fixing) control

The fuser-control circuit controls the fuser temperature. The product uses an on-demand fusing method.

Figure 1-6 Fuser (fixing) components

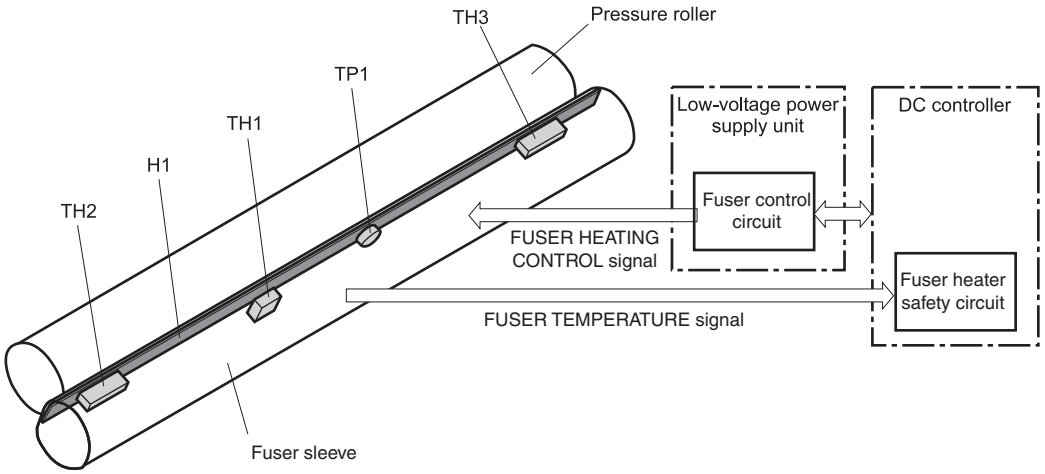


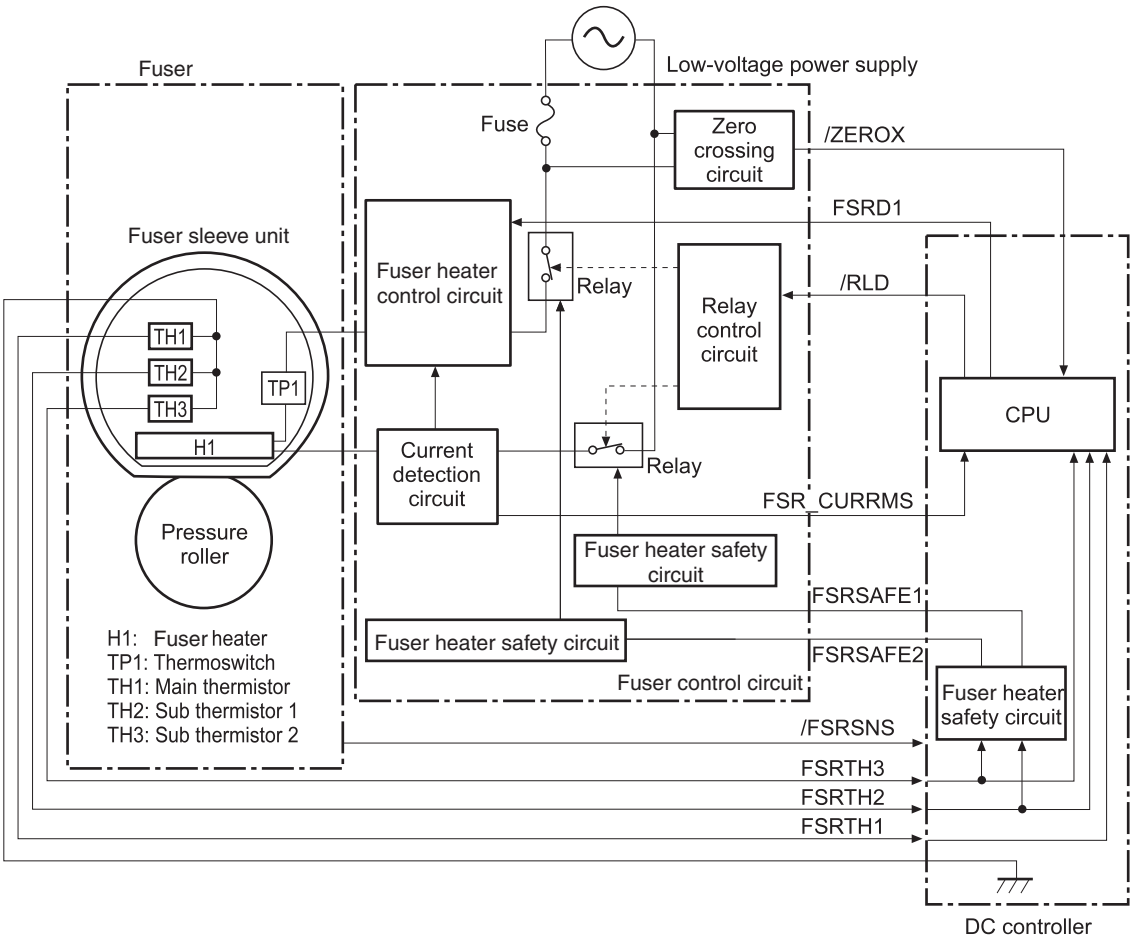
Table 1-9 Fuser (fixing) components

Type of component	Abbreviation	Name	Function
Heaters	H1	Fuser heater	Heats the fuser sleeve.
Thermistors (Contact type)	TH1	Main thermistor	The thermistor detects the center temperature of the fuser sleeve.
	TH2 TH3	Sub thermistor	Each thermistor detects the side temperature of the fuser heater.
Thermoswitches (Non-contact type)	TP1	For the fuser heater	Controls the fuser-roller main heater

Fuser (fixing) temperature-control circuit

The temperatures of the two rollers in the fuser fluctuate according to the stage of the printing process. The DC controller sends commands to the fuser-control circuit to adjust temperatures.

Figure 1-7 Fuser temperature-control circuit



Fuser (fixing) over-temperature protection

To protect the fuser from excessive temperatures, the product has four layers of protective functions. If one function fails, the subsequent functions should detect the problem.

- **DC controller**: When a thermistor or thermopile detects a temperature above a certain threshold, the DC controller interrupts power to the specific heater. Following are the thresholds for each component:
  - TH1: 230° C (446° F) or higher
  - TH2: 285° C (545° F) or higher
  - TH3: 285° C (545° F) or higher
- **Fuser (fixing)-heater safety circuit**: If the DC controller fails to interrupt the power to the heaters at the prescribed temperatures, the fuser-heater safety circuit deactivates the triac-drive

circuit and releases the relay, which causes the heaters to stop at slightly higher temperature thresholds.

  - TH2: 290° C (554° F) or higher
  - TH3: 290° C (554° F) or higher

- **Current-detection protection circuit**: If current flowing in each triac exceeds a specific value, the current-detection protection circuit deactivates the triac-drive circuit and releases the relay, which interrupts the power supply to the heaters.
- **Thermoswitch**: If the temperature in the heaters is abnormally high, and the temperature in the thermoswitches exceeds a specified value, the contact to the thermoswitch breaks. Breaking this contact deactivates the triac-drive circuit and releases the relay, which interrupts the power supply to the heaters. Following are the thresholds for each thermoswitch:

  - TP1: 270° C (518° F) or higher

NOTE: When the thermoswitches reach this temperature, the temperature on the fuser rollers is about 320° C (608° F).

Fuser (fixing)-failure detection

When the DC controller detects any of the following conditions, it determines that the fuser has failed. The DC controller then interrupts power to the fuser heaters and notifies the formatter.

- **Abnormally high temperatures**: Temperatures are too high for any of the following components, at any time:

  - TH1: 230° C (446° F) or higher
  - TH2: 285° C (545° F) or higher
  - TH3: 285° C (545° F) or higher

- **Abnormally low temperatures**: Temperatures are too low at any of the following components after the product has initialized.

  - TH1: 120° C (248° F) or lower
  - TP2 or TP3: 100° C (212° F) or lower

  Or, the temperature drops in either of the thermopiles (TP2 and TP3) by 30° C (86° F) or more within a specified length of time.

- **Abnormal temperature rise**: The DC controller determines an abnormal temperature rise if the detected temperature of TH1 does not rise 2° C within a specified time period after the fuser (fixing) motor is turned on, or if the detected temperature of the thermistors does not rise to a specified temperature for a specified time after the fuser (fixing) motor is turned on.

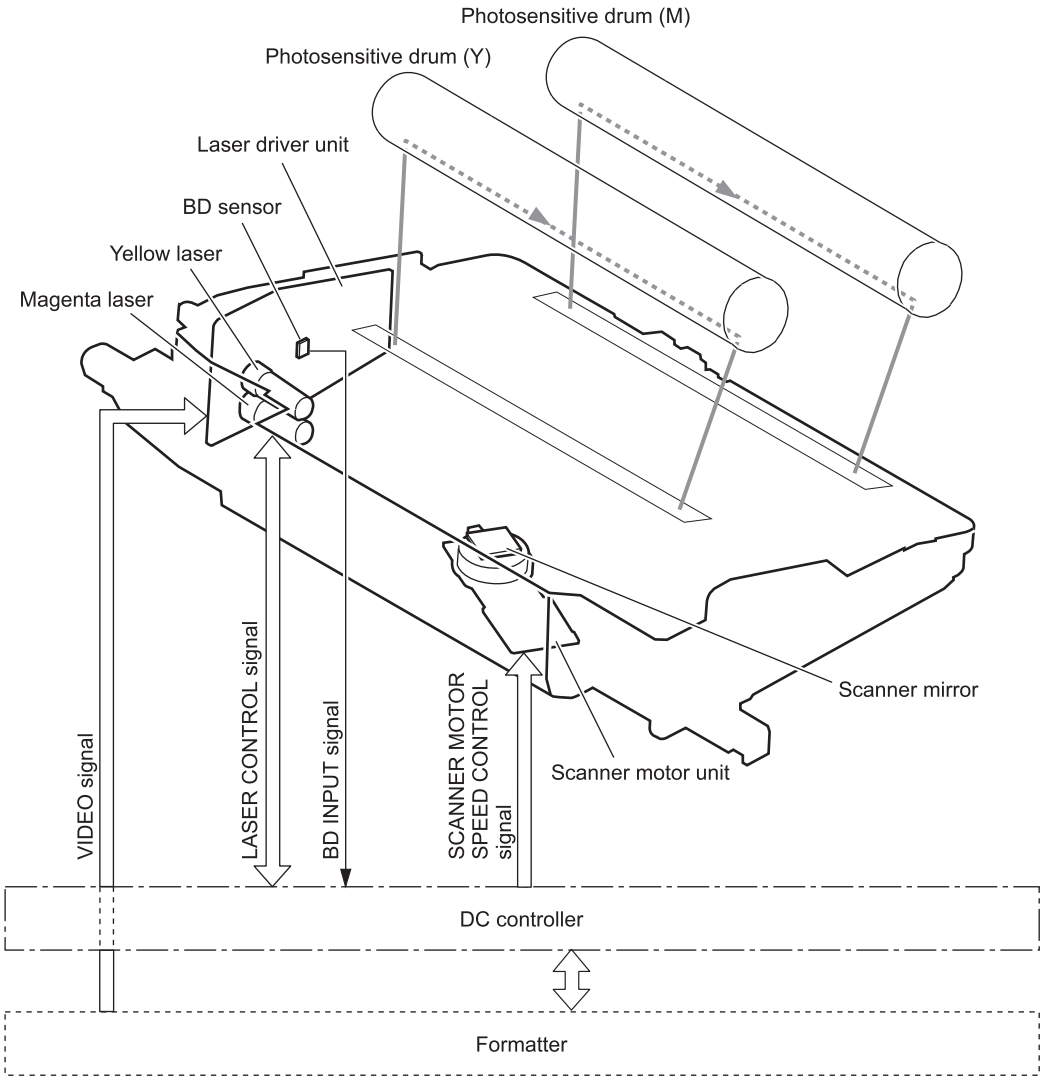
- **Thermistor open**: The DC controller determines a thermistor open if:
  - The detected temperature of TH1 is kept at 12° C (53° F) or lower for a specified time after the fuser (fixing) motor is turned on.
  - The detected temperature of TH2 is kept at 4° C (39° F) or lower for a specified time.
  - The detected temperature of TH3 is kept at 4° C (39° F) or lower for a specified time.
- **Drive-circuit failure**: The DC controller determines a drive-circuit failure:
  - If the detected power supply frequency is out of a specified range when the printer is turned on or during the standby period
  - If the current detection circuit detects an out of specified current value
- **Fuser (fixing) discrepancy**: The DC controller determines a fuser type mismatch when it detects an unexpected fuser (fixing) unit presence signal. The product has two fusers for 110 V or 220 V input power.

Laser/scanner system

The laser/scanner system forms the latent electrostatic image on the photosensitive drums according to the VIDEO signals sent from the formatter. The product has two laser/scanners: one for yellow and magenta and the other for cyan and black.

The formatter sends the DC controller instructions for the image of the page to be printed. The DC controller signals the lasers to emit light, and the laser beams pass through lenses and onto the scanner mirror, which rotates at a constant speed. The mirror reflects the beam onto the photosensitive drum in the pattern necessary for the image, exposing the surface of the drum so it can receive toner.

Figure 1-8 Laser/scanner system



The DC controller determines that a laser/scanner has failed when any of the following conditions occurs:

- **Laser failure**: The detected laser intensity does not match a specified value when the product initializes.
- **Beam-detect (BD) failure**: The BD interval is outside a specified range during printing.
- **Scanner-motor failure**: The scanner motor does not reach a specified rotation speed within a certain time after it begins rotating.

Image formation system

The image-formation system creates the printed image on the paper. The system consists of the laser/scanners, toner cartridges, imaging drums, ITB, and fuser.

Figure 1-9 Image formation system

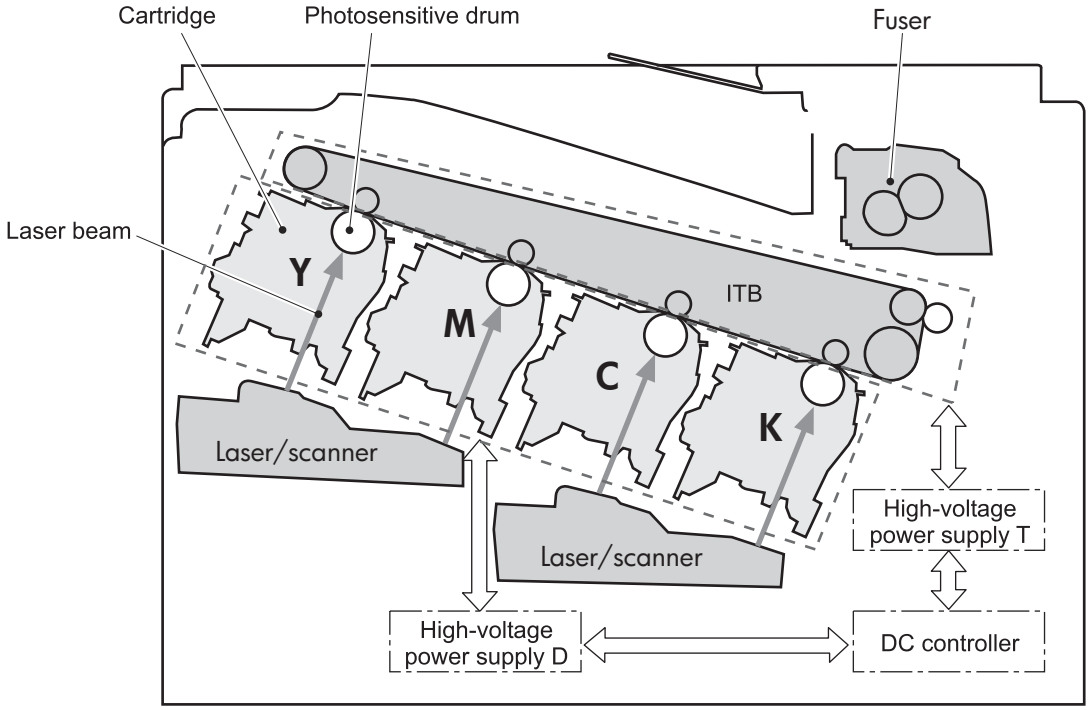


Image formation process

The image-formation system consists of ten steps divided into six functional blocks.

Figure 1-10 Image formation process

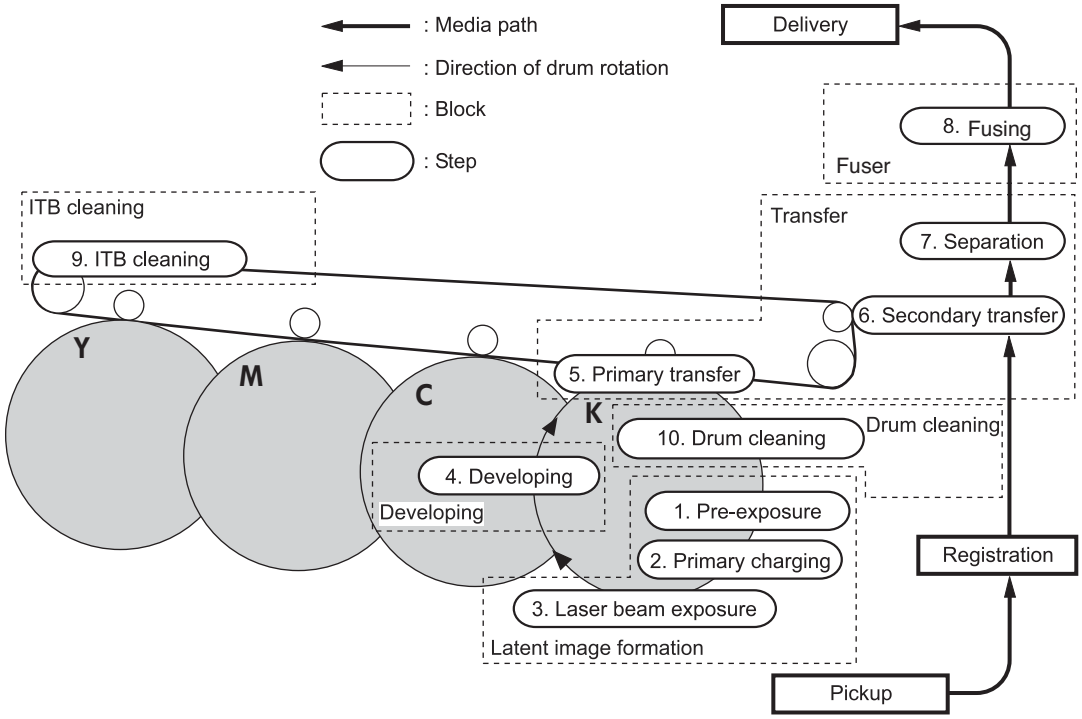


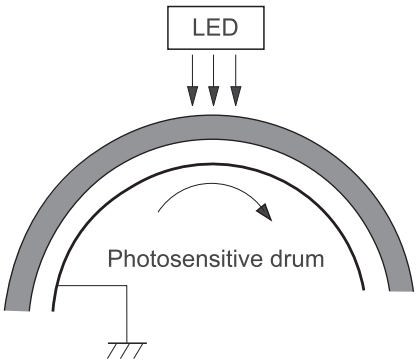
Table 1-10 Image formation process

Functional block	Steps	Description
Latent image formation	1. Pre-exposure 2. Primary charging 3. Laser-beam exposure	An invisible latent image forms on the surface of the photosensitive drums.
Development	4. Development	Toner adheres to the electrostatic latent image on the photosensitive drums.
Transfer	5. Primary transfer 6. Secondary transfer 7. Separation	The toner image transfers to the ITB and subsequently to the paper.
Fusing	8. Fusing	The toner fuses to the paper to make a permanent image.
ITB cleaning	9. ITB cleaning	Residual toner is removed from the ITB.
Drum cleaning	10. Drum cleaning	Residual toner is removed from the photosensitive drums.

Step 1: Pre-exposure

Light from the pre-exposure LED strikes the surface of the photosensitive drum to remove any residual electrical charges from the drum surface.

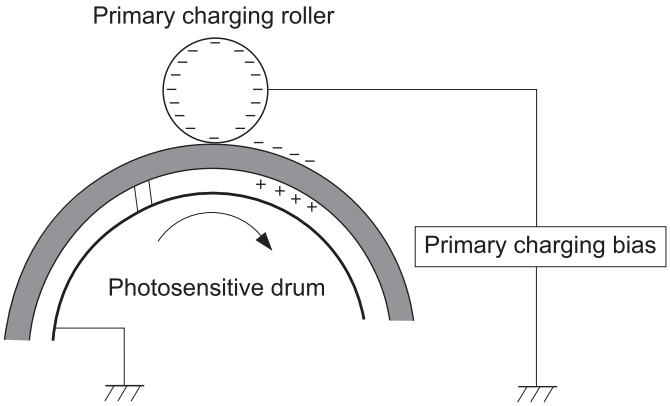
Figure 1-11 Pre-exposure



Step 2: Primary charging

The primary-charging roller contacts the photosensitive drum and charges the drum with negative potential.

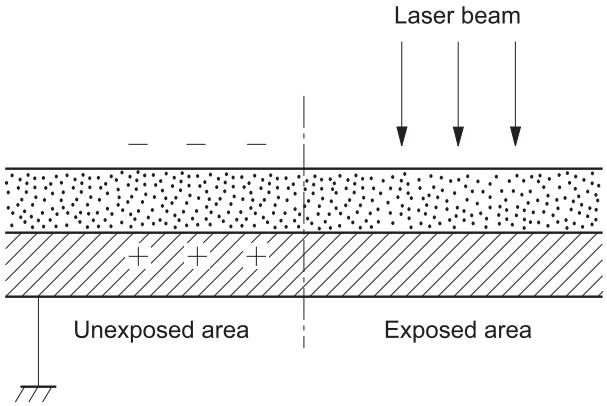
Figure 1-12 Primary charging



Step 3: Laser-beam exposure

The laser beam strikes the surface of the photosensitive drum in the areas where the image will form. The negative charge neutralizes in those areas, which are then ready to accept toner.

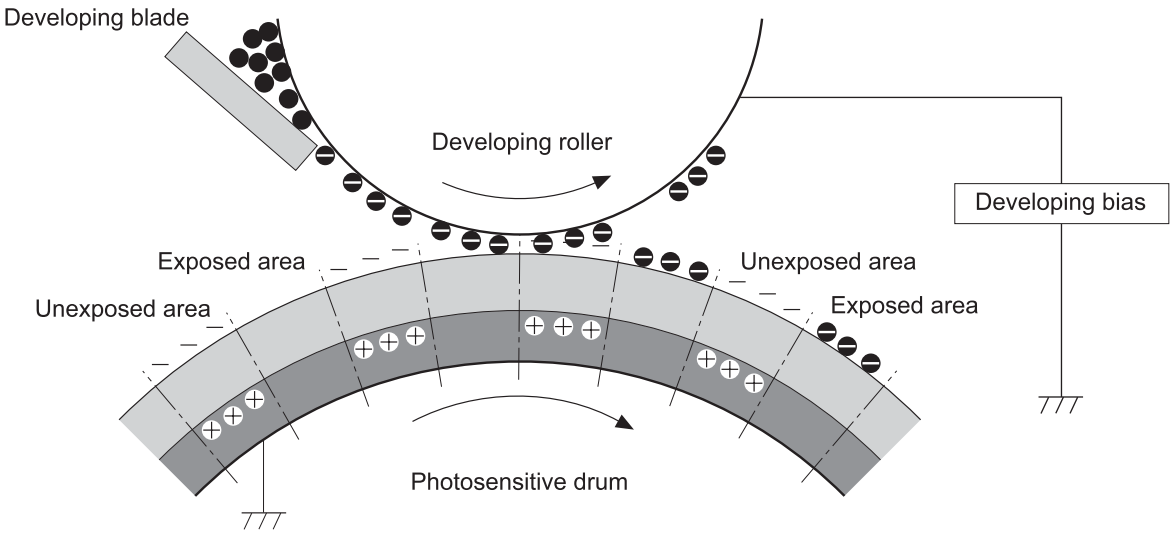
Figure 1-13 Laser-beam exposure



Step 4: Development

Toner acquires a negative charge as the developing cylinder contacts the developing blade. Because the negatively charged surface of the photosensitive drums have been neutralized where they have been struck by the laser beam, the toner adheres to those areas on the drums. The latent image becomes visible on the surface of each drum.

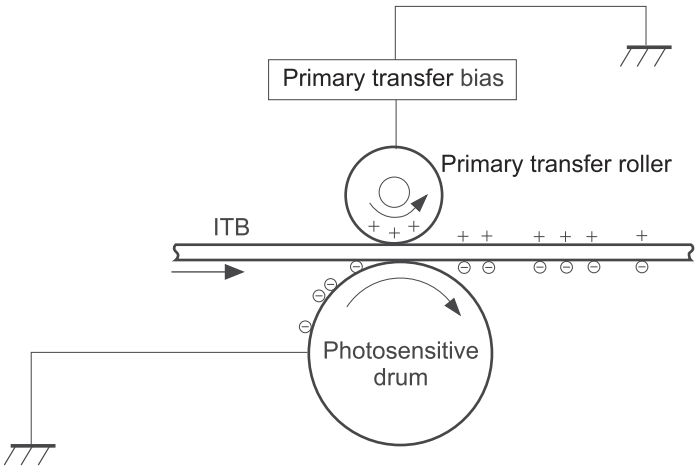
Figure 1-14 Development



Step 5: Primary transfer

The positively charged primary-transfer rollers contact the ITB, giving the ITB a positive charge. The ITB attracts the negatively charged toner from the surface of each photosensitive drum, and the complete toner image transfers onto the ITB, beginning with yellow, followed by magenta, cyan, and black.

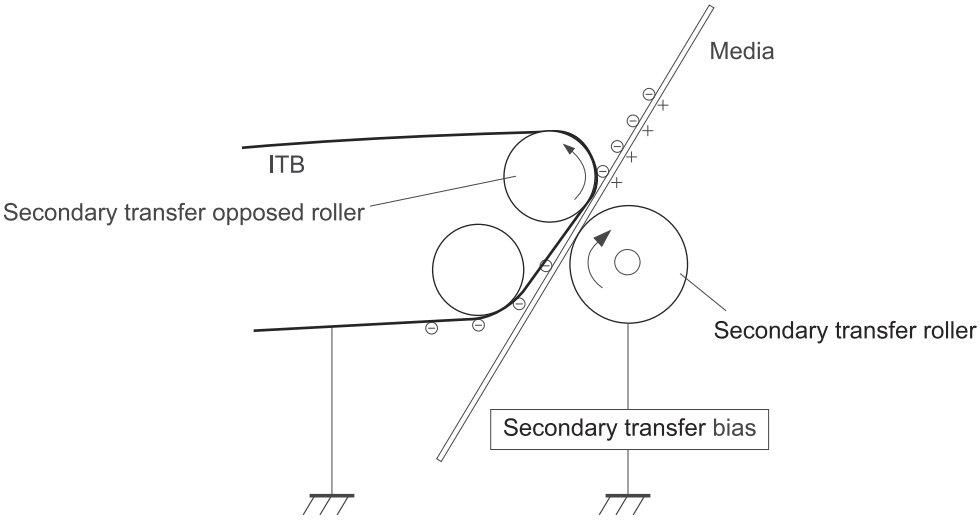
Figure 1-15 Primary transfer



Step 6: Secondary transfer

The paper acquires a positive charge from the secondary-transfer roller, and so it attracts the negatively charged toner from the surface of the ITB. The complete toner image transfers onto the paper.

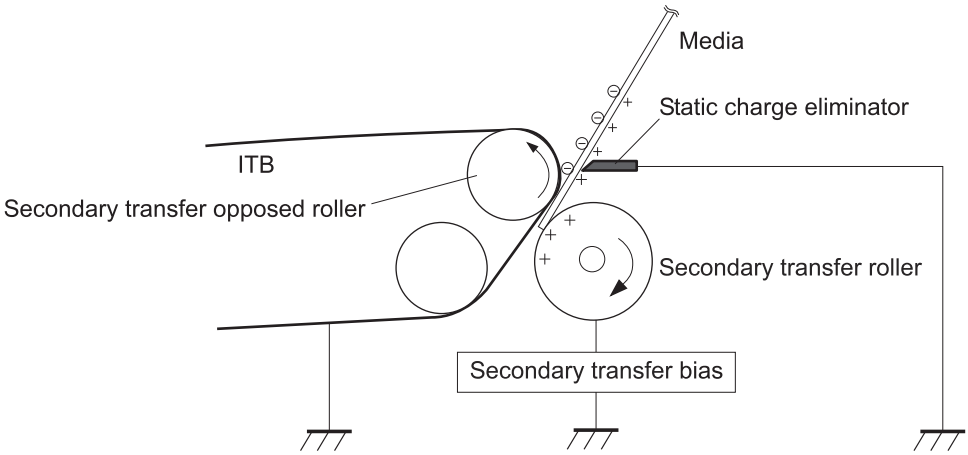
Figure 1-16 Secondary transfer



Step 7: Separation

The stiffness of the paper causes it to separate from the ITB as the ITB bends. The static-charge eliminator removes excess charge from the paper to ensure that the toner fuses correctly.

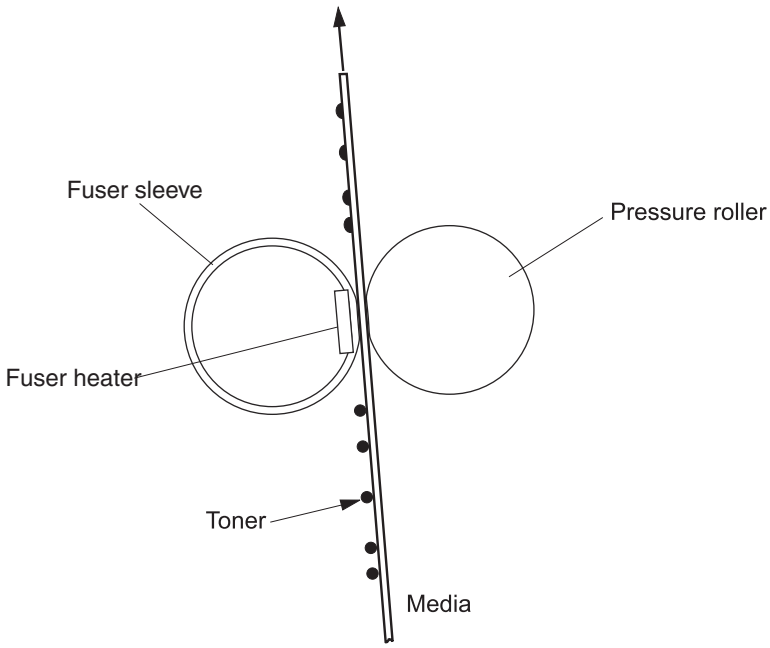
Figure 1-17 Separation



Step 8: Fusing

To create the permanent image, the paper passes through heated, pressurized rollers to melt the toner onto the page.

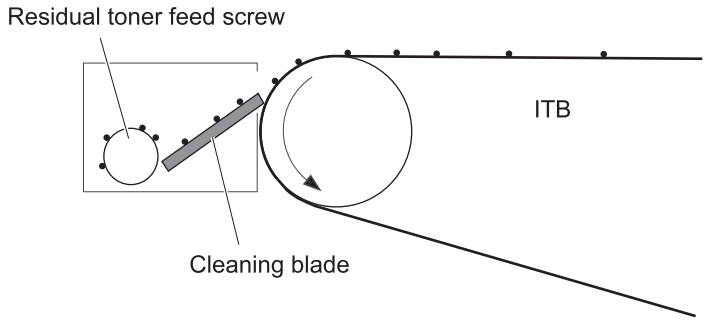
Figure 1-18 Fusing



Step 9: ITB cleaning

The cleaning blade scrapes the residual toner off the surface of the ITB. The residual-toner-feed screw deposits residual toner in the toner collection box.

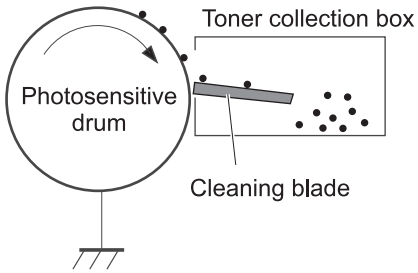
Figure 1-19 ITB cleaning



Step 10: Drum cleaning

Inside the toner cartridge, the cleaning blade removes residual toner from the surface of the drum to prepare it for the next image. The waste toner falls into the hopper in the print cartridge.

Figure 1-20 Drum cleaning



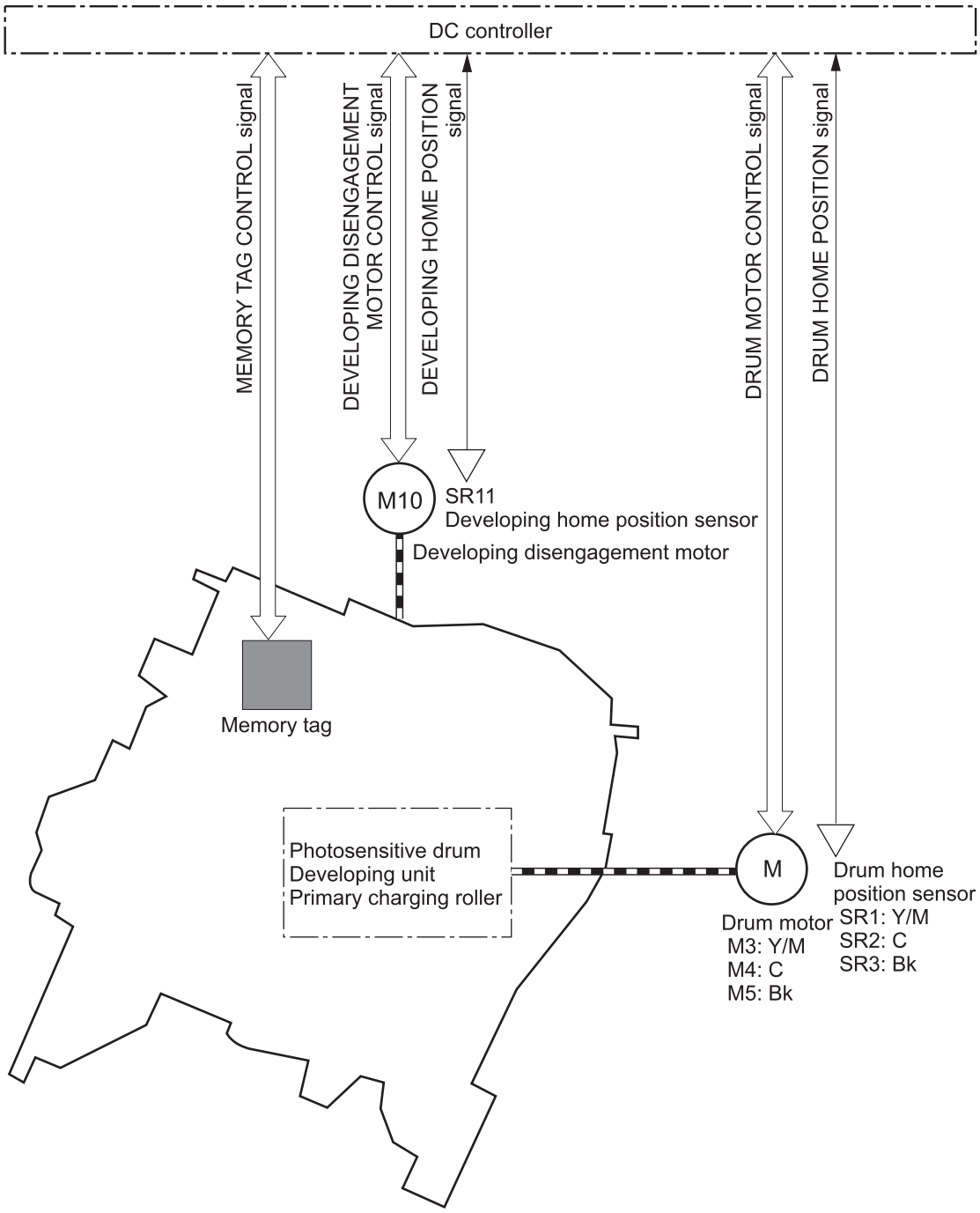
Toner cartridge

The product has four toner cartridges, one for each color. Each toner cartridge contains a reservoir of toner and the following components:

- Photosensitive drum
- Developing roller
- Primary-charging roller

The DC controller rotates the drum motor to drive the photosensitive drum, developing roller, and the primary-charging roller.

Figure 1-21 Toner-cartridge system



The DC controller rotates the drum motor to drive the photosensitive drum, developing unit, and primary charging roller.

The memory tag is a non-volatile memory chip that stores information about the usage for the toner cartridge.

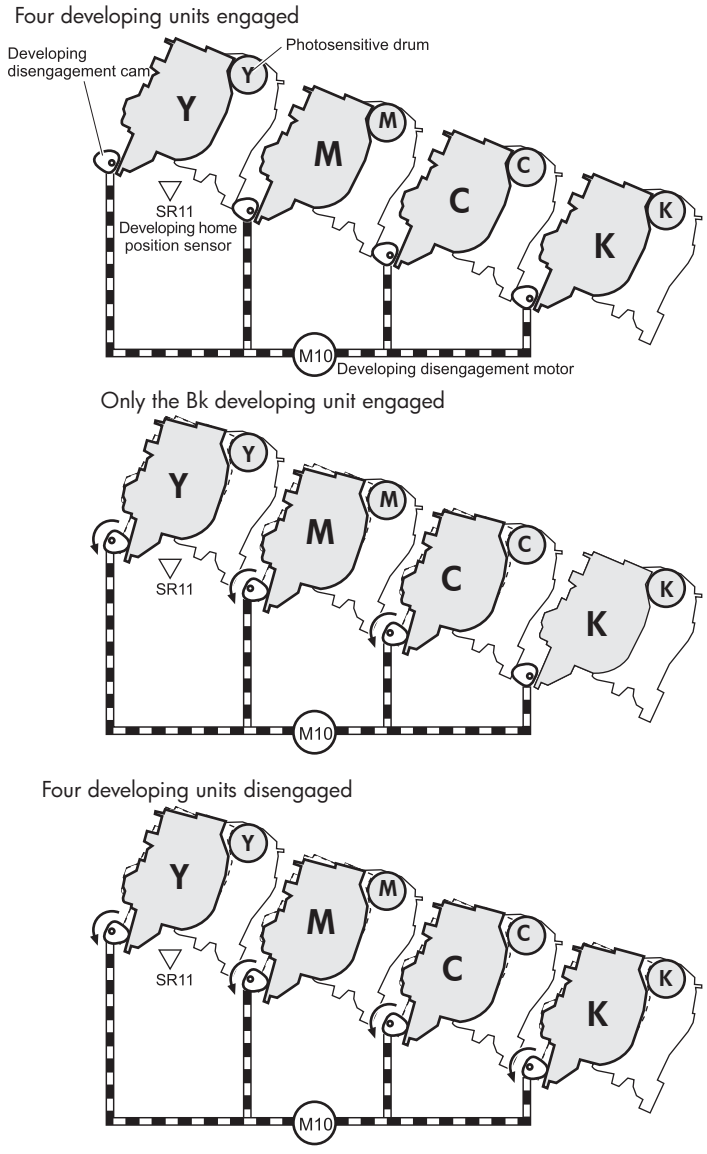
The DC controller notifies the formatter of an error if any of the following conditions exist:

- The memory tag fails to either read to or write from the DC controller.
- The RD sensors detect a missing or incorrectly installed toner cartridge.
- The accumulated print time reaches a specified time period or the cartridge runs out of toner.
- The toner level in any of the toner cartridges drops below a certain level.

Developing roller engagement and disengagement

The product can print in full-color mode or in black-only mode. To print in black-only mode, the product disengages the developing rollers in the cyan, magenta, and yellow toner cartridges. This maximizes the life of the cartridges.

Figure 1-22 Developing-roller engagement and disengagement control



The DC controller rotates the developing disengagement motor and changes the direction of the cam according to the instructions from the formatter for each print job.

When the product is turned on and at the end of each print job, all four of the developing rollers disengage from the photosensitive drums. If the next print job is full-color mode, each of the developing rollers engage. If the next print job is black-only mode, only the black developing roller engages.

If the DC controller does not detect any output from the developing home-position sensor, it determines that the developing-disengagement motor has failed.

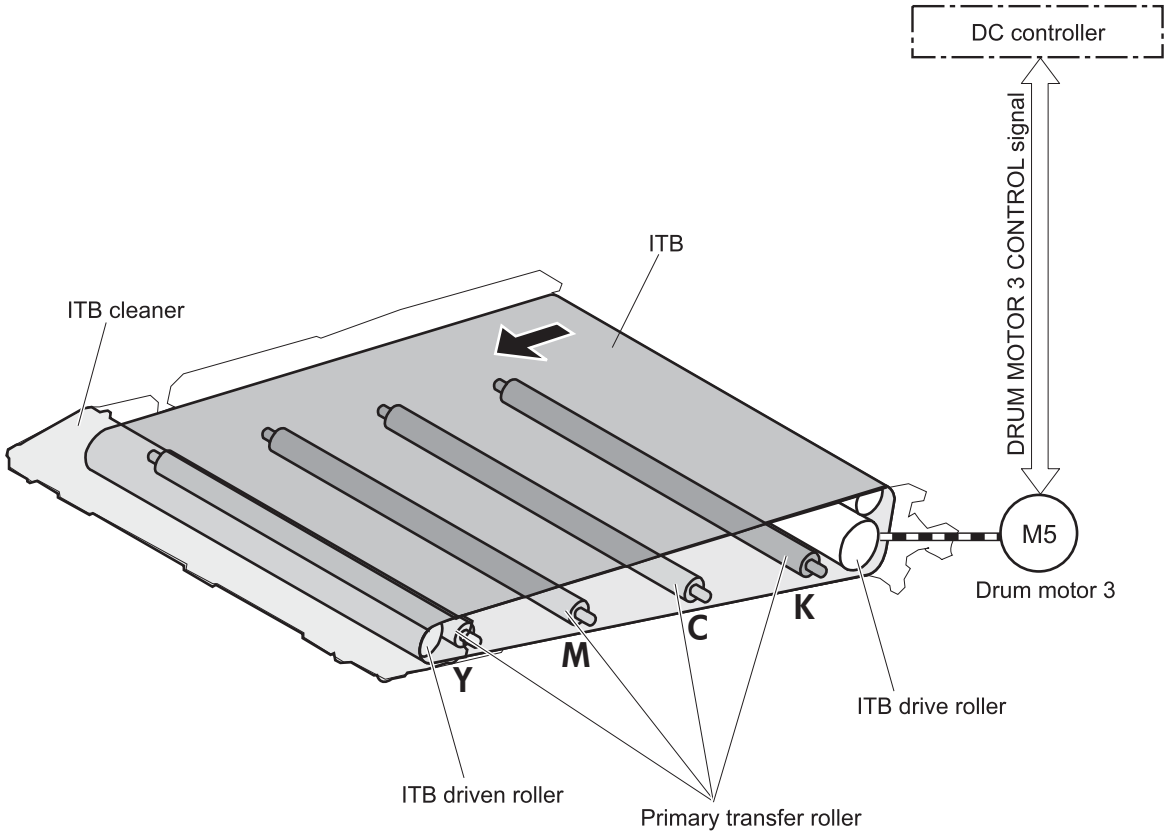
Intermediate transfer belt (ITB) unit

The ITB unit accepts the toner images from the photosensitive drums and transfers the completed image to the paper. The ITB unit has these main components:

- ITB
- ITB drive roller
- ITB-driven roller
- Primary-transfer rollers
- ITB cleaner

The ITB motor drives the ITB drive roller, which rotates the ITB. The motion of the ITB causes the primary transfer rollers to rotate. The ITB cleaner cleans the ITB surface.

Figure 1-23 ITB unit



Primary-transfer-roller engagement and disengagement

Depending on the requirements of the print job, the primary-transfer rollers engage with the ITB so it can receive toner from the photosensitive drums.

Figure 1-24 Three states of primary-transfer-roller engagement and disengagement

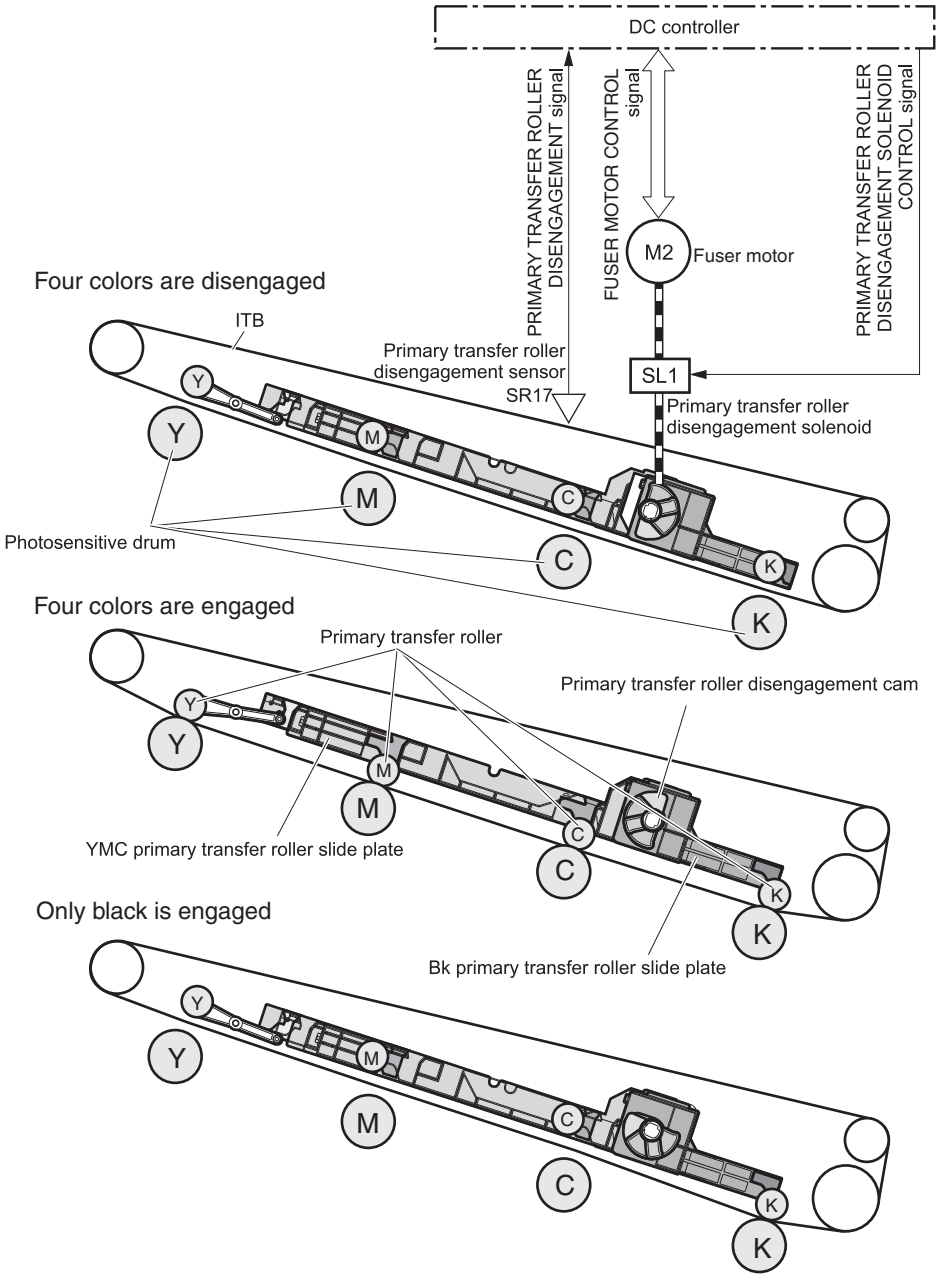


Table 1-11 Primary-transfer-roller engagement states

Roller state	Product state
All rollers disengaged	The home position for the ITB unit
All rollers engaged	The state for a full-color print job
Black roller engaged	The state for a black-only print job

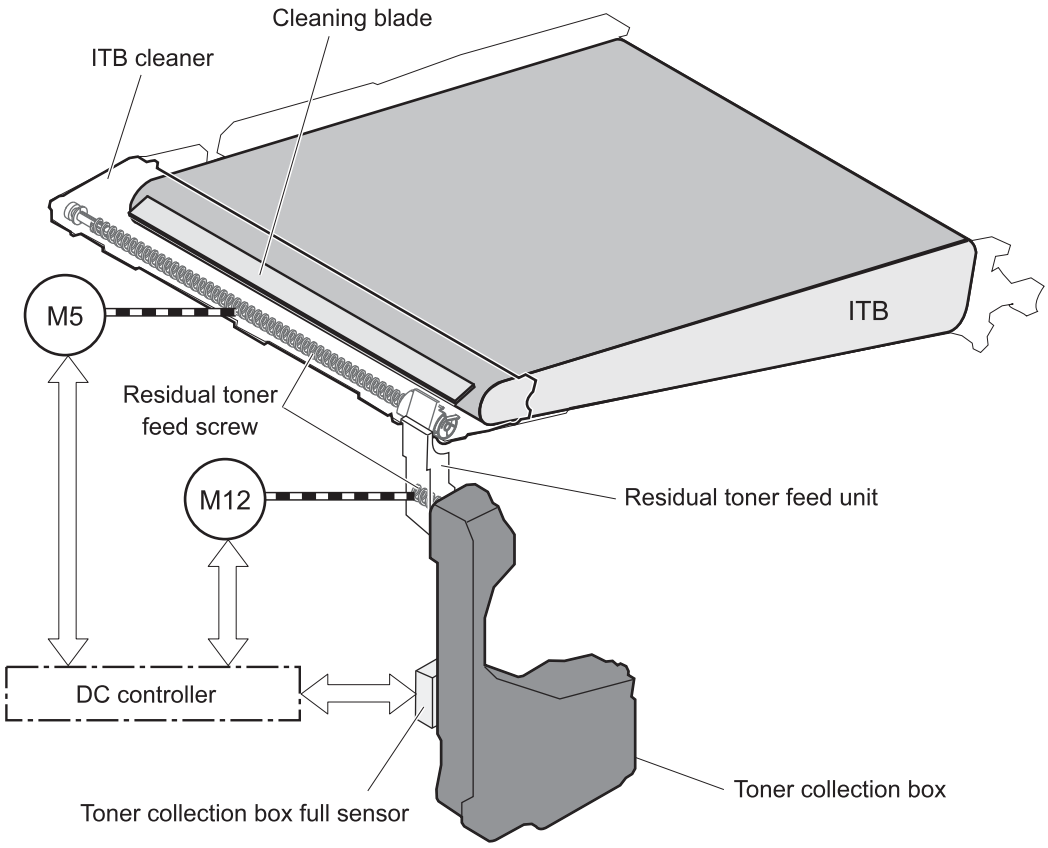
The primary-transfer-roller disengagement motor rotates or reverses to place the primary-transfer-roller disengagement cam into one of three positions. The cam causes the transfer-roller slide plate to move to the right or left. This movement causes the primary-transfer rollers to move up to engage the ITB with the photosensitive drum or down to disengage it.

If the DC controller does not receive the expected signal from the ITB home-position sensor when the primary-transfer-roller engages or disengages, but the primary-transfer-roller disengagement motor is rotating, the DC controller determines that the primary-transfer-disengagement mechanism has failed, and notifies the formatter.

ITB cleaning

The cleaning blade in the ITB cleaner scrapes the residual toner off the ITB surface. The drum motor (M5) drives the residual toner feed screw. The screw feeds the residual toner to the residual toner feed unit. The residual toner feed motor (M12) drives the residual toner feed screw. The residual toner feed screw deposits the residual toner in the toner collection box. The DC control detects whether the toner collection box is full, using the toner collection-box-full sensor, and then notifies the formatter.

