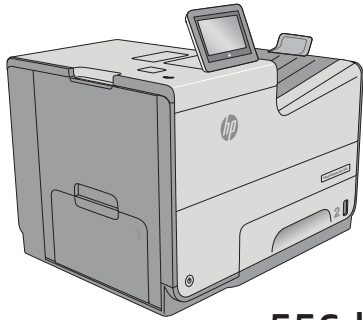




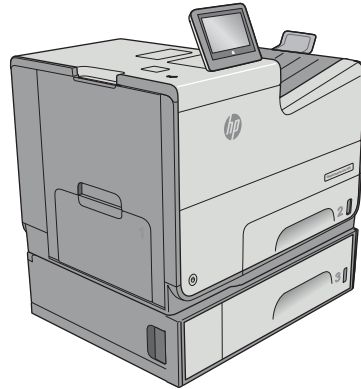
PageWide Enterprise Color 556

PageWide Enterprise Color MFP 586

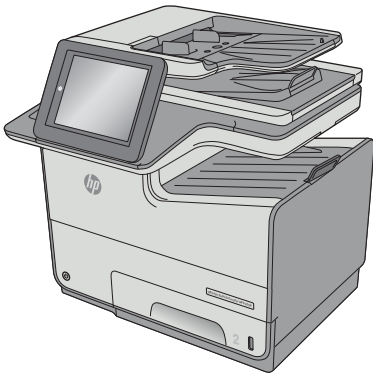
Troubleshooting Manual



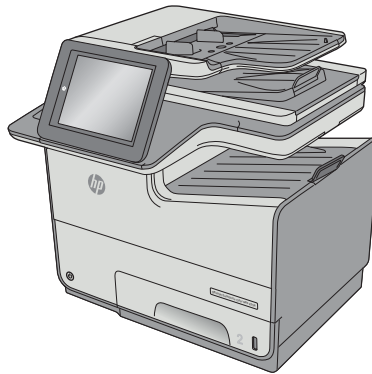
556dn



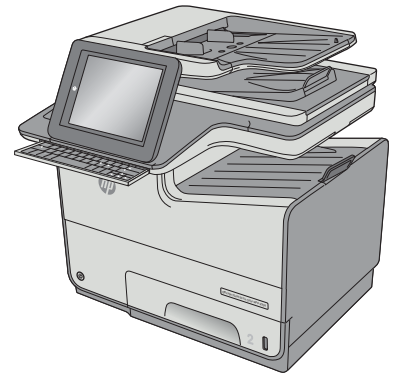
556xh



586dn



586f



586z



www.hp.com/support/pagewidecolor556
www.hp.com/support/pagewidecolor586MFP

For printer part removal and part number information, see the Repair Manual.



HP PageWide Enterprise Color 556 and MFP 586

Troubleshooting Manual

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Conventions used in this guide


 **TIP:** Helpful hints or shortcuts.

 **NOTE:** Information that explains a concept or how to complete a task.

 **Reinstallation tip:** Reinstallation helpful hints, shortcuts, or considerations.

 **IMPORTANT:** Information that help the user to avoid potential printer error conditions.

 **CAUTION:** Procedures that the user must follow to avoid losing data or damaging the printer.

 **WARNING!** Procedures that the user must follow to avoid personal injury, catastrophic loss of data, or extensive damage to the printer.

For additional service and support information

HP service personnel, go to the WISE at <https://support.hp.com/wise/home/ams-en>.

Channel partners, go to HP Channel Services Network (CNS) at <https://h30125.www3.hp.com/hpcsn>.

At these locations, find information on the following topics:

- Install and configure
- Printer specifications
- Up-to-date control panel message (CPMD) troubleshooting
- Solutions for printer issues and emerging issues
- Remove and replace part instructions and videos
- Service advisories
- Warranty and regulatory information

To access HP PartSurfer information from any mobile device, go to <http://partsurfermobile.hp.com/> or scan the Quick Response (QR) code below.



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1 Theory of operation

- [Basic operation](#)
- [System control](#)
- [Print subsystem](#)
- [Paper-handling system](#)
- [Servicing system](#)
- [Transmission system](#)
- [Aerosol management system](#)
- [Document feeder system \(586 models\)](#)
- [Scanning and image capture system \(586 models\)](#)
- [Fax functions and operation \(586f and 586z models\)](#)

Basic operation

Function structure

The printer consists of the following components:

Figure 1-1 Main components (556 models)

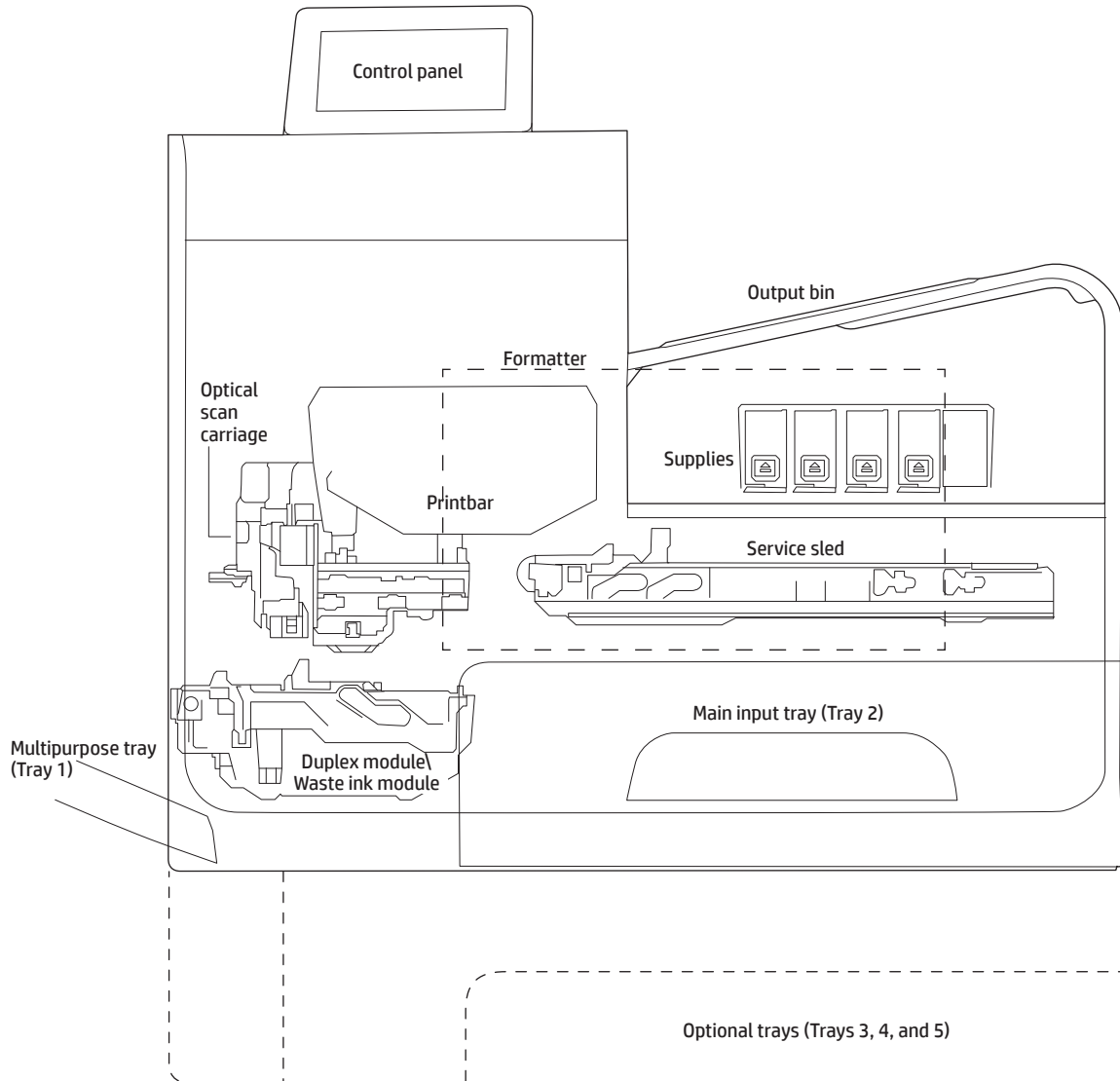
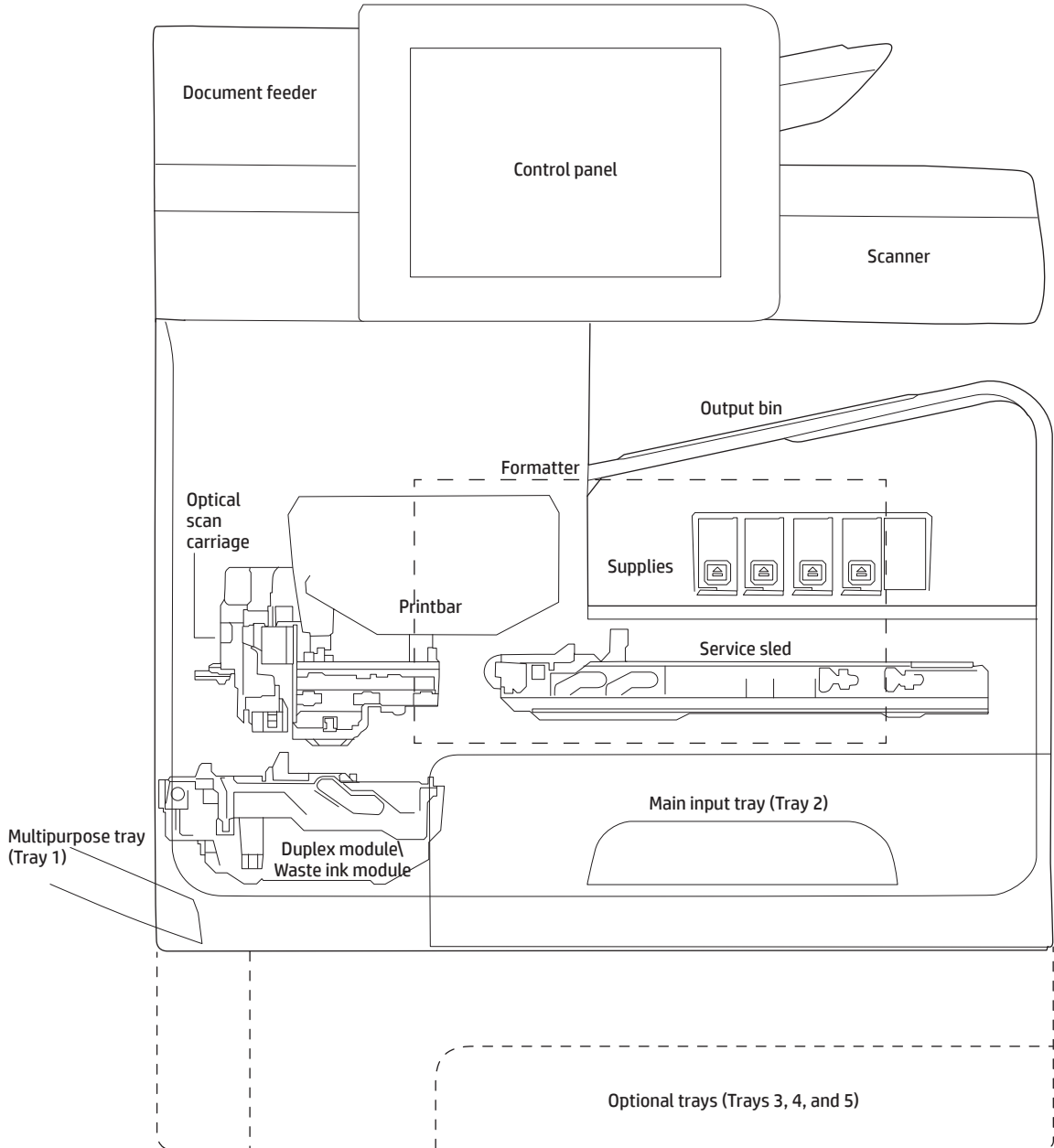


Figure 1-2 Main components (586 models)



The printer contains the following systems:

- Engine control system
- Print subsystem
- Paper-handling system
- Servicing system
- Aerosol management system
- Scanner and document feeder system (586 printers)

Two elements influence the printer architecture:

- The first is the need to orient the printbar with its active face downwards and statically located above the print paper. This requires the printbar to move vertically to access its active face.
- The second is producing face-down output. Rather than ejecting the page face-up immediately after the ink is applied, as many inkjet printers do, the printed page is routed up and back over the printbar to eject face-down.

Operation sequence

The engine-control system on the formatter PCA controls the operational sequences. The following table describes the durations and the operations for each period of a print operation from when the printer is turned on to when the motors stop rotating.

Table 1-1 Operation sequence

Period	Duration	Purpose
Initial startup and calibrations	When the printer is set up for the first time from the factory.	<p>This period gets the printer ready to print for the first time.</p> <ul style="list-style-type: none"> • The printer flushes the shipping and handling fluid out of the printbar and replaces it with ink. • Die alignment—The printer aligns the 10 die on the printbar active face. • Die density leveling—The printer measures and compensates for the drop variation.
Servicing operations	When the printbar enters the capping state after printing, when the printbar leaves capping state after a print job is initiated, or during extended print jobs.	<p>Servicing maintains the print quality by ensuring debris and excess ink are removed and missing nozzles are replaced.</p> <ul style="list-style-type: none"> • Nozzle presence detection—The optical scan carriage detects and disables inoperable nozzles, and replaces them with operable nozzles. • Printbar servicing—The web wipe on the service sled moves under the printbar to clean the active face and then fires the nozzles into the waste ink module to clear clogs.
Print preparation	From the time the printer receives a print command until paper enters the print zone.	<p>Prepares the printer for a print job.</p> <ul style="list-style-type: none"> • The printbar leaves the capping state as the service sled moves away from the printbar. • If needed, some servicing occurs. • The printbar lowers to the printing position. The media type and printing mode determine the print zone height. • The printer picks paper from one of the input trays. • Every page from Tray 1 is scanned. After paper is loaded in Tray 2 and optional Trays 3, 4, and 5, the printer performs media-edge detection after printing the first sheet. If at least five sheets have been printed, the last sheet of each job is also scanned. • The printer monitors environmental conditions. The printer can decrease the print speed if conditions are significantly different from a normal office environment (23 degrees C (73 degrees F), 50% relative humidity). • The formatter PCA processes print data and transmits the data to the printbar.

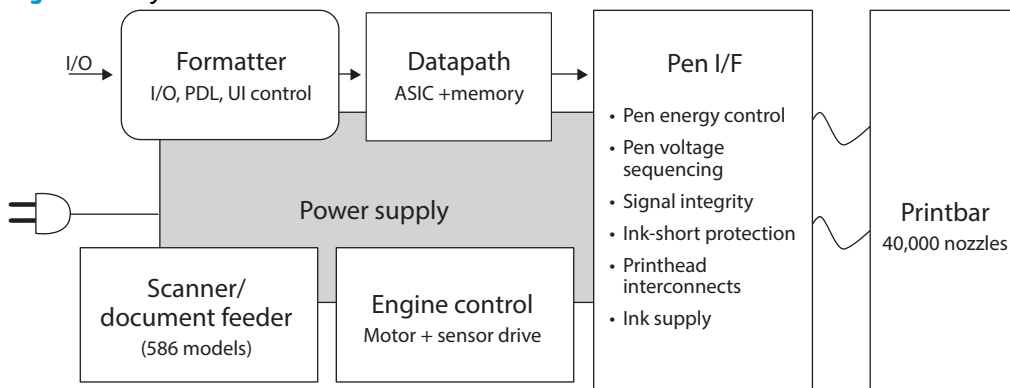
Table 1-1 Operation sequence (continued)

Period	Duration	Purpose
Printing	From the end of the preparation period until the last sheet is delivered.	<p>Processes the print job.</p> <ul style="list-style-type: none">• As the page travels through the print zone, the printbar applies ink to the page.• Simplex print job: the page moves up, over the printbar, and out to the output bin (face-down).• Duplex print job: the page moves up until the trailing edge is 40 mm past the star-wheel jam reflective sensor, then reverses direction down through the duplex path underneath the waste ink module, and then reenters the print zone where the printbar applies ink to the second side.• The process continues until all the pages of the print job are completed. Occasional nozzle presence detection and servicing events might occur if the job includes many pages.
End of print job	Performed after the print job is completed, and continues until the next job is initiated.	<p>Puts the printer in a state where it's ready for the next print job.</p> <ul style="list-style-type: none">• If needed, some servicing occurs.• The printbar moves to the capping position after a short dwell interval.• The service sled moves to cap the printbar.
Standby	The printer is sitting idle, waiting for the next print job to be initiated.	<p>Conserves energy while the printer is sitting idle. Certain functions might be disabled to save power, then are restarted when needed. The printer has three sleep modes:</p> <ul style="list-style-type: none">• Idle mode—The printbar is capped and the printer is ready to immediately start a new job• Sleep1 mode—After the printer is inactive for about 10 minutes, the control panel dims and the power LED blinks to indicate the unit is in Sleep1. All printer functions are available. This setting can be adjusted from the control panel.• Sleep2 mode—After the printer is inactive for a longer period of time (typically 2 hours), the engine controller powers down to minimize power consumption. This setting can be adjusted from the control panel.

System control

The system control coordinates all the other systems, according to commands from the formatter.

Figure 1-3 System control



The system consists of the following major sections:

- Formatter
- Data path
- Engine control
- Pen interface
- Scanner/document feeder (586 printers)
- Power supply

The engine control electronics are located on the engine control board (ECB). The formatter PCA is a separate assembly. The fax module (586f and 586z models) is attached to the formatter PCA.

Formatter and data path

The formatter controller ASIC controls the input/output (I/O) control, the user interface, and the rendering of page description language files into printer-specific commands.

Input/output (I/O) control

The printers support 10/100/1000 Ethernet, 802.11 wireless and NFC (some 556 models), a rear USB host port, a rear USB device port, a walk-up USB host port, and analog fax port (some 586 models). For Ethernet networks, the formatter ASIC uses a separate integrated circuit (Marvell device) to provide the physical network layer.

The formatter PCA controls the USB device and USB host. The optional dual USB host port accessory is also connected to the formatter after user installation.

Wireless and NFC I/O are provided via a separate radio module.

User interface

The printers contain either a 4.3-in (556 models) or an 8-in (586 models) color graphics display. For wireless models, there is an icon on the control panel to denote that the wireless feature is enabled. The printers include a walk-up USB host port for connection to thumb drives.

Formatter digital ASIC

The formatter digital ASIC has dual ARM CPUs (1.2 GHz) that execute firmware code that provides high-level device control. The digital ASIC uses a standard PCIe interface to pass data to the engine control ASIC. The formatter firmware is located on either a hard-disk drive (HDD) or, on some 556 models, an embedded MultiMedia Card (eMMC).

Additionally, the formatter digital ASIC manages the real-time clock, interfaces to the mass storage controller ASIC, provides control of USB ports, and interfaces with the Ethernet LAN ASIC and fax module.

Formatter Ethernet ASIC

The formatter Ethernet ASIC connects to the formatter digital ASIC with a PCIe interface to transmit and receive network packets.

Formatter mass storage ASIC

The formatter mass storage ASIC bridges between the formatter digital ASIC (via PCIe interface) and the mass storage device (via SATA interface). Both HDD and eMMC mass-storage media are supported. The 586 models use a rotating media HDD, while the 556 models use either HDD or eMMC depending upon the bundle option.

Formatter memory

Formatter memory is installed on-board and there is support for additional DIMM memory installation. The size of the memory on the formatter is 1 GB for 556 models and 1.256 GB for 586 models. An optional 1GB DIMM is available as a customer accessory.

Real-time clock

The real-time clock (RTC) allows the fax module to time-stamp outgoing faxes. It also determines the elapsed time between printhead and ISS calibration events. The RTC uses a separate device connected to the formatter digital ASIC, along with a crystal and a battery.

Engine control

The engine controller digital ASIC receives high-level commands from the formatter, and it then provides low-level control to the print mechanism. In particular, the engine controller digital ASIC and its firmware control motors, system sensors, and the printbar. The engine controller analog ASIC integrates motor drivers, voltage regulators, sensor interfaces, and supervisory circuits.

Engine controller digital ASIC

The engine controller digital ASIC has a high-performance 480 MHz ARM CPU and DSP co-processors that execute firmware code to provide low-level engine control. It also drives the printbar via 15 high-speed LVDS transmission lines, which are routed from the engine PCA to the printbar via two large flat cables. The engine controller digital ASIC receives pre-rendered data from the formatter digital ASIC over a standard PCIe interface.

In some printer sleep modes, the digital ASIC reduces the clock frequencies. If a print job is received while the printer is in this mode, the clocks are restored to the digital ASIC, which then must restore the engine. This can take approximately 15 seconds, which will delay the first page out (FPO) time accordingly. This sleep mode typically begins after two hours of printer inactivity.

Engine controller analog ASIC

The engine uses three analog ASICs to generate the system voltages for the engine, drive the engine motors, control various engine sensors, and monitor printbar power delivery for correct operation.

The engine has seven motors, some of which are shared with other subsystems. Those motors are:

- Pick motor
- Feed motor
- Duplex motor
- Lift motor
- Eject motor
- Sensor carriage motor
- Aerosol fan motor

Each one is a DC motor with encoder feedback to provide precision servo control. These motors are driven directly by one of the engine analog ASICs. Small DC motors also are used to drive the ISS pump and the aerosol fan. Solenoids actuate the ejection flap and the ISS priming system.

The printer uses many sensors to track the paper as it travels through the paper path. Most of these are optical REDI sensors, which are used in conjunction with mirrors to sense the presence or absence of paper in a particular location. These are carefully aligned and calibrated at the factory, so care must be taken when servicing these sensors. See the “Remove and Replace” chapter in the *Repair* manual for more details.

Other printed circuit-board assemblies (PCAs)

In addition to hosting the system ASICs, the engine PCA is home to many circuits needed to interface with sensors and other sub-system components. In some cases, this circuitry is located on a smaller remote PCA (SLB) to optimize cable interconnections.

- Humidity sensor—The humidity sensor causes the printer to adjust printing speed if ambient conditions are outside the optimal humidity range. This sensor is calibrated at the factory to ensure maximum accuracy.
- Temperature sensor—The temperature sensor causes the printer to adjust printing speed if ambient conditions are outside the optimal temperature range. In some printers, this sensor resides on a separate, remote PCA.
- Main tray presence sensor—The hall-effect sensor that detects if the main tray is properly engaged resides on the back of the engine PCA. A small magnet on the back of the main tray actuates the sensor. If the tray is fully engaged, the magnetic field strength is sufficient to trigger the sensor.

Additionally, the printer includes the following PCAs:

- Front USB PCA—This PCA governs the walk-up USB port.
- Fax PCA—This PCA governs the printer fax module.
- Duplex module presence sensor—A hall-effect sensor that detects that the duplex module is properly seated.
- Power button PCA—This PCA includes the power button and power LED, as well as interface cables to the duplex module presence sensor and the MP tray empty REDI sensor.

- Accessory tray interconnect PCA—This PCA provides communication to optional Tray 3.
- Pick encoder distribution PCA—This PCA includes the pick motor encoder and the pick motor interconnect cable.
- Eject encoder distribution PCA—This PCA includes the eject motor encoder, plus the interconnect cables to the eject motor and the aerosol fan.
- Print zone distribution PCA—This PCA joins interconnect cables to the following sensors: separator REDI, feed motion encoder, main tray empty sensor, feed roller OOPs REDI sensor, and the starwheel jam REDI sensor.
- REDI distribution PCA—This PCA includes hall-effect sensors that detect ink cartridge door and left door positions. It also combines the interconnect cables for the Eject jam REDI sensor, the upper paper path REDI sensor, the lower paper path REDI sensor, and the eject flap opto flag sensor.
- Sensor carriage PCA—This PCA includes a carriage motion encoder, a ZIM sensor, and the BDD sensor.
- Printbar lift encoder distribution PCA—This PCA includes the printbar lift motion encoder, and combines interconnect cables to the printbar lift motor, carriage motor, and eject flap solenoid.
- Duplex encoder PCA—This PCA contains the motion encoder for the duplex motor.
- SHAID PCA —This PCA contains interfaces to the out-of-ink sensors for the ink cartridges, and combines the interface cables to the acumen PCA, the ISS pump, and the ISS solenoids.
- Acumen PCA—This PCA contains interfaces to the acumen memory devices for the ink cartridges.

Pen interface (I/F)

The printbar is the key component that differentiates this printer from other inkjet printers. The conventional approach is to print a page in horizontal swaths by moving a “scanning” printhead horizontally over a fixed sheet of paper, advancing the paper a fixed amount, and then printing the next swath. With this printer, the paper moves underneath a fixed page-wide printhead in a single, smooth motion.

Single pass page-wide printing requires that data and power be delivered to the printbar at a very high rate, while also maintaining good control of paper position as it moves past the printhead nozzles.

The engine PCA sends power and data to the printbar via two large flat flexible cables (36 and 38 pins). The printbar PCA routes power and data to 10 printhead die, which are attached to the PCA using a flexible tab circuit and wire-bonding process.

There are also electronics to control the ink supply station (ISS). The SHAID PCA detects low-ink conditions. It gauges ink levels by electronically sensing the presence of ink and/or ink foam in the X-chamber. The SHAID PCA also collects and distributes electronic signals that drive the push-prime pump(s), engage the solenoids, and read the ink supply acumen data. All are routed through a single 17-pin FFC from the SHAID PCA to the engine PCA.

Each ink supply has a memory tag that stores information about its ink type, ink remaining, and other critical data. It uses a special authentication scheme to ensure that only genuine HP supplies are used and the printer is not damaged by using invalid supplies. Acumen uses a two-line serial bus, which, along with 3.3 V and ground, is cabled via the SHAID PCA to the engine PCA and the engine control digital ASIC.

Power supply

The power supply module converts 100–240 VAC to 33 VDC and 5.1 VDC to power the system. The 33 V rail goes to the engine and the scanner/document feeder, and the 5.1 V rail supplies power to the formatter. The power supply module has a sleep mode that reduces power consumption in low-power system modes.

The power supply module has four operating modes, depending on certain control signals, as outlined in the table below. The power supply has a power factor correction (PFC) circuit to improve efficiency when the system is in the active mode.

Table 1-2 Power supply module operating modes

Mode	n33V_OFF input signal	nPFC_OFF input signal	PFC Status	33 V rail status	5.1 V rail status
OFF	Low	Low	Off	Off	On
Sleep 2	High	Low	Off	On	On
Sleep 1	High	Low	Off	On	On
Active	High	High	On	On	On

The power supply is a self-contained module that can be replaced if it is defective (see the Remove and Replace chapter of the Repair Manual).

To ensure safe operation, the power supply will “latch off” if a persistent overcurrent fault condition exists. This is typically caused by a short-circuit from 33 V or 5.1 V to ground in the printer. Less severe faults can cause the power supply to latch off if the fault is present for an extended period of time, or if the printer is operated above the recommended operating range.

Print subsystem

The print subsystem includes the following components:

- Printbar
- Printbar lift
- Ink cartridges
- Optical scan carriage

Figure 1-4 Print subsystem components (556 models)

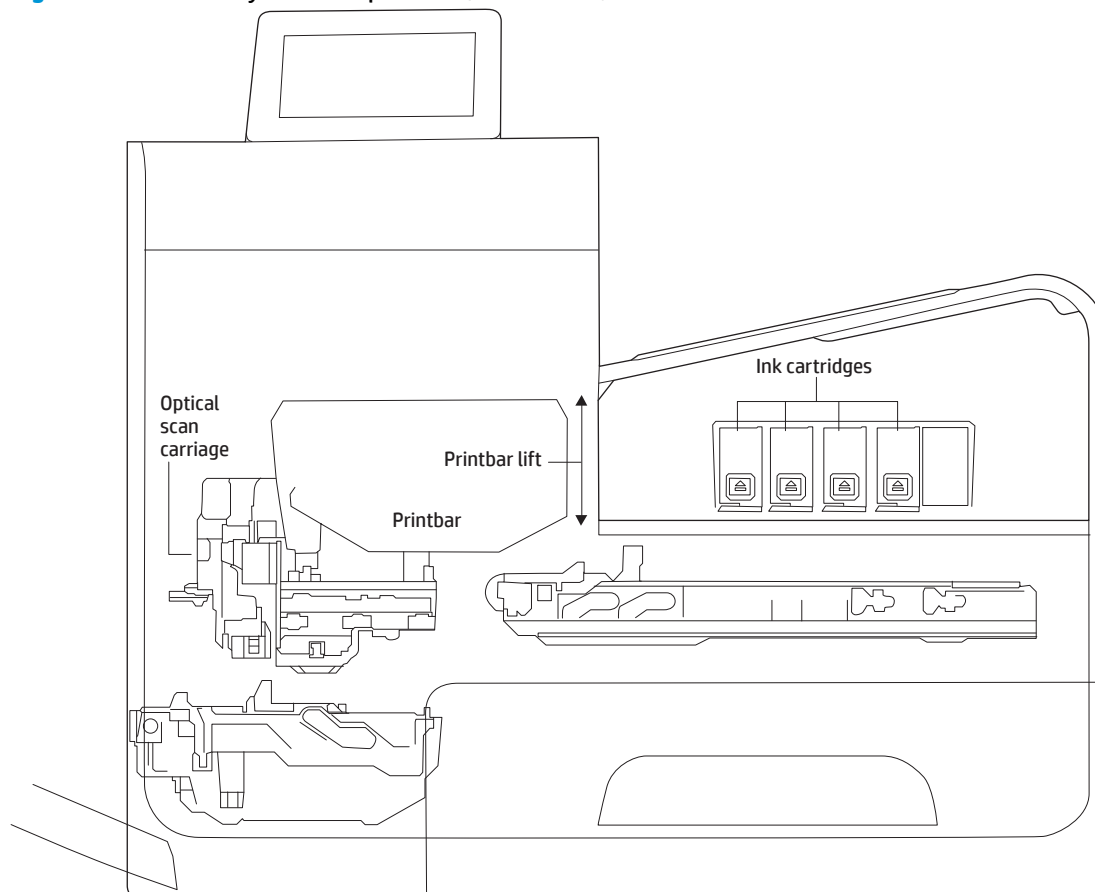
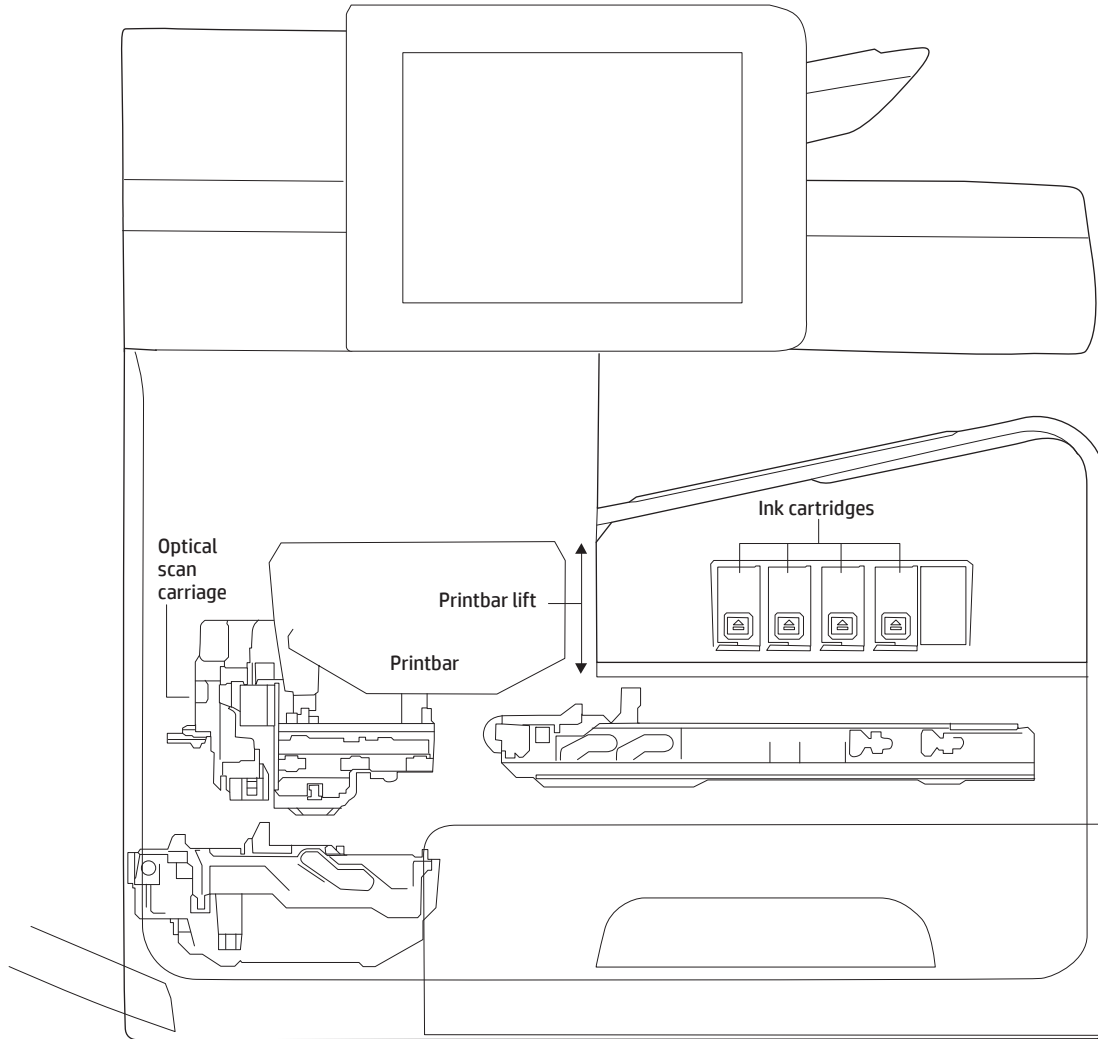


Figure 1-5 Print subsystem components (586 models)



Printbar

The printbar's fundamental purpose is to convert the digital firing instructions from the printer electronics into properly formed and timed microscopic drops of the four ink colors. The printbar spans the full width of a letter/A4-size sheet (216 mm (8.5 in)), and is statically positioned within the printer so that the paper moves underneath it, printing the entire page in a single motion.

Figure 1-6 Printbar components

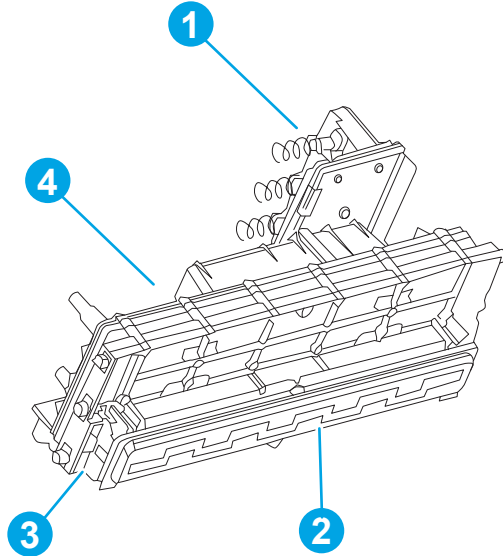


Table 1-3 Printbar components

Item	Description
1	Ink cartridge connections
2	Thermal inkjet (TIJ) die array
3	Data/power flow and regulation
4	Inkflow channels and pressure regulation

The printbar has a fixed array of 10 thermal inkjet (TIJ) die oriented in two staggered rows. Each die contains more than 1,000 nozzles for each of the four ink colors (black (K), cyan (C), magenta (M) and yellow (Y)). Behind the die array are the ink flow channels and pressure regulation mechanisms that supply the die array with ink at the proper pressure and flow. Onboard electronic circuitry feeds power and data to the die at the appropriate levels and rates. Four ink cartridge receptacles, one for each color, are located at the top of the printbar. Flow connections link these cartridges to the rest of the printbar to supply the ink necessary for its operation.

A sensor technology called back-scatter drop detect (BDD) monitors the printbar health and calibrations. This system looks at the reflection of the miniscule drops in-flight and passes these signals through high-speed, high-gain, bandpass filters. An artificial intelligence (AI) system decides which drop ejectors are currently in or out of specifications.

After the AI system determines which drop ejectors are out of specification, the printer compensates for them. Some ejectors use neighboring nozzles and, at times, even tiny amounts of other inks – whichever combination of methods are necessary to deliver the best print quality possible at that moment. Up to half of the nozzles can be “out” without a noticeable degradation in quality. The compensation is done in real time with a dedicated high-speed DSP. The system can scan portions of the system after print jobs, but it is fully interruptible by new incoming print jobs.

Printbar lift

The printbar lift is responsible for positioning the printbar within the printer and moving it up and down as required. This vertical motion is both to establish proper spacing to the paper during printing, and to raise it to either access the active face or perform necessary calibrations.

During printing, the lift mechanism sets the printbar height and paper height depending on the type of paper.

Ink cartridges

This printer has new, state-of-the-art pigmented inks. They are filtered using proprietary processes to prevent printhead contamination. These inks are designed to produce optimal print quality on ColorLok office papers, but also produce very good print quality on regular office papers and specialty paper.

Optical scan carriage

The optical scan carriage has optical sensors used for calibration. Its motion is along the long axis of the printbar. These sensors are used by a number of printer calibration features that are important for proper subsystem function. The BDD sensor is located on the optical scan carriage.

Print system operational states

The print subsystem has a number of distinct operational states besides active printing.

Startup

As it comes from the factory, the printbar is initially filled with an inert ink-substitute called Shipping and Handling Fluid (SHF). This fluid, essential for the manufacture and transportation of the printbar, must be flushed and replaced with actual ink. This is accomplished during the Startup phase. The flushing process automatically commences when ink supplies are inserted and the unit is powered up for the first time. The SHF is removed by sustained printbar operation and replaced by ink from the supplies. The process terminates once all the SHF has been flushed from the printbar.

Special host supplies are supplied with the printer prior to its first use. These supplies contain additional ink so that there will be 100 percent ink level after the SHF is replaced with ink. These supplies can be used only to initialize the printer. You cannot use them in another printer that has been initialized.



NOTE: The initial startup time is noticeably longer than the following regular startup times.

Die alignment

Since there are 10 die comprising the printbar active face, each with associated positional tolerances, an active calibration must be performed to prevent errors and allow a uniform ink application to the paper (without any gaps or overlaps between adjacent die). This die alignment is done by printing a special diagnostic image on a sheet of paper and then scanning it with the optical scan carriage. Die alignment is performed as part of initial unit startup, and can be performed manually as part of the print quality recovery tool.

Die density leveling

There are also tolerances associated with the drops fired by the individual printbar die. Another active calibration measures and compensates for these variations to produce a visually uniform ink application to the paper. Another set of diagnostic images is printed and scanned by the optical scan carriage to achieve this die density leveling. Die alignment and die density leveling are usually paired together.

Nozzle presence detection

In printing, since all the ink is applied in a single smooth motion of the paper past the printbar, any inoperable nozzle can show up as a noticeable streak. The operational state of each of the thousands of nozzles on the printbar is periodically measured. The printbar is raised by the printbar lift, and the BDD assembly on the optical scan carriage watches for drop presence as each nozzle is fired. Inoperable nozzles are turned off and

other operable nozzles used on subsequent printed pages to apply the missing ink. Nozzle presence detection is fully interruptible by new incoming print jobs.

Media edge position detection

The printer uses a learning algorithm to define media center as a function of input source—Tray 1, Tray 2, or optional Trays 3–5. The edge scan is located downstream of the print zone. As paper is scanned, the media center database is updated. The image is registered to the page using the media center database.

Servicing and capping

When in the capped state, the printbar is fully raised, the service sled is positioned underneath, and the printbar cap is engaged against the printbar active face. Servicing—the cleaning of the active face and the firing of the nozzles—can occur either during Sleep2 mode or after extended time in storage. It can also occur during extended print jobs.

Printing

The printing state begins by the printbar leaving the capping state, and being lowered to the printing position after the service sled moves out of the way. At the same time, a sheet of paper is picked from one of the three trays and the leading edge staged at the entrance to the print zone. Once the print data has been sent, the sheet of paper is fed at a constant velocity through the print zone and the ink applied by the printbar.

In the case of one-sided printing, the inked sheet is moved up, over and out to the output tray. For two-sided printing, the sheet is moved until its trailing edge is past the merge to the vertical path, and then it is reversed down through the duplex path underneath the maintenance ink module, and reintroduced into the print zone for inking of the second side.

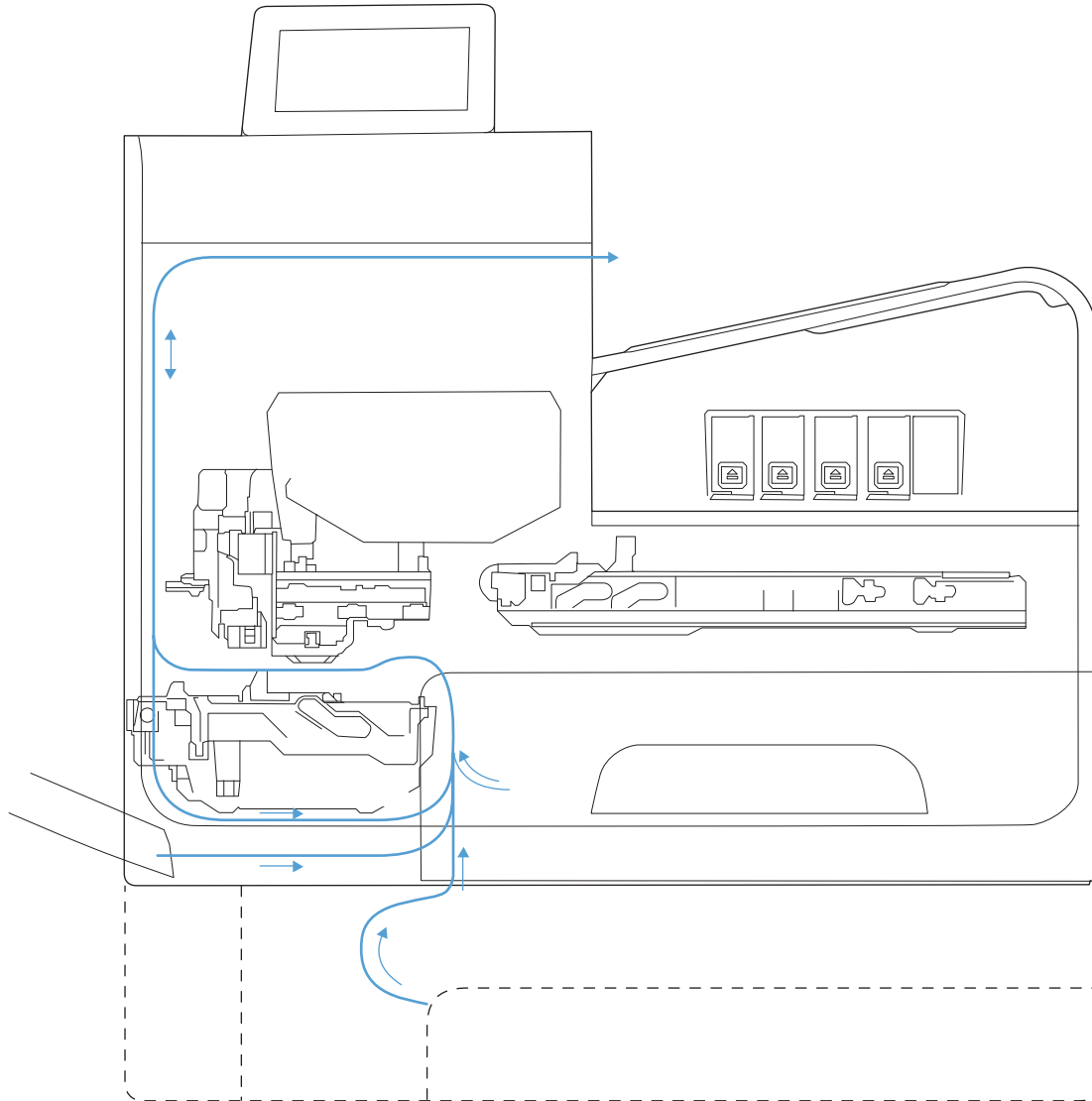
This process continues until all the pages of the print job are completed. If the print job is large enough, it can be interrupted by servicing processes.

Paper-handling system

The paper-handling system moves paper through the printer according to commands from the formatter.

The following figure shows the printer paper path.

Figure 1-7 Paper-handling system paper path (556 models)



- Feed rollers, pinch rollers, star wheels, and media guides
- Transmission components (gears, shafts, levers, swing arms) that interface with other subsystems such as the printbar and service sled.

Components of the paper path move the paper from the input tray to a position 1 to 2 mm (.04 to .08 in) underneath the printbar, and then deliver the printed result to the output tray. The combined orientations and actions of the printbar, the printbar lift, and the paper path establish the print-zone, where the ink drops move from the active face of the printbar to the paper.

The following figures show the printer sensors.

Figure 1-9 Printer sensors (556 models)

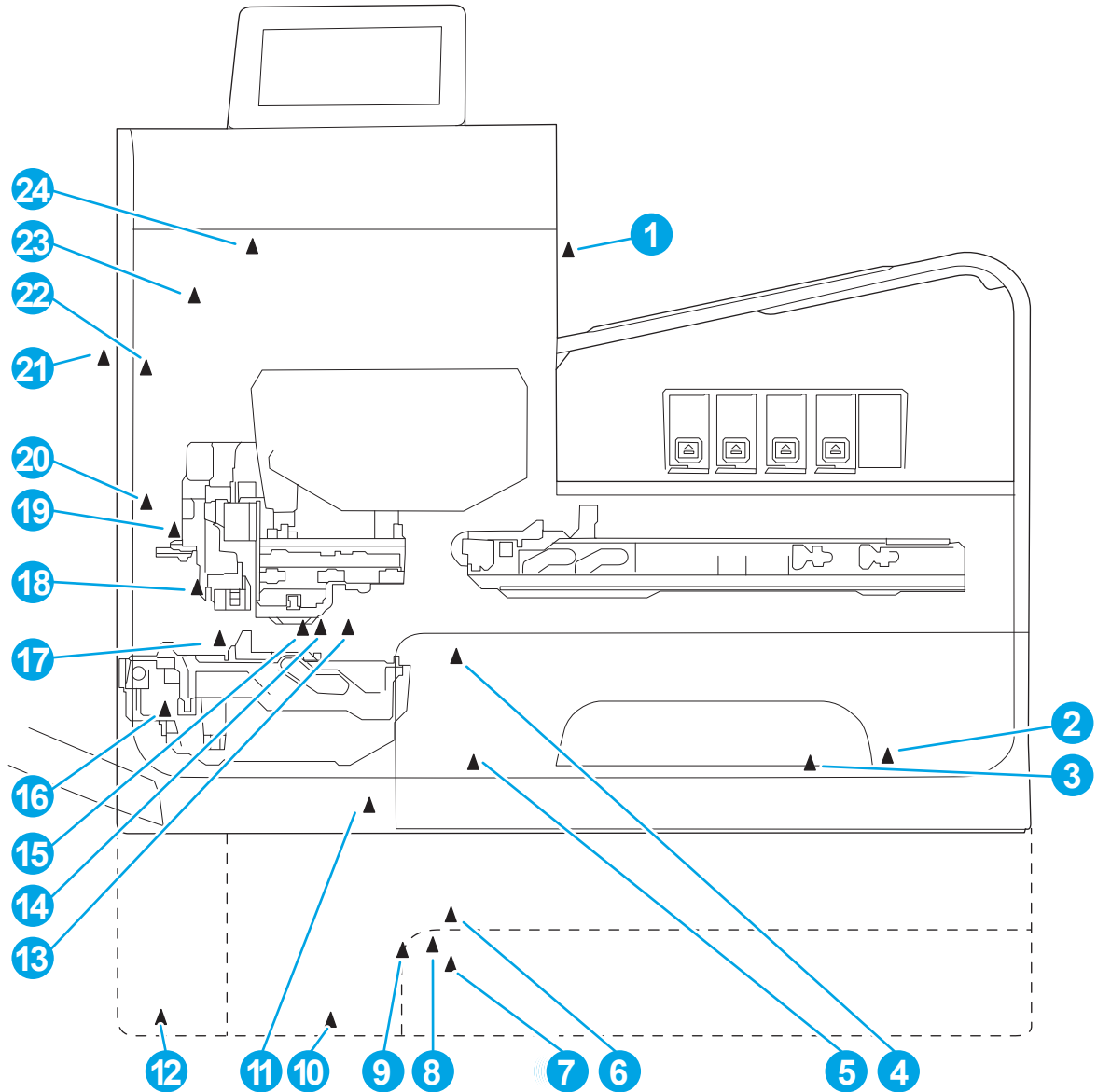


Figure 1-10 Printer sensors (586 models)

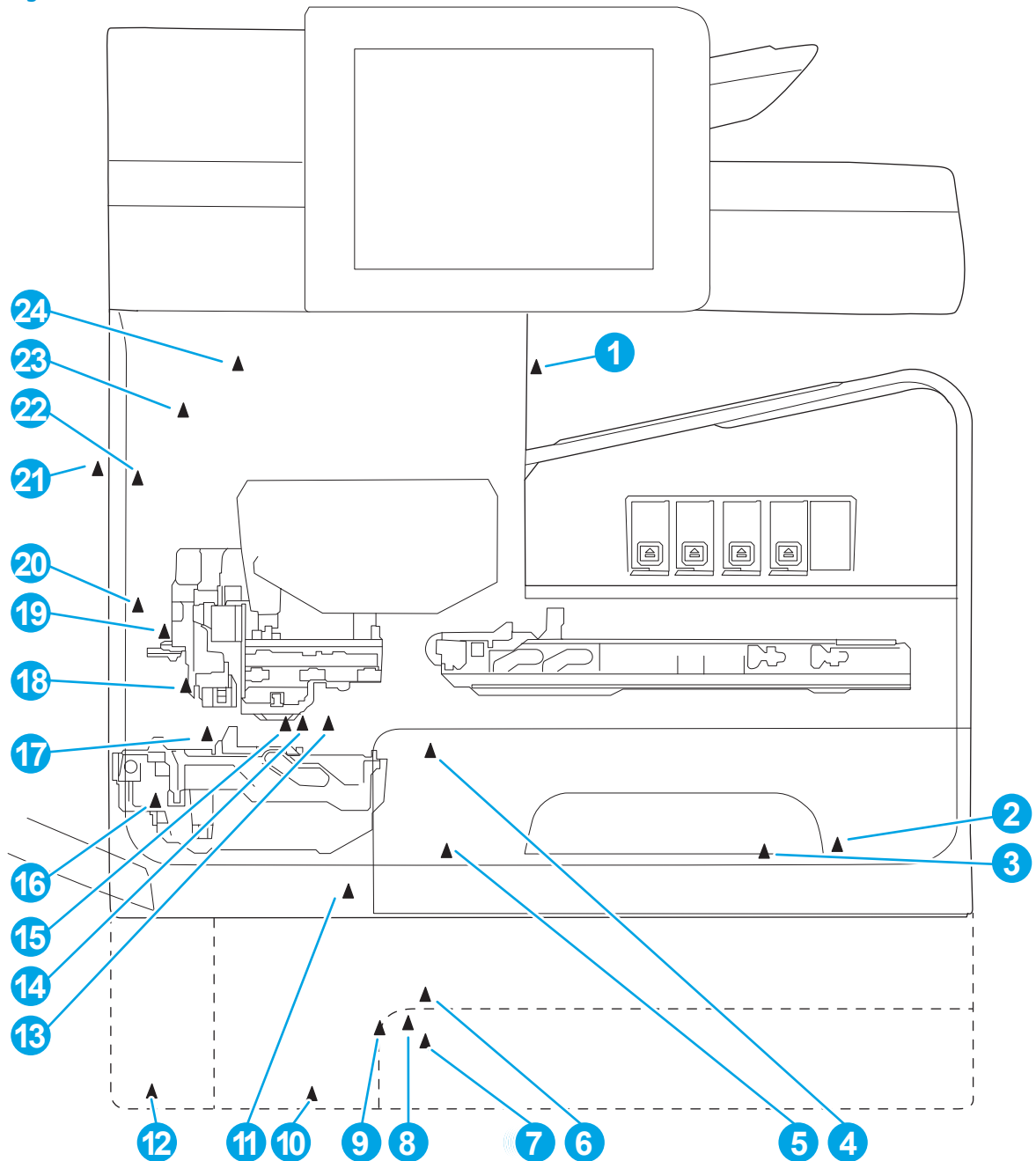


Table 1-4 Printer sensors

Item	Description	Item	Description
1	Output flap jam sensor	13	Feed roller jam sensor
2	Ambient temperature sensor	14	Feed roller encoder
3	Ambient humidity sensor	15	Feed roller home sensor
4	Tray 2 pickup tire home sensor	16	Duplex module presence sensor
5	Tray 2 tray presence sensor	17	Star-wheel jam sensor
6	Tray 3 pickup tire home sensor	18	Back-scatter drop detect sensor

Table 1-4 Printer sensors (continued)

Item	Description	Item	Description
7	Tray 3 paper presence sensor	19	Print calibration/Media edge detect sensor
8	Tray 3 separation sensor	20	Lower left door jam sensor
9	Tray 2 paper presence sensor	21	Left door open sensor
10	Tray 3 tray presence sensor	22	Upper left door jam sensor
11	Tray 1 paper presence sensor	23	Ink supply door open sensor
12	Tray 3 cleanout presence sensor	24	Eject jam sensor

There are several motors in the printer for pick, feed, duplexing, printbar lift, delivery, and the scanning sensor carriage.

Figure 1-11 Paper-handling-system motors (556 models)

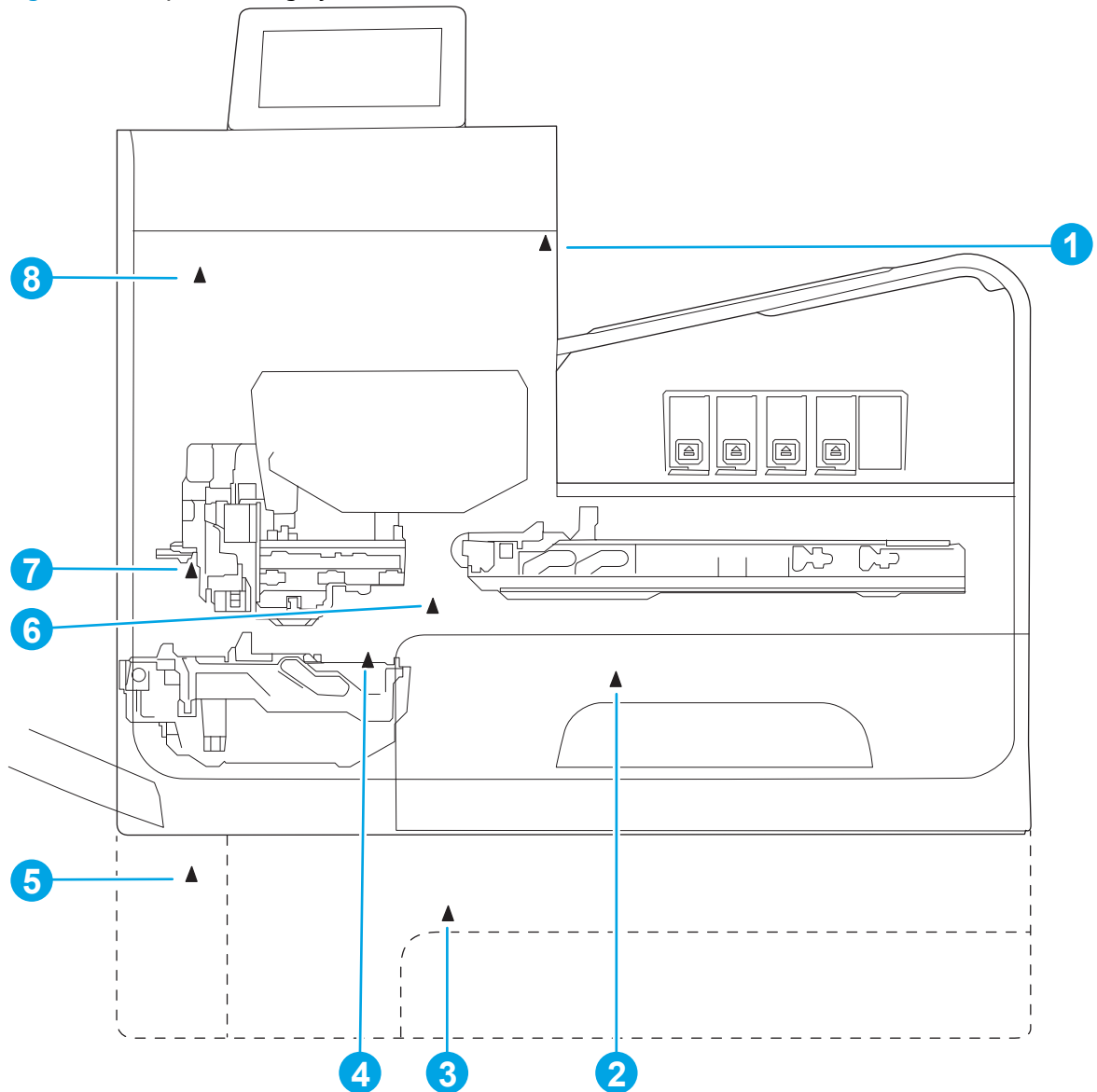


Figure 1-12 Paper-handling-system motors (586 models)

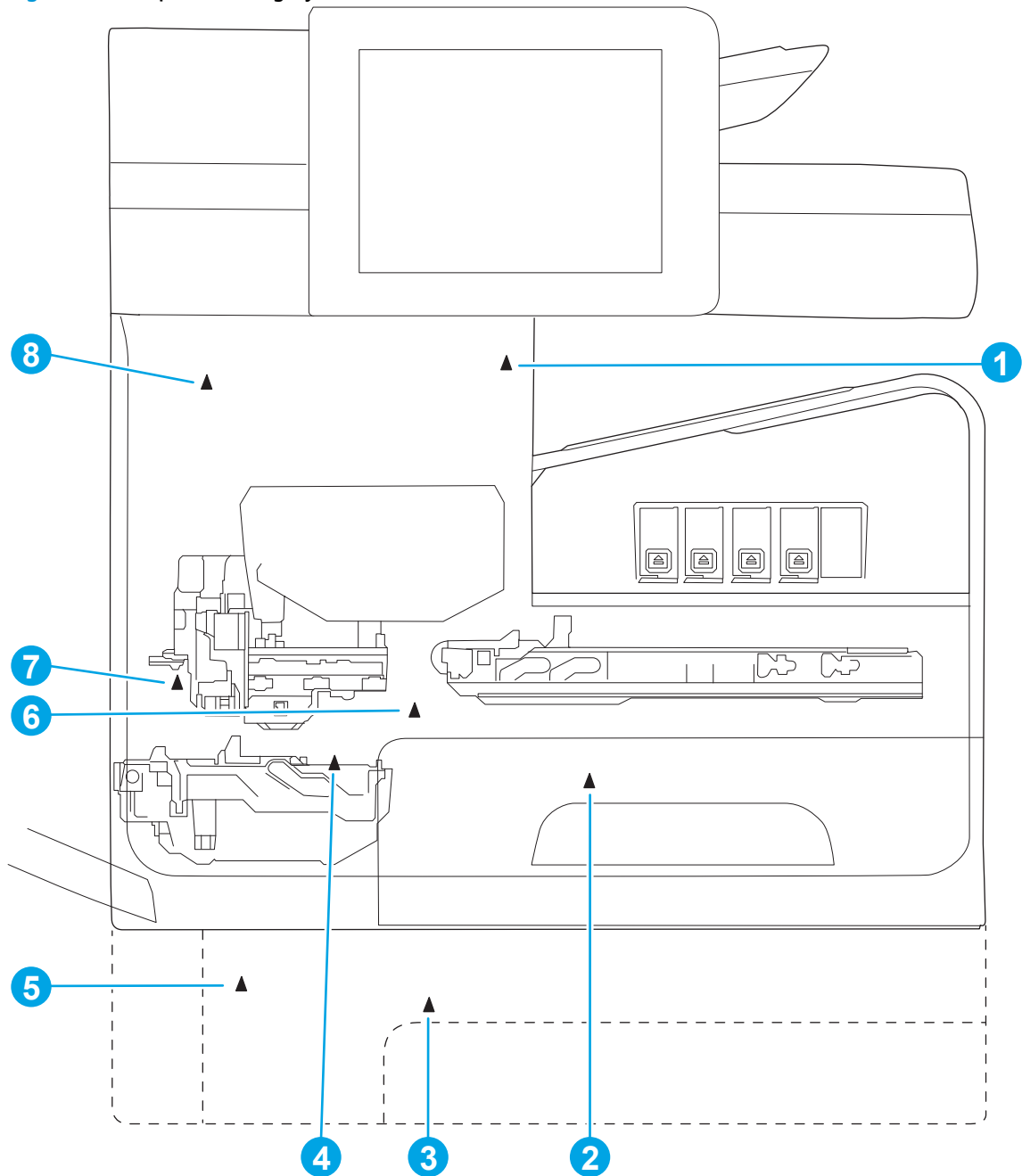


Table 1-5 Paper-handling system motors

Item	Description
1	Eject (or output drive) motor
2	Tray 2 pickup motor
3	Tray 3 pickup motor
4	Duplex Tray 1 motor
5	Tray 3 feed motor
6	Feed motor

Table 1-5 Paper-handling system motors (continued)

Item	Description
7	Optical carriage motor
8	Printbar lift motor

Input trays

The printer comes standard with two input trays and supports up to three optional accessory trays.

- 50-page multipurpose (MP) tray—Tray 1: The tray shares a motor with the duplex module and has one sensor. This reflective (REDI) sensor determines if paper is present in the tray. The feed roller REDI sensor determines if a sheet of paper is successfully picked from the tray.
- 500-sheet letter/A4 size main tray—Tray 2: The tray has a pick motor, which also moves the service sled. Both the main tray motor and the duplex MP tray motor operate at the same time when picking paper from the main tray. The main tray has three sensors:
 - A hall-effect sensor determines if the tray is closed.
 - A flag/opto sensor determines if there is paper in the tray.
 - A flag/opto sensor determines if the pick roller is in home position.

The feed roller jam sensor determines if a sheet of paper is successfully picked from the main tray.

- Optional 500-sheet legal size accessory trays—Trays 3-5: The optional trays have two motors, one for picking paper and one for the turn roller. The turn roller receives paper from the pickup roller and transfers it to the multipurpose tray ITR that is driven by the duplex module/MP tray motor. Both the accessory tray motor and the duplex module/MP tray motor operate at the same time when picking paper out of the accessory trays.

The accessory trays have the following sensors:

- A hall-effect sensor detects if the tray is closed.
- A flag/opto sensor detects if there is paper in the tray.
- A flag/opto sensor detects if the pickup roller is in home position.
- A hall-effect sensor detects if the left door is closed.
- A separation sensor detects if the printer successfully picked paper.

Paper path zones

The printer paper path includes the following elements:

- Deskew buckle
- Print zone
- Duplex
- Output
- Eject

Figure 1-13 Paper path zones (556 models)

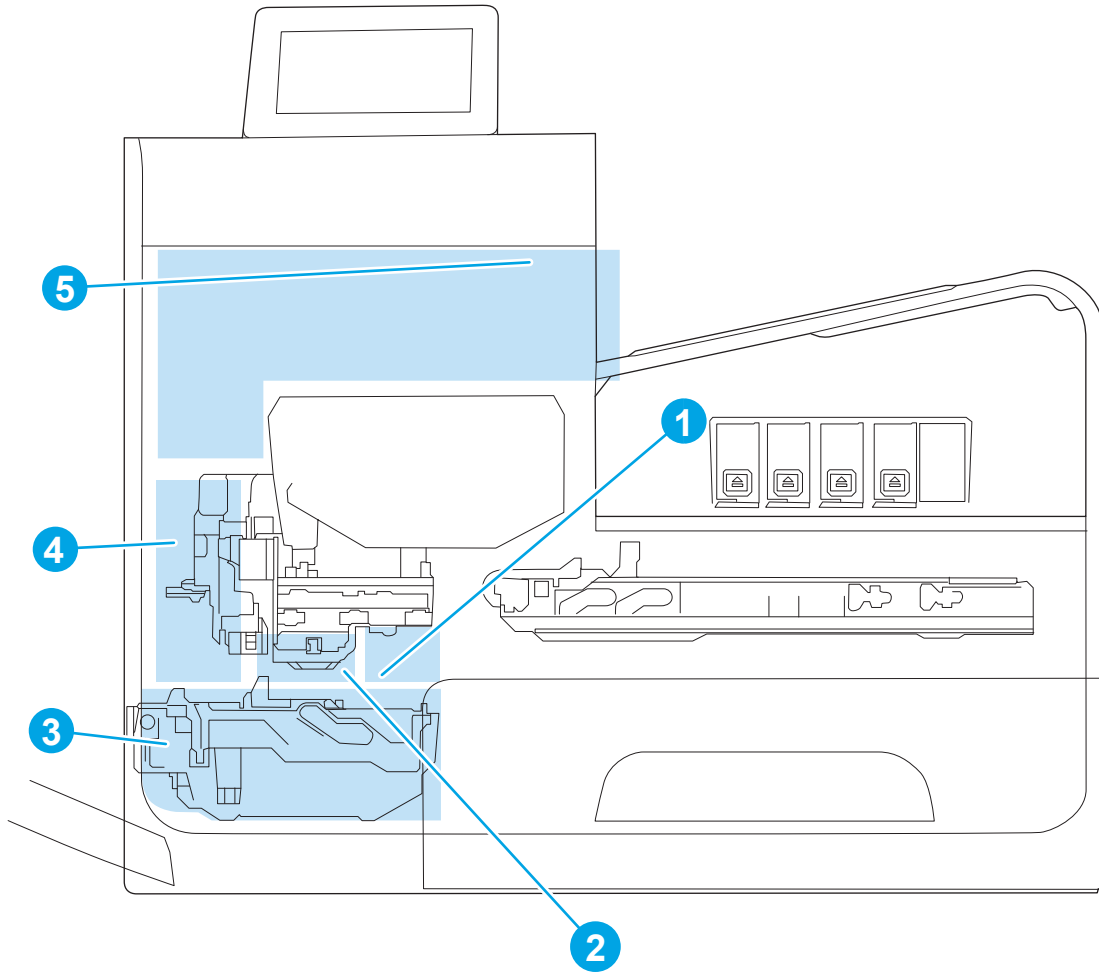


Figure 1-14 Paper path zones (586 models)

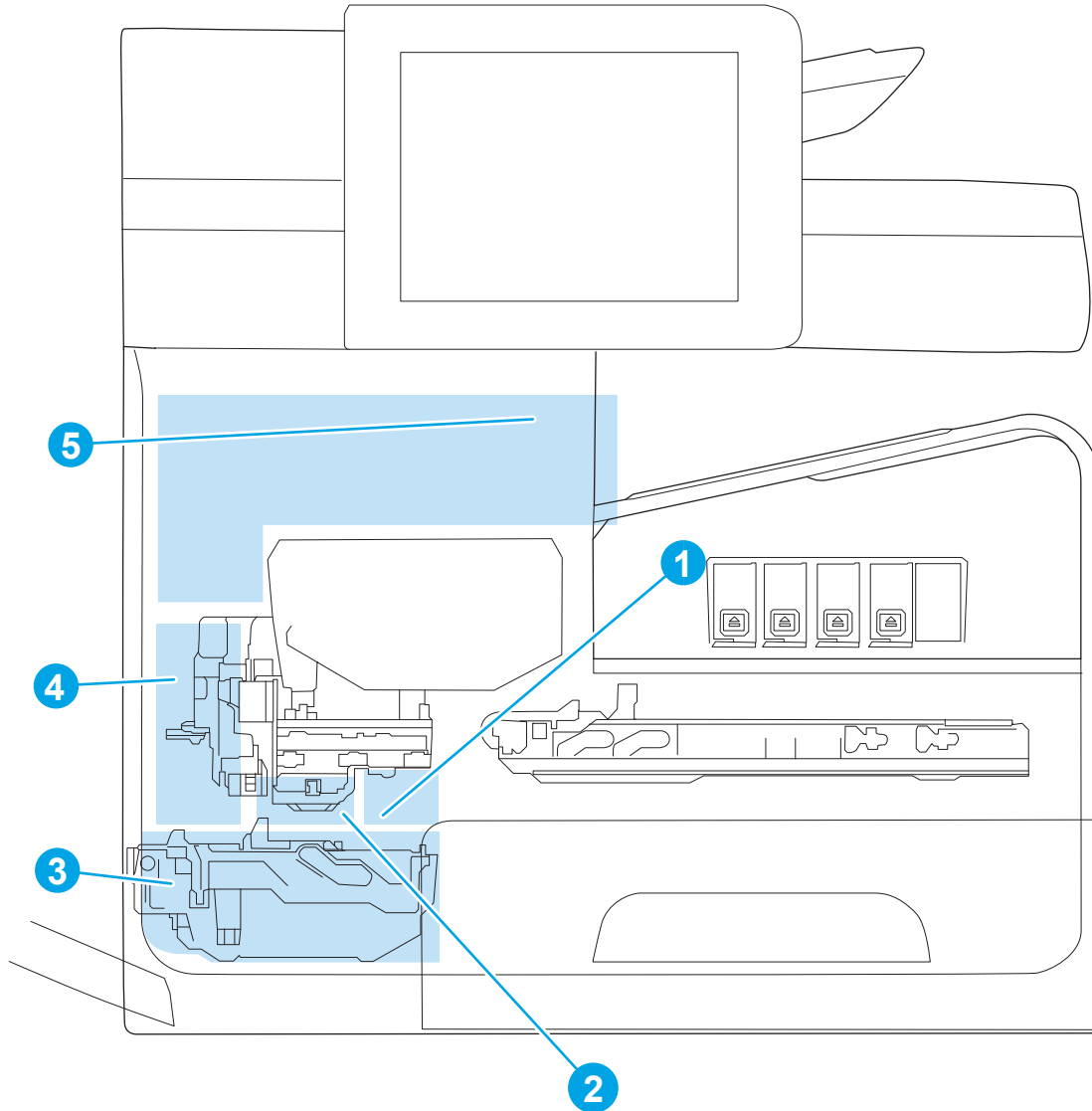


Table 1-6 Paper path zones

Item	Zone	Description
1	Deskew buckle	This is the area between the turn roller and feed roller. All print job paper passes through this zone. During the deskew operation, the duplex module/MP tray motor rotates forward, driving the paper into the feed roller nip while the feed roller is not moving. The feed roller REDI sensor determines the leading edge for accurate deskew buckle size, jam detection, and if the tray successfully picked paper.

Table 1-6 Paper path zones (continued)

Item	Zone	Description
2	Print zone	<p>This is the path between the feed roller and output pinch 1 roller. The feed roller, which has an analog quadrature encoder, precisely controls the paper in the paper feed direction. In the vertical direction, a combination of the platen, feed roller, and output pinch roller 1 controls the paper. The user can rotate the platen down for jam access after removing the duplex module.</p> <p>There are no paper path sensors in the print zone. If a jam occurs in the print zone, it is not detected until the leading edge of the paper is determined to be “late” in reaching the jam sensor in the output path.</p> <p>When a user pulls on jammed paper in the print zone that is still partially in the feed roller nip, the servo control will detect a slight movement of the feed roller and assist the user by applying a forward torque to the roller. Also, the motion control system will disengage the duplex module rectifier (swing arm) so that the turn roller can spin freely. This feature reduces the pulling force needed by the user and therefore reduces the chance of leaving torn pieces of paper in the path—especially in the deskew buckle zone.</p>
3	Duplex	<p>By opening the left door, the duplex module can be removed to clear jams. The duplex module also serves as a waste-collection unit for the printbar and will expose the user to waste ink when it is removed. Therefore there are warnings on the module to not touch certain areas.</p> <p>When the user pulls on jammed paper from the duplex module (or any of the trays) that is partially in the feed roller nip, the servo control detects a slight movement of the feed roller and assists the user by applying a reverse torque to the feed roller and disengages. Also, the motion control system disengages the duplex module rectifier so the turn roller can spin freely. This feature reduces the pulling force needed by the user and therefore reduces the chance of leaving torn pieces of paper in the path—especially in the deskew buckle zone.</p> <p>In order for the printer to determine the duplex module's presence, the duplex module has a magnet that triggers a hall-effect sensor mounted to the structure.</p>
4	Output	<p>The output path begins at output pinch roller 1 and continues to output pinch roller 5. There are four REDI sensors in this path that detect leading and trailing edges and jams.</p> <p>The feed motor drives the rollers in the output path, except output pinch roller 5. All the pinch rollers in the output and exit path are star wheels to prevent roller tracking on wet/damp ink. However, the turn roller pinch is solid and has a high amount of force for deskew buckle formation. Also, the feed motor drives all output shafts except shafts 5 and 6.</p> <p>The REDI dry path lower, REDI dry path upper, and eject jam REDI sensor in the output path all track the leading and trailing edges of paper.</p> <p>The outer and top portions of the vertical path are formed by paper guides molded in and attached to the left door. The left door can be opened for jam clearance and has a hall-effect sensor to determine if it is closed. Also when the left door is opened, drive rollers that form pinches 3 and 4 disengage from the feed motor for safety purposes.</p>
5	Eject	<p>The eject portion of the paper path includes the zone from output pinch roller 5 to the eject flap.</p> <p>The eject motor powers output pinch roller 5 and eject pinch roller 6.</p> <p>The eject flap has 3 positions:</p> <ul style="list-style-type: none"> • Closed when not printing. • Partially open for heavy ink printing in dry environments to limit severe curl. • Open for all other printing. This position controls moderately curled paper. <p>The flap is opened and closed by a torque clutch on the eject roller shaft. The flap also has a locking feature that is controlled by a solenoid. In order for the door to open all the way, or move between positions, the solenoid must be actuated.</p>

Servicing system

The servicing system comprises the service sled, which maintains print quality by wiping debris and ink off the print nozzles, and the service ink module, where waste ink is deposited.

