



LaserJet MFP M433a, M436n, M436dn, M436nda

Service Manual



M433a/M436n/M436dn



M436nda



www.hp.com/support/ljM433MFP
www.hp.com/support/ljM436MFP



HP LaserJet MFP M433a, M436n, M436dn,
M436nda

Service Manual

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Conventions used in this guide

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

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

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

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

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1 Product specs and features

This chapter presents an overview of the major components of the printer, and it includes a detailed discussion of the image-formation system.

Product Overview



- Printing speed
 - Up to 20 ppm on A4 or Letter M433
 - Up to 23 ppm on A4 or Letter M436
- Scan speed (ADF)
 - 30 ipm @ color 200dpi, 30 ipm @ mono 300dpi
- Processor
 - 600 MHz
- Memory
 - 128 MB
- Option unit
 - Document feeder (M436n/dn only)



Specifications

Product specifications are subject to change without notice.

General Specifications

Table 1-1 General specifications

Item		Specification
Function		<ul style="list-style-type: none"> HP LaserJet MFP M433a Printer: Print, Copy, Scan HP LaserJet MFP M436dn Printer: Print, Copy, Scan, Network, Duplex HP LaserJet MFP M436n Printer: Print, Copy, Scan HP LaserJet MFP M436nda Printer: Print, Copy, Scan, Network, Duplex
Temperature	Operating	10 ~ 30 °C (50 ~ 86°F)
	Storage	-10 ~ 40 °C (-4 ~ 104 °F)
Humidity	Operating	20~80% RH
	Storage	10~90% RH
Acoustic Noise Level (Sound Power/Pressure)	Printing	<ul style="list-style-type: none"> Tray 2: 49 dBA Tray 3: 51 dBA MP Tray 1: 51 dBA
	Copying	<ul style="list-style-type: none"> Tray 2: 49dBA (@platen), 53dBA (@document feeder) Tray 3: 51dBA(@platen), 55dBA (@document feeder) MP Tray 1: 51dBA(@platen), 55dBA (@document feeder)
Power Supply	Input Voltage	AC 220-240V (-10%~6%)/5A
	Rated Frequency	50 Hz
Power Consumption	Ready	70 Wh
	Printing	500 Wh
	Copying	500 Wh
	Scanning	70 Wh
	Power Off	0.3 W
Dimension (W x L x H)	M436n/M436dn models	560 x 540 x 417 mm (22.05 x 21.26 x 16.42 inches)
	M436nda models	560 x 583.5 x 504.5 mm (22.5 x 22.97 x 19.86 inches)
Weight	M436n/M436dn models	25 kg (55.12 lbs)

Table 1-1 General specifications (continued)

Item	Specification	
	M436nda models	M436nda models: 30.00 kg (66.14 lbs)
Reliability & Service	Recommended Printing Volume (AMPV)	2,500 sheets/month
	Max. Monthly Print Volume	50,000 sheets/month

Print specifications

Table 1-2 Print specifications

Item	Specification	
Engine Speed	Simplex	Up to 23 ppm on A4 and Letter
	Duplex	Up to 10 ipm in A4 (10 ipm in Letter)
FPOT	From Ready	Less than 9.2 sec
	From Sleep	Less than 22.2 sec
Resolution	Optical	600 x 600 x 2 bit dpi
	Enhanced	1200 x 1200 dpi
Printer Language	PCL6	

Controller and software specification

Table 1-3 Controller and software specification

Item	Specification	
Processor	600 MHz	
Memory	128 MB	
Memory Expansion	N/A	
Storage	N/A	
Printer driver	Supporting OS	[Windows] <ul style="list-style-type: none"> Windows 2000/XP(32/64bit)/2003(32/64bit)/Vista(32/64bit)/2008/Win7/2008 R2(64 only)/Windows 8/Windows 8.1/Window Server 2012/Windows 10 UPD
	Default Driver	PCL6
Driver feature	[Windows] <ul style="list-style-type: none"> Watermark, Overlay, N-up printing, Poster printing Manual duplex and auto duplex (depending on model) 	

Table 1-3 Controller and software specification (continued)

Item	Specification	
	WHQL (Windows Hardware Quality Labs)	Windows 2000/XP(32/64bit)/2003(32/64bit)/Vista(32/64bit)/2008/Win7/2008 R2(64 only)/Windows 8/Windows 8.1/Window Server 2012
Scan driver	TWAIN	Yes
	WIA	Yes
	Supporting OS	[Windows] <ul style="list-style-type: none"> Windows 2000/XP(32/64bit)/2003(32/64bit)/Vista(32/64bit)/2008/Win7/2008 R2(64 only)/Windows 8/Windows 8.1/Window Server 2012/Windows 10

Table 1-4 Interface

Item	Specification
Parallel (IEEE 1284)	No
USB	High-Speed USB 2.0
Wired LAN	Ethernet 10/100 Base TX (M436 only)
Wireless LAN	No

Table 1-5 Network Interface

Item	Specification	
Network Protocols	TCP/IP	Raw TCP/IP Printing, LPR/LPD, IPP, WSD, T4NET, SETIP
	IPX/SPX	No
	Ether Talk	No
	NetBIOS over TCP/IP	No
IP Addressing	Static IP	Yes
	Auto IP	Yes
	BOOTP	Yes
	DHCP	Yes

Scan specification

Table 1-6 Scan specification

Item	Specification
Scan method	D-CIS

Table 1-6 Scan specification (continued)

Item	Specification	
Compatibility	TWAIN, WIA	
Color Mode	Mono/Gray/Color	
Scan Speed	B/W	30 ipm @ A4 and Letter
	Gray	30 ipm @ A4 and Letter
	Color	30 ipm @ A4 and Letter
Resolution	Optical	<ul style="list-style-type: none"> • Platen: 600 x 600 dpi • Document feeder: 300 x 300 dpi (HP LaserJet MFP M436nda standard, HP LaserJet MFP M436n/M436dn optional)
		Scan Size
	platen	<ul style="list-style-type: none"> • Max. Document Width: Max. 297 mm • Max. Document Width: Max. 297 mm • Effective Scan Width: Max. 291 mm • Max. Document Length: Max. 432 mm • Effective Scan Length: Max 424 mm • Max. Document Width: Max. 297 mm • Max. Document Width: Max. 297 mm • Effective Scan Width: Max. 291 mm • Max. Document Length: Max. 432 mm • Effective Scan Length: Max 424 mm
Scan-to	PC (Local, Network)	Yes
	HDD	No
	USB	No
	Email	No
	Client	No
	SMB	No
	FTP	No
	HTTP(S)	No
	WebDAV	No
	Multi Destination	No
Scan File Format	PDF, Single-Page-TIFF, JPEG, Multi-Page-TIFF, Single-Page-PDF, TIFF, Editable PDF for Win7/8/8.1/10 on USB connect using the HP Scan application	

Copy specification

Table 1-7 Copy specification

Item	Specification	
Copy Speed	Up to 20 cpm in A4 & Letter	
FCOT	From Ready	Less than 7.4 seconds (from platen)
	From Sleep	Less than 22.2 seconds (from platen)
	From Coldboot	Less than 22.2 seconds (from platen)
Copy Original Type	Text	<ul style="list-style-type: none"> Platen: Scan 600 x 600 , Printing 600 x 600 Document feeder: Scan 600 x 600 , Printing 600 x 600
	Text/Photo	<ul style="list-style-type: none"> Platen: Scan 600 x 600 , Printing 600 x 600 Document feeder: Scan 600 x 600 , Printing 600 x 600
	Photo	<ul style="list-style-type: none"> Platen: Scan 600 x 600 , Printing 600 x 600 Document feeder: Scan 600 x 600 , Printing 600 x 600
	Map	<ul style="list-style-type: none"> Platen: Scan 600 x 600 , Printing 600 x 600 Document feeder: Scan 600 x 600 , Printing 600 x 600
Max. Original Size	Platen	297 x 432 mm (11.7" x 17")
	Document feeder	297 x 432 mm (11.7" x 17")
Copy Feature	Multi Copy	1-+999
	Reduce/Enlarge	25~400%
	ID Card Copy	Yes
	N-up	2/4/8/16-up (A5), 2/4/8-up (A4), 2/4-up (A3)
	Collation Copy	Yes (NDA only)

Paper handling specification

Table 1-8 Paper handling specification

Item	Specification
Standard Capacity	<ul style="list-style-type: none"> 250-sheet cassette Tray (20 lb or 80 g/m²) 100-sheet MP tray (20 lb or 80 g/m²)

Table 1-8 Paper handling specification (continued)

Item		Specification	
Max. Input Capacity		<ul style="list-style-type: none"> HP LaserJet MFP M436nda Printer: 600 sheets @ 20 lb or 80 g/m² (Tray 2 + Optional Tray + Tray 1) HP LaserJet MFP M436n/M436dn Printer: 350 sheets @ 20 lb or 80 g/m² (Tray 2 + Tray 1) 	
Printing	Max. Size	297 x 432 mm (11.7" x 17")	
	Min. Size–Tray 1	125 x 101.6 mm (4.92 x 4 inches)	
	Min. Size–Tray 2/3	148.5 x 182 mm (5.83 x 7.17 inches)	
	Margin(T/B/L/R)	4.2+/-1.5mm	
MP Tray	Capacity	<ul style="list-style-type: none"> Plain Paper: 100 sheets @ 80 g/m² 	
	Media sizes	A4,A5, B5 (JIS), Letter, Executive, Statement, A3, B4 (JIS), 8K, 16K, Ledger, Legal, Oficio 8.5 x 13, Oficio 216 x 1340, 4x6	
	Media type	Plain, HP LaserJet 90g, Light 60-74g, Intermediate 85-95 g, Bond, Recycled, Mid-Weight 96-110g, Heavy 111-130g Preprinted, Letterhead, Prepunched, Cardstock, Colored	
	Media weight	<ul style="list-style-type: none"> 16 ~ 43 lb (60 to 163 g/m²): Simplex 16 ~ 28 lb (60 to 110 g/m²): Duplex 	
	Sensing	Paper Empty Detect: Yes	
	Standard Cassette Tray	Capacity	250 sheets @ 20 lb (80g/m ²)
Standard Cassette Tray	Media sizes	A3/A4/A5/B4 (JIS)/B5 (JIS)/Ledger/Legal/Oficio/Letter/Executive/4x6/8K/16K	
	Media types	Plain, Mid-weight, Light, HP LaserJet, Colored, Preprinted, Recycled, Intermediate, Letterhead, Prepunched	
	Media weight	<ul style="list-style-type: none"> 16 - 29 lb 60 - 110 gsm 	
	Sensing	Paper Empty: Yes	
	Optional Cassette Tray (M436 only)	Capacity	250 sheets @ 20 lb (80g/m ²)
	Optional Cassette Tray (M436 only)	Media sizes	A3/A4/A5/B4 (JIS)/B5 (JIS)/Ledger/Legal/Oficio 8.5 x 13, Oficio 216 x 340 mm/Letter/Executive/8K/16K
Media types		Plain, Mid-weight, Light, HP LaserJet, Colored, Preprinted, Recycled, Intermediate, Letterhead, Prepunched	
Media weight		<ul style="list-style-type: none"> 16 - 29 lb 60 - 110 gsm 	
Sensing		Paper Empty: Yes	

Table 1-8 Paper handling specification (continued)

Item	Specification	
Document feeder	Capacity	100 sheets (20lb, 80 g/m ²)
	2-sided document scanning	No
	Document size	• Width: 128–297 mm
		• Length: 128–432 mm
	Document weight	• 60~128g/m ² (16-34lbs)
Sensing	Paper Empty, Paper Width, Paper Length	

Supplies

When supplies reach the end of their life span, you can order the followings of supplies for your machine:

Item	Description	Part number
Toner Cartridge	Standard-capacity replacement black toner cartridge	CF256A
	High-capacity replacement black toner cartridge	CF256X
Imaging unit ¹	Replacement imaging drum	CF257A

¹ The imaging unit must be installed by a service technician.

⚠ WARNING! When purchasing new toner cartridges or other supplies, these must be purchased in the same country/region as the machine you are using. Otherwise, new toner cartridges or other supplies will be incompatible with your machine due to different configurations of toner cartridges and other supplies according to the specific country/region conditions.

⚠ CAUTION: HP does not recommend using non-genuine HP toner cartridge such as refilled or remanufactured toner. HP cannot guarantee non-genuine HP toner cartridge's quality. Service or repair required as a result of using non-genuine HP toner cartridges will not be covered under the machine's warranty.

📄 NOTE: Depending on the options, percentage of image area and job mode used, the toner cartridge's life span may differ.

Maintenance parts

Table 1-9 Maintenance parts

Item	Kit number	Life
Pick-up roller and friction pad	W7U01-67903	Approx. 100,000 pages
MP Pick-up roller and 50k friction pad (for MP Tray)		
Transfer roller	W7U01-67901	Approx. 100,000 pages
Fuser unit	W7U01-67902	Approx. 100,000 pages

Table 1-9 Maintenance parts (continued)

Item	Kit number	Life
Document feeder Pick-Up roller assembly (optional)	W7U02-67901	Approx. 120,000 pages
Document feeder Friction Pad (optional)	W7U02-67902	Approx. 50,000 pages

 **NOTE:** It will be affected by the operating system used, computing performance, application software, connecting method, media, and media size and job complexity.

Optional accessories

You can purchase and install accessories to enhance your machine's performance and capacity.

 **NOTE:** Some features and optional goods may not be available depending on model or country/region.

Table 1-10 Option accessories

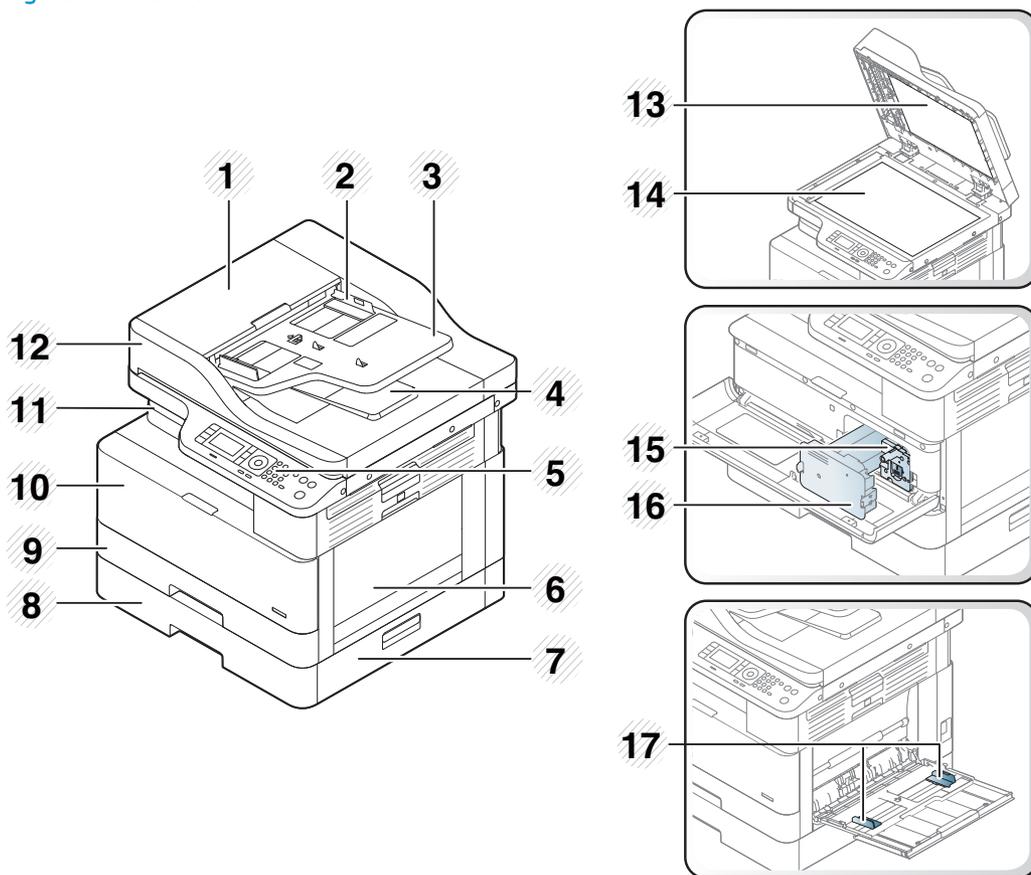
Accessory	Function	Part name
Optional tray	If you are experiencing frequent paper supply problems, you can attach an additional 250 ^b sheet tray.	XOR64A
Document feeder^a	Automatic document feeder	XOR65A

^a M436n/M436dn Only

^b Plain paper 80 g/m² (20 lbs bond)

System configuration

Figure 1-1 Front View

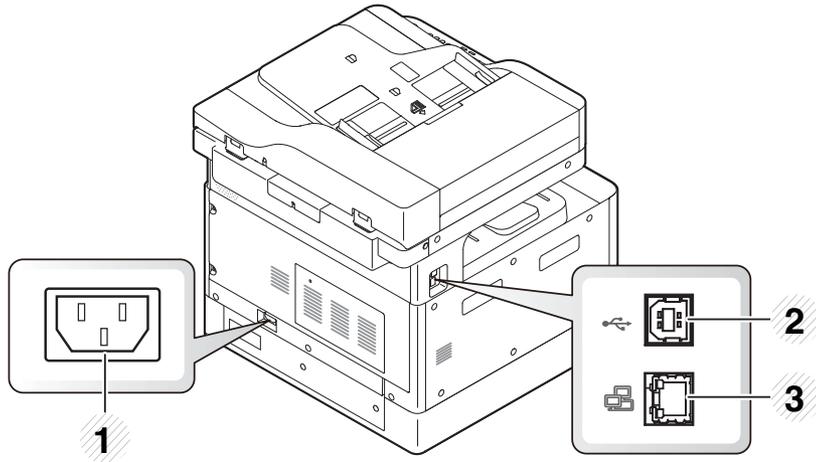


1	Automatic document feeder cover
2	Automatic document feeder width guide
3	Automatic document feeder input tray
4	Automatic document feeder output tray
5	Control panel
6	Multi-purpose tray
7	Tray 3 jam cover
8	Second Cassette Feeder (Tray 3) (optional)
9	Tray 2
10	Front cover
11	Output tray
12	Automatic document feeder
13	Scanner lid
14	Scanner glass
15	Imaging unit

16	Toner cartridge
17	Paper width guides on a multipurpose tray

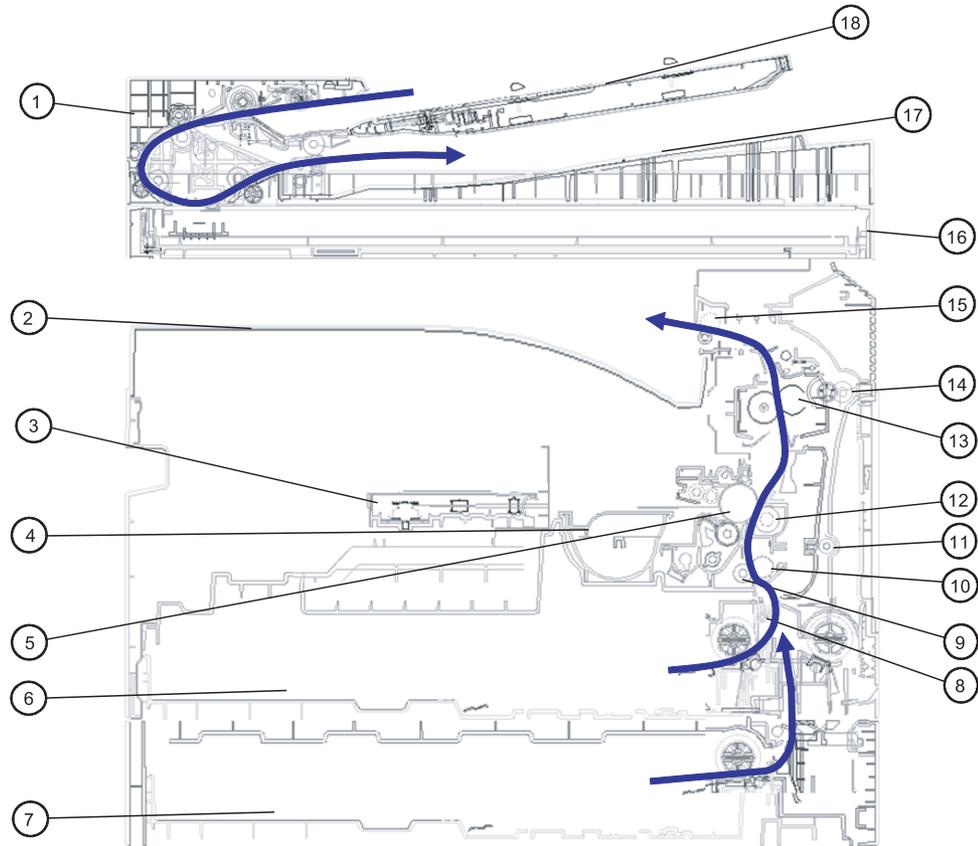
 **NOTE:** HP LaserJet MFP M436n/M436dn Printer models are equipped with a platen cover.

Figure 1-2 Rear view



1	Power receptacle
2	USB port
3	Network port

Figure 1-3 System layout

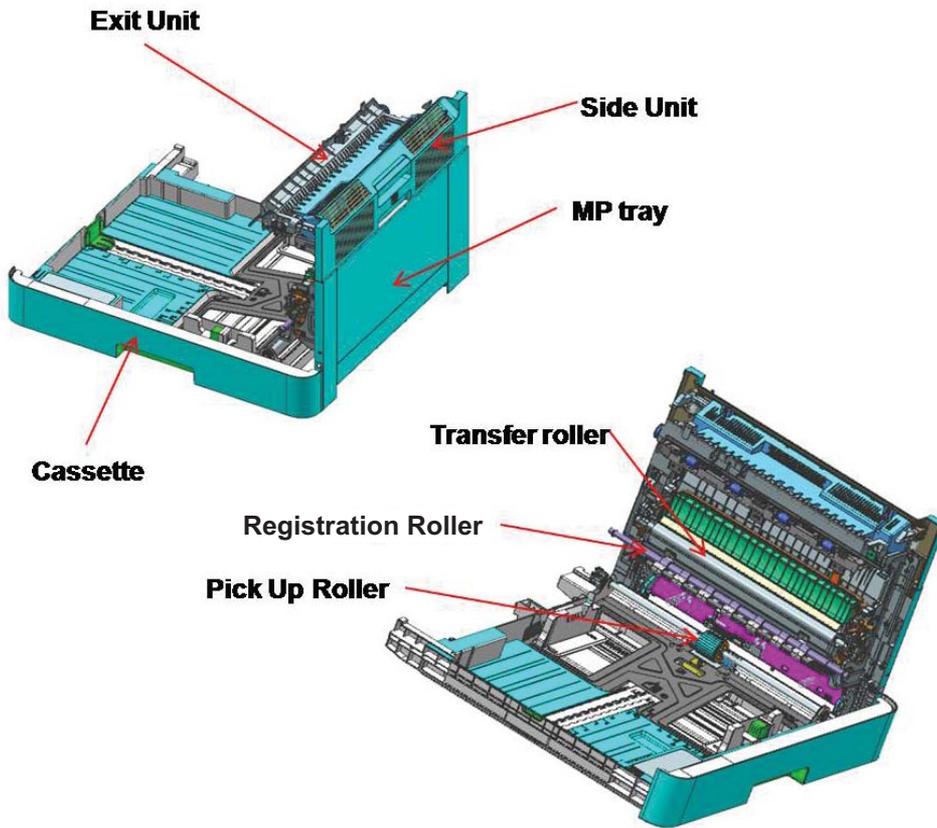


1	Document feeder	11	Duplex 2 roller
2	Face down output tray	12	Transfer roller
3	Laser scanning unit	13	Fuser unit
4	Toner cartridge	14	Duplex 1 roller
5	Imaging unit	15	Exit-face down roller
6	Tray 2	16	Platen unit (Scanner)
7	SCF (optional Tray 3)	17	Document output tray
8	Registration frame idle roller	18	Document input tray
9	Registration-idle roller		
10	Feed-registration roller		

Feeding system

Feeding system overview

The feeding system picks up paper from the cassette or MP tray and transports it to the printer inside. It consists of the pickup roller, registration roller, transfer roller, MP pickup roller, exit unit, and side unit.



Main components and functions

Figure 1-4 Sensor, Clutch, Motor

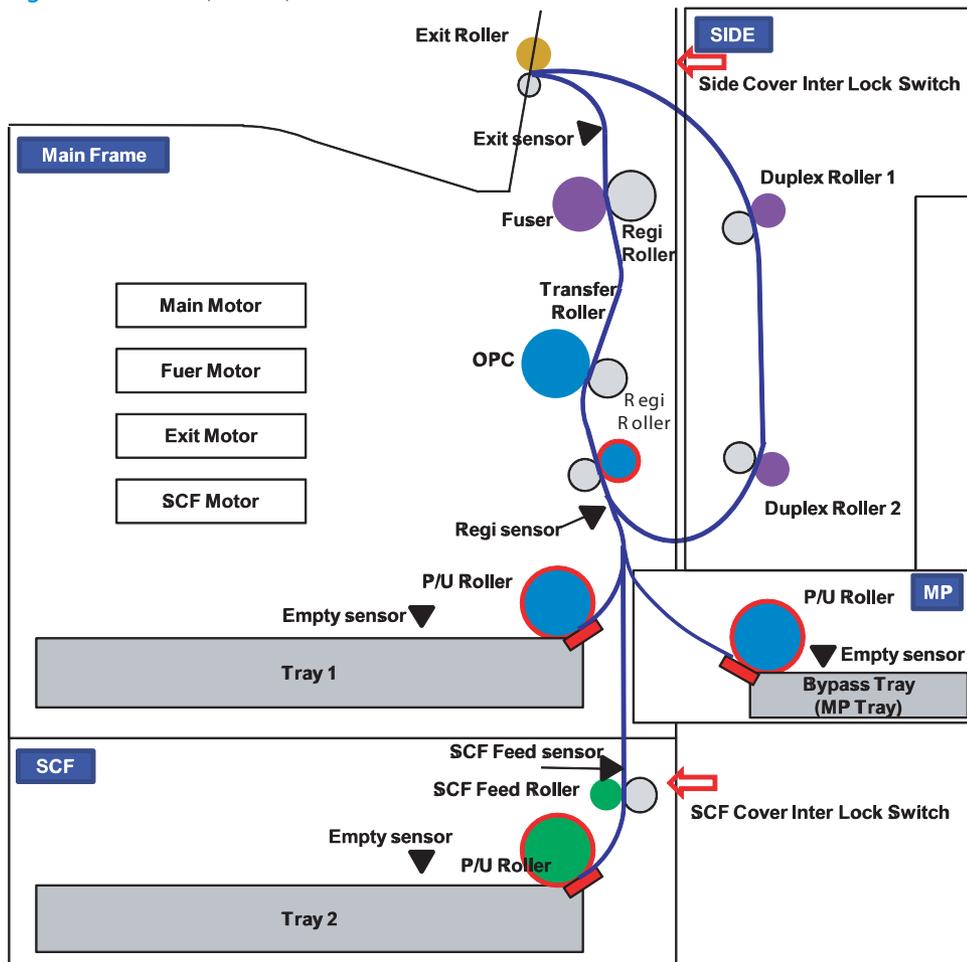


Table 1-11 Sensor, Clutch, Motor

Item	Function
Side Interlock Switch	Detects that the side cover is open.
Front cover Interlock Switch	Detects that the front cover is open.
SCF Interlock Switch	Detects that the SCF cover is open.
Multipurpose Tray 1 (Main CST) Empty Sensor	Detects that Multipurpose Tray1 is empty.
Tray 2 (SCF CST) Empty Sensor	Detects that tray2 is empty.
Multipurpose Empty Sensor	Detects that Multipurpose Tray 1 is empty.
SCF Feed Sensor	Detects the jam on SCF path.
Registration Sensor	Detects the jam on regi path.
Exit Sensor	Detects the jam on exit path.
SCF Motor	Controls the SCF operation.
MP Pickup Clutch	Controls the MP pickup roller operation.
Exit Motor	Controls the exit roller operation.

Table 1-11 Sensor, Clutch, Motor (continued)

Item	Function
Multipurpose Tray 1 Pickup Clutch	Controls the Multipurpose Tray 1 pickup roller operation.
Tray 2 Pickup Clutch	Controls the Tray 2 (SCF) pickup roller operation.
Registration Clutch	Controls the registration roller operation.

Figure 1-5 Rollers and friction pad

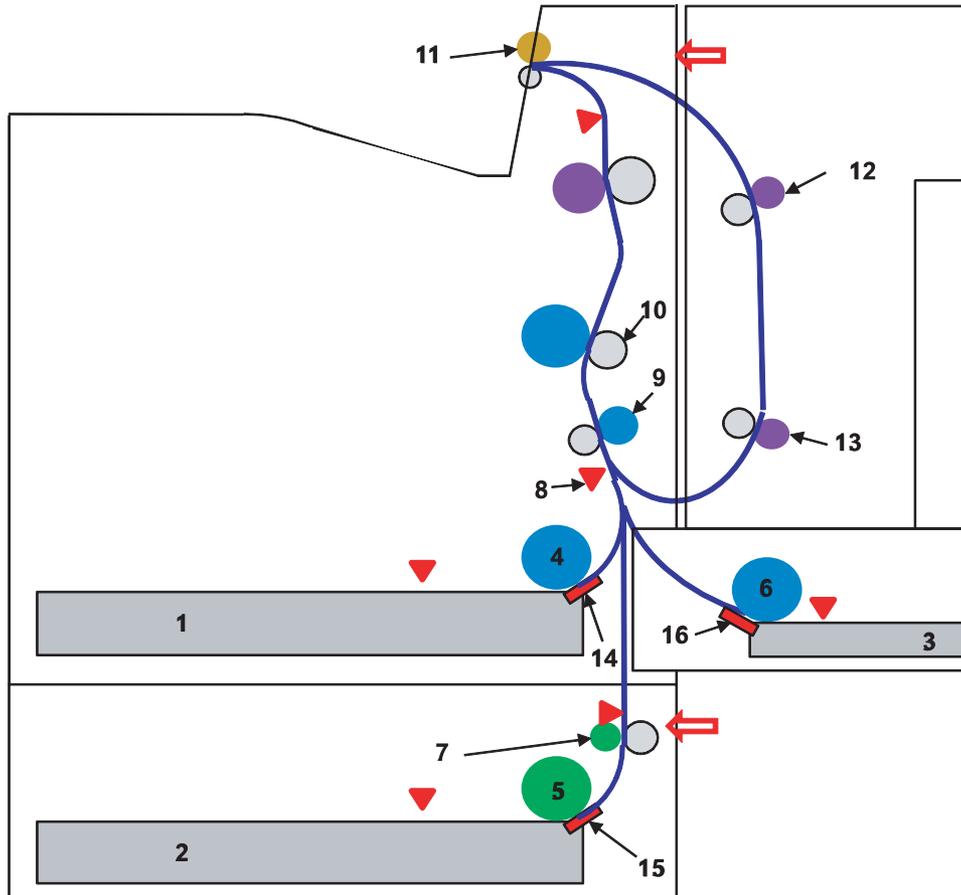


Table 1-12 Rollers and friction pad

Item	Function
1	Tray 2 paper tray
2	Tray 3 Paper tray (optional)
3	Multipurpose Tray 1
4	Tray 2 Pickup Roller
5	Tray 2 Pickup Roller
6	Multipurpose Tray 1 pickup roller
7	Tray 3 feed Roller (Option)
8	Registration Sensor

Table 1-12 Rollers and friction pad (continued)

Item	Function
9	Registration Roller
10	Transfer Roller
11	Exit Roller
12	Duplex Roller 1
13	Duplex Roller 2
14	Tray 2 Friction Pad
15	Tray 3 Friction Pad (Option)
16	Multipurpose Tray 1 Friction Pad

Cassette

The cassette stores paper. Paper size in the cassette is set using the front/rear guide.

Figure 1-6 Cassette

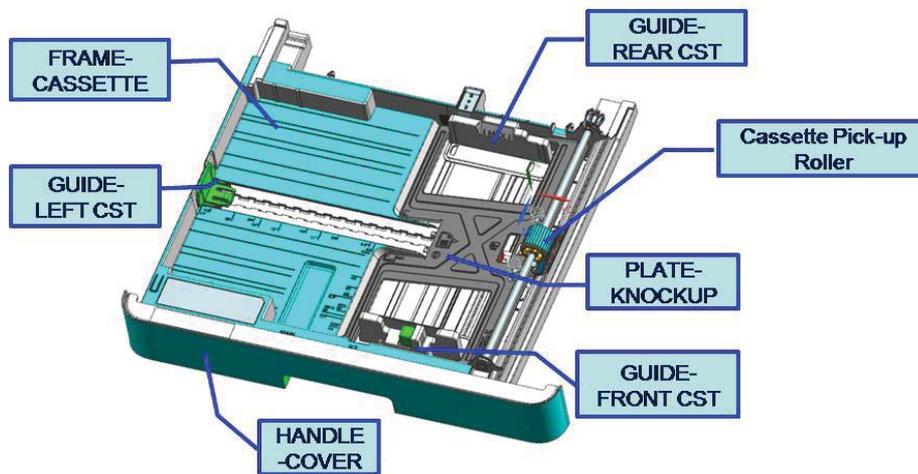


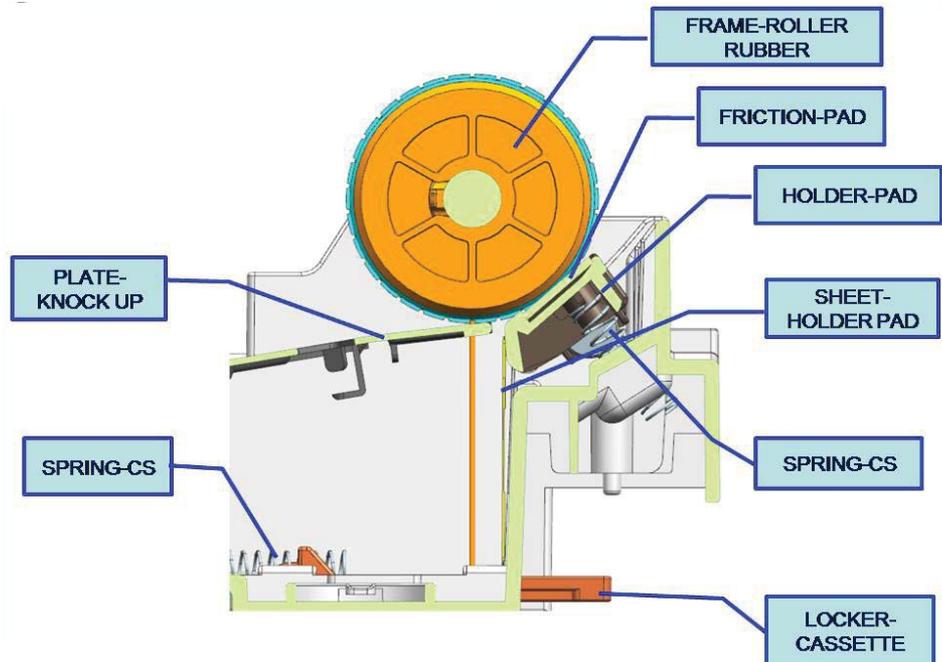
Table 1-13 Cassette

Item	Description
1	Structure: Cassette type
2	Capacity: 250 sheets (80g/m ² paper standard)
3	Support paper See Paper handling specification for more information
4	Paper type and weight See Paper handling specification for more information
5	Plate knock up lift type: Spring (2ea)

Pickup roller and friction pad

When the cassette is installed, the LOCKER-CASSETTE is released and risen by the pressure spring of the PLATE-KNOCK UP. The surface of the paper contacts the pickup roller and a single sheet of paper is fed by the pickup roller rotation. After first page feeding, paper is separated and moved by the friction pad.

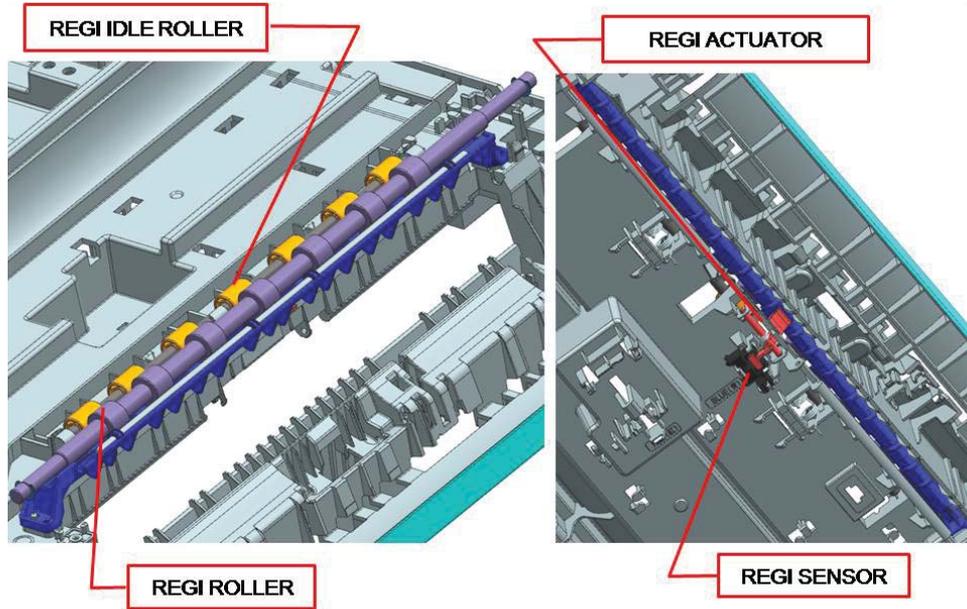
Figure 1-7 Pickup roller and friction pad



Registration roller

The registration roller is driven by the main motor. The registration roller clutch is located between the main motor and registration roller, and it controls ON/OFF of the registration roller in order to match paper and an image on the drum at the predetermined registration point.

Figure 1-8 Registration roller



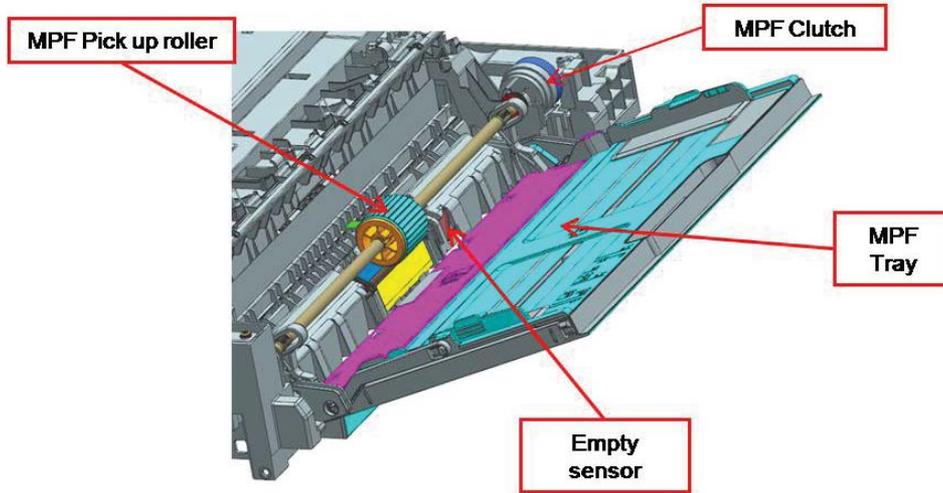
Specification

- Skew in simplex
 - Top skew: 1.5 mm (MP 1.8 mm)
 - Side skew: 2.2 mm
- Margin
 - Top margin: 4.23 ± 1.5 mm
 - Side margin: 4.23 ± 2.0 mm
 - Duplex top margin: 4.23 ± 1.8 mm
 - Duplex side margin: 4.23 ± 2.6 mm

MPF(Multi-Purpose Feeder) unit

The MPF unit allows feeding of special media cardstock, and custom size paper.

Figure 1-9 MPF(Multi-Purpose Feeder) unit



Specification

- Capacity: 100 sheets (80g/m² paper standard)
- Media size: max 11.7" × 17" (297×432 mm)/Min 6"×4" (152.4×101.6mm)
- Media weight: Plain paper 60 ~ 163 g/m²
- Feeding speed: 20 ppm Letter/A4 LEF (Long Edge Feeding)

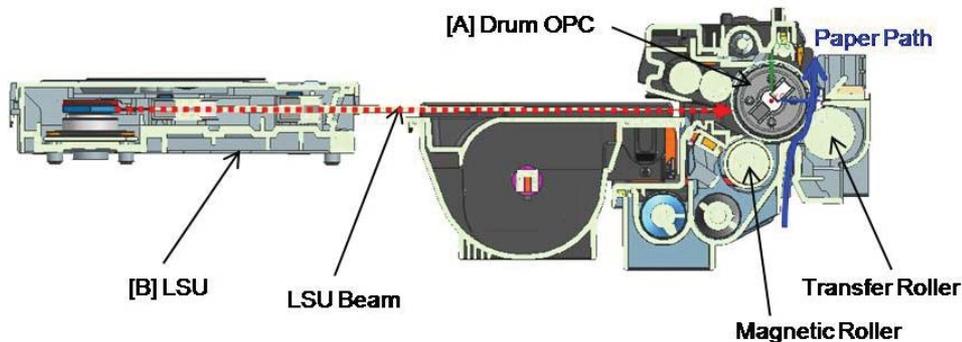
Image Creation

Printing process overview

This printer uses one imaging unit and one laser beam for mono printing. Imaging unit consists of a drum unit and developer unit.

The drum unit consists of an OPC drum, charge roller, and cleaning blade.

Figure 1-10 Printing process overview



1. **OPC drum charge:** The charge roller gives the drum a negative charge.
2. **Laser exposure:** Light produced by a laser diode hits the charged OPC through the lens and mirrors.
3. **Development:** The magnetic roller carries negatively-charged toner to the latent image on the drum surface.
4. **Transfer:** The transfer roller opposite the OPC drum transfers toner from the drum to the paper.
5. **Cleaning for OPC drum:** The cleaning blade removes remaining toner on the drum surface after image transfer to the paper.
6. **Quenching for OPC drum:** Discharge cleaning is done by illuminating the whole area of the drum with the cleaning lamp at the end of every job.

Imaging unit

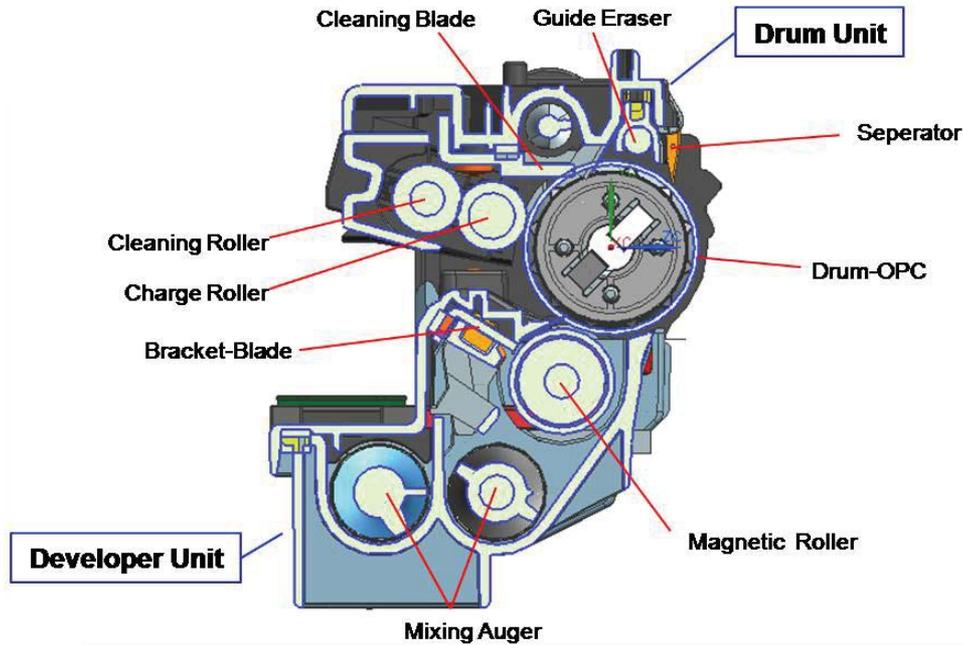
Imaging unit overview

The Imaging unit consists of the drum unit and the developer unit.

The diameter of the drum is 30 mm (circumference: about 94.2 mm).

The developing gap between the OPC drum and the magnetic roller cannot be adjusted. The ID chip is the sub part of the drum unit. It stores the printed page-count information and data.

Figure 1-11 Imaging unit overview

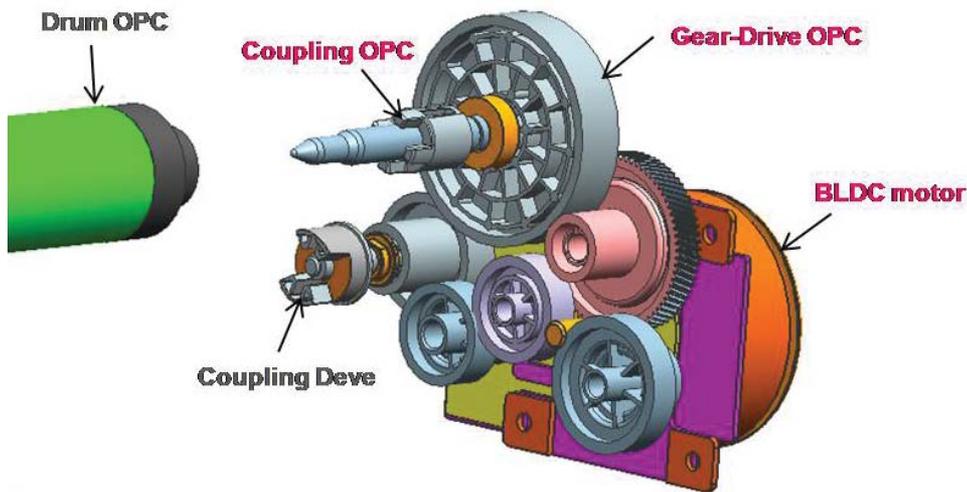


Drum drive

The OPC drum and magnetic roller are driven by one BLDC motor and supplied with power from the coupling.

The drive shaft is directly inserted into the OPC drum to fix the drum unit. This structure provides stable printing quality.

Figure 1-12 Drum drive



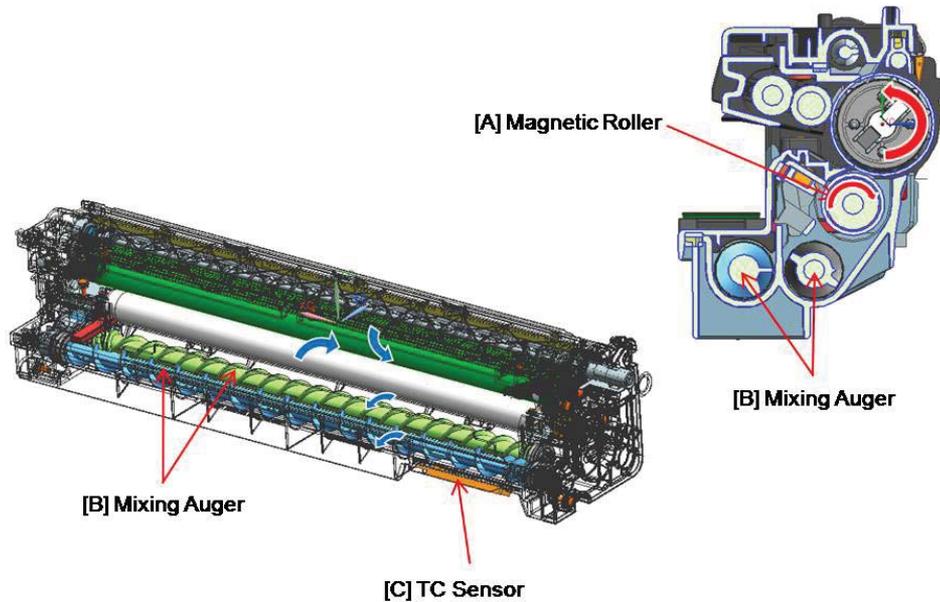
Developer unit

This printer uses a dual-component development system.

The developer unit contains 255g of toner carrier that is supplied to the magnetic roller (callout A) by the two mixing augers (callout B). The diameter of the magnetic roller is 18.2 mm.

The developer unit has a TC (toner concentration) sensor (callout C). It is used for controlling the operating range of toner density.

Figure 1-13 Developer unit



Developer Circulation

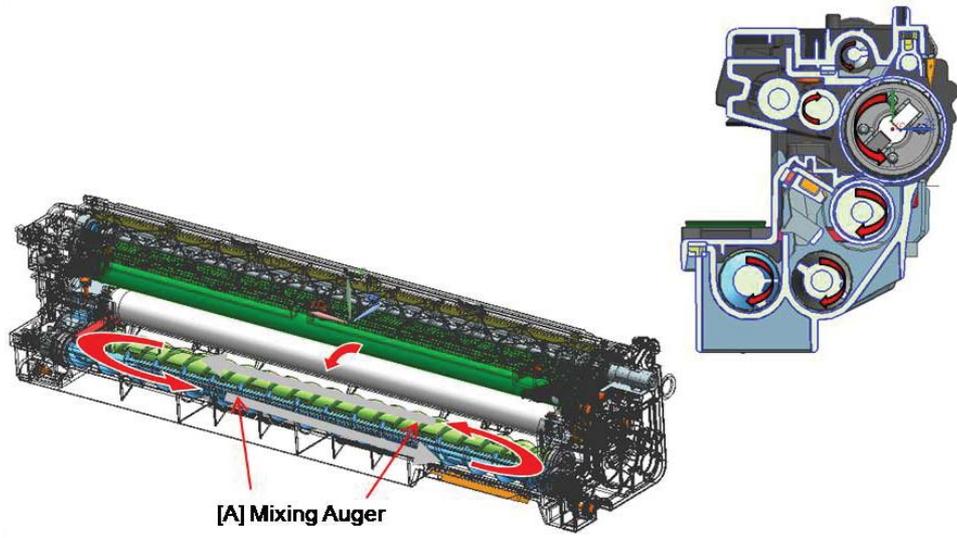
Two mixing augers (callout A) circulate the developer forward and backward to agitate the developer in order to mix the developer and toner well.

This occurs at the following times:

- During the process control self-checking
- During toner supply job
- During development job

The developer unit must be stored below 50 degrees C or the toner will harden and not work properly.

Figure 1-14 Developer Circulation



Fuser unit

Fuser unit overview

This unit fuses the toner that was transferred by the transfer roller onto the paper, by applying heat and pressure. This printer's two-roller fusing system uses a thinner heat roller to improve warm-up time.