Figure 1-25 ITB cleaning process

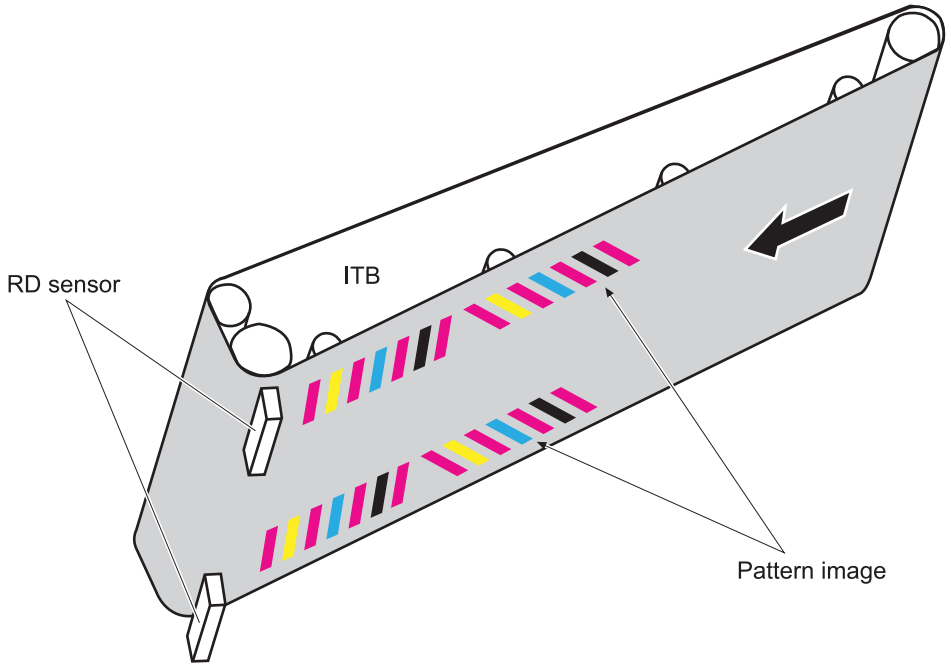


Calibration

The product calibrates itself to maintain excellent print quality. Calibration corrects color-misregistration and color-density variation.

During calibration, the product places a specific pattern of toner on the surface of the ITB. Sensors at the end of the ITB read the toner pattern to determine if adjustments are necessary.

Figure 1-26 Toner patterns for calibration



Color misregistration control

Internal variations in the laser/scanners can cause the toner images to become misaligned. The color-misregistration control corrects the following problems:

- Horizontal scanning start position
- Horizontal scanning magnification
- Vertical scanning start position

The calibration occurs when any of the following occurs:

- A cartridge is replaced.
- The temperature of the sub thermistor is 50 C (122 F) or lower when the product recovers from sleep mode after a specific number of pages print.
- A specified number of pages have printed.
- The formatter sends a command.
- The user requests a calibration by using the control-panel menus.

If data from the color-misregistration and image-density sensors is outside a specified range when the product is turned on or when it is beginning the calibration sequence, the DC controller determines that these sensors have failed, and it notifies the formatter.

Image stabilization control

Environmental changes or deterioration of the photosensitive drums and toner can cause variations in the image density. The image-stabilization control reduces these fluctuations. There are three kinds of image stabilization controls.

The formatter control is performed by the formatter.

Table 1-12 Image-stabilization controls

Image stabilization control	Description
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, controls, and related biases. This control occurs under the following circumstances: • The toner cartridge is replaced. The DC controller notifies the formatter when it encounters a communication error with the environmental sensor.
Image density control (DMAX)	This control corrects variations in image density related to deterioration of the photosensitive drum or the toner. The DC controller adjusts the high-voltage biases to correct the problem under the following conditions: • The sub thermistor detects a temperature that is too low when the product is turned on. • After the print operation is completed for a specific period of the time. • A toner cartridge is replaced. • The ITB is replaced. • A specified number of pages have printed. • The formatter sends a command. • The environment is relatively charged.
Image halftone control (DHALF)	The image halftone control is performed by the formatter. The DC controller measures the halftone pattern according to the command from the formatter. The formatter performs this control to calibrate the halftone, based on the halftone-density measurements, under the following conditions: • The formatter sends a command. • The DMAX is completed.

The DC controller determines an RD sensor failure and notifies the formatter if it detects an out-of-specified-data value from the RD sensor when the product is turned on or when the color misregistration control starts.

Pickup, feed, and delivery system

The pickup, feed, and delivery system uses a series of rollers to move the paper through the product.

Figure 1-27 Switches and sensors for the pickup, feed, and delivery system

: Duplex model only

: Duplex media path

: Simplex media path

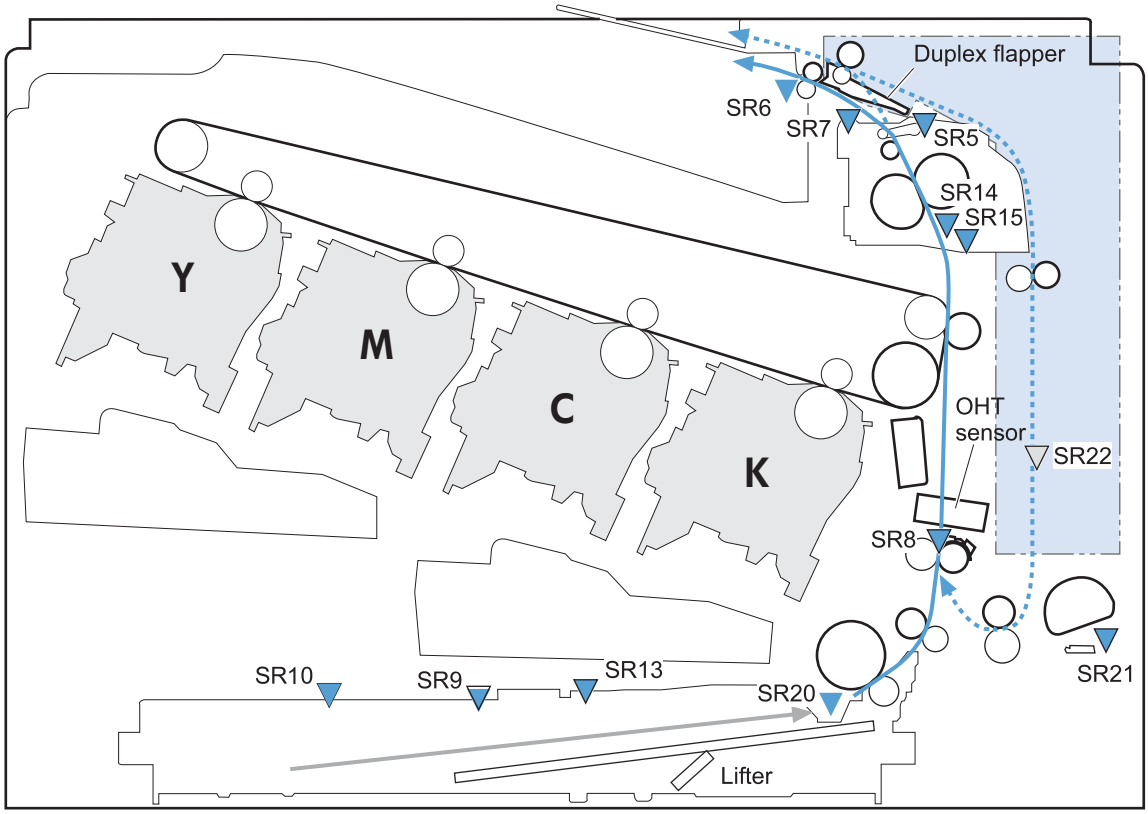


Table 1-13 Switches and sensors for the pickup, feed, and delivery system

Abbreviation	Component
SR5	Fuser (fixing) delivery sensor
SR6	Delivery tray media full sensor
SR7	Fuser (fixing) pressure release sensor
SR8	TOP (top of page) sensor
SR9	Tray-media stack-surface sensor
SR13	Tray presence sensor
SR14	Loop sensor 1
SR15	Loop sensor 2
SR20	Tray media-presence sensor

Table 1-13 Switches and sensors for the pickup, feed, and delivery system (continued)

Abbreviation	Component
SR21	MP tray media-presence sensor
SR22	Duplex re-pickup sensor (duplex models only)

Figure 1-28 Motors and solenoids for the pickup, feed, and delivery system

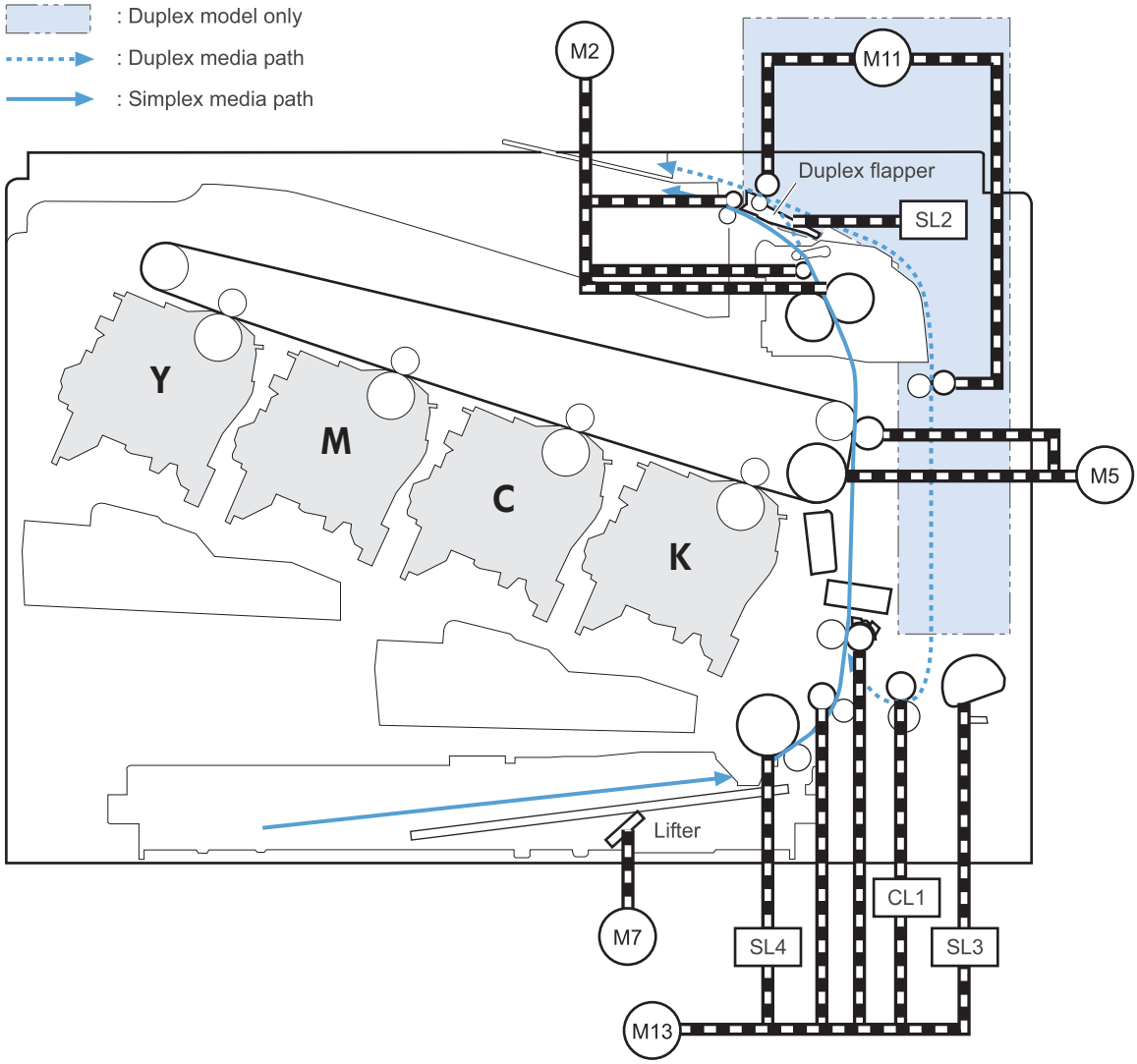


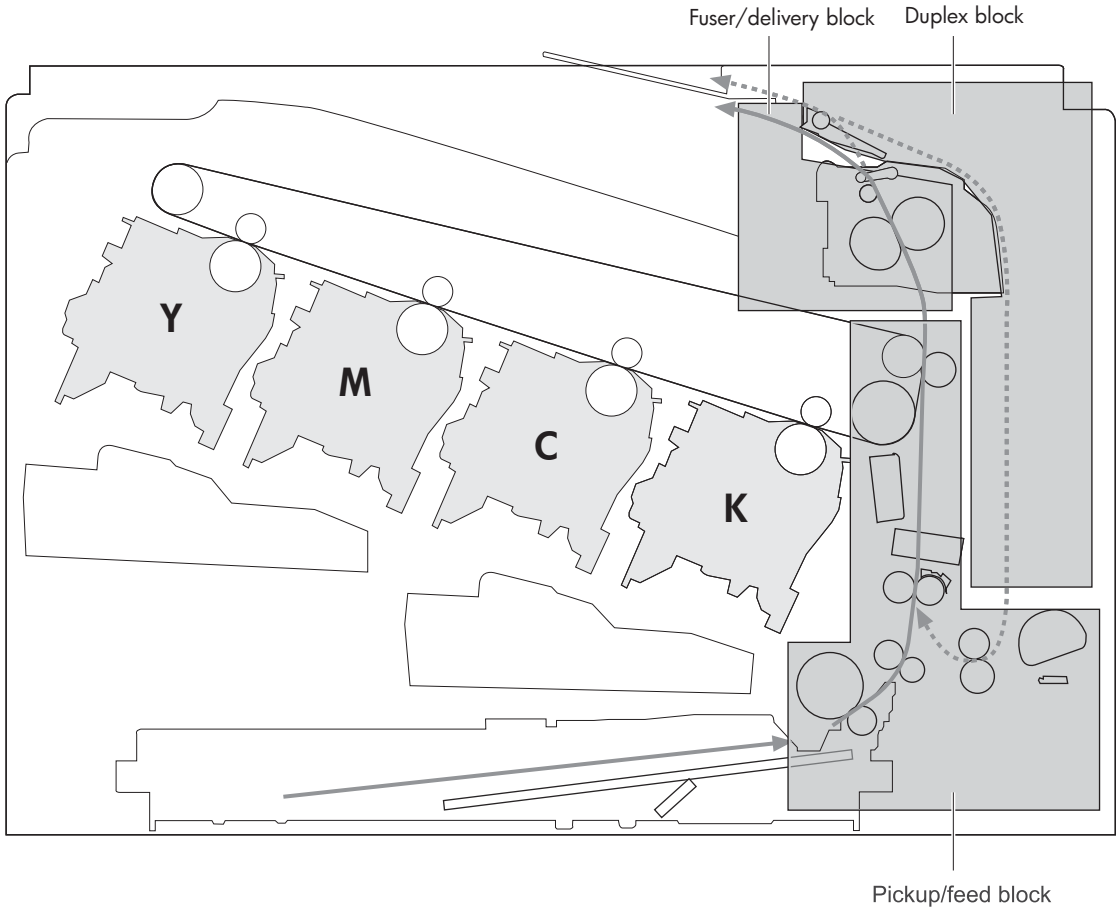
Table 1-14 Motors and solenoids for the pickup, feed, and delivery system

Abbreviation	Component
M2	Fuser (fixing) motor
M5	Drum motor 3
M7	Lifter motor
M11	Duplex reverse motor (duplex models only)

Table 1-14 Motors and solenoids for the pickup, feed, and delivery system (continued)

Abbreviation	Component
M13	Pickup motor
CL1	Duplex re-pickup clutch (duplex models only)
SL2	Duplex reverse solenoid (duplex models only)
SL3	Multipurpose tray pickup solenoid
SL4	Tray pickup solenoid

Figure 1-29 Three main units of the pickup, feed, and delivery system



Pickup-and-feed unit

The pickup-and-feed unit picks an individual sheet of paper from the multipurpose tray or the cassettes, carries it through the secondary-transfer unit, and feeds it into the fuser.

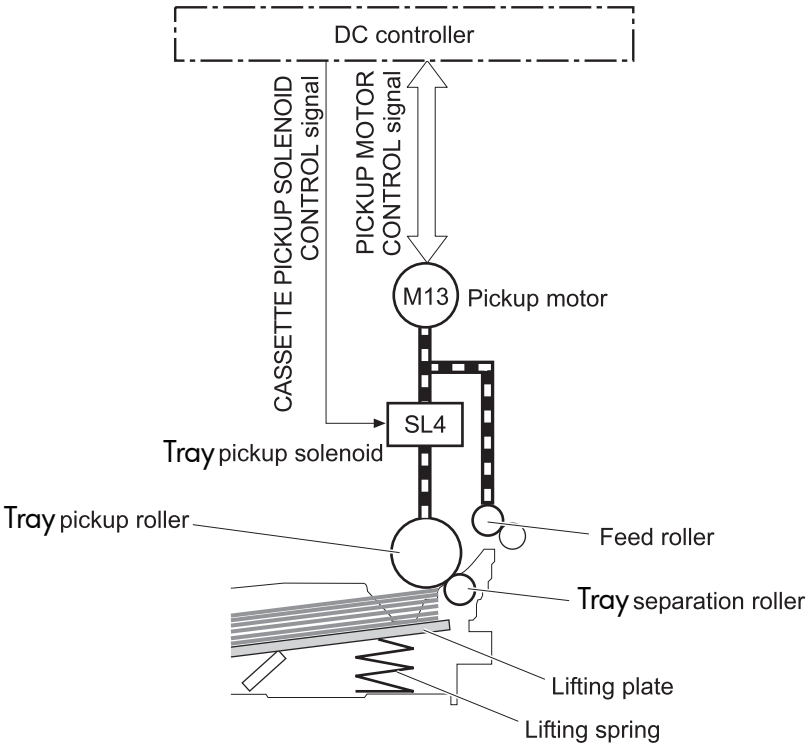
Figure 1-30 Pickup-and-feed unit

Tray pickup

The sequence of steps for the tray pickup operation is the following:

1. When the product starts or the tray closes, the lifting mechanism lifts the paper stack so it is ready.
2. After receiving a print command from the formatter, the DC controller rotates the pickup motor, which causes the tray pickup roller, tray feed roller, and tray separation roller to rotate.
3. The DC controller drives the tray pickup solenoid, which rotates the tray pickup cam. As the pickup cam rotates, the pickup arm moves down, and the tray pickup roller touches the surface of the paper stack. The tray pickup roller then picks up one sheet of paper.

Figure 1-31 Tray-pickup mechanism

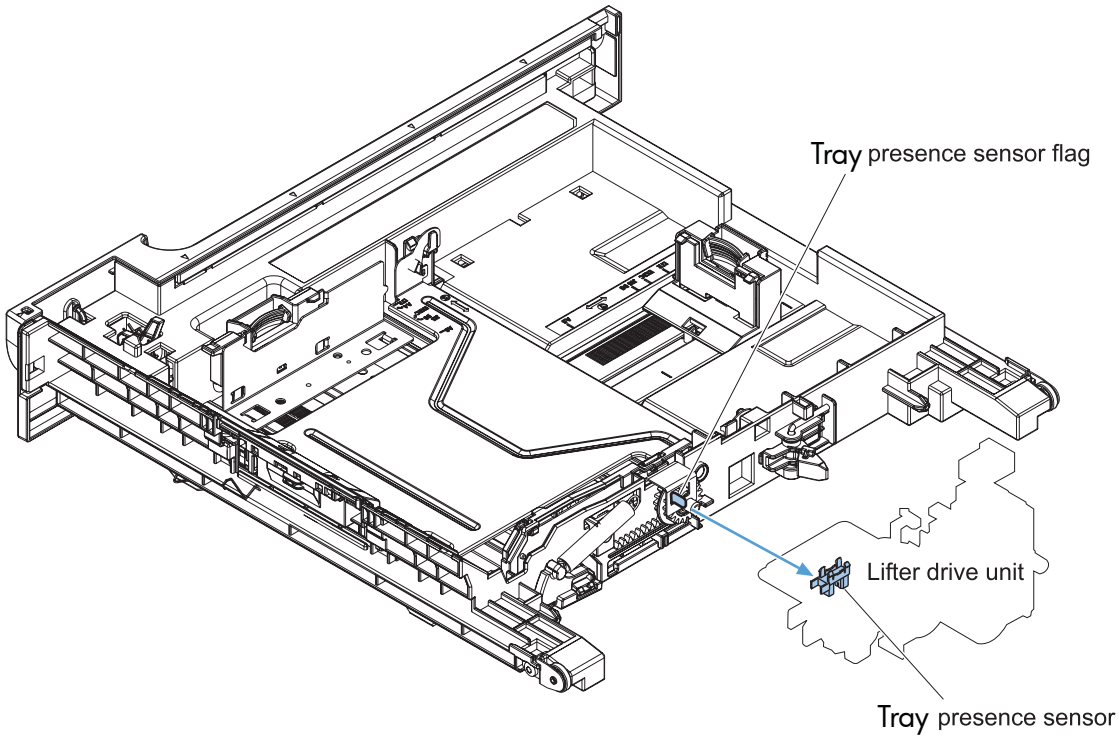


NOTE: The lift-up operation lifts the lifting plate to keep the stack surface of the media at a pickup position. The lifting spring helps support the lifting plate depending on the media size and amount.

Tray-presence detection

The tray presence sensor is in the lifter drive unit. The sensor detects the tray-presence sensor flag and determines whether the tray is installed correctly.

Figure 1-32 Tray presence sensor



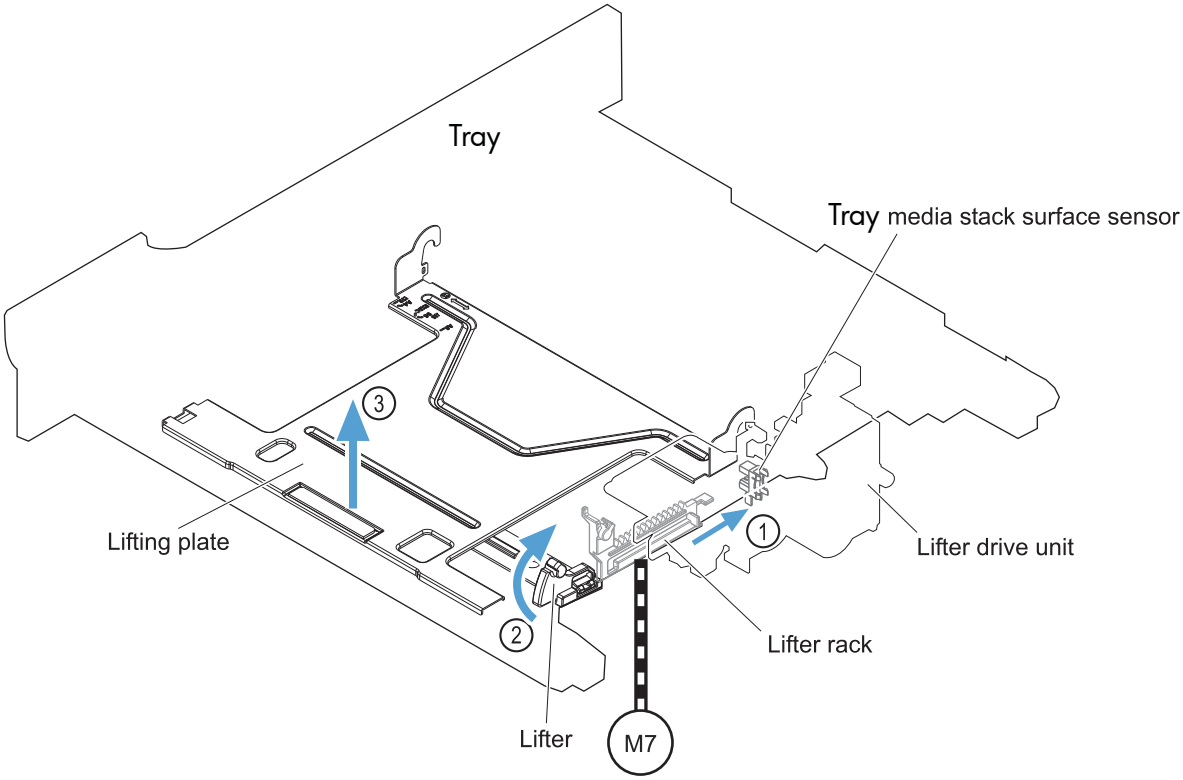
Tray lift operation

The DC controller rotates the lifter motor (M7) and moves the lifter rack until the tray media stack surface sensor (SR9) detects it. The lifter lifts, and the lifting plate moves up to the position where the media can be picked up. The lift operation is performed by monitoring the media stack surface sensor when the printer is turned on, when the tray is installed, or as needed during a print operation.

If the paper-stack surface sensor does not detect the paper within a specified time after the lifter motor begins rotating, the DC controller notifies the formatter that the lifter motor has failed.

The DC controller lowers the lifting plate when no printing occurs to prevent media damage and pickup failure. If a print operation does not occur for a specified time, the DC controller reverses the lifter motor and moves the lifter rack until the tray media-stack surface sensor stops detecting it.

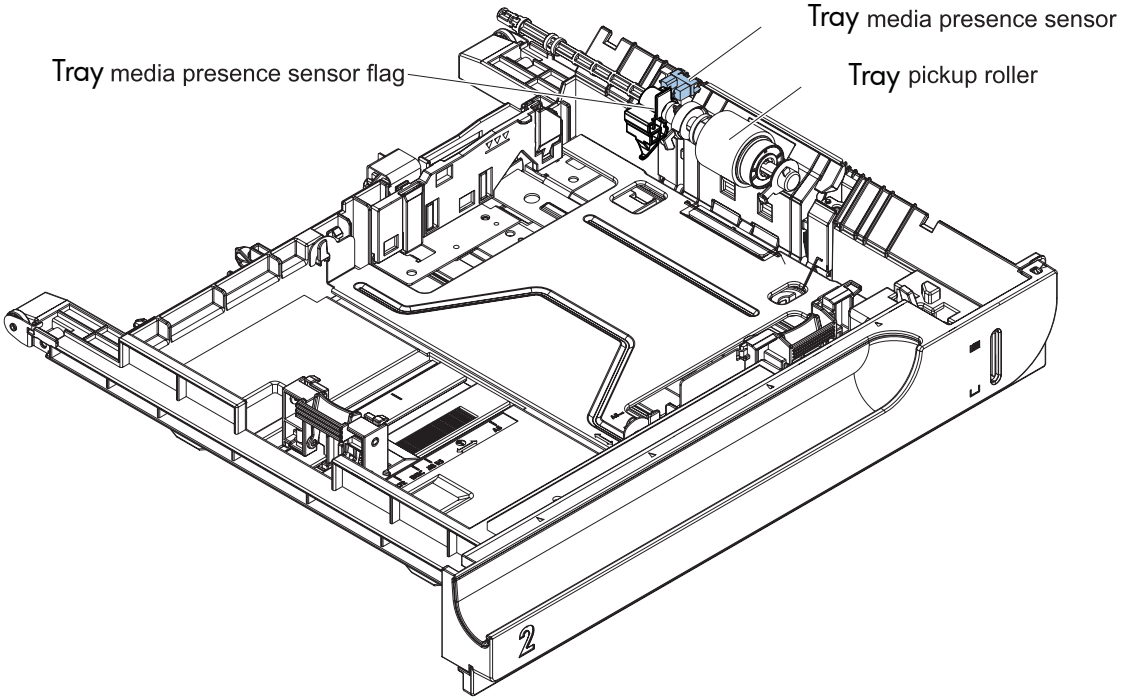
Figure 1-33 Tray lift mechanism



paper-presence detection

The media presence sensor detects whether paper is in the .

Figure 1-34 Paper-level-detection mechanism

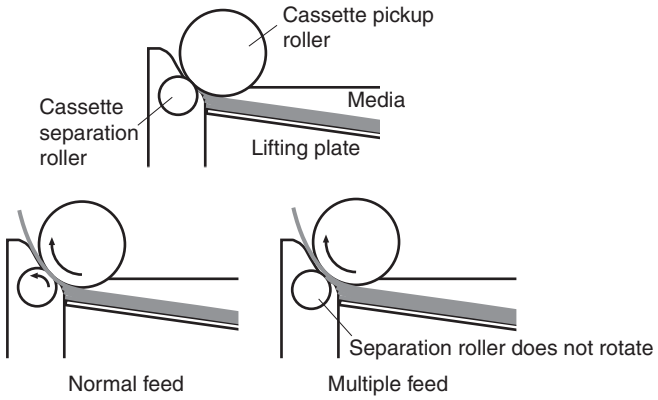


Multifeed prevention

In the , a separation roller prevents multiple sheets of paper from entering the paper path. The pickup roller drives the separation roller through a sheet of paper.

The low friction force between the sheets weakens the driving force from the pickup roller. Because some braking force is applied to the separation roller, the weak rotational force of the pickup roller is not enough to rotate the separation roller. Therefore, the separation roller holds back any multiple-fed sheets, and one sheet of media is fed into the printer.

Figure 1-35 Multifeed prevention



Multipurpose tray pickup

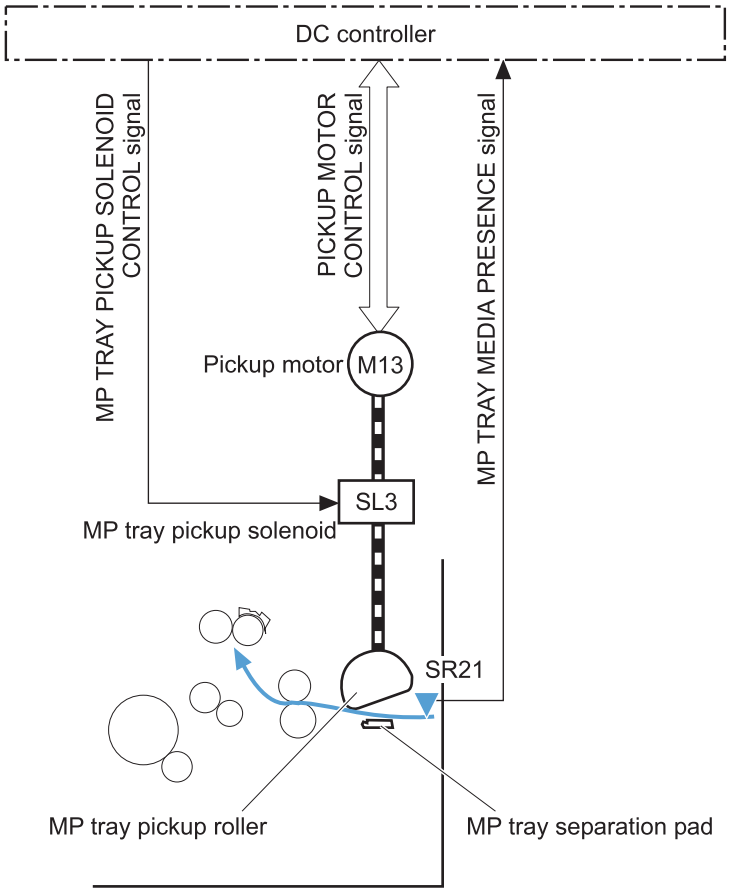
The multipurpose tray (MP) paper-presence sensor detects whether paper is in the tray. If no paper is present, the DC controller notifies the formatter. Printing does not occur until paper is in the tray.

The sequence of steps for the multipurpose tray pickup operation as follows:

1. After receiving a print command from the formatter, the DC controller reverses the pickup motor, which causes the multipurpose tray separation roller to rotate.
2. The DC controller turns on the multipurpose tray pickup solenoid (SL3), causing the multipurpose tray pickup roller to rotate.
3. The multipurpose tray separation roller isolates a single sheet of paper in case more than one sheet was picked. The single sheet of paper feeds into the product.

The MP-tray media-presence sensor (SR21) detects whether the media is present in the MP tray. No printing occurs if no media is loaded.

Figure 1-36 Multipurpose tray pickup mechanism

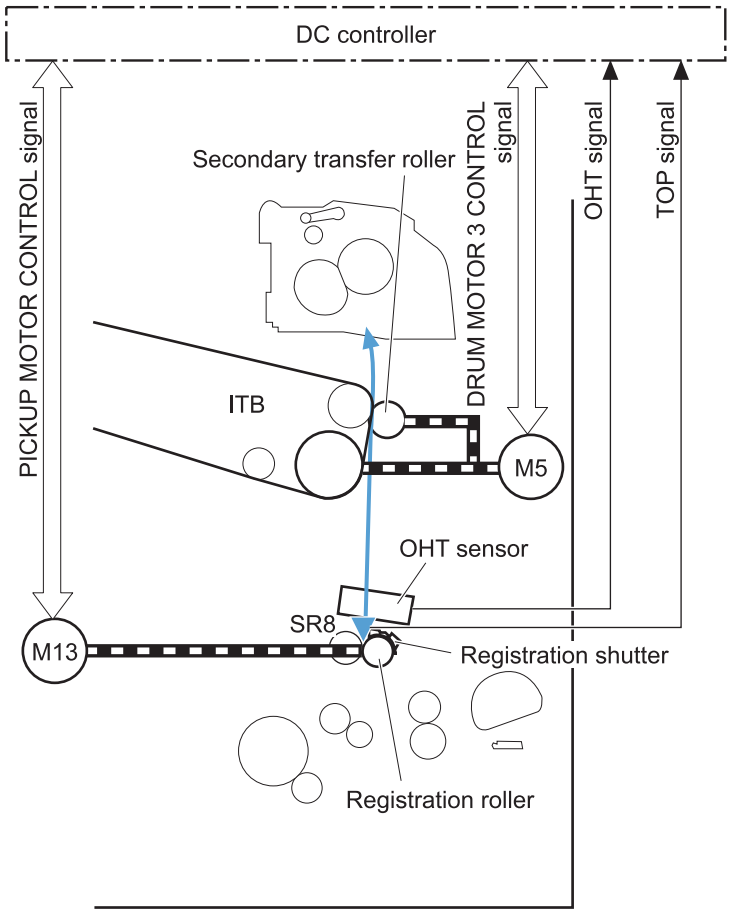


Paper feed

After the pickup operation, the paper feeds through the product and into the fuser.

1. The paper passes through the feed rollers. The registration shutter aligns the paper correctly to prevent skewed printing.
2. The DC controller detects the leading edge of paper by the Top sensor (SR8) and controls the rotational speed of the pickup motor to align with the leading edge of image on the ITB.
3. The DC controller detects whether or not the media is overhead transparency, using the OHT sensor.
4. The toner image on the ITB transfers onto the media, which feeds to the fuser.

Figure 1-37 Paper-feed mechanism

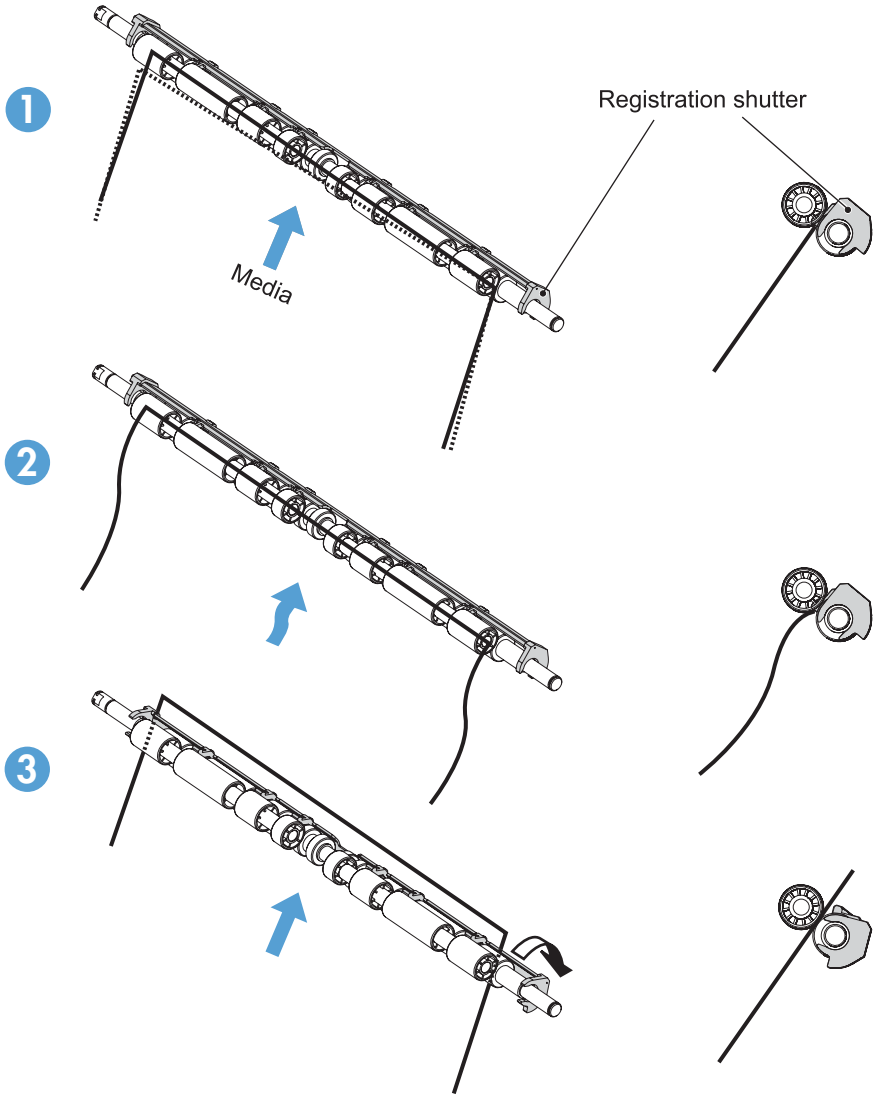


Skew-feed prevention

The product can straighten the paper without slowing the feed operation.

1. As the paper enters the paper path, the leading edge strikes the registration shutter, which straightens the paper. The paper does not pass through the shutter.
2. The feed rollers keep pushing the paper, which creates a force on the leading edge against the registration shutter.
3. When the force is great enough, the registration shutter opens and the paper passes through.

Figure 1-38 Skew-feed prevention



OHT detection

The OHT sensor detects overhead transparencies. The OHT sensor is a transmission sensor that uses an LED. The DC controller determines a media mismatch and notifies the formatter when the media type differs from the media type detected by the OHT sensor. The DC controller turns the LED in the OHT

sensor on and off during the wait or initial rotation period. If the intensity of the light does not match the specified value, the DC controller determines that the OHT sensor has failed.

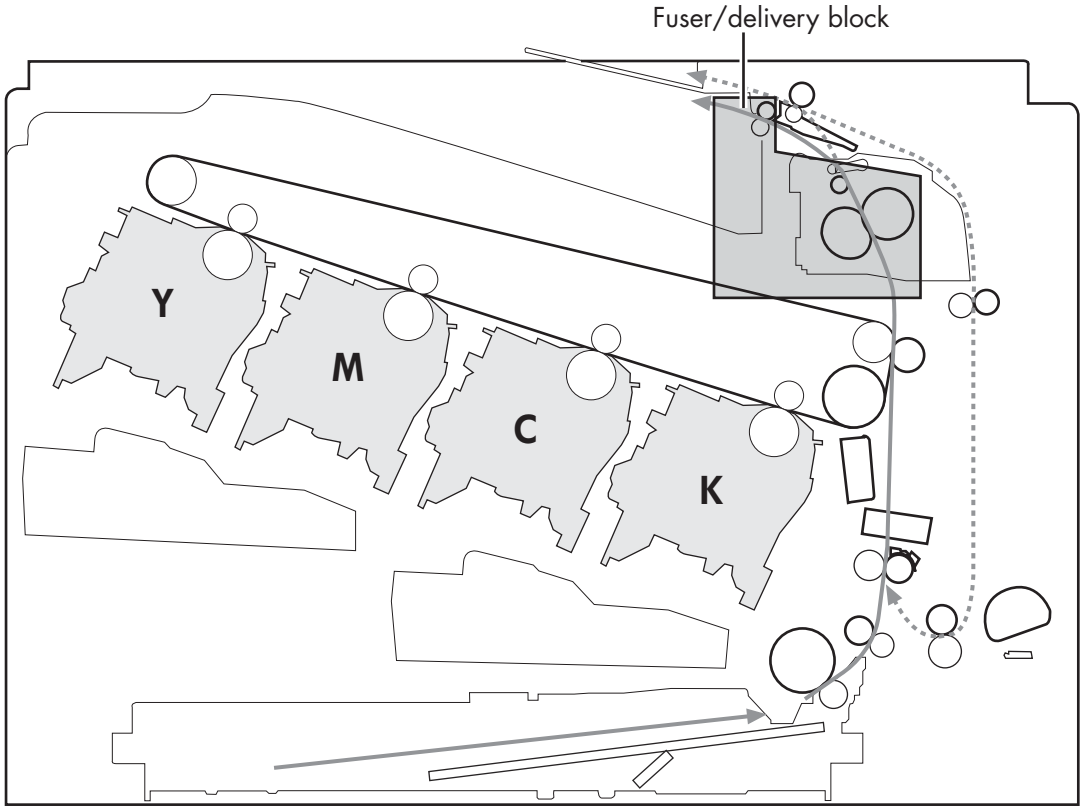
Fusing and delivery unit

The fusing and delivery unit fuses the toner onto the paper and delivers the printed page into the output bin. The following controls ensure optimum print quality:

- Loop control
- Pressure roller pressurization/depressurization control

A sensor detects when the output bin is full, and the DC controller notifies the formatter.

Figure 1-39 Fuser and delivery unit



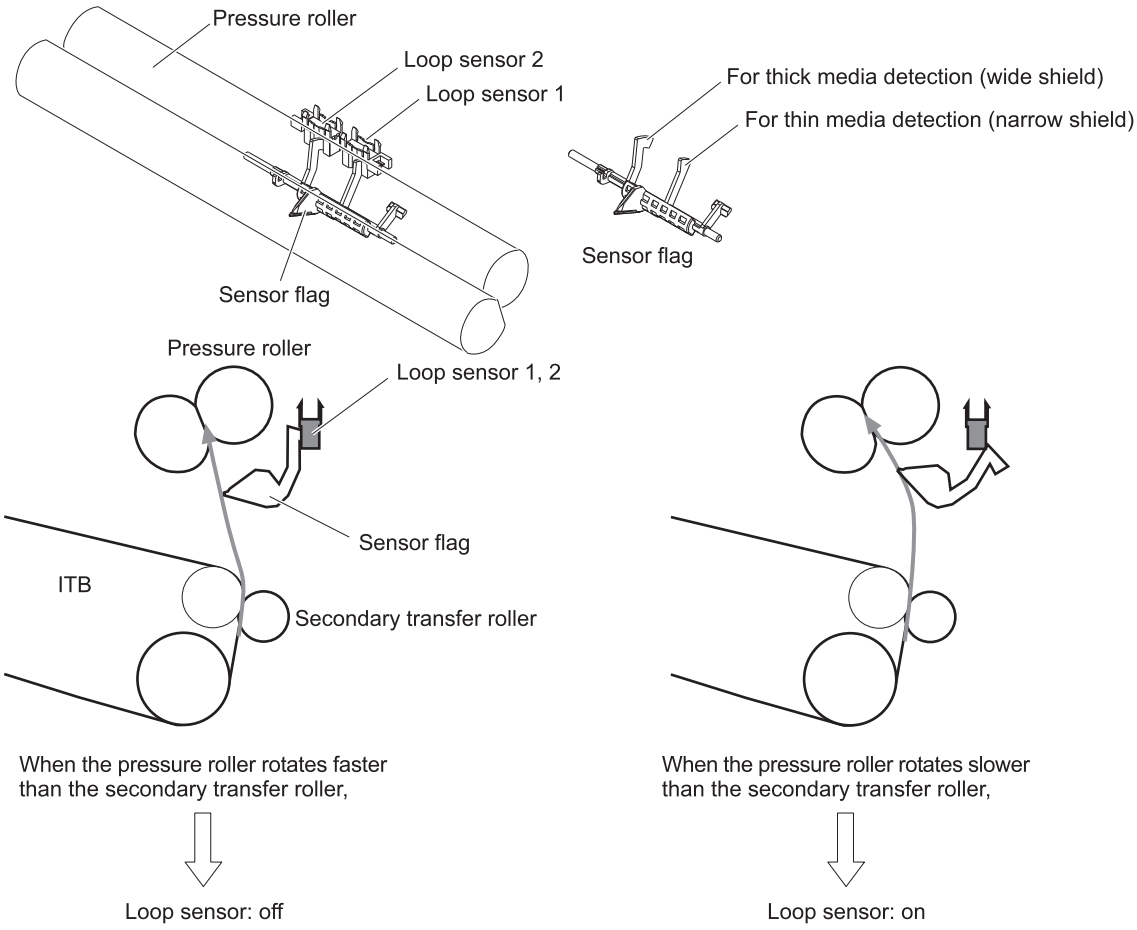
Loop control

The loop control monitors the tension of the paper between the secondary-transfer roller and the fuser.

- If the fuser rollers rotate more slowly than the secondary transfer rollers, the paper warp increases and an image defect or paper crease occurs.
- If the fuser rollers rotate faster than the secondary transfer rollers, the paper warp decreases and the toner image fails to transfer to the paper correctly, causing color misregistration.

To prevent these problems, the loop sensors, which are located between the secondary transfer rollers and the fuser rollers, detect whether the paper is sagging or is too taut. The DC controller adjusts the speed of the fuser motor.

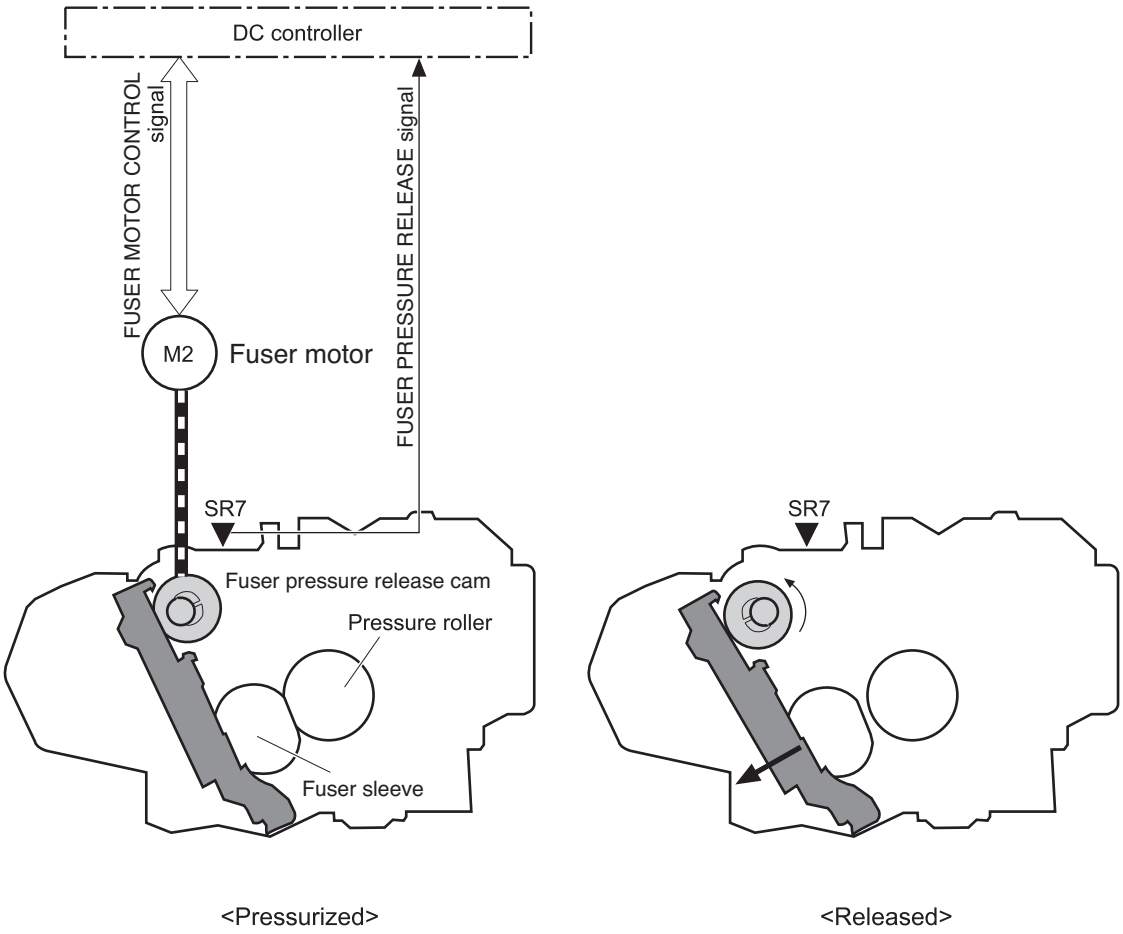
Figure 1-40 Loop-control mechanism



Pressure-roller pressurization control

To prevent excessive wear on the pressure roller and help with jam-clearing procedures, the pressure roller pressurizes only during printing and standby. The DC controller reverses the fuser motor. The fuser motor rotates the fuser pressure-release cam.

Figure 1-41 Pressure-roller pressurization control



<Pressurized> <Released>

The pressure roller depressurizes under the following conditions:

- The product is turned off with the on/off switch
- Any failure occurs other than a fuser pressure-release mechanism failure
- During powersave mode
- When a paper jam is detected

If the DC controller does not sense the fuser pressure-release sensor for a specified period after it reverses the fuser motor, it notifies the formatter that a fuser pressure-release mechanism failure has occurred.

NOTE: The fuser remains pressurized if the power is interrupted when the power cord is removed or the surge protector is turned off, or if the fuser is removed without turning off the product.

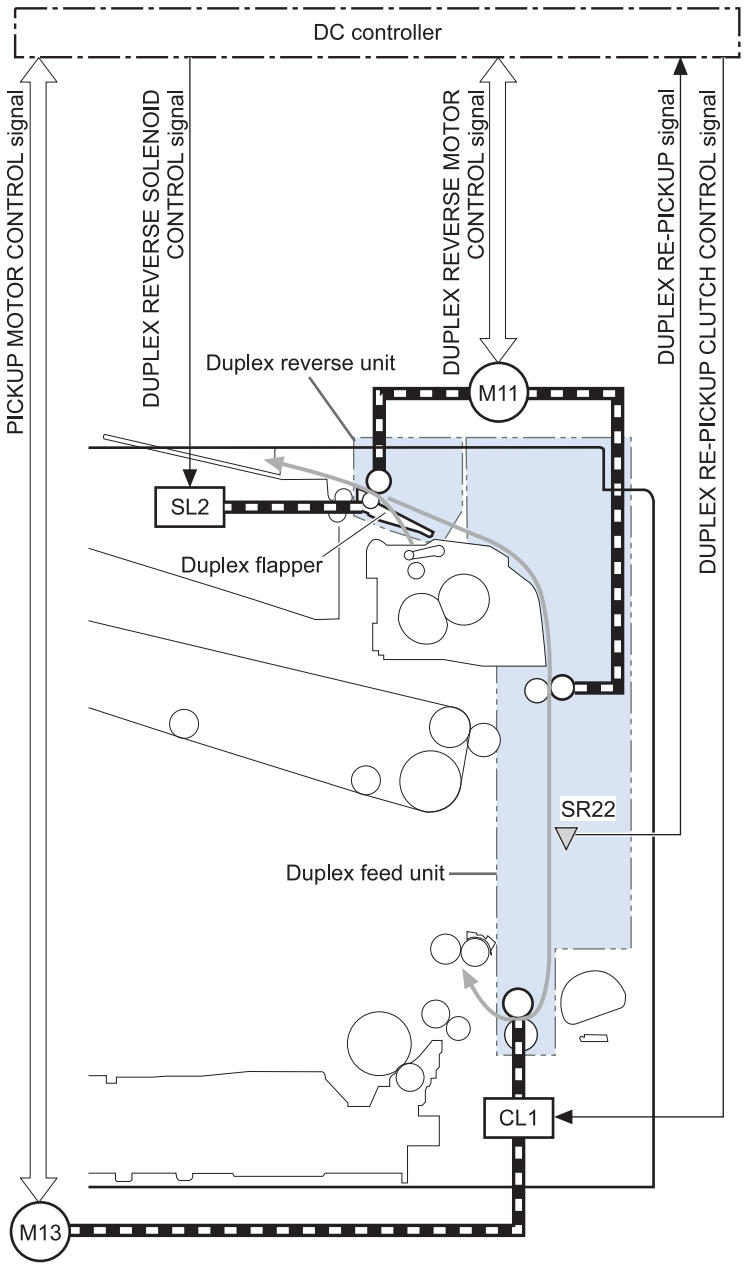
Duplexing unit

The duplexing unit reverses the paper and feeds it through the paper path to print the second side. The duplexing unit consists of the following components:

- **Duplexing-reverse unit**: Installed on top of the product
- **Duplexing-feed unit**: Along the right side

The DC controller controls the operational sequence of the duplex block. The DC controller drives each load, such as motors, solenoid, and clutch, depending on the duplex-reverse unit and duplex-feed unit controls.