Figure 1-15 Servicing system components (556 models)

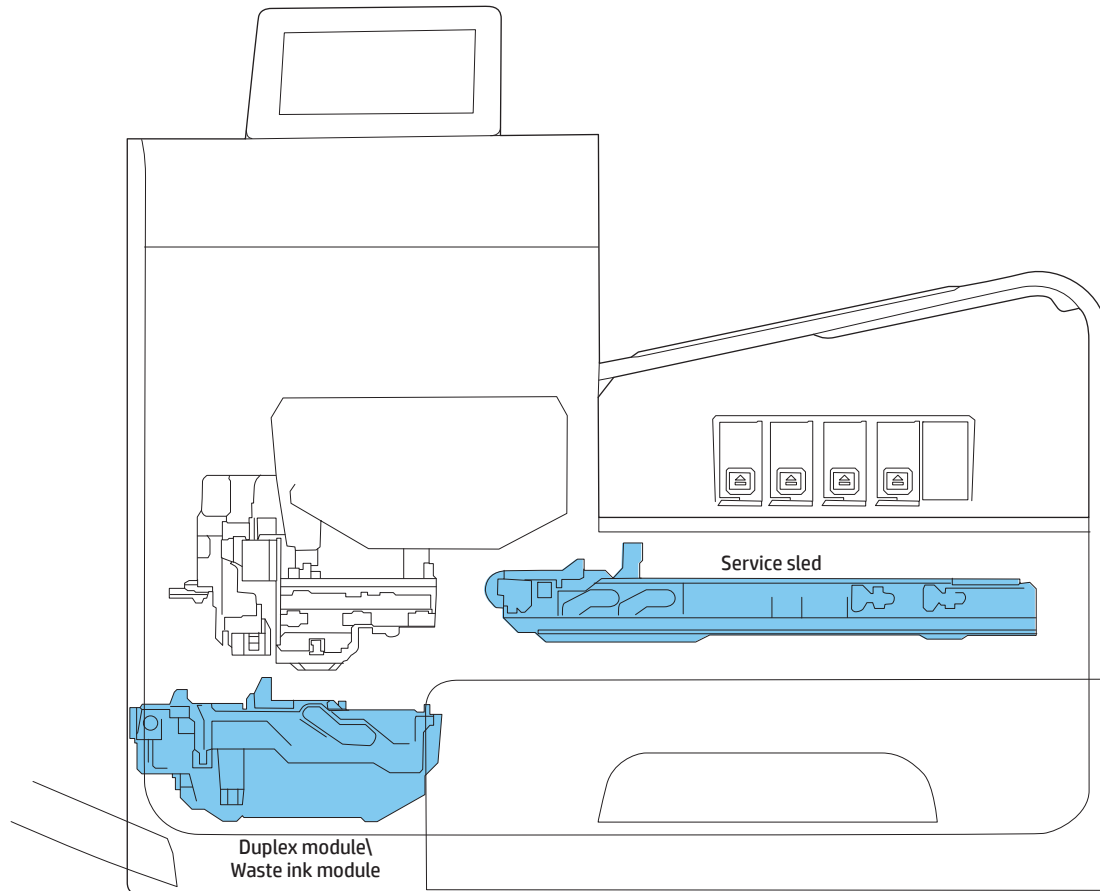
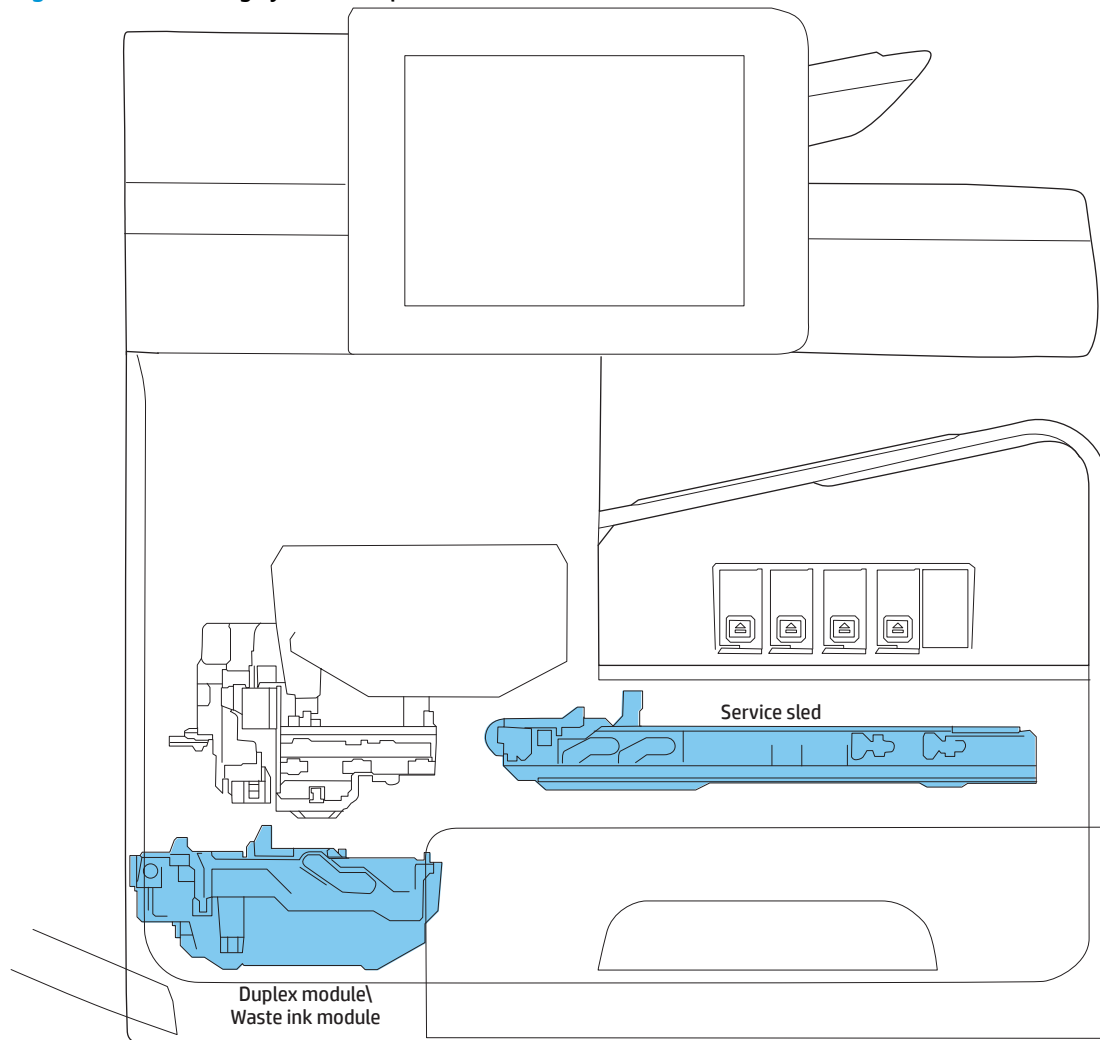


Figure 1-16 Servicing system components (586 models)



Service sled

Figure 1-17 Service sled components

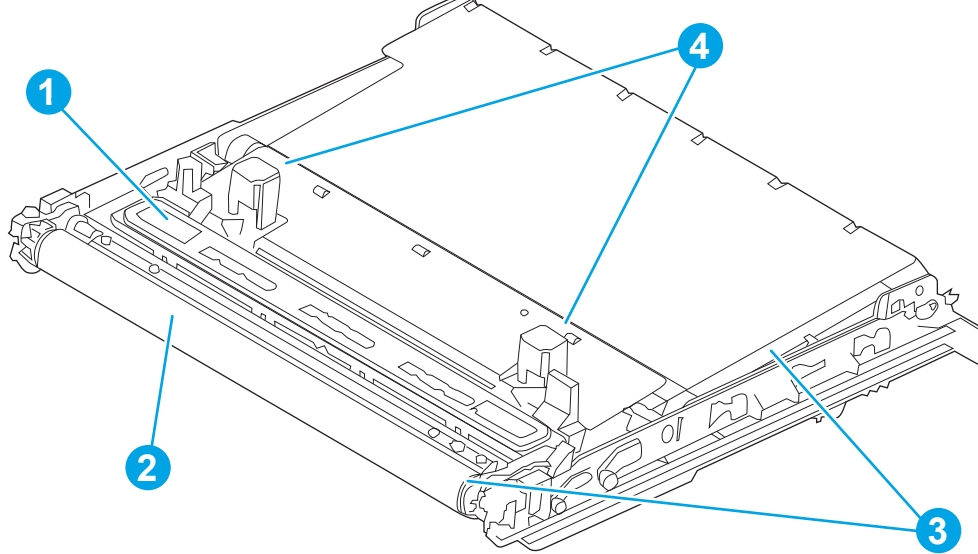


Table 1-7 Service sled components

Item	Description
1	Service sled cap
2	Service sled wiping surface
3	Service sled web fabric loop
4	Printbar support posts

The service sled system keeps the printbar nozzles firing correctly throughout the life of the printer as it performs the wiping and capping functions.

- The wiping function cleans the nozzles of ink residue and particulates.
- The capping function keeps the nozzles moist during storage when the printer is idle.

The service sled system uses the pick drive system (a component of the paper path) for horizontal motion to perform its functions.

To perform the wiping function, the printer moves the service sled underneath the printbar (which is elevated from the print position) so that the web fabric makes contact with the ink nozzles. The web fabric is a looped belt that advances after every wipe. Since the belt is a finite loop, it will eventually reuse previously used material. The web advances when the web wipe module moves to the right and out of the print zone. The advance mechanism is triggered by a mechanism located on the rear wall of the unit.

To perform the capping function, the service sled moves underneath the printbar (which is elevated from the print position), allowing the rubber cap to seal the print nozzles from the environment.

Transmission system

The pick/service motor uses a multi-state transmission to power the following three functions:

- Move the service sled
- Pick paper from the main tray
- Lift the main tray paper stack

The transmission has the following states:

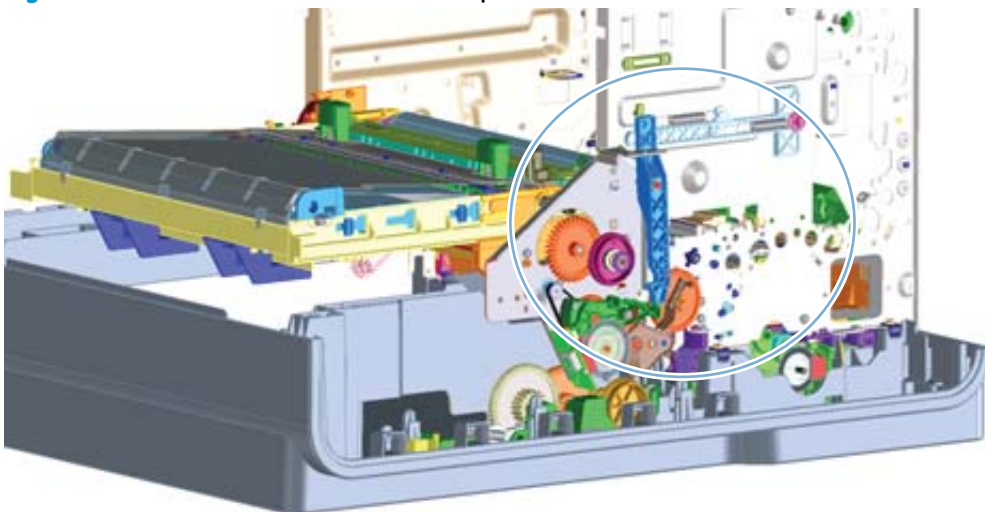
- Service sled (forward/reverse)
- Pick (forward direction)/Tray Lift (reverse direction)

Printbar movement to a specific location releases the transmission lock, and enables the pick/service motor to select the transmission state. The general location of the transmission parts is in [Figure 1-18 Rear view of transmission components on page 29](#).



NOTE: The transmission components are behind the main PCA electronics and are difficult to access.

Figure 1-18 Rear view of transmission components

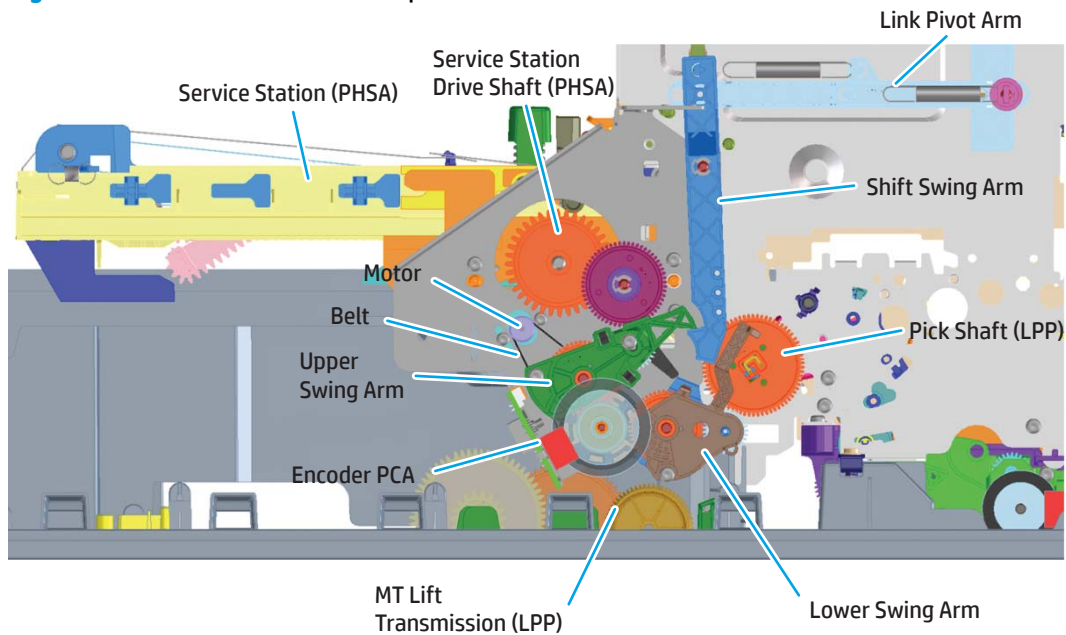


The printer will not function with the transmission in the main tray pick/main tray lift state if the service station has been manually capped.

Reusing caps or pushing the caps too far onto the printbar lift guide rods while servicing the printer can result in the transmission not shifting reliably.

Components

Figure 1-19 Transmission main components



States

1. State 1: Main tray lift

- Link pivot arm and shift swing arm in locked position
- Upper swing arm down, engaged with lower swing arm
- Lower swing arm down, engaged with main tray lift transmission
- Printbar either up or down



2. State 1: Main tray pick

- Link pivot arm and shift swing arm in locked position
- Upper swing arm down, engaged with lower swing arm
- Lower Swing arm up, engaged with pick shaft
- Printbar either up or down



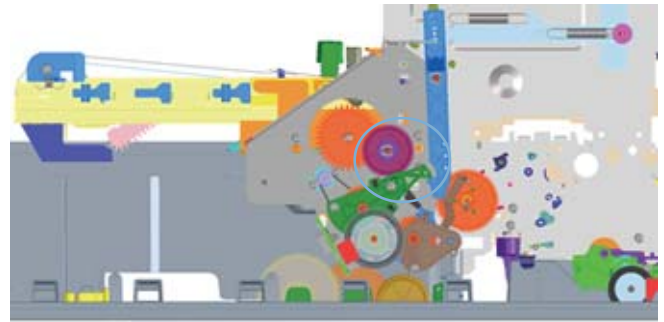
3. State 1: Mid-switch

- Link pivot arm and shift swing arm in unlocked position
- Upper swing arm in mid-switch position
- Printbar in middle position



4. State 2: Service station

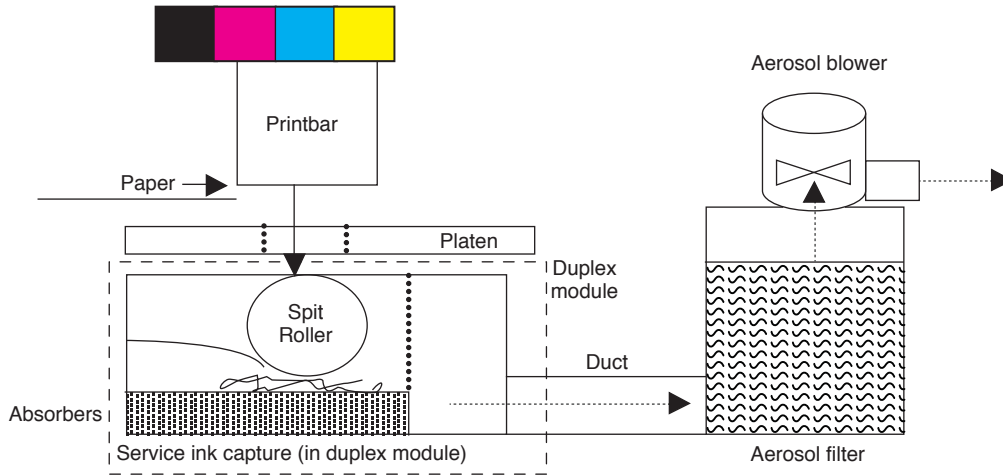
- Link pivot arm and shift swing arm in locked position
- Upper swing arm up, engaged with service sled drive shaft
- Printbar either up or down



Aerosol management system

The aerosol management system consists of a fan module and filter box to keep ink aerosol from building up inside the printer. The following figure shows the service ink and aerosol capture system components.

Figure 1-20 Aerosol management process



Between pages, printed aerosol is drawn through the platen openings. Service ink travels directly through the platen, impacting and collecting on the spit roller. Aerosol from the service spitting is also collected. Service ink collects in the duplex module, and a porous filter element captures the aerosol as aerosol-laden air passes through it. The aerosol blower mounted to the filter housing creates the air motion (suction—lower pressure—in the print zone).

Most of the printbar servicing ink (spit ink) is captured by the spit roller and scraped into the bottom of the bucket on the duplex module. The service ink spit roller is indexed slowly by the motion of paper through the printer, driven by the swing-arm and turn roller gear train, with power provided by the duplex motor.

The printer purges the printbar of its shipping fluid at initial startup, and then absorbers in the base of the duplex module collect the fluid. These absorbers allow much of the initial water to evaporate from the shipping fluid over time. Also, they allow service ink coming into contact with the absorbers to leach some of their fluids into them, which assists in the drying and thickening of the sludge.

The blower remains active as long as the printbar is uncapped, and it continues to operate for a few seconds after capping is complete.

Figure 1-21 Aerosol management system components

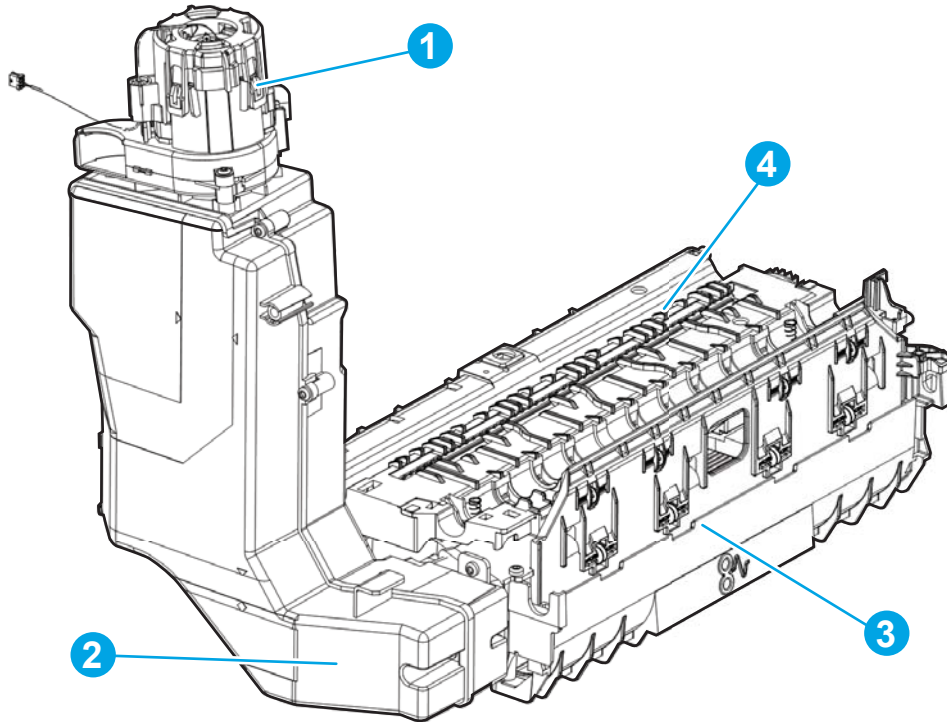


Table 1-8 Aerosol management system components

Item	Description
1	Blower
2	Aerosol filter housing
3	Duplex module/maintenance ink module
4	Platen

Document feeder system (586 models)

Document feed system

This section describes the following:

- Sensors in the document feeder
- Document feeder paper path
- Simplex single-pass scanning
- Electronic duplexing (e-duplex) single-pass scanning
- Deskew operation
- Document feeder hinges

The printer supports single-pass electronic duplexing (e-duplex) copy jobs. Two separate scan modules scan the front-side and back-side of an e-duplex copy job page in a single pass through the document feeder.

For the WF class, this ADF supports a smart background, which auto-crops and adjusts the image extents.

Sensors in the document feeder

The document feeder contains the following sensors:

- **ADF paper present sensor:** Detects whether a document is present in the document feeder. If paper is present in the document feeder when copies are made, the printer scans the document using the document feeder. If no paper is present when copies are made, the printer scans the document using the scanner glass.
- **ADF Y (length) sensor:** Detects whether a legal-size original is present in the document feeder.
- **ADF jam cover sensor:** Detects whether the document feeder cover is open or closed.
- **ADF paper path deskew sensor:** Detects the top of the page as it enters the deskew rollers.
- **ADF paper path pick success sensor:** Detects a successful one page feed from the document feeder tray.



NOTE: This sensor uses ultrasonic sound to detect a multi-page paper feed.

- **Paper path sensor 1:** Detects the top of the page as it approaches the front-side scan module (document feeder glass).

Figure 1-22 Document feeder sensors

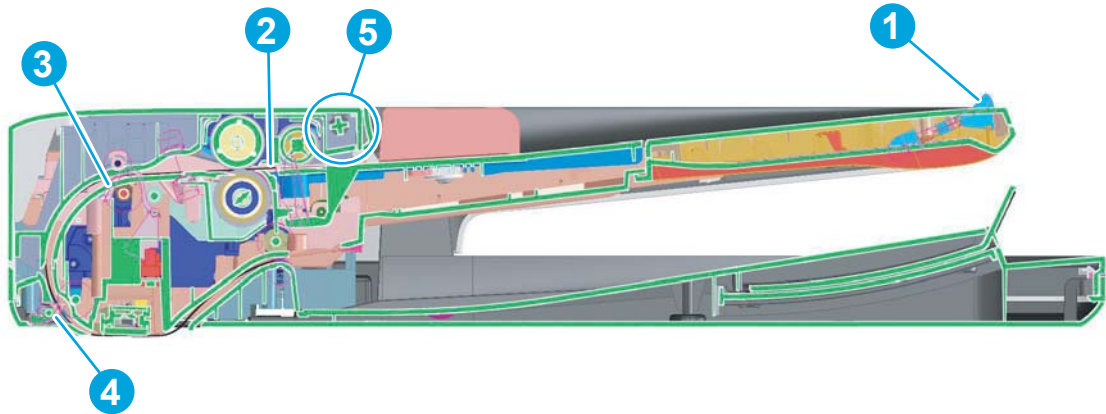


Table 1-9 Document feeder sensors

Item	Description
1	ADF Y (length) sensor
2	ADF paper present sensor
3	ADF deskew sensor
4	Paper path sensor 1 NOTE: For an e-duplex copy job, this sensor is used to activate the front-side scan module (in the scanner base) and the front-side background selector (in the document feeder), if needed.
5	ADF jam cover sensor (open the jam access cover and insert a folded piece of paper to activate the flag)

Document feeder paper path

Figure 1-23 Document feeder paper path

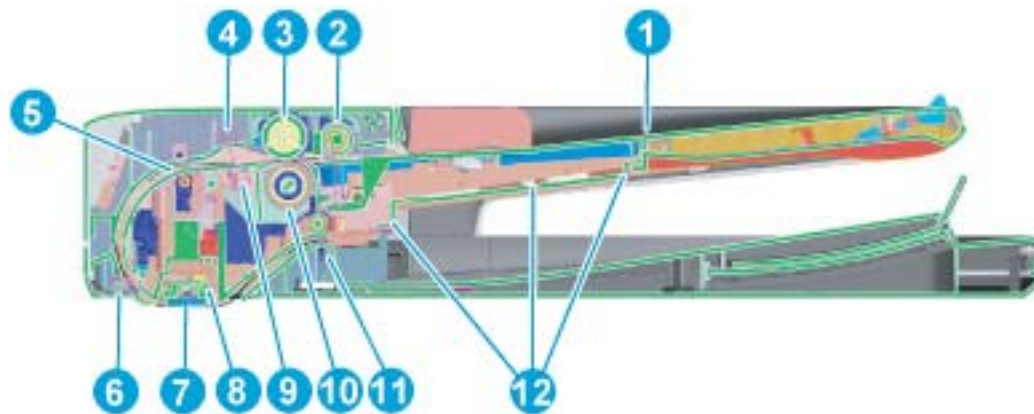


Table 1-10 Document feeder paper path

Item	Description	Item	Description
1	Input tray	7	Front-side scan module NOTE: This scan module (document feeder glass) is located in the scanner base.
2	Pre-pick roller	8	Back-side scan module

Table 1-10 Document feeder paper path (continued)

Item	Description	Item	Description
3	Pick roller	9	ADF pick success transmitter
4	ADF pick success receiver	10	Separator roller
5	Deskew drive roller	11	Exit drive roller
6	Prescan drive roller	12	Lift plate

Document feeder simplex operation

Following is the basic sequence of operation for a document feeder simplex job:

1. The ADF jam cover sensor detects when the cover door is closed.
2. The ADF paper present sensor activates when paper is loaded onto the input tray.
3. The feed motor rotates to raise the lift plate and starts to pick the loaded paper.
4. The ADF multi-pick (ultrasonic) sensor activates when the leading edge of the paper is driven past the sensor. The printer firmware registers a successful pick operation.
5. The ADF paper path deskew activates when the leading edge of the paper passes it. The printer firmware registers the leading edge of the paper position.
6. The leading edge of the paper drives into the nip point of the deskew drive roller and the deskew pinch rollers. This creates a buckle of paper by the nip point for pick-skew correction.
7. The deskew motor rotates the deskew drive roller to pull the paper into the prescan drive roller.
8. The pick motor stops turning and allows both the pick and feed roller to turn freely while the paper is pulled in by the deskew drive roller.
9. The feed motor rotates to drive the paper into the prescan front-side sensor. The firmware registers the leading edge position of the paper as the multi-pick sensor activates.
10. The feed motor continues to rotate and drive the leading edge of the paper through the preset distance from the multi-pick sensor to the front-side scan zone. The scanner begins the scanning and data retrieval process.
11. The ADF multi-pick (ultrasonic) sensor deactivates when the trailing edge of the paper passes the sensor. The firmware registers the trailing edge of the paper position.
12. The feed motor continues to rotate and drive the trailing edge of the paper through the preset distance from the ADF multi-pick (ultrasonic) sensor to the front-side scan zone. The scanner ends the scanning and data retrieval process.
13. The feed motor continues to rotate and ejects the trailing edge of the paper into the output bin.
14. One of the following occurs:
 - If the copy job is complete, the ADF paper present sensor deactivates. The feed motor reverses rotation to raise the pick roller.
 - If the copy job is not complete, the ADF paper present sensor is active. The printer firmware detects additional pages in the input tray and the process repeats.

Document feeder e-duplex operation

Following is the basic sequence of operation for a document feeder simplex job:



NOTE: For an e-duplex copy job, the background scan operation begins immediately after the simplex sequence of operation ends.

1. The feed motor continues to drive the paper until the leading edge activates the prescan back-side sensor. The printer firmware registers the position of the leading edge of the paper.
2. The feed motor continues to rotate to drive the leading edge of the paper through the preset distance from prescan back-side sensor to the back-side background selector scan zone. The back-side background scan module begins the scanning and retrieval of the data.
3. The prescan back-side sensor deactivates when the trailing edge of the paper passes it. The printer firmware registers the trailing edge of the paper position.
4. The feed motor continues to rotate to drive the trailing edge of the paper edge past the back-side background selector scan zone.
5. The feed motor continues to rotate and ejects the trailing edge of the paper into the output bin.
6. One of the following occurs:
 - If the copy job is complete, the ADF paper present sensor deactivates. The feed motor reverses rotation to raise the pick roller.
 - If the copy job is not complete, the ADF paper present sensor is active. The printer firmware detects additional pages in the input tray and the process repeats.

Deskew operation

Sliding side guides on the input tray make sure that the paper stack is correctly aligned at the center of the input tray when paper is loaded in the tray. The correct position of the loaded paper is parallel with the direction of travel into the document feeder paper path.

The document feeder further reduces paper skew due to improper loading of paper in the input tray by buckling the paper to create a paper buffer.

The document feeder aligns the leading edge of the paper parallel with the deskew drive rollers before the paper is driven further into the document feeder paper path.


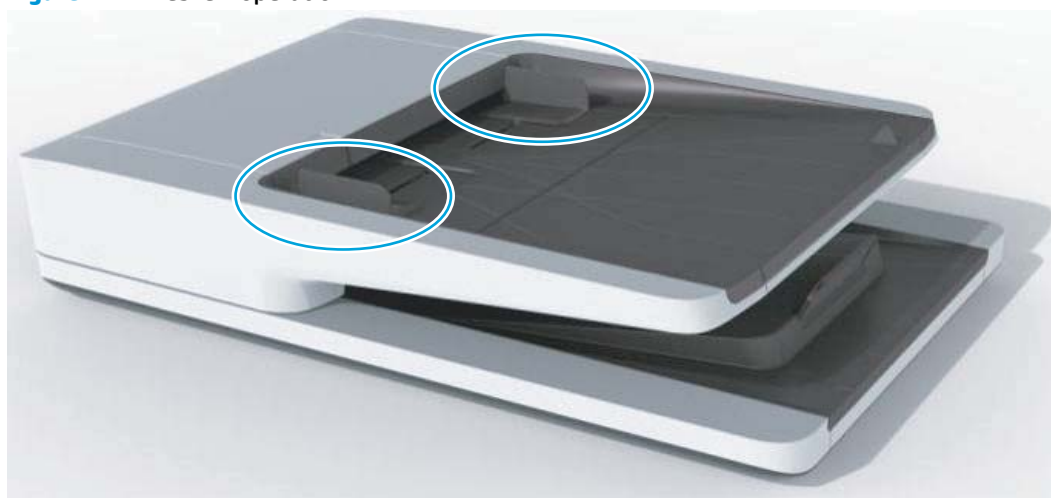
 **NOTE:** If the page to be copied is smaller than the minimal sliding guide setting, do not use the document feeder for the copy job. Attempting to copy too small of a page using the document feeder can result in document feeder jams and/or damage to the original page. Instead, use the flatbed glass to copy the page.

Figure 1-24 Deskew operation



Document feeder hinges

The document feeder hinges allow positioning the feeder above the scanner glass to accommodate the placement of books and other objects up to 25 mm (1.0 in) in height on the scanner glass. The document feeder still closes (the bottom of the feeder is kept parallel to the scanner glass) and allows the printer to operate.

The document feeder will withstand a downward force of about 4.5 kg (10 lb) applied at the front edge center of the assembly—when the fulcrum (such as the spine of a book) is located anywhere on the scanner glass and parallel to its long axis—without breaking, deforming, detaching or experiencing performance degradation.

The document feeder hinges support the assembly in the open position and prevent the document feeder from suddenly closing and causing damage or a loud noise.

The hinges can hold the document feeder static in all positions higher than 100 mm (3.93 in); measured at the front of the assembly. Less than 2.3 kg (5 lb) of force is required to open or close the document feeder.

The hinges allow the document feeder to open to an angle of between 60° and 80° from the horizontal position (this angle will not allow the printer to tip over).

Figure 1-25 Document feeder open (book mode)

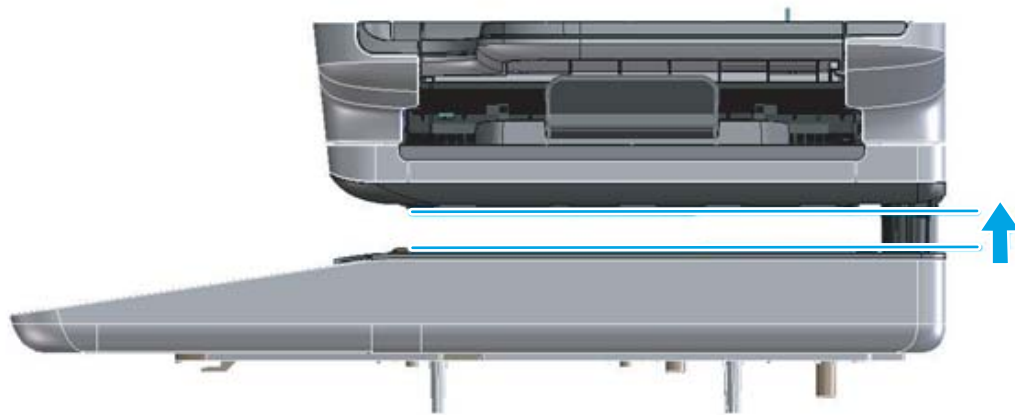


Figure 1-26 Document feeder open (60° to 80°)



Scanning and image capture system (586 models)

The scanner is a carriage-type platen scanner that includes the frame, glass, scan module, and a scan control board (SCB). The scanner has a sensor to detect legal-sized paper and a switch to indicate when the document feeder is opened.

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

Fax functions and operation (586f and 586z models)

The following sections describe the printer fax capabilities.

Computer and network security features

The printer can send and receive fax data over telephone lines that conform to public switch telephone network (PSTN) standards. The secure fax protocols make it impossible for computer viruses to be transferred from the telephone line to a computer or network.

The following printer features prevent virus transmission:

- No direct connection exists between the fax line and any devices that are connected to the USB or Ethernet ports.
- The internal firmware cannot be modified through the fax connection.
- All fax communications go through the fax subsystem, which does not use Internet data-exchange protocols.

PSTN operation

The PSTN operates through a central office (CO) that generates a constant voltage on the TIP and RING wires (usually 48 V). A device goes off-hook by connecting impedance (such as 600 ohms for the U.S.) across the TIP and RING so that a line current can flow. The CO can detect this current and send impulses like dial tones. The printer generates more signaling tones, such as dialing digits, to tell the CO how to connect the call. The printer can also detect tones, such as a busy tone from the CO, that tell it how to behave.

When the call is connected, the CO behaves like a wire connecting the sender and receiver. This is the period during which all of the fax signaling and data transfer occurs. When a call is completed, the circuit opens again and the line-current flow ceases, removing the CO connection from both the sender and the receiver.

On most phone systems, the TIP and RING signals appear on pins 3 and 4 of the RJ-11 modular jack (the one on the fax card, as defined in the common 6-wire RJ standard). These two signals do not have to be polarized because all the equipment works with TIP on one pin and RING on the other pin. This means that cables of either polarity can interconnect and still work.

These basic functions of PSTN operation are assumed in the design of the fax subsystem. The printer generates and detects the signaling tones, currents, and data signals that are required to transmit and receive faxes using the PSTN.

The fax subsystem

The formatter, fax card, firmware, and software all contribute to the printer fax functionality. The designs of the formatter and fax card, along with parameters in the firmware, determine the majority of the regulatory requirements for telephony on the printer.

The fax subsystem is designed to support V.34 fax transmission, medium speeds (such as V.17 fax), and the lower speeds of older fax machines.

Fax card in the fax subsystem

The fax card contains the modem chipset (DSP and CODEC) that controls the basic fax functions of tone generation and detection, along with channel control for fax transmissions. The CODEC and its associated

circuitry act as the third-generation silicon data access arrangement (DAA) to comply with worldwide regulatory requirements.

Safety isolation

The fax card provides safety isolation between the high-voltage, transient-prone environment of the telephone network (TNV—telephone network voltage) and the low-voltage analog and digital circuitry of the formatter (SELV—secondary extra-low voltage). This safety isolation provides both customer safety and printer reliability in the telecom environment.

Any signals that cross the isolation barrier do so magnetically. The breakdown voltage rating of barrier-critical components is greater than 5 kV.

Safety-protection circuitry

In addition to the safety barrier, the fax card protects against overvoltage and overcurrent events.

Telephone overvoltage events can be either differential mode or common mode. The event can be transient in nature (a lightning-induced surge or ESD) or continuous (a power line crossed with a phone line). The fax card protection circuitry provides a margin of safety against combinations of overvoltage and overcurrent events.

Common mode protection is provided by the selection of high-voltage, barrier-critical components (transformer and relay). The safety barrier of the fax card PCA and the clearance between the fax card and surrounding components also contribute to common mode protection.

A voltage suppressor (a crowbar-type thyristor) provides differential protection. This device becomes low impedance at approximately 300 V differential, and crowbars to a low voltage.

Data path

TIP and RING are the two-wire paths for all signals from the telephone network. All signaling and data information comes across them, including fax tones and fax data.

The telephone network uses DC current to determine the hook state of the telephone, so line current must be present during a call. The silicon DAA provides a DC holding circuit to keep the line current constant during a fax call.

The silicon DAA converts the analog signal to a digital signal for DSP processing, and also converts the digital signal to an analog signal for transmitting data through a telephone line.

The magnetically coupled signals that cross the isolation barrier go through a transformer.

The DSP in the fax card communicates with the ASIC on the formatter using the high-speed serial interface.

Ring detect

Ring detect is performed by the line voltage monitoring module of the silicon DAA, and is a combination of voltage levels and cadence (time on and time off). Both must be present to detect a valid ring. The CODEC works with DSP and the firmware to determine if an incoming signal is an answerable ring.

Line current control

The DC current from the CO needs to have a path to flow from TIP to RING. The DC impedance emulation line modulator and DC termination modules in the silicon DAA act as a DC holding circuit, and work with the firmware to achieve the voltage-current characteristic between TIP and RING. The impedance (the current-voltage characteristic) changes in correspondence to certain special events, such as pulse dialing or when the printer goes on-hook.

Fax page storage in flash memory

Fax pages are the electronic images of the document page. They can be created in one of three ways: scanned to be sent to another fax machine, generated to be sent by the computer, or received from a fax machine to be printed.

The printer automatically stores all fax pages in flash memory. After these pages are written into flash memory, they are stored until the pages are sent to another fax machine, printed on the printer, transmitted to the computer, or erased by the user.

These pages are stored in flash memory, which is the nonvolatile memory that can be repeatedly read from, written to, and erased. The printer has 2 MB of flash memory, of which 1.5 MB is available for fax storage. The remaining 0.5 MB is used for the file system and reclamation. Adding RAM does not affect the fax page storage because the printer does not use RAM for storing fax pages.

Advantages of flash memory storage

Fax pages that are stored in flash memory are persistent. They are not lost as a result of a power failure, no matter how long the power is off. Users can reprint faxes if an ink cartridge runs out of ink or the printer experiences other errors while printing faxes.

The printer also has scan-ahead functionality that makes use of flash memory. Scan-ahead automatically scans pages into flash memory before a fax job is sent. This allows the sender to pick up the original document immediately after it is scanned, eliminating the need to wait until the fax transmission is complete.

Because fax pages are stored in flash memory rather than RAM, more RAM is available to handle larger and more complicated copy and print jobs.

2 Solve problems

- [Problem-solving checklist](#)
- [Troubleshooting process](#)
- [Tools for troubleshooting](#)
- [Control-panel menus](#)
- [Print quality troubleshooting guide](#)
- [Solve image quality problems \(print\)](#)
- [Solve copy/scan problems \(586\)](#)
- [Solve paper jam or feed problems](#)
- [Solve performance problems](#)
- [Solve connectivity problems](#)
- [Service mode functions](#)
- [Firmware upgrades](#)
- [Solve fax problems \(586f and 586z models\)](#)

Problem-solving checklist

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

- [Step 1: Check that the printer power is on](#)
- [Step 2: Check the control panel for error messages](#)
- [Step 3: Test print functionality](#)
- [Step 4: Test copy functionality \(586 only\)](#)
- [Step 5: Test the fax sending functionality \(586 fax models only\)](#)
- [Step 6: Test the fax receiving functionality \(586 fax models only\)](#)
- [Step 7: Try sending a print job from a computer](#)
- [Step 8: Test the Plug and Print USB Drive printing functionality](#)
- [Factors that affect printer performance](#)

Step 1: Check that the printer power is on


1. Make sure that the printer is plugged in and turned on. The power button should be lit with a green light. If it is not, press the power button. It should first glow with an amber color, and then quickly switch to green as the printer initializes. If the power button does not light up, check the following conditions.
 - Make sure that the power cable is connected to the printer and the outlet.
 - Check the power source by connecting the power cable to a different outlet.
2. If the printer motors do not rotate, make sure that the ink cartridges are installed and that the doors are all closed. The control panel displays messages to indicate these problems.
3. **586 only:** If the document feeder motor does not rotate, open the document feeder cover and remove any packing material or shipping tape.
4. **586 only:** If the scanner bulb does not light during copying, scanning, or faxing, see the Power subsystems section in the printer troubleshooting manual.

Step 2: Check the control panel for error messages

The control panel should indicate ready status. If an error message appears, resolve the error.

Print a supplies status page to ensure that the supplies are not at or over end of life.

- Ink collection unit (B5L09A): estimated life is 115,000 pages.
- **586 only:** Document feeder (ADF) roller kit (B5L52-67903): estimated life is 75,000 pages.

 **NOTE:** HP long-life consumable and maintenance kit life specifications are estimations. Actual individual life or yield during normal use will vary depending on usage, environment, media, and other factors. Estimated life is not an implied warranty.

Step 3: Test print functionality

1. From the control panel Home screen, touch the [Administration](#) button.
2. Open the [Reports](#) menu, touch the [Configuration/Status Pages](#) menu, select the [Configuration Page](#) item, and then touch the [Print](#) button to print the report.
3. If the report does not print, make sure that paper is loaded in the tray, and check the control panel to see if paper is jammed inside the printer.



NOTE: Make sure that the paper in the tray meets specifications for this printer.

Step 4: Test copy functionality (586 only)

1. Place the configuration page into the document feeder and make a copy. If paper does not feed smoothly through the document feeder, you might need to clean the document feeder rollers and separation pad. Make sure that the paper meets specifications for this printer.
2. Place the configuration page onto the scanner glass and make a copy.
3. If the print quality on the copied pages is not acceptable, clean the scanner glass and the small glass strip.

Step 5: Test the fax sending functionality (586 fax models only)

1. From the control panel Home screen, touch the [Administration](#) button.
2. Open the [Fax Setup](#) menu, and then open the [Fax Tools](#) menu. Touch the [Run Fax Test](#) button to test the fax functionality.
3. Touch the [Fax](#) on the printer control panel, and then touch the [Start Fax](#) button.

Step 6: Test the fax receiving functionality (586 fax models only)

1. From the control panel Home screen, touch the [Administration](#) button.
2. Touch the [Fax Setup](#) menu, and then touch the [Fax Tools](#) menu. Touch the [Run Fax Test](#) button to test the fax functionality.
3. Use another fax machine to send a fax to the printer.
4. Review and reset the printer fax settings.

Step 7: Try sending a print job from a computer

1. Use a word-processing program to send a print job to the printer.
2. If the job does not print, make sure that you selected the correct printer driver.
3. Uninstall and then reinstall the printer software.

Step 8: Test the Plug and Print USB Drive printing functionality

1. Load a .PDF document or .JPEG photo onto a USB flash drive, and insert it in the USB port near the control panel.
2. The **USB Flash Drive** menu opens. Try printing the document or photo.
3. If no documents are listed, try a different type of USB flash drive.

Factors that affect printer performance

Several factors affect the time it takes to print a job:

- The software program that you are using and its settings
- The use of special paper (such as heavy paper or custom-size paper)
- Printer processing and download time
- The complexity and size of graphics
- The speed of the computer you are using
- The USB or network connection
- Whether the printer is printing in color or in monochrome
- The type of USB drive, if you are using one
- Environmental factors, such as low temperature or high humidity

Troubleshooting process

Determine the problem source

When the printer malfunctions or encounters an unexpected situation, the printer 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?
- Are supply items Genuine HP supplies?
- 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 printer hardware problems.

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

Table 2-1 Troubleshooting flowchart

1 Power on	Is the printer on and does a readable message display?		Follow the power-on troubleshooting checks. See Power subsystem on page 50 .
	Yes ↓	No →	After the control-panel display is functional, see step 2.
2 Control-panel messages	Does the message Ready display on the control panel?		After the errors have been corrected, go to step 3. See the control-panel messages document (CPDM) in the printer troubleshooting manual.
	Yes ↓	No →	
3 Event log	Open the Troubleshooting menu and print an event log to see the history of errors with this printer.		If the event log does not print, check for error messages. See the control-panel messages document (CPDM) in the printer troubleshooting manual.
	Does the event log print?		If paper jams inside the printer, clear the jam. See the clear paper jams section of the printer troubleshooting manual.
	Yes ↓	No →	If error messages display on the control panel when you try to print an event log, see the control-panel messages document (CPDM) in the printer troubleshooting manual. After successfully printing and evaluating the event log, see step 4.

Table 2-1 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 Print quality	Does the print quality meet the customer's requirements?		Compare the images with the print quality report. See the solve image quality section of the printer troubleshooting 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 HP Jetdirect configuration page. If error messages display on the control panel when you try to print an event log, see the control-panel messages document (CPDM) in the printer troubleshooting 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 printer functions should start up when the printer is connected into an electrical outlet and the power switch is pushed to the *on* position. If the printer does not start, use the information in this section to isolate and solve the problem.

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.

Power-on troubleshooting overview

During normal operation, a cooling fan begins to spin briefly after the printer power is turned on. Place your hand over the vents at the rear of the printer, next to the formatter, or on the rear of the scanner (586 printers). If the fan is operating, you will feel air passing out of the printer. You can lean close to the printer and hear the fan operating.

After the fan is operating, the main motor turns on (unless the left door or cartridge access door 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.

If the control panel is blank when you turn on the printer, check the following items:

1. Make sure that the printer 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 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 printer on again.

Troubleshooting a blank display, black display, no display, or no power situation

Customers usually report that the control-panel display is not showing anything. It is very important to collect as much information as possible from the customer about the issue to help resolve it.

Following are some printer behaviors the customer might encounter:

- The control panel is completely blank (no LEDs or back light).
- The control Panel is blank, but there might be LEDs illuminated.
- The control Panel is blank (LEDs are on or flashing) and the back light is on (but no text visible).

Following are some possible causes of a blank control-panel display:

- No power to the printer.
- The control panel contrast setting is not correctly adjusted.
- The formatter connector(s) are not fully seated into the connector(s) on the DC controller.
- The memory DIMM is missing, faulty, incorrectly installed, or is not fully seated.
- A faulty component is installed on the formatter (for example a memory DIMM, fax PCA, network PCA, USB device, or other component).
- The formatter is defective.
- The control panel connector is not fully seated, or the control panel is defective.
- The DC controller is defective.

Following are some questions to ask the customer:

- Was the printer newly install or has the printer been properly functioning?
 - For a new install, investigate to see if there was any shipping damage to the printer.
 - Did the customer notice any damage to the shipping box or any visible damage to the printer?
- What happened just prior to the control panel going blank?
 - Was the printer serviced recently, a power outage occurred?
 - Has a lightning storm recently occurred?
 - Did the customer recently add a memory DIMM or install a third-party component?
- Make sure to get a complete description of the failure.
 - Is the control-panel display completely blank (might be faint text and no back light)?
 - Is the control-panel display back light on?

- Are any of the LEDs (Ready, Data, or Attention) illuminated?
- Has a print job been sent to the printer? The customer might report that their print jobs seemed to print but when they go to the printer the control-panel display is blank.

Recommended actions


If the control-panel display is completely blank (no LEDs illuminated or no back light) check to see if the printer is getting power. Listen for fans or any printer initialization sounds when the power is turned on.

If there are no signs of power, then perform the following:


1. Make sure that the printer is plugged directly into an active electrical outlet (not a power strip or interruptible power supply) that delivers the correct voltage.

 **TIP:** Try using a different power cable if possible.

2. Turn the printer power on, and make sure that the fan(s) run briefly (this indicates that the power supply is operational).
3. Turn the printer power off.
4. Make sure that the control-panel display wire harness (and/or flat cable) is properly connected (and fully seated), and then turn the printer power on again.
5. Verify the status LEDs are illuminated, but the control-panel display is blank. If applicable: Check if the contrast setting is adjusted to very low. If so, try turning the contrast knob to see if the control-panel display becomes visible.
6. From a host computer, send a print job to the printer.


 **NOTE:** If the print job correctly prints, then the problem is most likely to a defective control panel.

7. Turn the printer power off, and then make sure that the memory DIMM is installed in the correct slot and is fully seated.

 **NOTE:** For some printers, there may be more than one memory DIMM installed. Some printers have third-party solutions/applications or fonts that use memory.

8. Remove all of the components/accessories installed on the formatter (for example, hard drive, solid-state drive, memory DIMM(s), fax PCA, network PCA, USB devices, or other devices).


- **For printers with a interconnect board (ICB):** Make sure that the formatter is fully seated.
- Take out or disconnect all removable components on the formatter (SSD, HDD, or other devices).

 **IMPORTANT:** This is important because the formatter or a component on the formatter might be defective or shorted which causes the printer to lose power.

9. **For printers with a interconnect board (ICB):** Reinstall the Formatter (make sure it makes a good connection and is fully seated).

Make sure that all of the connectors on the formatter are correctly connected and fully seated.

10. Turn the printer power on, and then check the control-panel display.
11. If the printer control panel is properly working, replace each removed component (one at a time) to determine which one is causing the problem.

 **CAUTION:** Turn the printer power off, and then on again, after replacing a component on the formatter.

12. If the control-panel display is still blank after performing the above troubleshooting steps, replace the formatter.

Scanning subsystem (586)

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 is replaced.

1. From the Home screen on the printer 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.

Control panel checks

Control panel diagnostic flowcharts

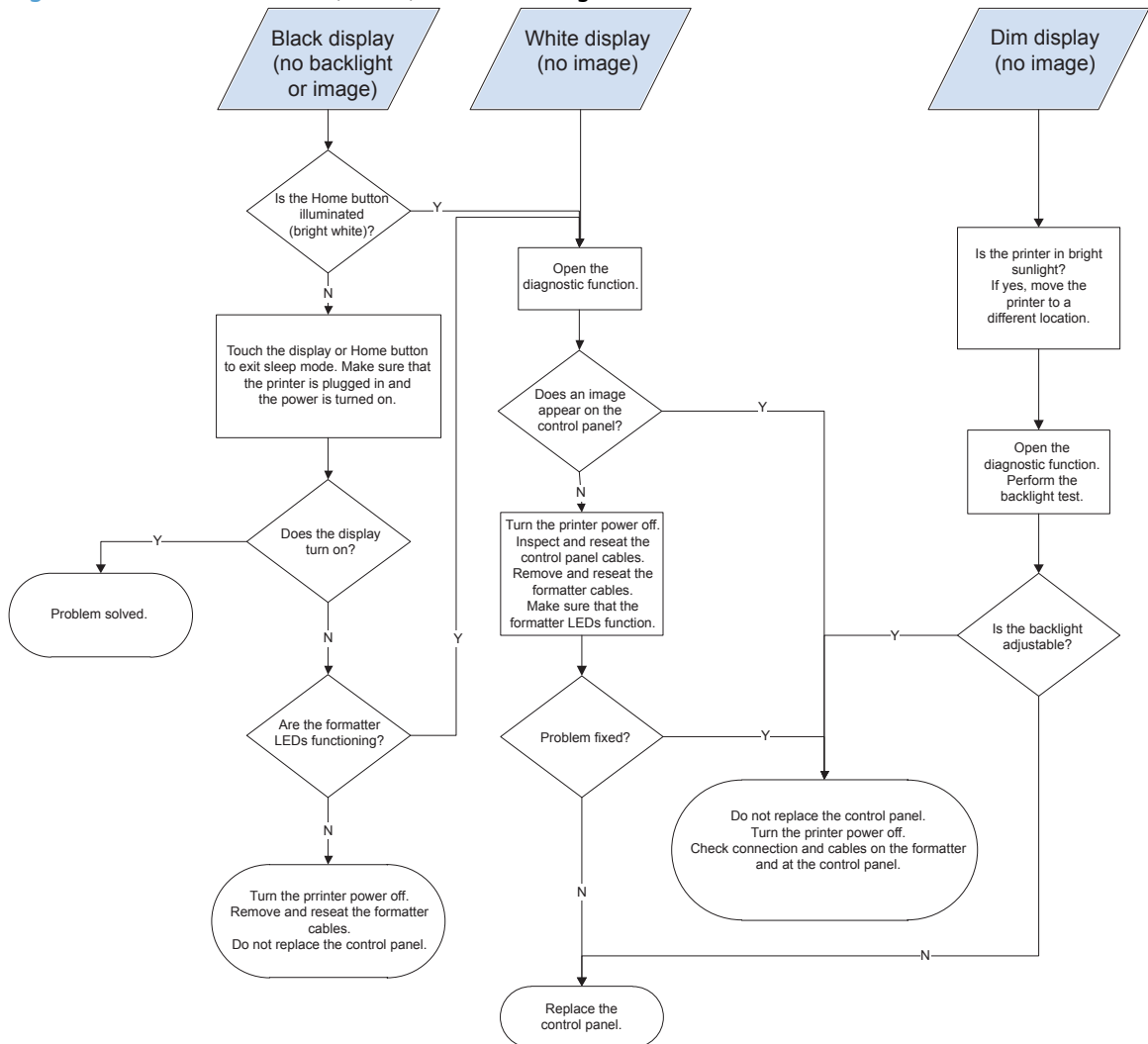
Use the flowcharts in this section to troubleshoot the following control panel problems.

- Touchscreen is blank, white, or dim (no image).
- Touchscreen is slow to respond or requires multiple presses to respond.
- Touchscreen has an unresponsive zone.
- No control panel sound.
- [Home](#) button is unresponsive.
- Hardware integration pocket (HIP) is not functioning (control panel functional).

Touchscreen black, white, or dim (no image)

 **NOTE:** To open the diagnostic function, press the button on the back of the control panel.

Figure 2-1 Touchscreen blank, white, or dim (no image)

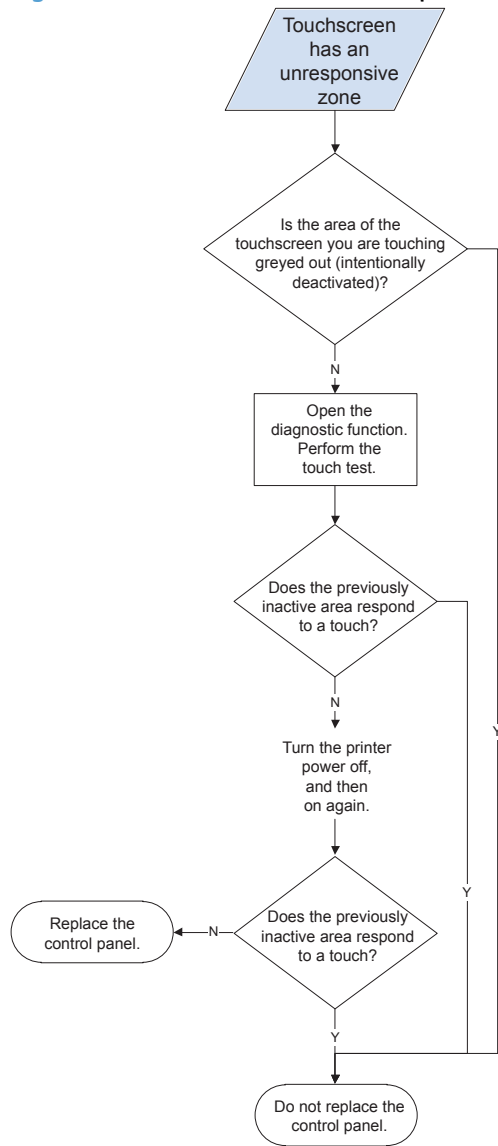


Touchscreen has an unresponsive zone



NOTE: To open the diagnostic function, press the button on the back of the control panel.

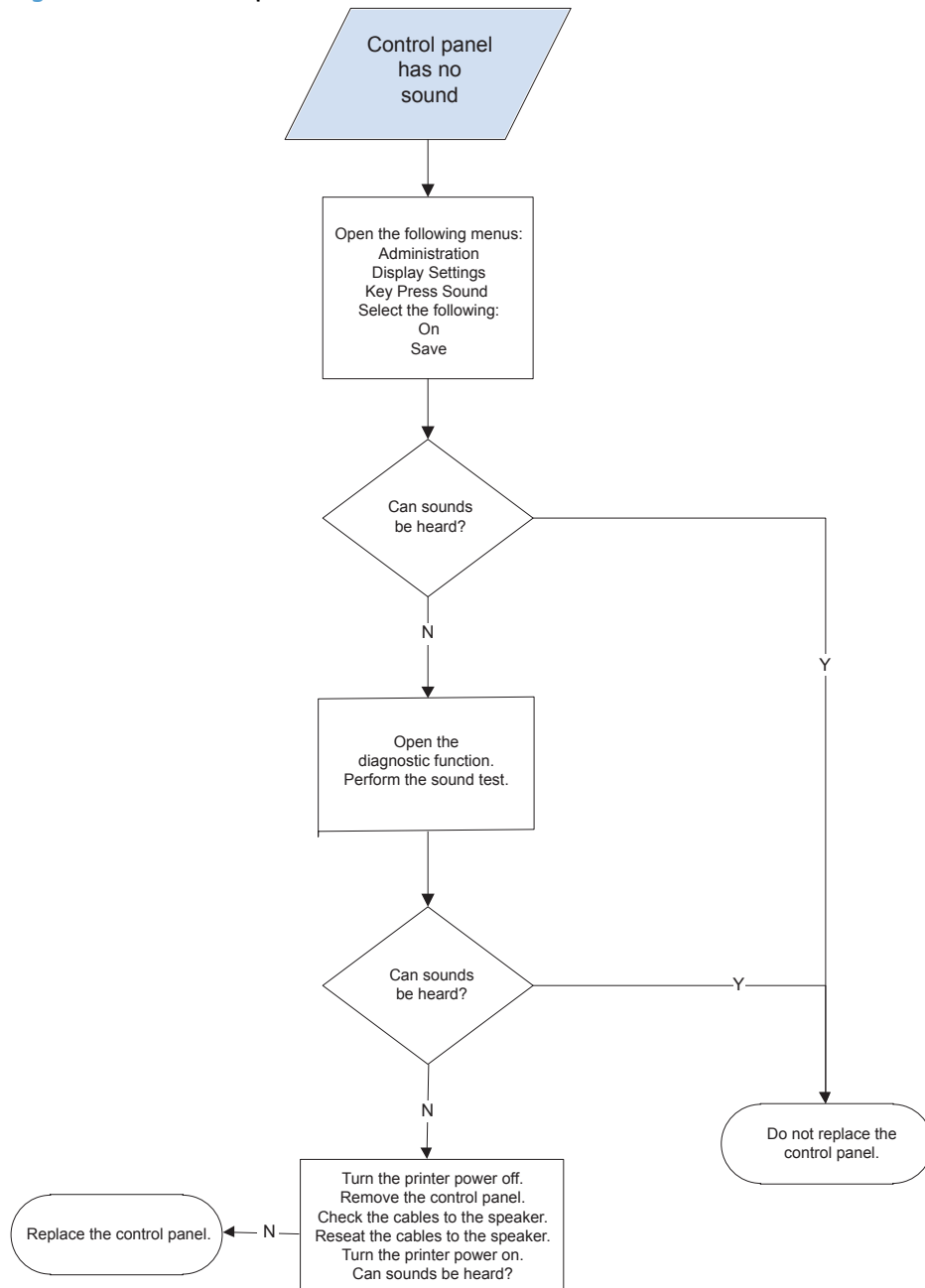
Figure 2-2 Touchscreen has an unresponsive zone



No control panel sound

 **NOTE:** To open the diagnostic function, press the button on the back of the control panel.

Figure 2-3 No control panel sound

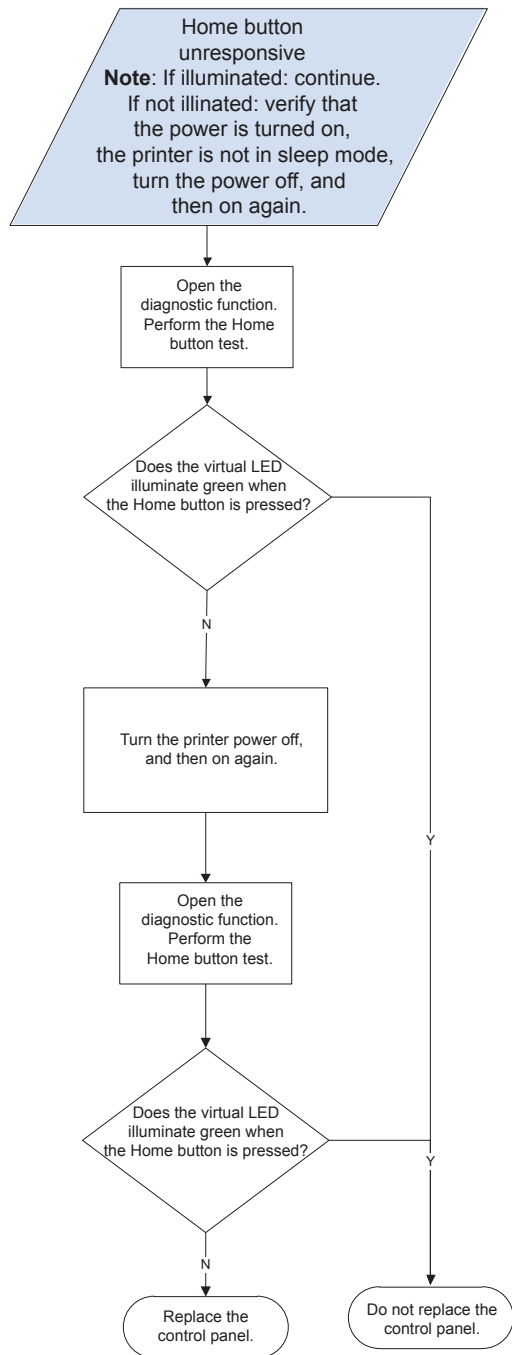


Home button is unresponsive



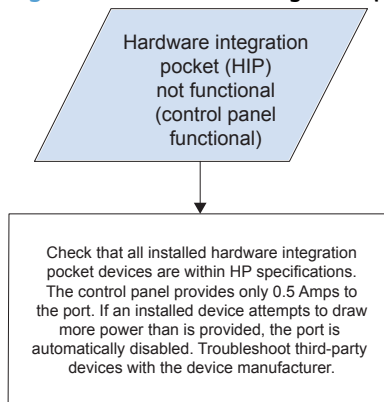
NOTE: To open the diagnostic function, press the button on the back of the control panel.

Figure 2-4 Home button is unresponsive



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

Figure 2-5 Hardware integration pocket (HIP) is not functioning (control panel functional)



Tools for troubleshooting

Print the 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 fax accessory page (586 fax models only), and the HP embedded Jetdirect configuration pages print.

Print a configuration page

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

1. From the Home screen on the printer 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 (586 only) to view the information on the control panel, or touch the [Print](#) button to print the pages.

Figure 2-6 Configuration page

Configuration Page
HP PageWide Color Flow MFP 586
Page 1

1 Device Information

Product Name: HP PageWide Color Flow MFP 586
 Device Name: HP PageWide Color Flow MFP 586
 Model Number: G1W41M
 Engine Firmware Revision: 81L8CA1525HR
 Device Serial Number: C05762P302
 Formatter Number: 3T000G4
 CPB: 3.054
 SCB: xxxxFA1519CR 1.0
 Firmware Bundle Version: LVB
 Firmware Revision: Z305548_528001
 Firmware Datecode: 20150626
 HP FutureSmart Level: HP FutureSmart 3
 NFC revision: Not Installed
 Service ID: 00000
 Document Feeder Kit Interval: 75000
 Pages Since Last Doc Feeder Maintenance: 0
 PS Wait Time-out: 300 seconds
 Engine Cycles*: 21
 Color Engine Cycles*: 21
 *Not weighted for billing

2 Installed Personalities and Options

PCL: 20010402
 PCLXL: 20010402
 POSTSCRIPT: 20010402
 PDF: 20130501
 AirPrint: 2040201
 PWGRASTER: 2040201
 PCL3dL: 20140721
 Internal Disk: Hard Disk: Enabled
 Serial Number: 53PW6A05
 Mode: HP Secure Hard Disk
 Capacity: 385245 MB
 Hard Disk Encryption Status: Drive is not yet encrypted.
 Internal Fax: Ver11.1
 Embedded HP JetDirect: 10.10.48.169
 LDAP Gateway: 0.0.0.0
 Digital Send Advanced
 Custom Color Table: Not Installed

3 HP Web Services

HP Web Services: Disabled
 ePrint: Disabled

4 Calibration Information

Last Calibration Performed (Engine Cycles): 21
 Last Calibration Performed: 9/30/2015 7:20:38 AM

5 Memory

Total RAM: 2048 MB

6 Event Log

Number of Entries in Use: 9
 Three Most Recent Entries:


Number	Cycles	Event
9	21	42.80.01
8	21	33.02.02
7	21	01.01.01

7 Security

Hard Disk Encryption Status:
 Internal Disk: Drive is not yet encrypted.
 Job Data Encryption Status: Encrypted
 Job Data Persistence: Persistent (not volatile)
 File Erase Mode: Non-Secure Fast Erase (No overwrite)
 Control Panel Password: Disabled
 Support Key: ZW8-1P18-4B2
 Host USB plug and play: Enabled
 Device USB: Enabled

8 Paper Trays and Options

Default Paper Size: Letter (8.5x11)
 Tray 1 Size: Any Size
 Tray 1 Type: Any type
 Tray 2 Size: Letter (8.5x11)
 Tray 2 Type: Plain
 Duplex Unit
 1: Output Bin 1, 300 Sheets, Standard bin

Oct0102015 1:57:59 PM

English (United States)

1	Device Information information, including the firmware version, usage statistics, and the service ID.	5	Memory
2	Installed Personalities and Options information, including installed printer languages and hard disk information.	6	Event Log information that shows the most recent entries in the log.
3	HP Web Services status information	7	Security information that includes encryption information and current security settings.
4	Calibration Information that shows when the printer most recently performed a calibration.	8	Paper Trays and Options information that shows installed trays and current paper size/type settings.

Fax accessory page (586 fax models only)

The second configuration page is the fax accessory page, which contains the following information.

Figure 2-7 Fax accessory page (586 fax models only)

Fax Accessory Page
HP PageWide Color Flow MFP 586
Page 1

1 Hardware Information
 Product: LSI CFAX34 Ver11.1 (Jun 11 2014) *V34Fax*Class 2.0 EDM+Sphone V
 Modem Firmware Version: Ver11.1
 Modem Status: Operational/Enabled

2 Fax Information
 Fax Job Count: 0

3 Fax Setup Settings
 Country/Region: United States
 Current Date: Oct.01/2015
 Current Time: 01:57 PM
 Phone Number:
 Company Name:
 Fax Archive: Disabled
 Fax Forwarding: Disabled
 Forward Fax Number:
 Fax Dial Volume: Soft
 Ringer Volume: Soft
 Error Correction: Enabled
 JBIG Compression: Disabled
 Ring Interval: 600
 Ring Frequency: 68
 Fax Number Confirmation: Disabled
 Fax V.34: Enabled

4 Fax Send Settings
 Fax Send: Enabled
 Default Resolution: Standard (100 x 200dpi)
 Fax Header: Prepend
 Dialing Mode: Tone
 Redial on Error: 2
 Redial on Busy: 3
 Redial on No Answer: Never
 Redial Interval: 5
 Detect Dial Tone: Disabled
 Fax Send Speed: Medium
 Dialing Prefix: Off
 PC Fax Send: Enabled
 Billing Code: Off
 Billing Code Digits: 1

5 Fax Receive Settings
 Fax Receive: Enabled
 Fax Receive Speed: Medium
 Rings to Answer: 1
 Stamp Received Faxes: Off
 Fit to Page: Enabled
 Paper Selection: PrinterSelect
 Output Bin: Automatic
 Fax Printing Schedule: Always print faxes
 Sides: Simplex

6 Fax Report Setting
 Sent Fax Report: Never automatically generate
 Received Fax Report: Never automatically generate
 Fax T.30 Tracer Report: Never automatically print
 Thumbnail on Report: Off
 Thumbnail on Report: Off

Oct01/2015 1:57:59 PM English (United States)

1	Hardware Information that shows printer and modem firmware versions, and shows the modem status.	4	Fax Send Settings shows the fax send configuration.
2	Fax Information that shows the fax job count.	5	Fax Receive Settings shows the fax receive configuration.
3	Fax Setup Settings shows the fax configuration.	6	Fax Report Setting shows the fax report configuration.

HP embedded Jetdirect page

The third configuration page—this is the second page for non-fax models—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 2-8 HP embedded Jetdirect page

Embedded HP Jetdirect **HP PageWide Color Flow MFP 586**
Page 1

```

----- General Information -----
1 Status: I/O Card Ready
Model Number: J8832E
Hardware Address: 308099A9EE92
Firmware Version: JS123520109
LAA: 308099A9EE92
Port Config: 100TX FULL
Auto Negotiation: On
Manufacturing ID: 5523552300****-a
Date Manufactured: 06/2015
MS Registration: Not Registered

ePrint: Not Applicable
Email: Not Applicable
Google Cloud Print: Not Registered
GCP Name: HP PageWide Color Flow MFP 586

----- Security Settings -----
2 802.1X: Not Specified
IPsec: Disabled
Secure Web: HTTPS Required
Cert Expires: 2020-09-27 00:38 UTC
SNMP Versions: 1,2
SNMP Set Cntry Name: Not Specified
SNMP Get Cntry Name: Not Specified/Default
Access List: Not Specified
Admin Password: Not Specified
Announcement Agent: Failed
FIPS: Disabled

----- Network Statistics -----
3 Total Packets Received: 970
Unicast Packets Received: 34
Bad Packets Received: 11
Total Packets Transmitted: 178
Framing Errors Received: 0
Unsendable Packets: 0
Transmit Collisions: 0
Transmit Late Collisions: 0
Last Wake:
000000790000000000000000000000000000
000000000000000000000000000000000000
000000000000000000000000000000000002

----- TCP/IP -----
4 IPv4: Enabled
IPv6: Enabled
Host Name: NP1A9EE92
IPv4 Domain Name: aquant.int
IPv6 Domain Name: Not Specified
Primary DNS Server: 10.10.58.209
Secondary DNS Server: 10.10.58.210
DNS(IPv6): Not Specified
WINS Server: Not Specified
TCP Idle Timeout: 270 sec

----- IPv4 -----
5 Status: Ready
ARP DUPLICATE IP ADDRESS
d4:c9:ef:51:0e:69
IP Address: 10.10.48.169
Subnet Mask: 255.0.0.0
Default Gateway: 10.10.48.169
Config By: RARP
RARP Server: 10.10.48.29
TFTP Server: Not Specified
Bonjour Service Name:
HP PageWide Color Flow MFP 586 [A9EE92]

----- IPv6 -----
6 Status: Ready
Link-Local:
fe80::328d:99ff:fea9:ee92
Stateless:
Not Configured
DHCPv6:
Not Configured
Manual:
Not Configured
  
```

Oct01/2015 1:57:59 PM English (United States)

1	General Information indicates the printer status, model number, hardware firmware version, port select, port configuration, auto negotiation, manufacturing identification, and manufactured date.	4	TCP/IP information, including the IP address
2	Security Settings information	5	IPv4 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.	6	IPv6 information

Finding important information on the configuration pages

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

Table 2-2 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.	Engine firmware revision	Look on the main configuration page, under “Device Information.”
	Firmware datecode	Look on the main configuration page, under “Device Information.”
	HP embedded Jetdirect firmware version	Look on the HP embedded Jetdirect page, under “General Information.”
Accessories and internal storage All optional devices that are installed on the printer 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.”
Finishing accessories	Installed finishing accessory type	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 printer 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 Troubleshooting menu.	Engine cycles	Look on the main configuration page, under “Device Information.”
	Event log information	Event log information

Event log messages

See the control-panel message and event-log entries section of the product troubleshooting manual for event-log entry descriptions and solutions. The event log shows the last 50 events in descending order.

Figure 2-9 Sample event log

Event Log						
HP PageWide Color 556 Page 1						
Device Information						
Device Serial	Number	Date and Time	Cycles	Event	Firmware	Description or Personality
000000	50	1/2/2014 8:28:12 AM	62	40.08.00	2302176_420411	Secure file erase is disabled
	49	1/2/2014 8:27:41 AM	61	10.99.34	2302176_420411	Used supply in use
	48	1/2/2014 8:25:09 AM	0	32.08.A3	2302176_420411	Normal boot up
	47	1/2/2014 8:25:06 AM	0	33.02.02	2302176_420411	Save/Recover disabled
	46	1/2/2014 8:24:53 AM	0	99.06.01	2302176_420411	Finisher installation successful
	45	1/2/2014 8:21:43 AM	61	32.08.A2	2302176_420411	Normal shutdown
	44	12/19/2013 3:05:54 PM	61	10.99.34	2302176_420411	Used supply in use
	43	12/19/2013 2:59:26 PM	0	32.08.A3	2302176_420411	Normal boot up
	42	12/19/2013 2:59:24 PM	0	33.02.02	2302176_420411	Save/Recover disabled
	41	12/19/2013 2:59:11 PM	0	99.06.01	2302176_420411	Finisher installation successful
	40	12/19/2013 2:57:38 PM	61	32.08.A2	2302176_420411	Normal shutdown
	39	12/19/2013 2:53:14 PM	61	10.99.34	2302176_420411	Used supply in use
	38	12/19/2013 2:45:54 PM	0	32.08.A3	2302176_420411	Normal boot up
	37	12/19/2013 2:45:52 PM	0	33.02.02	2302176_420411	Save/Recover disabled
	36	12/19/2013 2:45:39 PM	0	99.06.01	2302176_420411	Finisher installation successful
	35	12/19/2013 2:44:05 PM	61	32.08.A2	2302176_420411	Normal shutdown
	34	12/19/2013 8:30:32 AM	60	40.08.00	2302176_420411	Secure file erase is disabled
	33	12/18/2013 2:05:44 PM	59	10.99.34	2302176_420411	Used supply in use
	32	12/18/2013 2:03:21 PM	0	32.08.A3	2302176_420411	Normal boot up
	31	12/18/2013 2:03:18 PM	0	33.02.02	2302176_420411	Save/Recover disabled
	30	12/18/2013 2:03:06 PM	0	99.06.01	2302176_420411	Finisher installation successful
	29	12/18/2013 2:01:32 PM	59	32.08.A2	2302176_420411	Normal shutdown
	28	12/18/2013 1:54:54 PM	59	10.99.34	2302176_420411	Used supply in use
	27	12/18/2013 1:47:09 PM	0	32.08.A3	2302176_420411	Normal boot up
	26	12/18/2013 1:47:07 PM	0	33.02.02	2302176_420411	Save/Recover disabled
	25	12/18/2013 1:46:54 PM	0	99.06.01	2302176_420411	Finisher installation successful
	24	12/18/2013 1:45:19 PM	59	32.08.A2	2302176_420411	Normal shutdown

Table 2-3 Sample event log page

Item	Description	Item	Description	Item	Description	Item	Description
1	Printer information	3	Date and time	5	Event log code	7	Description of personality
2	Event number	4	Engine cycles	6	Firmware version number	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 the event log from the Administration menu (touchscreen control panel)

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 the event log from the Administration menu (LCD control panel)

1. From the [Home](#) screen on the product control panel, use the down arrow ▼ button to scroll to [Administration](#), and then press the [OK](#) button.
2. Use the down arrow ▼ button to scroll to [Troubleshooting](#), and then press the [OK](#) button to select it.
3. With [Print Event Log](#) highlighted, press the [OK](#) button to print the page.

Print the event log from the Service menu (touchscreen control panel)

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 the product:
 - 05055616 (556)
 - 05058616 (586)
5. The event log displays on the screen. To print it, touch the [Print](#) button.

Print the event log from the Service menu (LCD control panel)

1. From the [Home](#) screen on the product control panel, use the down arrow ▼ button to scroll to [Device Maintenance](#), and then press the [OK](#) button.
2. Use the down arrow ▼ button to scroll to [Service](#), and then press the [OK](#) button to select it.
3. Use the down arrow ▼ button to scroll to [Service Access Code](#), and then press the [OK](#) button to select it.
4. Enter the following service access code for the product:



NOTE: After entering the PIN, press the [OK](#) button.

- 05055616 (556)
 - 05058616 (586)
5. With [Print Event Log](#) highlighted, press the [OK](#) button to print the page.

Clear the event log

Clear the event log from the Service menu (touchscreen control panel)

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 the product:
 - 05055616 (556)
 - 05058616 (586)
5. Select the [Clear Event Log](#) item, and then touch the [OK](#) button.

Clear the event log from the Service menu (LCD control panel)

1. From the [Home](#) screen on the product control panel, use the down arrow ▼ button to scroll to [Device Maintenance](#), and then press the [OK](#) button.
2. Use the down arrow ▼ button to scroll to [Service](#), and then press the [OK](#) button to select it.
3. Use the down arrow ▼ button to scroll to [Service Access Code](#), and then press the [OK](#) button to select it.
4. Enter the following service access code for the product:



NOTE: After entering the PIN, press the [OK](#) button.

- 05055616 (556)
 - 05058616 (586)
5. Use the down arrow ▼ button to scroll to [Clear Event Log](#), and then press the [OK](#) button.

Control panel message document (CPMD)

Control-panel message types

The control-panel messages and event code entries indicate the current printer status or situations that might require action.



NOTE: Event log errors do not appear on the control-panel display. Open the event log to view or print the event log errors.

A control-panel message displays temporarily and might require the user to 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 printer will attempt to resume printing after the message has appeared for 10 seconds without acknowledgement.

For some messages, restarting the printer might fix the problem. If a critical error persists, the printer might require service.

Control-panel messages and event log entries



NOTE: Some of the messages in the following sections only appear in the event log.



TIP: Some control-panel messages and event log entries refer to a specific printer sensor or switch in the recommended action to solve the problem.

11.XX.YZ Error Messages

11.00.01 or 11.00.02 Internal clock error

Description

This message indicates a problem with the formatter's real time clock.

The product real time clock has experienced an error.

01=dead clock

02=dead real time clock

Recommended action

1. Whenever the product is turned off and then turned on again, set the time and date on the control panel.
2. If the error persists, you might need to replace the formatter.

15.XX.YZ Error Messages

15.00.00 Unknown Jam

Description

A paper jam has occurred in the printer at an unknown location.

Recommended action

1. Follow jam removal instructions on the screen.
2. Open all doors and trays and remove all paper from the paper path.
3. Run Paper Path Diagnostics to move paper from tray to output bin ([Administration / Troubleshooting / Paper Path Page](#)).

15.A0.01 Input Jam, Tray 1**Description**

An input jam occurred from Tray 1 but sensor and condition are unknown.

No Pick "Did not pick page from tray 1".

This jam occurs when the paper does not reach the Feed roller REDI sensor [1] for Tray 1 in designated amount of time after the start of paper pick-up from Tray 1.

Recommended action**Customer:**

See Public Document

Call Center Agent and Service Technicians:

1. Follow jam removal instructions on the screen.
2. Clear all possible paper jam locations (remove paper stack, open left door, remove ICU, lower flap, clear paper, raise flap, install ICU, close door).
3. Verify the paper meets the specifications for the tray.
4. Ensure that the tray width setting is set to your paper being installed into the tray.

The arrow on the guide should line up exactly with the line connected to paper size designation.

5. Make sure the tray is not overload above the marking shown on the tray side guide.

How to load paper trays: <https://support.hp.com/us-en/document/c05426810>

How to Load Paper Video  <http://link.brightcove.com/services/player/bcpid1190528646001?bctid=ref:REFIDBC4242055248001>

6. Check the Tray 1 feed roller for wear, damage or paper dusk. Clean or replace the rollers as needed.
7. Run Paper Path Diagnostics to move paper from tray to output bin ([Administration / Troubleshooting / Paper Path Page](#)).
8. Replace the Mech Kit.