Figure 1-15 Fuser unit overview

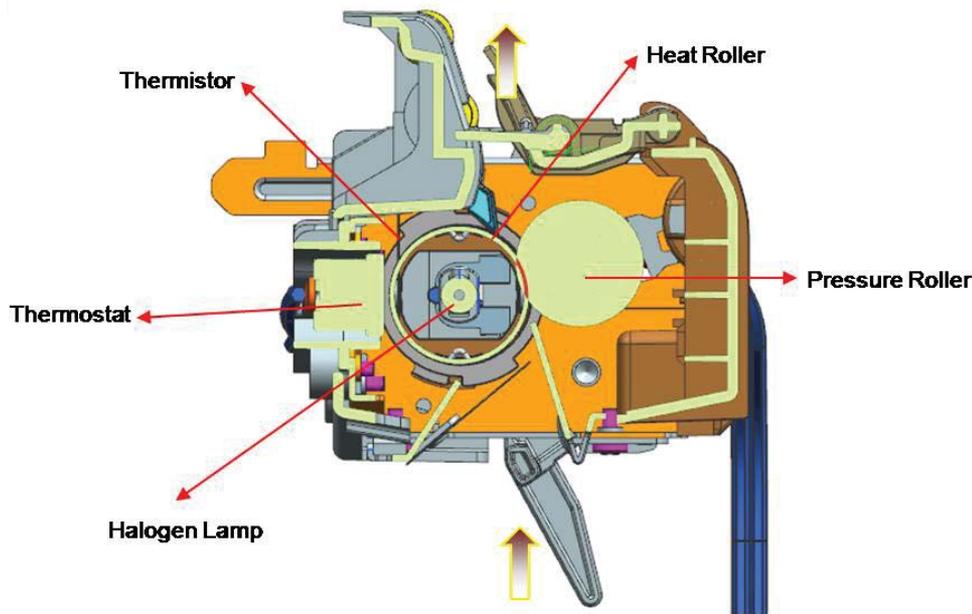


Table 1-14 Fuser unit overview

Item	Description
1	Halogen Lamp This fuser unit has one halogen lamp that is mounted inside the heat roller. When rotating the heat roller, this lamp does not rotate.
2	Heat Roller The aluminum heat roller transfers heat from the halogen lamp to the toner and paper. The thinner heat roller reduces the warm-up time and the mode switching time. To prevent the heat roller from adhering to the toner, its surface has a PFA coating. The gear assembly on the side of the fuser unit rotates the heat roller.
3	Pressure Roller The pressure roller is made of rubber which ensures proper nip width between the pressure roller and the heat roller. The pressure roller uses a spring to adhere the toner on to paper effectively.
4	Thermistor The thermistor detects the temperature on the surface of the heat roller and controls the halogen lamp.
5	Thermostat The thermostat cuts off the power supply to the halogen lamp by opening the circuit when the heat roller becomes abnormally hot as a result of problems, such as thermistor malfunction. The thermostat is used to prevent abnormal operation. When the thermostat is triggered, it must be replaced (as well as the other damaged parts in the fuser unit).

Fuser duplex exit drive

Figure 1-16 Fuser duplex exit drive

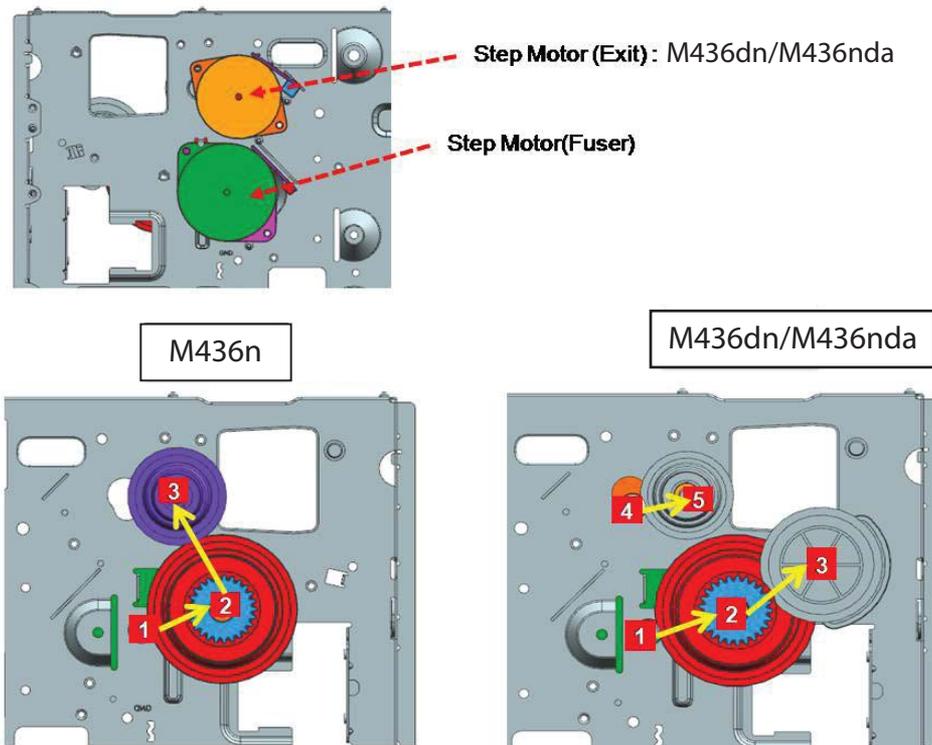


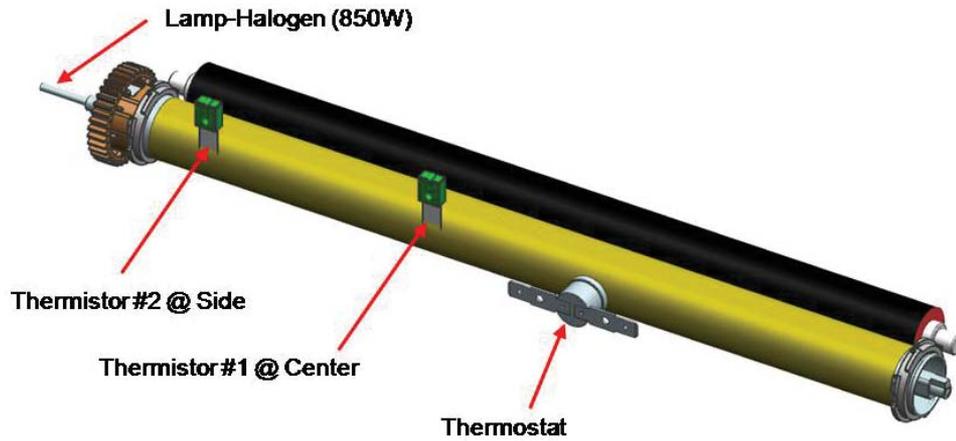
Table 1-15 Fuser duplex exit drive

Power Train	<ul style="list-style-type: none"> Fuser/Duplex: Step Motor Exit: Step Motor
<ul style="list-style-type: none"> [HP LaserJet MFP M436n Printer] <ul style="list-style-type: none"> 1 → 2 (Fuser driving) → 3 GEAR RDCN EXIT (Exit driving) [HP LaserJet MFP M436dn/M436nda Printer] <ul style="list-style-type: none"> 1 → 2 (Fuser driving) → 3 GEAR Duplex (Duplex driving) 4 → 5 GEAR RDCN EXIT (Exit driving) 	

Fuser unit temperature control

When the main switch turns on, the CPU turns on the fusing lamp. The lamp stays on until the contact thermistors detect the standby temperature. Then the CPU raises the temperature up to the printing temperature.

Figure 1-17 Fuser unit temperature control



Overheat Protection

The CPU cuts power to the fusing lamp in the following cases :

- The temperature detected by the thermistor stays higher than 240°C for 20 seconds.

The following components are used when the thermistor overheat protection fails:

- Two thermostats get into line with the common ground wire of the fusing lamp.
- If the thermostat temperature is higher than 195°C, power is cut to the fusing lamp.

Laser Scanning unit (LSU)

LSU overview

Figure 1-18 LSU overview

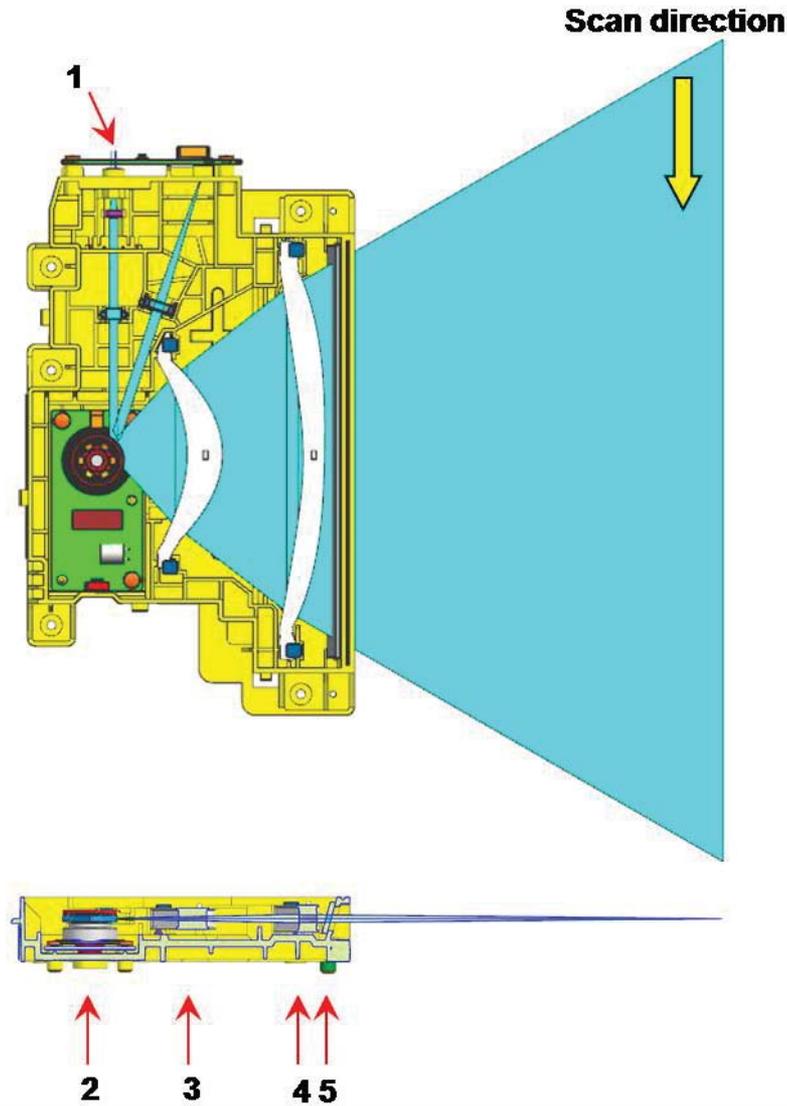


Table 1-16 LSU overview

Item	Description
1	LD PBA
2	P/Mirror Motor
3	F1 Lens
4	F2 Lens
5	Cover glass

Laser scanning optical path

Figure 1-19 Laser scanning optical path

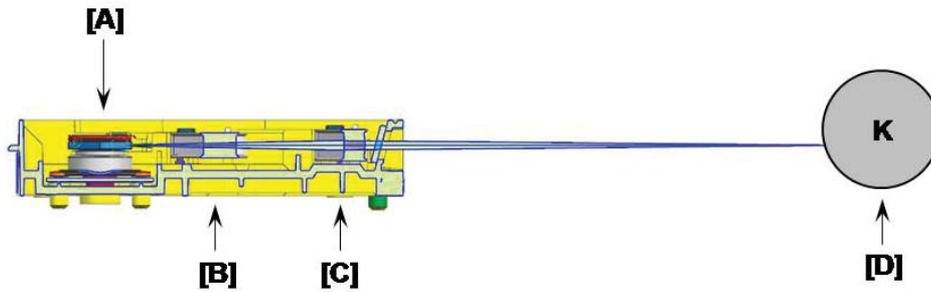


Table 1-17 Laser scanning optical path

Item	Specification	Remarks
LD unit	Laser Diode: Single Beam driving IC for Single LD	
P/Motor speed	32,217 rpm	
Process speed	90.925 mm/sec	
H/W interface	Harness:14 Pin (Interface with set)	FFC cable

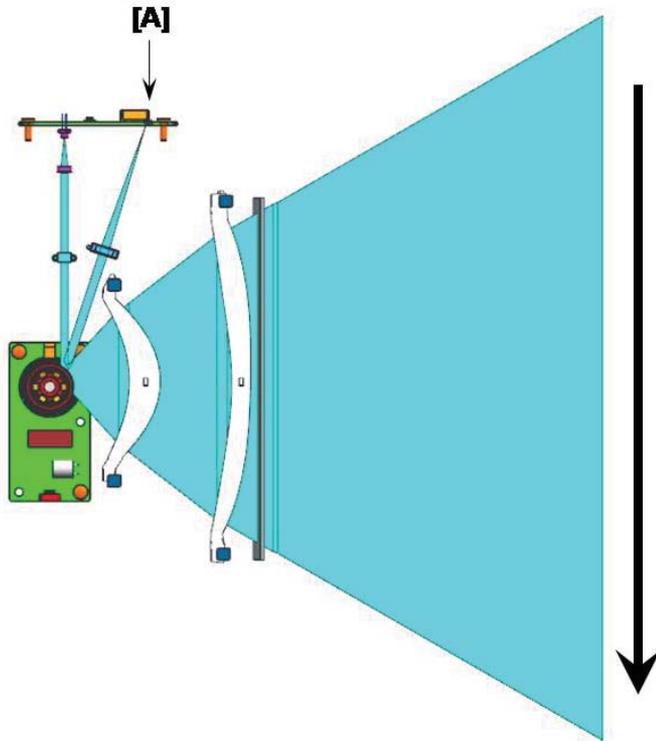
Laser synchronizing detectors

The LSU has a PD PBA beam detector sensor board that detects the scanning start point (callout A).

Main Scan Start Detection

The PD PBA detects the beam at the scanning start point and creates the horizontal sync signal (Hsync).

Figure 1-20 Laser synchronizing detectors



Drive system

Drive motors

This section shows the motor locations and functions.

Figure 1-21 Drive motors

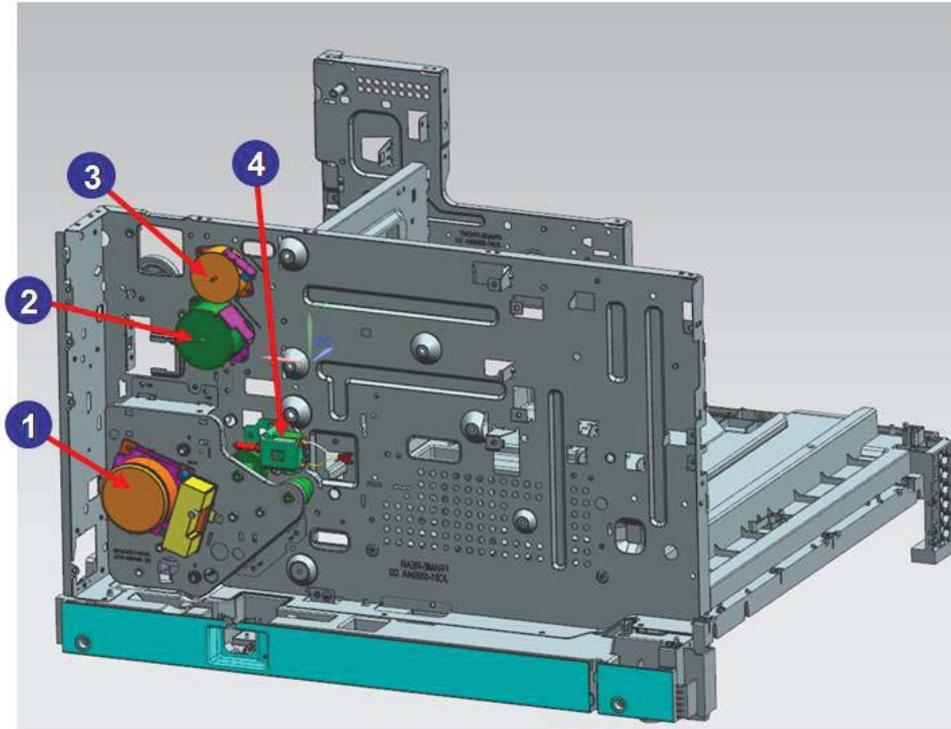


Table 1-18 Drive motors

Item	Motor	Motor type	Qty	Function
1		BLDC	1	OPC/DEVE/Registration/MP/pickup drive
	OPC/DEVE/PH	E-Clutch	3	Registration/MP/pickup drive engages
2	Fuser	STEP	1	<ul style="list-style-type: none"> HP LaserJet MFP M436n Printer: Fuser/Exit drive HP LaserJet MFP M436dn/ M436nda Printer: Fuser/ Duplex drive
3	Exit	STEP	1	Exit drive
	NOTE: Only HP LaserJet MFP M436dn/ M436nda Printer			
4	Toner Cartridge	DC	1	Toner cartridge drive

Main drive unit (OPC_DEVE_REGI_MP_pickup)

Figure 1-22 Main drive unit—front view

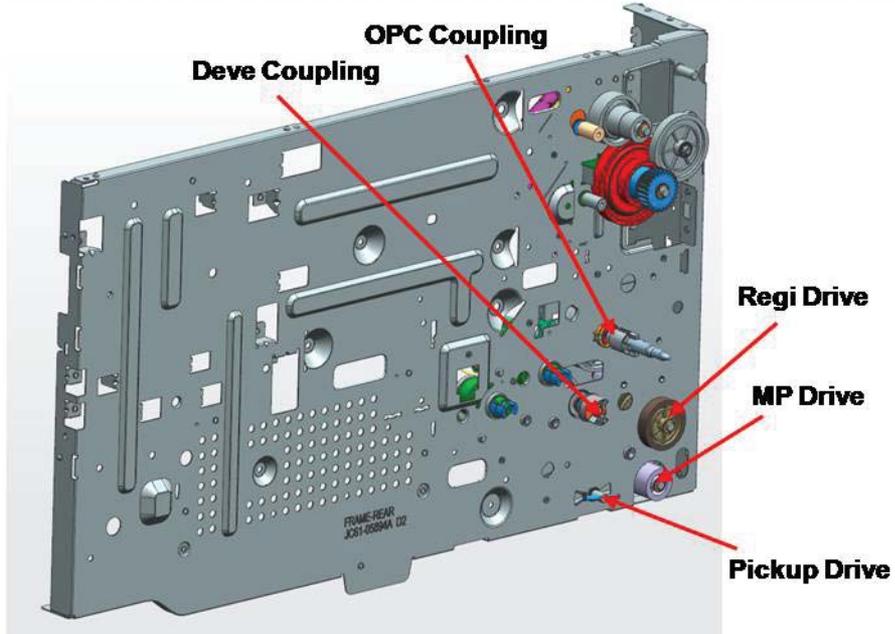


Figure 1-23 Main drive unit—rear view

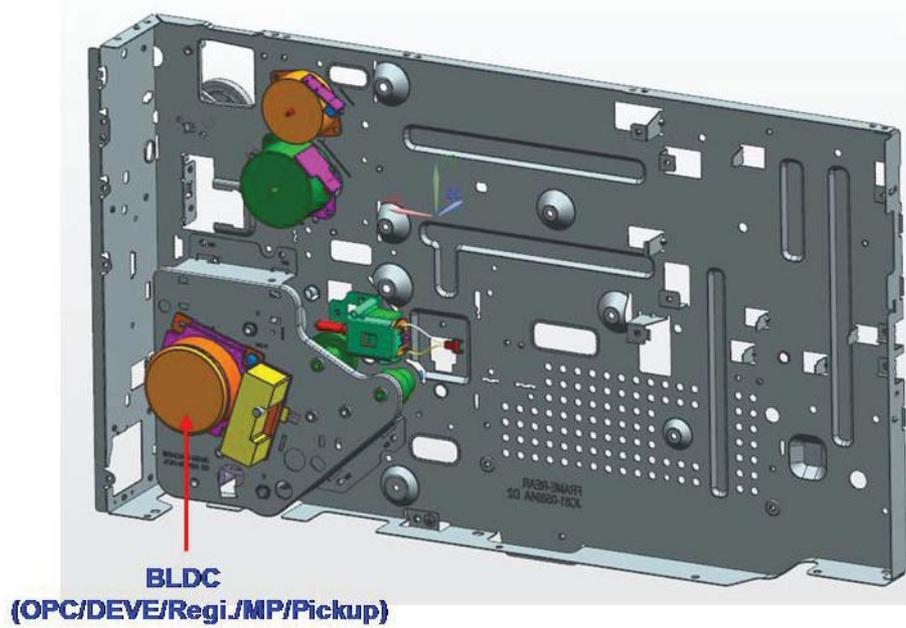


Figure 1-24 Main drive (OPC/Deve)

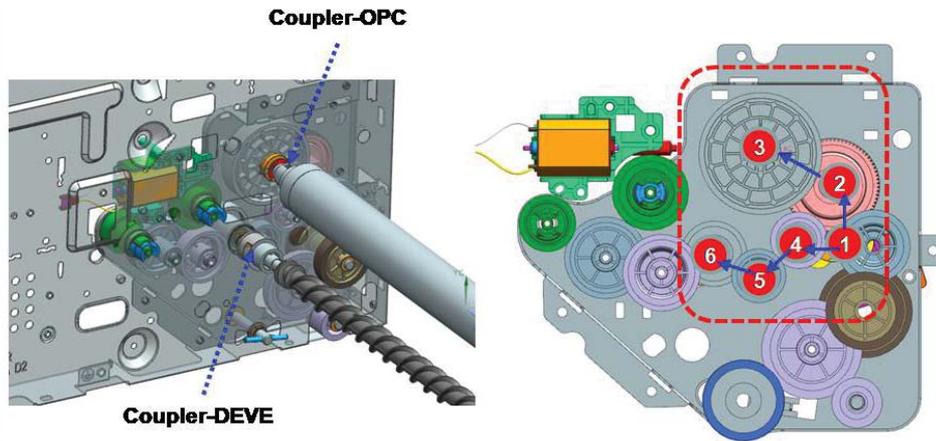


Table 1-19 Main drive (OPC/Deve)

Power Train	Registration/MP/pickup: BLDC driving, Clutch driving control
<ul style="list-style-type: none"> 1 → 2 → 3 (OPC driving) 1 → 4 → 5 → 6 (Magnetic roller driving) 	

Figure 1-25 Main drive (Registration/MP/Feed 1,2)

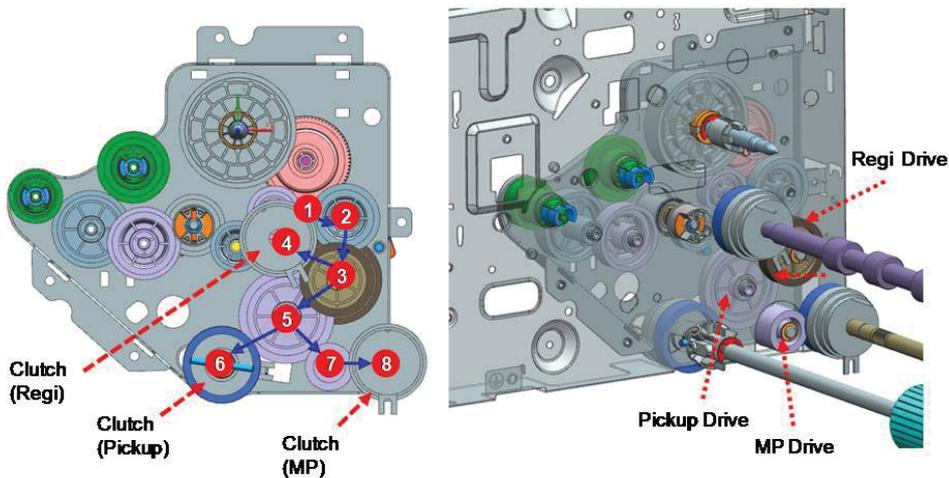


Table 1-20 Main drive (Registration/MP/Feed 1,2)

Power Train	<ul style="list-style-type: none"> Fuser/Duplex: Step Motor Exit: Step Motor
<ul style="list-style-type: none"> 1 → 2 → 3 → 4 Clutch/Gear (Registration Input) 1 → 2 → 3 → 5 → 6 Clutch/Gear (pickup Input) 1 → 2 → 3 → 5 → 7 → 8 (MP Input) 	

Fuser duplex exit drive

Figure 1-26 Fuser duplex exit drive

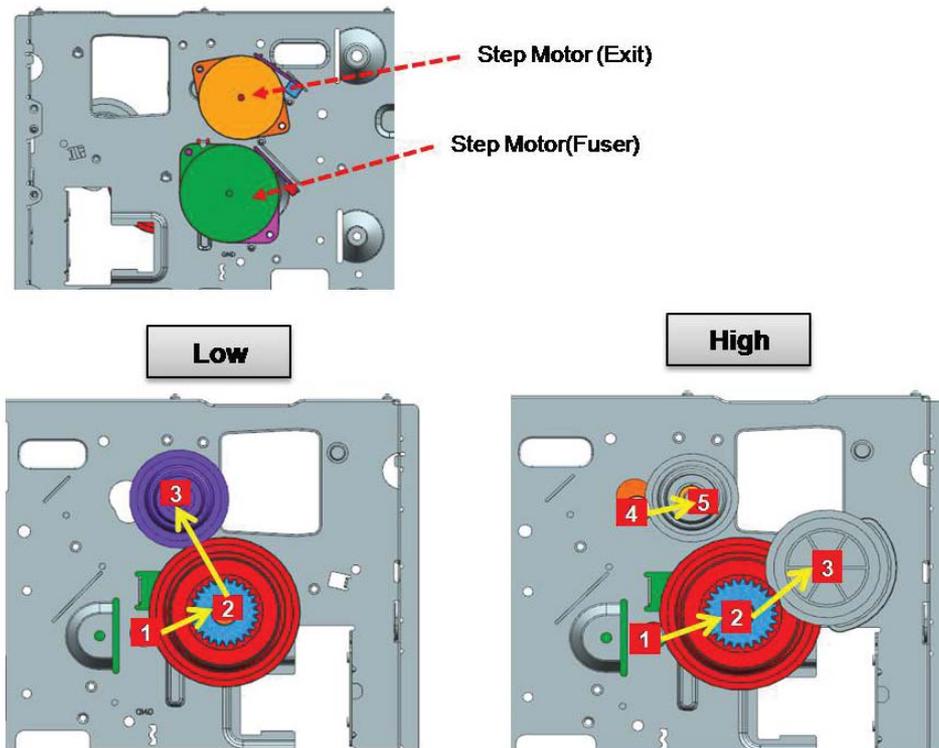


Table 1-21 Fuser duplex exit drive

Power Train	<ul style="list-style-type: none"> Fuser/Duplex: Step Motor Exit: Step Motor
<ul style="list-style-type: none"> [HP LaserJet MFP M436n Printer (Low model)] <ul style="list-style-type: none"> 1 → 2 (Fuser driving) → 3 GEAR RDCN EXIT (Exit driving) [HP LaserJet MFP M436dn/M436nda Printer (High model)] <ul style="list-style-type: none"> 1 → 2 (Fuser driving) → 3 GEAR Duplex (Duplex driving) 4 → 5 GEAR RDCN EXIT (Exit driving) 	

Toner cartridge drive

Figure 1-27 Toner cartridge drive

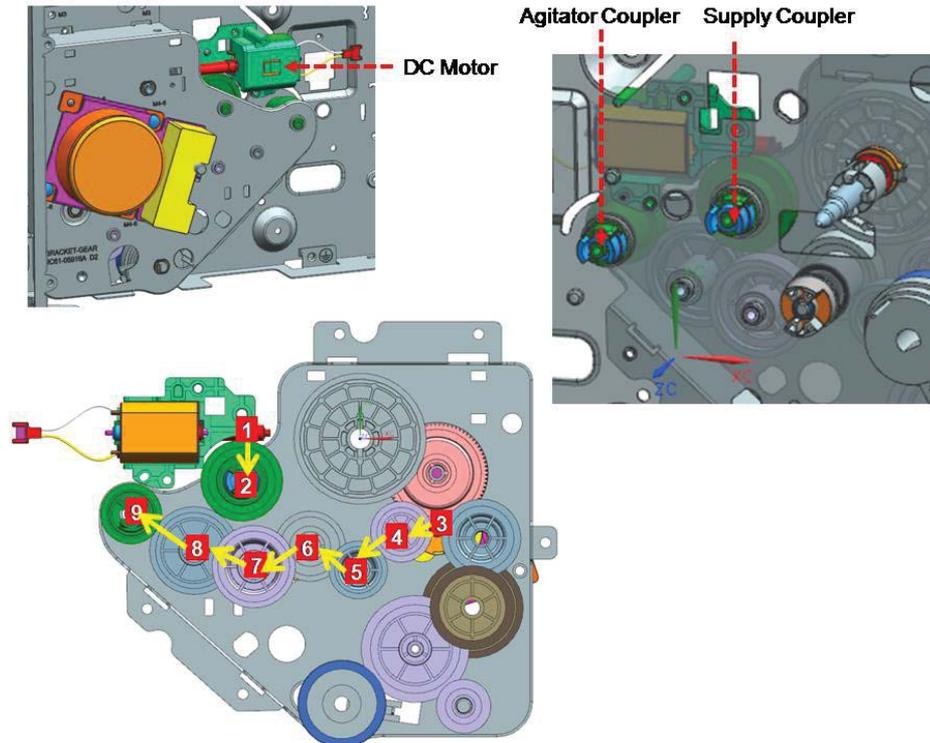


Table 1-22 Toner cartridge drive

Power Train	<ul style="list-style-type: none"> • Toner supply: DC motor driving • Agitator: BLDC motor driving
<ul style="list-style-type: none"> • 1 DC motor → 2 Gear-Supply Coupler (Toner Supply driving) • 3 BLDC motor → 4 → 5 → 6 → 7 → 8 → 9 Gear-agitator coupler (Agitator driving) 	

Scanner System

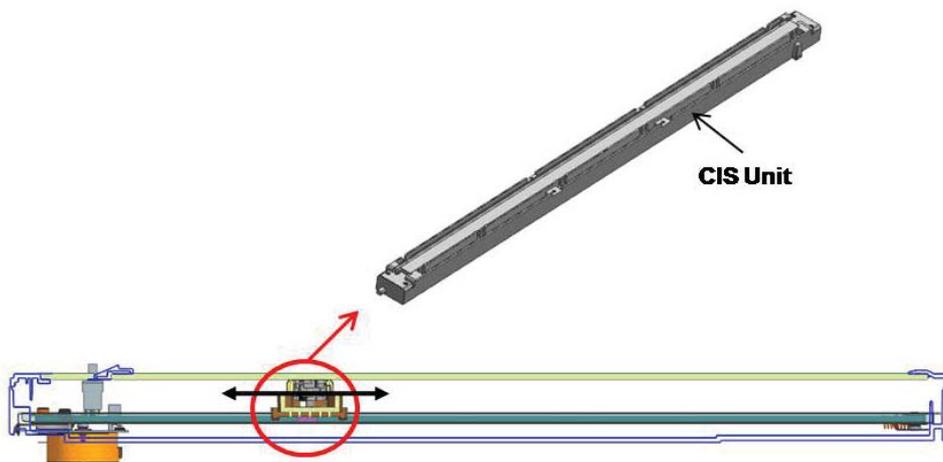
Scanner system overview

During the scanning process, the surface of a document is exposed to direct light. The reflected light is sent to the CIS sensor that converts the optical image data into an electrical (analog) signal.

This analog signal is changed to a digital signal, which then undergoes various corrective processes necessary for image formation. After that, mathematical operations are performed on the digital signal, which is then transmitted to the data writing processor.

This printer uses the 3ch D-CIS for this process. The sensors in the CIS unit are arranged in a row and read the document image by turning on an RGB LED sequentially.

Figure 1-28 Scanner system overview



Scanning system components

The following shows the construction and purpose of the scanning system:

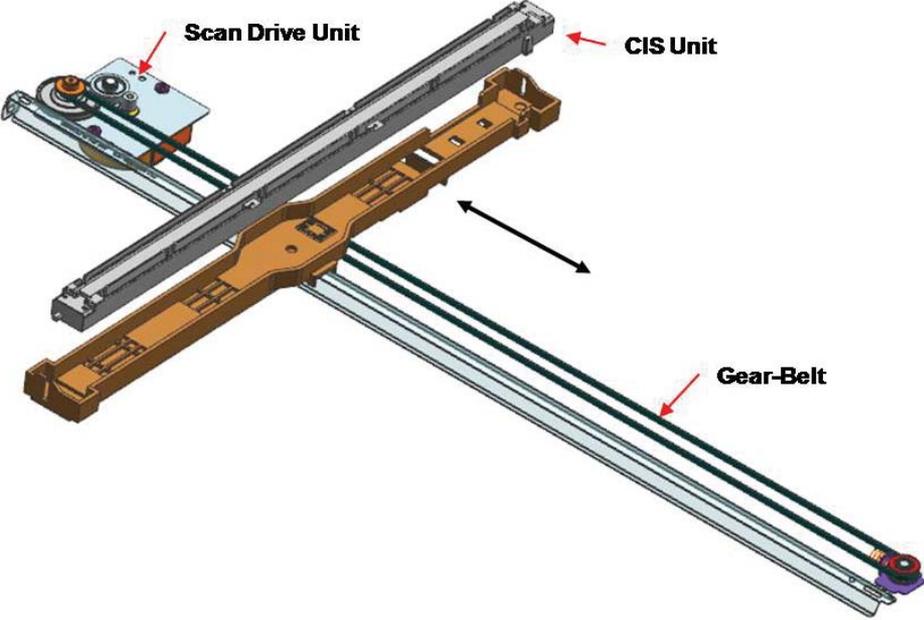
- **CIS (Contact Image Sensor)**

The CIS illuminates and reads the document on the scan glass with the RGB light source, the sub-miniature lens array, and sensor. Once the sensor illuminates the document, the reflected light is sent to the lens array. The CIS sensor detects and converts the light to a color or a mono electrical signal, which is used to scan the image or print through the image process.

- **Scan Drive unit**

The scan drive unit consists of a step motor, retardation gear and gear-belt. The CIS unit is moved by the gear-belt. The document image is scanned by the CIS movement.

Figure 1-29 Scanning system components



Document feeder

Document feeder overview

Figure 1-30 Document feeder overview

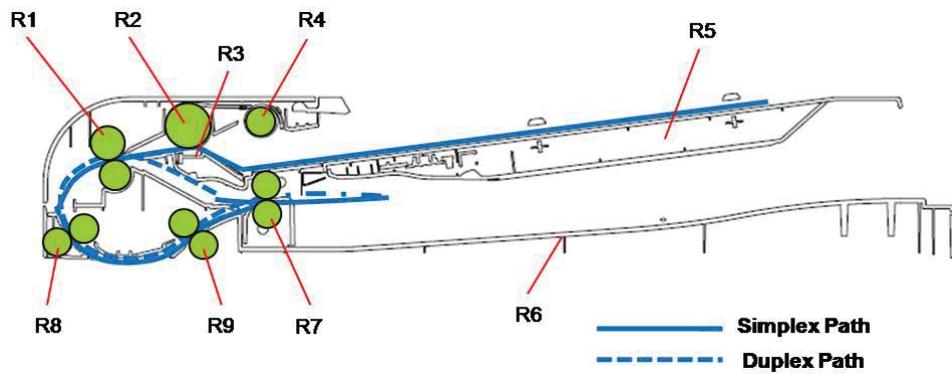


Table 1-23 Document feeder overview

Callout	Part	Function
R1	Simplex and duplex registration roller	Aligns the leading edge of the paper for registration.
R2	Document feeder forward roller	Separates an original from the tray and transfers it to the paper path.
R3	Document feeder friction pad	Prevents multi-feeds.
R4	Document feeder pickup roller	Picks up an original from the tray.
R5	Original document tray	Paper input tray
R6	Exit tray	Paper output tray
R7	Exit roller	Sends an original to the exit tray and forms the duplex reverse path.
R8	Feed-in roller	Feeds an original before scanning.
R9	Feed-out roller	Transfers a scanned original to the exit roller.

Electrical parts location

Figure 1-31 Electrical parts location

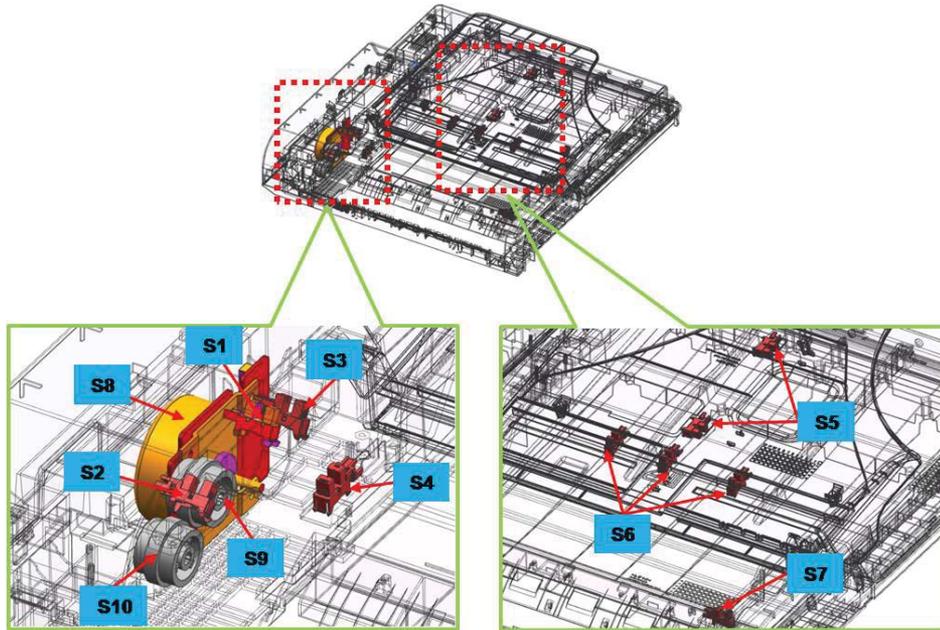


Table 1-24 Electrical parts location

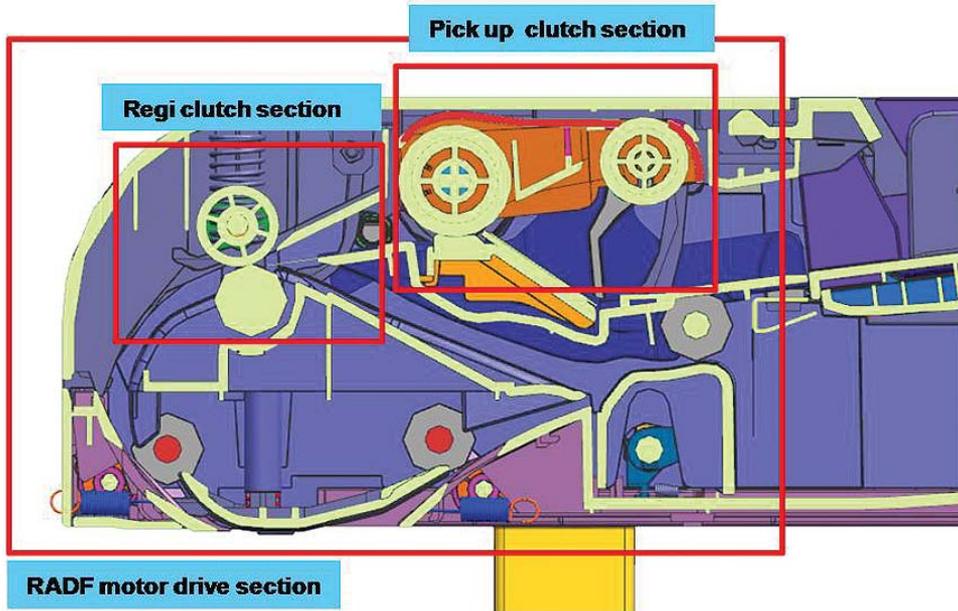
Callout	Description	Parts number	Controller board
S1	PHOTO-INTERRUPTER (COVER)		PBA-document feeder
S2	PHOTO-INTERRUPTER (REGI)		PBA-document feeder
S3	PHOTO-INTERRUPTER (DETECT)		PBA-document feeder
S4	PHOTO-INTERRUPTER (EXIT IDLE)		PBA-document feeder
S5	PHOTO-INTERRUPTER (PAPER LENTGH)		PBA-document feeder
S6	PHOTO-INTERRUPTER (PAPER WIDTH)		PBA-document feeder
S7	PHOTO-INTERRUPTER (EXIT)		PBA-document feeder
S8	BLDC MOTOR		PBA-document feeder
S9	CLUTCH-ELECTRIC (PICKU-UP)		PBA-document feeder
S10	CLUTCH-ELECTRIC (REGI)		PBA-document feeder

Document feeder drive system

Overview

The document feeder consists of one motor and two clutches for paper transfer.

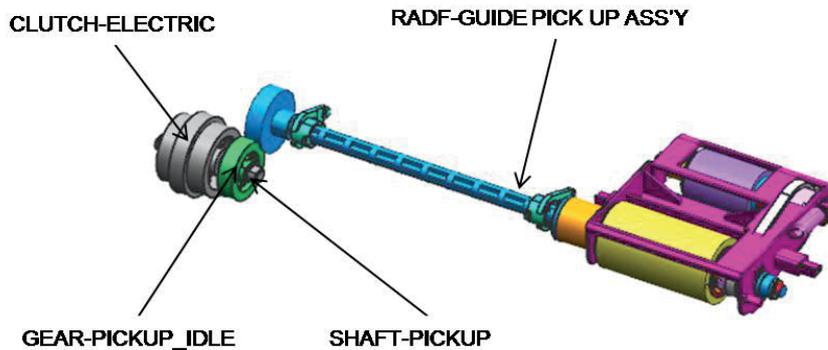
Figure 1-32 Document feeder drive system



- A BLDC motor drives the system for simplex and duplex jobs.
- The pick up and registration clutch controls the drive power.
- The cam type gear and solenoid is used for duplex reverse.

Document feeder original drive assembly

Figure 1-33 Document feeder original drive assembly



After detecting the paper, one motor controls the entire drive system.

The electric clutch provides the power to pick up the paper.

When the clutch stops rotating, the printer goes into Standby mode in order to fix the problem.

The document feeder roller and pick up roller are connected by the belt.

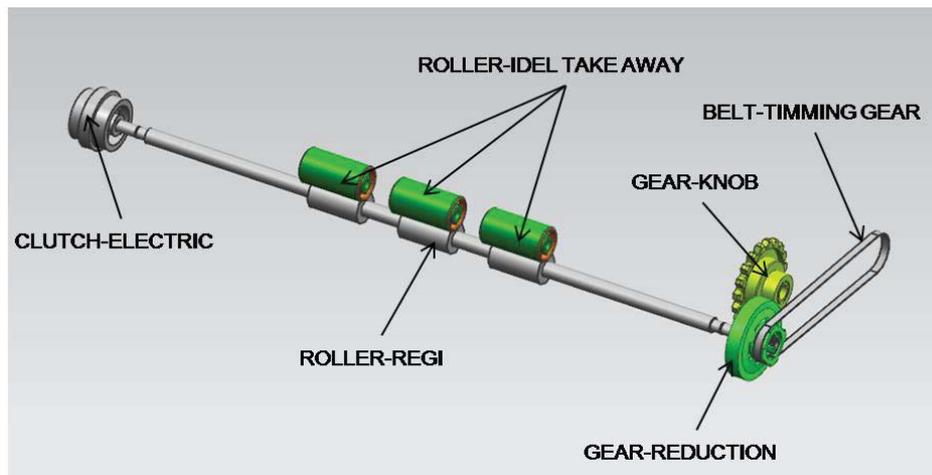
The ADF roller provides the power while the paper is picked up and transferred to the registration roller. When the pickup drive is stopped and registration roller is driven, the document feeder roller becomes idle.

The normal process is:

- When the original is set up, the detect-sensor activates and start the print job. The motor and pick-up clutch work and the pick-up roller moves down to contact an original in the tray.
- When the Registration sensor detects the paper, the pickup clutch stops.
- When the Detect-Sensor detects that the tray is empty, the motor stops and the printer enters stand-by status.

Document feeder registration drive assembly

Figure 1-34 Document feeder registration drive assembly



The registration drive uses the electric clutch to drive the registration roller, and transfers the paper to ROLLER FEED.

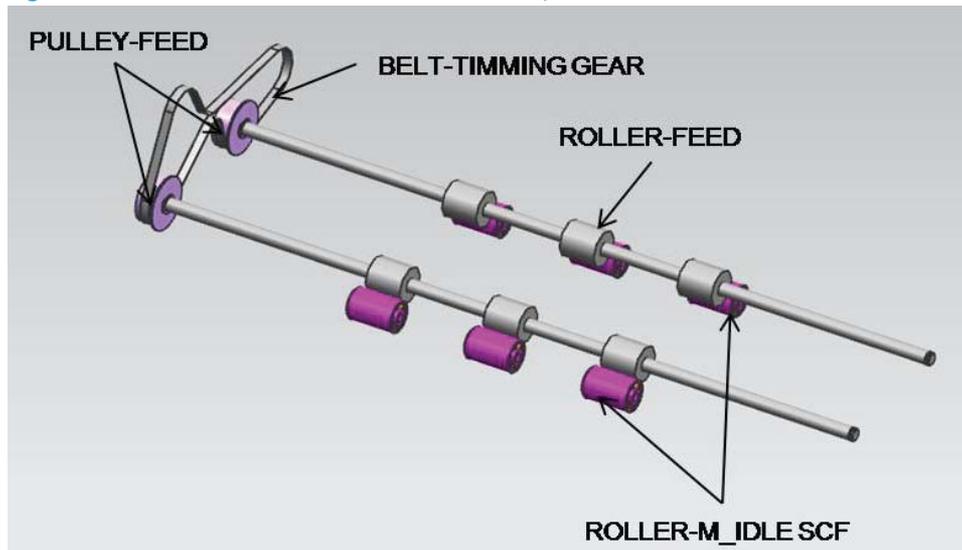
The registration roller aligns the leading edge of the original. When original is placed in the Nip, the roller is rotated for alignment.

The electric clutch repeats powers on and off to align each page.

The gear-knob and gear-reduction moves the belt to connect the roller-exit with power. This structure allows for easy paper jam clearing.

Document feeder feed drive assembly

Figure 1-35 Document feeder feed drive assembly



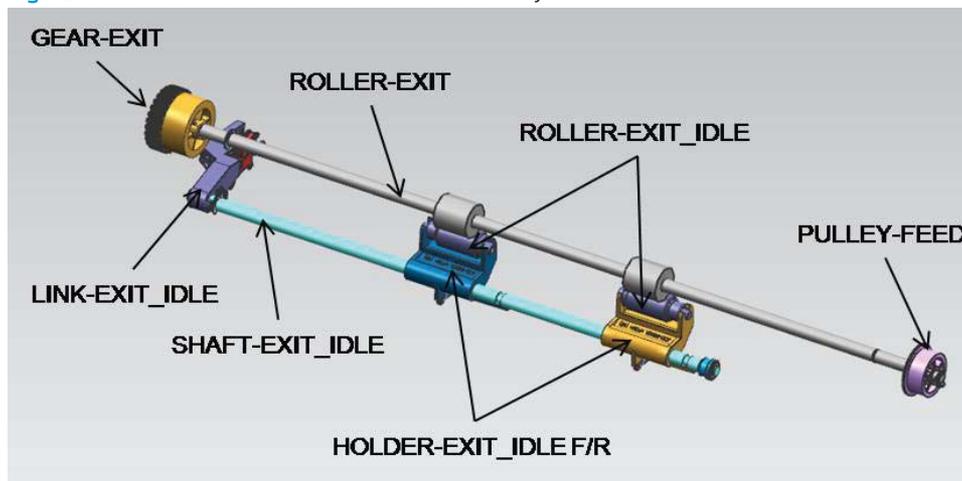
The ROLLER FEED is driven by the BELT-TIMING that is connected to Motor.

The roller-feed and roller-m idle SCL feed paper using spring pressure.

The motor transfers paper through the interlocking roller-feed-in and roller-feed-out. When scanning, the motor is driven continually to maintain stable paper transfer.

Document feeder exit drive assembly

Figure 1-36 Document feeder exit drive assembly



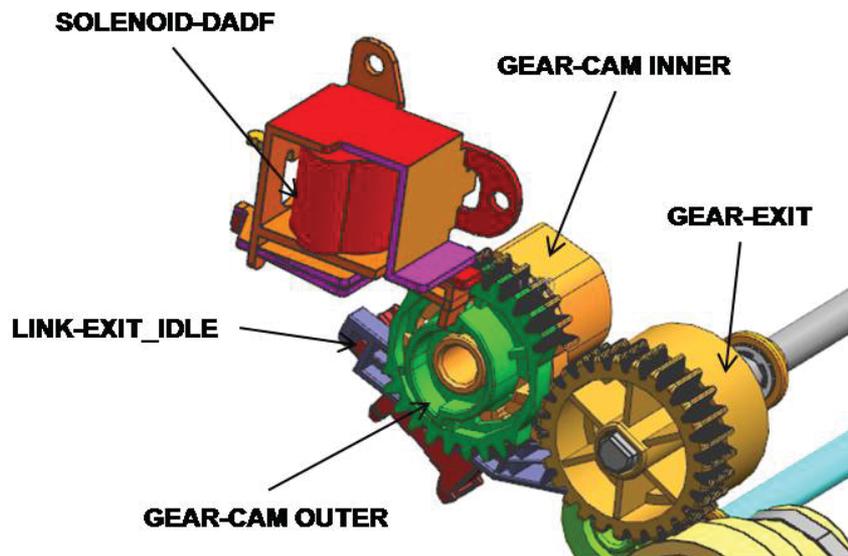
The power from the motor is transferred to GEAR-EXIT and ROLLER-EXIT. The paper is transferred to the exit. At duplex mode, counter rotation occurs.

The roller-exit-idle spring keeps pressure on the exit roller. During duplexing, the roller-exit_idle is rotated inversely, making space between the rollers to prevent jams.

The space between rollers is adjusted by LINK-EXIT_IDLE and SENSOR-EXIT_IDLE.

Original return drive

Figure 1-37 Original return drive



The solenoid works only during duplex mode.

During duplex mode, the motor rotates inversely and the solenoid powers the gear-cam outer and gear-exit.

When the gear-exit rotates, the solenoid drives the gear-cam which makes space between the roller-exit and the idle roller.