Figure 1-42 Duplexing unit



Duplexing reverse and feed control

The duplexing reverse procedure pulls the paper into the duplexing unit after it exits the fuser. The duplexing feed procedure moves the paper through the duplexer so it can enter the product paper path to print the second side of the page.

1. After the first side has printed, the duplexing flapper solenoid opens, which creates a paper path into the duplexing-reverse unit.
2. After the paper has fully entered the duplexing-reverse unit, the duplexing-reverse motor reverses and directs the paper into the duplexing-feed unit.
3. The duplexing re-pickup motor and duplexing feed motor move the paper into the duplexing re-pickup unit.
4. To align the paper with the toner image on the ITB, the duplexing re-pickup motor stops and the paper pauses.
5. The paper re-enters the paper path, and the second side prints.

Duplex pickup operation

The product has the following two duplex-media-feed modes depending on the media sizes:

- One-sheet mode: Prints one sheet that is printed on two sides in one duplex print operation
- Two-sheet mode: Prints two sheets that are printed on two-sides in one duplex print operation (maximum paper size is A4)

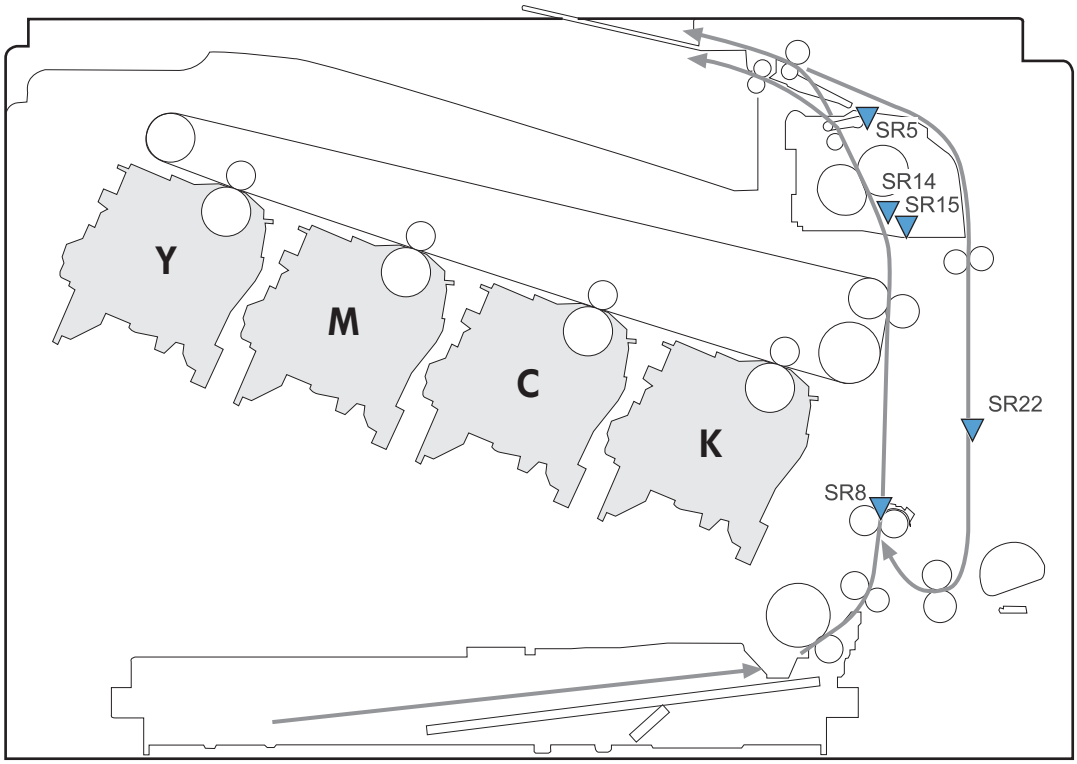
The formatter specifies the duplex-media-feed mode.

Jam detection

The product uses the following sensors to detect the paper as it moves through the paper path and to report to the DC controller if the paper has jammed.

- Fuser output sensor (SR5)
- Registration sensor (SR8)
- Fuser loop 1 (SR14)
- Fuser loop 2 (SR15)
- Duplexer refeed (SR22)

Figure 1-43 Jam detection sensors



The product determines that a jam has occurred if one of these sensors detects paper at an inappropriate time. The DC controller stops the print operation and notifies the formatter.

Table 1-15 Jams that the product detects

Jam	Description
Pickup delay jam 1	**pickup**: The TOP sensor does not detect the leading edge of the paper within a specified period after the pickup solenoid has turned on.
	Multipurpose tray pickup: The TOP sensor does not detect the leading edge of the paper within a specified period after the multipurpose tray solenoid has turned on.
Pickup stationary jam	The TOP sensor does not detect the trailing edge of the paper within a specified time from when it detects the leading edge.

Table 1-15 Jams that the product detects (continued)

Jam	Description
Fuser delivery delay jam	The fuser delivery paper-feed sensor does not detect the leading edge of the paper within a specified period after the TOP sensor detects the leading edge.
Fuser delivery stationary jam	The fuser delivery paper-feed sensor does not detect the trailing edge of the paper within a specified period after it detects the leading edge.
Wrapping jam	After detecting the leading edge of the paper, the fuser delivery paper-feed sensor detects the absence of paper, and it has not yet detected the trailing edge.
Residual paper jam	One of the following sensors detects paper presence during the initialization sequence: • Fuser delivery paper-feed sensor • TOP sensor • Loop sensor 1 • Loop sensor 2 • Duplex re-feed
Door open jam	A door is opened while paper is moving through the product.
Duplexing re-pickup jam 1	The duplex re-pickup sensor does not detect the leading edge of the paper within a specified period after the media reverse operation starts in the duplex-reverse unit.
Duplexing re-pickup jam 2	The TOP sensor does not detect the leading edge of the paper within a specified period after the paper is re-picked.

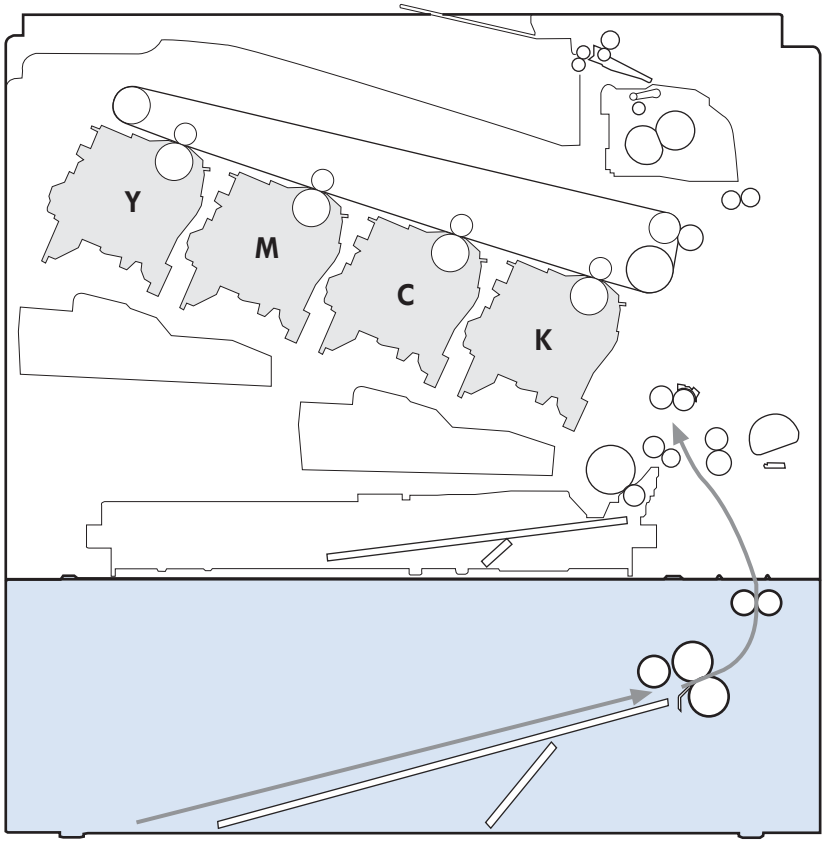
After a jam, some sheets of paper might remain inside the product. If the DC controller detects residual paper after a door closes or after the product is turned on, the product automatically clears itself of those residual sheets.

Optional paper feeder

The 1x500-sheet paper feeder is optionally installed underneath the product. The paper feeder picks up the print media and feeds it to the printer.

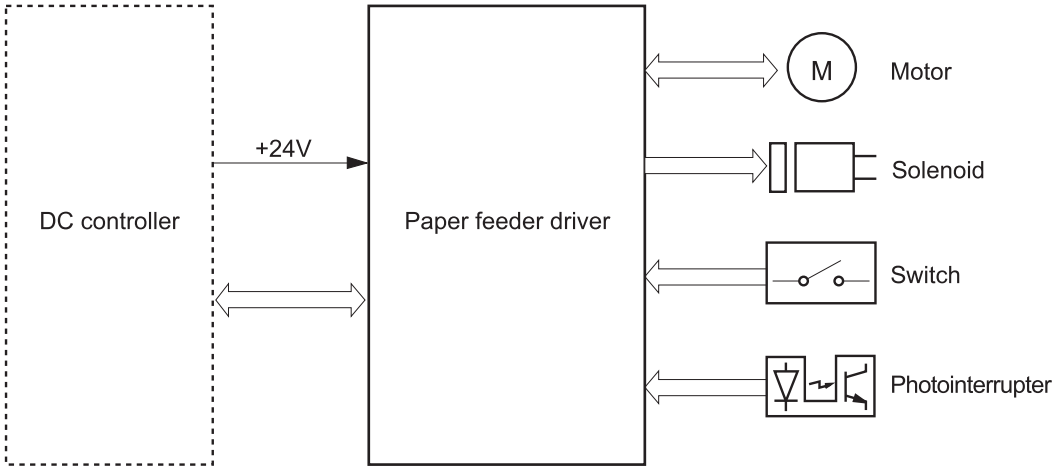
NOTE: These optional trays are *not* identical to the main (Tray 2).

Figure 1-44 Optional paper feeder



The paper-deck drivers contain a microcomputer and control the paper feeder. The paper-deck drivers receive commands from the DC controller. If the DC controller is unable to communicate with a paper-deck driver, it notifies the formatter that the optional paper feeders are not connected correctly.

Figure 1-45 Signals for the paper feeder



The input trays contain several motors, solenoids, sensors, and switches, as described in the following table.

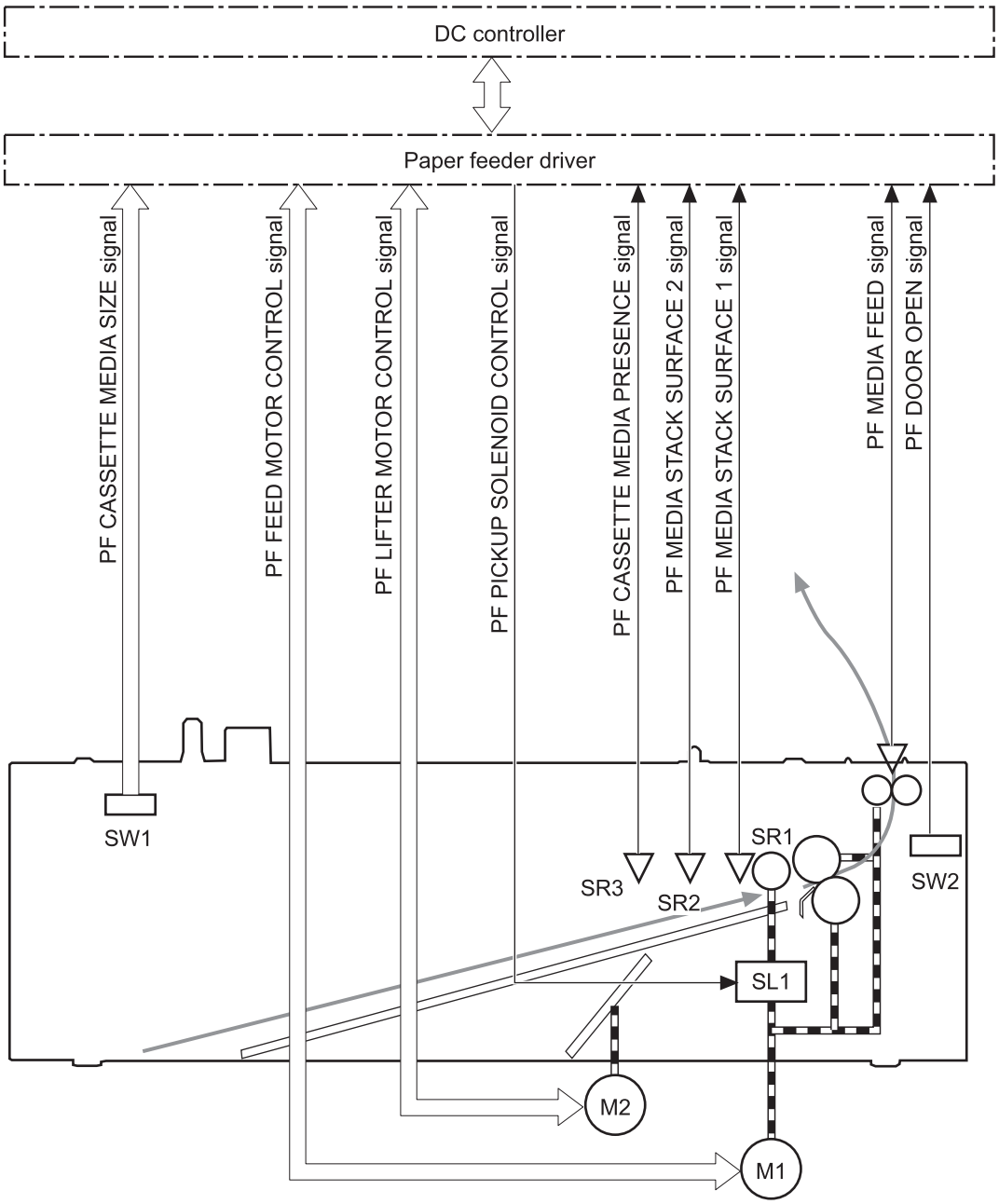
Table 1-16 Electrical components for the paper feeder

Component type	Abbreviation	Component name
Motors	M1	Paper feeder motor
	M2	Paper feeder lift motor
Solenoids	SL1	Paper feeder pickup solenoid
Sensors	SR1	Tray 3 installed sensor
	SR2	Tray 3 stack surface sensor 2
	SR3	Tray 3 paper present sensor
	SR4	Tray 3 feed sensor
Switches	SW1	Paper feeder media-size switch
	SW2	Paper-feeder door switch

Paper-feeder pickup and feed operation

The paper feeder picks up one sheet from the paper-feeder and feeds it to the product.

Figure 1-46 Paper-feeder pickup and feed operation



Paper size detection and presence detection

The paper-feeder media-size switch (SW1) detects the size of paper loaded in the paper-feeder . The paper-feeder driver determines the media size by monitoring the combination of the switches.

Figure 1-47 Paper size detection

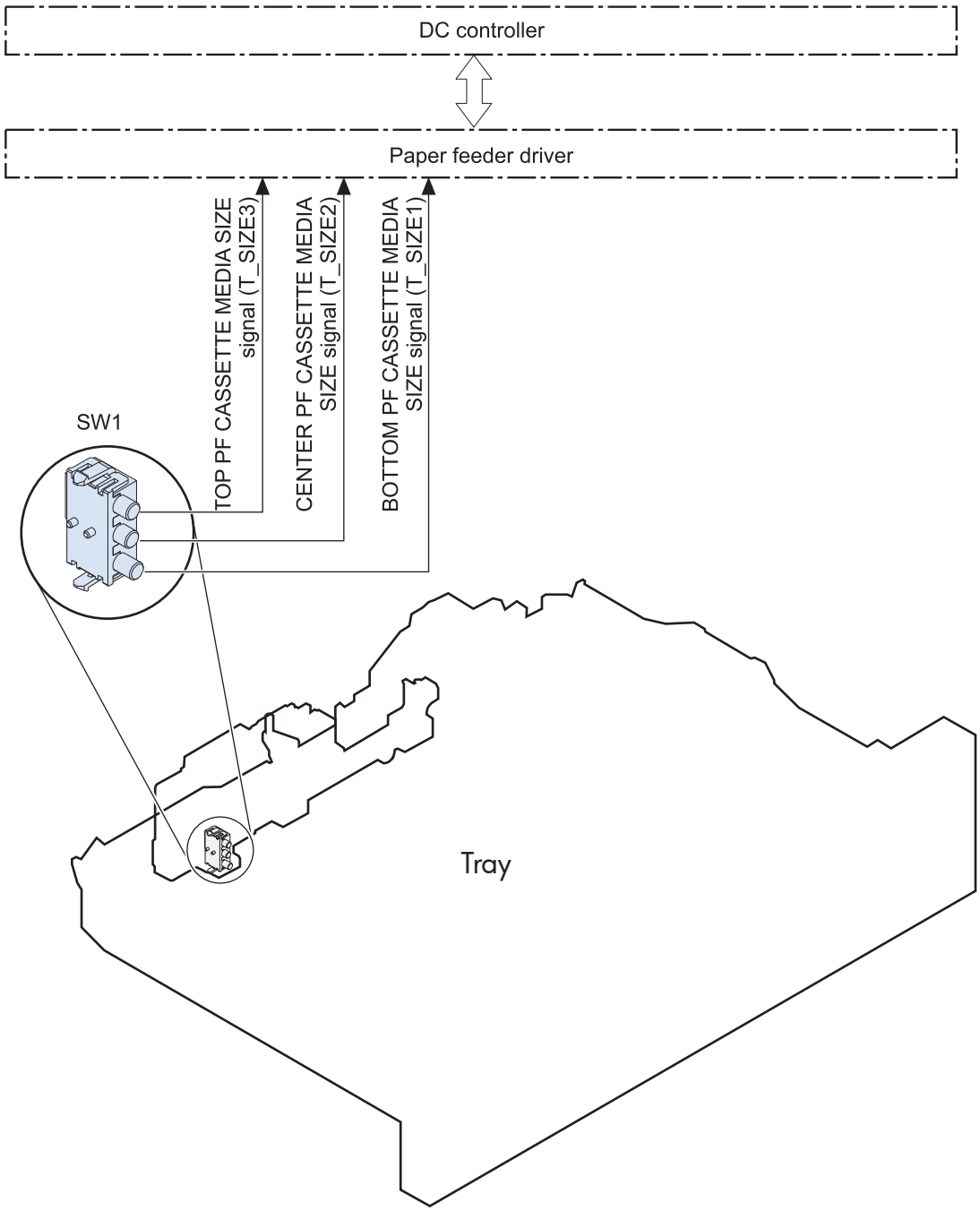


Table 1-17 Paper size detection

Paper size	Paper-feeder media-size switch settings		
	Top switch	Center switch	Bottom switch
Universal	On	On	On
A5	On	Off	Off
B5	Off	On	On
Executive	On	Off	On
Letter	Off	On	Off
A4	Off	Off	On
Legal	On	On	Off
No	Off	Off	Off

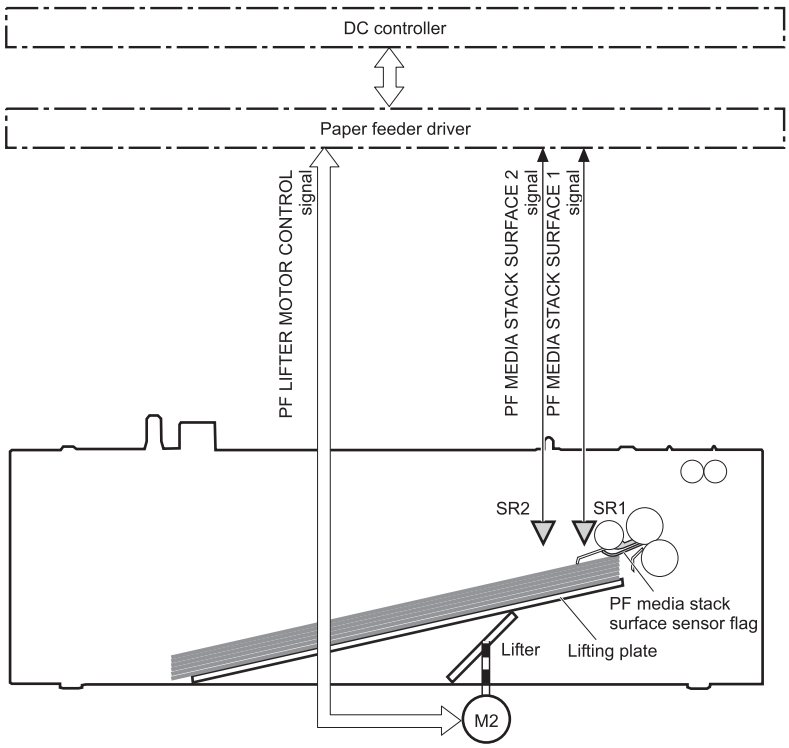
The paper-feeder media size switch (SW1) detects whether the paper-feeder is installed correctly. The paper-feeder driver determines if a is absent when all three switches are turned off. The paper-feeder driver determines a presence when one of the switches is turned on.

Paper feeder lift operation

The lift operation keeps the stack surface of paper at a specified height to maintain stable media feeding. The paper-feeder driver controls the paper-feeder lifter motor (M2) and monitors the paper-feeder media stack surface sensors (SR1, SR2) to adjust the stack height when the printer is turned on, when the printer recovers from sleep mode, when the paper-feeder is installed or as needed during a print operation. The paper feeder has two paper-feeder media-stack surface sensors. The paper-feeder media stack surface sensor 1 detects the stack height during a print operation. The paper-feeder media-stack surface sensor 2 detects the stack height when the printer is turned on, when the printer recovers from sleep mode and when the paper-feeder is installed. The operational sequence of the lift operation is as follows:

1. The paper-feeder driver rotates the paper-feeder lifter motor to lift the lifting plate.
2. The paper-feeder driver stops the paper-feeder lifter motor when the paper-feeder media-stack surface sensor 2 detects the stack surface.
3. The paper-feeder driver rotates the lifter motor again when paper-feeder media stack surface 1 detects that the media surface is lowered during a print operation.

Figure 1-48 Paper-feeder lift



The paper-feeder driver notifies the formatter if either of the paper-feeder media-stack surface sensors fails to detect the stack surface within a specified period from when a lift-up operation starts.

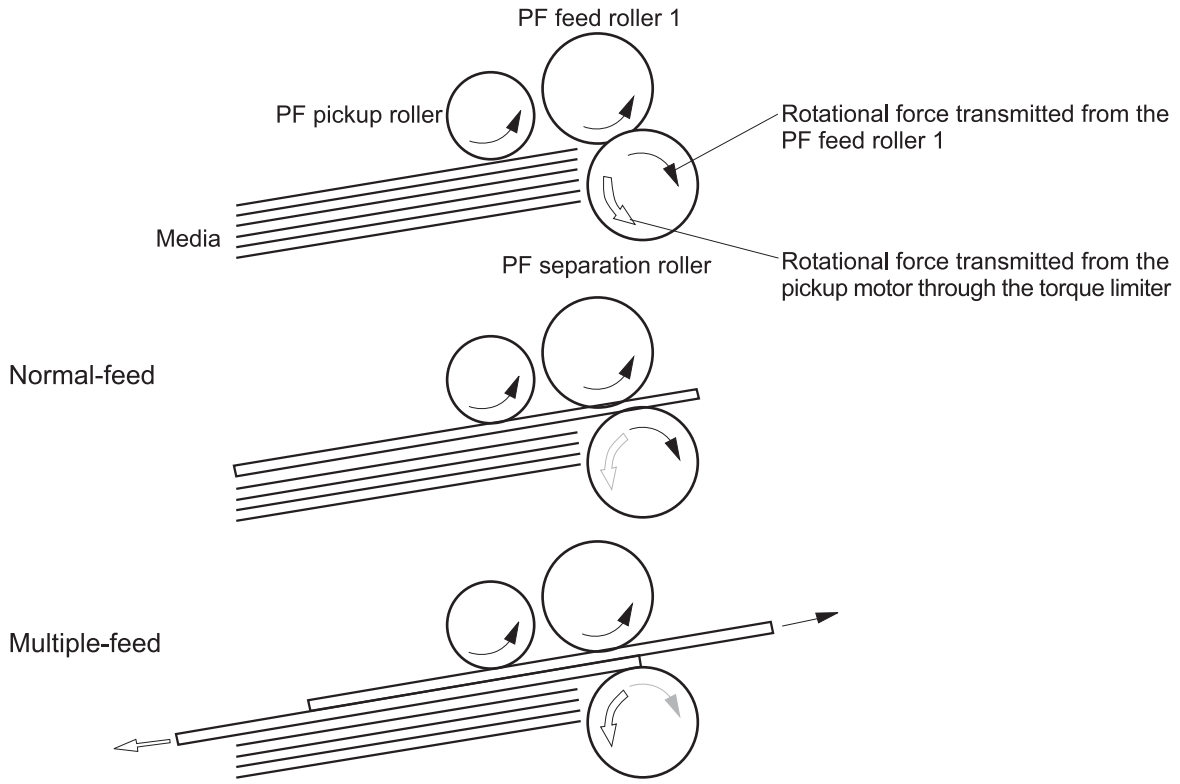
Paper feeder presence detection

The Tray 3 paper present (SR3) detects whether the paper is present in the paper-feeder .

Paper-feeder multiple feed prevention

The paper-feeder uses a separation roller to prevent multiple sheets of paper from entering the printer. The separation roller prevents multiple feeds of paper by allowing the paper-feeder separation roller to rotate in the same direction as the paper-feeder feed roller 1. The paper-feeder separation roller is equipped with the torque limiter. If multiple sheets of paper are picked up, the torque limiter takes control of the paper-feeder separation roller, and pushes the extra sheets back to the paper-feeder . That way, only the top sheet is fed to the printer.

Figure 1-49 Paper-feeder multiple feed prevention



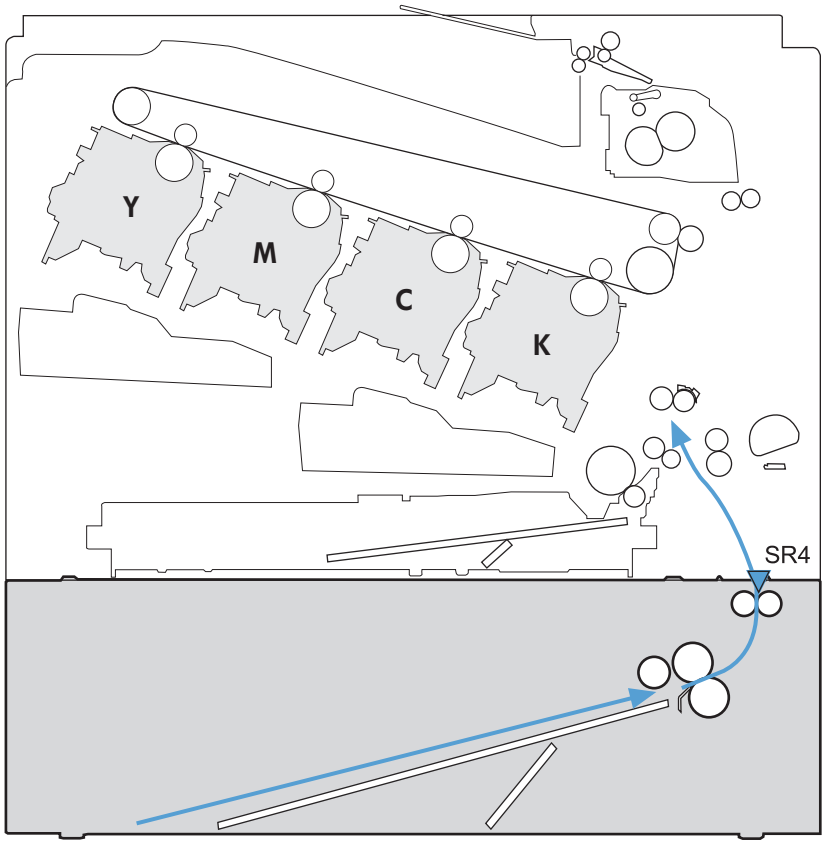
No-load	Rotational force for paper-feeder separation roller: Pushes back the media into the paper-feeder Rotational force for paper-feeder feed roller 1: Feeds media into the printer

Normal feed	Rotational force for paper-feeder separation roller: Pushes back the media into the paper-feeder Rotational force for paper-feeder feed roller 1: Feeds media into the printer
Multiple-feed	The low friction force between the sheets weakens the rotational force from the paper-feeder feed roller 1. The paper-feeder separation roller rotates by its own rotational force and removes the extra sheet.

Paper feeder jam detection

The paper feeder uses the Tray 3 feed (SR4) to detect the presence of paper and to check whether paper has jammed.

Figure 1-50 Jam detection



The paper-feeder driver identifies a jam if the sensor detects paper at a specified timing stored in the paper-feeder driver. The paper-feeder driver stops printing and notifies the formatter through the DC controller of the jam. The paper feeder detects the following jams:

- Pickup delay jam: The paper-feeder media-feed sensor does not detect the leading edge of media within a specified period from when the paper-feeder pickup solenoid is turned on.
- Pickup stationary jam: The paper-feeder media-feed sensor does not detect the trailing edge of media within a specified time period from when the sensor detects the leading edge.

Scanning/image capture system

Control panel

The control panel is an 8 in full color SVGA (800 x 600 LCD) with capacitive touchscreen and adjustable viewing angle. The control panel includes a USB port for walk-up printing and a hardware integration pocket for third-party USB devices such as card readers.

The control panel has a diagnostic mode to allow testing of the touchscreen, home button, and speaker. The control panel does not require calibration.

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 a sensor to detect legal-sized media and a switch to indicate when the ADF is opened.

The ADF 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 ADF, SCB, or control-panel assembly.

Automatic document feed system

- Simplex single pass
- Duplex three pass
- Legal-sensing flag
- Pick and feed roller assembly with separation pad
- Mechanical deskew
- Step glass for ADF scanning
- Jam clearance door with sensing
- LED indication when original is placed on input tray

Sensors in the ADF

The ADF contains the following sensors:

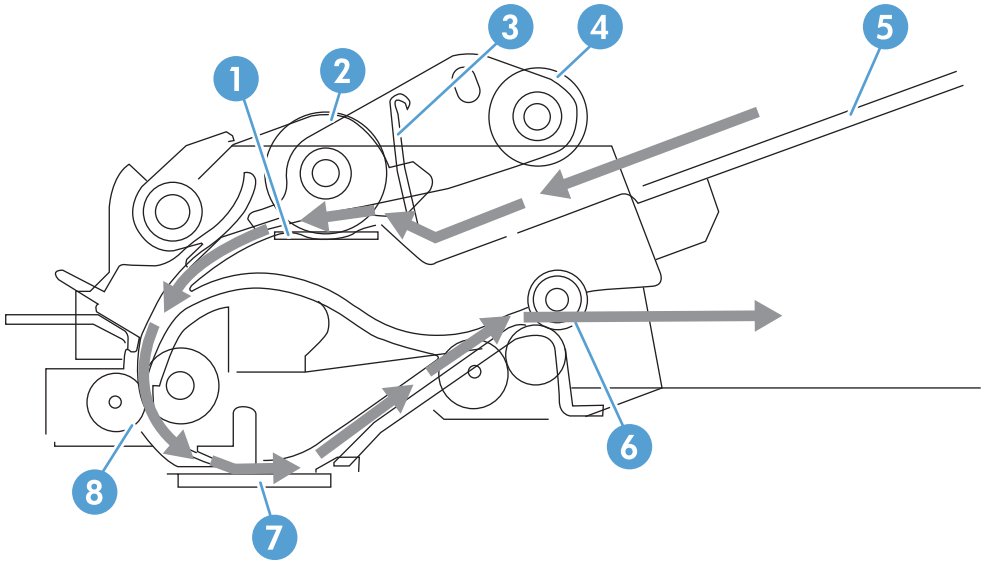
- **ADF-cover sensor:** Detects whether the ADF cover is open or closed.
- **Paper length sensor**: Detects whether there is a legal-size original.
- **Pick success sensor:** Detects the top of the page before sending a page through the ADF and the end of the page after feeding/scanning is complete.
- **Paper-present sensor:** Detects whether a document is present in the ADF. If paper is present in the ADF when copies are made, the product scans the document using the ADF. 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 ADF glass.

ADF paper path

The ADF feeds documents past the ADF glass for scanning.

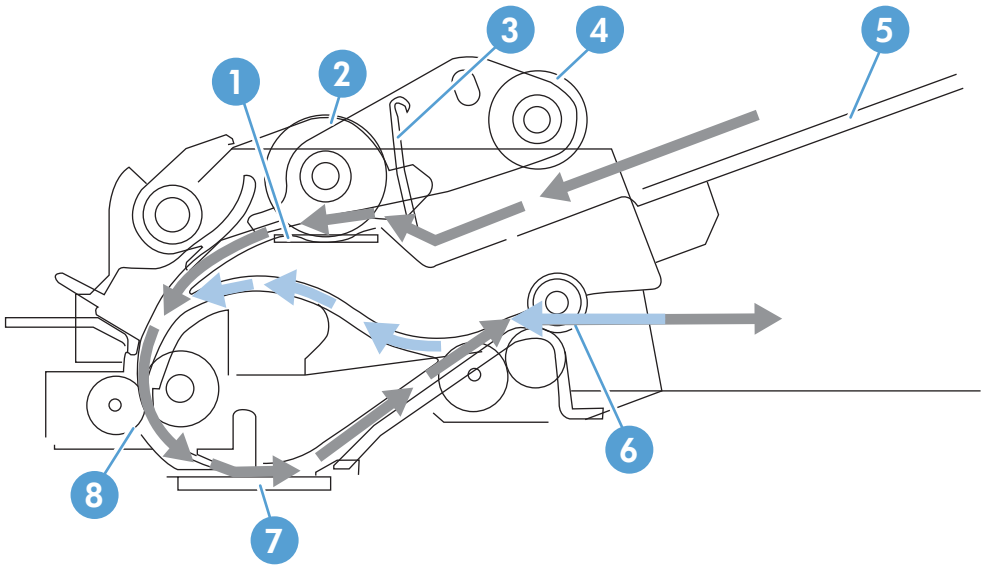
Figure 1-51 ADF path for single-sided documents



1	Separation pad	5	ADF input tray
2	Pickup roller	6	Delivery/duplex-feed rollers
3	Stack stop	7	ADF glass
4	Pre-pick roller	8	ADF 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 ADF glass.

Figure 1-52 ADF path for two-sided documents



NOTE: Callouts in Figure 1-52 ADF path for two-sided documents on page 67 are identical to callouts in Figure 1-51 ADF path for single-sided documents on page 66 .

Stapler (stapling models only)

The product includes a stapler capable of stapling 20 sheets of (75 g/m^2) (20 lb) paper. The stapler is powered by a +24v connection from the DC controller. Because there are no logic connections to the product, error conditions or out-of-staples indications are not displayed on the control panel.

2 Solve problems

NOTE: To perform diagnostic and configuration procedures (for example, resetting page counts) for the product, you must install the CP1210 Service Config Tool (available at your HP authorized repair center).

Solve problems checklist

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

1. If the control panel is blank or black, complete these steps:
   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. The control panel should indicate a Ready status. If an error message displays, resolve the error.
3. Check the cabling.
   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. Ensure that the selected paper size and type meet specifications. Also open the Trays menu on the product control panel and verify that the tray is configured correctly for the paper type and size.
5. 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 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 this Web site: www.hp.com/go/lj500colorMFPM575_software.

7. 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:

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

   b. 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, selecting the new connection type that you are using.

Menu map

You can print a report of the complete Administration menu so you can more easily navigate to the individual settings you need.

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.

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 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.

Access the Preboot menu

1. Turn the product on.
2. The HP logo displays on the product control panel. When a "1/8" with an underscore displays below the HP logo, touch the logo to open the **Preboot** menu.
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. The HP logo displays on the product control panel. When a "1/8" with an underscore displays below the HP logo, touch the logo to open the **Preboot** menu.
3. Use the down arrow ▼ button to highlight Administrator, and then touch the OK button.
4. Use the down arrow ▼ button to highlight Startup Options item, and then touch the OK button.
5. Use the down arrow ▼ button to highlight the Cold Reset item, and then touch the OK button.
6. Touch the home button to highlight 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
Continue				Selecting the 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 Continue. If the user navigates to another menu, the timeout does not apply.
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
Administrator				This item navigates to the Administrator sub menus. If authentication is required (and the user is not already signed in) the Sign In displays. The user is required to sign in.
	Download	Network USB USB Thumbdrive		This item initiates a preboot firmware download process. A USB Thumbdrive option will work on all FutureSmart products. USB or Network connections are not currently supported.
	Format Disk			This item reinitializes the disk and cleans all disk partitions. **CAUTION:** Selecting the Format Disk item removes **all** data. A delete confirmation prompt is **not** provided. The system is **not** bootable after this action and a **99.09.67** error will be presented on the control panel. A firmware download must be performed to return the system to a bootable state.
	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 Partial Clean item removes **all** data except the firmware repository. A delete confirmation prompt is **not** provided. This allows user to reformat the disk by removing the firmware image from the active directory without having to download new firmware code (product remains bootable).
	Change Password			Select this item to set or change the administrator password.
	Clear Password			Select the 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
Administrator continued	Manage Disk	Clear disk		Select the Clear disk item to disable using 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.
		Lock Disk		Select the 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 then one encrypted disk accessible by the product when using them interchangeably. The data stored on the secure disk locked to this product always remains accessible to this product.
		Leave Unlocked		Select the Leave Unlocked item to use a new secure disk in an unlocked mode for 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. The secure disk that is already locked to this product remains accessible to this product.
		Clear Disk Pwd		Select the 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.
		Retain Password		Select the Retain Password item to use the non-secure disk for this session only, and then search for the missing secure disk in future sessions.
		Boot Device	Secure Erase	Select the 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. ATA secure-erase command one pass over write. Erases entire disk including firmware. The disk remains an encrypted disk.
			Erase/Unlock	Select the 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. Erases the crypto key. The disk becomes a non-encrypted disk.
			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
Administrator continued	Manage Disk continued	Internal Device		Select the Internal Device item to erase the internal device or get status about the internal device.
			Secure Erase	Select the 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. ATA secure-erase command one pass over write. Erases the entire disk, including firmware. The disk remains an encrypted disk.
			Erase/Unlock	Select the 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. Erases the HP HIgh Performance Secure Hard Disk. The disk becomes a non-encrypted disk.
			Get Status	This item provides disk status information if any is available.
		External Device		Select the External Device item to erase the internal device or get status about the internal device.
			Secure Erase	Select the 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.
			Erase/Unlock	Select the 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. Erases the crypto key. The disk becomes a non-encrypted disk.
			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
Administrator continued	Configure LAN			Select the Configure LAN item to setup the network settings for the PreBoot menu firmware upgrade. The network can be configured 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 addresses.
			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
Administrator continued	Startup Options			Select the 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.
		Show Revision		Not currently functional: Check the 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 Show Revision item is unchecked so that the firmware revision is not shown.
		Cold Reset		Check the 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.
		Skip Disk Load		Select the Skip Disk Load item to disable installed third-party applications.
		Skip Cal		Select the Skip Cal item to initialize the product the next time the power is turned on without calibrating.
		Lock Service		**CAUTION:** Select the 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 Lock Service setting before they can open the Service menu.
		Skip FSCK		Select the 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
Administrator continued	Startup Options continued	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.
		Embedded JetDirect Off		Check the Embedded JetDirect Off item to disable the embedded Jetdirect. By default this item is unchecked so that Jetdirect is always enabled.
		WiFi Accessory		Check the WiFi Accessory item to enable the WiFi accessory.

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

Menu option	First level	Second level	Third level	Description
Administrator continued	Diagnostics	Memory	Do Not Run	Diagnostic items are useful for troubleshooting formatter problems. Use the options below the Do Not Run item to help troubleshoot formatter problems.
			Short	
			Long	
		Disk	Do Not Run	
			Short	
			Long	
			Optimized	
			Raw	
			Smart	
		ICB		
		CPB		
		Interconnect Run Selected		
	Remote Admin	Start Telnet		The Remote Admin item allows a service technician to access the product remotely to troubleshoot issues.
		Stop Telnet		
		Refresh IP		

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

Menu option	First level	Second level	Third level	Description
	System Triage	Copy Logs		If you cannot print the error logs, the System Triage item allows you to copy the error logs to a flash drive on the next startup. The files can then be sent to HP to help determine the problem.
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 files can be sent to HP to help determine what is causing the problem.
	Reset Password			Use this item to reset the administrator password.
	Subsystems			For manufacturing use only. Do not change these values.
Developer Tools	Netexec			

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.

Troubleshooting process

Determine the problem source

When the product malfunctions or encounters an unexpected situation, the product control panel alerts you to the situation. This section contains a pre-troubleshooting checklist to filter out many possible causes of the problem. A troubleshooting flowchart helps you diagnose the root cause of the problem. The remainder of this chapter provides steps for correcting problems.

- 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 82. After the control panel display is functional, see step 2.
	Yes ↓	No →	
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 →	

Table 2-7 Troubleshooting flowchart (continued)

4 **Information pages**	Open the Reports menu and print the configuration pages to verify that all the accessories are installed. Are all the accessories installed?		If accessories that are installed are not listed on the configuration page, remove the accessory and reinstall it. After evaluating the configuration pages, see step 5.
	Yes ↓	No →	
5 **Image quality**	Does the print quality meet the customer's requirements?		Compare the images with the sample defects in the image defect tables. See the images defects table in the product service manual. After the print quality is acceptable, see step 6.
	Yes ↓	No →	
6 **Interface**	Can the customer print successfully from the host computer?		Verify that all I/O cables are connected correctly and that a valid IP address is listed on the Jetdirect configuration page. 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.
	Yes. This is the end of the troubleshooting process.	No →	

Power subsystem

Power-on checks

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

Power-on troubleshooting overview

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

During normal operation, the main cooling fan begins to spin briefly after the product power is turned on. Place your hand over the holes in the 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 performing 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, make sure the power switch is in the on position, and then verify that the heartbeat LED is blinking.
6. Remove any external solutions, and then try to turn the product on again.

NOTE: If the control panel display is blank, but the main cooling fan runs briefly after the product power is turned on, try printing an engine-test page to determine whether the problem is with the control-panel display, formatter, or other product assemblies.

Control-panel checks

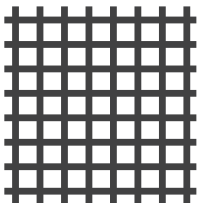
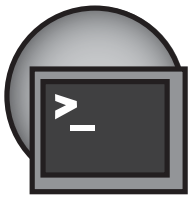
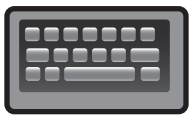
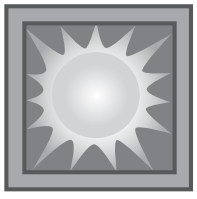
The product includes a diagnostic test mode for the control panel. This mode allows you to troubleshoot issues with the touchscreen, speaker, and Home button.

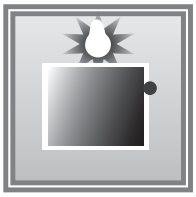
Start diagnostic mode

- On the rear side of the control panel, use a paperclip to press the button inside the small hole in the center of the control panel.

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

	Exits a test
	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
	Not applicable for this model
	Adjusts the backlight

	Checks the ambient light sensor
	Tests the home button

Exit diagnostic mode

Do one of the following:

- Touch the Cancel button.
- Wait 20 seconds and the control panel will return to the Home screen.

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 product.

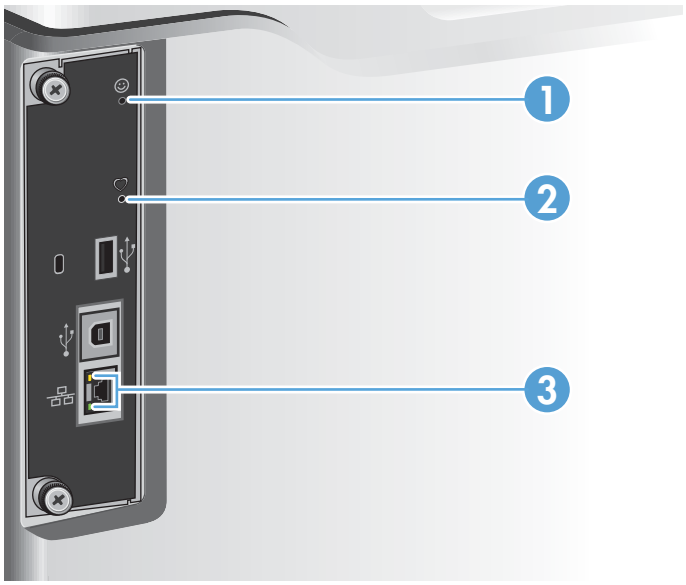
Individual component diagnostics

LED diagnostics

LED, engine, and individual diagnostics can identify and troubleshoot product problems.

Understand lights on the formatter

Three LEDs on the formatter indicate that the product is functioning correctly.



1	Connectivity LED
2	Heartbeat LED
3	HP Jetdirect LEDs

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.

Formatter to control panel communication interruptions

- The firmware does not fully initialize and configure the control panel interface.
- The control panel is not functioning (either a failed assembly or power problem).
- Interface cabling between the formatter and control panel is damaged or disconnected.

TIP: If the heartbeat LED is illuminated—by an error condition or normal operation—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.

The heartbeat LED operates according to the product state. When the product is initializing, see Heartbeat LED, product initialization on page 87. When the product is in Ready mode, see Connectivity LED, product operating on page 89.

Heartbeat LED, product initialization

The following table describes the heartbeat LED operation while the product is executing the firmware boot process.

NOTE: When the initialization process completes the heartbeat LED should be illuminated solid green —the LED is off if the product is in Sleep Mode.

If after initialization the heartbeat LED is not solid green, see Connectivity LED, product operating on page 89.

Table 2-8 Heartbeat LED, product initialization

Product initializing state	Heartbeat LED, normal state	Heartbeat LED, error state
No power (power cable disconnected or power switch off)	Off	Not applicable
Power on (immediately after the power switch pressed)	Red, solid • Duration should be 1 second or less	Red, solid • Firmware error; problem finding hardware and booting the serial peripheral interface flash memory ◦ Boot process halted Replace the formatter.
Serial peripheral interface (SPI) flash memory boot	Green, solid	Red, solid • Firmware error; problem corrupt or missing SPI flash memory ◦ Boot process halted Replace the formatter.

Table 2-8 Heartbeat LED, product initialization (continued)

Product initializing state	Heartbeat LED, normal state	Heartbeat LED, error state
HW checks on board DRAM	Green, solid	Red, solid • Power on self check failure ◦ Boot process halted Replace the formatter.
Control panel connection initializes	Green, solid **NOTE:** Control panel communication successful. If an error occurs, a message should appear on the control-panel display.	Yellow, fast flash • Formatter to control panel connection failed ◦ Boot process continues Check the cables between the formatter and control panel for damage. Make sure that the cables are fully seated.
Preboot menu available (including diagnostics)	Green, solid	Red, solid • Diagnostic failure ◦ Follow diagnostic instructions Turn the power off, and then on again to restart the initialization process.
Accessing disk for firmware image	Green, solid **NOTE:** If applicable, disk error messages appear on the control-panel display.	Yellow, fast flash • Control panel not connected
Firmware boot	Green, solid **NOTE:** If applicable, error messages appear on the control-panel display.	Yellow, fast flash • Control panel not connected
Product operational	Green, heartbeat blink **NOTE:** If applicable, error messages appear on the control-panel display.	Yellow, fast flash • Control panel not connected
49.XX.YY error or initialization freezes	Not applicable	LED off **NOTE:** An error message (for example, **49.XX.YY**) might appear on the control-panel display. Eventually a formatter connection missing message will appear. Turn the power off, and then on again to restart the initialization process. If the error persists, perform a firmware upgrade.

Table 2-8 Heartbeat LED, product initialization (continued)

Product initializing state	Heartbeat LED, normal state	Heartbeat LED, error state
Control panel connection interrupted after the product is operational	Not applicable	Yellow, fast flash • Control panel not connected
Sleep Mode	Green, slow blink	Not applicable
Approaching Sleep Mode	Green, slow blink	Not applicable
Wake up from Sleep Mode	Follows initialization progression.	Follows initialization progression.
Approaching wake up from Sleep Mode	Follows initialization progression.	Follows initialization progression.

Connectivity LED, product operating

The following table describes the connectivity operation when the product completes the firmware boot process and is in the Ready state.

Table 2-9 Heartbeat LED, product operational

LED color	Description
Green	• Normal operation ◦ Formatter is operating normally ◦ Firmware is operating normally ◦ Control panel is connected
Yellow	• Formatter cannot connect to the control panel ◦ Check control panel connections ◦ Verify control panel functionality

Table 2-9 Heartbeat LED, product operational (continued)

LED color	Description
Red	• Formatter error or failure ◦ Serial peripheral interface (SPI) flash memory boot error ◦ Power on self test (formatter) failed ◦ Diagnostic (formatter) failed
Off	**TIP:** The connectivity LED is off if the power cable is disconnected, the product power switch is in the off position, or the product is in Sleep Mode. • Firmware or system freeze ◦ Check the control panel for an error message ◦ Control panel failure **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

The connectivity LED indicates that the formatter is functioning correctly. While the product is initializing after you turn it on, the LED blinks rapidly, and then turns off. When the product has finished the initialization sequence, the connectivity LED pulses on and off.

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.

Defeating interlocks

Different tests can be used to isolate different types of issues. For assembly or noise isolation, you can run the diagnostic test when the front and right doors are open. To operate the product with the doors open, the door switch levers must be depressed to simulate a closed-door position.

⚠ **WARNING!** Be careful when performing product diagnostics to avoid risk of injury. Only trained service personnel should open and run the diagnostics with the covers removed. Never touch any of the power supplies when the product is turned on.

1. Open the right and front doors.

2. Locate the slots on the right and front of the product.

Figure 2-1 Diagnostic test (1 of 3)

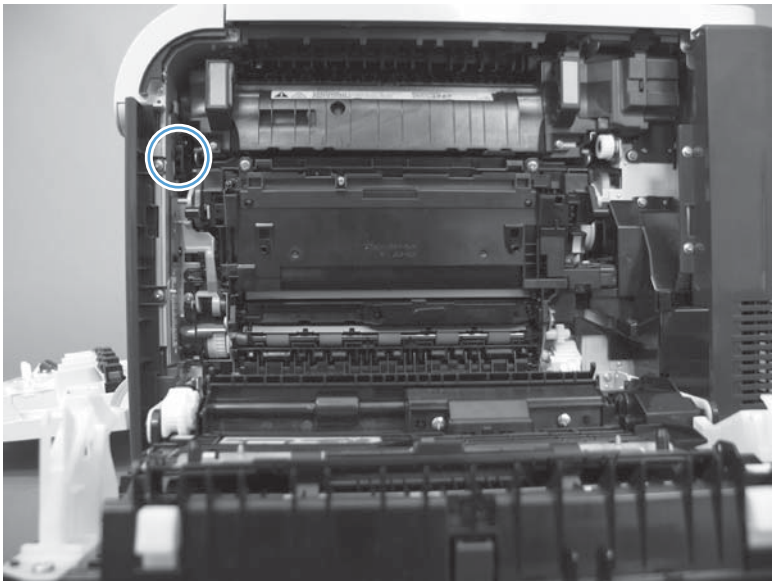


Figure 2-2 Diagnostic test (2 of 3)

3. Insert a folded piece of paper into each slot at the same time until the product is in a Ready state.

Figure 2-3 Diagnostic test (3 of 3)

Disable cartridge check

Use this diagnostic test to print internal pages or send an external job to the product when one or more toner cartridges are removed or exchanged. Supply errors are ignored while the product is in this mode. When the product is in this mode, you can navigate the troubleshooting menus and print internal pages (the print quality pages will be the most useful). This test can be used isolate problems, such as noise, and to isolate print-quality problems that are related to individual toner cartridges.