15.A0.02 Input Jam, Tray 2**Description**

An input jam occurred from Tray 2 but sensor and condition are unknown.

No Pick "Did not pick page from tray 2".

This jam occurs when the paper does not reach the Feed roller REDI sensor [1] for Tray 2 in designated amount of time after the start of paper pick-up from Tray 2.

Recommended action

Customer:

See Public Document

Call Center Agent and Service Technicians:

1. Follow jam removal instructions on the screen.
2. Clear all possible paper jam locations (Open paper cassette remove paper, open left door, remove ICU, lower flap, clear paper, raise flap, install ICU, close door).
3. Verify the paper meets the specifications for the tray.
4. Ensure that the tray width setting is set to your paper being installed into the tray.

The arrow on the guide should line up exactly with the line connected to paper size designation.

5. Make sure the tray is not overload above the marking shown on the tray side guide.

How to load paper trays: <https://support.hp.com/us-en/document/c05426810>

How to Load Paper Video  <http://link.brightcove.com/services/player/bcpid1190528646001?bctid=ref:REFIDBC4242055248001>

6. Check the Tray 2 pickup and feed rollers for wear, damage or paper dusk. Clean or replace the rollers as needed.
Order P/N: CN598–67018 Separator Pick Assembly kit tray 2
7. Run Paper Path Diagnostics to move paper from tray to output bin ([Administration / Troubleshooting / Paper Path Page](#)).
8. Replace the Mech Kit.

15.A0.03 Input Jam, Tray 3

Description

An input jam occurred from Tray 3 but sensor and condition are unknown.

No Pick "Did not pick page from tray 3".

This jam occurs when the paper does not reach the Tray 3 separation REDI sensor in designated amount of time after the start of paper pick-up from Tray 3.

Recommended action

Customer:

See Public Document

Call Center Agent and Service Technicians:

1. Follow jam removal instructions on the screen.
2. Clear all possible paper jam locations (Open paper cassette remove paper, open left door, remove ICU, lower flap, clear paper, raise flap, install ICU, close door).
3. Verify the paper meets the specifications for the tray.
4. Ensure that the tray width setting is set to your paper being installed into the tray.

The arrow on the guide should line up exactly with the line connected to paper size designation.

5. Make sure the tray is not overload above the marking shown on the tray side guide. How to load paper trays: <https://support.hp.com/us-en/document/c05426810>

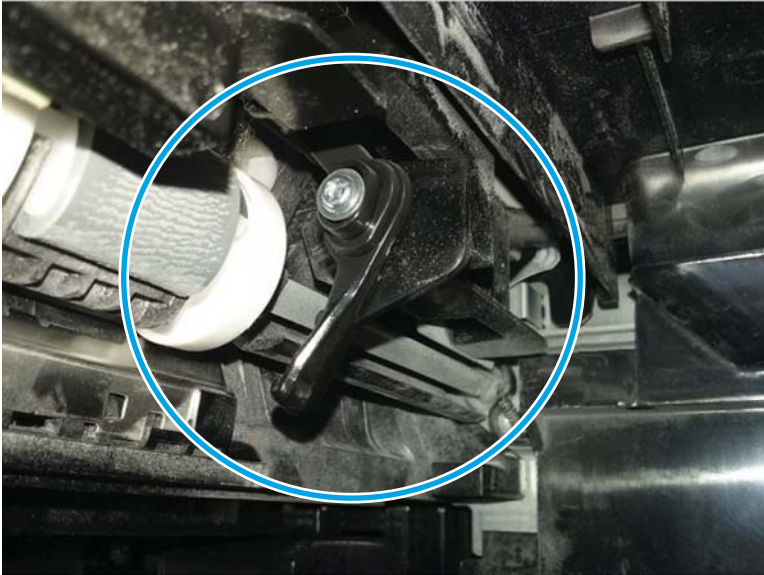
How to Load Paper Video  <http://link.brightcove.com/services/player/bcpid1190528646001?bctid=ref:REFIDBC4242055248001>

6. Ensure the Pick sensor flag is not out of position. If it is found to be out of position, gently move the lever to the correct position as seen in the following images:

Figure 2-10 Flag is in the CORRECT position



Figure 2-11 Flag is in the INCORRECT position



7. Check the Tray 3 pickup and feed rollers for wear, damage or paper dusk. Clean or replace the rollers as needed.
Order P/N: CN598-67071 Separator pick assembly kit Tray 3
8. Run Paper Path Diagnostics to move paper from tray to output bin ([Administration / Troubleshooting / Paper Path Page](#)).
9. Replace the Mech Kit.

15.B0.0Z Image Area Jam from Tray X

Description

A Print Zone jam occurred from tray indicated but sensor and condition are unknown.

- **15.B0.01** — Image Area from Tray 1
- **15.B0.02** — Image Area from Tray 2
- **15.B0.03** — Image Area from Tray 3
- **15.B0.0D** — Image Area from Duplexer

Recommended action

Customer:

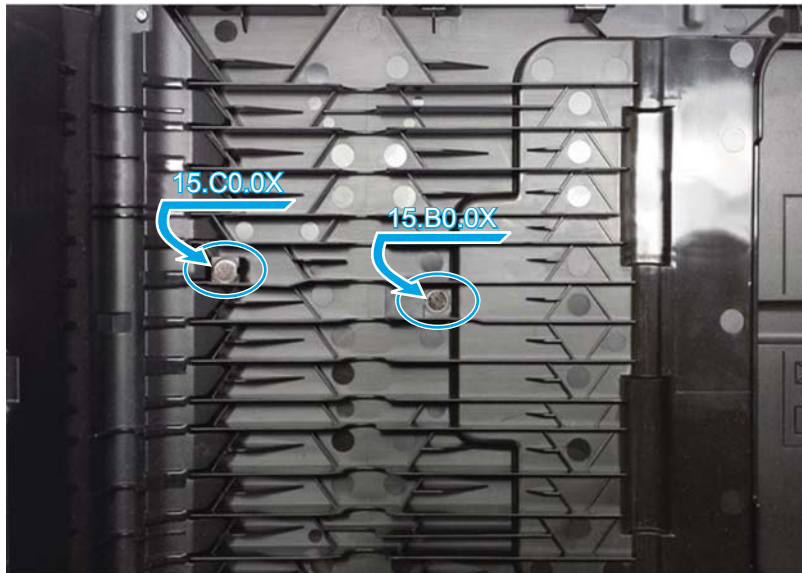
See Public Document

Call Center Agent and Service Technicians:

1. Clear all the possible paper jam locations (Remove paper from tray, open left door, remove ICU, lower flap, clear paper, raise flap, install ICU, close door).
2. Run Paper Path Diagnostics to move paper from tray to output bin ([Administration / Troubleshooting / Paper Path Page](#)).
3. Check the 2 mirror labels for the optical REDI reflection sensor on the inside of products left door. If one or more of the mirror labels it found to be missing or out of place, this error could occur.

Check the following:

Figure 2-12 Open the left door and locate the 2 mirror labels:



4. Reposition the mirror label if it is found to be out place. If the mirror label will not stick or is missing, replace the Left door / Tray 1 Assembly B (HP Part #: B5L04-67916).

Figure 2-13 CORRECTLY positioned mirror label:

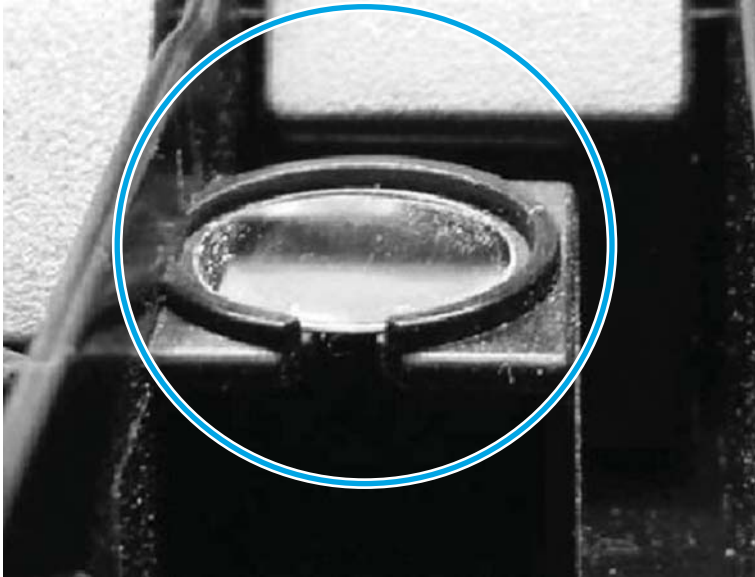
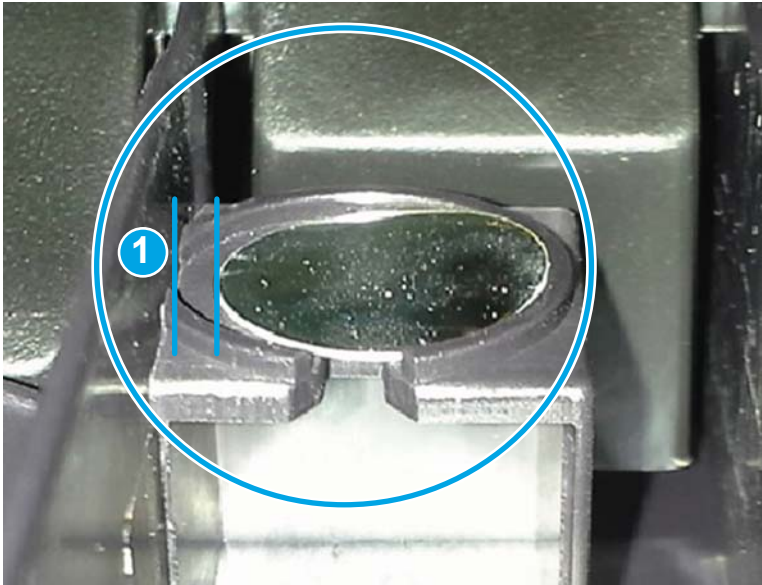


Figure 2-14 INCORRECTLY positioned mirror label:



5. Replace Mech Kit.

15.B0.F0 Image Area Jam at Power On

Description

An jam occurred in the Image area at Power On.

Recommended action

Customer:

See Public Document

Call Center Agent and Service Technicians:

1. Clear all possible paper jam locations (Open left door, remove ICU, lower flap, clear paper, raise flap, install ICU, close door).
2. Run Paper Path Diagnostics to move paper from tray to output bin ([Administration / Troubleshooting / Paper Path Page](#)).
3. Run the Advance Jam Recovery Utility using a heavy paper on tray 1 ([Administration / Troubleshooting / Advance Jam Recovery](#)). It is recommended to run it a few times in order to clear jams at the print zone.
4. If the issue persists, replace the Mech Kit.

15.C0.0Z Switchback area Jam from Tray X**Description**

An output jam occurred while printing from indicated tray or area.

- **15.C0.01** — Switchback jam from Tray 1
- **15.C0.02** — Switchback jam from Tray 2
- **15.C0.03** — Switchback from Tray 3
- **15.C0.0D** — Switchback from Duplexer

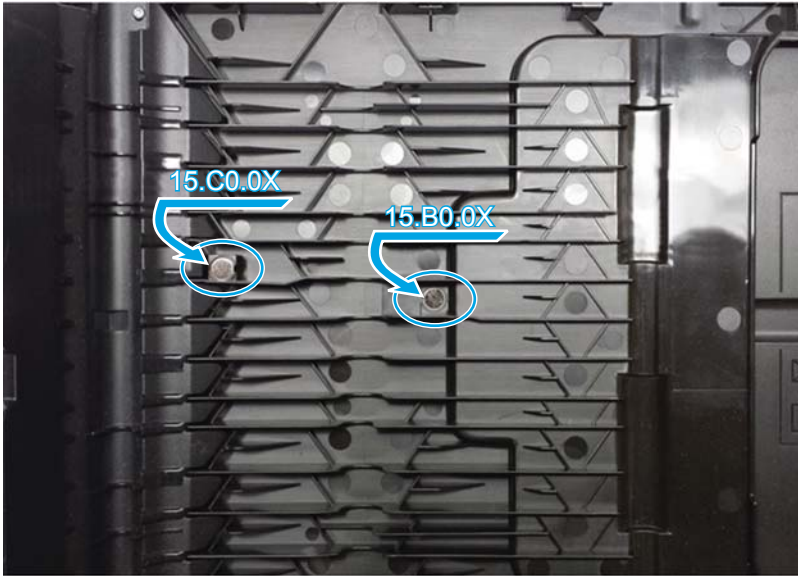
Recommended action

1. Clear all possible paper jam locations (Open left door, remove ICU, lower flap, clear paper, raise flap, install ICU, close door).
2. Run Paper Path Diagnostics to move paper from tray to output bin ([Administration / Troubleshooting / Paper Path Page](#)).

3. Check the 2 mirror labels for the optical REDI reflection sensor on the inside of products left door. If one or more of the mirror labels it found to be missing or out of place, this error could occur.

Check the following:

Figure 2-15 Open the left door and locate the 2 mirror labels:



4. Reposition the mirror label if it is found to be out place. If the mirror label will not stick or is missing, replace the Left door / Tray 1 Assembly B (HP Part #: B5L04-67916).

Figure 2-16 CORRECTLY positioned mirror label:

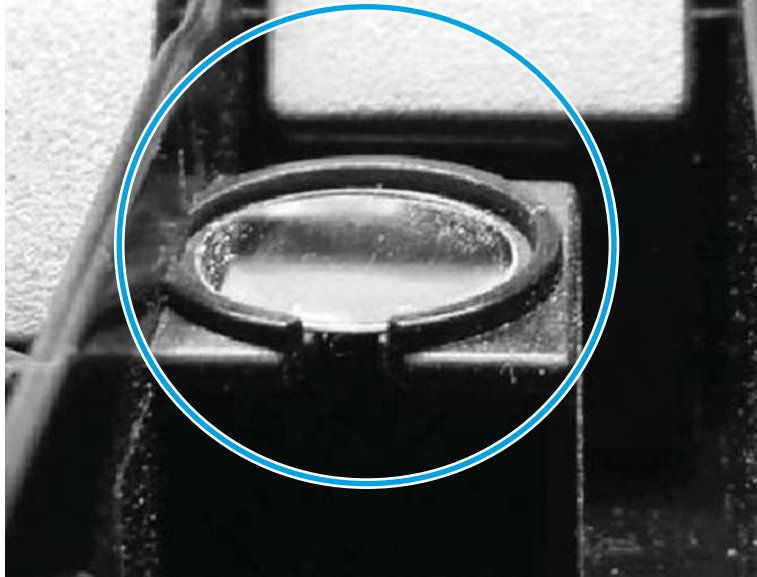
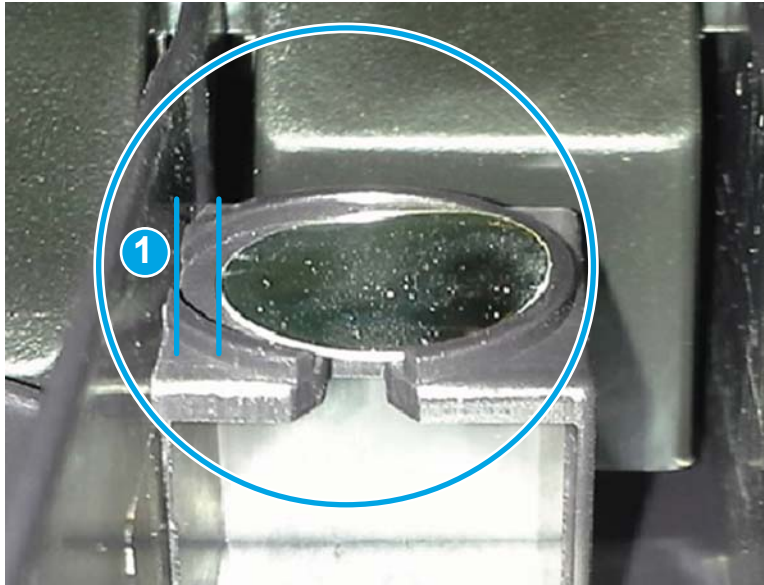


Figure 2-17 INCORRECTLY positioned mirror label:



5. Replace Mech Kit.

15.C0.F0 Jam in left door at Power On

Description

An jam occurred in the left door at Power On.

Recommended action

Customer:

See Public Document

Call Center Agent and Service Technicians:

1. Clear all possible paper jam locations (Open left door, remove ICU, lower flap, clear paper, raise flap, install ICU, close door).
2. Run Paper Path Diagnostics to move paper from tray to output bin ([Administration / Troubleshooting / Paper Path Page](#)).
3. Run the Advance Jam Recovery Utility using a heavy paper on tray 1 ([Administration / Troubleshooting / Advance Jam Recovery](#)). It is recommended to run it a few times in order to clear jams at the print zone.
4. If issue persists, replace the Mech Kit.

15.E0.02 Output jam from Tray X**Description**

An eject jam occurred from the tray designated.

- **15.E0.01** — Output jam from Tray 1
- **15.E0.02** — Output jam from Tray 2
- **15.E0.03** — Output jam from Tray 3
- **15.E0.0D** — Output jam from Duplexer

Recommended action**Customer:**

See Public Document

Call Center Agent and Service Technicians:

1. Clear all possible paper jam locations (Open left door, remove ICU, lower flap, clear paper, raise flap, install ICU, close door).
2. Run Paper Path Diagnostics to move paper from tray to output bin ([Administration / Troubleshooting / Paper Path Page](#)).
3. Replace Mech Kit.

17.XX.YZ Error Messages (Supply errors)**17.0X.00 Failed Cartridge****Description**

The indicated cartridge is detected but its data is corrupt or invalid in some way.

- **17.00.00** — Black Cartridge
- **17.01.00** — Cyan Cartridge
- **17.02.00** — Magenta Cartridge
- **17.03.00** — Yellow Cartridge

Recommended action

1. Remove the cartridge, reinstall it and close the ink door.
2. Turn the product off, and then on again.
3. Replace the failing cartridge.
4. Replace the Mech Kit.

17.OX.34 Counterfeit or refilled cartridge installed**Description**

The supply being used is either a counterfeit or refilled cartridge.

- **17.00.34** — Black Cartridge
- **17.01.34** — Cyan Cartridge
- **17.02.34** — Magenta Cartridge
- **17.03.34** — Yellow Cartridge

Recommended action

To avoid this condition – always use genuine HP cartridges.

The user must replace with a genuine HP cartridge OR approve the use of refilled cartridges before printing can continue.

If you believe you purchased a genuine HP supply, go to www.hp.com/go/anticounterfeit. Any print quality 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.

17.OX.35 Incompatible <supply>**Description**

The indicated supply is not compatible with this product.

- **17.00.35** — Black Cartridge
- **17.01.35** — Cyan Cartridge
- **17.02.35** — Magenta Cartridge
- **17.03.35** — Yellow Cartridge

Recommended action

To avoid this condition – always use genuine HP cartridges.

The user must replace with a genuine HP cartridge OR approve the use of refilled cartridges before printing can continue.

17.OX.36 Non-Startup cartridge at startup

Description

Non-Startup cartridge at startup.

A trade cartridge has been installed before purge has been completed.

- **17.00.36** — Black Cartridge
- **17.01.36** — Cyan Cartridge
- **17.02.36** — Magenta Cartridge
- **17.03.36** — Yellow Cartridge

Recommended action

To avoid this condition – always use the startup cartridges that shipped with the product.

Do not override and use trade cartridges unless absolutely necessary. If the user later finds the startup cartridges after initialization, these startup cartridges will be unusable on this device.

17.OX.37 Startup Cartridge after startup completed

Description

Startup cartridge is being used after startup completed.

- **17.00.37** — Black Cartridge
- **17.01.37** — Cyan Cartridge
- **17.02.37** — Magenta Cartridge
- **17.03.37** — Yellow Cartridge

Recommended action

To avoid this condition, always use trade cartridges after initialization has completed and the original startup cartridges are spent.

Startup cartridges can only be used the first time the product is initialized.

Once a startup cartridge has been used for initialization it's memory tag contents are changed to indicate it will now behave and be detected as a trade cartridge.

17.OX.38 Cartridge might be empty

Description

The cartridge indicated might be empty.

Continuing may cause image quality issues.

This is a transient condition that occurs when the cartridge memory tag indicates empty and the cartridge is newly inserted into a printer.

- **17.00.38** — Black Cartridge
- **17.01.38** — Cyan Cartridge

- **17.02.38** — Magenta Cartridge
- **17.03.38** — Yellow Cartridge

Recommended action

There several possible outcomes when this condition is detected:

1. The user removes the cartridge from the printer and replaces it with a non-empty cartridge.
2. The user touches “OK” and approves the use of the “Possibly Empty” cartridge.
 - Printer attempts to pump/prime ink but is unsuccessful. The cartridge is declared as “Empty”.
 - Some ink was previously stranded due to tilt and the pump/prime is successful. The cartridge is declared as “Low” or possibly “Very Low”.
 - Cartridge has been refilled and now after printing some number of pages, the cartridge will be declared as “Refilled”.

17.0X.39 Use new cartridges

Description

The Startup-Trade cartridge override feature has been enabled and a partially used Cyan Cartridge has been installed before the ink initialization process completed.

The cartridge might not be able to complete the ink initialization.

Using a new cartridge allows the process to complete in one session, preventing the user from leaving and coming back to find the process incomplete.

- **17.00.39** — Black Cartridge
- **17.01.39** — Cyan Cartridge
- **17.02.39** — Magenta Cartridge
- **17.03.39** — Yellow Cartridge

Recommended action

Touch “OK” to continue or use a new cartridge.

If a “Too Low to Prime” condition occurs, use the following steps.

1. The engine has determined that there is probably not enough ink in the installed trade cartridge to complete the initialization (ink purge) process.
2. The user can touch “OK” to proceed anyway (they may see this same message again once the current cartridge is depleted).
3. The user can replace the partially full trade cartridge with a replacement that is full.

17.0X.42 General printing error

Description

Printer failure or the indicated cartridge SHAID too early.

- **17.00.42** — Black Cartridge
- **17.01.42** — Cyan Cartridge
- **17.02.42** — Magenta Cartridge
- **17.03.42** — Yellow Cartridge



NOTE: Condition does not distinguish between SHAID Too Early and a failure in the ink delivery system.

Recommended action

1. Turn the product off, and then on again.
2. Replace the cartridge.
3. Replace the Mech kit.

17.0X.52 Supply upgrade detected

Description

The indicated supply upgrade was detected.

- **17.00.52** — Black Cartridge
- **17.01.52** — Cyan Cartridge
- **17.02.52** — Magenta Cartridge
- **17.03.52** — Yellow Cartridge

Recommended action

Touch “OK” to continue or change cartridge.

17.0X.53 Supply upgrade successful

Description

The indicated supply upgrade was successful.

- **17.00.53** — Black Cartridge
- **17.01.53** — Cyan Cartridge
- **17.02.53** — Magenta Cartridge
- **17.03.53** — Yellow Cartridge

Recommended action

No action necessary.

17.0X.54 / 17.0X.55 Supply upgrade problem

Description

The indicated supply encountered an upgrade problem.

The requested upgrade (addition of a new cartridge to the list of supported cartridges stored in the engine NVRAM) using a “Trade” cartridge did not succeed. The formatter does not know why the failure occurred, only that it did fail.

- **17.00.54** — Black Cartridge
- **17.01.54** — Cyan Cartridge
- **17.02.54** — Magenta Cartridge
- **17.03.54** — Yellow Cartridge
- **17.00.55** — Black Cartridge
- **17.01.55** — Cyan Cartridge
- **17.02.55** — Magenta Cartridge
- **17.03.55** — Yellow Cartridge

Recommended action

1. Replace the failed cartridge with one that is known good and then reinsert the upgrade cartridge and try again.
2. Turn the product off, and then on again.
3. Remove the upgrade cartridge and go back to using the cartridge(s) supported at release.
4. Replace the Mech Kit.

17.0X.56 Ink sensor warning

Description

The indicated cartridge has printed past approximately 150% of its expected capacity and there has been no SHAID event.

The ink sensor might not be able to detect when supplies are empty or the cartridge has been refilled.

- **17.00.56** — Black Cartridge
- **17.01.56** — Cyan Cartridge
- **17.02.56** — Magenta Cartridge
- **17.03.56** — Yellow Cartridge

Recommended action

1. If print quality issues exist, replace the cartridge.
2. Check cartridge warranty and manufacture date. Check event log for low on ink code. If user acknowledges, assume cartridge has been refilled.

17.0X.57 HP Cartridge Protection enabled

Description

The indicated cartridge that has been protected using the HP cartridge protection feature has been detected.

The target cartridge has been locked to a different printer and cannot be used on this device.

- **17.00.57** — Black Cartridge
- **17.01.57** — Cyan Cartridge
- **17.02.57** — Magenta Cartridge
- **17.03.57** — Yellow Cartridge

Recommended action

1. Replace the indicated cartridge with one that has not been “protected” on another device.
2. Once a cartridge is locked to a given device there is no way to unlock the cartridge.

17.OX.60 Cartridge Low Warning

Description

The indicated cartridge is low.

- **17.00.60** — Black Cartridge
- **17.01.60** — Cyan Cartridge
- **17.02.60** — Magenta Cartridge
- **17.03.60** — Yellow Cartridge

Recommended action

No action necessary.

17.OX.65 or 17.OX.80 Install Supply

Description

The indicated cartridge is not installed or missing or has a damaged acumen.

- **17.00.65** — Black Cartridge
- **17.01.65** — Cyan Cartridge
- **17.02.65** — Magenta Cartridge
- **17.03.65** — Yellow Cartridge
- **17.00.80** — Black Cartridge
- **17.01.80** — Cyan Cartridge
- **17.02.80** — Magenta Cartridge
- **17.03.80** — Yellow Cartridge

Recommended action

1. Reinstall the supply.
2. Replace the indicated supply with a replacement.

17.0X.69 Cartridge Very Low

Description

The indicated cartridge is very low.

- **17.00.69** — Black Cartridge
- **17.01.69** — Cyan Cartridge
- **17.02.69** — Magenta Cartridge
- **17.03.69** — Yellow Cartridge

Recommended action

The target cartridge has been depleted and the only ink remaining is in the X chamber and print head. The cartridge can be replaced in this state without any loss of ink to the system.

No action necessary.

17.0X.70 Printing past very low

Description

The indicated cartridge is printing past very low.

- **17.00.70** — Black Cartridge
- **17.01.70** — Cyan Cartridge
- **17.02.70** — Magenta Cartridge
- **17.03.70** — Yellow Cartridge

Recommended action

The print quality should not degrade in any way when the ink cartridge approaches end-of-life as the product will halt printing when all of the usable ink has been depleted.

Customers should have a spare cartridge on-hand as the indicated cartridge will transition to Empty in just a few pages.

If print quality is not acceptable replace the indicated cartridge.

17.31.60 Ink Collection Unit Warning

Description

Ink Collection Unit almost full. The percentage of life remaining is 2%.

The product's Ink Collection Unit (ICU) collects unused ink for later disposal. The life tracking on this supply is accomplished via a numeric percent life remaining (PLR) that starts at 100% and decreases in 1% increments as pages are printed. The engine counts the number of ink droplet that go into the ICU and reports this information to the formatter as a percentage of life remaining. The expected life of the ICU is nominally 120,000 page but this will vary depending on printing patterns.

Recommended action

A new ICU should be ordered and printing can continue.



NOTE: There is no sensor that indicates when the ICU has been replaced. For this reason the user will be asked near end of ICU life if the ICU has been replaced each time the left door closes or a power-on occurs.

17.31.65 Install Supply Ink Collection Unit

Description

The Ink Collection Unit (ICU) is not installed.

Recommended action

Install the ICU, make sure it is aligned and installed correctly.

If message continues to appear, install a replacement ICU.

17.31.69 Ink Collection Unit full

Description

The Ink Collection Unit is full. This is the second warning that the ICU life is almost depleted. The percentage of life remaining is 1% or less.

The products Ink Collection Unit (ICU) collects unused ink for later disposal. The life tracking on this supply is accomplished via a numeric percent life remaining (PLR) that starts at 100% and decreases in 1% increments as pages are printed. The engine counts the number of ink droplet that go into the ICU and reports this information to the formatter as a percentage of life remaining. The expected life of the ICU is nominally 120,000 page but this will vary depending on printing patterns.

Recommended action

Replace the ICU or continue printing until stop occurs.

17.31.70 Ink Collection Printing past full

Description

Ink Collection Unit (ICU) printing past full.

Recommended action

Replace the ICU.

Replacement can occur at this point or the user can continue until halted.

17.31.71 Reinstall Ink Collection Unit

Description

The product has prompted the user to remove and reinstall the Ink Collection Unit (ICU) to maintain print quality.

Recommended action

Remove and reinstall ICU, make sure it is aligned and installed correctly.

17.31.72 Ink Collection Unit reinstalled

Description

The user removed and reinstalled the Ink Collection Unit (ICU) to maintain print quality.

Recommended action

No action necessary.

17.31.73 New Ink Collection Unit

Description

The Ink Collection Unit (ICU) counter has been reset.

Recommended action

There is no sensor that indicates when the ICU has been replaced. For this reason the user will be asked near end of ICU life if the ICU has been replaced each time the left door closes or a power-on occurs. When “YES” is selected the reset will be performed.

17.31.80 Replace Ink Collection Unit

Description

Ink Collection Unit (ICU) is full and must be replaced.

Recommended action

Replace the ICU.

17.99.31 Non-HP supply in use

Description

Non-HP supply in use. If any of these bits are set, the event could be posted.

This message does not distinguish between supplies.

Recommended action

No action necessary.

17.99.32 Previously used HP Supply installed

Description

An original HP supply that started its life in another product is in use.

This message does not distinguish between supplies.

Recommended action

No action necessary.

17.99.40 Supplies installed

Description

Transition of at least one non-HP to all genuine.

This message does not distinguish between supplies.

Recommended action

No action necessary.

17.99.49 Startup Cartridge Override

Description

User has overridden using Startup cartridges.

This message does not distinguish between supplies.

Recommended action

No action necessary.

17.99.58 HP Cartridge Protection enabled

Description

A user enabled the HP Cartridge Protection Feature, protecting their cartridges and restricting the cartridges to only be usable in the product that originally protected them.

Recommended action

No action necessary.

20.XX.YZ, 21.XX.YZ Error Messages

20.00.00 Insufficient memory: <Device>

Description

Event log error message 20.00.00.

The product does not have enough memory to print the page.

The product received more data than can fit in the available memory. You might have tried to transfer too many macros, soft fonts, or complex graphics.

Recommended action

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

21.00.00 Page Too Complex

Description

Event log error message 21.00.00.

The product displays this message to indicate that the page decompression process was too slow for the product.

Recommended action

Touch the **OK** button to continue. There may be some data loss on the page that was being formatted when the error occurred.

21.1C.2D Page complex error

Description

Event log error message 21.1C.2D.

The product displays this message to indicate that the page decompression process was too slow for the product.

Recommended action

Touch the **OK** button to continue. There may be some data loss on the page that was being formatted when the error occurred.

30.XX.YZ Error Messages — X586 only

30.01.01

Description

The flatbed cover sensor was interrupted.

The scanner flatbed cover is open.

Message appears only in the event log and is not posted on the control panel.

The control panel will read **Flatbed Cover Open**.

Recommended action

No action necessary. This error message should automatically clear.

If the error persists, open the [Scanner Tests](#) to test the flatbed cover sensor.

1. If the cover is closed, check the cover sensor at the right rear of the scanner for correct mechanical functionality, using the scanner sensor test in the **Administration / Troubleshooting / Diagnostics / Scanner Tests** Menu.
2. Check the connectors on the scanner control board (SCB) for loose connections.
3. Replace the scanner control board (SCB).
4. Replace the integrated scanning assembly (ISA).



Parts and Videos

- Scanner control board (SCB) (586) — PART NUMBER: G1W39-67935— [Scanner control board - Video \(Link URL\)](#)
- Image scanner (586) kit; includes white backing and retention clips — PART NUMBER: G1W39-67943 — [Image scanner \(586\) kit - Video \(Link URL\)](#)

30.01.02 Scanner calibration failure

Description

The scanner calibration failed.

Recommended action

Customer:

Public customer document.

Call Agent / Service Technician:

1. Turn the product off, and then on again.
2. After the product warms up, repeat the calibration process.

Device Maintenance / Calibrate-Cleaning / Calibrate Scanner

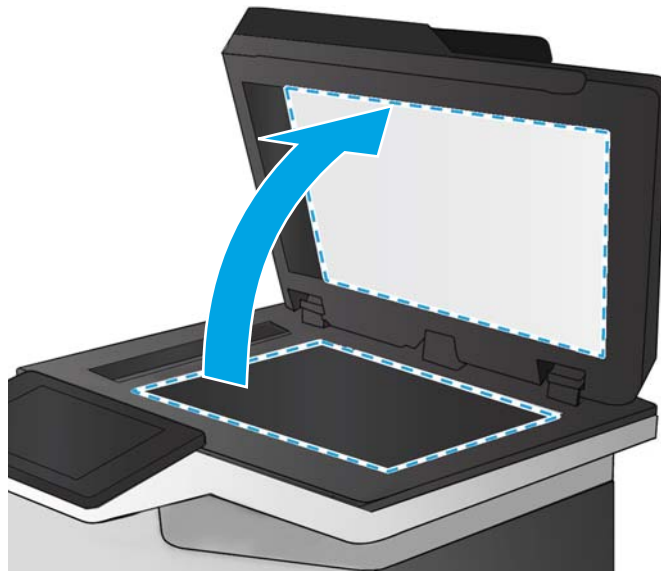
3. If the error persists, clean the scanner glass and calibration strips.



NOTE: Dust might appear on the underside of the glass, but this cannot be cleaned.

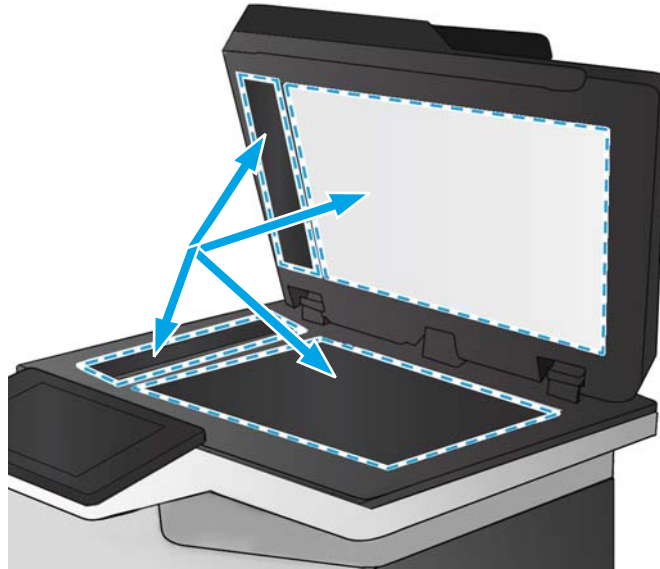
- a. Press the power button to turn the product off, and then disconnect the power cable from the electrical outlet.
- b. Open the scanner lid.


Figure 2-18 Open Scanner lid



- c. Use a soft, lint-free cloth moistened with water to clean the calibration white strips and reflector plate (see call-outs). Also clean the document feeder glass, flatbed glass and plastic lid backing.

Figure 2-19 Calibration/reflector strips and glass



 **NOTE:** If needed, lens cleaner or nonabrasive glass cleaner can be applied to the cloth before cleaning the glass. Spray only onto the cloth and not directly onto the glass or device. Do not spray water or glass cleaner on the glass as it can seep under it and possibly damage the printer. Do not use abrasives, acetone, benzene, ethyl alcohol, or carbon tetrachloride on the glass; these can damage it and/or leave residue on the glass resulting in degraded copy/scan quality.

4. If the error persists, replace the Integrated Scanning Assembly (ISA).

 **Parts and Videos**

- Image scanner (586) kit; includes white backing and retention clips — PART NUMBER: G1W39-67943 — Image scanner (586) kit - Video ([Link URL](#))


30.01.08 Home position error

Description

The scanner optic failed to return to the home position.

Recommended action

1. Turn the product off, and then on again.
2. Observe the movement of the optics assembly.
3. If the error persists, run the scanner motor test under component test. **Administration/Troubleshooting/Scanner tests/Flatbed motor test**
4. If issue still remains and firmware has been upgraded replace scanner control board (SCB).

 **IMPORTANT:** Check all cables on SCB for proper connection and seating before replacing any parts and test.

5. If the error persists, replace the integrated scanning assembly (ISA).

Parts and Videos

- Scanner control board (SCB) (586) — PART NUMBER: G1W39-67935— Scanner control board - Video (Link URL)
- Image scanner (586) kit; includes white backing and retention clips — PART NUMBER: G1W39-67943 — Image scanner (586) kit - Video (Link URL)

30.01.14 Scan system EEPROM error

Description

Scanner control board (SCB) EEPROM error.

Recommended action

1. Turn the product off, and then on again.
2. Ensure all connectors on the SCB are connected and properly seated.
3. Ensure the MFP has at latest SCB firmware version.
4. Replace the SCB.

Parts and Videos

- Scanner control board (SCB) (586) — PART NUMBER: G1W39-67935— Scanner control board - Video (Link URL)

30.01.15 Scanner error

Description

Scanner did not initialize (internal error).

The scanner failed to be initialized due to an internal error.

Recommended action

1. Turn the product off, and then on again.
2. Verify that all covers are installed correctly and that the ADF and ADF jam cover are closed.
3. Check all sensors on the scanner to ensure they are not blocked.
4. Look through the vents on back of scanner check to see if GREEN SCB LEDs are lit.
5. Check all connections for SCB to print engine and make sure they are properly seated.
6. Replace the SCB.

Parts and Videos

- Scanner control board (SCB) (586) — PART NUMBER: G1W39-67935— Scanner control board - Video (Link URL)

30.01.18 Scanner Error

Description

Scanner internal optical sensor error.

Recommended action

1. Turn the product off, and then on again.
2. Make sure that all the connectors on the SCB are properly seated.
3. Make sure that the MFP has the latest SCB firmware version.
4. Replace the SCB.
5. If the error persists, replace the integrated scanning assembly (ISA)



Parts and Videos

- Image scanner (586) kit; includes white backing and retention clips — PART NUMBER: G1W39-67943 — Image scanner (586) kit - Video (Link URL)

30.01.19 Scanner lamp error

Description

Scanner internal lamp sensor error.

Recommended action

1. Turn the product off, and then on again.
2. Determine if the scanner lamp turns on and off approximately 12 second after the product turns on.
3. Test the lower lamp using the scanner test located in the Diagnostics menu.
4. Re-seat the interconnect cables between the optical carriage and the SCB.
5. Replace the integrated scanning assembly (ISA)



Parts and Videos

- Image scanner (586) kit; includes white backing and retention clips — PART NUMBER: G1W39-67943 — Image scanner (586) kit - Video (Link URL)

30.01.30 or 30.01.32

Description

HP image ASIC error.

Recommended action

Turn the product off, and then on again.

Check all connections on the SCB.

Replace the SCB.

 **Parts and Videos**

- Scanner control board (SCB) (586) — PART NUMBER: G1W39-67935— Scanner control board - Video (Link URL)

30.01.36 Upgrade Error Try downloading upgrade again

Description

Scanner firmware upgrade error.

Recommended action

1. Re-send the scanner firmware upgrade.
2. If the error persists, replace the SCB.

 **Parts and Videos**

- Scanner control board (SCB) (586) — PART NUMBER: G1W39-67935— Scanner control board - Video (Link URL)

30.01.41, 30.01.44, 30.01.45 Scanner error

Description

The formatter lost connections with the SCB or communication was corrupted.

Scanner control board (SCB) communication error.

Recommended action**Customer:**

— [HP LaserJet Enterprise Printers - 30.01.XX Error - c04583162](#)

Call Center Agent:


1. Have the customer turn the printer off, and then on to see if error persists.
2. If issue persists, turn the printer off and remove and then re-seat the formatter then turn the printer back on.
3. If issue persists, Upgrade the firmware.

— [HP LaserJet Enterprise - Update firmware using a USB flash drive or the Embedded Web Server \(EWS\)](#)


4. Replace the scanner control board (SCB).



IMPORTANT: Add notes for On-Site technician to verify that all cables are connected to the product and to the interconnect board, and scanner control board (SCB) before replacing any parts.

 **Parts and Remove/Replace Videos**

5. Replace the formatter.

 **Parts and Remove/Replace Videos**


6. Verify that all cables are connected to the product and to the interconnect board / formatter and SCB.
7. Verify that the scanner control board (SCB) has power.
8. Replace the scanner control board (SCB).

Service Technician:

1. Turn the printer off, and then on to see if error persists.
2. If issue persists, turn the printer off and remove and then re-seat the formatter then turn the printer back on.
3. If issue persists, Upgrade the firmware.

[— HP LaserJet Enterprise - Update firmware using a USB flash drive or the Embedded Web Server \(EWS\)](#)

4. Verify that all cables are connected to the product and to the interconnect board / formatter and SCB.
5. Verify that the scanner control board (SCB) has power.
6. Replace the scanner control board (SCB).

 [Parts and Remove/Replace Videos](#)

7. Replace the formatter.

 [Parts and Remove/Replace Videos](#)

 **Parts and Videos**

- Scanner control board (SCB) (586) — PART NUMBER: G1W39-67935— Scanner control board - Video (Link URL)
- Formatter PCA assembly (586) — PART NUMBER : G1W39-67914 — Formatter Assembly - Video (Link URL)
- Formatter PCA assembly China only (586) — PART NUMBER : G1W39-67939 — Formatter Assembly - Video (Link URL)

30.01.42 Scanner error

Description

Internal product communication error.

Recommended action

1. Turn the product off, and then on again.
2. If the error persists, turn the product off, and then check all scanner control board (SCB) connectors are fully seated.
3. If this error occurs after a formatter, fax card or hard disk has been replaced, check that the formatter connectivity LED (smile face icon on the formatter) is illuminated. Check the fax card for proper seating on the formatter. (If fax card is not properly seated it can prevent the formatter from seating properly in the product.

4. Verify that all cables are connected to the product and to the interconnect board / formatter and SCB.
5. If the error persists, replace the scanner control board (SCB).

30.01.43 Scanner memory failure

Description

Scan memory error.

Recommended action

1. Turn the product off, and then on again.
2. If the error persists, turn the product off, and then re-seat the formatter.
3. If the error persists, replace the formatter.

30.01.46 Scanner Error

Description

The firmware cannot find the copy processor board (CPB).

Recommended action

1. Turn the product off, and then on again.
2. If the error persists, turn the product off, and then re-seat the formatter.
3. If the error persists, replace the scanner control board (SCB).

30.01.48 Scanner error

Description

Scanner error.

Scanner power is not connected.

Recommended action

Customer:

— [HP LaserJet Enterprise Printers - 30.01.XX Error - c04583162](#)

Call Agent and Service Technician:

1. Turn the product off, and then on again.
2. If the error persists, use another known good power cord, make sure printer is connected to a known good dedicated power outlet and not to UPS or surge protector.
3. If the error persists, turn the product off, and then check the scanner wire-harness connectors and the scanner power supply fan.
4. If the error persists, replace integrated scanning assembly (ISA).



IMPORTANT: On-Site Technicians need to check the scanner wire-harness, All SCB connectors and the scanner power before replacing any parts.



Parts and Videos

- [Integrated Scanning Assembly \(ISA\) — PART NUMBER — Integrated Scanning Assembly - Video \(Link URL\)](#)

30.01.50 Scanner error

Description

Internal scanner control board (SCB) error.

Recommended action

1. Turn the product off, and then on again.
2. Upgrade the firmware (FW).
3. If the error persists, replace the SCB.

30.03.14

Description

A non-fatal error has occurred.

A scanner EEPROM (NVM) error has occurred.

Recommended action

This is an informational message, and no action is required.

30.03.XX

Description

30.03.20 : The copy processor board firmware cannot communicate with the PCA on the optical assembly.

30.03.22 : Front side illumination calibration failure. The scan module cannot see the illumination module, or marginal illumination. The optical assembly may not be parked under the calibration strip.

30.03.23 : Flatbed alignment calibration error.

30.03.30 : Flatbed motor shutdown. The scanner control board (SCB) cannot communicate with the flatbed scanner motor.

30.03.45 : Scanner control board (SCB) firmware assertion failure. SCB firmware assert controls the scan head motor.

Recommended action

Customer:

— [HP LaserJet Enterprise and OfficeJet Enterprise MFP Printers - 30.03.23 Error](#)

— [HP LaserJet Enterprise MFP Series - 30.03.45 Error](#)

Call Agent and Service Technician:

1. Turn the product off, and then on again. As the product turns on, verify that the scan head moves.
2. Check the service event log for other scanner errors, and then resolve those errors.
3. Upgrade the firmware.
4. Verify that the drive belt is in the correct position.
5. Run diagnostics on the flatbed scanner to see if the scan bar moves.
6. Replace the integrated scanning assembly (ISA).



IMPORTANT: On-Site Technicians need to check the scanner wire-harness, All SCB connectors and the scanner power before replacing any parts.



Parts and Videos

- Integrated Scanning Assembly (ISA) — PART NUMBER — Integrated Scanning Assembly - Video (Link URL)

31.XX.YZ Error Messages — X586 only

31.01.47 Document feeder not detected

Description

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

Recommended action

1. Turn the product off and then on.

2. If error persists, replace document feeder


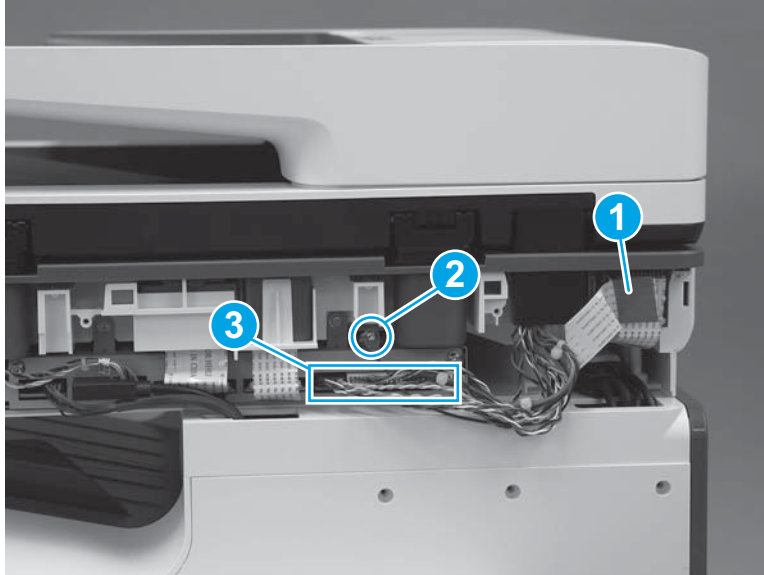
 **NOTE:** Before replacing the document feeder, technicians should verify that the connections between the document feeder and the product are fully seated. Check One flat cable (callout 1), one ground screw (callout 2), and five connectors (callout 3).

Figure 2-20 Check connectors and ground screw



31.03.14

Description

Backside scanner EEPROM (NVM) error.

A non-fatal error has occurred.

Recommended action

This is an informational message, and no action is required.

31.03.20 Backside scanner not detected

Description

Backside scanner not detected.

Recommended action

1. Turn the product off, and then on again.
2. Verify the cables between scanner and scanner control board (SCB) are connected. (connection 6 — ADF (side 2) FFC)
3. Replace the document feeder assembly

31.03.22 Scanner calibration failure

Description

Backside illumination calibration failure.

Recommended action

Customer:

Public Customer Document.

Call Agent / Service Technician:

1. Turn the product off, and then on again.
2. After the product warms up, repeat the calibration process.

Device Maintenance / Calibrate-Cleaning / Calibrate Scanner

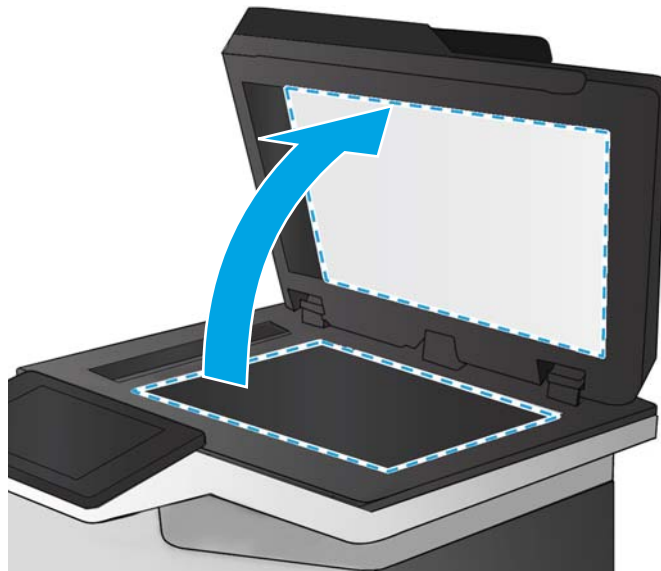
3. If the error persists, clean the scanner glass and calibration strips.



NOTE: Dust might appear on the underside of the glass, but this cannot be cleaned.

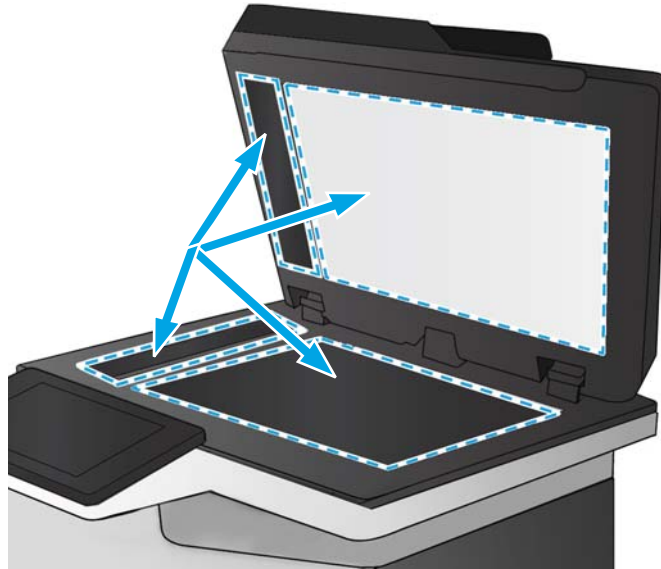
- a. Press the power button to turn the product off, and then disconnect the power cable from the electrical outlet.
- b. Open the scanner lid.


Figure 2-21 Open Scanner lid



- c. Use a soft, lint-free cloth moistened with water to clean the calibration white strips and reflector plate (see call-outs). Also clean the document feeder glass, flatbed glass and plastic lid backing.

Figure 2-22 Calibration/reflector strips and glass



 **NOTE:** If needed, lens cleaner or nonabrasive glass cleaner can be applied to the cloth before cleaning the glass. Spray only onto the cloth and not directly onto the glass or device. Do not spray water or glass cleaner on the glass as it can seep under it and possibly damage the printer. Do not use abrasives, acetone, benzene, ethyl alcohol, or carbon tetrachloride on the glass; these can damage it and/or leave residue on the glass resulting in degraded copy/scan quality.

4. If the error persists, replace the Integrated Scanning Assembly (ISA).

 **Parts and Videos**

- Image scanner (586) kit; includes white backing and retention clips — PART NUMBER: G1W39-67943 — Image scanner (586) kit - Video ([Link URL](#))

31.03.30, 31.03.31 or 31.32

Description

31.03.30: The document feeder pick motor is not turning.

31.03.31: The document feeder feed motor is not turning.

31.03.32: The document feeder de-skew motor is not turning.

Recommended action

1. Verify that the paper meets the product specifications.
2. Make sure that the feed tray is not overloaded.
3. Check the event log for document feeder errors, and then 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 that the motor cables are connected.

6. Re-seat the document feeder to the scanner control board (SCB).
7. Replace the document feeder assembly.

31.03.33 Backside scanner calibration area dirty

Description

The white area used for backside scanner calibration is dirty.

Recommended action

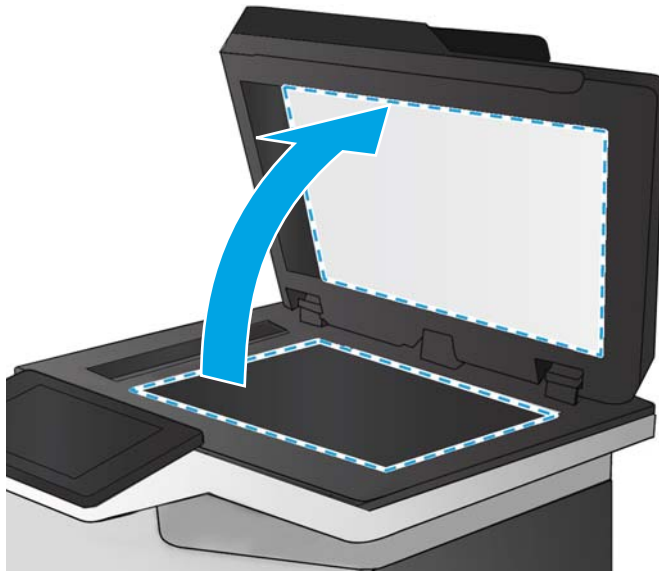
1. Remove the white background and clean it.
2. If the error persists, clean the scanner glass and calibration strips.



NOTE: Dust might appear on the underside of the glass, but this cannot be cleaned.

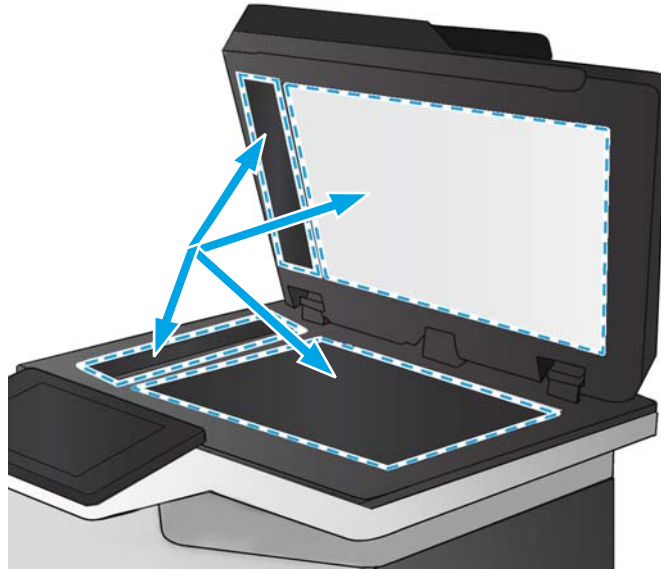
- a. Press the power button to turn the product off, and then disconnect the power cable from the electrical outlet.
- b. Open the scanner lid.


Figure 2-23 Open Scanner lid



- c. Use a soft, lint-free cloth moistened with water to clean the calibration white strips and reflector plate (see call-outs). Also clean the document feeder glass, flatbed glass and plastic lid backing.

Figure 2-24 Calibration/reflector strips and glass



 **NOTE:** If needed, lens cleaner or nonabrasive glass cleaner can be applied to the cloth before cleaning the glass. Spray only onto the cloth and not directly onto the glass or device. Do not spray water or glass cleaner on the glass as it can seep under it and possibly damage the printer. Do not use abrasives, acetone, benzene, ethyl alcohol, or carbon tetrachloride on the glass; these can damage it and/or leave residue on the glass resulting in degraded copy/scan quality.

3. Clean the backside scanner glass.
4. If issue remains replace the document feeder assembly.

31.03.34 Background missing

Description

The removable background for the backside scanner is either missing or not fully snapped into place.

Recommended action

1. Remove the white background and clean it.
2. Clean the backside scanner glass.
3. If issue remains replace the document feeder assembly.

No action necessary.

31.13.00 Document feeder multi-pick error

Description

A multiple pick error was reported by the document feeder assembly.

Recommended action

Customer:

Public Customer Document.

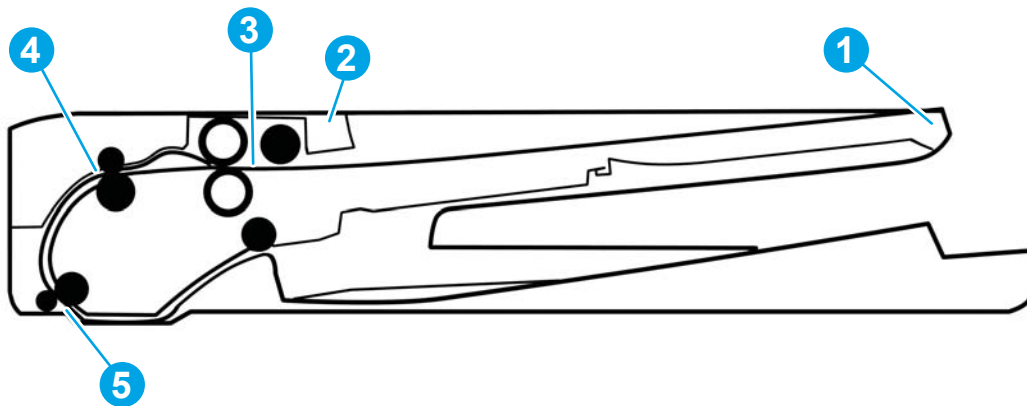
Call Agent / Service Technician:

1. Open the document feeder cover, pull **ALL** the sheets back into the tray and then resume the job.
2. Verify that the paper meets the product specifications.
3. Make sure that the input tray is not overloaded and the tray guides are properly aligned to both edges of the media.
4. Check and clean the rollers and separation pad, and test the registration sensor. If needed, replace pickup roller assembly and separation pad.
5. Verify that the motor cables are connected.
6. Re-seat the document feeder to the scanner control board (SCB).
7. Replace the document feeder assembly.

31.13.00, 31.13.01 or 31.13.02

Description

- **31.13.00:** Document feeder multipick error.
- **31.13.01:** Sensor location 4 — Document feeder job error, pick error. Paper pick was initiated, but the page didn't make it to the pick success sensor.
- **31.13.02:** Sensor location 4 and 5 — Document feeder job error, feed jam. The paper passed the pick success sensor, and then jammed in the document feeder paper path.



Recommended action

Customer:

Public Customer Document.

Call Agent / Service Technician:

1. Open the document feeder lid, pull sheets back into input tray, and then resume the job.
2. Check the paper guides and make sure that they are set to the correct paper width.

3. Make sure that the input tray is not overloaded and the tray guides are properly aligned to both edges of the media.
4. Check the document feeder page count for roller life.
5. Verify that the paper meets the product specifications.
6. Clean the document feeder pick and feeder rollers and clean separation pad. If worn or damaged, replace roller kit.

 **Parts and Videos**

- Document feeder roller replacement kit (586 only) — PART NUMBER: B5L52-67903 — ADF Rollers - Video (Link URL)
7. Open the following menus:
 - [Administration](#)
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Scanner Tests](#)

Figure 2-25 Control Panel view

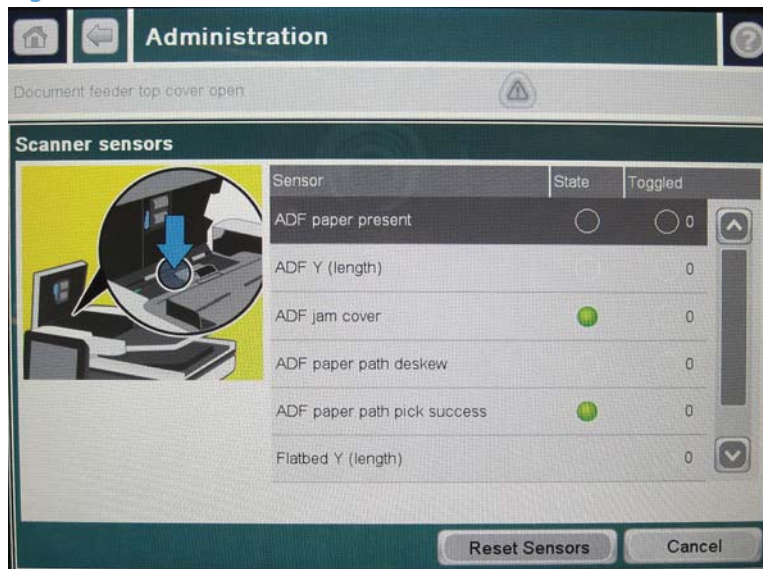


Figure 2-26 Sensor flag location



8. Actuate the [Pick-Success Sensor](#). If the sensor does not show functionality when tested, replace the document feeder assembly.

 **Parts and Videos**

- Document feeder (586) kit; includes white backing and retention clips — PART NUMBER: G1W41-67908 — [Document feeder Video \(Link URL\)](#)

31.13.13

Description

The document feeder jam access door is open.

Recommended action

Customer:

Public Customer Document.

Call Agent / Service Technician:

1. Verify that the jam access cover is closed.

2. Verify that the flag is not broken off.



3. Open the following menus:

- Administration
- Troubleshooting
- Diagnostic Tests
- Scanner Tests

4. Actuate the document feeder [Jam Cover Sensor](#). If the sensor does not show functionality when tested, replace the document feeder assembly.


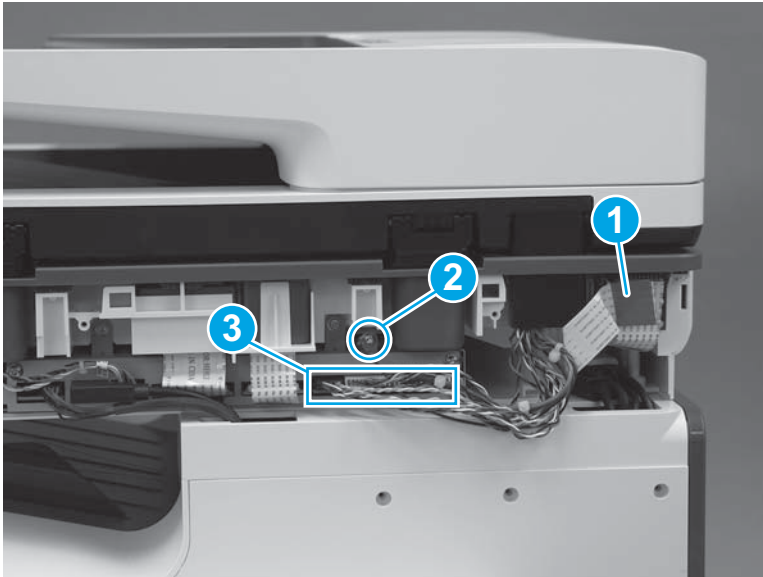
 **IMPORTANT:** Before replacing the document feeder, technicians should verify that the connections between the document feeder and the product are fully seated. Check One flat cable (callout 1), one ground screw (callout 2), and five connectors (callout 3).

Figure 2-27 Check connectors and ground screw



Parts and Videos

- Document feeder (586) kit; includes white backing and retention clips — PART NUMBER: G1W41-67908 — Document feeder Video ([Link URL](#))

31.13.14

Description

Document feeder job error, over current.

This is a feed jam in the document feeder, and the motor is not turning.

Recommended action

Customer:

Public Customer Document.

Call Agent / Service Technician:

1. Verify that the paper meets the product specifications.
2. Make sure that the document feeder input tray is not overloaded.
3. Check the event log for document feeder errors, and then resolve any errors first.
4. Open and close the top cover to see if the pick motor turns without posting this error. If there is no error, then the motor is good.

5. Verify that the connections between the document feeder and the product are fully seated. Check One flat cable (callout 1), one ground screw (callout 2), and five connectors (callout 3).
6. Re-seat the document feeder to the scanner control board (SCB).
7. Replace the document feeder assembly.



Parts and Videos

- Document feeder (586) kit; includes white backing and retention clips — PART NUMBER: G1W41-67908 — Document feeder Video (Link URL)

32.08.XX Error Messages

32.08.A1, 32.08.A2, 32.08.A3

Description

[32.08.A1](#) (event code)

Shutdown event-boot after abnormal shutdown.

[32.08.A2](#) (event code)

Boot from normal shutdown event.

[32.08.A3](#) (event code)

Regular boot event.

Recommended action

No action necessary.

32.1C.XX

Description

[32.1C.05](#) (event code)

The restore job ticket was submitted with invalid credentials.

[32.1C.06](#) (event code)

The backup job ticket was submitted with invalid credentials.

[32.1C.07](#) (event code)

Backup restore permissions error.

There was an error during the creation, read, or write of the restore file.

[32.1C.08](#) (event code)

Not enough disk space to perform backup/restore or network share issue.

There was an error during the creation, read, or write of the backup file.

[32.1C.09](#) (event code)

Tried to restore a backup file that was not valid for this product.

The data in the backup file specified in the restore job ticket is no longer valid due to a corruption of the data or no longer present.

[32.1C.0A](#) (event code)

Backup file is invalid.

The data in the backup file specified in the restore job ticket is no longer valid due to a corruption of the data or no longer present.

[32.1C.0D](#) (event code)

Backup/restore failed, auto-reboot failed, or the product might be busy.

[32.1C.11](#) (event code)

Backup/restore timeout while communicating with the engine.

The backup was aborted because the product is busy.

[32.1C.13](#) (event code) and [32.1C.14](#) (event code)

Not enough space exists to perform the backup.

The backup was aborted because the disk is at a critical level or full.

Scheduled backup failure.

[32.1C.15](#) (event code)

Restore aborted because the backup file was created by a previous version of firmware no longer supported by the feature.

[32.1C.2E](#) (event code)

The restore was aborted because the product is busy.

[32.1C.2F](#) (event code)

Reset failure

[32.1C.40](#) (event code)

The backup operation completed successfully (informational).

[32.1C.41](#) (event code)

The backup operation encountered an error (informational).

[32.1C.42](#) (event code)

The backup operation completed, but with a warning message (informational).

[32.1C.43](#) (event code)

A component in the backup file is not supported by the current version of firmware and will not be restored (informational).

[32.1C.44](#) (event code)

A component in the backup file is not transferable to another product and will not be restored (informational).

[32.1C.45](#) (event code)

Some data was not included in the backup file (informational).

[32.1C.46](#) (event code)

An expected component could not be found and was thus not backed up. Because components should be known on backups, this code is a warning (informational).

[32.1C.47](#) (event code)

Some data was not restored from the backup file (informational).

[32.1C.48](#) (event code)

The backup job ticket was submitted using an invalid network path.

[32.1C.49](#) (event code)

The backup job ticket was submitted with a bad encryption.

[32.1C.4A](#) (event code)

An error occurred when creating the temporary directories used to store the backup files in transition to and from the compressed (ZIP) file.

[32.1C.56](#) (event code)

Reset aborted. Backup/restore in progress (informational).

[32.1C.57](#) (event code)

Reset aborted (informational).

[32.1C.58](#) (event code)

Unknown reset error (informational).

[32.1C.60](#) (event code)

The restore operation completed successfully (informational).

[32.1C.61](#) (event code)

The restore operation encountered an error.

[32.1C.62](#) (event code)

The restore operation completed, but with a warning message.

[32.1C.68](#) (event code)

The restore job ticket was submitted using an invalid network path.

[32.1C.69](#) (event code)

The restore job ticket was submitted with a bad encryption personal identification number (PIN).

[32.1C.6A](#) (event code)

An error occurred when creating the temporary directories used to store the restore files in transition to and from the compressed (ZIP) file.

32.1C.6D (event code)

An unusual error occurred when running the restore.

Recommended action

32.1C.05 (event code)

Verify the credentials that were submitted. Check the domain, user name, and password.

32.1C.06 (event code)

Verify the credentials that were submitted. Check the domain, user name, and password.

32.1C.07 (event code)

Retry the job.

32.1C.08 (event code)

- Retry the job.
- Remove stored jobs and retry.
- Use a larger capacity storage device.
- Check the network share.

Remove any stored jobs, and then retry.

If the error persists, try using a larger capacity storage device and check the network share settings.

32.1C.09 (event code)

Use a valid backup file.

32.1C.0A (event code)

Use a valid backup file.

Reboot, and then observe the state of the product.

If the error persists, perform a partition clean from the **Preboot** menu.

32.1C.0D (event code)

Reboot, and then retry the backup/restore.

32.1C.11 (event code)

Wait until the product is idle, and then try again.

32.1C.13 (event code) and 32.1C.14 (event code)

Free up disk space, and then try again.

32.1C.15 (event code)

- Use the current backup file.

32.1C.2E (event code)

Wait until the product is idle, and then try again.

Turn the product off then on, and then retry.

[32.1C.2F](#) (event code)

Turn the product off then on, and then retry.

[32.1C.40](#) (event code)

No action necessary.

[32.1C.41](#) (event code)

No action necessary.

[32.1C.42](#) (event code)

No action necessary.

[32.1C.43](#) (event code)

No action necessary.

[32.1C.44](#) (event code)

No action necessary.

[32.1C.45](#) (event code)

No action necessary.

[32.1C.46](#) (event code)

No action necessary.

[32.1C.47](#) (event code)

No action necessary.

[32.1C.48](#) (event code)

Check that a share was provided as part of the network path (not blank).

Check that the server and the share exists.

Check that the user has permission to access the share on the provided server.

[32.1C.49](#) (event code)

Verify that the encryption personal identification number (PIN) meets the restrictions for the product.

[32.1C.4A](#) (event code)

Retry the job.

If this does not resolve the issue, turn the product off then on again and retry the job.

If the error persists, perform a **Partial Clean** using the **Preboot** menu.

[32.1C.56](#) (event code)

No action necessary.

[32.1C.57](#) (event code)

No action necessary.

[32.1C.58](#) (event code)

No action necessary.

[32.1C.60](#) (event code)

No action necessary.

[32.1C.61](#) (event code)

Review the error log to see specific details about the failure.

[32.1C.62](#) (event code)

Review the error log to see specific details about the failure.

[32.1C.68](#) (event code)

Check that a share was provided as part of the network path (not blank).

Check that the server and the share exist.

Check that the user has permission to access the share on the provided server.

Check that the path includes the compressed (ZIP) file name as part of the path

[32.1C.69](#) (event code)

Verify the encryption personal identification number (PIN) is the same PIN used to encrypt the backup file.

[32.1C.6A](#) (event code)

Retry the job.

[32.1C.6D](#) (event code)

Retry the job.

33.XX.YZ Error Messages

33.02.01 Used board/disk installed

Description

Used board disk installed.

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

1. Reinstall the used board or disk back into its original printer.
2. To save the data on the board or disk, turn the product off. Replace the board or disk with another board or disk.
3. To delete the data on the board or disk and continue, touch the **OK** button.

33.03.03 Incompatible formatter installed.**Description**

This is an EFI BIOS event to prevent booting with the wrong formatter installed.

Recommended action

Power down the printer and install the correct formatter in the device.



NOTE: If it is believed that the formatter is the correct part number and model for this printer, replace the formatter again and return the formatter in question to HP for evaluation.

33.03.XX**Description**

- 33.03.01: Save recover engine storage ID unexpected length.
- 33.03.02: Data size mismatch unable to recover DCC MVRAM.

Recommended action

Power the printer off then back on.

If issue is not resolved replace the ICB and return to HP for evaluation.

40.XX.YZ Error Messages**40.00.01 USB I/O buffer overflow To continue, touch “OK”****Description**

The USB buffer has overflowed.

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**

The product has experienced a JetDirect buffer overflow.

Recommended action

1. Touch the **OK** button to print the transferred data (some data might be lost).
2. Check the host configuration.

40.00.03 EIO <X> buffer overflow To continue, touch “OK”**Description**

Too much data was sent to the EIO card in the specified slot (x). An incorrect communications protocol might be in use.

Recommended action

Touch the **OK** button to print the transferred data (some data might be lost).

40.00.04 EIO <X> bad transmission To continue, touch “OK”**Description**

The connection between the product and the USB device has been broken.

Recommended action

1. Touch the **OK** button to clear the error message and continue printing.
2. Remove, and then reinstall the USB device.

40.00.05 Embedded I/O bad transmission To continue, touch “OK”**Description**

The USB device has been removed.

Recommended action

1. Touch the **OK** button to clear the error message (data will be lost).
2. Install the USB device.

40.08.0X USB storage accessory removed**Description**

X = 0 or 1; information code.

Secure file erase is enabled.

Recommended action

No action necessary.

40.0X.05 USB storage accessory removed**Description**

X = 1, 2, 3, 5, or 6; information code.

The USB storage accessory was removed.

Recommended action

No action necessary.

41.XX.YZ Error Messages

41.03.YZ Unexpected size in tray <X>

Description

The product detected a different paper size than expected.

Y = Type, Z = Tray

- Y = 0 Size mismatch. Detected media is longer or shorter than expected.
- Y = A Size mismatch. Detected media too long.
- Y = B Size mismatch. Detected media too short.
- Y = C Size mismatch. Inter-page gap error.
- Z = D Source is the duplexer.
- Z = 1 Source is Tray 1.
- Z = 2 Source is Tray 2.
- Z = 3 Source is Tray 3.

Recommended action

1. Touch **OK** to use another tray.
2. Make sure that the tray is loaded with the correct paper size and that the sliding paper guides are correctly adjusted.
3. Use the Tray/Bin manual sensor test to verify that the cassette media switch is correctly functioning.
4. If the issue persists, replace the Mech kit.

42.XX.YY Error Messages

42.XX.YY Error Event Log message

Description

Internal system failure.

Recommended action

1. Turn the product off, then on, and then retry.
2. If the error persists, clear the firmware image from the active partition by using the **Partial Clean** item in the **Preboot** menu.

44.XX.XX Error Messages

44.01.XX Error Event log message (Multifunction product only.)

Description

A digital send error has occurred.

Recommended action

Try to send the job again.

No action necessary. This error message should automatically clear.

44.02.XX Error Event log message (Multifunction product only.)

Description

Personal address book error has occurred.

Recommended action

Try to send the job again.

Check Digital Send configuration and address book.

44.03.XX Error Event log message (Multifunction product only.)

Description

A digital send error has occurred.

Recommended action

Try to send the job again.

Check the Digital Send configuration.

44.04.XX Error Event log message (Multifunction product only.)

Description

Digital Send Email error has occurred.

Recommended action

Try to send the job again.

Check the Digital Send configuration.

44.05.XX Error Event log message (Multifunction product only.)

Description

Digital Send Folder Job error has occurred.

Recommended action

Try to send the job again.

Check the Digital Send configuration.

44.07.XX Error Event log message (Multifunction product only.)

Description

Digital Send Remote Printer Job Error has occurred.

Recommended action

Try to send the job again.

Check the Digital Send configuration.

44.08.XX Error Event log message (Multifunction product only.)

Description

SharePoint Job Error has occurred.

Recommended action

1. If this is the first time the error has occurred, cancel and then restart the job.
2. If the error occurs repeatedly, reboot the engine and retry the job.
3. If error still persists, reset to factory settings. Upgrade to most current firmware.

44.10.XX Error Event log message (Multifunction product only.)

Description

A send to email error has occurred.

Recommended action

Try to send the job again.

Check the Digital Send configuration.

44.11.0E Error Event log message (Multifunction product only.)

Description

The attachment filename already exists at the destination, and the flag to fail on filename collisions was set. This file will not be sent.

Recommended action

1. If this is the first time the error has occurred, use a different filename or verify that the filename is not already in use.
2. If the issue persists, use a unique filename or disable the flag to fail on filename collision.

44.11.XX Error Event log message (Multifunction product only.)

Description

A Digital Send error has occurred.

Recommended action

Try to send the job again.

Check the Digital Send configuration.

44.12.0E Error Event log message (Multifunction product only.)

Description

Digital Send, the attachment filename already exists at the destination, and the flag to fail on filename collisions is set. This file will not be sent.

Recommended action

1. If this is the first time the error has occurred, use a different filename or verify that the filename is not already in use.
2. If the issue persists, use a unique filename or disable the flag to fail on filename collision.

44.12.XX Error Event log message (Multifunction product only.)

Description

A Digital Send error has occurred.

Recommended action

Try to send the job again.

Check the Digital Send configuration.

44.16.01 Error Event log message (Multifunction product only.)

Description

A Digital Send error has occurred while trying to create file type.

XX =

- 01 – RTF File
- 03 – CSV File
- 04 – HTML File
- 05 – XML File
- 06 – XPS File
- 07 – PDF File

Recommended action

1. Try to send the job again.
2. Check Digital Send configuration.

44.16.02 Error Event log message (Multifunction product only.)

Description

The destination URL was found to be invalid or unreachable.

Recommended action

1. If this is the first time the error has occurred, cancel and then restart the job.
2. If the error persists, turn the product off and then on and retry the job.
3. If error still persists, reset to factory settings. Upgrade to current version of firmware.

44.16.03 Error Event log message (Multifunction product only.)**Description**

The destination URL is not a SharePoint site.

Recommended action

1. If this is the first time the error has occurred, verify settings in job configuration and then restart the job.
2. If the error persists,
 - Check network connection settings.
 - Verify access to the SharePoint site.

44.16.04 Error Event log message (Multifunction product only.)**Description**

Credentials associated with the SharePoint destination were found to be invalid or missing.