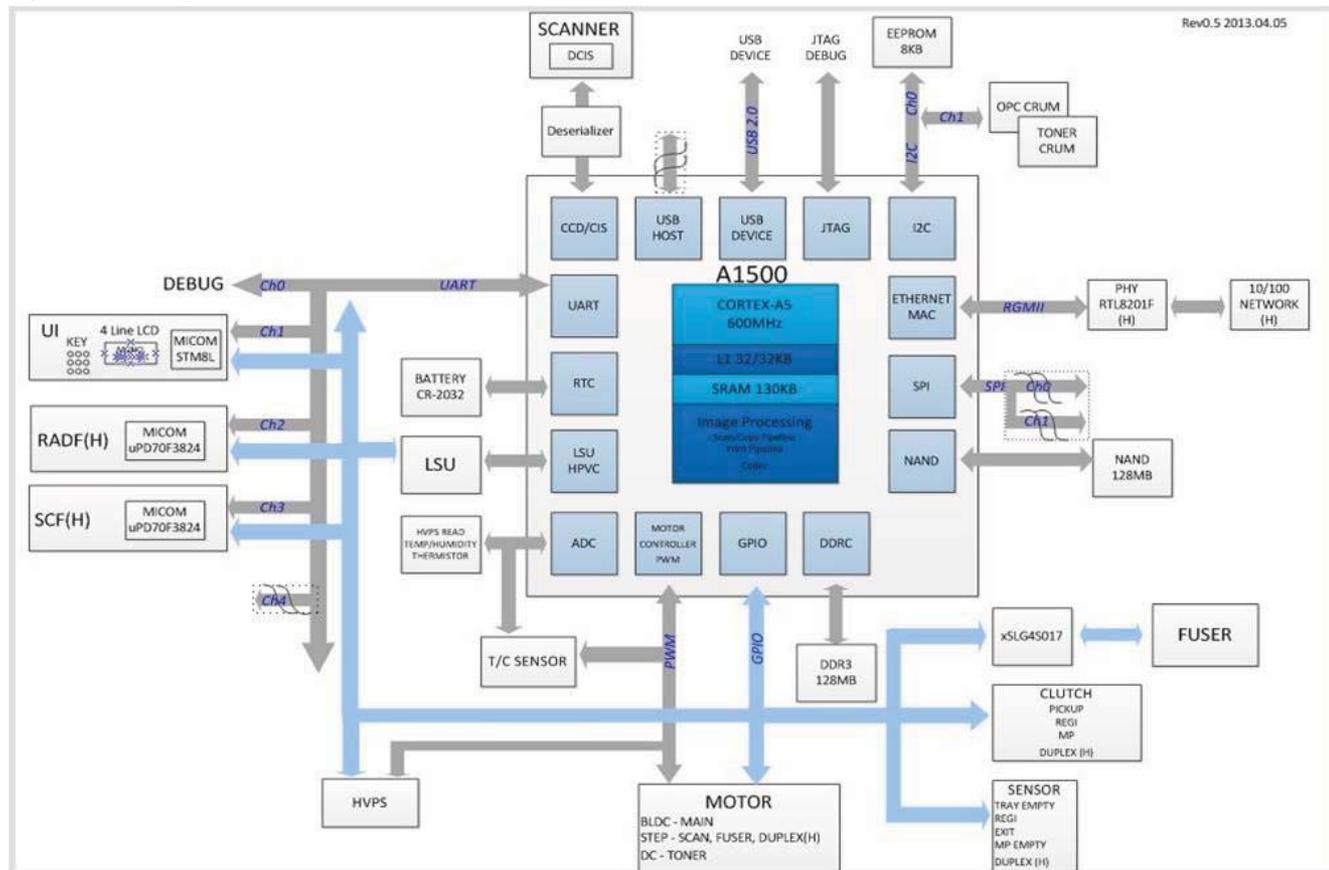
Hardware configuration

Overview

The M436 series Electrical Circuit System consists of the following:

- Main board (System board)
- OPE board
- HVPS board
- SMPS board
- Document feeder board (Optional/HP LaserJet MFP M436nda Printer only)
- SCF board (Optional/HP LaserJet MFP M436nda Printer only)

Figure 1-38 Diagram of M436 Series Electrical Circuit



The main board handles the video controller, engine controller and scan controller.

The engine controller of main board controls all modules required to print, that is, LSU, HVPS, FAN, Fuser, etc. It communicates with the video control block in CPU and interfaces with all video sync signals to print the video data.

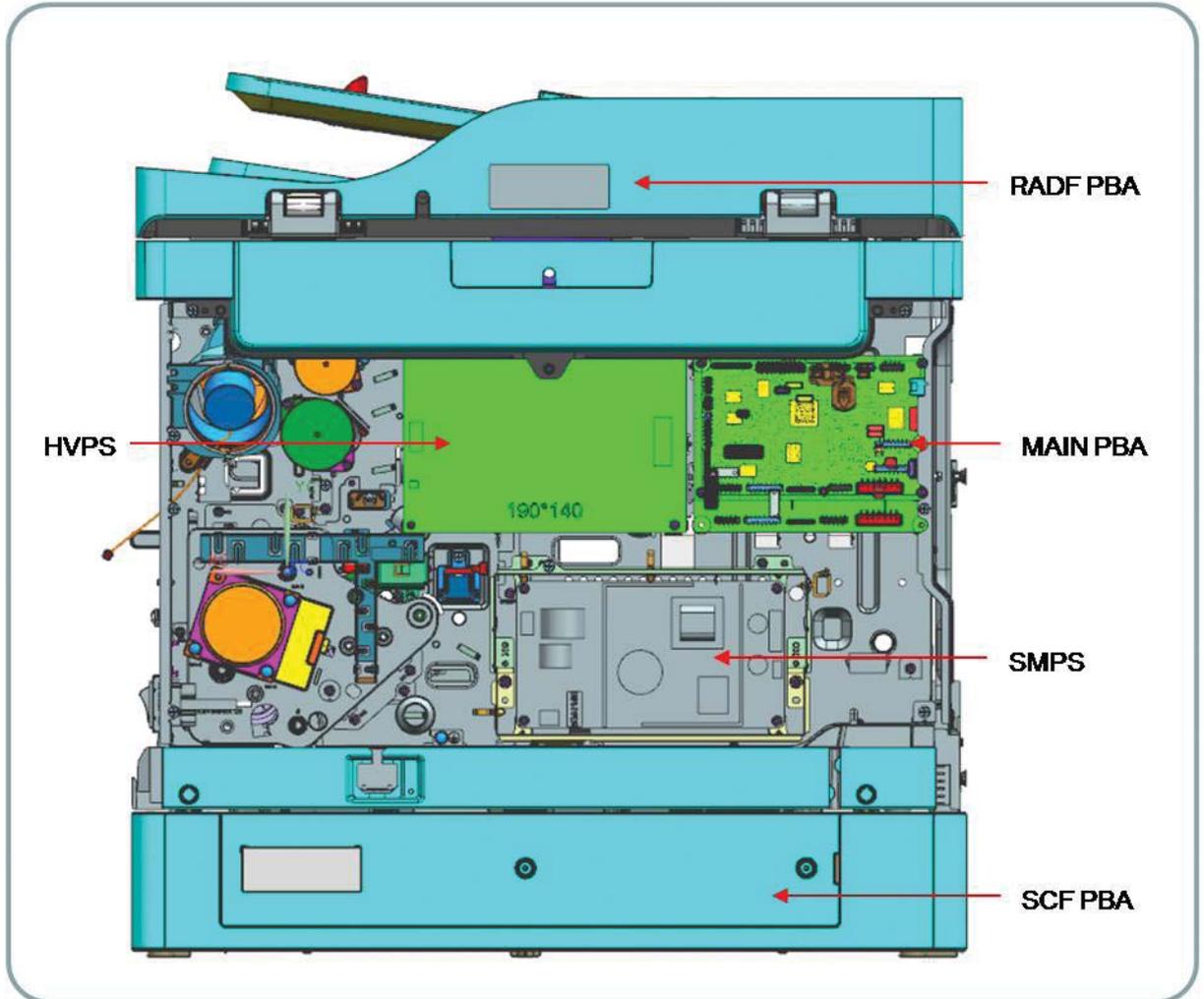
The video controller on the main board receives print data from the host through the network or USB port, and it receives copy data from the scan controller. It takes this information and generates printable video bitmap data. The generated data is sent to the engine controller.

The main board adopted 600MHz CPU, DDR3 128 MB.

Circuit Board Locations

The following diagrams show the locations of the printer circuit boards:

Figure 1-39 Circuit Board Locations



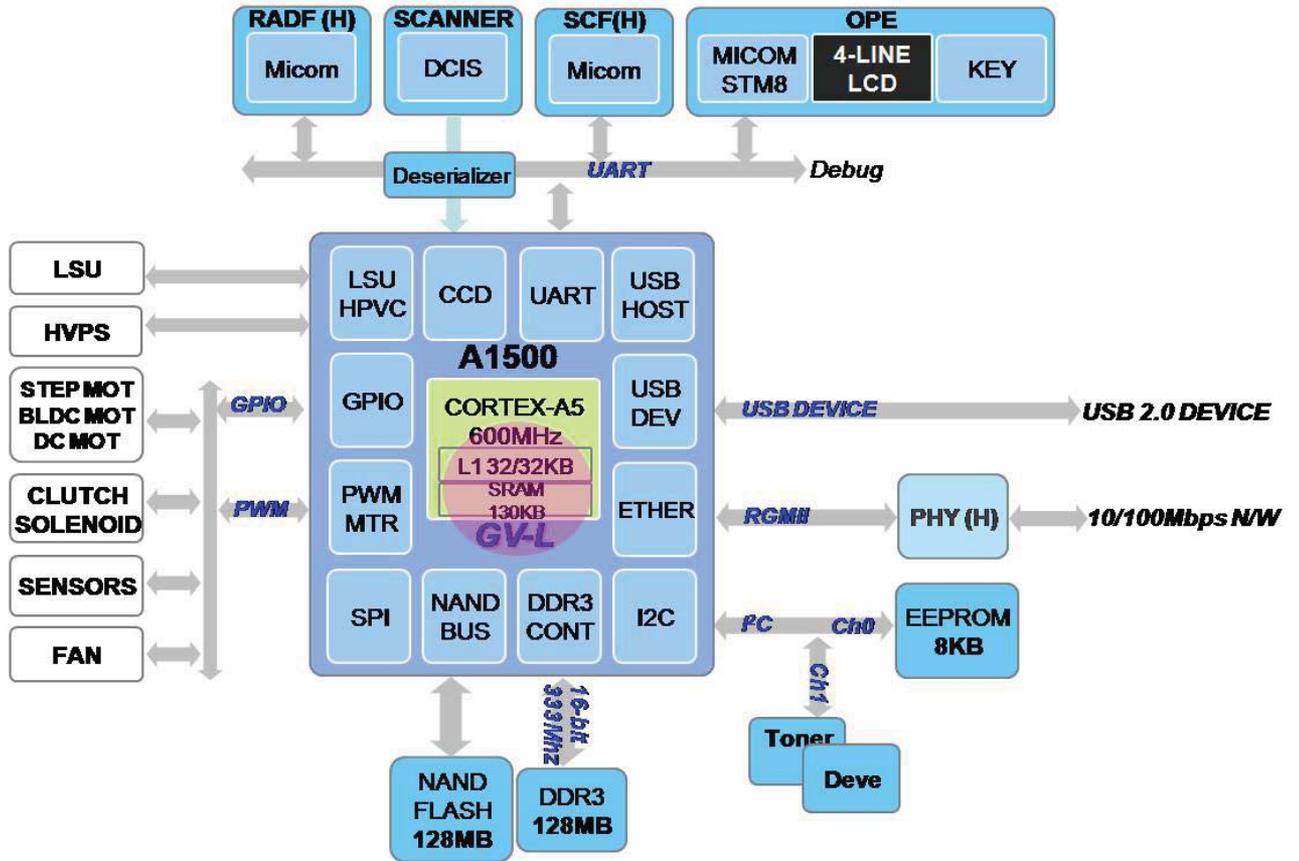
Formatter (Main) board

The main board adopted A1500 (600MHz) as the main processor. A1500 is a one-chip CPU integrated with engine/video/scan controller. The main board also has DDR3 128MB for high speed data processing and 128MB NAND flash for boot.

The USB is the embedded type and the wired network supports 100Mbps.

The optional document feeder, optional SCF, network function are applied to the HP LaserJet MFP M436nda Printer model only.

Figure 1-40 Main board diagram



Formatter (Main) board

Figure 1-41 Formatter (Main) board

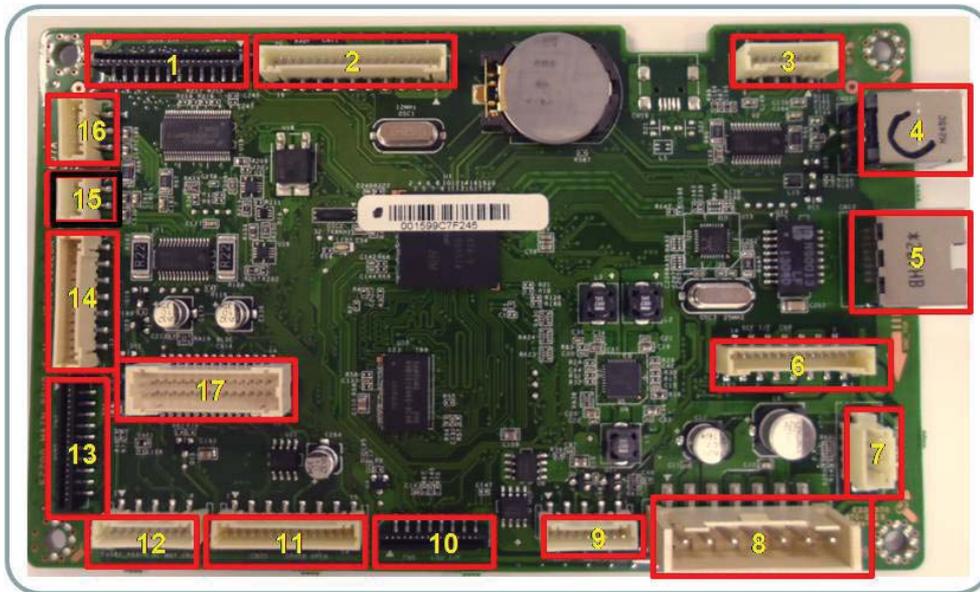


Table 1-25 Formatter (Main) board

Item	Connection	Related Problem
1	SCAN CIS Interface	Copy & SCAN: White Image (Null data)
2	Document feeder Interface (HP LaserJet MFP M436nda Printer only)	No response to document feeder Job
3	Scan Motor Interface	Scanner Locked
4	USB Device Jack	No USB printing
5	Network Jack (HP LaserJet MFP M436nda Printer Only)	No N/W printing
6	SCF Interface (HP LaserJet MFP M436nda Printer Only)	No use of Tray 3
7	Debug	Can't see debug message with hyper terminal
8	SMPS Interface	No power
9	SMPS Control Interface	No 24V/Room temp error/#U1-2320
10	LSU Interface	Hsync Error/#U1-1111
11	TC, OPC CRUM Interface	Not installed imaging unit/C1-1314
12	Thermistor, Toner CRUM Interface	#U1-2320V/Toner not installed
13	HVPS Interface	Print White paper
14	OPE Interface	Don't use UI (LCD & Keys)
15	Fuser Motor Interface	#U1-2132
16	Exit Motor Interface (HP LaserJet MFP M436nda Printer Only)	When printing, paper Exit Jam error
17	BLDC, Clutch Interface	#C3-1414/Jam in tray/Jam inside printer

OPE board

The OPE board consists of OPE MICOM (STM8L151M8T6), status LED, power LED, navigation LED, four-line LCD, button.

The OPE board and main board use the UART for communication. The main board controls the power LED.

Figure 1-42 OPE board (1 of 2)

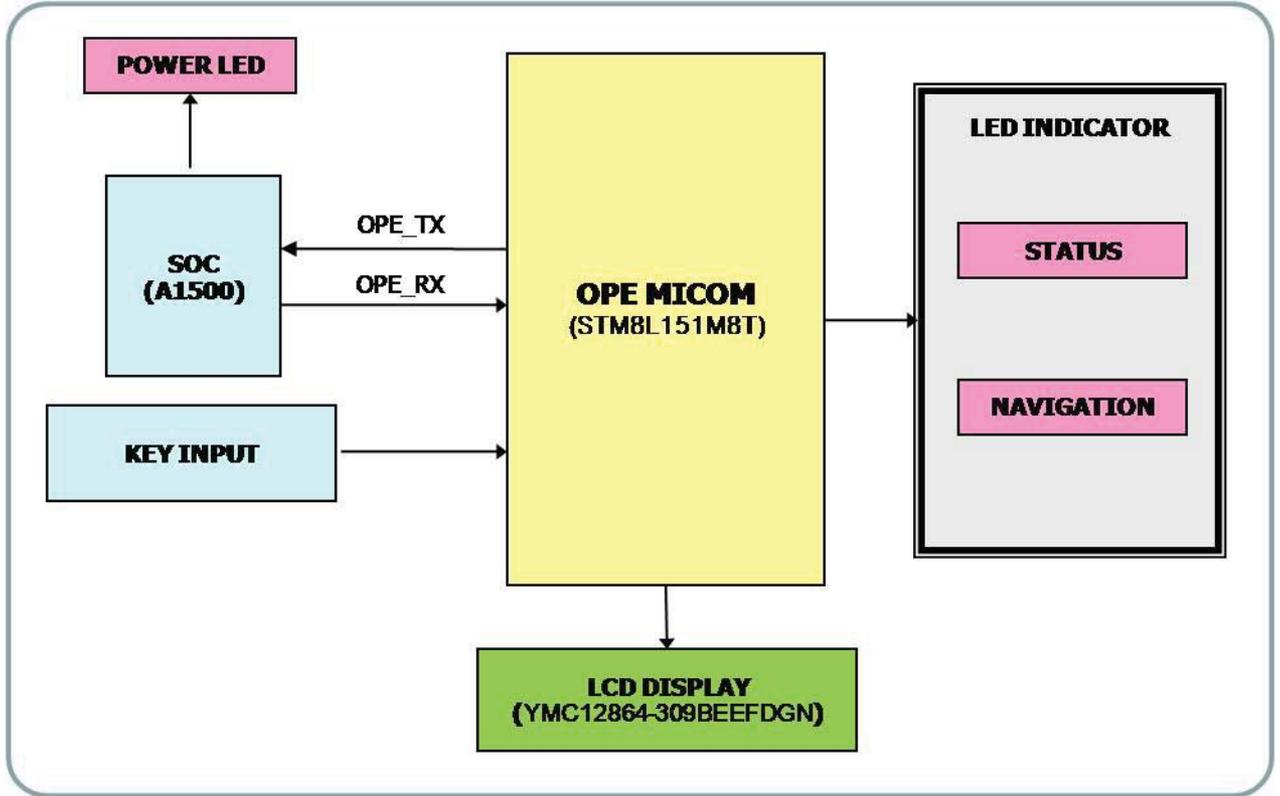


Figure 1-43 OPE board (2 of 2)

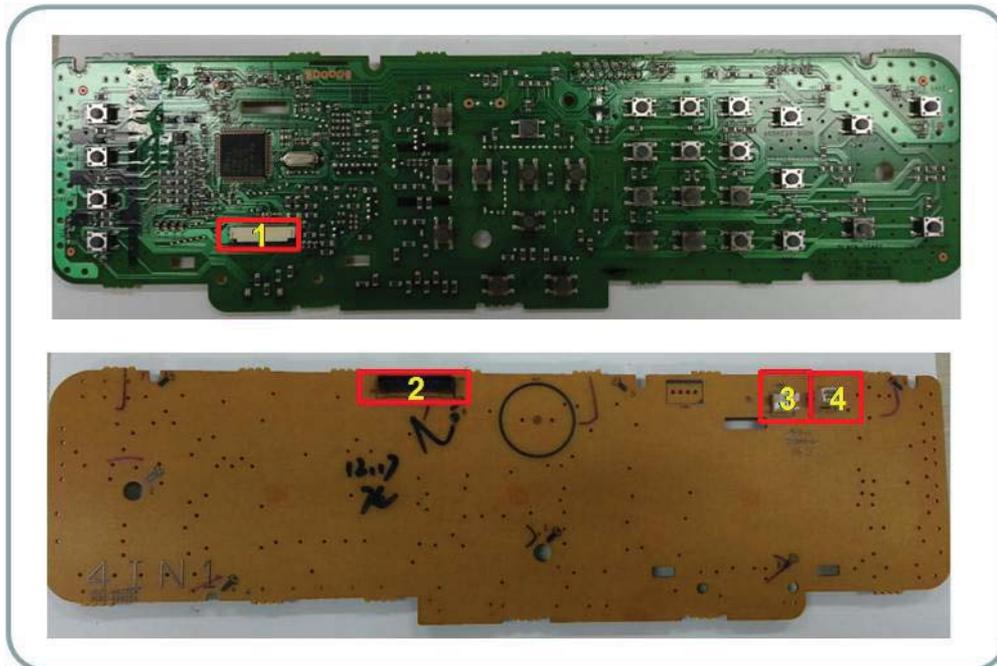


Table 1-26 OPE board

1	FFC connector to four-Line LCD
2	Interface to connector to main board

Table 1-26 OPE board (continued)

3	Interface connector to BLU (Back Light unit) PBA
4	Not Used

SMPS (LVPS) board (HP LaserJet MFP M436n/M436dn Printer only)

SMPS (Switching Mode Power Supply)/LVPS (Low Voltage Power Supply) board supplies electric power to the Main Board and other boards. The voltage provided includes +5V, and +24V from a 220V power input. It has safety protection modes for over current and overload.

Figure 1-44 SMPS (LVPS) board—M436n/M436dn



Specification

General Input/Output Voltage

- AC 220V (220V ~ 240V)
- Input Current: 4.5A
- Output Power (Max): 111W
 - DC 5V:15W/DC 24V:96W

Connection

- **Table 1-27 SMPS (LVPS) board—M436n/M436dn**

1	AC_Inlet
2	FUSER_AC Output
3	OUTPUT_DC

Input/Output connector

- **Table 1-28 AC Input Connector (CON1)**

PIN ASSIGN	PIN NO	Description
1	AC_L	AC Input
2	AC_N	

- **Table 1-29 Fuser AC output Connector (CON2)**

PIN ASSIGN	PIN NO	Description
1	AC_L	AC Output for Heater Controller
2	AC_N	

- **Table 1-30 DC Output Connector (CON3)**

PIN ASSIGN	PIN NO	Description
1	5V	+5V Power
2	GND	Ground
3	24V1	+24V Power
4	GND	Ground
5	24V2	+24V Power

- **Table 1-31 Signal Connector (CON4)**

PIN ASSIGN	PIN NO	Description
1	GND	Ground
2	24V_ON_OFF	24V_ON_OFF
3	Relay on	Fuser Relay
4	24VS	Photo Triac Bias
5	Fuser On	Fuser On

SMPS (LVPS) board (HP LaserJet MFP M436nda Printer only)

SMPS (Switching Mode Power Supply/ LVPS (Low Voltage Power Supply) board supplies electric power to the Main Board and other boards. The voltage provided includes +5V, and +24V from a 220V power input. It has safety protection modes for over current and overload.

Figure 1-45 SMPS (LVPS) board–M436nda



Specification

General Input/Output Voltage

- AC 220V (220V ~ 240V)
- Input current: 5A
- Output power (max): 161.5W
 - DC 5V:17.5W/DC 24V:144W

Connection

- [Table 1-32](#) SMPS (LVPS) board–M436nda

1	AC_Inlet
2	FUSER_AC Output
3	OUTPUT_DC

Input/output connector

- [Table 1-33](#) AC input connector (CON1)

PIN ASSIGN	PIN NO	Description
1	AC_L	AC Input
2	AC_N	

- [Table 1-34 Fuser AC output connector \(CON2\)](#)

PIN ASSIGN	PIN NO	Description
1	AC_L	AC Output for Heater Controller
2	AC_N	

- [Table 1-35 DC Output Connector \(CON3\)](#)

PIN ASSIGN	PIN NO	Description
1	5V	+5V Power
2	GND	Ground
3	24V1	+24V Power
4	GND	Ground
5	24V2	+24V Power
6	GND	Ground
7	24V3	+24V Power

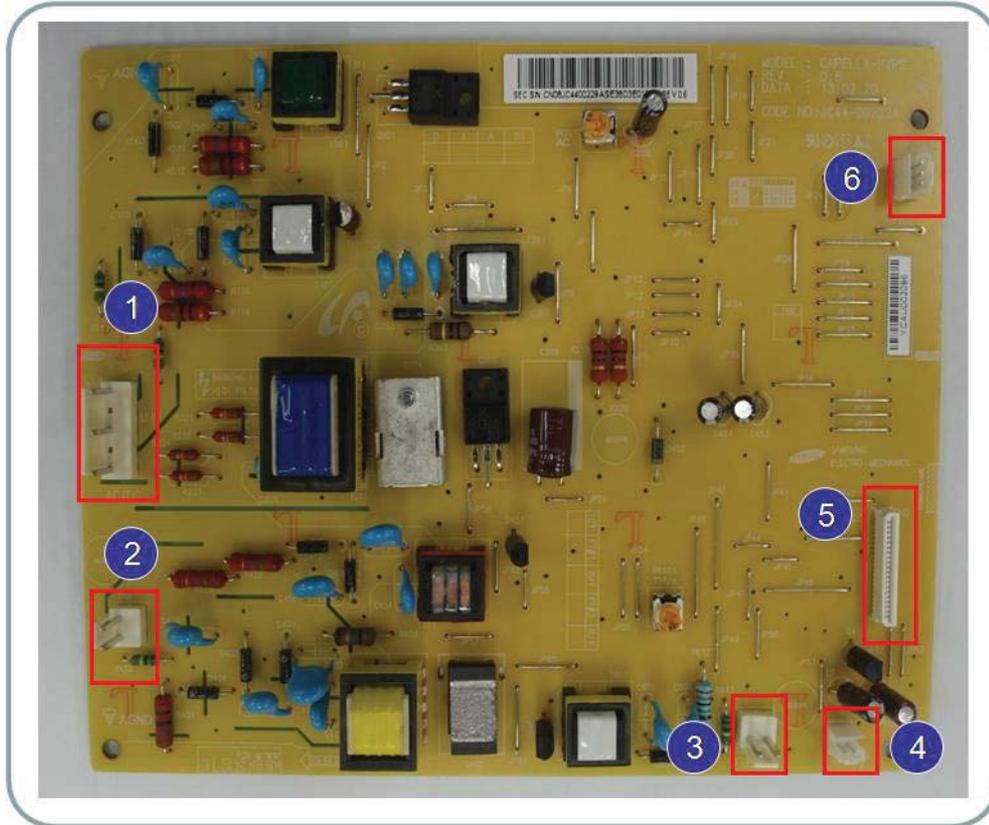
- [Table 1-36 Signal Connector \(CON4\)](#)

PIN ASSIGN	PIN NO	Description
1	GND	Ground
2	24V_ON_OFF	24V_ON_OFF
3	Relay on	Fuser Relay
4	24VS	Photo Triac Bias
5	Fuser On	Fuser On

HVPS board

HVPS (High Voltage Power Supply) board generates seven high-voltage channels, MHV DC (-), DEV AC/DC (-), THV DC (+/-), Fuser DC (+), SAW DC (-)

Figure 1-46 HVPS board



Connection

• Table 1-37 HVPS board

1	SAW, MHV, DEV AC/DC
2	THV +/-
3	FUSER Bias
4	SMPS FAN
5	HVPS I/O
6	PS_Vcc

Input/Output connector

• Table 1-38 AC Input Connector (CN1)

PIN ASSIGN	PIN NO	Description
1	SAW	High Voltage
2	—	
3	MHV	High Voltage
4	—	
5	DEV AC/DC	High Voltage

- **Table 1-39 AC Input Connector (CN2)**

PIN ASSIGN	PIN NO	Description
1,2	THV +/-	High Voltage

- **Table 1-40 AC Input Connector (CN3)**

PIN ASSIGN	PIN NO	Description
1,2	Fuser	High Voltage

- **Table 1-41 AC Input Connector (CN4)**

PIN ASSIGN	PIN NO	Description
1	FAN_SMPS	Low Voltage
2	AGND	

- **Table 1-42 DC Output Connector (CON3)**

PIN ASSIGN	PIN NO	Description
1	FAN_SMPS	
2	nEN_THV	
3	24V	
4	PWM THV	
5	24V	
6	PWM MHV	
7	PWM VPP AC	
8	nEN DEV AC	
9	PWM DEV AC	
10	PWM DEV DC	
11	PWM SAW	
12	AGND	
13	AGND	
14	ADC MHV READ	
15	AGND	
16	ADC THV READ	
17	nOUT_BIN_FULL	
18	3.3V PS	
19	DGND	
20	PWM FUSER BIAS	

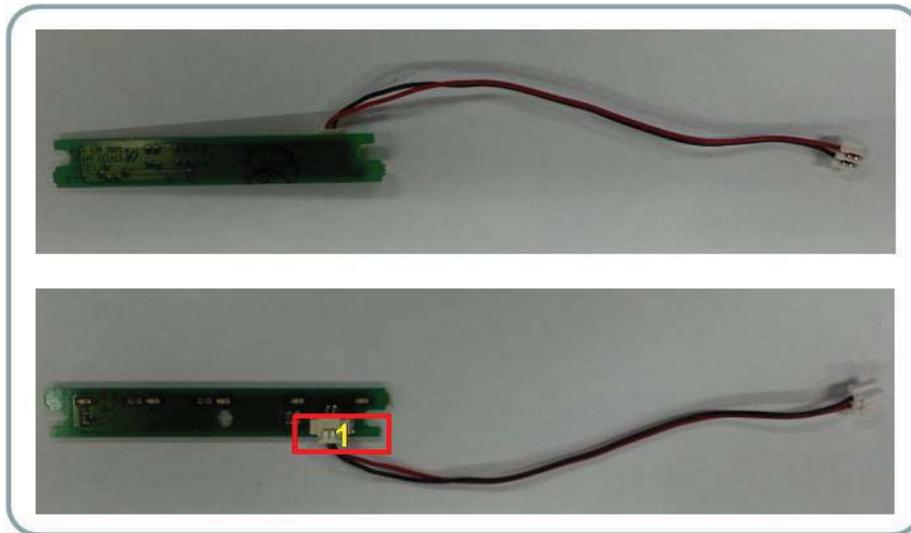
- **Table 1-43 AC Input Connector (CN7)**

PIN ASSIGN	PIN NO	Description
1	PS_VCC	Low Voltage
2	DGND	
3	nOUT_BIN_FULL	

BLU PBA (back light unit)

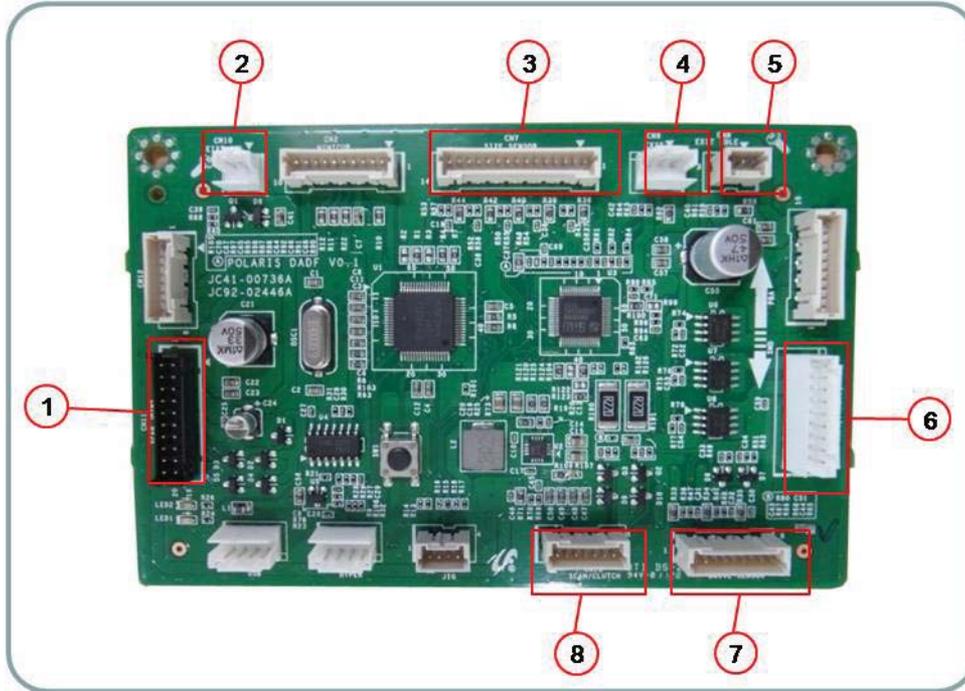
This PBA provides the backlight function to the LCD and is assembled to the OPE PBA.

Figure 1-47 BLU PBA



Document feeder board

Figure 1-48 Document feeder board



Connection

- **Table 1-44 Document feeder board**

1	Main board
2	Exit Solenoid
3	Length Sensor 1,2,3/Width Sensor 1,2
4	Exit Sensor
5	Exit Idle Sensor
6	BLDC Motor
	Cover open sensor/registration. Sensor/Detect Sensor
	Pick up clutch/registration. Clutch/scan read sensor

Tray 3 accessory board

Figure 1-49 Tray 3 accessory board

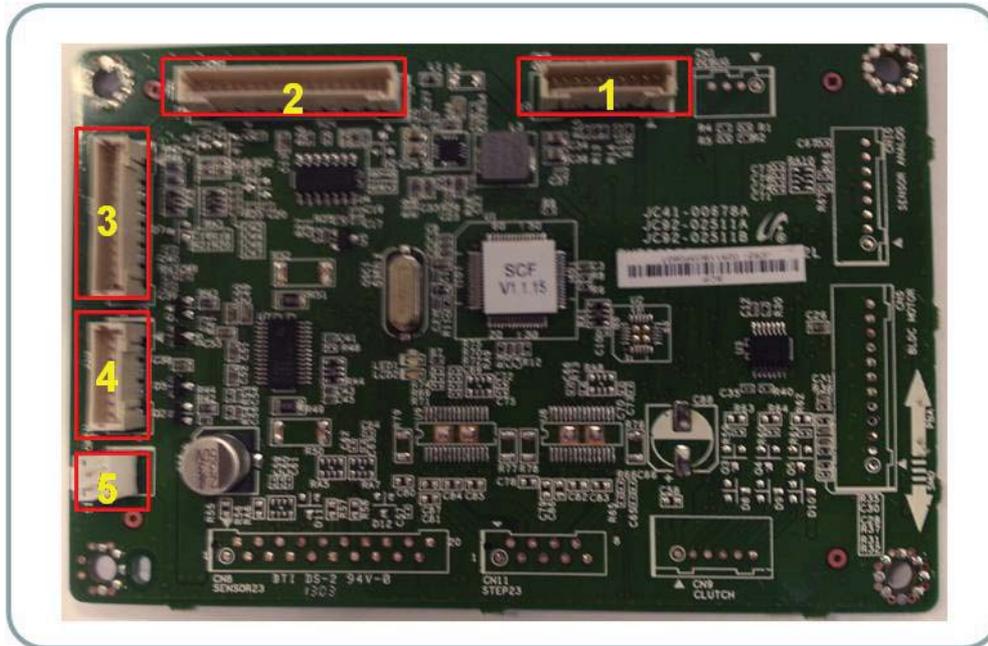


Table 1-45 Tray 3 accessory board

Item	Connection	Related Problem
1	Debug	Can't upgrade F/W with download jig
2	Main Interface	Can't detect Tray 3
3	Sensor Interface	Jam Tray 3 (when printing)
4	Step Motor Interface	Doesn't pickup paper in Tray 3
5	cover open	cover open error

Sensor location

The following diagrams shows the sensor locations and related errors.

Figure 1-50 Sensor location (1 of 2)

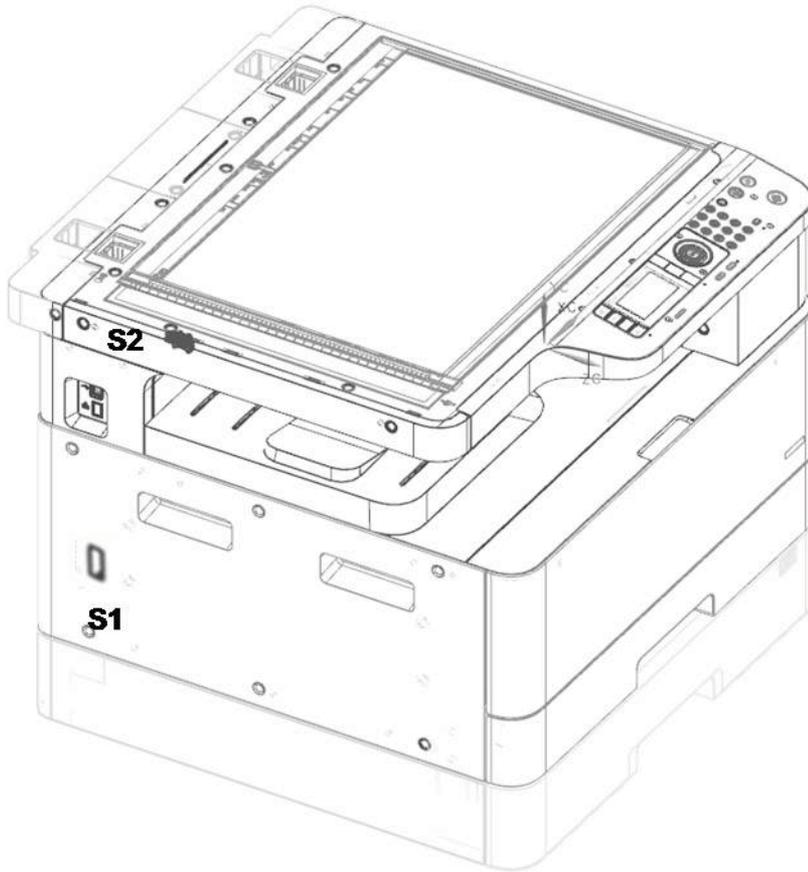


Table 1-46 Sensor location (1 of 2)

Ref.	Sensor	Related Error Code
S1	SENSOR-HUMIDITY (FRAME)	A3-3411/A3-3412
S2	PHOTO-INTERRUPTER (PLATEN LOWER)	Scanner Locked

Figure 1-51 Sensor location (2 of 2)

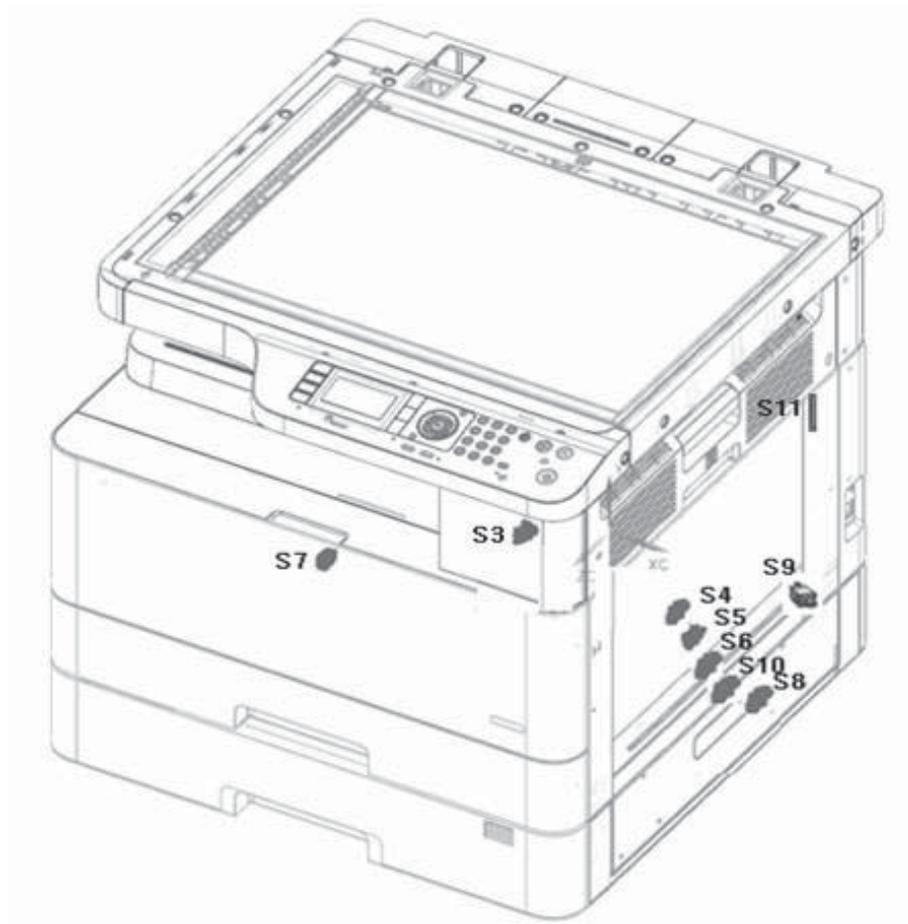


Table 1-47 Sensor location (2 of 2)

Ref.	Sensor	Related Error Code
S3	PHOTO-INTERRUPTER (EXIT SENSOR)	M3-1110
S4	PHOTO-INTERRUPTER (PICKUP EMFTY SENSOR)	M1-5112
S5	PHOTO-INTERRUPTER (REGI-SENSOR)	M2-1110
S6	PHOTO-INTERRUPTER (MP-SENSOR)	M1-5612
S7	PAPER SENSOR (FRAME FRONT COVER OPEN)	S2-4210
S8	PHOTO-INTERRUPTER (SCF-GUIDE PATH)	H1-1210
S9	PAPER SENSOR (COVER OPEN)	S2-4410
S10	PHOTO-INTERRUPTER (SCF-PICKUP EMFTY SENSOR)	H1-1252
S11	FRAME-SWITCH OPEN (SIDE COVER INTERLOCK SWITCH)	S2-4210

2 Removal and replacement

- [For additional service and support](#)
- [Removal and replacement strategy](#)
- [Service approach](#)
- [Removal: Toner cartridge](#)
- [Removal: Transfer roller](#)
- [Removal: Fuser unit](#)
- [Removal: Imaging unit \(drum unit and developer\)](#)
- [Removal: Pickup roller and friction pad](#)
- [Removal: MP pickup roller and friction pad](#)
- [Removal: Document feeder pickup roller assembly](#)
- [Removal: Document feeder friction pad](#)
- [Removal: Rear cover](#)
- [Removal: Front cover](#)
- [Removal: Left cover](#)
- [Removal: Formatter board](#)
- [Removal: LVPS board](#)
- [Removal: Front cover open sensor](#)
- [Removal: Side unit](#)
- [Removal: Side cover-open sensor](#)
- [Removal: Platen cover \(M433a/M436n/M436dn only\)](#)
- [Removal: Document feeder unit \(optional\)](#)
- [Removal: Document feeder cover](#)
- [Removal: Document feeder open cover](#)
- [Removal: Document feeder stacker](#)

- [Removal: Document feeder board](#)
- [Removal: Document feeder registration-cover-detect sensor](#)
- [Removal: Document feeder motor solenoid clutch](#)
- [Removal: Document feeder exit idle sensor](#)
- [Removal: Document feeder exit sensor](#)
- [Removal: Document feeder length-width sensor](#)
- [Removal: OPE unit](#)
- [Removal: Platen unit](#)
- [Removal: Upper platen](#)
- [Removal: CIS unit](#)
- [Removal: Scan drive unit](#)
- [Removal: Scan home-position sensor and cover-open sensor](#)
- [Removal: Laser/scanner unit \(LSU\)](#)
- [Removal: Main drive motor](#)
- [Removal: Exit motor \(MFP M436nda only\)](#)
- [Removal: Fuser motor](#)
- [Removal: Paper empty registration MP sensor](#)
- [Removal: MP clutch](#)
- [Removal: Registration clutch](#)
- [Removal: Fuser fan](#)
- [Removal: HVPS board](#)
- [Removal: Temperature humidity sensor](#)
- [Removal: Developer unit](#)
- [Removal: SCF \(optional Tray 3\)](#)

For additional service and support

HP service personnel, go to one of the following Web-based Interactive Search Engines (WISE) sites:

AMS

- <https://support.hp.com/wise/home/ams-en>
- <https://support.hp.com/wise/home/ams-es>
- <https://support.hp.com/wise/home/ams-pt>

APJ

- <https://support.hp.com/wise/home/apj-en>
- <https://support.hp.com/wise/home/apj-ja>
- <https://support.hp.com/wise/home/apj-ko>
- <https://support.hp.com/wise/home/apj-zh-Hans>
- <https://support.hp.com/wise/home/apj-zh-Hant>

EMEA

- <https://support.hp.com/wise/home/emea-en>

Channel partners, go to HP Channel Services Network (CSN) at www.hp.com/partners/csn.

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

Channel partners, access training materials in the HP University and Partner Learning Center at <https://content.ext.hp.com/sites/LMS/HPU.page>.

To access HP PartSurfer information from any mobile device, go to <http://partsurfermobile.hp.com/>.

Removal and replacement strategy

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

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

 **CAUTION:** Many repair operations will require you to flatten or straighten flex cables. However, where possible, try to avoid doing so. You *must* make sure that all FFCs are fully seated in their connectors. Failure to fully seat an FFC into a connector can cause a short circuit in a printed circuit-board assembly (PCA).

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

Throughout this chapter, the reinstallation process should follow the reverse order of the removal process documented. Where necessary, the tasks include reinstallation tips to aid in the installation of replacement parts.

Electrostatic discharge

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

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

Required tools

- #T10 TORX driver with a magnetic tip and a 152 mm (6 in) shaft length
- Small flat blade screwdriver
- Needle-nose pliers
- ESD mat (if one is available) or ESD strap
- Penlight (optional)

Types of screws

⚠ WARNING! Make sure that components are replaced with the correct screw type. Using the incorrect screw (for example, substituting a long screw for the correct shorter screw) can cause damage to the product or interfere with product operation. Do not intermix screws that are removed from one component with the screws that are removed from another component.

Service approach

⚠ CAUTION: When working on the product, do not pick up the unit by the output tray, which will detach under the weight of the product.

Before performing service

- Remove all paper from the product.
- Turn off the power using the power button.
- Unplug the power cable and interface cable or cables.
- Remove the output bin.
- Place the product on an ESD workstation or mat, or use an ESD strap (if one is available). If an ESD workstation, mat, or strap is not available, ground yourself by touching the sheet-metal chassis *before* touching an ESD-sensitive part.
- Remove the toner cartridges.
- Remove the Tray 2 cassette.

Releasing Plastic Latches

Many of the parts are held in place with plastic latches. The latches break easily; release them carefully. To remove such parts, press the hook end of the latch away from the part to which it is latched.

After performing service

- Plug in the power cable.
- Reinstall the output bin.
- Reinstall the toner cartridges.

- Reinstall the Tray 2 cassette.
- Load paper in the product.

Post-service test

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

Print-quality test

1. Verify that you have completed the necessary reassembly steps.
2. Make sure that the tray contains clean, unmarked paper.
3. Attach the power cord and interface cable or interface cables, and then turn on the product.
4. Print a configuration page.
5. Print a print quality page, and then verify that there are no lines, streaks, banding, or other print quality defects.
6. Send a print job from the host computer, and then verify that the output meets expectations.
7. Clean the outside of the product with a damp cloth.

Removal: Toner cartridge

- [Introduction](#)
- [Remove: Toner cartridge](#)

A toner cartridge has almost reached its estimated cartridge life:

- The status LED and the toner-related message on the display indicate when the toner cartridge should be replaced.
- The computer's Printing Status Program window appears on the computer telling you cartridge is empty on toner.

 **CAUTION:** If toner gets on your clothing, wipe it off with a dry cloth and wash clothing in cold water. Hot water sets toner into fabric.

 **NOTE:**

- Shake the toner cartridge thoroughly, it will increase the initial print quality.
 - Illustrations in this procedure might differ from your machine depending on its options or models.
-

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

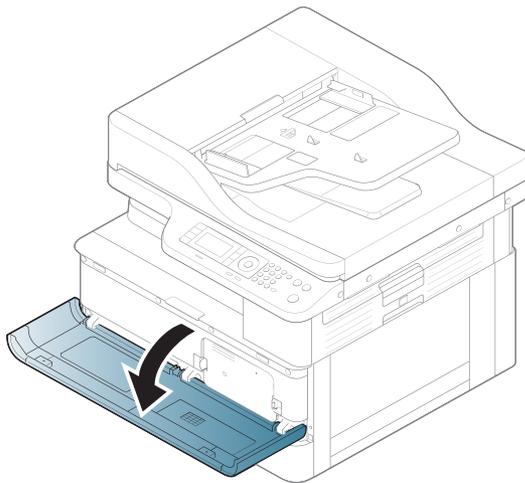
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

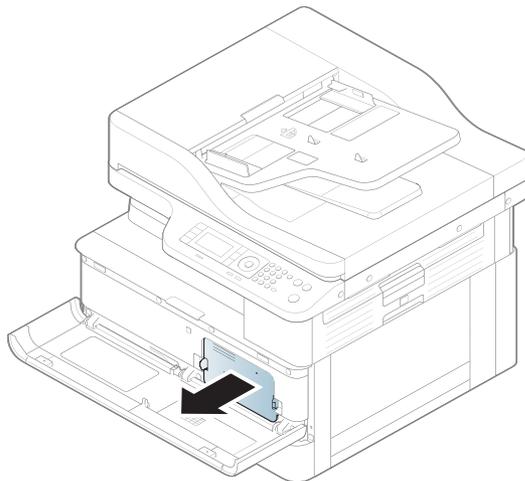
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Toner cartridge

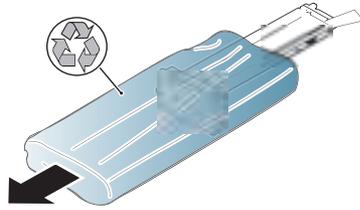
1.



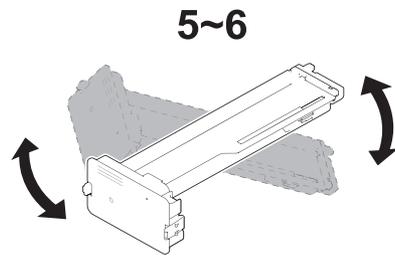
2.



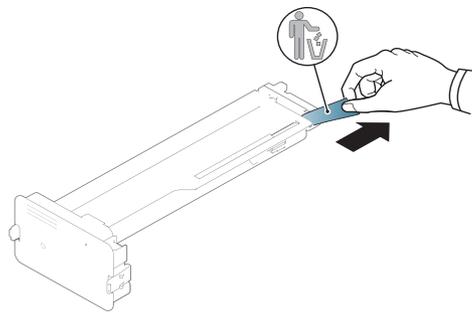
3.



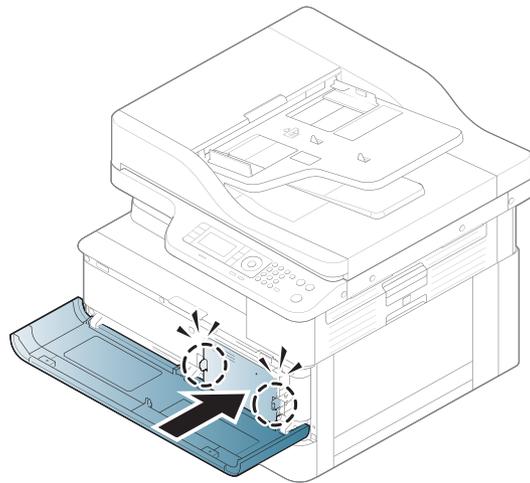
4.



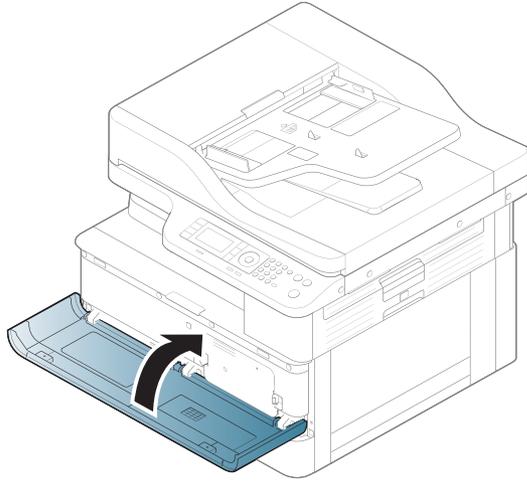
5.



6.



7.