NOTE: Cartridges are not keyed and can be interchanged. An error will display on the control panel if a toner cartridge is installed in the wrong position. The Manage Supplies menu explains which toner cartridge is misplaced.

NOTE: Do not remove or exchange toner cartridges until after you start the disable cartridge check diagnostic.

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
   - Disable Cartridge Check

Engine test button

To verify that the product engine is functioning, print an engine test page. Use a small pointed object to depress the test-page switch located on the rear of the product. The test page should have a series of horizontal lines. The test page can use only Tray 2 as the paper source, so make sure that paper is loaded in Tray 2.

Figure 2-4 Engine-test 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 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.
- 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 sensors test

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 sensor test menu and then reentering it will clear the test values from the previous test.

Table 2-10 Paper-path sensors diagnostic tests

Sensor name	Sensor/Switch number	Replacement part number	Descriptions	Sensor test name
Tray 3 Feed	SR4	CF084-67901	500 Sheet Feeder Kit (tray 3)	Paper Path Test

Table 2-10 Paper-path sensors diagnostic tests (continued)

Sensor name	Sensor/Switch number	Replacement part number	Descriptions	Sensor test name
Registration	SR8	RM1-4969-000CN	Registration assy	Paper Path Test
Fuser Loop 1	SR14	RM1-8154-000CN 110V RM1-8156-000CN 220V	Fuser assy	Paper Path Test
Fuser Loop 2	SR15	RM1-8154-000CN 110V RM1-8156-000CN 220V	Fuser assy	Paper Path Test
Fuser Pressure Release	SR7	RM1-8178-000CN	Sensor cable Assy	Paper Path Test
Fuser Output	SR5	W8G-5935-000CN	Photointerrupter	Paper Path Test
Duplexer Refeed	SR22	RM1-8123-000CN	Right door assy	Paper Path Test
Developer Alienation	SR11	RM1-8133-000CN	Main drive assy	Paper Path Test
ITB Alienation	SR17	W8G-5935-000CN	Photointerrupter	Paper Path Test
Output Bin Full	SR6	RM1-44970-060CN	Delivery assy	Paper Path Test

Manual sensor test

Use this diagnostic test to manually test the product sensors and switches. Each sensor is represented by a letter and number on the control panel display.

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

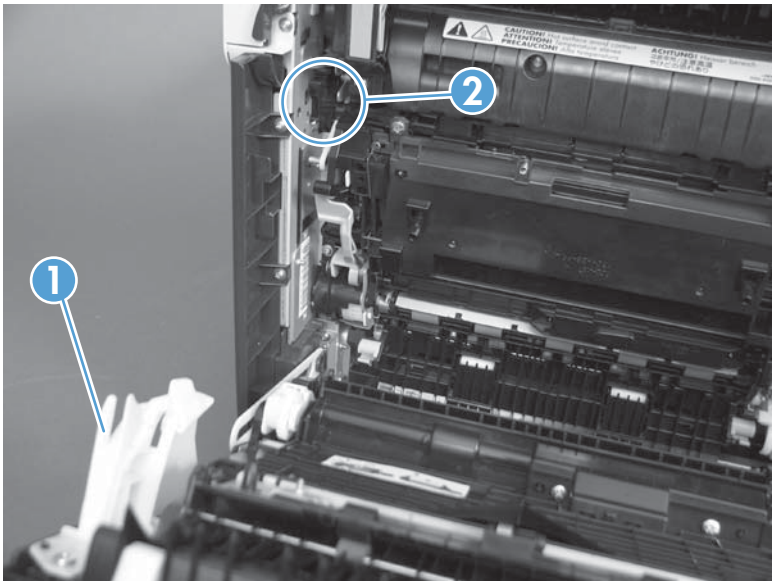
Table 2-11 Manual sensor diagnostic tests

Sensor or switch name	Sensor or switch number	Replacement Part number	Descriptions	Sensor test name
Front Door	SW1	RC2-5120-000CN	Interlock Switch	SW1 Front door
Tray 3 Feed	SR4	CF084-67901	500 Sheet Feeder Kit (tray 3)	Paper Path Test
Registration	SR8	RM1-4969-000CN	Registration assy	SR8 Registration
Fuser Loop 1	SR14	RM-8154-000CN 110V RM1-8156-000CN 220V	Fuser	SR14 Fuser loop 1
Fuser Loop 2	SR15	RM-8154-000CN 110V RM1-8156-000CN 220V	Fuser	SR15 Fuser loop 2
Fuser Pressure Release	SR7	RM1-8178-000CN	Sensor cable assy	SR7 Fuser Pressure Release
Fuser Output	SR5	W8G-5935-000CN	Photointerrupter	SR5 Fuser output
Duplex Refeed	SR22	RM1-8123-000CN	Right door assy	SR22 Duplex refeed
Developer Alienation	SR11	RM1-8133-000CN	Main drive assy	SR11 Developer Alienation
ITB Alienation	SR17	W8G-5935-000CN	Photointerrupter	SR17 ITB Alienation
Output Bin Full	SR6	RM1-4970-060CN	Paper delivery assy	SR6 Output Bin full

SW1 Front Door

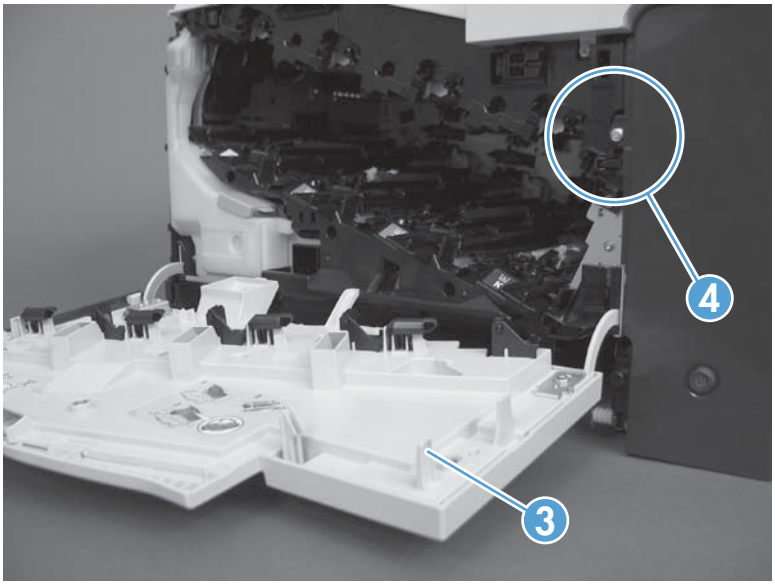
1. Open the right door (callout 1) to disengage the right-door switch (callout 2).

Figure 2-5 Test the front door switch (1 of 4)



2. Close the right door and check the control panel on the product for sensor response.
3. Open the front door (callout 3) to disengage the front-door switch (callout 4).

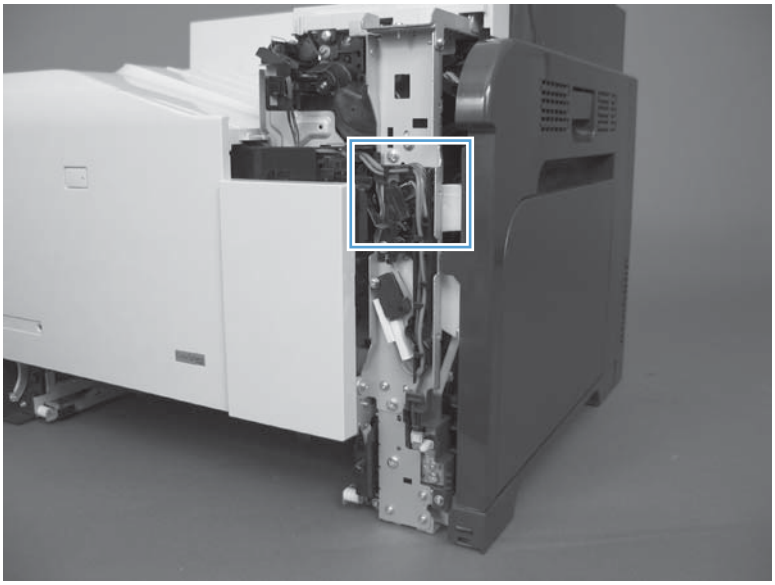
Figure 2-6 Test the front door switch (2 of 4)



4. Close the front door and check the control panel on the product for sensor response.
5. If either interlock switch failed to respond, remove the upper-front cover and right-front cover. By removing the right-front cover, you can tell if the linkages are properly closing the switches.

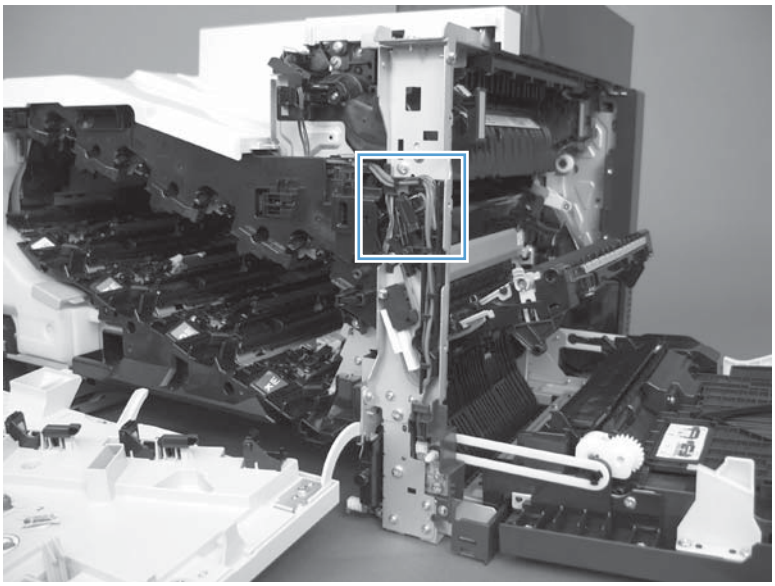
6. Close the right door and front door to verify that the switches close.

Figure 2-7 Test the front door switch (3 of 4)



7. Open the right door and front door to verify that the switches open.

Figure 2-8 Test the front door switch (4 of 4)

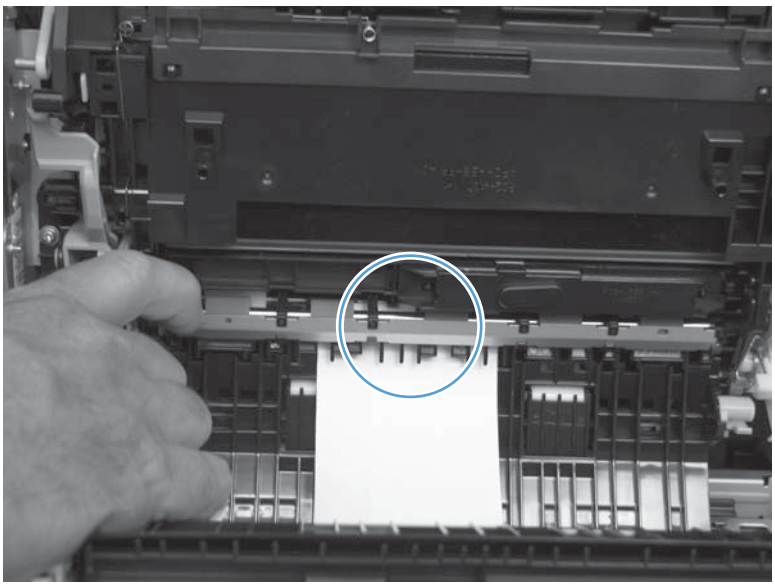


8. If the switches do not close, check the connectors on the DC controller PCA.
9. If the switches are opening/closing correctly when either door is open or closed, then check J118 on the DC controller.
10. If the connectors are securely connected to the DC controller PCA and the switches still do not close, replace the DC controller PCA.

SR8 Registration sensor

1. Open the right door.
2. Open the registration shutter.
3. Insert a piece of paper to activate the TOP sensor.

Figure 2-9 Test the registration sensor

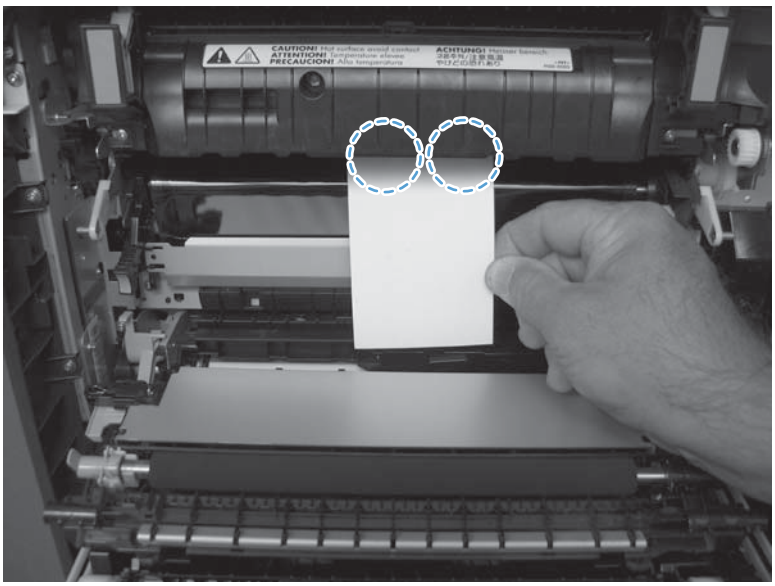


4. Check the control-panel display for sensor response.
5. If no response, replace the registration assembly.

SR14 Fuser Loop 1 and SR15 Fuser Loop 2 sensors

1. Open the right door.
2. Lower the secondary transfer assembly.
3. Slowly insert a piece of paper to activate the fuser loop sensors underneath the fuser.

Figure 2-10 Test the fuser loop sensors

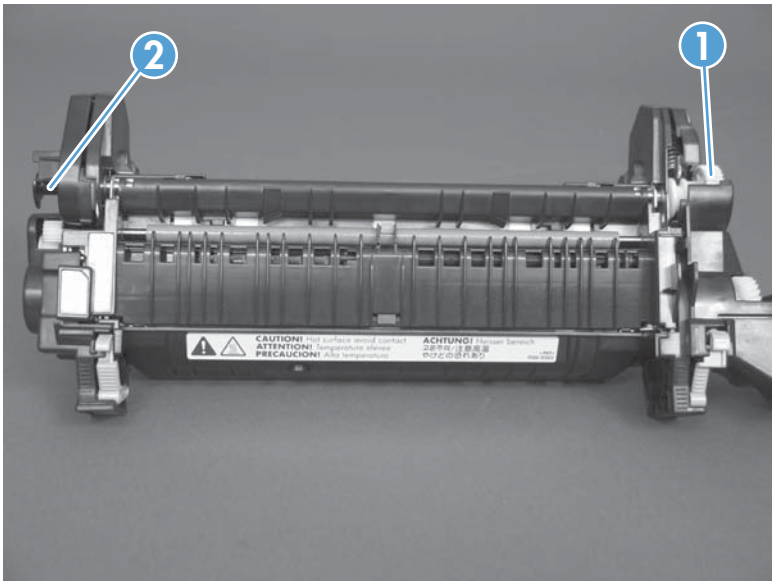


4. Check the control-panel display for a sensor response.
5. If there is no response, replace the fuser.

SR7 Fuser Pressure Release sensor

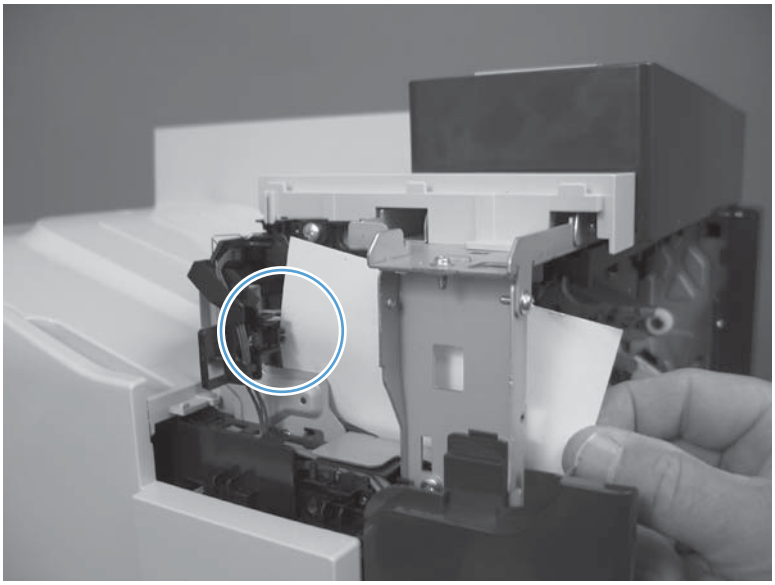
1. Open the right door.
2. Lower the secondary transfer assembly.
3. Remove the fuser, and then rotate the gear (callout 1) to move the flag (callout 2). If the flag does not actuate, replace the fuser.

Figure 2-11 Test the fuser pressure-release sensor (1 of 2)



4. Insert a piece of paper to activate the fuser pressure-release sensor.

Figure 2-12 Test the fuser pressure-release sensor (2 of 2)

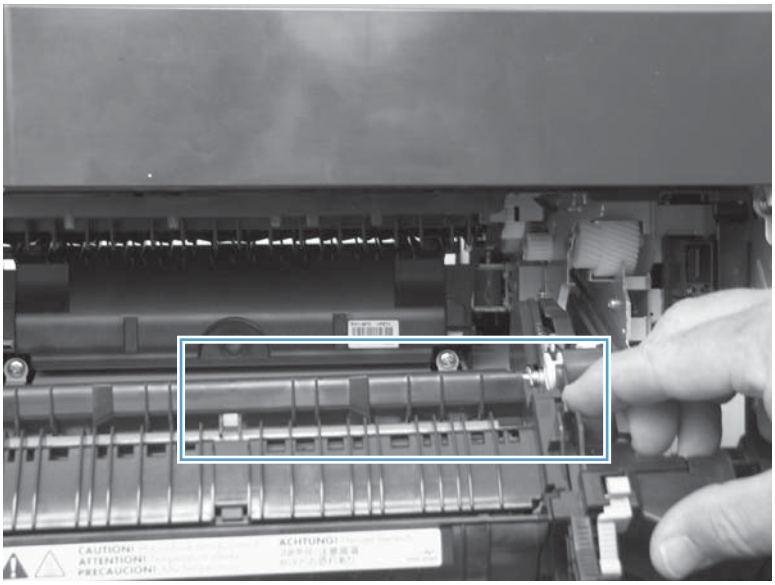


5. Check the control-panel display for sensor response.
6. If there is no response, replace fuser pressure-release sensor.

SR5 Fuser Output sensor

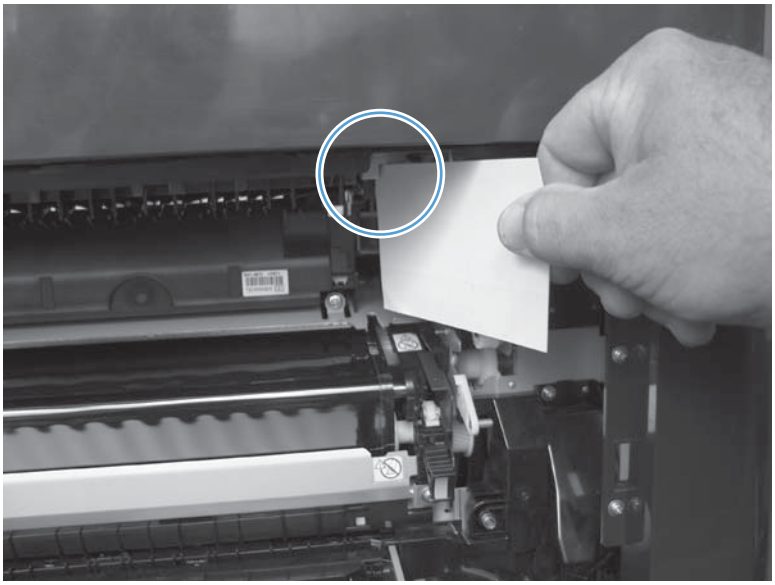
1. Open the right door.
2. Lower the secondary transfer assembly.
3. Remove the fuser assembly, and then verify that the sensor flag on the fuser assembly moves freely. If the sensor flag does not move freely, replace the fuser.

Figure 2-13 Test the fuser output sensor (1 of 2)



4. Insert a piece of paper to activate the sensor.

Figure 2-14 Test the fuser output sensor (2 of 2)

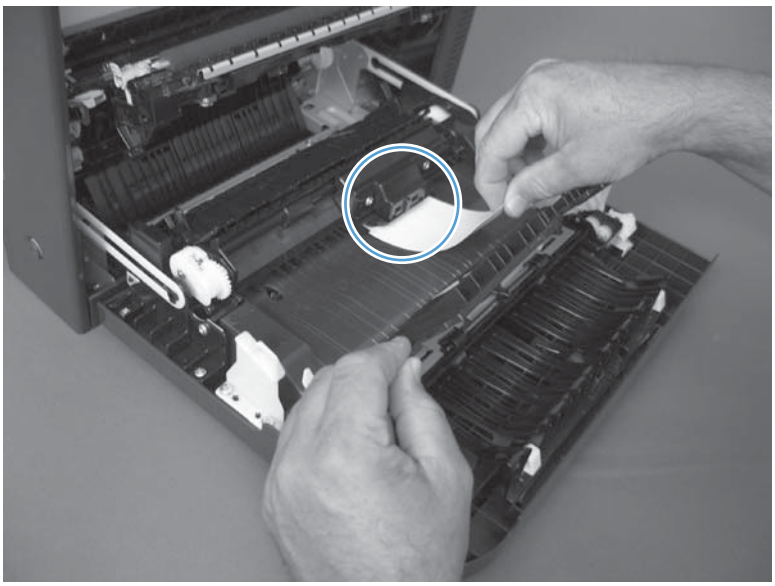


5. Check the control-panel display for a sensor response.
6. If there is no response, replace the fuser output sensor.

SR22 Duplexer Refeed sensor

1. Open the right door.
2. Use the green handle to lift the duplex jam cover.
3. Insert a piece of paper to activate the sensor.

Figure 2-15 Test the duplexer refeed sensor



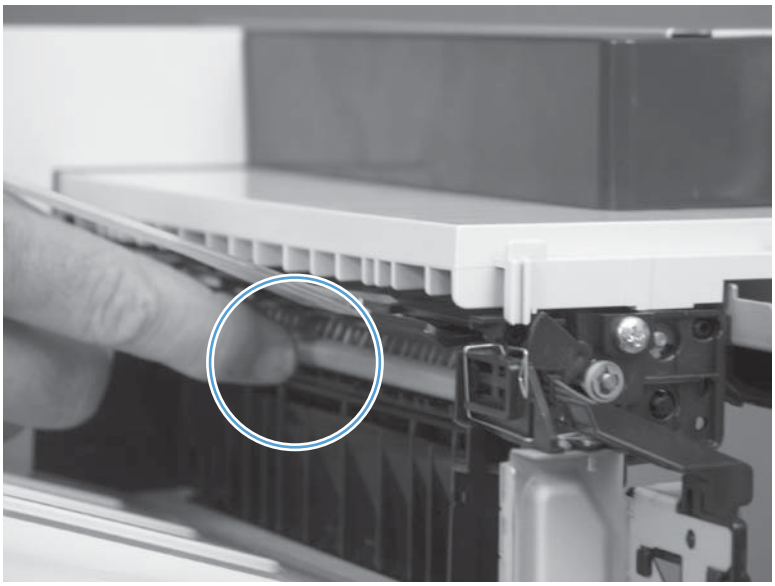
4. Check the control-panel display for sensor response.
5. If no response, replace the right door assembly.

SR6 Output Bin Full sensor

NOTE: Upper-front cover has been removed for clarity.

1. Open the right door.
2. Lower the secondary transfer assembly.
3. Remove the fuser.
4. Move the output-bin full sensor flag.

Figure 2-16 Test the output-bin-full sensor



5. Check the control-panel display for sensor response.
6. If no response, remove the control panel and verify that the flag is moving. If not, replace the delivery assembly. If the sensor is malfunctioning, replace the delivery assembly.

SR11 Developer Alienation sensor

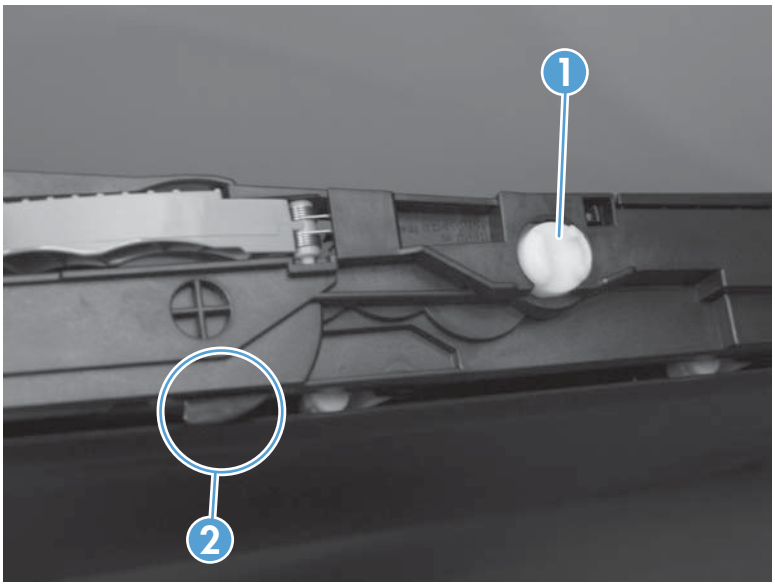
The normal status of sensor G is 0. Testing the sensor requires the following steps:

1. Turn off the product and then remove the formatter and left side cover.
2. Reinstall the formatter and turn on the product. Resume the manual sensor test.
3. Disconnect the 3–pin connector to the right of the power cord connection. Sensor G should change to 1.
4. Reconnect the connector. Sensor G should change to 0.
5. If sensor G does not change, replace the main drive assembly. See the product repair manual.

SR17 ITB Alienation sensor

1. Open the right door.
2. Lower the secondary transfer assembly.
3. Remove the ITB.
4. Rotate the gear (callout 1) to move the flag (callout 2). If the flag does not actuate, replace the ITB.

Figure 2-17 Test the ITB alienation sensor (1 of 2)



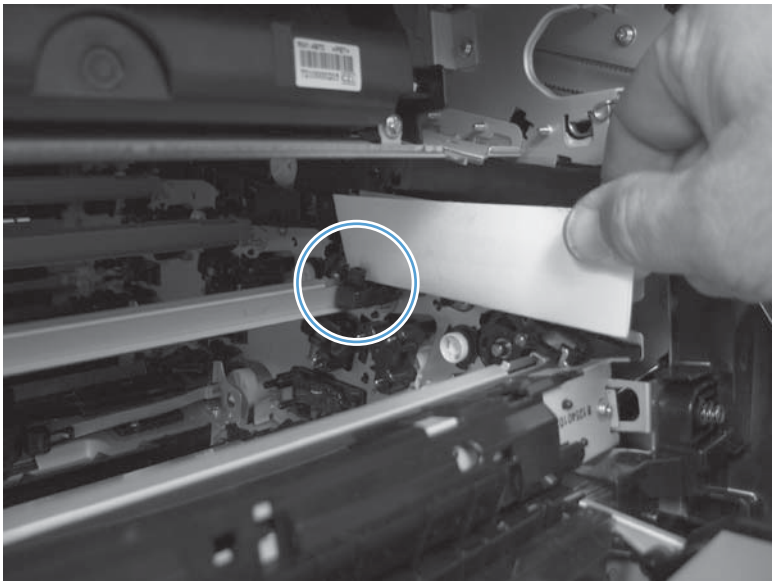
5. Remove all toner cartridges.

NOTE: Cover all removed toner cartridges with paper.

6. Locate the sensor behind the cyan OPC drum position.

7. Insert a piece of paper to activate the ITB alienation sensor.

Figure 2-18 Test the ITB alienation sensor (2 of 2)



8. Check the control-panel display for sensor response.
9. If no response, replace the sensor.

Tray/bin manual sensor test

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

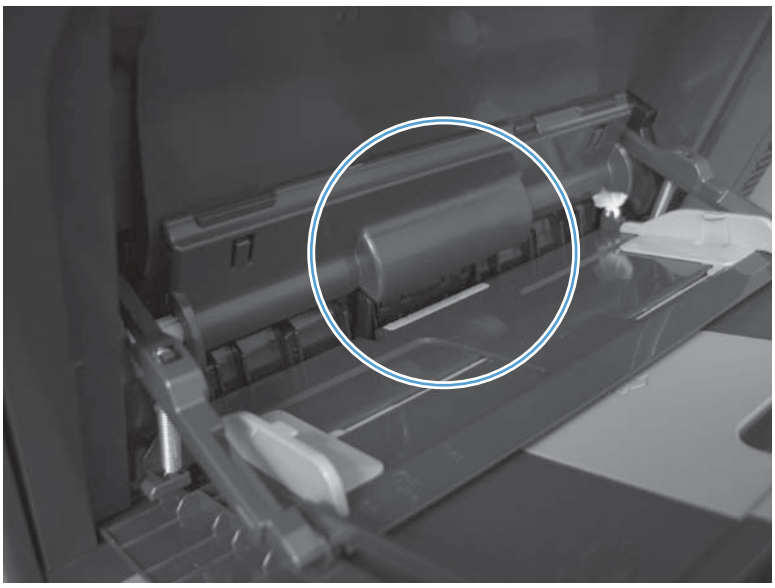
Table 2-12 Tray/bin manual sensors

Sensor or switch name	Sensor or switch number	Replacement part number	Descriptions	Sensor Test Name
Tray 1 Paper present	SR21	RM1-8123-000CN	Right door assy	SR21 Tray 1 paper
Tray 2 Paper present	SR20	RM1-4967-040CN	Cassette paper pick up assy	SR20 Tray 2 paper
Tray 2 Sensor	SR13	RM1-4976-040CN	Lifter drive assy	SR13 Tray 2 Cassette sensor
Tray 2 Lifter	SR9	RM1-4976-040CN	Lifter drive assy	SR9 Tray 2 Cassette lifter
Tray 3 Paper Surface	SR2	CF084-67901	500 Sheet feeder kit (tray 3)	SR2 Tray 3 paper
Tray 3 Tray 3 Paper Size 1	SW1	RM1-5913-000CN	Lifter base assy	Tray 3 SW1 paper size sensors
Tray 3 Tray 3 Paper Size 2				
Tray 3 Tray 3 Paper Size 3				
Tray 3 Refeed	SR4	CF084-67901	500 Sheet feeder kit (tray 3)	Paper Path Test

SR21 Tray 1 Paper sensor

1. Open Tray 1.
2. Move the Tray 1 paper sensor flag.

Figure 2-19 Test the Tray 1 paper sensor

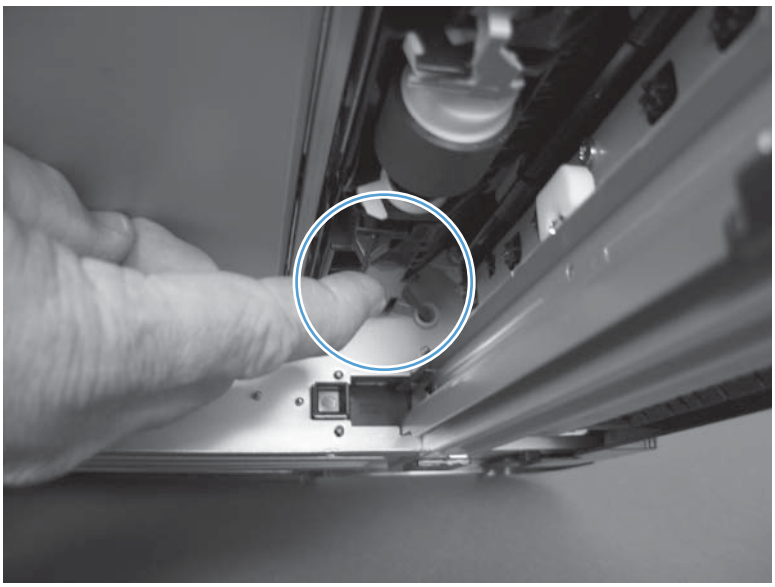


3. Check the control-panel display for sensor response.
4. If no response, replace Tray 1.

SR20 Tray 2 Paper sensor

1. Remove Tray 2.
2. Move the Tray 2 paper sensor flag.

Figure 2-20 Test the Tray 2 paper sensor



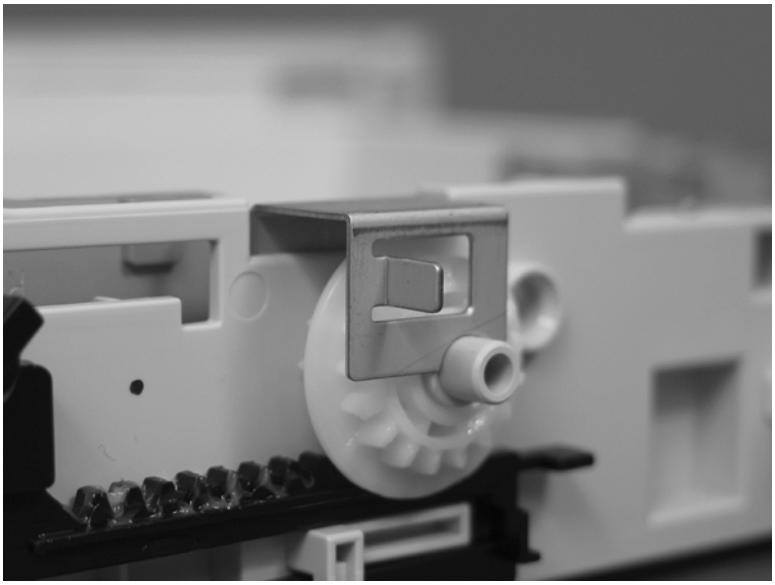
3. Check the control-panel display for sensor response.
4. If there is no response, replace the Tray 2 paper-out sensor.

SR13 Tray 2 sensor

1. Remove Tray 2.

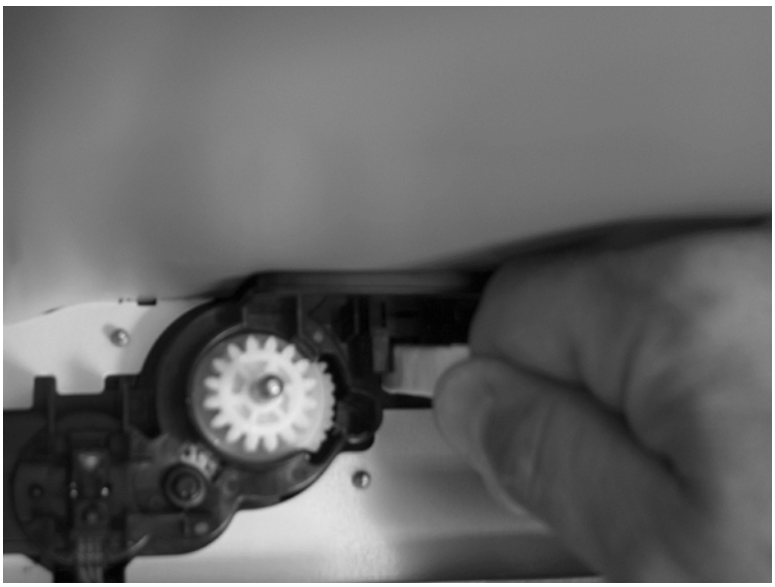
NOTE: The Tray 2 sensor flag is on the back of Tray 2. Inspect the flag to verify that it is aligned correctly. If it is bent upward, it might miss the sensor when installed.

Figure 2-21 Test the Tray 2 sensor (1 of 2)



2. Insert a piece of paper in the Tray 2 sensor.

Figure 2-22 Test the Tray 2 sensor (2 of 2)

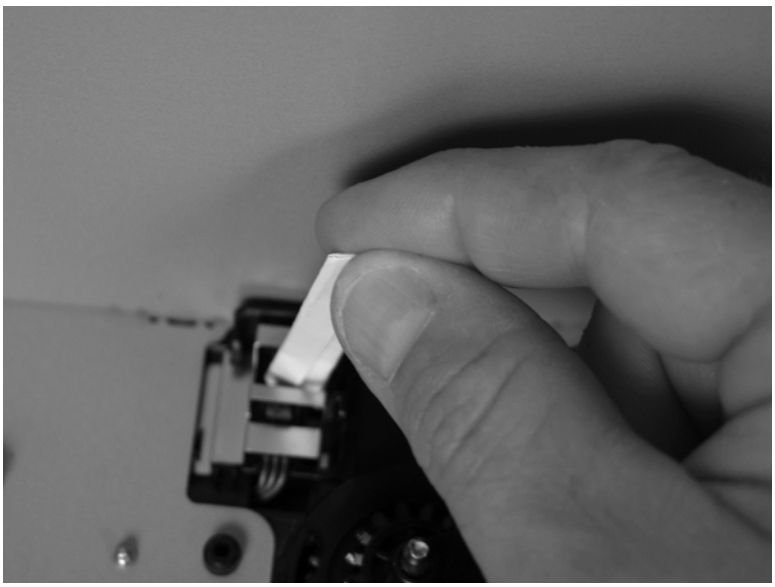


3. Check the control-panel display for sensor response.
4. If there is no response, replace the lifter-drive assembly.

SR9 Tray 2 Lifter sensor

1. Remove Tray 2.
2. In the Tray 2 cavity, insert a piece of paper in the Tray 2 lifter sensor.

Figure 2-23 Test the Tray 2 lifter sensor

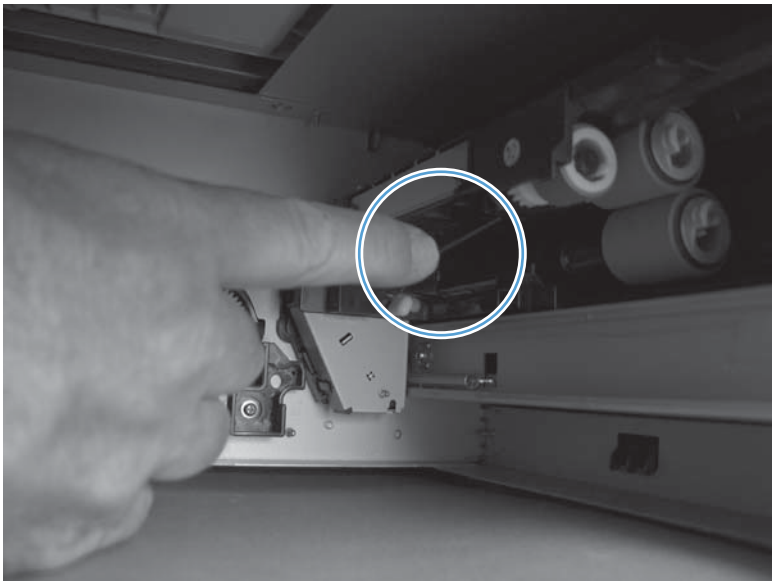


3. Check the control-panel display for sensor response.
4. If no response, replace the lifter-drive assembly.

SR3 Tray 3 Paper

1. Remove the optional Tray 3.
2. Move the optional Tray 3 paper sensor flag.

Figure 2-24 Test the optional Tray 3 paper sensor

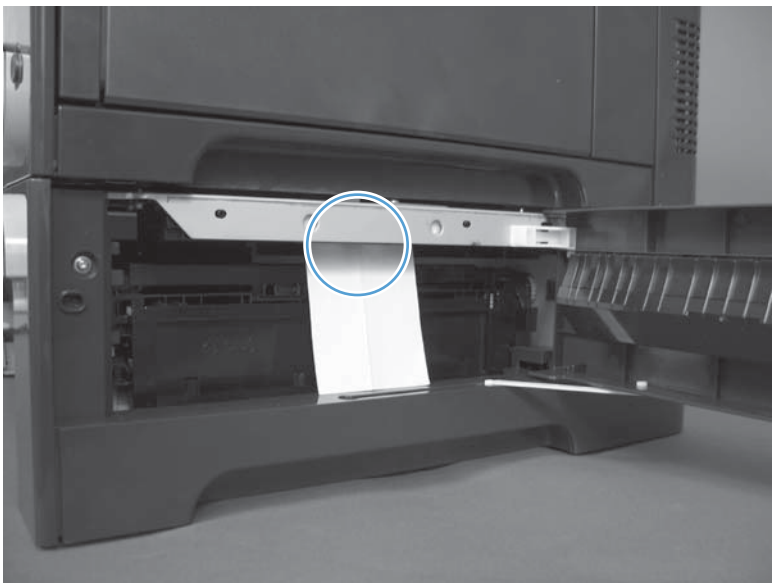


3. Check the control-panel display for sensor response.
4. If no response, replace the optional Tray 3.

SR4 Tray 3 Feed

1. Open the right door on optional Tray 3.
2. Insert a piece of paper to activate the optional Tray 3 feed sensor

Figure 2-25 Test the optional Tray 3 feed sensor

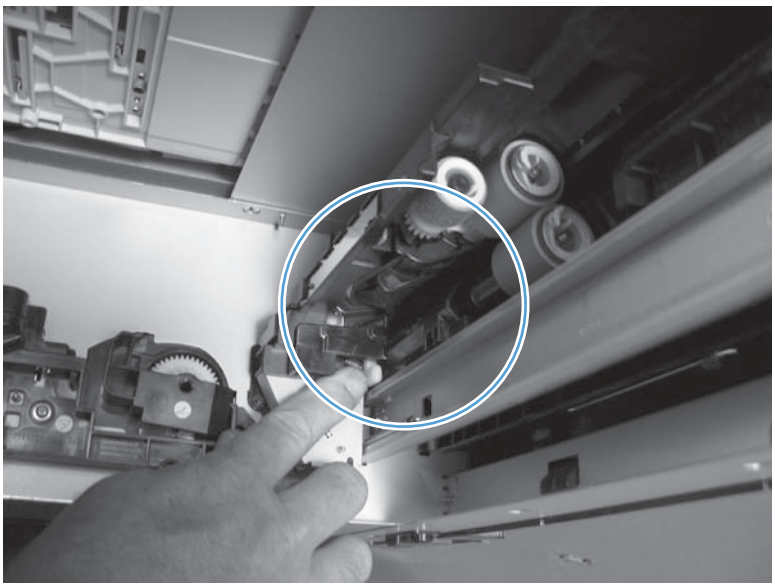


3. Check the control-panel display for sensor response.
4. If there is no response, replace the optional Tray 3.

SR2 Tray 3 paper surface

1. Remove the optional Tray 3.
2. Push the lever to activate the sensor arms.

Figure 2-26 Test the optional Tray 3 paper surface sensor

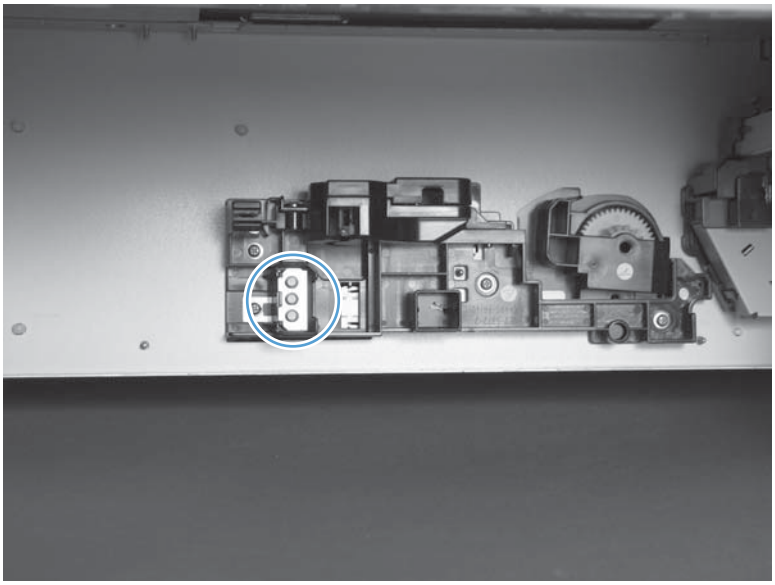


3. If there is no response, replace the optional Tray 3.

Tray 3 SW1 paper size sensors

1. Push any of the three buttons to see if the control panel changes for sensors.

Figure 2-27 Test the optional Tray 3 SW1 paper size sensors



2. If any of the tests fail, replace the 500-sheet feeder.

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. The test can be programmed to stop printing internal pages or an external print job when the paper reaches a certain position. The test can also be programmed to stop from 0 to 60,000 ms. If the timer is set to a value that is greater than the job-print time, 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 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: tests the key pad and other buttons.
- Touchscreen: tests the control-panel touchscreen.

For more control-panel diagnostics, see Control-panel checks on page 83.

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.

NOTE: The front or side door interlocks must be defeated to run the component tests. Some tests might require that the ITB and toner cartridges be removed. The control panel display prompts you to remove some or all cartridges during certain tests.

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 2-13 Component test details

Component test	Motor or solenoid number	Replacement part number	Comments
Transfer Motors	M5	RM1-8105-000CN	All motors related to cartridges and belts.

Table 2-13 Component test details (continued)

Component test	Motor or solenoid number	Replacement part number	Comments
Belt Only	M10	RK2-2415-000CN	Remove all toner cartridges to perform this test. Rotates the ITB belt. You can hear the auger motor running.
Cartridge Motors	• M3: yellow • M4: magenta/cyan • M5: black	RM-8105-000CN	Activates three drum motors at a specified speed for 10 seconds.
Fuser Motor	M2	RM1-4983-000CN	Activates the fuser motor at a specified speed for 10 seconds.
Fuser Pressure Release Motor	M2 reverse	RM1-4983-000CN	Reverses the fuser motor and pressurizes or depressurizes the pressure release motor.
Alienation Motor	M10	RK2-2415-000CN	Activates CMYK developer alienation in the following sequence: All colors engaged, all colors alienated, K-only engaged, and K alienated.
ITB Contact/ Alienation	M2	RM1-4983-000CN	Activates the ITB drive motor at a specified speed for 10 seconds.
TCU Motor	M12		Activates the motor at a specified speed for 10 seconds.
Tray <X> Pickup Motor	T2 SL4 Tray 3: M1 (paper feed motor) M2 (paper feeder lift motor)	M1: RM1-5773-000CN M2: RM1-4983-000CN	Activates the pickup motor, pickup roller, separation roller, and registration roller at a specified speed for 10 seconds.
Duplex pick up solenoid	M11: Duplex reverse motor		Activates the motor at a specified speed for 10 seconds.
Tray <X> Pickup Solenoid	Tray 1: SL3 Tray 2: SL4 Tray 3: SL1	"SL3: RM1-8124-000CN SL4: RM1-5773-000CN SL1 RM1-5914-000CN	Activates the solenoid for 10 seconds.
Duplex Refeed Clutch Solenoid	• CL1: duplex re-pickup clutch • SL2: duplex reverse solenoid	CL1: RM1-4973-000CN SL2: RM1-4973-000CN	Activates the clutch and solenoid for 10 seconds.
Black Laser Scanner	M8		Activates the black/cyan scanner motor for 10 seconds.
Cyan Laser Scanner	M8		Activates the black/cyan scanner motor for 10 seconds.

Table 2-13 Component test details (continued)

Component test	Motor or solenoid number	Replacement part number	Comments
Magenta Laser Scanner	M9		Activates the yellow/magenta scanner motor for 10 seconds.
Yellow Laser Scanner	M9		Activates the yellow/magenta scanner motor for 10 seconds.