Recommended action

1. If this is the first time the error has occurred, verify settings in job configuration and then restart the job.
2. If the error persists,
 - Check network connection settings.
 - Verify access to the SharePoint site.

44.16.05 Error Event log message (Multifunction product only.)**Description**

Credentials do not have write access to the SharePoint destination.

Recommended action

1. If this is the first time the error has occurred, verify settings in job configuration and then restart the job.
2. If the error persists,
 - Check network connection settings.
 - Verify access to the SharePoint site.

44.16.06 Error Event log message (Multifunction product only.)**Description**

Upload of image file failed. Reason unknown.

Recommended action

1. If this is the first time the error has occurred, verify settings in job configuration and then restart the job.
2. If the error persists, turn the product off then on again and retry the job.
3. If error still persists, reset to factory settings. Upgrade to current firmware version.

44.16.07 Error Event log message (Multifunction product only.)**Description**

Upload of image file failed.

The file exceeded the maximum form submission length on the Web server.

Recommended action

1. If this is the first time the error has occurred, send fewer pages in the job, lower the DPI of the scanned pages, or select a file type that splits pages into separate files (for example, jpeg).
2. If the error persists repeatedly, contact the SharePoint site administrator to increase the Web server's maximum form submission length.

44.16.08 Error Event log message (Multifunction product only.)**Description**

Upload of image file failed. The SharePoint site storage quota limit was exceeded.

Recommended action

1. If this is the first time the error has occurred, make space on the SharePoint site by deleting some files, and then retry the job.
2. If the error occurs repeatedly, contact the SharePoint site administrator to increase the storage quota limit.

44.16.09 Error Event log message (Multifunction product only.)**Description**

Upload of image file failed. A folder or filename length is too long.

Recommended action

1. If this is the first time the error has occurred, check the destination URL and filename in the SharePoint job configuration to verify no folder or filename exceeds the maximum of 128 characters.
2. If the error occurs repeatedly, try sending to a different folder on the SharePoint site or changing the filename (which could include prefix or suffix).

44.16.0A Error Event log message (Multifunction product only.)**Description**

Upload of the image file failed. The image file already exists on the server and is checked out for editing by another user.

Recommended action

1. If this is the first time the error has occurred, verify that the filename used by the job is not checked out on the SharePoint site.
2. If the error occurs persists, use a different filename for the job.

44.16.0B Error Event log message (Multifunction product only.)**Description**

Upload of the image file failed. The image file already exists on the server and the job was set to not overwrite files.

Recommended action

1. If this is the first time the error has occurred, set the job to overwrite existing files.
2. If the error occurs persists, use a different filename for the job.

44.16.0D Error Event log message (Multifunction product only.)**Description**

Encountered an unexpected processing error while transferring attachments to the destination SharePoint.

Recommended action

1. If this is the first time the error has occurred, verify settings in job configuration and restart the job.
2. If the error persists, turn the product off, and then on and retry the job.
3. If error continues, reset to factory settings. Upgrade to current version of firmware.

44.16.0E Error Event log message (Multifunction product only.)**Description**

The attachment filename already exists at the destination, and the flag to fail on filename collisions was set. This file will not be sent.

Recommended action

1. If this is the first time the error has occurred, use a different filename or verify that the filename is not already in use.
2. If the issue persists, use a unique filename or disable the flag to fail on filename collision.

44.16.0F Error Event log message (Multifunction product only.)**Description**

Not enough memory to process the current SharePoint Job.

Recommended action

1. If this is the first time the error has occurred, cancel and/or restart the job, breaking it up into small jobs.
2. Repeat this process if the error persists until job goes through.

44.16.10 Error Event log message (Multifunction product only.)

Description

SharePoint server is using an invalid certificate.

Recommended action

1. If this is the first time the error has occurred, send the SharePoint job to a non-secure address, or send the job to a SharePoint server that has a valid certificate.
2. If the error occurs repeatedly, send the job to a different, trusted SharePoint server.

44.16.FF Error Event log message (Multifunction product only.)

Description

Unexpected error occurred in the SharePoint resource device code.

Recommended action

1. If this is the first time the error has occurred, verify settings in job configuration and restart the job.
2. If error persists, turn the product off, and then on and retry the job.
3. If error continues, reset to factory settings. Upgrade to current version of firmware.

44.34.XX Error Event log message (Multifunction product only.)

Description

A fax error has occurred.

Recommended action

1. Try to send the job again.
2. Check the fax configuration

44.90.XX Error Event log message - 44.91.XX Error Event log message - 44.92.XX Error Event log message (Multifunction product only.)

Description

A fax error has occurred.

Recommended action

1. Try to send the job again.
2. Check the fax configuration.

45.WX.YZ Error Messages

45.00.YZ

Description

Event log entry only

All 45.00.YZ events are OXPd/Webkit informational log entries.

Recommended action

No action necessary.

47.XX.XX Error Messages**47.00.XX****Description**

Back channel internal error.

Recommended action

1. Turn the product off, and then on again.
2. Resend the print job.
3. If the error persists, clear the active partition by using the [Partial Clean](#) item in the [Preboot](#) menu.

47.01.XX**Description**

Image transformer internal error.

Recommended action

1. Turn the product off, and then on again.
2. Resend the print job.
3. If the error persists, clear the active partition by using the [Partial Clean](#) item in the [Preboot](#) menu.

47.02.XX**Description**

Job parser internal error.

Recommended action

1. Turn the product off, and then on again.
2. Resend the print job.
3. If the error persists, clear the active partition by using the [Partial Clean](#) item in the [Preboot](#) menu.

47.03.XX**Description**

Print job internal error.

Recommended action

1. Turn the product off, and then on again.
2. Resend the print job.
3. If the error persists, clear the active partition by using the [Partial Clean](#) item in the [Preboot](#) menu.

47.04.XX

Description

Print spooler 9100 internal error.

Recommended action

1. Turn the product off, and then on again.
2. Resend the print job.
3. If the error persists, clear the active partition by using the [Partial Clean](#) item in the [Preboot](#) menu.

47.05.00

Description

Print spooler framework internal error.

Recommended action

1. Turn the product off, and then on again.
2. Resend the print job.
3. If the error persists, clear the active partition by using the [Partial Clean](#) item in the [Preboot](#) menu.

47.06.XX

Description

Print application internal error.

Recommended action

1. Turn the product off, and then on again.
2. Resend the print job.
3. If the error persists, clear the active partition by using the [Partial Clean](#) item in the [Preboot](#) menu.

47.WX.YZ Printer Calibration Failed To continue, touch "OK"

Description

The device is unable to access or implement one of the image patterns files.

Y = Calibration type, Z = Event

- 47.FC.00 (event code) Color plane registration (CPR) Image not found at system initialization
- 47.FC.01 (event code) CPR Store Image failure
- 47.FC.02 (event code) CPR Image not found
- 47.FC.03 (event code) CPR Print engine execution failure
- 47.FC.10 (event code) Consecutive Dmax Dhalf Image not found at system initialization
- 47.FC.11 (event code) Consecutive Dmax Dhalf Store image failure

- 47.FC.12 (event code) Consecutive Dmax Dhalf Image not found
- 47.FC.13 (event code) Consecutive Dmax Dhalf Print engine execution failure
- 47.FC.20 (event code) Error Diffusion Image not found at system initialization
- 47.FC.21 (event code) Error Diffusion Store image failure
- 47.FC.22 (event code) Error Diffusion Image not found
- 47.FC.23 Error Diffusion Print engine execution failure
- 47.FC.30 0 (event code) Drum Speed Adjustment Image not found at system initialization
- 47.FC.31 (event code) Drum Speed Adjustment Store image failure
- 47.FC.32 (event code) Drum Speed Adjustment Image not found
- 47.FC.33 (event code) Drum Speed Adjustment Print engine execution failure
- 47.FC.40 (event code) Pulse Width Modulation Image not found at system initialization
- 47.FC.41 (event code) Pulse Width Modulation Store image failure
- 47.FC.42 (event code) Pulse Width Modulation Image not found
- 47.FC.43 (event code) Pulse Width Modulation Print engine execution failure

Recommended action

1. Turn the product off, and then on again.
2. If the error persists over multiple power cycles frequently and consistently on a unit then do the following.
 - In the [Administration/Troubleshooting/Diagnostics](#), run the hard disk tests to validate health of the device. Fix any issue found with the mass storage device
3. If the error persists, reload the firmware.
4. If the error persists, clear the active partition by using the [Partial Clean](#) item in the [Preboot](#) menu then reload the firmware.

48.XX.YY Error Messages

48.XX.YY

Description

A job framework internal error has occurred.

Recommended action

1. No action should be necessary.
2. If the error persists, upgrade the product firmware.
3. If the issue persists, continue troubleshooting with the flowcharts for either Intermittent or Persistent 49 error troubleshooting (whichever is appropriate) in document c03122817, “HP LaserJet FutureSmart Devices - 49 Error Troubleshooting (Persistent and Intermittent)”.

49.XX.YY Error Messages

49.XX.YY Error To continue turn off then on

Description

A firmware error occurred. Corrupted print jobs, software application issues, non-product specific print drivers, poor quality USB or network cables, bad network connections or incorrect configurations, invalid firmware operations, or unsupported accessories can cause this error.

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, due to an invalid print driver, a problem with the software application, or a problem with the file being printed.
 - Upgrading the product firmware might help resolve the error. See the product user guide for more information.

When a 49 error occurs, the user sees a 49.XXXX message on the control panel (where XXXX is replaced by a combination of letters and numbers). A 49 error might happen at any time for multiple reasons. Although some types of 49 errors can be caused by hardware failures, it is more common for 49 errors to be caused by printing a specific document or performing some task on the product.

49 errors most often occur when a product is asked to perform an action that the product firmware is not capable of and might not have been designed to comply with, such as:

- Printing files with unsupported programming commands
- A unique combination of user environment and user interactions with the product
- Interfacing with a third-party solution that was not designed to work with the product
- Specific timing, network traffic, or concurrent processing of jobs

Each of these interactions could cause the product firmware to initiate an action that the product cannot accomplish. In situations like this, the product might present the error if it has no other option. When these errors occur, the only way to recover is to turn the product's power off and back on.



NOTE: LaserJet formatter PCAs are rarely the root cause of 49 service errors. Please do not replace the formatter or flash unless troubleshooting has identified the formatter as the root cause.

If the error persists, continue troubleshooting with the flowcharts for either Intermittent or Persistent 49 error troubleshooting (whichever is appropriate) in document c03122817, “HP LaserJet FutureSmart Devices - 49 Error Troubleshooting (Persistent and Intermittent)”.

54.XX.YZ Error Messages

54.30.00 Calibration error

Description

An engine calibration has failed.

Details of which calibration and failure reason can be found in the payload.

610000AC Sensor_Cms_Calibrate_Unknown_Sensor Tried to start a page calibration scan with an unknown sensor ID. Only Zim and BDD sensors are recognized.

610000AD Sensor_Cms_Calibrate_Invalid_Sensor A sensor other than Zim was specified for the pen calibration scan.

610000AE Sensor_Cms_Calibrate_Overshoot The paper advanced too far during a page calibration such that the printed artifact could not be scanned. This assert could happen if the mech wasn't able to stop the paper movement accurately.

Recommended action

1. Turn the power off on the product by pressing the power button and holding it for more than 3 seconds.
2. Unplug power cord from back of product and wait 30 seconds.
3. Plug power cord back into product.
4. Turn the power on to the product using power button.
5. If the error condition is cleared then the issue is resolved, if not continue to step 6.
6. Repeat steps 1 & 2.
7. Remove the formatter, check formatter thoroughly for any loose connections and reseal them, then reinstall the formatter.
8. Repeat steps 3 & 4.
9. If the error condition is cleared then the issue is resolved, if issue is not resolved replace the Mech Kit.



NOTE: It is critical to either print the event log after power cycle clears issue, or access the event log through EWS and capture the 8 character fail code value corresponding to the 61.00.0X and log it into the case. Look for the last 61.00.0x error that occurred which also has the 8 character value under the text description. This value is critical in HP understanding the failure and debugging potential field issues.

58.XX error messages

58.10.02 Ink Sensor Failure

Description

SHAID electrical failure.

Recommended action

1. Turn the power off on the product by pressing the power button and holding it for more than 3 seconds.
2. Unplug power cord from back of product and wait 30 seconds.
3. Plug power cord back into product.
4. Turn the power on to the product using power button.
5. If the error condition is cleared then the issue is resolved, if not continue to step 6.
6. Repeat steps 1 & 2.

7. Remove the formatter, check formatter thoroughly for any loose connections and reseal them, then reinstall the formatter.
8. Repeat steps 3 & 4.
9. If the error condition is cleared then the issue is resolved, if issue is not resolved replace the Mech Kit.

61.00.0X Error Messages

61.00.01 Print Engine Error 61.00.02 Print Engine Error 61.00.03 Print Engine Error

Description

The print engine has encountered an error.

The payload data will be included which will be with the error code, and description string.

Service_Station_Cap_Home_Long (6100000D)

Paper_Load_Tray1_Pick_Motor (6100002D)

Paper_Load_Pick_Tire_Index_Sensor (6100002E)

Service_Station_Cap_Home_Short (6100000E)

SS_Restricted_Movement_Error (61000011)

Lift_Restricted_Movement_Error (61000012)

Carriage_Restricted_Movement_Error (61000013)

Service_Move_To_Tranny_State (610000C8)

DPU_Printbar_Crash_Into_Service_Station (610000D3)

DPU_Service_Station_Under_Print_Bar (610000D4)

Printbar_Clutch_Slippage (61000035)

Service_Station_Pen_Too_Cold (6100000B)

Service_Station_Home_Failure (6100000C)

Service_Carriage_Home_Invalid (610000C9)

Pen_Start_Up_Spits_Already_Done (6100004E)

Recommended action

Customer:

ADD Doc reference and Link

Call Agent and Service Technician:

1. Turn the power off on the product by pressing the power button and holding it for more than 3 seconds.
2. Unplug power cord from back of product and wait 30 seconds.
3. Plug power cord back into product.

4. Turn the power on to the product using power button.
5. If the error condition is cleared then the issue is resolved, if not continue to step 6.
6. Repeat steps 1 & 2.
7. Remove the formatter, check formatter thoroughly for any loose connections and reseal them, then reinstall the formatter.
8. Repeat steps 3 & 4.
9. If the error condition is cleared then the issue is resolved, if issue is not resolved replace the Mech Kit.



NOTE: It is critical to either print the event log after power cycle clears issue, or access the event log through EWS and capture the 8 character fail code value corresponding to the 61.00.0X and log it into the case. Look for the last 61.00.0x error that occurred which also has the 8 character value under the text description. This value is critical in HP understanding the failure and debugging potential field issues.

WHAT Else do we want for Intellifix??

81.XX.YY, 82.XX.YY Error Messages

81.WX.00 Wireless Network Error To continue turn off then on

Description

A wireless network component on the product has failed.

81.02.00 Wireless network Event

81.07.00 Internal Wireless Networking event

Recommended action

1. Turn the product off then on.
2. Turn the product off, reseal the wireless network component and turn the product back on.
3. If 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 EIO Event

81.03.00 Access Point Wireless Network event

81.04.00 JetDirect inside Network event

81.06.00 Internal EIO Networking event

81.08.00 Internal Access Point Wireless Network event

81.09.00 Internal JetDirect inside Network event

Recommended action

1. Turn the product off then on.
2. Turn the product off, reseal the EIO accessory and turn the product back on.
3. If error persists replace the formatter.

82.73.45, Disk Successfully cleaned.**Description**

Event log only, disk successfully cleaned.

Recommended action

No action necessary.

82.73.46, 82.73.47**Description**

A hard disk or compact flash disk cleaning failed. This error is usually caused by a failure of the disk hardware.

Recommended action

1. Turn the product off, and then on.
2. Use the [Clean Disk](#) item in the [Preboot](#) menu.
3. Reload the firmware.

98.0X.0Y Error Messages**98.00.01 or 98.01.00 Corrupt data in firmware volume****Description**

Data corrupt has occurred in the firmware volume.

Recommended action

1. Turn the product off, and then on.
2. Use the [Clean Disk](#) item in the [Preboot](#) menu.
3. Reload the firmware.

98.00.02 Corrupt data in the solutions volume**Description**

Data corruption has occurred in the solutions volume.

Recommended action

1. Turn the product off, and then on.
2. Use the [Clean Disk](#) item in the [Preboot](#) menu.
3. Reload the firmware.

98.00.03 Corrupt data in the configuration volume

Description

Data corrupt has occurred in the configuration volume.

Recommended action

1. Turn the product off, and then on.
2. Download the firmware again, and then attempt the upgrade again.
3. Use the [Clean Disk](#) item in the [Preboot](#) menu.
4. Reload the firmware.

98.00.04 Corrupt data in the job data volume

Description

Data corrupt has occurred in the job data volume.

Recommended action

1. Turn the product off, and then on.
2. Rerun the file erase function.

99.XX.YY Error Messages

99.00.01 Upgrade not performed file is corrupt

Description

A remote firmware upgrade (RFU) was not performed.

This is a CRC error in the firmware image (bad image).

Recommended action

Download the RFU file, and then attempt the upgrade again.

99.00.02 Upgrade not performed timeout during receive

Description

A remote firmware upgrade (RFU) was not performed.

The issue is an I/O timeout when reading the header number and size. It indicates a problem with the network environment, not the product.

Recommended action

The most common cause is an issue with the network environment.

Make sure that there is a good network connection to the product, and then attempt the firmware upgrade again, or upgrade using the USB walk-up port.

99.00.03 Upgrade not performed error writing to disk

Description

A remote firmware upgrade (RFU) was not performed.

This is a disk error. It might indicate a problem or a hard disk failure. It might be necessary to check the connection to the hard disk or replace the hard disk.

Recommended action

1. Download the RFU file, and then attempt the upgrade again.
2. If the error persists, run the [Clean Disk](#) process from the [Preboot](#) menu.
You will need to download the firmware from the [Preboot](#) menu.
3. If the error persists, replace the hard disk.

99.00.04 Upgrade not performed timeout during receive

Description

A remote firmware upgrade (RFU) was not performed.

The issue is an I/O timeout when reading the header.

Recommended action

The most common cause is an issue with the network environment.

Make sure that there is a good network connection to the product, and then attempt the firmware upgrade again, or upgrade using the USB walk-up port.

99.00.05 Upgrade not performed timeout during receive

Description

A remote firmware upgrade (RFU) was not performed.

The issue is an I/O timeout when reading image data.

Recommended action

The most common cause is an issue with the network environment.

Make sure that there is a good network connection to the product, and then attempt the firmware upgrade again, or upgrade using the USB walk-up port.

99.00.06 Upgrade not performed error reading upgrade

Description

A remote firmware upgrade (RFU) was not performed.

The issue is an unexpected read error when reading the header number and size.

Recommended action

1. Download the RFU file, and then attempt the upgrade again.
2. If the error persists, replace the hard disk.

99.00.07 Upgrade not performed error reading upgrade**Description**

A remote firmware upgrade (RFU) was not performed.

The issue is an unexpected read error when reading the rest of the header.

Recommended action

1. Download the RFU file, and then attempt the upgrade again.
2. If the error persists, replace the hard disk.

99.00.08 Upgrade not performed error reading upgrade**Description**

A remote firmware upgrade (RFU) was not performed.

The issue is an unexpected read error when reading image data.

Recommended action

1. Download the RFU file, and then attempt the upgrade again.
2. If the error persists, replace the hard disk.

99.00.09 Upgrade canceled by user**Description**

A remote firmware upgrade (RFU) was not performed.

The RFU was canceled by the user.

Recommended action

Resend the RFU.

99.00.10 Upgrade canceled by user**Description**

A remote firmware upgrade (RFU) was not performed.

The RFU was canceled by the user when reading the header number and size.

Recommended action

Resend the RFU.

99.00.11 Upgrade canceled by user

Description

A remote firmware upgrade (RFU) was not performed.

The RFU was canceled by the user when reading the rest of the header.

Recommended action

Resend the RFU.

99.00.12 Upgrade not performed the file is invalid

Description

A remote firmware upgrade (RFU) was not performed.

The header number is 1, but the header size does not match version 1 size.

Recommended action

Download the RFU file again.

Make sure that you download the file for the correct product model, and then resend the RFU.

99.00.13 Upgrade not performed the file is invalid

Description

A remote firmware upgrade (RFU) was not performed.

The header number is 2, but the header size does not match version 2 size.

Recommended action

Download the RFU file again.

Make sure that you download the file for the correct product model, and then resend the RFU.

99.00.14 Upgrade not performed the file is invalid

Description

A remote firmware upgrade (RFU) was not performed.

The file is invalid.

Recommended action

Download the RFU file again.

Make sure that you download the file for the correct product model, and then resend the RFU.

99.00.2X

Description

There is a compatibility issue with the firmware. The specific message varies depending on the cause, but the solution for each message is the same.

- **99.00.20** (event log)
The bundle is not for this product.
- **99.00.21** (event log)
The bundle is not signed with the correct signature, or the signature is invalid.
- **99.00.22** (event log)
The bundle header version is not supported by this firmware.
- **99.00.23** (event log)
The package header version is not supported by this firmware.
- **99.00.24** (event log)
The format of the bundle is invalid.
- **99.00.25** (event log)
The format of the package is invalid.
- **99.00.26** (event log)
A CRC32 check did not pass.
- **99.00.27** (event log)
An I/O error occurred while downloading the bundle.

Recommended action

Download the correct firmware file from www.hp.com, and then resend the firmware upgrade.

99.00.27 only:

1. Turn the product off, and then on.
2. Resend the firmware upgrade.
3. If the error persists, try installing the upgrade by another method (USB or Embedded Web Server).

99.01.XX

Description

A firmware install error has occurred. The specific message varies depending on the cause, but the solution for each message is the same.

- **99.01.00**
- **99.01.10**
- **99.01.20**
- **99.01.21**

Recommended action

Reload the firmware.

99.02.01

Description

Firmware installation was successful.

Recommended action

No action necessary.

99.02.09

Description

Firmware upgrade cancelled by user.

Recommended action

No action necessary.

99.09.60 Unsupported disk

Description

This is a **Preboot** menu error.

The hard disk currently installed is not recognized or supported by the product.

Recommended action

Install the correct hard disk for this product.

99.09.61 Unsupported disk

Description

This is a **Preboot** menu error.

The installed disk is installed in a product configured for an encrypted hard disk.

Recommended action

Access the **Preboot** menu, and then select **Lock Disk** to lock the disk.

99.09.62 Unknown disk

Description

This error indicates that there is an encryption mismatch between the HDD and the formatter. This typically happens because an HDD was swapped into a device from another device.

Recommended action

Install a new disk or use the **Preboot** menu unlock the disk.

If a disk is to be reused in a different product, execute the **Clean Disk** procedure from the **Preboot**, and then reload the firmware and lock the disk.

99.09.63 Incorrect disk

Description

This error indicates that the expected encrypted HDD is not present.

This is expected behavior when installing a new HDD in a device where the previous HDD was encrypted.

Recommended action

Follow the procedure to load firmware on a new hard disk, and then lock the disk to this product.

99.09.64 Disk malfunction

Description

A fatal hard disk failure has occurred.

Recommended action

Replace the hard disk.

99.09.65 Disk data error

Description

Disk data corruption has occurred.

Recommended action

Use the **Clean Disk** procedure from the **Preboot** menu, and then resend the RFU.

99.09.66 No disk installed

Description

A disk drive is not installed in the product.

Recommended action

1. Install a compatible hard disk drive.
2. If a compatible hard disk is installed, reseal the hard disk to make sure that it is connected correctly.
3. If the error persists, replace the hard disk drive.

99.09.67 Disk is not bootable please download firmware

Description

This is an error indicating that there is no firmware installed on the disk. This is usually the result of installing a new disk or performing a [Clean Disk](#) operation from the [Preboot](#) menu.

Recommended action

1. Press any button to continue to the main **Preboot** menu.
2. Press the Help button to see the help text for the error.
3. Select the [Administration](#) menu.



NOTE: If there is a password assigned to the administrator, a prompt to enter the product displays. Enter the password to proceed.

4. Select the **Download** item, and then download the latest firmware.

The user can now download a new firmware bundle to the product.

99.XX.YY

Description

A message of this form indicates a firmware installation error.

Recommended action

Reload the firmware.

Alpha Error Messages

FIM Load Error Send full FIM on <X> port

Description

The product displays this message before the firmware is loaded at startup if an error has occurred during a firmware upgrade.

Recommended action

Resend the firmware upgrade.

<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

The ink collection unit is almost full.

Recommended action

Replace the ink collection unit.

<Supply> low OR Supplies low

Description

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

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

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 approximate end of life, the HP Premium protection warrant ends.

<Supply> very low OR Supplies very low**Description**

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

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

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 approximate end of life, the HP Premium protection warrant ends.

<Tray X> lifting**Description**

The product is in the process of lifting paper in the indicated tray.

- **X = 2:** Tray 2
- **X = 3:** Tray 3

Recommended action

No action necessary.

[File System] device failure To clear touch “OK”**Description**

The specified device has failed.

Recommended action

Touch the **OK** button to clear the error.

[File System] file operation failure To clear touch “OK”**Description**

A PJJL file system command attempted to perform an invalid operation.

Recommended action

Touch the **OK** button to clear the error.

[File System] file system is full To clear touch “OK”

Description

A PJI file system command could not store something on the file system because the file system is full.

Recommended action

Touch the **OK** button to clear the error.

[File System] is not initialized

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.

[File System] is write protected

Description

The file system device is protected and no new files can be written to it.

Recommended action

Touch the **OK** button to clear the error.

Accept bad signature

Description

The product is performing a remote firmware upgrade and the code signature is invalid.

Recommended action

Download the correct firmware upgrade file for the product, and then reinstall the upgrade. See the product user guide for more information.

Automatic Document Feeder cover open

Description

The document feeder cover is open.

Recommended action

Close the document feeder cover.

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 then reinstall the optional tray.
3. Reconnect the connectors for the tray.
4. Turn the product on.
5. If the error persists, replace the connector for the tray.

Calibration reset pending**Description**

A calibration reset occurs when all jobs are processed.

Recommended action

To begin the reset sooner, cancel all jobs by pressing the Stop button.

Canceling**Description**

The product is canceling the current job.

Recommended action

No action necessary.

Canceling...<jobname>**Description**

The product is canceling the current job <jobname>.

Recommended action

No action necessary.

Cartridge Problem; Ink cartridge problem**Description**

The product has detected that a cartridge is missing or damaged.

Recommended action

Replace the cartridge indicated in the error message.

Checking engine**Description**

The product is conducting an internal test.

Recommended action

No action necessary.

Checking paper path

Description

The product is checking for possible paper jams.

Recommended action

No action necessary.

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 print driver for a different language, or add the requested language to the product (if possible). To see a list of available personalities, print a configuration page.

Clear Output Area

Description

The product has detected a jam in the output area.

Recommended action

Remove any paper from the output flap area.

Make sure that the flap can open and close. If it cannot, replace the output flap.

Clearing event log

Description

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

Recommended action

No action necessary.

Clearing paper path

Description

The product is attempting to eject jammed paper.

Media is detected in the paper path. The product will attempt to eject it.

Recommended action

No action necessary. Check the progress at the bottom of the control panel display.

If a jam is not cleared, remove the media.

Close Ink Access Door

Description

The product has detected that the ink cartridge door is open.

Recommended action

1. Close the door.
2. Run the test in the sensor monitor mode to verify that the ink supply door open sensor is functioning properly. If it is not, replace the front door open detection switch.
3. Check the sensor flag on the front door open detection sensor. If the flag is damaged, replace the ink supply door.

Close Left door

Description

The product has detected that the left door is open.

Recommended action

1. Close the door.
2. Check the sensor flag on the left door. If the flag is damaged, replace the left door assembly.

Close upper Left door

Description

The product has detected that the left door is open.

Recommended action

1. Close the door.
2. Check the sensor flag on the left door. If the flag is damaged, replace the left door assembly.

Cooling device

Description

The product is cooling.

Recommended action

No action necessary.

Counterfeit Cartridge Advisory

Description

This is a software message only.

The product has detected a possibly counterfeit cartridge.

Recommended action

At the computer, click the hypertext link to report fraud, or click the Continue button to clear the message.

Data received To print last page press “OK”

Description

The product is waiting for the command to print the last page.

Recommended action

Touch the **OK** button to print the last page of the job.

Do not use startup cartridges

Description

The startup cartridges that came with the product cannot be used after the product has been initialized.

Recommended action

Remove those cartridges, and then install non-startup cartridges.

Document feeder Misfeed

Description

Document feeder misfeed. The product has detected a failure to feed paper through the document.

Recommended action

Reload the paper and try the job again.

If the error persists, clean the document feeder pickup and feed rollers.

Document feeder not detected

Description

The document feeder was not detected when the product initialized.

Recommended action

Make sure that the document feeder cables are connected and fully seated.

Empty Ink Cartridge

Description

The product cannot detect ink in the indicated cartridge.

Recommended action

If ink is still present in the cartridge, touch the **OK** button to continue printing. If the cartridge is empty, replace the cartridge.

Event log is empty

Description

No product events are in the log.

Recommended action

No action necessary.

Expected drive missing**Description**

The product cannot find the encrypted hard drive.

Recommended action

Install the encrypted hard drive.

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

Use the [Administration](#) menu to configure the required fax settings.

Flatbed cover open or Close Flatbed cover**Description**

The platen glass cover is open or the open/closed sensor is not functioning correctly.

Recommended action

1. Close the flatbed cover.
2. If the error persists, perform a sensors diagnostic in the [Diagnostics](#) menu on the product control panel to test the flatbed open/closed sensor.
3. Clean, adjust, or replace the sensor as needed.

Gateways failed**Description**

There is an incorrect gateways configuration.

Recommended action

Use the [EIO <X> Jetdirect](#) menu to configure the default gateway.

Gateways OK**Description**

The gateways are configured correctly.

Recommended action

No action necessary.

Genuine HP cartridge installed

Description

A new HP cartridge has been installed. The message appears for about 6 seconds before the product returns to the ready state.

Recommended action

No action necessary.

Genuine HP supply installed

Description

A new genuine HP supply has been installed.

Recommended action

Touch the [Hide](#) button to remove this message.

HP Protected Cartridge Installed

Description

The product has detected cartridges that were locked in another product using the HP Cartridge Protection feature.

- **17.00.57** : (event code) Black cartridge
- **17.01.57** : (event code) Cyan cartridge
- **17.02.57** : (event code) Magenta cartridge
- **17.03.57** : (event code) Yellow cartridge

Recommended action

Cartridges locked in another product will not work in this product.

Replace the cartridge indicated in the error message.

HP Secure hard drive disabled

Description

The drive has been encrypted for another product.

Recommended action

Remove the drive or use the HP Embedded Web Server for more information.

Incompatible ink cartridges

Description

The product has detected a cartridge or cartridges that are not for use with the product.

- **17.00.35** : (event code) Black cartridge
- **17.01.35** : (event code) Cyan cartridge

- **17.02.35** : (event code) Magenta cartridge
- **17.03.35** : (event code) Yellow cartridge

Recommended action

Replace the supply with one that is designed for this product.

Initializing...

Description

The product is starting.

Recommended action

No action necessary.

Ink cartridges depleted

Description

One or more of the ink cartridges is empty.

- **17.00.80** : (event code) Black cartridge
- **17.01.80** : (event code) Cyan cartridge
- **17.02.80** : (event code) Magenta cartridge
- **17.03.80** : (event code) Yellow cartridge

Recommended action

Replace the empty cartridge or cartridges indicated in the error message.

Ink Sensor Failure

Description

The product ink sensor has failed and the product no longer prints.

- **17.00.42** : (event code) Black cartridge
- **17.01.42** : (event code) Cyan cartridge
- **17.02.42** : (event code) Magenta cartridge
- **17.03.42** : (event code) Yellow cartridge

Recommended action

The product ink sensor has failed and the product no longer prints.

1. Turn the product off and then on.
2. Replace cartridge.
3. Replace mech kit.

Install <supply>

Description

The indicated cartridge is not installed, missing or has a damaged acumen.

- **17.00.65** : (event code) Black cartridge
- **17.01.65** : (event code) Cyan cartridge
- **17.02.65** : (event code) Magenta cartridge
- **17.03.65** : (event code) Yellow cartridge

Recommended action

Install the supply item or make sure that the installed supply item is fully seated.

Internal disk device failure To clear touch “OK”

Description

82.OX.YY (event code)

The internal disk failed.

Recommended action

1. Touch the **OK** button to clear the error.
2. If the error persists, turn off the product, and then remove and reinstall the hard drive.
3. Turn on the product.
4. If the error persists, replace the internal hard drive.

Internal disk file operation failed

Description

A P JL system command attempted to perform an invalid operation, such as downloading a file to a nonexistent directory.

Recommended action

Touch the **OK** button to clear the error.

Internal disk file system is full

Description

A P JL system command attempted to write data to the internal disk, but failed because the disk is full.

Recommended action

Touch the **OK** button to clear the error.

Internal disk is write protected

Description

The internal disk is write protected and no new files can be written to it.

Recommended action

Touch the **OK** button to clear the error.

Internal disk not found

Description

The internal disk was not found at start up.

Recommended action

Turn the product off, and then on.

Internal disk not functional

Description

82.OX.YY (event code)

The internal hard drive is not functioning correctly.

Recommended action

1. Turn off the product, and then remove and reinstall the hard drive.
2. Turn on the product.
3. If the error persists, replace the internal hard drive.

Internal disk not initialized

Description

The file system on the internal disk must be initialized before it can be used.

Recommended action

Initialize the file system on the internal disk.

Internal disk spinning up

Description

The internal disk device is spinning up its platter. Jobs that require disk access must wait.

Recommended action

No action is necessary.

Jam in document feeder

Description

A document feeder jam has occurred.

Recommended action

Clear the jam.

Load Tray <X>: [Type], [Size] To use another tray, press “OK”**Description**

This message displays when the indicated tray is selected, but is not loaded, and other paper trays are available for use.

It also displays when the tray is configured for a different paper type or size than the print job requires.

Recommended action

1. Load the correct paper in the tray.
2. If prompted, confirm the size and type of paper loaded.
3. Otherwise, press the **OK** button to select another tray.
4. If error persists, use the cassette media present sensor test in the tray/bin manual sensor test to verify that the sensor is functioning correctly.
5. Make sure that the sensor flag on the media presence sensor is not damaged and moves freely.

Loading program <XX>**Description**

Programs and fonts can be stored on the product's file system and are loaded into RAM when the product is turned on. The number <XX> specifies a sequence number indicating the current program being loaded.

Recommended action

No action necessary.



NOTE: Do not turn the product off.

Turning the product off might cause a corruption of the files loading.

Low on ink**Description**

The ink level in the indicated cartridge has reached a low level.

- **17.00.60** : (event code) Black cartridge
- **17.01.60** : (event code) Cyan cartridge
- **17.02.60** : (event code) Magenta cartridge
- **17.03.60** : (event code) Yellow cartridge

Recommended action

It is not necessary to replace the cartridge at this point.

HP recommends having a replacement cartridge ready for when the cartridge is empty.

Main Tray 2 Missing or Open

Description

The product cannot detect the tray.

Recommended action

Install and close the tray.

Manually feed output stack Then touch "OK" to print second side

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

1. Maintaining the same orientation, remove the pages from the output bin.
2. Flip the document printed side up.
3. Load the document in Tray 1.
4. Touch the **OK** button to print the second side of the job.

Manually feed: <Type><Size> To use another tray, press "OK"

Description

This message displays when manual feed is selected, Tray 1 is loaded, and other trays are available.

Recommended action

1. Load tray with the requested paper.
2. If paper is already in tray, press the **Help** button to exit the message, and then press the **OK** button to print.
3. To use another tray, clear paper from Tray 1, press the **Help** button to exit the message, and then press the **OK** button.

No job to cancel

Description

The user pressed the "Stop" button, but the product is not actively processing any jobs.

Recommended action

No action necessary.

Non-HP Cartridge(s) Non-HP ink cartridges installed

Description

The product has detected a non-HP cartridge or cartridges

- **17.00.34** : (event code) Black cartridge
- **17.01.34** : (event code) Cyan cartridge
- **17.02.34** : (event code) Magenta cartridge
- **17.03.34** : (event code) Yellow cartridge

Recommended action

Press **OK** to continue.

HP cannot guarantee the quality or reliability of non-HP supplies.

Replace the cartridges with HP cartridges to ensure the best print quality.

If you believe you purchased a genuine HP supply, go to www.hp.com/go/anticounterfeit.

Output Bin Full

Description

The output bin is full or this message displays even though the output bin is not full.

Recommended action

1. Clear all media from the output bin.
2. Check that the face-down tray media-full sensor flag to move smoothly. If the flag is damaged, replace the face-down delivery assembly
3. Run the sensor test in the sensor monitor mode to verify that the face-down tray media-full sensor is functioning properly. If it is not, replace the face-down delivery assembly.

Paper Jam in Automatic Document Feeder

Description

The product has detected a jam in the document feeder.

Recommended action

Clear the jam and then touch the **OK** button.

Paper Jam Paper Jam

Description

The product has experienced a paper jam. Printing cannot continue until the jam has been cleared.

Recommended action

Follow the instructions on the product control panel to clear the jam.

Paper too short Paper too short

Description

The product cannot print on paper smaller than 12.5 cm (4.9 in) in length.

Recommended action

Load paper that exceeds the product minimum supported size and re-send the print job.

Paper too short to aut duplex**Description**

The paper in the product does not meet the minimum size requirements for automatic two sided printing (duplexing).

Recommended action

Load paper that meets specifications for automatic duplexing.

Paper type mismatch**Description**

The paper type detected by the product does not match the type selected in the software.

Recommended action

Select the correct type in the software, load the type dictated by the software, or touch the **OK** button to continue the job with the size mismatch.

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 the **Stop** button.

Performing Paper Path Test...**Description**

The product is performing a paper-path test.

Recommended action

No action necessary.

Please Wait...**Description**

The product is in the process of clearing data.

Recommended action

No action necessary.

Print head Jam

Description

The product has detected a jam that is blocking the print head.

Recommended action

Follow the instructions on the product control panel to clear the jam.

Printer Failure

Description

The product or ink system has experienced an error.

Recommended action

Turn the product off and then on.

Printer Supply Upgrade

Description

The indicated supply upgrade was detected.

- **17.00.52** — Black Cartridge
- **17.01.52** — Cyan Cartridge
- **17.02.52** — Magenta Cartridge
- **17.03.52** — Yellow Cartridge

Recommended action

Press the **OK** button or touch the **Upgrade** button to install the upgrade cartridge, or replace the cartridge.

Printer Supply Upgrade Problem

Description

The indicated supply encountered an upgrade problem.

- **17.00.54** — Black Cartridge
- **17.01.54** — Cyan Cartridge
- **17.02.54** — Magenta Cartridge
- **17.03.54** — Yellow Cartridge

Recommended action

Replace the ink cartridge.

Printing Configuration...

Description

The product is printing the Configuration page.

Recommended action

No action 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 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 stopped**Description**

Time 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.

Printing...engine test**Description**

The product is printing an Engine test page.

Recommended action

No action necessary.

Problem with Printer Preparation**Description**

The product has detected an error with the product clock. Print quality can be affected.

Recommended action

Run a cleaning page through the product.

Problem with startup Cartridge(s)**Description**

The product has detected a problem with the startup cartridges, which prevents the product from completing the initialization process during initial installation.

Recommended action

Replace the cartridges.

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...**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 “OK”**Description**

The specified device failed.

Recommended action

Touch the **OK** button to clear the error.

RAM disk file operation failed To clear touch “OK”**Description**

A PJI command was received that attempted to perform an invalid operation, such as downloading a file to a nonexistent directory.

Recommended action

Touch the **OK** button to clear the error.

RAM disk file system is full To clear touch “OK”**Description**

The hard disk is full.

Recommended action

Touch the **OK** button to clear the error.

RAM disk is write protected To clear touch “OK”

Description

The RAM device is write protected and no new files can be written to it.

Recommended action

Touch the **OK** button to clear the error.

RAM disk not initialized

Description

The file system on the RAM disk must be initialized before it can be used.

Recommended action

Initialize the file system on the RAM disk.

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 necessary.

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 necessary.

Receiving Upgrade

Description

The product is receiving a firmware upgrade.

Recommended action

Do not turn the product off until it reaches the Ready state.

Turning the product off might cause a corruption of the upgrade file.

Remove USB accessory

Description

This message displays when an unsupported USB device is inserted into a host USB port on the product.

Recommended action

Remove the unsupported USB device.

Resend Upgrade**Description**

A firmware upgrade did not complete successfully.

Recommended action

Upgrade the firmware again.

Restore Factory Settings**Description**

The product is restoring factory settings.

Recommended action

No action necessary.

ROM disk device failed To clear touch “OK”**Description**

The specified device failed.

Recommended action

Touch the **OK** button to clear the error.

ROM disk file operation failed To clear touch “OK”**Description**

A PJI command was received that attempted to perform an invalid operation, such as downloading a file to a nonexistent directory.

Recommended action

Touch the **OK** button to clear the error.

ROM disk file system is full To clear touch “OK”**Description**

The hard disk is full.

Recommended action

Touch the **OK** button to clear the error.

ROM disk is write protected To clear touch “OK”**Description**

The ROM device is write protected and no new files can be written to it.

Recommended action

Touch the [OK](#) button to clear the error.

ROM disk not initialized To clear touch “OK”**Description**

The file system on the ROM disk must be initialized before it can be used.

Recommended action

Initialize the file system on the ROM disk.

Service Ink Capacity Warning**Description**

The waste ink container on the duplex module is full or almost full. This can cause print quality issues (smearing).

Recommended action

Replace the duplex module, and then reset the service ink detection mechanism.

1. Open the [Administration](#) menu on control panel.
2. Select [Manage Supplies](#).
3. Select [Reset Supplies](#).
4. Select [New Ink Collection Unit](#) and then touch the [OK](#) button

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. Make sure that the paper is positioned correctly.
3. Close the tray, and then make sure that the control panel lists the correct size and type for the specified tray.
4. If necessary, use the control panel menus to reconfigure the size and type settings for the specified tray.
5. If error persists, use the tray/bin manual sensor test to test the switch.

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.

Startup Routine Ink Alert**Description**

The cartridge indicated might not have enough ink to complete the product startup process.

- **17.00.36** — Black Cartridge
- **17.01.36** — Cyan Cartridge
- **17.02.36** — Magenta Cartridge
- **17.03.36** — Yellow Cartridge

Recommended action

Replace the cartridge indicated in the error message.

The unit has corrupt data**Description**

Data corruption has occurred in the firmware volume.

- **98.00.01**: Corrupt data in the firmware volume
- **98.00.02**: Corrupt data in the solutions volume
- **98.00.03**: Corrupt data in the configuration volume
- **98.00.04**: Corrupt data in the job data volume

Recommended action

For **98.00.01**, **98.00.02**, and **98.00.03**, perform the following steps:

1. Turn the product off, and then on.
2. Use the [Clean Disk](#) item in the [Preboot](#) menu.
3. Reload the firmware.

For **98.00.04**, perform the following steps:

1. Turn the product off, and then on.
2. Run the file erase function.

Tray <X> [type] [size]**Description**

The media in the specified tray is detected as the specified size and type.

The custom switch was not changed.

Recommended action

If the media is a custom size or type, change the custom switch accordingly.

Tray <X> empty: [Type], [Size] / Tray X Out of Paper**Description**

The specified tray is empty and the current job does not need this tray to print.

- X = 1: Tray 1
- X = 2: Tray 2
- X = 3: Tray 3

Recommended action

Refill the tray at a convenient time.

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> lifting**Description**

The product is in the process of lifting paper in the indicated tray.

- X = 2: Tray 2
- X = 3: Tray 3

Recommended action

No action necessary.

Tray <X> open**Description**

The specified tray is open or not closed completely.

- X = 2: Tray 2
- X = 3: Tray 3

Recommended action

1. Close the tray.
2. If this message displays after the lifter drive assembly was removed or replaced, make sure that the connector of the assembly is connected correctly and fully seated.
3. If the error persists, use the media size switches in the tray/bin manual sensor test to test the switches.
4. If the switches do not respond, replace the associated lifter drive assembly.

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. On the product control, make sure that the type loaded in the tray matches the specified setting for the tray.

Unsupported drive installed To continue, touch “OK”

Description

A non-supported hard drive has been installed. The drive is unusable by this product.

Recommended action

1. Turn the product off.
2. Remove the hard drive.
3. Turn the product on.

Unsupported supply in use OR Unsupported supply installed To continue, touch “OK”

Description

A non-supported supply has been installed or the ink cartridge is for a different product.

Recommended action

Install the correct supplies for this product. See the parts chapter in the service manual for supply part numbers.

Unsupported USB accessory detected Remove USB accessory

Description

A non-supported USB accessory has been connected.

Recommended action

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

Upgrade Error

Description

SCB upgrade error has occurred.

Recommended action

1. Turn the product off, and then on.
2. Resend the upgrade.
3. If the error persists, replace the SCB.

USB needs too much power**Description**

Power requirements for the USB device attached to the product are beyond supported limits.

Recommended action

1. Remove the USB device.
2. Turn the product off, and then on.
3. Try a similar accessory that has its own power supply or requires less power.

USB accessory not functional**Description**

A parameter in the USB accessory is not functioning correctly.

Recommended action

1. Turn the product off.
2. Remove the USB accessory.
3. Insert the USB accessory making sure it is fully seated and connected properly.
4. Turn the product on.
5. If issue remains, replace the 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 “OK”**Description**

The USB device is write protected and no new files can be written to it.

Recommended action

Touch the **OK** button to clear the error.

USB needs too much power Remove USB and Then Turn Off then On

Description

A USB accessory is drawing too much electrical current. Printing cannot continue.

Recommended action

1. Turn the product off.
2. Remove the USB accessory.
3. Turn the product on.
4. Try a similar USB accessory that has its own power supply or requires less power.

USB not initialized

Description

The file system on the USB device must be initialized before it can be used.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the USB device.

USB storage accessory removed Clearing any associated data

Description

This message displays for about 6 seconds after a USB device is removed.

Recommended action

Touch the [Hide](#) button to remove this message.

USB storage device failure To clear touch "OK"

Description

The specified device failed.

Recommended action

Touch the [OK](#) button to clear this error.

USB storage file operation failed To clear touch "OK"

Description

A PjL file system command was received that attempted to perform an invalid operation, such as downloading a file to a nonexistent directory.

Recommended action

Touch the [OK](#) button to clear this error.

USB storage file system is full To clear touch “OK”

Description

The file system on the installed USB device is full.

Recommended action

Touch the **OK** button to clear this error.

Use startup cartridges

Description

The product needs the startup ink cartridges that came with the product to perform the initial startup process.

Recommended action

Replace the cartridges with the startup ink cartridges that came with the product.

Used HP Ink Cartridge(s) installed

Description

The product has detected a used cartridge or cartridges.

Recommended action

Press or touch the **OK** button to clear the message.

Used or Counterfeit Cartridge Detected

Description

The supply being used is either a counterfeit or refilled cartridge.

- **17.00.34** — Black Cartridge
- **17.01.34** — Cyan Cartridge
- **17.02.34** — Magenta Cartridge
- **17.03.34** — Yellow Cartridge

Recommended action

At the computer, click **Yes** or **No** to clear the message.

If you believe you purchased a genuine HP supply, go to www.hp.com/go/anticounterfeit . Any print quality 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.

Very Low on Ink

Description

The ink level in the indicated cartridge has reached a very low level.

- **17.00.69** — Black Cartridge
- **17.01.69** — Cyan Cartridge
- **17.02.69** — Magenta Cartridge
- **17.03.69** — Yellow Cartridge

Recommended action

It is not necessary to replace the cartridge at this point. HP recommends having a replacement cartridge ready for when the cartridge is empty.

Windows Login Required to Use this Feature

Description

Windows login is required for the selected feature or job.

Recommended action

Enter the necessary Windows login information.

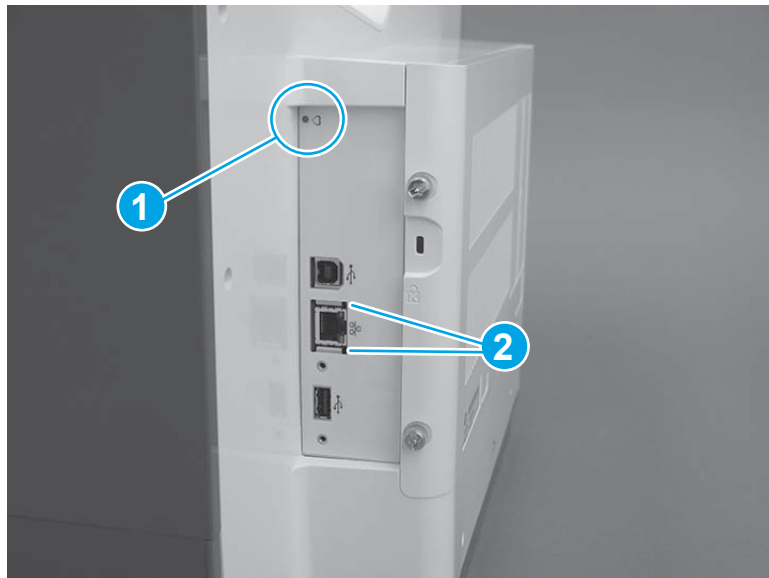
Individual component diagnostics

LED diagnostics

Understand lights on the formatter

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


Figure 2-28 LEDs



- 1 Heartbeat LED
- 2 HP Jetdirect LEDs

Heartbeat LED

The heartbeat LED provides information about printer operation. If a printer 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.

The heartbeat LED operates according to the printer state.

Table 2-4 Heartbeat LED status

LED color	Description
Green	<ul style="list-style-type: none">• Solid—During part of boot up initialization and Pre-boot menu• Slow blinking—During normal operation/sleep mode<ul style="list-style-type: none">◦ Formatter is operating normally◦ Firmware is operating normally◦ Control panel is connected

Table 2-4 Heartbeat LED status (continued)

LED color	Description
Yellow	<ul style="list-style-type: none">• Fast blinking—Formatter cannot connect to the control panel<ul style="list-style-type: none">◦ Check control panel connections◦ Verify control panel functionality
Red	<ul style="list-style-type: none">• Solid—Formatter error or failure (initially red for one second during power on)<ul style="list-style-type: none">◦ Serial peripheral interface (SPI) flash memory boot error◦ Power on self-test (formatter) failed◦ Diagnostic (formatter) failed
Off	<p>The power cable is disconnected, or the printer power switch is in the off position.</p> <p>TIP: The heartbeat LED is off if the power cable is disconnected, the printer power switch is in the off position, or the printer is in Sleep Mode.</p> <ul style="list-style-type: none">• Firmware or system freeze. Reboot the printer, or reload or upgrade the firmware<ul style="list-style-type: none">◦ Check control panel for an error message◦ Control panel failure or the printer power switch is in the off position <p>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.</p>

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 printer control-panel menus.

1. From the Home screen on the printer control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Network Settings](#)
 - [Ethernet](#)
 - [Link Speed](#)
3. Select the appropriate link speed, and then touch the [OK](#) 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 **All trays**, **Tray 1**, **Tray 2**, or the optional tray (only available if an input accessory is installed).
 - **Test Duplex Path:** Enable or disable two-sided printing.
 - **Number of Copies:** Set the numbers of copies to be printed; the range is 1-500.
1. From the Home screen on the printer 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.

Scanner tests (586 only)

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

Scanner tests

This section lists the sensors available in the [Scanner Tests](#).

Use the scanner tests

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

1. From the [Home](#) screen on the printer control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Scanner Tests](#)
 - [Sensors](#)
3. Touch the sensor name on the [Scanner Tests](#) screen to display a sensor location graphic on the control-panel display.
4. Activate the desired sensor, and then check the control-panel display to verify the sensor state (active or inactive).
 - The [State](#) virtual LED next to the sensor number and sensor name illuminates green when the sensor is active.
 - The [Toggle](#) virtual LED next to the sensor number and sensor name illuminates green after the sensor is activated and increments by one each time the sensor is interrupted (activated or deactivated).

For example, opening and closing the flatbed cover increments the [Flatbed Cover Toggle](#) item count two times—once when the door is opened, and once when the door is closed.
5. Touch the [Reset Sensors](#) button to reset the [Toggle](#) count item.

-or-

Touch the [Cancel](#) button to exit the [Scanner Tests](#) screen, and then touch the [Cancel](#) button again to return to the [Diagnostic Tests](#) menu.

Scanner sensor tests

- [ADF paper present](#)
- [ADF Y \(length\)](#)
- [ADF jam cover](#)
- [ADF paper path deskew](#)
- [ADF paper path pick success](#)

- Paper path sensor 1 (unreachable)
- Flatbed Y (length)
- Flatbed cover

Diagrams

For diagrams showing sensors and other components, see the Theory of Operations chapter in the printer troubleshooting manual.

Plug/jack locations

Figure 2-29 Plug/jack locations

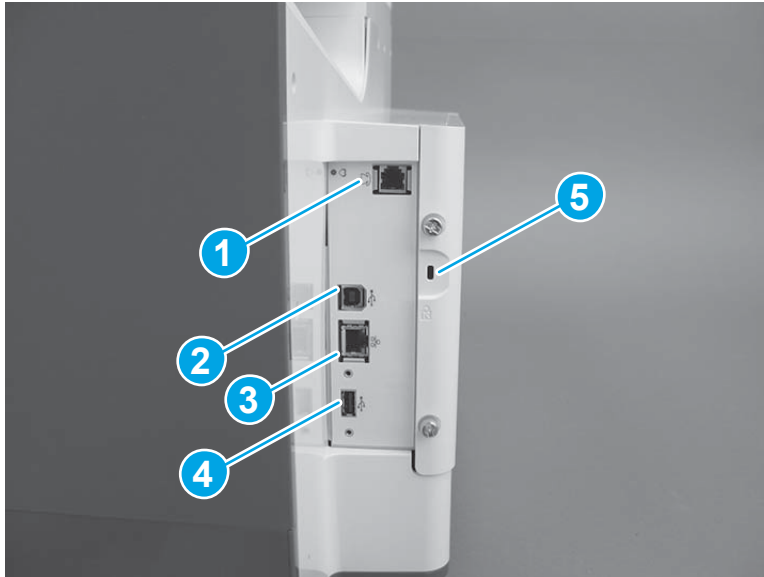


Table 2-5 Plug/jack locations

Item	Description
1	Fax port (586 fax models only)
2	Hi-Speed USB 2.0 printing port
3	Local area network (LAN) Ethernet (RJ-45) network port
4	USB port for connecting external USB devices
5	Kensington security slot

Print-quality troubleshooting tools

Internal print-quality test pages

Print-quality troubleshooting pages

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



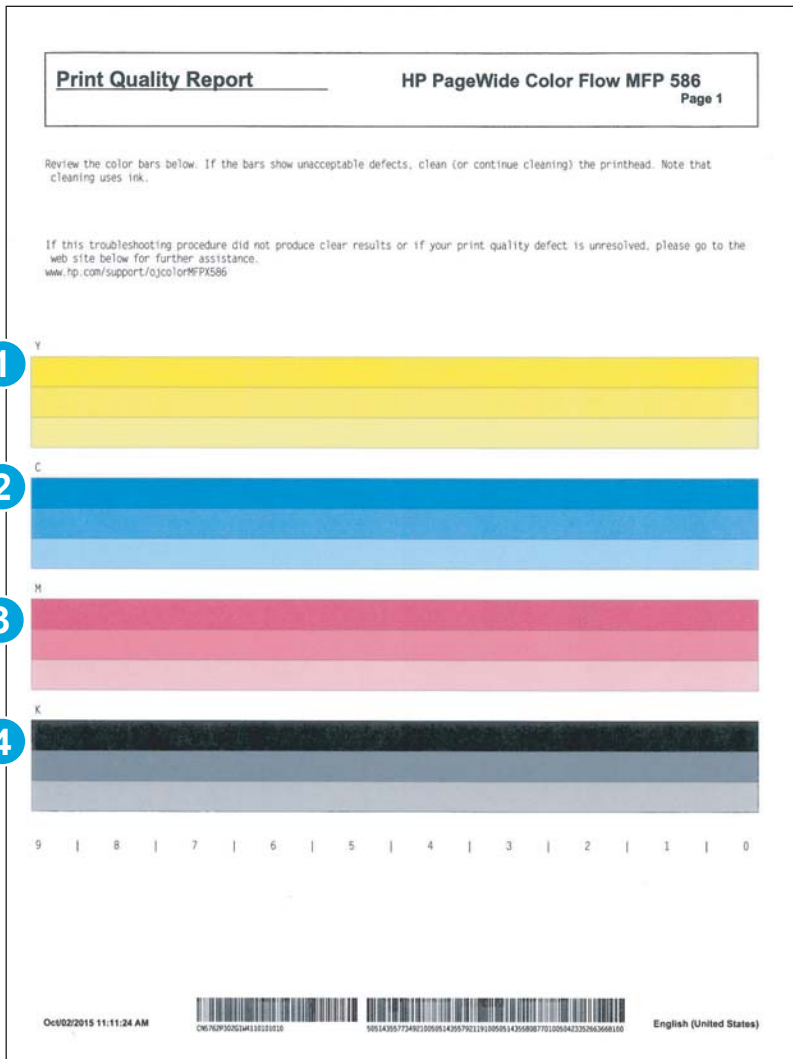
NOTE: To get further assistance in print-quality troubleshooting, go to www.hp.com/support/pagewidecolor556, www.hp.com/support/pagewidecolor586MFP and select **PQ Troubleshooting Tools**.

1. From the Home screen on the printer control panel, scroll to and touch the **Administration** button.
2. Open the following menus:
 - **Troubleshooting**
 - **Print Quality Pages**
3. Select one of the following documents to print:
 - **Troubleshooting Guide**
 - **Diagnostic Page**
 - **Print Quality Report**
 - **Print Quality Service Pages**
 - **Printhead Diagnostic Pages**

Interpret the print quality report

1. Load the printer with regular, unused white paper.
2. From the Home screen on the printer control panel, touch the **Administration** button.
3. Open the following menus:
 - **Troubleshooting**
 - **Print Quality Pages**
4. Select the **Print Quality Report** item to print it.

This page contains four bands of color, which are divided into the groups as indicated in the following illustration. By examining each group, you can isolate the problem to a particular ink cartridge.



Section	Ink cartridge
1	Yellow
2	Cyan
3	Magenta
4	Black

TIP: Mark this page with a “1” in a corner. If you clean the printhead later, you will want to keep track of which page was printed first, in order to note any progress.

In general, if the ink system is working correctly, all the color bars are present and not streaked. Each bar has three distinct shades, but otherwise the color should not vary across the bar. The bars should also be evenly lined up. The black text on the page should not show ink streaks.

The following table shows some representative examples of defects on the print quality report.

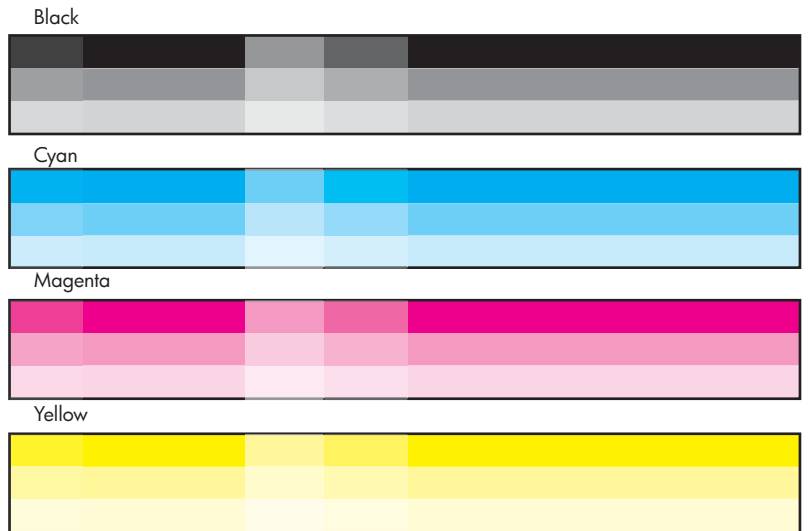
NOTE: The relative position of the color bars might be different than they appear on the printed report, but the defects are representative of the defects that are shown.