Removal: Transfer roller

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Transfer roller

1. Open the side cover.



2. Remove one screw.



3. Remove one bushing.



4. Lift the transfer roller assembly up.



5. Move the assembly to the left to remove.



Removal: Fuser unit

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

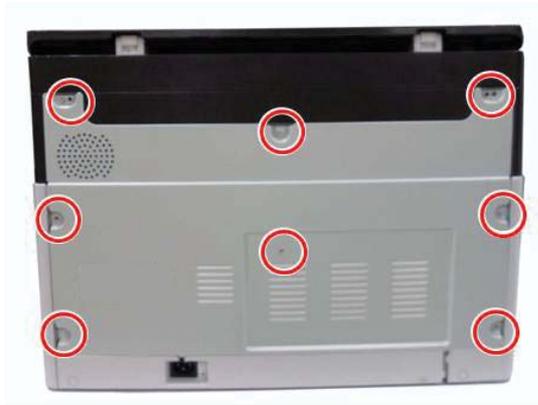
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Fuser unit

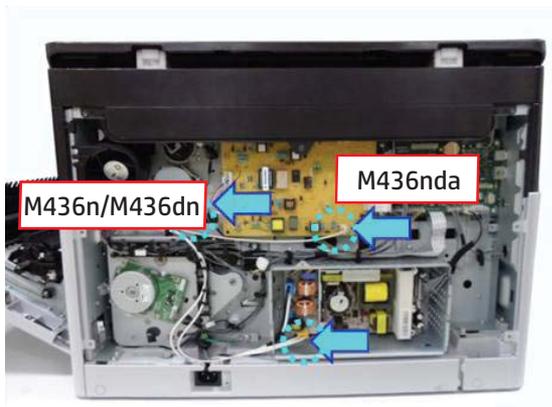
1. Release the rear cover after removing eight screws.



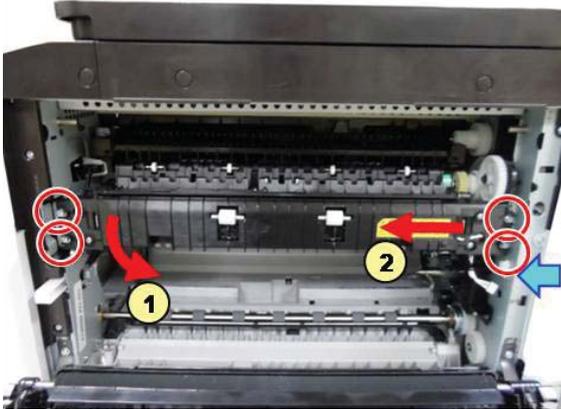
2. Open the side cover.



3. Unplug the SMPS connector (callout 1) and HVPS connector (callout 2) (HP LaserJet MFP M436nda Printer)/GND harness (HP LaserJet MFP M436n/M436dn).



4. Unplug the connector from the right frame. Remove four screws, and then remove the fuser unit by pulling it in the direction of the arrows.



Removal: Imaging unit (drum unit and developer)

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

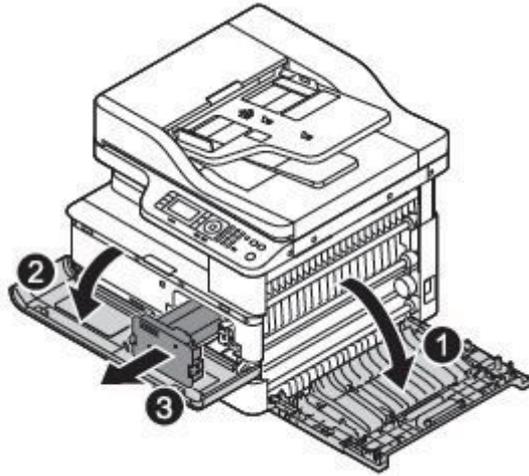
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

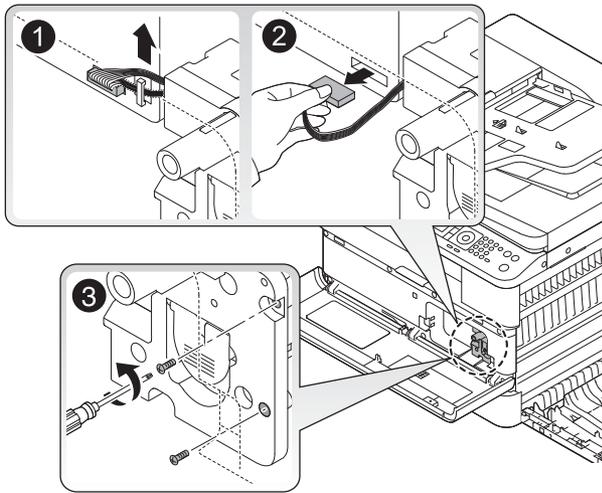
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Imaging unit (drum unit and developer)

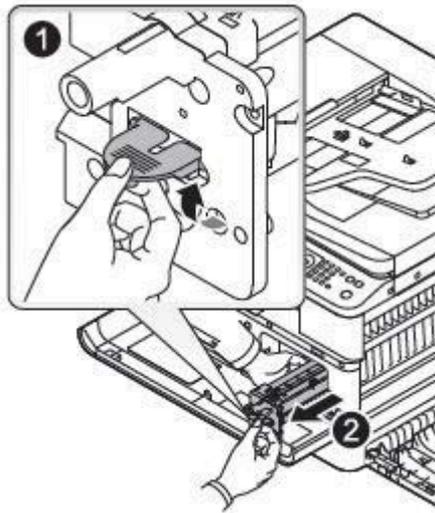
1. Open the side cover. Open the front cover. Remove the toner cartridge.



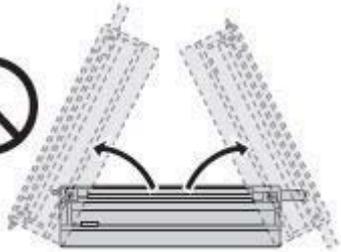
2. Open the cable clamp. Unplug the connector. Remove two screws.



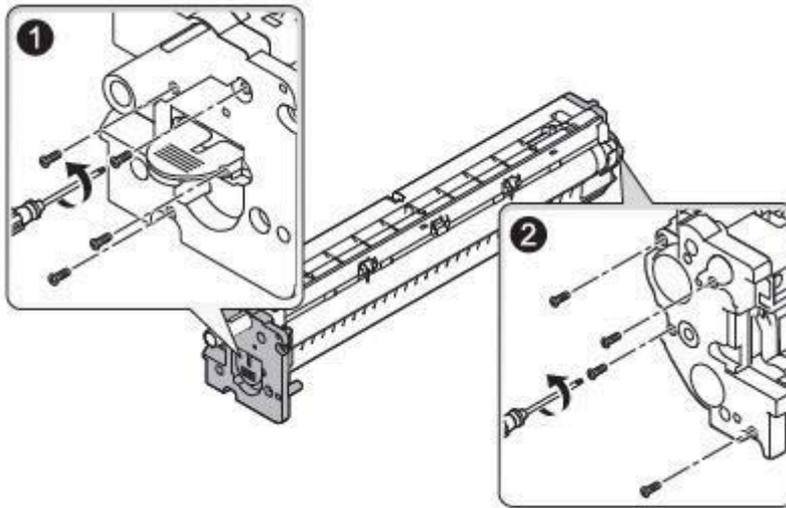
3. Take off the imaging unit while holding the lever.



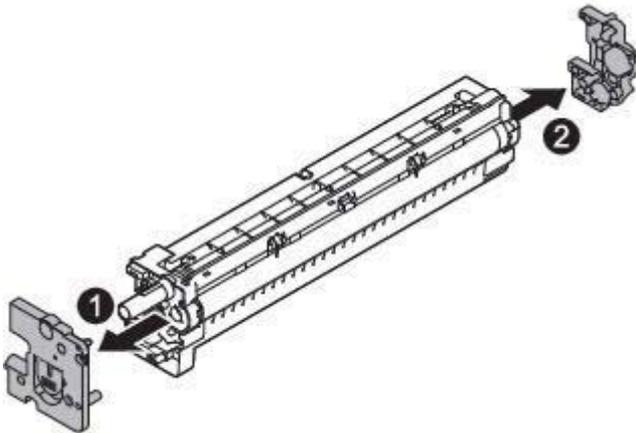
⚠ CAUTION: Place imaging unit on a flat surface and do not shake or tilt the imaging unit to prevent toner from spilling.



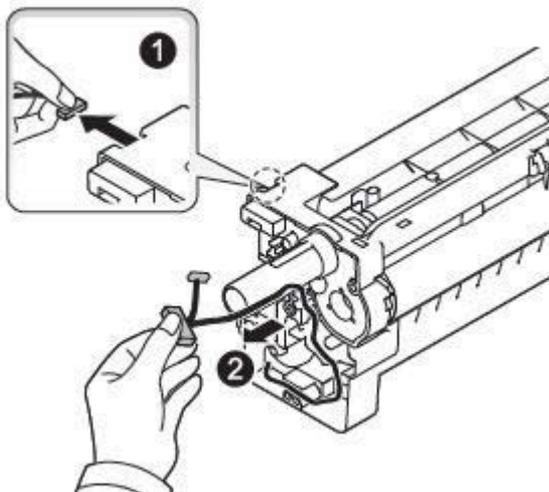
4. Remove eight screws securing both side covers.



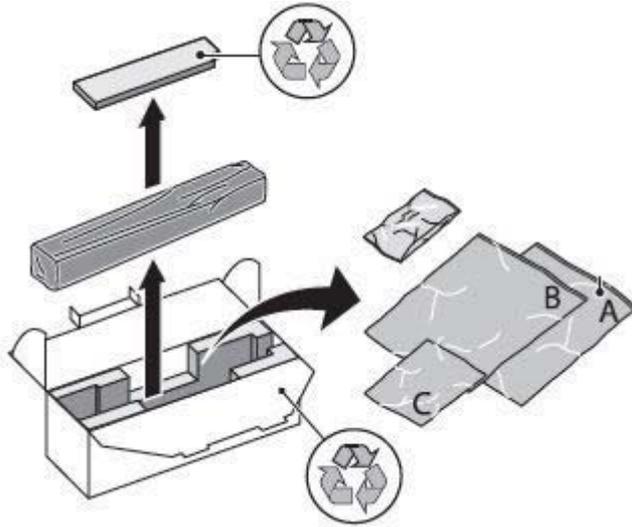
5. Remove the left and right cover of the imaging unit.



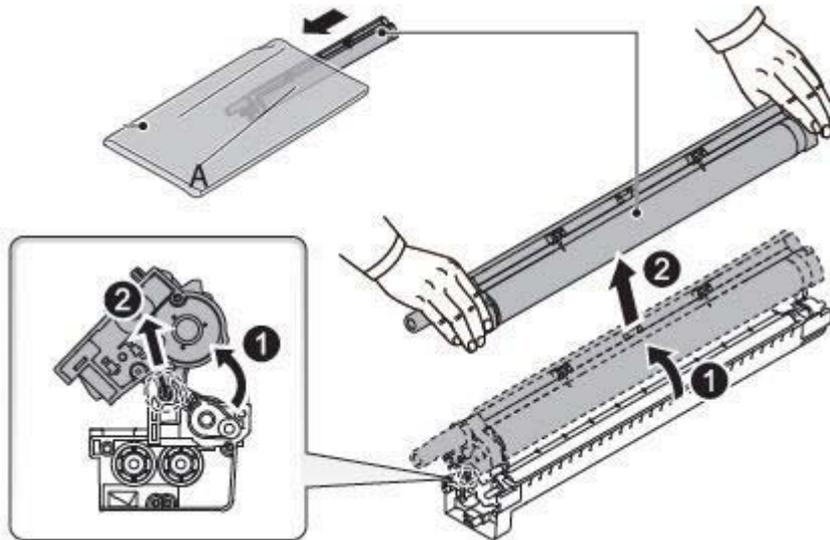
6. Unplug the connector.



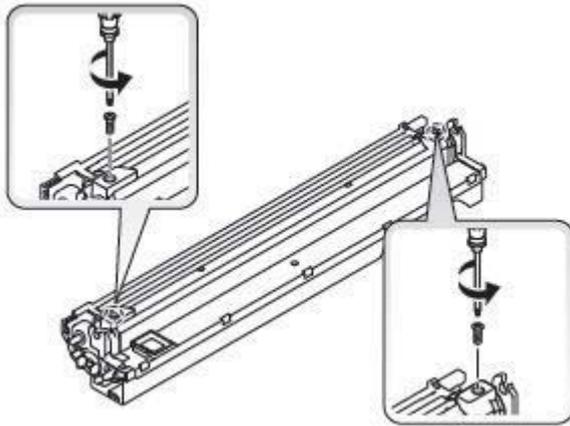
7. Take the imaging unit and accessories out of the box.



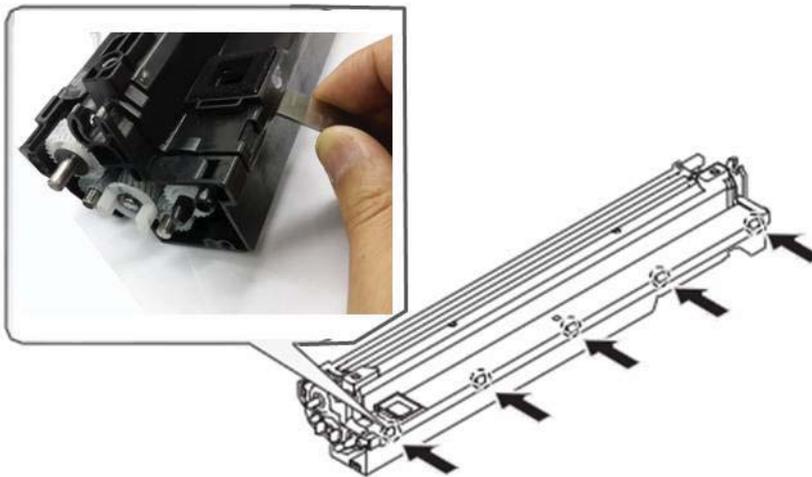
8. Separate the drum unit from the developer unit.



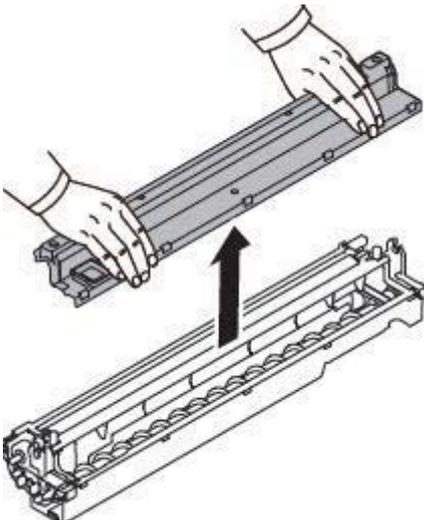
9. Remove two screws.



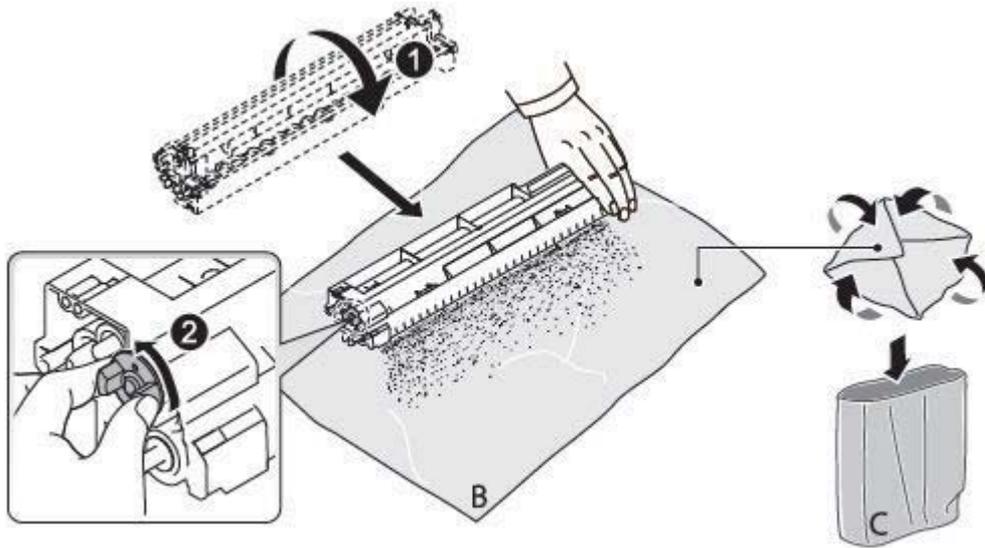
10. Unlock the hook.



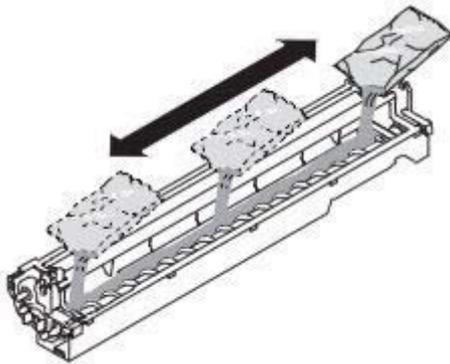
11. Lift up and release the developer cover.



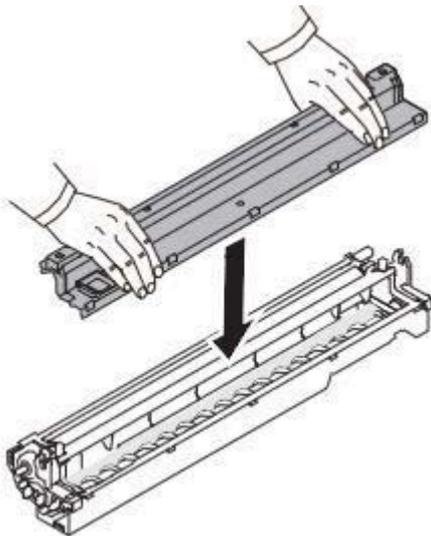
12. Turn the developer unit down to dispose of old developer on to the sheet (B), then put the sheet into the bag (C).



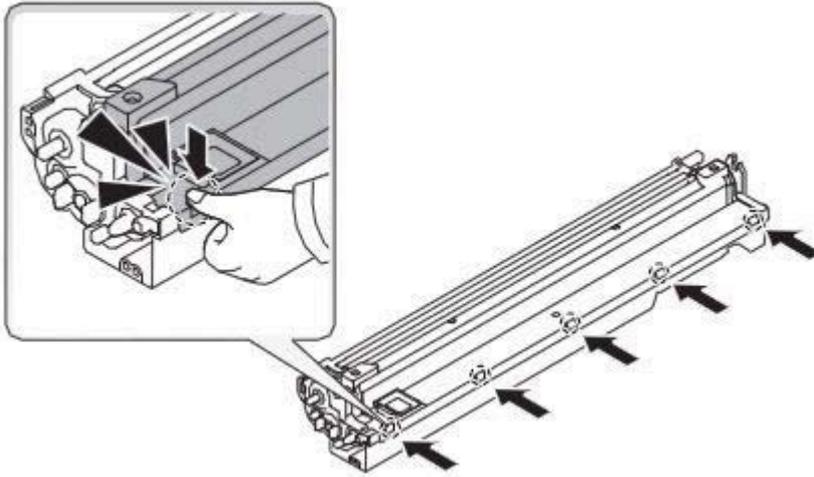
13. Pour the developer into the developer unit evenly.



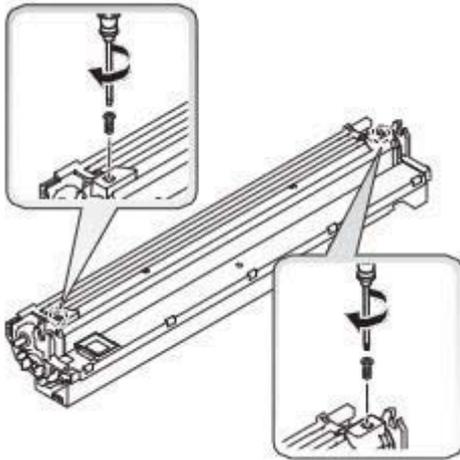
14. Close the developer cover.



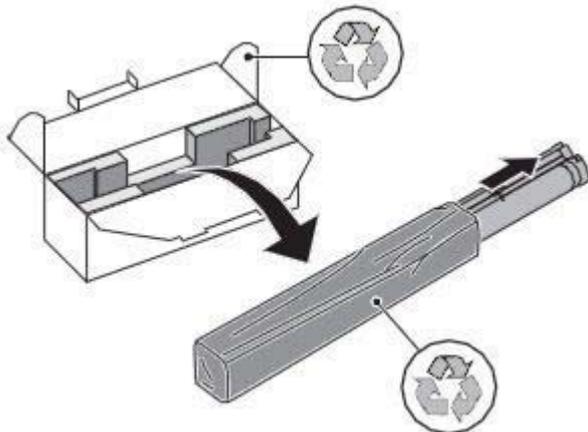
15. Check the locking.



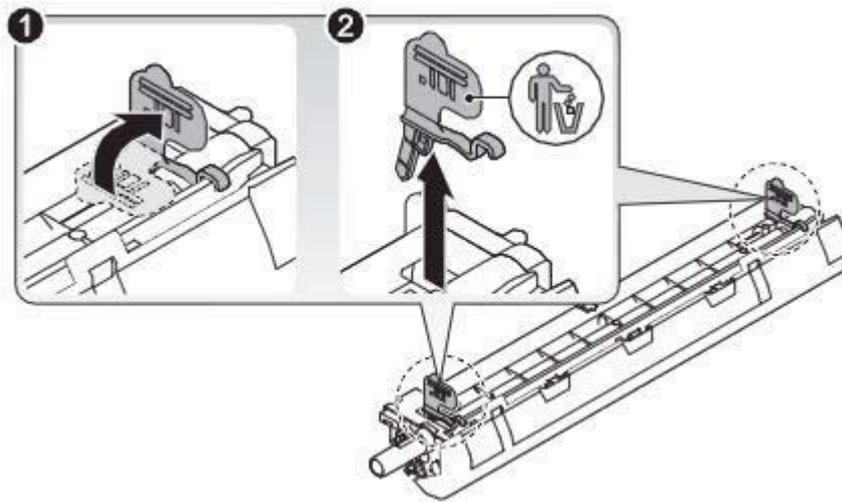
16. Tighten two screws.



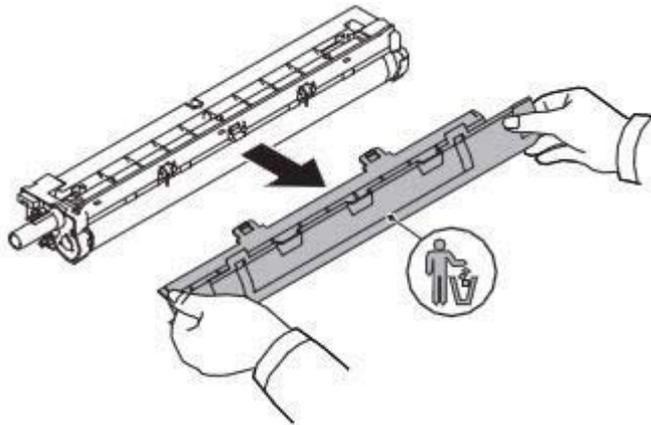
17. Remove the new drum unit from the packaging.



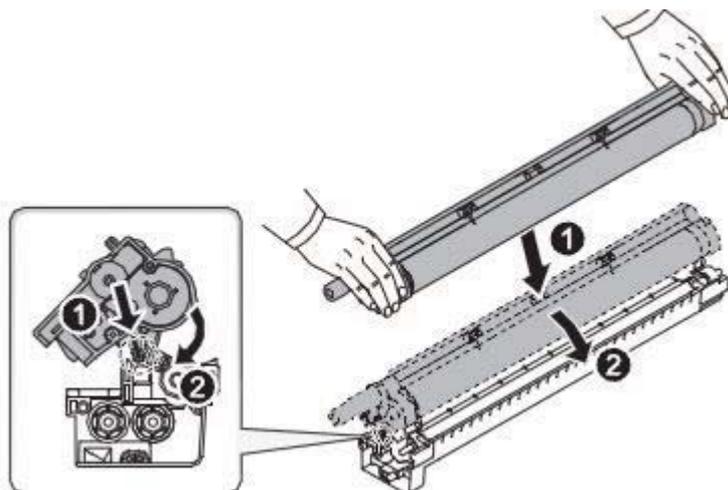
18. Remove the two fixers.



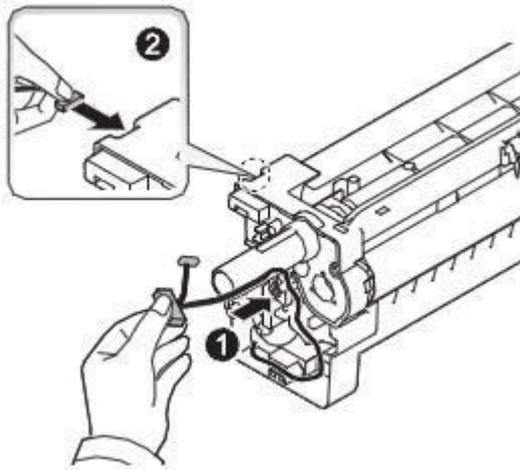
19. Remove the OPC protection cover.



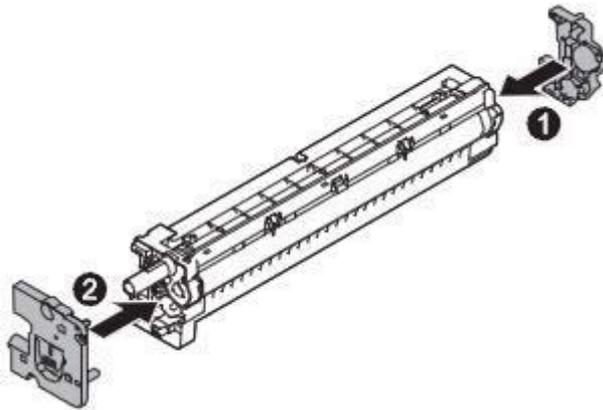
20. Assemble the drum unit with the developer unit.



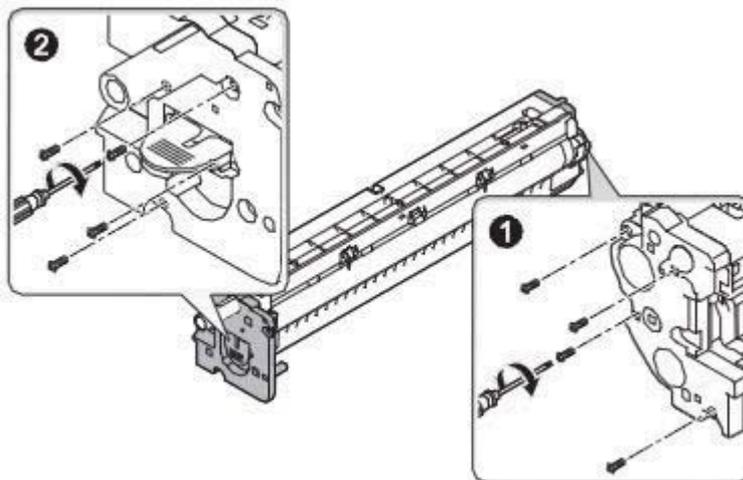
21. Connect the cable.



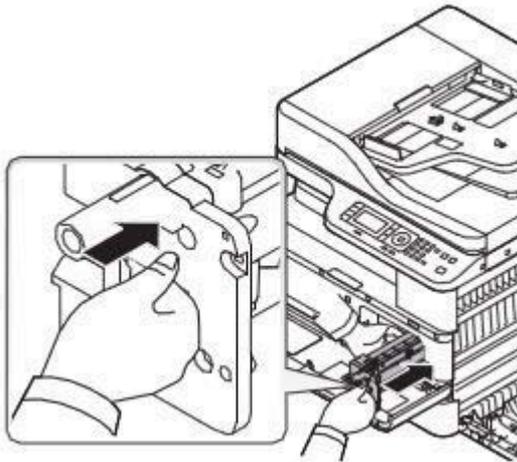
22. Assemble the left cover and right cover.



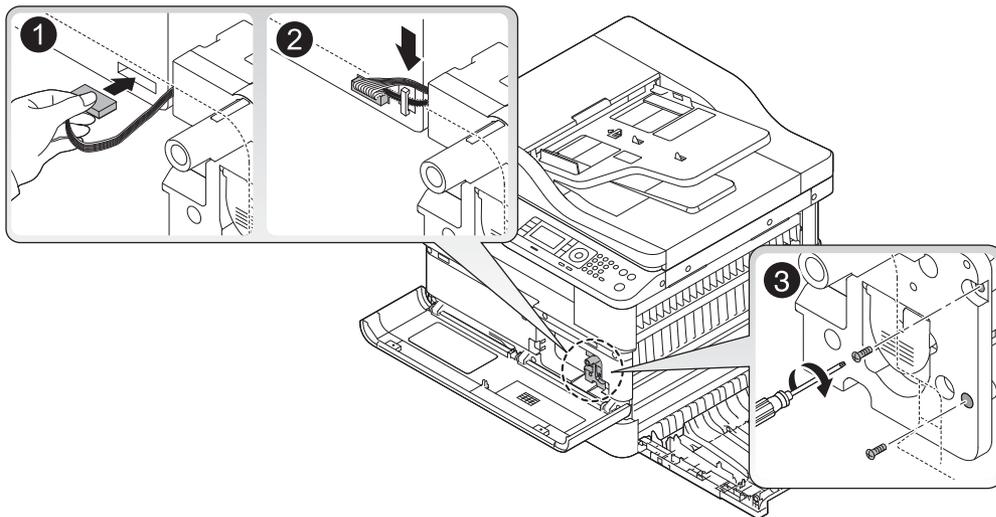
23. Tighten eight screws.



24. Install the imaging unit.



25. Connect the cable and close the cable clamp. Tighten two screws.



26. Install the toner cartridge. Close the front cover. Close the side cover.

 **NOTE:** When inserting the new imaging unit, the printer will start the toner calibration.

Removal: Pickup roller and friction pad

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

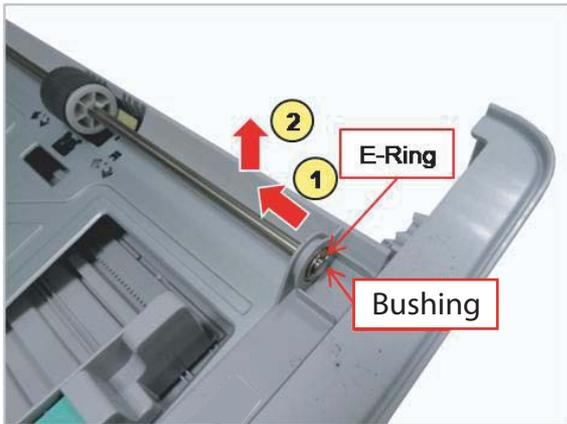
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Pickup roller and friction pad

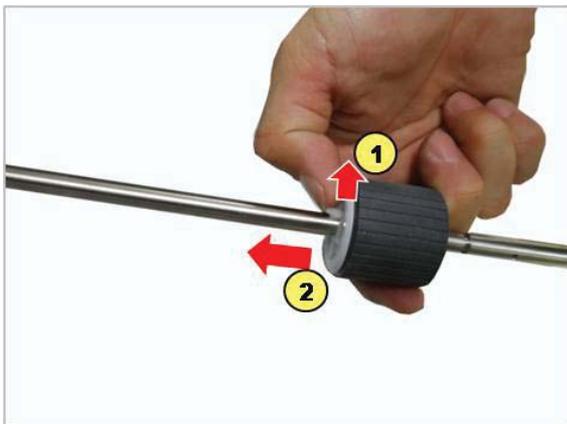
1. Remove the cassette.



2. Remove e-ring and bushing. Pull the shaft to the direction of arrow.



3. Remove the pickup roller by pulling the tab (callouts 1 and 2).



4. Pull and release the friction pad.



Removal: MP pickup roller and friction pad

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

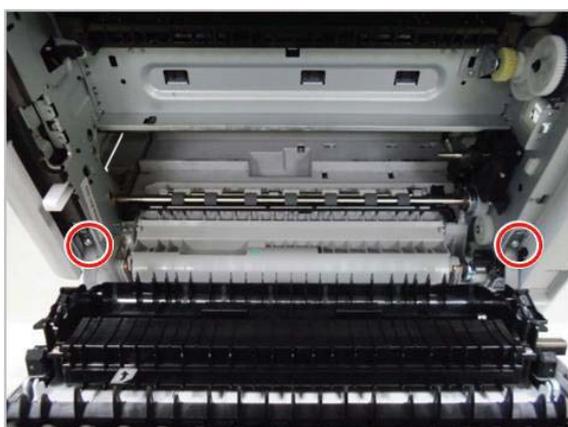
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: MP pickup roller and friction pad

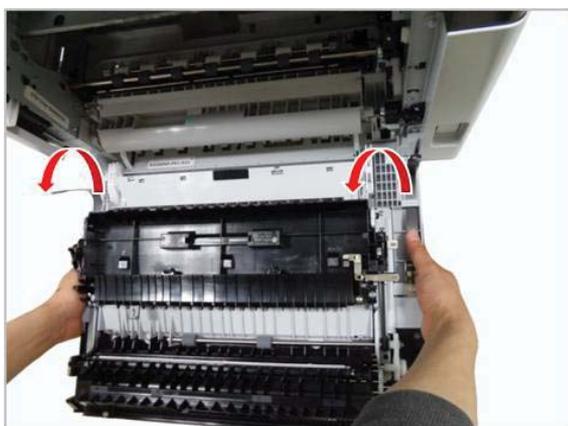
1. Open the side cover.



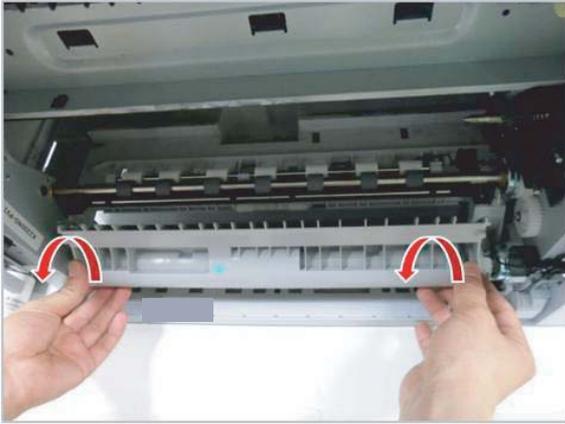
2. Remove two screws.



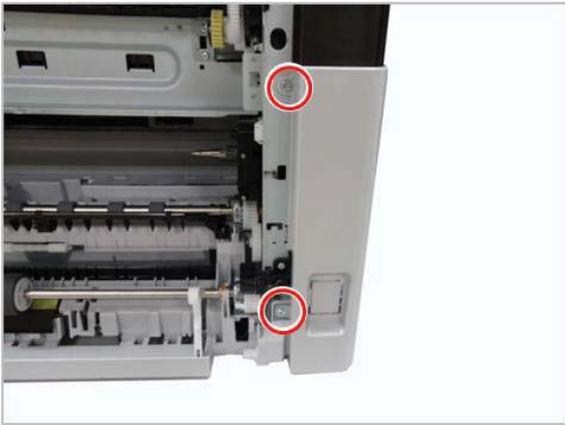
3. Release the side unit.



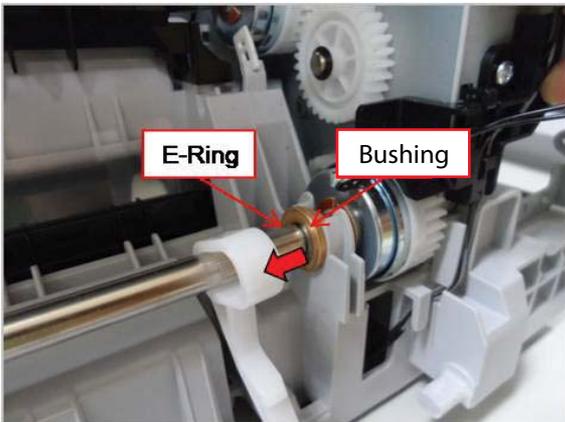
4. Remove the MP guide.



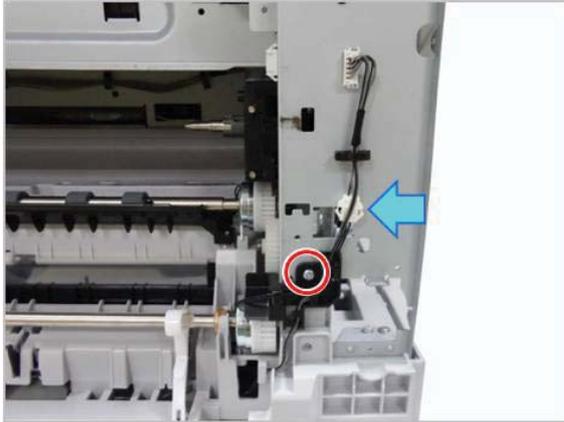
5. Remove the rear-dummy cover after removing two screws.



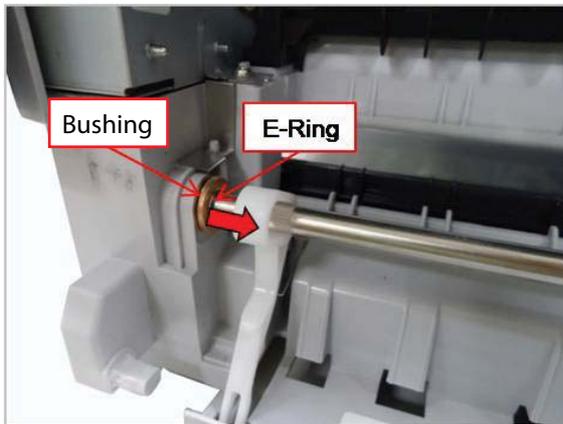
6. Remove the e-ring. Pull the bushing to the left.



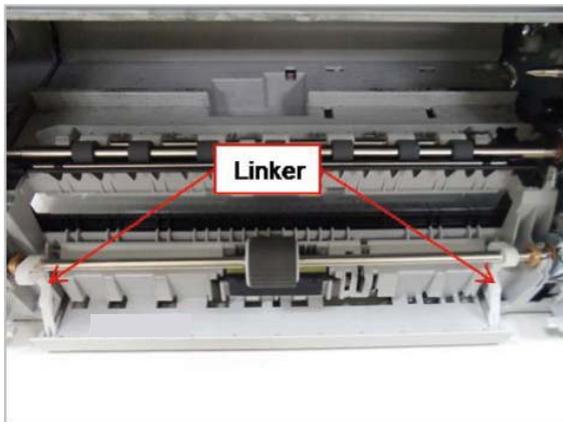
7. Unplug the MP clutch connector. Remove one screw. Remove the harness holder.



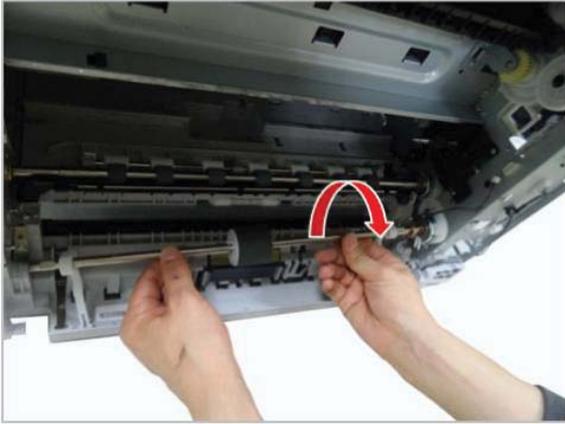
8. Remove the e-ring from the left of the MP shaft. Pull the bushing to the right.



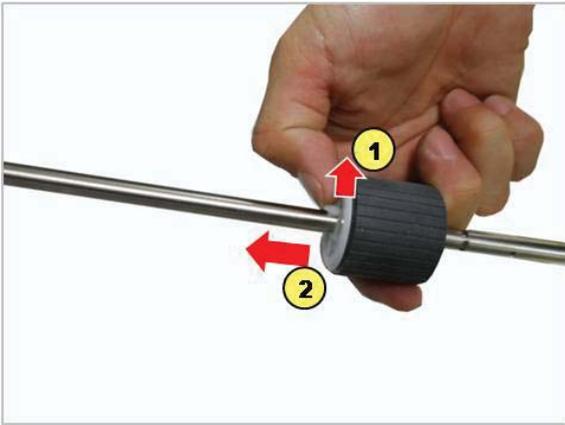
9. Release both linkers from the bottom.



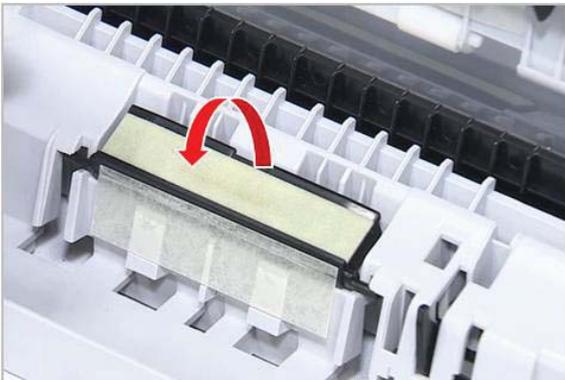
10. Release the MP pickup assembly.



11. Remove the MP pickup roller by pulling the tabs (callouts 1 and 2).



12. Pull and release the MP friction pad.



Removal: Document feeder pickup roller assembly

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder pickup roller assembly

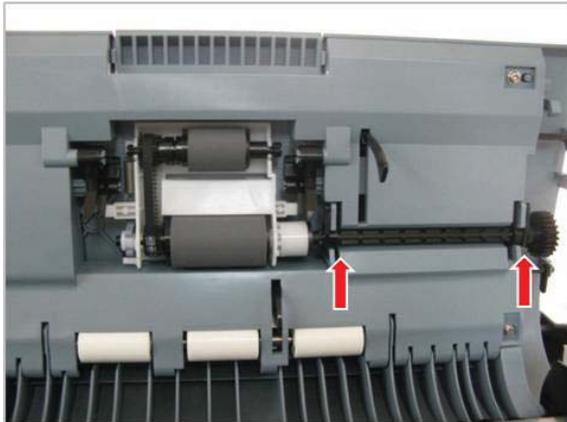
1. open the document-feeder open cover.



2. Remove the spring.



3. Remove the document feeder pickup roller assembly after releasing two hooks.



Removal: Document feeder friction pad

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

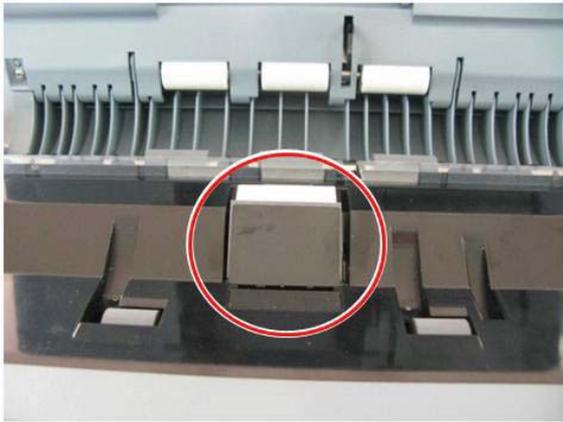
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder friction pad

1. Open the document feeder-open cover.



2. Remove the document feeder friction pad.



Removal: Rear cover

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Rear cover

- ▲ Remove the rear cover after removing eight screws.



Removal: Front cover

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Front cover

1. Open the front cover.
2. Remove the toner cartridge and imaging unit.

3. Remove the front cover after removing seven screws.



Removal: Left cover

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

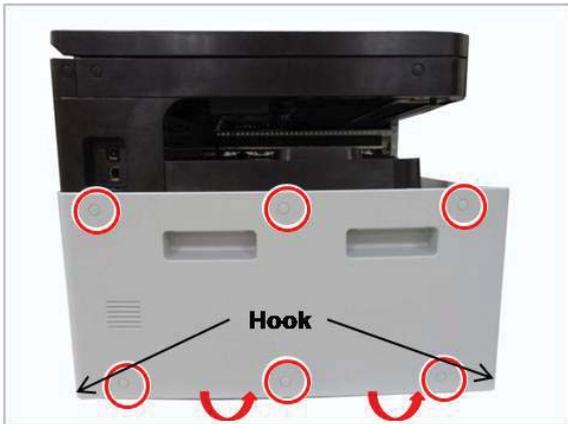
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Left cover

1. Remove two screws securing the rear cover.



2. Remove the left cover after removing six cap-holes and six screws.



Removal: Formatter board

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

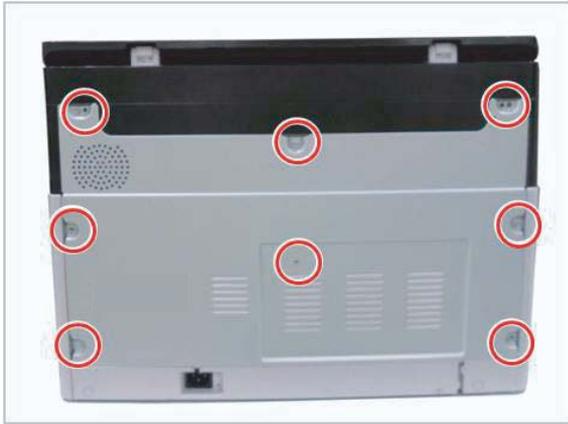
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

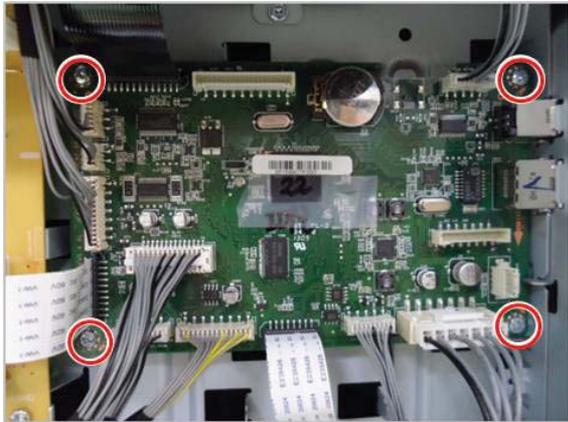
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Formatter board

1. Remove the rear cover after removing eight screws.



2. Unplug all connectors. Remove four screws. Remove the main board.



Removal: LVPS board

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

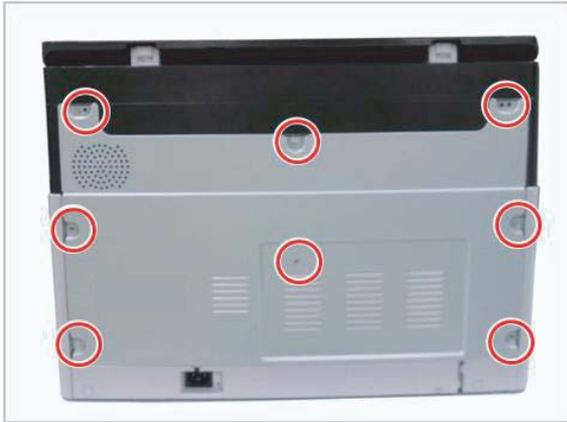
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

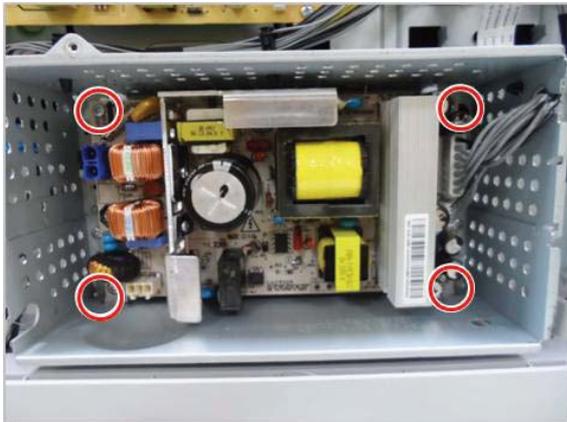
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: LVPS board

1. Remove the rear cover after removing eight screws.



2. Unplug all connectors on the SMPS board. Remove four screws. Remove the SMPS board.



Removal: Front cover open sensor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

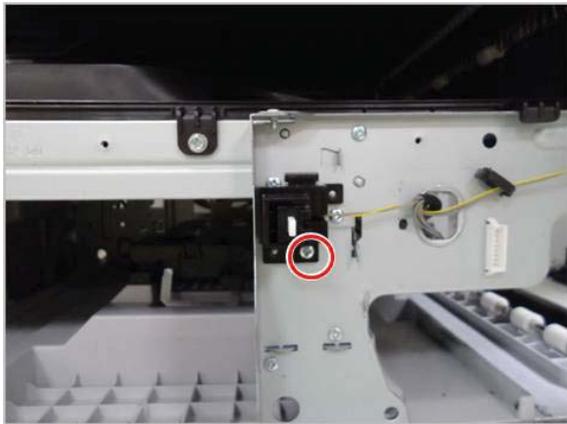
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Front cover open sensor

1. Remove the front cover after removing seven screws.



2. Remove the front cover-open sensor after removing one screw.



Removal: Side unit

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

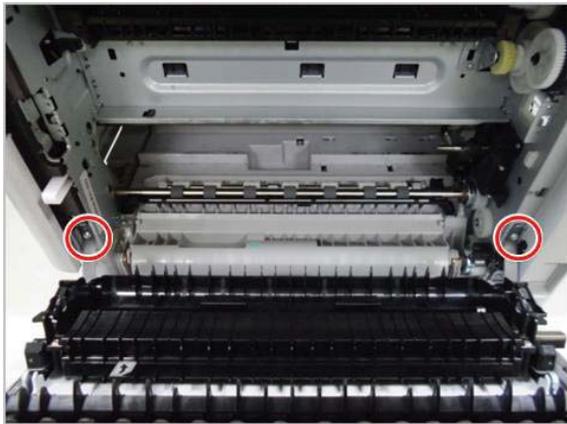
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Side unit

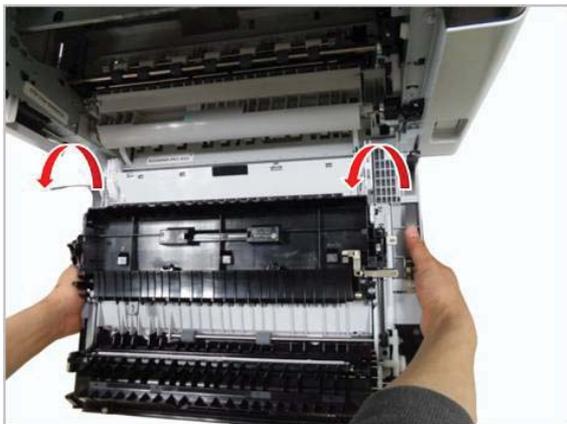
1. Open the side cover.



2. Remove two screws.



3. Release the side unit.



Removal: Side cover-open sensor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Side cover-open sensor

1. Open the side cover.



2. Remove one screw.



3. Remove the sensor cover.



4. Remove the cover-open sensor after unplugging the connector. Remove the rubber pad from the back side of the sensor.



Removal: Platen cover (M433a/M436n/M436dn only)

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Platen cover (M433a/M436n/M436dn only)

- ▲ Pull up and release the platen cover.



