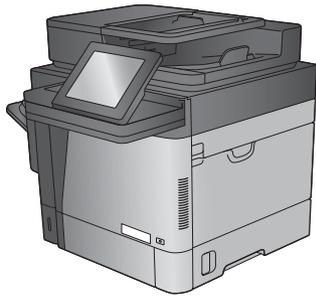


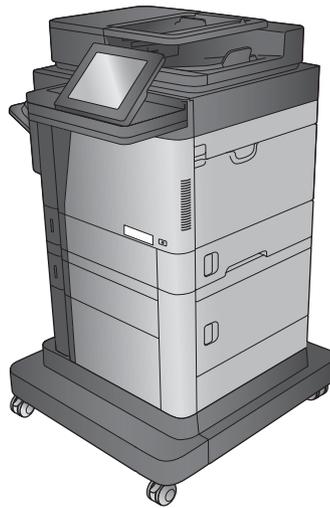


LaserJet Enterprise MFP M630

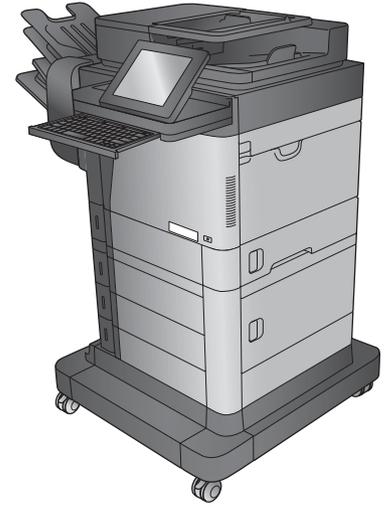
Troubleshooting Manual



**M630dn
M630h**



M630f



M630z



www.hp.com/support/ljMFPM630
For product repair and part number
information, see the Repair Manual.



HP LaserJet Enterprise M630

Troubleshooting Manual

Copyright and License

© 2014 Copyright Hewlett-Packard
Development Company, L.P.

Reproduction, adaptation, or translation
without prior written permission is prohibited,
except as allowed under the copyright laws.

The information contained herein is subject to
change without notice.

The only warranties for HP products and
services are set forth in the express warranty
statements accompanying such products and
services. Nothing herein should be construed
as constituting an additional warranty. HP shall
not be liable for technical or editorial errors or
omissions contained herein.

Edition 1, 9/2014

Conventions used in this guide

 **TIP:** Helpful hints or shortcuts.

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

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

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

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

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

Table of contents

1 Theory of operation	1
Basic operation	2
Sequence of operation (product)	4
Sequence of operation (scanner)	5
Formatter-control system	6
Formatter hardware	6
Sleep mode	6
Input/output (I/O)	8
CPU	8
Memory	8
Random access memory (RAM)	8
Firmware	8
Nonvolatile random access memory (NVRAM)	8
Image Resolution Enhancement technology	8
HP Memory Enhancement technology	9
Printer job language (PJL)	9
Printer management language (PML)	9
Control panel	9
Scanner interface	9
Engine-control system	10
DC controller	11
Motors	12
Fans	13
High-voltage power supply	14
Low-voltage power supply	15
Overcurrent/overvoltage protection	16
Voltage detection	16
Safety	16
Sleep (power save) mode	17
Low-voltage power supply functions	17
Fuser control	18
Fuser temperature control	19

Fuser sleeve temperature protection	20
Fuser failure detection	20
Pressure roller cleaning	21
Ambient-temperature detection	21
Laser/scanner system	22
Laser/scanner failure	23
Safety	23
Image-formation system	24
Electrophotographic process	26
Step 1: Primary charge (conditioning)	27
Step 2: Laser-beam exposure (writing)	27
Step 3: Developing	28
Step 4: Transfer	28
Step 5: Separation	29
Step 6: Fusing	29
Step 7: Drum cleaning	30
Toner cartridge	31
Memory chip	31
Cartridge presence and life detection	31
Pickup, feed, and delivery system	33
Pickup-and-feed block	38
Tray 2 pickup	39
Tray 2 paper-size detection and tray-present detection	40
Tray 1 pickup	43
Tray 1 paper-presence detection	44
Feed speed control	44
Skew-feed prevention	45
Paper-length detection	46
Paper-width detection	46
Fusing, reverse, and delivery block	47
Fusing	47
Pressure roller pressurization and depressurization control	48
Reverse and delivery control	49
Face-down delivery	50
Face-up delivery	51
Output bin paper-full detection	52
Duplex block	53
Duplex side registration adjustment operation	53
Jam detection	55
Optional paper feeders	59
Paper-feeder pickup and feed components	62

1x500-sheet paper feeder signal flow and component locations	62
1x500-sheet paper feeder with cabinet signal flow and component locations	63
2,500-sheet high-capacity paper feeder signal flow and component locations	65
Paper-size detection and tray-presence detection	67
Paper feeder tray lift operation	68
Trays 3 and 4 lift operation	68
Tray 5 lift operation	69
Paper feeder jam detection	70
Scanning/image capture system	73
Scanner	73
Document feed system	73
Sensors in the document feeder	73
Document feeder paper path	75
Document feeder simplex operation	75
Document feeder e-duplex operation	76
Front-side and back-side background selector	77
Deskew operation	78
Document feeder hinges	79
Stapling mailbox	81
Motor control	83
Failure detection	84
Delivery operation	84
Staple operation	86
Stapler	91
Output bin 3 lift operation	92
Stacker mode	93
Mailbox/job separator mode	93
Jam detection	94
Automatic delivery	96
2 Solve problems	97
Solve problems checklist	98
Menu map	101
Current settings pages	101
Event log	101
Pre-boot menu options	103
Remote Admin	110
Required software and network connection	110
Telnet client	111
Network connection	112
Connect a remote connection	112

Disconnect a remote connection	117
Troubleshooting process	119
Determine the problem source	119
Troubleshooting flowchart	119
Power subsystem	120
Power-on checks	120
Power-on troubleshooting overview	120
Scanning subsystem	124
Control panel checks	124
Control panel diagnostic flowcharts	127
Touchscreen black, white, or dim (no image)	128
Touchscreen is slow to respond or requires multiple presses to respond	129
Touchscreen has an unresponsive zone	130
No control panel sound	131
Home button is unresponsive	132
Hardware integration pocket (HIP) is not functioning (control panel functional)	133
Tools for troubleshooting	134
Individual component diagnostics	134
LED diagnostics	134
Understand lights on the formatter	134
Engine diagnostics	139
Defeating interlocks	139
Disable cartridge check	140
Engine test button	140
Paper path test	141
Paper path sensors test	141
Manual sensor tests and tray/bin sensor tests	143
Manual sensor tests	143
Tray/bin manual sensor test	148
Print/stop test	150
Component tests	150
Component test (special-mode test)	150
Scanner tests	153
Scanner tests	153
Diagrams	155
Block diagrams	155
Sensors	155
Switches (product base)	159
Solenoids (product base)	160

Clutch (product base)	161
Motors	162
Fans (product base)	166
Main assemblies	167
Main PCAs (product base)	174
Rollers (product base)	175
DC controller connections	176
Scanner controller board (SBC) connectors	178
1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high- capacity feeder connectors	179
Stapling mailbox connectors	180
General timing chart	182
General circuit diagrams	184
Internal print-quality test pages	189
Print quality troubleshooting pages	189
Fuser test page	192
Cleaning page	193
Enable and configure auto cleaning	193
Print configuration page	194
Configuration page	194
HP embedded Jetdirect page	196
Finding important information on the configuration pages	197
Print quality troubleshooting tools	198
Print quality troubleshooting tools: repetitive defects ruler	198
Control-panel menus	199
Administration menu	199
Reports menu	199
General Settings menu	201
Copy Settings menu	206
Scan/Digital Send Settings menu	214
Fax Settings menu (fax models only)	224
General Print Settings menu	234
Default Print Options menu	237
Display Settings menu	239
Manage Supplies menu	241
Manage Trays menu	244
Network Settings menu	246
Troubleshooting menu	257
Device Maintenance menu	259
Backup/Restore menu	259
Calibration/Cleaning menu	260

USB Firmware Upgrade menu	262
Service menu	262
Control panel message document (CPMD)	263
Control-panel message types	263
Control-panel messages and event log entries	263
10.XX.YZ Error Messages	263
11.XX.YZ Error Messages	266
13.XX.YZ Error Messages	267
13.XX.YZ Error Messages	293
30.XX.YZ Error Messages	293
31.XX.YZ Error Messages	300
32.XX.YX and 33.XX.YZ Error Messages	306
40.XX.YZ Error Messages	312
41.XX.YZ Error Messages	314
42.XX.YZ Error Messages	321
44.XX.XX Error Messages	321
47.XX.XX Error Messages	323
48.XX.YY Error Messages	325
49.XX.YY Error Messages	326
50.WX.YZ Error Messages	326
51.XX.YZ, 52.XX.YZ Error Messages	328
54.XX.YZ Error Messages	329
55.XX.YZ, 56.XX.YZ Error Messages	330
57.XX.YZ Error Messages	331
58.XX.YZ Error Messages	333
59.XX.YZ Error Messages	335
60.00.0Y, 62.00.00 Error Messages	337
65.X0.AZ Error Messages	339
66.WX.YZ Error Messages	339
70.XX.YY Error Messages	343
80.XX.YY, 82.XX.YY Error Messages	343
98.0X.0Y Error Messages	344
99.XX.YY Error Messages	345
Alpha Error Messages	352
Control panel: event log messages	386
Print or view an event log	387
Clear the event log	387
Clear jams	388
Jam sensor locations	388
Paper path sensor locations	388
Jam locations	392

Auto-navigation for clearing jams	392
Experiencing frequent or recurring paper jams?	392
Clear jams in the document feeder	394
Clear jams in Tray 1	398
Clear jams in Tray 2, 3, or 4	401
Clear jams in the 1,500-sheet high-capacity input tray (Tray 5)	403
Clear jams in the right door	406
Clear jams in the lower-right door	407
Clear jams in the duplexer and fuser	408
Clear jams under the top cover and in the registration area	413
Clear jams in the output bin	416
Clear jams in the stapling mailbox accessory	417
Clear staple jams in the stapling mailbox accessory	419
Change jam recovery	423
Paper feeds incorrectly or becomes jammed	424
The product does not pick up paper	424
The product picks up multiple sheets of paper	424
The document feeder jams, skews, or picks up multiple sheets of paper	425
Prevent paper jams	425
Use manual print modes	426
Solve image quality problems	429
Image defects table	429
Clean the product	439
Print a cleaning page	439
Check the scanner glass for dirt or smudges	440
Clean the pickup rollers and separation pad in the document feeder	442
Clean the pickup, feed, and separation rollers in the 1x500-sheet paper-feeder and 1x500-sheet paper-feeder with storage cabinet	444
Clean the pickup, feed, and separation rollers in the 2,500-sheet high-capacity feeder (HCI)	445
Solve performance problems	446
Solve connectivity problems	447
Solve USB connection problems	447
Solve wired network problems	447
Poor physical connection	447
The computer is using the incorrect IP address for the product	447
The computer is unable to communicate with the product	448
The product is using incorrect link and duplex settings for the network	448
New software programs might be causing compatibility problems	448
The computer or workstation might be set up incorrectly	448
The product is disabled, or other network settings are incorrect	448
Service mode functions	449

Service menu	449
Product resets	452
Restore factory-set defaults	452
Restore the service ID	453
Product cold reset	453
Format Disk and Partial Clean functions	454
Active and repository firmware locations	454
Partial Clean	454
Execute a Partial Clean	455
Format Disk	455
Execute a Format Disk	456
Solve fax problems	457
Checklist for solving fax problems	457
What type of phone line are you using?	457
Are you using a surge-protection device?	457
Are you using a phone company voice-messaging service or an answering machine?	457
Does your phone line have a call-waiting feature?	457
Check fax accessory status	458
General fax problems	459
The fax failed to send	459
An Out of Memory status message displays on the product control panel	459
Print quality of a photo is poor or prints as a gray box	459
You touched the Stop button to cancel a fax, but the fax was still sent	459
No fax address book button displays	459
Not able to locate the Fax settings in HP Web Jetadmin	459
The header is appended to the top of the page when the overlay option is enabled	459
A mix of names and numbers is in the recipients box	459
A one-page fax prints as two pages	460
A document stops in the document feeder in the middle of faxing	460
The volume for sounds coming from the fax accessory is too high or too low	460
Use Fax over VoIP networks	460
Problems with receiving faxes	461
Problems with sending faxes	463
Fax error messages on the product control panel	464
Send-fax messages	465
Receive-fax messages	466
Service settings	467
Settings in the Troubleshooting menu	467
Firmware upgrades	468
Determine the installed revision of firmware	469

Perform a firmware upgrade	470
HP Embedded Web Server	470
USB flash drive (Pre-boot menu)	470
USB flash drive (control-panel menu)	471
Appendix A Product specifications	473
Product dimensions	474
Product space requirements	475
Power consumption, electrical specifications, and acoustic emissions	476
Environmental specifications	476
Certificate of Volatility	477
Index	479

List of tables

Table 1-1	Sequence of operation (product)	4
Table 1-2	Sequence of operation (scanner)	5
Table 1-3	Formatter hardware components	6
Table 1-4	Motors	12
Table 1-5	Fans	13
Table 1-6	Converted DC voltages	16
Table 1-7	Low-voltage power supply functions	17
Table 1-8	Fuser components	18
Table 1-9	Sensors	34
Table 1-10	Motors, clutch, and solenoids	35
Table 1-11	Switches	36
Table 1-12	Tray 2 media-size detection switch components	40
Table 1-13	Feed speed control	44
Table 1-14	Paper-width detection	46
Table 1-15	Jams that the product detects	56
Table 1-16	Pickup and feed components (1x500-sheet paper feeder)	62
Table 1-17	Pickup and feed components (1x500-sheet paper feeder with cabinet)	64
Table 1-18	Pickup and feed components (2,500-sheet high-capacity paper feeder)	66
Table 1-19	Paper-size detection and tray-presence detection (1 x 500-sheet paper feeder and 1x500-sheet paper feeder with cabinet)	67
Table 1-20	Paper-size detection and tray-presence detection (2,500-sheet high-capacity paper feeder)	67
Table 1-21	Document feeder sensors	74
Table 1-22	Document feeder paper path	75
Table 1-23	Document feeder deskew features	78
Table 1-24	Motor control (stapling mailbox)	83
Table 1-25	Delivery components (stapling mailbox)	85
Table 2-1	Pre-boot menu options (1 of 7)	103
Table 2-2	Pre-boot menu options (2 of 7)	104
Table 2-3	Pre-boot menu options (3 of 7)	105
Table 2-4	Pre-boot menu options (4 of 7)	106
Table 2-5	Pre-boot menu options (5 of 7)	107
Table 2-6	Pre-boot menu options (6 of 7)	108

Table 2-7	Pre-boot menu options (7 of 7)	109
Table 2-8	Troubleshooting flowchart	119
Table 2-9	Control panel diagnostic functions	124
Table 2-10	Connectivity LED, product initialization	135
Table 2-11	Connectivity LED, product operational	137
Table 2-12	Paper-path sensors diagnostic tests	141
Table 2-13	Manual sensor diagnostic tests	144
Table 2-14	Tray/bin manual sensors	148
Table 2-15	Component test details	151
Table 2-16	Sensors (product base)	155
Table 2-17	Sensors (1x500-sheet paper feeder and 1x500-sheet paper feeder with cabinet)	156
Table 2-18	Sensors (2,500-sheet high-capacity feeder) (HCI)	157
Table 2-19	Sensors (SSMBM)	158
Table 2-20	Switches (product base)	159
Table 2-21	Solenoids (product base)	160
Table 2-22	Clutch (product base)	161
Table 2-23	Motors (product base)	162
Table 2-24	Motors (1 x 500-sheet paper feeder)	163
Table 2-25	Motors (1x500-sheet and 3 x 500-sheet paper deck)	163
Table 2-26	Motors (1x500-sheet and 3 x 500-sheet paper deck)	164
Table 2-27	Motors (SSMBM)	165
Table 2-28	Fans (product base)	166
Table 2-29	Main assemblies (product base; 1 of 2)	167
Table 2-30	Main assemblies (product base; 2 of 2)	168
Table 2-31	Main assemblies (1 x 500-sheet paper feeder)	169
Table 2-32	Main assemblies (1x500-sheet paper feeder with cabinet)	170
Table 2-33	Main assemblies (2,500-sheet high-capacity feeder) (HCI)	171
Table 2-34	Main assemblies (SSMBM; 1 of 2)	172
Table 2-35	Main assemblies (SSMBM; 2 of 2)	173
Table 2-36	Main PCAs (product base)	174
Table 2-37	Rollers (product base)	175
Table 2-38	DC controller connectors	176
Table 2-39	Scanner controller board (SCB) connectors	178
Table 2-40	1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high-capacity feeder connectors	179
Table 2-41	Stapling mailbox connectors	180
Table 2-42	Important information on the configuration pages	197
Table 2-43	Reports menu	199
Table 2-44	General Settings menu	201
Table 2-45	Copy Settings menu	206
Table 2-46	Scan/Digital Send Settings menu	214

Table 2-47	Fax Settings menu (fax models only)	224
Table 2-48	General Print Settings menu	234
Table 2-49	Default Print Options menu	237
Table 2-50	Display Settings menu	239
Table 2-51	Manage Supplies menu	241
Table 2-52	Manage Trays menu	244
Table 2-53	Network Settings menu	246
Table 2-54	Embedded Jetdirect Menu	246
Table 2-55	Troubleshooting menu	257
Table 2-56	Backup/Restore menu	260
Table 2-57	Calibration/Cleaning menu	260
Table 2-58	Sample event log page	386
Table 2-59	Sensors (product base)	388
Table 2-60	1x500-sheet paper-feeder and 1x500-sheet paper-feeder with storage cabinet sensors and switches ¹	389
Table 2-61	2,500-sheet high-capacity feeder (HCI) sensors and switches	390
Table 2-62	3-bin stapling mailbox accessory sensors	391
Table 2-63	Print modes ¹ under the Adjust Paper Types submenu	427
Table 2-64	Print modes under the Optimize submenu	427
Table 2-65	Image defects table	429
Table 2-66	Solve performance problems	446
Table 2-67	Send-fax messages	465
Table 2-68	Receive-fax messages	466
Table A-1	Physical specifications	474
Table A-2	Accessory dimensions	474
Table A-3	Product space requirements	475
Table A-4	Operating-environment specifications	476

List of figures

Figure 1-1	Relationship between the main product systems	2
Figure 1-2	System block diagram	3
Figure 1-3	Engine control system block diagram	10
Figure 1-4	DC controller block diagram	11
Figure 1-5	Motors	12
Figure 1-6	Fans	13
Figure 1-7	High-voltage power supply	14
Figure 1-8	Low-voltage power supply circuit	15
Figure 1-9	Fuser components	18
Figure 1-10	Fuser circuit	19
Figure 1-11	Laser/scanner	22
Figure 1-12	Image-formation system components	24
Figure 1-13	Image-formation system motor control	25
Figure 1-14	Stages of image-formation	26
Figure 1-15	1. Primary charge (conditioning)	27
Figure 1-16	2. Laser-beam exposure (writing)	27
Figure 1-17	3. Developing	28
Figure 1-18	4. Transfer	28
Figure 1-19	5. Separation	29
Figure 1-20	6. Fusing	29
Figure 1-21	7. Drum cleaning	30
Figure 1-22	Toner Cartridge	31
Figure 1-23	Pickup, feed, and delivery system	33
Figure 1-24	Sensor locations	34
Figure 1-25	Motor, clutch, and solenoid locations	35
Figure 1-26	Switch locations	36
Figure 1-27	Pickup-and-feed block	38
Figure 1-28	Tray 2 pickup	39
Figure 1-29	Tray 2 lift operation	41
Figure 1-30	Multiple-feed prevention	42
Figure 1-31	Tray 1 pickup	43
Figure 1-32	Skew-feed prevention	45

Figure 1-33	Fusing, reverse, and delivery block	47
Figure 1-34	Pressure roller pressurization and depressurization control	48
Figure 1-35	Reverse and delivery control	49
Figure 1-36	Face-down delivery	50
Figure 1-37	Face-up delivery	51
Figure 1-38	Output bin paper-full detection	52
Figure 1-39	Duplex block	53
Figure 1-40	Duplex side registration adjustment operation	54
Figure 1-41	Jam detection sensors	56
Figure 1-42	1x500-sheet paper feeder	59
Figure 1-43	1x500-sheet paper feeder with cabinet	60
Figure 1-44	2,500-sheet high-capacity paper feeder	61
Figure 1-45	Signal flow for the 1x500-sheet paper feeder controller	62
Figure 1-46	Pickup and feed components (1x500-sheet paper feeder)	62
Figure 1-47	Signal flow for the 1x500 paper feeder with cabinet controller	63
Figure 1-48	Pickup and feed components (1x500-sheet paper feeder with cabinet)	64
Figure 1-49	Signal flow for the 2,500-sheet high-capacity paper feeder controller	65
Figure 1-50	Pickup and feed components (2,500-sheet high-capacity paper feeder)	65
Figure 1-51	Trays 3 and 4 paper feeder lift operation	68
Figure 1-52	Tray 5 paper feeder lift operation	69
Figure 1-53	1x500-sheet paper feeder media feed sensor	70
Figure 1-54	1x500-sheet paper feeder with cabinet media feed sensor	71
Figure 1-55	2,500-sheet high-capacity paper feeder media feed sensors	72
Figure 1-56	Document feeder sensors	74
Figure 1-57	Document feeder paper path	75
Figure 1-58	Document feeder deskew features	78
Figure 1-59	Document feeder open (book mode)	79
Figure 1-60	Document feeder open (60° to 80°)	80
Figure 1-61	Stapling mailbox	81
Figure 1-62	Signal flow for the stapling mailbox	82
Figure 1-63	Stapling mailbox motors	83
Figure 1-64	Delivery components (stapling mailbox)	85
Figure 1-65	Stapling mailbox stapler operation	87
Figure 1-66	Stapling mailbox stapler operation	88
Figure 1-67	Stapling mailbox stapler operation	89
Figure 1-68	Stapling mailbox stapler operation	90
Figure 1-69	Stapling mailbox sensors for the stapler	91
Figure 1-70	Stapling mailbox sensors for output bin 3 lift operation	92
Figure 1-71	Stapling mailbox sensors for stacker mode	93
Figure 1-72	Stapling mailbox sensors for mailbox/jam separation	94
Figure 1-73	Stapling mailbox sensors for jam detection	95

Figure 2-1	Open the Control Panel	111
Figure 2-2	Turn Windows features on or off	111
Figure 2-3	Enable the telnet client feature	112
Figure 2-4	Select the +3:Administrator item	113
Figure 2-5	Select the +A:Remote Admin item	113
Figure 2-6	Select the 1:Start Telnet item	113
Figure 2-7	Telnet connecting message	113
Figure 2-8	Telnet error message	114
Figure 2-9	Telnet server function initialized	114
Figure 2-10	Open a command window	115
Figure 2-11	Start a telnet session	115
Figure 2-12	Establish a telnet connection	115
Figure 2-13	Enter the PIN	116
Figure 2-14	Remote Admin window	116
Figure 2-15	Access the administrator menu	117
Figure 2-16	Access the remote admin menu	117
Figure 2-17	Terminate the telnet connection	118
Figure 2-18	Touchscreen blank, white, or dim (no image)	128
Figure 2-19	Touchscreen is slow to respond or requires multiple presses to respond	129
Figure 2-20	Touchscreen has an unresponsive zone	130
Figure 2-21	No control panel sound	131
Figure 2-22	Home button is unresponsive	132
Figure 2-23	Hardware integration pocket (HIP) is not functioning (control panel functional)	133
Figure 2-24	Defeating interlocks	139
Figure 2-25	Engine test button	140
Figure 2-26	Sensors (product base)	155
Figure 2-27	Sensors (1x500-sheet paper feeder and 1x500-sheet paper feeder with cabinet)	156
Figure 2-28	Sensors (2,500-sheet high-capacity feeder) (HCI)	157
Figure 2-29	Sensors (SSMBM)	158
Figure 2-30	Switches (product base)	159
Figure 2-31	Solenoids (product base)	160
Figure 2-32	Clutch (product base)	161
Figure 2-33	Motors (product base)	162
Figure 2-34	Motors (1 x 500-sheet paper feeder)	163
Figure 2-35	Motors (1x500-sheet paper feeder)	163
Figure 2-36	Motors (2,500-sheet high-capacity feeder) (HCI)	164
Figure 2-37	Motors (SSMBM)	165
Figure 2-38	Fans (product base)	166
Figure 2-39	Main assemblies (product base; 1 of 2)	167
Figure 2-40	Main assemblies (product base; 2 of 2)	168
Figure 2-41	Main assemblies (1x500-sheet paper feeder)	169

Figure 2-42	Main assemblies (1x 500-sheet paper feeder with cabinet)	170
Figure 2-43	Main assemblies (2,500-sheet high-capacity feeder) (HCI)	171
Figure 2-44	Main assemblies (SSMBM; 1 of 2)	172
Figure 2-45	Main assemblies (SSMBM; 2 of 2)	173
Figure 2-46	Main PCAs (product base)	174
Figure 2-47	Rollers (product base)	175
Figure 2-48	DC controller PCA connectors	176
Figure 2-49	Scanner controller board (SCB) connectors	178
Figure 2-50	1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high-capacity feeder connectors	179
Figure 2-51	Stapling mailbox connectors	180
Figure 2-52	General timing chart (1 of 2)	182
Figure 2-53	General timing chart (2 of 2)	183
Figure 2-54	General circuit diagram (product base) (1 of 2)	184
Figure 2-55	General circuit diagram (product base) (2 of 2)	185
Figure 2-56	General circuit diagram 1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high-capacity feeder (HCI)	186
Figure 2-57	General circuit diagram for the stapling mailbox	187
Figure 2-58	General circuit diagram for the envelope feeder	188
Figure 2-59	Print-quality troubleshooting procedure page	190
Figure 2-60	Black print-quality troubleshooting page	191
Figure 2-61	Configuration page	195
Figure 2-62	HP embedded Jetdirect page	196
Figure 2-63	Removing paper Stuck in Duplex re-feed path.	280
Figure 2-64	Jam detection sensors	281
Figure 2-65	Opening to the registration assembly	282
Figure 2-66	Paper feed assembly belt	288
Figure 2-67	Sample event log	386
Figure 2-68	Sensors (product base)	388
Figure 2-69	1x500-sheet paper-feeder and 1x500-sheet paper-feeder with storage cabinet sensors and switches ¹	389
Figure 2-70	2,500-sheet high-capacity feeder (HCI) sensors and switches	390
Figure 2-71	Stapling mailbox sensors	391
Figure A-1	Product space requirements	475
Figure A-2	Certificate of Volatility 1 of 2)	477
Figure A-3	Certificate of Volatility (2 of 2)	478

1 Theory of operation

- [Basic operation](#)
- [Formatter-control system](#)
- [Engine-control system](#)
- [Laser/scanner system](#)
- [Image-formation system](#)
- [Pickup, feed, and delivery system](#)
- [Optional paper feeders](#)
- [Scanning/image capture system](#)
- [Stapling mailbox](#)

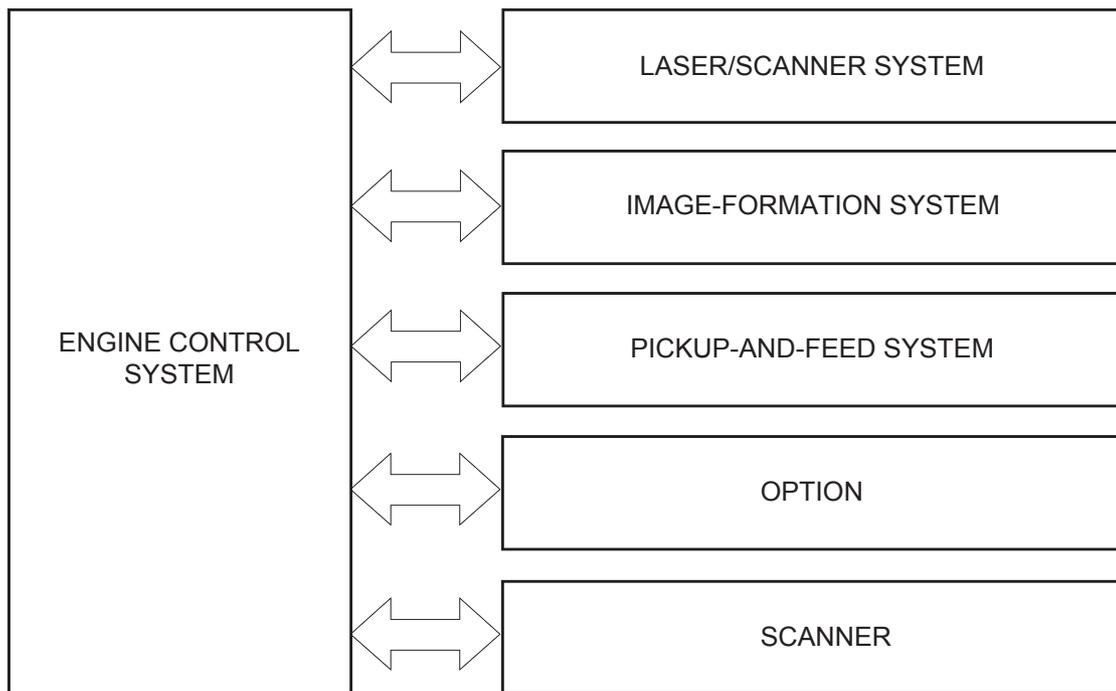
Basic operation

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

The basic product operation comprises the following systems:

- The engine-control system, which includes the power supply and the DC controller
- The laser/scanner system, which forms the latent image on the photosensitive drum
- The image-formation system, which transfers a toner image onto the paper
- The pickup-and-feed system, which uses a system of rollers and belts to transport the paper through the product
- The option system, which controls the optional paper feeders
- The scanner system, which scans data and sends it to the formatter for copying or for sending to email

Figure 1-1 Relationship between the main product systems



The interconnect board (ICB) provides connections from the formatter to the following components:

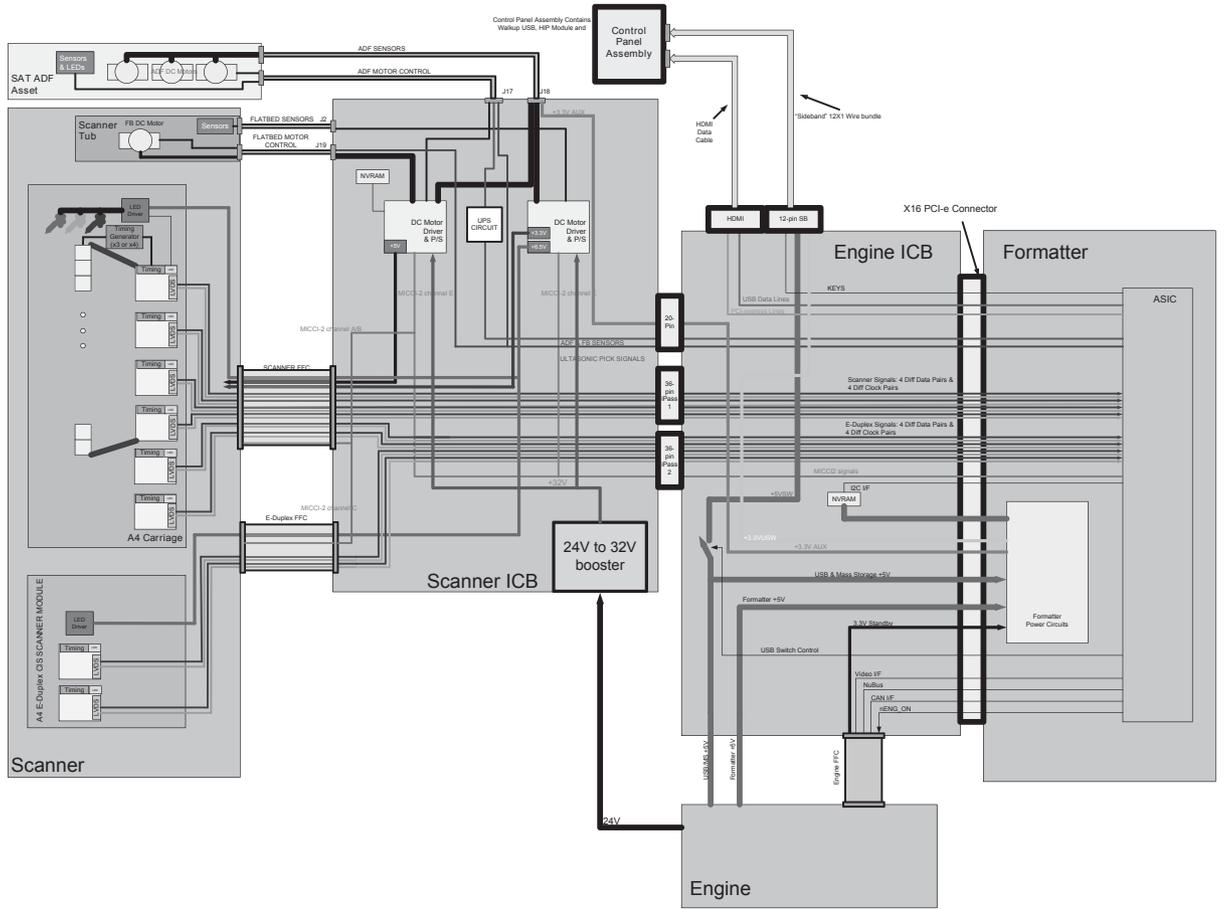
- DC controller (DCC)
- Scanner control board (SCB)
- Control panel, easy-access USB port, and USB hardware integration pocket through a USB cable

The formatter receives +5 volts from the low-voltage power supply (LVPS).

The document feeder/scanner receives +24 volts from the scanner power supply, which is powered by an AC line from the LVPS.

The stapling mailbox receives +24 volts from the LVPS through a line in the JetLink cable connecting the stapling mailbox to the product.

Figure 1-2 System block diagram



Sequence of operation (product)

A microprocessor on the DC controller controls the operating sequence of the product. The tables in this section describe the basic operating sequence, from when the product power is turned on until the final printed page is delivered to an output bin.

Table 1-1 Sequence of operation (product)

Period	Duration	Description
Waiting	From the time the power is turned on, the door is closed, or the product exits Sleep mode until the product is ready for printing	<ul style="list-style-type: none">• Detects the toner cartridge• Cleans the transfer roller• Heats the fuser sleeve in the fuser• Pressurizes the pressure roller in the fuser
Standby	From the end of the waiting sequence or the end of the last rotation until the formatter receives a print command or the product is turned off	<ul style="list-style-type: none">• The product is in the Ready state.• The product enters Sleep mode if the Sleep command is received from the formatter.
Initial rotation	From the time the formatter receives a print command until the paper enters the paper path	<ul style="list-style-type: none">• Stabilizes the photosensitive drum to prepare for printing• Prepares the laser/scanner unit
Print	From the time the first sheet of paper enters the paper path until the last sheet has passed through the fuser	<ul style="list-style-type: none">• Forms the image on the photosensitive drum• Transfers the toner to the paper• Fuses the toner image onto the paper
Last rotation	From the time the last sheet of paper exits the fuser until the motors stop rotating	<ul style="list-style-type: none">• Moves the last printed sheet into the output bin• Cleans the transfer roller• Stops the high-voltage power supply• Stops the laser/scanner unit• If the product receives another print command, the product returns to the initial rotation period when the last rotation is complete.• If the product does not receive another print command, the product returns to the standby period.

Sequence of operation (scanner)

Table 1-2 Sequence of operation (scanner)

Period	Duration	Description
Power on	When the product is turned on	<ul style="list-style-type: none">• Scanner motors rotate• Product checks the status of all the sensors• Scanner lamp illuminates• Optical scan head moves from its home position• Scanner calibrates• Optical scan head returns to its home position
Initialization	From the end of the power-on period until the product is ready to scan or copy	<ul style="list-style-type: none">• Scanner and document feeder initialization complete• Scanner calibrates• Document feeder checks for paper in the input tray
Standby	From the end of the initialization period until a request for a scan	<ul style="list-style-type: none">• The product enters Sleep mode if the Sleep command is received from the formatter.• Scan carriage rests in its home position
Scan	From the time immediately following a request for a scan until the scan is complete	<ul style="list-style-type: none">• Scanner turns on• Scan start position adjusted• Scan performed• Data sent to the formatter

Formatter-control system

The formatter performs the following functions:

- Controls Sleep mode
- Receives and processes print data from the various product interfaces
- Monitors control-panel functions and relays product-status information (through the control panel and the network or the bidirectional interface)
- Develops and coordinates data placement and timing with the DC controller
- Stores font information
- Communicates with the host computer through the network or the bidirectional interface

The formatter receives a print job from the network or the bidirectional interface and separates it into image information and instructions that control the printing process. The DC controller synchronizes the image-formation system with the paper-input and -output systems, and then signals the formatter to send the print-image data.

The formatter also provides the electrical interface and mounting locations for one memory DIMM, the hard disk drive or solid state module memory device, and the optional analog fax accessory.

Formatter hardware

The formatter system includes the following components.