Defect**Example**

Color variation across bar

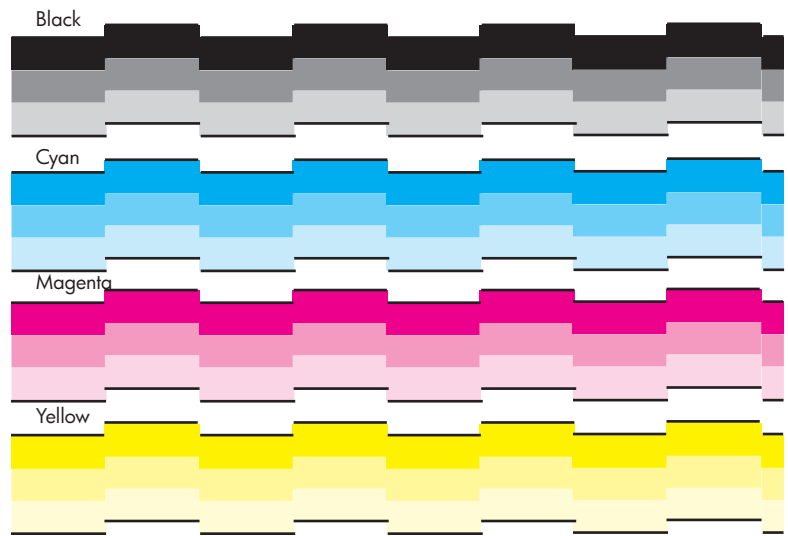


Color intensity variation across bars

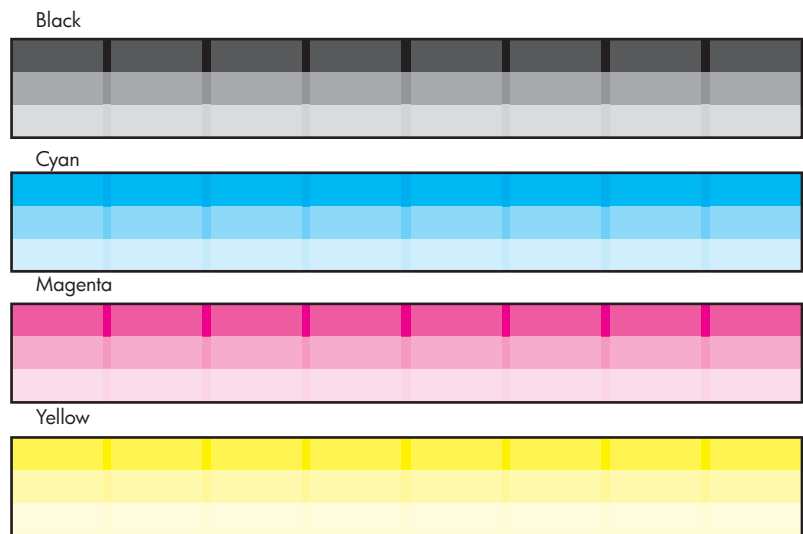


Defect**Example**

Uneven bars



Vertical dark lines

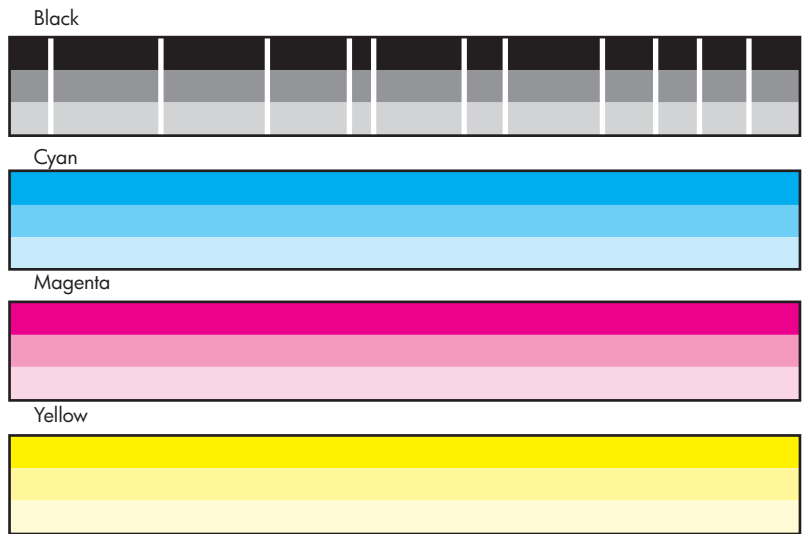


Defect**Example**

Vertical white lines on all bars



Vertical white lines on select bars



Defect

Example

Shade gradations not sharp

Black



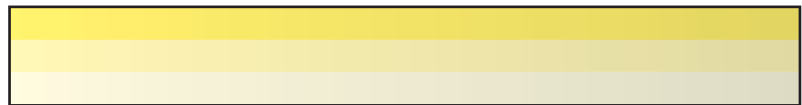
Cyan



Magenta



Yellow



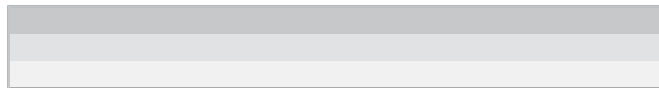
Page is blank or only partially printed

Print Quality Printhead Cleaning Diagnostic

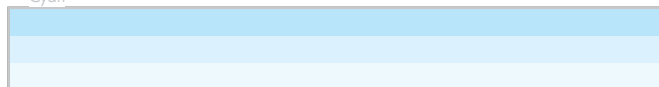
```
XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

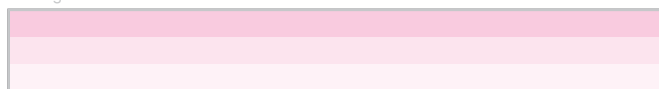
Black



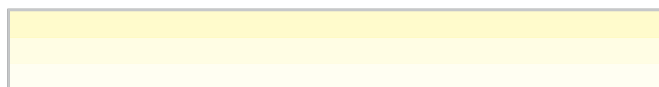
Cyan



Magenta



Yellow



1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

If the print quality report shows defects like the ones above, clean the printhead as follows:

1. Load the printer with regular, unused white paper.
2. On the control panel, touch the [Device Maintenance](#) button.
3. Open the [Calibration/Cleaning](#) menu.
4. Select the [Printhead Cleaning](#) item.

The cleaning process has several steps. After each of them, the printer prints the print quality report again. Evaluate each of these pages to determine if the original defect has been fixed – if it has, there is no reason to go on to the next cleaning stage.



TIP: Number each of the print quality pages so you don't lose track of the prints later.

5. If you finish the cleaning process and still see defects on the print quality report, retry cleaning, especially if you have seen improvement in the print quality reports.
6. If the print quality report still shows defects after a second cleaning, go to the next section to service the printer.

If the defect on the print quality report is color variation across the bars (see the table of defects above), and if the problem seems to go away after a cleaning, but then reoccurs in the same location on the color bar the next day, complete the following procedure:

1. Check to see if any of the following conditions are true:
 - Prior to the print quality problem, the printer was unused for more than three weeks.
 - The printer was recently moved or experienced a large temperature shift.
 - There was a recent paper jam.
 - The print quality problem seems to be getting better as the printer is used (especially if print jobs with dense backgrounds are printed).
2. If none of the conditions above are true, the color problem is likely to reoccur, even if a cleaning fixes it temporarily. Go to the final section of this document to service the printer.

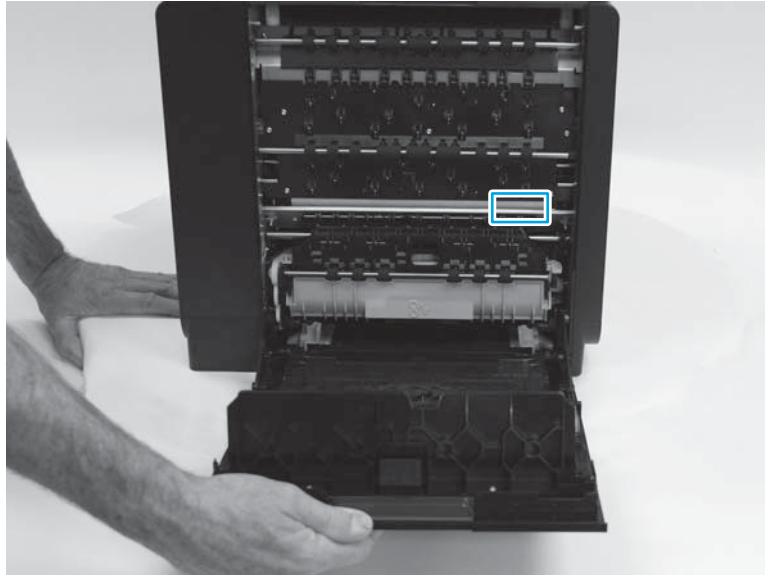
If the print quality report has no defects, then the ink system is working correctly. There is no reason to clean the printhead, which unnecessarily wastes ink and paper. Complete the following steps:

1. Retry the original print job. Just printing the print quality report can solve some problems. If the print job meets print quality standards, stop troubleshooting here.
2. If problems still exist on print jobs, review the earlier steps in this document: make sure the ink and paper are appropriate, and that the print settings are correct. In addition, these suggestions may help with some problems:
 - If you are printing an image, make sure it has sufficient resolution. Images that have been enlarged too much might appear fuzzy or blurry.
 - If the problem is confined to a band near the edge of a printout, use the software you installed with the printer or another software program to rotate the image 180°. The problem might not appear on the other end of the printout.
 - Always use the power button to turn the printer off. This protects the printhead from exposure to air.

- If yellow is missing from color jobs, there might be an ink sludge buildup on the orifice plate. Clean the printhead several times and then see if print quality has improved.
- If all colors are experiencing poor print quality, there might be an issue with the web wipe not advancing. Open the left door, and then mark the edge of the web wipe above the duplex module.

Run the printer so that it performs a wipe, and then see if the web has advanced. If it has not, replace the print mechanism.

Figure 2-30 Mark the web wipe



3. If the problem persists, install a replacement print mechanism kit.

Cleaning page

1. From the Home screen on the printer control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the following menus:
 - [Calibration/Cleaning](#)
 - [Resolve Ink Smear](#)
3. Touch the [Start](#) button to begin the procedure.

The cleaning process can take several minutes.

Calibrate the printer to align the colors

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

1. From the Home screen on the printer control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the following menus:
 - [Calibration/Cleaning](#)
 - [Advanced Calibration Support](#) (and then touch [Continue](#))
 - [Color Density Calibration](#)
3. Touch the [Continue](#) button to start the calibration process.
4. Wait while the printer calibrates, and then try printing again.

Pre-boot menu options

The **Pre-boot** menus are available prior to the printer initializing.

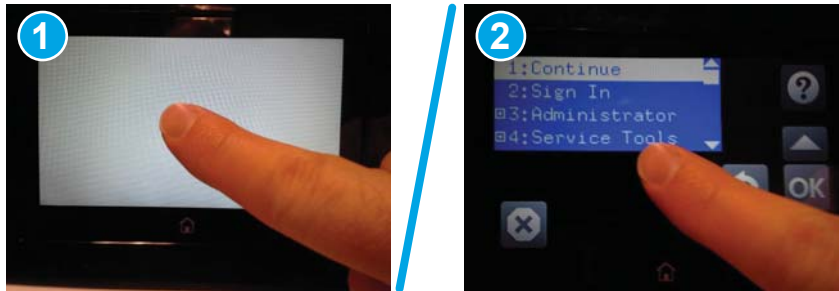
CAUTION: The **Format Disk** option (printers with a hard-disk drive only) performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) will be completely lost. HP does not recommend this action.

TIP: The Pre-boot menu can be remotely accessed by using a telnet network protocol to establish an administration connection to the printer. See [Remote Admin on page 195](#).

Open the Pre-boot menu from a touchscreen control panel

1. Touch the middle of the control-panel display when you see the **1/8** under the logo.

Figure 2-31 Open the Pre-boot menu



2. On the **Pre-boot** menu screen, use the following buttons to navigate the tests.

Figure 2-32 Pre-boot menu



Use this button to see more information about a selected item.



Use this button to scroll up through menu items.



Use this button to select a highlighted menu item.



Use this button to scroll down through menu items.



Use this button to go back to the previous menu.




Not used.



Use this button to exit a diagnostic test.

3. Use the arrow buttons on the touchscreen to navigate the **Pre-boot** menu.
4. Touch the **OK** button to select a menu item.

Open the Pre-boot menu from a LCD control panel

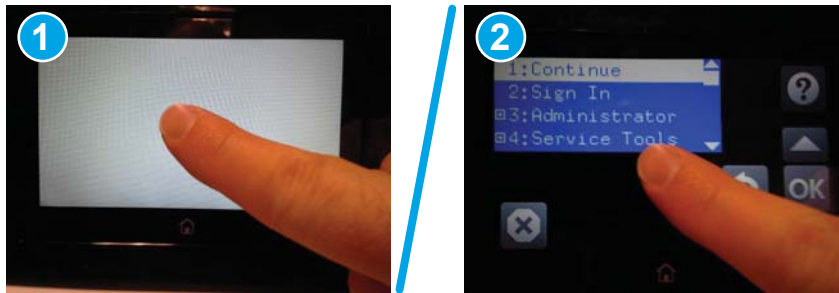
1. Press the **Cancel**  button when you see the **1/8** under the logo.
2. Use the arrow buttons on the control panel to navigate the **Pre-boot** menu.
3. Press the **OK** button to select a menu item.

Cold reset using the Pre-boot menu from a touchscreen control panel

CAUTION: This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).

1. Touch the middle of the control-panel display when you see the **1/8** under the logo.

Figure 2-33 Open the Pre-boot menu




2. Use the ▼ button to highlight the **+3:Administrator** item, and then touch the **OK** button.
3. Use the ▼ button to highlight the **+8:Startup Options** item, and then touch the **OK** button.
4. Use the ▼ button to highlight the **2 Cold Reset** item, and then touch the **OK** button to select it.
5. Touch the Home button to return to the main **Pre-boot** menu and highlight the **1:Continue** item, and then touch the **OK** button.

NOTE: The printer will initialize.

Cold reset using the Pre-boot menu from a LCD control panel

CAUTION: This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).

1. Press the **Cancel**  button when you see the **1/8** under the logo.
2. Use the down arrow ▼ button to highlight the **+3:Administrator** item, and then press the **OK** button.
3. Use the down arrow ▼ button to highlight the **+8:Startup Options** item, and then press the **OK** button.

4. Use the down arrow ▼ button to highlight the **2 Cold Reset** item, and then press the **OK** button to select it.
5. Touch the Home button to return to the main **Pre-boot** menu and highlight the **1:Continue** item, and then touch the **OK** button.

 **NOTE:** The printer will initialize.


 **NOTE:** Some of the pre-boot options in the following tables are not supported by the current version of the printer firmware and are included for information only. Future versions of firmware will support these options.

Table 2-6 Pre-boot menu options (1 of 7)

Menu option	First level	Second level	Third level	Description
Continue				<p>Selecting the Continue item exits the Pre-boot menu and continues the normal boot process.</p> <p>If a selection is not made in the initial menu within 30 seconds, the printer returns to a normal boot (the same as selecting Continue).</p> <p>If the user navigates to another menu, the timeout does not apply.</p>
Sign In				<p>Enter the administrator PIN or service PIN if one is required to open the Pre-boot menu.</p>
Administrator				<p>This item navigates to the Administrator submenus.</p> <p>If authentication is required (and the user is not already signed in) the Sign In prompt displays. The user is required to sign in.</p>
	Download	Network		<p>This item initiates a Pre-boot firmware download process. A USB Thumbdrive option will work on all FutureSmart printers. USB or Network connections are not currently supported.</p>
		USB		
		USB Thumbdrive		
Format Disk				<p>This item reinitializes the disk and cleans all disk partitions.</p> <p>CAUTION: Selecting the Format Disk item removes all data.</p> <p>A delete confirmation prompt is not provided.</p> <p>The system is not bootable after this action and a 99.09.67 error displays on the control panel. A firmware download must be performed to return the system to a bootable state.</p>

Table 2-6 Pre-boot menu options (1 of 7) (continued)

Menu option	First level	Second level	Third level	Description
	Partial Clean			<p>This item reinitializes the disk (removing all data except the firmware repository where the master firmware bundle is downloaded and saved).</p> <p>CAUTION: Selecting the Partial Clean item removes all data except the firmware repository. A delete confirmation prompt is not provided.</p> <p>CAUTION: This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).</p> <p>This allows a user to reformat the disk by removing the firmware image from the active directory without having to download new firmware code (printer remains bootable).</p>
	Change Password			Select this item to set or change the administrator password.
	Clear Password			<p>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.</p> <p>When the confirmation prompt displays, press the OK button to clear the password.</p>

Table 2-7 Pre-boot menu options (2 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Manage Disk	Clear disk		Select the Clear disk item to enable 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		<p>Select the Lock Disk item to lock (mate) a new secure disk to this printer.</p> <p>The secure disk already locked to this printer will remain accessible to this printer. Use this function to have more than one encrypted disk accessible by the printer when using them interchangeably.</p> <p>The data stored on the secure disk locked to this printer always remains accessible to this printer.</p>
		Leave Unlocked		<p>Select the Leave Unlocked item to use a new secure disk in an unlocked mode for a single service event. The secure disk that is already locked to this printer will remain accessible to this printer and uses the old disk's encryption password with the new disk.</p> <p>The secure disk that is already locked to this printer remains accessible to this printer.</p>

Table 2-7 Pre-boot menu options (2 of 7) (continued)

Menu option	First level	Second level	Third level	Description
		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. The ATA secure-erase command is a one-pass overwrite, which 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 the disk and unlock the disk to allow a user to gain access to it from any printer. NOTE: The system will be unusable until the system files are reinstalled. It erases the encryption key. The encryption key is erased, so the disk becomes a non-encrypted disk.
			Get Status	This item provides disk status information if any is available.

Table 2-8 Pre-boot menu options (3 of 7)

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 a 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 of the data on disk and unlock the disk to allow the user to gain access to it from any printer. NOTE: The system will be unusable until the system files are reinstalled. The HP High Performance Secure Hard Disk is erased.
			Get Status	This item provides disk status information if any is available.
		External Device		Select the External Device item to erase the external device or get status about the external device.

Table 2-8 Pre-boot menu options (3 of 7) (continued)

Menu option	First level	Second level	Third level	Description
			Secure Erase	<p>Select the Secure Erase item to erase all of the data on the disk and unlock it if required.</p> <p>This might take a long time.</p> <p>NOTE: The system will be unusable until the system files are reinstalled.</p> <p>The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk.</p>
			Erase/Unlock	<p>Select the Erase/Unlock item to cryptographically erase all of the data on disk and unlock the disk to allow a user to gain access to it from any printer.</p> <p>NOTE: The system will be unusable until the system files are reinstalled. The encryption key is erased, so the disk becomes a non-encrypted disk.</p>
			Get Status	This item provides disk status information if any is available.

Table 2-9 Pre-boot menu options (4 of 7)

Menu option	First level	Second level	Third level	Description
Administrator	Configure LAN	IP Mode [DHCP]		<p>The network can be configured to obtain the network settings from a DHCP server or as static.</p> <p>Use this item for automatic IP address acquisition from the DHCP server.</p>
(continued)	NOTE: This configuration is only active when the Pre-boot menu is open.	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 2-10 Pre-boot menu options (5 of 7)

Menu option	First level	Second level	Third level	Description
Administrator	Startup Options			Select the Startup Options item to specify options that can be set for the next time the printer is turned on and initializes to the Ready state.
(continued)		Show Revision		<p>Not currently functional: Select the Show Revision item to allow the printer to initialize and show the firmware version when the printer reaches the Ready state.</p> <p>Once the printer power is turned on the next time, the Show Revision item is unchecked so that the firmware revision is not shown.</p>

Table 2-10 Pre-boot menu options (5 of 7) (continued)

Menu option	First level	Second level	Third level	Description
		Cold Reset		Select 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 skip the printer calibration for the very next power-initialization cycle only.
		Lock Service		CAUTION: Select the Lock Service item to lock the Service menu access (both in the Pre-boot 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.
Administrator (continued)	Startup Options (continued)	First Power		Not currently functional: This item allows the printer 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. Select this item so that it is enabled for the next time the printer power is turned on. When the printer 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		Select the Embedded Jetdirect Off item to disable the embedded HP Jetdirect. By default this item is unchecked so that HP Jetdirect is always enabled.
		WiFi Accessory		Select the WiFi Accessory item to enable the wireless accessory.

Table 2-11 Pre-boot menu options (6 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Diagnostics			Diagnostic items are useful to diagnose hardware components and their interface connections. Use these items to troubleshoot specific hardware components, and the interface between them and other components.
		Memory	Do Not Run	Use the Do Not Run item to exclude the Memory diagnostic when executing multiple diagnostics.

Table 2-11 Pre-boot menu options (6 of 7) (continued)

Menu option	First level	Second level	Third level	Description
			Short	Use the Short item to select a brief memory test. NOTE: This test requires about four minutes to execute.
			Long	Use the Long item to select an extended memory test. NOTE: This test requires about twenty minutes to execute.
	Disk		Do Not Run	Use the Do Not Run item to exclude the Disk diagnostic when executing multiple diagnostics.
			Short	Use the Short item to select a brief firmware self-test. NOTE: This test requires about two or three minutes to execute.
			Long	Use the Long item to select an extended firmware self-test. NOTE: This test requires about sixty minutes to execute.
			Optimized	Use the Optimized item to select a test that checks the active sectors on the disk. NOTE: This test requires about thirty minutes to execute.
			Raw	Use the Raw item to select a test that checks every sector on the disk. NOTE: This test requires about fifty minutes to execute.
			Smart	Use the Smart item to select a very brief test that checks the drive self-monitoring analysis and reporting technology (SMART) status—the drive detects and reports reliability indicators to help anticipate disk failures (SMART status).
		CPB		Use the CPB item to verify the integrity of the copy processor board (CPB) and the formatter PCA connections.
		Interconnect		Use the Interconnect item to verify the integrity of the interconnect PCA (ICB) and its connections.
		Run Selected		Select the Run Selected item to execute a selected test. NOTE: If more than one test is selected, they are executed in sequence.

Table 2-12 Pre-boot menu options (7 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Remote Admin	Start Telnet		<p>The Remote Admin item allows a service technician to access to the printer Pre-boot menu remotely, and to navigate the menu selections from a remote location.</p> <p>IMPORTANT: A Remote Admin connection must be initiated by a person that is physically present at the printer.</p> <p>This person will also need to provide a randomly generated PIN to the remote service technician.</p> <p>NOTE: For more information about using the Remote Admin function, see Remote Admin on page 195.</p>
		Stop Telnet		
		Refresh IP		
	System Triage	Copy Logs		<p>If the device will not boot to the Ready state, or the diagnostic log feature found in the Troubleshooting menu is not accessible, then use the System Triage item to copy the diagnostic logs to a USB flash drive at the next printer start up.</p> <p>The files can then be sent to HP to help diagnose the problem.</p>
	Change Svc PWD			Use this item to change the Service menu personal identification number (PIN).
	Reset Svc PWD			If the Service menu personal identification number (PIN) has been changed. Use this item to reset it to the original PIN.
Service Tools	Reset Password			Use this item to reset the Pre-boot administrator password.
	Subsystems			For manufacturing use only. Do not change these values.
Developer Tools	Netexec			

Remote Admin

The Remote Admin feature allows remote access the printer Pre-boot menu (BIOS environment). The printer functions as a telnet server which uses the telnet networking protocol to transmit text data. Any computer (with telnet installed and enabled) can function as the telnet client to remotely display and interact with the Pre-boot menu.



IMPORTANT: While the Remote Admin function allows remote access the Pre-boot menu, for security reasons the Remote Admin connection must be initiated by a person that is physically present at the printer.

This section describes the following Remote Admin items.

- [Required software and network connection](#)
- [Connect a remote connection](#)
- [Disconnect a remote connection](#)

Required software and network connection

Before using the Remote Admin feature, make sure that the telnet network protocol is installed, and enabled, on the remote telnet client computer.




NOTE: This section describes enabling and configuring the telnet feature for computers using a Windows® operating system.

HP recommends that the telnet client computer be a Windows based system, however, there are other operating systems that support the telnet network protocol. For information about enabling and configuring the telnet network protocol for other operating systems, see the owner's manual for that operating system.

Telnet client

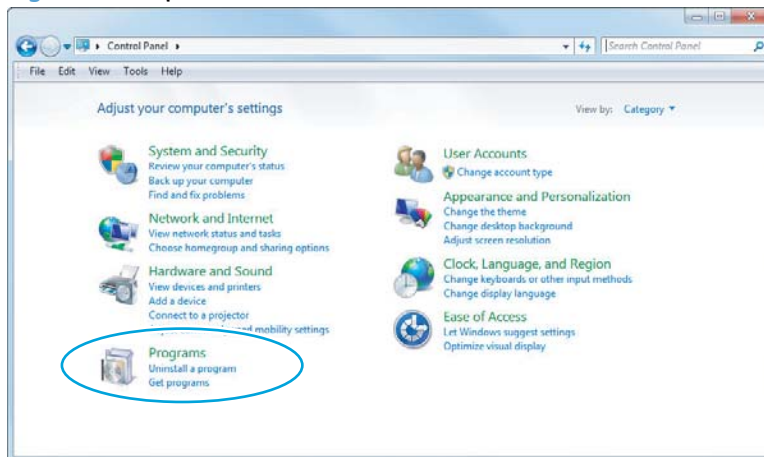
Enable the Windows telnet client

All computers using the Windows operating system have the telnet client installed, however, the telnet client function might not be enabled by default.

 **NOTE:** The figures and menus in this section are for the Windows 7 Enterprise® operating system. Screens and menu selections might vary slightly for other operating systems.

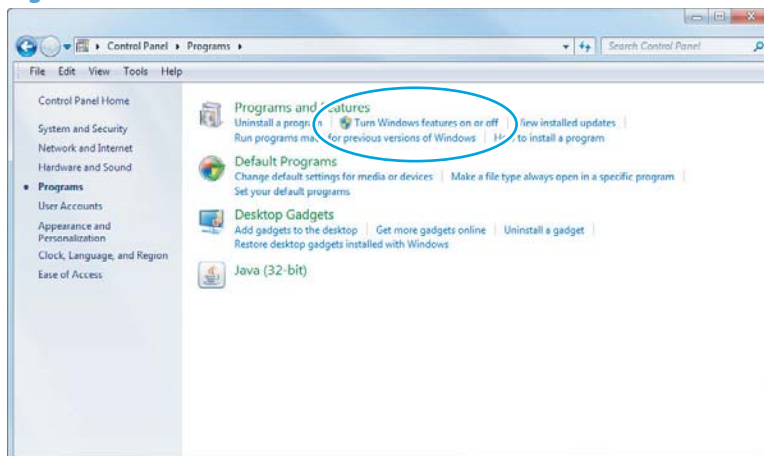
1. Use the **Start** menu to open the **Control Panel**, and then click the **Programs** item to select it.

Figure 2-34 Open the Control Panel



2. Click the **Turn Windows features on or off** item to select it.

Figure 2-35 Turn Windows features on or off



3. In the **Windows Features** box, scroll down to **Telnet Client**. If the check box is not checked, click the box to select it, and then click the **OK** button.


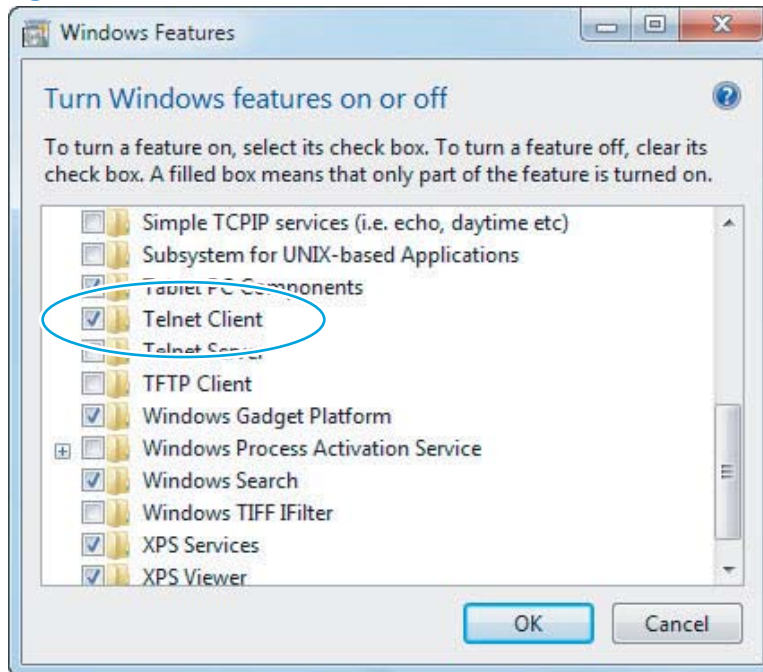
 **TIP:** If the check box is already checked then the telnet client function is already enabled. Click the **Cancel** button.

Figure 2-36 Enable the telnet client feature



Network connection


The remote telnet client computer must have direct network access to the printer for the Remote Admin function to operate. This means that the telnet client computer must be on the same network as the printer. The Remote Admin function cannot be accessed through a network firewall or other remote access network security programs.

If a private network is not accessible, ask the network administrator to set up a virtual private network (VPN) connection to the network.

Connect a remote connection

Start the telnet server function at the printer

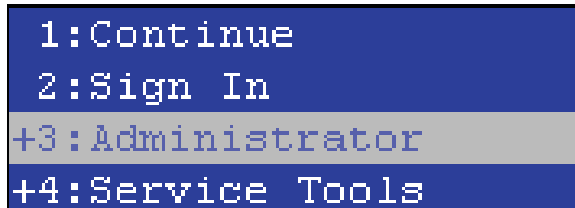
For security reasons the Remote Admin feature must be initiated by a person that is physically present at the printer. The following steps must be performed by a person that is physically present at the printer.

 **NOTE:** This person might need to sign in with an administrator or service password depending on how the printer is configured.

1. Turn the printer on.
2. The HP logo displays on the printer control panel. When a "1/8" with an underscore displays, touch the middle of the screen to open the **Pre-boot** menu.

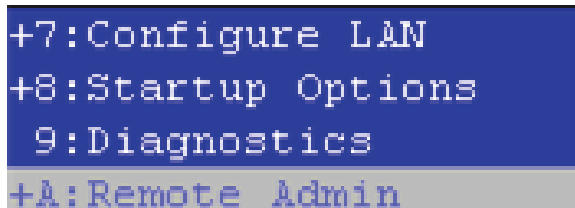
- Use the arrow buttons on the touchscreen to scroll down and highlight the **+3:Administrator** item, and then touch the **OK** button to select it.

Figure 2-37 Select the +3:Administrator item



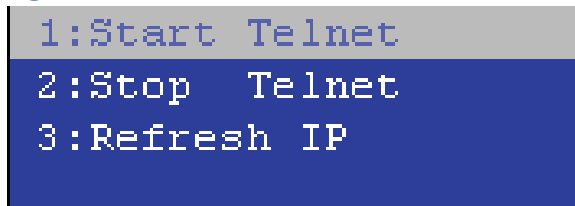
- Use the arrow buttons on the touchscreen to scroll down and highlight the **+A:Remote Admin** item, and then touch the **OK** button to select it.

Figure 2-38 Select the +A:Remote Admin item



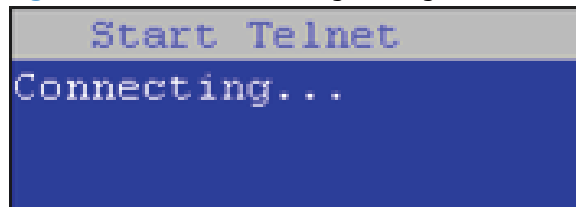
- Use the arrow buttons on the touchscreen to scroll down and highlight the **1:Start Telnet** item, and then touch the **OK** button to select it.

Figure 2-39 Select the 1:Start Telnet item



- Do one of the following
 - If a connecting message displays briefly, go to step [7](#).

Figure 2-40 Telnet connecting message



- If an error message displays, use the steps below to identify the problem.

Figure 2-41 Telnet error message