Diagrams

Block diagrams

Figure 2-28 Sensors

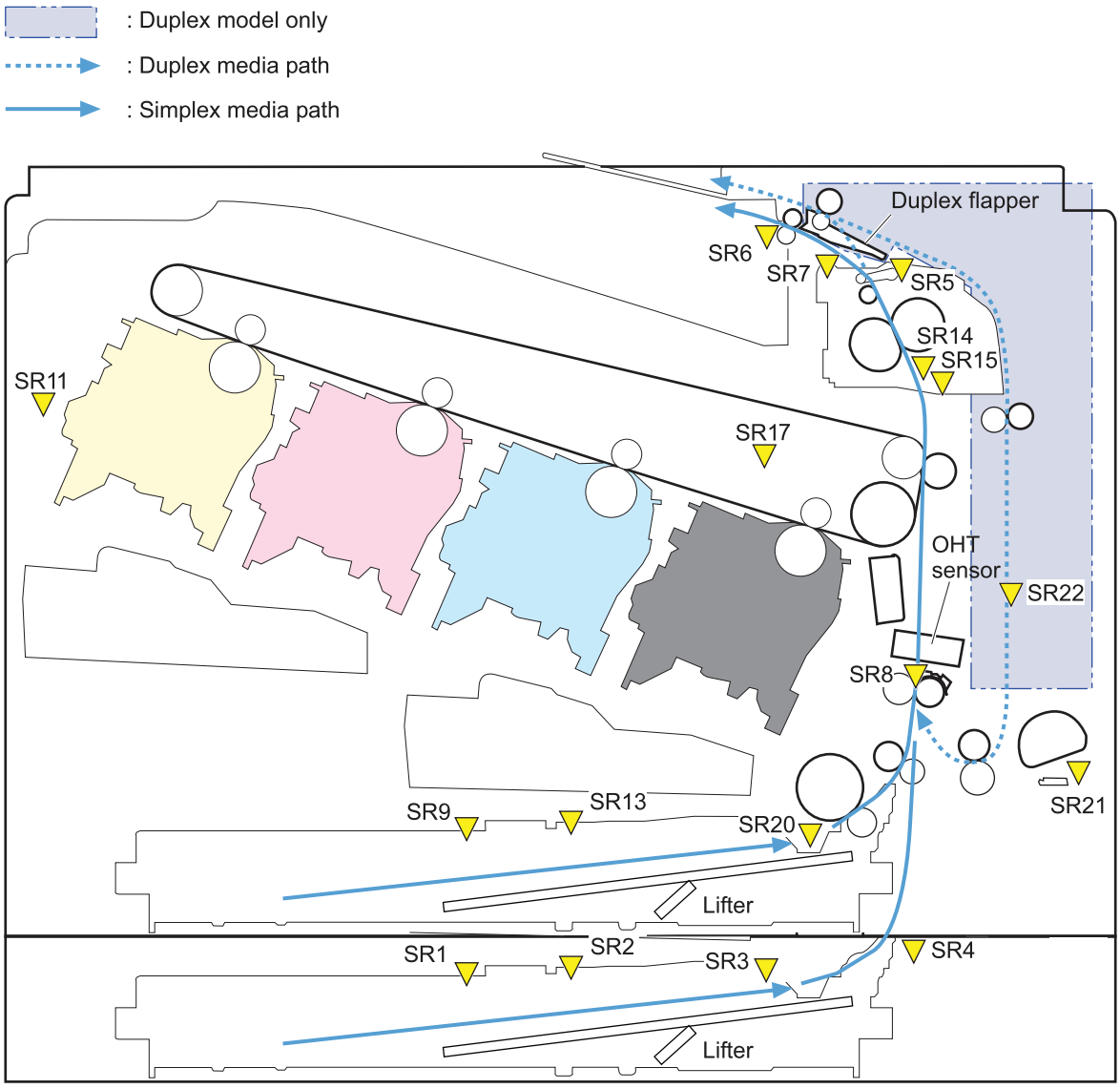


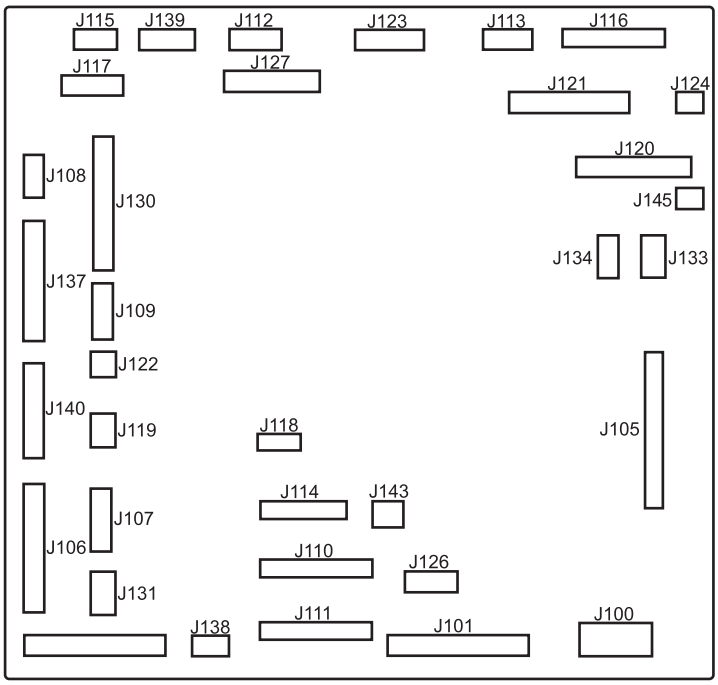
Table 2-14 Sensors

Component abbreviation	Component name
SR1	Tray 3 paper surface sensor 1
SR2	Tray 3 paper surface sensor 2
SR3	Tray 3 paper sensor
SR4	Tray 3 feed sensor
SR5	Fuser output
SR6	Output bin full
SR7	Fuser pressure release
SR8	Registration
SR9	Tray 2 lifter
SR10	Paper width 1
SR11	Developer alienation
SR13	Tray 2 sensor
SR14	Fuser loop 1
SR15	Fuser loop 2
SR17	ITB alienation
SR20	Tray 2 paper
SR21	Tray 1 paper
SR22	Duplexer refeed

Location of connectors

DC controller PCA

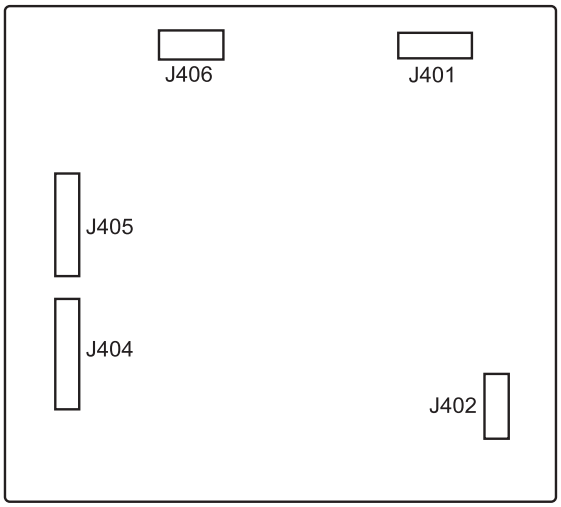
Figure 2-29 DC controller PCA



J100: 24 v from low-voltage power supply (LVPS) and interlock	**J114**: HVPS lower	**J126**: memory tag connector
J101: LVPS	**J115**: fuser sensors	**J127**: pre-exposure LEDs (rear), SR17, SL1
J105: interconnect board (ICB)	**J116**: HVPS upper	**J130**: registration density (RD) sensors (front and rear)
J106: 500-sheet feeder, developing home position, laser motors	**J117**: fuser motor	**J131**: pickup motor
J107: duplex sensor, Tray 1 solenoid, paper present sensor	**J118**: 5 v interlock	**J133**: not used
J108: environmental sensor	**J119**: LVPS fan	**J134**: not used
J109: duplex clutch, overhead transparency (OHT) in, top-of-page sensor	**J120**: drum motor 1 and drum motor 2	**J137**: toner collection unit (TCU) full, TCU motor, toner level detection
J110: YM laser	**J121**: drum motor 3, drum position 1,2,3	**J138**: 24 v to HVPS lower
J111: CK laser	**J122**: OHT out	**J139**: fuser sensors
J112: pre-exposure LEDs (front)	**J123**: pressure release, bin full, fuser delivery	**J140**: lift motor, tray present, stack surface (lifter drive assembly)
J113: 24 v to high-voltage power supply (HVPS) upper	**J124**: 24 v to scanner-control board (SCB)	**J143**: 24 v present from LVPS

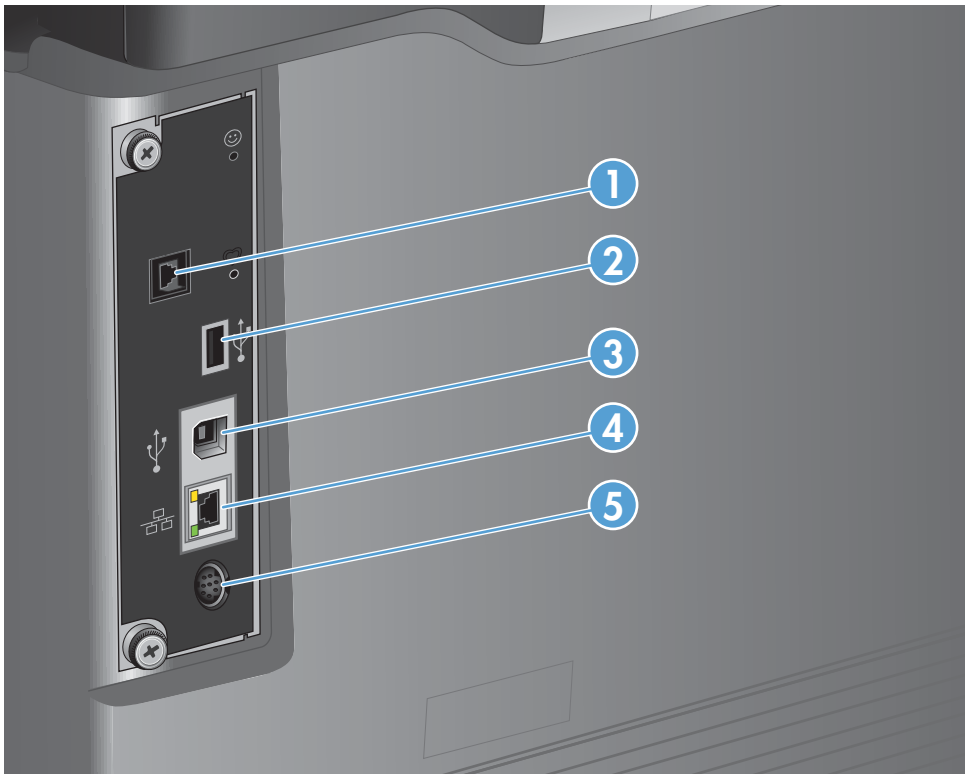
Paper feeder driver PCA

Figure 2-30 Paper feeder driver PCA



J401: engine connector
J402: not used
J404: SW1, SW2, lifter motor
J405: SR1, SR2, SR3, SR4, SL1
J406: feed motor

Plug/jack locations



1	Fax port
2	USB port for connecting external USB devices
3	Hi-Speed USB 2.0 printing port
4	Local area network (LAN) Ethernet (RJ-45) network port
5	Foreign interface harness (for connecting external devices)

Locations of major components

Use the diagrams to locate components. For a list of components, see Table 2-17 PCAs, motors, fans, switches, solenoids, and clutches on page 129.

Base product

Figure 2-31 Component locations (1 of 5)

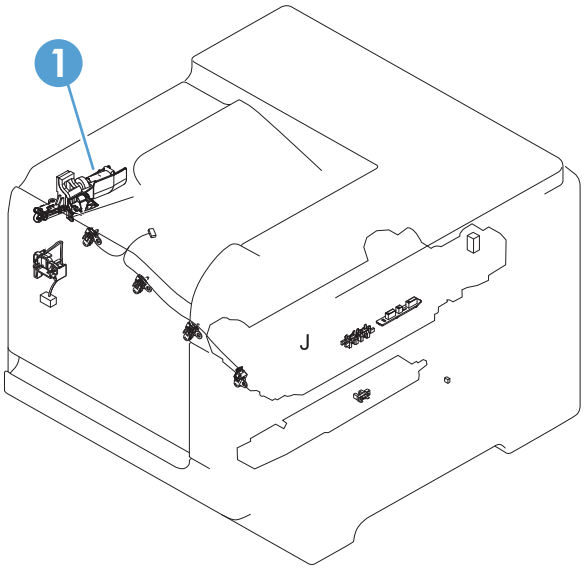


Figure 2-32 Component locations (2 of 5)

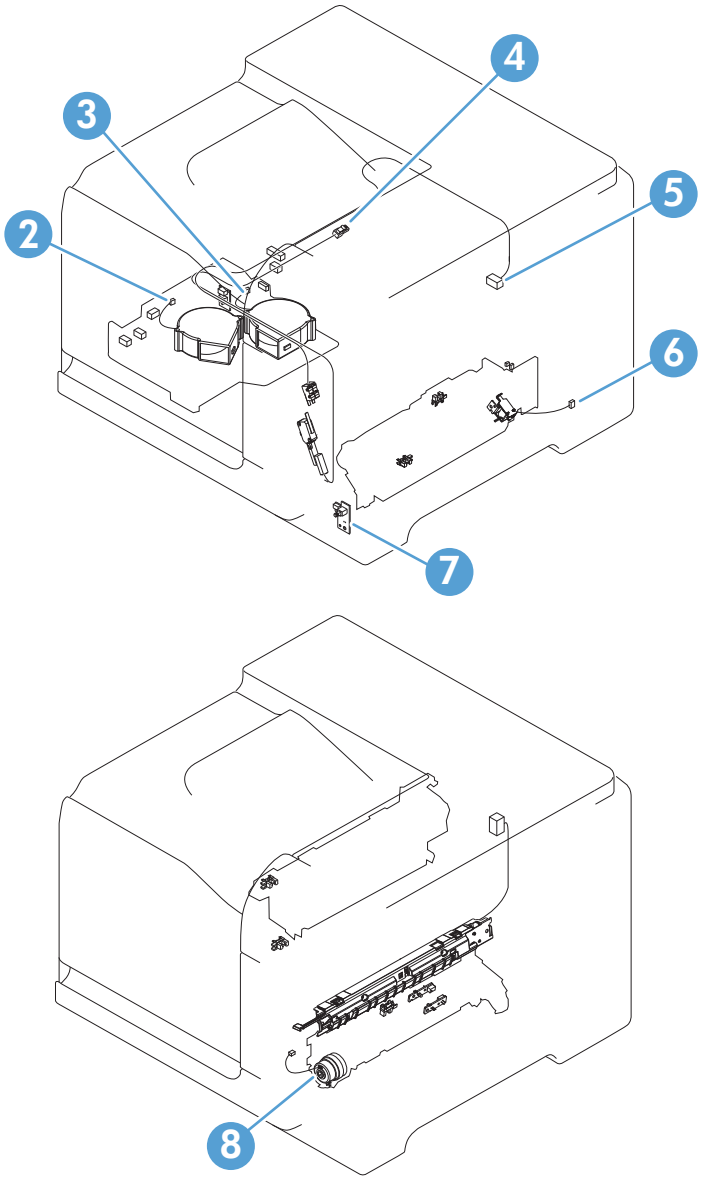


Figure 2-33 Component locations (3 of 5)

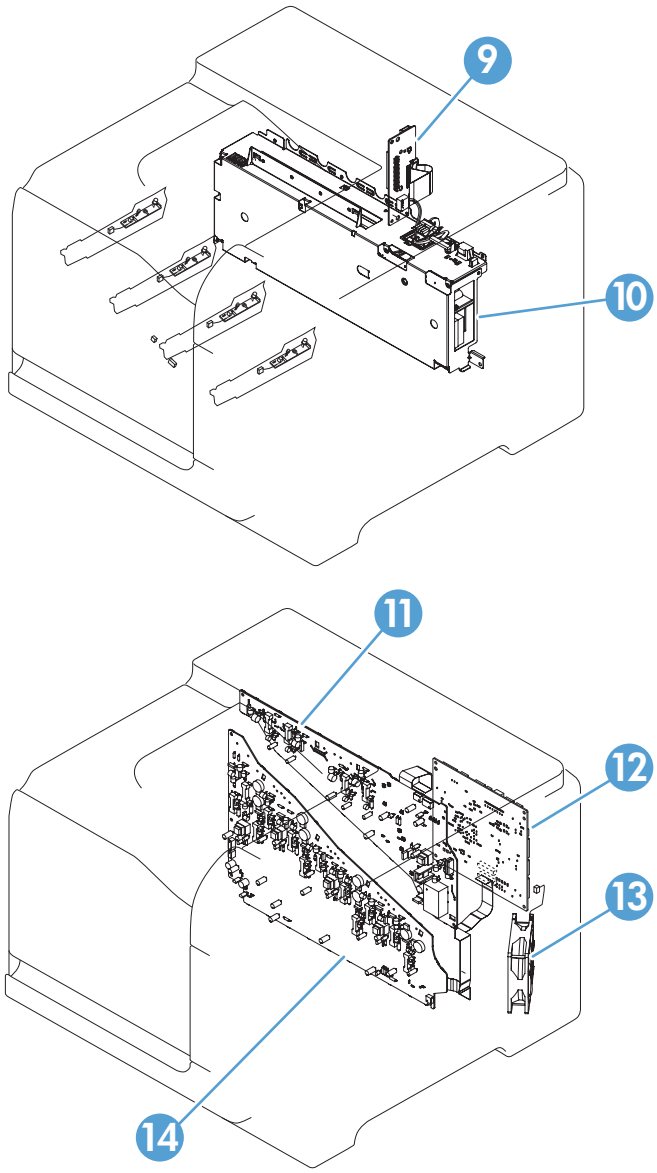


Figure 2-34 Component locations (4 of 5)

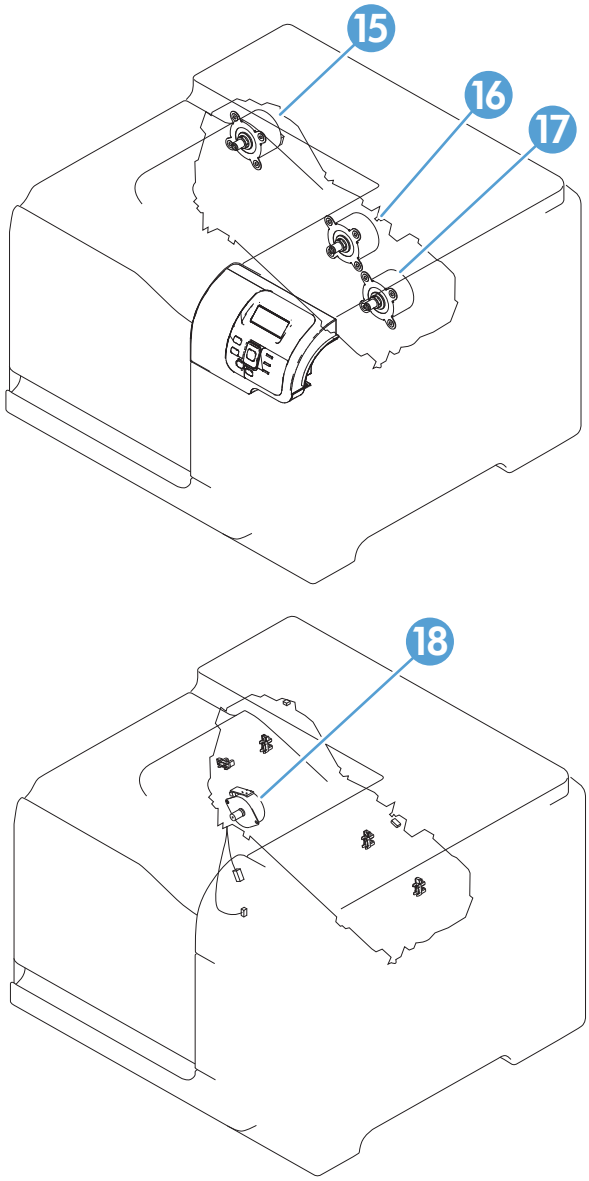


Figure 2-35 Component locations (5 of 5)

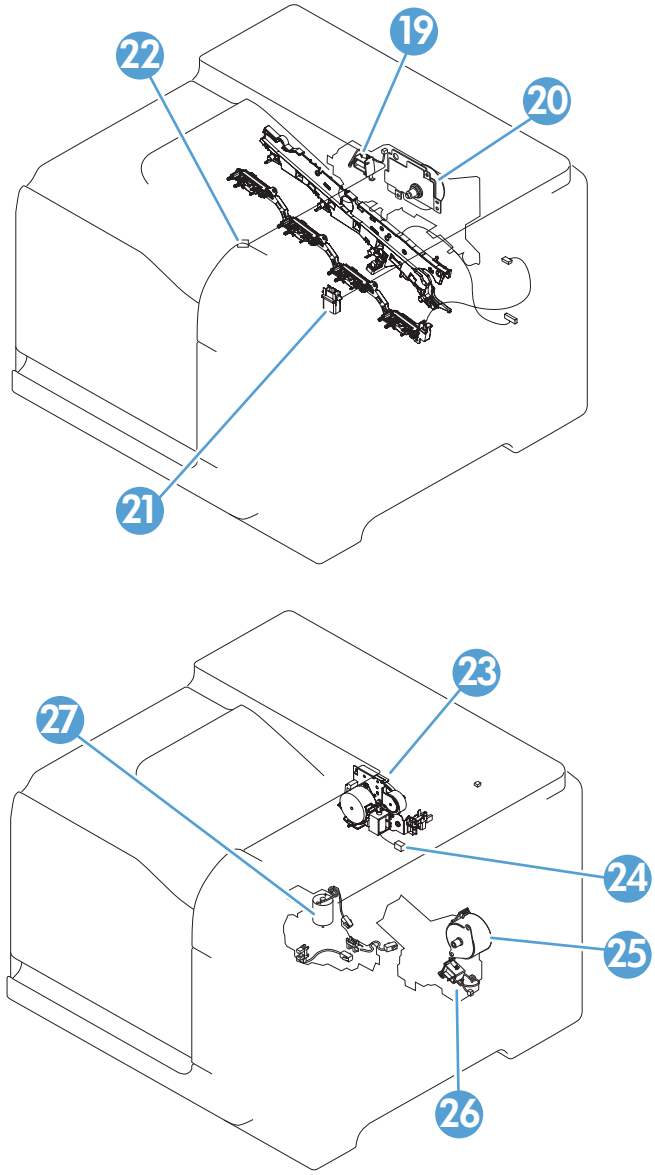


Table 2-17 PCAs, motors, fans, switches, solenoids, and clutches

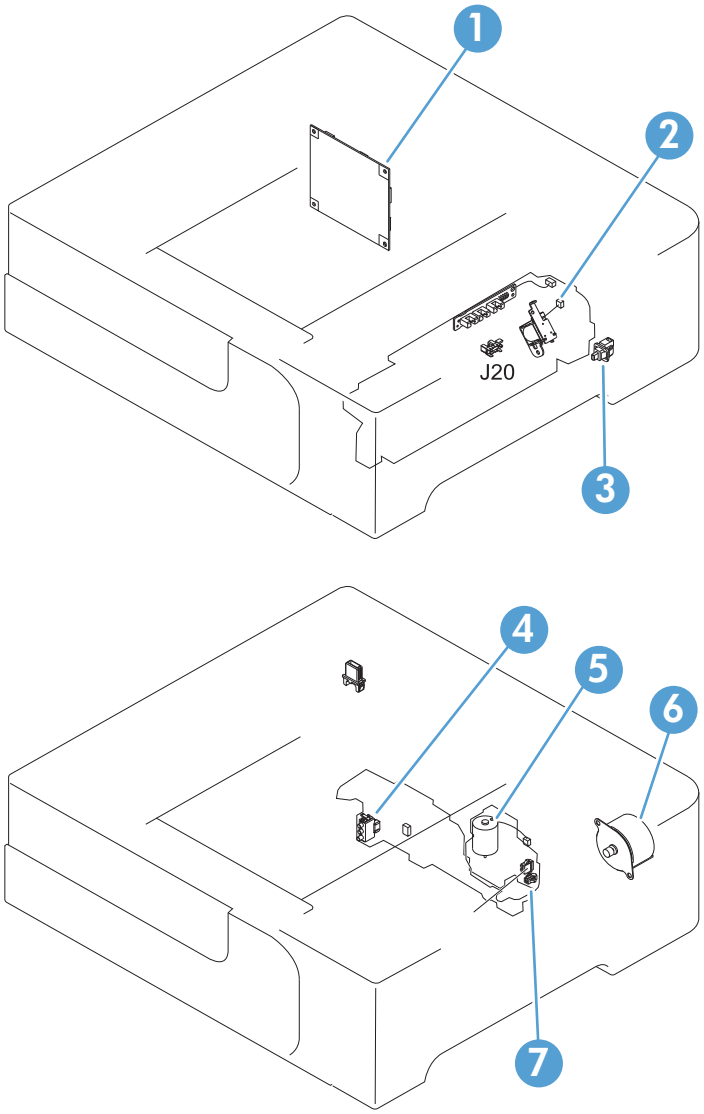
Location	Connector	Component abbreviation	Component name
1	J89	M12	Residual toner-feed motor
2	J26	FM2	Cartridge fan
3	J27	FM3	Delivery fan
4	J62	SW3	24V interlock switch
5	J118	SW1, SW2	5V interlock switch
6	J84	SL3	Multipurpose-tray pickup solenoid
7	J780	SW4	Power switch

Table 2-17 PCAs, motors, fans, switches, solenoids, and clutches (continued)

Location	Connector	Component abbreviation	Component name
8	J86	CL1	Duplex re-pick clutch
9		ICB	Interconnect board (ICB)
10		LVPS	Low-voltage power supply
11		HVPS (t)	HVPS-T upper
12		DCC	DC Controller
13	J119	FM1	Power-supply fan
14		HVPS (d)	HVPS-D (lower)
15	J41	M3	Drum motor 1 RM1-8105-000CN
16	J40	M4	Drum motor 2 RM1-8105-000CN
17	J42	M5	Drum motor 3 RM1-8105-000CN
18	J25	M10	Development-disengagement motor RK2-2415-000CN
19	J8	SL1	Primary transfer roller disengagement solenoid
20	J15	M2	Fuser motor
21	J55	M9	Yellow/magenta scanner motor
22	J56	M8	Cyan/black scanner motor
23	J20	M11	Duplex reverse motor (duplex models only)
24	J21	SL2	Duplex reverse solenoid (duplex models only)
25	J6	M13	Pickup motor RM1-5773-000CN
26	J83	SL4	Tray-pickup solenoid
27	J78	M7	Tray 2 lifter motor RM1-4976-000CN

1 x 500 paper feeder

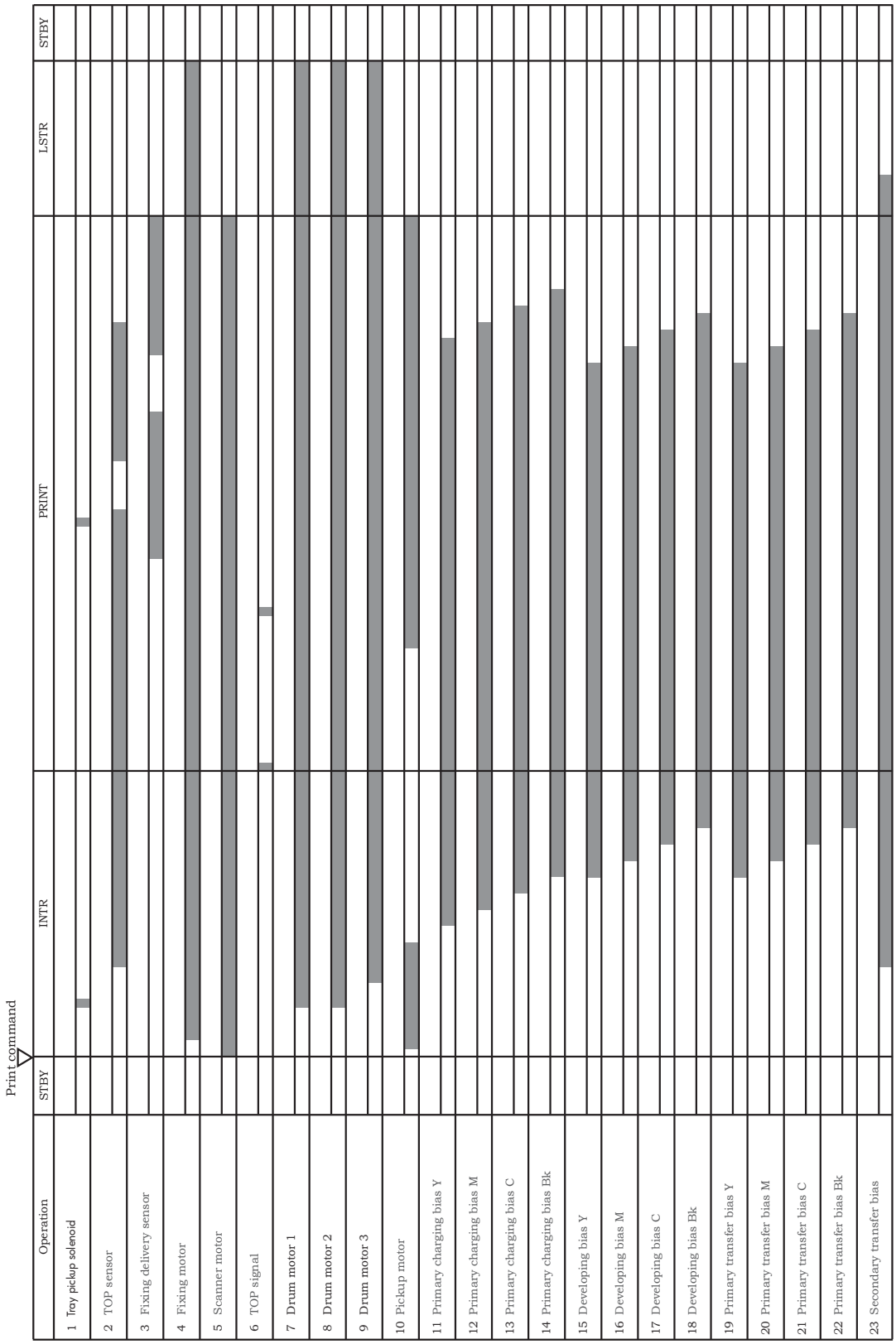
Figure 2-36 1 x 500 paper feeder



Location	Connector	Component abbreviation	Component name
1		PF PCA	Paper-feeder driver PCA
2/7	J18	SL1	Paper-feeder pickup solenoid
3	J21	SW2	Paper-feeder door switch
4	J16	SW1	Paper feeder tray media size switch
5	J15	M2	Paper-feeder lifter motor
6	J14	M1	Paper-feeder motor

General timing chart

Figure 2-37 General timing chart



Timing chart is two consecutive print jobs on letter-size paper (full color using one-to-one speed mode)

Circuit diagrams

Figure 2-38 General circuit diagram (1 of 2)

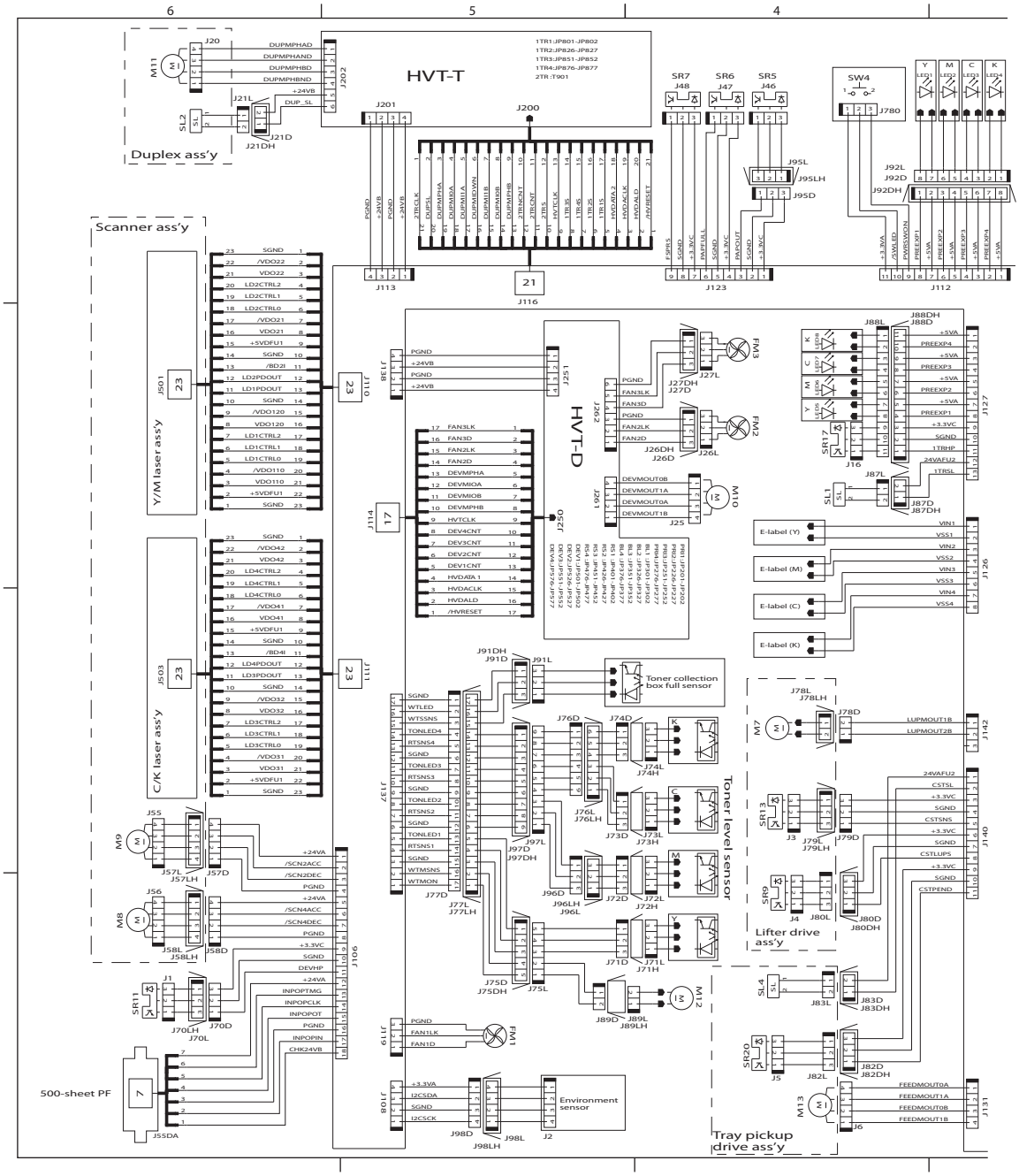


Figure 2-39 General circuit diagram (2 of 2)

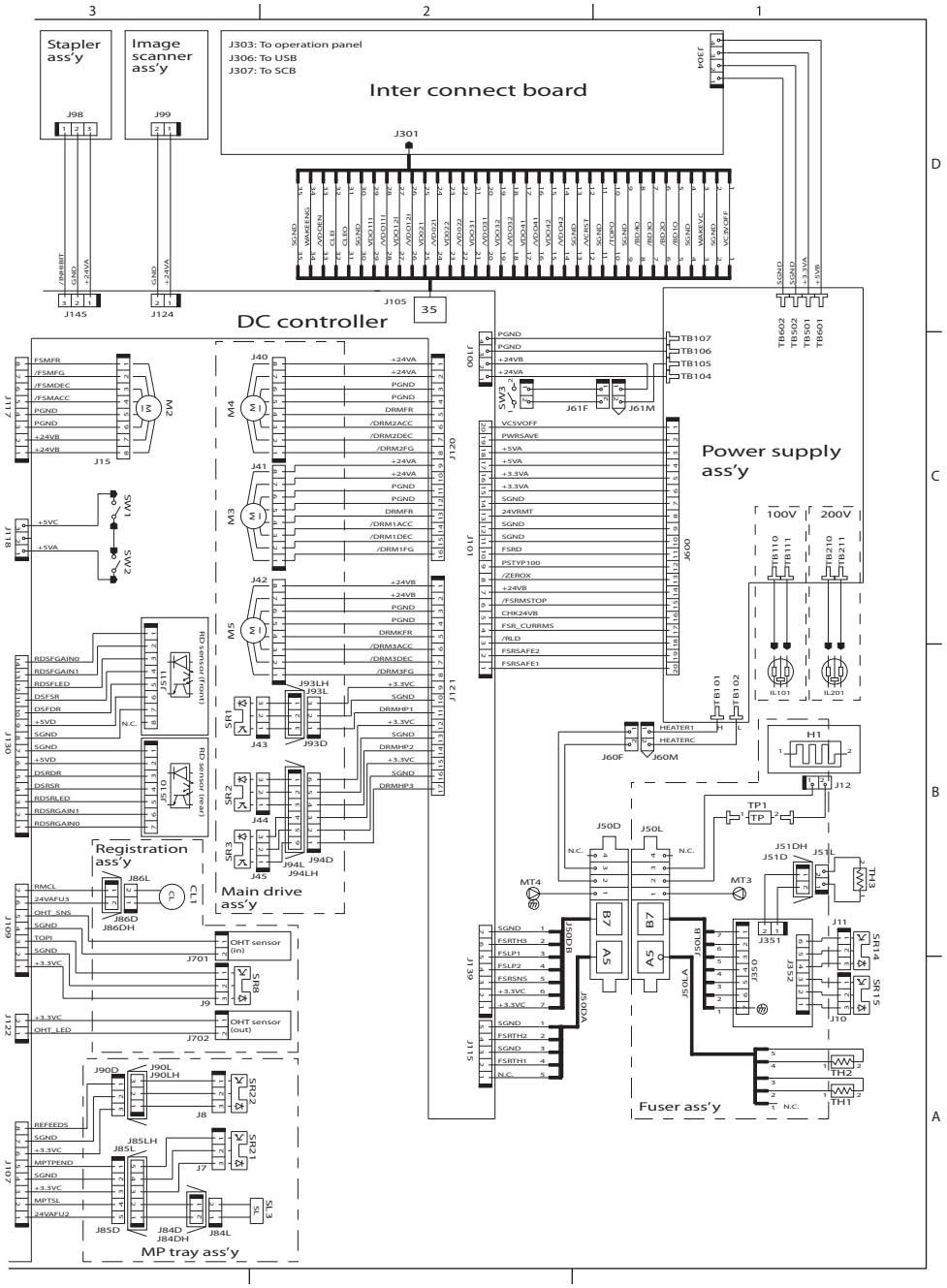


Figure 2-40 Product circuit block diagram

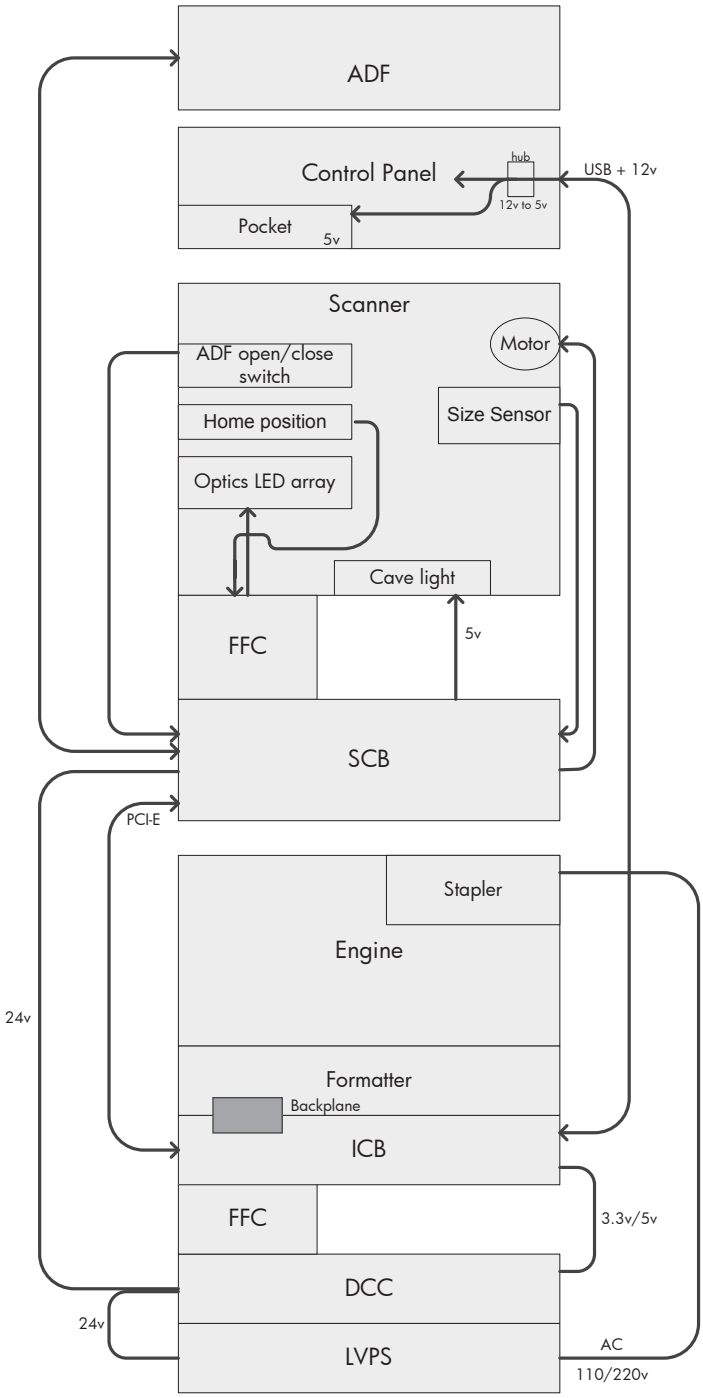
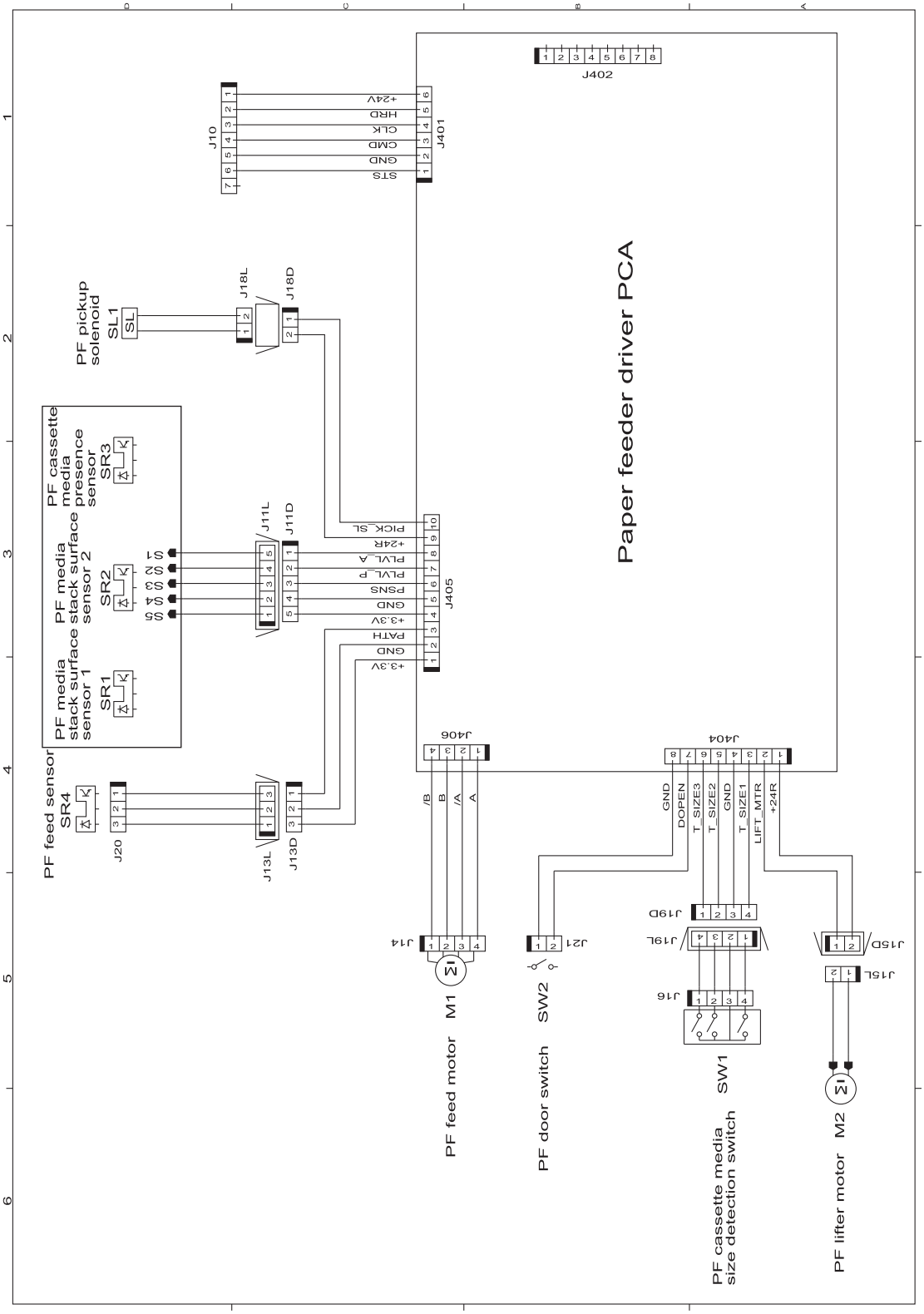


Figure 2-41 Paper feeder circuit diagram



Internal print-quality test pages

Print quality troubleshooting pages

Use the print-quality-troubleshooting pages to help diagnose and solve color print-quality problems.

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
   - Print PQ Troubleshooting Page
3. Touch the Print button. The product prints several print-quality troubleshooting pages.

The product returns to the **Ready** state after printing the print-quality-troubleshooting pages. Follow the instructions on the pages that print out.

Figure 2-42 Print-quality troubleshooting procedure

Figure 2-43 Yellow print-quality troubleshooting page

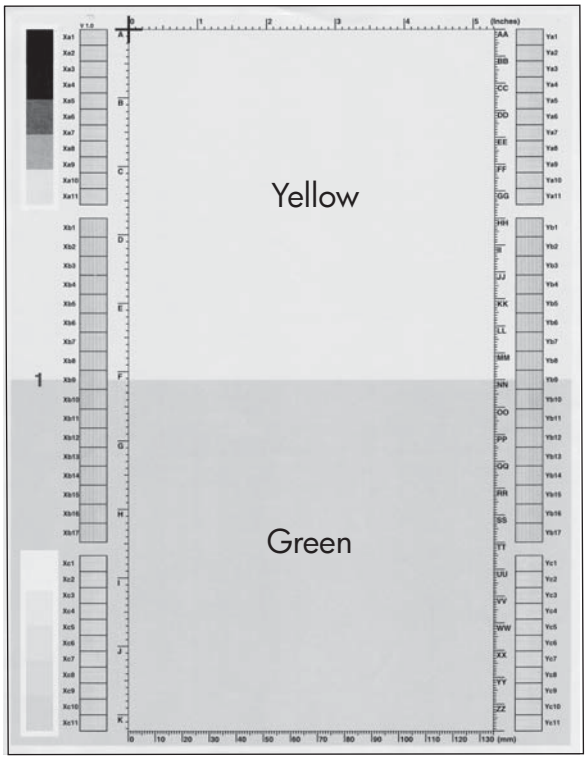
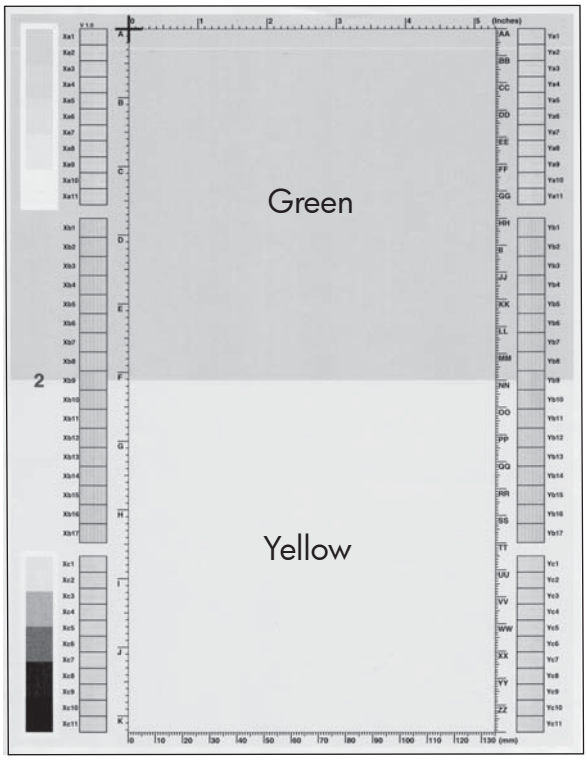
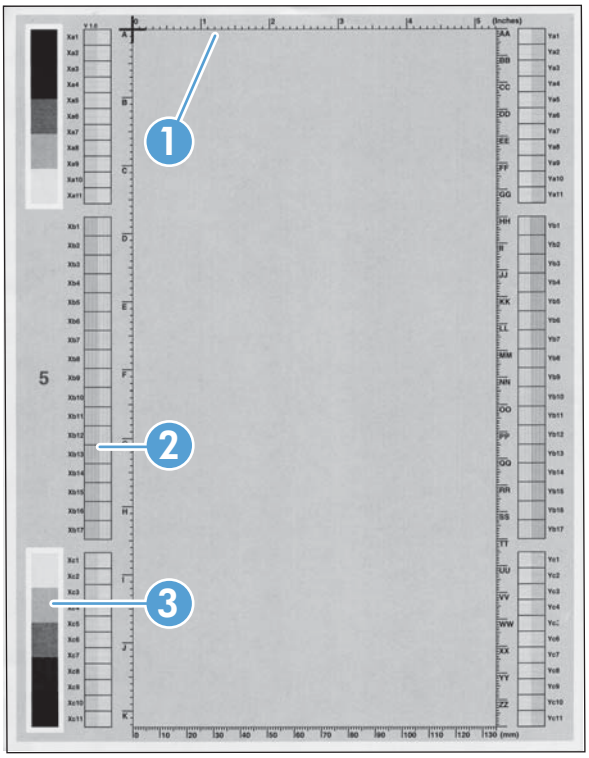


Figure 2-44 Yellow comparison page



Yellow cannot be easily seen unless combined with cyan, so half of each page is yellow and the other half is an amplified version of yellow problems (green half). Compare the yellow on page one with the corresponding green on page two for defects. You can also check the cyan page for defects.

Figure 2-45 Black print-quality troubleshooting page



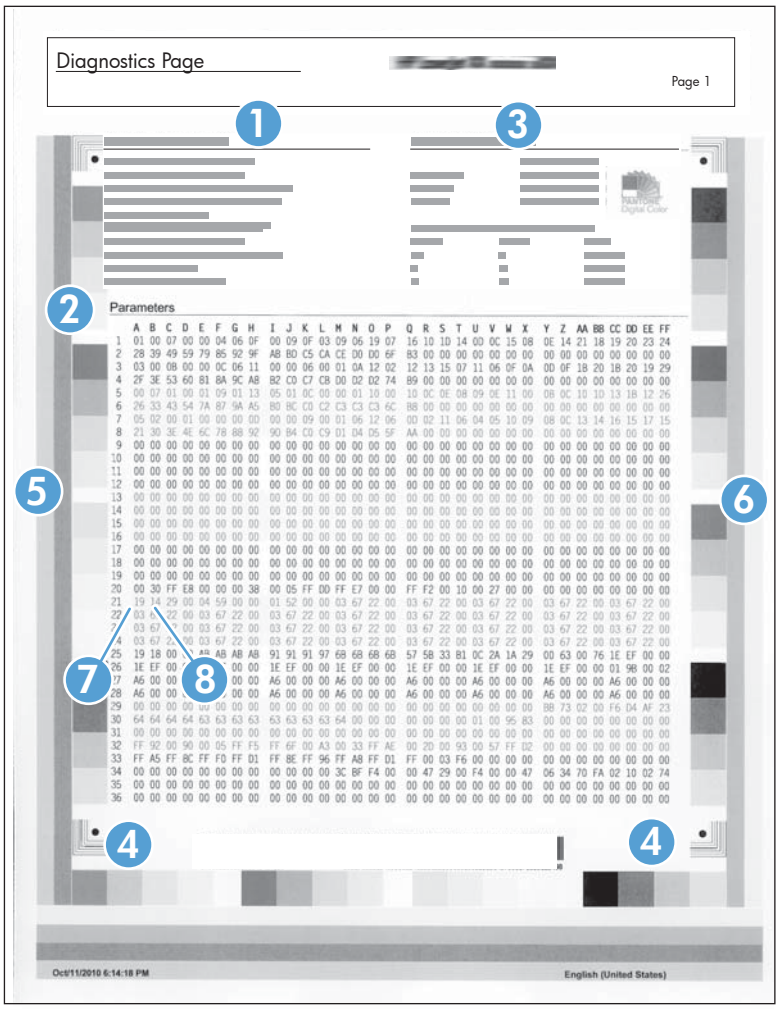
1. Grids	The grids are in inches and millimeters. They are label with letters and numbers so that defects can be described by position and by distance between repeats.
2. Color plane registration (CPR) bars	After printing, the box with no extra color in each area on each page shows how far off the CPR of that color is. Each page has two process direction areas and three scan direction areas that are labeled x and y and 1–11. The page should be fed by the long edge. Each square from the center equals 42 microns.
3. Color ramp patches	Used to detect offset for the OPC or developer in the image drum or offset in the fuser.

NOTE: To get further assistance in print quality troubleshooting, go to www.hp.com/support/lj500colorMFPM575 and select PQ Troubleshooting Tools.

Print quality assessment page

Use the diagnostics page to evaluate problems with color plane registration, EP parameters, and print quality.

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
   - Diagnostics Page
3. Touch the Print button.



1	Calibration information
2	Parameters
3	Color density

4	Color plane registration
5	Primary colors
6	Secondary colors
7	Temperature values (21A)
8	Humidity values (21B)

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.

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 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 2-46 Configuration page

1	Device information
2	Installed personalities and options
3	HP Web services

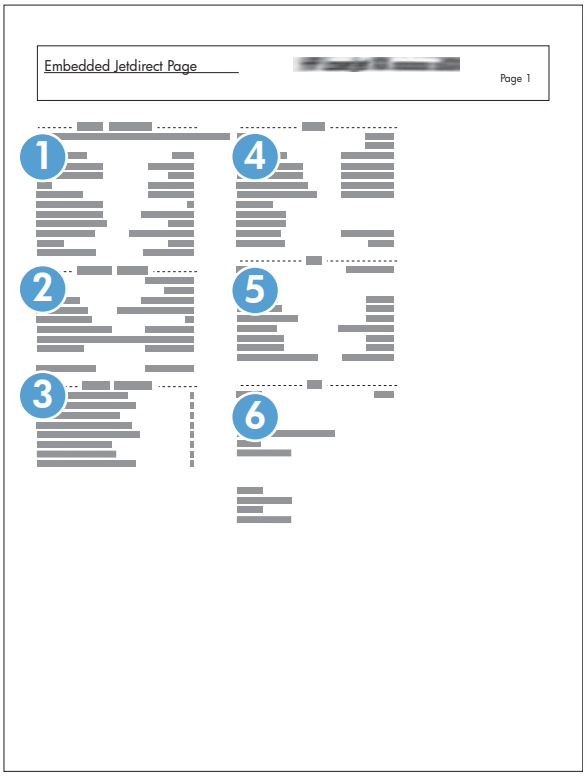
4	Color density
5	Calibration information
6	Memory
7	Event log
8	Security
9	Paper trays and options

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 2-47 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 2-18 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.	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."

Color band test

The color-band test page shows bands of colors that can indicate whether the product is producing colors correctly.