Table 1-3 Formatter hardware components

Component	Function
Microprocessor	Stores fonts and microprocessor control programs
Random access memory (RAM)	Stores printing and font information and temporarily stores print-image data before sending it to the product. RAM data is lost when the product is turned off.
Nonvolatile random access memory (NVRAM)	Stores configuration information. NVRAM data is saved when the product is turned off.
USB	Sends and receives data through a USB type B interface connector (connected to the host computer)
Hard-disk drive (HDD) Solid-state module (SSM)	Stores the firmware. A remote firmware upgrade process overwrites and upgrades the firmware on the HDD or SSM.
Real time clock	The Wake-up time feature uses this clock. It includes a battery to supply power when the product is turned off.
HP Jetdirect Inside (JDI)	JDI is an Ethernet interface that is part of the formatter.

Sleep mode



NOTE: In the [General Settings](#) menu (a submenu of the [Administration](#) menu), this item is termed [Sleep Timer Settings](#).

This feature conserves power after the product has been idle for an adjustable period of time. When the product is in Sleep mode, the product retains all settings, downloaded fonts, and macros. The default setting is for Sleep mode to be enabled, and the product enters Sleep mode after a 30-minute idle time.

The product firmware uses a combination of timers and Sleep settings to control when the product enters a different state as well as what states the product will enter. The available states are listed below, in descending order, from using the most power to using the least power:

- **Active:** The product control panel is fully illuminated. The power button light is illuminated.
- **Shallow suspend:** The product control panel is dim and the content is grayed out, but is still readable. The power button light is illuminated.
- **Suspend:** The product control panel is off (blacked out). The power button light blinks once every three seconds.
- **Deep suspend:** The product control panel is off (blacked out). The power button light blinks once every three seconds. The control panel and power button appearance is the same in this state as the suspend state. However, the product is drawing less than 1 watt of power in the deep suspend state (as opposed to 6 watts of power in the suspend state).
- **Off:** This state is entered by pressing the power button or removing power from the product. The power button light is not illuminated.

The product exits Sleep mode and enters the warm-up cycle when any of the following events occur:

- The product receives a print job, valid data, or a PML or PJJ command.
- A control-panel button is pressed or the touchscreen is touched.
- A cover or door is opened.
- The engine-test switch is pressed.
- A paper tray, other than Tray 1, is opened.



NOTE: If the product is in the deep suspend state, opening a paper tray will not cause the product to exit Sleep mode.



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



TIP: When the product is in Sleep mode, the sub-power supply is off and the low-voltage power supply is on. The scanner cannot be used when the product is in Sleep mode.

Input/output (I/O)

The product has three I/O interfaces:

- Hi-Speed USB 2.0
- 10/100/1000 Ethernet LAN connection with IPv4 and IPv6
- Easy-access USB printing (no computer required)

CPU

The formatter incorporates an 800 MHz processor.

Memory

This section describes the product random access memory (RAM).

Random access memory (RAM)

RAM on the formatter contains the page, I/O buffers, and the font storage area. It stores printing and font information received from the host system, and can also serve to temporarily store a full page of print-image data before the data is sent to the product. The contents of RAM are lost when the product is turned off.

 **NOTE:** If the product encounters a problem when managing available memory, a clearable warning message displays on the control-panel display.

Firmware

The hard-disk drive (HDD) or solid-state module (SSM) store the firmware. A remote firmware upgrade process overwrites and upgrades the firmware on the HDD or SSM.

Nonvolatile random access memory (NVRAM)

NVRAM on the formatter stores product and user configuration settings. The contents of NVRAM are retained when the product is turned off or disconnected.

Image Resolution Enhancement technology

 **NOTE:** Resolution Enhancement technology (REt) settings that are sent from software programs or product drivers override the control-panel settings.

The formatter contains circuitry for REt, which modifies the standard video dot data on its way to the DC controller to produce “smoothed” line edges. REt can be turned on or off from the control panel or from some software programs. The default setting is on.

REt produces print output with smooth angles, curves, and edges. All print resolutions, including FastRes 1200, benefit from using REt.

- ProRes 1200: produces 1200 dpi printing for the best quality in-line art and graphic images.
- FastRes 1200: produces 1200 dpi print quality for fast, high-quality printing of business text and graphics.

HP Memory Enhancement technology

The HP Memory Enhancement technology (MEt) effectively doubles the amount of standard memory through a variety of font- and data-compression methods.



NOTE: MEt is available only in when printing in printer command language (PCL) mode. It is not functional when printing in PostScript (PS) mode.

Printer job language (PJL)

PJL is an integral part of product configuration, in addition to the standard printer command language (PCL) and PostScript (PS). With standard cabling, the product can use PJL to perform a variety of functions, such as these:

- **Two-way communication with the host computer through a network connection or a USB device port:** The product can inform the host about the control-panel settings, and the control-panel settings can be changed from the host.
- **Dynamic I/O switching:** The product uses this switching to be configured with a host on each I/O. The product can receive data from more than one I/O simultaneously, until the I/O buffer is full. This can occur even when the product is offline.
- **Context-sensitive switching:** The product can automatically recognize the personality (PS or PCL) of each job and configure itself to serve that personality.
- **Isolation of print environment settings from one print job to the next:** For example, if a print job is sent to the product in landscape mode, the subsequent print jobs print in landscape only if they are formatted for landscape printing.

Printer management language (PML)

PML allows remote configuration of the product and status read-back from the product through the I/O ports.

Control panel

The control panel is a 20.3 cm (8 in) full-color SVGA with capacitive touchscreen and adjustable viewing angle. It includes an easy-access USB port for walk-up printing and a hardware integration pocket for third-party USB devices, such as card readers.

The control panel has a diagnostic mode to allow testing of the touchscreen, [Home](#) button, and speaker. The control panel does not require calibration.

The M630z model has a QWERTY retractable keyboard beneath the control panel. The keys are mapped to a specific language in the same way the virtual keyboard on the product control panel is mapped. Selecting a different keyboard layout for the virtual keyboard remaps the keys on the physical keyboard to match the new settings.

Scanner interface

The formatter receives data from the scanner to produce copies and to send scanned data in email format.

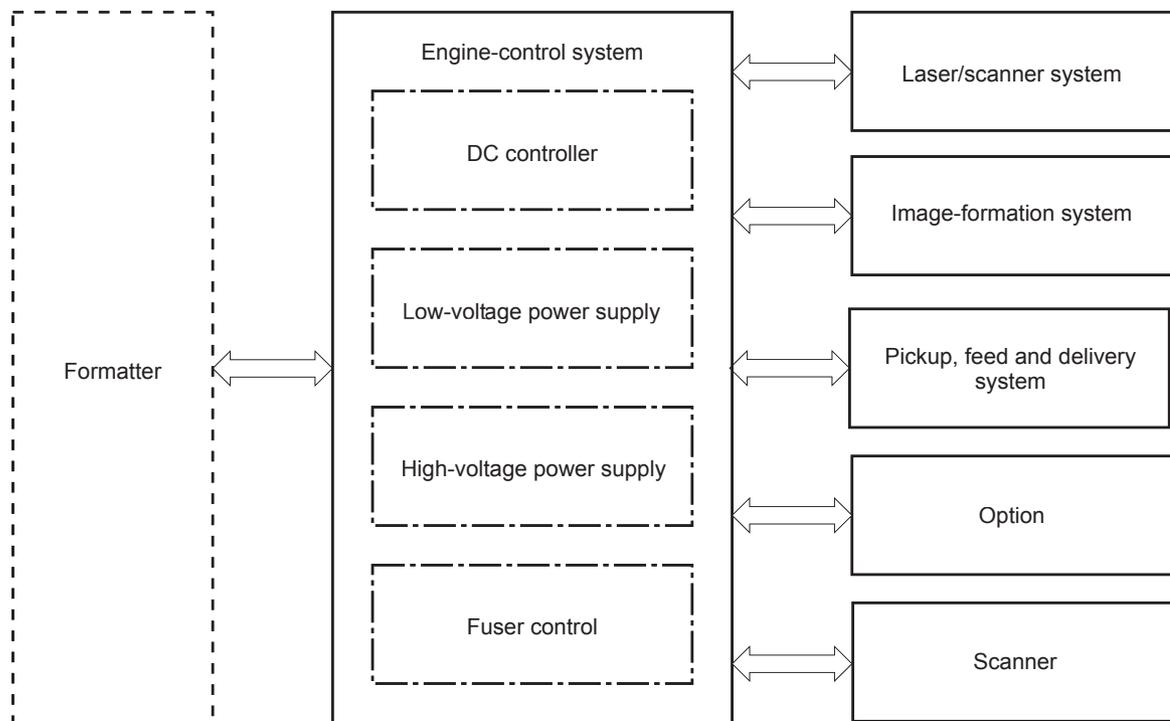
Engine-control system

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

- DC controller
- Low-voltage power supply (LVPS)
- High-voltage power supply (HVPS)
- Fuser control

This system controls the laser/scanner, image-formation, and pickup-and-feed systems. The microprocessor on the DC controller controls the operating sequence of the product.

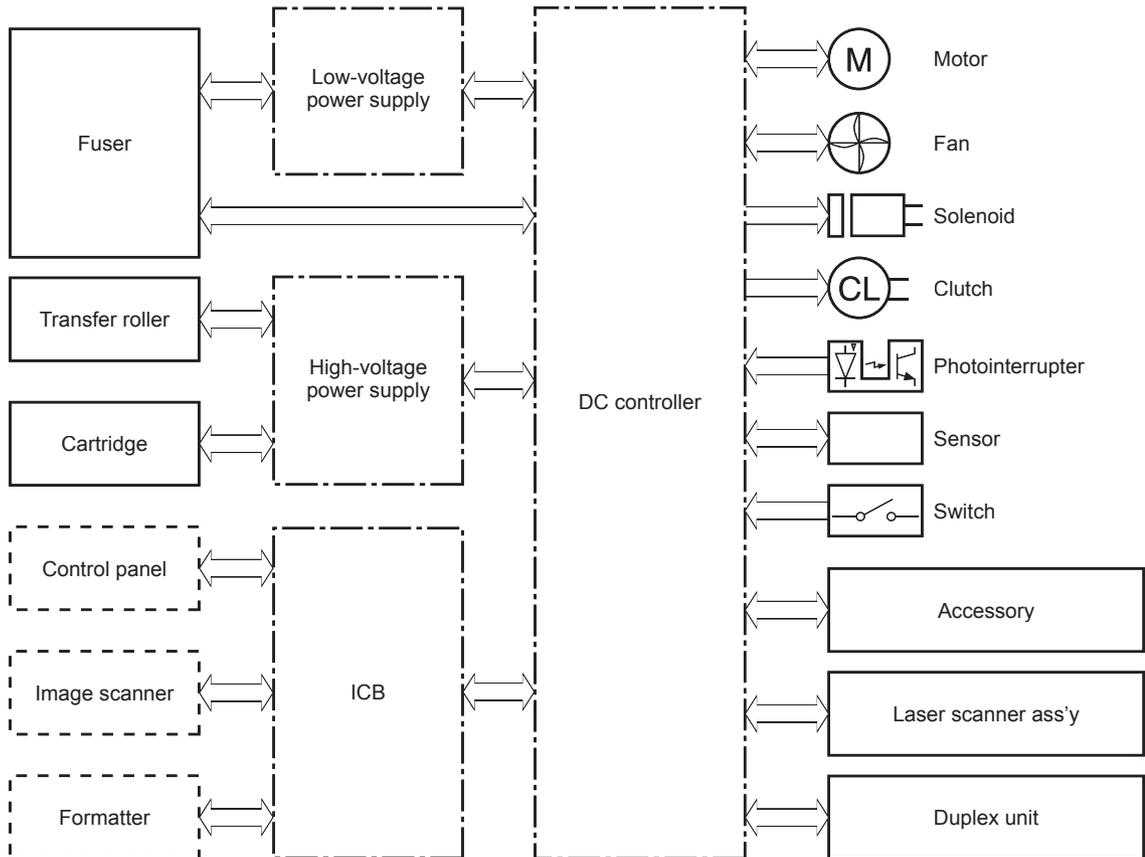
Figure 1-3 Engine control system block diagram



DC controller

The DC controller controls the operation of the product and its components. The DC controller starts the product operation when the product power is turned on and the power supply sends DC voltage to the DC controller. After the product enters the standby period, the DC controller sends out various signals to operate motors, solenoids, and other product components based on the print command and image data that the host computer sends.

Figure 1-4 DC controller block diagram



Motors

The product has nine motors. The motors drive the components in the paper-feed and image-formation systems.

The DC controller monitors the feed motor, drum motor, and fuser motor to determine motor failure. The DC controller does not detect motor failure in the intermediate reverse assembly motor, the reverse assembly motor, the delivery motor, or the duplex re-pickup motor. Therefore, a jam occurs when one of these motors fails.

Figure 1-5 Motors

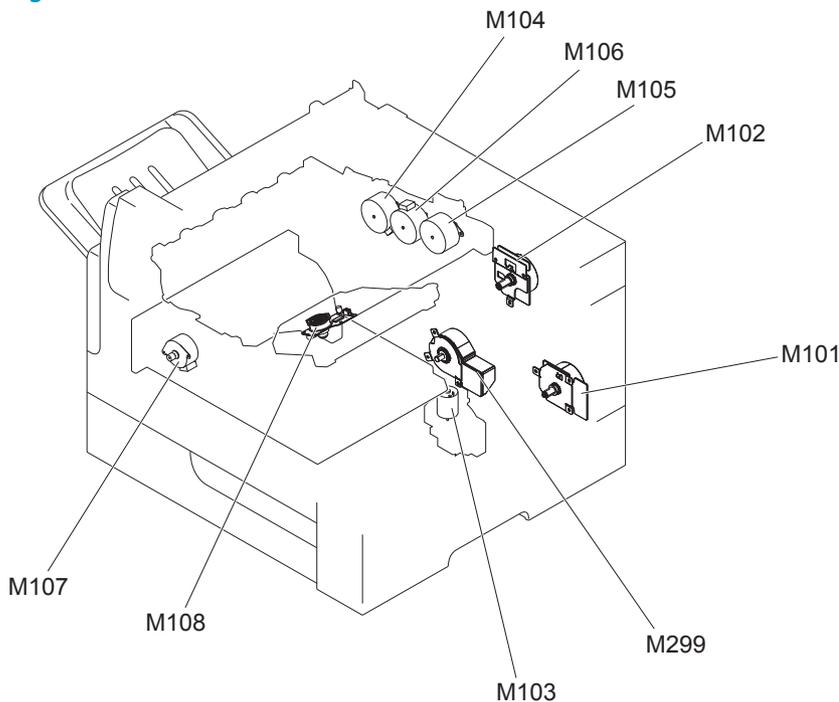


Table 1-4 Motors

Name	Purpose
Feed motor (M101)	Drives the following rollers: Tray 1 pickup roller, Tray 2 pickup roller, feed roller, and rollers for the optional paper feeders
Drum motor (M102)	Drives the transfer-charging roller, photosensitive drum, and developing cylinder
Cassette lifter motor (M103)	Moves the lifting plate
Intermediate reverse assembly motor (M104)	Drives the intermediate reverse assembly roller
Reverse assembly motor (M105)	Drives the reverse assembly roller
Delivery motor (M106)	Drives the intermediate delivery roller and the delivery roller
Duplex re-pickup motor (M107)	Drives the duplex feed roller
Scanner motor (M108)	Drives the scanner mirror
Fuser motor (M299)	Drives the pressure roller and fuser delivery roller; pressurizes or releases the pressure roller

Fans

The product has seven cooling fans for preventing the temperature from rising in the product.

The DC controller determines a fan failure and notifies the formatter when the fan locks for a specified period of time from when the fan starts up.

Figure 1-6 Fans

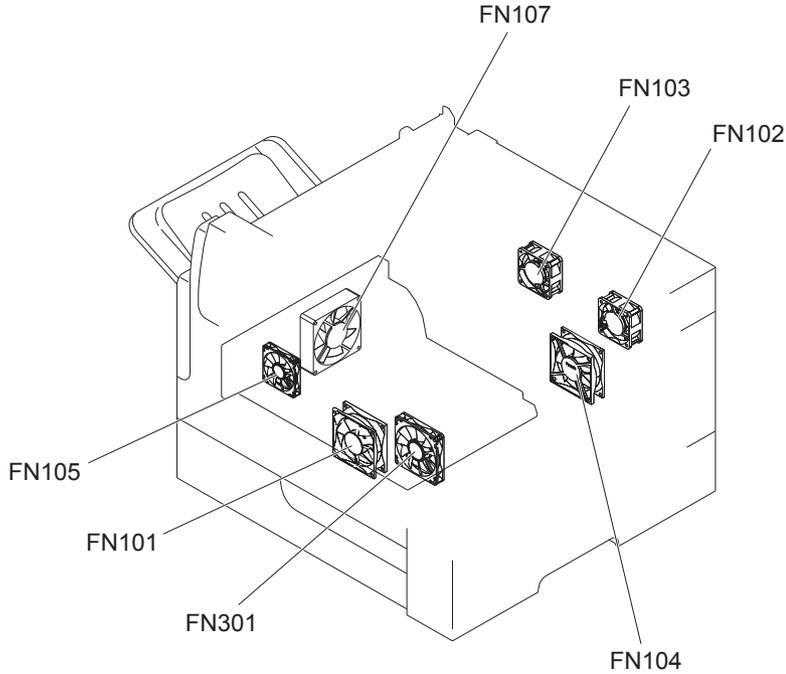


Table 1-5 Fans

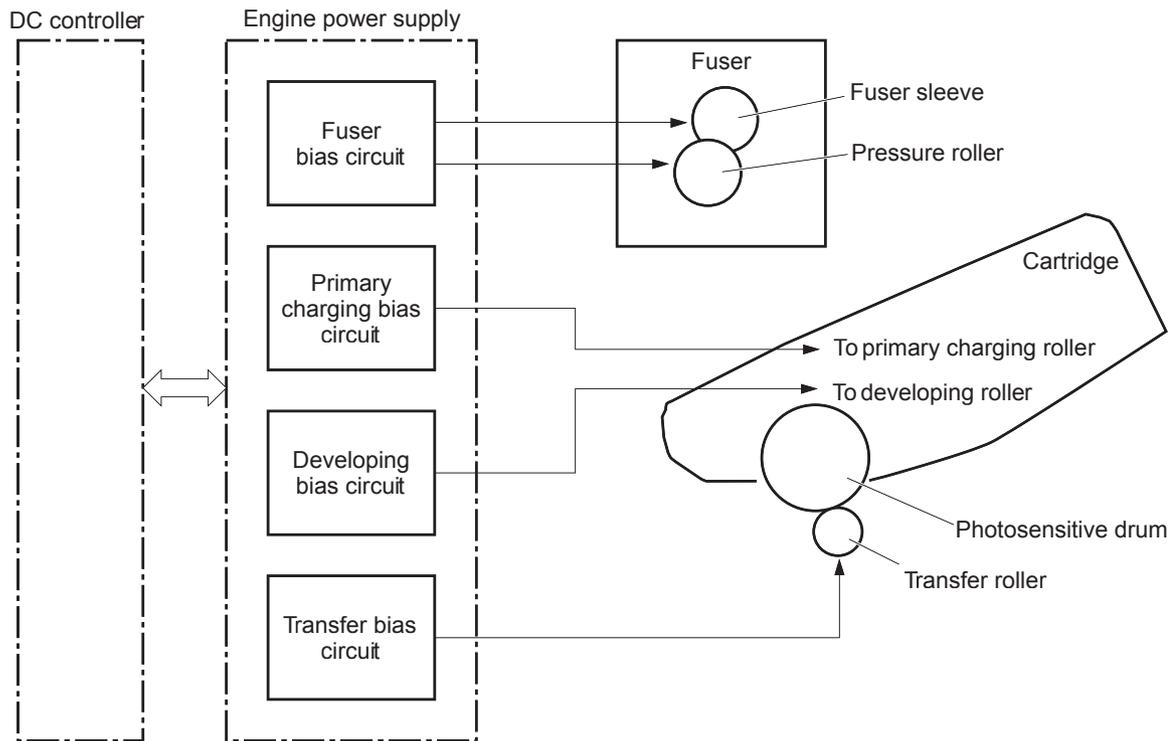
Name	Cooling area	Type	Motor speed	Failure detection
Main fan (FN101)	Cartridge area, engine power supply area and laser scanner area	Intake	2-speed	Yes
Laser scanner fan (FN102)	Laser scanner area	Intake	1-speed	Yes
Cartridge front side fan (FN103)	Cartridge area	Intake	1-speed	Yes
Low-voltage power supply fan (FN104)	Low-voltage power supply area	Intake	2-speed	Yes
Reverse fan (FN105)	Reverse area	Intake	1-speed	Yes
Duplex fan (FN107)	Duplex feed area	Intake	1-speed	Yes
Cartridge fan (FN301)	Cartridge area	Intake	1-speed	Yes

High-voltage power supply

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

- Primary charging roller
- Developing roller
- Transfer roller
- Fuser sleeve
- Pressure roller

Figure 1-7 High-voltage power supply



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

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

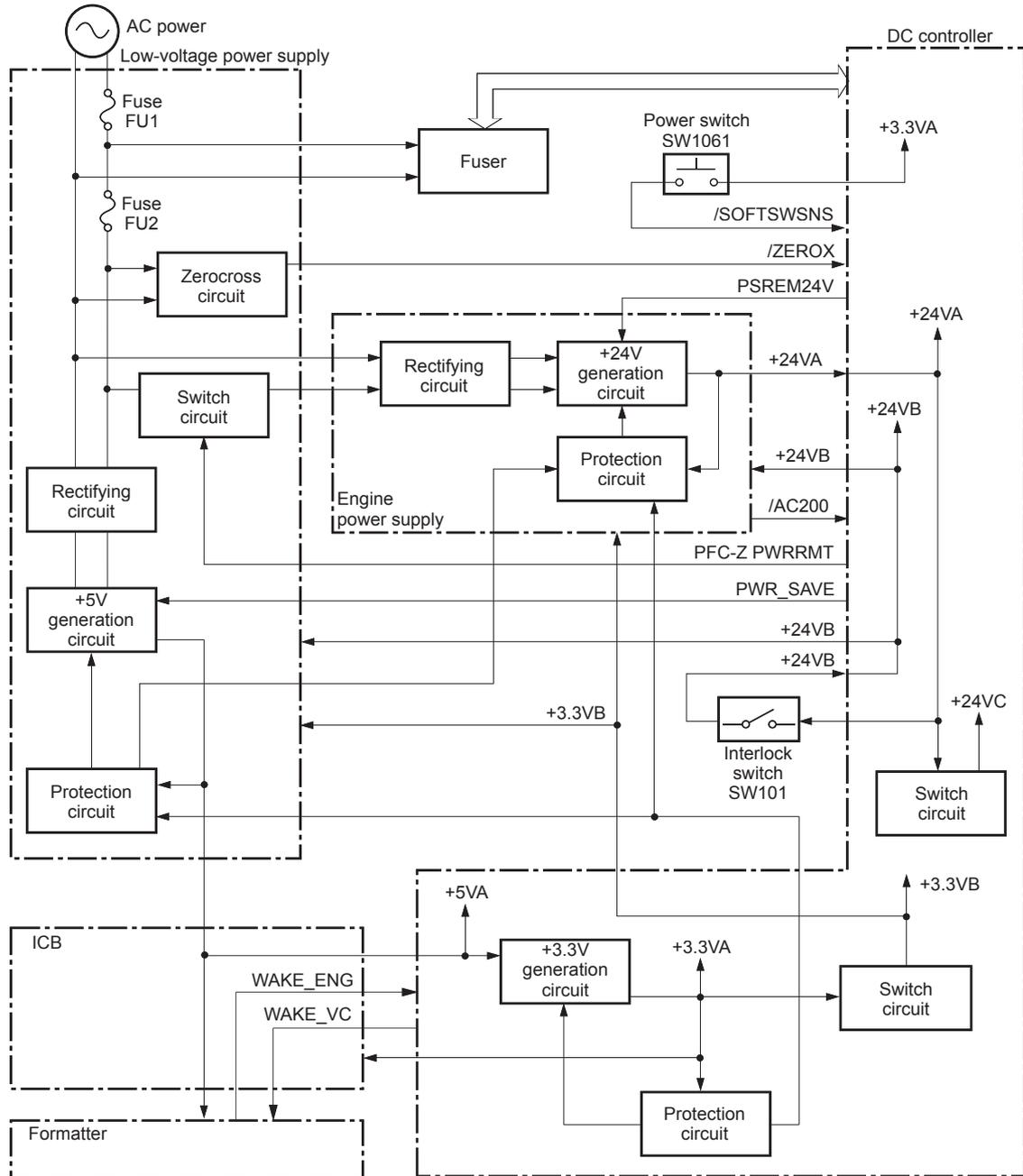
The transfer bias is used to transfer the toner from the photosensitive drum onto the paper. The transfer bias circuit generates the bias.

The fuser bias is used to stabilize the paper feed and improve the print quality. The fuser bias circuit generates the bias.

Low-voltage power supply

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

Figure 1-8 Low-voltage power supply circuit



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

Table 1-6 Converted DC voltages

	DC voltage	Behavior
+24V	+24VA	Stopped when the product is turned off or is in Sleep mode
	+24VB	Interrupted when the cartridge door opens
	+24VC	Interrupted when the product detects no fuser installed
+5V	+5VA	Constantly supplied
+3.3V	+3.3VA	Constantly supplied
	+3.3VB	Stopped when the product is turned off or is in Sleep mode

Overcurrent/overvoltage protection

The low-voltage power supply automatically stops supplying the DC voltage to the product components whenever it detects excessive current or abnormal voltage. The low-voltage power supply has a protective circuit against overcurrent and overvoltage to prevent failures in the power supply circuit.

⚠ CAUTION: If DC voltage is not being supplied from the low-voltage power supply, the protective function might be running. In this case, turn the power switch off and unplug the power cord.

Do not turn the power switch on until the root cause is found and corrected.

If the protective function is active, the DC controller notifies the formatter of a low-voltage power supply failure. In addition, the low-voltage power supply has two fuses (FU1 and FU2) to protect against over-current. If over-current flows into the AC line, the fuses stop the AC power.

Voltage detection

The product detects the power supply voltage that is connected to the product. The DC controller monitors the POWERSUPPLY VOLTAGE (/AC200) signal and detects power supply voltage, whether 100 volts or 200 volts, to control the fuser operation. The DC controller determines a low-voltage power supply failure and notifies the formatter when the power supply voltage is out of a specified range.

Safety

For personal safety, the product interrupts +24VB power when the interlock switch is turned off. As a result, the DC voltage to the following components stops. See [Table 1-6 Converted DC voltages on page 16](#).

- Low-voltage power supply
- High-voltage power supply
- Fuser motor (M299)
- Laser scanner fan (FN102)
- Cartridge front-side fan (FN103)
- Reverse fan (FN105)
- Cartridge fan (FN301)

⚠ WARNING! The remote switch control circuit turns the product power on or off such that AC power flows even when the power switch is turned off. Unplug the power cord before disassembling the product.

Sleep (power save) mode

Sleep mode conserves energy by stopping the power to several components when the product is idle. The DC controller determines a low-voltage power supply failure and notifies the formatter if the power supply of +24 volts is lower than a specified value when the product exits Sleep mode and enters the standby period.

Low-voltage power supply functions

The product has the following low-voltage power supply functions.

Table 1-7 Low-voltage power supply functions

Function	Supported feature
Sleep mode	Yes
Power supply voltage detection	Yes
Automatic power OFF	No
Automatic power ON/OFF	No
Active OFF	Yes
Inactive OFF	Yes
Network mode	No
Power switch illumination	Yes
Low-voltage power supply failure detection	Yes

Fuser control

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

Figure 1-9 Fuser components

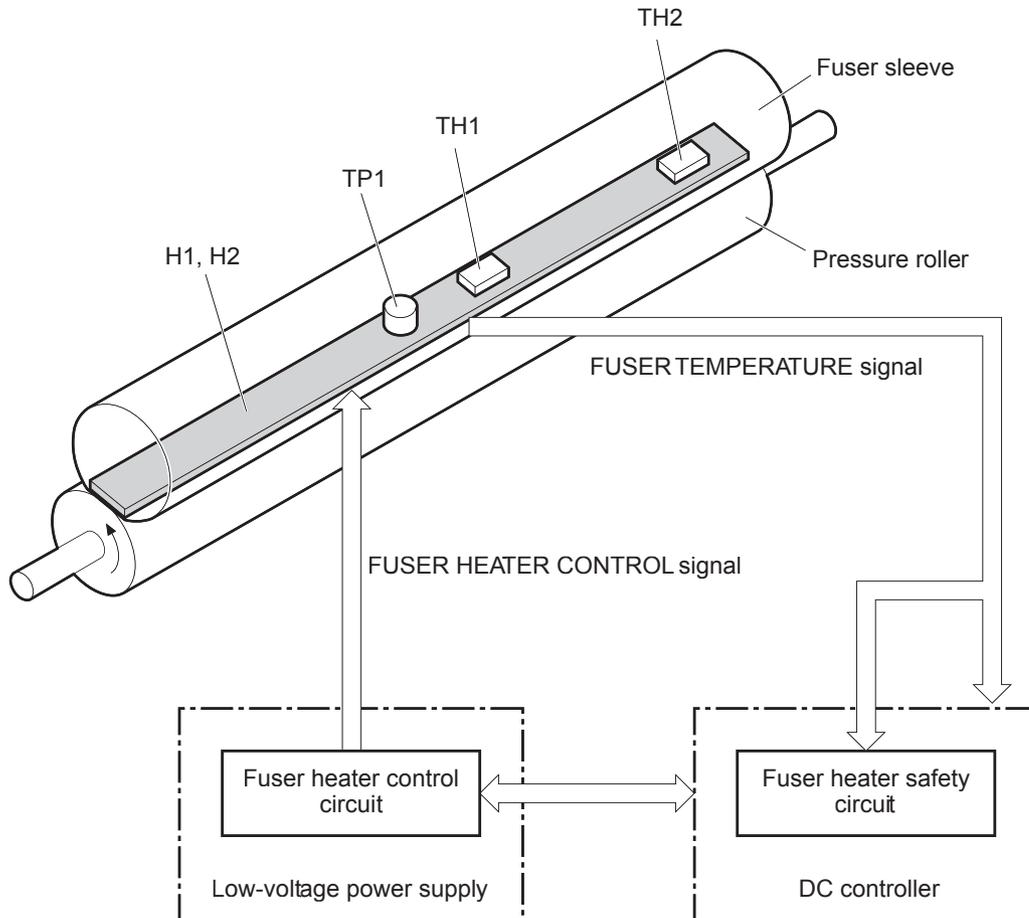


Table 1-8 Fuser components

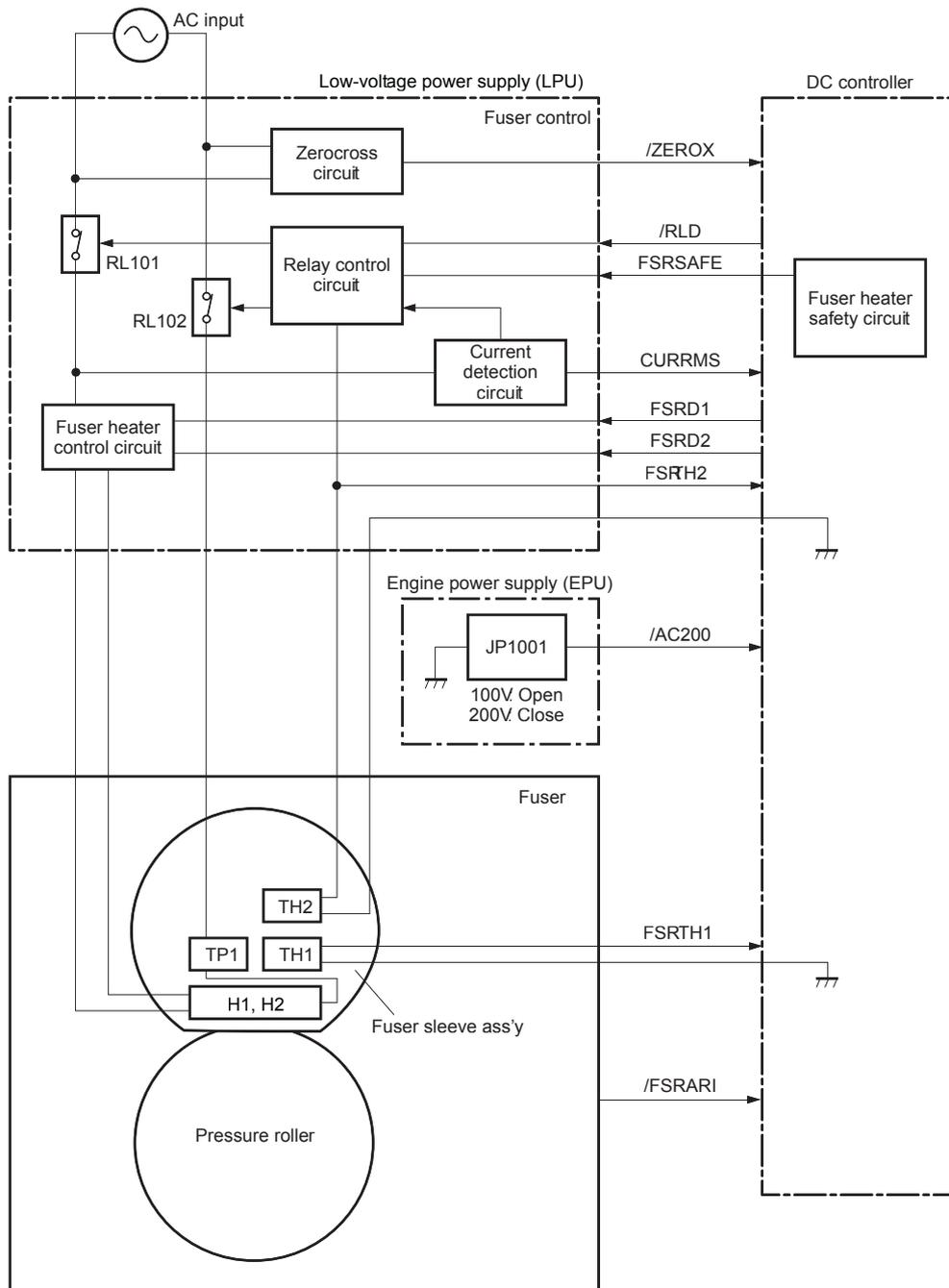
Component name	Function
H1	Fuser main heater Heats the fuser sleeve
H2	Fuser sub-heater Heats the fuser sleeve
TH1	Main thermistor Detects the temperature at the center of the fuser heater (contact type)
TH2	Sub-thermistor Detects the temperature on one end of the fuser heater (contact type)
TP1	Thermoswitch Prevents an abnormal temperature rise of the fuser heater (contact type)

Fuser temperature control

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

The DC controller detects the fuser temperature by monitoring the FUSER TEMPERATURE (FSRTH1 and FSRTH2) signals. The DC controller outputs the FUSER HEATER CONTROL (FSRD1 and FSRD2) signals, so that the fuser heater control circuit controls the fuser heater accordingly.

Figure 1-10 Fuser circuit



Fuser sleeve temperature protection

Fuser heater protection is a feature that detects excessive temperatures in the fuser and interrupts the power supply to the fuser heater.

The following three protective components prevent the fuser heater from reaching excessive temperatures:

- **DC controller:** The DC controller monitors the detected temperature of the thermistors. The DC controller deactivates the FUSER HEATER CONTROL signal and releases the relays (RL101 and RL102) to interrupt power supply to the fuser heater when it detects an excessive temperature.
- **Fuser heater safety circuit:** The fuser heater safety circuit monitors the detected temperature of the thermistors. The fuser heater safety circuit deactivates the FUSER HEATER CONTROL signal and releases the relays (RL101 and RL102) to interrupt power supply to the fuser heater when it detects an excessive temperature.
- **Thermoswitch:** If the temperature of the fuser heater is abnormally high, the contact of the thermoswitch breaks to interrupt power supply to the fuser heater.

Fuser failure detection

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

- Abnormal temperature rise
 - The main thermistor does not detect 15°C (59°F) or higher within a specified period of time from when the fuser heater is turned on.
 - The main thermistor does not detect 100°C (212°F) or higher within a specified period of time from when the fuser heater is turned on.
 - The main thermistor does not detect targeted temperature minus 5°C (41°F) within a specified period of time from when the fuser heater is turned on.
- Abnormally low temperature
 - The main thermistor detects 49°C (120.2°F) or lower continuously for a specified period of time after it once detects 100°C (212°F) or higher.
 - The main thermistor detects targeted temperature minus specified degrees or lower continuously for a specified period of time after the TOP signal for the first page is output.
 - The sub-thermistor detects 49°C (120.2°F) or lower continuously for a specified period of time after it once detects 100°C (212°F) or higher.
- Abnormally high temperature
 - The main thermistor detects 255°C (491°F) or higher.
 - The sub-thermistor detects 285°C (545°F) or higher.
- Frequency detection circuit failure
 - The ZEROCROSS signal is not detected within a specified period of time after the product is turned on.
- Fuser-presence detection

The DC controller determines if the fuser is installed in the product and notifies the formatter when it detects the fuser is absent. The DC controller detects fuser presence from the FUSER PRESENCE (/ FUSERARI) signal when any of the following occurs:

- The product is turned on.
- The door is closed.

Pressure roller cleaning

The formatter periodically initiates the pressure roller cleaning function to clear the toner accumulated on the pressure roller surface by transferring it to a piece of paper. Following is the operational sequence of pressure roller cleaning:

- 1.** The DC controller initiates picking a sheet of paper from the designated input source when it receives the cleaning command from the formatter.
- 2.** The fuser motor repeatedly drives-and-stops at a specified interval when the trailing edge of the paper passes through the transfer roller. The fuser heater is turned on-and-off at the same time.
- 3.** The fuser fuses the toner adhered to the pressure roller surface onto the paper; thus, cleaning the pressure roller.
- 4.** The paper with the fused toner exits the product.