```
Start Telnet
Unable to connect
Contact network
administrator.
```

- a. The printer network cable is not correctly connected.
 - b. The BIOS LAN settings are incorrect.
 - The printer should be configured to use a static IP address, but is configured to use DHCP instead.
 - The printer is configured to use a static IP address, but the IP address is incorrect.
 - c. The printer is correctly configured to use DHCP, but the DHCP server is not turned on or is malfunctioning.
7. When the printer telnet server function is initialized, the following screen appears. Use the information on this screen to connect the remote telnet client computer to the printer.

 **NOTE:** The printer is now ready to receive remote telnet client commands.

- **IP:** The static or dynamically allocated IP address for the printer.
- **Port:** The standard telnet port (23).
- **Pin:** A randomly generated 4-digit personal identification number (PIN).

Figure 2-42 Telnet server function initialized

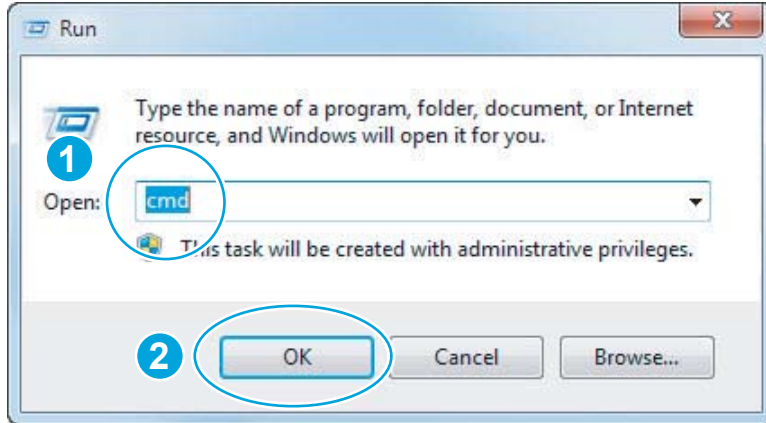
```
Start Telnet
IP: 16.88.109.66
Port: 23
Pin : 4031
```

Start the telnet client function at the remote computer

The following steps establish a Remote Admin connection from a remote computer to the printer.

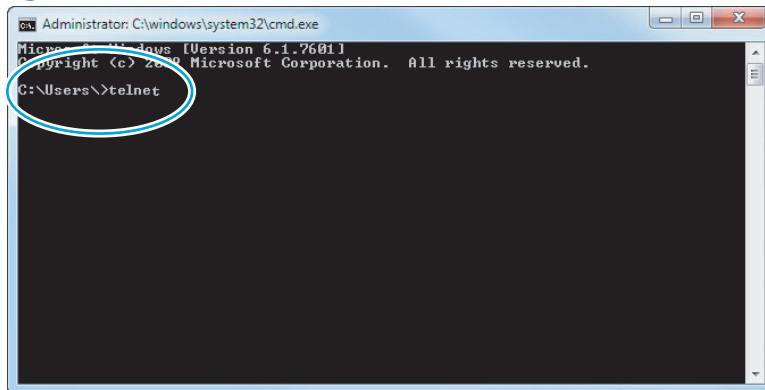
1. From the **Start** menu click **Run** to open a dialog box, type `cmd` in the **Open** field, and then click the **OK** button to open a Windows command window.

Figure 2-43 Open a command window




2. From any displayed directory, type `telnet` at the prompt, and then press the **Enter** key.

Figure 2-44 Start a telnet session



3. Type `<IP ADDRESS>` at the telnet prompt, and then press the **Enter** key.

 **NOTE:** For `<IP ADDRESS>`, substitute the IP address that was displayed in step 7 in [Start the telnet server function at the printer on page 197](#).


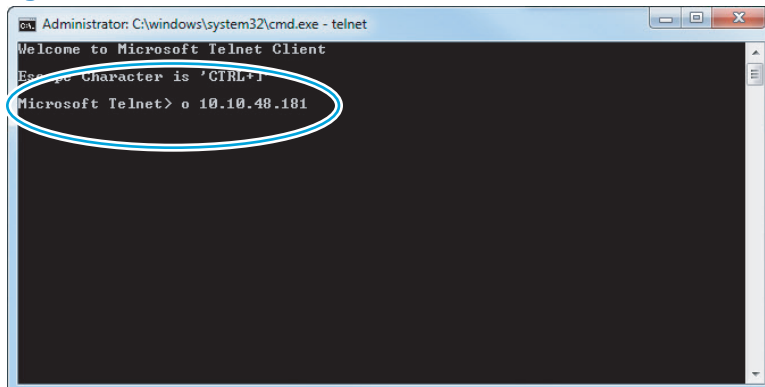
 **TIP:** If the telnet connection fails to establish a connection, the printer is probably behind a firewall or on a different network than the remote telnet client computer. See [Network connection on page 197](#).

Figure 2-45 Establish a telnet connection



4. Type the PIN that was displayed in step 7 in [Start the telnet server function at the printer on page 197](#) at the prompt, and then press the **Enter** key.


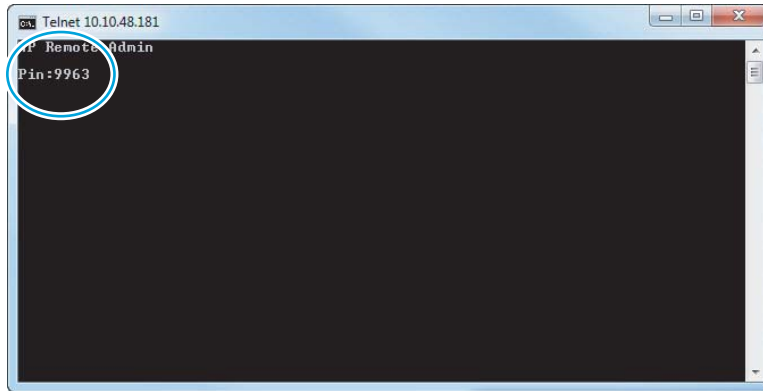

 **IMPORTANT:** Make sure to type the PIN correctly. After five incorrect PIN entries, the printer terminates the Remote Admin connection. The Remote Admin feature must be re-initiated at the printer. See [Start the telnet server function at the printer on page 197](#).

Figure 2-46 Enter the PIN

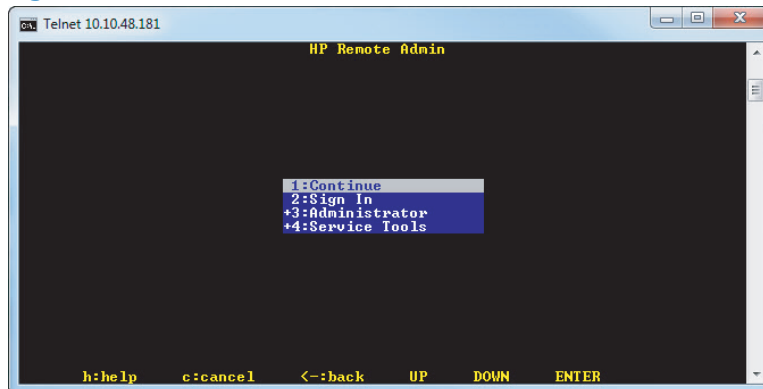


5. The following screen displays when the correct PIN is entered and the Remote Admin connection is successful. For information about the Pre-boot menu and options, see [Pre-boot menu options on page 185](#).

 **NOTE:** Because a Remote Admin connection is an unsecure telnet network protocol connection, the following Pre-boot menu items are disabled for the remote telnet client computer.


- The **+3:Administrator** menu **4:Change Password** item.
- The **+3:Administrator** menu **5:Clear Password** item.
- The **+3:Administrator** menu **6:Disk Manage** item.

Figure 2-47 Remote Admin window



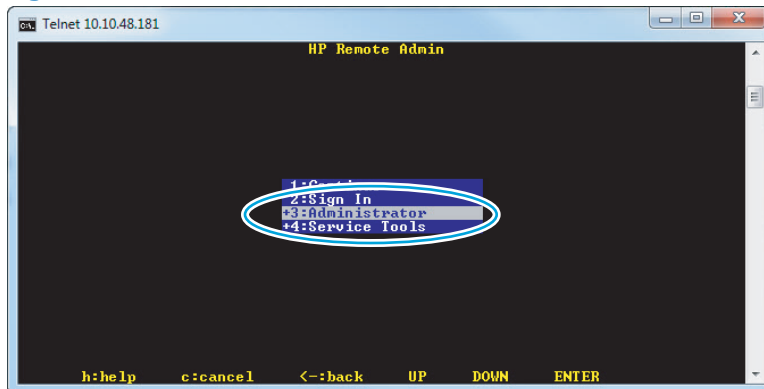
Disconnect a remote connection

The Remote Admin connection can be terminated from the printer control panel or the remote telnet client computer.

 **NOTE:** The following procedure describes terminating a Remote Admin connection from the remote telnet client computer.

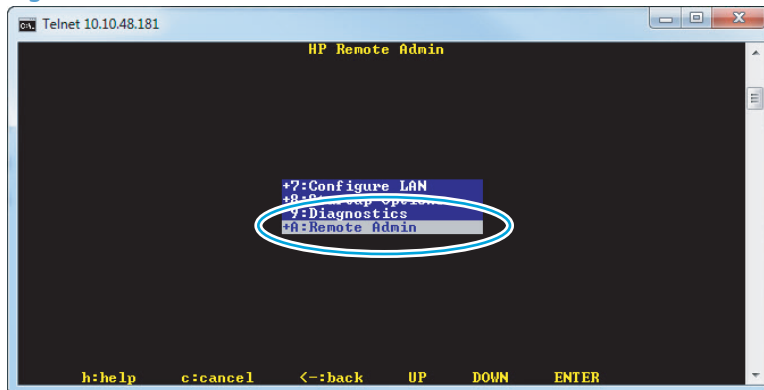
1. From the Pre-boot main menu, use the arrow buttons on the keyboard to scroll down to the **+3:Administrator** item, and then press the **Enter** key.

Figure 2-48 Access the administrator menu




2. Use the arrow buttons on the keyboard to scroll down to the **+A:Remote Admin** item, and then press the **Enter** key.

Figure 2-49 Access the remote admin menu

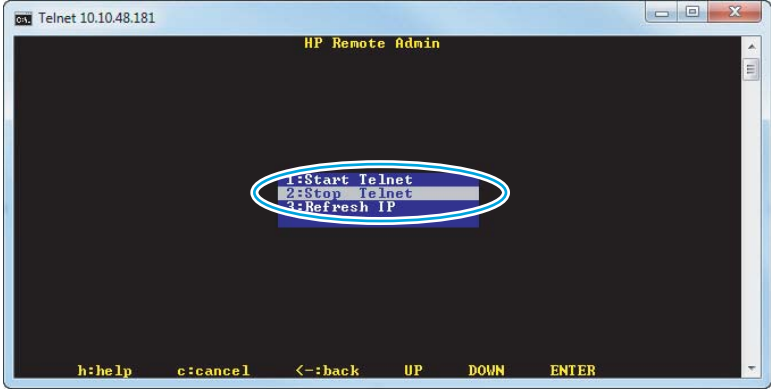


3. Use the arrow buttons on the keyboard to scroll down to the **2:Stop Telnet** item, and then press the **Enter** key. The Remote Admin connection between the printer and the remote telnet client computer terminates.


 **IMPORTANT:** The printer remains in the Pre-boot menu. Have the person that is physically present at the printer do the following:

- Touch the **Home** button to return to the main Pre-boot menu and highlight the **1:Continue** item, and then touch the **OK** button. The printer will continue to initialize.

Figure 2-50 Terminate the telnet connection



Control panel checks

 **NOTE:** The printer includes a diagnostic test mode for the touchscreen control panels.

- [Control-panel diagnostics](#)
- [Control panel diagnostic flowcharts](#)

Control-panel diagnostics

- [Touchscreen diagnostic mode](#)
- [Control-panel system diagnostics](#)

Touchscreen diagnostic mode

Use the diagnostics in this section to test the control-panel hardware and embedded firmware. These tests are useful for checking control-panel functionality independent of the printer control-panel system diagnostics. To test the control panel using the system diagnostics, see [Control-panel system diagnostics on page 209](#).

1. **556 only:** Locate the diagnostic-tests access button on the back of the control panel.

Figure 2-51 Diagnostic-tests access button (M556)



- 2. 556 only:** Press the diagnostics-access button. Repeatedly pressing the button cycles through the available diagnostics.

 **NOTE:** A pen, pencil, or other small blunt object is needed to press the button.


 **TIP:** When pressed, the button illuminates green.

Figure 2-52 Press the diagnostics-access button (556)



- 3. 586 only:** Locate the diagnostic-tests access button on the back of the control panel.

Figure 2-53 Diagnostic-tests access button (586)




4. **586 only:** Press the diagnostics-access button. Repeatedly pressing the button cycles through the available diagnostics.

Figure 2-54 Press the diagnostics-access button (586)



5. A yellow screen appears (after the first press of the button) indicating that the control-panel firmware is version A (a magenta screen indicates version B firmware).

 **NOTE:** If a different color appears on the screen, contact your global business unit (GBU) to determine the firmware version.


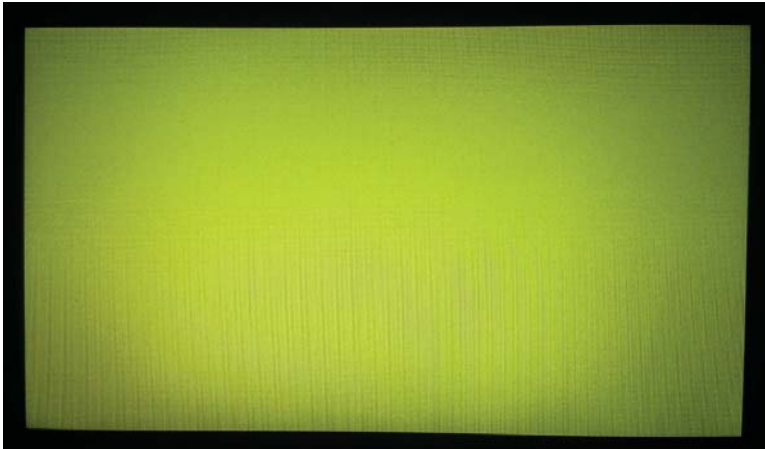
 **TIP:** After 4 seconds of inactivity, the diagnostic mode times out and is exited.

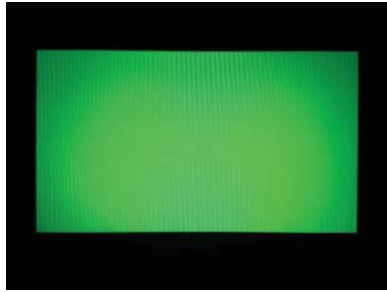
Figure 2-55 Control-panel version A yellow screen



6. Touch the screen to cycle the screen through the following:
 - A red screen.



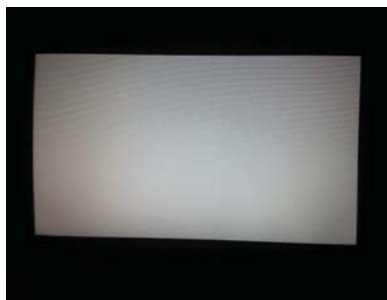
- A green screen.



- A blue screen.



- Five brightness levels of a white screen.



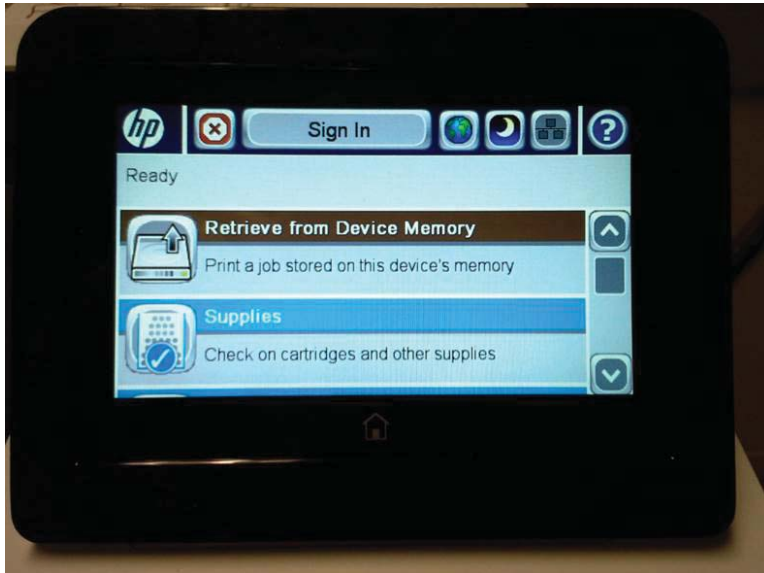
- A final black screen.

💡 **TIP:** When the final black screen displays, press the Home button to cycle through the diagnostic screens and test its functionality.



7. Pressing the diagnostic-tests button with the black screen displayed, exits the diagnostic mode.

Figure 2-56 Exit the diagnostic mode



Control-panel system diagnostics

Use the diagnostics in this section to test the control-panel hardware and display using the printer firmware system diagnostics.

- [Open the control-panel system diagnostic tests](#)
- [Screen test](#)
- [Touch test](#)
- [SoftKey test](#)
- [Backlight test](#)
- [Sound test](#)
- [Keyboard test \(M586z only\)](#)
- [Version](#)

Open the control-panel system diagnostic tests

Open the control-panel system diagnostic tests from a touchscreen control panel

1. Turn the printer power off, and then on again.
2. Touch the middle of the control-panel display when you see the 1/8 under the logo.

Figure 2-57 Open the Pre-boot menu



3. On the **Pre-boot** menu screen, use the following buttons to navigate the tests.

Figure 2-58 Pre-boot menu



Use this button to see more information about a selected item.



Use this button to scroll up through menu items.



Use this button to select a highlighted menu item.



Use this button to scroll down through menu items.



Use this button to go back to the previous menu.



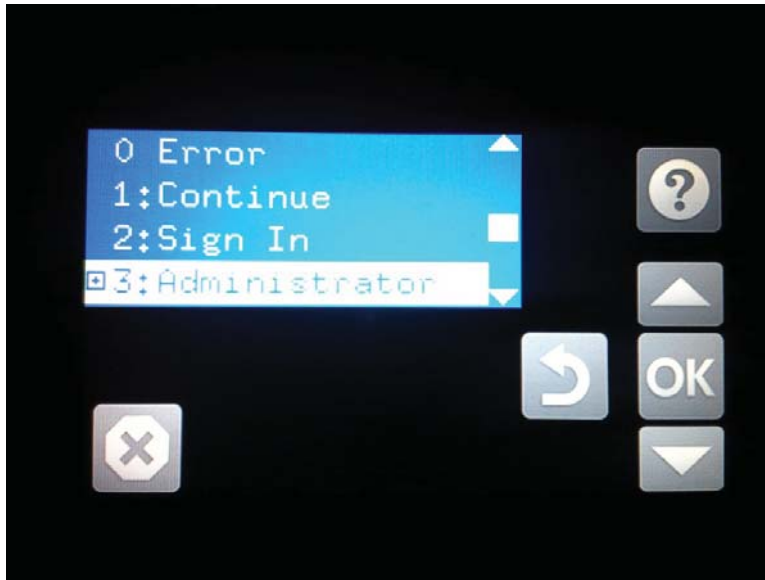
Not used.



Use this button to exit a diagnostic test.

4. Use the **down arrow ▼** button to scroll to **+3 Administration**, and then press the **OK** button to select it.

Figure 2-59 Access the administration menu



5. Use the **down arrow ▼** button to scroll to **+E CP Diagnostics**, and then press the **OK** button to select it.


 **NOTE:** An administrator password might be required to continue.

Figure 2-60 Access the diagnostics menu



Screen test

1. Open the control-panel system diagnostic tests. See [Open the control-panel system diagnostic tests on page 209](#).
2. With 1 Screen Test highlighted, press the OK button to select it.

Figure 2-61 Open the screen test



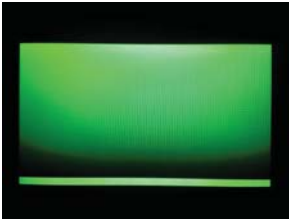
3. The blue vertical gradient screen appears.

Figure 2-62 Blue vertical gradient screen

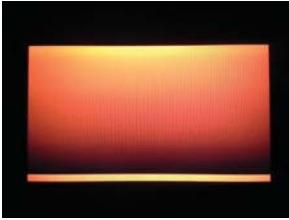


4. Touch the touchscreen to scroll through the remaining touchscreen test screens.

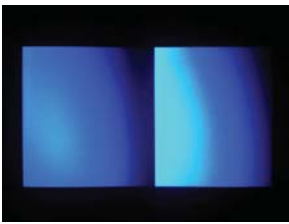
 **NOTE:** Touch the Home button to exit the test.



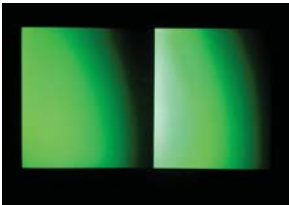
Green vertical gradient



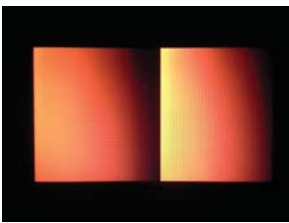
Red vertical gradient



Blue horizontal gradient



Green horizontal gradient



Red horizontal gradient



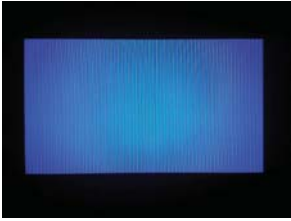
Blue with black horizontal interlaced



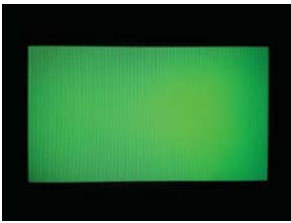
Green with black horizontal interlaced



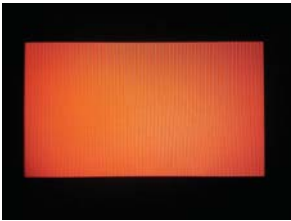
Red with black horizontal interlaced



Blue with black vertical interlaced



Green with black vertical interlaced



Red with black vertical interlaced



Black with white center



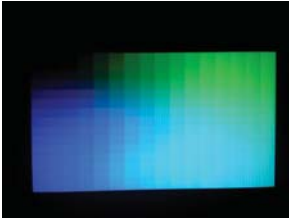
White with black center



Checkerboard



Multicolor stripes

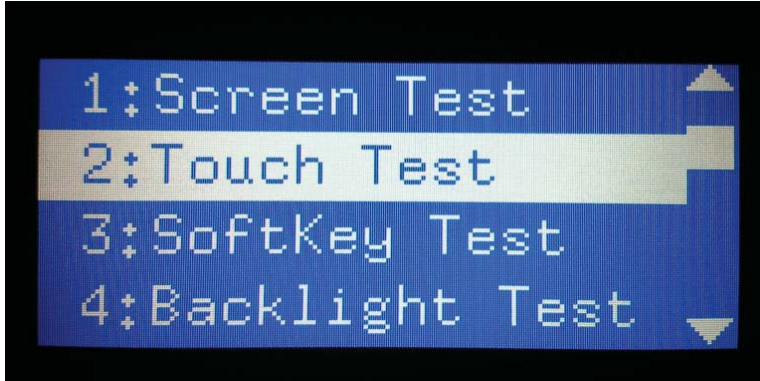


Blue green grid meshing

Touch test

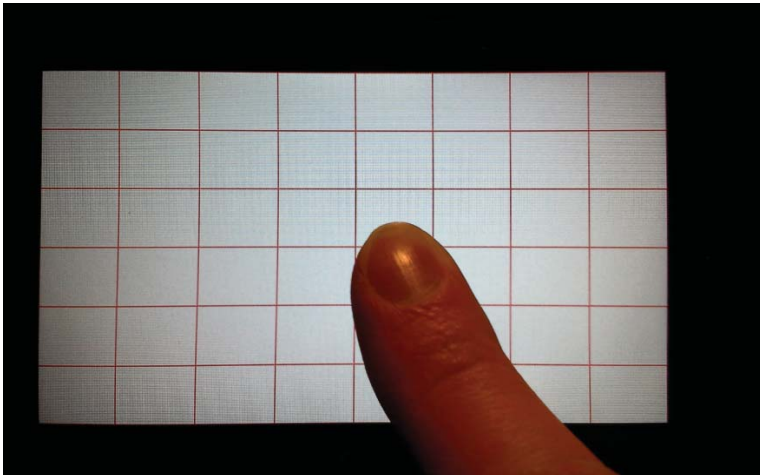
1. Open the control-panel system diagnostic tests. See [Open the control-panel system diagnostic tests on page 209](#).
2. Use the **down arrow ▼** button to scroll to **2 Touch Test**, and then press the **OK** button to select it.

Figure 2-63 Open the touch test



3. Use your finger to touch the white grid on the display.

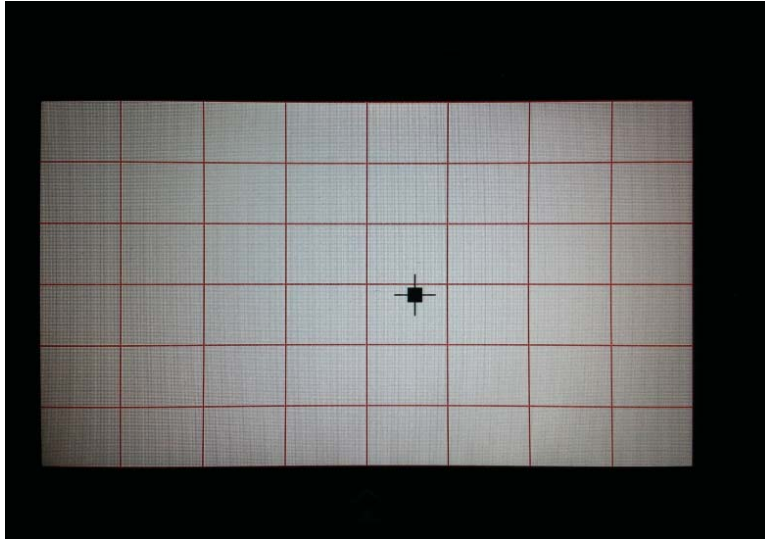
Figure 2-64 Touch the white grid



4. A mark appears on the grid where it was touched.

 **NOTE:** Touch the Home button to exit the test.

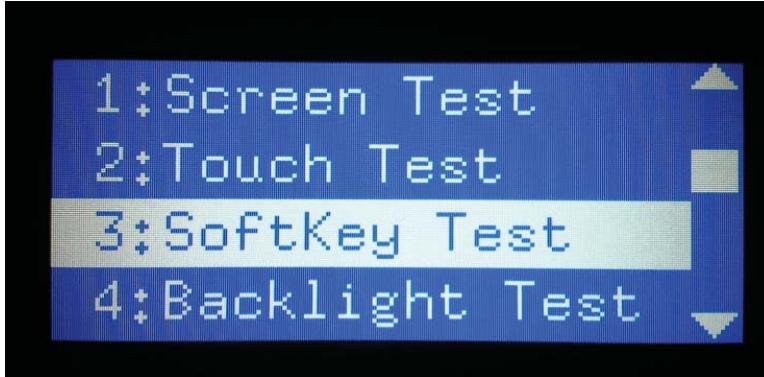
Figure 2-65 Verify the mark



SoftKey test

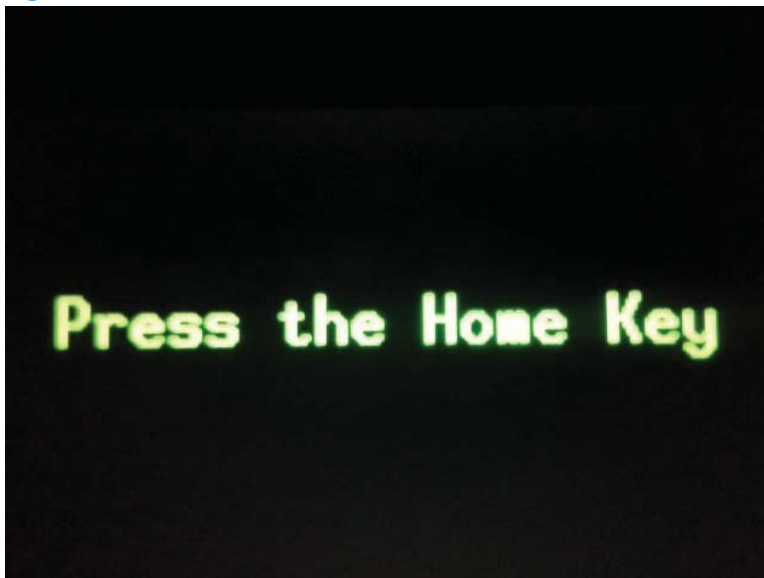
1. Open the control-panel system diagnostic tests. See [Open the control-panel system diagnostic tests on page 209](#).
2. Use the **down arrow ▼** button to scroll to **3 SoftKey Test**, and then press the **OK** button to select it.

Figure 2-66 Open the softkey test



3. When prompted, touch the Home button.

Figure 2-67 Touch the Home button



4. If the test is successful, the following screen appears on the display.


 **NOTE:** Touch the screen to exit the test.

Figure 2-68 Successful test



Backlight test

1. Open the control-panel system diagnostic tests. See [Open the control-panel system diagnostic tests on page 209](#).
2. Use the **down arrow ▼** button to scroll to **4 Backlight Test**, and then press the **OK** button to select it.
After selecting the **4 Backlight Test**, the screen automatically dims, and then returns to full brightness.


 **NOTE:** Touch any key to exit the test.

Figure 2-69 Open the backlight test



Sound test

1. Open the control-panel system diagnostic tests. See [Open the control-panel system diagnostic tests on page 209](#).
2. Use the **down arrow ▼** button to scroll to **5 Sound Test**, and then press the **OK** button to select it.

After selecting the **5 Sound Test**, the printer emits a series of audible tones.



 **NOTE:** Touch any key to exit the test.

Figure 2-70 Open the sound test



Keyboard test (M586z only)

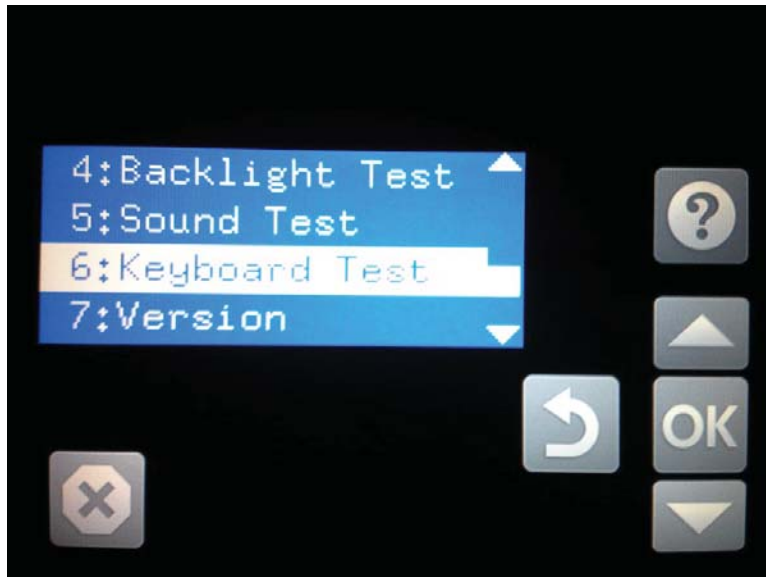
 **IMPORTANT:** The control-panel system diagnostic tests include a [6 Keyboard Test](#) item. This test is **not** valid for the 556 printer, even though this option is present in the control-panel system diagnostic tests menu.

If the [6 Keyboard Test](#) is opened on the 556 printer, the printer power must be turned off to exit the test.

HP does not recommend turning the printer power off during the control-panel system diagnostic tests.

1. Open the control-panel system diagnostic tests. See [Open the control-panel system diagnostic tests on page 209](#).
2. Use the [down arrow ▼](#) button to scroll to [6 Keyboard Test](#), and then press the [OK](#) button to select it.


Figure 2-71 Open the keyboard test




3. When prompted, touch the H key on the keyboard or the Home button to exit the test.

Version

1. Open the control-panel system diagnostic tests. See [Open the control-panel system diagnostic tests on page 209](#).
2. Use the **down arrow ▼** button to scroll to **7 Version**, and then press the **OK** button to select it.

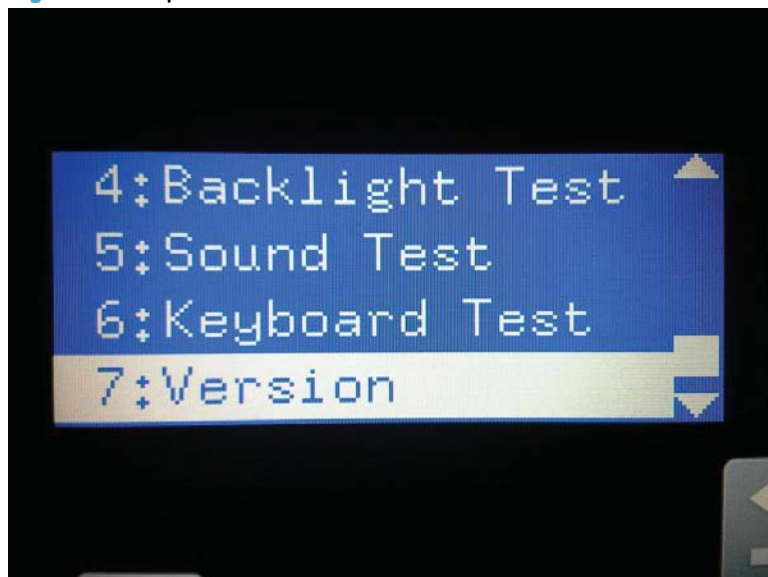
 **NOTE:** Touch any key to exit the test.

Select **7 Version** to view the following types of information:

 **NOTE:** The following types of information are for the control panel only, not the printer.

- Panel ID
- Hardware (version)
- Firmware (version)
- KB Hw (version)
- KB Firm (version)
- LCD Vendor
- Touch Controller Version

Figure 2-72 Open the sound test



Control panel diagnostic flowcharts

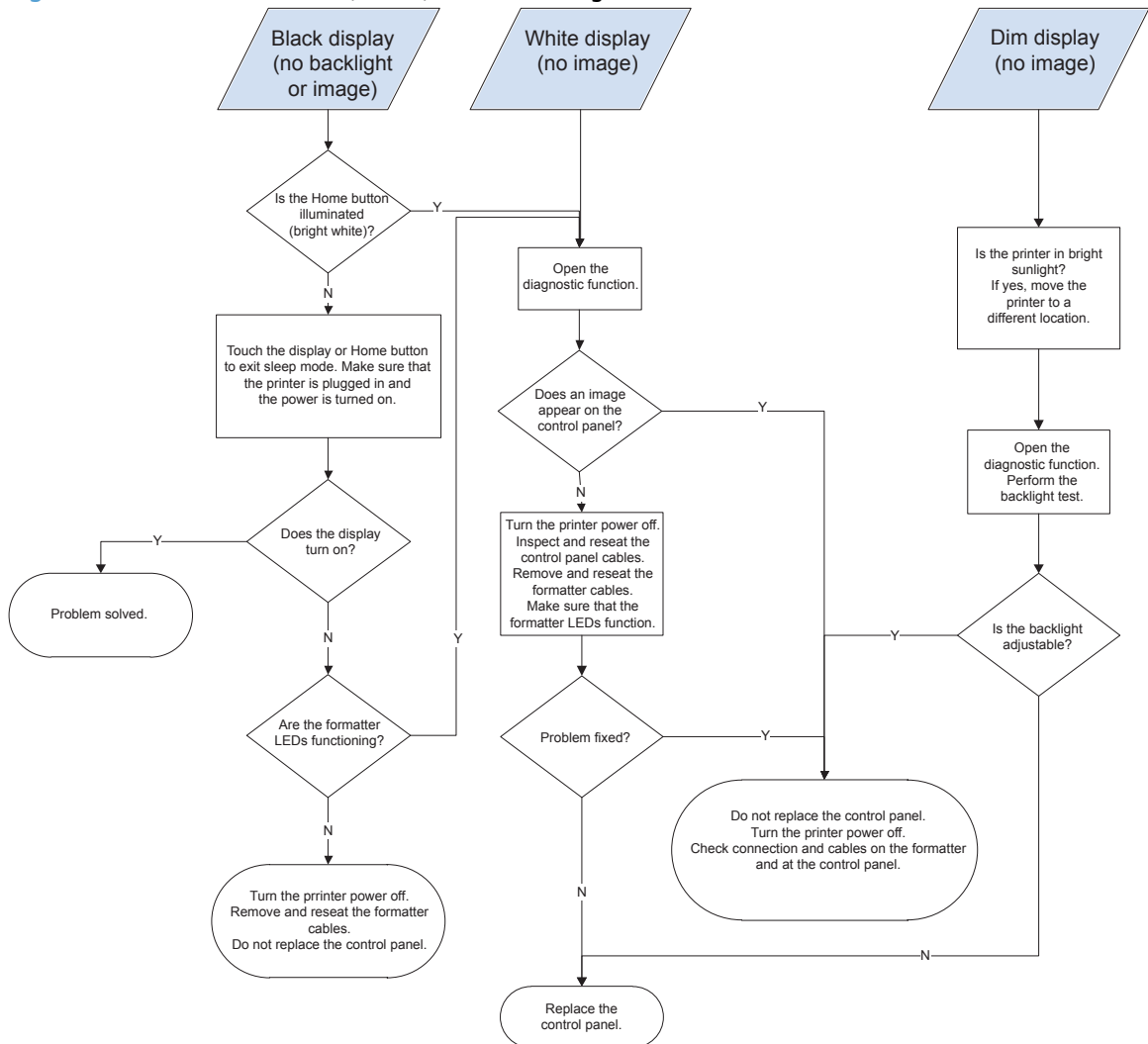
Use the flowcharts in this section to troubleshoot the following control panel problems.

- Touchscreen is blank, white, or dim (no image).
- Touchscreen is slow to respond or requires multiple presses to respond.
- Touchscreen has an unresponsive zone.
- No control panel sound.
- [Home](#) button is unresponsive.
- Hardware integration pocket (HIP) is not functioning (control panel functional).

Touchscreen black, white, or dim (no image)

 **NOTE:** To open the diagnostic function, press the button on the back of the control panel.

Figure 2-73 Touchscreen blank, white, or dim (no image)

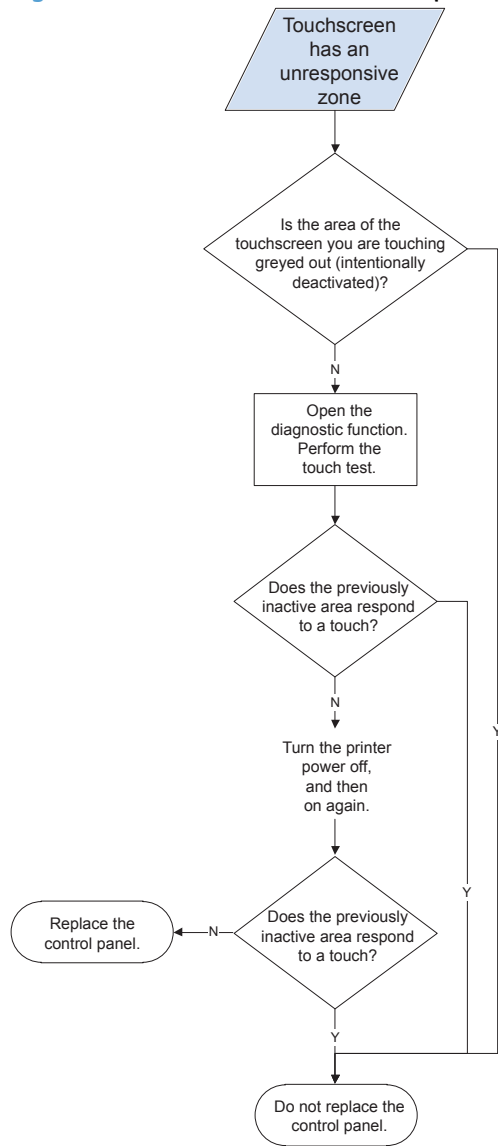


Touchscreen has an unresponsive zone



NOTE: To open the diagnostic function, press the button on the back of the control panel.

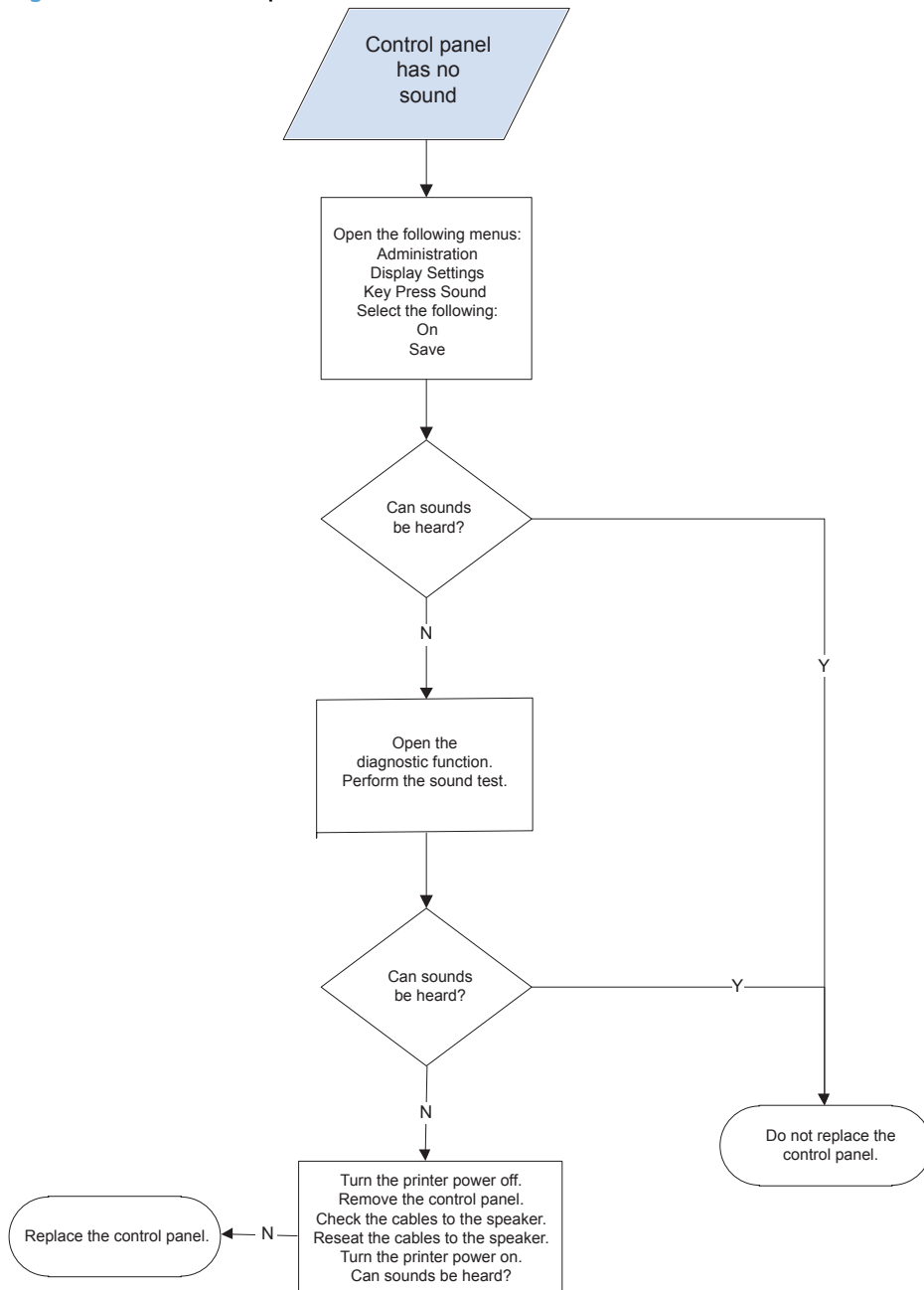
Figure 2-74 Touchscreen has an unresponsive zone



No control panel sound

 **NOTE:** To open the diagnostic function, press the button on the back of the control panel.

Figure 2-75 No control panel sound

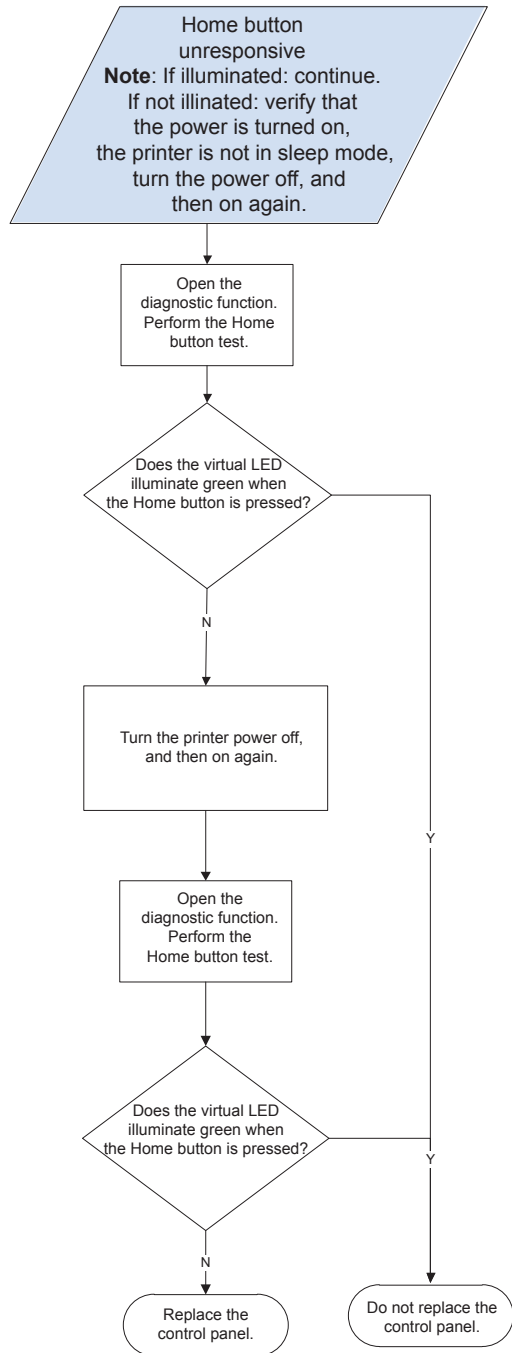


Home button is unresponsive



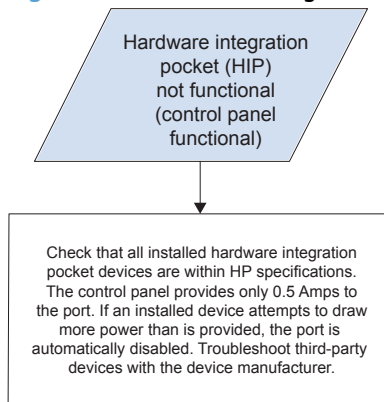
NOTE: To open the diagnostic function, press the button on the back of the control panel.

Figure 2-76 Home button is unresponsive



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

Figure 2-77 Hardware integration pocket (HIP) is not functioning (control panel functional)



Control-panel menus

Administration menu

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



NOTE: Where applicable, the 586 printer displays a [View](#) button.

- [Reports menu](#)
- [General Settings menu](#)
- [Copy Settings menu \(586 only\)](#)
- [Scan/Digital Send Settings menu \(586 only\)](#)
- [Fax Settings menu \(586 fax models only\)](#)
- [General Print Settings menu](#)
- [Default Print Options menu](#)
- [Display Settings menu](#)
- [Manage Supplies menu](#)
- [Manage Trays menu](#)
- [Network Settings menu](#)
- [Troubleshooting menu](#)

Reports menu

To display: At the printer control panel, select the [Administration](#) menu, and then select the [Reports](#) menu.

Table 2-13 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	Shows a summary of the current settings for the printer. This might be helpful if you plan to make changes and need a record of the present configuration.
	Configuration Page	Print View	Shows the printer settings and installed accessories.
	How to Connect Page	Print View	Shows the network information typically needed to connect the printer to a network.

Table 2-13 Reports menu (continued)

First level	Second level	Values	Description
	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 from the approximations provided.
	Usage Page	Print View	Shows a count of all paper sizes that have passed through the printer; lists whether they were simplex, duplex, monochrome, or color; and reports the page count.
	File Directory	Print View	Shows the file name and folder name for files that are stored in the printer memory.
	Web Services Status Page	Print View	Shows the detected Web Services for the printer.
	Color Usage Job Log	Print View	Shows color jobs completed by the printer.
Fax Reports (586 fax models only)	Fax Activity Log	Print View	Contains a list of the faxes that have been sent from or received by this printer.
	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 printer.
	Speed Dial List	Print View	Shows the speed dials that have been set up for this printer.
	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.

Table 2-13 Reports menu (continued)

First level	Second level	Values	Description
	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 printer control panel, select the [Administration](#) menu, and then select the [General Settings](#) menu.

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

Table 2-14 General Settings menu

First level	Second level	Third level	Fourth level	Values	Description
Date/Time Settings	Date/Time Format	Date Format		DD/MMM/YYYY	Use the Date/Time Settings menu to specify the date and time and to configure date/time settings.
				MMM/DD/YYYY	
		YYYY/MMM/DD			
		Time Format		12 hour (AM/PM)	Select the format that the printer uses to show the date and time, for example 12-hour format or 24-hour format.
			24 hours		
	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)	Use to configure the printer 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 this feature.
				Edit	
				Delete	
	Event Type				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.
	Time				Set the wake or sleep event time parameters.

Table 2-14 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Event Days	Select days of the week from a list.	Set the wake or sleep event day parameters.
	Sleep Timer Settings	Sleep/Auto Off After		Range: 1 to 110 minutes Default = 0 minutes	Set the number of minutes after which the printer enters Sleep or Auto Off mode. Touch the existing number to open the virtual keypad, and then increase or decrease the number of minutes.
		Wake/Auto On to These Events		All Events* Network port Power button only	

Table 2-14 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Print Quality	Image Registration	Adjust Tray <X>	X1 Shift Y1 Shift X2 Shift Y2 Shift	-5.00 mm to 5.00 mm	<p>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.</p> <p>The direction that is perpendicular to the way the paper passes through the printer 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.</p> <p>The direction that the paper feeds through the printer 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.</p> <p>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.</p>

Table 2-14 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Print Test Page		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.
Quiet Mode				Off*	Off: Normal printing.
				On	On: Produces less noise, but prints at half-speed.
Jam Recovery				Auto*	This printer provides a jam recovery feature that reprints jammed pages. Select one of the following options: Auto: The printer attempts to reprint jammed pages when sufficient memory is available. This is the default setting.
				Off	Off: The printer does not attempt to reprint jammed pages. Because no memory is used to store the most recent pages, performance is optimal.
				On	NOTE: When using this option, if the printer runs out of paper and the job is being printed on both sides, some pages can be lost. On: The printer always reprints jammed pages. Additional memory is allocated to store the last few pages printed. This might cause a decrease in overall performance.

Table 2-14 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Auto Recovery				Enabled Disabled*	The printer attempts to reprint jammed pages when sufficient memory is available. This is the default setting.
Manage Stored Jobs	General Stored Job Settings	Sort Stored Jobs By		Job Name* Date	This option allows you list the jobs either alphabetically or chronologically.
		Default Folder Name			Type the name for the stored jobs folder that is accessible to all users.
	Temporary Stored Job Settings	Retain Temporary Jobs After Reboot		Do not retain Personal jobs only All temporary jobs	Sets which temporary jobs will be retained in the event of a printer reboot.
		Delete Temporary Jobs After		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.
		Temporary Job Storage Limit		1-300 Default = 32	Configure global settings for jobs that are stored in the printer memory. The Temporary Job Storage Limit feature specifies the number of temporary jobs that can be stored on the printer. The maximum allowed value is 300.
Enable Retrieve from USB				Enabled Disabled*	Enables the printer to open a file from a USB drive.

Table 2-14 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				Restore Cancel	Use to restore all printer settings to their factory defaults.

Copy Settings menu (586 only)

To display: At the printer control panel, select the [Administration](#) menu, and then select the [Copy Settings](#) menu.

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

Table 2-15 Copy Settings menu (586)

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

Table 2-15 Copy Settings menu (586) (continued)

First level	Second level	Third level	Values	Description
		2-Sided Format	<p>Book-style</p> <p>Flip-style</p> <p>Book-style original; Flip-style copy</p> <p>Flip-style original; Book-style copy</p>	<p>If you are making two-sided copies, select a 2-sided format option.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>

Table 2-15 Copy Settings menu (586) (continued)

First level	Second level	Third level	Values	Description
Color/Black			Automatically detect*	Select how the copy should be printed.
			Color	Automatically detect: Prints color documents in color, and black and white documents in black and white. For mixed documents, the printer will determine whether to print in color or black and white.
			Black	Color: Prints documents in color. Black: Prints documents in black and white.
Collate			Collate on (Sets in page order)*	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.
			Collate off (Pages grouped)	
Reduce/Enlarge	Scaling		Auto*	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.
			100%	
			75%	
			50%	
			125%	
			150%	
			200%	
			Auto Include Margins	The printer reduces the image slightly to fit the entire scanned image within the printable area on the page.

Table 2-15 Copy Settings menu (586) (continued)

First level	Second level	Third level	Values	Description
Paper Selection			Manually feed Automatically select 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.
	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.
Optimize Text/Picture	Manually Adjust*		Optimize For slider	Use this setting to optimize the output for a particular type of content.

Table 2-15 Copy Settings menu (586) (continued)

First level	Second level	Third level	Values	Description
			Text	<p>Manually Adjust: Use to manually optimize the setting for each document.</p> <p>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.</p> <p>Photograph: Use for photographic prints.</p>
			Printed picture	
			Photograph	
Pages per Sheet			One (1) Two (2) Four (4)	<p>Copies multiple pages onto one sheet of paper.</p> <p>NOTE: Before using this screen, use the Content Orientation screen to describe the original document orientation.</p>
	Page Order		Right, then down Down, then right	<p>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.</p>
	Add Page Borders			<p>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.</p>
Original Size			Select from a list of sizes that the printer supports.	Describes the page size of the original document.
Booklet	Booklet Format		(Checkbox)	<p>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 printer arranges the pages in the correct order. For example, if the original document has eight pages, the printer prints pages 1 and 8 on the same sheet.</p>
		Borders on Each Page	(Checkbox)	<p>To print a border around each page, select the Borders on Each Page option.</p>

Table 2-15 Copy Settings menu (586) (continued)

First level	Second level	Third level	Values	Description
	Original Size		Select from a list of sizes that the printer supports.	Describes the page size of the original document.
	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.
	Paper Selection		Manually feed Automatic Tray 1: [Type], [Size] Tray <X>: [Type], [Size]	For the best color and image quality, select the appropriate paper type from the control panel menu or from the print driver.
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 printer 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 printer temporarily saves all the scanned images. After you have scanned all the pages for the job, touch the Finish option to finish the job.
Multi-feed Detection			Enabled* Disabled	This setting stops the scanning process if it detects multiple-page feeds through the document feeder.
2-sided ID Scan			ID Scan on ID Scan off*	ID Scan mode allows the user to scan both sides of an identification card onto one sheet.
Book Mode			Book Mode on Book Mode off*	This setting allows the user to scan pages from a book.

Scan/Digital Send Settings menu (586 only)

To display: At the printer 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 2-16 Scan/Digital Send Settings menu (586)

First level	Second level	Third level	Fourth level	Values	Description
E-mail Settings	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 multi-drive.
Save to Network Folder Options	NOTE: Email Settings only				
Save to USB Options					
NOTE: The same options are available for each of these features, except where noted.					The E-mail Setup Wizard feature configures the printer to send scanned images as email attachments. To open the printer HP Embedded Web Server and set up the email notification server, enter the printer IP address into a Web browser.

Table 2-16 Scan/Digital Send Settings menu (586) (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	Image Preview		Make optional* Require preview Disable preview	<p>Defines the default job options for each function. If you do not specify the job options when creating the job, the default options are used. For complete setup, go to the HP Embedded Web Server by typing the IP address of the printer into a Web browser.</p> <p>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 printer.</p> <p>Make optional: The feature is optional, depending on the user who is signed in.</p> <p>Require preview Previews are required for all users.</p> <p>Disable preview: Previews are disabled for all users.</p>
		Default File Name			<p>The printer 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 printer and a file with the default file name already exists, a number is appended to the file name, for example, [Untitled]001.</p>

Table 2-16 Scan/Digital Send Settings menu (586) (continued)

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

Table 2-16 Scan/Digital Send Settings menu (586) (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Optimize Text/Picture		Manually Adjust* Text Printed picture Photograph	<p>Use to optimize the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture.</p> <p>Manually Adjust: Use to manually optimize the setting for text or for pictures.</p> <p>Text: Use to optimize the text portion of the copy when text and/or pictures are on the original.</p> <p>Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books.</p> <p>Photograph: Best suited for making copies of printed pictures.</p>
		Output Quality		High (large file) Medium* Low (small file)	<p>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.</p>
		Original Sides		1-sided 2-sided	<p>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.</p>

Table 2-16 Scan/Digital Send Settings menu (586) (continued)

First level	Second level	Third level	Fourth level	Values	Description
			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	<p>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.</p> <p>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.</p>

Table 2-16 Scan/Digital Send Settings menu (586) (continued)

First level	Second level	Third level	Fourth level	Values	Description
		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.
		Content Orientation	Orientation	Auto Detect Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation.
			2-Sided Format	Book-style* Flip-style	Use to configure the default style for 2-sided print jobs. If the Book-style option is selected, the back side of the page is printed the right way up. This option is for print jobs that are bound along the left edge. If the Flip-style option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.

Table 2-16 Scan/Digital Send Settings menu (586) (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		Select 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 Print E-mail	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: Select to print the notification at this printer. E-mail: Select to receive the notification to an email account.
			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 2-16 Scan/Digital Send Settings menu (586) (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 Email Address , and then type the email address for the notification.
		Image Adjustment	Darkness		Use to improve the overall quality of the copy. Adjust the Darkness setting to increase or decrease the amount of white and black in the colors.
			Contrast		Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page.
			Background Cleanup		Adjust the Background Cleanup setting if you are having trouble copying a faint image.
			Sharpness		Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
			Automatic Tone		The printer automatically adjusts the Darkness , Contrast , and Background Cleanup settings to the most appropriate for the scanned document.
			Default		Select this to make the selected Image Adjustment setting the default value.

Table 2-16 Scan/Digital Send Settings menu (586) (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Job Build		Job Build off* Job Build on	Use to combine several original documents into one job. Also use to scan an original document that has more pages than the document feeder can accommodate at one time. The printer 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 Crop to paper	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.
		Multi-feed Detection		Disabled Enabled*	This setting stops the scanning process if it detects multiple-page feeds through the document feeder.
		Blank Page Suppression		Disabled* Enabled	Use to prevent blank pages in the original document from being included in the output document.

Table 2-16 Scan/Digital Send Settings menu (586) (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Create Multiple Files		Disabled* Enabled	<p>Enable this item to scan pages into separate files based on a specified page limit.</p> <p>A page is one side of an original document.</p> <p>JPEG and TIFF have a limit of one page per file.</p>
Digital Send Service Setup	Allow Usage of Digital Sending Software (DSS) Server			Disabled Enabled*	<p>Configure how the printer 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.</p> <p>Use the Allow Usage of Digital Sending Software (DSS) Server option to configure the printer to use HP DSS.</p>
	Allow Transfer to New Digital Sending Software (DSS) Server			Disabled Enabled*	<p>Use the Allow Transfer to New Digital Sending Software (DSS) Server option to specify whether DSS management of a printer is transferable to a different DSS.</p>

Fax Settings menu (586 fax models only)

To display: At the printer control panel, select the [Administration](#) menu, and then select the [Fax Settings](#) menu.

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

Table 2-17 Fax Settings menu (586 fax models only)

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 printer. 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 printer 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 2-17 Fax Settings menu (586 fax models only) (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 printer 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 printer sends or receives the error portion again.
			Fax Header	Prepend* Overlay	Use to prepend or overlay the fax header page.
			Fax Number Speed Dial Matching	Enabled Disabled*	Use this item to match the fax number that you type to numbers that are saved as a speed dial.

Table 2-17 Fax Settings menu (586 fax models only) (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Billing Codes	Enable Billing Codes	Off* On	<p>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.</p> <p>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 printer. The list is grouped by billing code and also shows fax details. This feature can be used for billing or usage tracking.</p>
			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 2-17 Fax Settings menu (586 fax models only) (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	Image Preview		Make optional* Require preview Disable preview	<p>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 printer.</p> <p>Make optional: The feature is optional, depending on the user who is signed in.</p> <p>Require preview Previews are required for all users.</p> <p>Disable preview: Previews are disabled for all users.</p>
		Resolution		Standard (100 x 200dpi)* Fine (200 x 200dpi) Superfine (300 x 300dpi)	<p>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.</p>
		Original Sides		1-sided* 2-sided	<p>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.</p>

Table 2-17 Fax Settings menu (586 fax models only) (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Orientation	Portrait* Landscape	<p>For some features to work correctly, you must specify the way the content of the original document is placed on the page.</p> <p>Portrait: This setting means the short edge of the page is along the top.</p> <p>Landscape: This setting means the long edge of the page is along the top.</p>
			2-Sided Format	Book-style* Flip-style	<p>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.</p> <p>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.</p>
		Notification		Do not notify* Notify when job completes Notify only if job fails	<p>Use to receive notification about the status of a sent document.</p> <p>Do not notify: Turns off this feature.</p> <p>Notify when job completes: Select to receive notification for this job only.</p> <p>Notify only if job fails: Select to receive notification only if the job is not sent successfully.</p>

Table 2-17 Fax Settings menu (586 fax models only) (continued)

First level	Second level	Third level	Fourth level	Values	Description
				Print E-mail	<p>Print: Select to print the notification at this printer.</p> <p>E-mail: Select to receive the notification in an email. Touch the text box following Email Address, and then enter the email address for the notification.</p>
			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	<p>For some features to work correctly, you must specify the way the content of the original document is placed on the page.</p> <p>Portrait: This setting means the short edge of the page is along the top.</p> <p>Landscape: This setting means the long edge of the page is along the top.</p>
			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 2-17 Fax Settings menu (586 fax models only) (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Original Size		Select from a list of sizes that the printer supports.	Use to describe the page size of the original document.
		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 printer automatically adjusts the Darkness , Contrast , and Background Cleanup settings to the most appropriate for the scanned document.
			Default		Select this to make the selected Image Adjustment setting the default value.

Table 2-17 Fax Settings menu (586 fax models only) (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Optimize Text/Picture	Manually Adjust*	Optimize For: Text Printed picture Photograph	<p>Optimizes the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture.</p> <p>Manually Adjust: Use to manually optimize the setting for text or for pictures.</p> <p>Text: Use to optimize the text portion of the copy where text and/or pictures are on the original.</p> <p>Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books.</p> <p>Photograph: Best suited for making copies of printed pictures.</p>
		Job Build		Job Build off* Job Build on	<p>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.</p>
		Multi-feed Detection		Disabled Enabled*	<p>Use this feature to prevent multiple pages being fed through the document feeder during document scans.</p>
		Blank Page Suppression		Disabled* Enabled	<p>Prevents blank pages in the original document from being included in the output document.</p>

Table 2-17 Fax Settings menu (586 fax models only) (continued)

First level	Second level	Third level	Fourth level	Values	Description
Fax Receive Settings	Fax Setup Wizard				<p>Configure settings for receiving faxes to the printer.</p> <p>Use the Fax Setup Wizard feature to set up options for faxing.</p> <p>NOTE: To set up LAN fax or Internet fax, use the HP Embedded Web Server. To open the HP Embedded Web Server, type the printer network address into a Web browser. To configure the fax features, select the Fax tab.</p>
	Fax Receive Setup	Ringer Volume		<p>Off</p> <p>Low*</p> <p>High</p>	Use to configure settings for receiving faxes.
		Rings To Answer		<p>Range: 1-6</p> <p>Default = 1</p>	
		Fax Receive Speed		<p>Fast*</p> <p>Medium</p> <p>Slow</p>	
		Ring Interval		<p>Range: 220-600 ms</p> <p>Default = 600 ms</p>	
		Ring Frequency		<p>Range: 1-200</p> <p>Default = 68hz</p>	
	Fax Printing Schedule			<p>Always store faxes</p> <p>Always print faxes*</p> <p>Use Fax Printing Schedule</p>	<p>If you have concerns about the security of private faxes, use this feature to store faxes rather than having them automatically print. Open the Fax Printing Schedule sub-menu, 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.</p>

Table 2-17 Fax Settings menu (586 fax models only) (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Schedule Touch this to set up a fax printing schedule if you selected the Use Fax Printing Schedule option.	+ (Add) Edit Delete (trash can)	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.
	Blocked Fax Numbers	Fax Number to Block			<p>The blocked fax list can contain up to 30 numbers. When the printer 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.</p> <p>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.</p> <p>To remove blocked numbers: Select a number and touch the Delete button to delete it from the blocked fax list.</p> <p>To clear all blocked numbers: Touch the Delete All button to clear all of the numbers from the blocked fax list.</p> <p>You also can use the Blocked Fax List report in the Information menu to view the list of the fax numbers that have been blocked on this printer.</p>

Table 2-17 Fax Settings menu (586 fax models only) (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 Email Address, and then 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		Touch this text field, provide the email address to which you want notifications sent, and then touch the OK button.
		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 printer receives.

Table 2-17 Fax Settings menu (586 fax models only) (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.
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	Use to select the type of fax jobs that you want forwarded.
		Fax Forwarding Number			Provide the forwarding phone number, and then touch the OK button.
Clear Fax Activity Log					Clears all events from the fax activity log.

General Print Settings menu

To display: At the printer 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 2-18 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 printer 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 printer encounters a PS error.
Print PDF Errors		Enabled Disabled*	Selects whether a PDF error page is printed when the printer encounters a PDF error.
Personality		Auto* PCL PS PDF	Configures the default print language or personality for the printer. Normally you should not change the printer language. If you change the setting to a specific printer language, the printer does not automatically switch from one language to another unless specific software commands are sent to it.
PCL	Form Length	Range: 5-128 Default = 60	Controls the PCL print-command options. PCL is a set of printer commands that HP developed to provide access to printer features. Use the Form Length feature to select the user-soft default vertical form length.

Table 2-18 General Print Settings menu (continued)

First level	Second level	Values	Description
	Orientation	Portrait* Landscape	Select the orientation that is most often used for copy or scan originals. Select the Portrait option if the short edge is at the top or select the Landscape option if the long edge is at the top.
	Font Source	Internal*	Selects the font source for the user-soft default font. The list of available options varies depending on the installed printer 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 printer 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.
	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.

Table 2-18 General Print Settings menu (continued)

First level	Second level	Values	Description
	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 printer 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 printer control panel, select the [Administration](#) menu, and then select the [Print Options](#) menu.

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

Table 2-19 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 printer Home screen.
Default Paper Size		Select from a list of sizes that the printer 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.
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.
Quality Level		General Office Professional* Presentation	Set the default print quality setting.

Display Settings menu

To display: At the printer control panel, select the [Administration](#) menu, and then select the [Display Settings](#) menu.

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

Table 2-20 Display Settings menu

First level	Second level	Values	Description
Display Brightness	Automatic*	The Manual setting uses a slider to manually control the display brightness.	Use to specify the intensity of the LCD control-panel display.
	Manual		
System Sound		On*	Use to specify whether you hear a sound when you touch the screen or press buttons on the control panel.
		Off	
Language Settings	Language	Select from a list of languages that the printer 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.
	586z only		
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*	Select whether to display or hide the date and time on the control panel Home screen.
586 only		Hide Date and Time	
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 printer 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 printer is signed out.

Table 2-20 Display Settings menu (continued)

First level	Second level	Values	Description
Clearable Warnings		On	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.
		Job*	
Continuable Events		Auto-continue (10 seconds)*	Use this option to configure the printer behavior when the printer 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 touch the OK button before continuing.
		Touch OK to continue	

Manage Supplies menu

To display: At the printer control panel, select the [Administration](#) menu, and then select the [Manage Supplies](#) menu.

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

Table 2-21 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 printer notifies you when an ink cartridge is very low.
		Very Low Settings		Stop Prompt to continue* Continue	Specifies how the printer notifies you when an ink cartridge is very low. Stop: The printer stops until you replace the cartridge. Prompt to continue: The printer stops and prompts you to replace the cartridge. You can acknowledge the prompt and continue printing. Continue: The printer alerts you that a 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 printer notifies you when an ink cartridge is very low. You can specify a different percentage for each color.

Table 2-21 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Very Low Settings		<p>Stop</p> <p>Prompt to continue*</p> <p>Continue</p>	<p>Specifies how the printer notifies you when an ink cartridge is very low.</p> <p>Stop: The printer stops until you replace the cartridge.</p> <p>Prompt to continue: The printer stops and prompts you to replace the cartridge. You can acknowledge the prompt and continue printing.</p> <p>Continue: The printer alerts you that a cartridge is very low, but it continues printing.</p>
	Ink Collection Unit	Low Threshold Settings		<p>1-100%</p> <p>Default = 10%</p>	<p>Set the estimated percentage at which the printer notifies you when the ink collection unit capacity is very low.</p>
		Very Low Settings		<p>Stop</p> <p>Prompt to continue*</p> <p>Continue</p>	<p>Specifies how the printer notifies you when the ink collection unit capacity is very low.</p> <p>Stop: The printer stops until you replace the unit.</p> <p>Prompt to continue: The printer stops and prompts you to replace the unit. You can acknowledge the prompt and continue printing.</p> <p>Continue: The printer alerts you that the ink collection unit capacity is very low, but it continues printing.</p>
	Document Feeder Kit 586 only	Low Threshold Settings		<p>1-100%</p> <p>Default = 10%</p>	<p>Set the percentage at which the printer notifies you when a document feeder kit is needed.</p>

Table 2-21 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Very Low Settings		Stop Prompt to continue* Continue	<p>Configure how the printer responds when the document feeder kit is reaching the end of its estimated life.</p> <p>Stop: The printer stops until you replace the document feeder kit.</p> <p>Prompt to continue: The printer stops and prompts you to replace the document feeder kit. You can acknowledge the prompt and continue printing.</p> <p>Continue: The printer alerts you that the document feeder kit is very low, but it continues printing.</p>
	Restrict Color Use			Enable color Disable color Color if allowed*	Use this feature to enable, restrict, or disable color printing or copying.
	Store Usage Data			On supplies Not on supplies	<p>The Store Usage Data menu provides a way to suppress the cartridges from storing most of the information gathered exclusively for the purpose of understanding the usage of the printer. Select the On supplies setting to store the data on the ink cartridge memory chip. Select the Not on supplies setting to suppress the information from being stored on the memory chip.</p>
	HP Cartridge Protection			Off* Protect cartridges	Enable or disable the HP Cartridge Protection feature.

Table 2-21 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 Ink Collection Unit			No Yes	Select the Yes option, and then touch the Save button if you have installed a new ink collection unit.
	New Document Feeder Kit			Reset Cancel	Touch the Reset button if you have installed a new document feeder kit.
	586 only				

Manage Trays menu

To display: At the printer control panel, select the **Administration** menu, and then select the **Manage Trays** menu.

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

Table 2-22 Manage Trays menu

First level	Values	Description
Use Requested Tray	Exclusively* First	Controls how the printer handles jobs that have specified a specific input tray. Two options are available: Exclusively: The printer 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 printer 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 printer pulls from the multipurpose tray instead. Two options are available: Always: A prompt always displays before using the multipurpose tray. Unless loaded: A message displays only if the multipurpose tray is empty.
Size/Type Prompt	Display* Do not display	Controls whether the tray configuration message displays whenever a tray is closed. Two options are available: Display: 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: 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 printer prompts the user to add paper to the tray that was initially selected.

Table 2-22 Manage Trays menu (continued)

First level	Values	Description
Alternative Letterhead Mode	Disabled*	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 printer for instructions about loading letterhead for printing on both sides. When this option is selected, the printer speed slows to the speed required for printing on both sides.
	Enabled	
Duplex Blank Pages	Auto*	Controls how the printer handles two-sided jobs (duplexing). Two options are available: Auto: Enables Smart Duplexing, which instructs the printer not to process blank pages. Yes: 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.
	Yes	
Override A4/Letter	Yes*	Prints on letter-size paper when an A4 job is sent but no A4-size paper is loaded in the printer (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.
	No	

Network Settings menu

To display: At the printer control panel, select the [Administration](#) menu, and then select the [Network Settings](#) menu.

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

Table 2-23 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 printer receives for a print job is interrupted, this setting indicates how long the printer waits before it reports that the job has failed.
Ethernet menu	See Table 2-24 Ethernet menu on page 279 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 2-24 Ethernet 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 printer. 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 2-24 Ethernet menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	IPv4 Settings	Config Method		Bootp DHCP* Auto IP Manual	<p>Specifies the method that TCP/IPv4 parameters will be configured on the HP Jetdirect print server.</p> <p>Bootp (Bootstrap Protocol): Use for automatic configuration from a BootP server.</p> <p>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.</p> <p>Auto IP: Use for automatic link-local IPv4 addressing. An address in the form 169.254.x.x is assigned automatically.</p> <p>If you set this option to the Manual setting, use the Manual Settings menu to configure TCP/IPv4 parameters.</p>
		Manual Settings	IP Address	Enter the address.	(Available only if the Config Method option is set to the Manual option.) Configure parameters directly from the printer control panel.
			Subnet Mask	Enter the address.	
			Default Gateway	Enter the address.	

Table 2-24 Ethernet 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 printers.
		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 2-24 Ethernet menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		DHCPV6 Policy		Router Specified Router Unavailable* Always	<p>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.</p> <p>Router Unavailable: If a router is not available, the print server should attempt to obtain its stateful configuration from a DHCPv6 server.</p> <p>Always: Whether a router is available, the print server always attempts to obtain its stateful configuration from a DHCPv6 server.</p>
		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.

Table 2-24 Ethernet menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Proxy Server			Select from a provided list.	<p>Specifies the proxy server to be used by embedded applications in the printer. 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.</p> <p>To specify a proxy server, enter its IPv4 address or fully-qualified domain name. The name can be up to 255 octets.</p> <p>For some networks, you might need to contact your Internet Service Provider (ISP) for the proxy server address.</p>
	Proxy Port			Default = 0080	<p>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.</p>
	Idle Timeout			Default = 0270	<p>The time period, in seconds, after which an idle TCP print data connection is closed (default is 270 seconds, 0 disables the timeout).</p>

Table 2-24 Ethernet 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.
	Announcement Agent			Enable* Disable	Enable remote configuration using a configuration server such as an HP Imaging and Printing Security Center.

Table 2-24 Ethernet menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Reset Security			Yes No*	<p>Specify whether the current security settings on the print server will be saved or reset to factory defaults.</p> <p>Yes: Security settings are reset to factory defaults.</p> <p>No: The current security settings are maintained.</p>
Diagnostics	Embedded Tests	LAN HW Test		Yes No*	<p>Provides tests to help diagnose network hardware or TCP/IP network connection problems.</p> <p>Embedded tests help to identify whether a network fault is internal or external to the printer. 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.</p> <p>Depending on the execution time, a selected test runs continuously until either the printer is turned off, or an error occurs and a diagnostic page is printed.</p> <p>CAUTION: Running this embedded test will erase your TCP/IP configuration.</p> <p>This test performs an internal loop-back test. An internal loop-back test will send and receive packets only on the internal network hardware. There are no external transmissions on your network.</p>

Table 2-24 Ethernet menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		HTTP Test		Yes No*	<p>This test checks operation of HTTP by retrieving predefined pages from the printer, and tests the HP Embedded Web Server.</p> <p>Select the Yes option to choose this test, or the No option to not choose it.</p>
		SNMP Test		Yes No*	<p>This test checks operation of SNMP communications by accessing predefined SNMP objects on the printer.</p> <p>Select the Yes option to choose this test, or the No option to not choose it.</p>
		Data Path Test		Yes No*	<p>This test helps to identify data path and corruption problems on an HP postscript level 3 emulation printer. It sends a predefined PS file to the printer, However, the test is paperless; the file will not print.</p> <p>Select the Yes option to choose this test, or the No option to not choose it.</p>
		Select All Tests		Yes No*	<p>Use this item to select all available embedded tests.</p> <p>Select the Yes option to choose all tests. Select the No option to select individual tests.</p>

Table 2-24 Ethernet 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 printer 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. It sends link-level packets to a remote network host, then waits for an appropriate response. Specify whether the target printer 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.
		Timeout		Default = 001	Specify the length of time, in seconds, to wait for a response from the remote host. The maximum is 100.

Table 2-24 Ethernet menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		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.
		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.

Table 2-24 Ethernet menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		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.
Link Speed				Auto*	<p>The link speed and communication mode of the print server must match the network. The available settings depend on the printer and installed print server. Select one of the following link configuration settings:</p> <p>CAUTION: If you change the link setting, network communications with the print server and network printer might be lost.</p> <p>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.)</p>

Table 2-24 Ethernet menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
				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.
				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 printer control panel, select the [Administration](#) menu, and then select the [Troubleshooting](#) menu.

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

Table 2-25 Troubleshooting menu

First level	Second level	Third level	Fourth level	Values	Description
Event Log				Print	Use to print a list of the 50 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				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.
586 fax models only					
		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.

Table 2-25 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Fax Log Entries			Standard* Detailed	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	Troubleshooting Guide			Print	Use to print a guide that can help you resolve problems with print quality.
	Diagnostics Page			Print	Use to print a diagnostics page. The page includes color swatches, diagnostic information, and calibration information.
	Print Quality Report			Print	Use to print a page that helps you resolve problems with print quality.
	Print Quality Service Pages			Print	Use to print more detailed, service-oriented pages that can help you resolve problems with print quality.
	Printhead Diagnostic Page			Print	Use to print a page that includes printhead statistics.
Diagnostic Tests	Paper Path Test	Print Test Page			
		Source Tray		Select from a list of the available trays.	Generates a test page for testing paper handling features. You can define the path that is used for the test in order to test specific paper paths.
		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 printer Home screen. The factory default setting is 1.

Table 2-25 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Scanner Tests			Sensors	
	586 only				
	Continuous Scan			2-sided	
	586 only				
Advanced Diagnostic Pages				<p>Engine Diagnostics Page</p> <p>Servo Calibration Page</p> <p>Technical Information Page</p> <p>Motor Status Page</p> <p>Data Path Page</p> <p>Pen Status Page</p> <p>Ink Delivery System Page</p> <p>Writing System Page</p> <p>Ink Supply Report</p> <p>Counters Report</p> <p>Hardware Status Page</p> <p>PWM Page</p>	<p>These pages provide more detailed information about certain components of the printer. Select the reports you want to print, and then touch the Print button.</p>
Cartridge Prime				<p>Continue</p> <p>Exit</p>	<p>HP authorized service providers know best how to interpret this information. HP recommends continuing only if you are working with a service provider.</p> <p>For more information about troubleshooting, go to www.hp.com/support/pagewidecolor556, www.hp.com/support/pagewidecolor586MFP.</p>

Table 2-25 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Advanced Jam Recover				Start Cancel	In some instances, paper jams can occur in an inaccessible part of the printer. First, clear any jams using the instructions on the control panel. If the jam reappears load Tray 1 with cardstock (letter size), and then select Start to begin Advanced Jam Recover .
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 printer that can help identify the cause of problems. NOTE: Send to E-mail is available only if Create device data file is selected.
Generate Debug Data				Start	
Retrieve Fax Diagnostic Data 586 fax models only	User Access Code Administrator Access Code Service Access Code NOTE: Use the printer personal identification number (PIN; 05058616) to log in to the printer.			Save to USB Cancel	Select Save to USB to create a zipped Fax Debug information file. NOTE: Make sure that a USB flash drive is installed in the USB port near the control panel. TIP: After servicing the printer, make sure to log off the printer from the Home screen.
Startup Cartridge Substitute				Disabled* Enabled	

Device Maintenance menu



NOTE: Where applicable, only the 586 printers display a **View** button.

Backup/Restore menu

To display: At the printer 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 2-26 Backup/Restore menu

First level	Second level	Third level	Values	Description
Back up Data	Back up Data		Back up Now Cancel	Initiate a backup.
Restore Data			Insert a USB flash drive that contains the backup file in to the USB port near the control panel.	Restore data from an external source.

Calibrate/Cleaning menu

To display: At the printer control panel, select the **Device Maintenance** menu, and then select the **Calibrate/Cleaning** menu.

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

Table 2-27 Calibrate/Cleaning menu

First level	Second level	Values	Description
Printhead Cleaning		Continue Exit	Run this process to clean the printhead.
Resolve Ink Smear		Start Cancel	Run this process to send a cleaning page through the paper path.
Advanced Calibration Support			Use this submenu to use more advanced cleaning and calibration processes.
HP authorized service providers know best how to interpret this information. HP recommends continuing only if you are working with a service provider.			
For more information about troubleshooting, go to www.hp.com/support/pagewidecolor556 , www.hp.com/support/pagewidecolor586MFP .			
	Printhead Cleaning Level 1	Continue	These two items perform a more thorough, detailed cleaning of the printhead. Each one runs for approximately 15 minutes.
	Printhead Cleaning Level 2	Exit	
	Pen Align	Continue Exit	This process calibrates the pen unit.
	Color Density Calibration	Continue Exit	Adjusts the print nozzles to have a uniform level of ink delivery and color intensity.
	Print Quality Report	Print Cancel	Produce a print quality report.

Table 2-27 Calibrate/Cleaning menu (continued)

First level	Second level	Values	Description
Calibrate Scanner 586 only			Touch Next to calibrate the printer scanner. Messages on the control-panel display will lead you through the calibration process.
Clean Rollers		Reset Cancel	The 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 586 only	Low Threshold Settings Very Low Settings	Range: 0-100% Default = 10% Stop Prompt to continue* Continue	Configure cleaning settings for the document feeder. Configure the printer action if the document feeder requires cleaning.

USB Firmware Upgrade menu

To display: At the printer 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.