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
   - Color Band Test

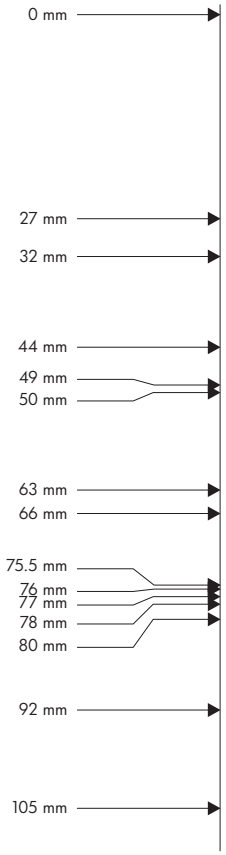
Print quality troubleshooting tools

Repetitive defects ruler

If defects repeat at regular intervals on the page, use this ruler to identify the cause of the defect. Place the top of the ruler at the first defect. The marking that is beside the next occurrence of the defect indicates which component needs to be replaced.

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

Figure 2-48 Repetitive defects ruler



Distance between defects	Product components that cause the defect
27 mm	Toner cartridge: primary charge roller
32 mm	Toner cartridge: developer roller
44 mm	Product: primary transfer roller
49 mm	Toner cartridge: RS roller
50 mm	Product: secondary transfer roller
63 mm	ITB: secondary transfer backing roller
66 mm	Product: distance from secondary transfer roller to fuser
75.5 mm	Toner cartridge: OPC drum
76 mm	ITB: driven roller
77 mm	Fuser sleeve
78 mm	Fuser pressure roller
80 mm	Product: distance from primary transfer roller to secondary transfer roller for black
92 mm	Toner cartridge station to station pitch: distance from the centerline of one OPC to the centerline of the adjacent OPC ITB: drive roller
105 mm	Product: distance from registration to secondary transfer roller

Calibrate the product to align the colors

Calibration is a product function that optimizes print quality. If you experience any image-quality problems, calibrate the product.

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
   - Full Calibration
3. Touch the Start button to start the calibration process.
4. Wait while the product calibrates, and then try printing again.

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 2-19 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 2-19 Reports menu (continued)

First level	Second level	Values	Description
	Web Services Status Page	Print View	Shows the detected Web Services for the product.
	Color Usage Job Log	Print	Contains the number of color and black and white pages that each user has printed. It also indicates from which software program each of the jobs was printed.
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	Demonstration Page	Print	Prints a demonstration page.
	RGB Samples	Print	Prints color samples for different RGB values. Use the samples as a guide for matching printed colors.
	CMYK Samples	Print	Prints color samples for different CMYK values. Use the samples as a guide for matching printed colors.
	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 2-20 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.
			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.	

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	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	
	Optimum Speed/ Energy Usage			Faster first page* Save energy Save more energy Save most energy	Specifies how much the fuser cools down between print or copy jobs. To maximize the product speed, select the Faster first page option. To maximize energy conservation, select the Save most energy option. Or, select one of the other settings to compromise between speed and energy conservation.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Print Quality	Adjust Color	Highlights	Cyan Magenta Yellow Black Default	-5 to 5	Use to set the default print-quality values and to trigger cleaning actions for optimum print quality. If you are using specific types of paper or placing the product in extreme environments, you might need to make adjustments in this menu. Highlights are the brightest color-values in an image. For each color, select a setting to adjust the darkness or lightness of highlights on the printed page. Decrease the value to lighten the highlights. Increase the value to darken the highlights. Default: Resets all the color-density settings to the factory default values.
		Midtones	Cyan Magenta Yellow Black	-5 to 5	Midtones are the middle-range color-values in an image. For each color, select a setting to adjust the darkness or lightness of midtones on the printed page. Decrease the value to lighten the midtones. Increase the value to darken the midtones.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Shadows	Cyan Magenta Yellow Black	-5 to 5	Shadows are the darkest color-values in an image. For each color, select a setting to adjust the darkness or lightness of shadows on the printed page. Decrease the value to lighten the shadows. Increase the value to darken the shadows. Restore color values to default values. **NOTE:** To restore color values to factory default settings, press the Default button.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	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 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			X1 Shift Y1 Shift X2 Shift Y2 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. 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.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Auto Sense Mode	Tray 1 Sensing		Full sensing Expanded sensing* Transparency Only	Use the Auto Sense Mode feature to configure which paper types the product should automatically sense. The following settings are available: Full sensing: Use this setting if you don't want media type misprints and can accept slower performance and possible decreased cartridge life. Expanded sensing: The product senses only the first page and assumes the rest of the pages are the same type. Transparency Only: The product senses only the first page. The product distinguishes transparencies from other paper types.
		Tray X Sensing		Expanded sensing* Transparency Only	When Configuring the Auto Sense Mode option for Tray 1 and Tray 2 the <x> variable represents the highest number of trays installed on the product).
	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 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Resistance Mode	Normal mode 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 High	Use this setting to correct print quality problems in high-humidity environments. Use the High setting if you are in a high-humidity environment and you are seeing problems with low toner density on the first page of a job.
			Pre-Rotation Mode	Off On	Turn on if horizontal lines appear on pages. Using this feature increases the first-page-out time by a few seconds.
			Fuser Temp Mode	Normal Up Down	If you continue to see ghost images on your print jobs after adjusting the Print Mode setting, set this feature with the Up option or Down option. Using this mode increases wear on product parts and might also slow down the printing process.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Paper Curl Mode	Normal Reduced	If excessive curling of paper occurs in warm, high-humidity environments above 23° C (73° F), use the Reduced setting. Using this setting slows printing and increases the frequency of consumable replacements.
	Restore Modes				
	Optimize	Normal Paper		Standard* Smooth	Use to optimize various print modes to address print quality issues. Use the Smooth setting to correct print quality problems when using very smooth paper of normal weight.
		Heavy Paper		Standard* Smooth	Use this setting to correct print quality problems when using very smooth heavy weight paper 129-216 g/m^2 (32-58 lb). The Smooth setting should be used if you are having print quality problems with very smooth, heavy paper.
		Envelope Control		Normal* Reduced Temp	If envelopes are sticking together in the output bin, use this setting to reduce the fuser temperature.
		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.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Line Voltage		Normal* Low Voltage	Enable if the product is operating in a low voltage environment and you are having problems with print quality such as blisters in the printed image.
		Tray 1		Normal* Alternate	Affects how often the product performs an internal cleaning procedure. Use the Alternate setting if you are having problems with extra toner on pages. In this mode, the product performs the cleaning procedure after each job that is printed from Tray 1. Using this mode increases wear on all the toner cartridges.
		Background		Normal* Alternate 1 Alternate 2 Alternate 3	Use if pages are printing with a shaded background. Using this feature might reduce gloss levels. Use the Alternate 1 setting if you are seeing a shaded background on the entire page. Use the Alternate 2 setting if you are seeing thin vertical lines on the background. The Alternate 3 setting applies the Alternate 1 setting and the Alternate 2 setting at the same time. Use this setting if the first two settings do not correct the problem.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Uniformity Control		Normal* Alternate 1 Alternate 2 Alternate 3	This setting might help correct uniformity in print quality issues, such as a mottled appearance due to poor transfer of toner onto the page. The Alternate 1 setting increases the T1 transfer bias and can be used for any media type. The Alternate 2 setting decreases the fuser temperature and reduces the throughput. Use this setting if you are experiencing mottled output due to poor fusing on normal or light paper types. The Alternate 3 setting applies the Alternate 1 setting and the Alternate 2 setting at the same time. Use this setting if the first two settings do not correct the problem.
		Tracking Control		On* Off	Normally, this setting should be set to On. Tracking control algorithm is turned ON/OFF. It is not expected that the customer will ever need to change this setting.
		Registration		Normal* Alternate	Use this setting if you are having trouble with color-planes shifting or overlapping on the page. Use the Alternate setting if you are seeing color mis-registration problems.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Transfer Control		Normal* Alternate 1 Alternate 2 Alternate 3	Use this setting to correct transfer issues in print jobs. Turn this feature on if green, mottled images are printed on the page. Note that using this mode can increase problems with blurry images or specks of toner on the leading or trailing edge of the paper. The Alternate 1 setting reduces the T1 bias and should be used when re-transfer occurs. The Alternate 2 setting increases the inter-page gap. Using this setting reduces throughput and might decrease the print-cartridge life. The Alternate 3 setting applies the Alternate 1 setting and the Alternate 2 setting at the same time. Use this setting if the first two settings do not correct the problem.
		Fuser Temp		Normal* Alternate	If you are seeing a faint image of the page repeated at the bottom of the page or on the following page, you should first make sure the Adjust Paper Types setting and the Print Mode setting are correct for the type of paper you are using. If you continue to see ghost images on your print jobs, set the Fuser Temp feature to the Alternate setting.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Restore Optimize			Use to return all the settings in the Optimize menu to the factory-default values.
	Resolution			Image Ret 3600 1200 x 1200dpi	Sets the resolution at which the product prints.
	Edge Control			Off Light Normal* Maximum	This setting determines how edges are rendered. Edge control has two components: adaptive halftoning and trapping. Adaptive halftoning increases edge sharpness. Trapping reduces the effect of color-plane misregistration by overlapping the edges of adjacent objects slightly. Select one of the following options: Off: Turns off both trapping and adaptive halftoning. Light: Sets trapping at a minimal level, and adaptive halftoning is on. Normal: Trapping is at a medium level and adaptive halftoning is on. Maximum: Trapping is at the highest level, and adaptive halftoning is on.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Jam Recovery				Auto* Off On	This product provides a jam recovery feature that reprints jammed pages. Select one of the following options: Auto: The product attempts to reprint jammed pages when sufficient memory is available. This is the default setting. 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 Disabled*	The product attempts to reprint jammed pages when sufficient memory is available. This is the default setting.
Manage Stored Jobs	Sort Stored Jobs By			Job Name* Date	This option allows you list the jobs either Alphabetically or Chronologically.

Table 2-20 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	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 2-20 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 Calibration 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 2-21 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.

Table 2-21 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
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 2-21 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
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	Orientation	Book-style Flip-style Book-style original; Flip-style copy Flip-style original; Book-style copy	If you are making two-sided copies, select a 2-sided format option. 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. 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 2-21 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Color/Black			Automatically detect* Color Black	Select how the copy should be printed. Automatically detect: Prints color documents in color, and black and white documents in black and white. For mixed documents, the product will determine whether to print in color or black and white. Color: Prints documents in color. Black: Prints documents in black and white.
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.

Table 2-21 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
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 Detect* 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.
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.

Table 2-21 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
	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 2-21 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
	2-Sided Format		Book-style Flip-style Book-style original; Flip-style copy Flip-style original; Book-style copy	If you are making two-sided copies, select a 2-sided format option. 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. 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.
Optimize Text/Picture	Manually adjust*		Optimize For slider	Use this setting to optimize the output for a particular type of content.

Table 2-21 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
			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 2-21 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 2-22 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 network address into a Web browser.

Table 2-22 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	Image Preview		Make optional* Require preview Disable preview	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 network address of the product into a Web browser. 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 2-22 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 2-22 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 2-22 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 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.
		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 2-22 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 2-22 Scan/Digital Send 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.
		Resolution		400 dpi 300 dpi 200 dpi 150 dpi* 75 dpi	Sets the resolution for sent documents. Higher resolution images have more dots per inch (dpi), so they show more detail. Lower resolution images have fewer dots per inch and show less detail, but the file size is smaller. Some file types, for example a file that will be processed with OCR, require a specific resolution. When these file types are selected, the Resolution setting might automatically change to a valid value.

Table 2-22 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Content Orientation	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.
			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 2-22 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 2-22 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 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		The product automatically adjusts the Darkness, Contrast, and Background Cleanup settings to the most appropriate for the scanned document.

Table 2-22 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Default		Select this to make the selected Image Adjustment setting the default value.
		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 2-22 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 2-23 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 Low* High	These settings control how the fax modem dials the outgoing fax number when faxes are sent.
			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	
			Redial on No Answer	Range: 0 – 2 Default = 0	
			Redial on Busy	Range: 0 – 9 Default = 3	

Table 2-23 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		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 fax number that you type to numbers that are saved as a speed dial.

Table 2-23 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 2-23 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 2-23 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 2-23 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 enter the email address for the notification.

Table 2-23 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 2-23 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 theBackground 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 2-23 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 2-23 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Fax Receive Settings	Fax Receive Setup	Ringer Volume		Off Low* High	Use to configure settings for receiving faxes.
		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 Always print faxes* Use Fax Printing Schedule	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.
		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 2-23 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 2-23 Fax Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	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. Notify only if job fails: Select to receive notification only if the job is not sent successfully.
				Print E-mail*	E-mail: Select to receive the notification in an email. Touch the text box following E-mail Address:, and enter the email address for the notification.
			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		Provide the email address that will receive notifications.
		Stamp Received Faxes		Enabled Disabled*	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.

Table 2-23 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 2-24 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 2-24 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* Card slot 1 Card slot <X> EIO <X> disk USB	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 2-24 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 2-25 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.

Table 2-25 Default Print Options menu (continued)

First level	Second level	Values	Description
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.
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 2-26 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 2-26 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 2-27 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.
	Color Cartridges	Low Threshold Settings	Cyan Magenta Yellow	1-100% Default = 10%	Set the estimated percentage at which the product notifies you when the toner cartridge is very low. You can specify a different percentage for each color.

Table 2-27 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Very Low Settings		Stop Prompt to continue* Continue	Specify 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.

Table 2-27 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Toner Collection Unit	Very Low Settings		Stop* Prompt to continue Continue	Configure how the product responds when the toner collection unit is reaching the end of its estimated life. This condition is equivalent to the supply life being very low. **CAUTION:** Continuing to print without replacing the toner collection unit might damage the product, cause toner to spill, or cause an error condition. Stop: The product stops until you replace the toner collection unit. Prompt to continue: The product stops and prompts you to replace the toner collection unit. You can acknowledge the prompt and continue printing. Continue: The product alerts you that the toner collection unit is very low, but it continues printing.
	Fuser Kit	Low Threshold Settings		1-100% Default = 10%	Set the estimated percentage at which the product notifies you when the fuser is very low.

Table 2-27 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 fuser is reaching the end of its estimated life. Stop: The product stops until you replace the fuser. Prompt to continue: The product stops and prompts you to replace the fuser. You can acknowledge the prompt and continue printing. Continue: The product alerts you that the fuser 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 2-27 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.
	Restrict Color Use			Enable Disable color Color if allowed*	Use this feature to enable, restrict, or disable color printing or copying.

Table 2-27 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Color/Black Mix			Auto* Mostly Color Pages Mostly Black Pages	Instructs the product when to switch between color and monochrome printing modes for the best overall performance. Auto: Uses the mode that is appropriate for the first page of the job. If necessary, the product switches modes during the middle of a job and then stays in that mode until the job is finished. Mostly Color Pages: The product uses color mode for all jobs, even if the job contains no color pages. Mostly Black Pages: The product uses monochrome mode until it detects a color page. The product switches back to monochrome mode when it detects a sequence of several monochrome pages.
	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 2-27 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 Fuser Kit			No Yes	Notifies the product that a new supplies kit has been installed.
	New Document Feeder Kit				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 2-28 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.

Table 2-28 Manage Trays menu (continued)

First level	Values	Description
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.
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.

Table 2-28 Manage Trays menu (continued)

First level	Values	Description
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 2-29 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 2-30 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 2-30 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 2-30 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 2-30 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 2-30 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 2-30 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 2-30 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 2-30 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 2-30 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 2-30 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 2-30 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 2-30 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 2-30 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 2-30 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 2-31 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.

Table 2-31 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		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.
	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 detailed fax log shows the intermediate results of the redial process not shown in the standard fax log.
Print Quality Pages	Print PQ Troubleshooting Page			Print	Use to print pages that help you resolve problems with print quality.
	Diagnostics Page			Print	Use to print a diagnostics page. The page includes color swatches and a table of electro-photographic (EP) parameters.

Table 2-31 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Color Band Test	Print Test Page		Print	Use to print a page to help identify arcing in the high-voltage power supply for each color. The page contains a series of colored bars. If streaks appear on a bar, the high-voltage power supply for the corresponding color might have a problem.
		Copies		Range: 1 – 30 Default = 1	Some problems with the high-voltage power supply do not appear until after several pages have been printed, so this test includes an option to print up to 30 pages.
Diagnostic Tests	Disable Cartridge Check				Used to put the product into a special mode in which you can remove a toner cartridge and still print internal pages. This can help you identify the source of a problem. When you are finished testing, press the OK button on the product control panel to return to the Troubleshooting menu. To return to normal product operation, press the OK button and reinstall the cartridge.
	Paper Path Sensors			Select from a list of the product sensors.	Initiates a test of the paper path sensors.

Table 2-31 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Paper Path Test	Source Tray		Select from a list of the available trays.	Generates a test page for testing paper handling features. You can define the path that is used for the test in order to test specific paper paths.
		Test Duplex Path		Off* On	
		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 2-31 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.
	Continuous Scan			2-sided	
	Scanner Tests			Sensors	
Retrieve Diagnostic Data				Create device data file Create zipped debug information file Include crash dump files Clean up debug information Send to E-mail Export to USB	Create files that contain information about the product that can help identify the cause of problems.
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 2-32 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 2-33 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.
Quick Calibration		Start	The product automatically calibrates itself at various times. However, you can calibrate the product immediately if you see problems with print quality. Use this feature to perform a partial calibration. Use this calibration if color density or tone seems incorrect. Before calibrating the product, make sure that the Ready indicator displays on the control-panel display. If a job is in progress, the calibration occurs when that job is complete.

Table 2-33 Calibration/Cleaning menu (continued)

First level	Second level	Values	Description
Full Calibration		Start	The product automatically calibrates itself at various times. However, you can calibrate the product immediately if you see problems with print quality. Use this feature to perform a full calibration, which can take up to three minutes. Use this calibration if the color layers seem to be shifted on the page. Before calibrating the product, make sure that the Ready indicator displays on the control-panel display. If a job is in progress, the calibration occurs when that job is complete.
Delay Calibration at Wake/ Power On		Disabled Enabled*	Controls the timing of power-on calibration when the product wakes up or is turned on. Wake: Select if you are not using the feature and want to print jobs immediately when the product wakes up or is turned on, before calibration begins. No option: The product will calibrate immediately when it wakes up or is turned on. The product will not print any jobs until it finishes calibrating. Yes: Enables the product that is asleep to accept print jobs before it calibrates. It might start calibrating before it has printed all the jobs it has received. This option allows quicker printing when coming out of sleep mode or when you turn the product on, but print quality might be reduced. **NOTE:** For the best results, allow the product to calibrate before printing. Print jobs performed before calibration might not be of the highest quality.
Calibrate Scanner			Touch Next to calibrate the device scanner. Messages on the control panel display will lead you through the calibration process.

Table 2-33 Calibration/Cleaning menu (continued)

First level	Second level	Values	Description
Clean Rollers		Reset Cancel	Maintenance History screen is view only. There are two options: the reset option to reset the page count, or the cancel option to go back to the previous screen.
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 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.

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 do 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 touching the OK button to resume printing or by touching 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

Ready

Description

The product is online and ready for data. No status or product attendance messages are pending at the display.

Recommended action

No action is necessary.

10.0X.Y0 Supply memory error

Description

The product cannot read or write to at least one toner cartridge memory tag or a memory tag is missing from a toner cartridge.

Memory error

- **10.00.00** (event code): Black toner cartridge
- **10.01.00** (event code): Cyan toner cartridge
- **10.02.00** (event code): Magenta toner cartridge
- **10.03.00** (event code): Yellow toner cartridge

E-label missing

- **10.00.10** (event code): Black toner cartridge
- **10.01.10** (event code): Cyan toner cartridge
- **10.02.10** (event code): Magenta toner cartridge
- **10.03.10** (event code): Yellow toner cartridge

Recommended action

1. Remove, and then reinstall the indicated toner cartridge.
2. If the error persists, turn the product off and then on.
3. Check the toner cartridge e-label. If it is damaged, replace the toner cartridge.

10.23.50

Description

The fuser kit life was reset above the order threshold.

A new ITB was installed.

Recommended action

No action necessary.

10.23.51

Description

The fuser kit life was reset above the replace threshold.

A new ITB was installed.

Recommended action

No action necessary.

10.23.52

Description

The fuser kit life was reset above the reset threshold.

A new ITB was installed.

Recommended action

No action necessary.

10.XX.34 Used supply in use

Description

The indicated cartridge is used.

- **10.00.34** (event code)

  Black print cartridge

- **10.01.34** (event code)

  Cyan print cartridge

- **10.02.34** (event code)

  Magenta print cartridge

- **10.03.34** (event code)

  Yellow print cartridge

Recommended action

Make sure this is a genuine HP supply.

NOTE: Removing a cartridge from one product and then installing it in a different product (for testing functionality) will cause this event code.

10.XX.40 Genuine HP supplies installed

Description

More than one genuine HP print cartridge has been installed.

- **10.00.40** (event code)

  Black print cartridge

- **10.01.40** (event code)

  Cyan print cartridge

- **10.02.40** (event code)

  Magenta print cartridge

- **10.03.40** (event code)

  Yellow print cartridge

Recommended action

No action necessary.

10.XX.41 Unsupported supply in use

Description

The indicated print cartridge is for a different product.

- **10.00.41** (event code)

  Black print cartridge

- **10.01.41** (event code)

  Cyan print cartridge

- **10.02.41** (event code)

  Magenta print cartridge

- **10.03.41** (event code)

  Yellow print cartridge

Recommended action

Remove the indicated print cartridge, and then install the correct cartridge for this product.

TIP: See the parts chapter in the service manual for the correct cartridge part number.

10.XX.70 Printing past very low

Description

The product indicates when fuser kit is very low. The actual remaining fuse kit life might vary.

You do not need to replace the fuser kit at this time unless print quality is no longer acceptable.

CAUTION: After an HP supply has reached the very low threshold, the HP premium protection warranty ends.

- **10.00.70** (event code)

  Black print cartridge

- **10.01.70** (event code)

  Cyan print cartridge

- **10.02.70** (event code)

  Magenta print cartridge

- **10.03.70** (event code)

  Yellow print cartridge

- **10.23.70** (event code)

  The product indicates when fuser kit is very low. The actual remaining fuse kit life might vary.

You do not need to replace the fuser kit at this time unless print quality is no longer acceptable.

Recommended action

If print quality is no longer acceptable, replace the indicated print cartridge or fuser kit. See the parts chapter in the repair manual for the print cartridge or fuser kit part number.

TIP: Advise the customer that HP recommends that they have replacement supplies available to install when the print quality is no longer acceptable.

10.YY.15 Install <supply>

Description

The indicated supply has been removed or installed incorrectly.

- **10.00.15** (event code)

  Black print cartridge

- **10.01.15** (event code)

  Cyan print cartridge

- **10.02.15** (event code)

  Magenta print cartridge

- **10.03.15** (event code)

  Yellow print cartridge

- **10.23.15**

  fuser kit

- **10.31.15**

  TCU

Recommended action

Replace or install the indicated supply.

See the parts chapter in the service manual for the correct supply or kit part number.

10.YY.25 Wrong cartridge in <color> slot

Description

The indicated cartridge is installed in the wrong position.

- **10.00.25** (event code)

  Black print cartridge

- **10.01.25** (event code)

  Cyan print cartridge

- **10.02.25** (event code)

  Magenta print cartridge

- **10.03.25** (event code)

  Yellow print cartridge

Recommended action

Install the indicated cartridge in the correct position.

From left to right, the correct cartridge order follows:

- Yellow
- Magenta
- Cyan
- Black

10.YY.35 Incompatible <supply>

Description

The indicated cartridge is not compatible with this product.

- **10.00.35** (event code)

  Black print cartridge

- **10.01.35** (event code)

  Cyan print cartridge

- **10.02.35** (event code)

  Magenta print cartridge

- **10.03.35** (event code)

  Yellow print cartridge

- **10.23.35** (event code)

Fuser

CAUTION: The fuser might be hot. Be careful when removing the fuser.

Recommended action

Install a supply that is designed for this product.

See the parts chapter in the repair manual for the correct supply part number.

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.A3.A3

Description

Print input stay jam 3. This paper stayed at the uppermost feed sensor of the optional paper feeder for the designated amount of time after it has reached the sensor. This jam occurs when the paper is longer than legal size by 40 mm, or more paper is detected as a result of the actual length detection.

Recommended action

Clear the jam

1. Open the lower right door and remove all paper.
2. Close the lower right door.
3. Open the right door and remove all paper.
4. Close the right door.

If the jam persists

1. Make sure the paper type is supported.
2. Open the lower right door and check for torn pieces of paper.
3. Open the right door and check for torn pieces of paper.
4. Make sure the rollers are installed correctly.

5. Replace the rollers.
6. Replace the optional paper feeder.

13.AD.D3

Description

Print input delay jam 1. This paper did not reach the delivery sensor of the optional paper feeder in time.

Recommended action

Clear the jam

1. Open Tray 3.
2. Clear any jammed paper.
3. Verify that the Tray 3 paper guides are in the correct position.
4. Reload the paper and close the tray.

NOTE: To avoid jams, use Tray 1 to print with heavier paper.

If the jam persists

1. Remove the tray and check for pieces of paper. Check the lower right door for pieces of paper.
2. Replace the pickup roller.
3. Make sure the paper type is supported.
4. Replace the optional paper feeder.

13.B2.AD

Description

Print input stay jam 1. The paper stayed at the registration sensor for the designated amount of time after it reached the registration sensor. This jam occurs when the paper is longer than legal size by 40 mm, or more paper is detected as a result of the actual length detection.

Recommended action

Clear the jam

1. Open the right door.
2. Remove any paper.
3. Remove any paper from the fuser area.
4. Lift the green guides to remove paper from the duplex area.
5. Close the right door.

If the jam persists

1. Make sure the paper type is supported.
2. Print using manual duplex.
3. If the jams occur only when duplexing, replace the right door.

13.B2.AZ

Description

Print input stay jam 1. This paper stayed at the registration sensor for the designated amount of time after it reached the registration sensor. This jam occurs when the paper is longer than legal size by 40 mm, or more paper is detected as a result of the actual length detection.

Recommended action

Clear the jam

1. Open the right door.
2. Remove any paper.
3. Remove all paper from the registration area.
4. Lift the green guides to locate the paper.
5. If you cannot access the paper, locate the rollers (covered by paper) and roll them back or forward to move the paper.
6. Close the right door.

If the jam persists

1. Make sure the paper type is supported.
2. Open Tray 2 and check for paper jams.
3. Check for torn pieces of paper in the paper path.
4. Remove any paper in the fuser area.
5. Make sure the rollers are installed correctly in the trays.
6. Lift the green guides to check the paper path.
7. Locate the rollers under the paper and roll them back to attempt to gain access to the top of the page to prevent tearing of the paper.

13.B2.D1

Description

Print input delay jam 2. The paper did not reach the registration sensor in time.

Recommended action

Clear the jam

1. Remove all paper from Tray 1.
2. Clear any jammed paper.
3. Reload paper in Tray 1.
4. Make sure the stack fits under the tabs on the guides and does not exceed the tray-full indicators. Make sure the paper guides are in the correct position.

If the jam persists

1. Make sure the paper was picked from Tray 1.
2. Check the page count by printing a usage page.
3. If the rollers are not engaging, replace the right door.

13.B2.D2

Description

Print input delay jam 2. The paper did not reach the registration sensor in time.

Recommended action

Clear the jam

1. Open Tray 2.
2. Clear any jammed paper.
3. Verify that the paper guides are in the correct position.
4. Reload the paper and close the tray.

NOTE: To avoid jams, use Tray 1 to print with heavier paper.

If the jam persists

1. Make sure the paper type is supported.
2. Open Tray 2 and check for paper jams.
3. Check for torn pieces of paper in the paper path.
4. Make sure the rollers are installed properly in Tray 2.

13.B2.D3

Description

Print input delay jam 2. The paper did not reach the registration sensor in time.

Recommended action

Clear the jam

1. Open the lower right door and check for paper.
2. Close the lower right door.
3. Open the right door and remove all the paper.
4. Remove any paper found in the fuser area.
5. Close the right door.

If the jam persists

1. Check the lower right door for jammed paper.
2. Check for torn pieces of paper in the paper path.
3. Clear any obstructions or jams from the paper path.
4. Replace the rollers.
5. Replace the optional paper feeder.

13.B2.DD

Description

Duplexer refeed jam 1: The paper does not reach the duplex refeed sensor in time after it is switched back during duplex printing.

Recommended action

Clear the jam

1. Open the right door and remove all paper.
2. Remove the fuser and any paper in the fuser area.
3. Close the right door.

If the jam persists

1. Make sure the paper type is supported.
2. Clear jams in the right door.
3. Remove the fuser and clear any jams in the paper path.
4. Clear any jams in the duplex paper path on the right door.
5. Test the duplex refeed sensor. If it fails, replace the right door.

13.B9.AZ

Description

Fuser delivery stay in jam 1: The paper stays at the fuser output sensor for the designated amount of time after it has reached the sensor.

Recommended action

Clear the jam

1. Open the right door and remove all paper.
2. Remove the fuser and any paper in the fuser area.
3. Remove any paper inside the fuser.
4. Reinstall the fuser.
5. Close the right door.

If the jam persists

1. Check paper type and fuser mode.
2. Check for a multi-feed. Replace the rollers if it consistently multi-feeds.
3. If the problem persists after replacing the rollers, replace the fuser.

13.B9.CZ

Description

Wrap jam 1: The paper leaves the fuser output sensor before a designated amount of time.

Recommended action

Clear the jam

1. Open the right door and remove all paper.
2. Remove the fuser and any paper in the fuser area.
3. Remove any paper in the fuser.
4. Reinstall the fuser.
5. Remove any other paper found.
6. Close the right door.

If the jam persists

1. Make sure the paper type is supported.
2. Test the fuser delivery sensor. If it fails, replace the fuser.
3. If the problem persists, replace the fuser.

13.B9.DD

Description

Fuser delivery delay in jam 1: The paper does not reach the fuser output sensor in time.

Recommended action

Clear the jam

1. Open the right door.

CAUTION: The fuser might be hot.

2. Remove the fuser and any paper in the fuser area.
3. Remove any paper inside the fuser.
4. Reinstall the fuser.
5. Remove any paper in the duplex area.
6. Close the right door.

If the jam persists

1. Make sure the paper type is supported.
2. Print using plain paper.
3. Test the paper path sensors and replace any sensors that fail.
4. Replace the fuser.

13.B9.Dz

Description

Fuser delivery delay in jam 1: The paper does not reach the fuser output sensor in time.

Recommended action

Clear the jam

1. Open the right door.

CAUTION: The fuser might be hot.

2. Remove the fuser and any paper in the fuser area.
3. Remove any paper inside fuser.
4. Reinstall the fuser.
5. Remove any paper in the duplex area.
6. Close the right door.

If the jam persists

1. Make sure the paper type is supported.
2. Print using plain paper.
3. Test the paper path sensors and replace any sensors that fail.
4. Replace the fuser.

13.WX.EE

Description

Door open jam 1: A door is opened during printing. The jam might occur at the following areas:

- Input media source 1 area
- Input media source 2 area
- Input media source 3 area
- Registration area
- Drum area
- Fuser area
- Paper output 1 area
- Duplex pick up area
- Duplex reversing area

Recommended action

Clear the jam

1. Open the right door and remove all paper.
2. Remove the fuser and any paper in the fuser area.
3. Remove any paper inside the fuser.
4. Reinstall the fuser.
5. Remove any other paper found.
6. Close the right door.

If the jam persists

1. Make sure all doors are closed.
2. Clear jams in the right door and lower right door.
3. View the event log: Look for 13.BA.EE right door or front door or 13.AA.EE lower right door.

13.WX.FF

Description

Residual media in paper path jam. The paper exists at the fuser output sensor or the fuser loop sensor, or the duplexer refeed sensor when the power is turned on or the door is closed. This jam occurs when the paper stays for more than the designated amount of time continuously at any of the sensors when executing the automatic media flush.

Recommended action

Clear the jam

1. Open the right door and remove all paper.
2. Remove the fuser and any paper in the fuser area.
3. Remove any paper inside the fuser.
4. Reinstall the fuser.
5. Remove any other paper found.
6. Close the right door.

If the jam persists

1. Clear jams in the right door and fuser area.
2. If possible, view the event log.
3. Conduct a manual sensor test to verify that the sensors are working correctly.
4. Replace any failed sensors or assemblies.

13.WX.YZ Fuser wrap jam

Description

This jam occurs when the paper disappears from the fuser output sensor before a designated amount of time after the paper reached the fuser output sensor. (It is determined that the paper is being wrapped around the fuser roller).

Z = Fuser mode

- 1 = Normal auto sense
- 2 = Normal non-auto sense
- 3 = Light 1 to 3
- 4 = Heavy 1
- 5= Heavy 2
- 6= Heavy 3
- 7 = Glossy

- 8 = Glossy 2
- 9 = Glossy 3
- A = Glossy film
- B = Transparency
- C = Label
- D = Envelope 1 to 3
- O = Photo 1 to 3

⚠ **CAUTION:** The fuser can be hot while the product is in use.

Recommended action

Clear the jam. See the clear jams section in the repair manual.

13.WX.YZ Jam above output bin clear jam, then touch "OK"

Description

There is a paper jam above output bin.

Recommended action

Clear the jam. See the clear jams section in the repair manual.

13.WX.YZ Jam in right door

Description

There is a jam accessible from the right door.

Recommended action

⚠ **CAUTION:** The fuser might be hot.

Clear the jam. See the clear jams section in the repair manual.

13.WX.YZ Jam in Tray <X>

Description

A page is jammed in the indicated tray. The page did not reach the delivery sensor or registration sensor in the designated amount of time after leaving the input source.

- **13.B2.D2** (event code): Misfeed jam from Tray 2

  This jam occurs when the paper does not reach the registration (Registration; SR8) sensor in designated amount of time from the start of paper pick-up at printing from Tray 2 and duplex printing.

- **13.A3.D3** (event code): Misfeed jam from Tray 3

This jam occurs when the paper does not reach the feed sensor of each tray in designated amount of time after the start of paper pickup.

Recommended action

Clear the jam. See the clear jams section in the service manual.

13.WX.YZ Jam lower right door

Description

There is a jam accessible from the lower right door.

Recommended action

Clear the jam. See the clear jams section in the service manual.

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

Touch the OK button to print the transferred data. Some data might be lost. Reduce the page complexity.

21.00.00 Page too complex To continue, touch "OK"

Description

The page decompression process was too slow for the product.

Recommended action

Touch the OK button to continue. There may be some data loss.

30.01.23 Scanner calibration failure

Description

The scanner calibration failed.

Recommended action

1. Turn the product off, then on again.
2. After the product warms up, repeat the calibration process.
3. If the error persists, replace the scanner.

30.01.36 Upgrade Error Try downloading upgrade again

Description

Scanner firmware upgrade error.

Recommended action

1. Resend the scanner firmware upgrade.
2. If the error persists, replace the scanner control board.

30.01.43 Scan memory failure To continue turn off then on

Description

A scan memory error occurred.

Recommended action

1. Turn the product off and then on.
2. Remove the formatter, and then reinstall the formatter.
3. If the error persists, replace the formatter.

30.01.YY Scanner failure To continue turn off then on

Description

- **30.01.06** (event code): Scanner fan error.
- **30.01.41** (event code): Internal communication error involving the copy processor board (CPB) on the formatter.
- **30.01.42** (event code): Internal communication error.

Recommended action

- **30.01.06** (event code)
  1. Turn the product off and then on.
  2. Check the fan, and reconnect any loose cables.
  3. If the error persists, replace the fan or the scanner control board.
- **30.01.41** (event code)
  1. Turn the product off and then on.
  2. Reseat the formatter.
  3. If the error persists, replace the formatter.
- **30.01.42** (event code)
  1. Turn the product off and then on.
  2. Check the cables connecting the scanner control board.
  3. If this error occurs after a formatter, fax card or hard disk has been replaced, check that the formatter is fully seated and the "smiley face" is illuminated. Check the fax card for proper seating on the formatter. If it is not properly seated, it can prevent the formatter from seating properly.
  4. If the error persists, replace the scanner control board.

30.WX.YZ Scanner fan failure To continue turn off then on

Description

The product has detected a problem with the scanner. This error occurs when there is a CPB memory failure and the formatter needs to be replaced.

Recommended action

1. Turn power off then on.
2. If the error persists, replace the formatter.

31.01.03 Document feeder pick error

Description

The document feeder cannot pick up paper.

Recommended action

1. Open the document feeder top cover.
2. Remove all paper found.
3. Remove the remaining pages from the document feeder input tray.

4. Close the document feeder top cover.
5. Place the jammed page on top of any remaining pages, and reinsert them into the document feeder.
6. Align the paper guides with both edges on the paper.
7. Touch the Start button to continue.

Check the paper guides, check and clean the rollers and separation pad, and test the registration sensor.

If the error persists, replace pickup roller assembly, separation pad, or document feeder.

31.01.47 Document feeder not detected

Description

The document feeder was not detected, and might not be ADF connected. The flatbed glass is still available for scanning.

Recommended action

Turn the product off and then on.

31.03.22 Scanner calibration failure

Description

The scanner calibration failed. This could affect scanning picture quality.

Recommended action

Remove any paper in document feeder. Turn the product off and then on.

31.WX.10 Scanner failure To continue turn off then on

Description

The product has detected a scanner ADF fan error.

Recommended action

1. Turn the product off and then on.
2. If the error persists, replace the ADF fan.

31.WX.15 Jam in document feeder

Description

Originals are jammed inside the document feeder top cover.

Recommended action

1. Open the document feeder top cover.
2. Remove all paper found.
3. Rotate the green wheel to remove any additional paper.
4. Remove the remaining pages from the document feeder input tray.
5. Close the document feeder top cover.
6. Place the jammed page on top of any remaining pages, and reinsert them into the document feeder.
7. Align the paper guides with both edges of the paper.
8. Touch the Start button to continue.

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 FW than what is currently on the product
- **32.1C.0C** (event code)

  Backup cancelled 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 timeout while communicating with the formatter
- **32.1C.11** (event code)

  Backup/restore timeout while communicating with the engine
- **32.1C.12** (event code)

  Backup/restore timeout while communicating with the disk
- **32.1C.13** (event code)

  Scheduled backup failure
- **32.1C.14** (event code)

  NVRAM restore timeout while communicating with the formatter
- **32.1C.17** (event code)

  NVRAM restore timeout while communicating with the engine
- **32.1C.1B** (event code)

  Backup of print subsystem failed
- **32.1C.1C** (event code)

  Backup of networking subsystem failed
- **32.1C.21** (event code)

  Restore of print subsystem failed
- **32.1C.22** (event code)

  Restore of networking subsystem failed
- **32.1C.24** (event code)

  NVRAM backup/restore successful

- **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 timeout
- **32.1C.2E** (event code)

  Reset engine timeout
- **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 then on and retry

- **32.1C.11** (event code)

  Turn the product off then on and retry

- **32.1C.12** (event code)

  Turn the product off then on and retry

- **32.1C.13** (event code)

  Turn the product off then on and retry

- **32.1C.14** (event code)

  Turn the product off then on and retry

- **32.1C.17** (event code)

  Turn the product off then on and retry

- **32.1C.1B** (event code)

  Turn the product off then on and retry

- **32.1C.1C** (event code)

  Turn the product off then on and retry

- **32.1C.21** (event code)

  Turn the product off 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 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 then on and retry

- **32.1C.28** (event code)

  Turn the product off then on and retry

- **32.1C.29** (event code)

  Turn the product off then on and retry

- **32.1C.2B** (event code)

  Turn the product off then on and retry

- **32.1C.2E** (event code)

  Turn the product off then on and retry

- **32.1C.2F** (event code)

  Turn the product off then on and retry

32.21.00

Description

Corrupt firmware in external accessory.

Recommended action

Turn the product off, 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.

33.02.01

Description

Used board disk installed.

A used formatter or hard disk from an existing printer has been placed in this printer.

Recommended action

Reinstall the used board or disk back into its original printer.

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, touch 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. Touch 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. Touch the OK button to print the transferred data. Some data might be lost.
2. Check the host configuration.

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 = 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 = 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 Autosense
- 1: Autosense (normal): special case distinguished from typed Normal
- 2: Normal, typed (not Autosense)
- 3: Light paper 1, 2, or 3, typed or Autosense
- 4: Heavy paper 1, typed or Autosense
- 5: Heavy paper 2, typed or Autosense
- 6: Heavy paper 3, typed or Autosense
- 7: Glossy paper 1, typed or Autosense
- 8: Glossy paper 2, typed or Autosense
- 9: Glossy paper 3, typed or Autosense
- A: Glossy film, typed or Autosense
- B: Transparency, typed or Autosense
- C: Label
- D: Envelope 1, Envelope 2, Envelope 3

- E: Rough (designated paper 1), typed or Autosense
- 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, touch 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.

42.XX.YY

Description

Internal system failure.

Recommended action

Turn the product off, then on, and retry.

47.FC.YZ Printer calibration failed To continue, touch "OK"

Description

The product is unable to access or implement one of the image pattern files.

Y = calibration type, Z = event

- **47.FC.00**: Color plane registration (CPR) image not found at system initialization
- **47.FC.01**: CPR store image failure
- **47.FC.02**: CPR image not found
- **47.FC.03**: CPR print engine execution failure
- **47.FC.10**: Consecutive Dmax Dhalf image not found at system initialization
- **47.FC.11**: Consecutive Dmax Dhalf store image failure
- **47.FC.12**: Consecutive Dmax Dhalf image not found
- **47.FC.13**: Consecutive Dmax Dhalf print engine execution failure
- **47.FC.20**: Error diffusion image not found at system initialization

- **47.FC.21**: Error diffusion store image failure
- **47.FC.22**: Error diffusion image not found
- **47.FC.23**: Error diffusion print engine execution failure
- **47.FC.30**: Drum speed adjustment Image not found at system initialization
- **47.FC.31**: Drum speed adjustment store image failure
- **47.FC.32**: Drum speed adjustment image not found
- **47.FC.33**: Drum speed adjustment print engine execution failure
- **47.FC.40**: Pulse width modulation image not found at system initialization
- **47.FC.41**: Pulse width modulation store image failure
- **47.FC.42**: Pulse width modulation image not found
- **47.FC.43**: Pulse width modulation print engine execution failure

Recommended action

1. Turn the product off and then on.
2. If the error persists, reload the firmware.

47.WX.YZ Printer calibration failed

Description

The print quality calibration failed. This message is for development and will not be seen by customers.

Recommended action

Turn the product off and then on.

48.01.XX Error

Description

A job framework internal error has occurred.

Recommended action

No action necessary.

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 AutoSense
    - 1: AutoSense (Normal special case distinguished from typed Normal)
    - 2: Normal, typed (not AutoSense)
    - 3: Light paper 1, 2, or 3, typed or AutoSense
    - 4: Heavy paper 1, typed or AutoSense
    - 5: Heavy paper 2, typed or AutoSense
    - 6: Heavy paper 3, typed or AutoSense
    - 7: Glossy paper 1, typed or AutoSense
    - 8: Glossy paper 2, typed or AutoSense
    - 9: Glossy paper 3, typed or AutoSense
    - A: Glossy film, typed or AutoSense
    - B: Transparency, typed or AutoSense
    - C: Label
    - D: Envelope1, Envelope2, or Envelope3
    - E: Rough (designated paper 1), typed or AutoSense
    - F: Reserved for future fuser mode

- Y = previous printer sleep state
- Z = next printer 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 (J50) between the fuser and the product. If it is damaged, replace the fuser.
4. If this product was previously serviced, check the connector (J50) 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 (J50) 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 (J50) on the DC controller PCA.
4. If the error persists, replace the fuser.

W = 2, Fuser warm-up failure

1. Reconnect the connector (J50) 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 (J50) 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 (J50) 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 (J101) 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 Manual Sensor Test to verify that the fuser pressure-release sensor (PS7) is properly functioning. If it is not, replace the fuser.
4. Use the fuser pressure-release drive test in the component test to verify that the fuser motor (M2) is properly functioning. If it is not, replace the fuser motor (M2).
5. If this product was previously serviced, check the connector (J117; J123) on the DC controller PCA.
6. 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 (J50) between the fuser and the product. If it is damaged, replace the fuser.
4. If this product was previously serviced, check the connector (J50) 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 (J50) between the fuser and the product. If it is damaged, replace the fuser.
4. If this product was previously serviced, check the connector (J50) 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
- YY = 21: Cyan laser scanner error
- YY = 22: Magenta laser scanner error
- YY = 23: Yellow laser scanner error

Recommended action

51.00.10

1. Turn the product off and then on.
2. Check the flat flexible cable (FFC) connections to the laser scanners.

3. Check connectors J111 and J110 at the DC controller, and check connectors J503 and J501 at the laser scanners.
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. Check the connector (J501) on the laser/scanner driver PCA and the connector (J111) on the DC controller PCA.
2. If the error persists, replace the black laser scanner.

51.00.21

1. Check the connector (J501) on the laser/scanner driver PCA and the connector (J111) on the DC controller PCA.
2. If the error persists, replace the cyan laser scanner.

51.00.22

1. Check the connector (J501) on the laser/scanner driver PCA and the connector (J110) on the DC controller PCA.
2. If the error persists, replace the magenta laser scanner.

50.00.23

1. Check the connector (J501) on the laser/scanner driver PCA and the connector (J110) on the DC controller PCA.
2. If the error persists, replace the yellow laser scanner.

52.00.00 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 connector (J501) on the laser/scanner driver PCA and the connector (J106) on the DC controller PCA.
3. If the error persists, replace the appropriate laser/scanner.

XX = 05

1. Perform the laser scanner component tests in the Troubleshooting menu.
2. Check the connector (J50-Y/K or J503-C/M) on the laser/scanner driver PCA and the connectors (J106; J110-C/K or J111-C/M) on the DC controller PCA.
3. If the error persists, replace the appropriate laser/scanner.

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. Depending on the test results, perform one of the following steps:
   - If the cyan or black component tests showed a startup failure, reconnect the connectors of the cyan/black scanner motor (J56 and J58) and the DC controller PCA (J106).
   - If the yellow or magenta component tests showed a startup failure, reconnect the connectors of the yellow/magenta scanner motor (J55 and J57) and the DC controller PCA (J106).
4. Replace the cyan and black laser-scanner assembly or the yellow and magenta laser-scanner assembly.

52.20.00 Error To continue turn off then on

Description

The laser/scanner experienced a rotational error.

Recommended action

1. Perform the laser/scanner component tests in the Troubleshooting menu.
2. Depending on the test results, perform one of the following steps:
   - If the cyan or black component tests showed a rotational failure, reconnect the connectors of the cyan/black scanner motor (J41 and J72) and the DC controller PCA (J111).
   - If the yellow or magenta component tests showed a rotational failure, reconnect the connectors of the yellow/magenta scanner motor (J40 and J71) and the DC controller PCA (J110).
3. Replace the cyan and black laser-scanner assembly or the yellow and magenta laser-scanner assembly.

52.<XX>.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. Depending on the test results, perform one of the following steps:
   - If the cyan or black component tests showed a startup failure, reconnect the connectors of the cyan/black scanner motor (J56 and J58) and the DC controller PCA (J106).
   - If the yellow or magenta component tests showed a startup failure, reconnect the connectors of the yellow/magenta scanner motor (J55 and J57) and the DC controller PCA (J106).
4. Replace the cyan and black laser-scanner assembly or the yellow and magenta laser-scanner assembly.

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 (J2) on the environment sensor and the connector (J108) on the DC controller PCA.
3. If the error persists, replace the environment sensor assembly.

54.00.06 or 54.00.14 or 54.00.19: Registration density sensor failure

1. Open and close the right door (or turn on and then off the power switch) to perform the color plane registration.
2. If the error persists, replace the registration density sensor assembly.

54.01.05: Paper sensor is out of calibration range

1. Turn the product off, and then clean the paper sensor with a lint-free cloth. Turn the product on.
2. If the error persists, replace the paper pickup assembly.

54.06.21: Primary laser/scanner beam detect abnormality

1. Turn the product off and then on.
2. If the error persists, replace the laser/scanner assembly.
3. If the product has had parts removed or replaced, check the connector (J110-C/M or J111-C/M) on the DC controller PCA.

54.0X.0B or 54.0X.0C: Density sensor out of range error or Dhalf calibration failure

X = 0 black, X = 1 cyan, X = 2 magenta, X = 3 yellow

1. Check the supplies status page to make sure the toner cartridges are not past their useful life.
2. Check the ITB for damage.
3. Make sure the CPR sensor is not contaminated with toner or paper dust. Clean the sensor with compressed air and soft brush.
4. If error persists, replace the registration sensor assembly.

54.0X.0D or 54.0X.0E: Optical memory element abnormal or CPR sensor out of range

X = 0 black, X = 1 cyan, X = 2 magenta, X = 3 yellow

1. Check the supplies status page to make sure the toner cartridges are not past their useful life.
2. Check the ITB for damage.
3. Make sure the CPR sensor is not contaminated with toner or paper dust. Clean the sensor with compressed air and soft brush.
4. If error persists, replace the registration sensor assembly.

55.XX.YY DC controller error To continue turn off then on

Description

The DC controller experienced a communication error.

- **55.00.01** (event code): DC controller memory error
- **55.00.02** (event code): DC controller no engine response

- **55.00.07** (event code): DC controller communications timeout
- **55.01.06** (event code): NVRAM memory data error warning
- **55.02.06** (event code): NVRAM memory access error warning

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 PCA.

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**: Internal communication error
- **55.00.01**: DC controller memory error
- **55.00.03**: DC controller no engine response
- **55.00.04**: DC controller communications timeout

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.

56.00.01 Illegal Input Printer Error To continue turn off then on

Description

The product experienced an illegal input.

Recommended action

1. Turn the product off and then on.
2. Remove any third-party hardware.
3. Attempt the remote firmware update again.
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**: Selected paper input tray is unavailable
- **56.00.02**: 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.

57.00.0X Error

Description

A fan error has occurred.

Recommended action

57.00.01: Fan motor 1 malfunction

1. Turn the product off and then on. Listen for fan noise at the front lower-left corner 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 (J119) on the DC controller PCA.
3. Measure the voltage between the connectors (J119-1 and J119-3) on the DC controller PCA immediately after the product power is turned on. If the voltage changes from 0 VDC to approximately 24 VDC, replace the fan (FM1).

57.00.02: Fan motor 2 malfunction

1. Turn the product off and then on. Listen for fan noise at the front lower-right corner of the product. If no noise is heard, replace the toner cartridge fan (FM2).
2. If this part has been removed or replace, check the connector (J26) on the toner cartridge fan, connector (J262) on the high-voltage power supply (lower), and the connector (J114) on the DC controller.
3. Measure the voltage between the connectors (J262-1 and J262-3) on the high-voltage power supply (lower) immediately after the product power is turned on. If the voltage changes from 0 VDC to approximately 24 VDC, replace the fan (FM2).

57.00.03: Fan motor 3 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 delivery fan (FM3).
2. If this part has been removed or replace, check the connector on the intermediate connect board.
3. Measure the voltage between the connectors (J262-1 and J262-3) on the high-voltage power supply (lower) immediately after the product power is turned on. If the voltage changes from 0 VDC to approximately 24 VDC, replace the fan (FM3).

57.00.04: Fan motor 4 malfunction

1. Turn the product off and then on.

57.00.05: Fan motor 5 malfunction

1. Turn the product off and then on.

57.00.06: Fan motor 6 malfunction

1. Turn the product off and then on.

57.00.07: Fan motor 7 malfunction

1. Turn the product off and then on.

57.00.08: Fan motor 8 malfunction

1. Turn the product off and then on.

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 connector (J143) 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 J117 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 J117 on the DC controller PCA.
4. Replace the fuser motor.

59.00.B0 Cleaning motor error Replace Toner Collection Unit

Description

The cleaning motor is stuck, the waste toner chute is clogged, or the TCU is full.

Recommended action

If the TCU is full, replace the TCU. If the TCU is not full, remove the TCU motor and check the rotation of the waste toner auger. Replace the TCU motor or the auger.

59.00.YY Error To continue turn off then on

Description

The product experienced a printing error.

Recommended action

59.00.04 or 59.00.05: Fuser motor (M2) start up error or fuser motor (M2) rotational error—pressure roller, delivery roller, fuser pressurization, primary transfer roller disengagement

1. Use the fuser motor (M2) drive test in the component test to verify that the fuser motor is properly functioning. If it is not, replace the fuser motor assembly.
2. If the product was previously serviced, check the connector (J15) on the fuser motor and the connector (J17) on the DC controller PCA.