Ambient-temperature detection

The product contains an environmental sensor (TH3) that measures the air temperature of the surrounding environment. The product automatically adjusts the temperature settings in the fuser to adjust for changes in the ambient temperature.

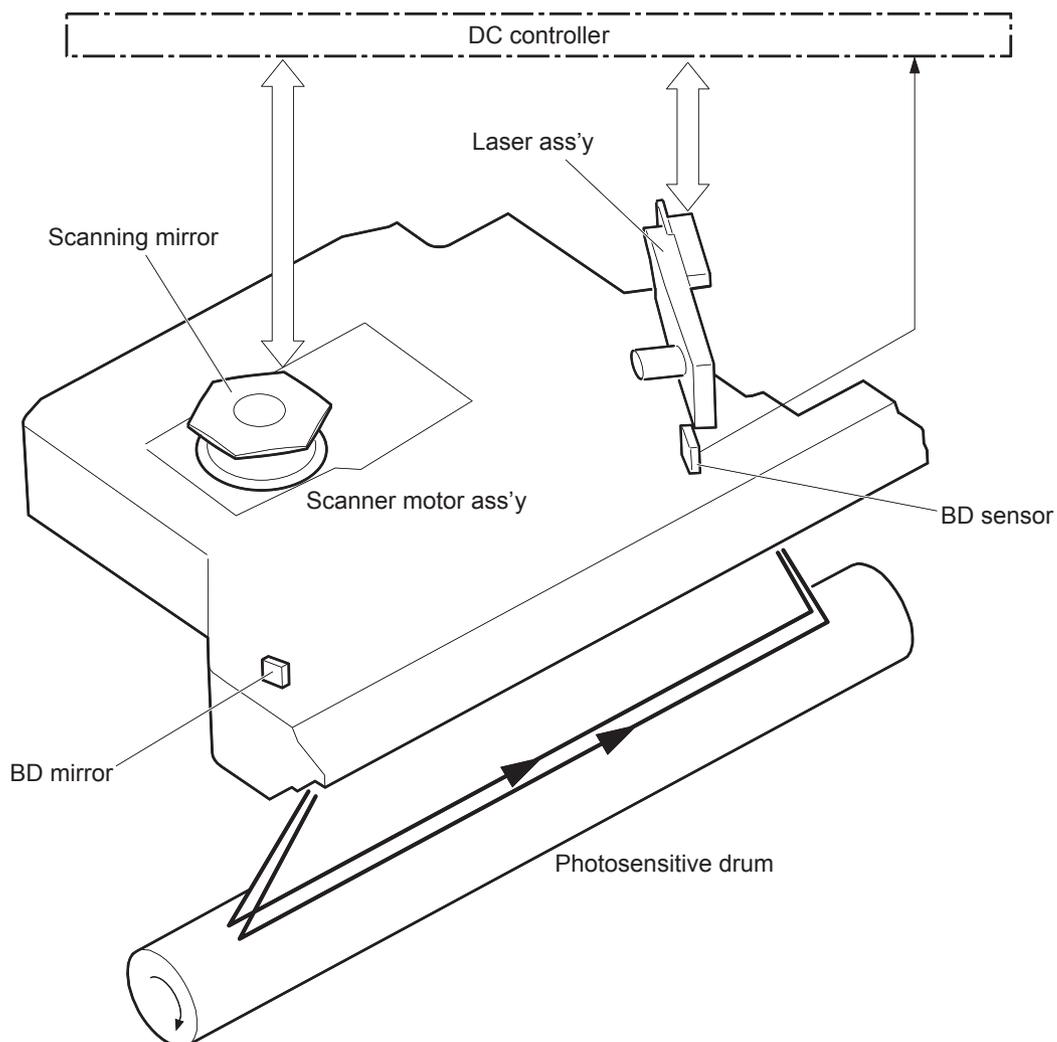
Laser/scanner system

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

The following are the main components of the laser scanner system:

- Laser assembly
- Scanner motor assembly
- Beam Detect (BD) sensor
- Scanning mirror
- BD mirror

Figure 1-11 Laser/scanner



Laser/scanner failure

The DC controller determines an optical unit failure and notifies the formatter of the error status when any of the following occurs:

- **Beam Detect (BD) failure:** The BD signal is not detected within a specified period of time from when the laser/scanner starts. Or, a specified BD interval is not detected within a specified period of time from when the laser/scanner is ready.
- **Laser/scanner motor startup failure:** The scanner motor does not reach a specified rotation frequency within a specified period of time from when the laser/scanner starts up.
- **Laser/scanner motor abnormal rotation:** The laser/scanner motor does not reach a specified rotational frequency within a specified period of time during a print operation.

Safety

The laser/scanner assembly has a mechanical laser shutter. For the safety of users and service technicians, the laser shutter interrupts the optical path of the laser/scanner assembly when the top door is opened (SW101).

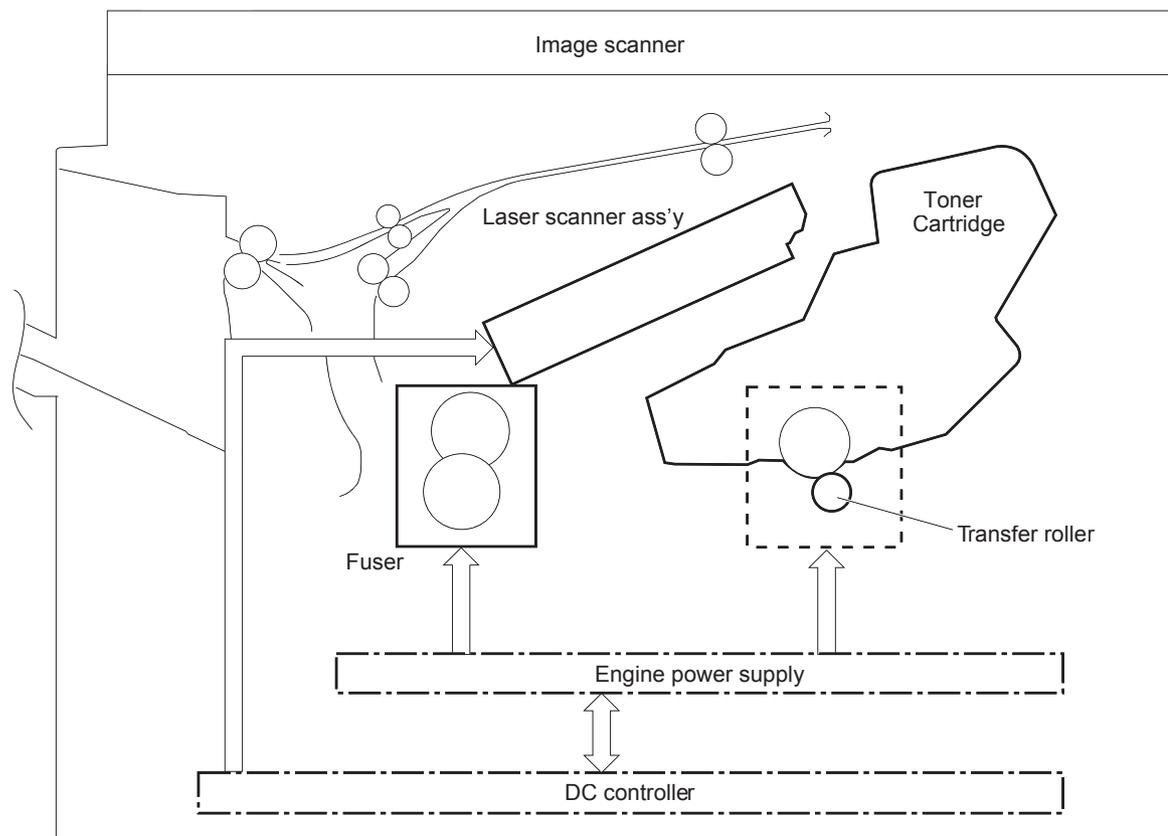
Image-formation system

The DC controller controls the image-formation system according to commands from the formatter. The DC controller controls the internal components of the image-formation system to form the toner image on the photosensitive drum surface, transfer the image to the paper, and then fuse it to the paper.

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

- Toner cartridge
- Transfer roller
- Fuser
- Laser/scanner assembly
- Engine power supply

Figure 1-12 Image-formation system components



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

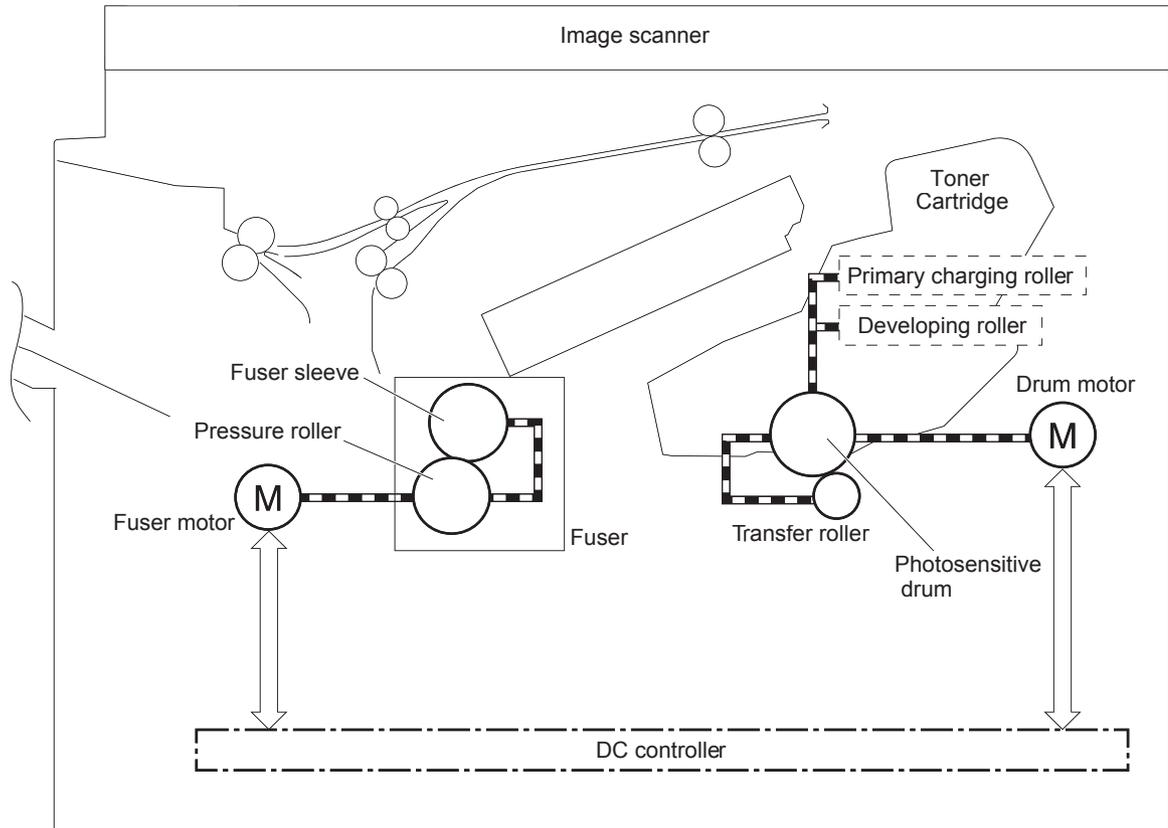
- Photosensitive drum
- Developing roller

- Primary charging roller (follows the photosensitive drum)
- Transfer roller (follows the photosensitive drum)

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

- Pressure roller
- Fuser sleeve (follows the pressure roller)

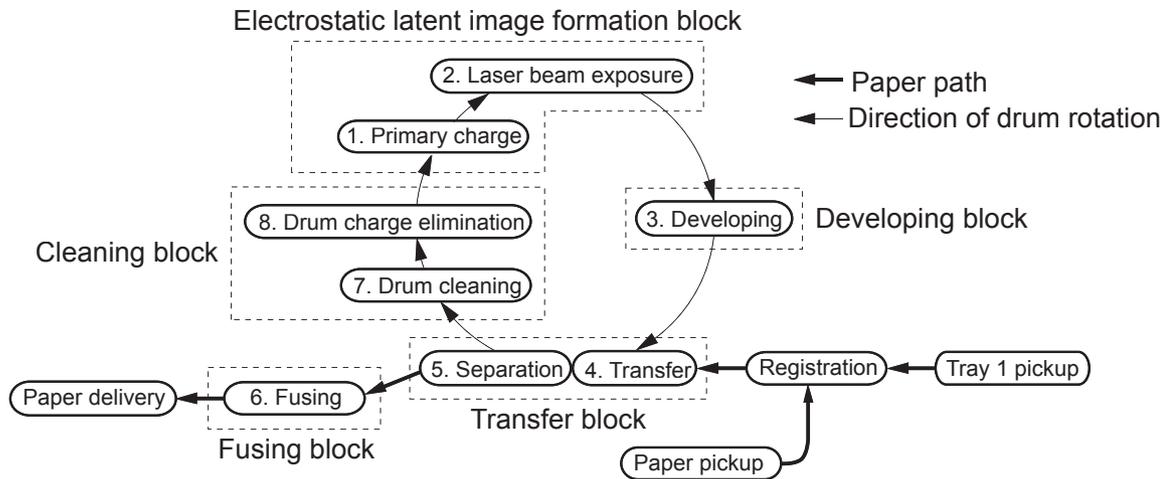
Figure 1-13 Image-formation system motor control



Electrophotographic process

Following are the stages of the electrophotographic process (image formation):

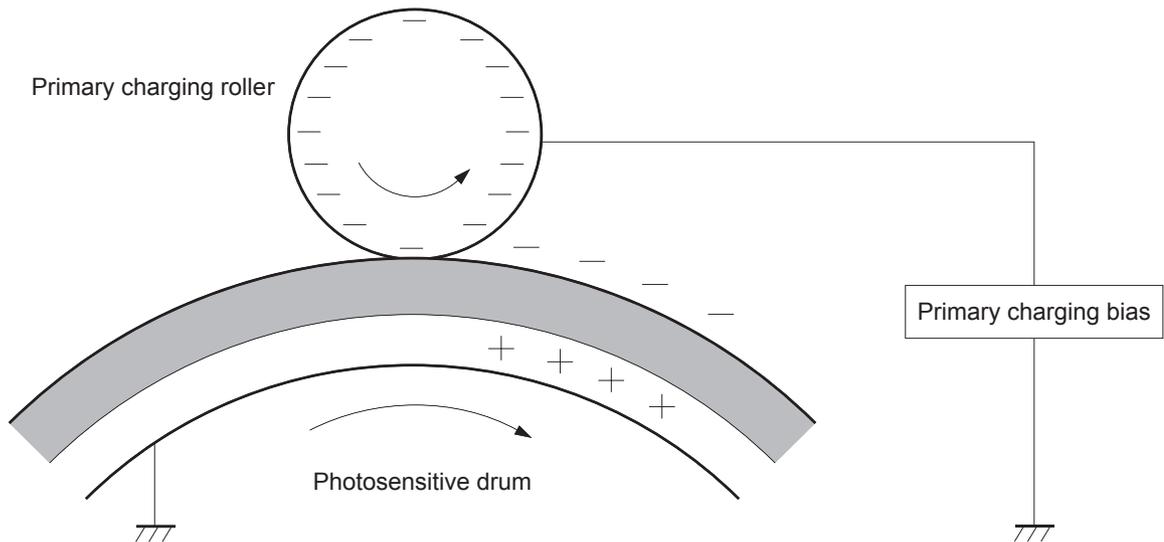
Figure 1-14 Stages of image-formation



Step 1: Primary charge (conditioning)

The primary-charging roller in the toner cartridge applies a uniform negative charge to the surface of the drum. The primary-charging roller is made of conductive rubber. An AC bias applied to the roller erases any residual charges from any previous image. The charging roller applies a negative DC bias to create a uniform negative potential on the drum surface.

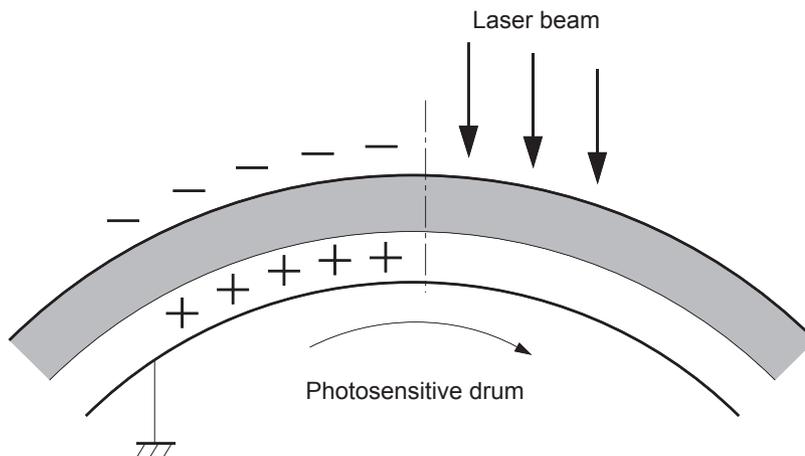
Figure 1-15 1. Primary charge (conditioning)



Step 2: Laser-beam exposure (writing)

Two laser diodes project laser beams onto a rotating scanning mirror. As the mirror rotates, the beams reflect off of the mirror, first through a set of focusing lenses, then off a mirror, and finally through a slot in the top of the toner cartridge, and onto the photosensitive drum. The twin beams sweep the drum from left to right, discharging the negative potential wherever the beams strike the surface. This creates a latent electrostatic image, which later is developed into a visible image.

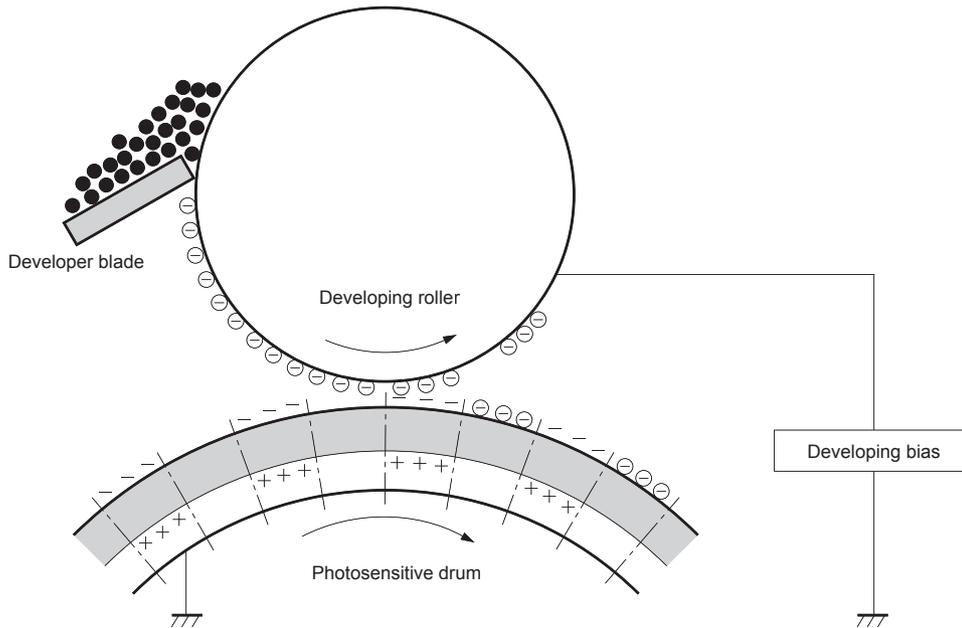
Figure 1-16 2. Laser-beam exposure (writing)



Step 3: Developing

At this stage of the process, the latent electrostatic image is present on the drum. The toner particles obtain a negative surface charge by rubbing against the developing cylinder, which is connected to a negative DC supply. The discharged (exposed, grounded) areas of the drum attract the negatively charged toner, and the negatively charged (unexposed) areas repel the toner.

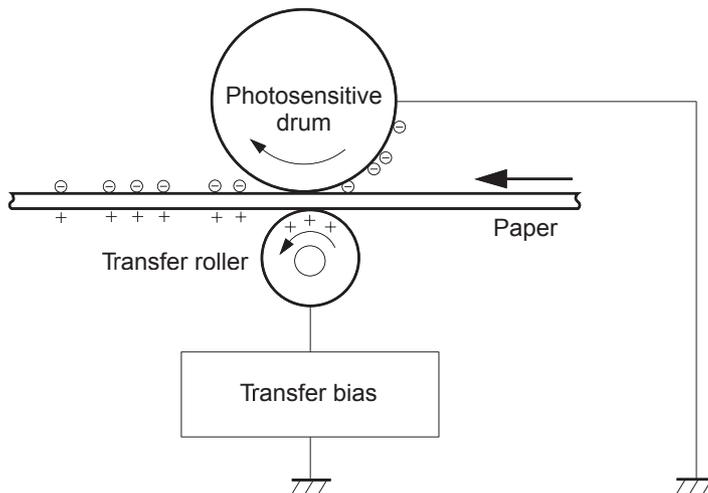
Figure 1-17 3. Developing



Step 4: Transfer

During the transfer process, the toner image on the drum surface transfers to the paper. The transfer charging roller applies a positive charge to the back of the paper, which attracts the negatively charged toner on the drum surface to the paper.

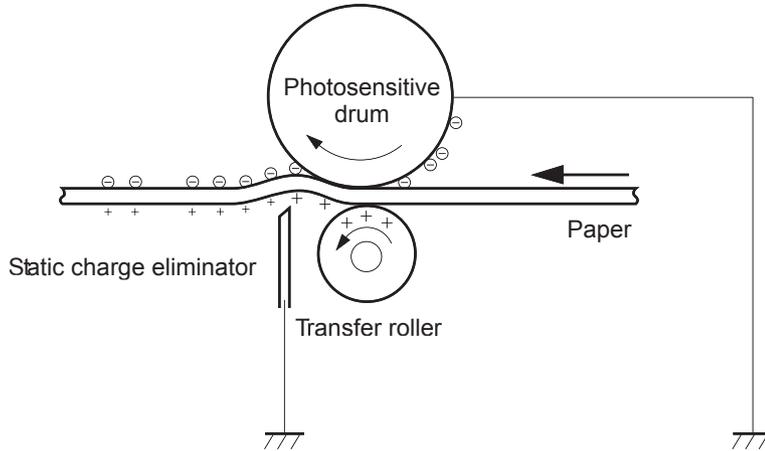
Figure 1-18 4. Transfer



Step 5: Separation

During the separating process, the paper separates from the drum. To stabilize the feed system and to prevent dropouts on the printed image at low temperature and humidity, the static-charge eliminator reduces the charge on the back of the paper.

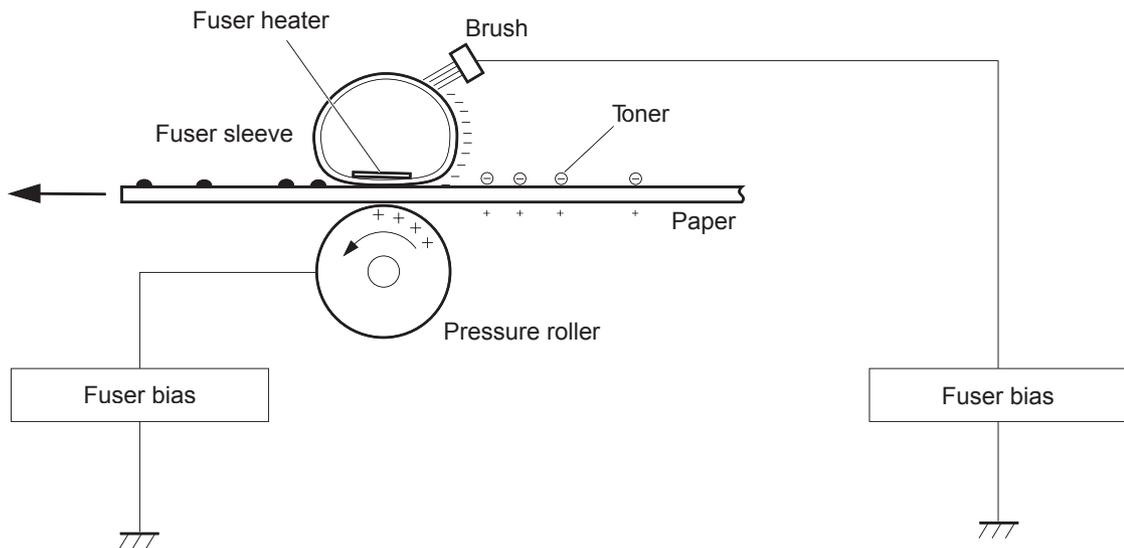
Figure 1-19 5. Separation



Step 6: Fusing

During the fusing process, heat and pressure fuse the toner to the paper in order to produce a permanent image. The paper passes between a heated fuser element and a soft pressure roller. This melts the toner and presses it into the paper.

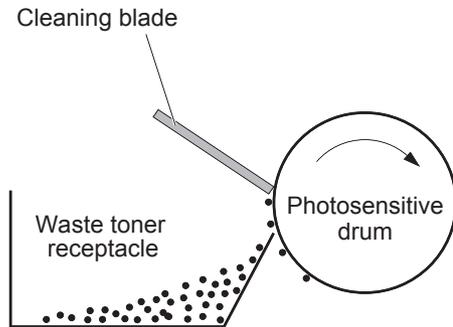
Figure 1-20 6. Fusing



Step 7: Drum cleaning

The cleaning blade is in contact with the surface of the drum at all times. As the drum rotates during printing, the cleaning blade scrapes excess toner into the waste-toner receptacle.

Figure 1-21 7. Drum cleaning

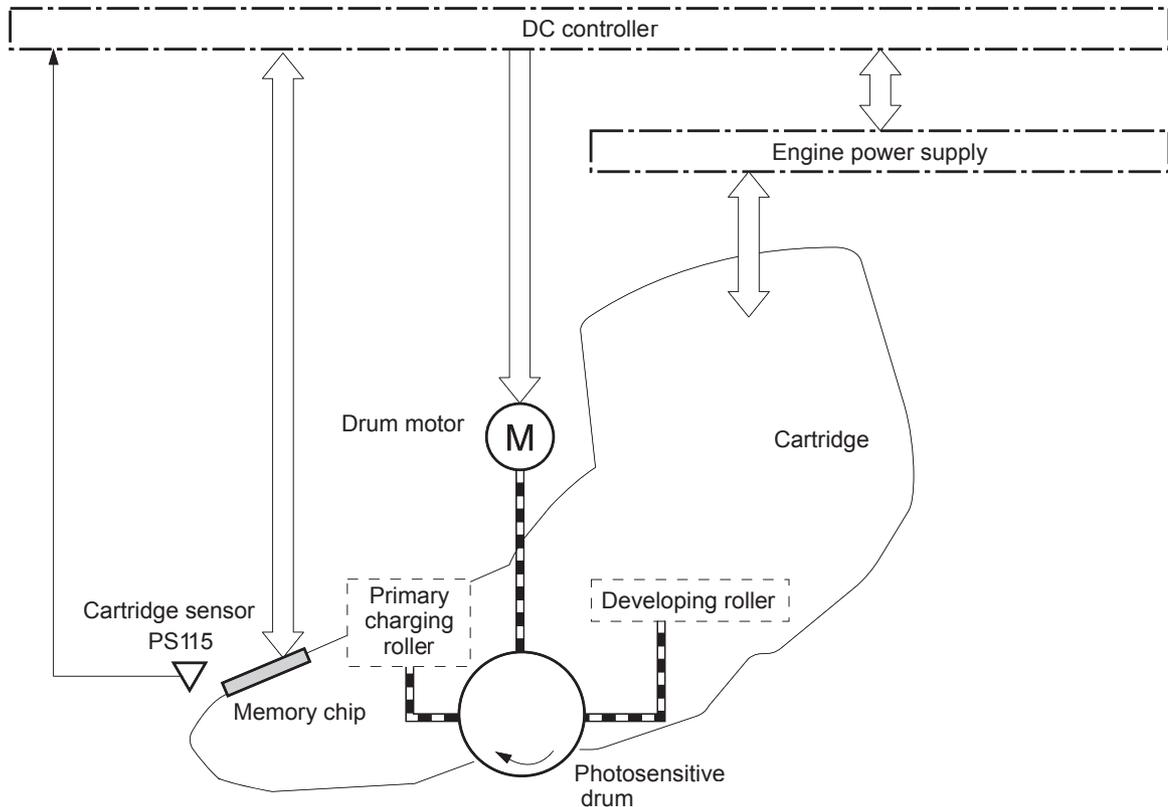


Toner cartridge

The toner cartridge consists of a reservoir of toner and the following components:

- Photosensitive drum
- Developing roller
- Primary charging roller
- Memory chip

Figure 1-22 Toner Cartridge



Memory chip

The memory chip is non-volatile memory that stores information about the usage of the toner cartridge. The product reads and writes the data in the memory chip.

The DC controller determines a memory chip error and notifies the formatter when it fails to either read from or write to the memory chip.

Cartridge presence and life detection

The DC controller performs the following functions related to both detecting the presence of the toner cartridge and determining the remaining life of the cartridge:

- **Cartridge presence detection:** The DC controller detects the presence of the cartridge by monitoring the cartridge sensor (PS115) when both of the following occur:

- The product is turned on.
- The door is closed.

The DC controller notifies the formatter when it detects the cartridge is missing.

- **Toner level detection:** The DC controller detects the remaining toner in the cartridge according to the TONER LEVEL signal, and then notifies the formatter of the remaining toner level.
- **Cartridge life detection:** The DC controller detects the cartridge life by monitoring the total operating time or remaining toner level of the toner cartridge. The DC controller determines a cartridge is at the end of life and notifies the formatter when total operating time of the cartridge reaches a specified period of time or the cartridge runs out of toner.

Pickup, feed, and delivery system

The DC controller controls the pickup, feed, and delivery system according to commands from the formatter. This system consists of three parts:

- The **pickup-and-feed block** encompasses the paper path from each tray to the fuser entrance.
- The **fusing, reverse, and delivery block** encompasses the paper path from the fuser entrance to the output device.
- The **duplex block** encompasses the paper path to reverse the paper in the duplex reverse area for two-sided printing

Figure 1-23 Pickup, feed, and delivery system

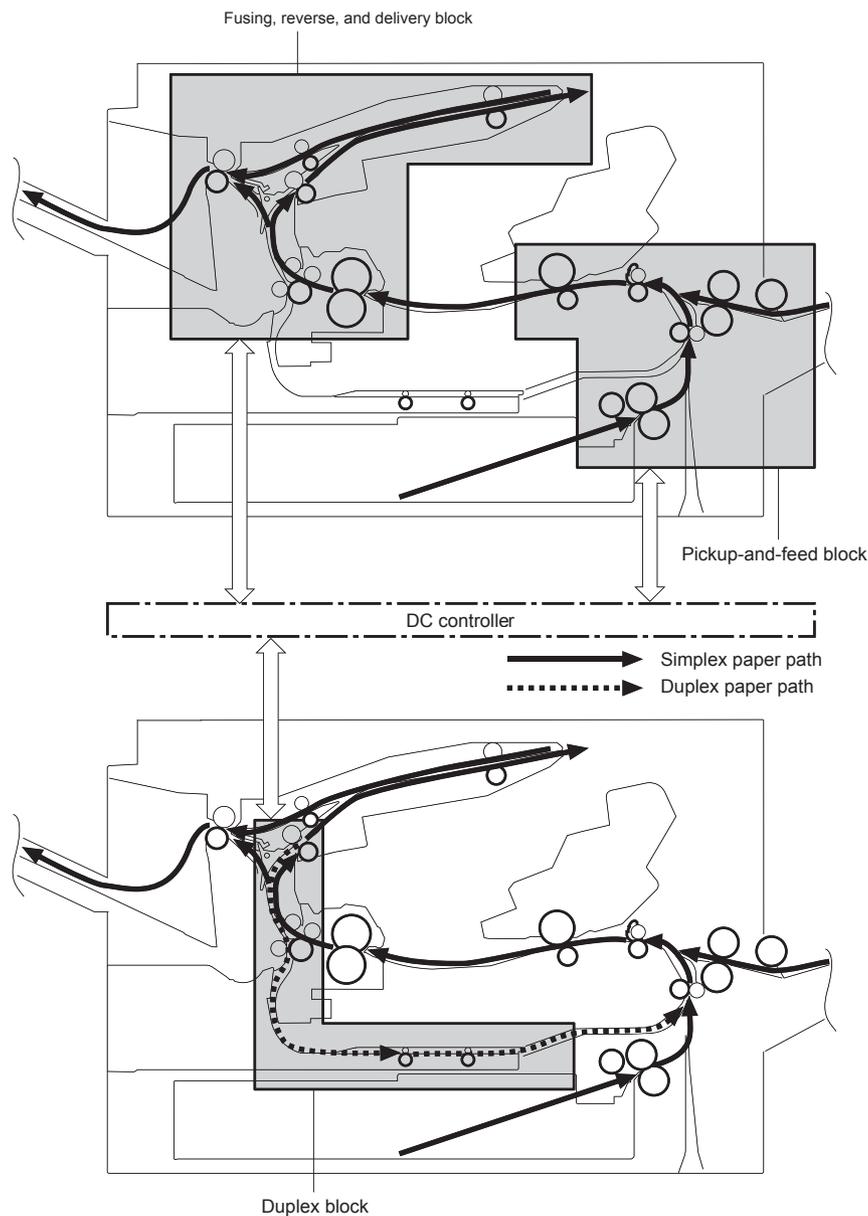


Figure 1-24 Sensor locations

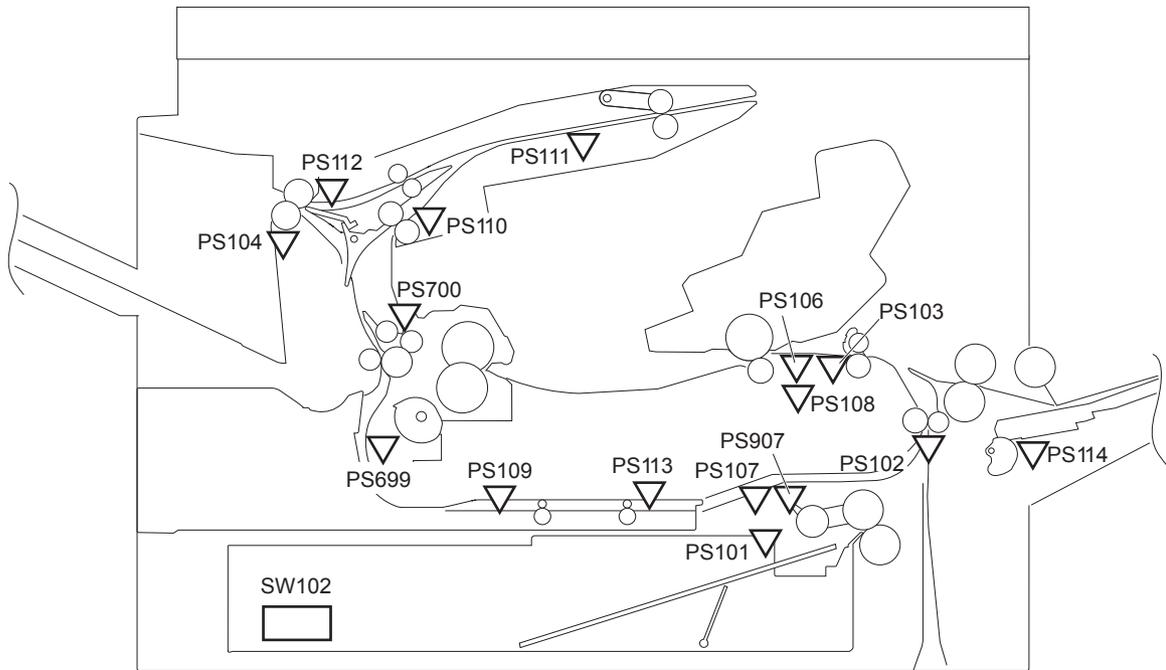


Table 1-9 Sensors

Abbreviation	Component	Replacement part number
PS101	Tray 2 media out sensor	Paper pickup assembly (RM1-5919-000CN)
PS102	Pre-feed sensor	Part not available
PS103	TOP sensor	Part not available
PS104	Output bin media-full sensor	Part not available
PS106	Media width sensor 1	Part not available
PS107	Tray 2 media stack surface sensor 1	Paper pickup assembly (RM1-5919-000CN)
PS108	Media width sensor 2	Part not available
PS109	Duplex side registration sensor	Duplex assembly kit (B3G84-67903)
PS110	Reverse sensor	Reverse assembly (RM2-5799-000CN)
PS111	Reverse jam sensor	Reverse assembly (RM2-5799-000CN)
PS112	Delivery sensor	Reverse assembly (RM2-5799-000CN)
PS113	Duplex re-pickup sensor	Duplex assembly kit (B3G84-67903)
PS114	Tray 1 media out sensor	MP (Tray 1) pickup assembly (RM2-5822-000CN)
PS115	Cartridge sensor	Cartridge sensor assembly (RM1-8323-000CN)
PS699	Fuser pressure release sensor	Fuser replacement kit, 110V (B3M77-67903) Fuser replacement kit, 220V (B3M78-67903)
PS700	Fuser delivery sensor	Fuser replacement kit, 110V (B3M77-67903) Fuser replacement kit, 220V (B3M78-67903)