Removal: Document feeder unit (optional)

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

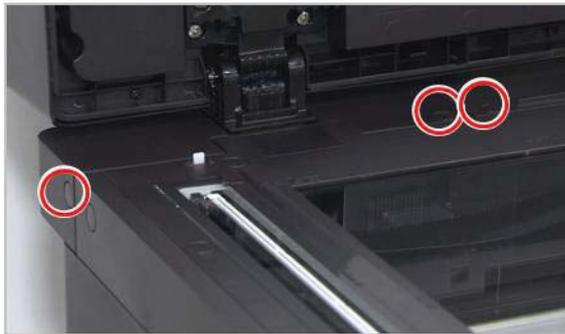
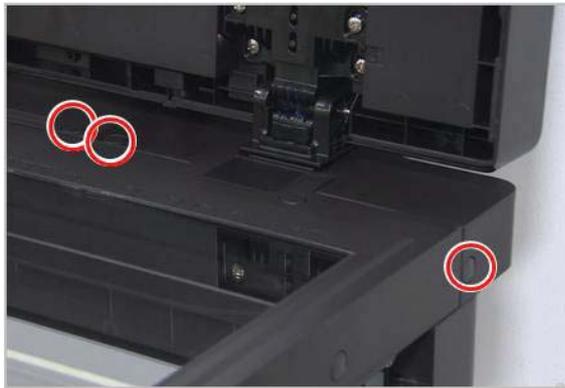
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder unit (optional)

1. Remove eight screws. Remove the rear cover.



2. Open the document feeder unit. Remove six screw-caps, and then remove six screws.



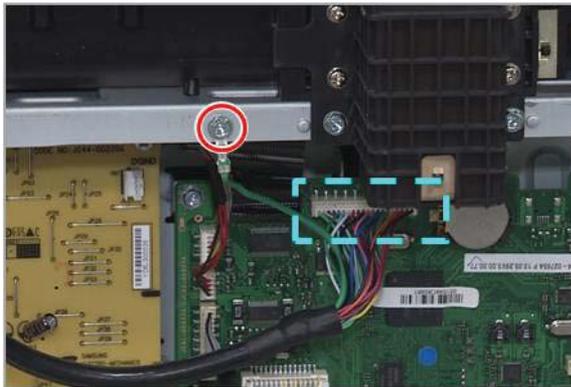
3. Remove the document feeder connector cover.



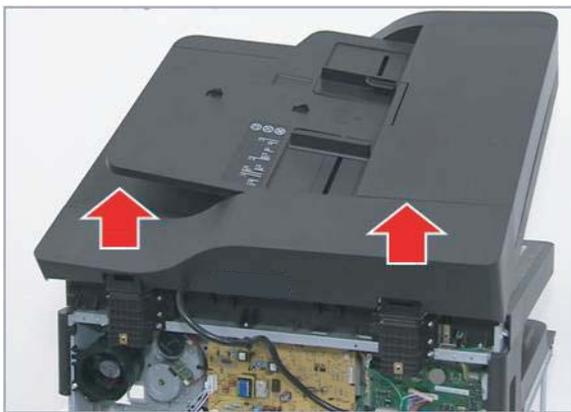
4. Remove the platen rear-cover.



5. Remove one screw. Unplug the document feeder cable.



6. Lift up and release the document feeder unit.



Removal: Document feeder cover

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

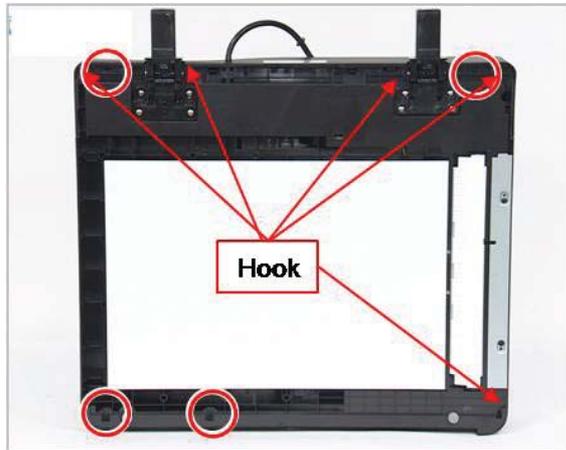
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder cover

1. Remove four screws from the bottom of the document feeder unit. Release the bottom hooks.



2. Open the document feeder cover. Remove two screws.



3. Push and release the stacker lock.



4. Remove two screws.



5. Remove the document feeder front cover.



6. Remove the document feeder rear cover.



Removal: Document feeder open cover

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder open cover

1. Remove the document feeder front cover and rear cover.

2. Release the document feeder open cover by pushing it in the directions shown.



Removal: Document feeder stacker

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder stacker

1. Remove the document feeder covers.

2. Unplug the stacker connector from the document feeder board. Release the stacker unit.



Removal: Document feeder board

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

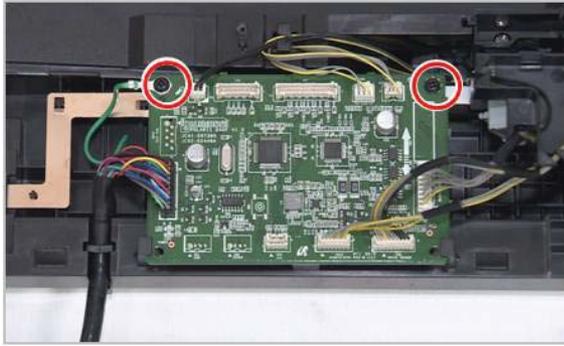
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder board

1. Remove the document feeder rear cover.
2. Unplug all connectors on the document feeder board.

3. Remove the document feeder board after removing two screws.



Removal: Document feeder registration-cover-detect sensor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

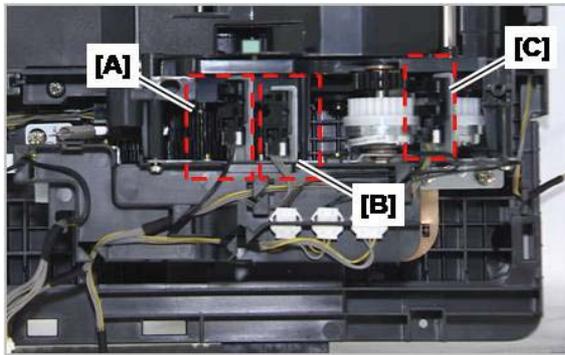
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder registration-cover-detect sensor

- ▲ Release the corresponding sensor after unplugging connector.
 - Detect sensor
 - Cover sensor
 - Registration sensor



Removal: Document feeder motor solenoid clutch

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

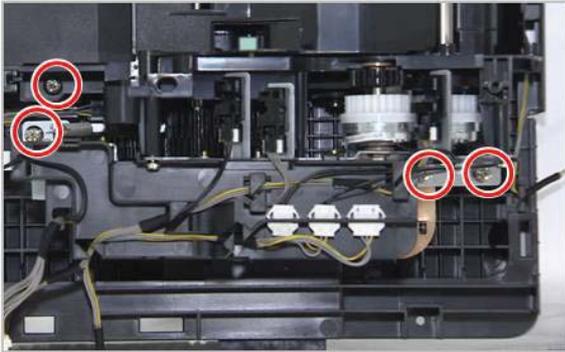
Remove: Document feeder motor solenoid clutch

1. Remove the document feeder covers.

2. Unplug all connectors on the document feeder board.



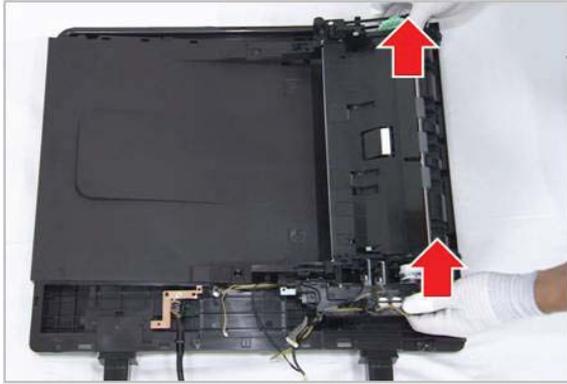
3. Remove four screws.



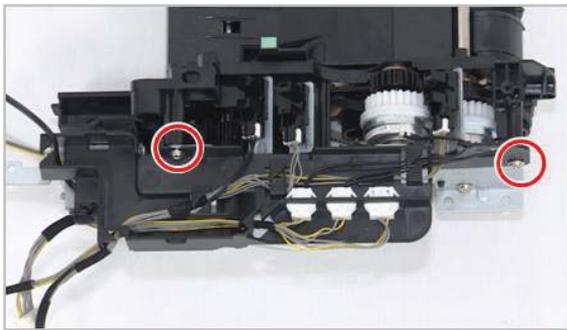
4. Remove two screws.



5. Lift up and release the document feeder main frame.



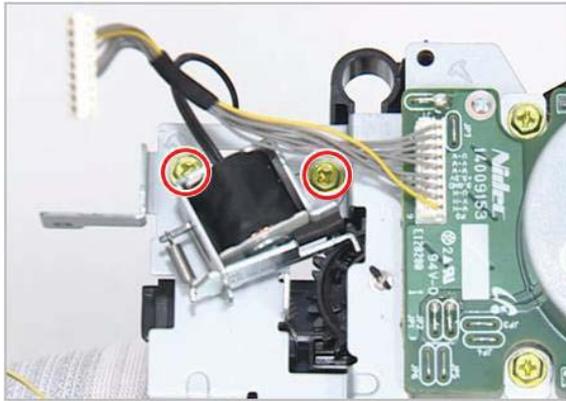
6. Release the harness holder after removing two screws.



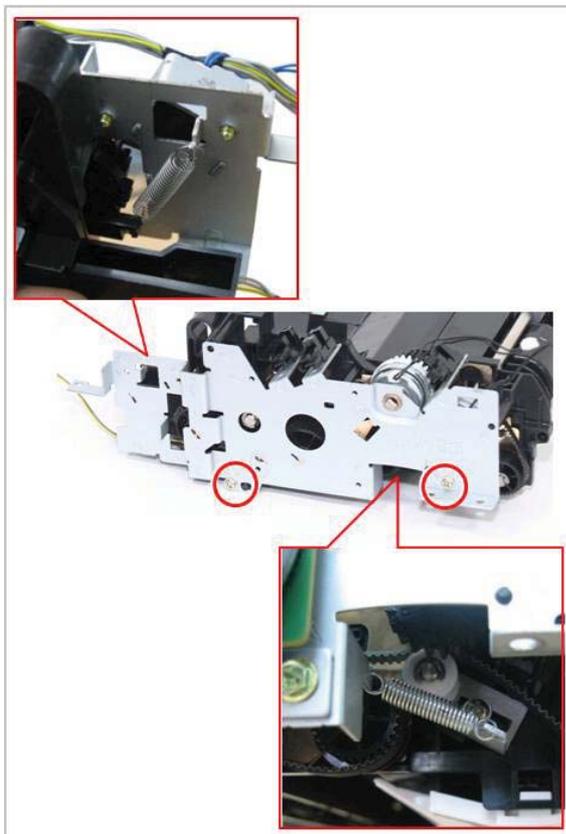
7. Unplug the connector. Remove four screws. Release the motor.



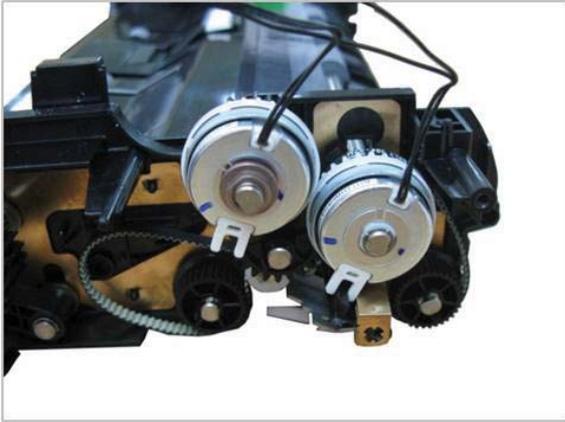
8. Release the solenoid after removing two screws.



9. Remove two springs. Remove two screws. Release the bracket.



10. Remove the clutch after removing the e-ring.



Removal: Document feeder exit idle sensor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

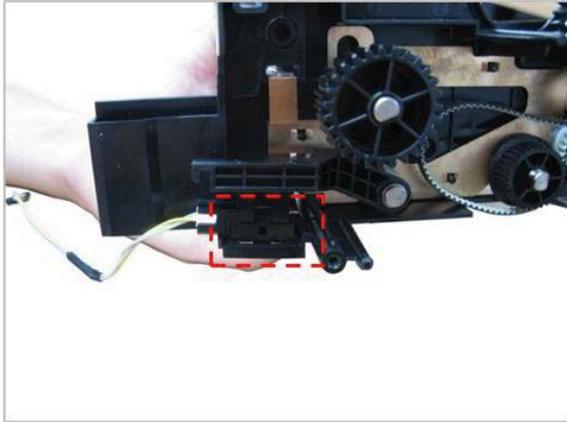
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder exit idle sensor

1. Remove the motor bracket.

2. Remove the sensor after unplugging the connector.



Removal: Document feeder exit sensor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

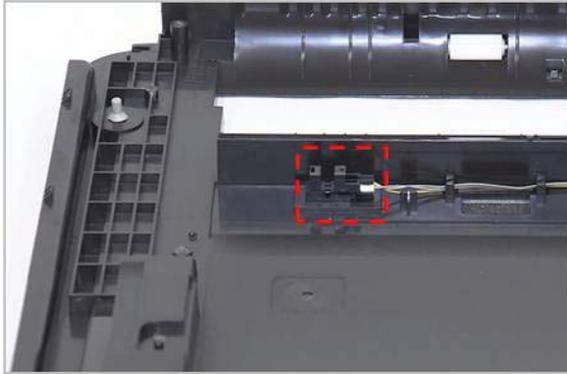
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder exit sensor

1. Remove the document feeder main frame.

2. Remove the sensor after unplugging the connector.



Removal: Document feeder length-width sensor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Document feeder length-width sensor

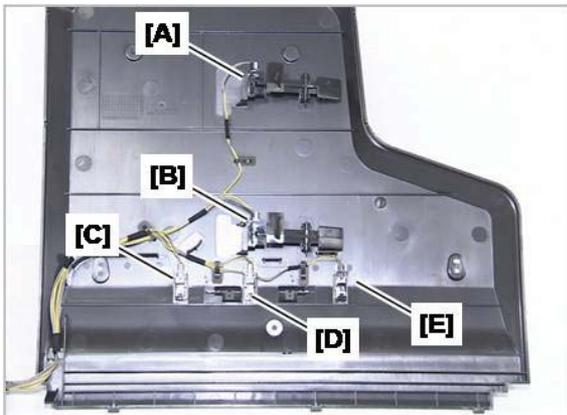
1. Remove the document feeder stacker.

2. Release the sensor cover after removing five screws.



3. Remove the defective sensor after unplugging the connector.

- A, B: paper length sensor
- C, D, E: paper width sensor



Removal: OPE unit

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: OPE unit

1. Remove the platen cover or document feeder unit.

2. Remove the cap-hole and screw.



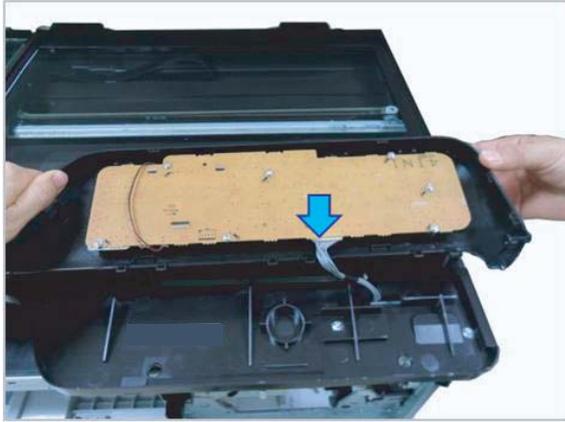
3. Release the left scan-cover after removing two screws.



4. Pull up the front of the OPE unit.



5. Release the OPE unit after unplugging the connector.



Removal: Platen unit

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

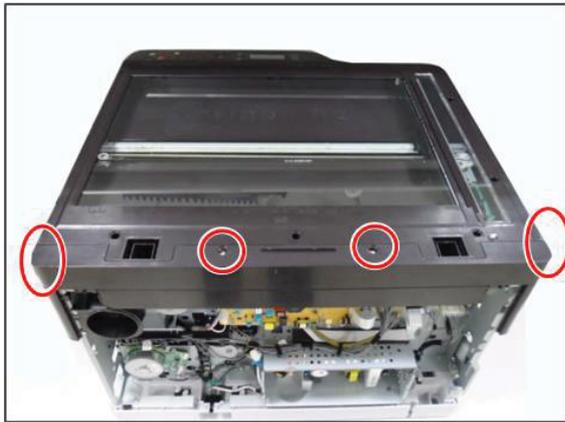
Remove: Platen unit

1. Remove the rear cover.
2. Remove the platen cover or document feeder unit.
3. Remove the OPE unit.

4. Remove the two cap holes and two screws.



5. Remove the four cap holes and four screws. Remove the rear-platen cover.



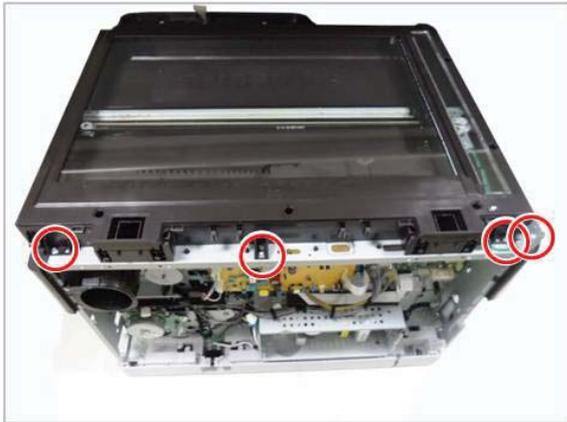
6. Remove the two cap holes and two screws. Pull up and release the left-platen cover.



7. Remove three screws.



8. Remove four screws.



9. Remove two screws.



10. Unplug the scan cables from the main board.



11. Lift up and release the platen unit.



 **NOTE:** When lifting up the platen unit, be careful with the flat cable and harness connector.

Removal: Upper platen

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

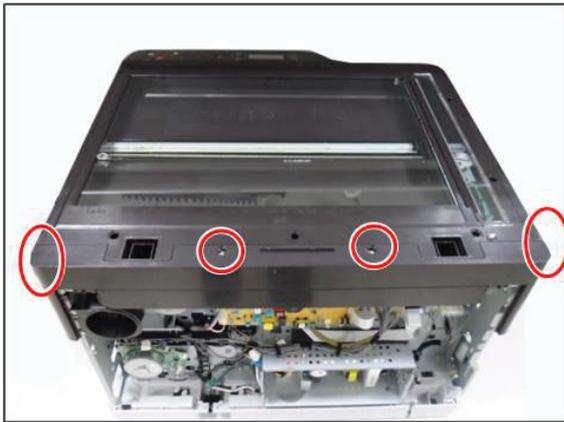
Remove: Upper platen

1. Remove the rear cover.
2. Remove the platen cover or document feeder unit.
3. Remove the OPE unit.

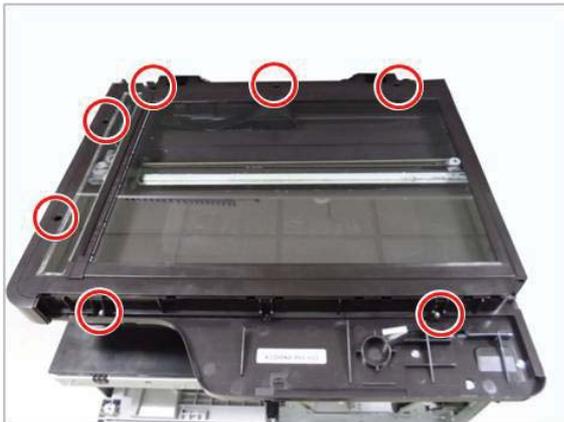
4. Remove two cap holes and two screws.



5. Remove four cap holes and four screws. Remove the rear platen cover.



6. Remove seven screws.



7. Lift up and release the upper platen.



Removal: CIS unit

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

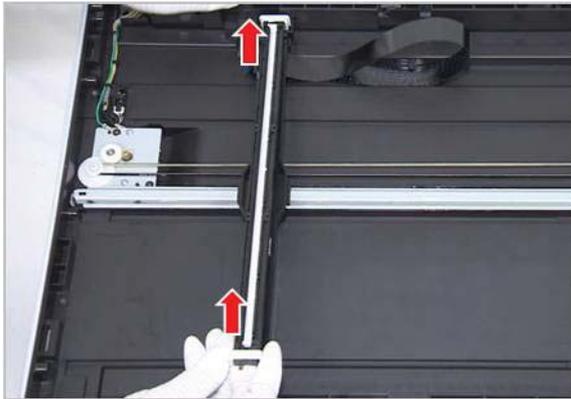
Remove: CIS unit

1. Remove the upper platen.

2. Unplug the CIS flat cable.



3. Release the CIS from its holder.



Removal: Scan drive unit

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

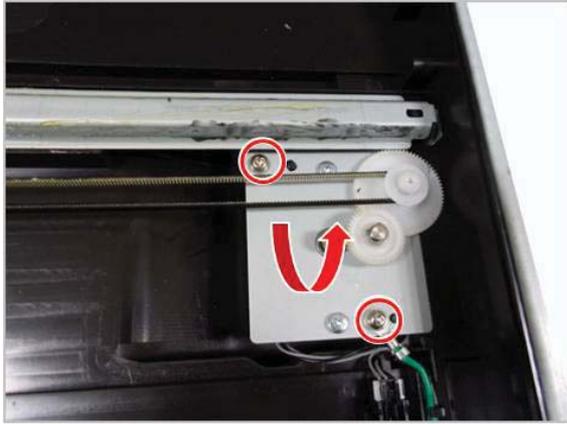
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Scan drive unit

1. Remove the upper platen.

2. Remove two screws. Lift up the scan drive unit.



3. Unplug the motor connector.



Removal: Scan home-position sensor and cover-open sensor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

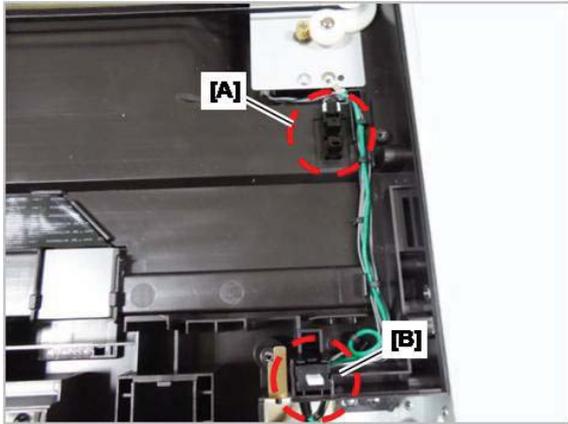
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Scan home-position sensor and cover-open sensor

1. Remove the upper platen.
2. Unplug the corresponding sensor connector. Remove the sensor.
 - A: Home position sensor
 - B: Cover-open sensor



Removal: Laser/scanner unit (LSU)

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

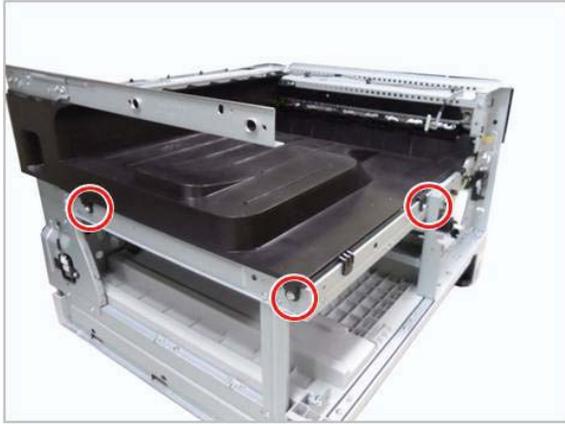
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

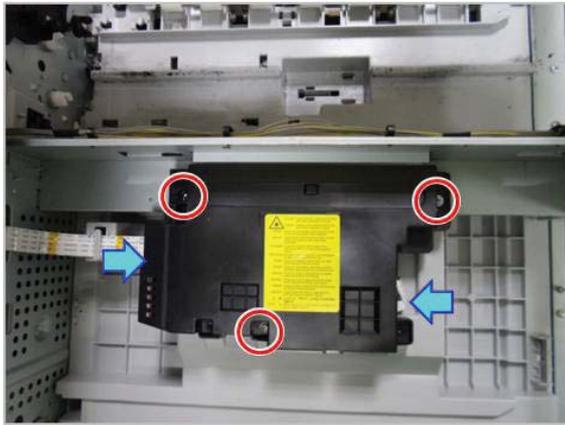
Remove: Laser/scanner unit (LSU)

1. Remove the front cover and left cover.

2. Remove the exit cover after removing three screws.



3. Unplug the flat cables. Remove three screws. Release the LSU.



 **NOTE:** When replacing the LSU, use a short screwdriver.



Removal: Main drive motor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

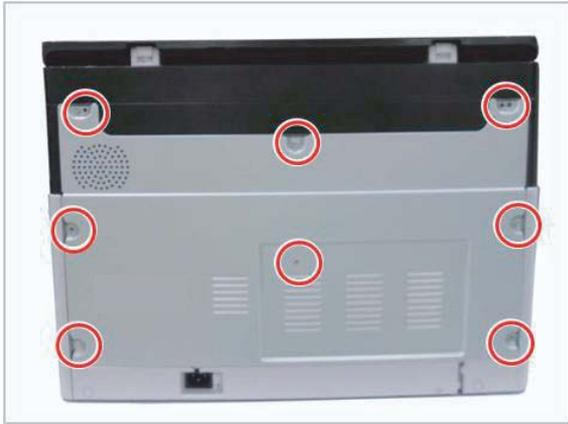
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

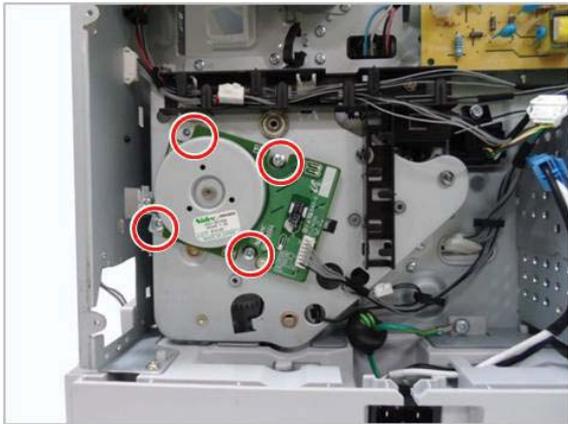
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Main drive motor

1. Remove the rear cover after removing eight screws.



2. Unplug the motor connector. Remove four screws. Remove the main drive motor.



Removal: Exit motor (MFP M436nda only)

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

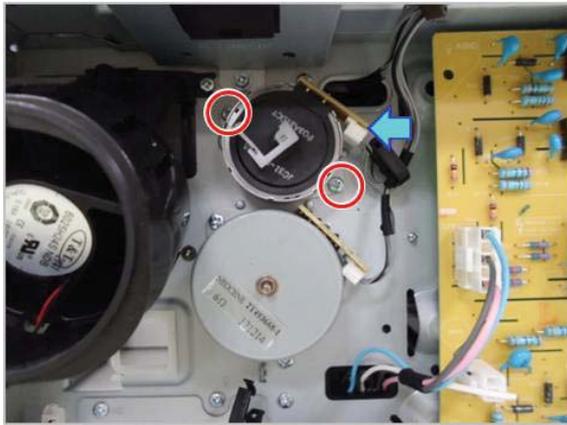
Remove: Exit motor (MFP M436nda only)

1. Remove the rear cover.
2. Remove the document feeder unit or platen cover.

3. Remove the platen-rear cover after removing four screws.



4. Unplug the connector. Remove two screws. Remove the exit motor.



Removal: Fuser motor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

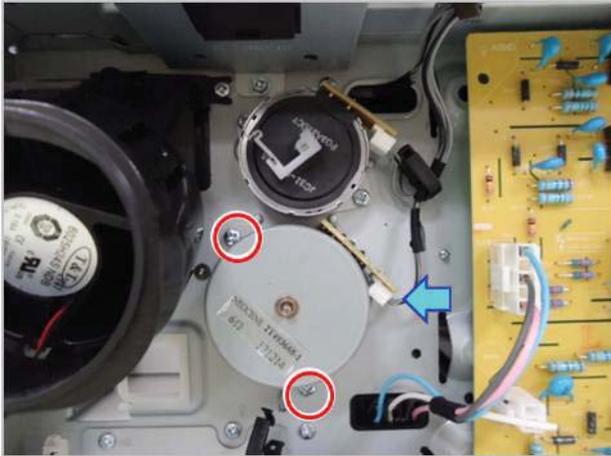
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Fuser motor

1. Remove the rear cover.

2. Unplug the connector. Remove two screws. Release the fuser motor.



Removal: Paper empty registration MP sensor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Paper empty registration MP sensor

1. Remove the cassette.



2. Open the front cover.



3. Open the side cover.

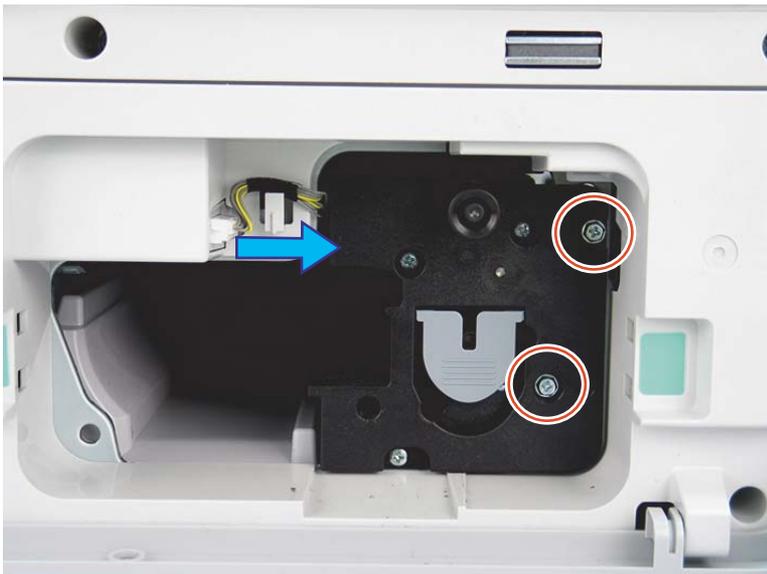


4. Remove the toner cartridge while pushing both hooks.

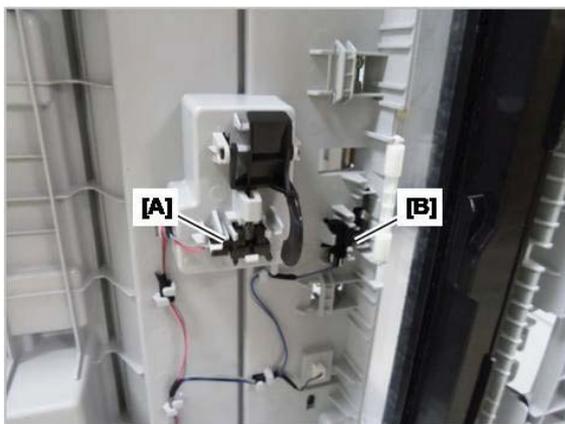


5. Unplug the connector. Remove two screws. Remove the imaging unit.

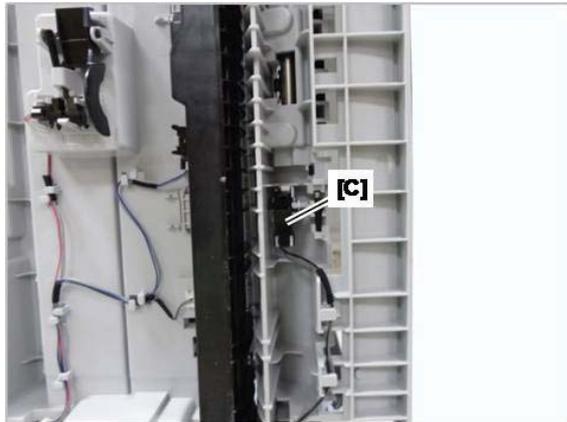
⚠ CAUTION: Do not turn the imaging unit upside down. Toner will spill out.



6. Turn the printer on its side to access the bottom side.



7. Release the empty sensor (callout A). Unplug the connector.
8. Release the registration sensor (callout B). Unplug the connector.
9. Release the MP sensor (callout C). Unplug the connector.



Removal: MP clutch

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

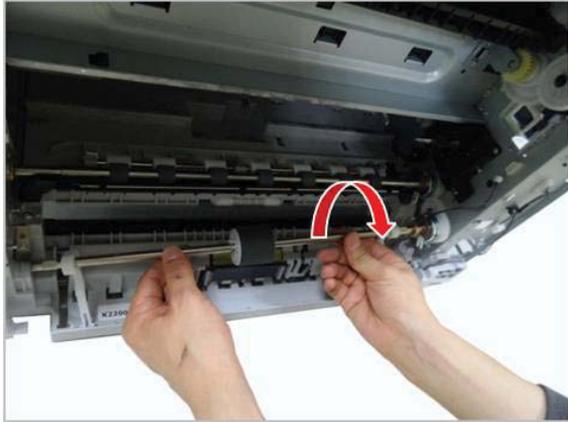
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: MP clutch

1. Remove the MP shaft assembly.



2. Remove the e-ring. Remove the MP clutch.



Removal: Registration clutch

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

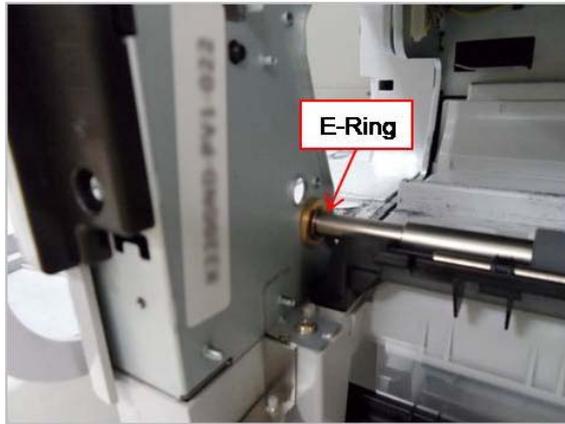
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

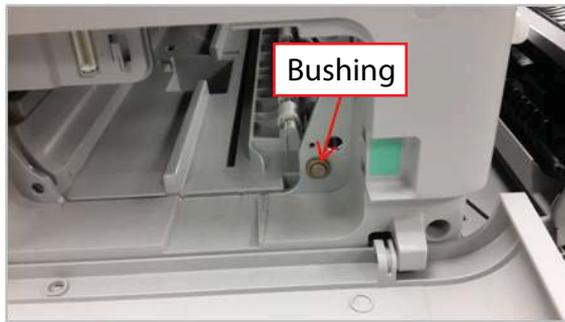
Remove: Registration clutch

1. Remove the toner cartridge and imaging unit.
2. Open the side cover.

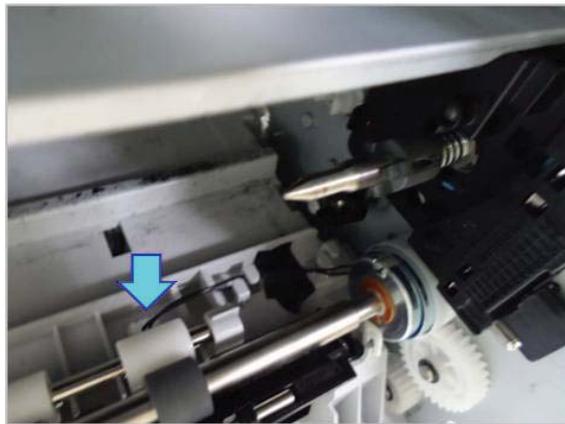
3. Remove the e-ring from the left of registration shaft.



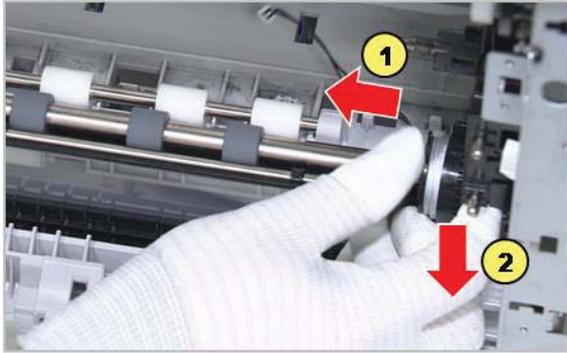
4. Remove the bushing from the front.



5. Unplug the registration clutch connector.



6. Remove the registration shaft assembly by pulling it to the left, then out (callouts 1 and 2).



7. Remove the e-ring. Remove the clutch.

Removal: Fuser fan

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Fuser fan

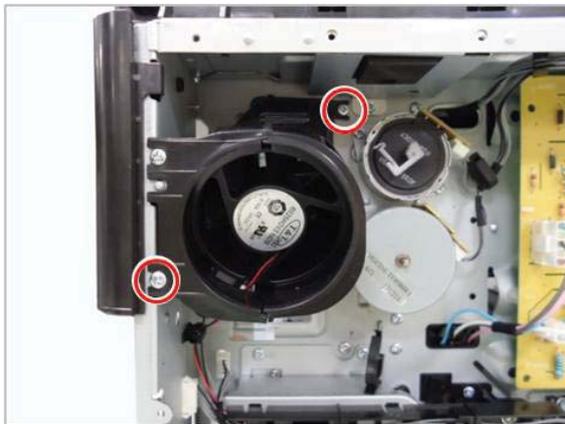
1. Remove the rear cover after removing eight screws.



2. Remove the document feeder unit or platen cover.
3. Remove the rear platen cover after removing four screws.



4. Remove the fuser fan after removing two screws.



Removal: HVPS board

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: HVPS board

1. Remove the rear cover after removing eight screws.



2. Remove the document feeder unit or platen cover.
3. Remove the rear platen cover after removing four screws.



4. Remove two screws. Release the support hooks. Remove the HVPS board.



Removal: Temperature humidity sensor

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Temperature humidity sensor

1. Remove two screws securing the rear cover.



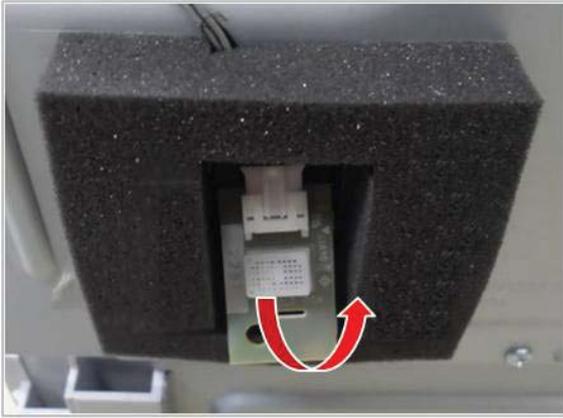
2. Remove the left cover after removing the six cap holes and screws.



3. Release the sensor hook.



4. Unplug the sensor connector.



Removal: Developer unit

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

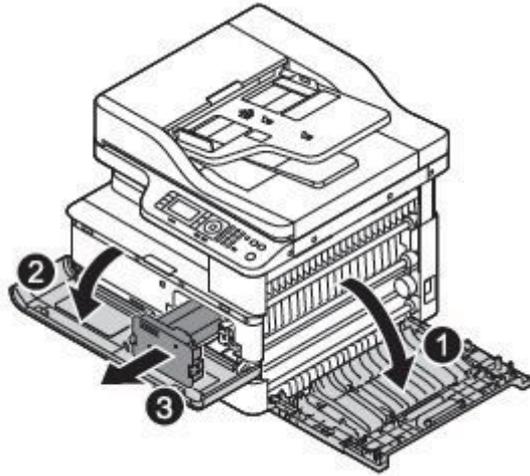
Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

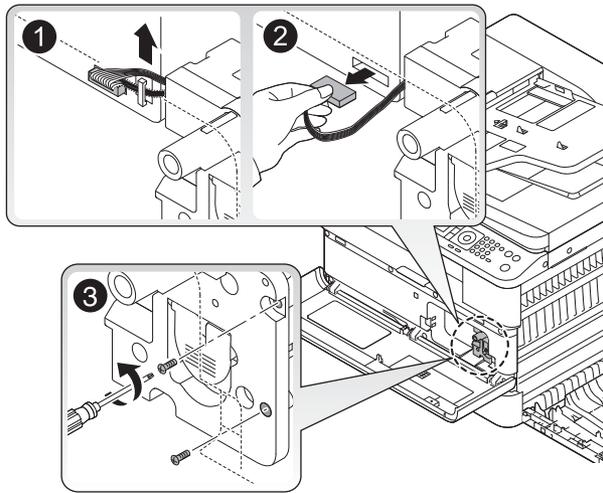
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: Developer unit

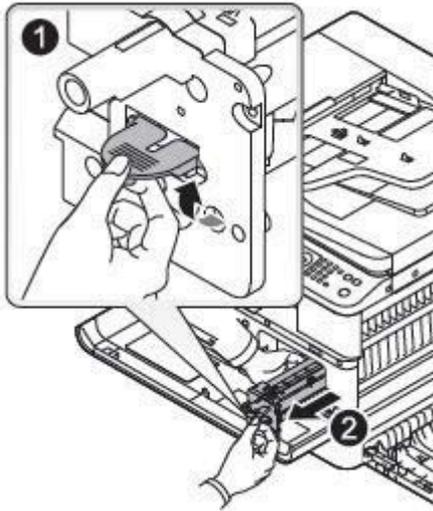
1. Open the side cover and front cover, and then remove the toner cartridge.



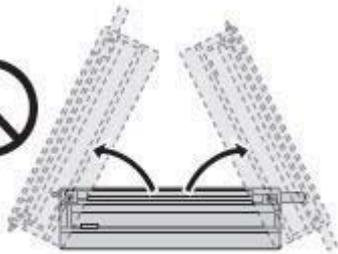
2. Open the cable clamp, unplug the connector, and then remove two screws.



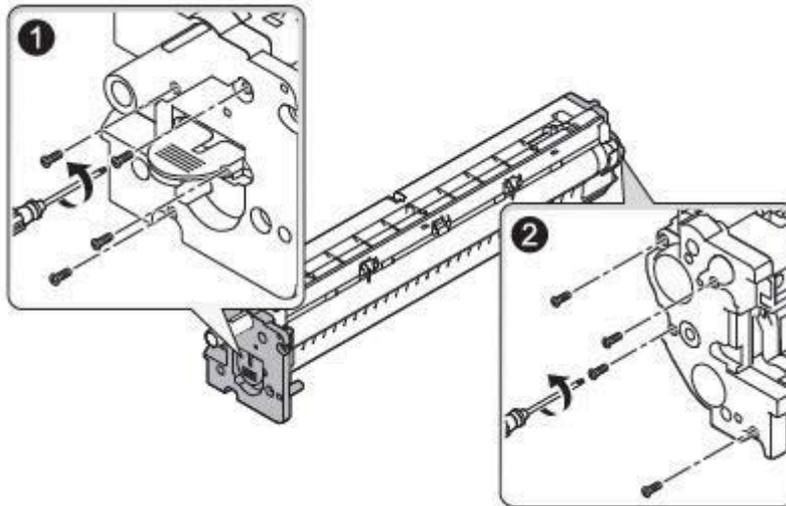
3. Take off the imaging unit while holding the lever.



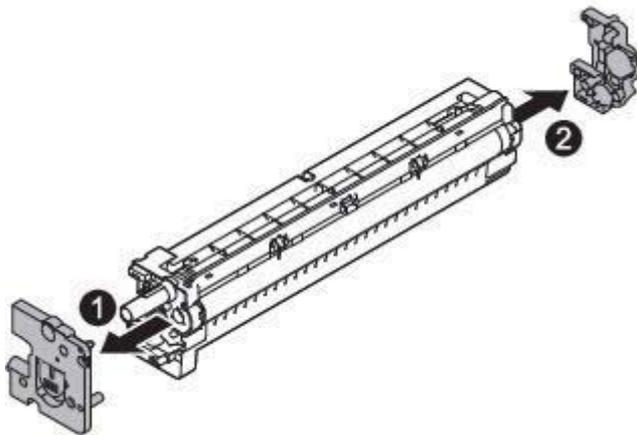
⚠ CAUTION: Place imaging unit on a flat surface to prevent toner from spilling.



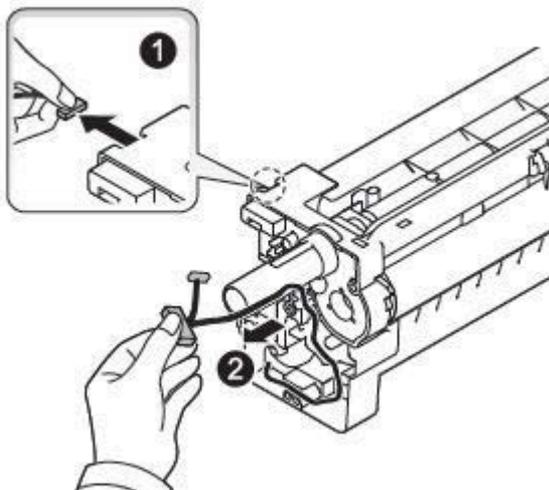
4. Remove eight screws securing both side covers.



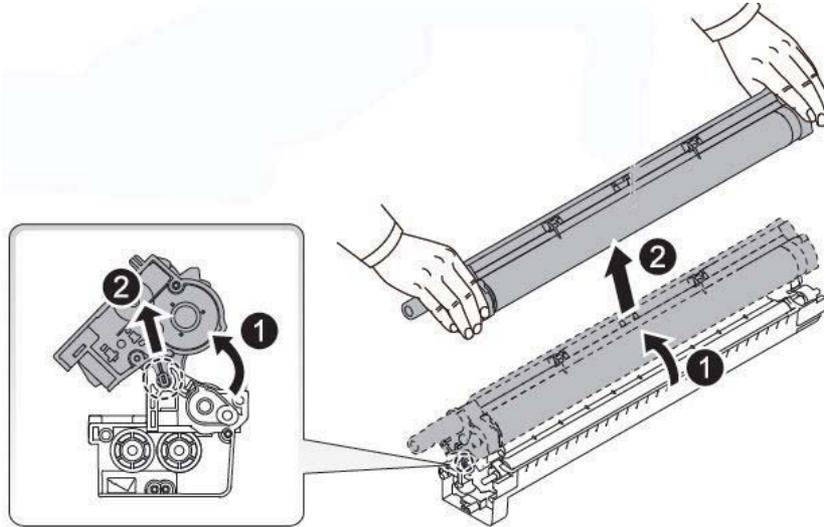
5. Remove the left and right cover of the imaging unit.



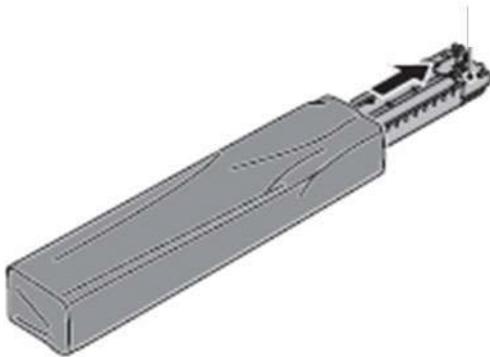
6. Unplug the connector.



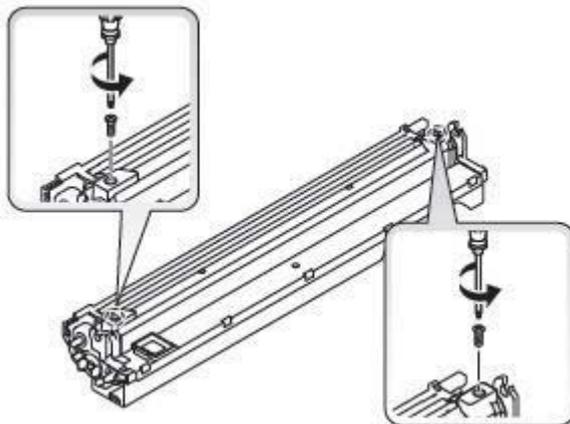
7. Separate the drum unit from the developer unit.



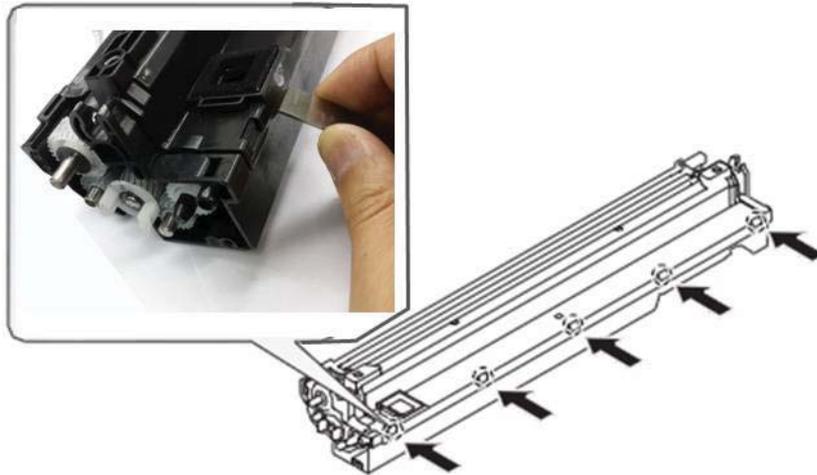
8. Unpack the new developer unit.



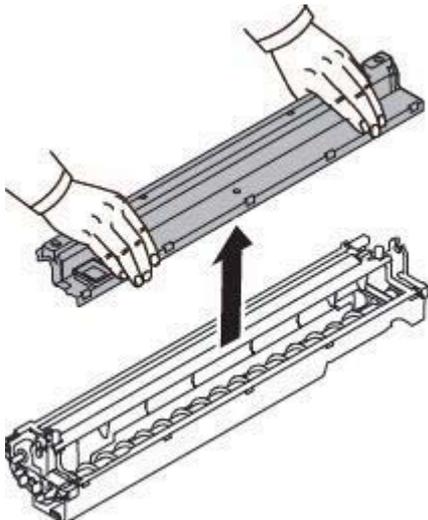
9. Remove two screws.



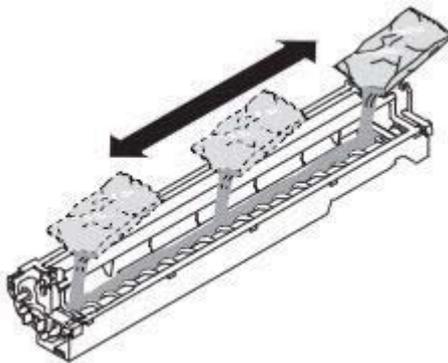
10. Unlock the hook.



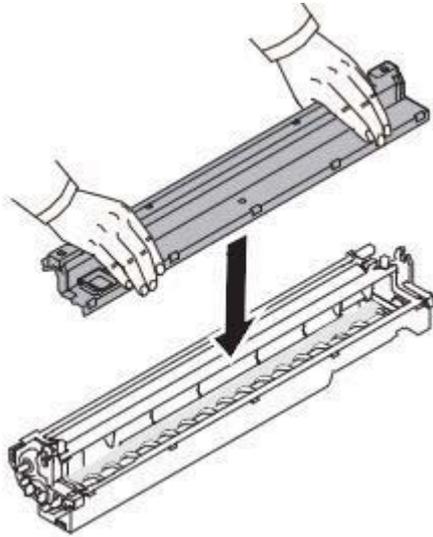
11. Lift up and release the developer cover.