59.00.90 or 59.00.A0: ITB motor (M1) start up error or ITB motor (M1) abnormal rotational error

1. Remove the ITB and check for damage.
2. Use the ITB motor (M1) drive test in the component test to verify that the ITB motor is properly functioning. If it is not, replace the ITB motor assembly.
3. If the product was previously serviced, check the connectors at the ITB motor assembly and the DC controller. See the circuit diagram for details.

59.00.C0: Developer alienation motor (M10) error

1. Use the developer engagement and disengagement drive test in the component test to verify that the disengagement mechanisms are properly functioning. If they are not, replace the developer alienation motor.
2. Use the Manual Sensor Test to verify that the developer disengagement sensor (SR11) is properly functioning. The sensor is located inside the main drive assembly and cannot be reached for testing. Disconnect the connector (J112) at the DC controller while in Manual Sensor Test mode to verify the sensor operation. If it is not operating, replace the main drive assembly.
3. If the product was previously serviced, check the intermediate connector (J87) of the developing disengagement sensor, the connector (J112) on the DC controller PCA, the connector (J38) of the developing disengagement motor, and the connector (J261) on the high-voltage power supply D PCA.

59.00.F0: T1 alienation mechanism failure

1. Make sure that the ITB is correctly installed.
2. Use the T1 roller alienation sensor (SR9) test in the Manual Sensor Test to verify that the sensor is properly functioning. If it is not, replace the sensor assembly.
3. Use the T1 roller engagement and disengagement drive test in the component test to verify that the T1 roller disengagement mechanism is properly functioning. If it is not, remove the ITB and

manually actuate the alienation mechanism. If it fails, replace the ITB. If the ITB is working correctly, replace the fuser drive assembly.

4. If the product was previously serviced, check the connector (J128) on the DC controller PCA.

59.0X.50 Error To continue turn off then on

Description

The product experienced a drum motor startup error.

- X= 5: Black
- X = 6: Cyan
- X = 7: Magenta
- X = 8: Yellow

Recommended action

1. Perform the drum-motors component test in the Troubleshooting menu.
2. Each toner cartridge slot has a drum motor. 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.

59.0X.60 Error To continue turn off then on

Description

The product experienced a drum motor rotation error.

- X= 5: Black
- X = 6: Cyan
- X = 7: Magenta
- X = 8: Yellow

Recommended action

1. Perform the drum-motors component test in the Troubleshooting menu.
2. Each toner cartridge slot has a drum motor. 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

60.00.11: Lifter motor failure (M7)

1. Turn the product off and then on.
2. Check the connector (J141) on the DC controller PCA.
3. Check the connector (J78) on the lifter motor (M7).
4. Use the tray lifter sensor (SR9) 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.
5. If the error persists, replace the lifter drive assembly.

61.00.01

Description

Color table read failure.

Recommended action

Turn the product off, and then on.

If the error persists, reload the firmware. If the error still persists, perform a firmware upgrade.

If the firmware upgrade does not resolve the problem, replace the hard disk.

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.

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 timeout

- **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. 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.

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 **Clean 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.

<Binname> full Remove all paper from bin

Description

The specified output bin is full.

Recommended action

Empty the bin to continue printing.

<Supply> almost full

Description

Toner Collection bottle is almost full.

- **10.31.60** (event code)

  Toner collection unit

Recommended action

Replace the toner collection unit.

<Supply> low

Description

Toner cartridges are at the very low condition.

- Black toner cartridge
- Cyan toner cartridge
- Magenta toner cartridge
- Yellow toner cartridge

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.

<Supply> low OR Supplies low

Description

The product indicates when a supply level, or more than one supply, is low. Actual print cartridge life might vary. You do not need to replace the print cartridge at this time unless print quality is no longer acceptable.

When multiple supplies are low, more than one event code is recorded.

- **10.00.60** (event code)

  Black print cartridge

- **10.01.60** (event code)

  Cyan print cartridge

- **10.02.60** (event code)

  Magenta print cartridge

- **10.03.60** (event code)

  Yellow print cartridge

- **10.23.60** (event code)

  Fuser kit

- **10.22.60** (event code)

  Transfer kit

Recommended action

If print quality is no longer acceptable, replace the supply.

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 ends.

<Supply> very low

Description

A toner cartridge has reached the very low condition.

- Black toner cartridge
- Cyan toner cartridge
- Magenta toner cartridge
- Yellow toner cartridge

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.

<Supply> very low To continue, touch "OK"

Description

A toner cartridge has reached the very low condition.

- Black toner cartridge
- Cyan toner cartridge
- Magenta toner cartridge
- Yellow toner cartridge

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.

<Supply> very low OR Supplies very low

Description

The product indicates when a supply level, or more than one supply, is very low. Actual print cartridge life might vary. You do not need to replace the print cartridge at this time unless print quality is no longer acceptable.

When multiple supplies are low, more than one event code is recorded.

- **10.00.70** (event code)

  Black print cartridge

- **10.01.70** (event code)

  Cyan print cartridge

- **10.02.70** (event code)

  Magenta print cartridge

- **10.03.70** (event code)

  Yellow print cartridge

- **10.23.70** (event code)

  Fuser kit

- **10.22.70** (event code)

  Transfer kit

Recommended action

If print quality is no longer acceptable, replace the supply.

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 ends.

A second USB wireless networking accessory has been detected

Description

This message appears on the control panel when more than one USB wireless product is attached to the product.

Recommended action

The use of more than one wireless USB product is not supported. Remove one of the wireless USB products.

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.

Card slot device failure To clear touch "Clear"

Description

The specified device has failed.

Recommended action

Touch 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

Touch 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

Touch 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

Touch 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.

Clean the rollers

Description

The product has reached the roller cleaning very low count. Clean the ADF rollers to maintain image quality.

Recommended action

1. Open document feeder top cover.
2. Remove any visible lint or dust from the feed rollers and the separation pad using compressed air or a clean lint-free cloth moistened with warm water.
3. Close the document feeder top cover.
4. On the product control panel, touch the Reset button.

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.

Clearing activity log

Description

This message is displayed while the activity log is cleared. The product exits the menus when the log has been cleared.

Recommended action

No action is necessary.

Close front or right doors

Description

The front and right door that share a sensor and the product cannot distinguish between the front and right doors. One or both of the doors needs to be closed.

Recommended action

1. Close the door.
2. Inspect the interlock on both the front and right doors.
3. Use the Manual Sensor Test to verify that the interlock switches are working correctly.

Close lower right door

Description

The optional paper feeder right door is open.

Recommended action

1. Open, and then close the door.
2. Use the right-door switch (SW1) test in the Tray/Bin Manual Sensor Test to verify that the switch is properly functioning. If the switch fails the test, replace the switch.
3. Check the sensor flag on the right door assembly. If it is damaged, replace the lower right door assembly.

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, run the Manual Sensor Test SP15 right door opening/closing sensor. If the sensor fails, replace the right door switch.

3. Check the right door sensor flag. If it is damaged, replace the right door.
4. If this product was previously serviced, reconnect the connector (J708) on the 24V interlock switch and the connector (J181) on the DC controller PCA.

Data received

Description

The product is waiting for more data to continue the print job.

Recommended action

Touch the OK button to print the last page of the job. To print the existing data, touch the **Print** button.

Digital send communication error

Description

A digital send job failed and cannot be delivered.

Recommended action

Touch the **Hide** button to remove this message. Try to send the job again.

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

- Touch **View Jobs** to view and delete the stored jobs.
- Touch **Print Faxes** to print and delete stored fax 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

- Touch **View Jobs** to view and delete stored jobs.
- Touch **Print Faxes** to print and delete stored faxes. Sign in might be required.

To increase available disk space, go to **Job Status** to cancel scheduled jobs.

Document feeder bin full

Description

Too many pages are in the document feeder.

Recommended action

Remove excess paper from the document feeder output bin.

Document feeder is empty

Description

This message displays when the user presses the Start button and there is nothing in the ADF or on the glass and the ADF is closed.

Recommended action

Place originals in document feeder and touch the Start button.

Document Feeder Kit low

Description

The product indicates when a supply level is low.

Recommended action

Replace the document feeder kit.

Document Feeder 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 document feeder kit.

Document Feeder Kit very low To continue, touch "OK"

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 document feeder kit.

Document feeder top cover open

Description

The document feeder jam access cover is open.

Recommended action

Close the cover.

Event log is empty

Description

No product events are in the log.

Recommended action

No action is necessary.

Fax is disabled – ignoring call

Description

The product received a call, but the fax feature was not configured with the required settings (country/region, date/time, company name, fax number, etc.).

Recommended action

Configure the fax with the required settings from the Administration menu on the control panel.

Finishing process not functional

Description

The finishing device indicates it cannot perform the requested finishing action (like stapling or binding).

Recommended action

The job proceeds without the finishing action being performed.

Flatbed cover open

Description

The scanner cover has been opened to access the glass.

Recommended action

Close the scanner cover.

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.

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 To continue, touch "OK"

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.

NOTE: After replacing the fuser kit, reset the fuser page counter by selecting the **New Fuser Kit** item in the Reset Supplies sub-menu.

Incompatible <supply>

Description

The indicated <supply>is not compatible with this product.

- **10.00.35** (event code): Black toner cartridge
- **10.10.35** (event code): Cyan toner cartridge
- **10.02.35** (event code): Magenta toner cartridge
- **10.03.35** (event code): Yellow toner cartridge
- **10.23.35** (event code): Fuser kit

Recommended action

Replace the incompatible supply.

Incompatible supplies

Description

Print cartridges 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

Touch the OK button to identify the incompatible supplies.

Replace the supplies with those that are designed for this product.

Initializing scanner, please wait

Description

The product is waiting for the scanner to initialize.

Recommended action

No action is necessary. Wait until the Ready message appears on the display.

Initializing...

Description

The product is starting.

Recommended action

No action is necessary. Wait until the Ready message appears on the display.

Install <color> Cartridge

Description

A supply is either not installed or not correctly installed in the product.

- **10.00.15** (event code): Black toner cartridge
- **10.01.15** (event code): Cyan toner cartridge
- **10.02.15** (event code): Magenta toner cartridge
- **10.03.15** (event code): Yellow toner cartridge

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
- **10.01.15** (event code): Cyan toner cartridge
- **10.02.15** (event code): Magenta toner cartridge
- **10.03.15** (event code): Yellow toner cartridge
- **10.23.15** (event code): Fuser kit
- **10.31.15** (event code): Toner collection unit

Recommended action

1. Touch the OK button to identify which supplies need to be replaced.
2. Touch 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

Touch 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

Touch 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

Touch 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

Touch 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, touch the OK button to print.
- If paper is in another tray, remove the paper and insert it in Tray 1, and then touch 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. Use the tray paper present sensor test in the Tray/Bin Manual Sensor Test to verify that the sensor is correctly functioning.
4. Make sure that the sensor flag on the paper presence sensor is not damaged and moves freely.
5. Reconnect the corresponding connector:
   - MP tray: Connector (J85, J90) on the MP tray paper out sensor and the connector (J107) on the DC controller PCA.
   - Input tray: Connectors (J6) on the tray paper out sensor and the connector (J131) on the DC controller PCA.
   - 1 X 500-sheet paper tray: Connector (J55D) on the paper tray paper out sensor and the connector (J106) on the paper feeder 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, touch 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, touch 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:
   - MP tray: Connector (J85, J90) on the MP tray paper out sensor and the connector (J107) on the DC controller PCA.
   - Input tray: Connectors (J6) on the tray paper out sensor and the connector (J131) on the DC controller PCA.
   - 1 X 500-sheet paper feeder tray: Connector (J55D) on the paper feeder tray paper out sensor and the connector (J106) on the paper feeder 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, touch 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. Touch 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, touch the Help button to exit the message and then touch the OK button to print.
- To use another tray, clear paper from Tray 1, touch the Help button to exit the message and then touch 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, touch 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, touch the Help button to exit the message and then touch the OK button to print.
- To use another tray, clear paper from Tray 1, touch the Help button to exit the message and then touch 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, touch Options to select a different tray.

Moving solenoid

Description

The solenoid is moving as part of a component test.

Recommended action

To exit press ▼

Moving solenoid and motor

Description

The solenoid and a motor is moving as part of a component test.

Recommended action

To exit press ▼

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

Empty the bin to continue printing.

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.

Paused

Description

The product is paused, and there are no error messages pending at the display. The I/O continues receiving data until memory is full.

Recommended action

Press theStop button.

Performing Color Band Test...

Description

A color-band test is being performed.

Recommended action

No action necessary.

Performing Paper Path Test...

Description

A paper-path test is being performed.

Recommended action

No action necessary.

Please wait...

Description

The product is in the process of clearing data.

Recommended action

No action necessary.

Printing CMYK samples...

Description

The product is printing the CMYK Sample pages.

Recommended action

No action necessary.

Printing Color Usage Log...

Description

The product is printing the Color Usage log.

Recommended action

No action necessary.

Printing Configuration...

Description

The product is printing the Configuration page.

Recommended action

No action necessary.

Printing Demo Page...

Description

The product is printing the Demo page.

Recommended action

No action necessary.

Printing Diagnostics Page...

Description

The product is printing the Diagnostics page.

Recommended action

No action necessary.

Printing Engine Test...

Description

The product is printing an Engine Test page.

Recommended action

No action necessary.

Printing Engine Test...

Description

The product is printing an engine test page.

Recommended action

No action is necessary.

Printing Event Log...

Description

The product is printing the Event Log page.

Recommended action

No action necessary.

Printing File Directory...

Description

The product is printing the File Directory pages.

Recommended action

No action necessary.

Printing Font List...

Description

The product is printing the Font List pages.

Recommended action

No action necessary.

Printing Fuser Test Page...

Description

The product is printing the Fuser Test page.

Recommended action

No action necessary.

Printing Help Page...

Description

The product is printing the Help page.

Recommended action

No action necessary.

Printing Menu Map...

Description

The product is printing the Menu Map pages.

Recommended action

No action necessary.

Printing PQ Troubleshooting...

Description

The product is printing the PQ Troubleshooting pages.

Recommended action

No action necessary.

Printing Registration Page...

Description

The product is printing the Registration pages.

Recommended action

No action necessary.

Printing RGB Samples...

Description

The product is printing the RGB Sample pages.

Recommended action

No action necessary.

Printing stopped To continue, touch "OK"

Description

Time has expired on the Print/Stop test.

Recommended action

Touch the OK button to continue.

Printing Supplies Status page...

Description

The product is printing the Supplies Status page.

Recommended action

No action necessary.

Printing Usage Page...

Description

The product is printing the Usage page.

Recommended action

No action necessary.

Processing digital send job

Description

This message is displayed after the user sends an e-mail or fax.

Recommended action

No action is needed.

Processing duplex job... Do not grab paper until job completes

Description

Paper temporarily comes into the output bin while printing a duplex job.

CAUTION: Do not grab paper as it temporarily comes into the output bin. The message disappears when the job is finished.

Recommended action

No action necessary.

Processing job from tray <X>... Do not grab paper until job completes

Description

The product is actively processing a job from the designated tray.

Recommended action

No action necessary.

Processing... <filename>

Description

The product is currently processing a job but is not yet picking pages. When paper motion begins, this message is replaced by a message that indicates the tray the job is using.

Recommended action

No action necessary.

Processing... copy <X> of <Y>

Description

The product is currently processing or printing collated copies. The message indicates that copy number <X> of total copies <Y> is currently being processed.

Recommended action

No action necessary.

RAM Disk device failure To clear touch “Clear”

Description

The specified device failed.

Recommended action

Touch 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

Touch 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

Touch 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

Touch the OK 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.

Ready <IP Address>

Description

The product is online and ready for data. No status or product attendance messages are pending at the display. The product IP address displays.

Recommended action

No action is necessary.

Remove all toner cartridges To exit press X

Description

The product is testing the transfer unit assembly.

Recommended action

- To perform the test, remove all the print cartridges.
- To cancel the test, touch the Stop button.

Remove at least one toner cartridge To exit press X

Description

The product is testing the toner-cartridge motor.

Recommended action

- To perform the test, remove at least one toner cartridge.
- To cancel the test, touch the Stop button.

Remove shipping lock from Tray 2

Description

The Tray 2 shipping lock was not removed before you turned the product on.

Recommended action

Open Tray 2, and then remove the shipping lock.

Replace <color> Cartridge

Description

This alert appears only if the product is configured to stop when a supply reaches the very low threshold. 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.

The product can be configured to stop when the supply level is very low. The supply might still be able to produce acceptable print quality.

NOTE: When an HP supply has reached its approximated end of life, the HP Premium Protection Warranty on that supply ends.

- **10.00.70** (event code): Black toner cartridge
- **10.01.70** (event code): Cyan toner cartridge
- **10.02.70** (event code): Magenta toner cartridge
- **10.03.70** (event code): Yellow toner cartridge
- **10.23.70** (event code): Fuser Kit
- **10.31.70** (event code): Toner collection unit
- **10.22.70** (event code): Transfer kit

Recommended action

- Replace the specified supply.
- Configure the product to continue printing by using the **Manage Supplies** menu.

Replace Document Feeder Kit

Description

The document feeder kit is very low.

Recommended action

Install a new document feeder roller assembly and a separation pad assembly.

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 staple cartridge

Description

The staple cartridge is empty.

Recommended action

Replace the staple cartridge located in the stapler/stacker.

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
- **10.01.70** (event code): Cyan toner cartridge
- **10.02.70** (event code): Magenta toner cartridge
- **10.03.70** (event code): Yellow toner cartridge
- **10.23.70** (event code): Fuser kit
- **10.31.70** (event code): Toner collection unit
- **10.22.70** (event code): Transfer kit

Recommended action

- Touch the OK button to find out which supplies need to be replaced.
- Configure the product to continue printing by using the **Manage Supplies** menu.

Replace Toner Collection Unit

Description

The product indicates when a toner collection unit is at its estimated end of life.

NOTE: After a toner collection unit has reached its end of life, the HP Premium Protection Warranty on that toner collection unit ends.

Recommended action

- Replace the toner collection unit.
- If you wish to have the toner collection unit operate past its estimated capacity, configure the product to continue printing by using the **Manage Supplies** menu.

NOTE: This is not a recommended option because of the risk of overfilling the toner collection unit, which could result in the need to service the product.

Restricted from printing in color

Description

This message displays when color printing is disabled for the product or when it is disabled for a particular user or print job.

Recommended action

To enable color printing for the product, change the **Restrict color use** setting in the **Manage Supplies** menu.

Roller cleaning is recommended

Description

The product has reached the roller cleaning low count. Clean the ADF rollers to maintain image quality.

Recommended action

1. Open document feeder top cover.
2. Remove any visible lint or dust from the feed rollers and the separation pad using compressed air or a clean lint-free cloth moistened with warm water.
3. Close the document feeder top cover.
4. On the product control panel, touch the **Reset** button.

ROM disk device failed To clear touch "Clear"

Description

The specified device failed.

Recommended action

Touch 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

Touch 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

Touch 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

Touch 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.

Rotating <color> motor To exit press X

Description

A component test is in progress. the component selected is the indicated <color> toner cartridge motor.

<color> =

- Black
- Cyan
- Magenta
- Yellow

Recommended action

Touch the Stop button when ready to stop this test.

Rotating Motor

Description

The product is executing a component test and the component selected is a motor.

Recommended action

Press the Stop button ⊗ when ready to stop this test.

To exit press ▼

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.

Sleep mode on

Description

The product is in sleep mode. Pressing a control-panel button, receiving of a print job, or an error condition clears this message.

Recommended action

No action necessary.

Standard top output 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.

Staple Cartridge low

Description

The product indicates when a supply level is low.

Recommended action

Replace the staple cartridge.

Staple Cartridge very low To continue, touch "OK"

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 staple cartridge.

Supplies in wrong positions

Description

The product displays this message when two or more toner cartridges are installed in the wrong slots.

Recommended action

Install the correct color of toner cartridge in each slot.

Supplies low

Description

Multiple supplies on the product have reached the **User Defined 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.

Toner Collection Unit almost full

Description

Toner collection unit bottle is almost full.

Recommended action

Replace the toner collection unit.

Actual supply life remaining may vary. Continuing to print without replacing might cause product damage, toner to spill or error conditions.

NOTE: Once an HP supply has reached the full level, HP's warranty on that supply has ended.

Toner Collection Unit full

Description

The toner collection unit has reached the out condition.

Recommended action

Replace the toner collection unit.

Actual supply life remaining may vary. Continuing to print without replacing might cause product damage, toner to spill or error conditions.

NOTE: Once an HP supply has reached the full level, HP's warranty on that supply has ended.

1. Open the front door.
2. Grasp the top of the collection unit to pull it out.
3. Place the cap on the used collection unit.
4. Install the new collection unit bottom first.
5. Push the top into place.
6. Close the front door.

Toner Collection Unit full To continue, touch “OK”

Description

The toner collection unit has reached the out condition.

Recommended action

Replace the toner collection unit.

Actual supply life remaining may vary. Continuing to print without replacing might cause product damage, toner to spill or error conditions.

NOTE: Once an HP supply has reached the full level, HP's warranty on that supply has ended.

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 touch the OK 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, one of the print cartridges is for a different HP product.

- **10.00.41** (event code): Black toner cartridge
- **10.10.41** (event code): Cyan toner cartridge
- **10.02.41** (event code): Magenta toner cartridge
- **10.03.41** (event code): Yellow 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

Touch 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 touch the OK button.

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

Touch the Clear button to clear the message.

USB 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

Turn the product off, remove the USB accessory, and then turn the product on.

Use a USB accessory that uses less power or that contains its own power supply.

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

Touch the Hide button to remove this message.

USB storage device failure To clear touch "Clear"

Description

The specified device failed.

Recommended action

Touch 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

Touch 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

Touch 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
- **10.01.34** (event code): Cyan toner cartridge
- **10.02.34** (event code): Magenta toner cartridge
- **10.03.34** (event code): Yellow 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.

Warming up scanner

Description

The scanner is warming up.

Recommended action

The product will enter the ready state when it is finished warming up.

Wireless Configuration Mode

Description

A USB wireless networking accessory was installed and is ready for configuration.

Recommended action

HP recommends using a computer and internet browser to configure this accessory. Enter the IP address into an internet browser to access the full range of configuration options. After wireless functionality has been configured and the changes have been applied, turn the product off and then on to exit the **Wireless Configuration Mode**.

Wireless is not configured

Description

A USB wireless networking accessory was attached to the product and was not configured.

Recommended action

To begin configuration, turn the product off and then on. The product will restart in the **Wireless Configuration Mode**.

Wrong cartridge in <color> slot

Description

The indicated slot for a toner cartridge contains a toner cartridge that is not the correct color.

The indicated toner cartridge is installed in the wrong position:

- **10.00.25** (event code): Black toner cartridge
- **10.01.25** (event code): Cyan toner cartridge

- **10.02.25** (event code): Magenta toner cartridge
- **10.03.25** (event code): Yellow toner cartridge

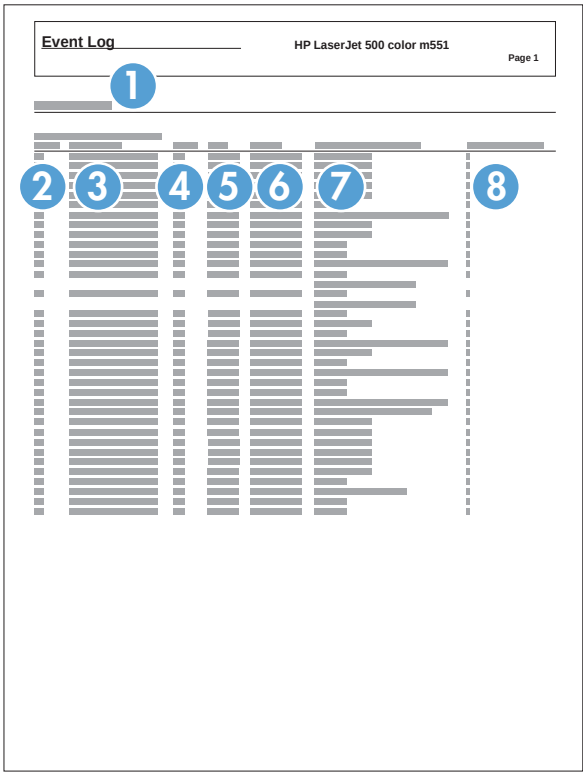
Recommended action

Remove the toner cartridge from that slot, and install a toner cartridge that is the correct color.

Event log messages

These messages appear only in the event log. For additional numeric messages, see the control-panel message section of this manual.

Figure 2-49 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: Specs Service Pin.
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: Specs Service Pin.
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
30.01.08	The flatbed optical assembly cannot find the origin notch.	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	The formatter lost connections with the scanner control board or communication was corrupted.	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. Replace the whole unit.
30.01.43	Copy processor board memory check failure during the initial memory check. The copy processor board resides on the scanner control board or formatter depending on the product.	1. Turn the product off and then on. 2. Replace the scanner control board. 3. Replace the formatter.
30.01.44	Scanner firmware error	1. Turn the product off and then on. 2. Replace the scanner control board. 3. Replace the formatter.
30.01.45	General code assert error for the copy processor board firmware.	1. Turn the product off and then on. 2. Upgrade the firmware. 3. Replace the scanner control board. 4. Replace the scanner assembly.
30.01.46	The firmware cannot find the copy processor board.	1. Reseat the formatter. 2. Replace the scanner control board or formatter depending on where copy processor board is located.
30.03.14	Non-fatal error	This is an informational message, and no action is required.

Event log message	Description	Action
30.03.20	The copy processor board firmware cannot communicate with the PCA on the optical assembly.	1. Turn the product off and then on. 2. Verify the FFC cables between scanner and scanner control board or formatter depending on product are connected. 3. Replace the scanner.
30.03.22	The scan module cannot see the illumination module, or marginal illumination. The optical assembly is not parked under the calibration strip.	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.
30.03.23	The calibration stitching label shifted or there are bad sensors in the scan module.	1. Turn the product off and then on. 2. Upgrade the firmware. 3. Replace the scanner.
30.03.30	The scanner control board cannot communicate with the flatbed scanner motor.	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 or formatter. 5. Replace the scanner. 6. Replace the scanner control board.
30.03.45	The PCA firmware code controls the motor.	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	ADF was not detected. Cable not attached.	1. Turn the product off and then on. 2. Upgrade the firmware. 3. Check the cables between the ADF and scanner control board or formatter depending on the product. 4. Replace the ADF. 5. Replace the scanner control board or formatter depending on product.

Event log message	Description	Action
31.03.30	ADF pick motor is not turning.	1. Verify the paper meets the product specifications. 2. Make sure the input tray is not overloaded. 3. Check the event log for ADF 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 ADF to scanner control board or formatter cables. 7. Replace the ADF.
31.03.31	ADF feed motor is not turning.	1. Verify the paper meets the product specifications. 2. Make sure the input tray is not overloaded. 3. Check the event log for ADF errors, and resolve any errors first. 4. Verify the motor cables are connected. 5. Reseat ADF to scanner control board or formatter cables. 6. Replace the ADF.
31.03.32	ADF deskew motor is not turning.	1. Verify the paper meets the product specifications. 2. Make sure the input tray is not overloaded. 3. Check the event log for ADF errors, and resolve any errors first. 4. Verify the motor cables are connected. 5. Reseat ADF to scanner control board or formatter cables. 6. Replace the ADF.

Event log message	Description	Action
31.13.01	Paper pick was initiated, but the page didn't make it to the pick success sensor.	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 ADF 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 ADF roller. 9. Install a ADF maintenance kit.
31.13.02	The paper passed the pick success sensor and then jammed in the ADF paper path.	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. Replace the ADF.
31.13.13	The jam access door is open.	1. Verify the jam access cover is closed. 2. Try feeding the paper again. 3. Verify the flag is not broken off. 4. With a piece of paper, check that the photo sensor is working. 5. Replace the ADF.

Event log message	Description	Action
31.13.14	This is a feed jam in the ADF, and the motor is not turning.	1. Verify the paper meets the product specifications. 2. Make sure the ADF input tray is not overloaded. 3. Check the event log for ADF errors, and resolve any errors first. 4. Open and close the right door 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 ADF to scanner control board or formatter cables. 7. Replace the ADF.
31.13.15	This is a duplex refeed jam in the ADF. The paper jam occurs on the back-side copy. The duplex refeed does not make it to the deskew sensor.	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 ADF.
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 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 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.

Event log message	Description	Action
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.
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

Common causes of jams

The product is jammed.

Cause	Solution
The paper does not meet specifications.	Use only paper that meets HP specifications.
A component is installed incorrectly.	Verify that the transfer belt and transfer roller are correctly installed.
You are using paper that has already passed through a product or copier.	Do not use paper that has been previously printed on or copied.
An input tray is loaded incorrectly.	Remove any excess paper from the input tray. Make sure that the stack is below the maximum stack height mark in the tray.
The paper is skewed.	The input-tray guides are not adjusted correctly. Adjust them so they hold the stack firmly in place without bending it.
The ADF jam-access door is not completely closed.	Press on the ADF jam-access door until it clicks to make sure that it is closed.
The paper is binding or sticking together.	Remove the paper, flex it, rotate it 180°, or flip it over. Reload the paper into the input tray.
The paper is removed before it settles into the output bin.	Reset the product. Wait until the page completely settles in the output bin before removing it.
During two-sided printing, you removed the paper before the second side of the document was printed.	Reset the product and print the document again. Wait until the page completely settles in the output bin before removing it.
The paper is in poor condition.	Replace the paper.
The internal tray rollers are not picking up the paper.	If the paper is heavier than 220 g/m^2 (58 lb), it might not be picked from the tray. The rollers are worn. Replace the rollers.
The paper has rough or jagged edges.	Replace the paper.
The paper is perforated or embossed.	Perforated or embossed paper does not separate easily. Feed single sheets from Tray 1.
Paper was not stored correctly.	Replace the paper in the trays. Paper should be stored in the original packaging in a controlled environment.
Not all product packing material was removed.	Verify that the packing tape, cardboard, and plastic shipping locks have been removed from the product.

If the product still continues to jam, contact HP Customer Support or your authorized HP service provider.

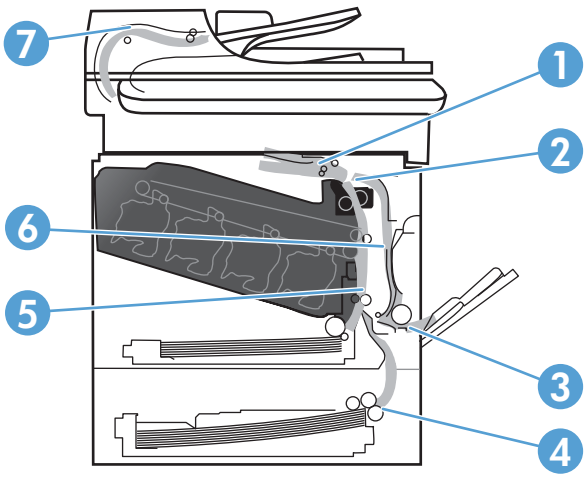
Auto-navigation for clearing jams

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.

Jam locations

Use this illustration to identify locations of jams. In addition, instructions display on the control panel to direct you to the location of jammed paper and how to clear it.

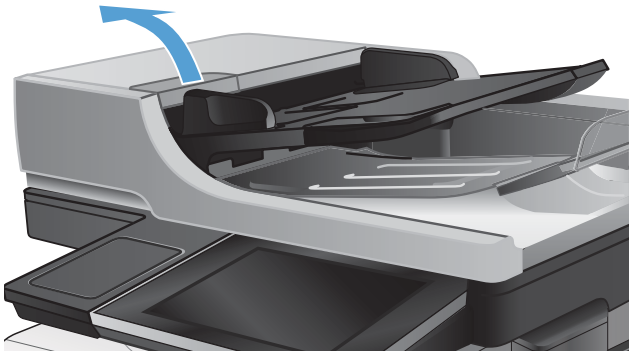
NOTE: Internal areas of the product that might need to be opened to clear jams have green handles or green labels.



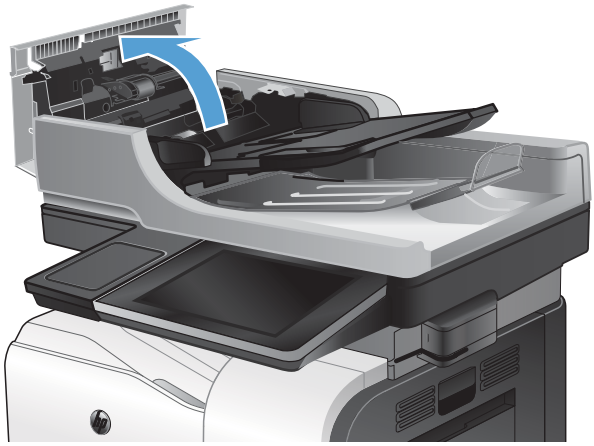
1	Output-bin area
2	Duplexing area
3	Tray 1 area
4	Optional Tray 3
5	Tray 2 pickup area
6	Fuser area
7	Document-feeder area

Clear jams in the document feeder

1. Lift the latch to release the document-feeder cover.

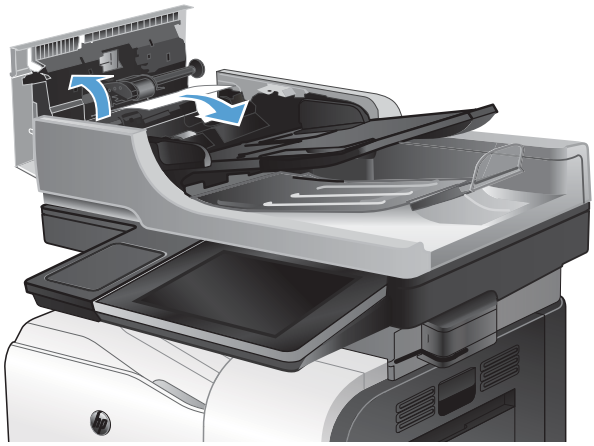


2. Open the document-feeder cover.

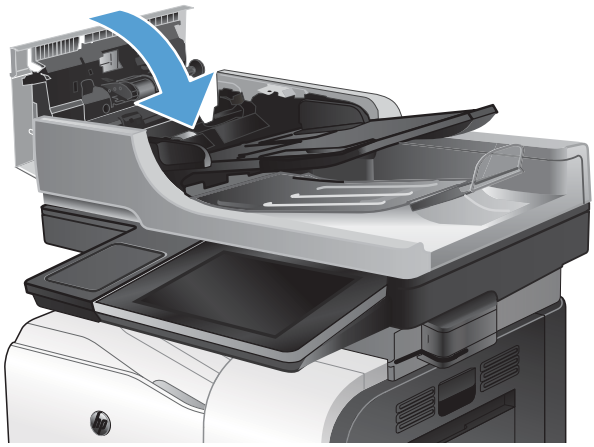


3. Lift the jam-access door, and remove any jammed paper.

   If necessary, rotate the green wheel at the front of the document feeder to remove jammed paper.



4. Close the document-feeder cover.



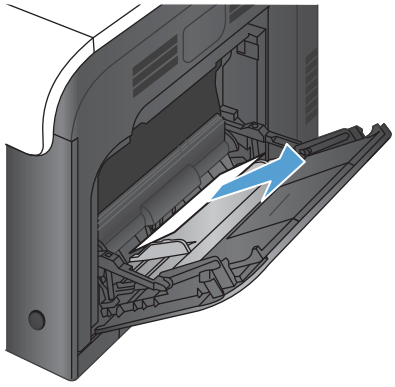
Clear jams in the output bin area

1. If paper is visible from the output bin, grasp the leading edge and remove it.

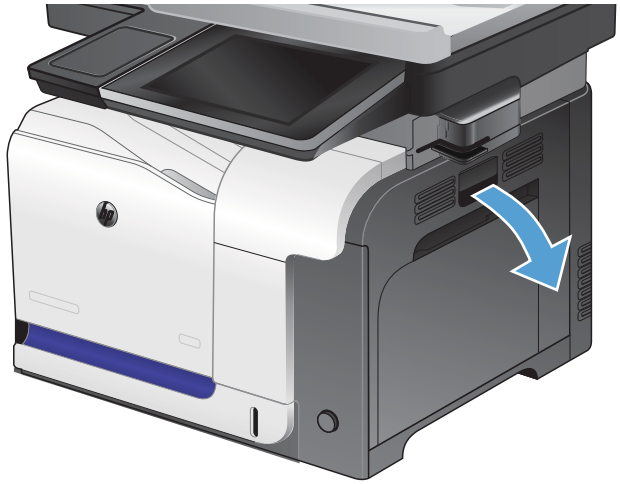
2. If jammed paper is visible in the duplex output area, gently pull it to remove it.

Clear jams in Tray 1

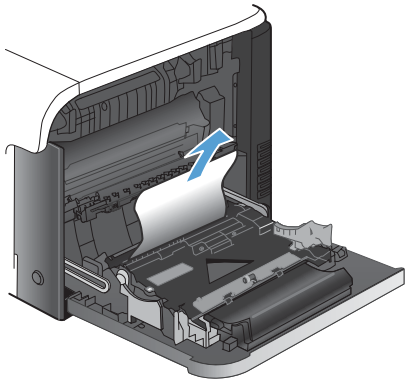
1. If jammed paper is visible in Tray 1, clear the jam by gently pulling the paper straight out.



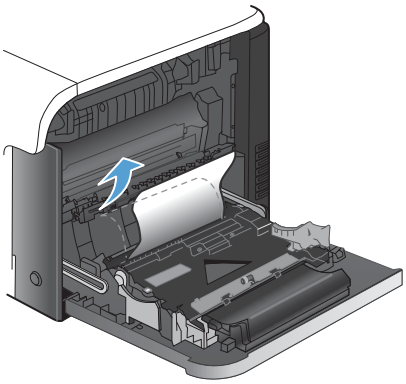
2. If you cannot remove the paper, or if no jammed paper is visible in Tray 1, close Tray 1 and open the right door.



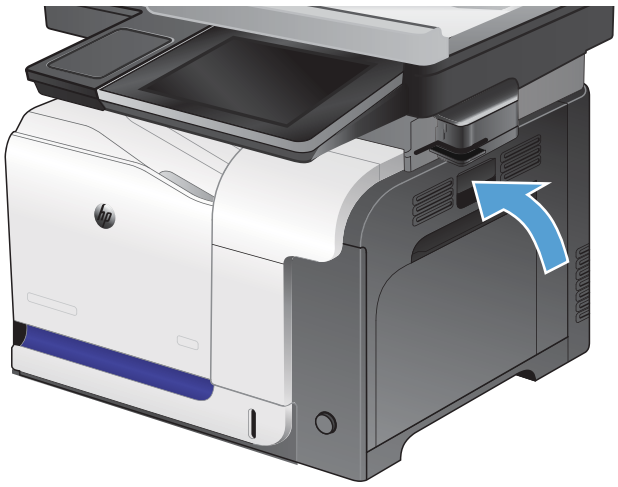
3. If paper is visible inside the right door, gently pull the trailing edge to remove it.



4. Gently pull the paper out of the pick up area.



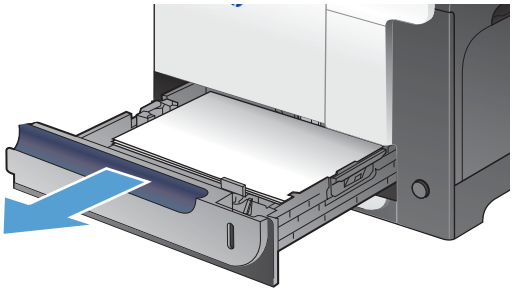
5. Close the right door.



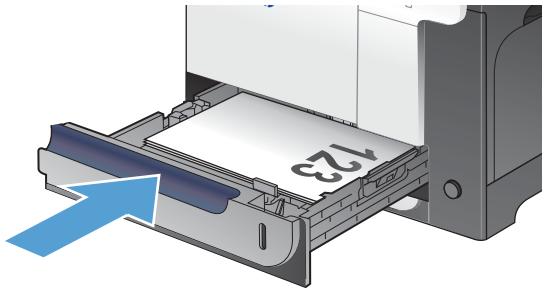
Clear jams in Tray 2

CAUTION: Opening a tray when paper is jammed can cause the paper to tear and leave pieces of paper in the tray, which might cause another jam. Be sure to clear jams before opening the tray.

1. Open Tray 2 and make sure that the paper is stacked correctly. Remove any jammed or damaged sheets of paper.



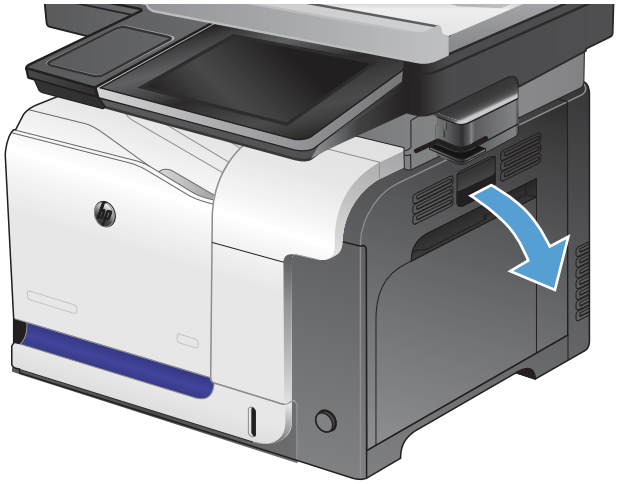
2. Close the tray.



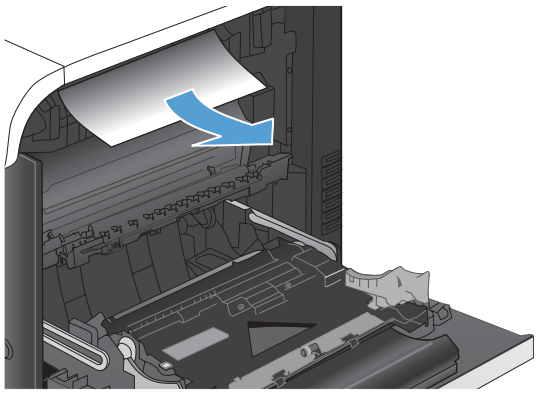
Clear jams in the right door

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

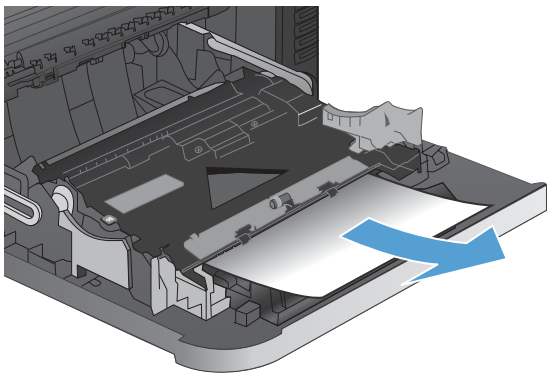
1. Open the right door.



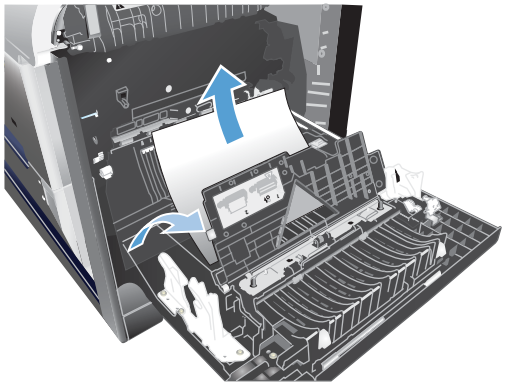
2. If paper is jammed as it enters the output bin, gently pull the paper downward to remove it.



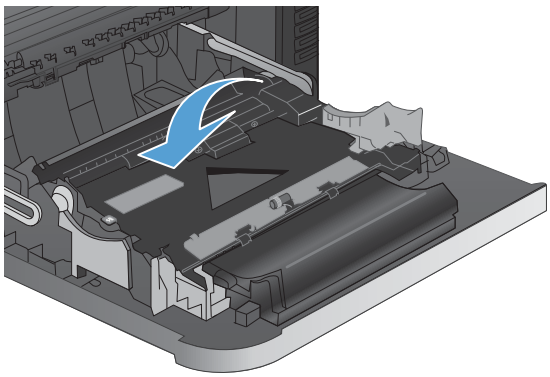
3. If paper is jammed inside the right door, gently pull the paper to remove it.



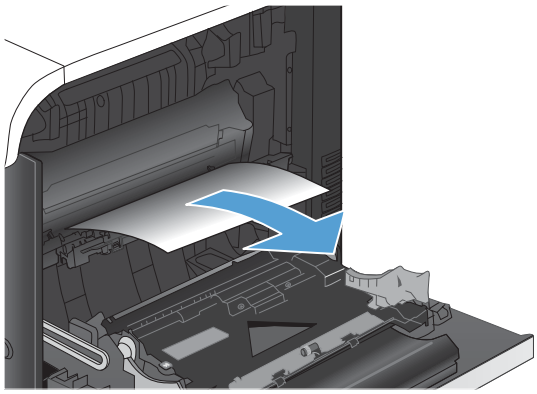
4. Lift the paper-feed cover on the inside of the right door. If jammed paper is present, gently pull the paper straight out to remove it.



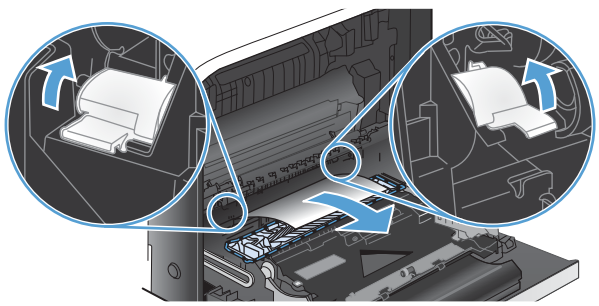
5. Close the paper-feed cover.



6. Gently pull the paper out of the pickup area.

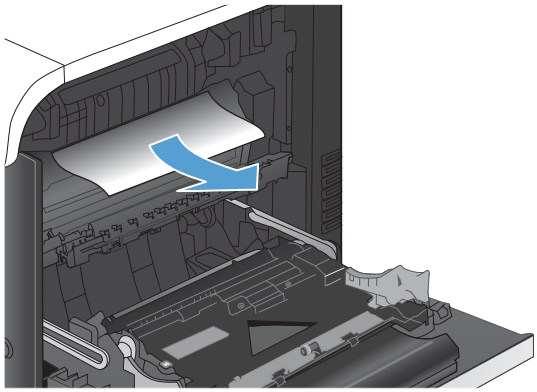


7. Look for paper in the Tray 2 roller area. Push up on the two green tabs to release the jam-access door. Remove any jammed paper, and close the door.



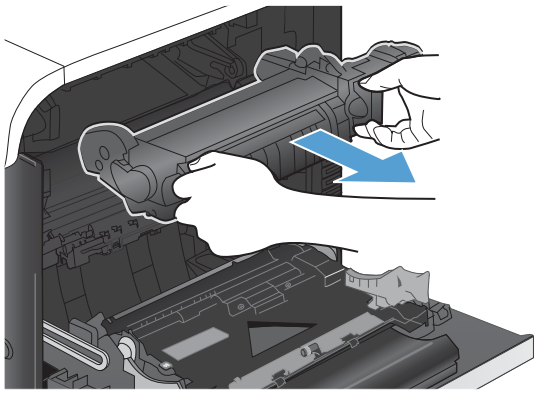
8. If paper is visible entering the bottom of the fuser, gently pull downward to remove it.

   CAUTION: Do not touch the rollers on the transfer roller. Contaminants can affect print quality.



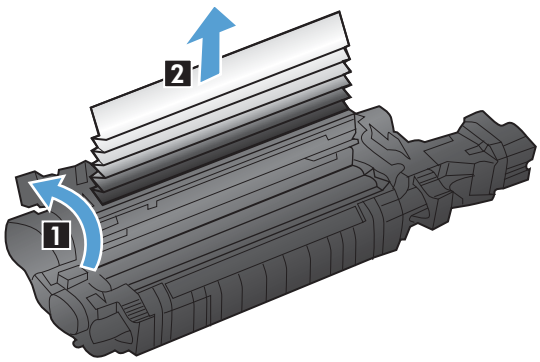
9. Paper could be jammed inside the fuser where it would not be visible. Grasp the fuser handles, lift up slightly, and pull straight out to remove the fuser.

   CAUTION: The fuser can be hot while the product is in use.

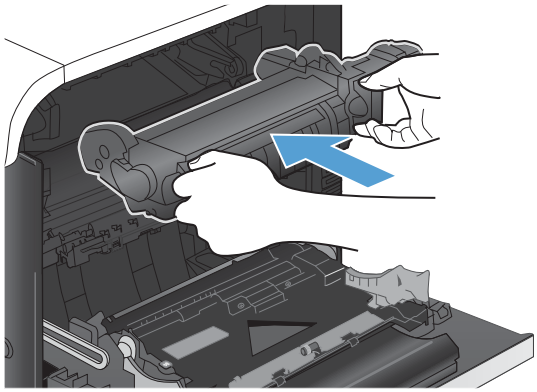


10. Open the jam-access door (callout 1). If paper is jammed inside the fuser, gently pull it straight up to remove it (callout 2). If the paper tears, remove all paper fragments.

    CAUTION: Even if the body of the fuser has cooled, the rollers that are inside could still be hot. Do not touch the fuser rollers until they have cooled.



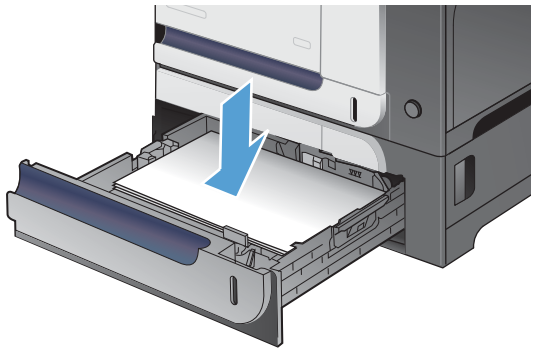
11. Close the jam-access door, and push the fuser completely into the product.



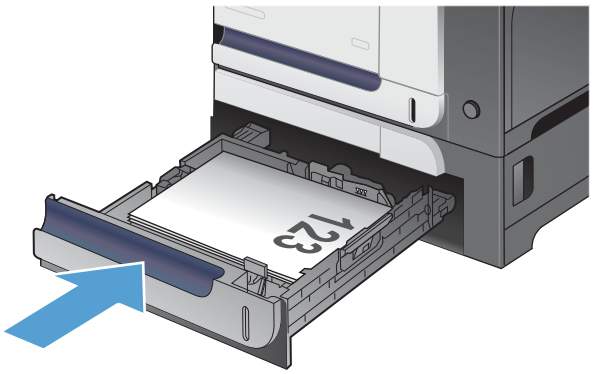
12. Close the right door.

Clear jams in optional Tray 3

1. Open Tray 3 and make sure that the paper is stacked correctly. Remove any damaged or jammed sheets of paper.

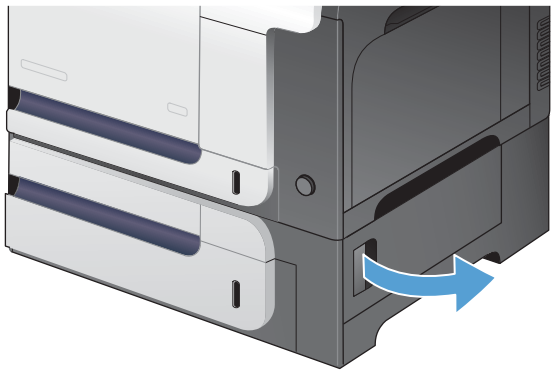


2. Close Tray 3.

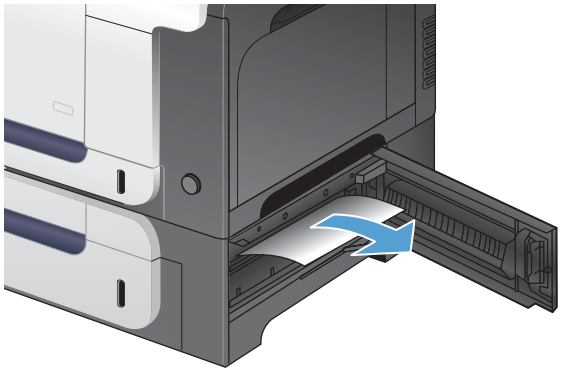


Clear jams in the lower right door (Tray 3)

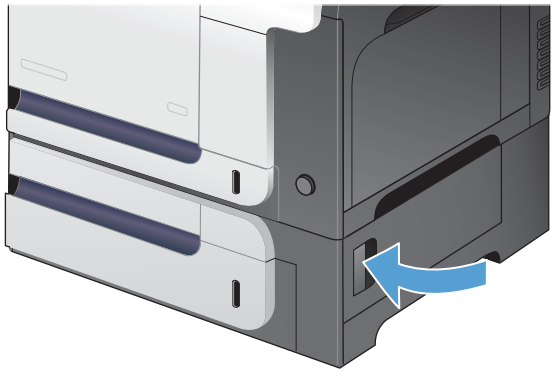
1. Open the lower right door.