Table 1-9 Sensors (continued)

Abbreviation	Component	Replacement part number
PS907	Tray 2 media stack surface sensor 2	Paper pickup assembly (RM1-5919-000CN)
SW102	Tray 2 media size switch	Size detect cable (RM1-7179-000CN)

Figure 1-25 Motor, clutch, and solenoid locations

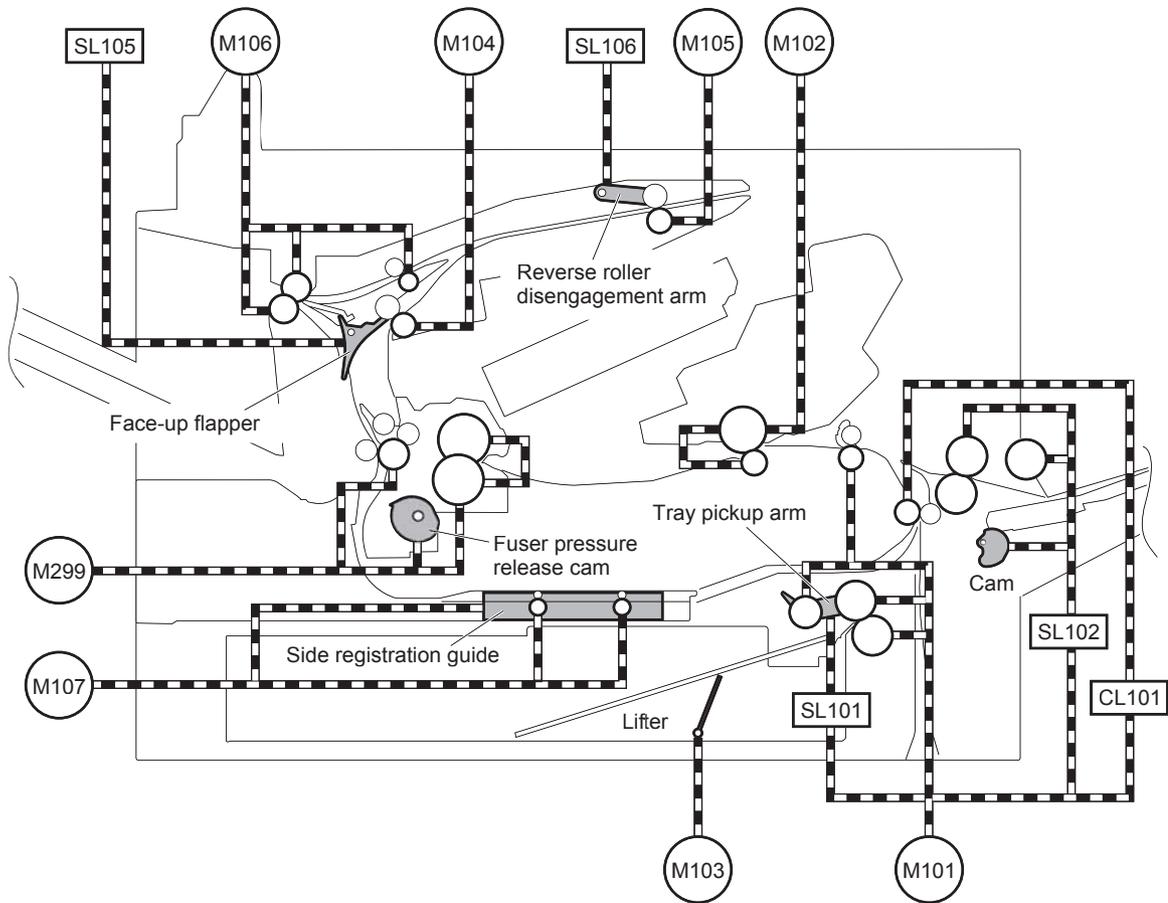
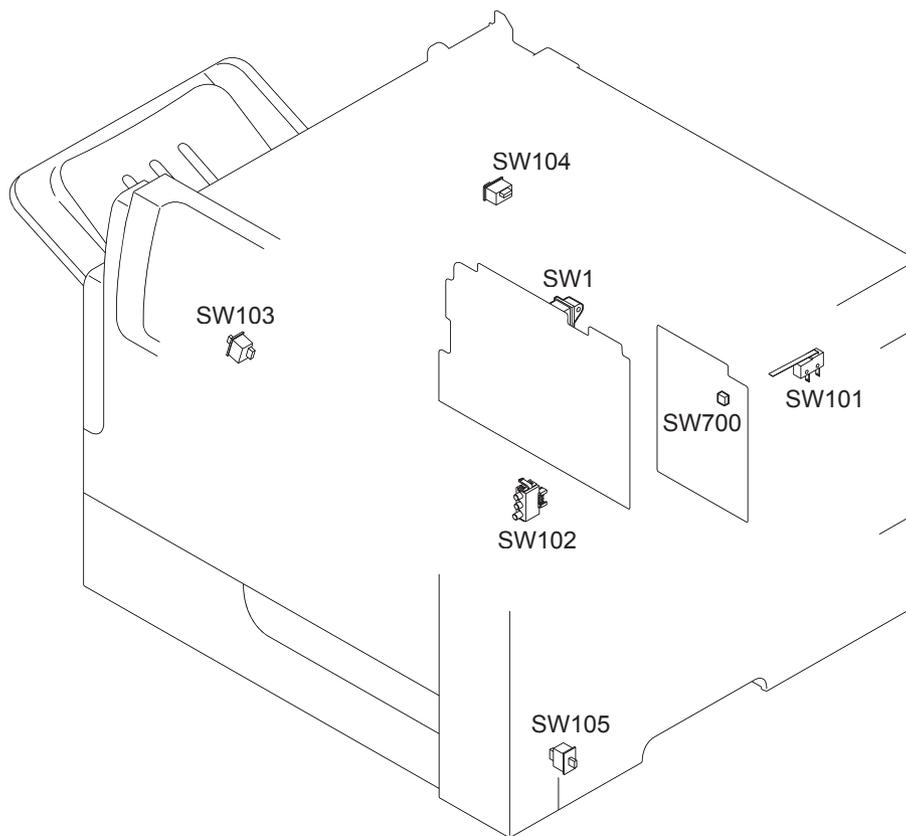


Table 1-10 Motors, clutch, and solenoids

Abbreviation	Component	Replacement part number
CL101	Media feed clutch	Paper feed roller assembly (RM1-8411-010CN)
M101	Feed motor	Feed motor assembly (RM2-5942-000CN)
M102	Drum motor	Drum motor assembly (RM1-8358-000CN)
M103	Tray 2 lifter motor	Lifter assembly (RM1-5914-000CN)
M104	Intermediate reverse assembly motor	Reverse assembly (RM2-5799-000CN)
M105	Reverse motor	Reverse assembly (RM2-5799-000CN)
M106	Delivery motor	Reverse assembly (RM2-5799-000CN)

Table 1-10 Motors, clutch, and solenoids (continued)

Abbreviation	Component	Replacement part number
M107	Duplex re-pickup motor	Duplex assembly kit (B3G84-67903)
M108	Scanner motor (not shown)	Laser/scanner assembly (RM1-8406-000CN)
M299	Fuser motor	Fuser motor assembly (RM1-5051-020CN)
SL101	Tray 2 pickup solenoid	Paper pickup assembly (RM1-5919-000CN)
SL102	Tray 1 pickup solenoid	MP (Tray 1) pickup assembly (RM2-5822-000CN)
SL105	Face-up solenoid	Reverse assembly (RM2-5799-000CN)
SL106	Reverse roller disengagement solenoid	Reverse assembly (RM2-5799-000CN)

Figure 1-26 Switch locations**Table 1-11 Switches**

Abbreviation	Component	Replacement part number
SW1061	Power switch	Power switch assembly (RM2-5818-000CN)
SW101	Interlock switch	Door switch cable assembly (RM2-7478-000CN)
SW102	Tray 2 media size switch	Part not available

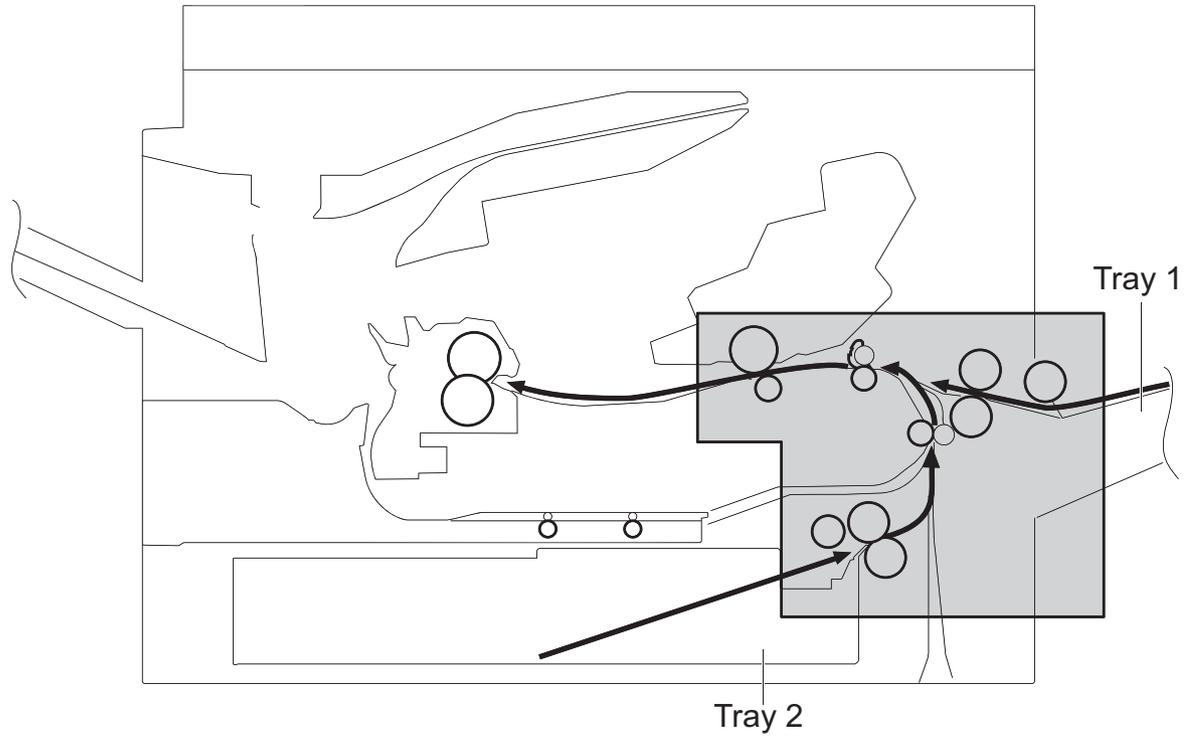
Table 1-11 Switches (continued)

Abbreviation	Component	Replacement part number
SW103	Face-up bin detection switch	Part not available
SW104	Output accessory detection switch	Push button switch assembly (RM1-7374-000CN)
SW105	Tray 2 door open detection switch	Right door sensor assembly (RM1-1045-000CN)
SW106	Cartridge door open detection switch (not shown)	Door sensor cable assembly (RM2-7476-000CN)
SW700	Test-print switch	DC controller PCA assembly (RM2-7458-000CN)

Pickup-and-feed block

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

Figure 1-27 Pickup-and-feed block

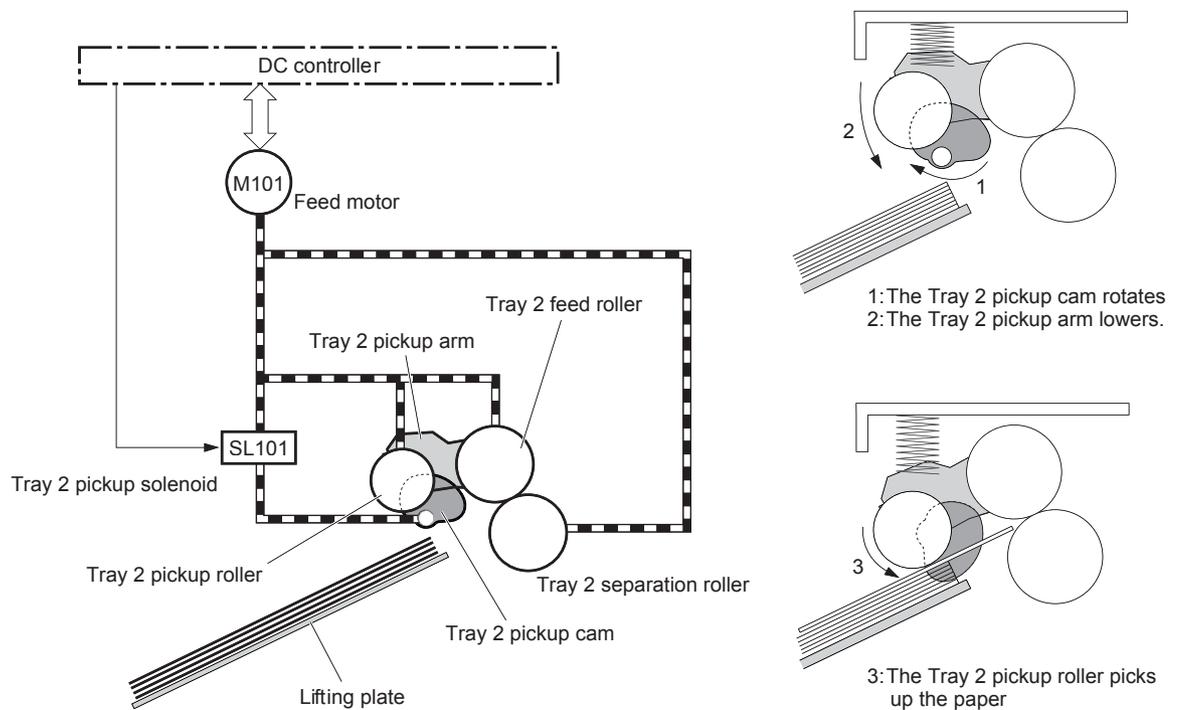


Tray 2 pickup

The operational sequence of picking one sheet of paper from Tray 2 is as follows:

1. The DC controller rotates the feed motor when it receives a print command from the formatter.
2. The Tray 2 pickup roller, Tray 2 feed roller, and Tray 2 separation roller rotate.
3. The Tray 2 pickup solenoid drives at a specified timing.
4. The Tray 2 pickup cam rotates.
5. As the Tray 2 pickup arm lowers, the Tray 2 pickup roller touches the surface of the top sheet of paper.
6. The Tray 2 separation roller removes any multiply-fed sheets.
7. One sheet of paper feeds into the product.

Figure 1-28 Tray 2 pickup



Tray 2 paper-size detection and tray-present detection

The DC controller determines the size of the paper loaded in Tray 2 and also whether the tray is installed in the product by monitoring the Tray 2 media size switch. The DC controller notifies the formatter when the detected paper size does not match the size specified by the formatter or if the tray is absent.

The Tray 2 media size switch contains three sub-switches. The DC controller detects the size of the paper and the presence of the tray based on the combination of the switches.

Table 1-12 Tray 2 media-size detection switch components

Tray presence or media size	Top switch	Center switch	Bottom switch
A4	On	Off	Off
Letter	Off	On	Off
B5	Off	On	On
A5	Off	Off	On
Executive	On	Off	On
Legal	On	On	Off
Custom size	On	On	On
No tray	Off	Off	Off

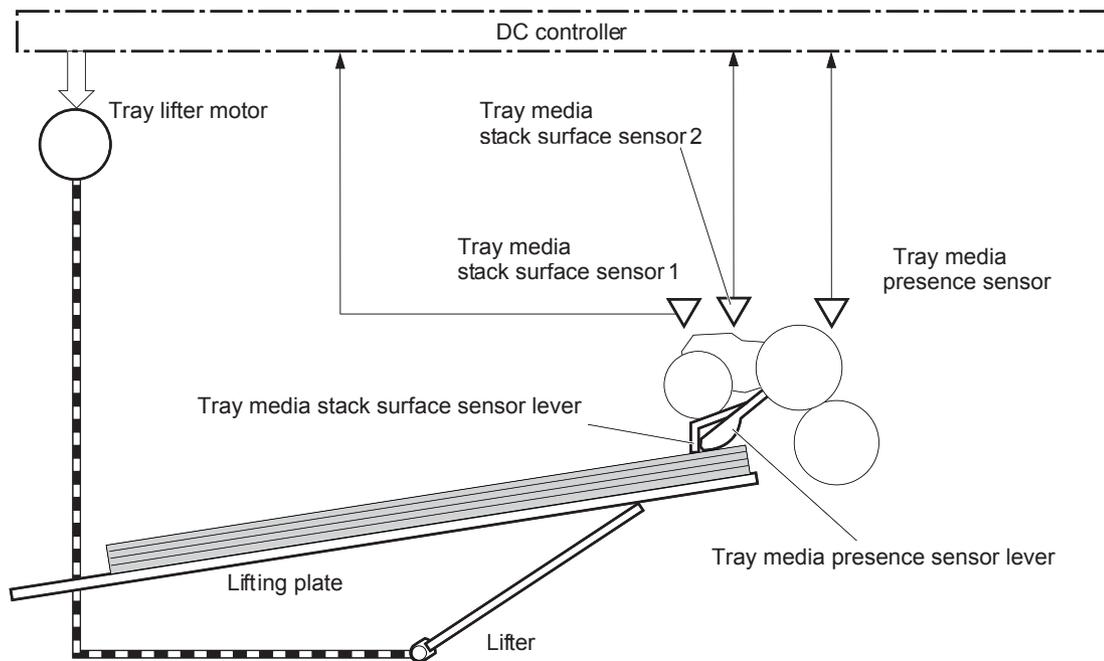
Tray 2 lift operation

The Tray 2 lift operation keeps the paper stack surface at the correct pickup position.

The DC controller detects the position of the stack surface by monitoring the Tray 2 media stack surface sensors under the following conditions:

- When the product is turned on
- When the tray is inserted
- When the paper stack surface in the tray lowers

Figure 1-29 Tray 2 lift operation



The sequence of the Tray 2 lift operation is as follows:

1. The DC controller rotates the Tray 2 lifter motor.
2. The lifter moves up.
3. The tray lifter motor stops when the tray media stack surface sensor 2 detects the paper stack surface.
4. The tray lifter motor rotates again when the tray media stack surface sensor 1 detects that the paper stack surface lowers.

NOTE: The DC controller determines a tray lifter motor failure and notifies the formatter if the tray media stack surface sensor 1 or sensor 2 does not detect the paper stack surface within a specified period of time after the tray lifter motor starts rotating.

Tray 2 paper-presence detection

The DC controller detects the presence of paper in Tray 2 by monitoring the Tray 2 media presence sensor. When this sensor does not detect paper in the tray, the DC controller notifies the formatter.

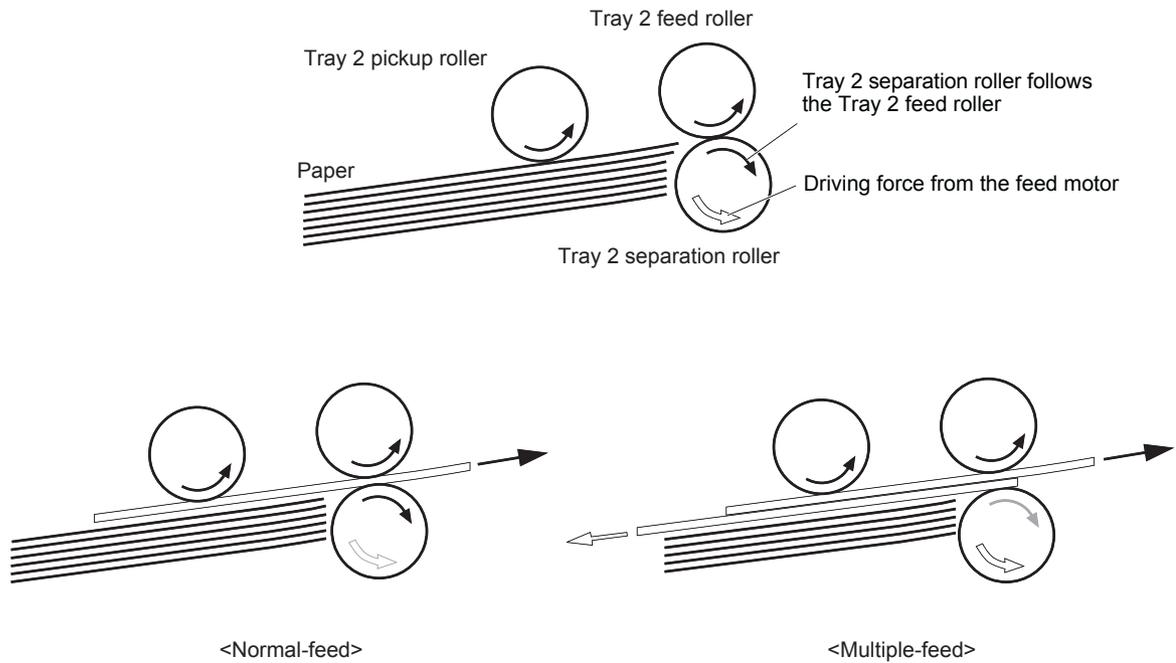
Tray 2 multiple-feed prevention

In Tray 2, the separation roller prevents multiple sheets of paper from entering the paper path. The Tray 2 pickup roller drives the separation roller through a sheet of paper.

The rotation of the Tray 2 feed roller through the sheet drives the separation roller. Because the feed roller is equipped with a torque limiter, only one sheet feeds into the product.

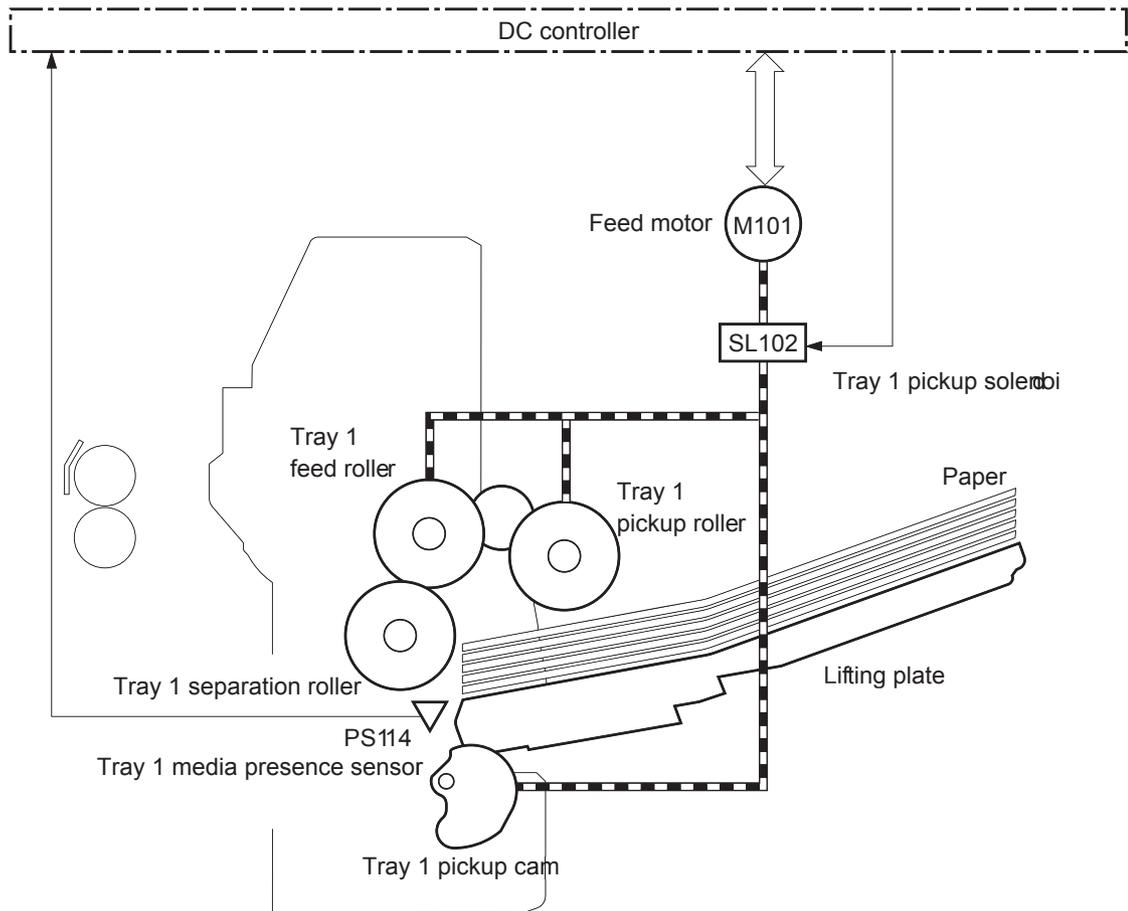
The low friction force between the sheets weakens the driving force from the Tray 2 feed roller. Therefore, the separation roller is driven by its own driving force and holds back any multiply-fed sheets from the cassette.

Figure 1-30 Multiple-feed prevention



Tray 1 pickup

Figure 1-31 Tray 1 pickup



The operational sequence of picking one sheet of paper from Tray 1 is as follows:

1. The DC controller rotates the feed motor when it receives a print command from the formatter.
2. The Tray 1 pickup solenoid drives at a specified timing.
3. The Tray 1 pickup roller rotates.
4. The Tray 1 pickup cam rotates and the lifting plate moves up.
5. The Tray 1 pickup roller touches the surface of the top sheet of paper.
6. The Tray 1 separation roller removes any multiply-fed sheets.
7. One sheet of paper feeds into the product.

 **NOTE:** Multiple-feed prevention for Tray 1 is the same mechanism as that for Tray 2. See [Tray 2 multiple-feed prevention on page 42](#)

Tray 1 paper-presence detection

The DC controller detects the presence of paper in Tray 1 by monitoring the Tray 1 media presence sensor during the initial rotation period when the product is turned on or when the product exits Sleep mode.

Feed speed control

The feed speed control adjusts the feed speed to improve the print quality depending upon the paper type. The DC controller feeds the paper at a specified speed, depending on the print mode designated by the formatter.

Table 1-13 Feed speed control

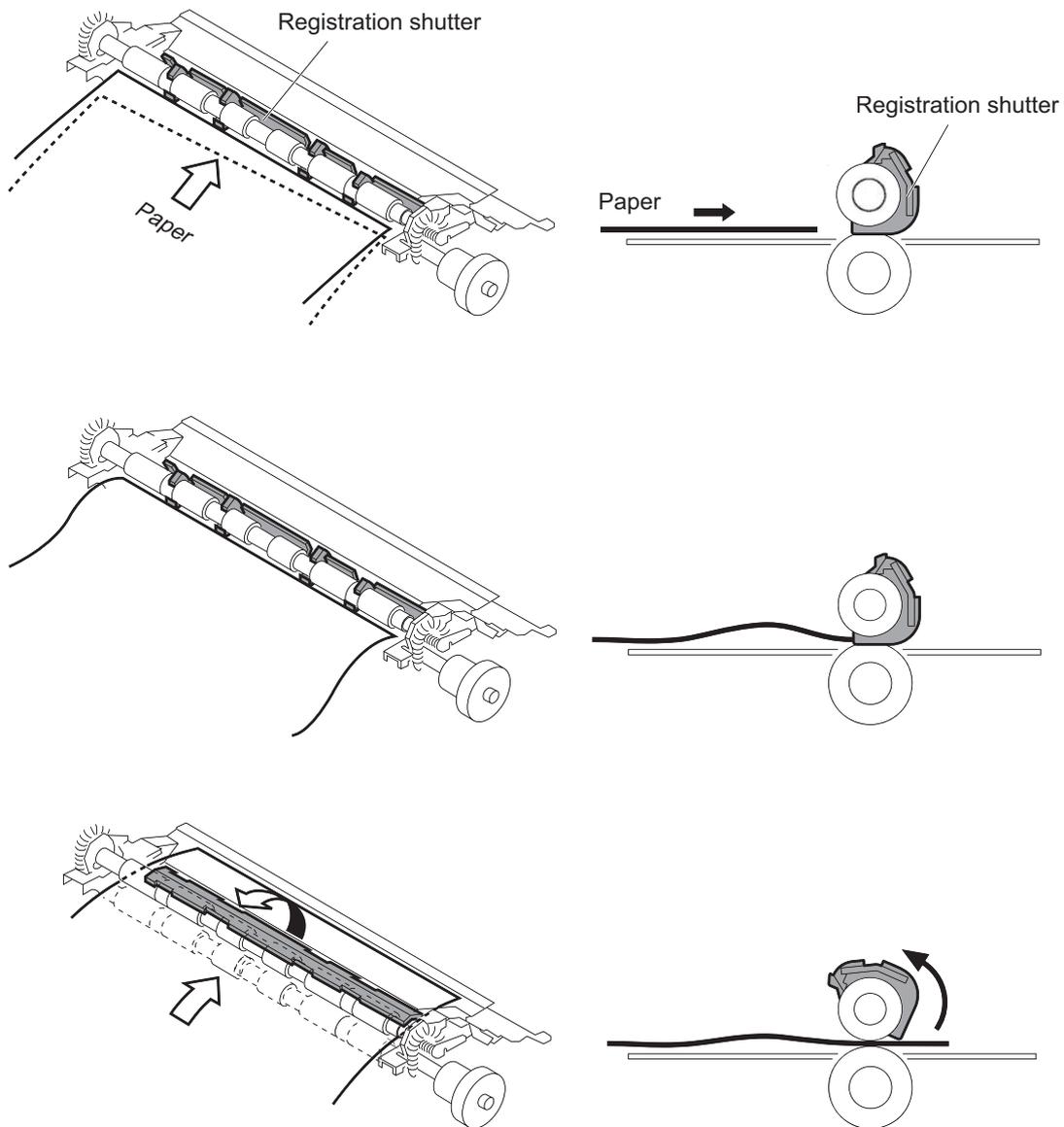
Print mode	Feed speed	
	Legal / Letter / A4	Executive / B5 / A5 / Any custom
Auto	NA	NA
Normal	1/1, 1/2	1/2
Heavy media 1	1/1, 1/2	1/2
Heavy media 2	1/2	1/2
Light media 2	1/1, 1/2	1/2
OHT	1/2	1/2

Skew-feed prevention

The product can straighten the paper without slowing the feed operation. The operational sequence of skew-feed prevention is as follows:

1. The leading edge of paper strikes the registration shutter, and the leading edge aligns with the shutter.
2. As the feed rollers keep pushing the paper, the paper warps.
3. When the force is great enough, the registration shutter opens, and the paper passes through and straightens.

Figure 1-32 Skew-feed prevention



Paper-length detection

The DC controller determines the paper length by measuring the time between when the leading edge of the paper reaches the TOP sensor and when the trailing edge passes through.

The DC controller determines a paper size mismatch and notifies the formatter in one of the following conditions:

- The detected paper size is different from the size designated by the formatter.
- The detected paper size is different from the size detected by the Tray 2 media size switch (only when printing from Tray 2).

Paper-width detection

The DC controller determines the paper width by analyzing the combination of media width sensor readings.

The DC controller determines a paper size mismatch and notifies the formatter in one of the following conditions:

- The detected paper size is different from the size designated by the formatter.
- The detected paper size is different from the size detected by the Tray 2 media size switch (only when printing from Tray 2).

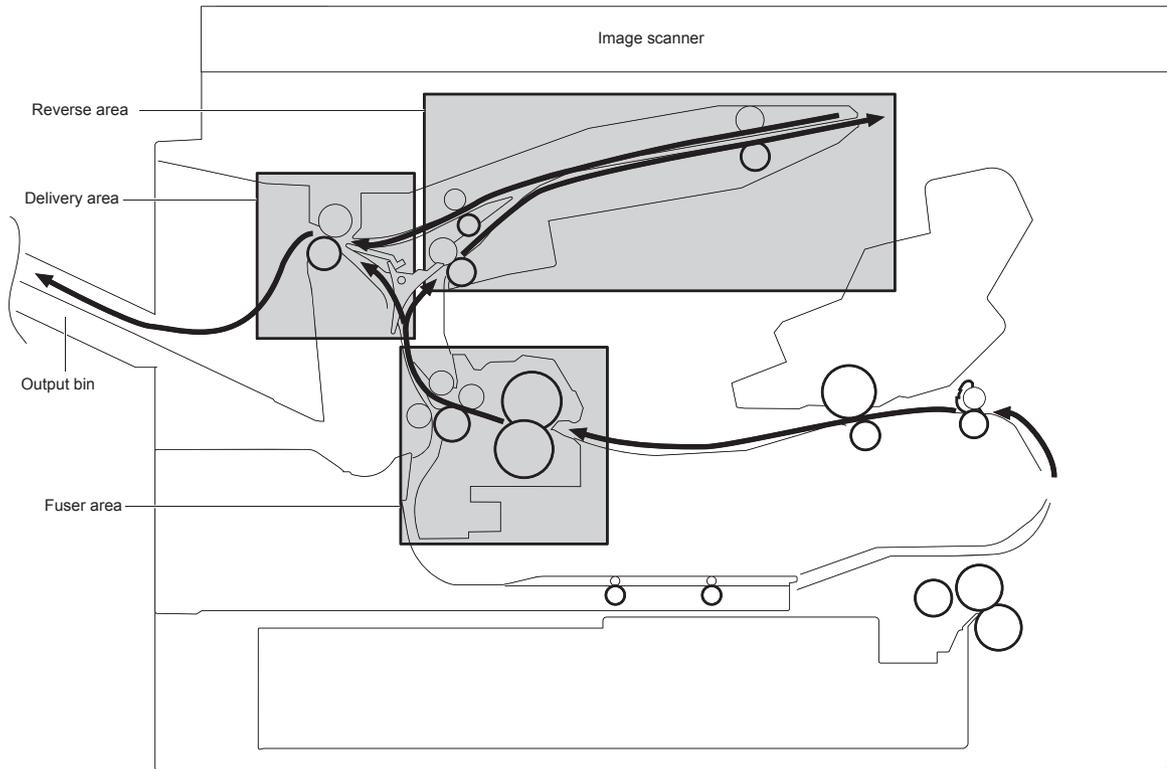
Table 1-14 Paper-width detection

Media width sensor 1 (PS106)	Media width sensor 2 (PS108)	Detection
ON	ON	Regular size A4, Letter and Legal
OFF	OFF	Small size Executive, B5 and A5
OFF	ON	Detected on right side
ON	OFF	Detected on left side

Fusing, reverse, and delivery block

The fusing, reverse, and delivery block fuses the toner to the paper and delivers the printed page to the output bin.

Figure 1-33 Fusing, reverse, and delivery block



Fusing

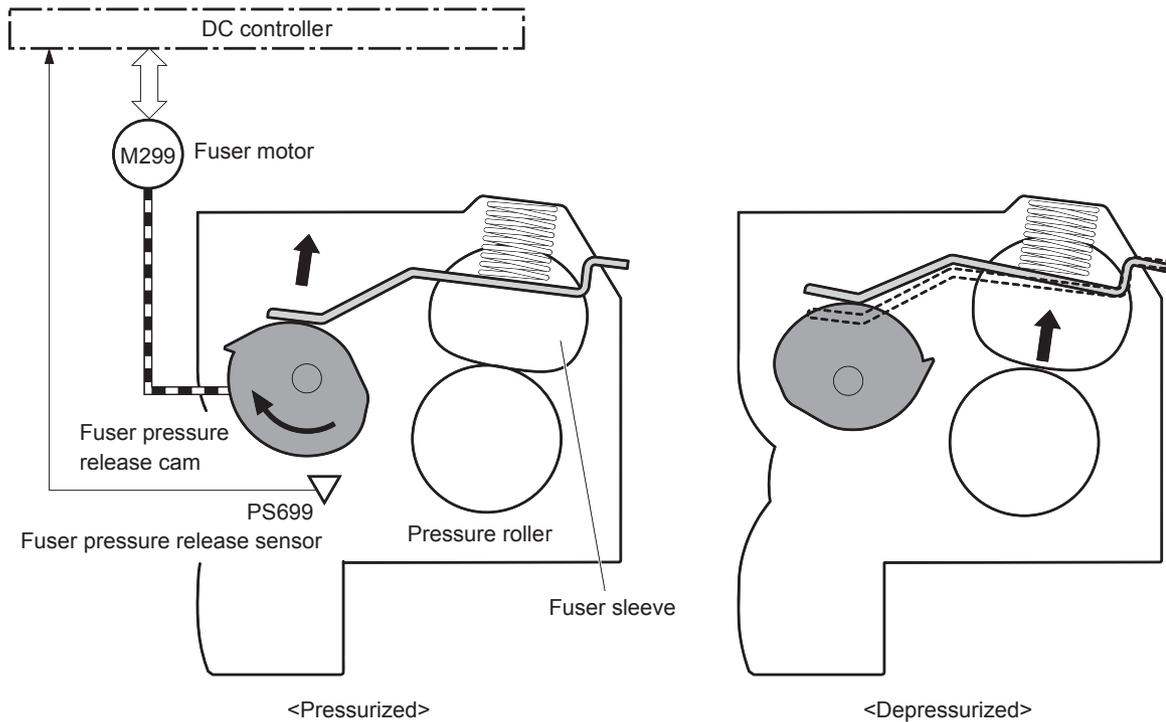
The fuser applies heat and pressure to the paper to permanently bond the toner image to the paper.

Pressure roller pressurization and depressurization control

Pressure roller pressurization and depressurization control is a feature to pressurize the pressure roller only when required for preventing a deformation of the roller and to facilitate clearing jams.