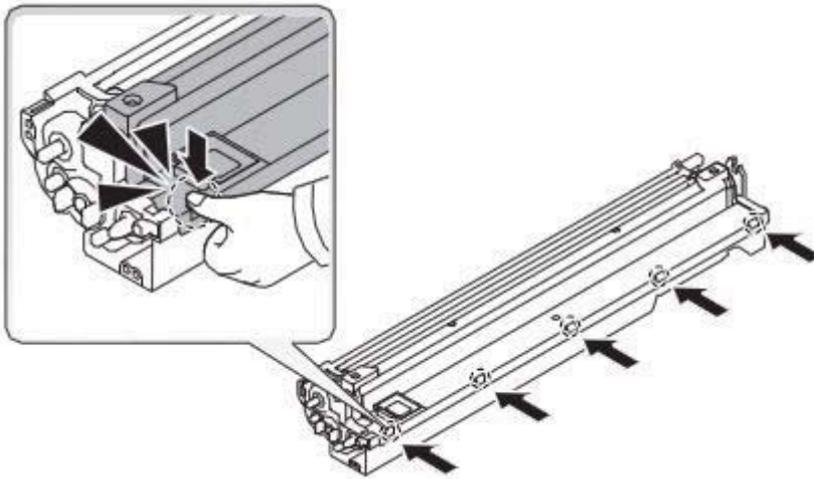
12. Pour the toner into the developer unit evenly.



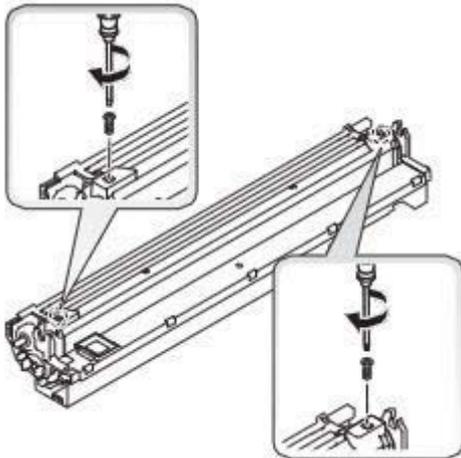
13. Close the developer cover.



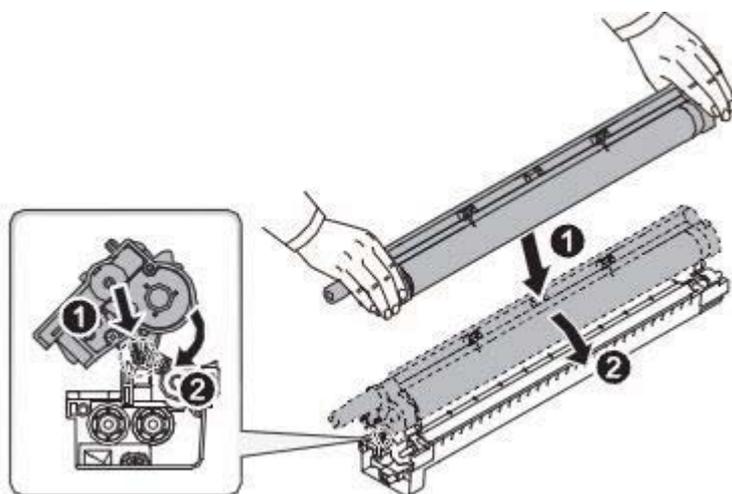
14. Check the locking.



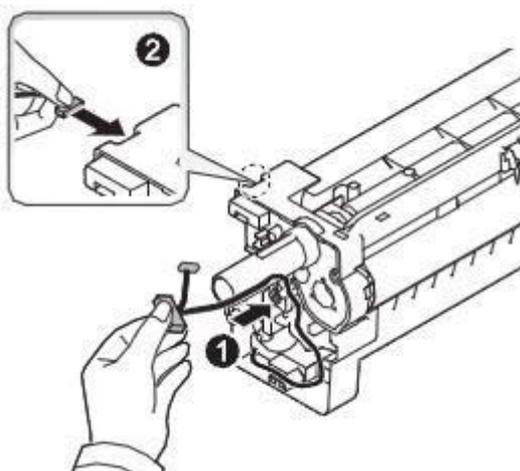
15. Tighten two screws.



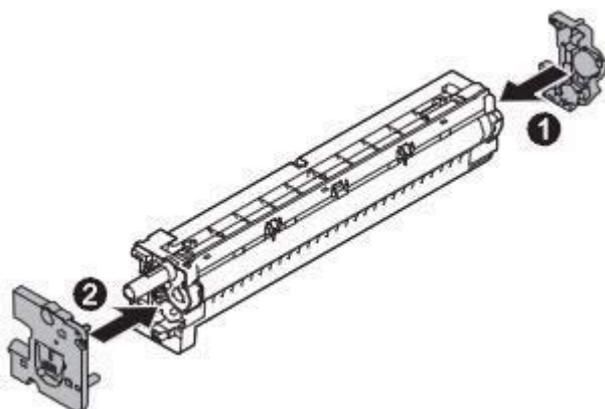
16. Assemble the drum unit with the developer unit.



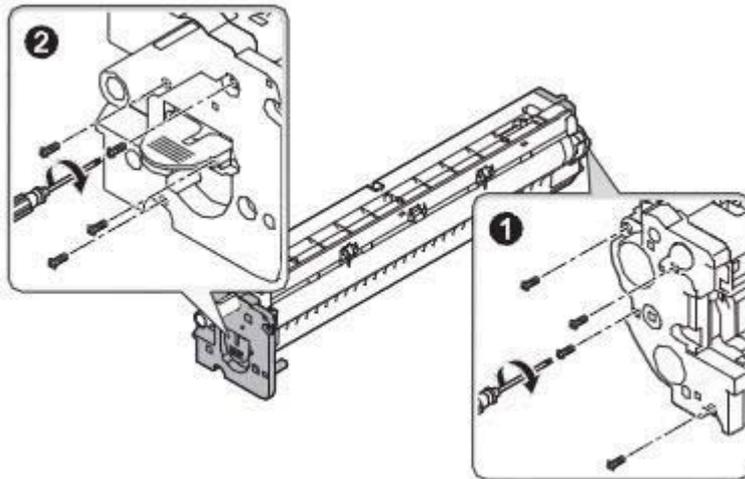
17. Connect the cable.



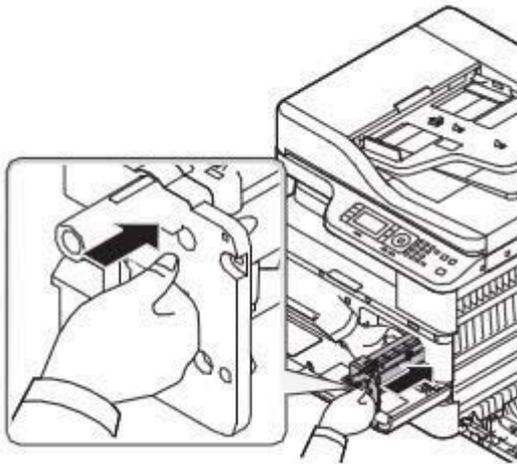
18. Assemble the left cover and right cover.



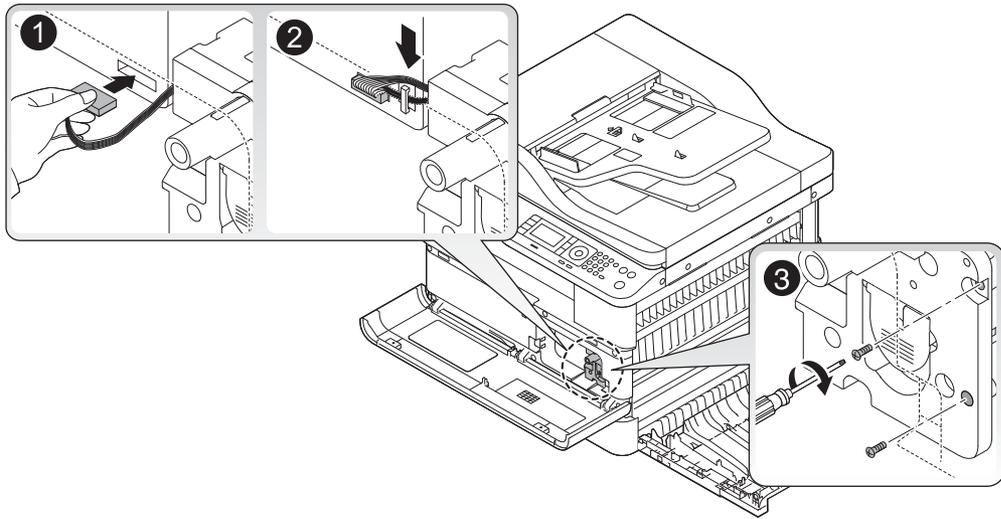
19. Tighten eight screws.



20. Install the imaging unit.



21. Connect the cable, close the cable clamp, and then tighten two screws.



22. Install the toner cartridge. Close the front cover. And close the side cover.

Removal: SCF (optional Tray 3)

Introduction

Overview

This document provides the procedures to remove and replace assemblies for the HP LaserJet MFP M436 series printers .

Before performing service

Turn the printer power off

- Disconnect the power cable.

 **WARNING!** To avoid damage to the printer, turn the printer off, wait 30 seconds, and then remove the power cable before attempting to service the printer.

Required tools

Some assemblies might require using a Phillips and/or flat-blade screwdriver. Read through the removal instructions to determine if any tools are needed to remove the assembly.

After performing service

Turn the printer power on

- Connect the power cable.
- Use the power switch to turn the power on.

Post service test

After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

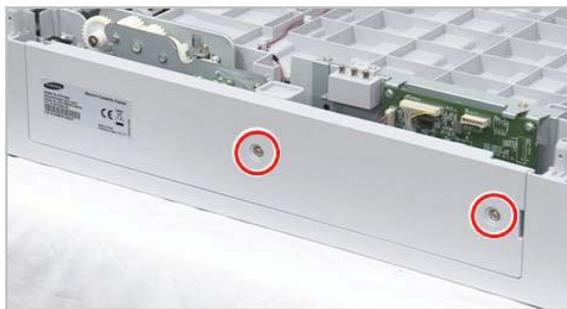
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder (M436nda only). Verify that the print quality meets customer expectations.

Remove: SCF board

1. Remove two screw-caps.



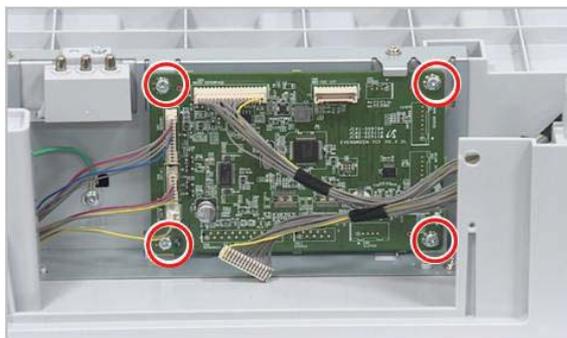
2. Remove two screws.



3. Remove the side cover.



4. Unplug all connectors from the SCF board. Remove four screws. Release the SCF board.

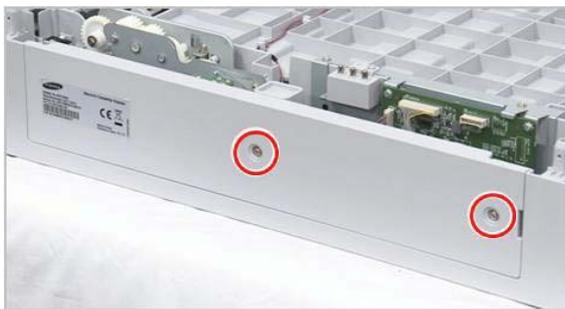


Remove: SCF drive unit

1. Remove two screw caps.



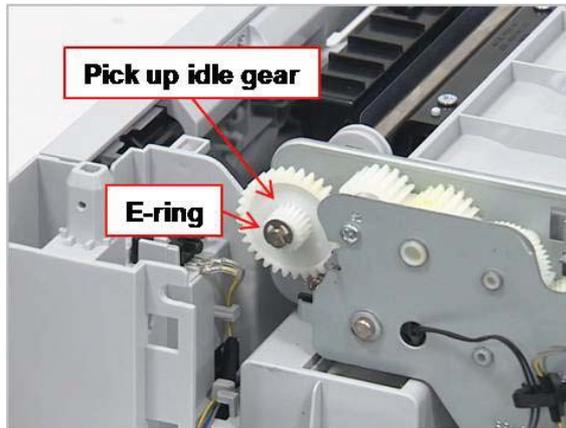
2. Remove two screws.



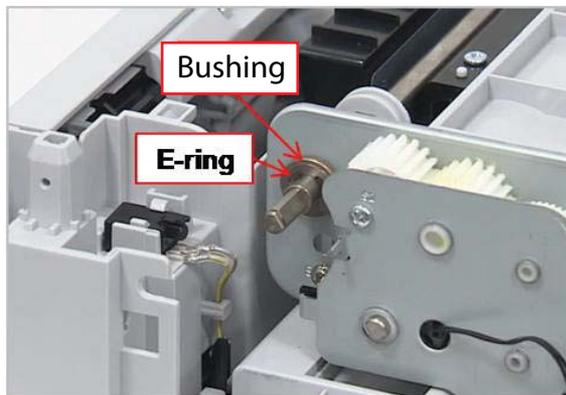
3. Remove the side cover.



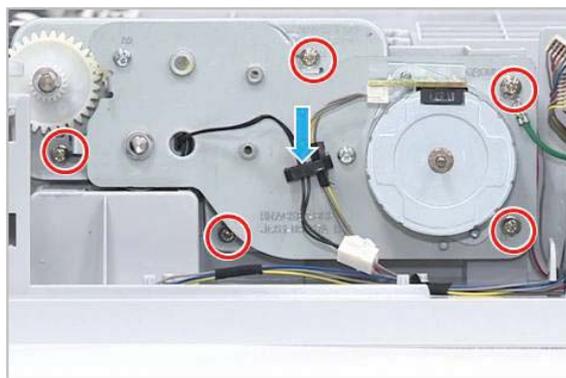
4. Remove the e-ring. Release the pickup idle gear.



5. Remove the e-ring. Release the bushing.



6. Open the clamp. Unplug connectors. Remove five screws. Release the drive unit.



Remove: SCF feed roller

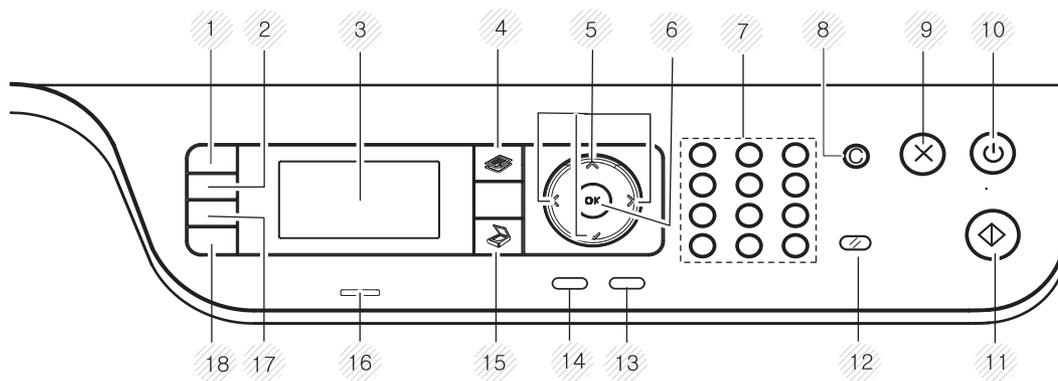
1. Remove the e-ring.
2. Pull the feed roller to the right. Lift up and release it.



3 Troubleshooting

- [Control panel](#)
- [Understanding the status LED](#)
- [Clearing jams](#)
- [Firmware upgrades](#)
- [Tech Mode](#)
- [Control Panel Error Messages](#)
- [Printing quality problems](#)
- [Adjusting the document feeder skew](#)
- [Other errors](#)
- [System diagram](#)

Control panel



1	ID Copy	Allows you to copy both sides of an ID card like a driver's license on a single side of paper.
2	Reduce/Enlarge	You can reduce or enlarge the size of a copied image from 25% to 400% when you copy original documents from the scanner glass.
3	Display screen	Shows the current status and prompts during an operation.
4	Copy	Switches to Copy mode.
5	Arrows	Scroll through the options available in the selected menu, and increase or decrease values.
6	OK	Confirms the selection on the screen.
7	Numeric keypad	Enters alphanumeric characters.
8	Clear	Deletes characters in the edit area.
9	Stop	Stops current operation.
10	Power/Wake Up	Turns the power on or off, or wakes up the printer from the power save mode. If you need to turn the printer off, press this button for more than three seconds.
11	Start	Begins a printing job.
12	Reset	Resets the current printer setup.
13	Back	Sends you back to the upper menu level.
14	Menu	Enters Menu mode and scrolls through the available menus.
15	Scan	Switches to Scan mode.
16	Status LED	Indicates the status of your printer.
17	Paper Select	Select the tray you want from the display screen.
18	Darkness	Adjusts the brightness level to make a copy for easier reading, when the original contains faint markings and dark images.

Understanding the status LED

The color of the LED indicates the printer's current status.

LED	Status	Description
Status	Off	<ul style="list-style-type: none"> The printer is off-line. The printer is in power save mode.
	Green	<p>Blinking</p> <p>When the backlight blinks, the printer is receiving or printing data.</p> <hr/> <p>On</p> <p>The printer is on-line and can be used.</p>
Red	Blinking	<ul style="list-style-type: none"> A minor error has occurred and the printer is waiting for the error to be cleared. Check the display message. When the problem is cleared, the printer resumes. Small amount of toner is left in the cartridge. The estimated cartridge life of toner is close. Prepare a new cartridge for replacement. You may temporarily increase the printing quality by redistributing the toner.
	On	<ul style="list-style-type: none"> A toner cartridge has almost reached its estimated cartridge life. It is recommended to replace the toner cartridge. The cover is opened. Close the cover. There is no paper in the tray. Load paper in the tray. The printer has stopped due to a major error. Check the display message. A paper jam has occurred. An imaging unit has almost reached its estimated cartridge life. It is recommended to replace the imaging unit.
Power/ Wake Up	Blue	<p>On</p> <p>The printer is in power save mode.</p> <hr/> <p>Off</p> <p>The printer is in ready mode or printer's power is off.</p>



NOTE:

- Estimated cartridge life means the expected or estimated toner cartridge life, which indicates the average capacity of print-outs and is designed pursuant to ISO/IEC 19752. The number of pages may be affected by operating environment, percentage of image area, printing interval, graphics, media and media size. Some amount of toner may remain in the cartridge even when red LED is on and the printer stops printing.
 - Some LEDs may not be available depending on model or country/region.
 - When the imaging unit has reached its end of life, the printer will stop printing. In this case, you can choose to stop or continue printing from the SyncThru™Web Service (Settings > Machine Settings > System > Setup > Supplies Management> Imaging unit Stop). Turning off this option and continuing to print may damage the device's system.
-

Clearing jams

Introduction

The following topics describe how to clear paper jams in several locations inside the printer and the scanner.

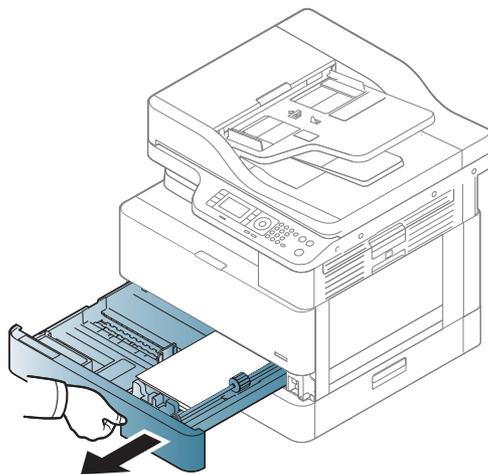
 **NOTE:** To avoid tearing the paper, pull the jammed paper out slowly and gently.

Illustrations on this user's guide may differ from your printer depending on its model or optional goods.

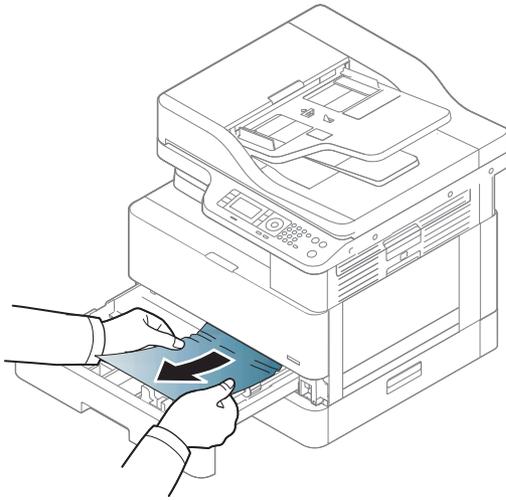
- [Tray 2](#)
- [In optional Tray 3](#)
- [In Multi-purpose Tray 1](#)
- [Inside the printer](#)
- [In the exit area](#)
- [In the duplex unit area](#)
- [Clearing original document jams](#)

Tray 2

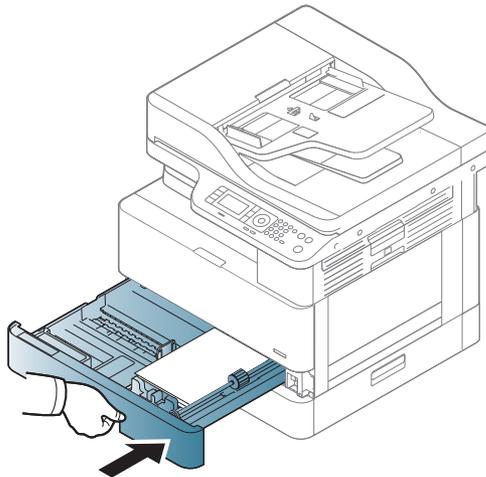
1. Pull out the tray.



2. Remove the jammed paper by gently pulling it straight out.

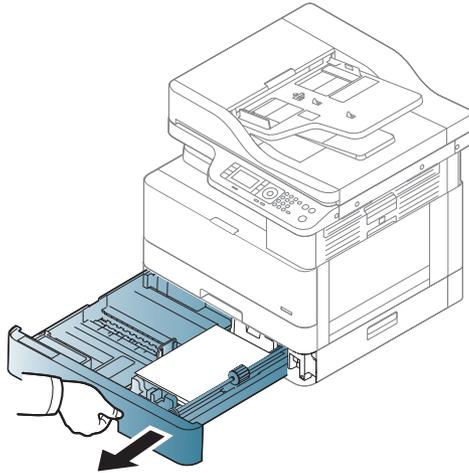


3. Insert the tray back into the printer until it snaps into place.

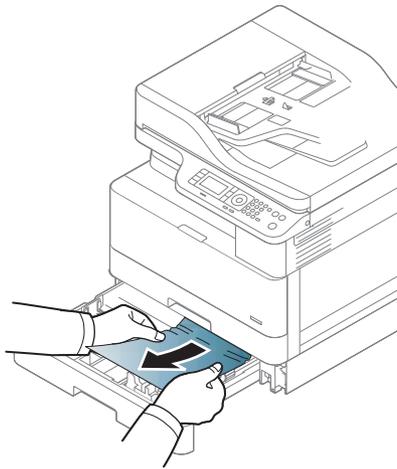


In optional Tray 3

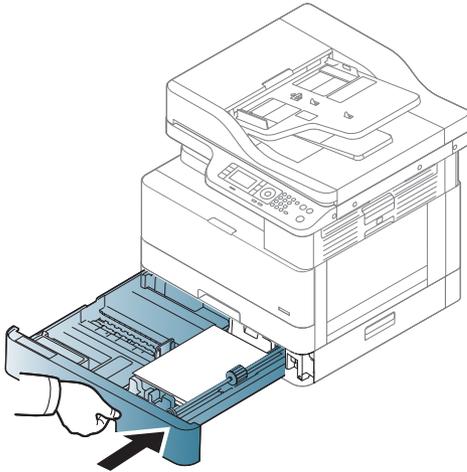
1. Pull out optional tray.



2. Remove the jammed paper by gently pulling it straight out.

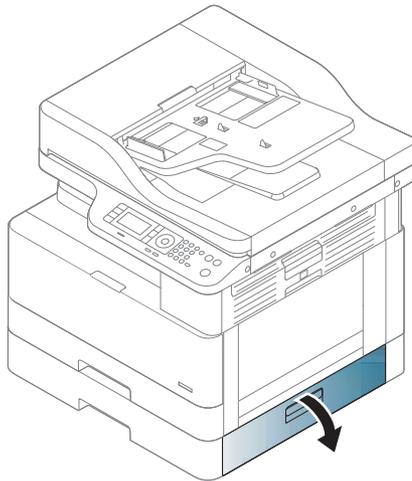


3. Insert tray back into the printer until it snaps into place.

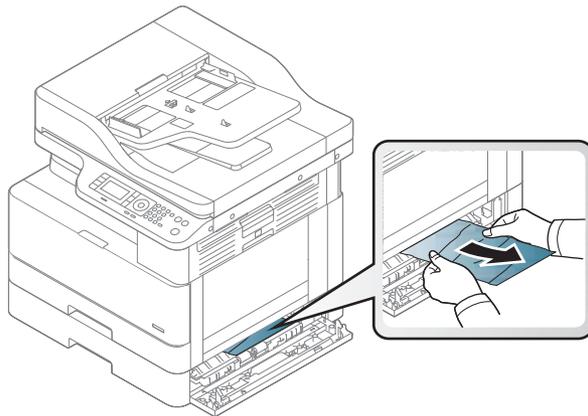


If you do not see the paper in this area, stop and go to next step:

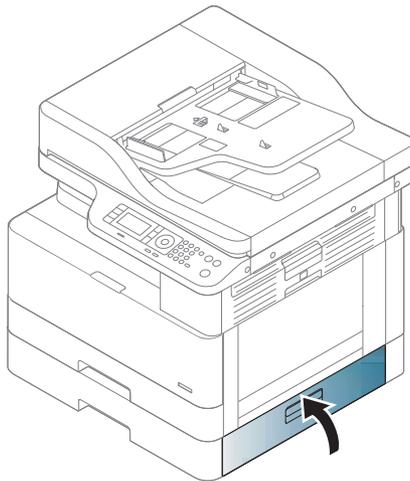
4. Open the SCF jam cover.



5. Remove the jammed paper by gently pulling it straight out.

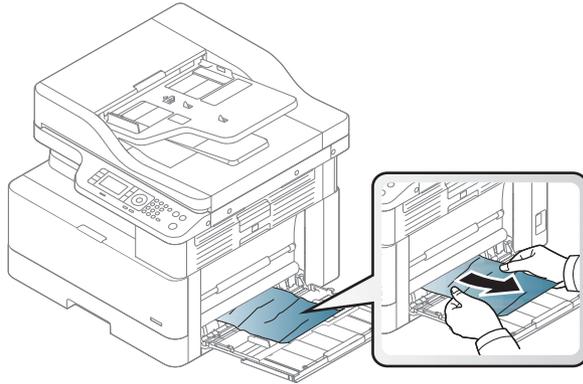


6. Close the SCF jam cover.



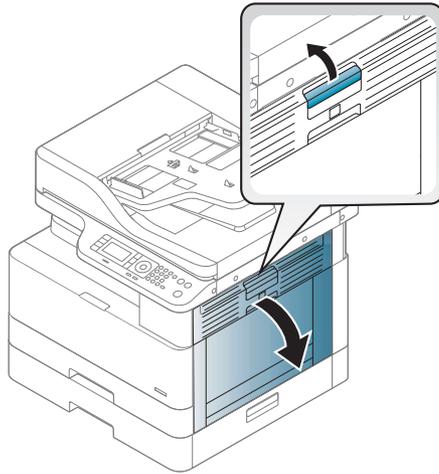
In Multi-purpose Tray 1

- ▲ Remove the jammed paper by gently pulling it straight out.

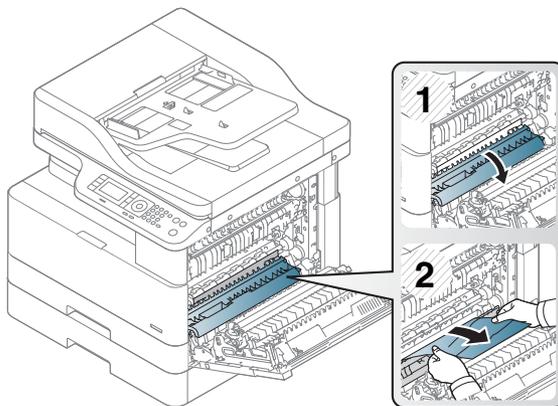


Inside the printer

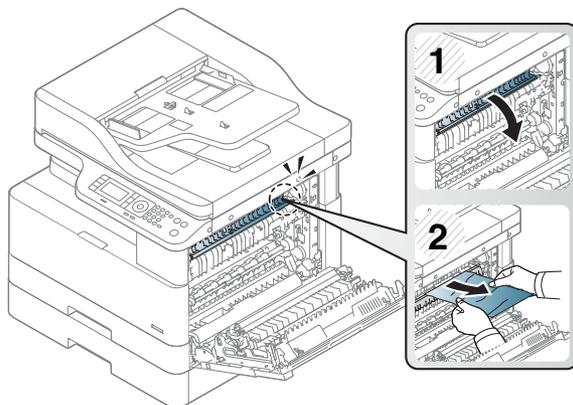
1. Open the side cover.



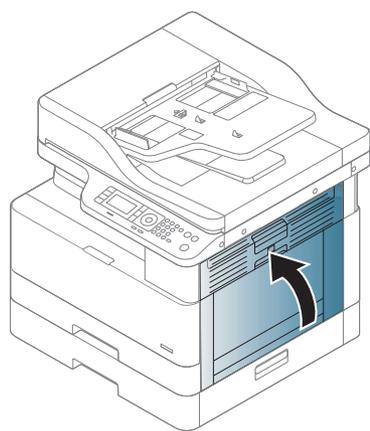
2. Open the jam guide and remove the jammed paper.



3. Open the fuser jam cover and remove the jammed paper.



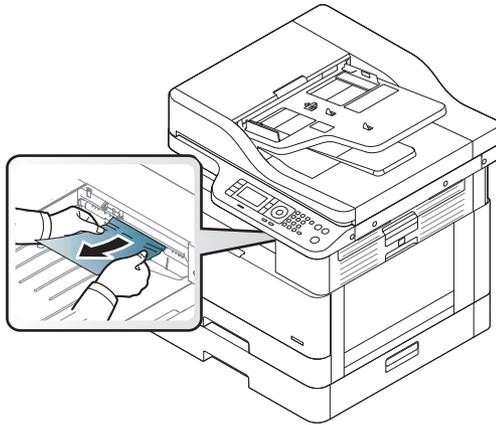
4. Close the side cover.



In the exit area

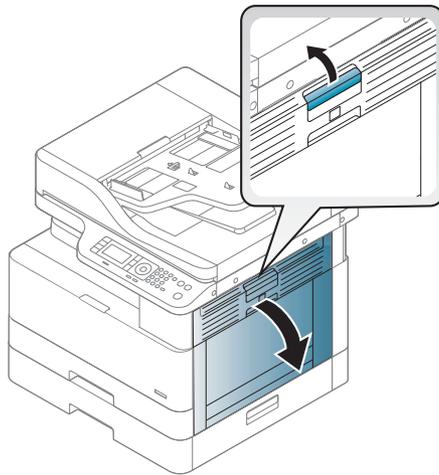
⚠ CAUTION: The fuser area is hot. Take care when removing paper from the printer.

1. Remove the jammed paper by gently pulling it straight out.

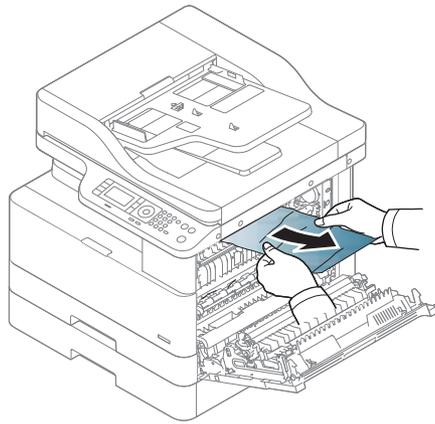


If you do not see the paper in this area, stop and go to next step:

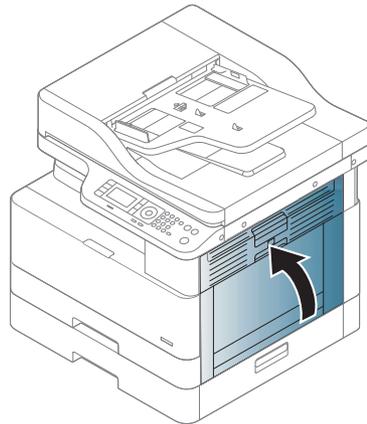
2. Open the side cover.



3. Remove the jammed paper from the exit unit or fuser unit.

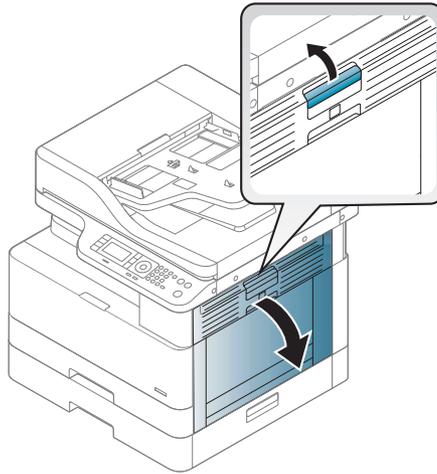


4. Close the side cover.

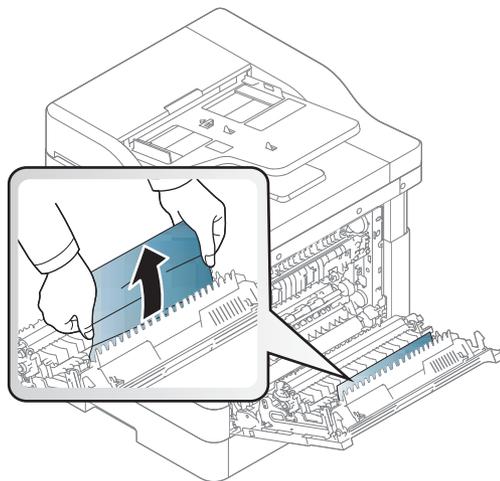


In the duplex unit area

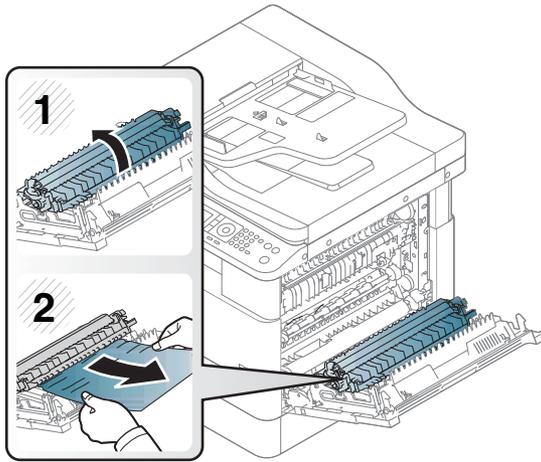
1. Open the side cover.



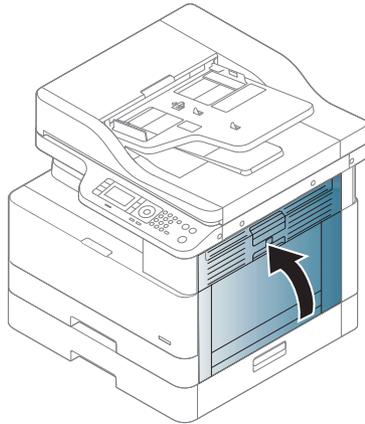
2. Remove the jammed paper from the transfer roller assembly.



3. Release the transfer roller assembly and remove the jammed paper.



4. Close the side cover.



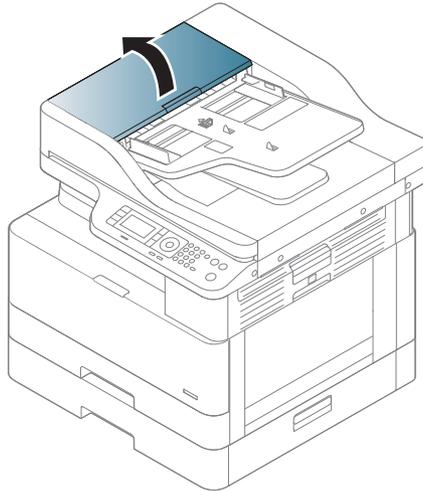
Clearing original document jams

 **NOTE:** To prevent document jams, use the scanner glass for thick, thin or mixed paper originals.

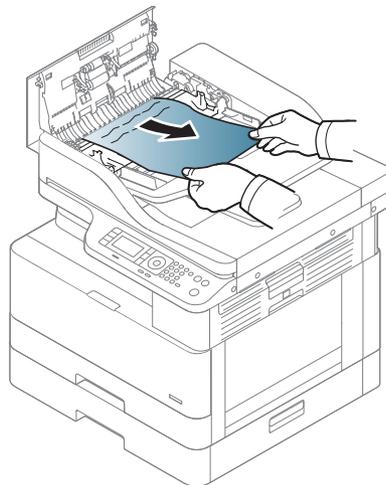
 **CAUTION:** To avoid tearing the document, remove the jammed document slowly and carefully.

Original paper jam in front of scanner

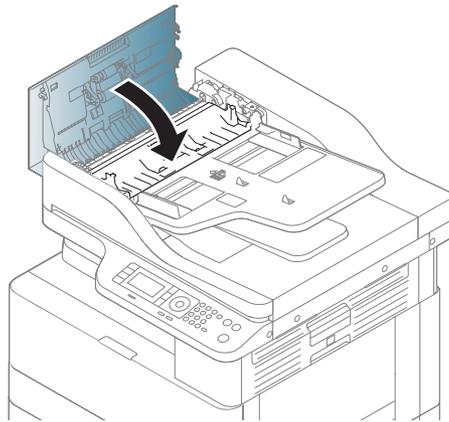
1. Open the document feeder cover.



2. Gently remove the original carefully from the document feeder.

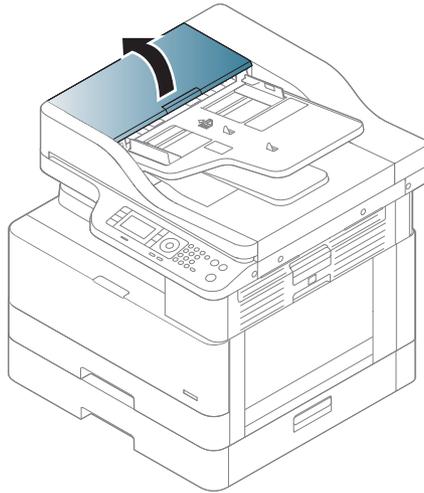


3. Close the document feeder cover.

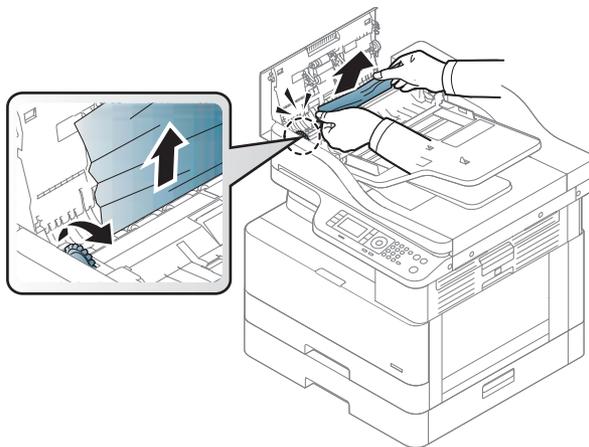


Original paper jam inside of scanner

1. Open the document feeder cover.

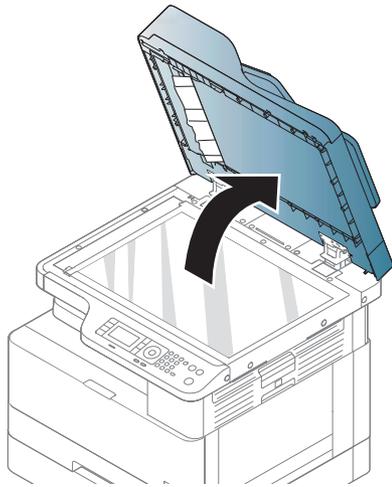


2. Gently remove the original carefully from the document feeder.

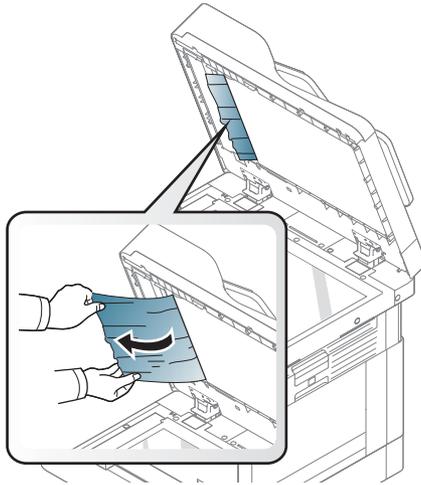


If you do not see the paper in this area, stop and go to next step:

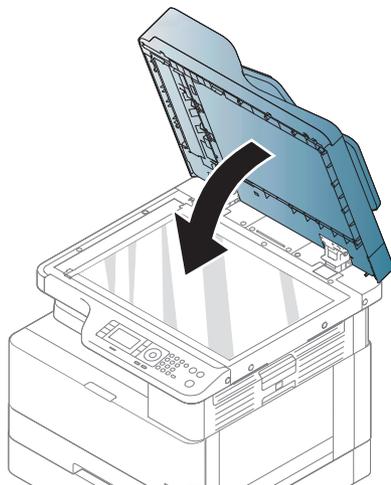
3. Open the scanner lid.



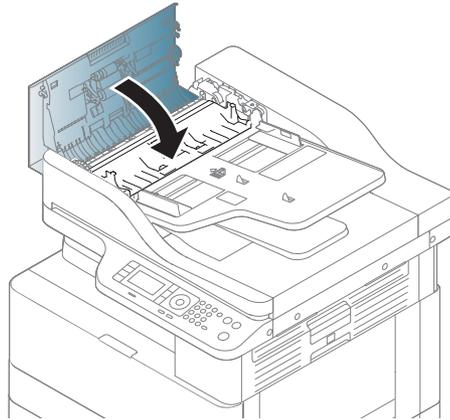
4. Grasp the misfed original, and remove the paper from the feed area by carefully pulling it.



5. Close the scanner lid.

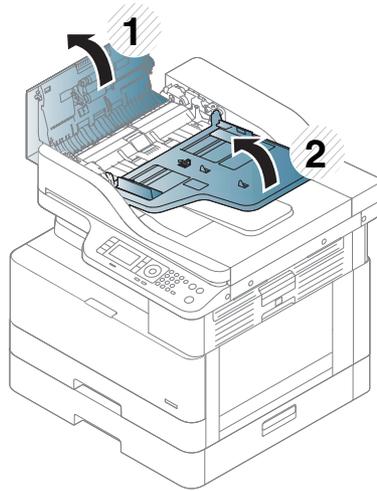


6. Close the document feeder cover.

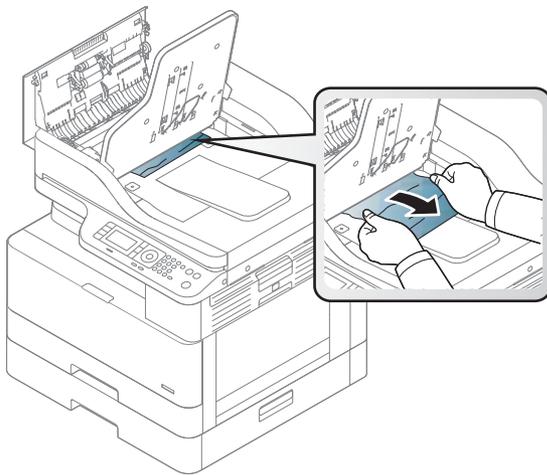


Original paper jam in exit area of scanner

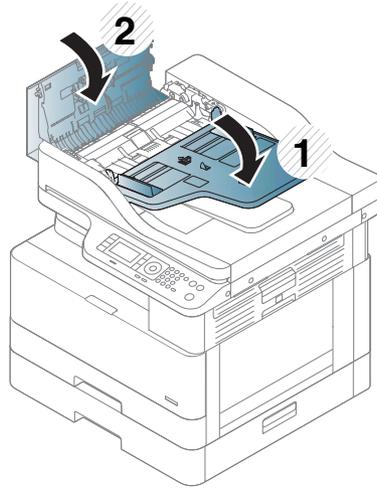
1. Open the Cover-Open and lift up the stacker.



2. Gently remove the original carefully from the document feeder.

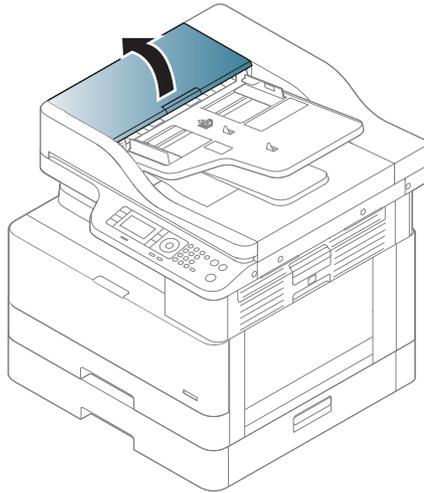


3. Close the Cover-Open and pull down the stacker.

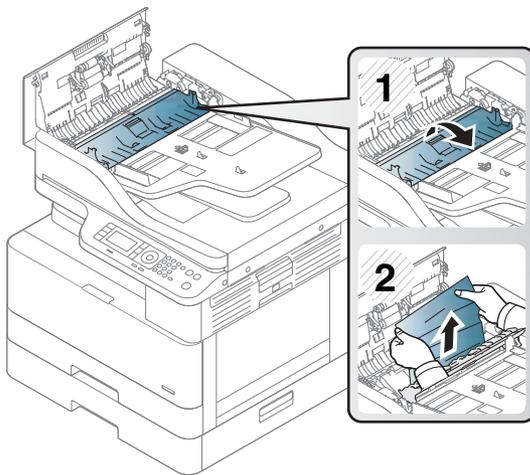


Original paper jam in scanner duplex path

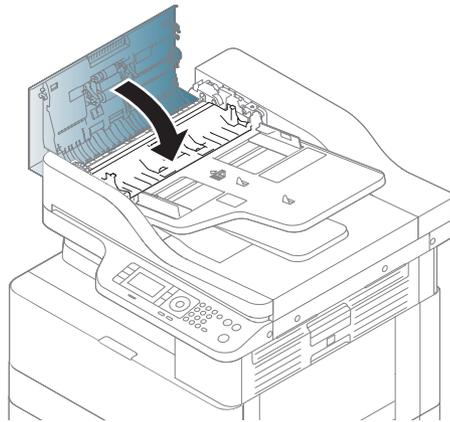
1. Open the document feeder cover.



2. Open the duplex jam cover. Pull the original document gently out of the document feeder.



3. Close the duplex jam cover and document feeder cover.



Firmware upgrades

To download the most recent firmware upgrade for the product, go to:

- In the US, go to www.hp.com/support/ljM433MFP or www.hp.com/support/ljM436MFP.
 - a. Select **Get drivers, Software, and Firmware**, and then select the appropriate product by name.



NOTE: More than one product model might be listed. Make sure to select the correct model so that the upgraded firmware supports all of the product 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 product model might be listed. Make sure to select the correct model so that the upgraded firmware supports all of the product 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.

Print the configuration page from an LCD control panel

1. From the [Ready to Copy](#) screen on the product control panel, open the following menus:
 - [Menu](#)
 - [System Setup](#)
 - [Report](#)
 - [Configuration](#)
2. Touch [Yes](#) to print.

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 product.

HP Embedded Web Server

 **NOTE:** The product 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 product to reinitialize.

1. Open an Internet browser window.
2. Enter the product IP address in the URL line.
3. Sign in using the Admin User name and password: `admin/admin`.
4. Select the **Maintenance** tab.
5. Click **Upgrade Wizard**.
6. Click **Browse** and browse to the location where the firmware upgrade file was downloaded to, and then select the firmware file—the file has an .hd file extension. Click the **Next** button to verify the firmware file. Click the **Next** 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.

7. After the product reinitializes, return to the **Maintenance** tab to verify the updated firmware version or print a configuration page and verify that the latest firmware version has been installed.

USB Firmware Upgrade

1. Download the `usblist2.exe` tool from the same location used to download the firmware from `hp.com`.
2. Connect a computer to the product with a USB cable.
3. Turn the product off.
4. Press the **Stop** key on the control panel and turn on the product while still pressing the **Stop** key until the **Download Mode Press Stop or Cancel Key** message displays.
5. Press the **Stop** key until the text **Wait Image...** displays on the control panel.
6. From a command prompt on your computer, browse to the folder containing the `usblist2.exe` tool and the firmware you are upgrading.
7. At the command prompt type `usblist2 <firmware_filename>`, and then press enter.
8. The product automatically turns off and then turns back on as part of the upgrade process.
9. After the product reinitializes, open the **Maintenance** tab on the EWS or print a configuration page and verify that the latest firmware version is installed.

Tech Mode

Overview

In service (Tech) mode, the technician can check the printer and perform various tests to isolate the cause of a malfunction. While in Tech mode, the printer still performs all normal operations.

Entering Tech mode

To enter Tech mode

1. Press “ Menu, + #, 1,0,0,4,3,6,1,6, Menu” in sequence
2. When “Tech Menu” is displayed, press the OK button.

Tech mode menu



NOTE: Some menu items may not appear on the display depending on the options or models.

Depth1	Depth2	Depth3	Depth4
Information	Report	Configuration	
		Supplies Information	
		Usage Counter	
		Error Information	
Maintenance Counts	Clear Counts	Enter Passcode	Document feeder Scan
			Platen scan
			Developer
			Fuser
			Transfer Roller
			MP Tray 1 Roller
			MP Tray 1 Friction Pad
			Tray 3 Roller
			Tray 3 Friction Pad
			MP Roller
			MP Friction Pad
			Document feeder roller
Document feeder rubber pad			
Diagnostics	Engine	NVM Initialize	
		NVM Read/Write	
		Test Routines	
	Scanner	NVM Read/Write	

Depth1	Depth2	Depth3	Depth4
		Test Routines	
		Shading Test	Shading&Print
			Print
		Scan Aging	
	Print Adjustment	Image Position	All
			Tray 2
			Tray 3
			MP Tray 1
		Print Test Pattern	A3
			A4
			Ledger
			Letter
	Copy Adjustment	Image Position	All
			Tray 2
			Tray 3
			MP Tray
	Scan Area Adjustment	Automatic Adjustment	
		Manual Adjustment	Image Position
			Magnification
	Document feeder Adjustment	Automatic Adjustment	
		Manual Adjustment	Image Position
			Magnification
	System	Switch Test	
Service Functions	Clear All Memory		
	Clear Admin Password	Yes/No	
	Engine Footer	Off	
		On	
	F/W Upgrade	Off	
		On	
	Part Replacement Alert	OPC unit	Off
			On
		Fuser	Off
			On
	EIUL	Off	

Depth1	Depth2	Depth3	Depth4
		On	
	TC Init.	Initialize Now?	
	Low Alert Level	Toner	[1-30]%
		OPC unit	[1-30]%
	Count of Large Page	1 Count Up	
		2 Count Up	

Tech Mode Menu description

Information > Report

- Configuration**
 Displays the current printer status for software version, hardware version, paper setting, etc.
- Supplies Info**
 Displays consumable unit life status and toner usage status.
- Usage Counter**
 Contains the total number of pages printed.
- Error info**
 Displays various kinds of errors which can occur in printer. It also stores a historical error count of how many errors occurred.

Maintenance

- Clear Counts**
 This function resets the count information for the selected item.
 After replacing the corresponding maintenance part, execute this menu.