HP FutureSmart Level menu

To display: At the printer control panel, select the [Device Maintenance](#) menu, and then select the [HP FutureSmart Level](#) menu.

Select an HP FutureSmart level that is available in the currently installed firmware, and then select [Change](#).

Service menu

To display: At the printer control panel, select the [Device Maintenance](#) menu, and then select the [Service](#) menu.

The [Service](#) menu is locked and requires a personal identification number (PIN) for access. This menu is intended for use by authorized service personnel. See the Service mode function section in the printer troubleshooting manual.

Print quality troubleshooting guide



NOTE: Use the procedures in this section to resolve most print-quality issues (for example, streaks or fading, missing black or other colors, blurred or fuzzy text, and ink streaks or smears). Try the following solutions in the order presented. When one of the solutions resolves the issue, there is no need to continue with the other procedures. If the issue only occurs on copy print jobs (586 only), go to [Copy quality troubleshooting \(586\) on page 309](#).

- [Printer pre-checks](#)
- [Product specific image defects](#)

Printer pre-checks

- [Check the control-panel display](#)
- [Inspect the ink cartridge for damage](#)
- [Check the print settings](#)
- [Printer driver considerations](#)
- [Cleaning procedures](#)
- [Resolve Ink Smears](#)
- [Copy quality troubleshooting \(586\)](#)

Check the control-panel display

Check the control panel to see if it displays any messages that indicate that a supply needs to be replaced or that a supply is in the very low condition. If it does, replace the supply item.

Inspect the ink cartridge for damage

1. Remove the ink cartridge from the product and verify that there is no debris in the cartridge path.
2. Examine the metal connector of the ink cartridge.

CAUTION: Do not touch the metal connector that is on the edge of the cartridge. Fingerprints on the metal connector can cause print-quality problems.

NOTE: If there are scratches or other damage on the metal connector, replace the ink cartridge.

If an ink cartridge must be replaced, look on the cartridge or print the Supplies Status Page to find the part number for the correct original HP ink cartridge.

Figure 2-78 Examine the ink cartridge



3. If the metal connector does not appear to be damaged, push the cartridge gently back into its slot until it locks in place. Print a few pages to see if the problem has resolved.

Refilled or remanufactured ink cartridges

HP does not recommend using non-HP supplies, either new or remanufactured. Because they are not HP products, HP cannot control the design or quality of non-HP supplies. If you are using a refilled or remanufactured ink cartridge and are not satisfied with the print quality, replace the cartridge with an original HP cartridge.

NOTE: If you replace a non-HP ink cartridge with an original HP ink cartridge, the printhead will still contain non-HP ink. Until the printhead is depleted of that ink and is supplied with ink from the newly installed original HP ink cartridge, the print defect might remain. Depleting the ink may require printing as many as several thousand pages of normal text.

Verify type of paper in use

The type of paper used can contribute to print-quality problems, such as those listed below:

- The printing is too light or seems faded in areas.
- Specks of ink are on the printed pages.
- Ink is smearing on the printed pages.

- Printed characters seem malformed.
- Printed pages are curled.

Check the type of paper used. Always use a paper type and weight that this printer supports. In addition, follow these guidelines when selecting paper:

- Use paper that is of good quality and free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, voids, staples, and curled or bent edges.
- Use paper that has not been previously printed on.
- Use paper that is designed for use in inkjet printers.
- Use paper that is not too rough. Using smoother paper generally results in better print quality.
- Check that the paper type is correctly set for the trays in use and that the paper type for the trays matches the paper type selected in the driver.



NOTE: Based on HP internal testing using a range of plain papers, HP highly recommends using papers with the ColorLok logo for this product. For more information, go to <http://www.hp.com/go/printpermanence>.



Check the print settings

Print quality settings

1. Open the print dialog box in the software program being used to send the print job.
2. Select your printer, and then click **Properties**. The printer properties dialog box opens.
3. Choose the correct tab to find the settings.
4. Review the following options, and then make changes if necessary.
 - Paper size: Make sure that the selected option matches the selected paper size.
 - Paper type: If one of the options matches required paper type exactly, select that option.
 - Print quality: If the print-quality of the print job is unacceptable, increase the print quality. To print more quickly, decrease the print quality.
5. Click **OK**, and then click **OK** again to start the print job.

Print in grayscale setting

1. Open the print dialog box in the software program being used to send the print job.
2. Select your printer, and then click **Properties**. The printer properties dialog box opens.
3. Choose the correct tab to find the color settings either under **Features** or **Color**.
4. Under **Color Options**, make sure that **Print in grayscale** is *not* selected.
5. Click **OK**, and then click **OK** again to start the print job.



NOTE: If these steps resolved the issue, further troubleshooting is not required. If the issue persists, continue to [Printer driver considerations on page 304](#).

Printer driver considerations

Use the printer driver that best meets the print job. Use a different printer driver if the printed page has unexpected lines in graphics, missing text, missing graphics, incorrect formatting, or substituted fonts. The available print drivers are listed in this section.

HP PCL 6 driver

- This driver is provided as the default driver. This driver is automatically installed when using the printer CD.
- This driver is recommended for all Windows environments.
- This driver provides the overall best speed, print quality, and product-feature support for most users, and was developed to align with the Windows Graphic Device Interface (GDI) for the best speed in Windows environments.
- This driver might not be fully compatible with third-party and custom software programs that are based on PCL 5.
- Download this drive at <http://www.hp.com/go/upd>.

HP UPD PS driver

- This driver is recommended for printing with Adobe software programs or with other highly graphics-intensive software programs
- This drive provides support for printing from postscript emulation needs, or for postscript flash font support.
- Download this drive at <http://www.hp.com/go/upd>.

HP UPD PCL5

- This driver is recommended for general office printing in Windows environments.
- This driver is compatible with previous PCL versions and older HP Inkjet printers.
- This driver is the best choice for printing from third-party or custom software programs.
- This drive is the best choice when operating with mixed environments that require the product to be set to PCL 5 (UNIX, Linux, mainframe).
- This driver is designed for use in corporate Windows environments to provide a single driver for use with multiple printer models. This driver is preferred when printing to multiple printer models from a mobile Windows computer.
- Download this drive at <http://www.hp.com/go/upd>.

HP UPD PCL6

- This driver is recommended for printing in all Windows environments.
- This driver provides the overall best speed, print quality, and product-feature support for most users, and was developed to align with the Windows Graphic Device Interface (GDI) for the best speed in Windows environments.

- This driver might not be fully compatible with third-party and custom software programs that are based on PCL 5.
- Download this driver at <http://www.hp.com/go/upd>.

Cleaning procedures

Print-quality report

These steps involve printing a page with color bars to identify print-quality issues.

1. At the printer control panel, open the following menus:
 - **Administration**
 - **Troubleshooting**
 - **Print Quality Pages**
2. Select **Print Quality Report**, and then select **Print** to print the report.

This page contains four bands of color, which are divided into the groups as indicated in the figure below. By examining each group, you can determine if the problem is due to a particular ink cartridge.


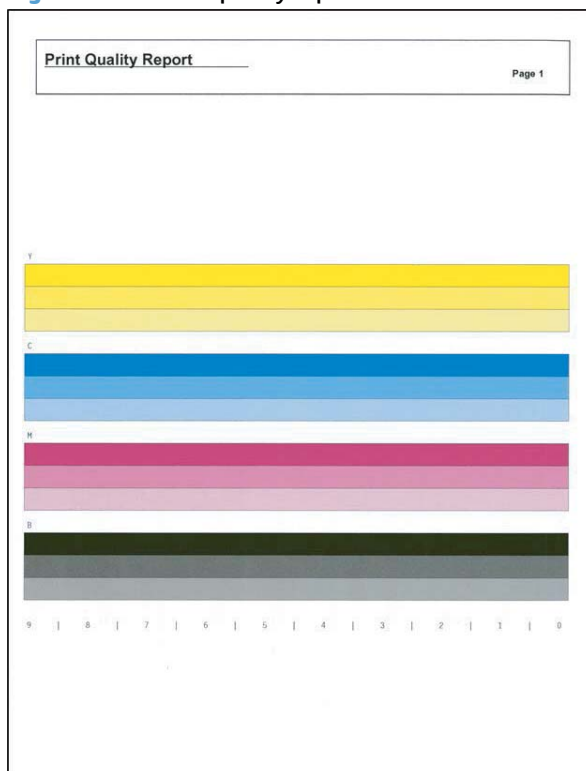
 **NOTE:** Each bar has three distinct shades, but otherwise the color should vary minimally across the bar. If any major defects appear in one or more color bars, clean the printhead as explained below. If all the color bars show little or no streaking, go to [Resolve Ink Smears on page 308](#).

Figure 2-79 Print-quality report



Printhead Cleaning

Use this procedure to clean the printhead.

1. Load plain letter-size or A4-size paper in the tray.
2. At the printer control panel, open the following menus:

- **Device Maintenance**
- **Calibration/Cleaning**

3. Select **Printhead Cleaning**, and then select **Continue** to begin the cleaning process.

There are three levels of cleaning in sequence. At end of each level, the printer will produce a print quality report. If streaks appear in any of the color bars, continue with next level of cleaning.

 **TIP:** Number each of the print quality report pages in order to track print-quality improvement.

Resolve Ink Smears

Use the following procedure to clean ink smears.

1. When prompted, load plain letter-size or A4-size paper.
2. At the printer control panel, open the following menus:
 - **Device Maintenance**
 - **Calibration/Cleaning**
3. Select **Resolve Ink Smear**, and then select **Start** to begin the cleaning process.

A page feeds through the product slowly. Retain this page for further print-quality evaluation.



NOTE: If the error persists, contact your Global Business Unit (GBU).

Copy quality troubleshooting (586)

Use the following procedures to resolve quality defects that occur only on copies.

Speckles on copies from the scan bed

Create a color copy, then rotate the original 180 degrees (do not turn the paper over) and make a second copy. Compare the location of the defect on the two copies.

- If the defect appears in a different position, clean the scanner glass using a soft, lint-free cloth that has been moistened with warm water. Dry the glass with a dry, soft, lint-free cloth.
- If the defect appears in the same location on both copies, contact your Global Business Unit (GBU).

Lines on copies from the automatic document feeder

Mark the corner of a blank sheet of paper and create a copy from the automatic document feeder.

Place the copy on the glass with the mark in the same orientation as the original. Make sure the page is even with the upper-left corner of the scan area.

The defect lines on the page should indicate the location of debris on the thin strip of glass to the left of the scan area. Use a fingernail or blunt object to loosen debris, and then clean the glass using a soft, lint-free cloth that has been moistened with warm water. Dry the glass with a dry, soft, lint-free cloth.

Product specific image defects



NOTE: The image defects described in this section are printer-specific image defects.


- [Major functionalities for PQ troubleshooting](#)
- [Image-quality defects](#)

Major functionalities for PQ troubleshooting

- [Print-quality report](#)
- [Printhead diagnostic page](#)
- [Engine diagnostic page](#)
- [Printhead cleaning](#)
- [Ink Slider](#)
- [Advanced cleaning](#)

Print-quality report

Print quality report is a useful page which shows different density fill bar chart with four colors. There are numbers below the bar to indicate the printhead numbering, and the line in between indicates the printhead boundary.

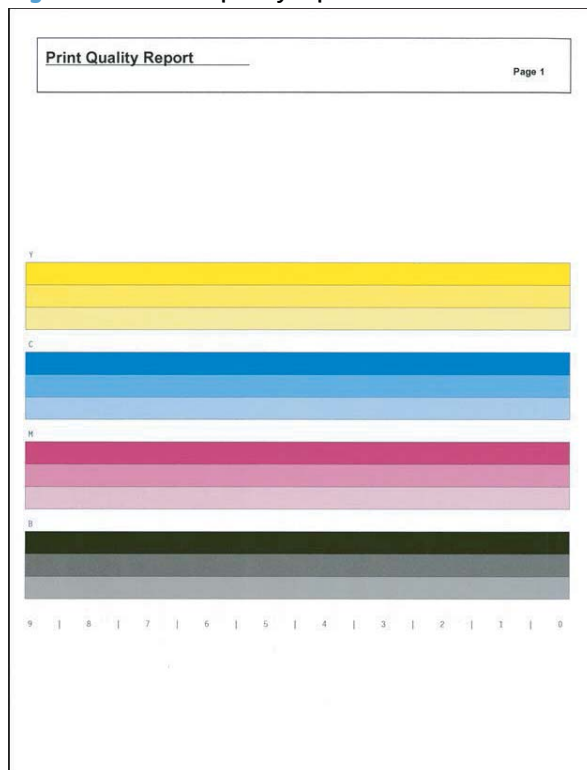
 **NOTE:** Depending on the FW revision, the line to indicate the printhead boundary might not be accurate, it could be off as much as 5 mm (0.19 in) for printhead zero. There is a CR 119406 to fix this issue, and the fix has been implemented into version 2307823 for 23r, and has been merged into version 2454949 for 24s.

Print the print-quality report (v01)

1. At the printer control panel, open the following menus:
 - **Administration**
 - **Troubleshooting**
 - **Print Quality Pages**
2. Select **Print Quality Report**, and then select **Print** to print the report.

This page contains four bands of color, which are divided into the groups as indicated in the figure below. By examining each group, you can determine if the problem is due to a particular ink cartridge.

Figure 2-80 Print-quality report



Print the print-quality report (v02)

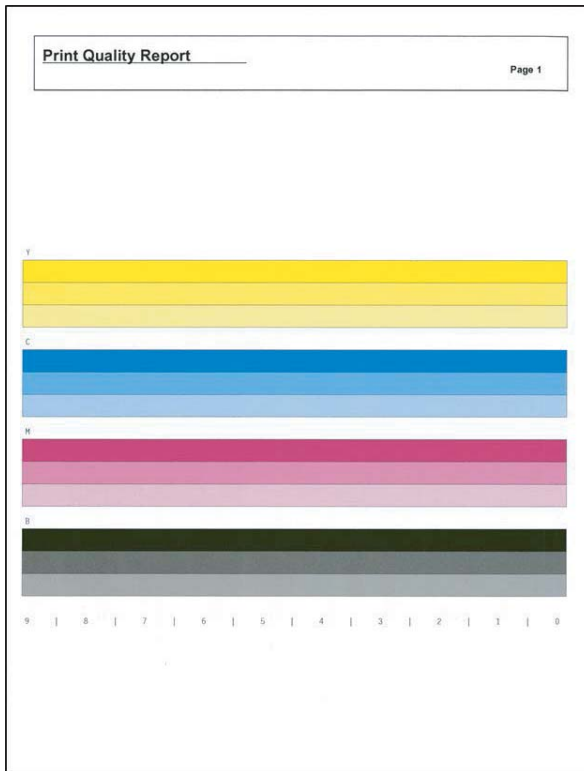
1. At the printer control panel, open the following menus:

- **Device maintenance**
- **Calibration/Cleaning**
- **Advanced Calibration Support**

2. Select **Print Quality Report**, and then select **Print** to print the report.


This page contains four bands of color, which are divided into the groups as indicated in the figure below. By examining each group, you can determine if the problem is due to a particular ink cartridge.

Figure 2-81 Print-quality report



Printhead diagnostic page

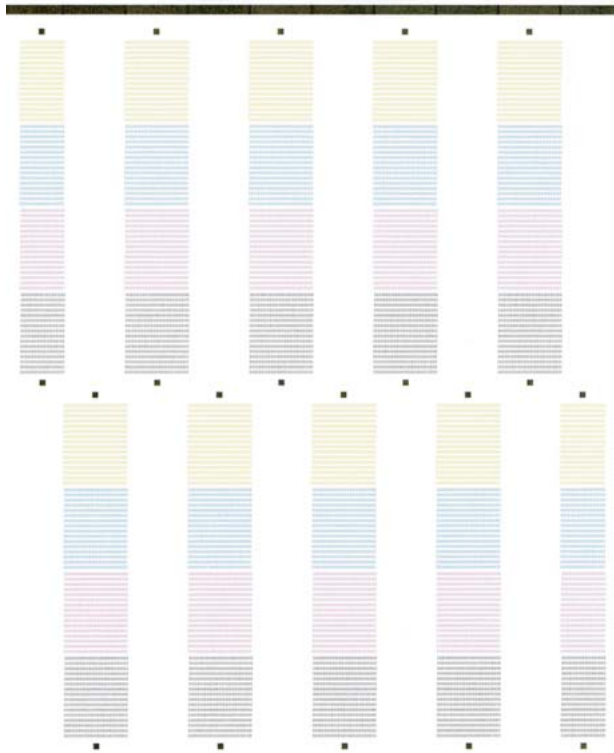
The printhead diagnostic page is a useful page to determine the health of the print bar. There are ten blocks of lines, and each block represents a printhead, and each line corresponds to a nozzle. Check whether the line is missing or being misdirected, to evaluate the health of the print bar.

 **NOTE:** Depending on the FW revision, the line to indicate the printhead boundary might not be accurate, it could be off as much as 5 mm (0.19 in) for printhead zero. There is a CR 119406 to fix this issue, and the fix has been implemented into version 2307823 for 23r, and has been merged into version 2454949 for 24s.

Print the print head diagnostic page

1. At the printer control panel, open the following menus:
 - **Administration**
 - **Troubleshooting**
 - **Print Quality Pages**
 - **Advanced Print Quality Pages**
2. Select **Continue**, and then select **Printhead Diagnostic Page** to print the page.

Figure 2-82 Printhead diagnostic page



Engine diagnostic page

The engine diagnostic page is a useful page to get engine related information. It has information from various portions of the other advanced diagnostic pages.



NOTE: Some information on this page is encrypted.

- Generic product information (for example, the printer serial number and page counts)
- Ink delivery system information (for example, the cartridge serial number and whether original HP ink is installed)
- Print bar related information (for example, printhead register values)

Print the engine diagnostic page

1. At the printer control panel, open the following menus:
 - **Administration**
 - **Troubleshooting**
 - **Print Quality Pages**
 - **Advanced Print Quality Pages**

Identify non-HP ink

Use the engine diagnostic page to determine if non-HP ink is used in the printer.

- Look at engine diagnostic page lines 58 and 59. If these lines are **0000** genuine HP ink is installed. If a **1** shows up (in any color), genuine HP ink is **not** installed.

Figure 2-85 Identify non-HP ink

Pxxxx	Sxxxxx	Ixxxxxxxxxxx	Yellow	Magenta	Cyan	Black
43.	xxxxxxx:					
44.	xxxxxxxx	xxxxxxxx	xxxx:			
45.	xxxxxxx	Sxxxx:	Ready	Ready	Ready	Ready
46.	xxxxxxx	Sxxxx	Sxxxx:			
			-1	-1	-1	-1
47.	xxxxxxxxxxxx	Nxxxx:	Hx 981A	Hx 981A	Hx 981A	Hx 981A
48.	Sxxxx	Sxxxx	Oxx:	0	0	0
49.	Sxxxx	Sxxxx	Txx:	0	0	0
50.	Hxxx/xxxx	Axxxx	Bxx:	0	0	0
51.	Sxxxx	Ux	Cxxxx:	0	0	0
52.	Sxxxx	Nxxxx:	374666925	374673999	374670584	377129891
54.	Hxx.	Dxxx:	09/17/2015	09/17/2015	09/17/2015	10/01/2015
55.	xxxxxxx	Ixxxx:	--	--	--	--
56.	xxxxxxxx	Bxxx:	09/17/2018	09/17/2018	09/17/2018	10/01/2018
57.	Cx:		1	3	3	3
58.	Nxxx:		0	0	0	0
59.	Ixx:		0	0	0	0
60.	Rx:	03,050,0000	Rc:	20921		

- Look at engine diagnostic page (page 2; Rxxxxxxx section). Refer to the number in the blue box in the figure below.

If the first digit of this value contains any value larger than 7 (such as 8, 9, a, b, c, etc.), then non-HP ink or a non-HP supply was used (at some time) in this printer.

Figure 2-86 Identify non-HP supplies

Rxxxxxxxx										
1	63	66	62	63	5f	5f	5b	61	5e	69
2	2a	29	2b	2a	2b	2c	2d	2b	2c	29
3	d7	db	c6	d5	cd	d3	c3	c9	c6	dc
4	24	4	4	14	14	14	14	4	4	14
5	45	46	46	45	44	45	44	46	44	46
6	1e	1e	1e	1e	1e	1e	1e	1e	1e	1e
7	c8	c8	c8	c8	c8	c8	c8	c8	c8	c8
8	0	3	0	0	3	0	3	0	2	3

Printhead cleaning

The printhead cleaning function includes several levels. This function can be automatic, or the user can choose a specific level.

There are three automatic printhead cleaning levels (starting with level 1). When a cleaning level is completed a print quality report prints, and then the user can choose to continue to next level or not (depending on what print-quality report shows).

Automatic printhead cleaning levels

- Level 1 and level 2 service the printhead to clear clogged nozzles (for example, by wiping the print bar and spitting ink). Level 2 utilizes more wipes to service the print bar than level 1 (and more spitting of ink, especially with colors).
- Level 3 is calibration (including pen alignment calibration and color density calibration).

Automatic printhead cleaning

- ▲ At the printer control panel, open the following menus:
 - **Device Maintenance**
 - **Calibration/Cleaning**
 - **Printhead cleaning**

Manually choose a printhead cleaning level

1. At the printer control panel, open the following menus:
 - **Device maintenance**
 - **Calibration/Cleaning**
 - **Advanced Calibration Support**
2. Select **Continue**, and then select from a list of printhead cleaning options.
 - **Printhead Cleaning Level 1**
 - **Printhead Cleaning Level 2**
 - **Pen Align**
 - **Color Density Calibration**
 - **Print Quality Report**

Ink Slider

The Ink slider is a printer driver feature. The following drivers support the ink slider feature:

- UPD 6.0.1 (not a public release, special request needed) and 6.1.0 and later
- 586 and 556 discrete driver
- 586 and 556 UPD driver

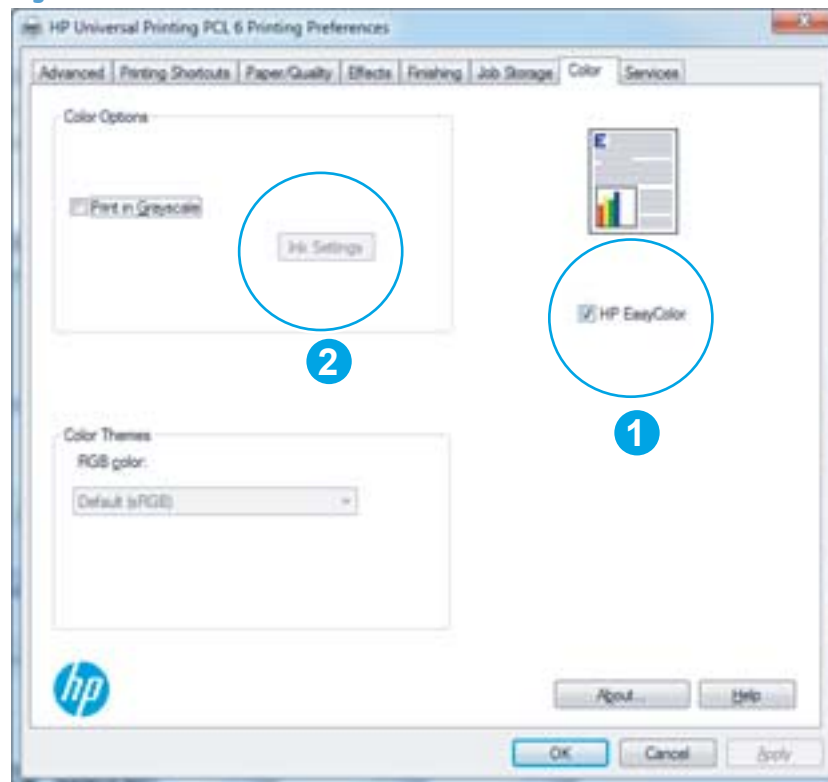


NOTE: The X585 and X555 discrete driver does not support the ink slider feature.

Open the print driver ink slider

1. Open the printer driver dialog box, select the color tab, and then do the following:
 - a. Uncheck the **HP EasyColor** check box.
 - b. Click the **Ink Settings** button.

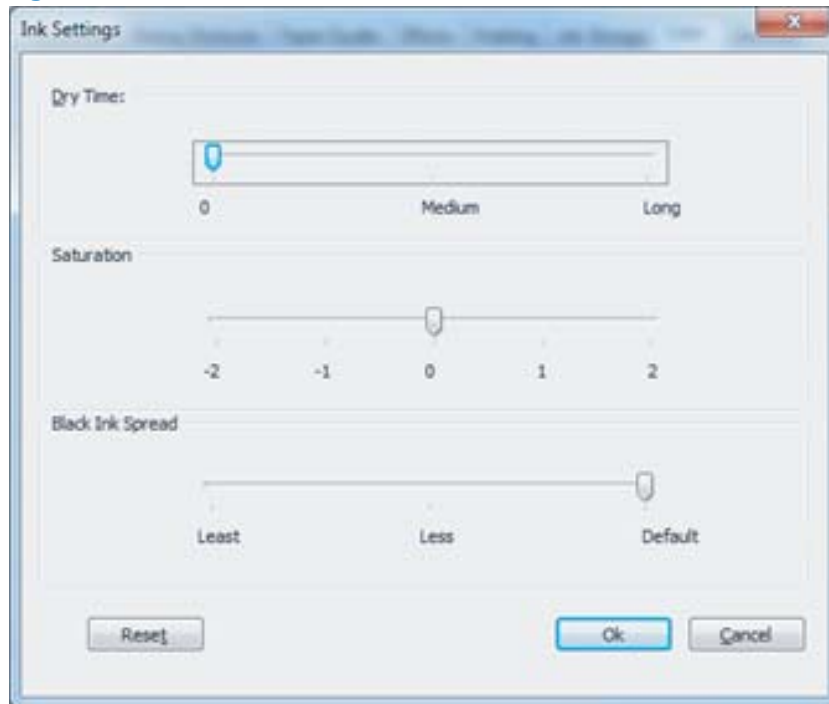
Figure 2-87 Access the ink slider



2. The following settings can be configured using the ink slider:
 - **Dry Time:** Use this item to adjust the print speed (default is 0). Move the slider to the right to slow down the print speed.
 - **Saturation:** Use this item to adjust the amount of ink used (default is 0). Move the slider to the right (1 and 2) to increase the amount of ink used. Move the slider to the left (-1 and -2) to decrease the amount of ink used.

- Click the **Black Ink Spread**: Use this item to improve bleed through when black and other colors are printing in certain patterns.

Figure 2-88 Ink slider



Advanced cleaning



NOTE: To use the advanced cleaning feature, order the advanced cleaning kit (part number CN459–67006).

The advanced cleaning feature attempts to remove any fiber or contaminants stuck to the shim underneath the print bar.

Open the advanced cleaning feature

1. At the printer control panel, open the following menus:
 - **Device maintenance**
 - **Calibration/Cleaning**
 - **Advanced Cleaning**
2. Follow the instruction provided in the advanced cleaning kit (CN459–67006) to install the kit in the tray, and to perform the advanced cleaning procedure.

Image-quality defects

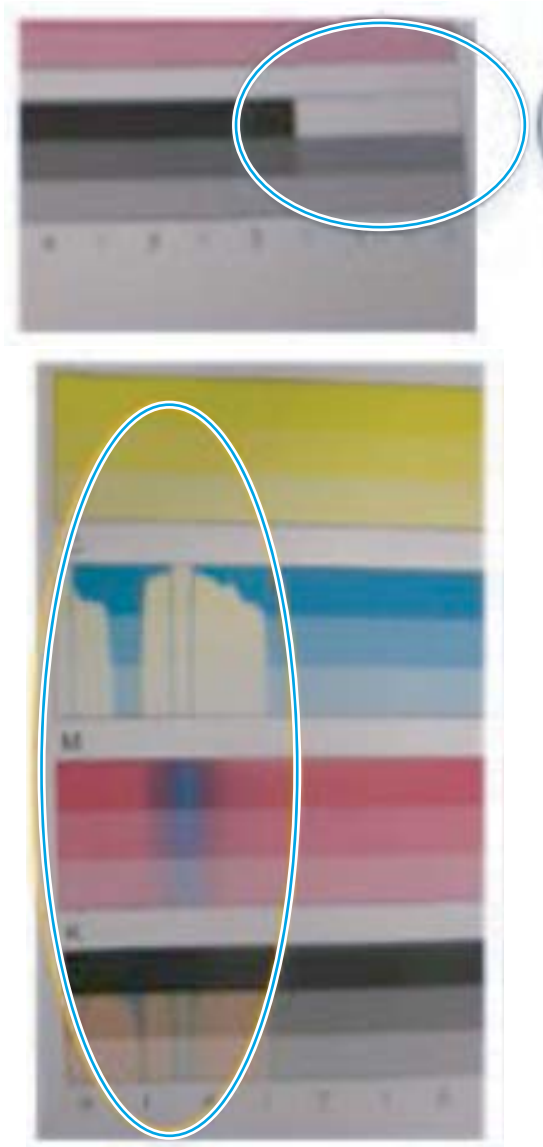


NOTE: The defects described in this section are product specific.

- [Large sections of wrong or missing color](#)
- [Small sections of wrong or missing color](#)
- [Streaks \(1\)](#)
- [Streaks \(2\)](#)
- [Streaks \(yellow only\)](#)
- [Color mix](#)
- [Highlighter smear](#)
- [Ink smear](#)
- [Image stretch](#)
- [Vertical bands](#)
- [Waterfall](#)
- [Washout](#)
- [Transition error](#)
- [Starwheel tracking](#)
- [Ink not drying](#)
- [Pen alignment calibration](#)
- [Color difference](#)
- [Paper curl](#)
- [Blurred boundaries](#)

Large sections of wrong or missing color

Figure 2-89 Wrong or missing color (large)



Description

Large area(s) the wrong or missing color(s) on the page.

 **NOTE:** Colors might be present at top of page, but go away by bottom of page.

Cause

Most likely caused by air inside the printhead.

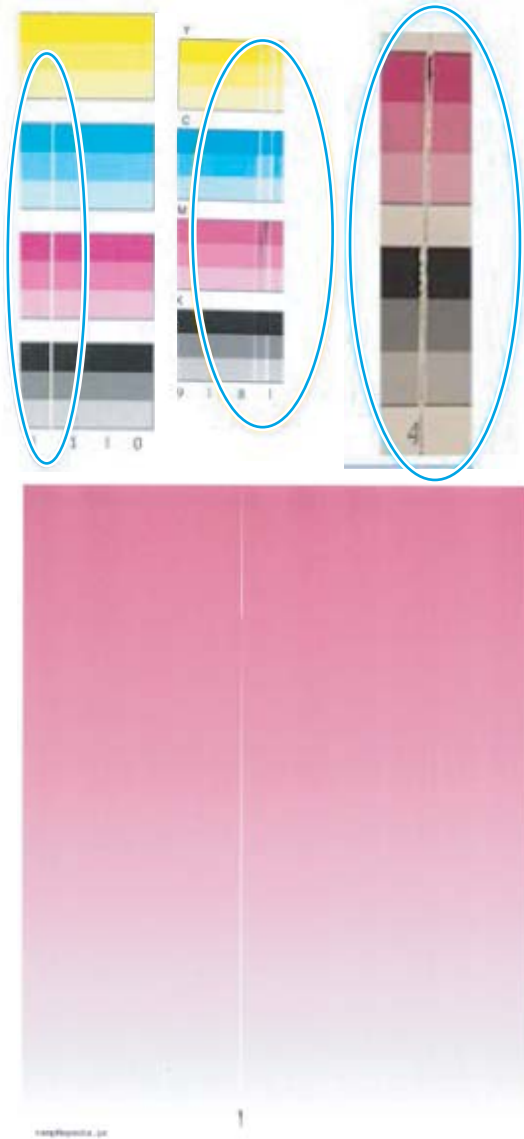
Solution

1. Make sure genuine HP ink is installed.
2. Print a print-quality report.

3. Perform a printhead cleaning level 2 procedure.
4. Print a print-quality report, and then compare it to the first report printed.
5. If the error persists, install a print mechanism (PM) kit.

Small sections of wrong or missing color

Figure 2-90 Wrong or missing color (small) (1 of 2)



Description

Shim whisker (fibers stuck onto the shim under the printbar).

Figure 2-91 Wrong or missing color (small) (2 of 2)



Cause

This defect is most likely caused by air inside the printbar.

Solution

1. Make sure genuine HP ink is installed.
2. Print a print-quality report.
3. Perform a printhead cleaning level 2 procedure.
4. Print a print-quality report, and then compare it to the first report printed.

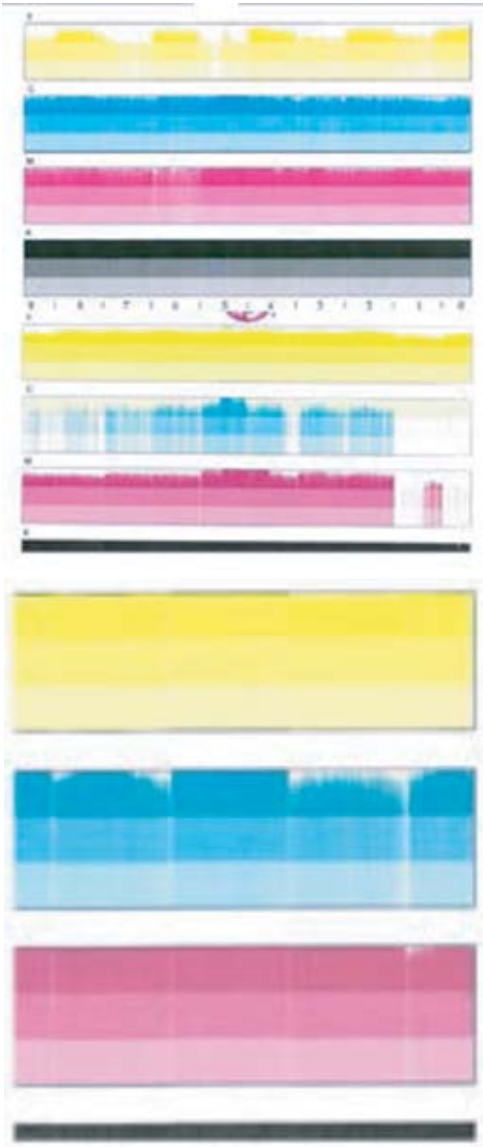


NOTE: If the report shows improved print quality, perform the cleaning level 2 procedure again (do not exceed three times).

5. If print quality did not improve, order the advanced cleaning kit (CN459-67006). Follow the instructions provided in the kit.
6. If the error persists, install a print mechanism (PM) kit.


Streaks (1)

Figure 2-92 Streaks (1)



Description

Streaks across entire page (multiple colors improving down the page).

 **NOTE:** The defect appears worse in colors (black being fairly robust).

Cause

Most likely caused by the print bar being left uncapped for an extended time.

Solution

1. Make sure genuine HP ink is installed.
2. Print a print-quality report.

3. Perform a printhead cleaning level 2 procedure.
4. Print a print-quality report, and then compare it to the first report printed.

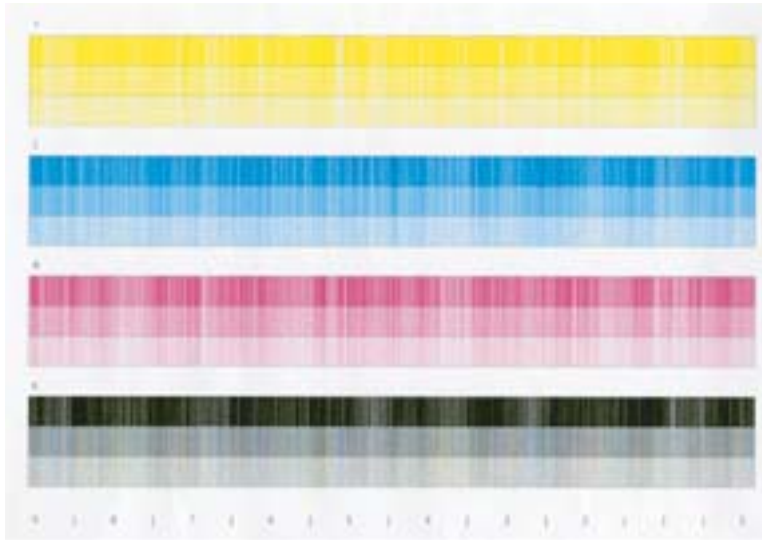


NOTE: If the report shows improved print quality, perform the cleaning level 2 procedure again (do not exceed three times).

5. If the error persists, install a print mechanism (PM) kit.

Streaks (2)

Figure 2-93 Streaks (2)



Description

Streaks across entire page (multiple colors consistent down the page).

Cause

If the printer recovers after sitting for 20 minutes, the web wipe used to clean the nozzles might have reached its end of life.

If the issue persists (after the printer has sat for 20 minutes), the defect is most likely caused by a mechanical failure (for example, the service sled is not rotating).

Solution

1. Make sure genuine HP ink is installed.
2. Print a print-quality report.
3. Perform a printhead cleaning level 2 procedure.
4. Print a print-quality report, and then compare it to the first report printed.



NOTE: If the report does not show improved print quality, wait 20 minutes and then print another print-quality report.

5. If the report shows improved print quality (after waiting the prescribed 20 minutes), check the engine page count.

If the page count is seventy-five thousand or greater, the error might return. Replace the service sled

6. If the error persists and the page count is seventy-five thousand or less, install a print mechanism (PM) kit.

Streaks (yellow only)

Figure 2-94 Streaks (yellow color plane)



Description

Streaks appear in the yellow color plane only.

Cause

TWINE: build up around the endcap region on print bar.

Solution

1. Make sure genuine HP ink is installed.
2. Print a print-quality report.
3. Perform a printhead cleaning level 2 procedure.

4. Print a print-quality report, and then compare it to the first report printed.

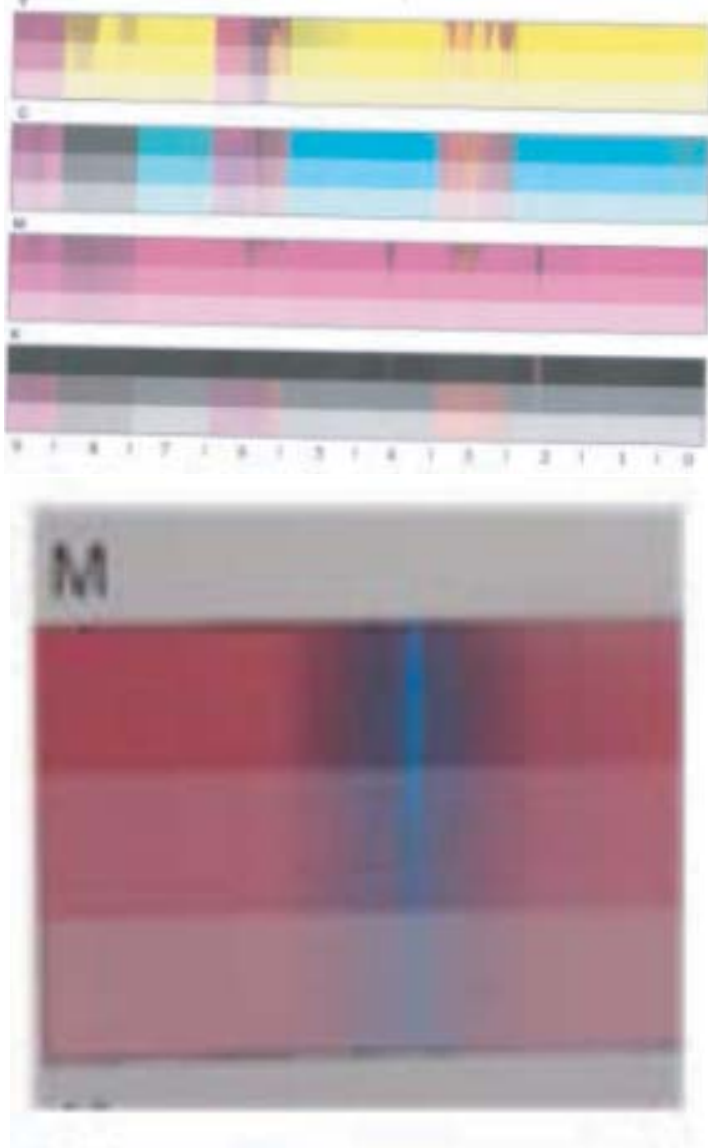


NOTE: If the report shows improved print quality, perform the cleaning level 2 procedure again (do not exceed three times).

5. Print a print-quality report.
6. If the error persists, install a print mechanism (PM) kit.

Color mix

Figure 2-95 Color mix



Description

Color bleeds on the page.



NOTE: This defect can be a small portion of or the entire printhead.

Cause

Color mixing might be caused by either an internal or external contamination source. External contamination clear-up with continued printing, or printhead cleaning. Internal contamination might require replacing the print bar.

Solution

1. Make sure genuine HP ink is installed.
2. Print a print-quality report.
3. Perform a printhead cleaning level 2 procedure.
4. Print a print-quality report, and then compare it to the first report printed.

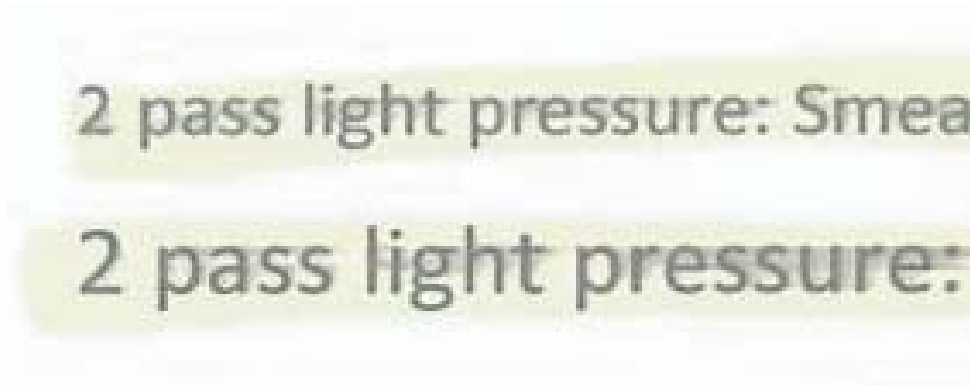


NOTE: If the report shows improved print quality, perform the cleaning level 2 procedure again (do not exceed three times).

5. If the error persists, install a print mechanism (PM) kit.

Highlighter smear

Figure 2-96 Highlighter smear



Description

This defect appears as smeared text.

Cause

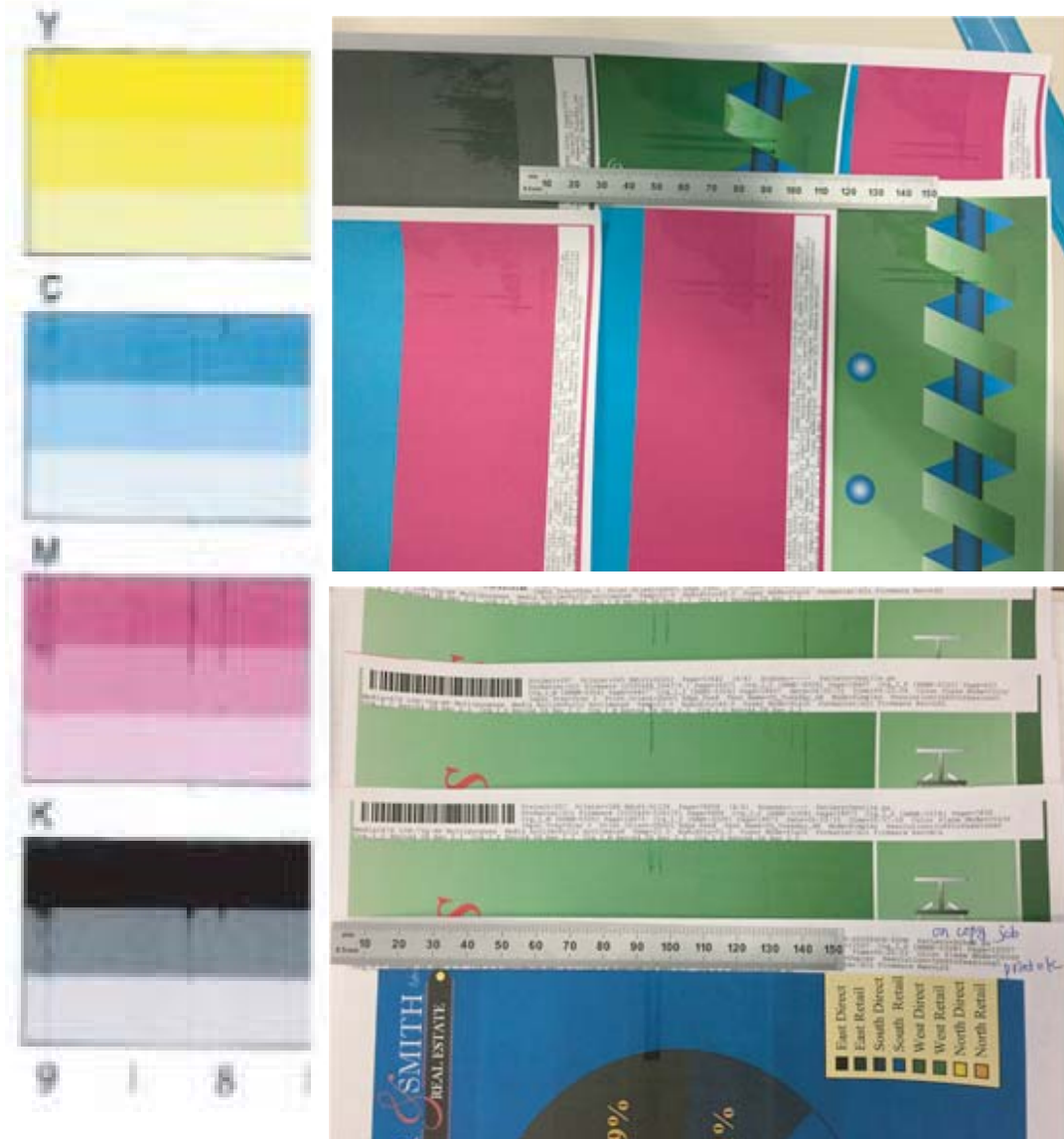
When using a highlighter pen on printed pages, a smear might be seen (this defect is caused by both the media type and the highlighter pen).

Solution

- Try different brand of highlighter.
- When using a highlight pen, use a single pass without too much pressure.
- Try using a different media type.

Ink smear

Figure 2-97 Ink smear



Description

This defect appears as smeared ink.

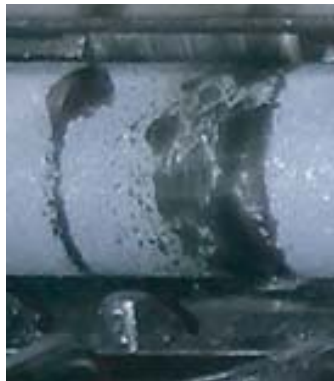
Cause

Potential causes:

- Decreased distance between the paper and the printhead nozzles due to contamination

- Build up along paper path

Figure 2-98 Paper—path buildup



Solution

1. Make sure genuine HP ink is installed.
2. Print a print-quality report.
3. Open the left door, remove the duplexer (ICU), and then lower the flap (push the green tab).
4. Check the shaft. If ink buildup is present, try using the grit roller cleaning kit.

Other buildup mitigation methods:

- Open the ink slider, and reduce the print speed (**Dry Time**) setting.
 - Open the ink slider, and reduce the ink saturation (**Saturation**) setting.
 - Open the ink slider, try different combinations of print speed and saturation (**Dry Time** and **Saturation**) settings.
 - Try using a different paper type.
5. If no ink buildup is present, see [Resolve Ink Smears on page 308](#).
 6. If the error persists, install a print mechanism (PM) kit.

Image stretch

Figure 2-99 Image stretch



Description

The image is stretched vertically or skewed (or both).

Cause

Grit roller contamination causes image stretch or skew issue.

If the ink contamination on the grit roller is evenly distributed, only a stretched image is created.

If ink contamination on grit roller is unevenly distributed across the width, then image skew and stretch is created.

Solution

1. Make sure genuine HP ink is installed.
2. Print a print-quality report.
3. Open the left door, remove the duplexer (ICU), and then lower the flap (push the green tab).
4. Check the shaft. If ink buildup is present, try using the grit roller cleaning kit.

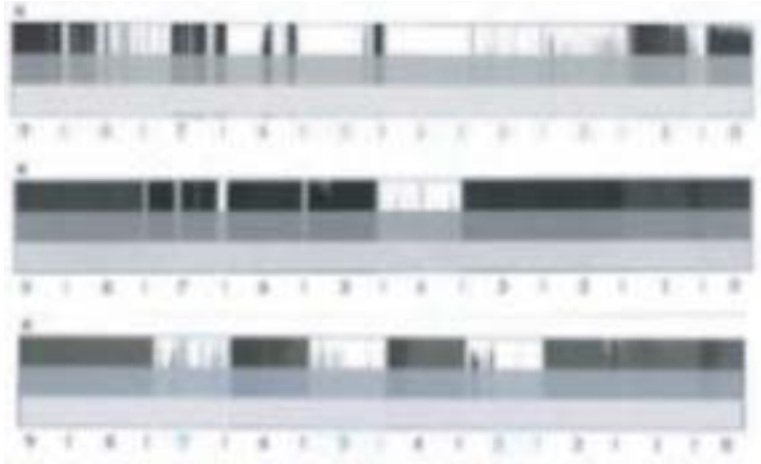
Other buildup mitigation methods:

- Open the ink slider, and reduce the print speed (**Dry Time**) setting.
- Open the ink slider, and reduce the ink saturation (**Saturation**) setting.
- Open the ink slider, try different combinations of print speed and saturation (**Dry Time** and **Saturation**) settings.
- Try using a different paper type.

5. If no ink buildup is present, see [Resolve Ink Smears on page 308](#).
6. If the error persists, install a print mechanism (PM) kit.

Vertical bands

Figure 2-100 Vertical bands



Description

Vertical white bands appear on one color.

Cause

Non-HP ink installed.

Solution

Make sure genuine HP ink is installed.

Waterfall

Figure 2-101 Waterfall



Description

Streaks and band appear on the first few pages.

Cause

If printer has been idle for an extended time, the first couple pages might have a defect that resembles a waterfall down the page.

Solution

This error self recovers after several pages print.

If not recoverable, perform the cleaning level 1 procedure (do not exceed four times).

Washout

Figure 2-102 Washout



Description

Colors appear washed out (not vivid).

Cause

Expected performance between Colorlok paper versus non ColorLok paper.

Solution

Use ColorLok paper to for best color performance.

Transition error

Figure 2-103 Transition error



Description

Image transition defect.

Cause

This defect might appear at the top of the page, at the middle of the page, or at the bottom of the page.
The main cause is page vibration when paper contacts, enters, or leaves a specific roller.

Solution

Open the ink slider, and reduce the print speed (**Dry Time**) setting.

Starwheel tracking

Figure 2-104 Starwheel tracking



Description

Image starwheel tracking defect.

Cause

Ink is being picked up by the star wheels and redeposited on the page.

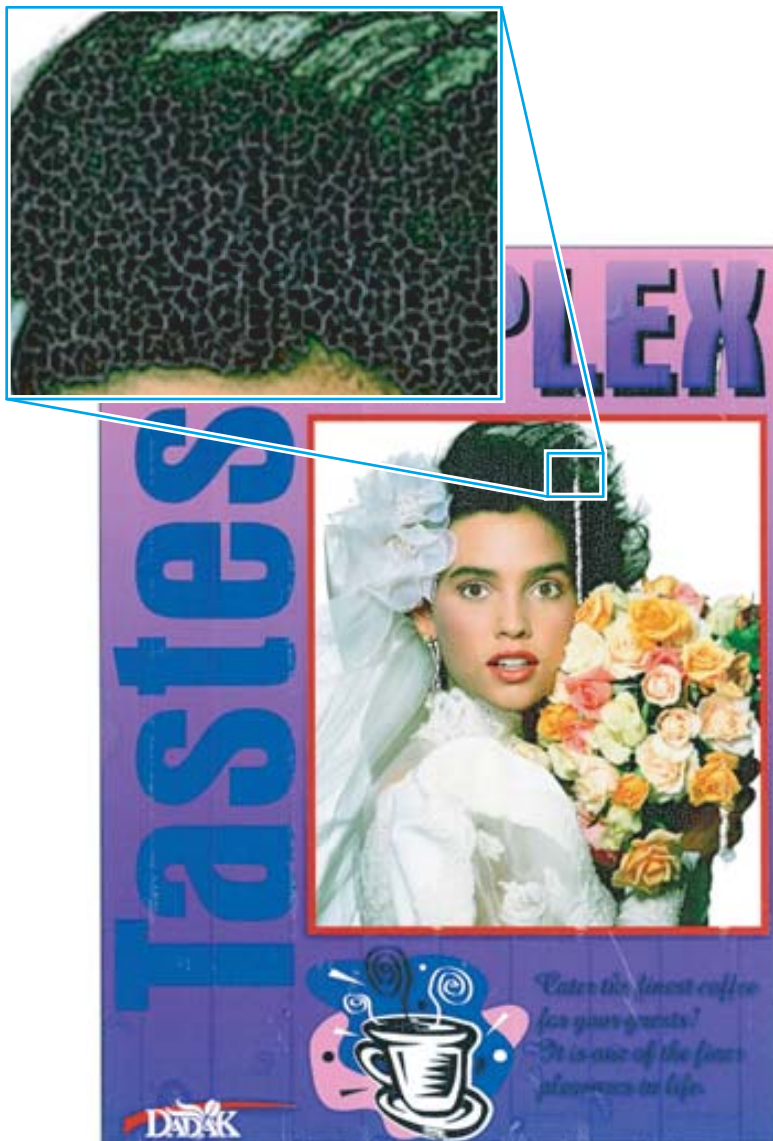
Solution

Open the ink slider, try increasing the print speed and decreasing the saturation (**Dry Time** and **Saturation**) settings.

Try using a different paper type.

Ink not drying

Figure 2-105 Ink not drying



Description

All sorts of exaggerated issues or ink not drying at all.

Cause

Dark lines, missing ink, and other defects are much more visible when using non-inkjet compatible paper.

Solution

Make sure to use an inkjet compatible paper type.

Pen alignment calibration


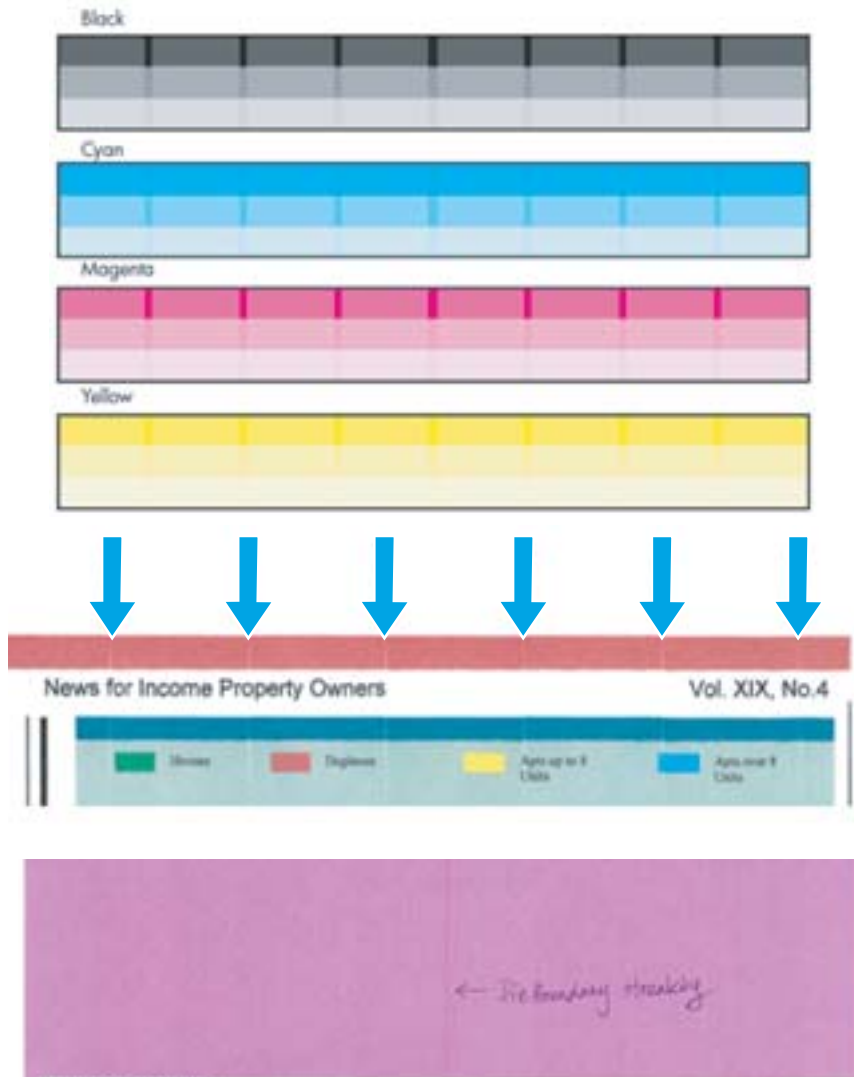
 **NOTE:** The upper most image below is an exaggerated example of this defect. Lines might be dark or white, and might only be on specific regions of the page.

Figure 2-106 Pen alignment calibration



Description

This defect appears as lines aligned with printhead boundaries.

Cause

Streaks align with die boundary because the printhead is not aligned.

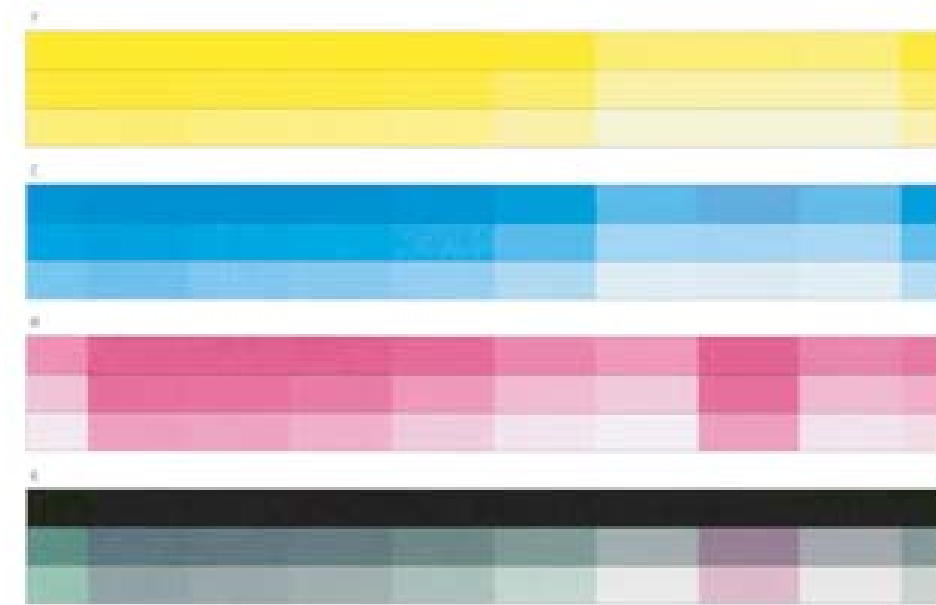
Solution

1. From the printer control panel, open the following menus:

- **Device Maintenance**
 - **Calibration/Cleaning**
 - **Advance Calibration Support**
2. Select **Continue**, and then select **Pen Align** to align the printhead.

Color difference

Figure 2-107 Color difference



Description

This defect appears as a color difference between printhead nozzles.

Cause

Density calibration error.

Solution

1. From the printer control panel, open the following menus:
 - **Device Maintenance**
 - **Calibration/Cleaning**
 - **Advance Calibration Support**
2. Select **Continue**, and then select **Color Density Calibration** to calibrate the printhead.

Paper curl

Figure 2-108 Paper curl



Description

This defect appears as paper with a wet feel or curl.

Cause

Curl can be seen when printing with high ink coverage, and there are variations between paper.

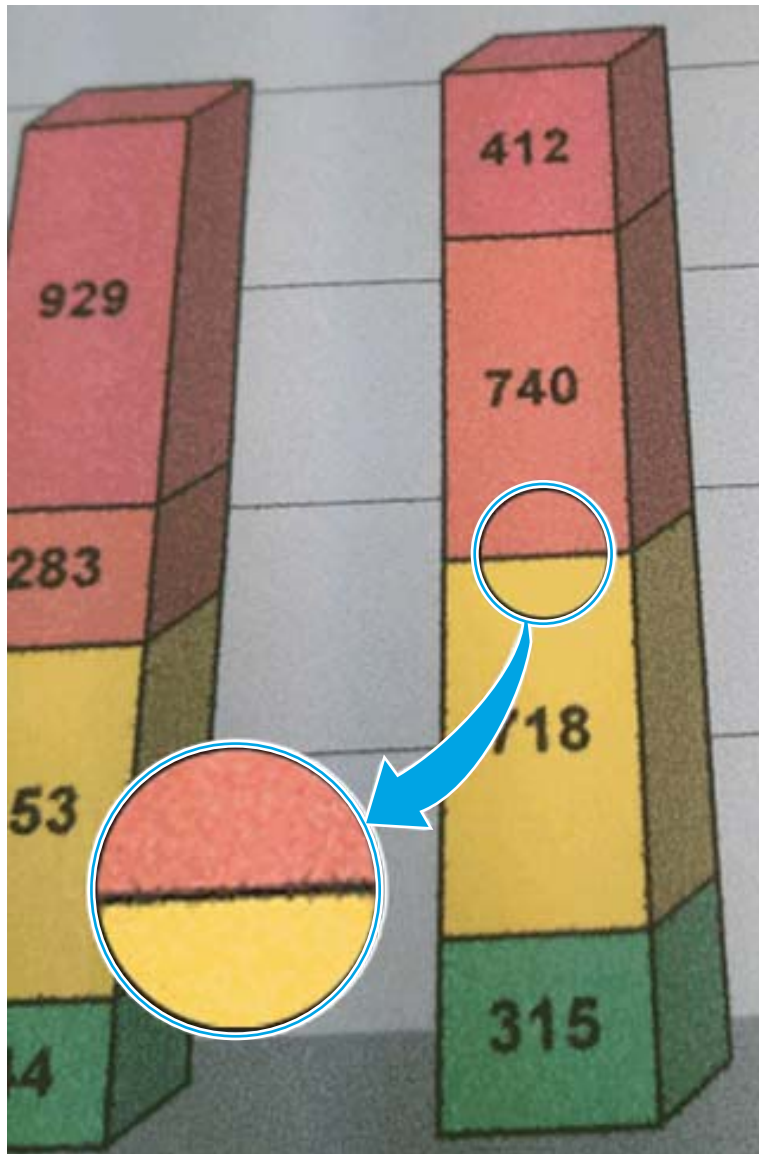
Solution

Potential mitigation methods:

- Open the ink slider, and reduce the ink saturation (**Saturation**) setting.
- Try printing with bigger page margins.
- Try using a heavier weight paper.
- Store pages with the printed side down.

Blurred boundaries

Figure 2-109 Blurred boundaries



Description

This defect appears as a blurry or fuzzy boundary between black and color images.

Cause

Ink saturation or paper type error.

Solution

Potential mitigation methods:

- Make sure that HP Colorlok paper is used in the printer.
- Open the ink slider, and reduce the ink saturation (**Saturation**) setting.
- Open the ink slider, and reduce the ink spread (**Black Ink Spread**) setting.

Solve image quality problems (print)

Clean ink smears

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

- Specks of ink are on the printed pages.
- Ink is smearing on the printed pages.
- Repeated marks occur on the printed pages.

Use the following procedure to clean ink smears.

1. Load the printer with regular, unused white paper.
2. From the control panel, touch the [Device Maintenance](#) button.
3. Open the [Calibration/Cleaning](#) menu.
4. Select the [Resolve Ink Smear](#) item.
5. Touch the [Start](#) button to begin the cleaning process.

A page feeds through the printer slowly. Retain this page for further print quality evaluation.

If the print jobs are showing ink smears on the back of the page, try the following solutions

- Remove the ink collection unit and then reinstall it. Black ink can build up on the ink collection unit after several thousand pages.
- The platen might have an ink buildup. Run a few sheets of blank (no text / graphics) thick paper through the printer to clean the platen.
- If the error persists, send the printer in for service.

Recover the printhead

If the printer is producing pages with faded or fuzzy black ink at the top of the page, try recovering the printhead.

1. Open the [Device Maintenance](#) menu.
2. Touch the [Service](#) menu.
3. Touch the [Service Access Code](#) item in the drop-down list, use the touchscreen keypad to enter the code, and then touch the [OK](#) button.
 - **556:** 05055616
 - **586:** 05058616
4. Touch the [Printhead Recovery](#), and then touch the [Start](#) button.
5. Follow the onscreen instructions to complete the process.

Solve copy/scan problems (586)

Solve copy problems (586)

If the printer is having copy quality problems, try the following solutions in the order presented to resolve the issue.

- [Check the scanner glass for dirt and smudges](#)
- [Calibrate the scanner](#)
- [Check the paper settings](#)
- [Check the image-adjustment settings](#)
- [Optimize copy quality for text or pictures](#)
- [Edge-to-edge copying](#)
- [Clean the pickup rollers and separation pad in the document feeder](#)

Try these few simple steps first:

- Use the flatbed scanner rather than the document feeder.
- Use high-quality originals.
- When using the document feeder, load the original document into the feeder correctly, using the paper guides, to avoid unclear or skewed images.

If the problem still exists, try these additional solutions. If they do not fix the problem, see “Improve print quality” for further solutions.

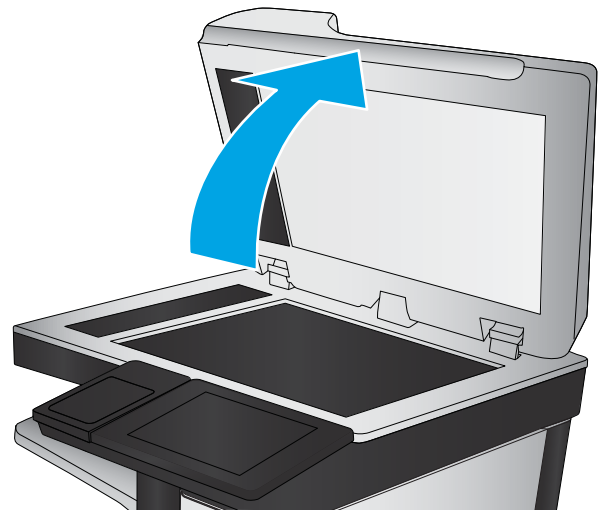
Check the scanner glass for dirt and smudges

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 if the printed pages have streaks, unwanted lines, black dots, poor print quality, or unclear text.

1. Press the power button to turn the printer off, and then disconnect the power cable from the electrical outlet.



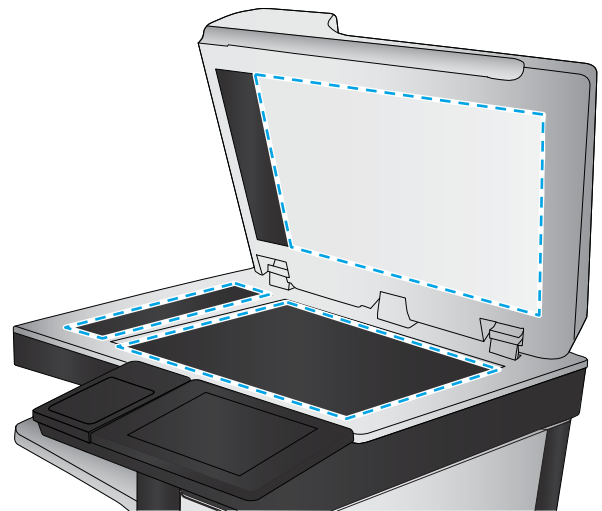
2. Open the scanner lid.



3. Clean the scanner glass, the document feeder strips, and the white plastic backing with a soft cloth or sponge that has been moistened with nonabrasive glass cleaner.

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

NOTE: If you are having trouble with streaks on copies when you are using the document feeder, be sure to clean the small strip of glass on the left side of the scanner.



4. Dry the glass and white plastic parts with a chamois or a cellulose sponge to prevent spotting.
5. Connect the power cable to an outlet, and then press the power button to turn the printer on.

Calibrate the scanner

If the copied image is not positioned correctly on the page, follow these steps to calibrate the scanner.



NOTE: When using the document feeder, make sure to adjust the guides in the input tray so they are against the original document.

1. From the Home screen on the printer control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the following menus:
 - [Calibration/Cleaning](#)
 - [Calibrate Scanner](#)

3. Touch the **Next** button to start the calibration process. Follow the on-screen prompts.
4. Wait while the printer calibrates, and then try copying again.

Check the paper settings

Follow these steps if copied pages have smears, fuzzy or dark print, curled paper, or areas where pigment has dropped out.

Check the paper size and type configuration

1. From the Home screen on the printer control panel, select **Trays**.
2. Select the line for the tray, and then select the **Modify**.
3. Select the paper size and paper type from the lists of options.
4. Touch the **OK** button to save the selection.

Select the tray to use for the copy

1. From the Home screen on the printer control panel, select **Copy**.
2. Select **Paper Selection**.
3. Select **Paper Tray**, and then select one of the paper trays.
4. Select the tray with to use, and then select **OK**.




NOTE: These settings are temporary. After you have finished the job, the printer returns to the default settings.

Check the image-adjustment settings

Adjust these additional settings to improve copy quality:

- **Sharpness:** Clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photos appear smoother.
 - **Darkness:** Increase or decrease the amount of white and black used in colors in scanned images.
 - **Contrast:** Increase or decrease the difference between the lightest and the darkest color on the page.
 - **Background Cleanup:** Remove faint colors from the background of scanned images. For example, if the original document is printed on colored paper, use this feature to lighten the background without affecting the darkness of the image.
 - **Automatic Tone:** Available for Flow printers only. For original documents that have at least 100 characters of text on the page, the printer can detect which edge is the top of the page, and it orients the scanned images appropriately. If some of the pages are upside-down in relation to the other pages, the resulting scanned image has all pages right-side-up. If some of the pages have a landscape orientation, the printer rotates the image so that the top of the page is at the top of the image.
1. From the Home screen on the printer control panel, select **Copy**.
 2. Touch the **Image Adjustment** button.


3. Adjust the sliders to set the levels, and then touch the **OK** button.
4. Touch the Start  button.



NOTE: These settings are temporary. After you have finished the job, the printer returns to the default settings.

Optimize copy quality for text or pictures

Optimize the copy job for the type of image being copied: text, graphics, or photos.


1. From the Home screen on the printer control panel, select **Copy**.
2. Touch the **More Options** button, and then touch the **Optimize Text/Picture** button.
3. Select one of the predefined options, or touch the **Manually adjust** button, and then adjust the slider in the **Optimize For** area. Touch the **OK** button.
4. Touch the Start  button.



NOTE: These settings are temporary. After you have finished the job, the printer returns to the default settings.

Edge-to-edge copying

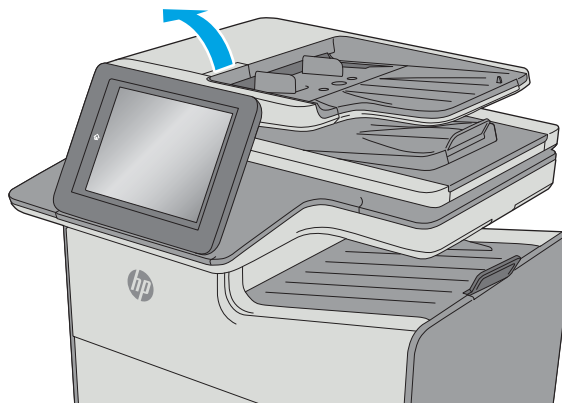
Use this feature to avoid shadows that can appear along the edges of copies when the original document is printed close to the edges.

1. From the Home screen on the printer control panel, scroll to and touch the **Administration** button.
2. Open the following menus:
 - **Copy Settings**
 - **Edge-To-Edge**
3. Select the **Edge-To-Edge output** option if the original document is printed close to the paper edges.
4. Touch the **Save** button.
5. Touch the Start  button.

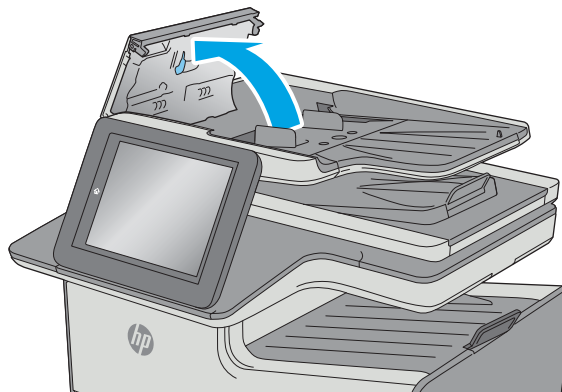
Clean the pickup rollers and separation pad in the document feeder

Follow these steps if the document feeder does not pick up pages correctly or produces skewed output.

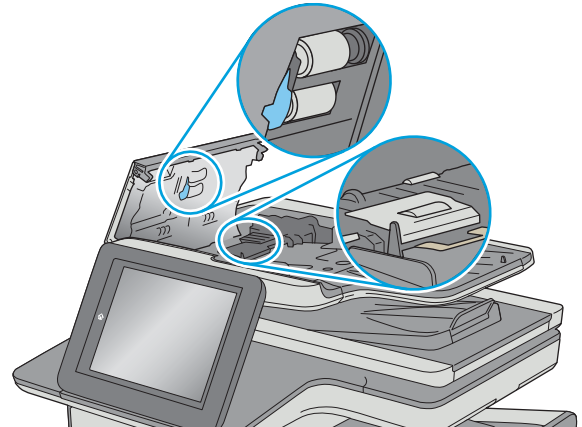
1. Lift the latch to release the document-feeder cover.



2. Open the document-feeder cover.

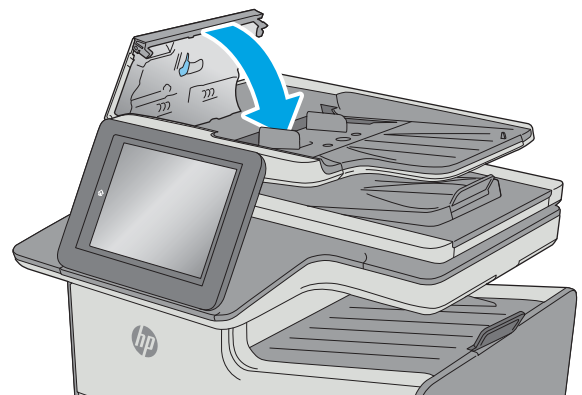


3. Remove any visible lint or dust from each of the feed rollers and the separation pad using compressed air or a clean lint-free cloth moistened with warm water.



4. Close the document-feeder cover.

NOTE: Verify that the latch on the top of the document-feeder cover is completely closed.



If the problem persists, check the document feeder separation pad and rollers for damage or wear, and replace them if necessary.



NOTE: New rollers have a rough surface. As rollers wear, they become smooth.

Solve scan problems (586)

- [Check the scanner glass for dirt and smudges](#)
- [Check the resolution settings](#)
- [Check the color settings](#)
- [Check the image-adjustment settings](#)
- [Optimize scan quality for text or pictures](#)
- [Check the output-quality settings](#)
- [Clean the pickup rollers and separation pad in the document feeder](#)

Try these few simple steps first:

- Use the flatbed scanner rather than the document feeder.
- Use high-quality originals.
- When using the document feeder, load the original document into the feeder correctly, using the paper guides, to avoid unclear or skewed images.

If the problem still exists, try these additional solutions. If they do not fix the problem, see “Improve print quality” for further solutions.

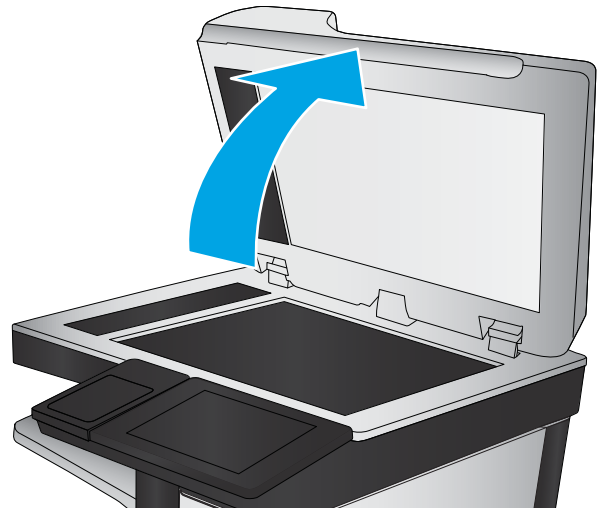
Check the scanner glass for dirt and smudges

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 if the printed pages have streaks, unwanted lines, black dots, poor print quality, or unclear text.

1. Press the power button to turn the printer off, and then disconnect the power cable from the electrical outlet.



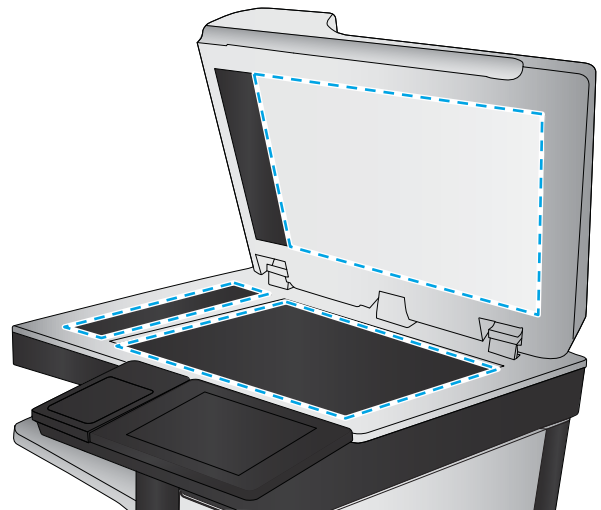
2. Open the scanner lid.



3. Clean the scanner glass, the document feeder strips, and the white plastic backing with a soft cloth or sponge that has been moistened with nonabrasive glass cleaner.

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

NOTE: If you are having trouble with streaks on copies when you are using the document feeder, be sure to clean the small strip of glass on the left side of the scanner.




4. Dry the glass and white plastic parts with a chamois or a cellulose sponge to prevent spotting.
5. Connect the power cable to an outlet, and then press the power button to turn the printer on.

Check the resolution settings



NOTE: Setting the resolution to a high value increases the file size and the scan time.


Follow these steps to adjust the resolution setting:

1. From the Home screen on the printer control panel, scroll to and touch the **Administration** button.
2. Open the **Scan/Digital Send Settings** menu.
3. Select the category of scan and send settings that you want to configure.
4. Open the **Default Job Options** menu.
5. Touch the **Resolution** button.
6. Select one of the predefined options. Touch the **Save** button.
7. Touch the Start  button.

Check the color settings

Follow these steps to adjust the color setting:


1. From the Home screen on the product control panel, scroll to and touch the **Administration** button.
2. Open the **Scan/Digital Send Settings** menu.
3. Select the category of scan and send settings that you want to configure.
4. Open the **Default Job Options** menu.
5. Touch the **Color/Black** button.

6. Select one of the predefined options. Touch the **Save** button.
7. Touch the Start  button.

Check the image-adjustment settings

Adjust these additional settings to improve scan quality:

- **Sharpness:** Clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photos appear smoother.
- **Darkness:** Increase or decrease the amount of white and black used in colors in scanned images.
- **Contrast:** Increase or decrease the difference between the lightest and the darkest color on the page.
- **Background Cleanup:** Remove faint colors from the background of scanned images. For example, if the original document is printed on colored paper, use this feature to lighten the background without affecting the darkness of the image.
- **Automatic Tone:** Available for Flow printers only. For original documents that have at least 100 characters of text on the page, the printer can detect which edge is the top of the page, and it orients the scanned images appropriately. If some of the pages are upside-down in relation to the other pages, the resulting scanned image has all pages right-side-up. If some of the pages have a landscape orientation, the printer rotates the image so that the top of the page is at the top of the image.

1. From the Home screen on the printer control panel, scroll to and touch the **Administration** button.
2. Open the **Scan/Digital Send Settings** menu.
3. Select the category of scan and send settings that you want to configure.
4. Open the **Default Job Options** menu.
5. Touch the **Image Adjustment** button.
6. Adjust the sliders to set the levels, and then touch the **Save** button.
7. Touch the Start  button.




NOTE: These settings are temporary. After you have finished the job, the printer returns to the default settings.

Optimize scan quality for text or pictures

Optimize the scan job for the type of image being scanned: text, graphics, or photos.

1. From the Home screen on the printer control panel, touch one of the buttons for the scan/send features:
 - **Save to Network Folder**
 - **Save to Device Memory**
 - **Save to USB**
 - **Scan to SharePoint®**
2. Touch the **More Options** button, and then touch the **Optimize Text/Picture** button.


3. Select one of the predefined options, or touch the [Manually adjust](#) button, and then adjust the slider in the [Optimize For](#) area. Touch the [OK](#) button.
4. Touch the Start  button.



NOTE: These settings are temporary. After you have finished the job, the printer returns to the default settings.

Check the output-quality settings

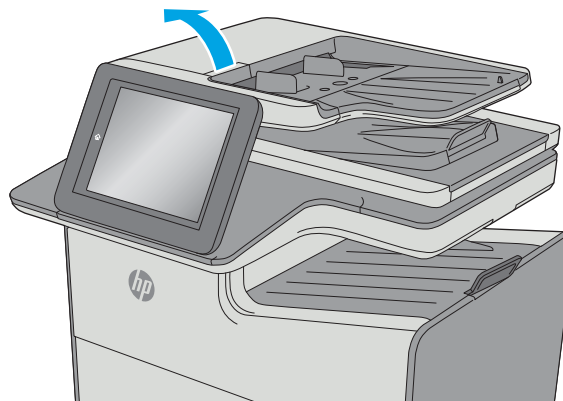
This setting adjusts the level of compression when saving the file. For the highest quality, select the highest setting.

1. From the Home screen on the printer control panel, scroll to and touch the [Administration](#) button.
2. Open the [Scan/Digital Send Settings](#) menu.
3. Select the category of scan and send settings that you want to configure.
4. Open the [Default Job Options](#) menu.
5. Touch the [Output Quality](#) button.
6. Select one of the predefined options, and then touch the [Save](#) button.
7. Touch the Start  button.

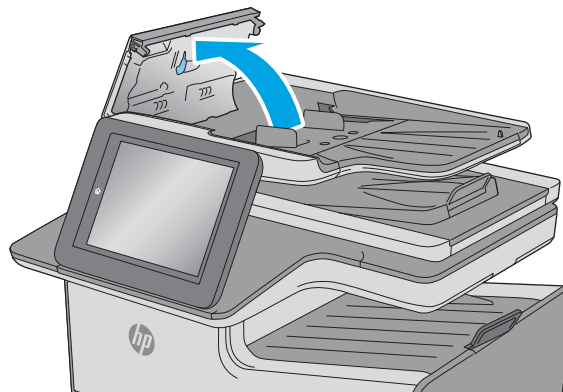
Clean the pickup rollers and separation pad in the document feeder

Follow these steps if the document feeder does not pick up pages correctly or produces skewed output.

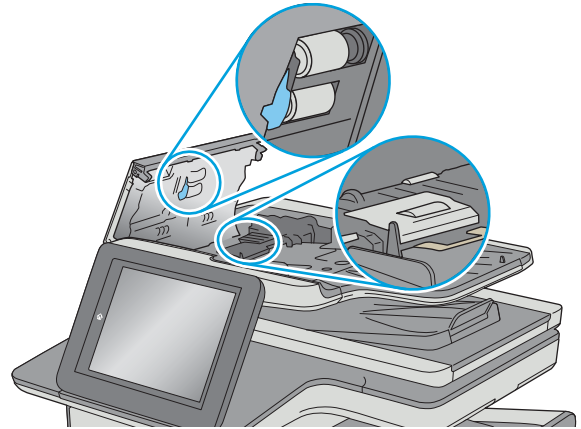
1. Lift the latch to release the document-feeder cover.



2. Open the document-feeder cover.

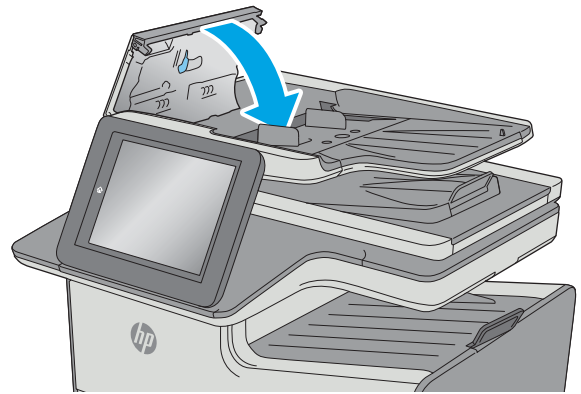


3. Remove any visible lint or dust from each of the feed rollers and the separation pad using compressed air or a clean lint-free cloth moistened with warm water.



4. Close the document-feeder cover.

NOTE: Verify that the latch on the top of the document-feeder cover is completely closed.



If the problem persists, check the document feeder separation pad and rollers for damage or wear, and replace them if necessary.



NOTE: New rollers have a rough surface. As rollers wear, they become smooth.

Solve paper jam or feed problems

Printer does not pick up paper or misfeeds

- [The printer does not pick up paper](#)
- [The printer picks up multiple sheets of paper](#)
- [The document feeder jams, skews, or picks up multiple sheets of paper \(586\)](#)

The printer does not pick up paper

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

1. Open the printer 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 printer 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 printer control panel to see if the printer 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 printer picks up multiple sheets of paper

If the printer 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 printer.
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.
7. If the error persists, the rollers above the tray might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.

The document feeder jams, skews, or picks up multiple sheets of paper (586)

- 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 printer control panel, scroll to and touch the Supplies button. Check the status of the document-feeder kit, and replace it if necessary.

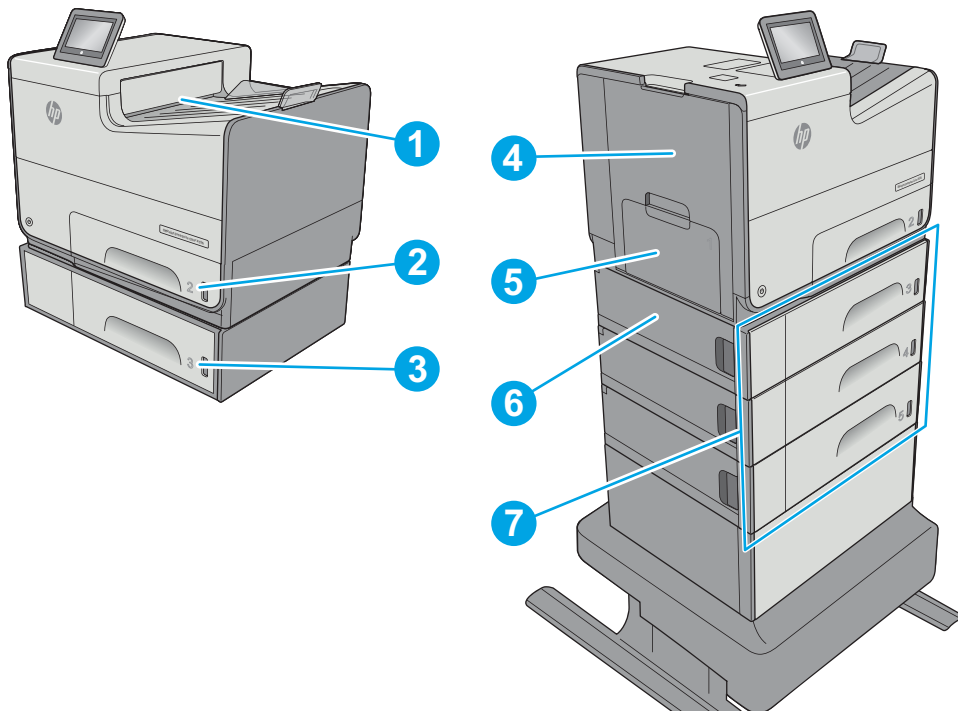
Clear paper jams

Introduction

The following information includes instructions for clearing paper jams from the printer.

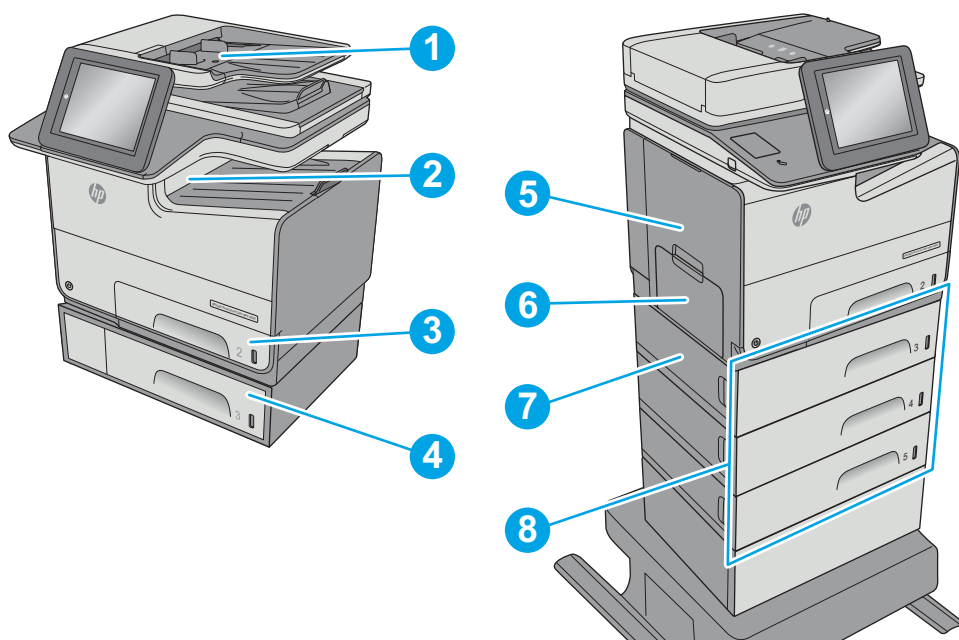
- [Jam locations \(556\)](#)
- [Jam locations \(586\)](#)
- [Auto-navigation for clearing jams](#)
- [Experiencing frequent or recurring paper jams?](#)
- [Clear jams in the document feeder \(586\)](#)
- [Clear jams in the left door](#)
- [Clear jams in Tray 1 \(multipurpose tray\)](#)
- [Clear jams in Tray 2](#)
- [Clear jams in optional Tray 3](#)
- [Clear jams in the optional 3x500-sheet feeder](#)
- [Clear jams in the ink-collection unit area](#)
- [Clear jams in the output bin \(556\)](#)
- [Clear jams in the output bin \(586\)](#)

Jam locations (556)



1	Output bin
2	Tray 2
3	Tray 3
4	Left door and ink-collection unit area
5	Tray 1
6	Lower-left door
7	Optional 3x500-sheet paper feeder

Jam locations (586)



1	Document feeder
2	Output bin
3	Tray 2
4	Optional Tray 3
5	Left door and ink-collection unit area
6	Tray 1
7	Lower-left door
8	Optional 3 x 500-sheet paper feeder

Auto-navigation for clearing jams

The auto-navigation feature assists in clearing jams by providing step-by-step instructions on the control panel. When you complete a step, the printer displays instructions for the next step until you have completed all steps in the procedure.

Experiencing frequent or recurring paper jams?

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

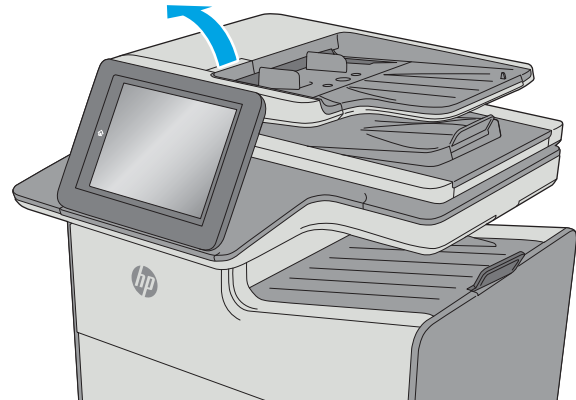
1. Use only paper that meets HP specifications for this printer.
2. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.
3. Use paper that has not previously been printed or copied on.
4. Make sure the tray is not overfilled. If it is, remove the entire 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 printer.
7. If you are printing on heavy, embossed, or perforated paper, use the manual feed feature and feed sheets one at a time.
8. Open the [Trays](#) menu on the printer control panel. Verify that the tray is configured correctly for the paper type and size.
9. Make sure the printing environment is within recommended specifications.

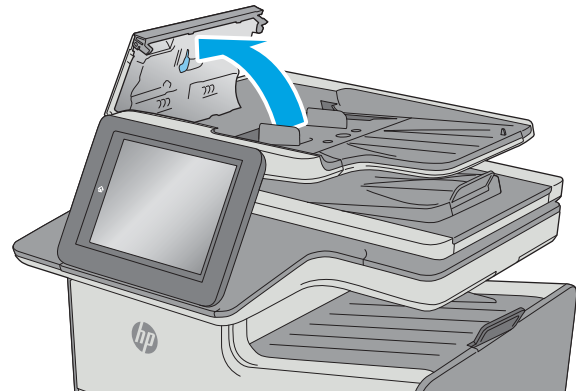
Clear jams in the document feeder (586)

The following information describes how to clear paper jams in the document feeder. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

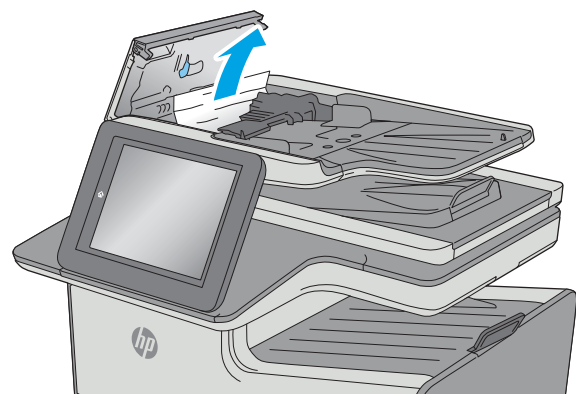
1. Lift the latch to release the document-feeder cover.



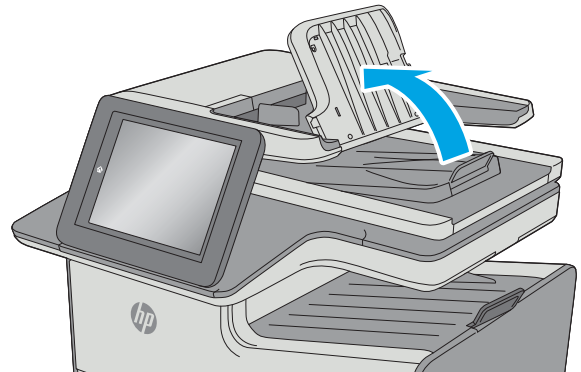
2. Open the document-feeder cover.



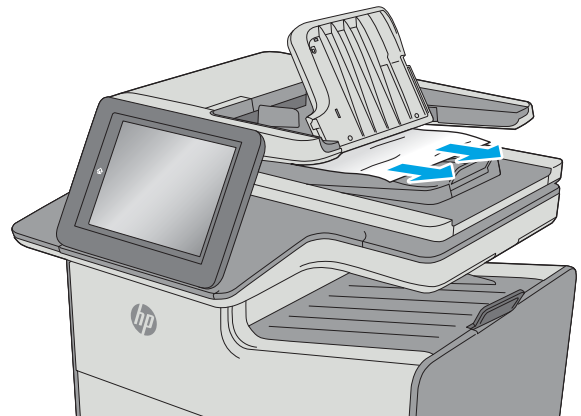
3. Remove any jammed paper.



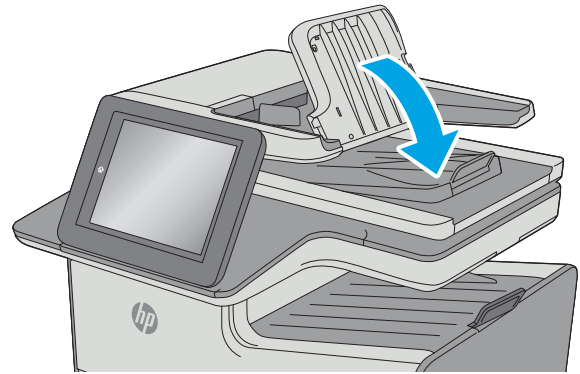
4. Lift the document feeder input tray.



5. Remove any jammed paper.

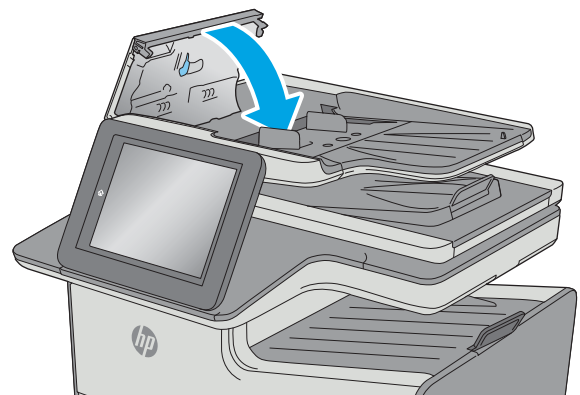





6. Lower the document-feeder input tray.



7. Close the document-feeder cover.

NOTE: Verify that the latch on the top of the document feeder cover is completely closed.

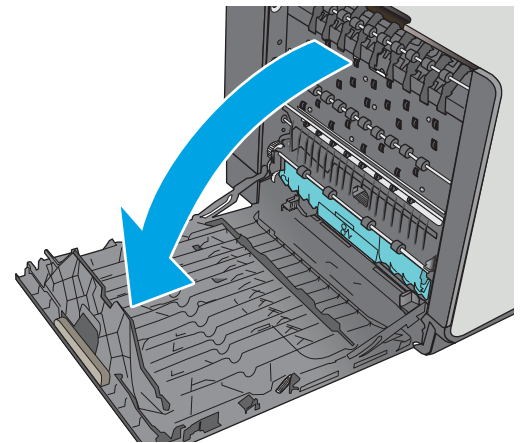


-
-  **NOTE:** To avoid jams, make sure the guides in the document-feeder input tray are adjusted against the document, without bending the document. To copy narrow documents, use the flatbed scanner. Remove all staples and paper clips from original documents.
 -  **NOTE:** Original documents that are printed on heavy, glossy paper can jam more frequently than originals that are printed on plain paper.
 -  **TIP:** If the error persists, the document feeder rollers might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.
-

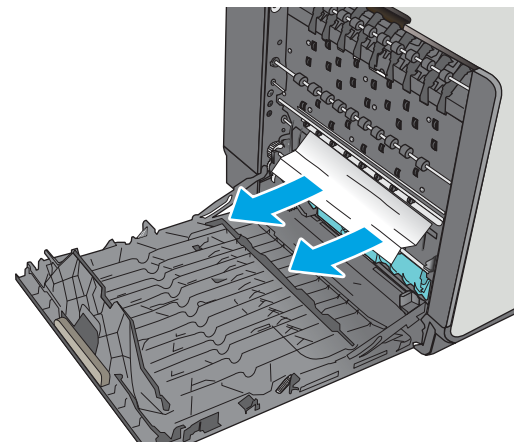
Clear jams in the left door

The following information describes how to clear paper jams in the left door. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

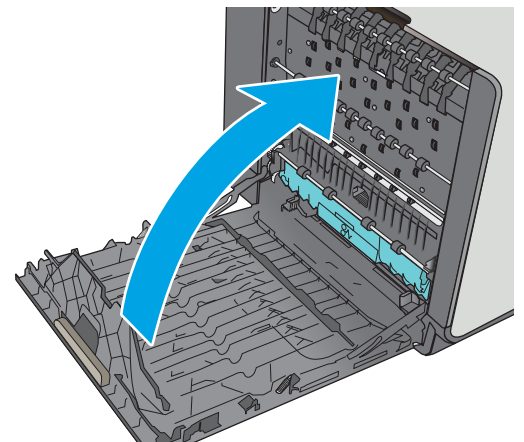
1. Open the left door.



2. Gently pull out any jammed paper from the rollers and delivery area. If the paper tears, make sure to remove all remnants.



3. Close the left door.

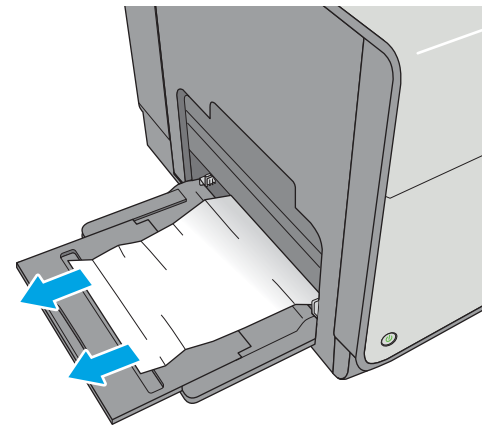


Clear jams in Tray 1 (multipurpose tray)

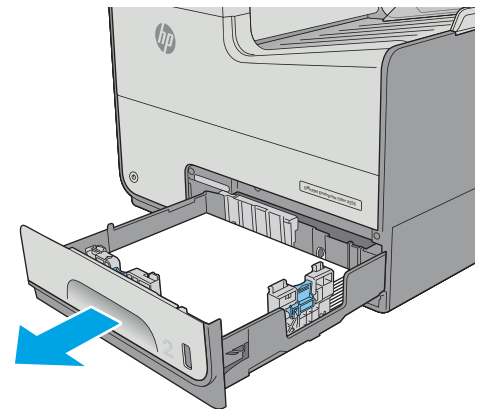
Use the following procedure to check for paper in all possible jam locations related to Tray 1. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

1. If most of the sheet of paper is visible in the tray, slowly pull the jammed paper out of the printer. Make sure that the entire sheet is removed. If it tears, continue with the following steps to find the remnants.

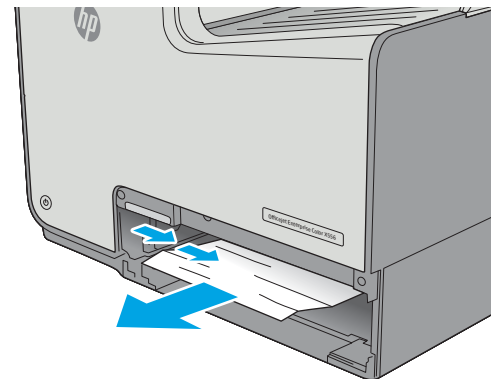
If most of the sheet of paper has been pulled inside the printer, continue with the following steps.



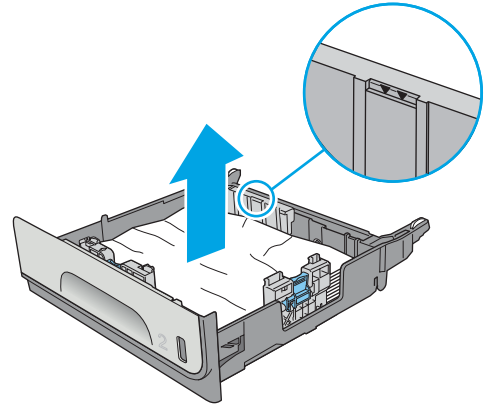
2. Pull Tray 2 completely out of the printer by pulling and lifting up slightly



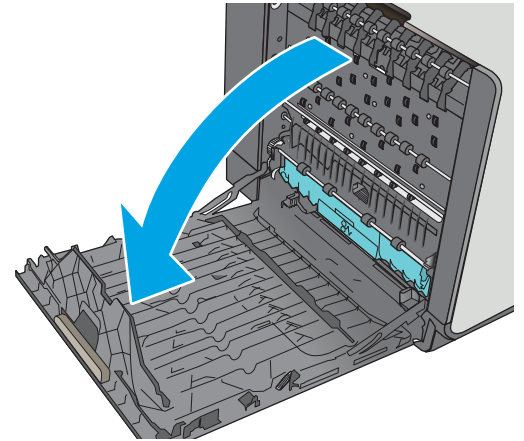
3. Remove the jammed paper from the feed rollers inside the printer. First pull the paper to the right, and then pull it forward to remove it.



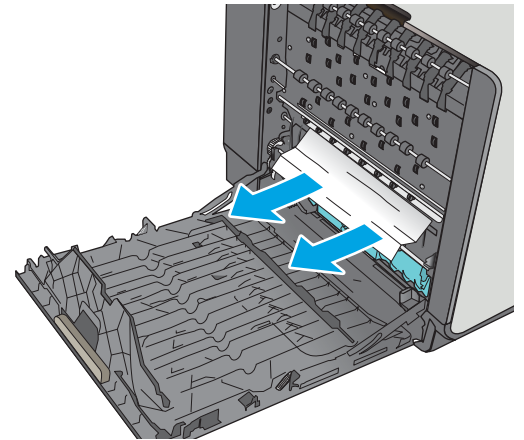
4. Remove any jammed or damaged sheets of paper. Verify that the tray is not overfilled and that the paper guides are adjusted correctly.



5. Open the left door.

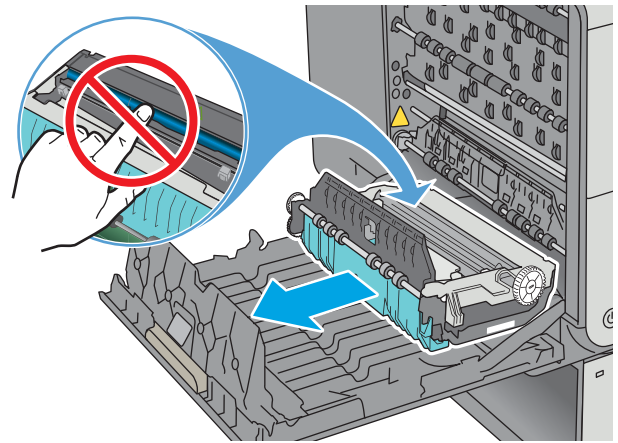


6. Gently pull out any jammed paper from the rollers and delivery area. If the paper tears, make sure to remove all remnants.

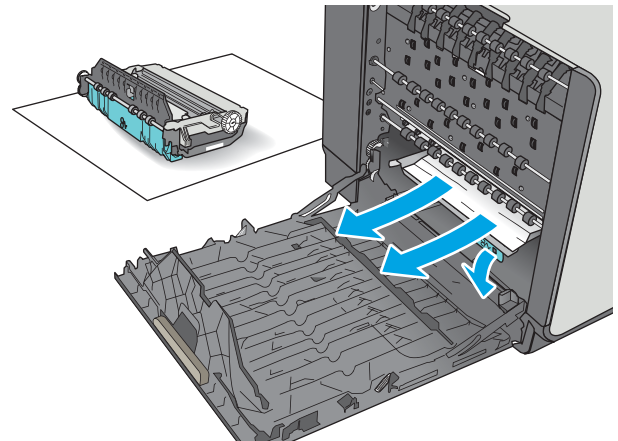


7. Remove the ink-collection unit by pulling it out with both hands. Set the unit aside, upright, on a piece of paper to prevent spills.

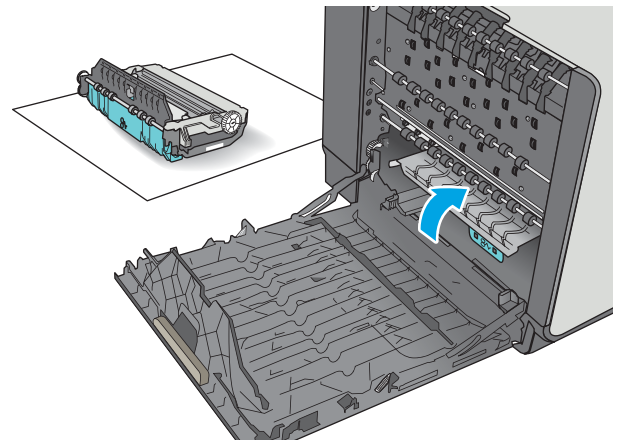
CAUTION: When removing the ink-collection unit, avoid making direct contact with the black cylinder to prevent pigment smear on skin or clothes.



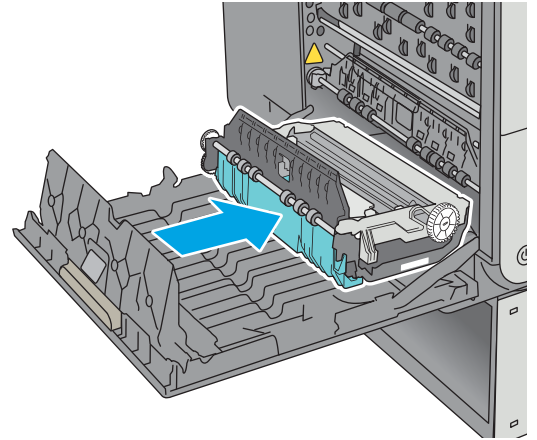
8. Lower the platen by pressing down on the green tab. This will cause the printer to try to feed the sheet through the print zone. You might need to gently pull on the sheet if it does not feed. Remove the sheet.



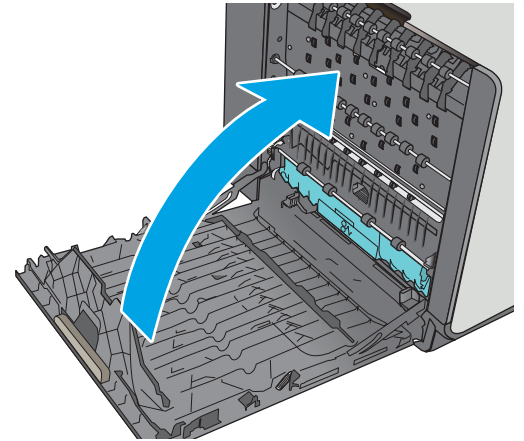
9. Lift the green tab to return the platen to the operating position.



10. Install the ink-collection unit.



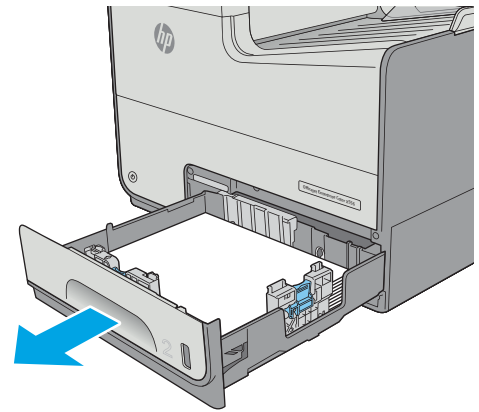
11. Close the left door.



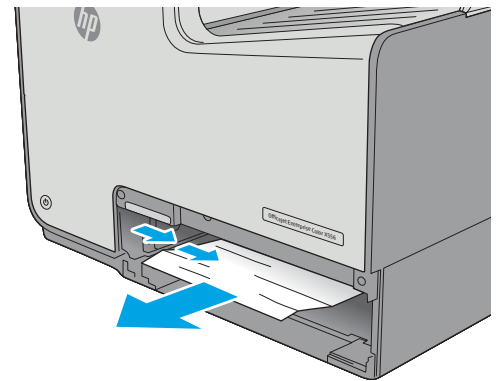
Clear jams in Tray 2

Use the following procedure to clear jams in Tray 2. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

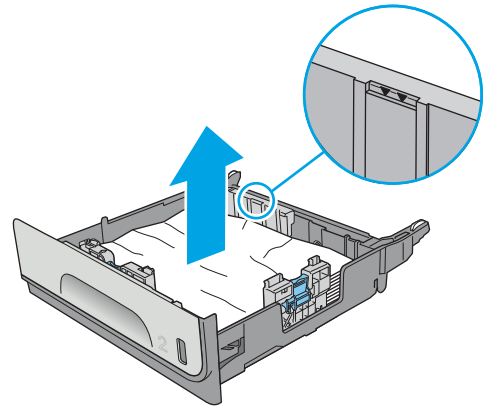
1. Pull the tray completely out of the printer by pulling and lifting up slightly



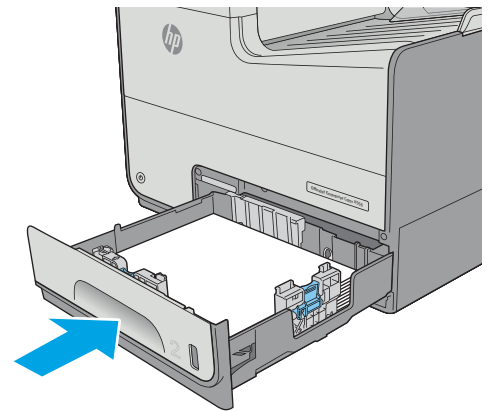
2. Remove the jammed paper from the feed rollers inside the printer. First pull the paper to the right, and then pull it forward to remove it.




3. Remove any jammed or damaged sheets of paper. Verify that the tray is not overfilled and that the paper guides are adjusted correctly.



4. Reinsert and close the tray.

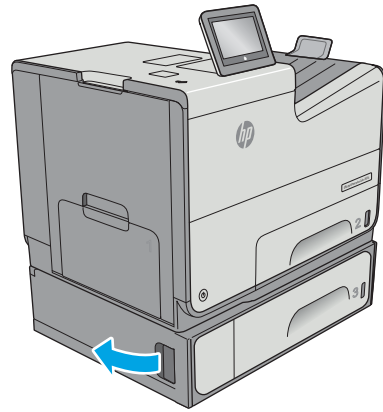


 **TIP:** If the error persists, the rollers above the tray might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.

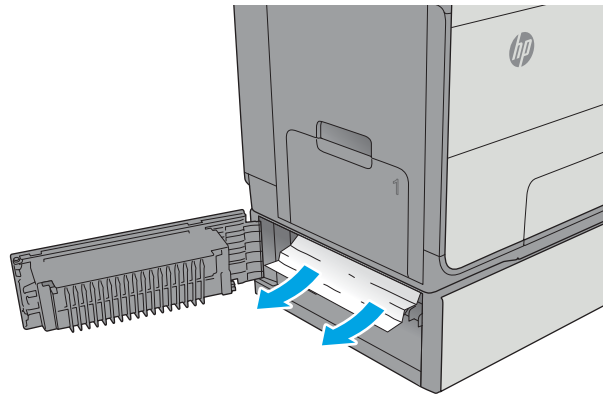
Clear jams in optional Tray 3

Use the following procedure to check for paper in all possible jam locations related to Tray 3. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

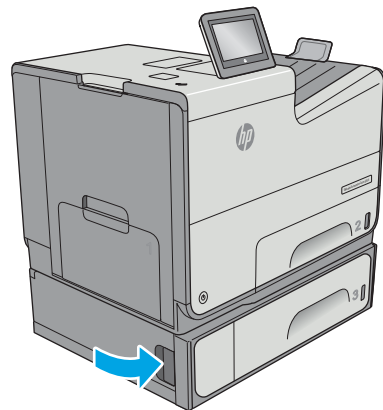
1. Open the lower-left door.



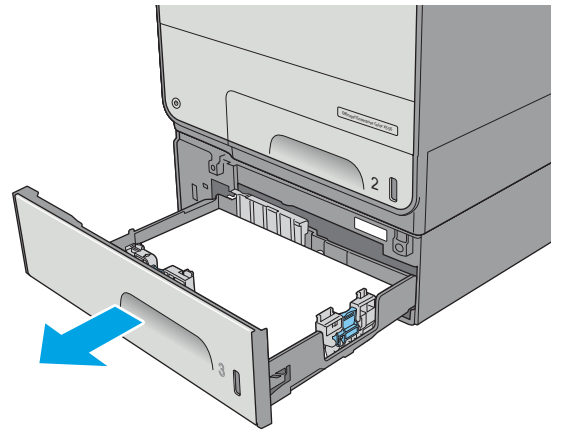
2. Gently pull out any jammed paper.



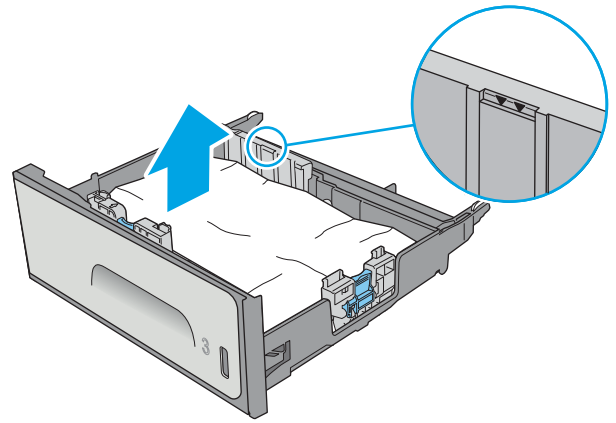
3. Close the lower-left door.



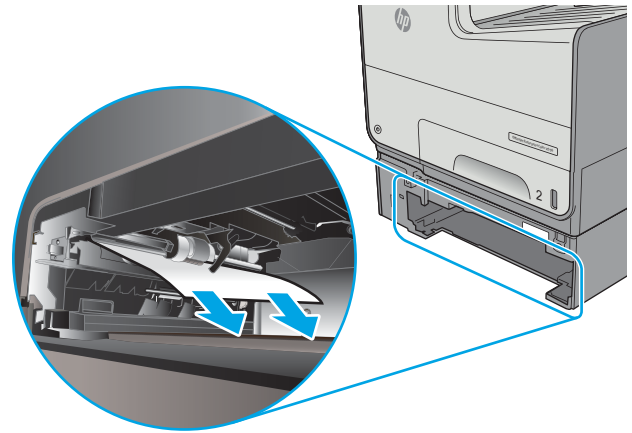
4. Pull the tray completely out of the printer by pulling and lifting it up slightly.



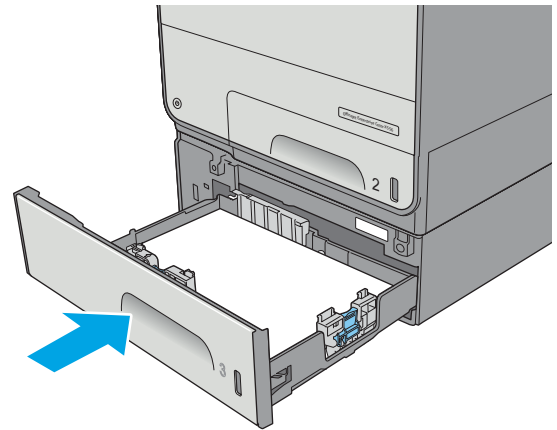
5. Remove any jammed or damaged sheets of paper. Verify that the tray is not overfilled and that the paper guides are adjusted correctly.




6. Remove any paper from the feed rollers inside the printer. First pull the paper to the right to release it, and then pull it forward to remove it.




7. Reinsert and close the tray.



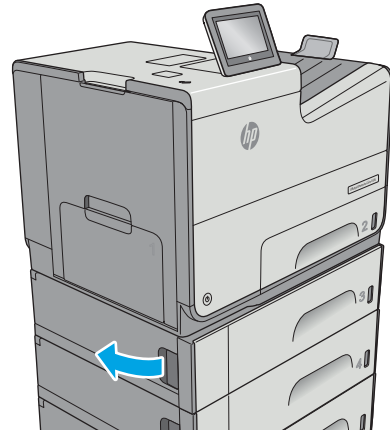
 **TIP:** If the error persists, the rollers above the tray might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.

Clear jams in the optional 3x500-sheet feeder

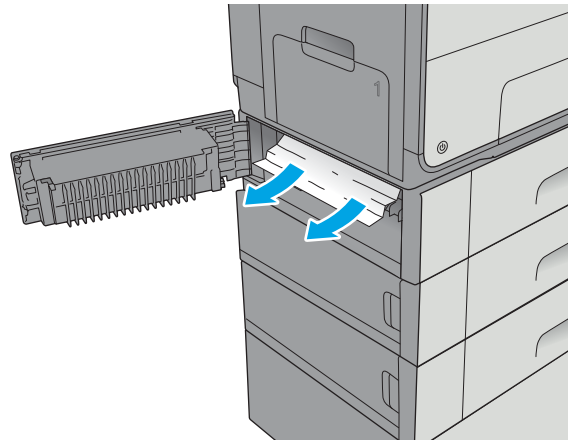
Use the following procedure to check for paper in all possible jam locations related to the 3x500-sheet feeder. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

 **NOTE:** The following procedure shows Tray 3. The method to clear jams in Trays 4 and 5 is the same.

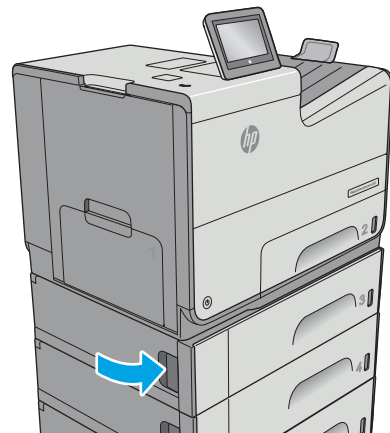
1. Open the lower-left door.



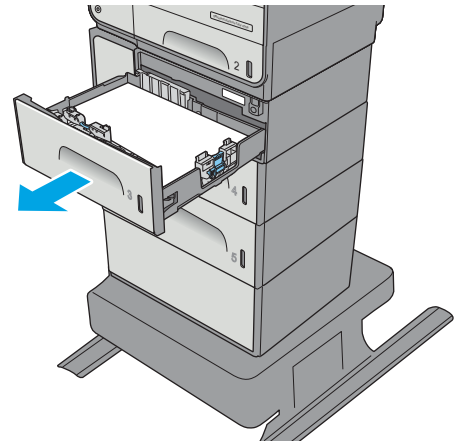
2. Gently pull out any jammed paper.



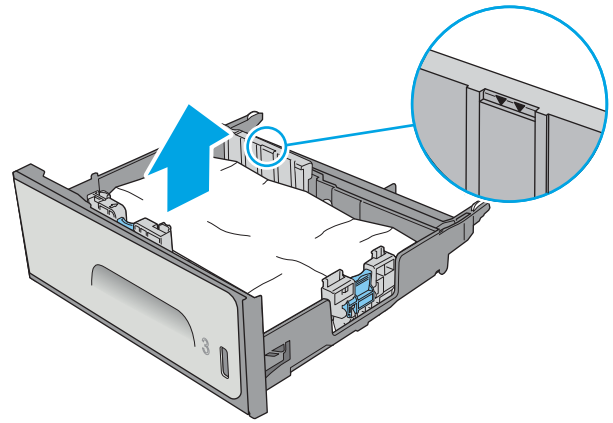
3. Close the lower-left door.



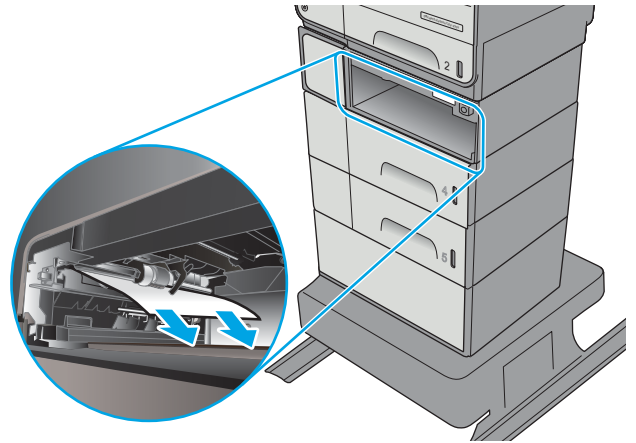
4. Pull the tray completely out of the printer by pulling and lifting it up slightly.



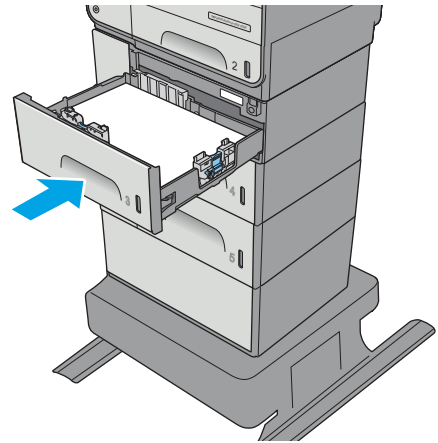
5. Remove any jammed or damaged sheets of paper. Verify that the tray is not overfilled and that the paper guides are adjusted correctly.




6. Remove any paper from the feed rollers inside the printer. First pull the paper to the right to release it, and then pull it forward to remove it.



7. Reinsert and close the tray.

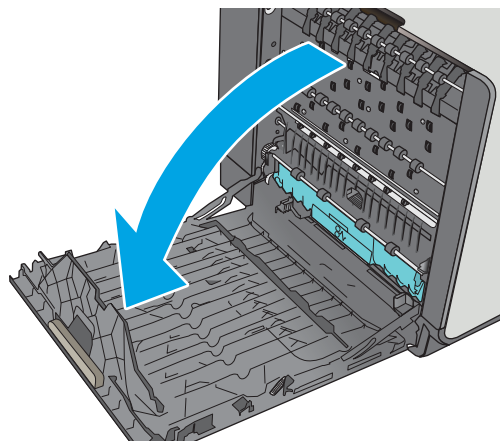


 **TIP:** If the error persists, the rollers above the tray might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.

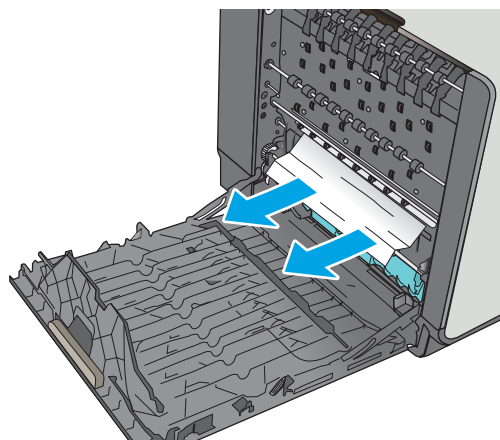
Clear jams in the ink-collection unit area

The following information describes how to clear paper jams in the ink-collection unit. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

1. Open the left door.

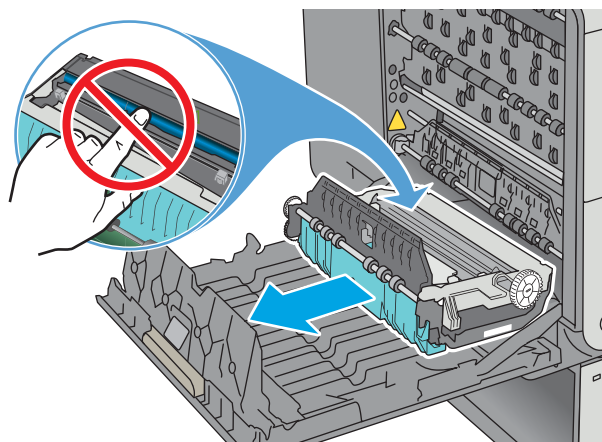


2. Gently pull out any jammed paper from the rollers and delivery area. If the paper tears, make sure to remove all remnants.

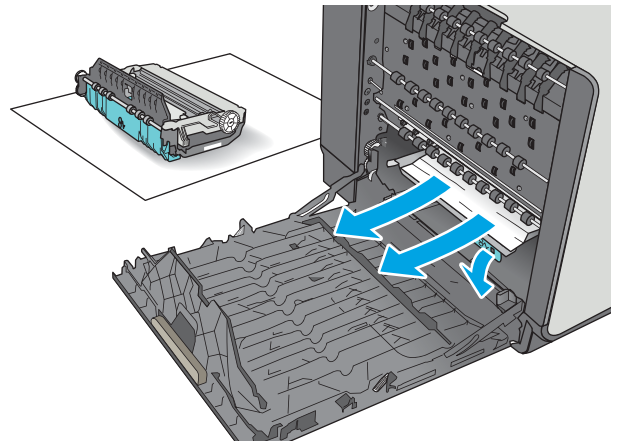


3. Remove the ink-collection unit by pulling it out with both hands. Set the unit aside, upright, on a piece of paper to prevent spills.

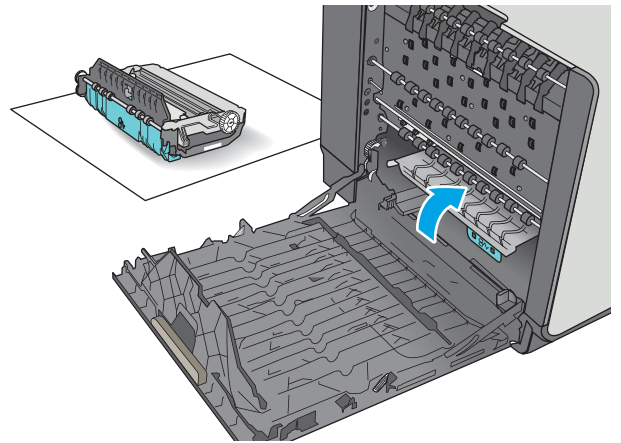
CAUTION: When pulling out the ink-collection unit, avoid making direct contact with the black cylinder to prevent pigment smear on skin or clothes.



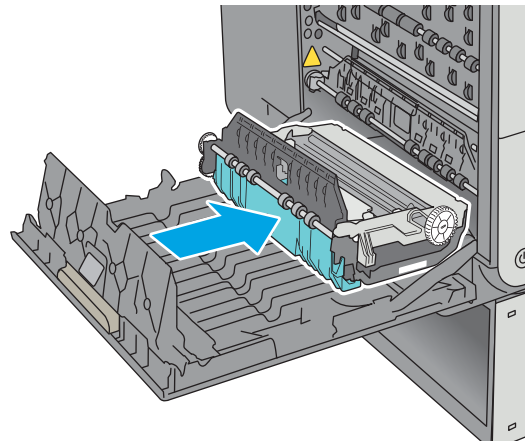
4. Lower the platen by pressing down on the green tab. This will cause the printer to try to feed the sheet through the print zone. You might need to gently pull on the sheet if it does not feed. Remove the sheet.



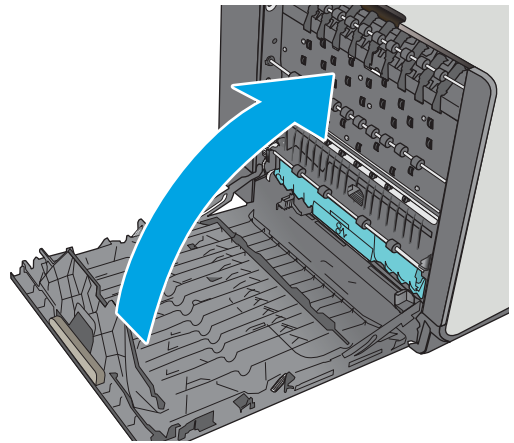
5. Lift the green tab to return the platen to the operating position.



6. Install the ink-collection unit.



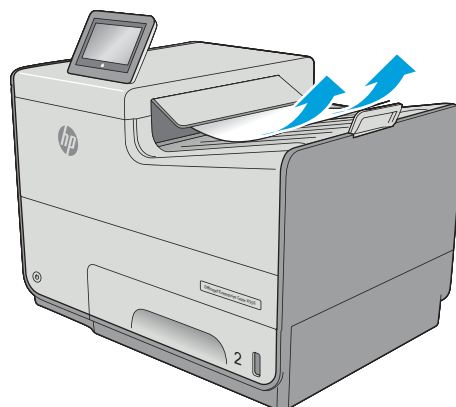
7. Close the left door.



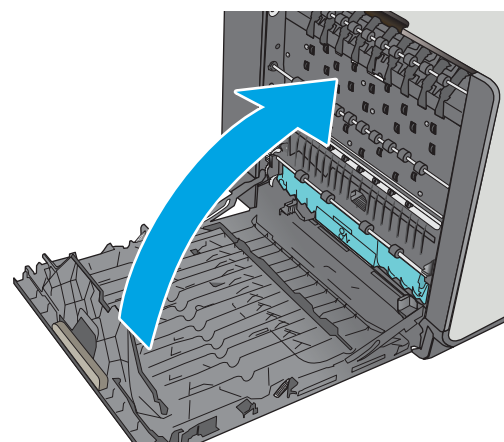
Clear jams in the output bin (556)

Use the following procedure to clear jams in the output bin. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

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



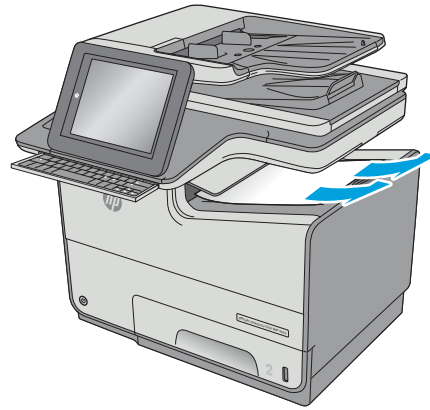
2. Open and then close the left door to clear the message.



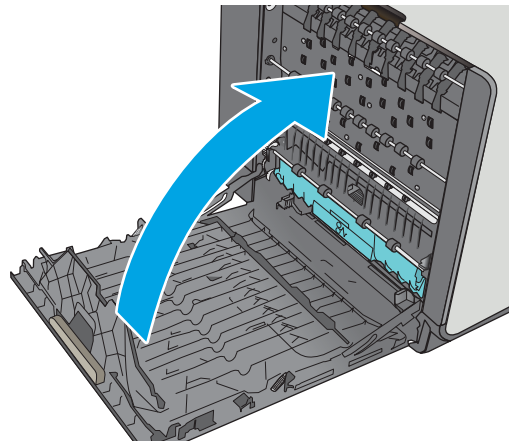
Clear jams in the output bin (586)

Use the following procedure to clear jams in the output bin. When a jam occurs, the control panel displays an animation that assists in clearing the jam.


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



2. Open and then close the left door to clear the message on the control panel.



Solve performance problems

 **NOTE:** Tray 1 and Tray 2 are optimal for paper pickup when using special paper or media other than 20lb plain paper. For Tray 1 and Tray 2 the printer increases the number of attempts to pick up a page, which increases the reliability of successfully picking the page from the tray and decreases the possibility of a mis-pick jam.

HP recommends using Tray 1 or Tray 2 if the printer is experiencing excessive or reoccurring jams from trays other than Tray 1 and Tray 2, or for print jobs that require media other than 20lb plain paper.

- [Factors affecting print performance](#)
- [Print speeds](#)
- [The printer does not print or it prints slowly](#)
- [The printer prints slowly](#)

Factors affecting print performance

Table 2-28 Solve performance problems

Problem	Cause	Solution
Pages print but are totally blank.	The document might contain blank pages.	Check the original document to see if content is present on all of the pages.
	The printer might be malfunctioning.	To check the printer, 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 printer might not be pulling paper correctly.	Make sure paper is loaded in the tray correctly.
	The paper is jamming in the printer.	Clear the jam.
	The USB cable might be defective or incorrectly connected.	<ul style="list-style-type: none">• 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 the host computer.	The printer might not share a USB port. If an external hard drive or network switchbox is connected to the same port as the printer, the other device might be interfering with the printer. To connect and use the printer, disconnect the other device or use two USB ports on the host computer.

Print speeds

Print speed is the number of pages that print in one minute. Print speed depends on different engine-process speeds or operational pauses between printed pages during normal printer operation. Factors that determine the print speed of the printer include the following:

- Page formatting time

The printer must pause for each page to be formatted before it prints. Complex pages take more time to format, resulting in reduced print speed. However, most jobs print at full engine speed.

- Media size

Legal-size media reduces print speed because it is longer than the standard Letter- or A4-size media. A reduce print speed is used when printing on narrow media to prevent the edges of the fuser from overheating.

- Media mode

Some media types require a reduced print speed to achieve maximum print quality on that media. For example, glossy, heavy, and specialty media (for example, envelopes or photos) require a reduced print speed. To maximize the print speed for special media types, make sure that the correct media type in the print driver is selected.

- Printer temperature