2. If paper is visible, gently pull the jammed paper up or down to remove it.



3. Close the lower right door.



Jam causes and solutions

Jams in the output bin

Table 2-34 Causes and solutions for delivery delay jam

Cause	Solution
The output-bin media-full sensor lever is damaged.	Replace the paper delivery assembly.
Poor contact of the output-bin media-full sensor connector.	Reconnect the connectors of the output bin full sensor (SR6) (J47) to DCC PCA (J123).
The output-bin media-full sensor is defective.	Check the output-bin full sensor (SR6) by using the manual sensor test. Toggle the sensor to determine if the value changes for "F." If the value does not change, replace paper delivery assembly.
Poor contact of the fuser-motor (M2) connector.	Reconnect the connectors of the fuser motor (J117), (J15), and the DC controller PCA (J105).
The fuser motor (M2) is defective.	Execute the fuser-motor driving test in the actuator-drive mode. If the motor is defective, replace the fuser motor (M2).

Jams in the fuser and transfer area

Table 2-35 Causes and solutions for fuser delivery delay jams

Cause	Solution
The lever for the loop-sensors (loop 1 and loop 2) is not set correctly.	Check the loop-sensor lever and place it in the correct position. If the jam persists, replace the fuser.
The spring of the fuser-delivery-sensor lever is unhooked.	Check the spring of the fuser and right-door sensor levers and place them in the correct position. If the jam persists, replace the fuser.
The fuser-delivery-sensor lever is damaged.	Replace the fuser.
Poor contact with the fuser-delivery connector.	Reconnect the connectors of the fuser output sensor (SR5) (J45), intermediate (J95) and the DC controller PCA (J123).
The fuser-delivery sensor is defective.	Check the fuser-delivery sensor with the sensor monitor mode. If the sensor is defective, replace the sensor (SR5).
Poor contact of the fuser-motor connector (M2).	Reconnect the connectors of the fuser motor (J15) and the DC controller PCA (J117).
The fuser motor is defective.	Execute the fuser-motor driving test in the actuator-drive mode. If the motor is defective, replace the fuser motor (M2).
The fuser pressure release sensor (SR7) is defective.	Execute a manual sensor test to verify the sensor is working by manually toggling the sensor. Check "H" to see if the value changes. If not, replace the sensor.

Table 2-36 Causes and solutions for wrapping jams

Cause	Solution
The fuser roller or pressure roller is dirty.	Execute a fuser roller cleaning.
The guide of the fuser delivery unit is dirty.	Clean the guide.
The fuser roller or the pressure roller is worn or deformed.	Replace the fuser.

Table 2-37 Causes and solutions for fuser delivery stationary jams

Cause	Solution
The fuser roller or pressure roller is worn or deformed.	Replace the fuser.
The fuser delivery roller is deformed.	
The gear of the fuser delivery roller is damaged.	
The fuser output sensor lever is set incorrectly or damaged.	Check the sensor lever to make sure it is set correctly. If it is damaged, replace the fuser.
The spring of the fuser output sensor lever is unhooked.	Check the spring and place it in correct position.
Poor contact of the fuser delivery sensor connector.	Reconnect the intermediate connector (J95) of the fuser output sensor and the connector (J123) on the DC controller PCA.
The fuser output sensor is defective.	Run the sensor test to verify that the fuser output sensor is functioning properly. If it is not replace the fuser output sensor.

Table 2-38 Causes and solutions for residual paper jams

Cause	Solution
The fuser loop sensor is defective.	Check the fuser loop sensor using the sensor monitor mode. If the sensor is defective, replace the fuser.
The spring of the fuser-delivery-sensor lever is unhooked.	Check the spring of the fuser and place it in the correct position.
The fuser-delivery-sensor lever is damaged.	Replace the sensor (SR5).
Poor contact of the fuser-delivery-sensor connector.	Reconnect the connectors of the fuser-delivery media-feed connector (J46), intermediate (J95) and the DC controller PCA (J123).
The fuser-output sensor is defective.	Check the fuser output sensor using the sensor monitor mode. If the sensor is defective, replace the sensor (SR5).
Poor contact of the duplexing repick sensor connector.	Reconnect the connectors of the duplexing media-reverse sensor (J8 and J9) and the duplexing driver PCA (J107).
The duplexer re-feed is defective.	Check the duplexer re-feed sensor. If the sensor is defective, replace the right door.

Table 2-38 Causes and solutions for residual paper jams (continued)

Cause	Solution
The sensor detecting a residual media jam is set incorrectly or damaged.	Run the sensor test to verify which sensor detects the paper. Check the sensor lever to make sure it is set correctly. If it is damaged, replace the following corresponding part: • Registration sensor (SR8): Replace the registration assembly. • Fuser output sensor (SR5): Replace the fuser. • Fuser loop sensor 1 or 2 (SR14 and SR15): Replace the fuser. • Duplexer re-feed sensor (SR22): Replace the MP tray pickup assembly.
The spring of the residual media jam detective sensor lever is unhooked.	Run the sensor test to verify which sensor detects the paper. Check the spring of the sensor lever to make sure it is set correctly.
Poor contact of the residual media jam detective sensor connector.	Run the sensor test to verify which sensor detects the paper. Reconnect the following corresponding sensor connector: • Registration sensor (SR8): Connector (J109) on the DC controller PCA. • Fuser output sensor (SR5): Intermediate connector (J95) and connector (J123) on the DC controller PCA. • Fuser loop sensor 1 or 2 (SR14 and SR15): Connector (J139) on the DC controller PCA. • Duplexer re-feed sensor (SR22): Connector (J107) on the DC controller PCA.
The residual media jam detective sensor is defective.	Run the sensor test to verify which sensor detects the paper. Replace the following corresponding part: • Registration sensor (SR8): Replace the registration assembly. • Fuser output sensor (SR5): Replace the fuser. • Fuser loop sensor 1 or 2 (SR14 and SR15): Replace the fuser. • Duplexer re-feed sensor (SR22): Replace the MP tray pickup assembly.

Table 2-39 Causes and solutions for pickup delay jams 2

Cause	Solution
The registration roller is worn or deformed.	Replace the secondary-transfer unit.
The spring of the registration shutter is unhooked.	Check the spring and place it in correct position.
Poor contact of the pickup motor drive connector.	Reconnect the connectors of the registration motor (J6), intermediate, and the DC controller PCA (J131).
The pickup motor is defective.	Execute the pickup-motor driving test in the actuator-drive mode. If the motor is defective, replace the pickup motor.
The cassette pickup roller is worn or deformed.	Replace the tray pickup roller.

Table 2-39 Causes and solutions for pickup delay jams 2 (continued)

Cause	Solution
The tray separation roller is worn or deformed.	Replace the tray separation roller.
Poor contact of the registration sensor connector.	Reconnect the connector (J109) on the DC controller PCA.
The registration sensor is defective.	Run the sensor test to verify that the registration sensor is functioning properly. If it is not, replace the registration assembly.
Poor contact of the tray pickup solenoid drive connector.	Reconnect the connector (J140) on the DC controller PCA.
The tray pickup solenoid is defective.	Run the solenoid drive test in the actuator drive mode to verify that the tray pickup solenoid is functioning properly. If it is not, replace the tray-pickup drive assembly.
Poor contact of the pickup motor drive connector.	Reconnect the connector (J131) on the DC controller PCA.
The pickup motor is defective.	Run the pickup motor drive test in the actuator drive mode to verify that the pickup motor is functioning properly. If it is not, replace the pickup motor.

Table 2-40 Causes and solutions for pickup stationary jams

Cause	Solution
Multiple feed of paper.	Replace any worn or deformed parts (tray separation roller, tray feed roller, MP-tray pickup roller or MP-tray separation roller). Check the separation roller and MP-tray separation roller to see if they are firmly seated and coupled with the torque limiter. Replace the separation roller and feed roller in Tray 2. Replace the MP-tray pickup roller and MP-tray separation roller.
The secondary transfer roller is not set correctly.	Place the secondary-transfer-roller unit in the correct position.
The secondary transfer roller is worn or deformed.	Replace the secondary-transfer-roller unit.
Poor contact of the drum motor 3 drive connector.	Reconnect the connectors of the drum motor 3 (J42) and the DC controller PCA (J121).
The drum motor 3 is defective.	Execute the drum motor 3 driving test in the actuator-drive mode. If the motor is defective, replace the drum motor 3.
The ITB does not rotate smoothly.	Replace the ITB.
Multiple-feed of paper.	If the Tray 2 pickup roller or separation roller are worn or deformed, replace any defective parts. If the Tray 1 pickup roller or separation pad are worn or deformed, replace any defective parts.
The registration sensor lever is set incorrectly or damaged.	Check the sensor lever to make sure it is set correctly. If it is damaged, replace the registration assembly.

Table 2-40 Causes and solutions for pickup stationary jams (continued)

Cause	Solution
The spring of the registration sensor lever is unhooked.	Check the spring and place it in correct position.
Poor contact of the registration sensor connector.	Reconnect the connector (J109) on the DC controller PCA.
The registration sensor is defective.	Run the sensor test to verify that the registration sensor is functioning properly. If it is not, replace the registration assembly.

Jams in the duplex area (duplex models)

Table 2-41 Causes and solutions for duplexing reverse jams

Cause	Solution
The duplex reverse roller is worn or deformed.	Replace the delivery assembly.
The duplex feed roller is worn or deformed.	Replace the duplex feed unit.
Poor contact of the duplex reverse-motor connector.	Reconnect the connectors (J202 and J201) on the high-voltage power supply (upper) PCA and connector (J113) on the DC controller PCA.
The duplex reverse motor is defective.	Replace the duplex drive assembly.
Poor contact of the duplexing reverse-motor connector.	Reconnect the connectors of the duplexing reverse motor (J20) and the duplexing driver PCA (J202).
The duplexing reverse motor is defective.	Replace the right door assembly.

Table 2-42 Causes and solutions for duplex repick jams

Cause	Solution
The duplexer re-feed sensor lever is set incorrectly or damaged.	Check the sensor lever to make sure it is set correctly. If it is damaged, replace the right door assembly.
The spring of the duplexer re-feed sensor lever is unhooked.	Check the spring and place it in correct position.
Poor contact of the duplexer re-feed sensor connector.	Reconnect the intermediate connector (J90) and connector (J107) on the DC controller PCA.
The duplexer re-feed sensor is defective.	Run the sensor test to verify that the duplexer re-feed sensor is functioning properly. If it is not, replace the right door assembly.
The spring of the duplexer-refeed-sensor lever is unhooked.	Check the spring and place it in the correct position.
The duplexer-refeed-sensor lever is damaged.	Replace the duplexer re-feed sensor.
Poor contact of the duplexer-refeed-sensor connector.	Reconnect the intermediate connector (J90) and connector (J107) on the DC controller PCA. If the problem persist, replace duplexer re-feed sensor.
The duplexer re-feed sensor is defective.	Check the duplexer re-feed sensor. If the sensor is defective, replace the duplexer re-feed sensor.

Table 2-42 Causes and solutions for duplex repick jams (continued)

Cause	Solution
Poor contact of the duplex reverse connector.	Reconnect the connectors of the duplex repick motor (J20), intermediate (J202 and J201) and the duplex driver PCA (J113).
The duplex-repick motor is defective.	Replace the duplex drive assembly.

Table 2-43 Causes and solutions for residual media jams

Cause	Solution
Poor contact of the loop-sensor connector and fuser loop sensors 1 and 2.	Reconnect the connectors of the fuser loop sensors (1 and 2): • Loop 1 (J11, J352, J350, J50) and the DC controller (J139) • Loop 2 (J10, J352, J350, J50) and the DC controller (J139)
The fuser loop sensor is defective.	Check the fuser loop sensor. If the sensor is defective, replace fuser.
The spring of the fuser output sensor lever is unhooked.	Check the spring of the fuser and right door and place it in the correct position.
The fuser-ouput-sensor lever is damaged.	Replace the sensor (SR5).
Poor contact of the fuser-output sensor connector.	Reconnect the connectors of the fuser-output sensor (J46), intermediate (J95) and the DC controller PCA (J123).
The fuser-output sensor is defective.	Check the fuser-output sensor. If the sensor is defective, replace the fuser.
The spring of the duplexer re-feed sensor lever is unhooked.	Check the spring and place it in the correct position. The sensor is located in the right door behind the cover close to the engine side.
The duplexer re-feed sensor lever is damaged.	Replace the right door assembly.
Poor contact of the duplexing media-reverse-sensor connector.	Reconnect the connectors of the duplexing media-reverse sensor (J8) and (J90) and the duplexing driver PCA (J107).
The duplexer re-feed sensor is defective.	Check the duplexer re-feed sensor. If the sensor is defective, replace the duplexer re-feed sensor.

NOTE: Even if jammed paper is visible in Tray 1, clear the jam from the inside of the product by opening the right door.

Jams in Tray 1, Tray 2 and internal paper path

Table 2-44 Causes and solutions for pickup delay jam 1: tray pickup

Cause	Solution
The MP tray pick up roller or the MP tray separation pad is worn or deformed.	Replace the MP tray pick up roller and separation pad.
Poor contact of the Tray 1 paper sensor.	Reconnect the connectors of the tray media-feed sensor (J7), intermediate (J85), and DC controller (J107).
The Tray 1 paper sensor is defective (SR21).	Check the Tray 1 paper sensor. If the sensor is defective, replace the right door assembly.

Table 2-44 Causes and solutions for pickup delay jam 1: tray pickup (continued)

Cause	Solution
The arm spring of the MP pickup solenoid is unhooked.	Check the spring and place it in the correct position.
Poor contact of the MP-pickup-solenoid drive connector.	Reconnect the connectors of the tray pickup solenoid (J84) and the DC controller PCA (J107).
The MP-pickup solenoid is defective.	Execute the tray-pickup-solenoid driving test in the actuator-drive mode. If the solenoid is defective, replace the right door assembly.
Poor contact of the pickup-motor drive connector (M13).	Reconnect the connectors of the pickup motor (J1705), intermediate (J6) and the DC controller PCA (J131).
The pickup motor (M13) is defective.	Execute the pickup-motor driving test in the actuator-drive mode. If the motor is defective, replace the pickup motor.

Table 2-45 Causes and solutions for pickup stationary jams

Cause	Solution
Multiple feed of paper.	Replace any worn or deformed parts (tray separation pad, tray feed roller, MP tray pickup roller or MP tray separation pad). If replacing the MP tray separation pad, you must replace the right door assembly. Check the separation pad and MP tray separation pad to see if they are firmly seated and coupled with the torque limiter. Replace the separation pad and feed roller for Tray 2 and Tray 3. If the MP tray pickup roller if defective, replace the roller. If the MP tray separation pad is defective, replace the right door assembly.
The secondary transfer roller is not set correctly.	Place the secondary-transfer-roller unit in the correct position.
The secondary-transfer roller is worn or deformed.	Replace the secondary-transfer-roller assembly..
Poor contact of the drum 3 drive connector.	Reconnect the connectors of the ITB motor (J42) and the DC controller PCA (J121).
The drum motor 3 is defective.	Execute the drum 3 driving test in the actuator-drive mode. If the motor is defective, replace the ITB motor.
The ITB does not rotate smoothly.	Replace the ITB.

Table 2-46 Causes and solutions for pickup delay jam 1; MP tray pickup

Cause	Solution
The MP tray pickup roller or MP tray separation pad is worn or deformed.	If the MP tray pickup roller if defective, replace the roller. If the MP tray separation pad is defective, replace the right door assembly.
Poor contact of the MP tray media-presence-sensor connector.	Reconnect the connectors of the MP tray media-presence sensor (J2007), intermediate (J85) and the DC controller PCA (J1071).

Table 2-46 Causes and solutions for pickup delay jam 1; MP tray pickup (continued)

Cause	Solution
The Tray 1 paper sensor is defective (SR21).	Check the Tray 1 paper sensor using the sensor monitor mode. If the sensor is defective, replace the right-door assembly.
The arm spring of the MP tray pickup solenoid is unhooked.	Check the spring and place it in the correct position.
Poor contact of the MP tray-pickup-solenoid drive connector.	Reconnect the connectors of the MP tray pickup solenoid (J84) and the DC controller PCA (J107).
The MP tray pickup solenoid is defective.	Execute the MP tray-pickup-solenoid driving test in the actuator-drive mode. If the solenoid is defective, replace the right door assembly.
Poor contact of the pickup-motor (M13) drive connector.	Reconnect the connectors of the pickup motor (J1705), intermediate (J6) and the DC controller PCA (J131).
The pickup motor (M13) is defective.	Execute the pickup-motor (M13) driving test in the actuator-drive mode. If the motor is defective, replace the pickup motor.

Jams in Tray 3

Table 2-47 Causes and solutions for pickup delay and pickup stationary jams

Cause	Solution
The paper-feeder pickup roller is worn or deformed.	Replace the Tray 3 pickup roller.
The paper-feeder separation roller is worn or deformed.	Replace the Tray 3 separation roller.
The paper-feeder feed roller 1 is worn or deformed.	Replace the Tray 3 feed roller.
Poor contact of the Tray 3 feed sensor connector.	Reconnect the connector (J405) on the paper feeder driver PCA, intermediate connector (J13) and connector (J20) of the Tray 3 feed sensor.
The Tray 3 feed sensor is defective.	Run the sensor test to verify that the Tray 3 feed sensor is functioning properly. If it is not, replace the paper-feeder feed assembly.
Poor contact of the paper-feeder pickup solenoid drive connector.	Reconnect the connector (J405) on the paper feeder driver PCA and connector (J18). Replace the paper feeder assembly.
The paper-feeder pickup solenoid is defective.	Run the solenoid drive test in the actuator drive mode to verify that the paper-feeder pickup solenoid is functioning properly. If it is not, replace the paper feeder assembly.
Poor contact of paper-feeder pickup motor drive connector.	Reconnect the connector (J406) on the paper feeder driver PCA and connector (J14). Replace the paper feeder assembly.
The paper-feeder pickup motor is defective.	Run the pickup motor drive test in the actuator drive mode to verify that the paper-feeder pickup motor is functioning properly. If it is not, replace the paper-feeder assembly.
Multiple feed of paper.	If the Tray 3 pickup roller, separation roller or feed roller is worn or deformed, replace any defective parts.

Table 2-47 Causes and solutions for pickup delay and pickup stationary jams (continued)

Cause	Solution
The Tray 3 feed sensor lever is set incorrectly or damaged.	Check the sensor lever to make sure it is set correctly. If it is damaged, replace the paper-feeder assembly.
The spring of the Tray 3 feed sensor lever is unhooked.	Check the spring and place it in correct position.
Poor contact of the Tray 3 feed sensor connector.	Reconnect the connector (J405) on the paper feeder driver PCA intermediate connector (J13) and connector (J20) of the Tray 3 feed sensor.
The Tray 3 feed sensor is defective.	Run a sensor test to verify that the Tray 3 feed sensor is functioning properly. If it is not, replace the paper-feeder assembly.

Paper feeds incorrectly or becomes jammed

The product does not pick up paper

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

1. Open the product and remove any jammed sheets of paper.
2. Load the tray with the correct size of paper for your job.
3. Make sure the paper size and type are set correctly on the product control panel.
4. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray.
5. Check the product control panel to see if the product is waiting for you to acknowledge a prompt to feed the paper manually. Load paper, and continue.
6. The rollers above the tray might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.

The product picks up multiple sheets of paper

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

1. Remove the stack of paper from the tray and flex it, rotate it 180 degrees, and flip it over. *Do not fan the paper.* Return the stack of paper to the tray.
2. Use only paper that meets HP specifications for this product.
3. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.
4. Make sure the tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.
5. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray.
6. Make sure the printing environment is within recommended specifications.

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.

Prevent paper jams

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

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

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 2-48 Print modes under the Adjust Paper Types sub menu

Print Mode	• Auto Sense Mode • Normal mode • Light Mode • Heavy Mode • Card Stock Mode • Transparency Mode • Transparency 2 Mode • Envelope Control • Label Mode • Tough Mode • Extra tough mode • Heavy Glossy Mode • Extra Heavy Mode • X-heavy glossy mode • Rough Mode • Card Glossy Mode • 4 mm trans mode • Light Rough Mode • Mid-weight mode • Mid-wt glossy mode **NOTE:** Not all print modes are available for all paper types.
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.
Pre-Rotation Mode	Set to On when horizontal banding occurs with the drum pitch.

Table 2-48 Print modes under the Adjust Paper Types sub menu (continued)

Fuser Temp Mode	If you are seeing a faint image of the page repeated at the bottom of the page or on the following page, first make sure the paper type (Adjust Paper Types menu) and Print Mode settings are correct for the type of paper you are using. If you continue to see ghost images on your print jobs, set the Fuser Temp feature to one of the settings. Normal Up Down
Paper Curl Mode	Use in high-humidity and high-temperature environments. The Reduced setting decreases fuser temperature and increases the interpage gap.

Table 2-49 MP modes under the Optimize submenu

Normal Paper	Set to Smooth when printing on smooth paper of normal weight.
Heavy Paper	Set to Smooth when printing on smooth, heavy paper types.
Envelop Control	Use this mode if envelopes are sticking together due to moisture in the envelope adhisive. Normal Reduced Temp
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.
Line Voltage	Set to Low Voltage if the product is operating in a low-voltage environment and you are having problems with print quality such as blisters in the printed image.
Tray 1	Set to Alternate if you are seeing marks on the back side of the paper when printing from Tray 1. This sets the product to initiate a clean sequence every time a job finishes when the product is set for Any Size and Any Type for Tray 1.
Background	Set to Alternate 1 when a background occurs all over the page. Set to Alternate 2 when thin vertical lines appear on the page. Set to Alternate 3 when the other alternatives do not correct the problem.
Uniformity Control	Set to Alternate 1 to improve uniformity on any paper type. Set to Alternate 2 to improve uniformity on normal and light paper types. Set to Alternate 3 when the other alternatives do not correct the problem.
Tracking Control	The default setting is On. This item is for manufacturing use only.
Registration	Set to Alternate when color misregistration occurs.

Table 2-49 MP modes under the Optimize submenu (continued)

Transfer Control	Set to Alternate 1 to reduce primary transfer bias and to resolve low density or blotchy images. Set to Alternate 2 to resolve ghosting outlines that look like a finger or fingers. Set to Alternate 3 when the other alternatives do not correct the problem.
Fuser Temp	The default setrting for this item is Normal. Use the Alternate setting to reduce the occurance of first-page fuser wrinkle or toner blister.
Restore Optimize	Use this item to reset the menu defaults.

Solve image quality problems

Often print-quality problems can be resolved easily by making sure that the product is maintained, using paper that meets HP specifications, or running a cleaning page.

Image defects table

The following examples depict letter-size paper that has passed through the product short-edge first. These examples illustrate problems that would affect all the pages that you print, whether you print in color or in black only.

Table 2-50 Image defects table

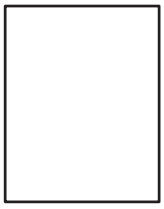
Problem	Sample	Cause	Solution
Print is light or faded on entire page.		Poor contacts exist on the ITB unit and the product grounding unit.	Clean the grounding contacts. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts.
		Poor secondary transfer contacts exist on the secondary transfer roller and the ITB.	Clean the contacts. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts.
Print is light or faded in a particular color.		Poor primary transfer bias contacts on the ITB unit and product.	Clean the contacts of the color that produces the light print. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts.
		Poor primary charging bias contacts with the toner cartridge and product.	
		Poor developing bias contacts with the toner cartridge and product.	
Image is too dark.		The RD sensor is defective.	Replace the RD sensor.
Page is blank.		The high-voltage power-supply lower is defective (no developing bias output).	Replace the high-voltage power-supply lower.

Table 2-50 Image defects table (continued)

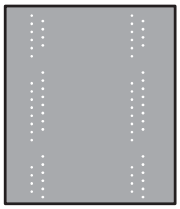
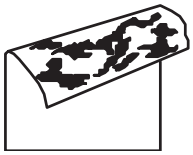
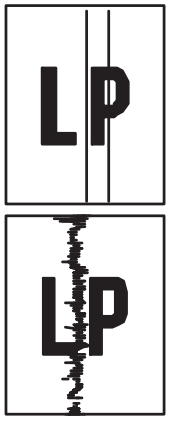
Problem	Sample	Cause	Solution
The page is all black or a solid color.		Poor contact exists in the primary charging bias or developing bias contacts between the toner cartridge and the product.	Clean each contact of the color that produces the all black or solid color. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts. Replace the affected toner cartridge.
White spots appear in an image		The primary transfer roller is deformed or has deteriorated.	Replace the ITB.
		The secondary transfer roller is deformed or has deteriorated.	Replace the secondary-transfer-roller.
The back of the page is dirty.		The secondary transfer roller is dirty.	Replace the secondary transfer roller.
		The fuser inlet guide or separation guide is dirty.	Clean the dirty parts. If the dirt does not come off, replace the guide.
		The pressure roller is dirty.	Run the cleaning page several times. If the issue persists, replace the fuser.
Vertical streaks or bands appear on the page.		Scratches are present on the circumference of the photosensitive drum.	Replace the toner cartridge of the color that matches the defect.
		Scratches are present on the circumference of the fuser roller.	Replace the fuser.
		Scratches are present on the circumference of the ITB.	Replace the ITB.
		The ITB drive roller is deformed or has deteriorated.	
		The ITB cleaning mechanism is malfunctioning.	

Table 2-50 Image defects table (continued)

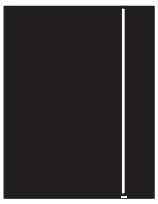
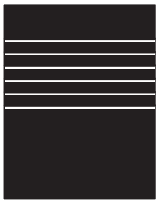
Problem	Sample	Cause	Solution
Vertical white lines appear in a particular color.		The laser beam window is dirty.	Clean the window and remove any foreign substances.
		Scratches are present on the circumference of the developing cylinder or photosensitive drum. White scratch down the page could mean the scanner glass needs to be cleaned.	Remove the affected toner cartridge and re-install it. The PGCs will clean the glass. If the problem persists, replace the affected toner cartridge.
		The laser/scanner-unit mirror is dirty.	Replace the laser/scanner assembly.
Vertical white lines appear in all colors.		Horizontal scratches on the fuser roller.	Replace the fuser.
		Scratches are present on the circumference of the ITB. White scratch down the page could mean the scanner glass needs to be cleaned.	Remove the affected toner cartridge and re-install it. The PGCs will clean the glass. Replace the ITB.
Horizontal lines appear on the page.		Repetitive horizontal lines appear.	Use the repetitive defects ruler to identify the dirty roller. Clean the roller. If the roller cannot be cleaned, replace the fuser.
		Horizontal scratches are present on the photosensitive drum.	Replace the toner cartridge of the color that matches the defect.
		Horizontal scratches are present on the fuser roller.	Replace the fuser.
A horizontal white line displays on the page.		Repetitive horizontal white lines appear.	Use the repetitive defects ruler to identify the dirty roller. Clean the roller. If the roller cannot be cleaned, replace the roller.
		Horizontal scratches are present on the photosensitive drum.	Replace the toner cartridge of the color that matches the defect.
		Scratches are present on the circumference of the ITB.	Replace the ITB.

Table 2-50 Image defects table (continued)

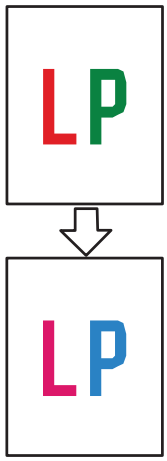
Problem	Sample	Cause	Solution
Image in a particular color does not print in the correct color.		Poor contact exists in the primary charging bias or developing bias contacts between the toner cartridge and the product.	Clean each contact of the color that produces the missing color. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts.
		The toner cartridge (primary charging roller, developing roller, or photosensitive drum) is defective.	Replace the toner cartridge of the color that matches the defect.
		The high-voltage power-supply lower is defective (no primary charging bias or developing bias output).	Replace the high-voltage power-supply lower.
		The laser/scanner unit is defective.	Replace the laser/scanner assembly.
Dropouts appear.		The secondary transfer roller is deformed or has deteriorated.	Replace the secondary-transfer-roller.
		The primary charging roller, developing roller, or photosensitive drum is deformed or has deteriorated.	Replace the toner cartridge of the color that matches the defect.
		The fuser roller is deformed or has deteriorated.	Replace the fuser.
		The high-voltage power-supply T PCA is defective (no transfer bias output).	Replace the high-voltage power-supply upper.
The toner is not fully fused to the paper.		The fuser roller or pressure roller is scarred or deformed.	Replace the fuser.
		The thermistor is defective.	Replace the fuser.
		The fuser heater is defective.	

Table 2-50 Image defects table (continued)

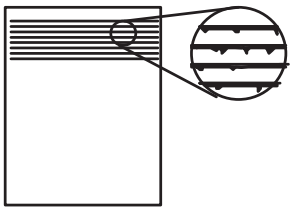
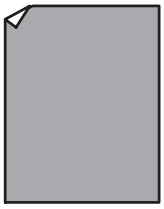
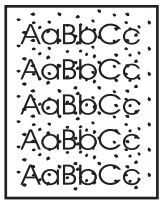
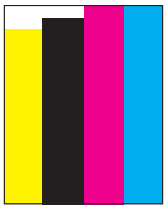
Problem	Sample	Cause	Solution
Some color is misregistered.		The product is incorrectly calibrated.	Calibrate the product.
		The ITB unit is defective.	If the ITB does not rotate smoothly or a cleaning malfunction occurs (ITB is dirty), replace the ITB.
		The drive gear of the ITB motor is worn or chipped.	Check each drive gear between the ITB drive roller and the ITB motor. If the gear is worn or chipped, replace the drive unit.
		The RD sensor is defective.	Open and close the front door several times to clean the RD sensor. If the problem persists, replace the RD sensor.
		The laser/scanner unit is defective.	Replace the laser/scanner assembly.
		The toner cartridge is defective.	Replace the toner cartridge of the affected color.
Toner smears appear on the paper.		The product has residual paper.	Remove the residual paper.
		The fuser inlet guide is dirty.	Clean the fuser inlet guide.
The printed page contains misformed characters.		The product is experiencing page skew.	See the "Text or graphics are skewed on the printed page" row in this table.
		The laser/scanner unit is defective.	Replace the laser/scanner assembly.
Text or graphics are skewed on the printed page.		The registration shutter spring is unhooked.	Check the spring and place it in the correct position.
		The registration shutter spring is deformed.	Replace the secondary transfer assembly.
The printed page contains wrinkles or creases.		The roller or paper feed guide is dirty.	Clean any dirty components.
		A feed roller is deformed or has deteriorated.	Replace any deformed or deteriorated rollers.
		The paper feed guide is damaged.	Replace the paper-feed-guide unit.

Table 2-50 Image defects table (continued)

Problem	Sample	Cause	Solution
The front of the page is dirty.		The photosensitive drum is dirty.	Replace the toner cartridge.
		The fuser roller or pressure roller is dirty.	Execute a **Pressure roller clean mode** procedure. If the dirt does not come off, replace the fuser. **NOTE:** Cleaning the fuser with HP tough paper provides better results than with plain paper. You might need to execute the cleaning process several times to remove all contaminants on the fuser.
Repetitive horizontal lines			See repetitive image defect ruler. Clean the indicated roller. If the contaminant does not come off, replace appropriate roller or assembly.
Pages have flecks of toner			Execute a cleaning page to clean the contaminant off the fuser. The cleaning page might need to be run several time to clean the fuser. Do not replace the fuser. **NOTE:** Cleaning the fuser with HP tough paper provides better results than with plain paper. You might need to execute the cleaning process several times to remove all contaminants on the fuser.
Pages have one or more skewed color planes (can appear on the right or left side of the page)			Remove, and then reinstall the toner cartridge associated with the defect.

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.

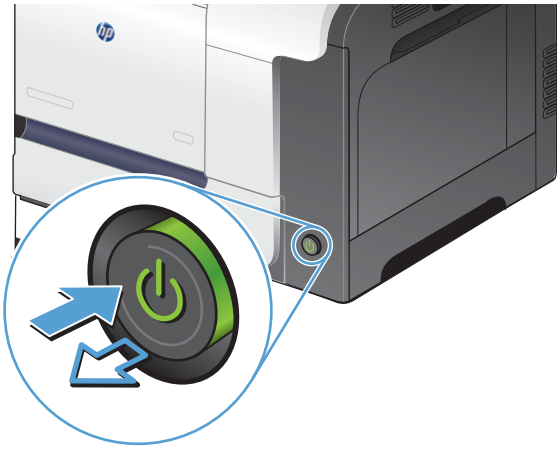
Use the following procedure to print a cleaning page.

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.

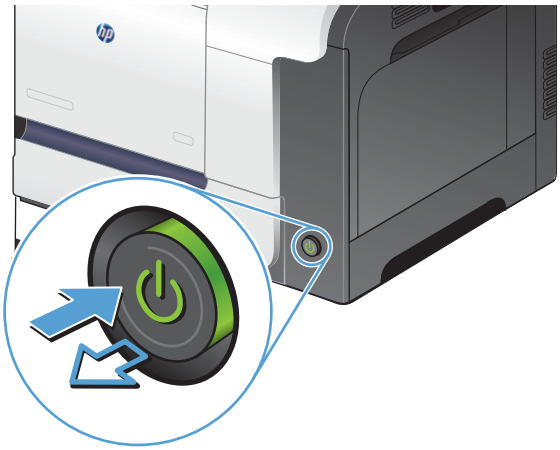


2. Open the scanner lid.

3. Clean the scanner glass and the white plastic backing by using 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.

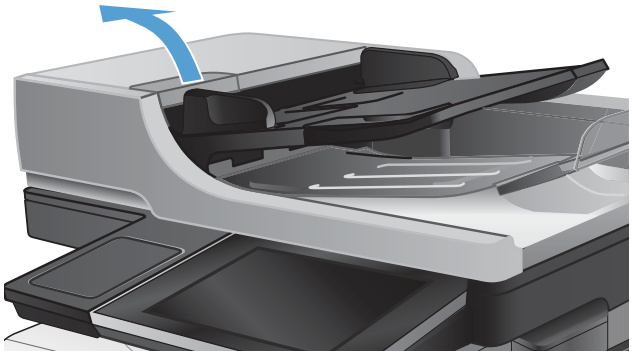
   CAUTION: Do not use abrasives, acetone, benzene, ammonia, ethyl alcohol, or carbon tetrachloride on any part of the product; these can damage the product. Do not place liquids directly on the glass or platen. They might seep and damage the product.

4. Connect the power cable to an outlet, and then press the power button to turn on the product.

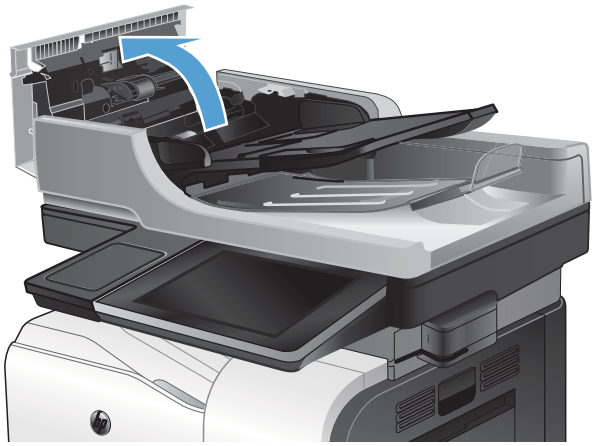


Clean the pickup rollers and separation pad in the document feeder

1. Lift the document-feeder latch.

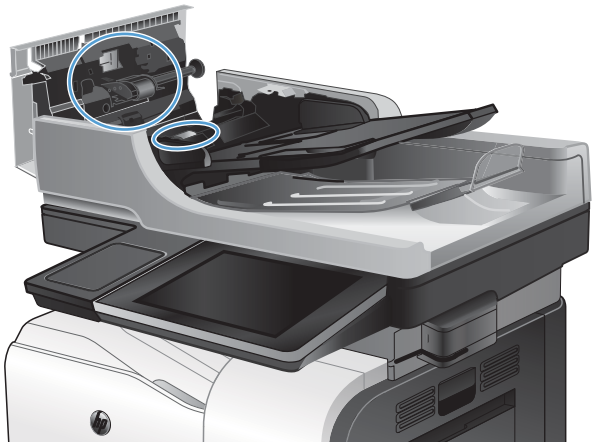


2. Open the document-feeder cover.

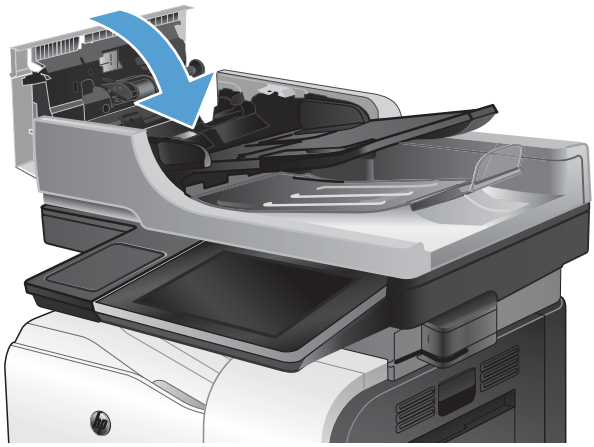


3. Remove any visible lint or dust from each of the feed rollers and the separation pad using compressed air or a clean lint-free cloth moistened with warm water.

   NOTE: Lift up the roller assembly so you can clean the second roller.



4. Close the document-feeder cover.



Solve performance problems

Table 2-51 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: 05057512.

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		
	Mono Cycle Count		The page count that is stored in NVRAM and printed on the configuration page represents the number of pages that the formatter has formatted (not including engine-test prints).
	Color Cycle Count		The page count that is stored in NVRAM and printed on the configuration page represents the number of pages that the formatter has formatted (not including engine-test prints).
	Refurbish Cycle Count		Use this item to record the page count when the product was refurbished.

First level	Second level	Value	Description
	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.
	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.

First level	Second level	Value	Description
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.
	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.	

First level	Second level	Value	Description
	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		
	Automatic Calibrations	Disabled Enabled*	
	Runtime Configuration	MercStine Standard StandardEIC Workflow WorkflowEIC Reconfigure	

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. Select one or more categories of settings from the list, and then 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. 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.
2. 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. The HP logo displays on the product control panel. When an underscore displays below the HP logo, touch the logo to open the **Preboot** menu.
3. Use the down arrow ▼ button to highlight Administrator, and then touch the OK button.
4. Use the down arrow ▼ button to highlight Startup Options item, and then touch the OK button.

5. Use the down arrow ▼ button to highlight the Cold Reset item, and then touch the OK button.
6. Touch the home button to highlight 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 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 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 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 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 Partial Clean function for this product.

CAUTION: HP recommends backing-up product configuration data before executing a 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 Partial Clean.

- The product will not respond to commands from the control panel.
- Executing the 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 Partial Clean

1. Turn the product on.
2. The HP logo displays on the product control panel. When an underscore displays below the HP logo, touch the logo to open the **Preboot** menu.
3. Touch the down arrow ▼ button to highlight Administrator, and then touch the OK button.
4. Use the down arrow ▼ button to highlight Partial Clean, and then touch the OK button.
5. Touch the OK button again.
6. Touch the home button to highlight Continue, and then touch the OK button.

NOTE: The product initializes.

Format Disk

The Format Disk option erases the entire disk drive.

CAUTION: After executing a 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 Format Disk function, the message **99.09.67** displays on the control panel.
- After executing the Format Disk function, the product firmware must be reloaded.

CAUTION: HP recommends that you do not use the Format Disk option unless an error occurs and the solution in the product service manual recommends this solution. After executing the Format Disk function, the product is unusable.

HP recommends backing-up product configuration data before executing a Format Disk if you need to retain customer-defined settings. See the Backup/Restore item in the Device Maintenance menu.

Reasons for performing Format Disk

- The product continually boots up in an error state.

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

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

Execute a Format Disk

1. Turn the product on.
2. The HP logo displays on the product control panel. When an underscore displays below the HP logo, touch the logo to open the **Preboot** menu.
3. Use the down arrow ▼ button to highlight Administrator, and then touch the OK button.
4. Use the down arrow ▼ button to highlight Format Disk, and then touch the OK button.
5. Touch the OK button again.

NOTE: When the 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 2-52 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 2-53 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/lj500colorMFPM575_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 an browser window.
2. Enter the product IP address in the URL line.
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 flash drive (Preboot menu)

1. Copy the `xxxxxxx.bdl` file to a portable USB flash drive.
2. Turn the product on.
3. The HP logo displays on the product control panel. When an underscore displays below the HP logo, touch the logo to open the **Preboot** menu.
4. Touch the down arrow ▼ button to highlight Administrator, and then touch the OK button.
5. Touch the down arrow ▼ button to highlight Download, and then touch the OK button.
6. Insert the USB flash drive with the `xxxxxxx.bdl` file on it.

NOTE: If the error message **No USB Thumbdrive Files Found** displays on the control-panel display, you might need to connect the storage device to the external USB connection on the formatter or try using a different portable storage device.

7. Touch the down arrow ▼ button to highlight USB Thumbdrive, and then touch the OK button.
8. Touch the down arrow ▼ button to highlight the `xxxxxxx.bdl` file, and then touch the OK button.

NOTE: The upgrade process can take up to 10 minutes to complete.

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.

9. When the message **Complete** displays on the control-panel display, touch the back arrow ⮌ button 3 times.
10. When the message Continue displays on the control-panel display, touch the OK button. The product will initialize.
11. When the upgrade process is complete, print a configuration page and verify that the upgrade firmware version was installed.

USB flash drive (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
- Color LaserJet Fuser Kit, Transfer Kit, and Roller Kit Limited Warranty Statement
- 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 500 color MFP M575dn, M575f	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.

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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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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).

Color LaserJet Fuser Kit, Transfer Kit, and Roller Kit Limited Warranty Statement

This HP product is warranted to be free from defects in materials and workmanship until the printer provides a low-life indicator on the control panel.

This warranty does not apply to products that (a) have been 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) or contact HP customer support. At HP's option, HP will either replace products that prove to be defective or refund your purchase price.

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Data stored on the 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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5. PROPRIETARY RIGHTS. All intellectual property rights in the Software and User Documentation are owned by HP or its suppliers and are protected by law, including applicable copyright, trade secret, patent, and trademark laws. You will not remove any product identification, copyright notice, or proprietary restriction from the Software.

6. LIMITATION ON REVERSE ENGINEERING. You may not reverse engineer, decompile, or disassemble the HP Software, except and only to the extent that the right to do so is allowed under applicable law.

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8. LIMITATION OF LIABILITY. Notwithstanding any damages that you might incur, the entire liability of HP and its suppliers under this EULA and your exclusive remedy under this EULA will be limited to the greater of the amount actually paid by you for the Product or U.S. $5.00. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOST PROFITS, LOST DATA, BUSINESS INTERRUPTION, PERSONAL INJURY, OR LOSS OF PRIVACY) RELATED IN ANY WAY TO THE USE OF OR INABILITY TO USE THE SOFTWARE, EVEN IF HP OR ANY SUPPLIER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND EVEN IF THE ABOVE REMEDY FAILS OF ITS ESSENTIAL PURPOSE. Some states or other jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

9. U.S. GOVERNMENT CUSTOMERS. Software was developed entirely at private expense. All Software is commercial computer software within the meaning of the applicable acquisition regulations. Accordingly, pursuant to US FAR 48 CFR 12.212 and DFAR 48 CFR 227.7202, use, duplication and disclosure of the Software by or for the U.S. Government or a U.S. Government subcontractor is subject solely to the terms and conditions set forth in this End User License Agreement, except for provisions which are contrary to applicable mandatory federal laws.

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

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

Rev. 04/09

OpenSSL

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

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;

LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

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/lj500colorMFPM575
Download software utilities, drivers, and electronic information	www.hp.com/go/lj500colorMFPM575_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

Table B-1 Physical specifications

Product	Height	Depth	Width	Weight
M575dn	600 mm (23.6 in)	458 mm (18.0 in)	510 mm (20.0 in)	46.6 kg (102.7 lb)
M575f	600 mm (23.6 in)	458 mm (18.0 in)	545 mm (21.5 in)	46.6 kg (102.7 lb)

Power consumption, electrical specifications, and acoustic emissions

See www.hp.com/go/lj500colorMFPM575_regulatory for current information.

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

Environmental specifications

Table B-2 Operating-environment specifications

Environment	Recommended	Allowed
Temperature	17° to 25°C (62.6° to 77°F)	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

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

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.

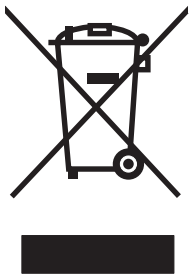
This HP product contains a battery that might require special handling at end-of-life. The batteries contained in or supplied by Hewlett-Packard for this product include the following:

HP LaserJet Enterprise 500 color MFP M575	
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-0802-04 Rel.1.0
Manufacturer's Address:	11311 Chinden Boulevard	
	Boise, Idaho 83714-1021, USA	
declares, that the product		
Product Name:	HP LaserJet Enterprise 500 MFP M575dn	
Regulatory Model Numbers:[2)]	BOISB-0802-04	
Product Options:	All	
Toner Cartridges:	CE400A, CE400X, CE401A, CE402A, CE403A	
conforms to the following Product Specifications:		
SAFETY:	IEC 60950-1:2005 / EN60950-1: 2006 +A11 +A1	
	IEC 60825-1:2007 / EN 60825-1:2007 (Class 1 Laser/LED Product)	
	IEC 62479–2010 / EN62479–2010	
	GB4943-2001	
EMC:	CISPR22:2005 +A1/ EN55022:2006 +A1 - 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 / ICES-003, Issue 4	
	GB9254-2008, GB17625.1-2003	

Supplementary Information:

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

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

1. The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
2. For regulatory purposes, this product is assigned a Regulatory model number. This number should not be confused with the marketing names or the product number(s).
3. The product meets the requirements of EN55022 & CNS13438 Class A in which case the following appleis: “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

July 27 2011

For Regulatory Topics only, contact:

European Contact:	Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard Gmbh, Hewlett-Packard GmbH, HQ-TRE, Herrenberger Straße 140, 71034 Böblingen, Germany www.hp.eu/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-0802–05–rel.1.0
Manufacturer's Address:	11311 Chinden Boulevard	
	Boise, Idaho 83714-1021, USA	
declares, that the product		
Product Name:	HP LaserJet Enterprise 500 MFP M575f	
Regulatory Model:[2)]	BOISB-0802–05	
	BOISB-0703-00 – Fax Module	
Product Options:	All	
Toner Cartridges:	CE400A, CE400X, CE401A, CE402A, CE403A	
conforms to the following Product Specifications:		
SAFETY:	IEC 60950-1:2005 / EN60950-1: 2006 +A11 +A1	
	IEC 60825-1:2007 / EN 60825-1:2007 (Class 1 Laser/LED Product)	
	IEC 62479–2010 / EN62479:2010	
	GB4943-2001	
EMC:	CISPR22:2005 +A1/ EN55022:2006 +A1 - 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 / ICES-003, Issue 4	
	GB9254-2008, GB17625.1-2003	
TELECOM	ES 203 021; FCC Title 47 CFR, Part 68[4)]	

Supplementary Information:

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

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

1. The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
2. For regulatory purposes, this product is assigned a Regulatory model number. This number should not be confused with the product name or the product number(s).
3. 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."
4. Telecom approvals and standards appropriate for the target countries/regions have been applied to this product, in addition to those listed above.
5. This product uses an analog fax accessory module which Regulatory Model numbers are: BOISB-0703-00, as needed to meet technical regulatory requirements for the countries/regions this product will be sold.

Boise, Idaho USA

July 27 2011

For Regulatory Topics only, contact:

European Contact:	Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard Gmbh, Hewlett-Packard GmbH, HQ-TRE, Herrenberger Straße 140, 71034 Böblingen, Germany www.hp.eu/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)

Hewlett-Packard Certificate of Volatility				
Model: HP LaserJet Enterprise 500 MFP M575 Series	Part Number: M575dn=CD644A,fw=CD645A, cw=CD646A		Address: Hewlett Packard Company 11311 Chinden Blvd Boise, ID 83714	
Volatile Memory				
Does the device contain volatile memory (Memory whose contents are lost when power is removed)? ☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (SRAM, DRAM, etc): DDR2 - DRAM	Size: 1.5 GB	User Modifiable: ☐ Yes ☒ No	Function: Used for temporary storage during the process of jobs, and for applications that are running on the OS.	Steps to clear memory: When the printer is powered off, the memory is erased.
Type (SRAM, DRAM, etc):	Size:	User Modifiable: ☐ Yes ☐ No	Function:	Steps to clear memory:
Type (SRAM, DRAM, etc):	Size:	User Modifiable: ☐ Yes ☐ No	Function:	Steps to clear memory:
Non-Volatile Memory				
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? ☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (Flash, EEPROM, etc): SPI Flash	Size: 4 MB	User Modifiable: ☒ Yes ☐ No	Function: Contains the boot code and factory product configuration data required for the device to function. User modifications are limited to downloading digitally signed HP firmware images.	Steps to clear memory: There are no steps to clear this data.
Type (Flash, EEPROM, etc): ICB EEPROM	Size: 32KB	User Modifiable: ☐ Yes ☒ No	Function: Backup device for critical system counters and product configuration information.	Steps to clear memory: There are no steps to clear this data.
Type (Flash, EEPROM, etc): None	Size:	User Modifiable: ☐ Yes ☒ No	Function:	Steps to clear memory:

Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? ☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc): Self Encrypting Hard Disk, SATA 1 and SATA 2	Size: 250 GB	User Modifiable: ☒ Yes ☐ No	Function: Stores customer data, OS, applications, digitally signed firmware images, persistent data, and temporary data used for processing and system functions.	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.

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

USB			
Does the item accept USB input and if so, for what purpose (i.e Print Jobs, device firmware updates, scan upload)? ☒ Yes ☐ No If Yes please describe below			
Print jobs, HP digitally signed firmware upgrades, 3rd party application loading. USB ports can be disabled.			
Can any data other than scan upload be sent to the USB device)? ☒ Yes ☐ No If Yes please describe below			
Diagnostic service logs can be uploaded. Print files can be printed via a USB thumb drive.			
RF/RFID			
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) ☐ Yes ☒ No If Yes please describe below			
Purpose:			
Frequency:		Bandwidth:	
Modulation:		Effective Radiate Power (ERP):	
Specifications:			
Other Transmission Capabilities			
Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? ☐ Yes ☒ No If Yes please describe below:			
Purpose:			
Frequency:		Bandwidth:	
Modulation:		Effective Radiate Power (ERP):	
Specifications:			
Other Capabilities			
Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? ☐ Yes ☒ No If Yes please describe below:			
Purpose:			
Specifications:			
Author Information			
Name:	Title: Security Technical Marketing Engineer	Email:	Business Unit: IPG
			Date Prepared: 04/24/12

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 기기이오니 판매자 또는 사용자는 이점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 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 500 color MFP M575dn, M575f, 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 500 color MFP M575dn, M575f - 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

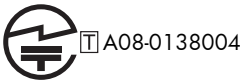
cause to request the user to disconnect the equipment. Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution can be particularly important 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.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed five (5.0). The standard connecting arrangement code (telephone jack type) for equipment with direct connections to the telephone network is CA11A.

Vietnam Telecom wired/wireless marking for ICTQC Type approved products

Japan Telecom Mark



Index

T

U

V

W

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