Diagnostics > Engine

- NVM Initialize**
 This function resets the count information for the selected item.
- NVRAM Read/Write**
 This menu can change a configuration value for engine firmware.

Table 3-1 NVRAM Read/Write

Code	LCD	Meaning
103-0031	0031-Registration Curl On	Buckle Control:Registration On Curl
103-0032	0032-Dup Curl On1	Buckle Control:Duplex Registration On Curl (x1)

Table 3-1 NVRAM Read/Write (continued)

Code	LCD	Meaning
105-0030	0030-MHV DC K	Charger HV Black DC Duty
106-0030	0030-Deve DC K	Deve DC Black
106-0070	0070-Deve VPP K	Deve VPP Black
107-0030	0030-THV K	Transfer1 HV Black Duty
107-0120	0120-Saw Plate	Saw Plate Duty
109-0010	0010-Print Temp	Target Temperature during run mode.
110-0070	0070-LD Power K	Black LD Power at Normal Speed
111-0030	0030-Toner Vcon K	Toner Vcon Black
111-0170	0170-Toner Tgt K	Black target TC sensor value

- **Test Routines**

This menu can perform the operation test for the main components.

Code	LCD	Meaning	State Displayed
100-0000	0000-Main BLDC	Main BLDC Motor is On/Off	On[Off]
100-0001	0001-Main Slow	Main BLDC Motor Slow On/Off	On[Off]
100-0010	0010-Main BLDC Rdy	Detect if Main BLDC Motor runs at normal speed	High[Low]
100-0120	0120-Exit Mot Fwd	Exit Motor Forward Fast On/Off	On[Off]
100-0130	0130-Exit Mot Slow	Exit Motor Forward Slow On/Off	On[Off]
100-0131	0131-Exit Mot Bwd	Exit Motor Forward Backward On/Off	On[Off]
100-0132	0132-Exit Bwd Slow	Exit Motor Forward Backward Slow On/Off	On[Off]
100-0260	0260-SMPS Fan	Start/Stop SMPS. Fan run	On[Off]
101-0000	0000-MP Feed Clutch	Engages drive to pickup a paper from bypass Tray(MP Tray).	On[Off]
101-0010	0010-Tray 2 Pickup	Engages drive to pickup a paper from Multipurpose Tray1.	On[Off]
101-0020	0020-Tray 3 Pickup	Engages drive to pickup a paper from tray2. (Optional)	On[Off]
101-0050	0050-Registration	Engages drive to registration rolls.	On[Off]
101-0130	0130-T3 Feed Mot	T3 Feed Motor On/Off	On[Off]
101-0131	0131-T3 Feed Slow	T3 Feed Motor Slow On/Off	On[Off]

Code	LCD	Meaning	State Displayed
102-0010	0010-Tray 2 Empty	Detect when paper is in Tray 2.	High[Low]
102-0080	0080-Tray 3 Empty	Detect when paper is in tray2.	High[Low]
102-0280	0280-MP Empty	Detect when paper is in Bypass Tray (MP Tray).	High[Low]
102-0300	0300-T3 Feed Sens	Detect when a paper is at T3 Feed sensor. (optional)	High[Low]
102-0310	0310-Tray 3 Door	Detect when T3 is closed.	Closed[Opened]
102-0360	0360-Registration Sens	Detect when a paper is at registration. sensor.	High[Low]
102-0370	0370-Exit Sens	Detect when a paper is at Exit. sensor.	High[Low]
105-0030	0030-K MHV Bias	Black MHV bias voltage on at normal drive level	On[Off]
105-0070	0070-K MHV Bias R	Black Detect what the MHV value is on the MHV Roller	Numeric 3 digits
106-0030	0030-K Dev Bias	Black Dev bias voltage on at normal drive level	On[Off]
107-0030	0030-K THV Bias	Black THV bias voltage on at normal drive level	On[Off]
107-0031	0031-K THV- Bias	Black THV bias voltage on at normal drive level	On[Off]
107-0070	0070-K THV Bias R	Detect what the THV value is on the THV Roller	Numeric 3 digits
107-0110	0110-Detach Bias	Detach bias voltage on at normal drive level	On[Off]
107-0160	0160-Erase Lamp	Erase Lamp 1	On[Off]
109-0000	0000-Temp A	Detect what the temperature A is on fuser.	Numeric 3 digits
109-0010	0010-Temp B	Detect what the temperature B is on fuser.	Numeric 3 digits
109-0013	0013-Outer Temp	Outer Temperature	Numeric 3 digits
109-0014	0014-Humidity	Humidity	Numeric 3 digits
109-0030	0030-Fuser Mot Fwd	Fuser Motor Forward On/Off	On[Off]
109-0032	0032-Fuser Fwd Slow	Fuser Motor Forward Slow On/Off	On[Off]
109-0040	0040-Fuser Fan Run	Fuser Fan Motor On/Off	On[Off]
110-0000	0000-LSU Mot1 Rdy	Detect if LSU motor1 runs at normal speed.	High[Low]
110-0060	0060-LSU Mot1 Run	LSU Motor1 On/Off	On[Off]
110-0110	0110-LD Power4	LSU LD4 Power On/Off (black)	On[Off]

Code	LCD	Meaning	State Displayed
110-0170	0170-LSU HSync4	Detect LSU HSync4 (black)	High[Low]
111-0030	0030-Supply Mot K	Toner Dispense(Supply) Motor On/Off	On[Off]
111-0070	0070-K Tnr Sensor	TC sensor in developer tank.	Numeric 3 digits

Diagnostics > Scanner

- **NVRAM Read/Write**

05-Document > 0000-Pick up Count: This menu shows a document feeder pickup roller lift count.

- **Test Routines**

This menu can perform the operation test for the scan components.

Depth1	Depth2	Meaning	Related Error or Trouble
05-Document	0000-Length Sen1	Document feeder Document Length Sensor 1 Test	Original Paper Size Detection Trouble
	0001-Length Sen2	Document feeder Document Length Sensor 2 Test	Original Paper Size Detection Trouble
	0020-Cov open Sen	Document feeder cover open Sensor Test	U3-4210, cover open/Close Trouble
	0040-Detect Sen	Document feeder Document Detect Sensor Test	Paper Detection Trouble
	0060-Sim. RegiSen	Document feeder Simplex Registration Sensor Test	U3-3211, U3-3213, U3-3214, Doc Jam Trouble
	0070-Scan Sen	Document feeder Scan Position Sensor Test	U3-3311, U3-3313, U3-3314, Doc Jam Trouble
	0080-Exit Sen	Document feeder Exit Sensor Test	U3-3711, U3-3713, U3-3714, Doc Jam Trouble
	0081-Exit IDLE Sen	Document feeder Exit Idle Sensor Test	U3-3711, U3-3713, U3-3714, Doc Jam Trouble
	0090-Pick up Clutch	Document feeder Pick up Clutch Test	U3-3211, U3-3213, U3-3214, Doc Jam Trouble
	0100-Registration Clutch	Document feeder Registration Clutch Test	U3-3211, U3-3213, U3-3214, Doc Jam Trouble
	0110-Mot Fwd	Document feeder Motor Forward Test	BLDC Motor Trouble
	0111-Mot Bwd	Document feeder Motor Backward Test	BLDC Motor Trouble
	0120-Width Sen1	Document feeder Width Sensor 1 Test	Original Paper Size Detection Trouble
	0121-Width Sen2	Document feeder Width Sensor 2 Test	Original Paper Size Detection Trouble
0122-Width Sen3	Document feeder Width Sensor 3 Test	Original Paper Size Detection Trouble	

Depth1	Depth2	Meaning	Related Error or Trouble
	0210-Jig Low Sim.	Document feeder Jig Test (Low Speed/Simplex)	Paper Path Trouble
	0220-Jig Low Dup.	Document feeder Jig Test (Low Speed/Duplex)	Paper Path Trouble
	0230-Jig High Sim.	Document feeder Jig Test (High Speed/Simplex)	Paper Path Trouble
	0240-Jig High Dup.	Document feeder Jig Test (High Speed/Duplex)	Paper Path Trouble
06-Scanner	0000-Orig Det Sen1	Flatbed Original Size Detect Sensor 1 Test	Menu exists, but not working (not supported in HP LaserJet MFP M436n/M436dn printers)
	0001-Orig Det Sen2	Flatbed Original Size Detect Sensor 2 Test	Menu exists, but not working (not supported in HP LaserJet MFP M436n/M436dn printers)
	0010-Cov open Sen1	Flatbed cover open Sensor 1 Test	Cover open/close trouble
	0011-Cov open Sen2	Flatbed cover open Sensor 2 Test	Menu exists, but not working (not supported in HP LaserJet MFP M436n/M436dn printers)
	0020-Plat Mot Fwd	Flatbed Motor Forward Test	S3-3122, Scan Motor Trouble
	0030-Plat Mot Bwd	Flatbed Motor Backward Test	S3-3122, Scan Motor Trouble

- **Shading Test**

The function is to get the optimum scan quality by the specific character of the CIS (Contact Image Sensor). If the copy image quality is poor, perform this function to check the condition CIS unit.



If "RESULTS" is not OK, check the scanner unit. If the scanner unit has a defective part, replace it or the platen unit.

Adjustment > Print Adjustment > Image Position

This menu adjusts the printed image position on paper in print engine manually.

- Leading Edge: Top margin, As the value increases, the image moves from top to bottom down.
- Side Edge: Left margin, As the value increases, the image moves from left to right.

How to adjust :

1. Enter "Print Test Patterns" menu, choose the paper size and print the pattern.
2. Set the amount of image position you want to adjust.
3. Enter Print Test Patterns menu, choose the paper size and print the pattern again and compare with the previously printed output should make sure that the adjustment well.

Tray	Adjustment item	Value range (unit: 0.1 mm)
All	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm
Multipurpose Tray 1	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm
Tray 3	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm
MP Tray	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm

Adjustment > Print Adjustment > Print Test Patterns

This menu prints the test pattern for A3, A4, Ledger, Letter.

Adjustment > Copy Adjustment > Image Position

This menu adjusts the copy image position for All or each tray.

Tray	Adjustment item	Value range (unit: 0.1 mm)
All	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm

Tray	Adjustment item	Value range (unit: 0.1 mm)
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm
Multipurpose Tray 1	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm
Tray 3	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm
Multipurpose Tray 1	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm

Scan Area Adjustment

- **Automatic Adjustment**

This menu executes the scan area adjustment automatically.

- **Manual Adjustment**

This menu executes the scan area adjustment manually.

- Image Position: This menu moves the leading edge or side edge of the image. [Range: -6.0~6.0 mm/unit: 0.1 mm]
- Magnification: This menu adjusts the image size to vertical direction. [Range: 98.5~101.5%]

Document feeder area adjustment

- **Automatic Adjustment**

This menu executes the scan area adjustment automatically.

- **Manual Adjustment**

This menu executes the scan area adjustment manually.

- Image Position: This menu moves the leading edge or side edge of the image. [Range: -6.0~6.0 mm/unit: 0.1 mm]
- Magnification: This menu adjusts the image size to vertical direction. [Range: 98.5~101.5%]

Diagnostics > System

- **Switch Test**

Use this feature to test all keys on the operation control panel. The result is displayed on the LCD window each time you press a key.

Service Function

- **Clear All Mem**

The function resets the system to factory default settings. This function is used to reset the system to the initial value when the product is functioning abnormally. All the values are returned to the default values, and all the information, which was set by the user, will be erased.

Items	Setting Value Clear
Copy Setup	0
Print Setup	0
System Setup	0
Network	X
Usage Count	X
Error Information	X
Scan/Copy/Print Adjustment in Tech Mode	X
Country/Region Change	0
Service Functions in Tech Mode	0



NOTE: Always perform a memory clear after replacing the main board. Otherwise, the system may not operate properly.

- **Clear Admin Password**

This menu resets the Admin password.

- **Engine Footer**

This function is for monitoring of the engine status. If you perform this function, at printing, the setting value for engine is shown on the bottom of the printed page.

- **F/W Upgrade**

The function is to upgrade the firmware by using “usblist.exe” file. Before updating firmware, you must select “On” for this menu.

- **EIUL (End of Image unit Life)**

The function is to set the printer hard stop when the drum life is expired.

- Off: No printer stop @ end of drum life
- On: Machine stop @ end of drum life

- **TC Init.**

- **Initialize Now?**

- **Low Alert Level**

- **Toner**

- The function is to set up the time to inform toner low status. This function can provide user convenience for replacing the toner cartridge.

- **OPC unit**

- The function is to set up the time to inform imaging unit low status. This function can provide user convenience for replacing the imaging unit.

- **Count of Large Page**

This function sets count of large page, such as A3 and ledger size, to 1 count or 2 count of the total count. For example, the total use of 100 A4 impressions and 100 A3 impressions will become 200 impressions if the configuration is set to "1 Count Up" while the total will be 300 impressions if the configuration is set to "2 Count Up."

Control Panel Error Messages

Messages appear on the control panel display to indicate the printer's status or errors.



NOTE: Some messages may not appear on the display depending on the options or models.

11-2T11, Paper mismatch Tray 2 Load [A4] [Plain] Continue Ⓞ Cancel X

Description

Paper in tray 2 is not proper.

Recommended action

If you want to print the current paper, press "OK". If not, select "X" and change the paper.

11-2T21, Paper mismatch Tray 3 Load [A4] [Plain] Continue Ⓞ Cancel X

Description

Paper in tray 3 is not proper.

Recommended action

If you want to print the current paper, press "OK". If not, select "X" and change the paper.

11-2T61, Paper mismatch Tray 1 Load [A4] [Plain] Continue Ⓞ Cancel X

Description

Paper in tray 1 is not proper.

Recommended action

If you want to print the current paper, press "OK". If not, select "X" and change the paper.

A1-1110, Error: #A1-1110 / Motor Failure: #A1-1110. Turn off then on. Call for service if the problem persists

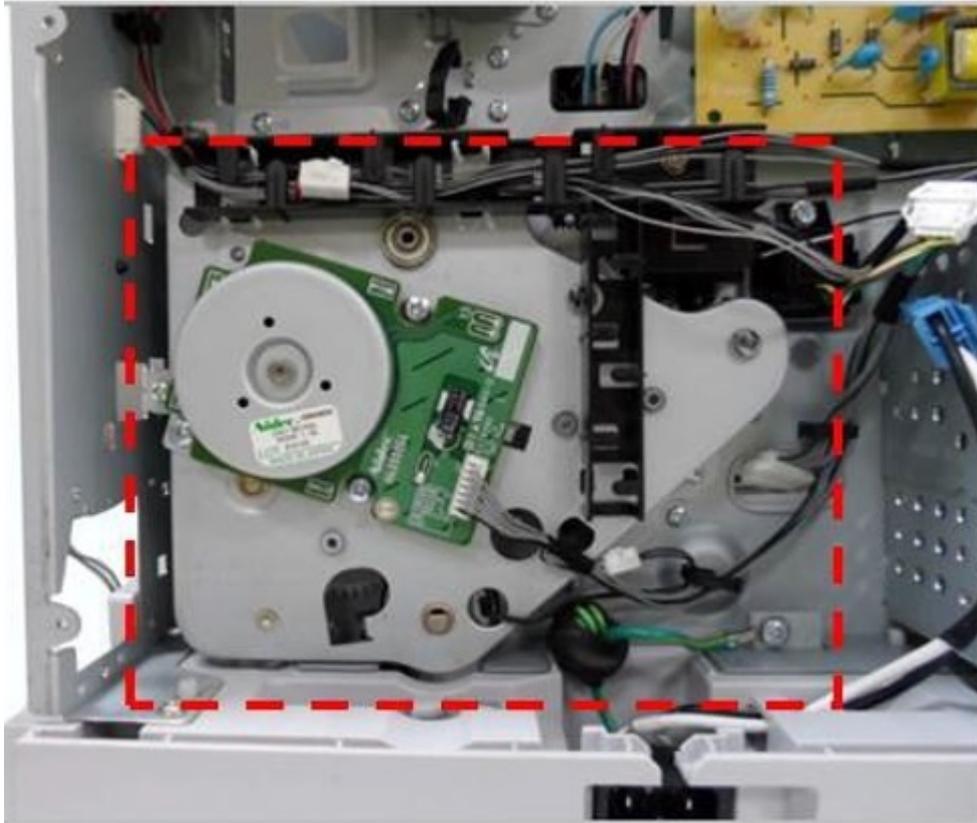
Description

The Main Motor, its harness, or the Main Board PBA is defective.

Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. Turn the printer off.
4. Remove the rear cover.
5. Check the connection the motor connector on main board is connected properly. Reconnect the harness.

6. If the connection is OK, replace the Main Motor (HP Part #: JC31-00145A).



7. If the problem persists, replace the Main Board PBA:

Model	Main Board PBA, HP Part #
M433a	JC92-02607K
M436n/M436dn	JC92-02607G
M436nda	JC92-02607H

A1-5513, Error: #A1-5513 / Motor Failure: #A1-1110. Turn off then on. Call for service if the problem persists

Description

The motor related to toner supply has a problem.

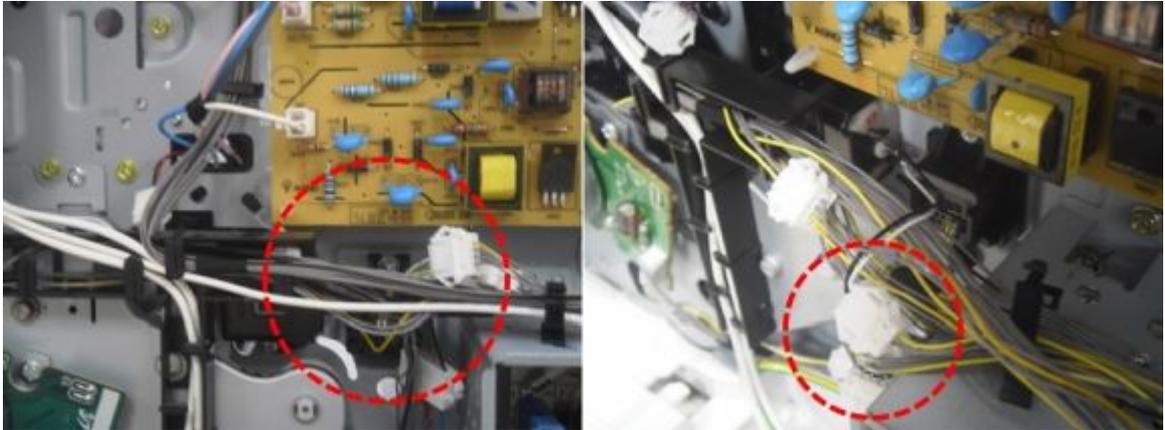
Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. Open the front cover. If the toner pipe is blocked, open it.
4. Check the seal is removed on toner and cartridge drum.
5. Turn the printer off then on. If the error persists, check the following steps.

6. From the control panel, enter Tech Mode and select the toner supply motor test:

[Menu > # > 10043616 > Menu > Tech Menu > Diagnostics > Engine Diagnostics > Engine Test Routines > 111-0030](#)

7. If the motor does not operate, measure the motor power with DVM.



- a. If 24V power is supplied, replace the Toner Drive Motor (HP Part #: JC31-00078A).
- b. If 24V power is not supplied, check the LVPS-SMPS Power Supply and Main Board PBA.
- c. If 24V power is not generated, replace the LVPS-SMPS Power Supply (HP Part #: JC44-00223A) **AND** Main Board PBA:

Model	Main Board PBA, HP Part #
M433a	JC92-02607K
M436n/M436dn	JC92-02607G
M436nda	JC92-02607H



- d. If the control signal is abnormal, replace the Main Board PBA:

Model	Main Board PBA, HP Part #
M433a	JC92-02607K

M436n/M436dn

JC92-02607G

M436nda

JC92-02607H

A2-1210, Error: #A2-1210 / Fan Failure: #A2-1210. Turn off then on. Call for service if the problem persists

Description

SMPS fan does not operate.

Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. Turn the printer off.
4. Check if the SMPS fan connector is connected to the main board correctly.
5. If the connection is OK, replace the SMPS Fan (HP Part #: JC31-00152B).

A2-2110, Error: #A2-2110 / Fan Failure: #A2-2110. Turn off then on. Call for service if the problem persists

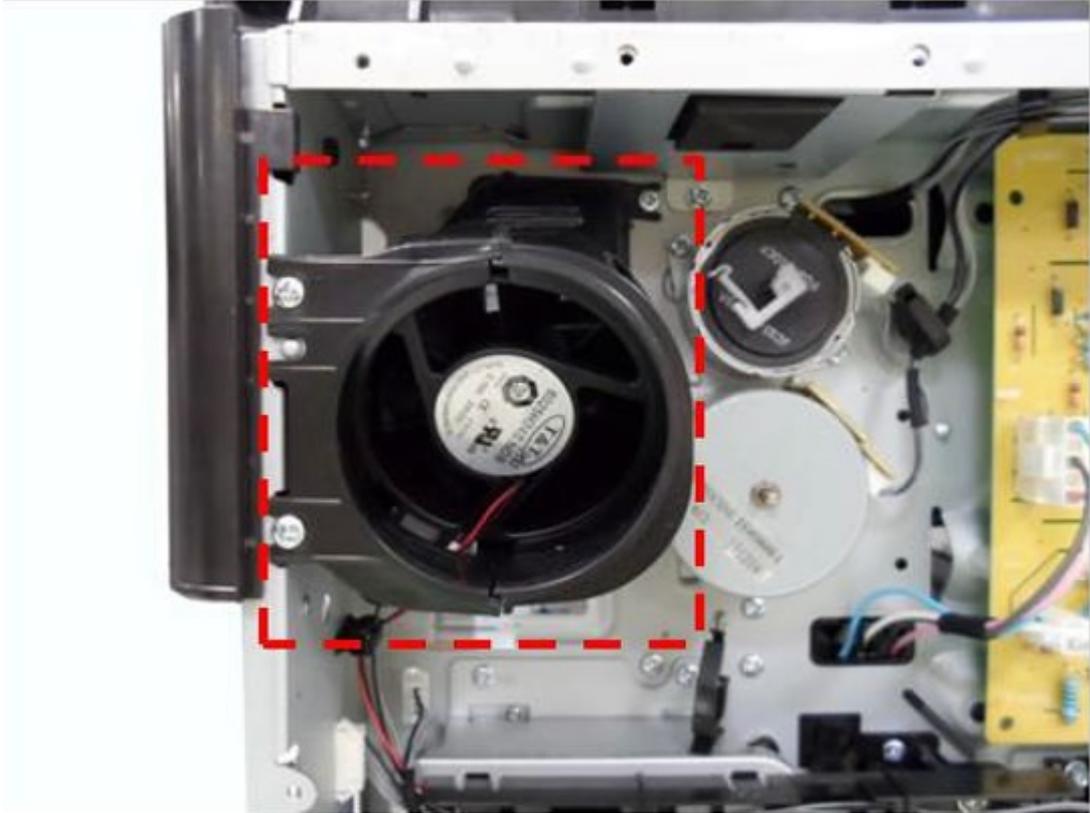
Description

Fuser fan does not operate.

Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. Turn the printer off.
4. Remove the rear cover.
5. Check if the fuser fan connector is connected to the main board correctly.

6. If the connection is OK, replace the Fuser Fan (HP Part #: JC31-00160A).



A3-3311, A3-3312, A3-3320, A3-3411, A3-3412 Sensor errors

Description

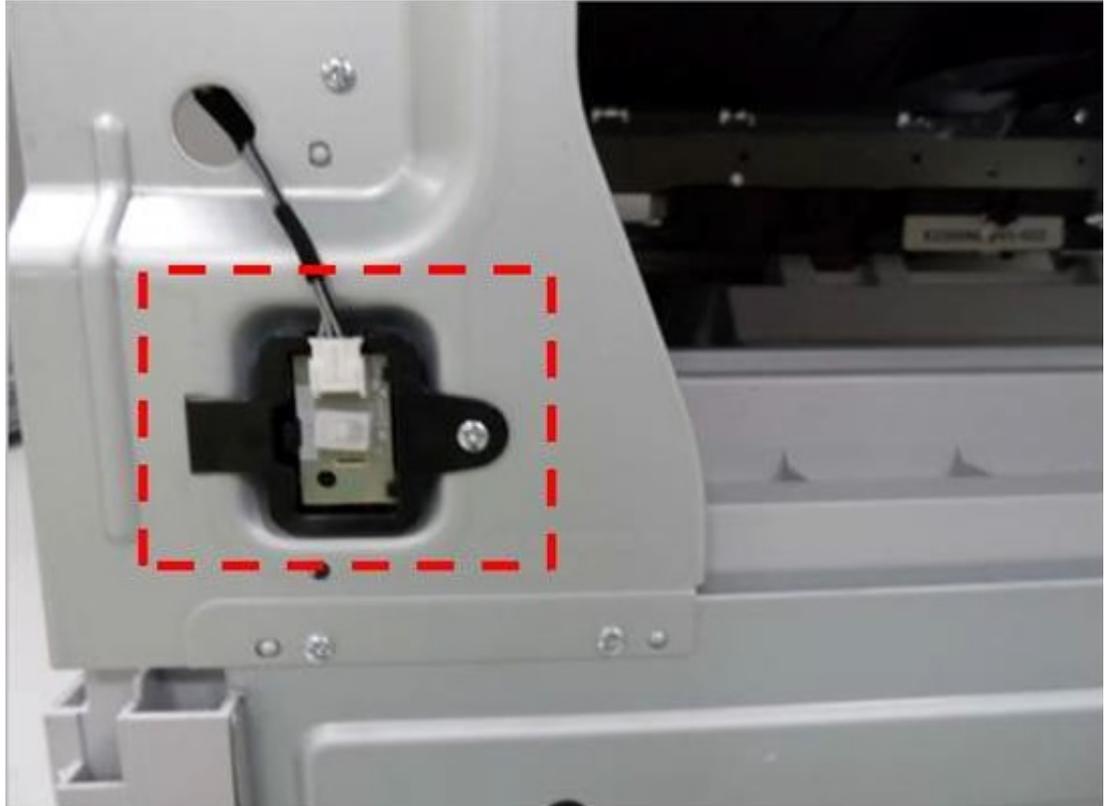
- **A3-3311**, Error: #A3-3311 / Sensor Failure: #A3-3311. Turn off then on. Call for service if the problem persists
- **A3-3312**, Error: #A3-3312 / Sensor Failure: #A3-3312. Turn off then on. Call for service if the problem persists
- **A3-3320**, Not proper Room Temp / The room temperature is not suitable for this set use. Please adjust room temperature
- **A3-3411**, Error: #A3-3411 / Sensor Failure: #A3-3411. Turn off then on. Call for service if the problem persists
- **A3-3412**, Error: #A3-3412 / Sensor Failure: #A3-3412. Turn off then on. Call for service if the problem persists

Temperature/Humidity sensor is defective.

Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. Remove the left cover.

4. Measure the resistance value of the connector at both ends.
 - If the values is not in $10K\Omega \pm 1\%$ (@ 25 °C), replace the Temp./humidity Sensor (HP Part #: JC66-03969A).



5. If the sensor is normal, replace the Main Board PBA:

Model	Main Board PBA, HP Part #
M433a	JC92-02607K
M436n/M436dn	JC92-02607G
M436nda	JC92-02607H

C1-1110, C1-111A Toner errors

Description

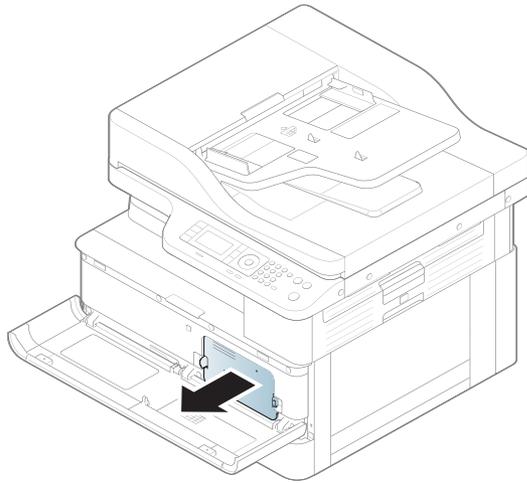
- **C1-1110**, Prepare new toner. / Prepare new toner cartridge
- **C1-111A**, Shake toner cart. / Shake toner cartridge and then install. Replace toner cartridge if the problem persists

Toner remaining is 5 ~ 30% of its life.

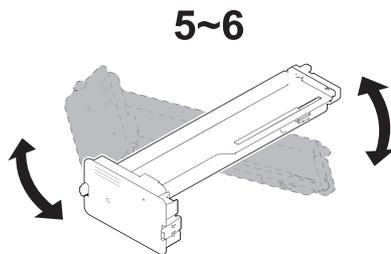
Recommended action

1. Check the life remaining of the toner cartridge.
2. Open the front cover.

3. Take out the toner cartridge.



4. Shake the toner cartridge horizontally to distribute the toner evenly inside the cartridge.



5. Reinstall the toner cartridge.
6. If the toner cartridge yield is expired, have the customer purchase a new toner cartridge (HP Part #: CF256A).

C1-1140, C1-1160, C1-1170 Toner errors

Description

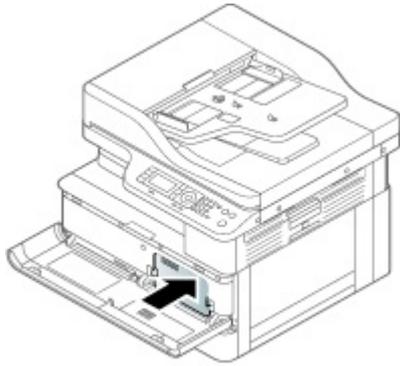
- **C1-1140**, Replace new toner. / End of life, Replace with new toner cartridge
- **C1-1160**, Replace new toner. / Replace with new toner cartridge
- **C1-1170**, Replace new toner. / End of life, Replace with new toner cartridge

The toner cartridge is at the end of its life.

Recommended action

1. Check the life remaining of the toner cartridge.

2. If the toner cartridge yield is expired, have the customer purchase a new toner cartridge (HP Part #: CF256A).



C1-1313, C1-1314 Errors

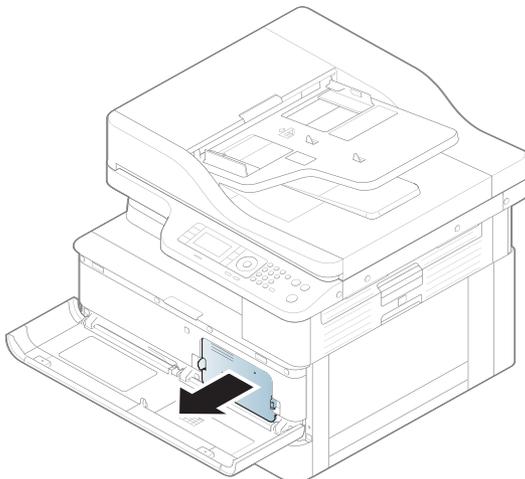
Description

- **C1-1313**, Shake toner cart. / Shake toner cartridge and then install. Call for service if the problem persists
- **C1-1314**, Remove seal tape / Did not supply enough toner. Remove seal tape of toner cartridge or shake it. Call for service if the problem persists

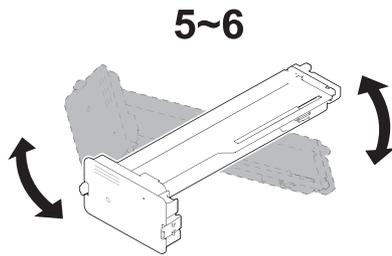
Toner supply is inefficient or abnormal.

Recommended action

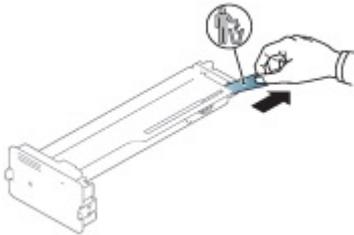
1. Turn the printer off.
2. Open the front cover.
3. Take out the toner cartridge.



4. Shake the toner cartridge horizontally to distribute the toner evenly inside the cartridge.



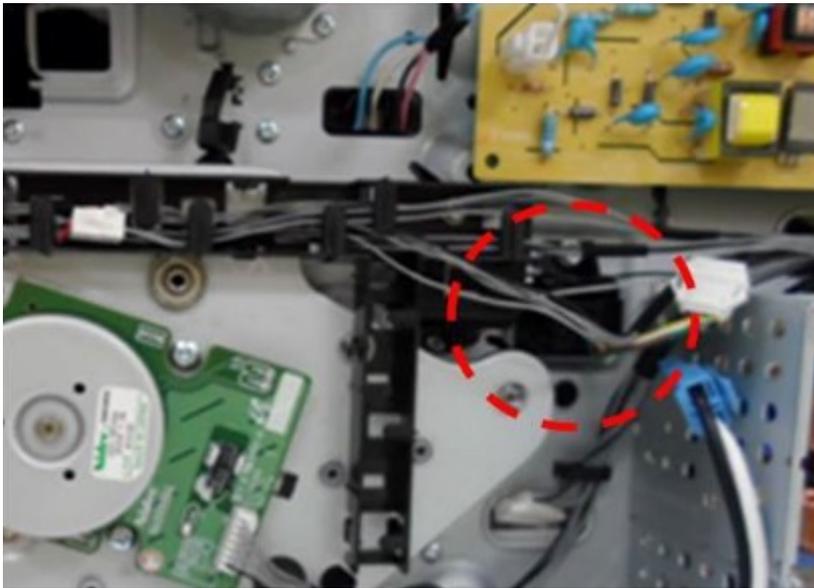
5. Check if the seal tape is removed. If not, remove it.



6. If the error persists, send an on-site technician to perform the remaining steps.
7. Remove the rear cover.
8. From the control panel, enter Tech Mode and run the toner drive motor test:

[Menu > # > 10043616 > Menu > Tech Menu > Diagnostics > Engine > Test Routines > 111-Toner > 0030-Supply Mot K](#)

- ▲ If the test fails, replace the Toner Drive Motor (HP Part #: JC31-00078A).



9. If the problem persists, replace the toner cartridge (HP Part #: CF256A-67901).

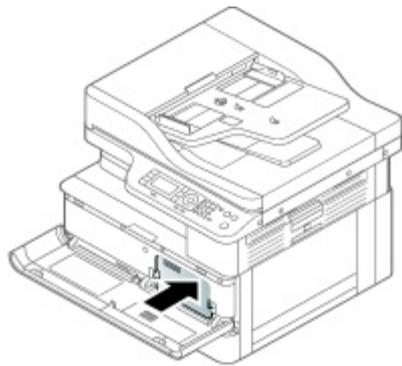
C1-1411 Toner Not Installed / Toner cartridge is not installed. Install it

Description

The toner cartridge is not installed or not detected.

Recommended action

1. Open the front cover. Check if the toner cartridge is installed.
2. Remove and reinstall the toner cartridge.
3. If the error persists, check if the toner cartridge modular jack is contaminated or deformed.
 - ▲ If the jack is damaged, replace the cartridge (HP Part #: CF256A-67901).



4. Replace the toner cartridge with a new one (HP Part #: CF256A-67901).

C1-1512, Toner Not Compatible / Toner cartridge is not compatible. Check guide

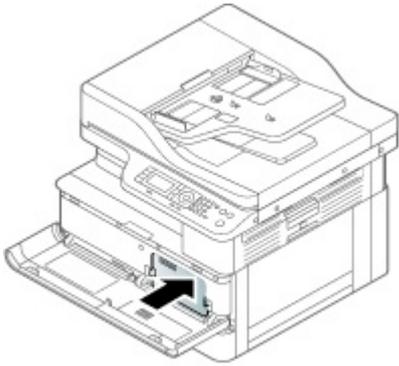
Description

Toner cartridge is not compatible.

Recommended action

1. Open the front cover. Check if the toner cartridge is installed.
2. Remove the toner cartridge and re-install.
3. If the error persists, remove the toner cartridge.

4. If the toner cartridge is not HP genuine, have the customer purchase a new toner cartridge (HP Part #: CF256A).



C1-1711, C1-1712 Errors

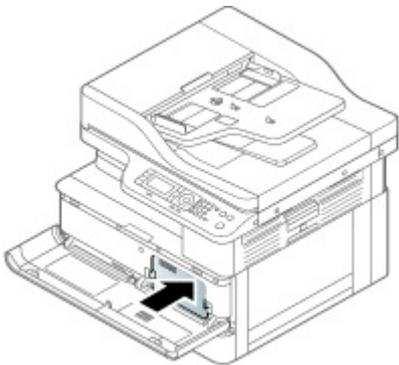
Description

- C1-1711, Error: #C1-1711 / Toner Cart Failure: #C1-1711. Call for service
- C1-1712, Error: #C1-1712 / Toner Cart Failure: #C1-1712. Call for service

The toner cartridge is not installed or not detected.

Recommended action

1. Open the front cover. Check if the toner cartridge is installed.
2. Remove the toner cartridge and re-install.
3. If the error persists, check if the toner cartridge modular jack is contaminated or deformed.
 - ▲ If the jack is damaged, replace the cartridge (HP Part #: CF256A-67901).



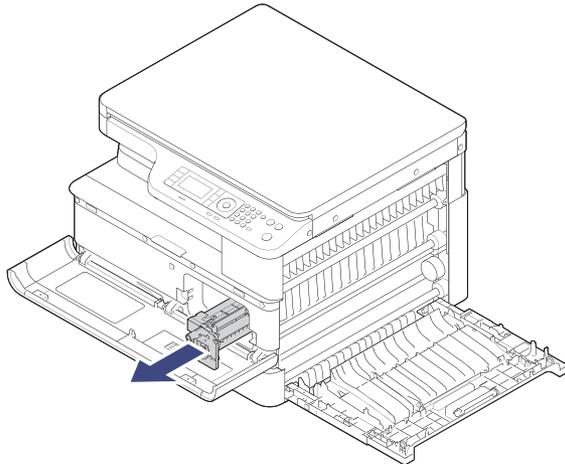
C3-1110, Prepare IMG. Unit / Prepare new imaging unit

Description

Imaging unit remaining is 5 ~ 30% of its life.

Recommended action

1. Check the life remaining of the drum unit.
2. If its life is at the end, turn the printer off and open the front cover.
3. Remove the toner cartridge.
4. Have the customer purchase a new Imaging Unit (HP Part #: CF257A).



C3-1140, C3-1150, C3-1170 Imaging unit errors

Description

- C3-1140, Replace IMG. Unit / End of life, Replace with new imaging unit
- C3-1150, Replace IMG. Unit / Replace with new imaging unit
- C3-1170, Replace IMG. Unit / End of life, Replace with new imaging unit

The imaging unit has almost reached the end of its life.

Recommended action

1. Check the life remaining of the Imaging Unit.

 **NOTE:** The life of the Imaging Unit is approximately 80k pages.

2. If its life is at the end, have the customer purchase a new Imaging Unit (HP Part #: CF257A).

C3-1312, C3-1411, C3-1414 Imaging unit errors

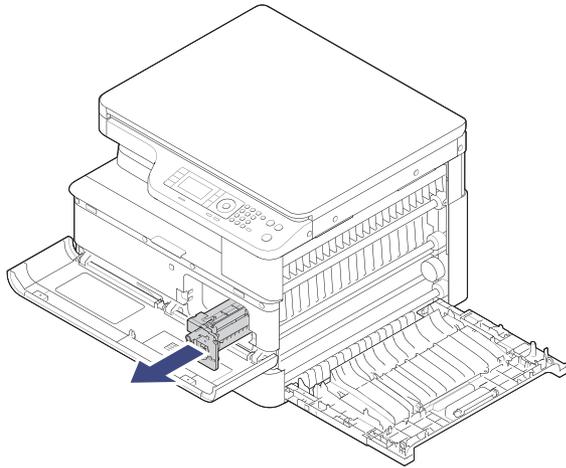
Description

- C3-1312, Error: #C3-1312 / Imaging Unit Failure: #C3-1312. Install IMG. Unit
- C3-1411, IMG. Not Installed / Imaging unit is not installed. Install the unit
- C3-1414, Error: #C3-1414 / Imaging Unit Failure: #C3-1414. Install imaging unit again

The imaging unit is not installed or not detected.

Recommended action

1. Open the front cover. Check if the imaging unit is installed.
2. Remove and reinstall the imaging unit.
3. If the error persists, check if the Imaging Unit connector is contaminated or deformed.
 - ▲ If the connector is damaged, replace the Imaging Unit (HP Part #: CF257-67901).
4. If the error persists, replace the Imaging Unit (HP Part #: CF257-67901).



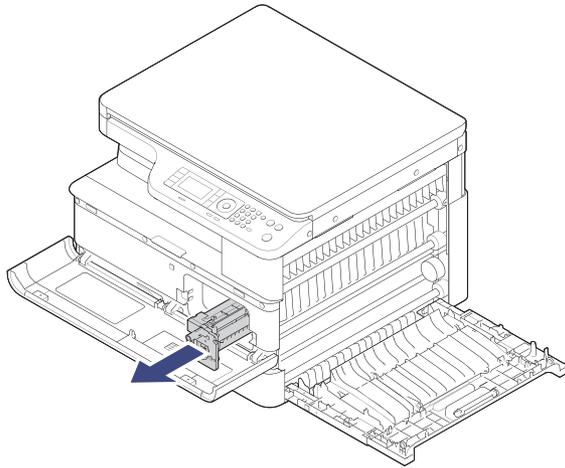
C3-1512, IMG. Not compatible / Imaging unit is not compatible. Check guide

Description

The imaging unit is not installed or not detected.

Recommended action

1. Open the front cover. Remove the toner cartridge.
2. Remove and reinstall the Imaging Unit.
3. Install the toner cartridge and close the front cover.
4. Check the part # of the installed Imaging Unit. (HP part numbers are CF257A and CF257-67901.)
 - ▲ If the Imaging Unit is not HP genuine, have the customer purchase a new Imaging Unit (HP Part #: CF257A).



C3-1711, C3-1712 Imaging unit errors

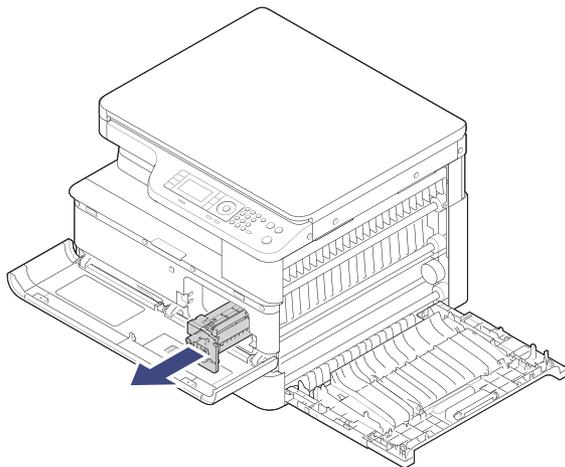
Description

- **C3-1711**, Error: #C3-1711 / Imaging Unit Failure: #C3-1711. Call for service
- **C3-1712**, Error: #C3-1712 / Imaging Unit Failure: #C3-1712. Call for service

The imaging unit is not installed or not detected.

Recommended action

1. Open the front cover. Check if the imaging unit is installed.
2. Remove and reinstall the Imaging Unit.
3. If the error persists, check if the Imaging Unit connector is contaminated or deformed.
 - ▲ If the connector is damaged, replace the Imaging Unit (HP Part #: CF257-67901).
4. If the error persists, replace the Imaging Unit (HP Part #: CF257-67901).



C9-2110, C9-2120, Prepare TR. Roller / Prepare with new transfer roller

Description

Transfer roller is at the end of its life.

Recommended action

1. Open the side cover.
2. Have the customer purchase a new Transfer Roller Kit (HP Part #: W7401-67901).



C9-2220, Error: #C9-2220 / TR Failure: #C9-2220. Install TR roller again

Description

Transfer roller is at the end of its life.

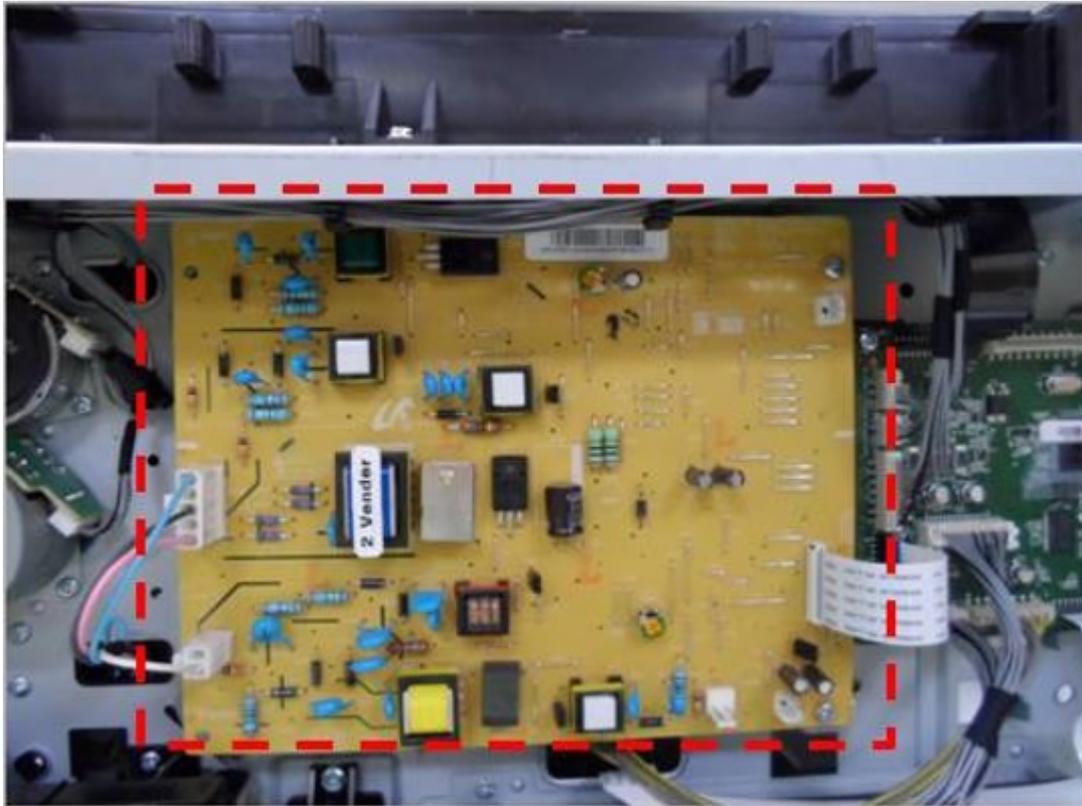
Recommended action

1. Open the side cover.

2. Have the customer purchase a new Transfer Roller Kit (HP Part #: W7401-67901).



3. If the error persists, send an on-site technician to replace the HVPS Board (HP Part #: JC44-00229A).



H1-1210, Paper jam in tray 2

Description

Paper jam has occurred in tray 2. (Pickup roller is worn out.)

Recommended action

1. Open the SCF right cover. Remove the jammed paper.
2. Remove tray 2. Remove the jammed paper.
3. Check if the pickup roller is worn out or contaminated.
4. Clean the pickup roller with a lint free cloth and water only.
5. If the error persists, send an on-site technician to replace the Pickup Roller and Friction Pad Kit (HP Part #: W7U01-67903).

H1-1220 Tray 2 door is open. Close it

Description

Tray 2 cassette is pulled out. Insert it properly.

Recommended action

1. Remove and insert tray 2 correctly.
2. If the message persists, send an on-site technician to perform the remaining steps.
3. Replace the tray 2 Photo Sensor (HP Part # 0604-01393).
4. If the message persists, replace the PBA Board, Secondary Cassette Feed (HP Part #: JC92-02511C).

H1-1230, Error: #H1-1230 / Input System Failure: #H1-1230. Check tray 3 connection

Description

Communication error has occurred between the copier and SCF.

Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. Disassemble the SCF unit.
4. Check if the interface cable on SCF main board is connected correctly.
5. If the error persists, replace the PBA Board, Secondary Cassette Feed (HP Part #: JC92-02511C).
6. Install the copier on the SCF unit.

H1-1252, H1-1254, Paper empty in tray 2 / Paper is empty in tray 3. Load paper

Description

Paper in tray 2 is empty or near empty. / The photo sensor is defective.

Recommended action

1. Remove tray 2 and load the paper.
2. If the message persists, send an on-site technician to replace the SCF Cassette Tray (HP Part #: JC90-01226B).

M1-1110, Paper jam in tray 1

Description

Paper jam has occurred in tray 1.

Recommended action

1. Open the side cover and check if a foreign substance or paper is jammed inside the unit.
2. Remove tray 1 and remove the jammed paper.

3. If the jam error occurs frequently, send an on-site technician to replace the Pickup Roller and Friction Pad Kit (HP Part #: W7U01-67903).



M1-1610, Paper jam in tray 1

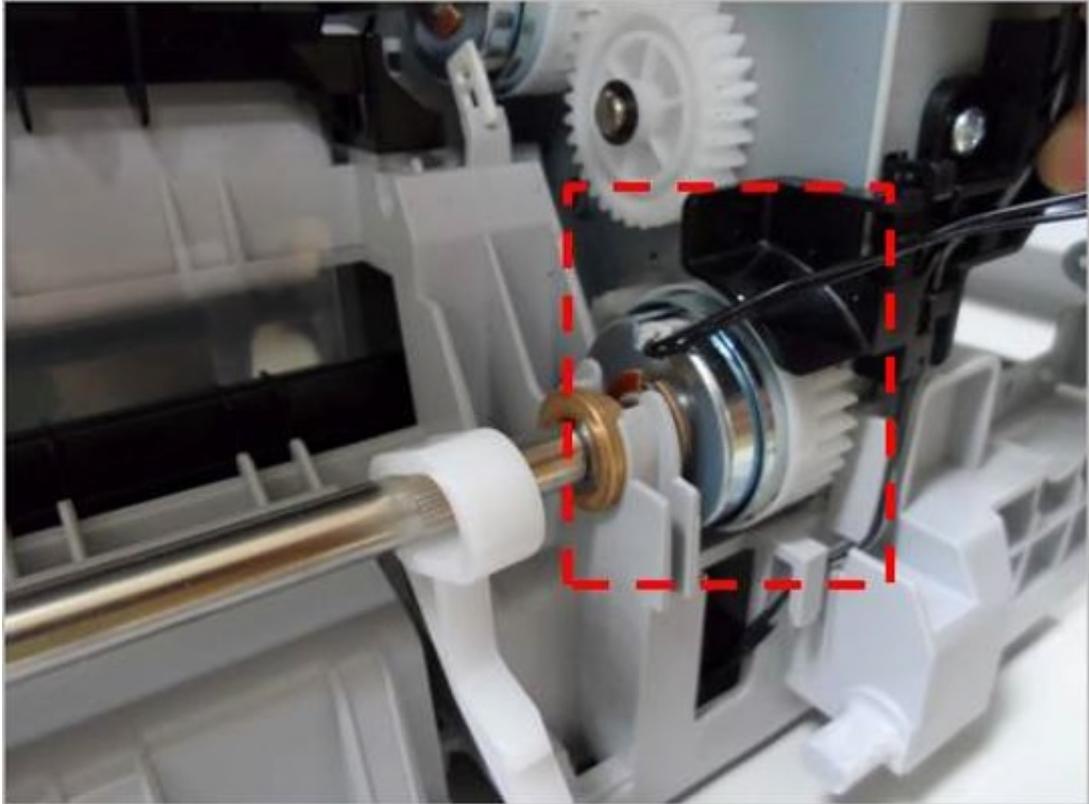
Description

Paper jam has occurred in tray 1.