To prevent printer damage, print speed is reduced if the printer reaches a specific internal temperature (thermal slow down). The starting temperature of the printer, ambient environment temperature, and the print job size effect the number of pages that can be printed before the printer reduces the print speed. Thermal slow down reduces print speed by printing four pages and then pausing for an amount of time before printing continues.

- Other print speed reduction factors

Other factors (especially during large print jobs) that can cause reduced print speeds include:

- Density control sequence; occurs every 150 pages and takes about 120 seconds

The printer does not print or it prints slowly

The printer does not print

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

1. Make sure the printer is turned on and that the control panel indicates it is ready.
 - If the control panel does not indicate the printer is ready, turn the printer off and then on again.
 - If the control panel indicates the printer is ready, try sending the job again.
2. If the control panel indicates the printer has an error, resolve the error and then try sending the job again.
3. Make sure the cables are all connected correctly. If the printer is connected to a network, check the following items:

- Check the bottom LED next to the network connection on the printer. If the network is active, the light is green.
 - Make sure that a network cable and not a phone cord is used to connect to the network.
 - Make sure the network router, hub, or switch is turned on and that it is working correctly.
4. Install the HP software from the CD that came with the printer. Using generic printer drivers can cause delays clearing jobs from the print queue.
 5. From the list of printers on your computer, right-click the name of this printer, click **Properties**, and open the **Ports** tab.
 - If a network cable is used to connect to the network, make sure the printer name listed on the **Ports** tab matches the printer name on the printer configuration page.
 - If a USB cable is used, and the printer is connected to a wireless network, make sure the box is checked next to **Virtual printer port for USB**.
 6. If a personal firewall system on the computer is used, it might be blocking communication with the printer. Try temporarily disabling the firewall to see if it is the source of the problem.
 7. If the host computer or the printer is connected to a wireless network, low signal quality or interference might be delaying print jobs.

The printer prints slowly

The printer prints slowly

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

1. Make sure the computer meets the minimum specifications for this printer. For a list of specifications, go to this Web site: www.hp.com/support/pagewidecolor556, www.hp.com/support/pagewidecolor586MFP.
2. When the printer is configured to print on some paper types, such as heavy paper, the printer prints more slowly so it can correctly fuse the toner to the paper. If the paper type setting is not correct for the type of paper you are using, change the setting to the correct paper type.
3. If the host computer or the printer is connected to a wireless network, low signal quality or interference might be delaying print jobs.

Solve connectivity problems

- [Solve USB connection problems](#)
- [Solve wired network problems](#)

Solve USB connection problems

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

- Verify that the cable is connected to the computer and to the printer.
- 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 printer. Replace the cable if necessary.

Solve wired network problems

Introduction

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

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



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

Poor physical connection

1. Verify that the printer 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 printer, 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 printer

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

The computer is unable to communicate with the printer

1. Test network communication by pinging the network.
 - a. Open a command-line prompt on your computer.
 - For Windows, click **Start**, click **Run**, type `cmd`, and then press **Enter**.
 - For OS X, go to **Applications**, then **Utilities**, and open **Terminal**.
 - b. Type `ping` followed by the IP address for your printer.
 - 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 printer, and the computer are all configured for the same network.

The printer is using incorrect link speed and duplex settings for the network

HP recommends leaving these settings 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 settings.
2. Verify that the operating system is configured correctly.

The printer 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](#)
- [Printer resets](#)
- [Format Disk and Partial Clean functions](#)

Service menu

The [Service](#) menu is PIN-protected for added security. Only authorized service people have access to the [Service](#) menu. When selecting [Service](#) from the list of menus, the printer prompts the user to enter an eight-digit personal identification number (PIN).



NOTE: The printer automatically exits the [Service](#) menu after about one minute if no items are selected or changed.

1. From the Home screen on the printer control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the [Service](#) menu.
3. On the sign-in screen, select [Service Access Code](#) from the drop-down list.
4. Enter the following service access code for the printer:
 - 05055616 (556)
 - 05058616 (586)

The following menu items appear in the [Service](#) menu:

Table 2-29 Service menu

First level	Second level	Value	Description
Event Log	Print		Print the event log.
Clear Event Log	Clear		Use this item to clear the printer event log.
Cycle Counts	Total Engine Cycles		Set the page count that was stored in NVRAM prior to installing a new formatter.
	Mono Cycle Count		Use this item to record the number of mono print jobs.
	Color Cycle Count		Use this item to record the number of color print jobs.
	Refurbish Cycle Count		Use this item to record the page count when the printer was refurbished.
	Document Feeder Kit Count (586 only)		Total number of pages since the document feeder kit was replaced.

Table 2-29 Service menu (continued)

First level	Second level	Value	Description
	Document Feeder Kit Interval (586 only)		Use this item to set the interval that causes the printer to prompt the customer to replace document feeder maintenance kit.
	Clean Rollers Count (586 only)		Total number of pages since the document feeder rollers were cleaned.
	Clean Rollers Interval (586 only)		Use this item to set the interval that causes the printer to prompt the customer to clean the document feeder rollers and separation pad.
	ADF Count (586 only)		Set the total pages fed through the document feeder.
	Flatbed Count (586 only)		Set the total pages scanned from the flatbed.
	ADF Simplex Count (586 only)		Set the total single-sided pages fed through the document feeder.
	ADF Duplex Count (586 only)		Set the total two-sided pages fed through the document feeder.
	Copy Scan Count (586 only)		Set the total copy pages that have been scanned.
	Send Scan Count (586 only)		Set the number of scanned pages sent to email.
	Fax Scan Count (586 fax models only)		Set the number of scanned pages that have been faxed.
	Copy Pages Count (586 only)		Set the number of scanned pages that have been printed.
Scanner Settings (586 only)	ADF Settings	Leading edge front	Set the calibration values. WARNING! Do not change these values unless instructed to do so.
		Leading edge back	
		Trailing edge front	
		Trailing edge back	
		Left side front	
		Left side back	
	Glass Settings (586 only)	Leading edge glass	
		Left Side Glass	
Serial Number			Set the serial number.

Table 2-29 Service menu (continued)

First level	Second level	Value	Description
Service ID			Use this item to show the date that the printer 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.
Low Alerts		Enable Disable	Turn on (or off) low alerts (for supplies).
Reset Low Alerts	<ul style="list-style-type: none"> Reset to level 1 Reset to level 2 Reset to level 3 Set to non-HP managed mode 		
PTT Test Mode			Test the internal modem for the analog fax accessory.
NOTE: 586 fax models only.			
	Hook Operations	Off Hook On Hook	
	Generate Random Data	Select a value from the list.	
	Generate DTMF Tone Burst	Select a value from the list.	
	Generate DTMF Continuous Tone	Select a value from the list.	
	Generate Pulse Burst	Select a value from the list.	
	Generate Tone Dial Number	Enter dial number.	
	Generate Pulse Dial Number	Enter dial number.	
	Generate Single Modem Tone	Range: 1100–2100 Hz Default = 2100 Hz	
	Line Measurements		
	Fax Transmit Signal Loss		

Table 2-29 Service menu (continued)

First level	Second level	Value	Description	
Test Support	Continuous Scan (586 only)	2-sided		
		Save to Disk		
	Continuous Copy (586 only)	2-sided		
		Save to Disk		
	Raw Scan (586 only)	2-sided		
		Mechanical Calibration		
	Continuous Print from USB			
	Automatic Calibrations (586 only)	Disabled		
		Enabled*		
	Runtime Configuration (586 only)	Standard		
StandardEIC				
Workflow				
WorkflowEIC				
Reconfigure				
Printhead Recovery	Start		Use this item to recover the printhead. NOTE: This process takes about two minutes, and uses a significant amount of ink. This process should not be performed more than one time in a 24-hour period to prevent the ink collection unit from overflowing.	
	Cancel			
Fac V29 Speed		V.29 7200	Use this item to set the fax V.29 speed (baud rate).	
NOTE: 586 fax models only.		V.29 9600*		

Printer resets

Restore factory-set defaults



NOTE: The printer restarts automatically after the reset operation completes.

1. From the Home screen on the printer control panel, scroll to and touch the **Administration** button.
2. Open the following menus:
 - **General Settings**
 - **Restore Factory Settings**
3. A verification message advises that completing the reset function might result in loss of data. Touch the **Reset** button to complete the process.

Restore the service ID

Restore the service ID

When replacing the formatter, the date is lost. Use this menu item to reset the date to the original date that the printer 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 printer 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: $9 \times 30 = 270$ or add 17 to 270: $270 + 17 = 287$. Thus, $DDD = 287$.

Convert the service ID to an actual date

Use the printer Service ID number to determine whether the printer 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 printer 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. $287 \text{ divided by } 30 = 9 \text{ with a remainder of } 17$. 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.

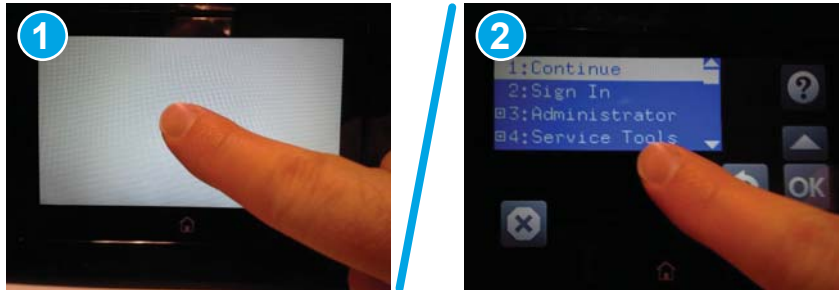
Printer cold reset

Cold reset using the Pre-boot menu from a touchscreen control panel

CAUTION: This procedure resets all printer configurations and settings to factory defaults (customer configurations and settings are lost).

1. Touch the middle of the control-panel display when you see the 1/8 under the logo.


Figure 2-110 Open the Pre-boot menu



2. Use the down arrow ▼ button to highlight the +3:Administrator item, and then touch the OK button.
3. Use the down arrow ▼ button to highlight the +8:Startup Options item, and then touch the OK button.
4. Use the down arrow ▼ button to highlight the 2 Cold Reset item, and then touch the OK button to select it.
5. Touch the Home button to return to the main Pre-boot menu and highlight the 1:Continue item, and then touch the OK button.

NOTE: The printer will initialize.

Format Disk and Partial Clean functions

 **NOTE:** Only for printers with a hard-disk drive (HDD) installed.

Active and repository firmware locations


The firmware bundle consists of multiple parts. The main components are the Windows CE Operating System and the printer/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 printer automatically copies over the OS and firmware files from the Repository location and the printer 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 printer in order for it to function again.

 **CAUTION:** HP recommends not using the [Format Disk](#) option unless an error occurs and the solution in the printer service manual recommends this solution. After executing the [Format Disk](#) function, the printer is unusable.

HP recommends backing-up printer configuration data before executing a [Format Disk](#) to retain customer-defined settings (if needed). See the [Backup/Restore](#) item in the [Device Maintenance](#) menu.

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 printer 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 printer restores the firmware files from the Repository location, but does not restore any customer-defined settings.
- For previous HP printers, a Hard Disk Initialization is similar to executing the [Partial Clean](#) function for this printer.

 **CAUTION:** HP recommends backing-up printer configuration data before executing a [Partial Clean](#) to retain customer-defined settings (if needed). See the [Backup/Restore](#) item in the [Device Maintenance](#) menu.

Reasons for performing Partial Clean

- The printer continually boots up in an error state.

 **NOTE:** Try clearing the error prior to executing a [Partial Clean](#).

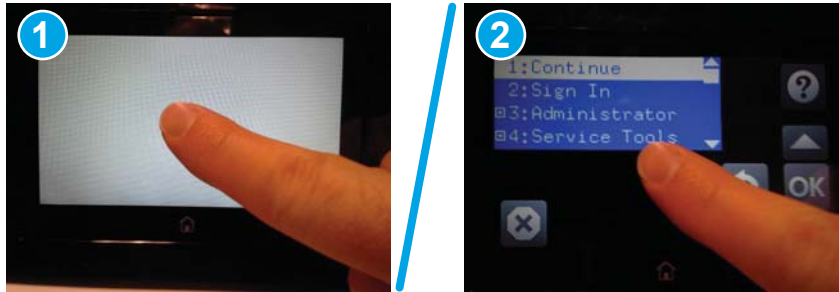
- The printer will not respond to commands from the control panel.
- Executing the [Partial Clean](#) function is helpful for troubleshooting hard disk problems.

- To reset the printer by deleting all solutions and customer-defined settings.
- The printer default settings are not properly working.


Execute a Partial Clean

1. Touch the middle of the control-panel display when you see the 1/8 under the logo.

Figure 2-111 Open the Pre-boot menu



2. Use the down arrow ▼ button to highlight the +3:Administrator item, and then touch the OK button.
3. Use the down arrow ▼ button to highlight Partial Clean and then touch the OK button.
4. Touch the OK button again.
5. Touch the Home button to highlight Continue, and then touch the OK button.

 **NOTE:** The printer initializes.


Format Disk

The **Format Disk** option erases the entire disk drive.


 **CAUTION:** After executing a **Format Disk** option, the printer 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 printer *does not* restore the firmware files.

- Rebooting the printer 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 printer firmware must be reloaded.

 **CAUTION:** HP recommends not using the **Format Disk** option unless an error occurs and the solution in the printer service manual recommends this solution. After executing the **Format Disk** function, the printer is unusable.

HP recommends backing-up printer configuration data before executing a **Format Disk** to retain customer-defined settings (if needed). See the **Backup/Restore** item in the **Device Maintenance** menu.

Reasons for performing Format Disk

- The printer continually boots up in an error state.



NOTE: Try clearing the error prior to executing a [Format Disk](#).

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

Execute a Format Disk

1. Touch the middle of the control-panel display when you see the [1/8](#) under the logo.

Figure 2-112 Open the Pre-boot menu



2. Use the down arrow ▼ button to highlight the [+3:Administrator](#) item, and then touch the [OK](#) button.
3. Use the down arrow ▼ button to highlight [Format Disk](#), and then touch the [OK](#) button.
4. Touch the [OK](#) button again.





NOTE: When the [Format Disk](#) operation is complete, reload the printer firmware.


Firmware upgrades

To download the most recent firmware upgrade for the printer, go to:

- In the US, go to www.hp.com/support/pagewidecolor556, www.hp.com/support/pagewidecolor586MFP.
 - a. Select **Get drivers, Software, and Firmware**, and then select the appropriate product by name.

 **NOTE:** More than one printer model might be listed. Make sure to select the correct model so that the upgraded firmware supports all of the printer functions.
 - b. Select the driver language and operating system.
 - c. Locate the firmware download, and then select **Download**.
- Outside the U.S., go to www.hp.com/support.
 - a. Select your country/region.
 - b. Select **Drivers & Downloads**.
 - c. Enter the product name in the **Find my product** dialogue box, and then select **Go**.

 **TIP:** Click on the **How do I find my product name/number?** link to see a short video on identifying the printer name and number.
 - d. Select the appropriate product by name.

 **NOTE:** More than one printer model might be listed. Make sure to select the correct model so that the upgraded firmware supports all of the printer functions.
 - e. Select the driver language and operating system.
 - f. Locate the firmware download, and then select **Download**.
- [Determine the installed revision of firmware](#)
- [Perform a firmware upgrade](#)

Determine the installed revision of firmware



NOTE: Print a configuration page to determine the installed revision of firmware.

1. From the **Home** screen on the printer 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 **Print** button to print the pages.

Figure 2-113 Configuration page firmware version

Configuration Page HP PageWide Color Flow MFP 586 Page 1

Firmware Reversion

Device Information

Product Name: HP PageWide Color Flow MFP 586
Device Name: HP PageWide Color Flow MFP 586
Model Number: G3W4
Engine Firmware Revision: B1LBCA1529HR
Device Serial Number: CN5762P302
Formatter Number: 31000G4
DIB: 2.0.0
SIC: xxxxF1519CR 1.0
Firmware Revision: 2305548

HP FutureSmart Level: HP FutureSmart 3
NFC revision: Not Installed
Service ID: 90000
Document Feeder Kit Interval: 75000
Pages Since Last Doc Feeder Maintenance: 0
PS Wait Time-out: 300 seconds
Engine Cycles*: 21
Color Engine Cycles*: 21
*Not weighted for billing

Calibration Information

Last Calibration Performed (Engine Cycles): 21
Last Calibration Performed: 9/30/2015 7:20:38 AM

Memory

Total RAM: 2048 MB

Event Log

Number of Entries in Use: 9
Three Most Recent Entries:

Number	Cycles	Event
9	21	42.80.01
8	21	33.02.02
7	21	01.01.01

Security

Hard Disk Encryption Status:
Internal Disk: Drive is not yet encrypted.
Job Data Encryption Status: Encrypted
Job Data Persistence: Persistent (not volatile)
File Erase Mode: Non-Secure Fast Erase (No overwrite)
Control Panel Password: Disabled
Support Key: 2948-JP18-AB2
Host USB plug and play: Enabled
Device USB: Enabled

Installed Personalities and Options

PCL: 20010402
PCLXL: 20010402
POSTSCRIPT: 20010402
PDF: 20130901
AirPrint: 2040201
PWGMASTER: 2040201
PCL3DUI: 20140721
Internal Disk: Hard Disk: Enabled
Serial Number: S3PW6AGS
Model: HP Secure Hard Disk
Capacity: 305245 MB
Hard Disk Encryption Status: Drive is not yet encrypted.
Internal Fax: Ver11.1
Embedded HP Jetdirect: 10.10.48.169
LDAP Gateway: 0.0.0.0
Digital Send Advanced
Custom Color Table: Not Installed

HP Web Services

HP Web Services: Disabled
ePrint: Disabled

Paper Trays and Options

Default Paper Size: Letter (8.5x11)
Tray 1 Size: Any Size
Tray 1 Type: Any Type
Tray 2 Size: Letter (8.5x11)
Tray 2 Type: Plain
Duplex Unit
1: Output Bin 1, 300 Sheets, Standard bin

Oct01/2015 1:57:59 PM
English (United States)

Perform a firmware upgrade

The firmware bundle is a .bdl file. This file requires an interactive upgrade method. The traditional FTP, LPR or Port 9100 methods of upgrading are not available. Use one of the following methods to upgrade the firmware for this printer.

HP Embedded Web Server



NOTE: The printer should be at the **Ready** state.

The firmware update might take 10 minutes or longer based on the input/output (I/O) transfer rates and the time it takes for the printer to reinitialize.


1. Open an Internet browser window.
2. Enter the printer IP address in the URL line.
3. Select the **Firmware Upgrade** link from the **General** tab or from the **Troubleshooting** tab.
4. Browse to the location that the firmware upgrade file was downloaded to, and then select the firmware file—the file has a .bdl file extension. Select the **Install** button to perform the upgrade.



NOTE: Do not close the browser window OR interrupt communication until the HP Embedded Web Server (EWS) displays the confirmation page.

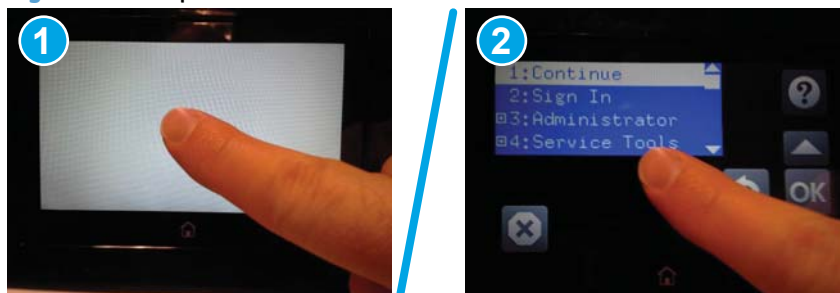
5. After the printer reinitializes, print a configuration page and verify that the latest firmware version has been installed.

USB flash drive (Pre-boot menu)

 **IMPORTANT:** Only use this method of performing a firmware upgrade if the printer cannot initialize to the **Ready** state.

1. Copy the .bdl file to a portable USB flash drive.
2. Touch the middle of the control-panel display when you see the 1/8 under the logo.

Figure 2-114 Open the Pre-boot menu




3. Touch the down arrow ▼ button to highlight +3 Administrator, and then touch the OK button.
4. If necessary, touch the down arrow ▼ button to highlight +1 Download, and then touch the OK button.
5. Insert the USB flash drive with the .bdl file on it into the USB port on the printer.

 **NOTE:** If the error message **No USB Thumbdrive Files Found** displays on the control-panel display, try using a different portable storage device.


6. Touch the down arrow ▼ button to highlight **USB Thumbdrive**, and then touch the OK button.
7. Touch the down arrow ▼ button to highlight the .bdl file, and then touch the OK button.

 **NOTE:** The upgrade process can take 10 minutes or longer to complete.


 **TIP:** If there is more than one .bdl file on the storage device, make sure to select the correct file for this printer.

8. When the message **Complete** displays on the control-panel display, touch the back ↵ button several times until the message **Continue** displays.
9. Touch the OK button to begin the upgrade. When the upgrade is complete, the printer will initialize to the **Ready** state.
10. 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)

 **NOTE:** USB flash drives that are not using a FAT32 format, or do not have a CD formatted partition, might not be recognized by the printer. If the printer does not recognize a USB flash drive, try using a different USB flash drive.

1. Copy the .bdl file to a portable USB flash drive.
2. Turn the printer on, and then wait until it reaches the **Ready** state.
3. From the **Home** screen on the printer control panel, scroll to and touch the **Device Maintenance** button.
4. Touch the **USB Firmware Upgrade** button.
5. Insert the USB flash drive with the .bdl file on it into the USB port on the printer.
6. Touch the .bdl file, and then touch the **Upgrade** button.

 **TIP:** If there is more than one .bdl file on the storage device, make sure to select the correct file for this printer.

7. Select one of the following options:

- **Upgrade**



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

- **Re-install**
- **Downgrade**

8. When the upgrade is complete, the printer will initialize to the **Ready** state. Print a configuration page and verify that the upgrade firmware version was installed.

Solve fax problems (586f and 586z models)

Fax reports

In addition to the printer reports, the printer also features several fax reports.

Fax test report

The user can use the fax test report to check the status of the printer and ensure that it is set up appropriately for faxing. Perform this test after the printer is set up for faxing.

The fax test performs the following activities:

- Tests the fax hardware.
- Checks whether the fax is connected to an active telephone wall jack.
- Checks whether the phone cord is plugged into the correct port.
- Checks whether the correct type of phone cord is connected to the HP printer.
- Checks for a dial tone.
- Checks for an active fax phone line.

The fax test report shows the following information:

- Pass/fail results for each of the fax setup tests
- Current fax settings to help diagnose issues
- Instructions on how to rerun the test

Guidelines for running the fax test

Before running the fax test, ensure that the following guidelines are met:

- The ink cartridges are installed properly.
- Full-size paper is loaded in the main tray.
- The printer is set up for faxing according to the particular home or office setup instructions.

Running the fax test

1. On the control panel, open the [Administration](#) menu.
2. Open the [Tools](#) menu, and then touch the [Run Fax Test](#) item. The printer displays the status of the test and prints a report.
3. Review the report.
 - If the test passes and you are still having problems faxing, check the fax settings listed in the report to verify the settings are correct. A blank or incorrect fax setting can cause problems faxing.
 - If the test fails, review the report for more information about how to fix any problems found.

Solve fax test failure

If the fax test fails to run, the printer might be busy with another task, or it may have an error condition preventing it from running the fax test. If the test fails, check the following possible issues:

1. Verify that the printer is set up properly, and connected to a power supply and to the computer. For more information on setting up the printer, see the user guide that came with the printer.
2. Verify that the printer is powered on. If it is not, press the power button.
3. Verify that the ink cartridges are installed correctly and the front door is closed.
4. Verify that the printer is not currently busy with another task. Check the display. If the printer is busy, wait until it completes the current task and then run the fax test again.
5. Verify that the rear door is attached to the back of the printer.
6. Verify that there are no error messages on the control-panel display. If there is an error message, resolve the problem and then run the test again.

Fax confirmation report

This report provides printed confirmation that the fax was successfully sent. The default fax confirmation setting is **Off**. To enable fax confirmation through the control panel, complete the following steps:

1. On the control panel, open the **Administration** menu.
2. Open the **Fax Setup** menu, and then open the **Advanced Fax Setup** menu.
3. Touch the **Fax Confirmation** item.
4. Select one of the following options:
 - **On (Fax Send)**: Prints a fax confirmation report for every fax you send.
 - **On (Fax Receive)**: Prints a fax confirmation report for every fax you receive.
 - **On (Send and Receive)**: Prints a fax confirmation report for every fax you send and receive.
 - **Off**: Does not print a fax confirmation report when you send and receive faxes successfully. This is the default setting.

Fax error report

You can configure the printer so that it automatically prints a report when there is an error during transmission or reception. To set up the printer to automatically print fax error reports, complete the following steps:

1. On the control panel, open the **Administration** menu.
2. Open the **Fax Setup** menu, and then open the **Advanced Fax Setup** menu.
3. Touch the **Fax Error Report** item.
4. Select one of the following options:
 - **On (Fax Send)**: Prints whenever a transmission error occurs.
 - **On (Fax Receive)**: Prints whenever a receiving error occurs.

- **On (Send and Receive):** Prints whenever a fax error occurs. This is the default setting.
- **Off:** Does not print any fax error reports.

Fax last transaction report

The Fax Last Transaction Report prints the details of the last fax transaction that occurred. Details include the fax number, number of pages, and the fax status. To print the last fax transaction report, complete the following steps:

1. On the control panel, open the **Administration** menu.
2. Open the **Fax Setup** menu, and then open the **Fax Reports** menu.
3. Touch the **Last Transaction** item.

Fax log

The fax log lists the last 30 transactions and the results. The report includes faxes that have been sent from the printer control panel and all faxes that have been received. Each entry in the log contains the following information:

- Transmission date and time
- Type (whether received or sent)
- Fax number
- Duration
- Number of pages
- Result (status) of transmission

To print the fax log from the printer control panel, complete the following steps:

1. On the control panel, open the **Administration** menu.
2. Open the **Fax Setup** menu, and then open the **Fax Reports** menu.
3. Touch the **Fax Log** item.

Caller ID report

Use the following procedure to print a history of caller ID fax numbers. If there are no calls in the ID history, the history could have been cleared during a power cycle or the user has not signed up for the caller ID service with the user's phone company.

1. On the control panel, open the **Administration** menu.
2. Open the **Fax Setup** menu, and then open the **Fax Reports** menu.
3. Touch the **Caller ID Report** item.

Possible fax issues

The following issues are the faxing issues that you might encounter, and the associated troubleshooting actions.

Issue	Solution
The fax test failed.	<p>If you ran a fax test and the test failed, review the report for basic information about the error. For more detailed information, check the report to see which part of the test failed, and then review the appropriate topic in this section for a solution.</p> <p>The “Fax Hardware Test” failed.</p> <ul style="list-style-type: none"> <li>• Use the power button to turn the power off, and then unplug the power cord from the printer. After a few seconds, plug the power cord in again, and then power on the printer. Run the test again. If the test fails again, continue reviewing the troubleshooting information in this section. <li>• Try to send or receive a test fax. If you can send or receive a fax successfully, there might not be a problem. <li>• If you are running the test from the Fax Setup Wizard (Windows) or HP Fax Setup Utility (Mac OS), ensure that the printer is not busy completing another task, such as receiving a fax or making a copy. Check the display for a message indicating that the printer is busy. If the printer is busy, wait until the job is finished and the printer is in the idle state before running the test. <li>• Ensure that you use the phone cord that came with the printer. If you do not use the supplied phone cord to connect the printer to the telephone wall jack, you might not be able to send or receive faxes. After you plug in the phone cord that came with the printer, run the fax test again. You might need to connect the supplied phone cord to the adapter provided for your country/region. <li>• If you are using a phone splitter, this can cause faxing problems. A splitter is a two-cord connector that plugs into a telephone wall jack. Try removing the splitter and connecting the printer directly to the telephone wall jack. <li>• After you resolve any problem that is found, run the fax test again to check if the printer passes the test and is ready for faxing. If the Fax Hardware Test continues to fail and you experience problems faxing, contact HP Support at www.hp.com/support. If prompted, choose your country/region, and then click Contact HP for information on calling for technical support. <p>The “Fax Connected to Active Telephone Wall Jack” test failed.</p> <ul style="list-style-type: none"> <li>• Check the connection between the telephone wall jack and the printer to ensure that the phone cord is secure. <li>• Ensure that you use the phone cord that came with the printer. If you do not use the supplied phone cord to connect the printer to the telephone wall jack, you might not be able to send or receive faxes. After you plug in the phone cord that came with the printer, run the fax test again. You might need to connect the supplied phone cord to the adapter provided for your country/region. <li>• Ensure that you have correctly connected the printer to the telephone wall jack. Connect one end of the phone cord supplied with the printer to your telephone wall jack and the other end to the port labeled 1-LINE on the printer. <li>• Try connecting a working phone and phone cord to the telephone wall jack that you are using for the printer and check for dial tone. If you do not hear a dial tone, contact your telephone company and have them check the line. <li>• Try sending or receiving a test fax. If you can do that successfully, there might not be a problem. <li>• After you resolve any problem that is found, run the fax test again to check if the printer passes the test and is ready for faxing.

Issue	Solution
<p>The fax test failed.</p> <p>(continued)</p>	<p>The "Phone Cord Connected to Correct Port on Fax" test failed.</p> <ol style="list-style-type: none"> 1. Connect one end of the phone cord supplied with the printer to your telephone wall jack and the other end to the port labeled 1-LINE on the printer. 2. After you have connected the phone cord to the port labeled 1-LINE, run the fax test again to check if the printer passes the test and is ready for faxing. 3. Try to send or receive a test fax. <ul style="list-style-type: none"> • Make sure you use the phone cord that came with the printer. If you do not use the supplied phone cord to connect from the telephone wall jack to the printer, you might not be able to send or receive faxes. After you plug in the phone cord that came with the printer, run the fax test again. • If you are using a phone splitter, this can cause faxing problems. (A splitter is a two-cord connector that plugs into a telephone wall jack.) Try removing the splitter and connecting the printer directly to the telephone wall jack. <p>The "Using Correct Type of Phone Cord with Fax" test failed.</p> <ul style="list-style-type: none"> • Make sure you used the phone cord supplied in the box with the printer to connect to the telephone wall jack. One end of the phone cord should be connected to the port labeled 1-LINE on the back of the printer, and the other end to your telephone wall jack. If the phone cord that came with the printer is not long enough, use a coupler to extend the length. • Check the connection between the telephone wall jack and the printer to ensure the phone cord is secure. • Ensure that you use the phone cord that came with the printer. If you do not use the supplied phone cord to connect the printer to the telephone wall jack, you might not be able to send or receive faxes. After you plug in the phone cord that came with the printer, run the fax test again. You might need to connect the supplied phone cord to the adapter provided for your country/region. • If you are using a phone splitter, this can cause faxing problems. A splitter is a two-cord connector that plugs into a telephone wall jack. Try removing the splitter and connecting the printer directly to the telephone wall jack.

Issue	Solution
<p>The fax test failed.</p> <p>(continued)</p>	<p>The “Dial Tone Detection” test failed.</p> <p>Other equipment, which uses the same phone line as the printer, might be causing the test to fail. To determine if the other equipment is causing a problem, disconnect everything from the phone line, and then run the test again. If the printer passes the Dial Tone Detection Test without the other equipment connected, then one or more pieces of the equipment is causing problems. Try adding them back one at a time and rerunning the test each time, until you identify which piece of equipment is causing the problem.</p> <ul style="list-style-type: none"> • Try connecting a working phone and phone cord to the telephone wall jack that you are using for the printer and check for dial tone. If you do not hear a dial tone, contact your telephone company and have them check the line. • Ensure that you have correctly connected the printer to the telephone wall jack. • Connect one end of the phone cord supplied with the printer to your telephone wall jack and the other end to the port labeled 1-LINE on the printer. • If your telephone system is not using a standard dial tone, such as the one used by some PBX systems, the test might fail. This will not cause a problem in sending or receiving faxes. Try sending or receiving a test fax. • Check to ensure that the country/region setting is set appropriately. If the country/region setting is not set or is set incorrectly, the test might fail, and you might have problems in sending and receiving faxes. • Ensure that you connect the printer to an analog phone line or you will not be able to send or receive faxes. To check if your phone line is digital, connect a regular analog phone to the line and listen for a dial tone. If you do not hear a normal sounding dial tone, it might be a phone line set up for digital phones. Connect the printer to an analog phone line and try sending or receiving a fax. • Ensure that you use the phone cord that came with the printer. If you do not use the supplied phone cord to connect the printer to the telephone wall jack, you might not be able to send or receive faxes. After you plug in the phone cord, run the fax test again. • After you resolve any problem that is found, run the fax test again to check if the printer passes the test and is ready for faxing. If the dial tone detection test continues to fail, contact your telephone company and have them check the phone line.
<p>The fax test failed.</p> <p>(continued)</p>	<p>The “Fax Line Condition” test failed.</p> <ul style="list-style-type: none"> • Ensure that you connect the printer to an analog phone line or you will not be able to send or receive faxes. To check if your phone line is digital, connect a regular analog phone to the line and listen for a dial tone. If you do not hear a normal sounding dial

Issue	Solution
	<p>tone, it might be a phone line set up for digital phones. Connect the printer to an analog phone line and try sending or receiving a fax.</p> <ul style="list-style-type: none"> • Check the connection between the telephone wall jack and the printer to make sure that the phone cord is secure. • Ensure that you have correctly connected the printer to the telephone wall jack. • Connect one end of the phone cord supplied with the printer to your telephone wall jack and the other end to the port labeled 1-LINE on the printer. You might need to connect the supplied phone cord to the adapter provided for your country/region. • Other equipment, which uses the same phone line as the printer, might be causing the test to fail. To determine if the other equipment is causing a problem, disconnect everything from the phone line, and then run the test again. • If the Fax Line Condition Test passes without the other equipment, then one or more pieces of the equipment is causing problems; try adding them back one at a time and rerunning the test each time, until you identify which piece of equipment is causing the problem. • If the Fax Line Condition Test fails even after removing the other connected equipment, connect the printer to a working phone line and continue reviewing the troubleshooting information in this section. • If you are using a phone splitter, this can cause faxing problems. A splitter is a two-cord connector that plugs into a telephone wall jack. Try removing the splitter and connecting the printer directly to the telephone wall jack. • Ensure that you use the phone cord that came with the printer. If you do not use the supplied phone cord to connect the printer to the telephone wall jack, you might not be able to send or receive faxes. After you plug in the phone cord that came with the printer, run the fax test again. • After you resolve any problem that is found, run the fax test again to check if the printer passes the test and is ready for faxing. If the Fax Line Condition test continues to fail and you experience problems faxing, contact your telephone company and have them check the phone line.
<p>The display always shows Phone Off Hook.</p>	<ul style="list-style-type: none"> • You are using the wrong type of phone cord. Ensure that you are using the phone cord that came with the printer to connect the printer to your phone line. If the phone cord that came with the printer is not long enough, you can use a coupler to extend the length. You can purchase a coupler at an electronics store that carries phone accessories. You will also need another phone cord, which can be a standard phone cord that you might already have in your home or office. • Other equipment that uses the same phone line as the printer might be in use. Ensure that the extension phones—phones on the same phone line, but not connected to the printer—or other equipment are not in use or off the hook. For example, you cannot use the printer for sending a fax if an extension phone is off the hook, or if you are using a computer dial-up modem to send e-mail or access the Internet.
<p>The printer is having problems sending and receiving faxes.</p>	<ul style="list-style-type: none"> • Ensure that the printer is powered on. Look at the display on the printer. If the display is blank and the Power light is not lit, the printer is powered off. Check if the power

Issue	Solution
	<p>cord is firmly connected to the printer and plugged into a power outlet. Press the power button to power on the printer.</p> <ul style="list-style-type: none"> • After powering on the printer, HP recommends that you wait five minutes before sending or receiving a fax. The printer cannot send or receive faxes while it is initializing after being powered on. • Connect one end of the phone cord supplied with the printer to your telephone wall jack and the other end to the port labeled 1-LINE on the printer. • If the phone cord that came with the printer is not long enough, you can use a coupler to extend the length. You can purchase a coupler at an electronics store that carries phone accessories. You will also need another phone cord, which can be a standard phone cord that you might already have in your home or office. • Try connecting a working phone and phone cord to the telephone wall jack that you are using for the printer and check for a dial tone. If you do not hear a dial tone, call your local telephone company for service. • Other equipment, which uses the same phone line as the printer, might be in use. For example, you cannot use the printer for faxing if an extension phone is off the hook, or if you are using a computer dial-up modem to send an e-mail or access the Internet. • Check to see if another process has caused an error. Check the control-panel display or your computer for an error message that provides information about the problem and its resolution. If there is an error, the printer will not send or receive a fax until the error condition is resolved. • The phone line connection might be noisy. Phone lines with poor sound quality (noise) can cause faxing problems. Check the sound quality of the phone line by plugging a phone into the telephone wall jack and listening for static or other noise. If you hear noise, turn Error Correction Mode (ECM) off and try faxing again. For information about changing ECM, see the onscreen Help. If the problem persists, contact your telephone company.
<p>The printer is having problems sending and receiving faxes.</p> <p>(continued)</p>	<ul style="list-style-type: none"> • If you are using a digital subscriber line (DSL) service, make sure that you have a DSL filter connected or you will not be able to fax successfully. • Ensure that the printer is not connected to a telephone wall jack that is set up for digital phones. To check if your phone line is digital, connect a regular analog phone to the line and listen for a dial tone. If you do not hear a normal sounding dial tone, it might be a phone line set up for digital phones. • If you are using a private branch exchange (PBX) or an integrated services digital network (ISDN) converter/terminal adapter, make sure that the printer is connected to the correct port and the terminal adapter is set to the correct switch type for your country/region, if possible. • If the printer shares the same phone line with a DSL service, the DSL modem might not be properly grounded. If the DSL modem is not properly grounded, it can create noise on the phone line. Phone lines with poor sound quality (noise) can cause faxing problems. You can check the sound quality of the phone line by plugging a phone into the telephone wall jack and listening for static or other noise. If you hear noise, power off your DSL modem for at least 15 minutes, after which, power on the DSL modem again and listen to the dial tone. If the phone line is still noisy, contact your telephone company. For information on how to power off your DSL modem, contact your DSL provider for support. • If you are using a phone splitter, this can cause faxing problems. (A splitter is a two-cord connector that plugs into a telephone wall jack.) Try removing the splitter and connecting the printer directly to the telephone wall jack.

Issue	Solution
The printer is having problems sending a manual fax.	<ul style="list-style-type: none"> • Ensure that the telephone you use to initiate the fax call is connected directly to the printer. To send a fax manually, the telephone must be connected directly to the port labeled 2-EXT on the printer. • If you are sending a fax manually from a phone that is connected directly to the printer, you must use the keypad on the telephone to send the fax. You cannot use the keypad on the printer control panel.
The printer cannot receive faxes, but can send faxes.	<ul style="list-style-type: none"> • If you are not using a distinctive ring service, check to make sure that the Distinctive Ring feature on the printer is set to All Rings • If Auto Answer is set to Off, you will need to receive faxes manually; otherwise, the printer will not receive the fax. • If you have a voice mail service on the same phone number that you use for fax calls, you must receive faxes manually, not automatically. This means that you must be available to respond in person to incoming fax calls. • If you have a computer dial-up modem on the same phone line as the printer, check to make sure that the software that came with your modem is not set to receive faxes automatically. Modems that are set up to receive faxes automatically take over the phone line to receive all incoming faxes. As a result, the printer doesn't receive fax calls. • If you have an answering machine on the same phone line with the printer, you might have one of the following problems: <ul style="list-style-type: none"> ◦ Your answering machine might not be set up properly with the printer. ◦ Your outgoing message might be too long or too loud to allow the printer to detect fax tones, and the sending fax machine might disconnect. ◦ Your answering machine might not have enough quiet time after your outgoing message to allow the printer to detect fax tones. This problem is most common with digital answering machines. • The following actions might help solve the above stated problems. <ul style="list-style-type: none"> ◦ When you have an answering machine on the phone line that you use for fax calls, try connecting the answering machine directly to the printer. ◦ Ensure that the printer is set to receive faxes automatically. For information on setting up the printer to receive faxes automatically, see Receive a fax. ◦ Ensure the Rings to Answer setting is set to a greater number of rings than the answering machine. ◦ Disconnect the answering machine and then try receiving a fax. If faxing is successful without the answering machine, the answering machine might be causing the problem. ◦ Reconnect the answering machine and record your outgoing message again. Record a message that is approximately 10 seconds in duration. Speak slowly and at a low volume when recording your message. Leave at least 5 seconds of

Issue	Solution
	<p>silence at the end of the voice message. There should be no background noise when recording this silent time. Try to receive a fax again.</p> <ul style="list-style-type: none"> <li>• If the printer shares the same phone line with other types of phone equipment, such as an answering machine, a computer dial-up modem, or a multi-port switch box, the fax signal level might be reduced. The signal level can also get reduced if you use a splitter or connect extra cables to extend the length of your phone. A reduced fax signal can cause problems during fax reception. To find out if other equipment is causing a problem, disconnect everything except the printer from the phone line, and then try to receive a fax. If you can receive faxes successfully without the other equipment connected, one or more pieces of the other connected equipment is causing problems; try adding them back one at a time and receiving a fax each time, until you identify which equipment is causing the problem. <li>• If you have a special ring pattern for your fax phone number (using a distinctive ring service through your telephone company), make sure that the Distinctive Ring feature on the printer is set to match.
The printer cannot send faxes, but can receive faxes.	<ul style="list-style-type: none"> <li>• The printer might be dialing too fast or too soon. You might need to insert some pauses in the number sequence. For example, if you need to access an outside line before dialing the phone number, insert a pause following the access number. If your number is 95555555, and 9 accesses an outside line, you might insert pauses as follows: 9-555-5555. To enter a pause in the fax number you are typing, touch Redial/ Pause, or touch Space (#) repeatedly, until a dash (-) appears on the display. <li>• You can also send the fax by using monitor dialing. This enables you to listen to the phone line as you dial. You can set the pace of your dialing and respond to prompts as you dial. <li>• The number you entered when sending the fax is not in the proper format or the receiving fax machine is having problems. To check this, try calling the fax number from a telephone and listen for fax tones. If you cannot hear fax tones, the receiving fax machine might not be powered on or connected, or a voice mail service could be interfering with the recipient's phone line. You can also ask the recipient to check the receiving fax machine for any problems.
Fax tones are recorded on the answering machine.	<ul style="list-style-type: none"> <li>• When you have an answering machine on the same phone line that you use for fax calls, try connecting the answering machine directly to the printer. If you do not connect the answering machine as recommended, fax tones might be recorded on your answering machine. <li>• Ensure that the printer is set to receive faxes automatically and that the Rings to Answer setting is correct. The number of rings to answer for the printer should be greater than the number of rings to answer for the answering machine. If the answering machine and the printer are set to the same number of rings to answer, both devices answer the call and fax tones are recorded on the answering machine. <li>• Set your answering machine to a low number of rings and the printer to answer in the maximum number of rings supported. (The maximum number of rings varies by country/region.) In this setup, the answering machine answers the call and the printer monitors the line. If the printer detects fax tones, the printer receives the fax. If the call is a voice call, the answering machine records the incoming message.
The phone cord that came with the printer is not long enough.	<ul style="list-style-type: none"> <li>• If the phone cord that came with the printer is not long enough, you can use a coupler to extend the length. You can purchase a coupler at an electronics store that carries phone accessories. You will also need another phone cord, which can be a standard phone cord that you might already have in your home or office. <li>• To extend your phone cord, complete the following steps.

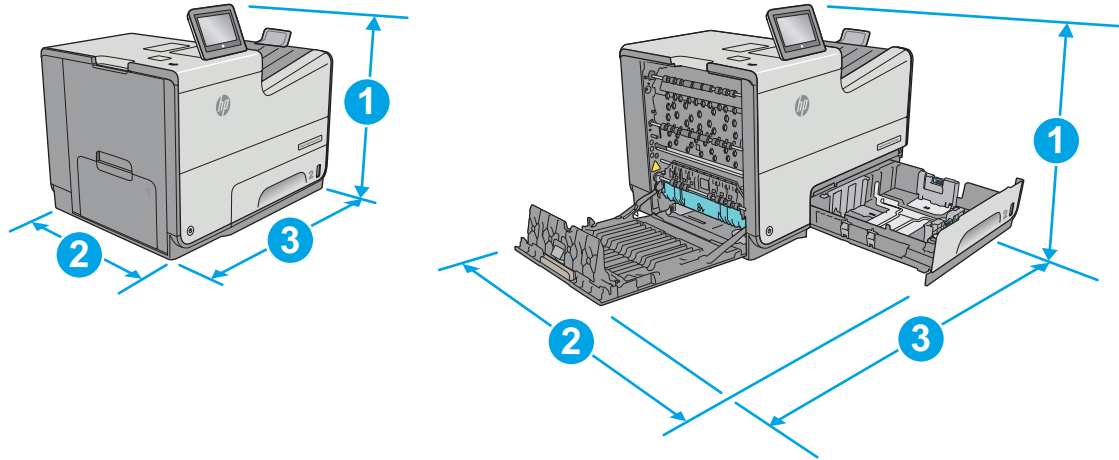
Issue	Solution
	<ol style="list-style-type: none"><li>1. Using the phone cord supplied with the printer, connect one end to the coupler, then connect the other end to the port labeled 1-LINE on the back of the printer.<li>2. Connect another phone cord to the open port on the coupler and the telephone wall jack.
Color faxes do not print	<ul style="list-style-type: none"><li>• The Incoming Fax Printing option might be turned off. To print color faxes, make sure that the Incoming Fax Printing option in the printer control panel is turned on.
The computer cannot receive faxes (Fax to PC or Fax to Mac)	<ul style="list-style-type: none"><li>• The computer selected to receive faxes might be turned off. Ensure that the computer selected to receive faxes is switched on at all times.<li>• Different computers might be configured for setup and receiving faxes and one of them might be switched off. If the computer receiving faxes is different from the one used for setup, both computers should be switched on at all times.<li>• Fax to PC or Fax to Mac might not be activated or the computer might not be configured to receive faxes. Activate Fax to PC or Fax to Mac and make sure the computer is configured to receive faxes.

A Printer specifications

- [Printer dimensions](#)
- [Printer space requirements](#)
- [Power consumption, electrical specifications, and acoustic emissions](#)
- [Operating-environment range](#)
- [Certificate of Volatility](#)

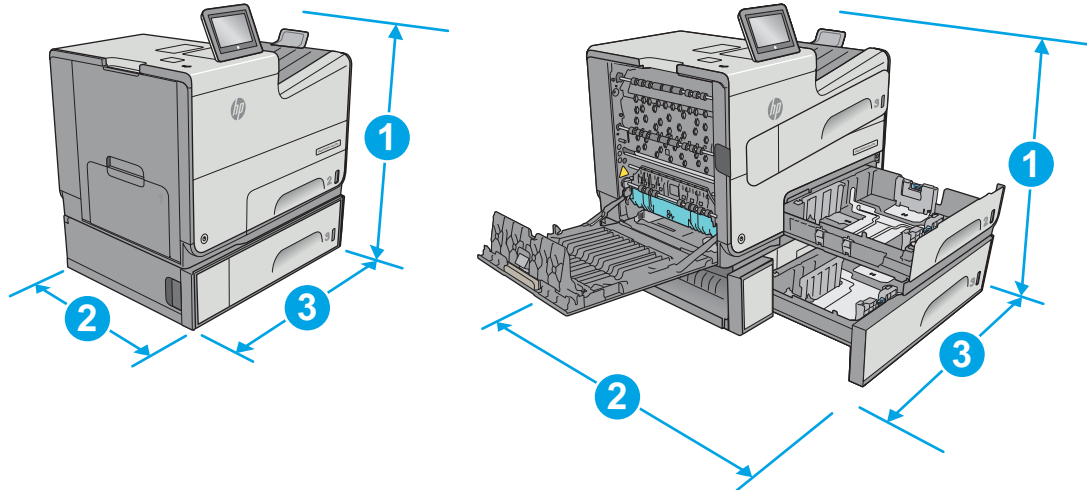
Printer dimensions

Figure A-1 Dimensions for the 556dn model



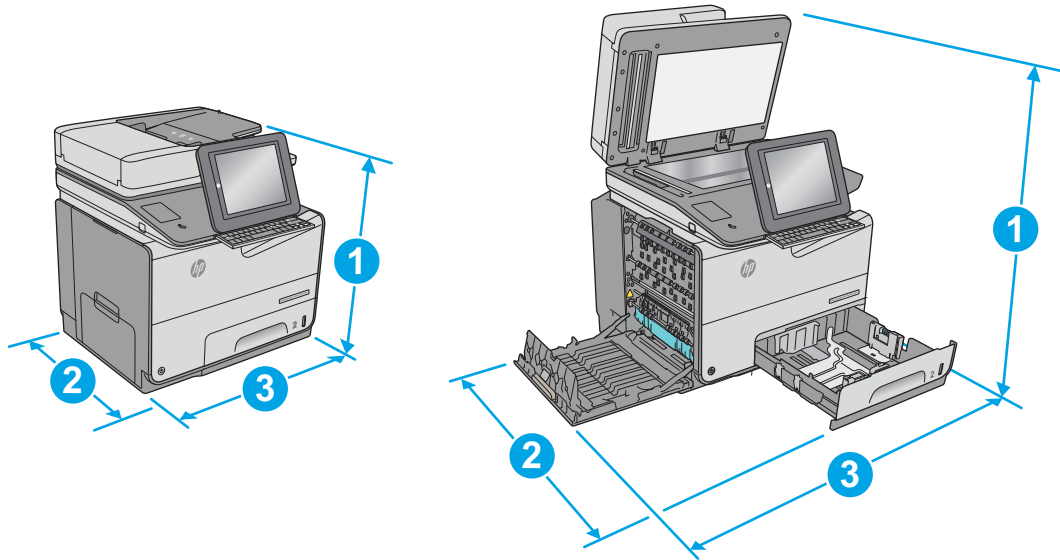
	Printer fully closed	Printer fully opened
1. Height	457 mm (17.9 in)	457 mm (17.9 in)
2. Depth	463 mm (18.2 in)	745 mm (29.3 in)
3. Width	530 mm (20.8 in)	934 mm (36.7 in)
Weight	22.2 kg (48.9 lb)	

Figure A-2 Dimensions for the 556xh model



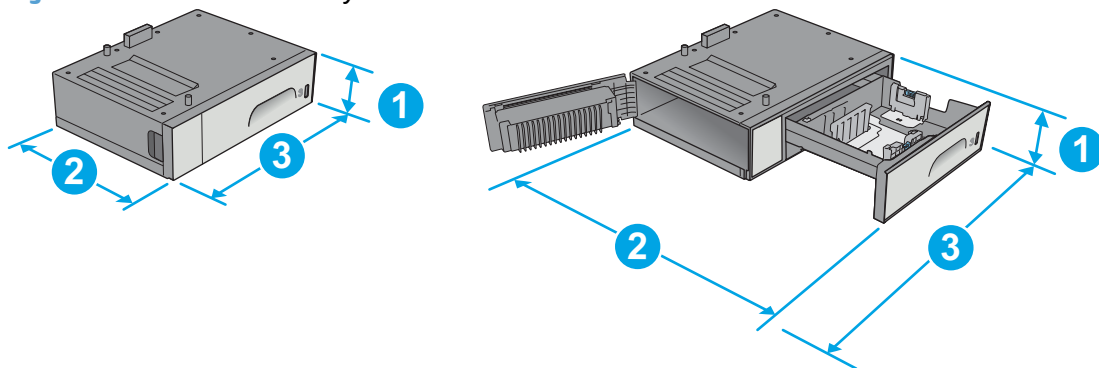
	Printer fully closed	Printer fully opened
1. Height	597 mm (23.5 in)	597 mm (23.5 in)
2. Depth	463 mm (18.2 in)	745 mm (29.3 in)
3. Width	530 mm (20.8 in)	1038 mm (40.8 in)
Weight	34.1 kg (75.2 lb)	

Figure A-3 Dimensions for the 586dn, 586f, and 586z models



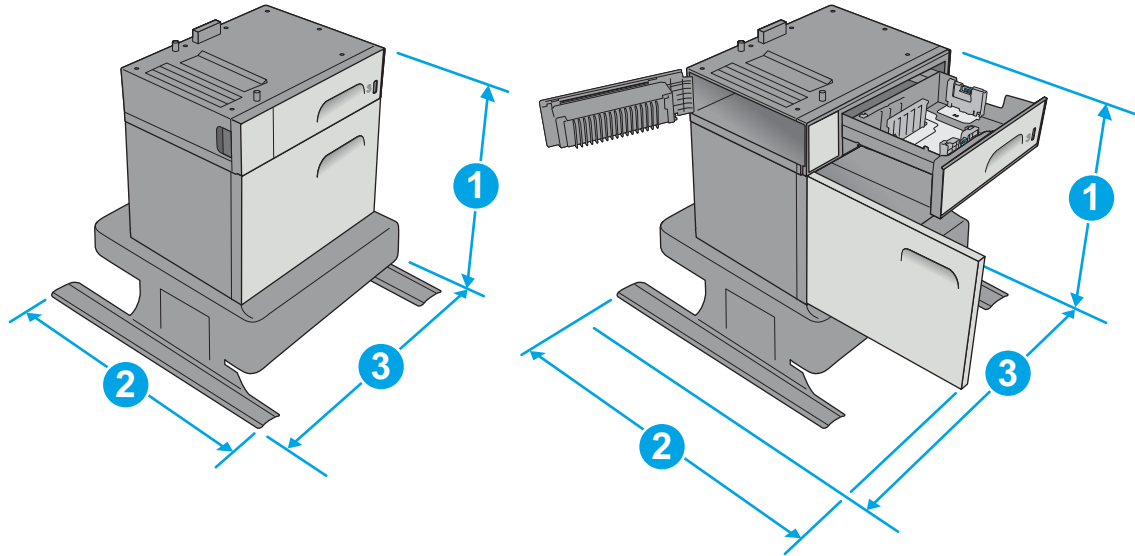
	Printer fully closed	Printer fully opened
1. Height	529 mm (20.8 in)	786 mm (30.9 in)
2. Depth	564 mm (22.2 in)	752 mm (29.6 in)
3. Width	530 mm (20.8 in)	934 mm (36.7 in)
Weight	32.3 kg (71.3 lb)	

Figure A-4 Dimensions for Tray 3



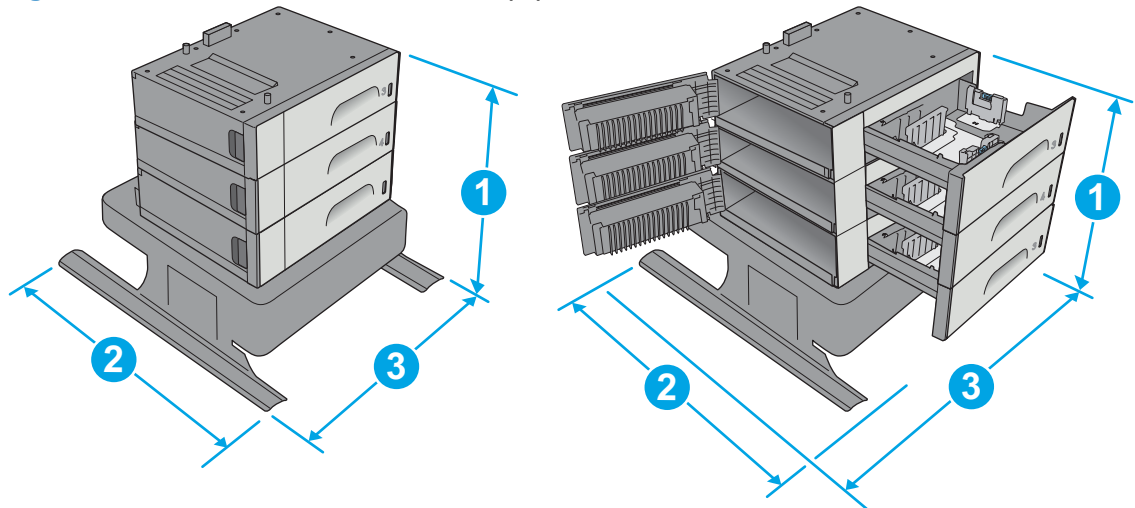
1. Height	138 mm (5.4 in)
2. Depth	Tray closed: 396 mm (15.5 in) Tray opened: 678 mm (26.6 in)
3. Width	Lower-left door closed: 514 mm (20.2 in) Lower-left door opened: 963 mm (37.9 in)
Weight	5.4 kg (11.8 lb)

Figure A-5 Dimensions for the printer stand



1. Height	640 mm (25.1 in)
2. Depth	Tray closed: 669 mm (26.3 in) Tray opened: 810 mm (31.8 in)
3. Width	Lower-left door closed: 669 mm (26.3 in) Lower-left door opened: 1040 mm (40.9 in)
Weight	31.2 kg (69 lb)

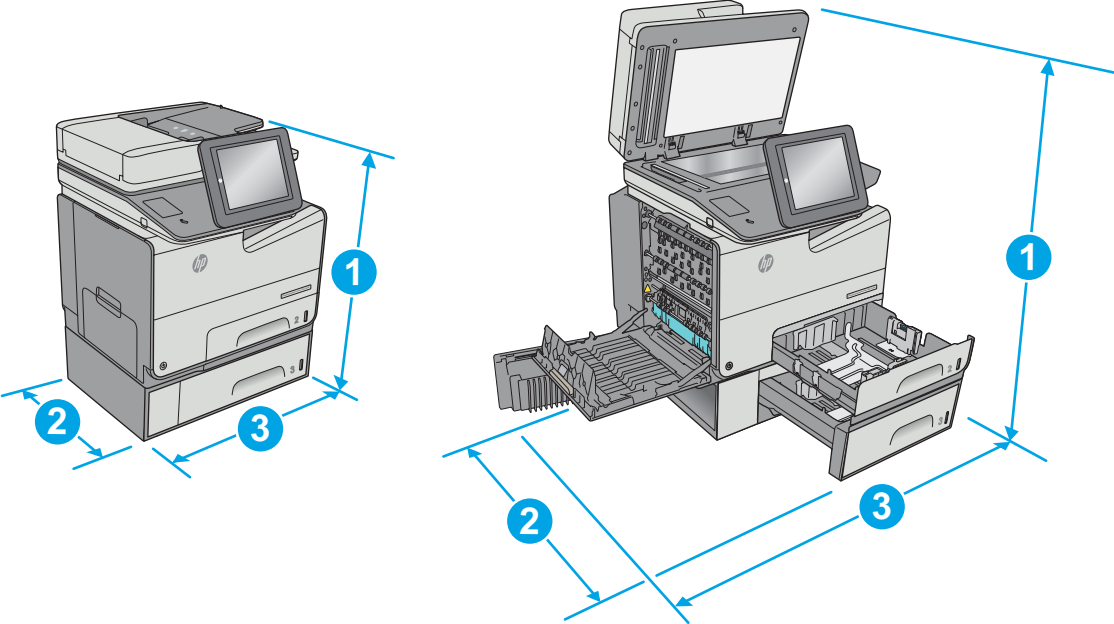
Figure A-6 Dimensions for the 3 x 500-sheet paper feeder and stand



1. Height	642 mm (25.2 in)
2. Depth	Tray closed: 669 mm (26.3 in) Tray opened: 795 mm (31.2 in)

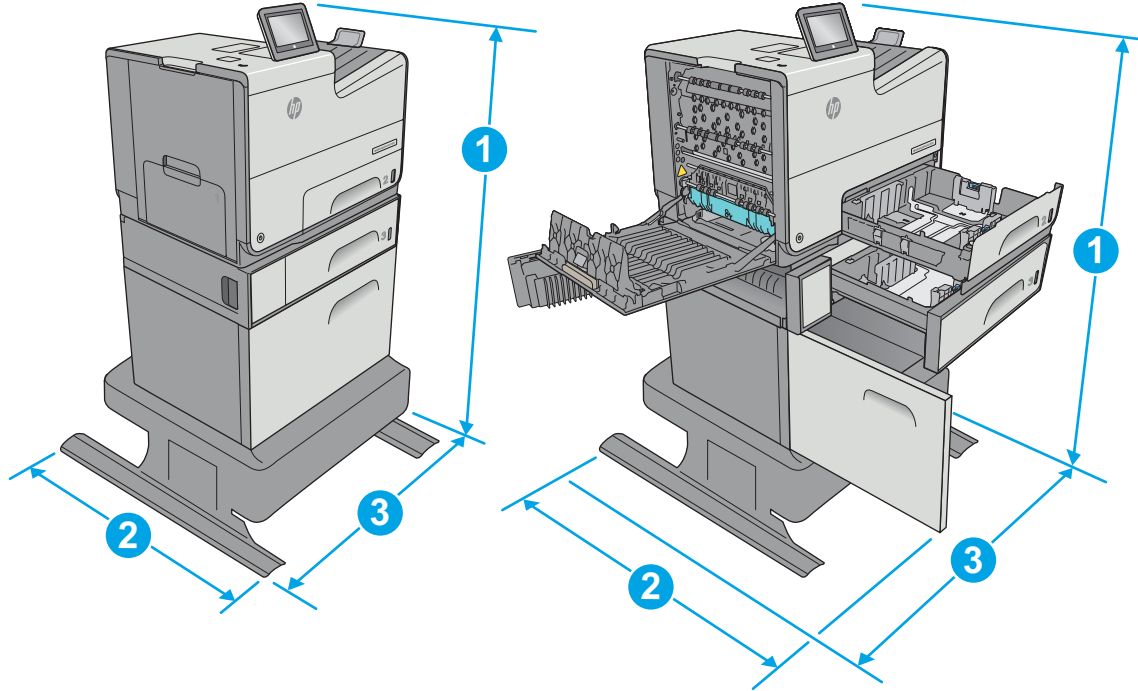
3. Width	Lower-left door closed: 669 mm (26.3 in)
	Lower-left door opened: 1040 mm (40.9 in)
Weight	35.8 kg (79 lb)

Figure A-7 Dimensions for the 586dn, 586f, and 586z models with Tray 3



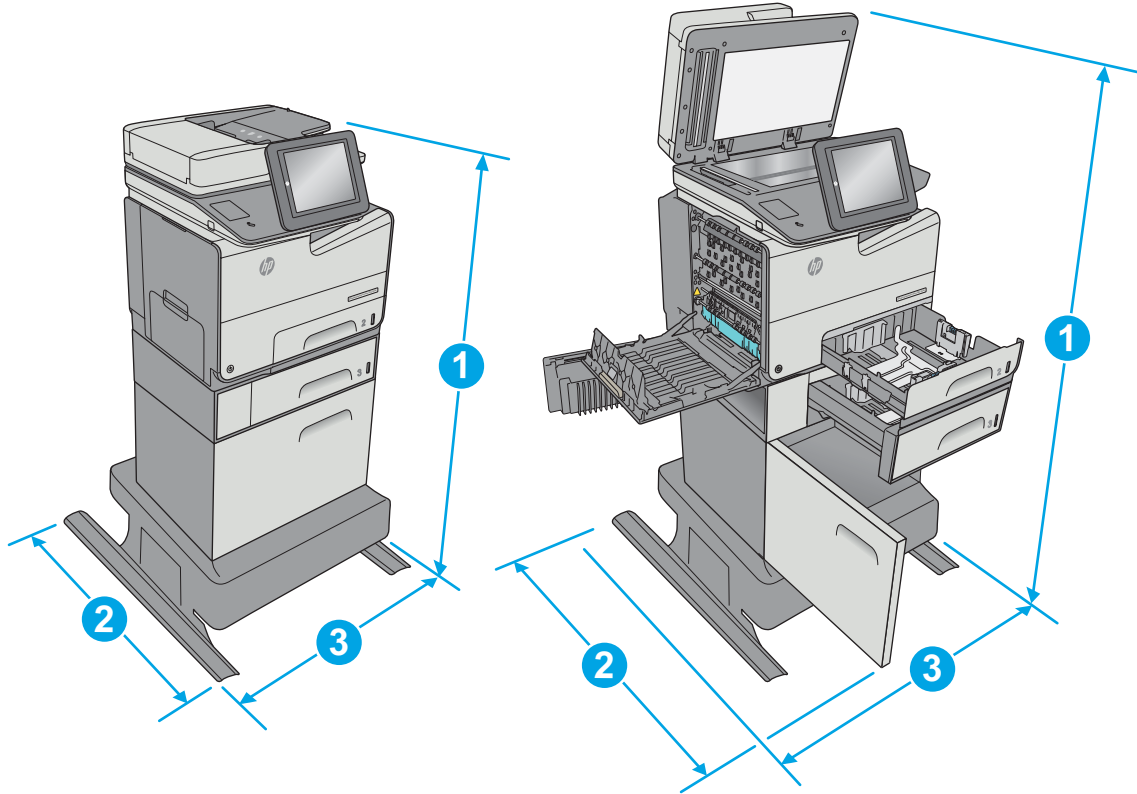
	Printer and accessories fully closed	Printer and accessories fully opened
1. Height	667 mm (26.2 in)	924 mm (36.3 in)
2. Depth	564 mm (22.2 in)	752 mm (29.6 in)
3. Width	530 mm (20.8 in)	963 mm (37.9 in)
Weight	37.7 kg (83.1 lb)	

Figure A-8 Dimensions for the 556xh model with the printer stand



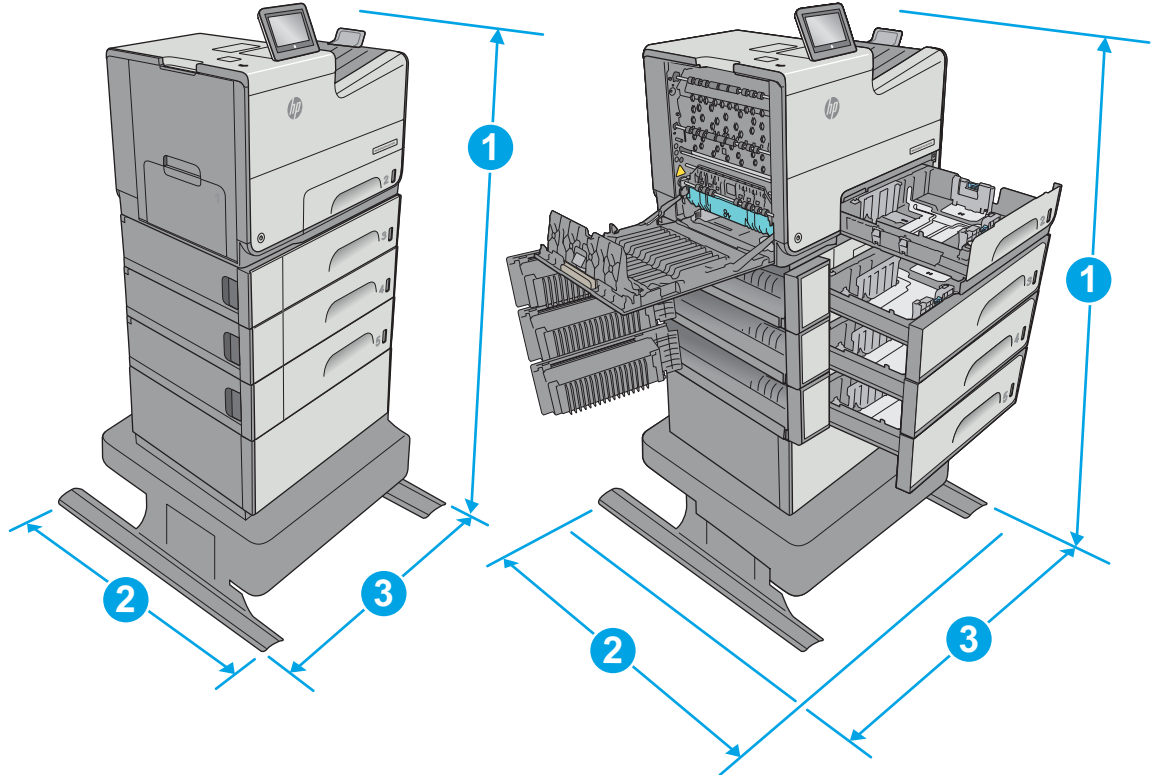
	Printer and accessories fully closed	Printer and accessories fully opened
1. Height	1297 mm (48.6 in)	1297 mm (48.6 in)
2. Depth	669 mm (26.3 in)	810 mm (31.8 in)
3. Width	669 mm (26.3 in)	1040 mm (40.9 in)
Weight	59.9 kg (132.2 lb)	

Figure A-9 Dimensions for the 586dn, 586f, and 586z models with the printer stand



	Printer and accessories fully closed	Printer and accessories fully opened
1. Height	1307 mm (51.4 in)	1564 mm (61.5 in)
2. Depth	669 mm (26.3 in)	810 mm (31.8 in)
3. Width	669 mm (26.3 in)	1040 mm (40.9 in)
Weight	63.5 kg (140.1)	

Figure A-10 Dimensions for the 556dn model with the 3 x 500-sheet paper feeder and stand

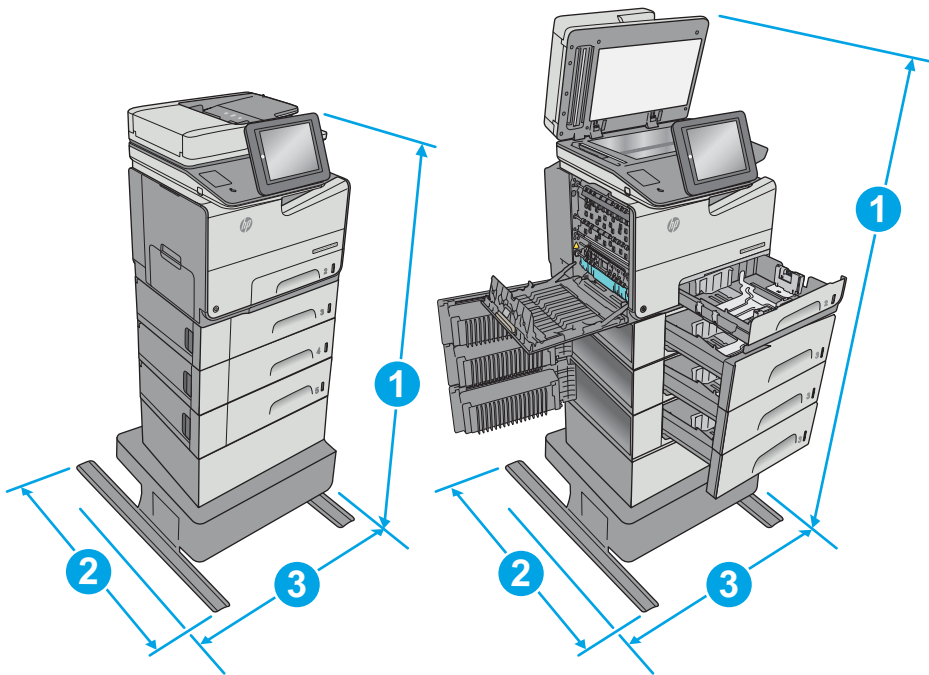


	Printer and accessories fully closed	Printer and accessories fully opened
1. Height	1099 mm (43.2 in)	1099 mm (43.2 in)
2. Depth	669 mm (26.3 in)	795 mm (31.2 in)
3. Width	669 mm (26.3 in)	1040 mm (40.9 in)
Weight	58 kg (127.9 lb)	

¹ These values are subject to change. For current information, go to www.hp.com/support/pagewidecolor556, www.hp.com/support/pagewidecolor586MFP.

² Do not extend more than one paper tray at a time.

Figure A-11 Dimensions for the 586dn, 586f, and 586z models with the 3 x 500-sheet paper feeder and stand



	Printer and accessories fully closed	Printer and accessories fully opened
1. Height	1171 mm (46.1 in)	1428 mm (56.2 in)
2. Depth	669 mm (26.3 in)	795 mm (31.2 in)
3. Width	669 mm (26.3 in)	1040 mm (40.9 in)
Weight	68.1 kg (150.3 in)	

¹ These values are subject to change. For current information, go to www.hp.com/support/pagewidecolor556, www.hp.com/support/pagewidecolor586MFP.


² Do not extend more than one paper tray at a time.

Printer space requirements

HP recommends that 30 mm (1.81 in) be added to the printer dimensions provided in this chapter to make sure there is sufficient space to open doors and covers, and to provide proper ventilation. See [Printer dimensions on page 420](#).

Power consumption, electrical specifications, and acoustic emissions

See www.hp.com/support/pagewidecolor556, www.hp.com/support/pagewidecolor586MFP for current information.

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

Operating-environment range

Table A-1 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)

Certificate of Volatility

Figure A-12 Certificate of Volatility (556; 1 of 2)

Hewlett-Packard Certificate of Volatility				
Model: HP Officejet Enterprise color SFP 556 series	Part Number: 556dn = G1W46A, 556xh = G1W47A	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)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (SRAM, DRAM, etc): DRAM	Size: 1.25 GB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Used for temporary storage of data during scan or print job processes, and for applications that are running on the OS.	Steps to clear memory: When the device is powered off the memory is erased.
Non-Volatile Memory				
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (Flash, EEPROM, etc): SPI Flash	Size: 12 MB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: Contains 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): EEPROM	Size: 128 KB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Backup device for critical system counters and product configuration information.	Steps to clear memory: There are no steps to clear this data.
Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc): HDD (HDD is standard on xh model)	Size: 320 GB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 HDD. 4. Secure File Erase – Erases files when jobs finish processing by overwriting them one or three times.
Type (HDD, Tape, etc): SSD (SSD is standard on dn model)	Size: 8 GB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: See HDD function above.	Steps to clear memory: See HDD Steps to clear memory above.

Figure A-13 Certificate of Volatility (556; 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)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Description: Print jobs, HP digitally signed firmware upgrades, 3 rd party application loading, Restore encrypted backed-up system settings. USB ports can be disabled.			
Can any data other than scan upload be sent to the USB device)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Diagnostic service logs can be uploaded. Back-up of encrypted system settings.			
RF/RFID			
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Purpose: Wireless printing on xh model			
Frequency: 2.4GHz		Bandwidth: Up to 54 Mb/s	
Modulation: MCS 0-7, 64QAM, QPSK		Effective Radiate Power (ERP): 15 +/- 1.5 dBm	
Specifications: Meets IEEE 802.11b/g/n			
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)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below:			
Purpose:			
Specifications:			
Author Information			
Name:	Title: Technical Marketing Engineer	Email: @hp.com	Business Unit:
			Date Prepared: 03-02-16

Figure A-14 Certificate of Volatility (586; 1 of 2)

Hewlett-Packard Certificate of Volatility				
Model: HP Officejet Enterprise color MFP X586 series		Part Number: MFP 586dn = G1W39A, MFP 586f = G1W40A, MFP 586z = G1W41A		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)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (SRAM, DRAM, etc): DRAM	Size: 2.0 GB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Used for temporary storage of data during scan or print job processes, and for applications that are running on the OS.	Steps to clear memory: When the device is powered off the memory is erased.
Non-Volatile Memory				
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (Flash, EEPROM, etc): SPI Flash	Size: 12 MB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: Contains 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): EEPROM	Size: 128 KB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Backup device for critical system counters and product configuration information.	Steps to clear memory: There are no steps to clear this data.
Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc): HDD, Self Encrypting, SATA	Size: 320 GB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <ol style="list-style-type: none"> 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 HDD. 4. Secure File Erase – Erases files when jobs finish processing by overwriting them one or three times.

Figure A-15 Certificate of Volatility (586; 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)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Description: Print jobs, HP digitally signed firmware upgrades, 3 rd party application loading, Restore encrypted backed-up system settings. USB ports can be disabled.			
Can any data other than scan upload be sent to the USB device? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
Diagnostic service logs can be uploaded. Back-up of encrypted system settings.			
RF/RFID			
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below:			
Purpose: Fax modem – send/receive fax data (on f and z models)			
Specifications: 33.6 kbs			
Author Information			
Name:	Title: Technical Marketing Engineer	Email: @hp.com	Business Unit:
			Date Prepared: 03-02-16

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