The product ships from the factory with the pressure roller released. The DC controller also releases the pressure roller when a jam is detected.

Figure 1-34 Pressure roller pressurization and depressurization control



The operational sequence of the pressure roller pressurization and depressurization control is as follows:

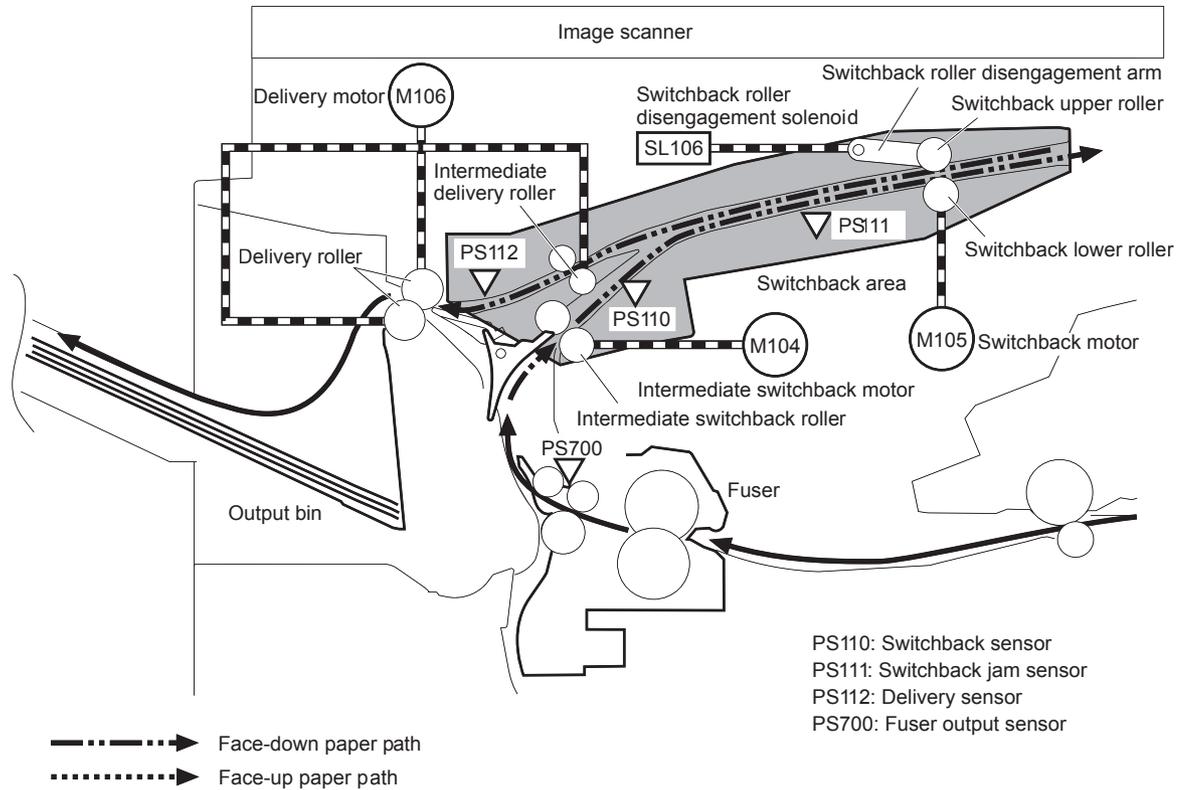
1. The DC controller reverses the fuser motor.
2. The fuser pressure release cam rotates.
3. The pressure roller is pressurized or depressurized against the fuser sleeve, depending on the position of the fuser pressure release cam.

NOTE: The DC controller determines a fuser pressure release mechanism failure and notifies the formatter if the fuser pressure release sensor does not detect the depressurized condition within a specified period of time from when the fuser motor starts reverse rotation.

Reverse and delivery control

After the toner is fused to the paper, the paper enters the reversing/delivery unit. The product can deliver the paper to the output bin either face-up or face-down, depending on instructions from the formatter.

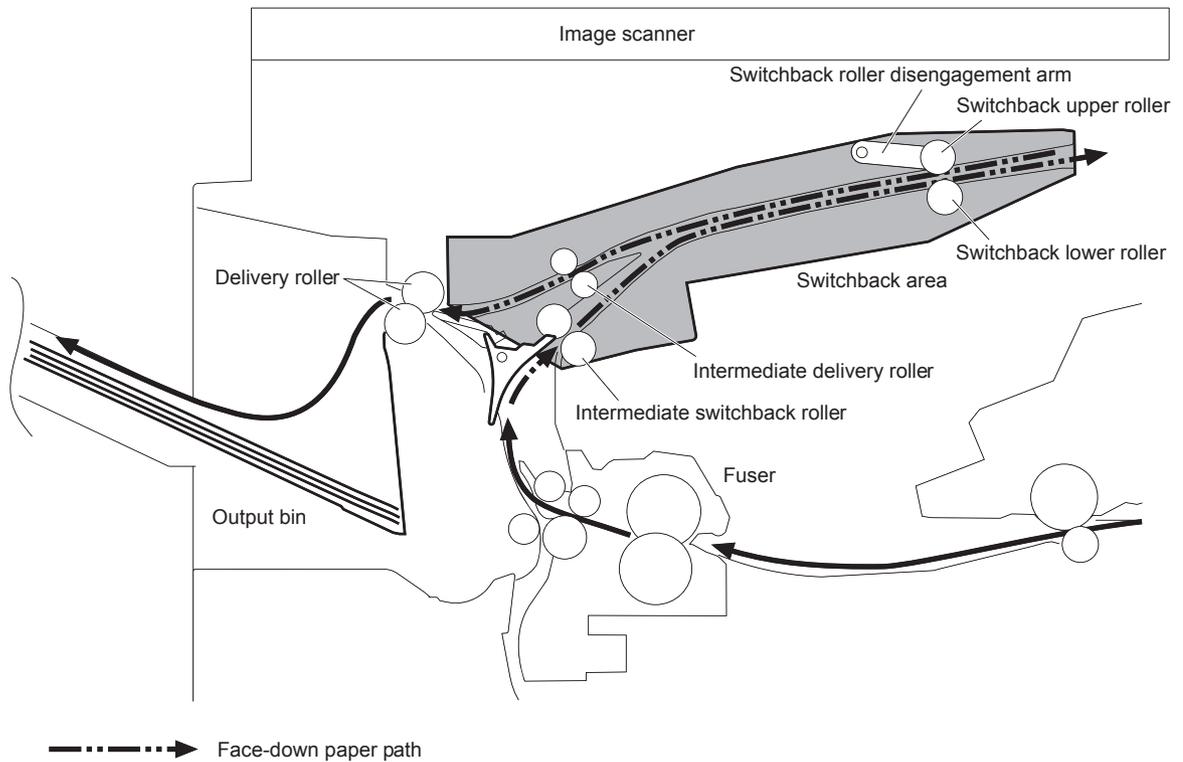
Figure 1-35 Reverse and delivery control



Face-down delivery

To stack pages of a multiple-page print job in the correct order, the pages must be flipped over in the reversing unit before they are delivered face-down to the output bin.

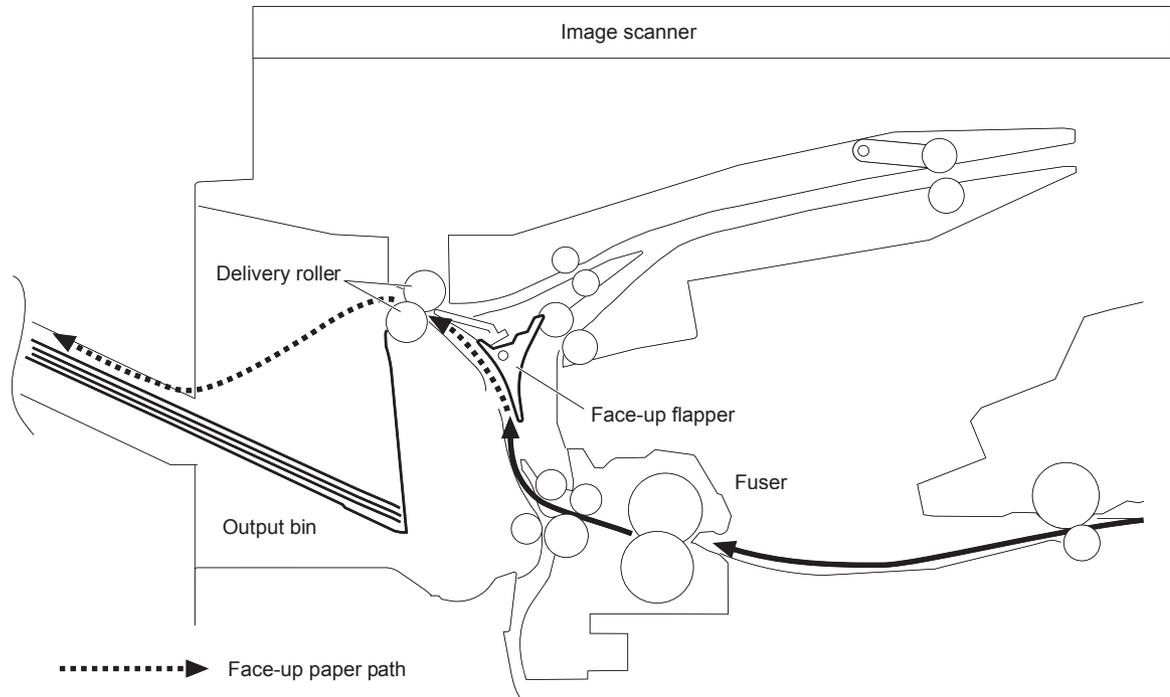
Figure 1-36 Face-down delivery



Face-up delivery

When the paper is delivered face-up, the face-up solenoid (SL105) activates the face-up deflector to prevent the paper from entering the reversing unit.

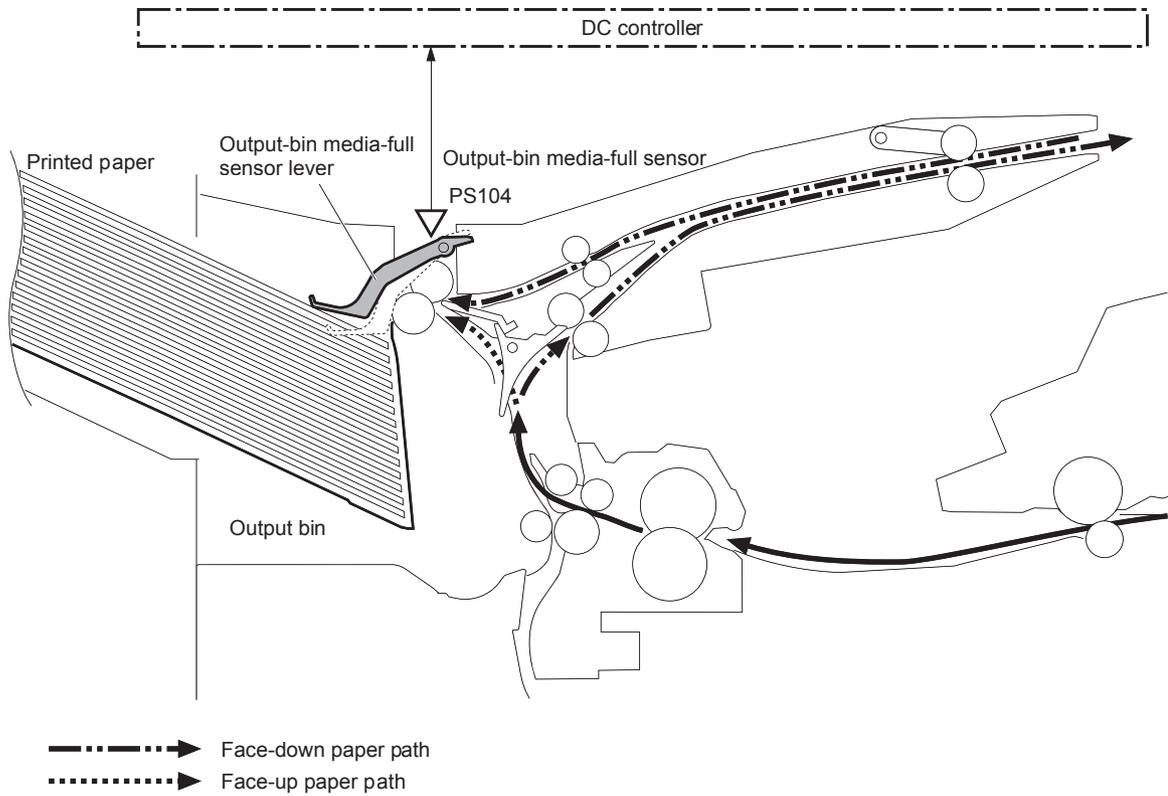
Figure 1-37 Face-up delivery



Output bin paper-full detection

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

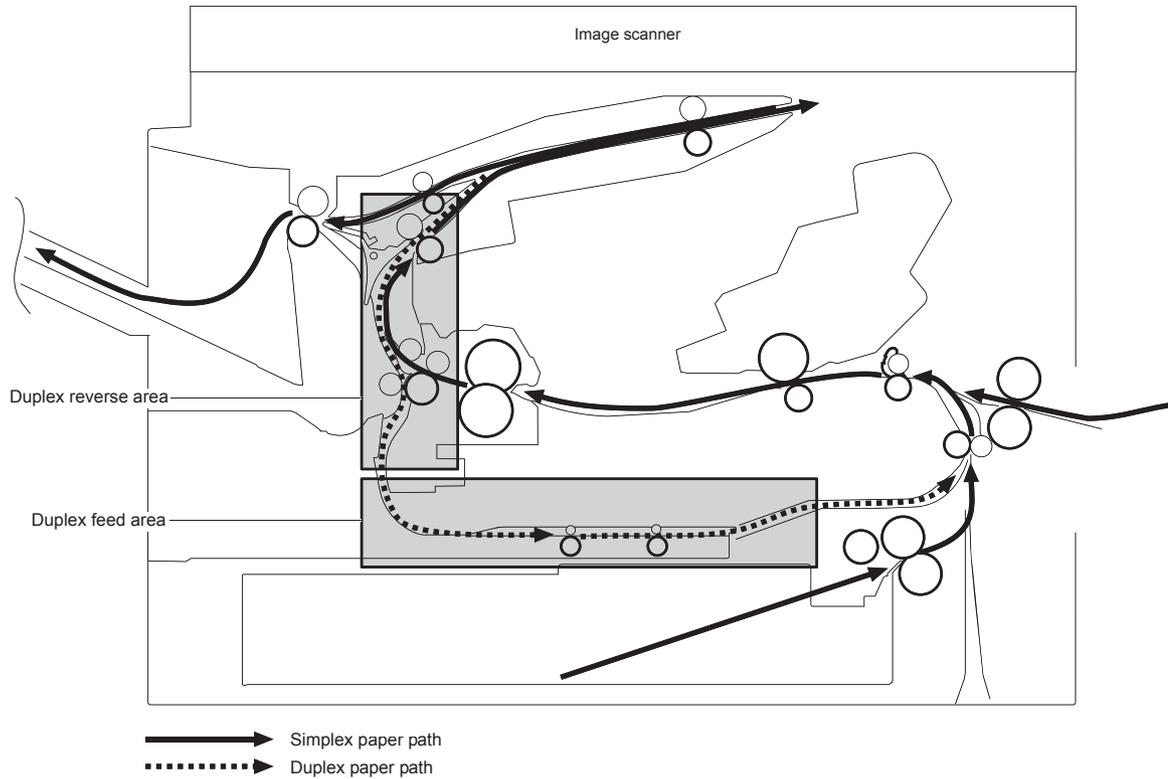
Figure 1-38 Output bin paper-full detection



Duplex block

The duplex block reverses the paper in the duplex reverse area and feeds it through the duplex feed area to bring it to the simplex paper path.

Figure 1-39 Duplex block



Duplex side registration adjustment operation

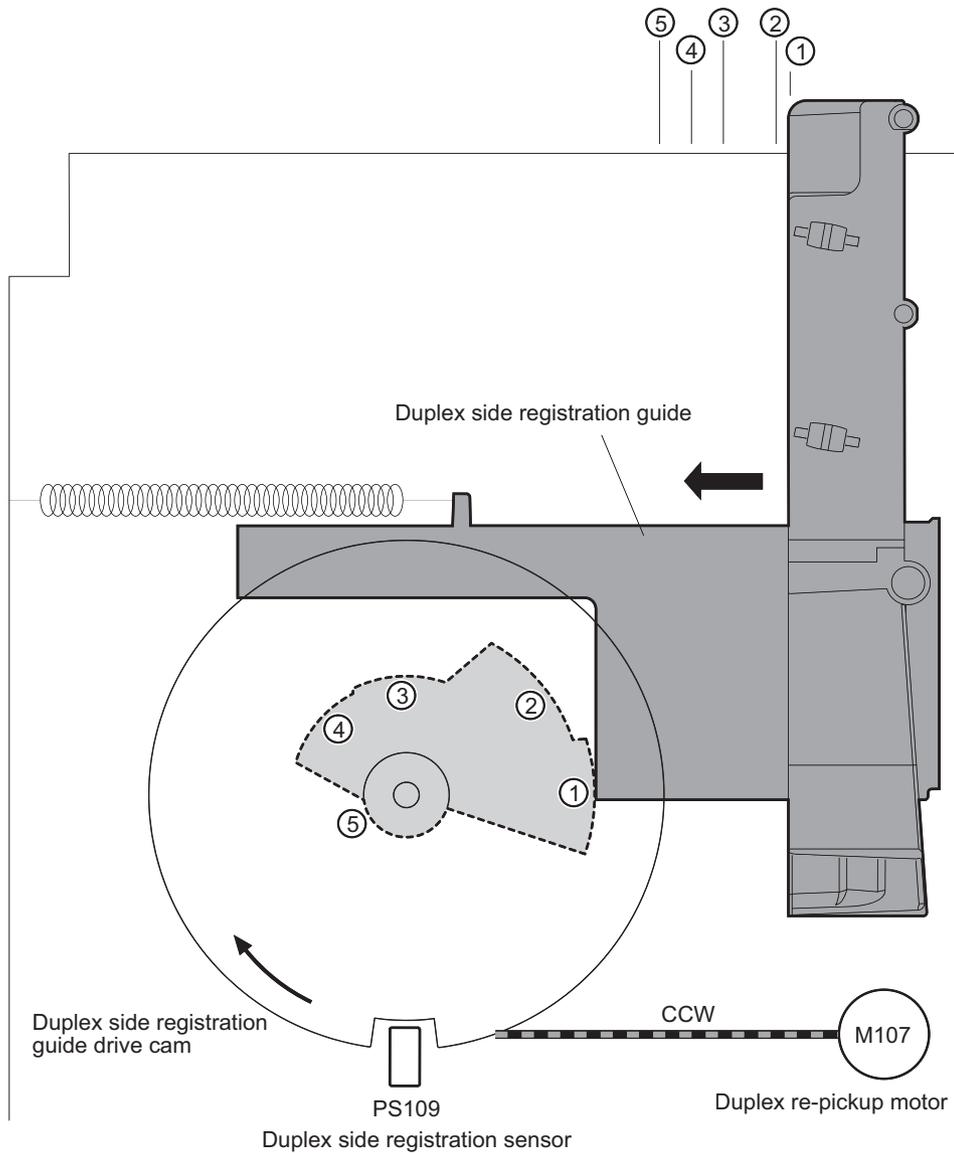
The product adjusts the side registration during a duplex print operation to align the center of the horizontal scanning direction on the second side with that of the print area on the photosensitive drum.

The side registration adjustment moves the side registration guide to the designated paper size.

The side registration guide moves to the following five positions, depending on the paper size, in order 1 to 5 and then back to 1:

1. Letter or Legal (home position)
2. A4
3. Executive
4. B5
5. A5

Figure 1-40 Duplex side registration adjustment operation



The operational sequence of the side registration adjustment is as follows:

1. The DC controller reverses the duplex re-pickup motor (M107).
2. The side registration guide drive cam rotates and the duplex side registration sensor (PS109) detects the home position of the duplex side registration guide.
3. The side registration guide moves, depending upon the paper size.
4. The DC controller stops the duplex re-pickup motor and completes the side registration guide movement.

NOTE: The DC controller determines a duplex side registration guide failure and notifies the formatter when the duplex side registration sensor does not detect the home position of the duplex side registration guide after the duplex side registration guide drive cam rotates twice.

Jam detection

 **NOTE:** The product senses a jam condition when paper in the paper path does not trigger the required sensor or sensors within a specific amount of time.

 **TIP:** For information about individual sensor tests, see the manual sensor test and tray/bin sensor test sections of the troubleshooting manual.

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

- Pre-feed sensor (PS102)
- Top-of-page (TOP) sensor (PS103)
- Media width sensor 1 (PS106)
- Media width sensor 2 (PS108)
- Reverse sensor (PS110)
- Reverse jam sensor (PS111)
- Paper-delivery sensor (PS112)
- Duplex re-pickup sensor (PS113)
- Fuser-delivery sensor (PS700)
- Tray 3 media feed sensor (SR4) (for 1x500 sheet paper feeder, 1x500 sheet paper feeder with cabinet, and 2,500-sheet high-capacity paper feeder)
- Tray 4 media feed sensor (SR8) (for 2,500-sheet high-capacity paper feeder)
- Tray 5 media feed sensor (SR12) (for 2,500-sheet high-capacity paper feeder)

The DC controller checks for jams by timing the paper as it moves past these sensors. If the paper does not pass the sensor in a specific period of time, the DC controller stops the transport process (the motors are turned off and the rollers no longer rotate) and a jam message displays on the control panel.

Figure 1-41 Jam detection sensors

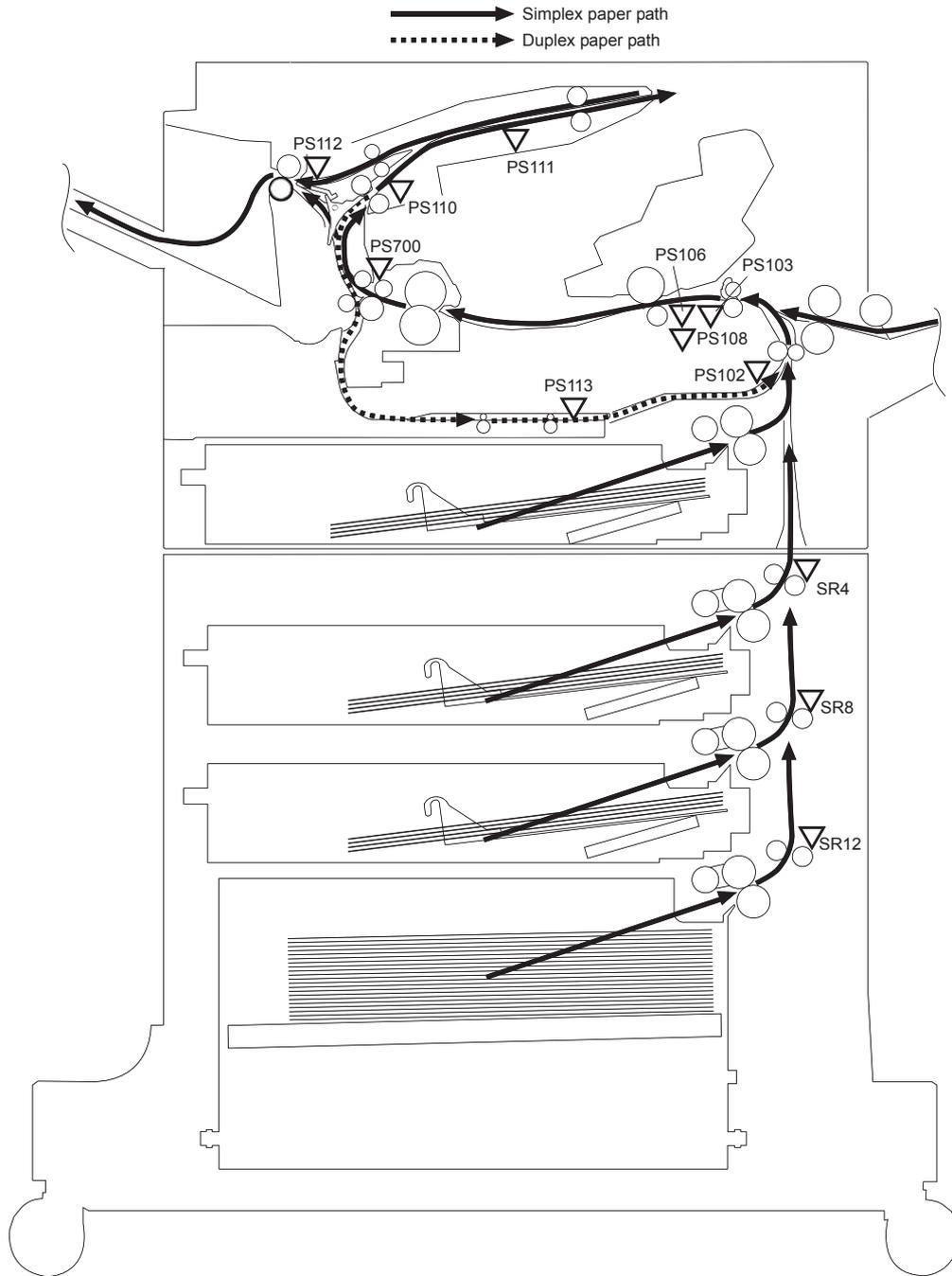


Table 1-15 Jams that the product detects

Jam	Description
Pickup delay jam	One of the following conditions is true: <ul style="list-style-type: none"> • Tray 1, duplex accessory, or envelope feeder

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

Jam	Description
	<ul style="list-style-type: none">◦ The TOP sensor does not detect the leading edge of the paper within a specified period of time after the pickup operation starts.• Tray 2<ul style="list-style-type: none">◦ The pre-feed sensor does not detect the leading edge of the paper within a specified period of time from when a pickup operation starts.◦ The TOP sensor does not detect the leading edge of the paper within a specified period of time from when the pre-feed sensor detects the leading edge.• Trays 4 or 5<ul style="list-style-type: none">◦ The Tray 3 media-feed sensor does not detect the leading edge of the paper within a specified period from when the Tray 4 or 5 media-feed sensor detects the leading edge.• Trays 3, 4, or 5<ul style="list-style-type: none">◦ The Tray 3, 4, or 5 media feed sensor does not detect the leading edge of the paper within a specified period of time after the pickup operation starts.◦ The TOP sensor does not detect the leading edge of paper within a specified period of time from when the media feed clutch is turned on. <p>NOTE: The product attempts to pick up the paper several times before determining that a jam exists. The number of pickup attempts depends on the source (for example, four attempts occur if Tray 1 is the source).</p>
Pickup stationary jam	One of the following conditions is true: <ul style="list-style-type: none">• The TOP sensor does not detect the trailing edge of the paper within a specified period of time from when it detects the leading edge.• Both media width sensors 1 and 2 do not detect the trailing edge of the paper within a specified period of time from when the TOP sensor detects the trailing edge.• Trays 4 or 5<ul style="list-style-type: none">◦ The Tray 3 media-feed sensor does not detect the trailing edge of paper within a specified period from when it detects the leading edge.• Trays 3, 4, or 5<ul style="list-style-type: none">◦ The Tray 3, 4, or 5 media feed sensor does not detect the trailing edge of the paper within a specified period of time from when it detects the leading edge.
Fuser delivery delay jam	One of the following conditions is true: <ul style="list-style-type: none">• The fuser delivery sensor does not detect the leading edge of the paper within a specified period of time after the TOP sensor detects the leading edge.• The reverse assembly jam sensor does not detect the leading edge of the paper within a specified period of time from when the fuser delivery sensor detects the leading edge.• For face-down delivery, the delivery sensor does not detect the leading edge of the paper within a specified period of time from when a paper reverse operation starts in the reverse area.• For face-up delivery, the delivery sensor does not detect the leading edge of the paper within a specified period of time from when the fuser delivery sensor detects the leading edge.

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

Jam	Description
Fuser delivery stationary jam	One of the following conditions is true: <ul style="list-style-type: none"><li data-bbox="555 338 1442 390">• The fuser delivery sensor does not detect the trailing edge of the paper within a specified period of time after the TOP sensor detects the trailing edge.<li data-bbox="555 415 1442 468">• The reverse assembly jam sensor does not detect the trailing edge of the paper within a specified period of time from when the fuser delivery sensor detects the trailing edge.<li data-bbox="555 493 1442 569">• For face-down delivery, the delivery sensor does not detect the trailing edge of the paper within a specified period of time from when a paper reverse operation starts in the reverse assembly area.<li data-bbox="555 594 1442 646">• For face-up delivery, the delivery sensor does not detect the trailing edge of the paper within a specified period of time from when the fuser delivery sensor detects the leading edge.
Duplex re-pickup delay jam	The duplex re-pickup sensor does not detect the leading edge of the paper within a specified period of time from when a duplex reverse operation starts.
Wrapping jam	After detecting the leading edge of the paper, the fuser delivery sensor detects the absence of paper, and it has not yet detected the trailing edge.
Residual paper jam	One of the following sensors detects paper presence when the product is turned on, when the door is closed or when the product exits Sleep mode. The product automatically clears the residual paper. <ul style="list-style-type: none"><li data-bbox="555 926 703 953">• TOP sensor<li data-bbox="555 978 788 1005">• Media width sensor 1<li data-bbox="555 1031 788 1058">• Media width sensor 2<li data-bbox="555 1083 788 1110">• Fuser delivery sensor<li data-bbox="555 1136 831 1163">• Tray 3 media-feed sensor<li data-bbox="555 1188 831 1215">• Tray 4 media-feed sensor<li data-bbox="555 1241 831 1268">• Tray 5 media-feed sensor
Door open jam	The product detects that a door is open while paper is moving through the product.

Optional paper feeders

Three types of optional paper feeders are available for the product:

- 1x500-sheet paper feeder
- 1x500-sheet paper feeder with cabinet
- 2,500-sheet high-capacity paper feeder

The following figures show the product positioned on these paper feeders and the paper path associated with each one.

Figure 1-42 1x500-sheet paper feeder

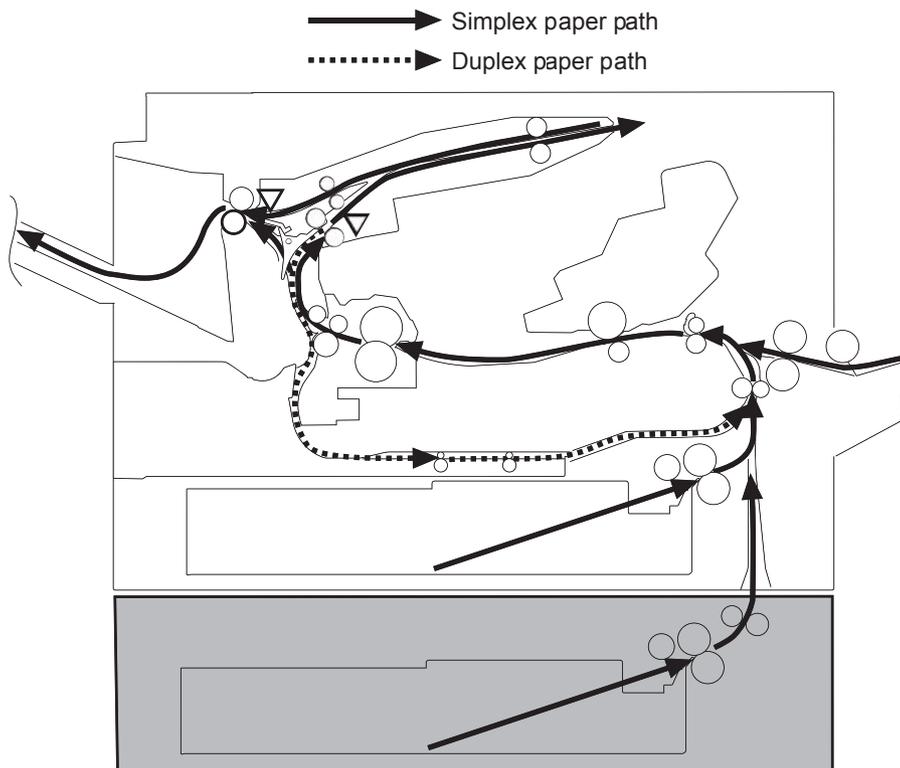


Figure 1-43 1x500-sheet paper feeder with cabinet

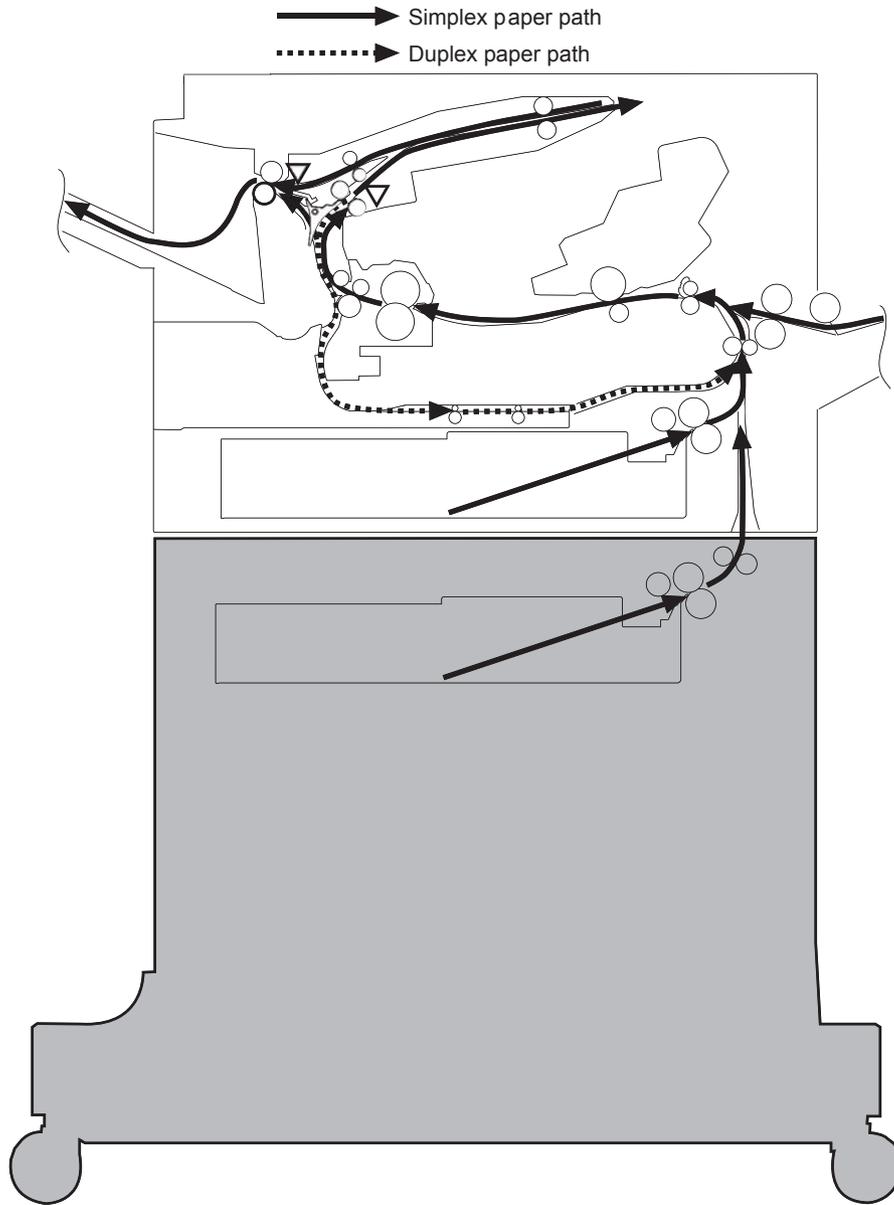
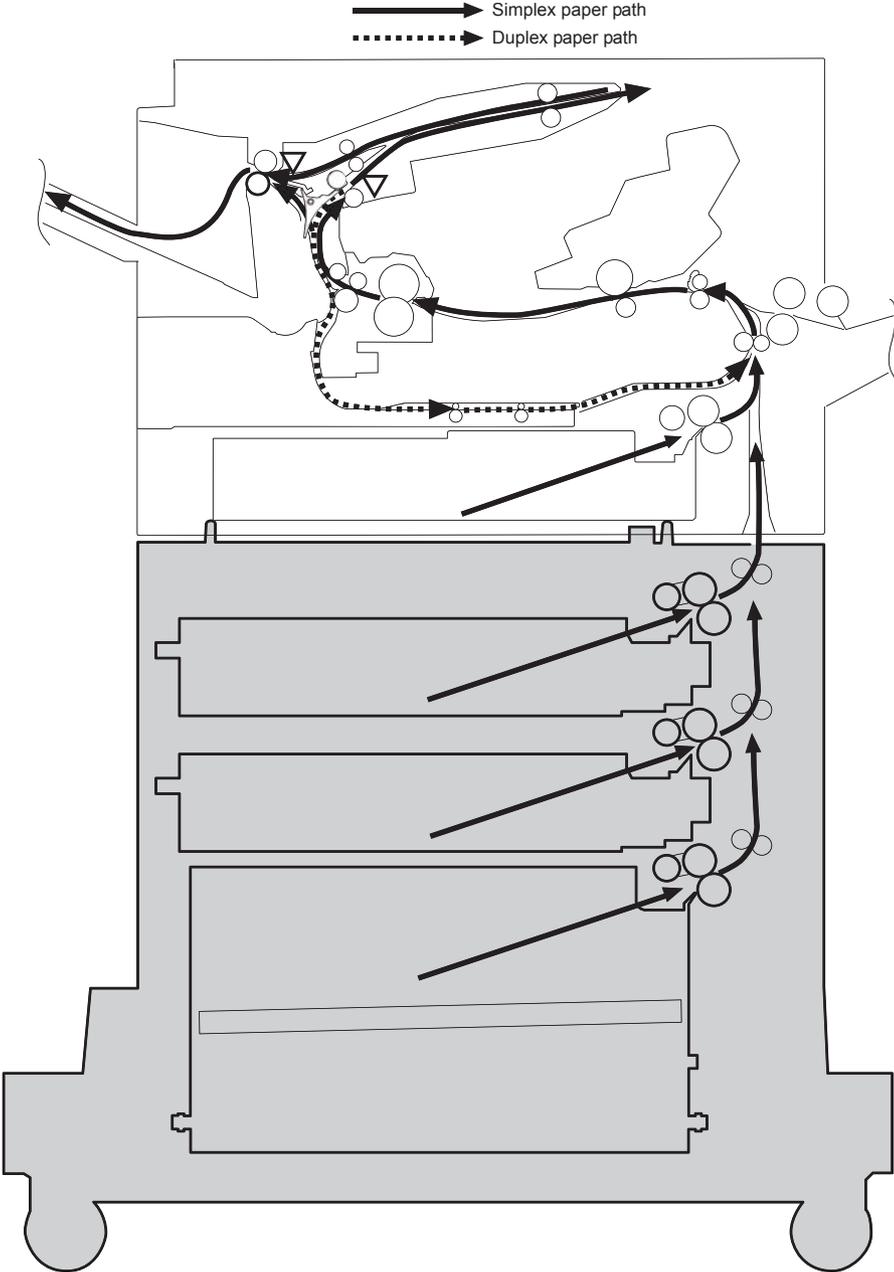


Figure 1-44 2,500-sheet high-capacity paper feeder



Paper-feeder pickup and feed components

The following figures and tables show the signal flow in the paper feeder controller and the location of the motors, sensors, and solenoids located in the paper feeders.