Recommended action

1. Open the side cover and check if a foreign substance or paper is jammed inside the unit.
2. Remove the jammed paper from tray 1.
3. If the jam error occurs frequently, send an on-site technician to replace the Pickup Roller and Friction Pad Kit (HP Part #: W7U01-67903).

4. If the error persists, replace the Clutch (HP Part #: JC66-03983A).



M1-5112, M1-5113, Paper empty in tray 1 / Paper is empty in tray 1. Load paper

Description

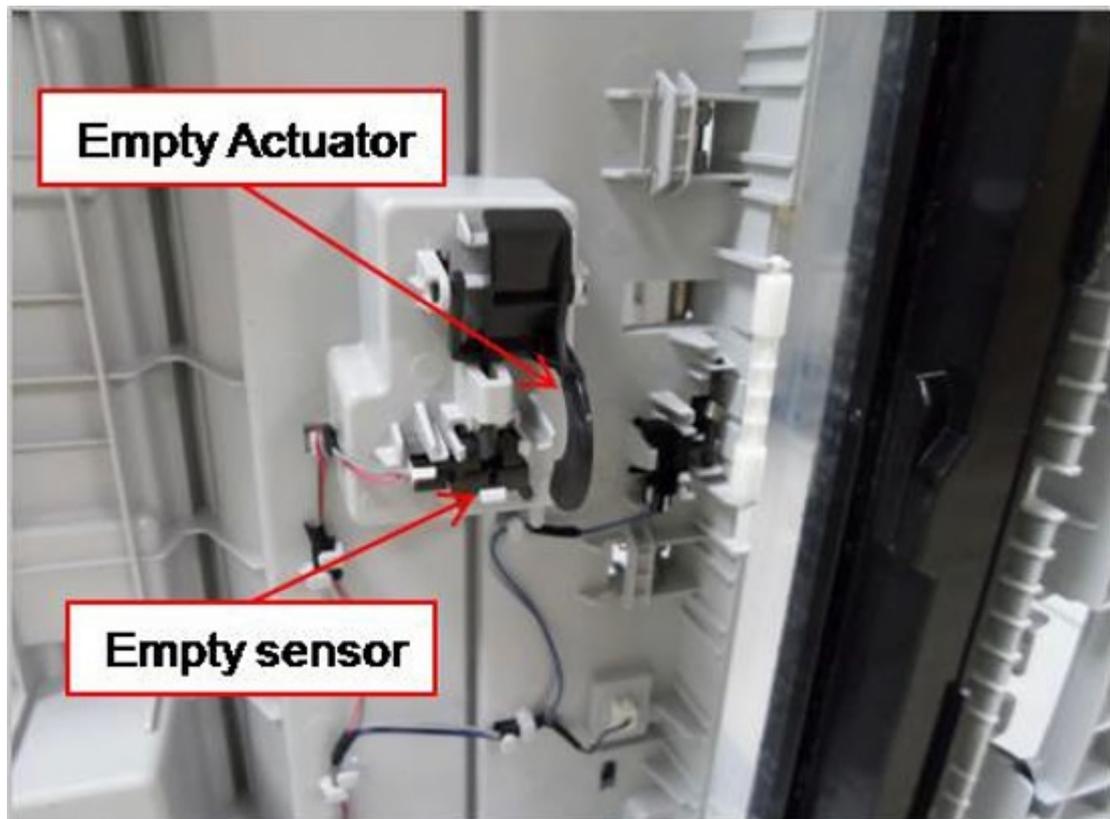
Paper in tray 1 is empty or almost empty. / The photo sensor is defective.

Recommended action

 **IMPORTANT:** Before following the instructions below, remove the toner cartridge and imaging unit. If not, toner will pour inside the printer.

1. Remove tray 1 and load paper.
2. If the message persists, send an on-site technician to perform the remaining steps.
3. Remove the tray 1 and stand the copier on its left side to see the bottom.

4. Actuate the Empty Sensor to see if it moves freely. Replace the Empty Sensor if needed (HP Part #: 0604-001393).



5. Check if the Empty Actuator is assembled correctly. If the actuator is defective, replace it (HP Part #: JC61-01350A).

M1-5120, All Trays Empty / Paper is empty in all trays. Load paper

Description

Paper in all trays is empty or near empty. / The photo sensor is defective.

Recommended action

Refer to “H1-1252, M1-5112, M1-5612” troubleshooting.

M1-5610, Paper Normal in Tray 1

Description

Paper in tray 1 is normal.

Recommended action

This message shows the printer can print the page from Tray 1 normally.

M1-5612, Paper empty in Tray 1. Load paper

Description

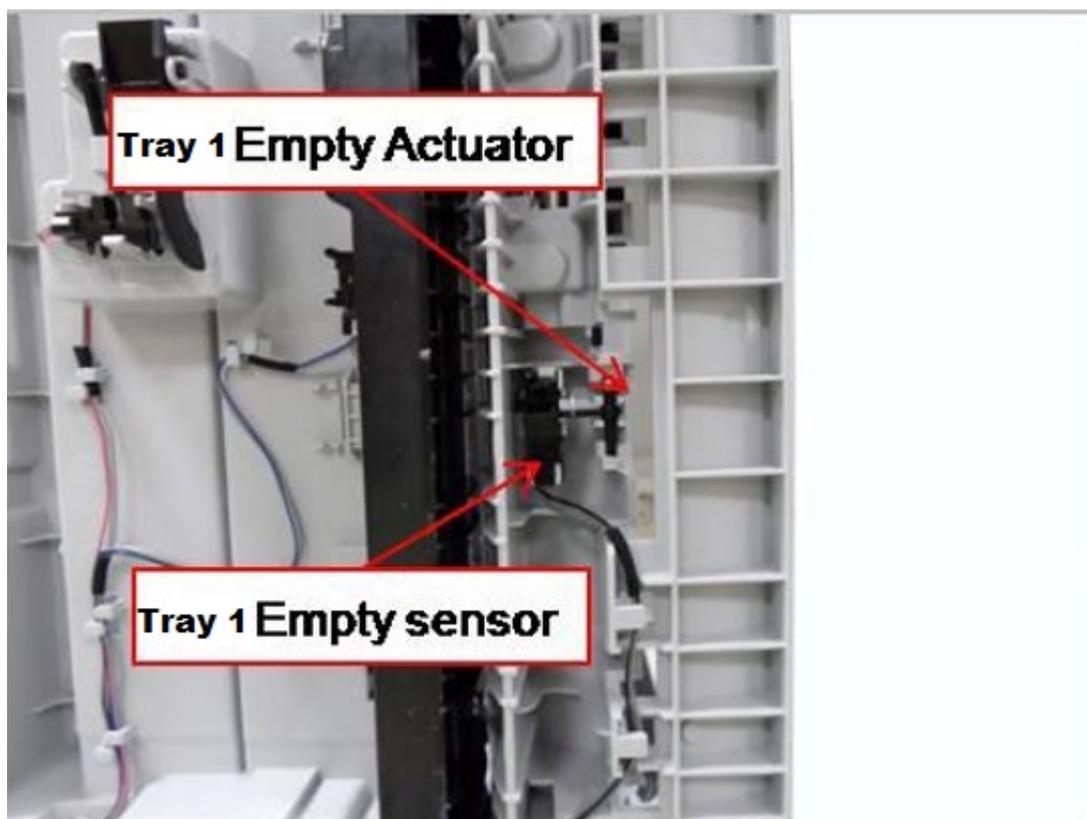
Paper in tray 1 is empty or almost empty. / The photo sensor is defective.

Recommended action

1. Load paper in tray 1.
2. If the message persists, send an on-site technician to perform the remaining steps.
3. Remove the toner cartridge and Imaging Unit.
4. Stand the copier on end to see the bottom.

 **IMPORTANT:** Before doing this, remove the toner cartridge and imaging unit. If not, toner will pour inside the printer.

5. Check if the Tray 1 Empty Sensor works normally. If needed, replace it (HP Part #: 0604-001393).
6. Check if the Tray 1 Empty Actuator is assembled correctly. If needed, replace it (HP Part #: JC66-03979A).

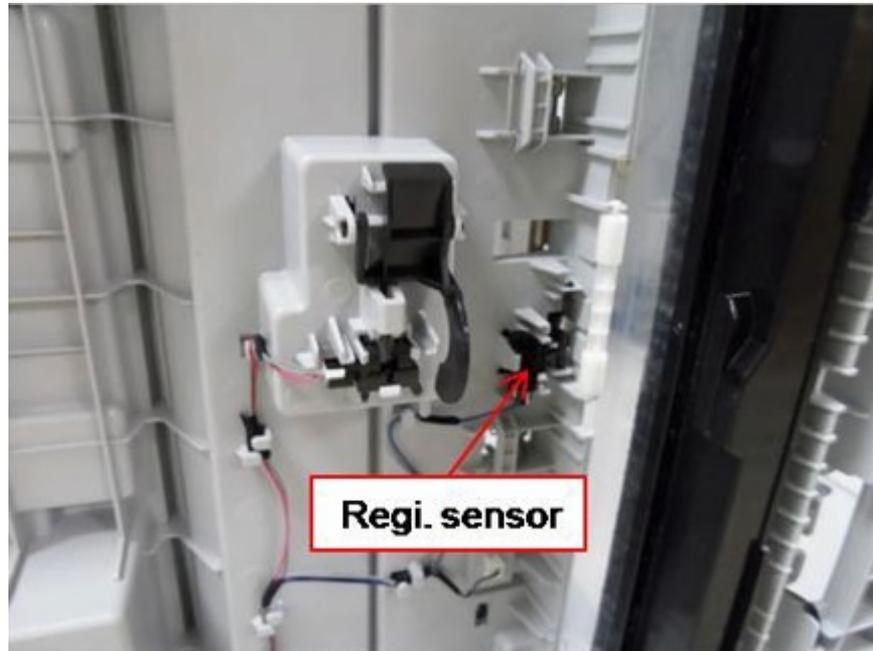


M2-1110, M2-2210 Jam inside errors

Description

- M2-1110, Jam inside printer
- M2-2210, Jam inside of duplex

- h. If the error persists, replace the Regi Sensor (HP Part # 0604-001393).



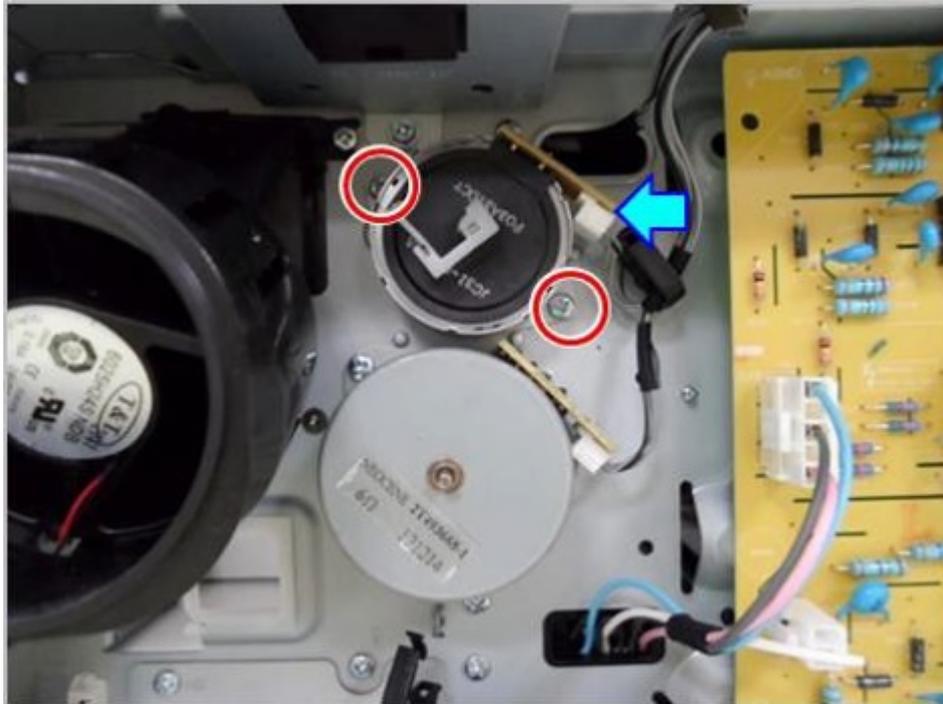
M3-1110, Jam in exit area

Description

Paper jam has occurred in the exit area.

Recommended action

1. Remove any jammed paper from the output tray.
2. If the message persists, send an on-site technician to perform the remaining steps.
3. Turn the printer off.
4. Remove the Exit Unit. If there are any defective parts, replace the Exit Unit (HP Part #: JC90-01221A).
5. Check if the Exit Motor works normally.
 - ▲ Unplug and reconnect the motor cable. If the connection is OK, replace the Exit Motor (HP Part #: JCP3-00452A).



6. If the message continually displays, replace the Fuser Unit (HP Part #: JC91-01217).

S2-331D, Waiting for low temp / Waiting delay time for lower fixing temperature...

Description

The printer is stopped because the temperature of the Fuser Unit is in an abnormal state.

Recommended action

Please wait. This error will disappear.

S2-3321, Supplying Toner / Supplying and mixing toner to developer unit. Please wait...

Description

Toner is supplying.

Recommended action

Please wait. This error will disappear.

S2-3421, Calibrating density / Calibrating image density. Please wait...

Description

The printer is calibrating.

Recommended action

Please wait. This error will disappear.

S2-4210, Front door is open. Close it

Description

Front cover is open or the cover open sensor is defective.

Recommended action

1. Check if the front cover is closed correctly.
2. If the message persists, send an on-site technician to perform the remaining steps.
3. Check if the cover open sensor connector is connected properly. Reconnect it.
4. If the sensor is defective, replace it (HP Part #: 0604-01393).

S2-4410, Right door is open. Close it

Description

Side cover is open or the cover open sensor is defective.

Recommended action

1. Check if the side cover is closed correctly.
2. If the message persists, send an on-site technician to perform the remaining steps.
3. Check if the cover open sensor connector is connected properly. Reconnect it.
4. If the sensor is defective, replace it (HP Part #: 0604-01393).

S3-3122, Scanner Locked / Scanner is locked. Press Stop button

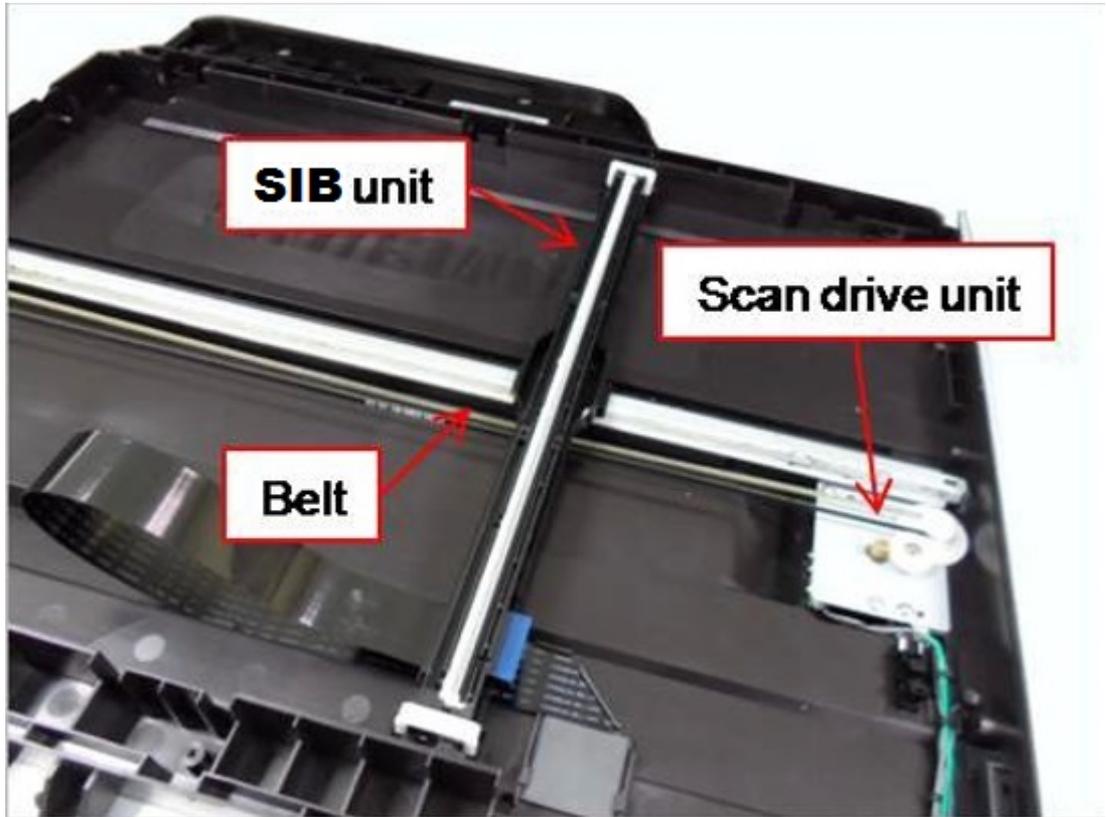
Description

Scanner lock error has occurred. Scanner Imaging Bar (SIB) does not move.

Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. Check if the Scanner Imaging Bar (SIB) unit is moving when powering on.
4. Check if the flat cable is connected to the SIB unit properly. Reconnect or replace the flat flexible cable (HP Part # JC39-02518A).
5. If the SIB is defective, replace it (HP Part #: 0609-001508).
6. Check if there is any defective part in the scanner unit. (Belt, Motor etc.)
 - o Belt

- Scan Motor



7. If the error persists, replace the Main Board PBA:

Model	Main Board PBA, HP Part #
M433a	JC92-02607K
M436n/M436dn	JC92-02607G
M436nda	JC92-02607H

S6-3123, IP Conflict / This IP address conflicts with that of other system

Description

IP address conflicts with that of other system. / There is no response when checking the ping test.

Recommended action

Change the printer's IP address.

- Set-up the IP address in this order, Network -> TCP/IP (IPv4) -> STATIC.
- In case of DHCP or Bootp, reboot the printer to receive a new IP address.

U1-2132, U1-2315, U1-2320, U1-2330, U1-2334, U1-2340, U1-234H Fuser unit failure errors

Description

- **U1-2132**, Error: #U1-2132 / Fuser Unit Failure: #U1-2132. Turn off then on. Call for service if the problem persists
- **U1-2315**, Error: #U1-2315 / Fuser Unit Failure: #U1-2315. Turn off then on. Call for service if the problem persists
- **U1-2320**, Error: #U1-2320 / Fuser Unit Failure: #U1-2320. Turn off then on. Call for service if the problem persists
- **U1-2330**, Error: #U1-2330 / Fuser Unit Failure: #U1-2330. Turn off then on. Call for service if the problem persists
- **U1-2334**, Error: #U1-2334 / Fuser Unit Failure: #U1-2334. Turn off then on. Call for service if the problem persists
- **U1-2340**, Error: #U1-2340 / Fuser Unit Failure: #U1-2340. Turn off then on. Call for service if the problem persists
- **U1-234H**, Error: #U1-234H / Fuser Unit Failure: #U1-234H. Turn off then on. Call for service if the problem persists

The temperature control of the Fuser Unit is abnormal.

Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. Turn the printer off, remove, then re-install the Fuser Unit.
4. If the error persists. Turn the printer off and remove the Fuser Unit.
 - a. Check the fuser connector for bent or broken pins.
 - b. Check if the input voltage is normal.
 - c. Check if the thermistor is twisted or contaminated; and is in contact with the Heat Roller.
5. After confirming continuity in the fuser connector and the error still exists; replace the below parts in order:
 - Fuser Unit (HP Part #: JC91-01217A)
 - LVPS—SMPS Power Supply (HP Part #: JC44-00223A)
 - HVPS (HP Part #: JC44-00229A)

U2-1111, U2-1112, U2-1113, U2-1114 LSU failure errors

Description

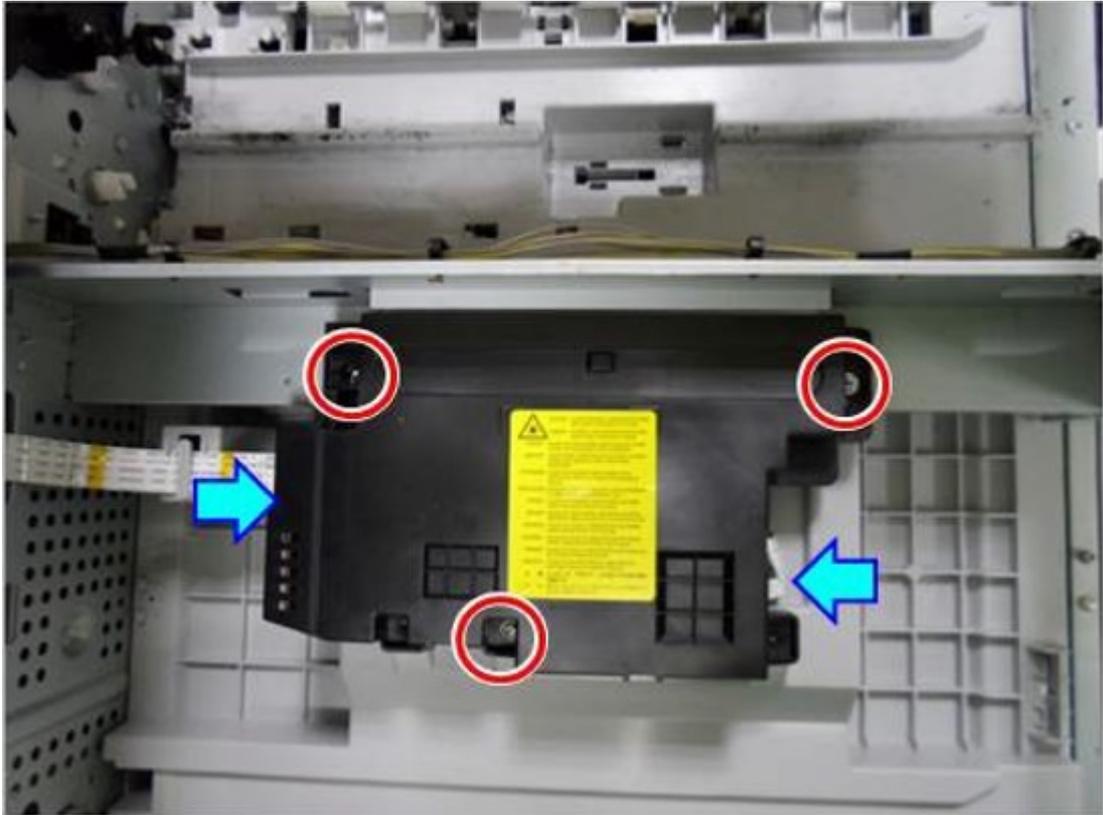
- **U2-1111**, Error: #U2-1111 / LSU Failure: #U2-1111. Turn off then on. Call for service if the problem persists
- **U2-1112**, Error: #U2-1112 / LSU Failure: #U2-1112. Turn off then on. Call for service if the problem persists
- **U2-1113**, Error: #U2-1113 / LSU Failure: #U2-1113. Turn off then on. Call for service if the problem persists
- **U2-1114**, Error: #U2-1114 / LSU Failure: #U2-1114. Turn off then on. Call for service if the problem persists

The Laser Scanner Unit (LSU) has experienced an error.

Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. From the control panel, enter Tech Mode and execute the LSU motor tests:
[Menu > # > 10043616 > Menu > Tech Menu > Diagnostics > Engine > Test Routines > 110 – LSU > 0000 – LSU Mot 1Rdy & 00602 – LSU Mot 1Run](#)
4. If there is no sound, remove the platen unit. Check if the LSU harness is connected on the main board properly.
5. If it is OK, remove the top cover. Check if the LSU harness is connected on the LSU board properly.
6. Check if the LSU harness is defective. If needed replace it (HP Part #: JC39-01996A).
7. Reconnect the LSU harness and then execute the LSU motor test again.

- If the error persists, replace the LSU (HP Part #: JC97-04301A).



- If the error persists after replacing the LSU, replace the Main Board PBA:

Model	Main Board PBA, HP Part #
M433a	JC92-02607K
M436n, M436dn	JC92-02607G
M436nda	JC92-02607H

U3-3211, U3-3213, U3-3214, U3-3311, U3-3313, U3-3314 Original paper jam / Original paper jam inside of scanner. Remove jam

Description

Jam has occurred inside the ADF unit.

Recommended action

- Open the ADF cover. If there is jammed paper, remove it.
- If the error persists, send an on-site technician to perform the remaining steps.
- If this error continually displays, check the Actuator Registration and ADF Registration Photo Sensor. If their operation is abnormal, replace the defective part.

Part	HP Part #
------	-----------

Actuator Registration	JC66-03148A
ADF Registration Photo Sensor	0604-001393



4. If the ADF Registration Photo Sensor is OK, check the Scan Actuator and Actuator Scan Photo Sensor . If their operation is abnormal, replace the defective part.

Model	HP Part #
Scan Actuator	JC66-03210A
Actuator Scan Photo Sensor	0604-001393



5. Check if the Registration Clutch operates normally. Check if the clutch cable is connected correctly. If the clutch is defective, replace it (HP Part #: JC47-0033G).

U3-3411, U3-3413, U3-3414 Original paper jam / Original paper jam inside of scanner. Remove jam

Description

Jam has occurred inside the ADF unit.

Recommended action

1. Open the ADF cover. If there is jammed paper, remove it.
2. If the error persists, send an on-site technician to perform the remaining steps.

3. Check if the Actuator Registration operates normally. If needed, replace it (HP Part #: JC66-03148A).



4. Re-seat the Actuator Registration Photo Sensor cable.
5. If the error persists, replace the Actuator Registration Photo Sensor (HP Part #: 0604-001393).

U3-3511, U3-3513, U3-3514 Original paper jam / Original paper jam inside of scanner. Remove jam

Description

Jam has occurred inside the ADF unit.

Recommended action

1. Open the ADF cover. If there is jammed paper, remove it.
2. If the error persists, send an on-site technician to perform the remaining steps.

3. Check if the Scan Actuator operates normally. If needed, replace it (HP Part #: JC66-03210A).



4. Re-seat the Scan Actuator Photo Sensor cable.
5. If the error persists, replace the Scan Actuator Photo Sensor (HP Part #: 0604-001393).

U3-3711, U3-3713, U3-3714 Original paper jam / Original paper jam inside of scanner. Remove jam

Description

Jam has occurred inside the ADF unit.

Recommended action

1. Open the ADF cover. If there is jammed paper, remove it.
2. If the error persists, send an on-site technician to perform the remaining steps.

3. Check if the Exit Actuator operates normally. If needed, replace it (HP Part #: JC66-B3184A).



4. Re-seat the Exit Actuator Photo Sensor cable.
5. If the error persists, replace the Exit Actuator Photo Sensor (HP Part #: 0604-001393).

U3-4210 Scanner door open / Top door of scanner is open. Close the door

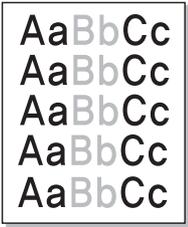
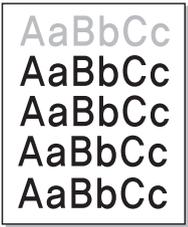
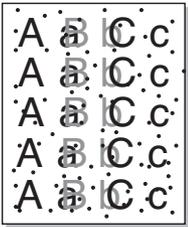
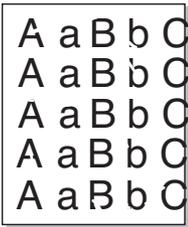
Description

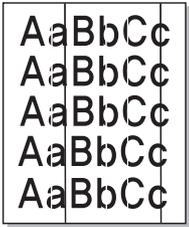
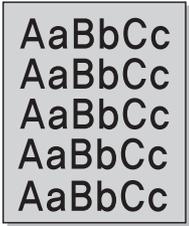
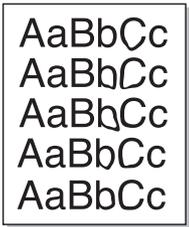
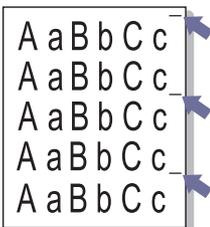
ADF cover is open.

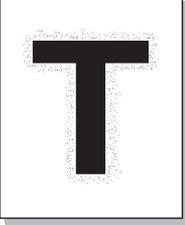
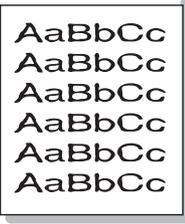
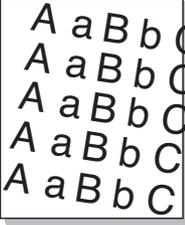
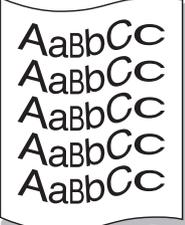
Recommended action

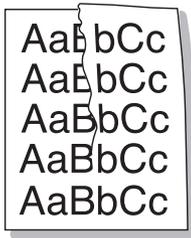
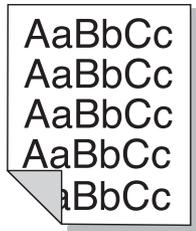
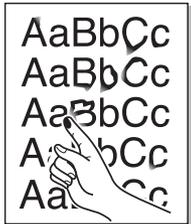
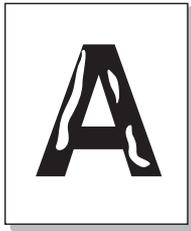
1. Close the ADF cover properly.
2. If the message persists, send an on-site technician to perform the remaining steps.
3. Check the ADF Cover Open Photo Sensor and its cable. If needed, replace it (HP Part #: 0604-001393).
4. Check for damaged ribs or broken parts on the underside of the ADF Cover. If needed, replace it (HP Part #: JC97-04754A).

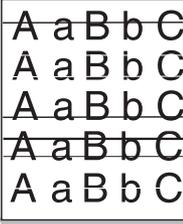
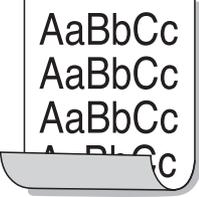
Printing quality problems

Condition	Example	Suggested solutions
Light or faded print		<ul style="list-style-type: none"> • If a vertical white streak or faded area appears on the page, the toner supply is low. Install a new toner cartridge. • The paper may not meet paper specifications; for example, the paper may be too moist or rough. • If the entire page is light, the print resolution setting is too low or the toner save mode is on. Adjust the print resolution and turn the toner save mode off. See the help screen of the printer driver. • A combination of faded or smeared defects may indicate that the toner cartridge needs cleaning. Clean the inside of your printer. • The surface of the LSU part inside the printer may be dirty. Clean the inside of your printer. If these steps do not correct the problem, contact a service representative.
The top half of the paper is printed lighter than the rest of the paper		<p>The toner might not adhere properly to this type of paper.</p> <ul style="list-style-type: none"> • Change the printer option and try again. Go to Printing Preferences, click the Paper tab, and set the paper type to Recycled.
Toner specks		<ul style="list-style-type: none"> • The paper may not meet specifications; for example, the paper may be too moist or rough. • The transfer roller may be dirty. Clean the inside of your printer. • The paper path may need cleaning. If these steps do not correct the problem, contact a service representative.
Dropouts		<p>If faded areas, generally rounded, occur randomly on the page:</p> <ul style="list-style-type: none"> • A single sheet of paper may be defective. Try reprinting the job. • The moisture content of the paper is uneven or the paper has moist spots on its surface. Try a different brand of paper. • The paper lot is bad. The manufacturing processes can cause some areas to reject toner. Try a different kind or brand of paper. • Change the printer option and try again. Go to Printing Preferences, click the Paper, and set type to Thick. <p>If these steps do not correct the problem, contact a service representative.</p>

Condition	Example	Suggested solutions
White Spots		<p>If white spots appear on the page:</p> <ul style="list-style-type: none"> The paper is too rough and a lot of dirt from paper falls to the inner components within the printer, so the transfer roller may be dirty. Clean the inside of your printer. The paper path may need cleaning. Clean the inside of your printer. <p>If these steps do not correct the problem, contact a service representative.</p>
Vertical lines		<p>If black vertical streaks appear on the page:</p> <ul style="list-style-type: none"> The surface (drum part) of the cartridge inside the printer has probably been scratched. Remove the cartridge and install a new one. <p>If white vertical streaks appear on the page:</p> <ul style="list-style-type: none"> The surface of the LSU part inside the printer may be dirty. Clean the inside of your printer. If these steps do not correct the problem, contact a service representative.
Black or color background		<ul style="list-style-type: none"> Change to a lighter weight paper. Check the environmental conditions: very dry conditions or a high level of humidity (higher than 80% RH) can increase the amount of background shading. Remove the old toner cartridge and install a new one. Thoroughly redistribute the toner.
Toner smear		<ul style="list-style-type: none"> Clean the inside of the printer. Check the paper type and quality. Remove the toner cartridge and install a new one.
Vertical repetitive defects		<p>If marks repeatedly appear on the printed side of the page at even intervals:</p> <ul style="list-style-type: none"> The toner cartridge may be damaged. If you still have the same problem, remove the toner cartridge and, install a new one. Parts of the printer may have toner on them. If the defects occur on the back of the page, the problem will likely correct itself after a few more pages. The fusing assembly may be damaged. Contact a service representative.

Condition	Example	Suggested solutions
Background scatter		<p>Background scatter results from bits of toner randomly distributed on the printed page.</p> <ul style="list-style-type: none"> • The paper may be too damp. Try printing with a different batch of paper. Do not open packages of paper until necessary so that the paper does not absorb too much moisture. • Select Thick from the Printing Preferences window. • If background scatter covers the entire surface area of a printed page, adjust the print resolution through your software application or in Printing Preferences. Ensure the correct paper type is selected. For example: If Thicker Paper is selected, but Plain Paper actually used, an overcharging can occur causing this copy quality problem. • If you are using a new toner cartridge, redistribute the toner first.
Toner particles are around bold characters or pictures		<p>The toner might not adhere properly to this type of paper.</p> <ul style="list-style-type: none"> • Change the printer option and try again. Go to Printing Preferences, click the Paper tab, and set the paper type to Recycled. • Ensure the correct paper type is selected. For example: If Thicker Paper is selected, but Plain Paper actually used, an overcharging can occur causing this copy quality problem.
Misformed characters		<ul style="list-style-type: none"> • If characters are improperly formed and producing hollow images, the paper stock may be too slick. Try different paper.
Page skew		<ul style="list-style-type: none"> • Ensure that the paper is loaded properly. • Check the paper type and quality. • Ensure that the guides are not too tight or too loose against the paper stack.
Curl or wave		<ul style="list-style-type: none"> • Ensure that the paper is loaded properly. • Check the paper type and quality. Both high temperature and humidity can cause paper curl. • Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.

Condition	Example	Suggested solutions
Wrinkles or creases		<ul style="list-style-type: none"> • Ensure that the paper is loaded properly. • Check the paper type and quality. • Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.
Back of printouts are dirty		<ul style="list-style-type: none"> • Check for leaking toner. Clean the inside of the printer.
Solid color or black pages		<ul style="list-style-type: none"> • The toner cartridge may not be installed properly. Remove the cartridge and reinsert it. • The toner cartridge may be defective. Remove the toner cartridge and install a new one. • The printer may require repairing. Contact a service representative.
Loose toner		<ul style="list-style-type: none"> • Clean the inside of the printer. • Check the paper type, thickness, and quality. • Remove the toner cartridge and then, install a new one. <p>If the problem persists, the printer may require repair. Contact a service representative.</p>
Character voids		<p>Character voids are white areas within parts of characters that should be solid black:</p> <ul style="list-style-type: none"> • You may be printing on the wrong surface of the paper. Remove the paper and turn it around. • The paper may not meet paper specifications.

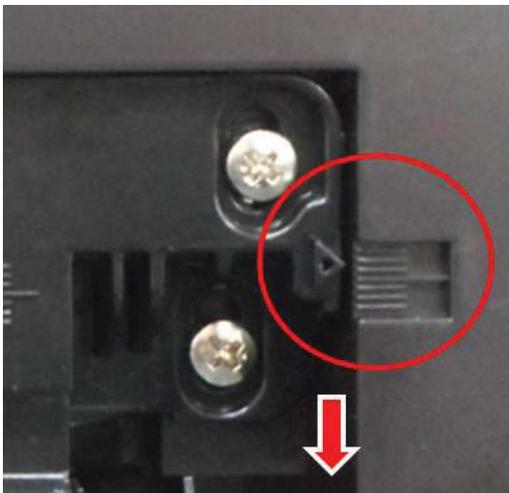
Condition	Example	Suggested solutions
Horizontal stripes		<p>If horizontally aligned black streaks or smears appear:</p> <ul style="list-style-type: none"> The toner cartridge may be installed improperly. Remove the cartridge and reinsert it. The toner cartridge may be defective. Remove the toner cartridge and install a new one. <p>If the problem persists, the printer may require repairing. Contact a service representative.</p>
Curl		<p>If the printed paper is curled or paper does not feed into the printer:</p> <ul style="list-style-type: none"> Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray. Change the printer's paper option and try again. Go to Printing Preferences, click the Paper tab, and set type to Thin.
<ul style="list-style-type: none"> An unknown image repetitively appears on a few sheets Loose toner Light print or contamination occurs 	<p>Your printer is probably being used at an altitude of 1,000 m (3,281 ft) or above. The high altitude may affect the print quality, such as loose toner or light imaging.</p>	

Adjusting the document feeder skew

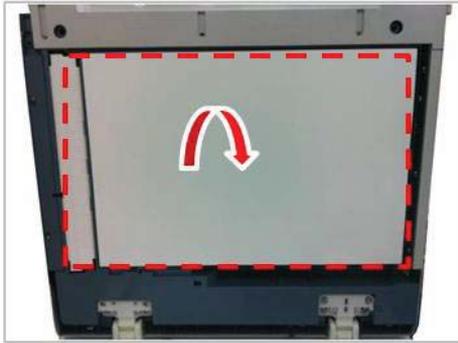
1. Lift the document feeder cover. Slightly loosen four screws securing the right hinge unit.



2. Adjust the position of the document feeder hinge as the skew status.
 - Adjust the hinge unit down. (1 scale => 0.9 mm skew adjustment)



3. Detach the document feeder sponge after adjusting the skew. Place the document feeder sponge on platen glass. And then close the document feeder unit to stick the sponge.



Other errors

Multi-feeding

- Description: Multiple sheet of paper are fed at once.

Check and cause	Solution
MP Pick up clutch or registration clutch does not work properly.	Replace the defective clutch if necessary.
Pick up roller or friction pad is worn out or contaminated.	Clean or replace the pickup roller or friction pad.

No-Power

- Description: When system power is turned on, LED and LCD on the control panel do not come on.

Check and cause	Solution
The connection between main board and OPE board is bad.	Reconnect or replace the harness.
HVPS/SMPS output is abnormal.	Replace the HVPS/SMPS board.

No	Connector	To Connector	Description
1	Main PBA	Duplex Motor	HARNESS-DUPLEX_STEP
2	Main PBA	Main Drive unit	HARNESS-MAIN_DRIVE
3	Main PBA	Thermistor(Fuser)_Toner DC motor_Toner CRUM Joint	HARNESS-THERMISTOR_TONER DC_CRUM
4	Main PBA	OPC CRUM_TC sensor_Eraser_Exit Sensor	HARNESS-OPC CRUM_TC SEN_ERASER_EXIT SEN
5	Main PBA	Fuser Motor	HARNESS-FUSER STEP
6	Main PBA	OPE PBA	HARNESS-OPE
7	Main PBA	Registration Clutch_Empty Sensor_Registration Sensor	HARNESS-REGL_CL_EMPTY SEN_REGL_SEN
8	Main PBA	MP Sensor	HARNESS-MP_SEN_MP_CL
9	Main PBA	Scan Motor_Scan Home Sensor_platen cover open	HARNESS-SCAN
10	Main PBA	SMPS	HARNESS-SMPS_TYPE3R
11	Main PBA	SMPS	HARNESS-SMPS_SUB
12	Main PBA	LSU	CBF FLAT CABLE-FFC_LSU
13	Main PBA	DCIS	CBF FLAT CABLE-FFC_DCIS
14	Main PBA	HVPS	CBF FLAT CABLE-HVPS I/F

Glossary

802.11

802.11 is a set of standards for wireless local area network (WLAN) communication, developed by the IEEE LAN/MAN Standards Committee (IEEE 802).

802.11b/g/n

802.11b/g/n can share same hardware and use the 2.4 GHz band. 802.11b supports bandwidth up to 11 Mbps, 802.11n supports bandwidth up to 150 Mbps. 802.11b/g/n devices may occasionally suffer interference from microwave ovens, cordless telephones, and Bluetooth devices.

Access point

Access Point or Wireless Access Point (AP or WAP) is a device that connects wireless communication devices together on wireless local area networks (WLAN), and acts as a central transmitter and receiver of WLAN radio signals.

ADF

An document feeder is a scanning unit that will automatically feed an original sheet of paper so that the printer can scan some amount of the paper at once.

BOOTP

Bootstrap Protocol. A network protocol used by a network client to obtain its IP address automatically. This is usually done in the bootstrap process of computers or operating systems running on them. The BOOTP servers assign the IP address from a pool of addresses to each client. BOOTP enables 'diskless workstation' computers to obtain an IP address prior to loading any advanced operating system.

CCD

Charge Coupled Device (CCD) is a hardware which enables the scan job. CCD Locking mechanism is also used to hold the CCD module to prevent any damage when you move the printer.

Collation

Collation is a process of printing a multiple-copy job in sets. When collation is selected, the device prints an entire set before printing additional copies.

Control Panel

A control panel is a flat, typically vertical, area where control or monitoring instruments are displayed. They are typically found in front of the printer.

Coverage

It is the printing term used for a toner usage measurement on printing. For example, 5% coverage means that an A4 sided paper has about 5% image or text on it. So, if the paper or original has complicated images or lots of text on it, the coverage will be higher and at the same time, a toner usage will be as much as the coverage.

Default

The value or setting that is in effect when taking a printer out of its box state, reset, or initialized.

DHCP

A Dynamic Host Configuration Protocol (DHCP) is a client-server networking protocol. A DHCP server provides configuration parameters specific to the DHCP client host requesting, generally, information required by the client host to participate on an IP network. DHCP also provides a mechanism for allocation of IP addresses to client hosts.

DNS

The Domain Name Server (DNS) is a system that stores information associated with domain names in a distributed database on networks, such as the Internet.

DPI

Dots Per Inch (DPI) is a measurement of resolution that is used for scanning and printing. Generally, higher DPI results in a higher resolution, more visible detail in the image, and a larger file size.

Duplex

A mechanism that will automatically turn over a sheet of paper so that the printer can print (or scan) on both sides of the paper. A printer equipped with a Duplex unit can print on both sides of paper during one print cycle.

Duty Cycle

Duty cycle is the page quantity which does not affect printer performance for a month. Generally the printer has the lifespan limitation such as pages per year. The lifespan means the average capacity of print-outs, usually within the warranty period. For example, if the duty cycle is 48,000 pages per month assuming 20 working days, a printer limits 2,400 pages a day.

Ethernet

Ethernet is a frame-based computer networking technology for local area networks (LANs). It defines wiring and signaling for the physical layer, and frame formats and protocols for the media access control (MAC)/data link layer of the OSI model. Ethernet is mostly standardized as IEEE 802.3. It has become the most widespread LAN technology in use during the 1990s to the present.

FDI

Foreign Device Interface (FDI) is a card installed inside the printer to allow a third-party device such as a coin operated device or a card reader. Those devices allow the pay-for-print service on your printer.

FTP

A File Transfer Protocol (FTP) is a commonly used protocol for exchanging files over any network that supports the TCP/IP protocol (such as the Internet or an intranet).

Fuser Unit

The part of a laser printer that fuses the toner onto the print media. It consists of a heat roller and a pressure roller. After toner is transferred onto the paper, the fuser unit applies heat and pressure to ensure that the toner stays on the paper permanently, which is why paper is warm when it comes out of a laser printer.

Grayscale

A shade of gray that represents light and dark portions of an image when color images are converted to grayscale; colors are represented by various shades of gray.

Halftone

An image type that simulates grayscale by varying the number of dots. Highly colored areas consist of a large number of dots, while lighter areas consist of a smaller number of dots.

Hard Disk Drive (HDD)

A nonvolatile storage device which stores digitally-encoded data on rapidly rotating platters with magnetic surfaces.

IEEE

The Institute of Electrical and Electronics Engineers (IEEE) is an international non-profit, professional organization for the advancement of technology related to electricity.

Intranet

A private network that uses Internet Protocols, network connectivity, and possibly the public telecommunication system to securely share part of an organization's information or operations with its employees. Sometimes the term refers only to the most visible service, the internal website.

IP address

An Internet Protocol (IP) address is a unique number that devices use in order to identify and communicate with each other on a network utilizing the Internet Protocol standard.

IPM

The Images Per Minute (IPM) is a way of measuring the speed of a printer. An IPM rate indicates the number of single-sided sheets a printer can complete within one minute.

IPP

The Internet Printing Protocol (IPP) defines a standard protocol for printing as well as managing print jobs, media size, resolution, and so forth. IPP can be used locally or over the Internet to hundreds of printers, and also supports access control, authentication, and encryption, making it a much more capable and secure printing solution than older ones.

ISO

The International Organization for Standardization (ISO) is an international standard-setting body composed of representatives from national standards bodies. It produces world-wide industrial and commercial standards.

ITU-T

The International Telecommunication Union is an international organization established to standardize and regulate international radio and telecommunications. Its main tasks include standardization, allocation of the radio spectrum, and organizing interconnection arrangements between different countries/regions to allow international phone calls. A -T out of ITU-T indicates telecommunication.

ITU-T No. 1 chart

Standardized test chart published by ITU-T for document facsimile transmissions.

JBIG

Joint Bi-level Image Experts Group (JBIG) is an image compression standard with no loss of accuracy or quality, which was designed for compression of binary images.

JPEG

Joint Photographic Experts Group (JPEG) is a most commonly used standard method of lossy compression for photographic images. It is the format used for storing and transmitting photographs on the World Wide Web.

LDAP

The Lightweight Directory Access Protocol (LDAP) is a networking protocol for querying and modifying directory services running over TCP/IP.

LED

A Light-Emitting Diode (LED) is a semiconductor device that indicates the status of a printer.

MAC address

Media Access Control (MAC) address is a unique identifier associated with a network adapter. MAC address is a unique 48-bit identifier usually written as 12 hexadecimal characters grouped in pairs (e. g., 00-00-0c-34-11-4e). This address is usually hard-coded into a Network Interface Card (NIC) by its manufacturer, and used as an aid for routers trying to locate machines on large networks.

MFP

Multi Function Peripheral (MFP) is an office printer that includes the following functionality in one physical body, so as to have a printer, a copier, a scanner and etc.

MMR

Modified Modified READ (MMR) is a compression method recommended by ITUT T.6.

Modem

A device that modulates a carrier signal to encode digital information, and also demodulates such a carrier signal to decode transmitted information.

MR

Modified Read (MR) is a compression method recommended by ITU-T T.4. MR encodes the first scanned line using MH. The next line is compared to the first, the differences determined, and then the differences are encoded and transmitted.

OPC

Organic Photo Conductor (OPC) is a mechanism that makes a virtual image for print using a laser beam emitted from a laser printer, and it is usually green or rust colored and has a cylinder shape.

An imaging unit containing a drum slowly wears the drum surface by its usage in the printer, and it should be replaced appropriately since it gets worn from contact with the cartridge development brush, cleaning mechanism, and paper.

OPE unit**Originals**

The first example of something, such as a document, photograph or text, etc, which is copied, reproduced or translated to produce others, but which is not itself copied or derived from something else.

OSI

Open Systems Interconnection (OSI) is a model developed by the International Organization for Standardization (ISO) for communications. OSI offers a standard, modular approach to network design that divides the required set of complex functions into manageable, self-contained, functional layers. The layers are, from top to bottom, Application, Presentation, Session, Transport, Network, Data Link and Physical.

PCL

Printer Command Language (PCL) is a Page Description Language (PDL) developed by HP as a printer protocol and has become an industry standard. Originally developed for early inkjet printers, PCL has been released in varying levels for thermal, dot matrix printer, and laser printers.

PDF

Portable Document Format (PDF) is a proprietary file format developed by Adobe Systems for representing two dimensional documents in a device independent and resolution independent format.

PostScript

PostScript (PS) is a page description language and programming language used primarily in the electronic and desktop publishing areas. - that is run in an interpreter to generate an image.

PPM

Pages Per Minute (PPM) is a method of measurement for determining how fast a printer works, meaning the number of pages a printer can produce in one minute.

Print Media

The media like paper, labels, and transparencies which can be used in a printer, a scanner, or a copier.

Printer Driver

A program used to send commands and transfer data from the computer to the printer.

PRN file

An interface for a device driver, this allows software to interact with the device driver using standard input/output system calls, which simplifies many tasks.

Protocol

A convention or standard that controls or enables the connection, communication, and data transfer between two computing endpoints.

PS

See PostScript.

Resolution

The sharpness of an image, measured in Dots Per Inch (DPI). The higher the dpi, the greater the resolution.

SMB

Server Message Block (SMB) is a network protocol mainly applied to share files, printers, serial ports, and miscellaneous communications between nodes on a network. It also provides an authenticated Inter-process communication mechanism.

SMTP

Simple Mail Transfer Protocol (SMTP) is the standard for e-mail transmissions across the Internet. SMTP is a relatively simple, text-based protocol, where one or more recipients of a message are specified, and then the message text is transferred. It is a client-server protocol, where the client transmits an email message to the server.

TCP/IP

The Transmission Control Protocol (TCP) and the Internet Protocol (IP); the set of communications protocols that implement the protocol stack on which the Internet and most commercial networks run.

TCR

The Transmission Control Protocol (TCP) and the Internet Protocol (IP); the set of communications protocols that implement the protocol stack on which the Internet and most commercial networks run.

TIFF

Tagged Image File Format (TIFF) is a variable-resolution bitmapped image format. TIFF describes image data that typically come from scanners. TIFF images make use of tags, keywords defining the characteristics of the image that is included in the file. This flexible and platform-independent format can be used for pictures that have been made by various image processing applications.

Toner Cartridge

A kind of bottle or container used in a printer like a printer which contains toner. Toner is a powder used in laser printers and photocopiers, which forms the text and images on the printed paper. Toner can be fused by a combination of heat/pressure from the fuser, causing it to bind to the fibers in the paper.

TWAIN

An industry standard for scanners and software. By using a TWAIN-compliant scanner with a TWAIN-compliant program, a scan can be initiated from within the program. It is an image capture API for Microsoft Windows and Apple Mac operating systems.

URL

>Uniform Resource Locator (URL) is the global address of documents and resources on the Internet. The first part of the address indicates what protocol to use, the second part specifies the IP address or the domain name where the resource is located.

USB

Universal Serial Bus (USB) is a standard that was developed by the USB Implementers Forum, Inc., to connect computers and peripherals. Unlike the parallel port, USB is designed to concurrently connect a single computer USB port to multiple peripherals.

Watermark

A watermark is a recognizable image or pattern in paper that appears lighter when viewed by transmitted light. Watermarks were first introduced in Bologna, Italy in 1282; they have been used by papermakers to identify their product, and also on postage stamps, currency, and other government documents to discourage counterfeiting.

WPS

The Wi-Fi Protected Setup (WPS) is a standard for establishing a wireless home network. If your wireless access point supports WPS, you can configure the wireless network connection easily without a computer.

XPS

XML Paper Specification (XPS) is a specification for a Page Description Language (PDL) and a new document format, which has benefits for portable document and electronic document, developed by Microsoft. It is an XML-based specification, based on a new print path and a vector-based device-independent document format.

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