1x500-sheet paper feeder signal flow and component locations

Figure 1-45 Signal flow for the 1x500-sheet paper feeder controller

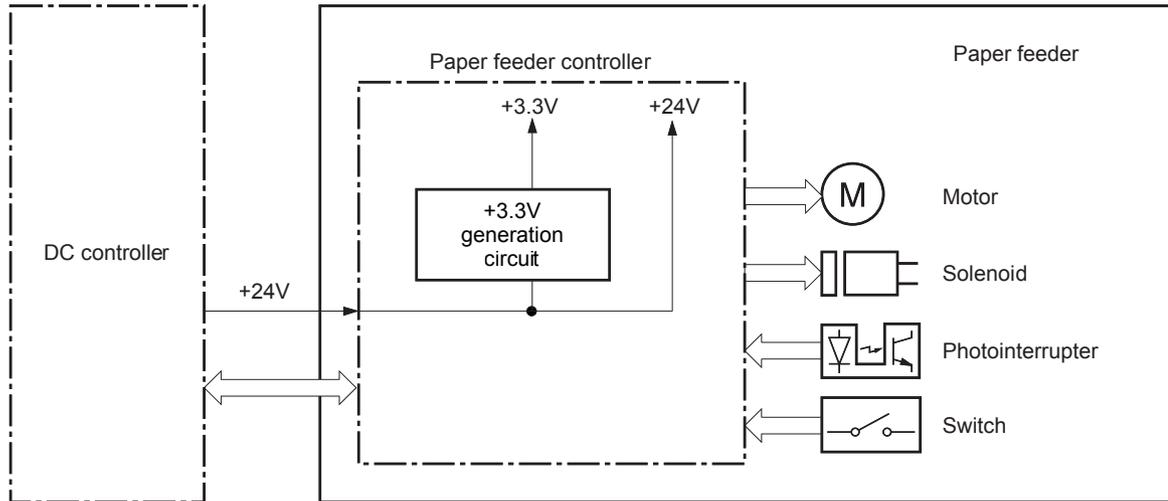


Figure 1-46 Pickup and feed components (1x500-sheet paper feeder)

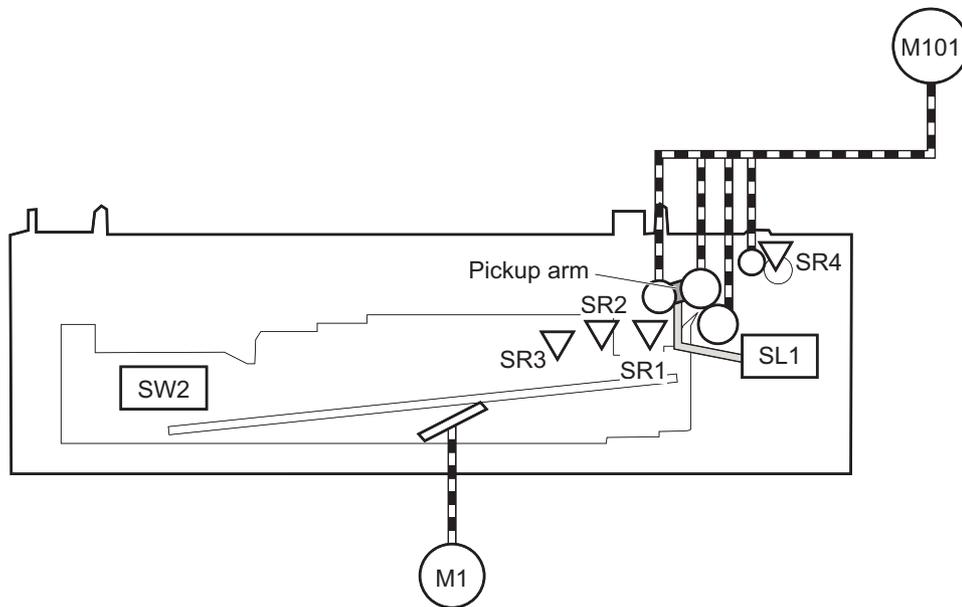


Table 1-16 Pickup and feed components (1x500-sheet paper feeder)

Abbreviation	Component	Replacement part number
M101	Feed motor	Feed motor assembly (RM2-5942-000CN)
M1	Paper feeder tray lifter motor	Lifter assembly (RM1-5914-000CN)

Table 1-16 Pickup and feed components (1x500-sheet paper feeder) (continued)

Abbreviation	Component	Replacement part number
SL1	Paper feeder tray pickup solenoid	Paper pickup assembly (RM2-0341-000CN)
SR1	Paper feeder tray media stack surface sensor 1	Paper feed roller assembly (RM1-8411-010CN)
SR2	Paper feeder tray media stack surface sensor 2	Paper feed roller assembly (RM1-8411-010CN)
SR3	Paper feeder tray media out sensor	Paper pickup assembly (RM2-0341-000CN)
SR4	Paper feeder tray media feed sensor	Paper pickup assembly (RM2-0341-000CN)
SW2	Paper feeder tray media size switch	Part not available

1x500-sheet paper feeder with cabinet signal flow and component locations

Figure 1-47 Signal flow for the 1x500 paper feeder with cabinet controller

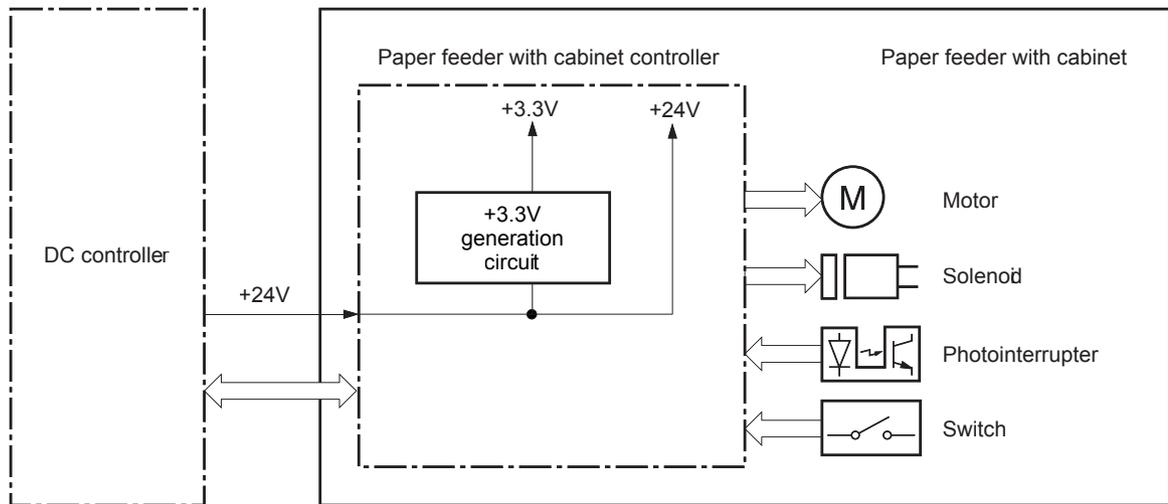


Figure 1-48 Pickup and feed components (1x500-sheet paper feeder with cabinet)

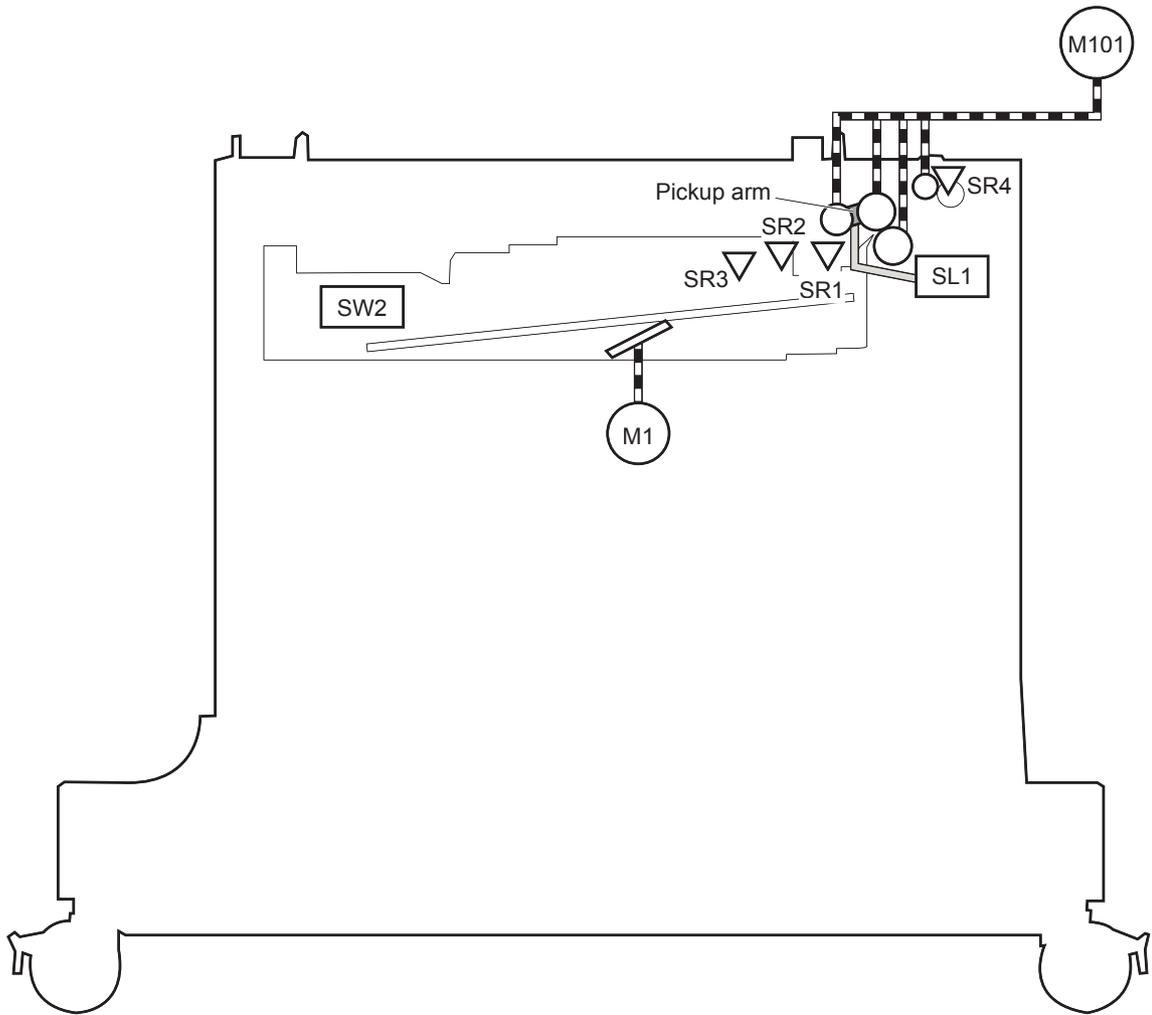


Table 1-17 Pickup and feed components (1x500-sheet paper feeder with cabinet)

Abbreviation	Component	Replacement part number
M101	Feed motor	Feed motor assembly (RM2-5942-000CN)
M1	Paper feeder with cabinet lifter motor	Lifter assembly (RM1-5914-000CN)
SL1	Paper feeder with cabinet pickup solenoid	Paper pickup assembly (RM2-0341-000CN)
SR1	Paper feeder with cabinet media stack surface sensor 1	Paper feed roller assembly (RM1-8411-010CN)
SR2	Paper feeder with cabinet media stack surface sensor 2	Paper feed roller assembly (RM1-8411-010CN)
SR3	Paper feeder with cabinet media out sensor	Paper pickup assembly (RM2-0341-000CN)
SR4	Paper feeder with cabinet media feed sensor	Paper pickup assembly (RM2-0341-000CN)
SW2	Paper feeder with cabinet media size switch	Part not available

2,500-sheet high-capacity paper feeder signal flow and component locations

Figure 1-49 Signal flow for the 2,500-sheet high-capacity paper feeder controller

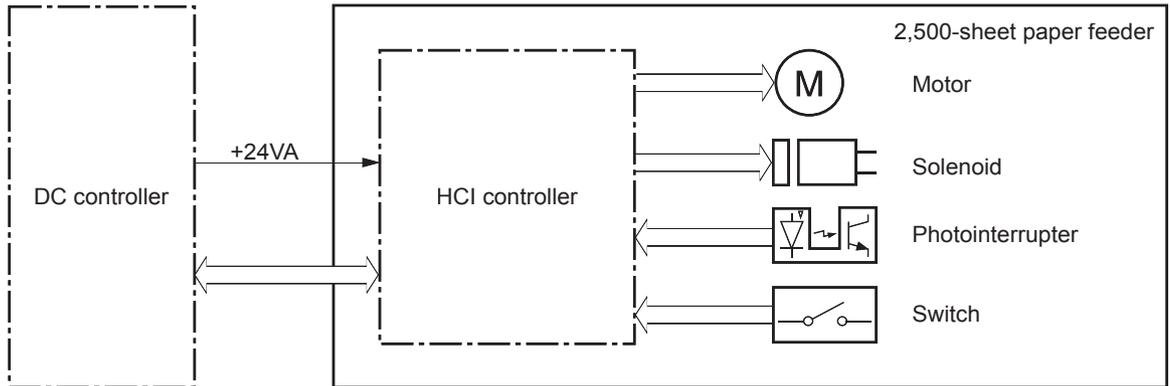


Figure 1-50 Pickup and feed components (2,500-sheet high-capacity paper feeder)

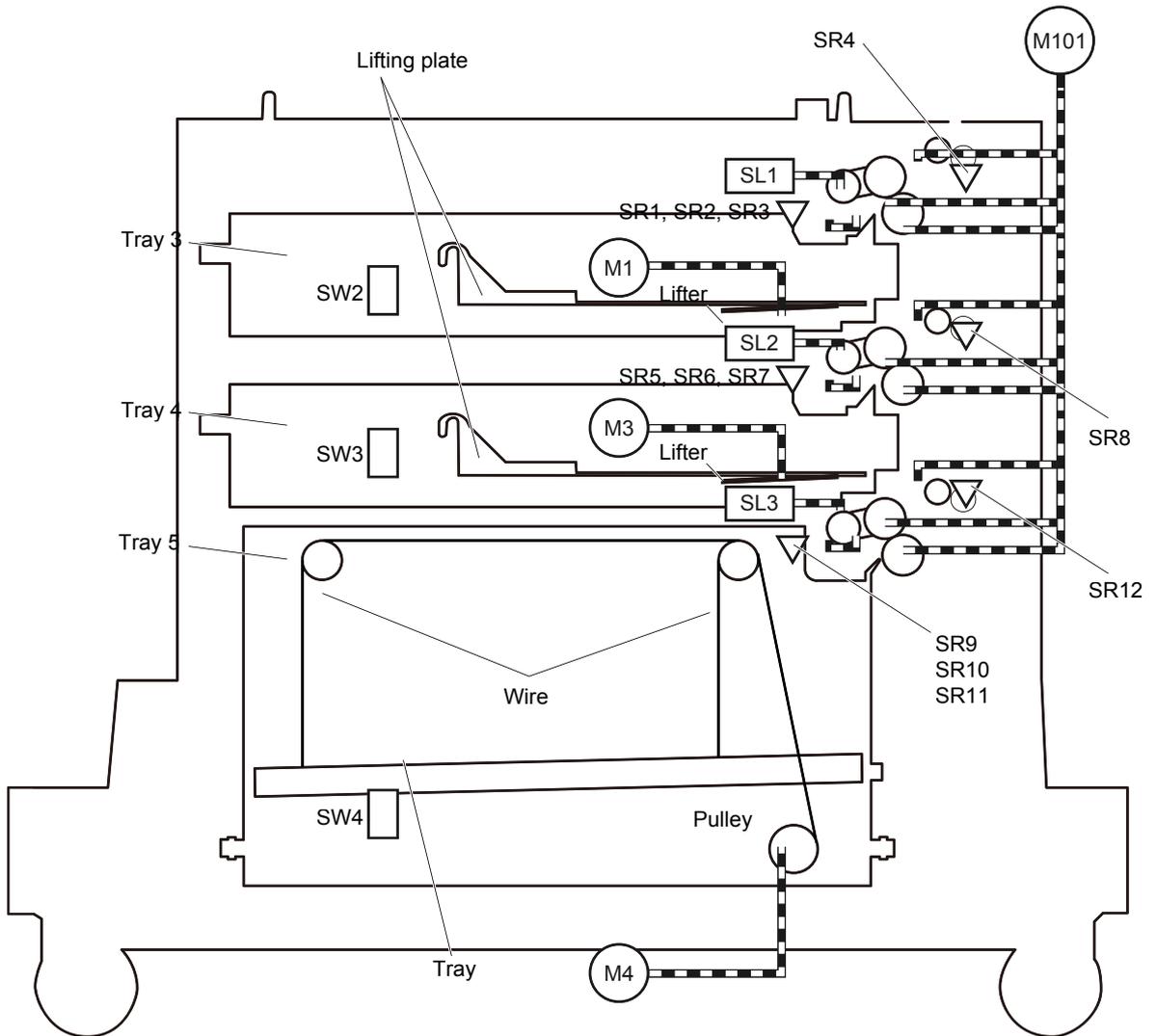


Table 1-18 Pickup and feed components (2,500-sheet high-capacity paper feeder)

Abbreviation	Component name	Replacement part number
M101	Feed motor	Feed motor assembly (RM2-5942-000CN)
M1	Tray 3 lifter motor	Lifter assembly (RM1-5914-000CN)
M3	Tray 4 lifter motor	Lifter assembly (RM1-5914-000CN)
M4	Tray 5 lifter motor	Lifter drive assembly (RM2-0346-000CN)
SL1	Tray 3 pickup solenoid	Paper pickup assembly (RM2-0341-000CN)
SL2	Tray 4 pickup solenoid	Lifter assembly (RM1-5914-000CN)
SL3	Tray 5 pickup solenoid	Lifter assembly (RM1-5914-000CN)
SW1	Right door open detection switch	Part not available
SW2	Tray 3 media-size switch	Lifter base assembly (RM1-5913-000CN)
SW3	Tray 4 media-size switch	Lifter base assembly (RM1-5913-000CN)
SW4	Tray 5 media-size switch	Tray size sensor assembly (RM2-0350-000CN)
SR1	Tray 3 media-surface sensor 1	Paper pickup assembly (RM2-0341-000CN)
SR2	Tray 3 media-surface sensor 2	Paper pickup assembly (RM2-0341-000CN)
SR3	Tray 3 media-presence sensor	Paper pickup assembly (RM2-0341-000CN)
SR4	Tray 3 media-feed sensor	Paper pickup assembly (RM2-0341-000CN)
SR5	Tray 4 media-surface sensor 1	Paper pickup assembly (RM2-0341-000CN)
SR6	Tray 4 media-surface sensor 2	Paper pickup assembly (RM2-0341-000CN)
SR7	Tray 4 media-presence sensor	Paper pickup assembly (RM2-0341-000CN)
SR8	Tray 4 media-feed sensor	Paper pickup assembly (RM2-0341-000CN)
SR9	Tray 5 media-surface sensor 1	Paper pickup assembly (RM2-0341-000CN)
SR10	Tray 5 media-surface sensor 2	Paper pickup assembly (RM2-0341-000CN)
SR11	Tray 5 media-presence sensor	Paper pickup assembly (RM2-0341-000CN)
SR12	Tray 5 media-feed sensor	Paper pickup assembly (RM2-0341-000CN)

Paper-size detection and tray-presence detection

The paper feeder controller in both the 1 x 500-sheet paper feeder and 1x500-sheet paper feeder with cabinet detects the size of paper loaded in Tray 3 and the presence of Tray 3 using the media size switch. Each media-size switch contains three sub-switches. The paper feeder controller detects the size of paper and the presence of the tray according to the combination of the sub-switches and notifies the formatter through the DC controller.

Table 1-19 Paper-size detection and tray-presence detection (1 x 500-sheet paper feeder and 1x500-sheet paper feeder with cabinet)

Tray presence or media size	Top switch	Center switch	Bottom switch
A4	On	Off	Off
Letter	Off	On	Off
B5	Off	On	On
A5	Off	Off	On
Executive	On	Off	On
Legal	On	On	Off
Custom size	On	On	On
No tray	Off	Off	Off

The HCI controller detects the size of the paper loaded in the trays and the presence of the trays in the 2,500-sheet high-capacity paper feeder by monitoring the media-size switches. Each media-size switch contains three sub-switches. The HCI controller detects the size of paper and the presence of the tray according to the combination of the sub-switches and notifies the formatter through the DC controller. During Sleep mode, the HCI controller only detects the presence of the tray.

Table 1-20 Paper-size detection and tray-presence detection (2,500-sheet high-capacity paper feeder)

Paper size	Paper-size switch SW2, SW3 (Trays 3 and 4)			Paper-size switch SW4 (Tray 5)		
	Top	Center	Bottom	Top	Center	Bottom
No tray	Off	Off	Off	Off	Off	Off
A5	On	On	Off	N/A	N/A	N/A
B5	Off	On	On	N/A	N/A	N/A
Executive	On	Off	On	N/A	N/A	N/A
Letter	Off	On	Off	Off	On	On
A4	On	Off	Off	On	Off	On
Legal	On	On	Off	Off	Off	On
Custom size	On	On	On	Any combination of switches not shown above		

Paper feeder tray lift operation

The paper feeders keep the paper stack surface at the correct pickup position. The tray lift operation occurs under the following conditions:

The paper feeder controller detects the position of the stack surface by monitoring the paper feeder media stack surface sensors under the following conditions:

- When the product is turned on
- When a tray is inserted
- When the paper stack surface in the tray lowers

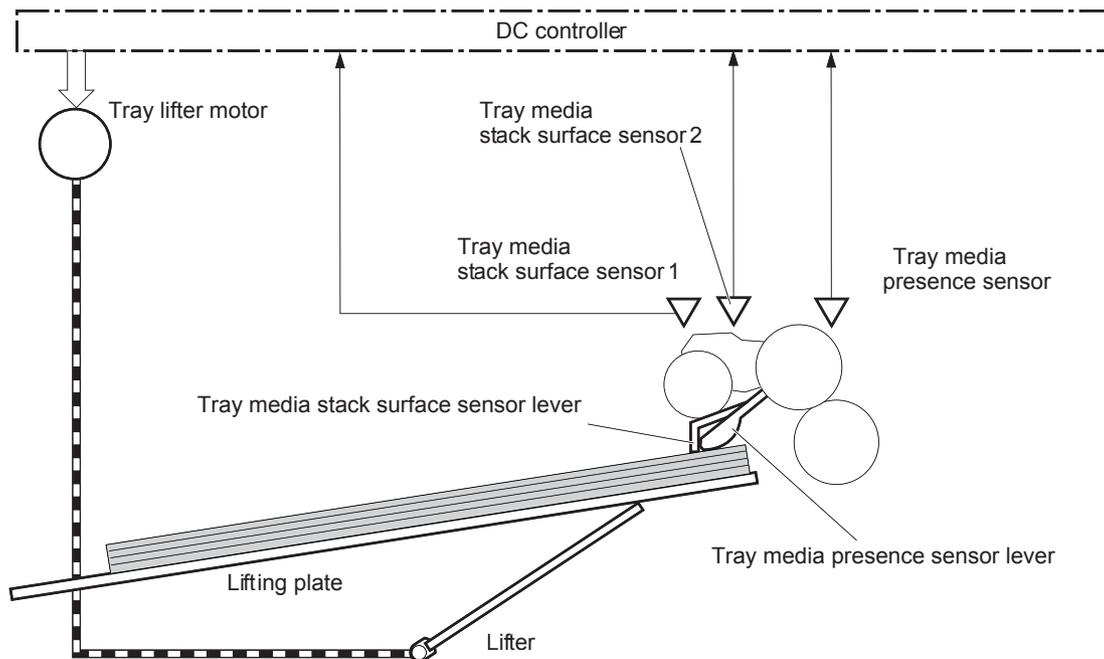
Trays 3 and 4 lift operation

The sequence of the paper feeder lift operation for Trays 3 and 4 is as follows:

1. The paper feeder controller rotates the tray lifter motor.
2. The lifter moves up.
3. The tray lifter motor stops when the tray media stack surface sensor 2 detects the paper stack surface.
4. The tray lifter motor rotates again when the tray media stack surface sensor 1 detects that the paper stack surface lowers.

 **NOTE:** The paper feeder controller determines a tray lifter motor failure and notifies the formatter through the DC controller if the tray media stack surface sensor 1 or sensor 2 does not detect the paper stack surface within a specified period of time after the tray lifter motor starts rotating.

Figure 1-51 Trays 3 and 4 paper feeder lift operation



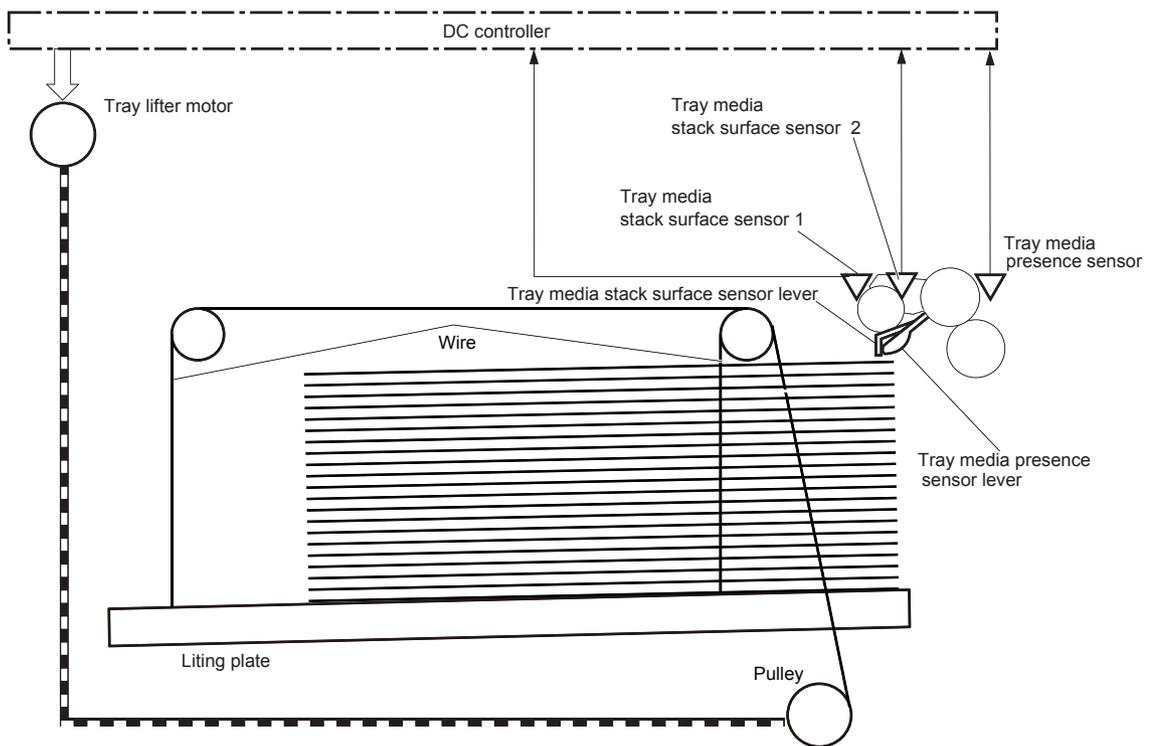
Tray 5 lift operation

The sequence of the paper feeder lift operation for Tray 5 is as follows:

1. The paper feeder controller rotates the tray lifter motor.
2. The lifter motor activates the pulley, which coils the wire connected to the lift plate, and raises the lift plate.
3. The tray lifter motor stops when the tray media stack surface sensor 2 detects the paper stack surface.
4. The tray lifter motor rotates again when the tray media stack surface sensor 1 detects that the paper stack surface lowers.

 **NOTE:** The paper feeder controller determines a tray lifter motor failure and notifies the formatter through the DC controller if the tray media stack surface sensor 1 or sensor 2 does not detect the paper stack surface within a specified period of time after the tray lifter motor starts rotating.

Figure 1-52 Tray 5 paper feeder lift operation



Paper feeder jam detection

The following figures show the location of paper presence sensors in the paper feeders that detect the presence of paper and determine whether the paper is being fed correctly or has jammed. The 1x500-sheet paper feeder and 1x500-sheet paper feeder with cabinet use the Tray 3 paper presence sensor (SR4). The 2,500-sheet high-capacity paper feeder uses the following sensors

- Tray 3 media-feed sensor (SR4)
- Tray 4 media-feed sensor (SR8)
- Tray 5 media-feed sensor (SR12)

See [Table 1-15 Jams that the product detects on page 56](#) for descriptions of jams detected by these sensors.

Figure 1-53 1x500-sheet paper feeder media feed sensor

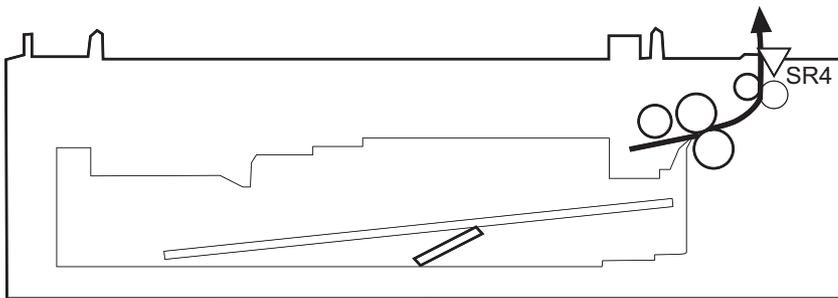


Figure 1-54 1x500-sheet paper feeder with cabinet media feed sensor

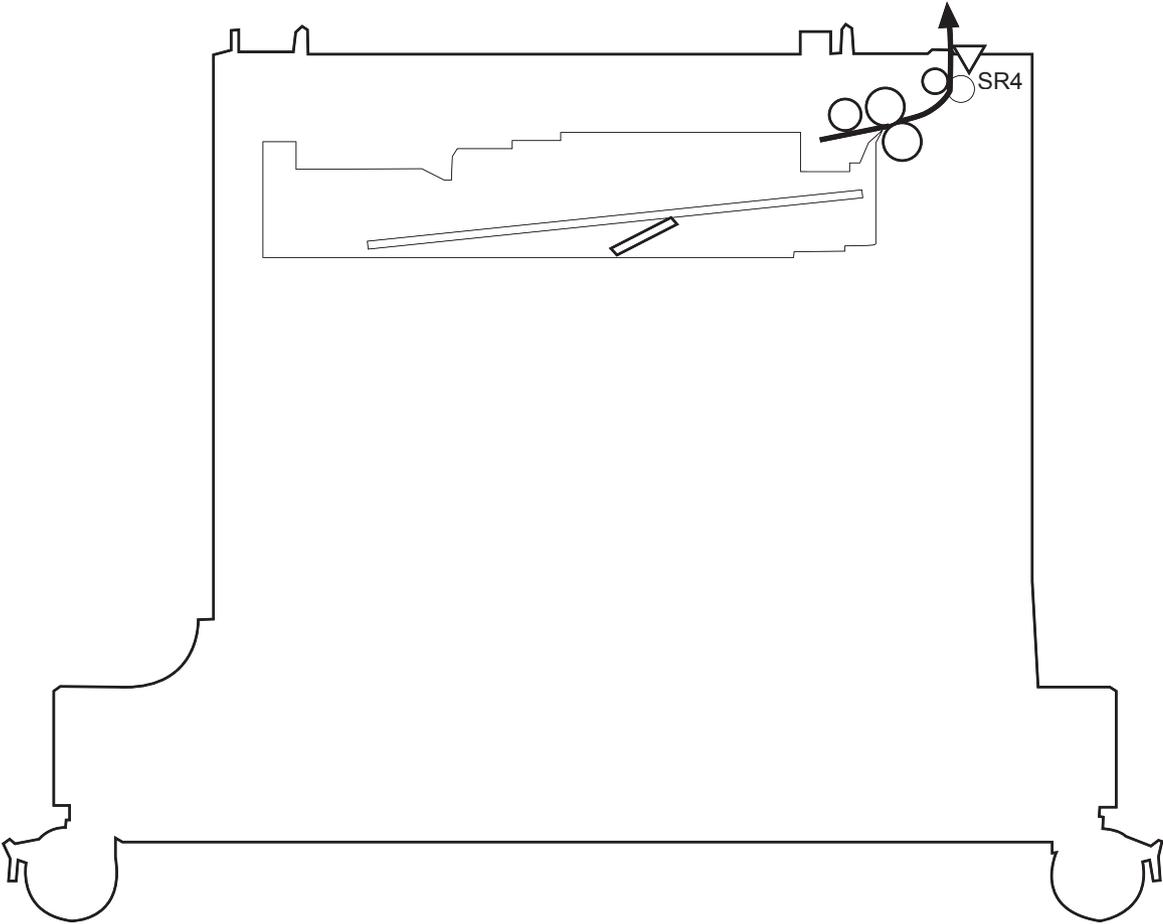
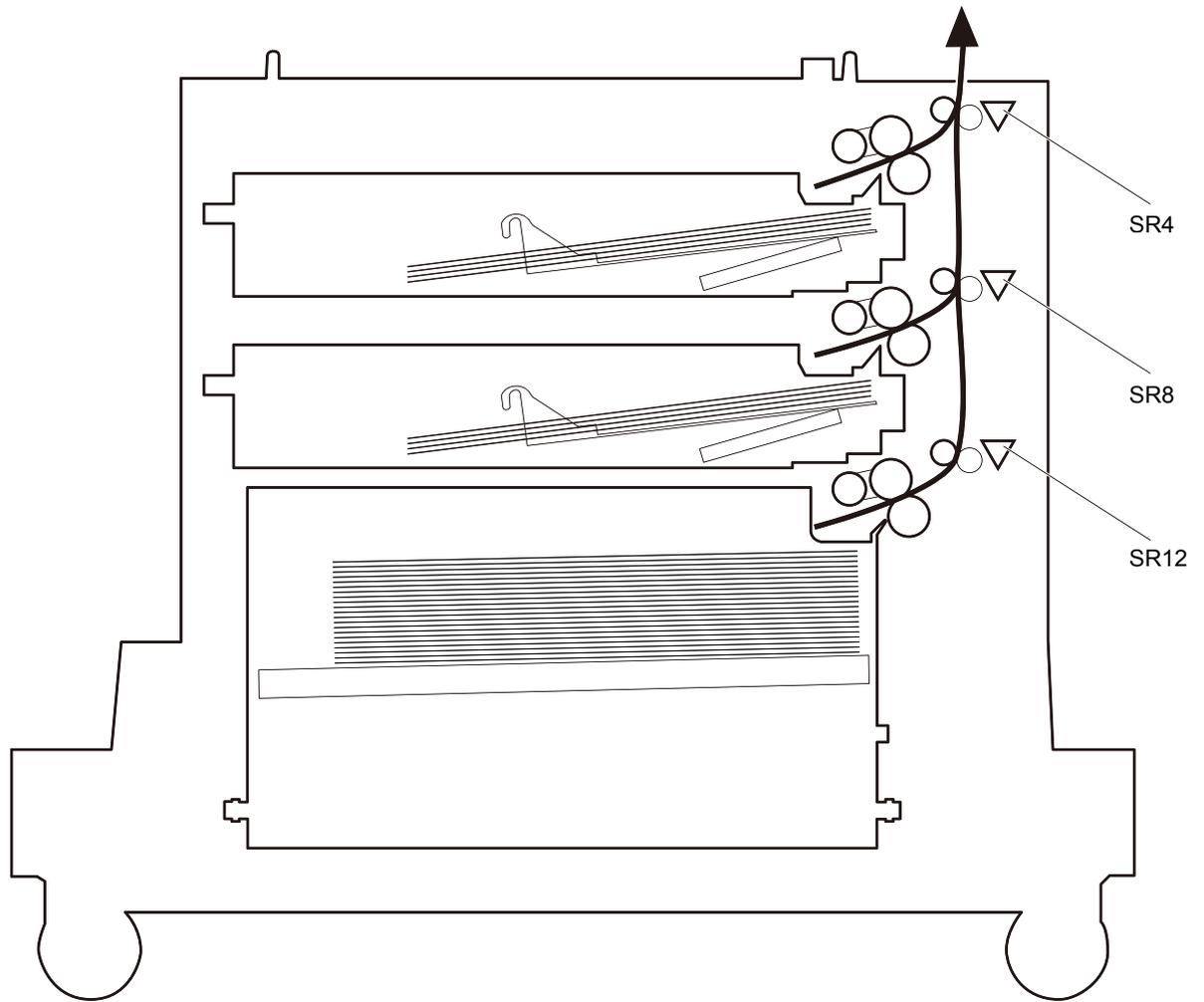


Figure 1-55 2,500-sheet high-capacity paper feeder media feed sensors



Scanning/image capture system



NOTE: Figures in this section might look slightly different from your product, but they are correct for the M630. All the information provided in this section is correct for this product.

Scanner

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

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

Document feed system

This section describes the following:

- Sensors in the document feeder
- Document feeder paper path
- Simplex single-pass scanning
- Electronic duplexing (e-duplex) single-pass scanning
- Front-side and back-side background selector
- Deskew operation
- Document feeder hinges

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

For specific copy jobs, a background selector changes the reflective platen from a white strip to a black strip for page edge-to-edge recognition.

Sensors in the document feeder

The document feeder contains the following sensors:

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



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

- **Paper path sensor 1:** Detects the top of the page as it approaches the front-side scan module (document feeder glass).
- **Paper path sensor 2:** Detects the top of the page as it approaches the back-side scan module during e-duplex copy jobs.

Figure 1-56 Document feeder sensors

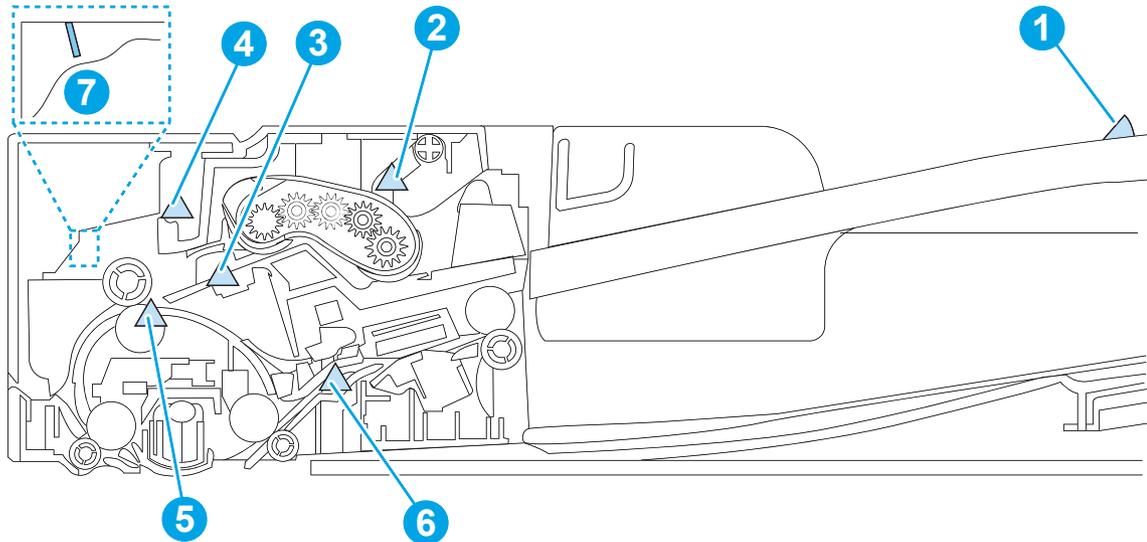


Table 1-21 Document feeder sensors

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

Document feeder paper path

Figure 1-57 Document feeder paper path

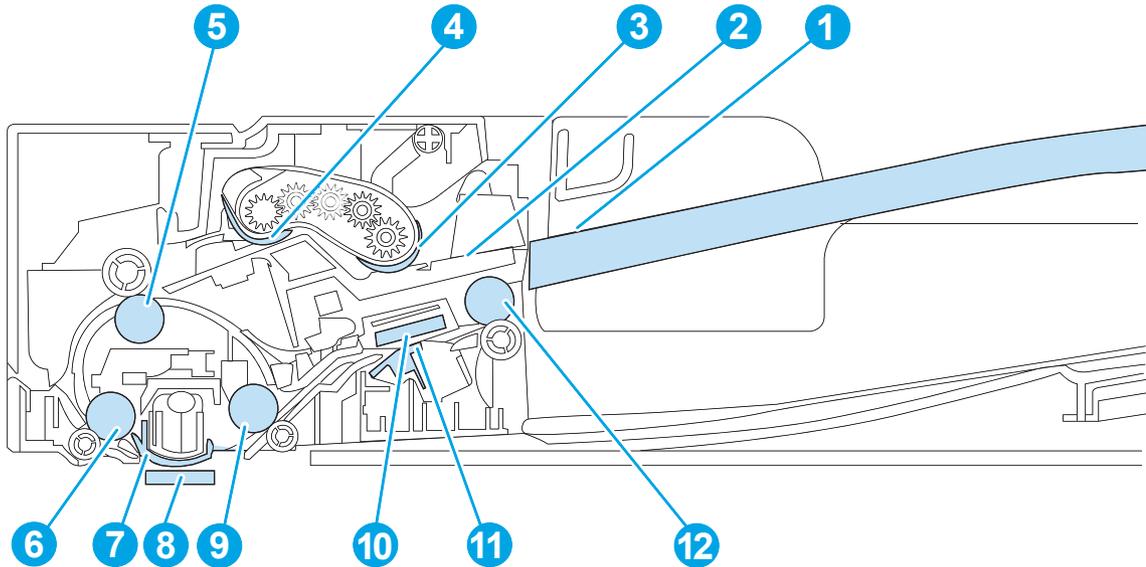


Table 1-22 Document feeder paper path

Item	Description	Item	Description
1	Input tray	7	Front-side background selector
2	Separation pad	8	Front-side scan module
			NOTE: This scan module (document feeder glass) is located in the scanner base.
3	Pick roller	9	Postscan drive roller
4	Feed roller	10	Back-side scan module
5	Deskew drive roller	11	Back-side background selector
6	Prescan drive roller	12	Exit drive roller

Document feeder simplex operation

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

1. The ADF jam cover sensor detects when the cover door is in the closed position.
2. The ADF paper present sensor activates when paper is loaded onto the input tray.
3. The pick motor rotates to lower the pick roller and starts to pick the loaded paper.
4. The ADF multi-pick (ultrasonic) sensor activates when the leading edge of the media is driven past the sensor. The product firmware registers a successful pick operation.
5. The ADF paper path deskew activates when the leading edge of the paper passes it. The product firmware registers the leading edge of the paper position.

6. The leading edge of the paper drives into the nip point of the deskew drive roller and the deskew pinch rollers. This creates a buckle of paper by the nip point for pick-skew correction.
7. The deskew motor rotates the deskew drive roller to pull the paper into the prescan drive roller.
8. The pick motor stops turning and allows both the pick and feed roller to turn freely while the paper is pulled in by the deskew drive roller.
9. The feed motor rotates to drive the paper into the prescan front-side sensor. The firmware registers the leading edge position of the paper as the multi-pick sensor activates.



NOTE: If the copy job requires a reflective platen change, the front-side background selector activates.

10. The feed motor continues to rotate and drive the leading edge of the paper through the preset distance from the multi-pick sensor to the front-side scan zone. The scanner begins the scanning and data retrieval process.
11. The ADF multi-pick (ultrasonic) sensor deactivates when the trailing edge of the paper passes the sensor. The firmware registers the trailing edge of the paper position.
12. The feed motor continues to rotate and drive the trailing edge of the paper through the preset distance from the ADF multi-pick (ultrasonic) sensor to the front-side scan zone. The scanner ends the scanning and data retrieval process.
13. The feed motor continues to rotate and ejects the trailing edge of the paper into the output bin.
14. One of the following occurs:
 - If the copy job is complete, the ADF paper present sensor deactivates. The feed motor reverses rotation to raise the pick roller.
 - If the copy job is not complete, the ADF paper present sensor is active. The product firmware detects additional pages in the input tray and the process repeats.

Document feeder e-duplex operation

Following is the basic sequence of operation for an e-duplex job.



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

1. The feed motor continues to drive the paper until the leading edge activates the prescan back-side sensor. The product firmware registers the position of the leading edge of the paper.



NOTE: If the copy job requires a reflective platen change, the back-side background selector activates.

2. The feed motor continues to rotate to drive the leading edge of the paper through the preset distance from prescan back-side sensor to the back-side background selector scan zone. The back-side background scan module begins scanning and retrieval of the data.
3. The prescan back-side sensor deactivates when the trailing edge of the paper passes it. The product firmware registers the trailing edge of the paper position.
4. The feed motor continues to rotate to drive the trailing edge of the paper edge past the back-side background selector scan zone.

5. The feed motor continues to rotate and ejects the trailing edge of the paper into the output bin.
6. One of the following occurs:
 - If the copy job is complete, the ADF paper present sensor deactivates. The feed motor reverses rotation to raise the pick roller.
 - If the copy job is not complete, the ADF paper present sensor is active. The product firmware detects additional pages in the input tray and the process repeats.

Front-side and back-side background selector



NOTE: The product automatically controls the operation of the front-side and back-side background selectors.

The background selectors change the reflective surface behind a duplex or simplex scanned page from white to black. Doing so allows the firmware to recognize the edges of a scanned page by passing it over a black background.

The product uses the background selectors for specific scan jobs. Scan jobs like optical character recognition (OCR) and scan-to-folder require a black reflective background so that the firmware can correctly scan the page from edge-to-edge.

The front-side background selector is a non-removable component of the document feeder. The back-side background selector assembly is located under the document feeder input tray and is removable to allow access for cleaning the back-side scan module glass.

Deskew operation

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

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

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

The stack-height limiter prevents incorrect insertion of the paper and limits the maximum amount (stacking height) of media that can be loaded on the input tray.

Figure 1-58 Document feeder deskew features

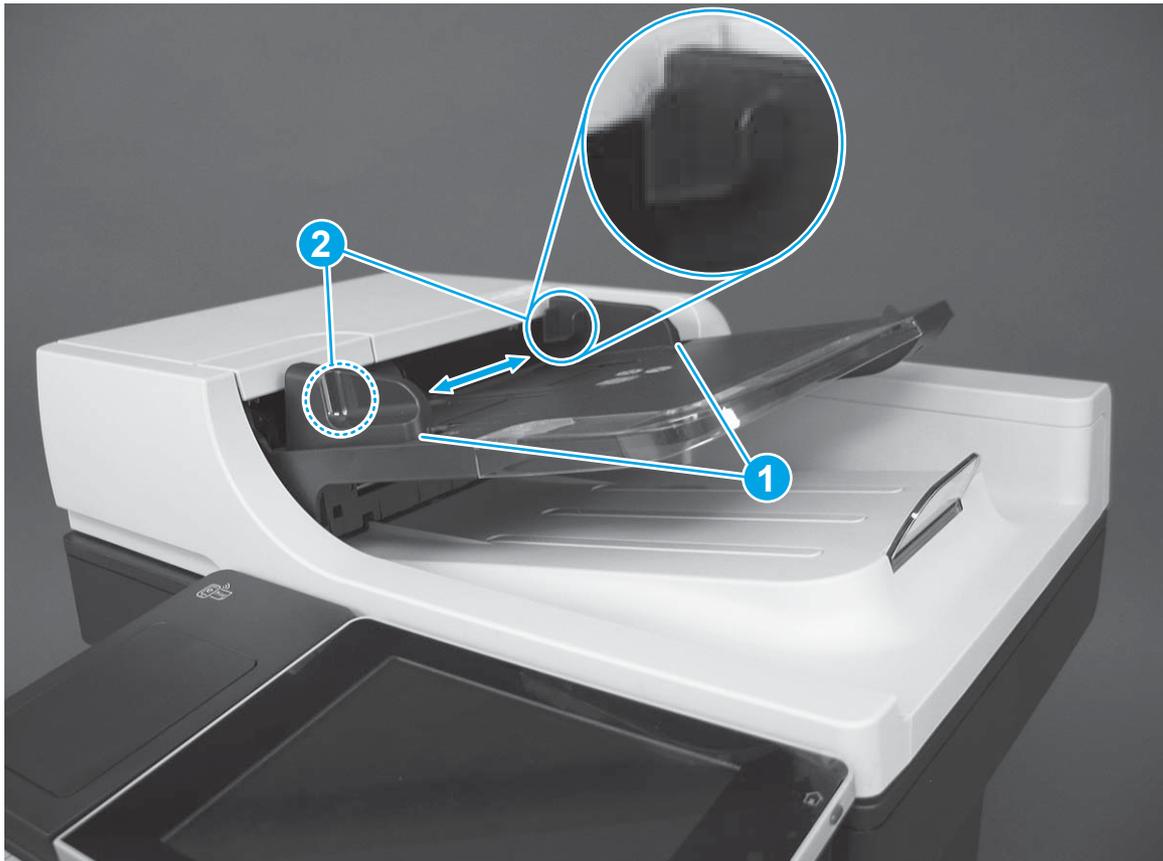


Table 1-23 Document feeder deskew features

Item	Description
1	Sliding side guides
2	Stack-height limiter

Document feeder hinges

The document feeder hinges allow positioning the assembly vertically above the scanner glass to accommodate the placement of books and other objects up to 40 mm (1.57 in) in height on the scanner glass. The document feeder still closes (the bottom of the ADF is kept parallel to the scanner glass) and allows the product to operate.

The document feeder hinges provide height adjustment of at least 40 mm (1.57 in) when a maximum downward force of 5 kg (11 lb) is applied at the front edge of the assembly, with the fulcrum (such as the spine of a book) centered on the scanner glass and parallel to its long axis.

The document feeder will withstand a downward force of at least 15 kg (33 lb) applied at the front edge center of the assembly—when the fulcrum (such as the spine of a book) is located anywhere on the scanner glass and parallel to its long axis—without breaking, deforming, detaching or experiencing performance degradation.

The document feeder hinges support the assembly in the open position and prevent the document feeder from suddenly closing in a damaging or loud manner.

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

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

Figure 1-59 Document feeder open (book mode)

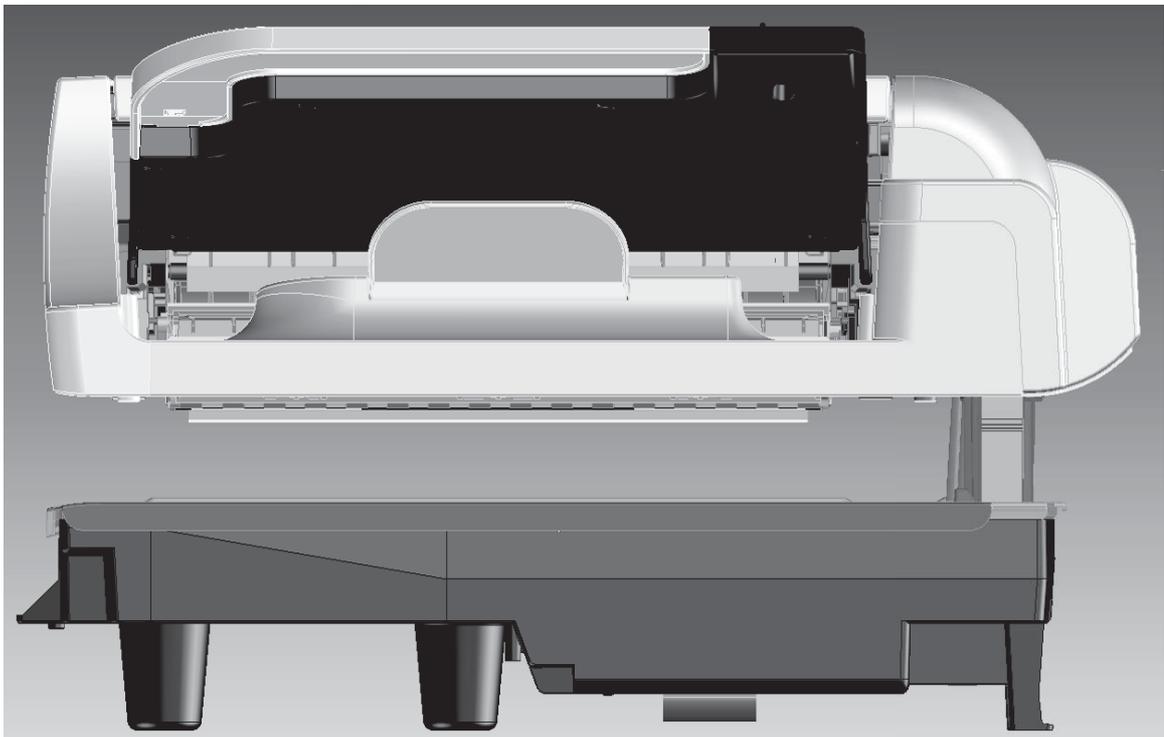


Figure 1-60 Document feeder open (60° to 80°)



Stapling mailbox

The stapling mailbox installs on the delivery assembly in place of the standard output bin. The stapling mailbox controller controls the operational sequence of the stapling mailbox.

Figure 1-61 Stapling mailbox

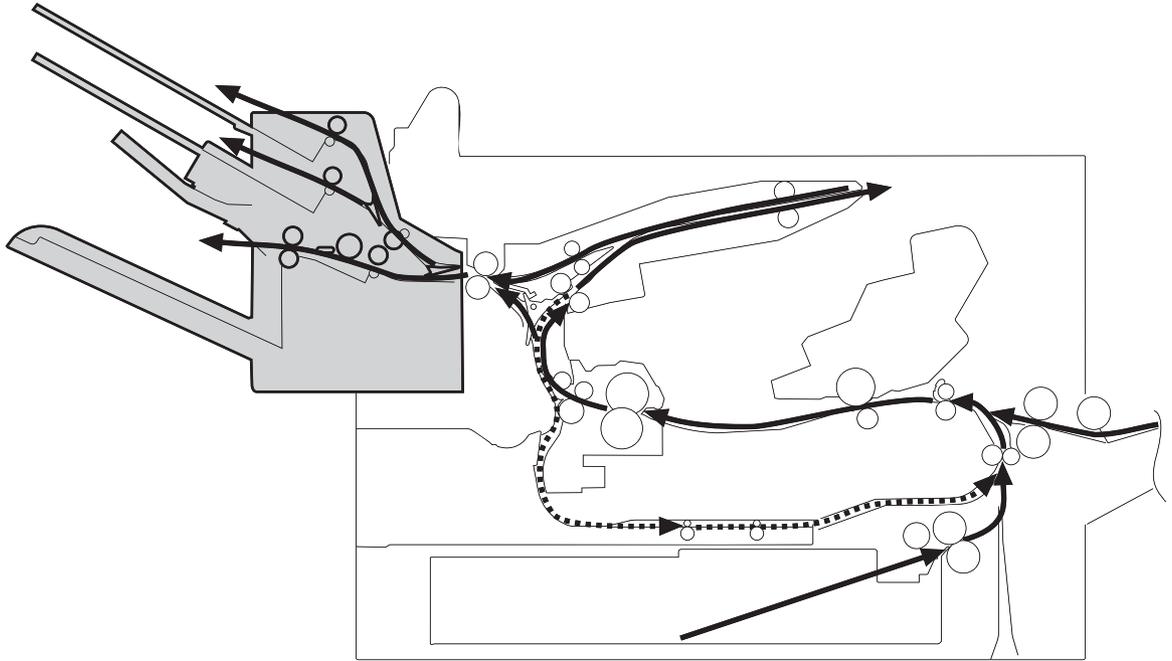
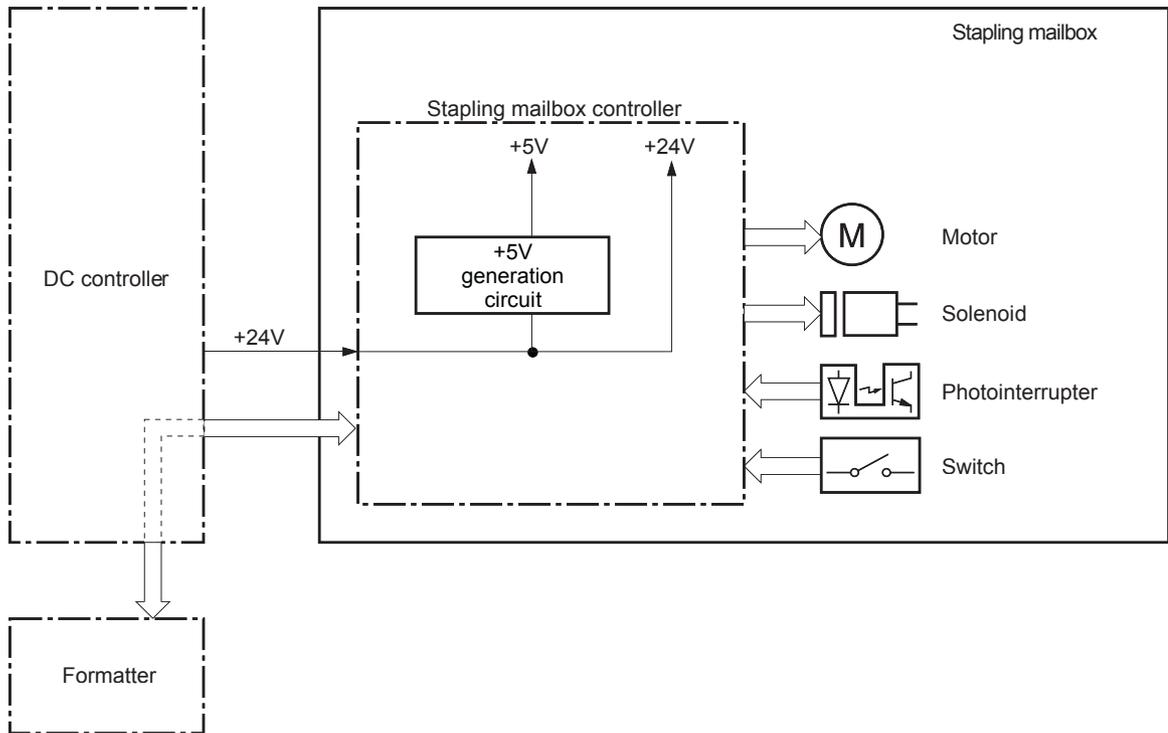
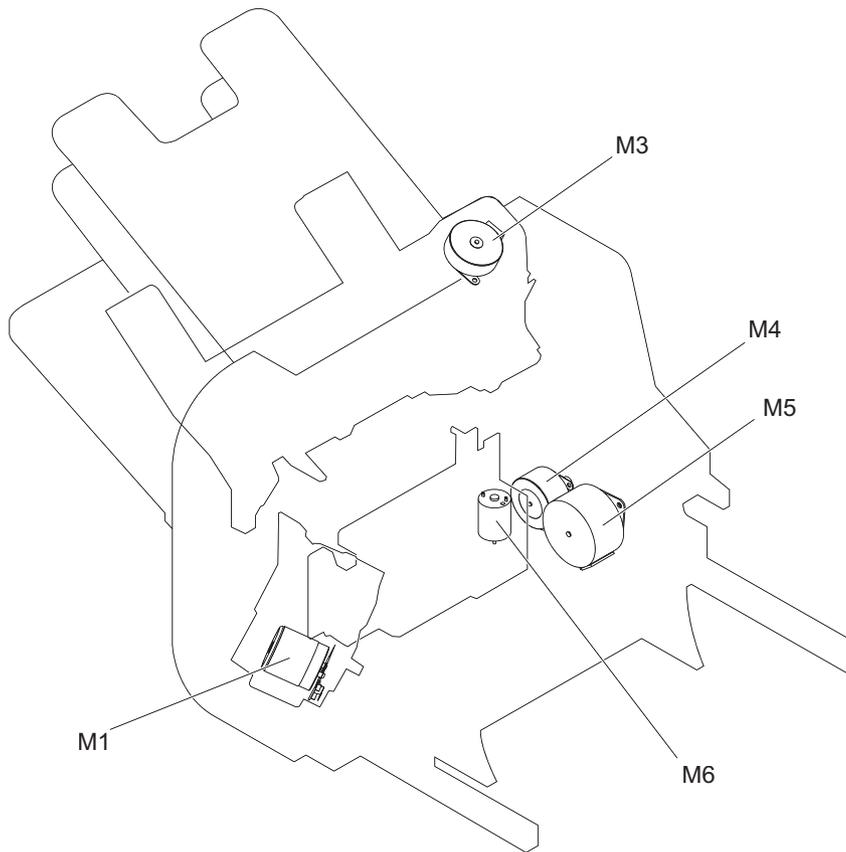


Figure 1-62 Signal flow for the stapling mailbox



Motor control

Figure 1-63 Stapling mailbox motors



The stapling mailbox has five motors for paper feed, paper delivery, and staple operation.

Table 1-24 Motor control (stapling mailbox)

Component		Drives	Failure detection
Stapler motor	M1	Stapler	Yes
Jogger motor	M3	Jogger guide	Yes
Paddle motor	M4	Alignment roller, disengagement of the alignment roller, and disengagement of the output bin 3 lower delivery roller	Yes
Stapling mailbox feed motor	M5	Stapling mailbox feed roller, stapling mailbox delivery roller, output bin 3 upper delivery roller, and the output bin 3 lower delivery roller	No When the motor fails, a jam occurs.
Stapling mailbox lifter motor	M6	Output bin 3	Yes

Failure detection

The stapling mailbox controller detects a motor failure by monitoring a part related to the motor. If the controller determines a motor failure or motor-related part failure, it notifies the formatter when it encounters the following conditions:

- **Stapler motor:** The stapler sensor is not sensed for a specified period of time after the stapler motor starts rotating.
- **Jogger motor:** The jogger sensor is not sensed for a specified period of time after the jogger motor starts rotating.
- **Paddle motor:** The output bin 3 upper delivery roller sensor is not sensed for a specified period of time after the paddle motor rotates. The alignment roller sensor is not sensed for a specified period of time after the paddle motor reverses.
- **Stapling mailbox lifter motor:** The output bin 3 higher limit sensor or output bin 3 media full sensor is not sensed for a specified period of time after the stapling mailbox lifter motor rotates. The output bin 3 higher limit sensor, output bin 3 lower limit sensor, or output bin 3 media full sensor is not sensed for a specified period of time from when the stapling mailbox lifter motor reverses.

Delivery operation

The stapling mailbox has two modes.

- **Stacker mode:** The printed page is delivered to output bin 3 first and then delivered to the subsequent output bins.
- **Mailbox/job separator mode:** The printed page is delivered to the specified output bin for each print job.

Stapling is available for both modes. All stapled jobs are delivered to the lower bin.



NOTE: The figure below does not show the location of the stapler motor, stapler sensor, staple presence sensor and staple ready sensor because they are contained in the stapler assembly.

Figure 1-64 Delivery components (stapling mailbox)

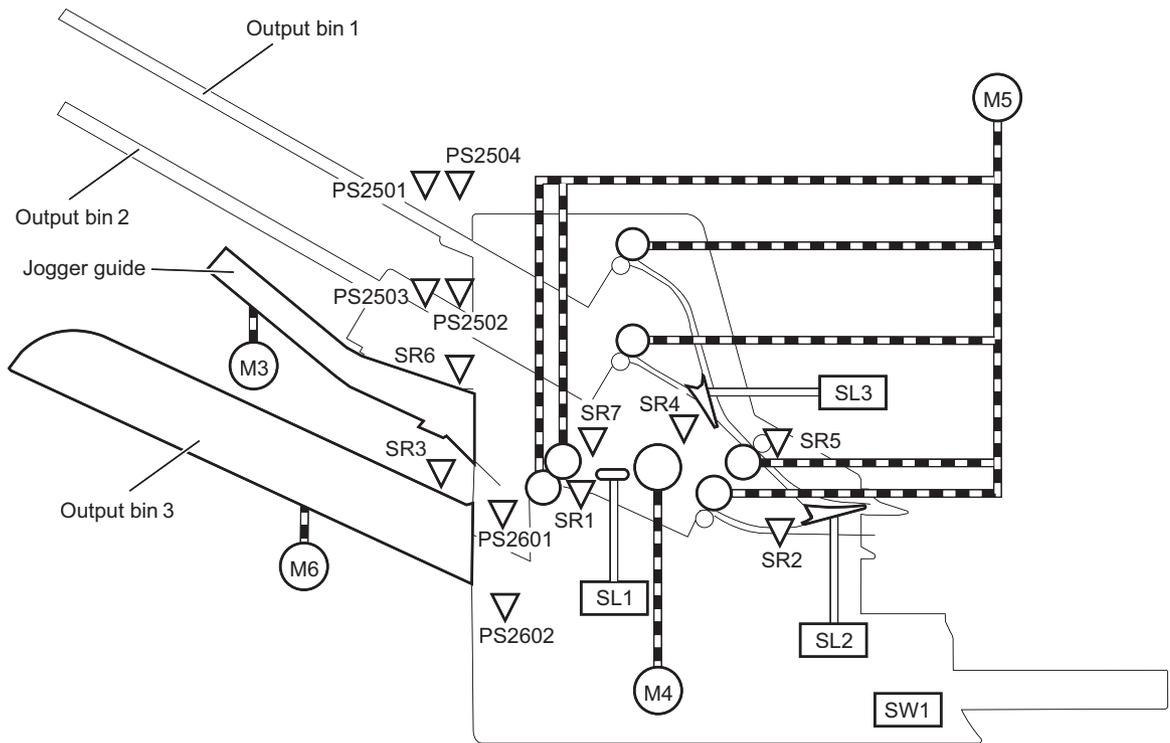


Table 1-25 Delivery components (stapling mailbox)

Abbreviation	Component	Replacement part number
M1	Stapler motor	Stapler assembly (RM1-5166-000CN)
M3	Jogger motor	Jog assembly (RM2-5235-000CN)
M4	Paddle motor	Part not available
M5	Stapling mailbox feed motor	Part not available
M6	Stapling mailbox lifter motor	Output bin 3 drive assembly (RM1-5156-000CN)
SL1	Stamp solenoid	Stamp solenoid assembly (RM1-6664-000CN)
SL2	Inlet solenoid	Entrance solenoid assembly (RM1-6663-000CN)
SL3	Output bin solenoid	Bin solenoid assembly (RM1-5896-000CN)
SR1	Output bin 3 delivery sensor	Bin sensor PCA assembly (RM1-5894-000CN)
SR2	Stapling mailbox media feed sensor 1	Paper feed guide assembly (RM1-5173-000CN)
SR3	Output bin 3 media full sensor	Bin sensor PCA assembly (RM1-5894-000CN)
SR4	Alignment roller sensor	Stage top subassembly (RM1-7437-010CN)
SR5	Stapling mailbox media feed sensor 2	Stapler assembly (RM1-5166-000CN)
SR6	Jogger sensor	Jog assembly (RM2-5235-000CN)
SR7	Output bin 3 upper delivery roller sensor	Part not available
PS2501	Output bin 1 media presence sensor	Bin sensor PCA assembly (RM1-5894-000CN)

Table 1-25 Delivery components (stapling mailbox) (continued)

Abbreviation	Component	Replacement part number
PS2502	Output bin 2 media full sensor	Bin sensor PCA assembly (RM1-5894-000CN)
PS2503	Output bin 2 media presence sensor	Bin sensor PCA assembly (RM1-5894-000CN)
PS2504	Output bin 1 media full sensor	Bin sensor PCA assembly (RM1-5894-000CN)
PS2601	Output bin 3 higher limit sensor	Stage assembly (RM1-5159-000CN)
PS2602	Output bin 3 lower limit sensor	Stage assembly (RM1-5159-000CN)
PH011	Stapler sensor (not shown)	Stapler assembly (RM1-5166-000CN)
PH013	Staple presence sensor (not shown)	Stapler assembly (RM1-5166-000CN)
PH012	Staple ready sensor (not shown)	Stapler assembly (RM1-5166-000CN)
SW1	Stapling mailbox door switch (not shown)	Part not available

Staple operation

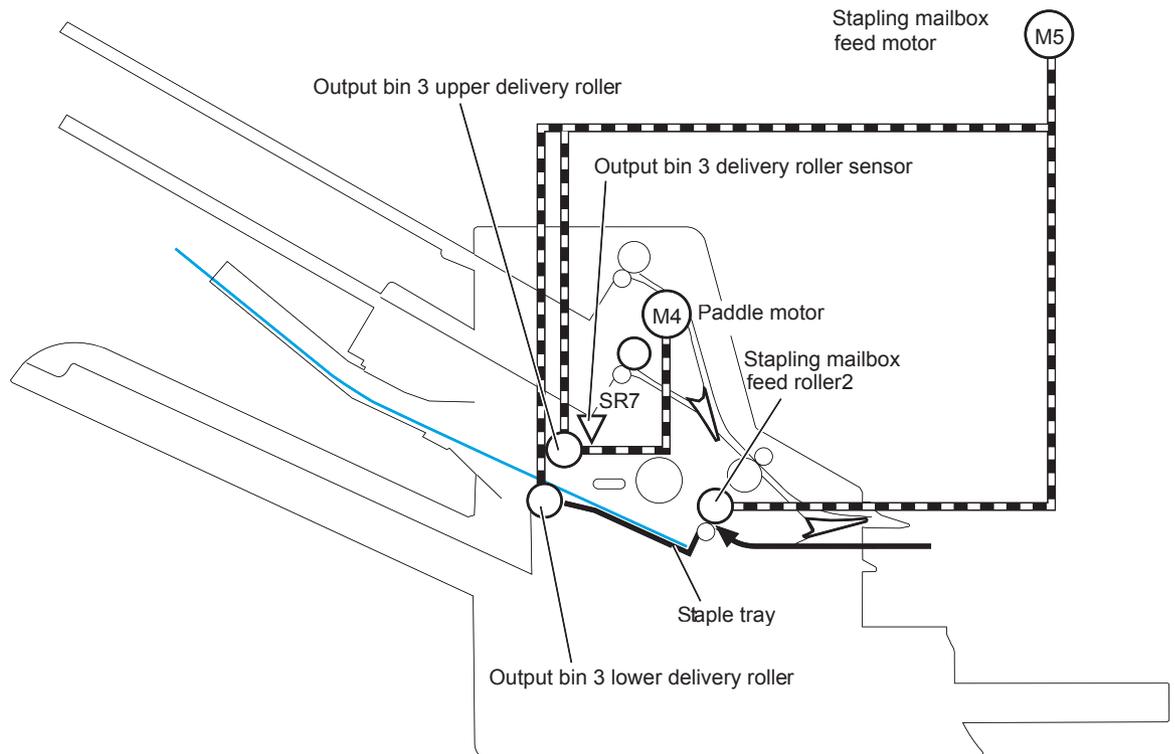
The staple operation staples 2 to 30 sheets of printed pages together into one set and then delivers it to output bin 3. This staple operation is available for both stacker mode and mailbox/job separator mode.

The staple sequence is as follows:

1. The stapling mailbox controller rotates the paddle motor to disengage the output bin 3 upper delivery roller from the output bin 3 lower delivery roller.

2. The stapling mailbox feeds the printed page from the product to the staple tray.

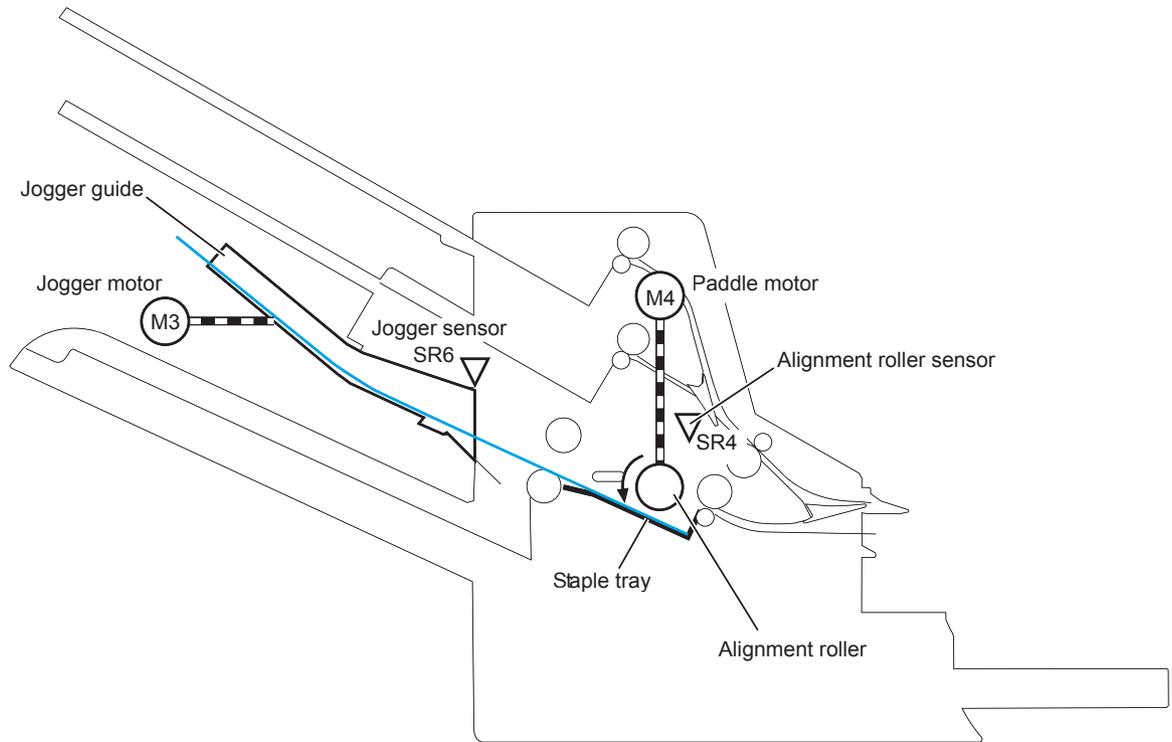
Figure 1-65 Stapling mailbox stapler operation



The stapling mailbox controller determines an output bin 3 upper delivery roller failure and notifies the formatter through the DC controller when it does not detect the output bin 3 upper delivery roller sensor for a specified period of time after the paddle motor starts rotating.

3. The stapling mailbox aligns the printed page on the staple tray. For horizontal alignment, the jogger motor rotates and moves the jogger guide. For vertical alignment, the paddle motor reverses and the alignment roller pushes the page.

Figure 1-66 Stapling mailbox stapler operation

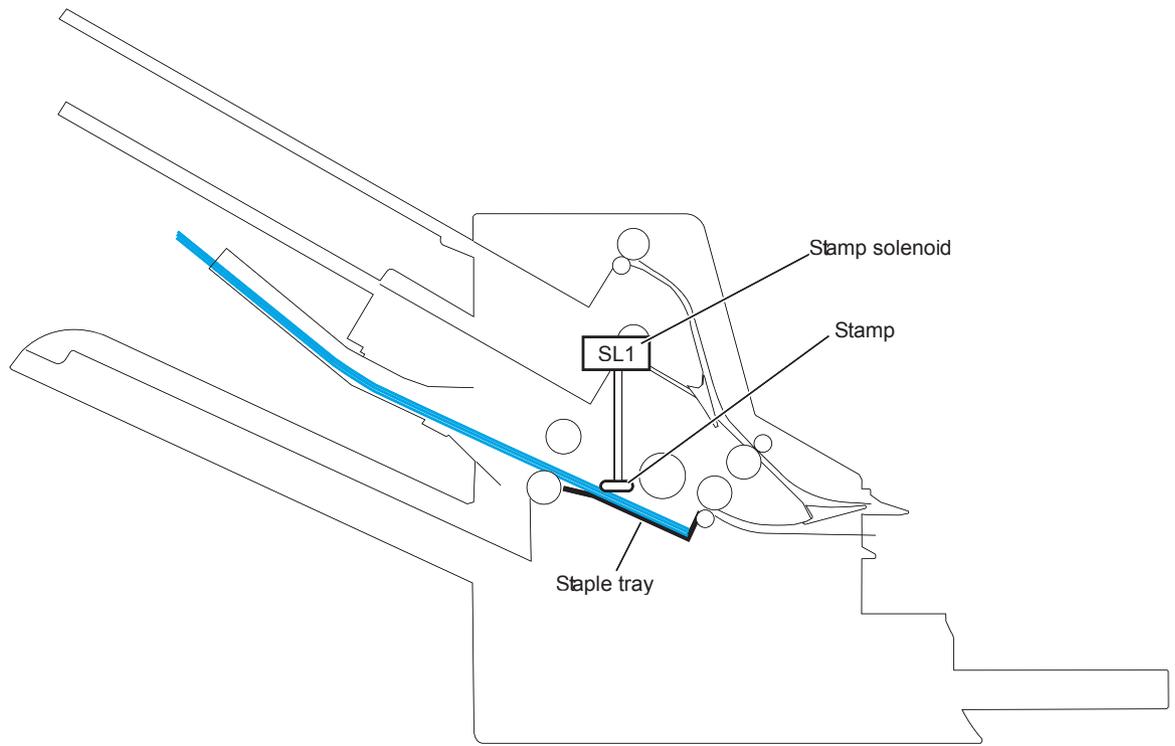


The controller determines a paddle motor failure and notifies the formatter through the DC controller when it does not detect the alignment roller sensor for a specified period of time after the paddle motor starts rotating.

4. After alignment, the stamp solenoid drives and the stamp holds the page.
5. Steps 1 to 4 repeat for a specified number of pages.

6. After all of the pages are aligned, the stapling mailbox stapes the pages together while they are being held by the stamp.

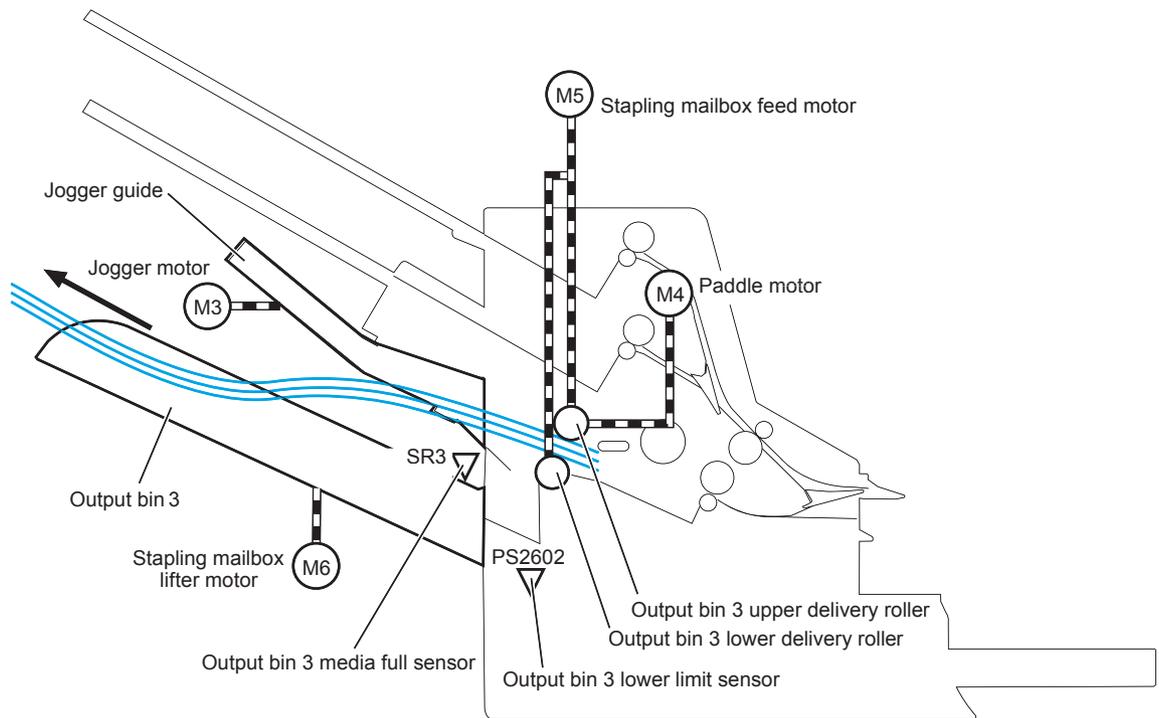
Figure 1-67 Stapling mailbox stapler operation



7. The paddle motor rotates, and the output bin 3 upper delivery roller touches the stapled pages.
8. The stapling mailbox feed motor rotates the output bin 3 upper delivery roller and the output bin 3 lower delivery roller. Then, the stapling mailbox delivers the set of printed-pages to output bin 3.

9. The stapling mailbox feed motor starts rotating while the jogger motor reverses and the jogger guide moves to its home position.

Figure 1-68 Stapling mailbox stapler operation



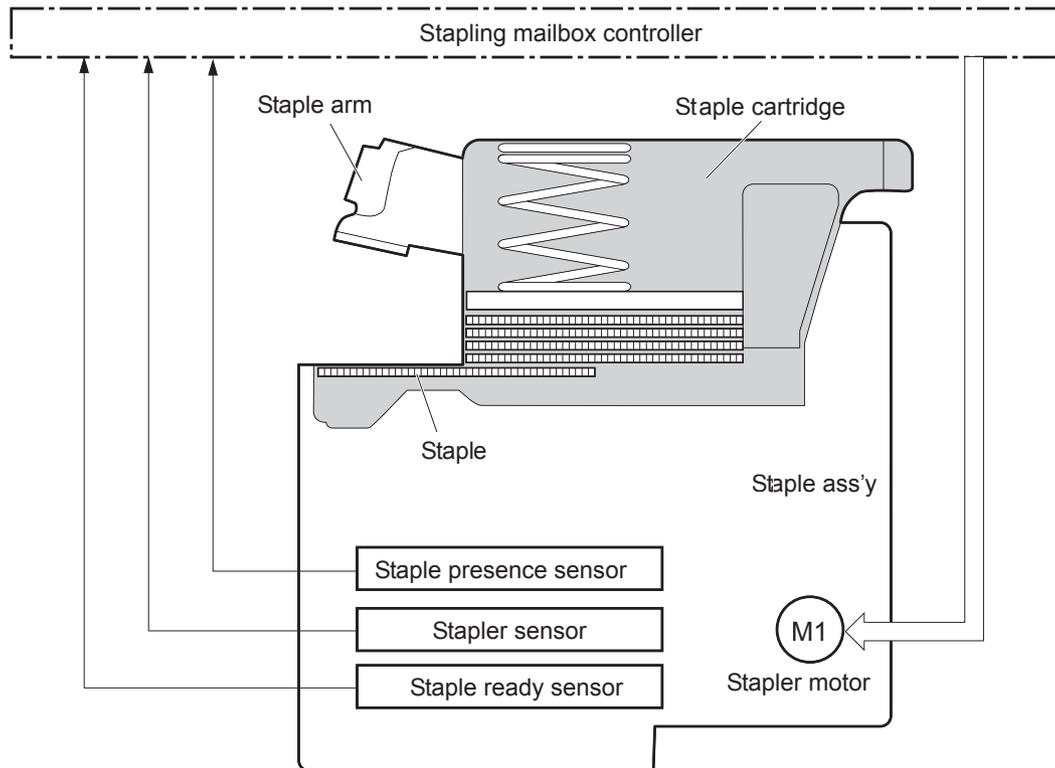
The output bin 3 media full sensor detects whether the bin is full. The stapling mailbox controller determines that the paper stack surface is high and reverses the stapling mailbox lifter motor to lower output bin 3 when the output bin 3 media full sensor is on for a specified period of time. If the output bin 3 lower limit sensor activates at this time, the stapling mailbox controller determines an output bin 3 media full and notifies the formatter through the DC controller.

The stapling mailbox controller determines a jogger motor failure and notifies the formatter through the DC controller when it does not detect the jogger sensor for a specified period of time after the jogger motor starts rotating.

Stapler

The stapler consists of the staple cartridge and the stapler assembly. The staple cartridge holds up to 5,000 staples. The staple presence sensor detects the presence of staples. The staple ready sensor detects whether the stapler is in the correct position to staple. The stapler assembly contains the stapler motor. When the stapling mailbox controller rotates the stapler motor, the staple arm lowers and the staple operation begins. The stapler sensor detects the position of the staple arm.

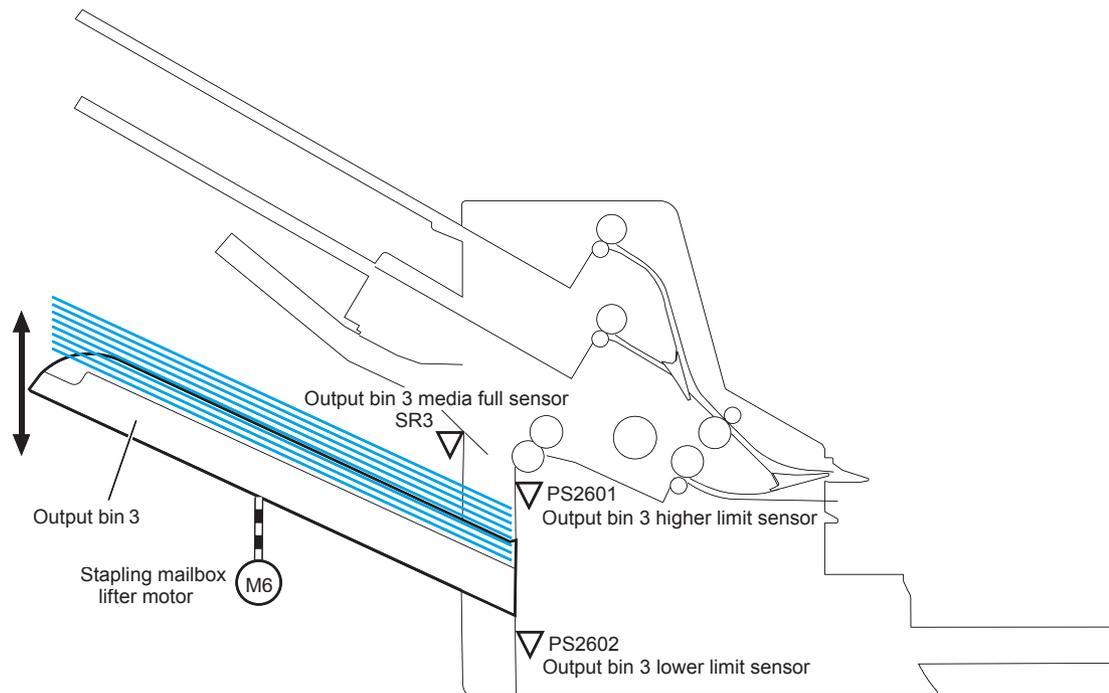
Figure 1-69 Stapling mailbox sensors for the stapler



The stapling mailbox controller determines a stapler motor failure and notifies the formatter through the DC controller when it does not detect the stapler sensor for a specified period of time after the stapler motor starts rotating. The stapling mailbox controller determines a stapler jam and notifies the formatter through the DC controller if it senses the stapler sensor after a specified period of time from when the stapler motor starts rotating. It also detects if the stapler sensor recovers within a specified period of time from when the stapler motor is reversed.

Output bin 3 lift operation

Figure 1-70 Stapling mailbox sensors for output bin 3 lift operation



The operational sequence of the output bin 3 lift operation is as follows:

1. The stapling mailbox lifter motor rotates if both the output bin 3 higher limit sensor and the output bin 3 media full sensor are off when the product is turned on until the following conditions occur:
 - The output bin 3 higher limit sensor detects the output bin 3.
 - The output bin 3 media full sensor detects paper.

The stapling mailbox lifter motor reverses to lower output bin 3 to a specified level if either of the following occur:

- The output bin 3 higher limit sensor or the output bin 3 media full sensor is on.
 - Both the output bin 3 higher limit sensor and the output bin 3 media full sensor are on when the product is turned on.
2. When the printed pages are stacked in output bin 3, and the output bin 3 media full sensor detects the paper, the stapling mailbox lifter motor reverses to lower output bin 3 to a specified level.
 3. The stapling mailbox controller notifies the formatter through the DC controller when the output bin 3 media full sensor detects paper. Output bin 3 lowers to the position of the output bin 3 lower limit sensor.

The stapling mailbox controller determines a stapling mailbox lifter motor failure. The controller notifies the formatter through the DC controller when it encounters the following conditions after the stapling mailbox lifter motor starts rotating:

- Output bin 3 does not reach the output bin 3 higher limit sensor within a specified period of time.
- The output bin 3 media full sensor does not detect paper.

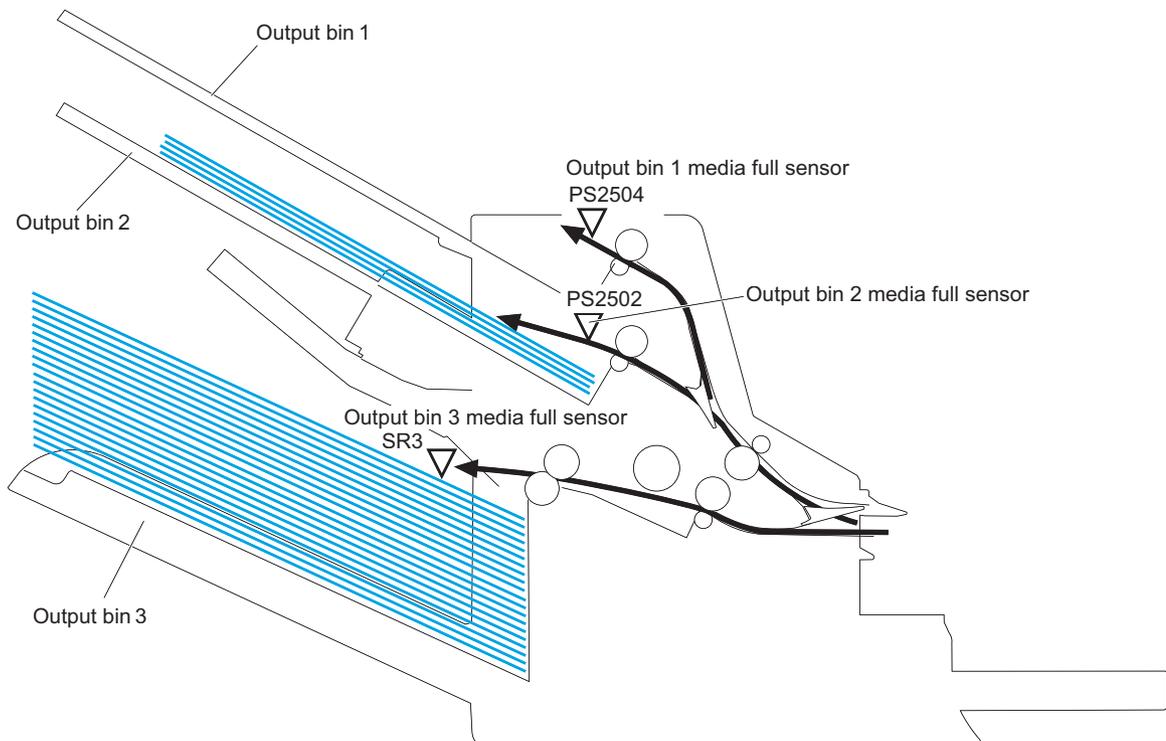
The stapling mailbox controller also detects a stapling mailbox lifter motor failure and notifies the formatter through the DC controller when the following sensors are not sensed after the stapling mailbox lifter motor reverses:

- Output bin 3 higher limit sensor
- Output bin 3 lower limit sensor
- Output bin 3 media full sensor

Stacker mode

Stacker mode does not designate an output bin. It attempts to deliver the printed page to output bin 3 first. When the output bin 3 media full sensor detects that output bin 3 is full, the stapling mailbox delivers to output bin 2. When the output bin 2 media full sensor detects that output bin 2 is full, the stapling mailbox delivers to output bin 1.

Figure 1-71 Stapling mailbox sensors for stacker mode



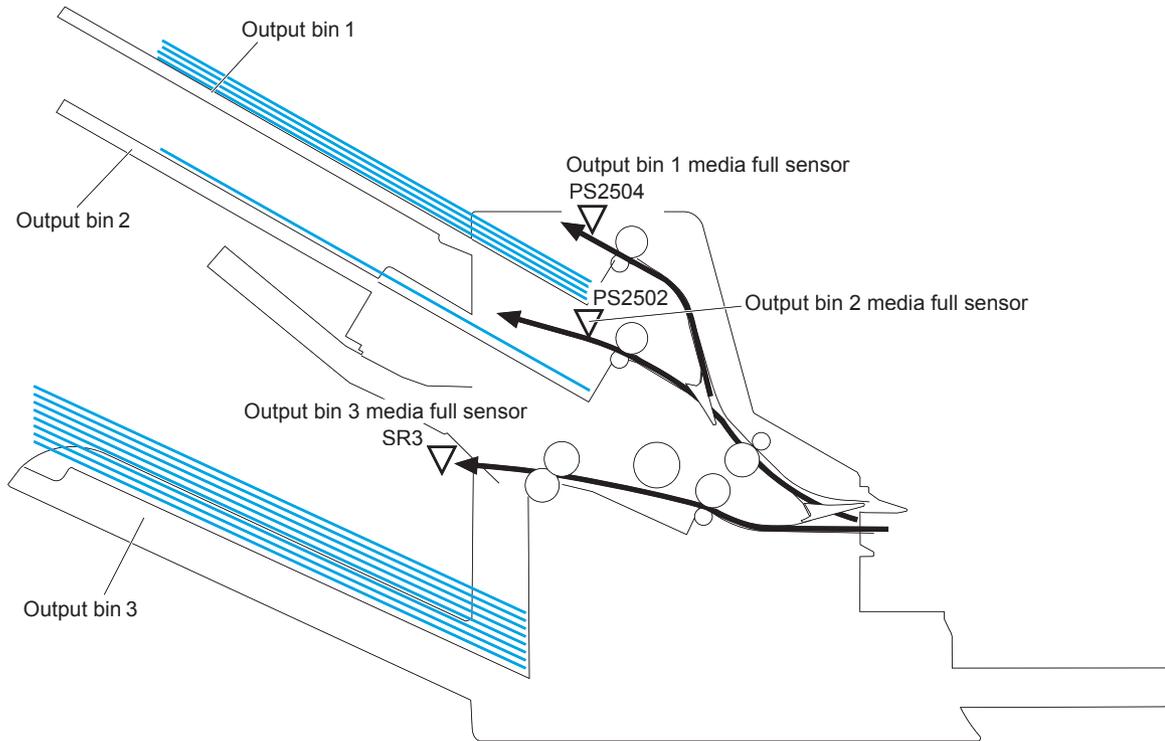
The stapling mailbox controller determines if the stapling mailbox is full and notifies the formatter through the DC controller when it encounters one of the following conditions:

- The output bin 1 media full sensor is detected.
- The staple operation is designated when output bin 3 is full.

Mailbox/job separator mode

The mailbox/job separator mode delivers the printed page to the designated bin for each print job.

Figure 1-72 Stapling mailbox sensors for mailbox/jam separation



The stapling mailbox controller determines if the stapling mailbox is full and notifies the formatter through the DC controller when it encounters the following condition:

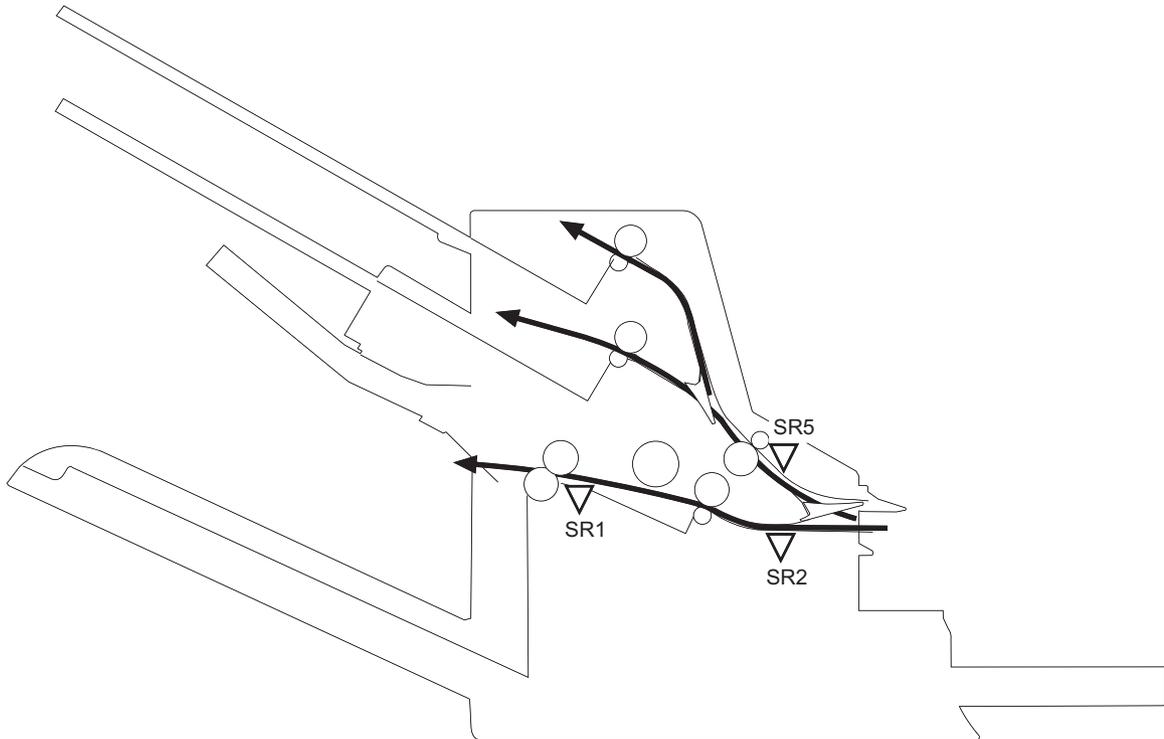
- The designated output bin media full sensor is detected.
- The staple operation is designated when output bin 3 is full of paper.

Jam detection

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

- Output bin 3 delivery sensor (SR1)
- Stapling mailbox media feed sensor 1 (SR2)
- Stapling mailbox media feed sensor 2 (SR5)

Figure 1-73 Stapling mailbox sensors for jam detection



The stapling mailbox detects the following jams:

- **Stapling mailbox feed delay jam 1:** The stapling mailbox media feed sensor 1 does not detect the leading edge of paper within a specified period of time after the fuser delivery sensor in the product detects the leading edge.
- **Stapling mailbox feed delay jam 2:** The stapling mailbox media feed sensor 2 does not detect the leading edge of paper within a specified period of time after the fuser delivery sensor in the product detects the leading edge.
- **Stapling mailbox feed stationary jam 1:** The stapling mailbox media feed sensor 1 does not detect the trailing edge of paper within a specified period of time after it detects the leading edge.
- **Stapling mailbox feed stationary jam 2:** The stapling mailbox media feed sensor 2 does not detect the trailing edge of paper within a specified period of time after it detects the leading edge.
- **Stapling mailbox feed stationary jam 3:** The output bin 3 delivery sensor does not detect the trailing edge of paper within a specified period of time from when the stapling mailbox feed motor starts rotating after a staple operation.
- **Stapling mailbox residual paper jam:** Any one of the following sensors detects a presence of paper for a specified period of time during an automatic delivery operation:
 - Output bin 3 delivery sensor
 - Stapling mailbox media feed sensor 1
 - Stapling mailbox media feed sensor 2

Automatic delivery

The stapling mailbox automatically clears the paper if any one of the following sensors detects residual paper during the initial sequence after the stapling mailbox is turned on or after the door is closed.

- Output bin 3 delivery sensor
- Stapling mailbox media feed sensor 1
- Stapling mailbox media feed sensor 2

2 Solve problems

- [Solve problems checklist](#)
- [Menu map](#)
- [Current settings pages](#)
- [Event log](#)
- [Pre-boot menu options](#)
- [Troubleshooting process](#)
- [Tools for troubleshooting](#)
- [Clear jams](#)
- [Paper feeds incorrectly or becomes jammed](#)
- [Use manual print modes](#)
- [Solve image quality problems](#)
- [Clean the product](#)
- [Solve performance problems](#)
- [Solve connectivity problems](#)
- [Service mode functions](#)
- [Solve fax problems](#)
- [Firmware upgrades](#)

Solve problems checklist

If the product is not correctly functioning, complete the steps (in the order given) in the following checklist. If the product fails a checklist step, follow the corresponding troubleshooting suggestions for that step. If a checklist step resolves the problem, skip the remaining checklist items.

1. If the control panel is blank or black, check the following before proceeding:

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

If the control panel is not responding to touch, or if it appears black or blank, look for the following conditions.



NOTE: The following conditions indicate that the product has froze while in Sleep mode (opening a door or tapping the control panel causes the product to wake up if it is in Sleep mode).

- The control-panel home button LED is illuminated.
 - The power-switch LED flashes once every three to five seconds.
 - The product does not exit Sleep mode when a page is placed in the document feeder.
 - The product does not exit Sleep mode when the document feeder is opened to place a page on the scanner flatbed.
- a. Try upgrading the firmware. If the firmware upgrade fails to resolve the problem, and the product still freezes while in Sleep mode, elevate the case after collecting the following info:
- Try printing to the product from a host computer. Does the product print a page?
 - Is the product HP Embedded Web Server (EWS) accessible?
 - Turn the product power off, and then on again. Save the product diagnostic file.
- b. If the product did not freeze while in Sleep mode, verify that the control panel is correctly functioning by accessing the control panel diagnostics (see the Control-panel checks section of the product problem solving manual).

If the control panel does not respond to the diagnostic button, try the following:

- Turn the product power off.
- Reseat the cable connections on the bottom of the control-panel assembly.
- Remove, and then reseat the formatter.
- Turn the product power on, and then check for functionality of the control-panel.

- c. Verify that the formatter is firmly seated. Check the control-panel cables and connectors at both ends of the cables.
 - d. If the error persists, replace the control-panel assembly.
2. The control panel should indicate a **Ready**, **Paused**, or **Sleep mode on** status. If an error message displays, resolve the error.
 - Use the Power-on checks section in the product troubleshooting service manual to solve the problem.
3. For network connection errors, check the cables.
 - a. Check the network cable connections between the product and the computer or network port. Make sure that the connections are secure.
 - b. Make sure that the cables are not faulty by trying different cables, if possible.
 - c. Check the network connection.
4. Print a configuration page. If the product is connected to a network, an HP Jetdirect page also prints.
 - a. From the **Home** screen on the product control panel, scroll to and touch the **Administration** button.
 - b. Open the following menus:
 - **Reports**
 - **Configuration/Status Pages**
 - **Configuration Page**
 - c. Touch the **Print** button to print the page.
 - If the pages do not print, check that at least one tray contains paper.

 **TIP:** Make sure that the selected paper size and type meet HP specifications. Also open the **Trays** menu on the product control panel and verify that the tray is configured correctly for the paper type and size.

 - If the page jams in the product, follow the instructions on the control panel to clear the jam.
 - If the page does not print correctly, the problem is with the product hardware.
 - If the page prints correctly, the product hardware is working. The problem is with the host computer, with the print driver, or with the program.
5. Print a supplies status page and then check that the maintenance items below are not at their end-of-life.

 **TIP:** If a maintenance item needs to be replaced, order the part number provided below.

- a. From the Home screen on the product control panel, scroll to and touch the **Administration** button.
 - b. Open the following menus:

- **Reports**
 - **Configuration/Status Pages**
 - **Supplies Status Page**
- c. Touch the **Print** button to print the page, and then check the following maintenance items:



NOTE: HP long-life consumables and maintenance kit life specifications are estimations. Actual individual life/yield during normal use varies depending on usage, environment, media, and other factors. Estimated life is not an implied guarantee or warrantable.

- 110V or 220V maintenance kit (includes the fuser, transfer roller, and the Tray 2 - Tray 5 feed and separation rollers; estimated life: 225,000 pages
 - B3M77A (110V)
 - B3M78A (22V)
 - Fuser kit; estimated life: 225,000 pages
 - B3M77-67903 (110V)
 - B3M78-67903 (220V)
 - ADF maintenance kit; estimated life: 100,000 pages
 - L2725A
6. Verify that the correct print driver for this product is installed. Check the program to make sure that the print driver for this product is used. The print driver is on the CD that came with the product, or can be downloaded from this Web site: www.hp.com/support/ljMFPM630.
7. Print a short document from a different program that has worked in the past. If this solution works, the problem is with the program. If this solution does not work (the document does not print), complete these steps:
- a. Try printing the job from another computer that has the product software installed.
 - b. If the product is connected to the network, connect the product directly to a host computer with a USB cable. Redirect the product to the correct port, or reinstall the software (make sure to select the new connection type).

Menu map

To more easily navigate individual settings, print a report of the complete [Administration](#) menu.

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Reports](#)
 - [Configuration/Status Pages](#)
3. Select the [Administration Menu Map](#) option.
4. Touch the [Print](#) button to print the report.

Current settings pages

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

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Reports](#)
 - [Configuration/Status Pages](#)
3. Select the [Current Settings Page](#) option.
4. Touch the [Print](#) button to print the report.

Event log

Printing the event log might be helpful in the troubleshooting process. For more information, see the Interpret control-panel messages and event log entries section in the product troubleshooting manual.

Print or view the event log from the Administration menu

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Event Log](#)
3. The event log displays on the screen. To print it, touch the [Print](#) button.

Print or view the event log from the Service menu

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the [Service](#) menu.
3. On the sign-in screen, select the [Service Access Code](#) option from the drop-down list.

4. Enter the following service access code for the product:
 - 09063014
5. Touch the [Print Event Log](#) or [View Event Log](#) item.

Clear the event log

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the [Service](#) menu.
3. On the sign-in screen, select the [Service Access Code](#) option from the drop-down list.
4. Enter the following service access code for the product:
 - 09063014
5. Select the [Clear Event Log](#) item, and then touch the [OK](#) button.

Pre-boot menu options

The **Pre-boot** menus are available prior to the product initializing.

 **CAUTION:** The **Format Disk** option performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) will be completely lost. HP does not recommend this action.

 **TIP:** The Pre-boot menu can be remotely accessed by using a telnet network protocol to establish a administration connection to the product. See [Remote Admin on page 110](#).

Open the Pre-boot menu using the product control panel

1. Turn the product on.
2. The HP logo displays on the product control panel. When a "1/8" with an underscore displays below the HP logo, touch the logo to open the **Pre-boot** menu.
3. Use the arrow buttons on the touchscreen to navigate the **Pre-boot** menu.
4. Touch the **OK** button to select a menu item.

Cold reset using the Pre-boot menu from the product control panel

 **CAUTION:** This procedure resets all product configurations and settings to factory defaults (customer configurations and settings are lost).

1. Turn the product on.
2. The HP logo displays on the product control panel. When a "1/8" with an underscore displays below the HP logo, touch the logo to open the **Pre-boot** menu.
3. Use the down arrow ▼ button to highlight the **+3:Administrator** item, and then touch the **OK** button.
4. Use the down arrow ▼ button to highlight the **+8:Startup Options** item, and then touch the **OK** button.
5. Use the down arrow ▼ button to highlight the **2 Cold Reset** item, and then touch the **OK** button to select it.
6. Touch the **Home**  button to return to the main Pre-boot menu and highlight the **1:Continue** item, and then touch the **OK** button.

 **NOTE:** The product will initialize.

Table 2-1 Pre-boot menu options (1 of 7)

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

Table 2-1 Pre-boot menu options (1 of 7) (continued)

Menu option	First level	Second level	Third level	Description
Administrator				<p>This item navigates to the Administrator submenus.</p> <p>If authentication is required (and the user is not already signed in) the Sign In prompt displays. The user is required to sign in.</p>
	Download	Network USB USB Thumbdrive		<p>This item initiates a Pre-boot firmware download process. A USB Thumbdrive option will work on all FutureSmart products. USB or Network connections are not currently supported.</p>
	Format Disk			<p>This item reinitializes the disk and cleans all disk partitions.</p> <p>CAUTION: Selecting the Format Disk item removes all data.</p> <p>A delete confirmation prompt is not provided.</p> <p>The system is not bootable after this action and a 99.09.67 error displays on the control panel. A firmware download must be performed to return the system to a bootable state.</p>
	Partial Clean			<p>This item reinitializes the disk (removing all data except the firmware repository where the master firmware bundle is downloaded and saved).</p> <p>CAUTION: Selecting the Partial Clean item removes all data except the firmware repository. A delete confirmation prompt is not provided.</p> <p>CAUTION: This procedure resets all product configurations and settings to factory defaults (customer configurations and settings are lost).</p> <p>This allows a user to reformat the disk by removing the firmware image from the active directory without having to download new firmware code (product remains bootable).</p>
	Change Password			<p>Select this item to set or change the administrator password.</p>
	Clear Password			<p>Select the Clear Password item to remove a password from the Administrator menu. Before the password is actually cleared, a message will be shown asking to confirm that the password should be cleared. Press the OK button to confirm the action.</p> <p>When the confirmation prompt displays, press the OK button to clear the password.</p>

Table 2-2 Pre-boot menu options (2 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Manage Disk	Clear disk		<p>Select the Clear disk item to enable using an external device for job storage. Job storage is normally enabled only for the Boot device. This will be grayed out unless the 99.09.68 error is displayed.</p>

Table 2-2 Pre-boot menu options (2 of 7) (continued)

Menu option	First level	Second level	Third level	Description
		Lock Disk		<p>Select the Lock Disk item to lock (mate) a new secure disk to this product.</p> <p>The secure disk already locked to this product will remain accessible to this product. Use this function to have more than one encrypted disk accessible by the product when using them interchangeably.</p> <p>The data stored on the secure disk locked to this product always remains accessible to this product.</p>
		Leave Unlocked		<p>Select the Leave Unlocked item to use a new secure disk in an unlocked mode for a single service event. The secure disk that is already locked to this product will remain accessible to this product and uses the old disk's encryption password with the new disk.</p> <p>The secure disk that is already locked to this product remains accessible to this product.</p>
		Clear Disk Pwd		<p>Select the Clear Disk Pwd item to continue using the non-secure disk and clear the password associated with the yet-to-be installed secure disk.</p> <p>CAUTION: Data on the missing secure disk will be permanently inaccessible.</p>
		Retain Password		<p>Select the Retain Password item to use the non-secure disk for this session only, and then search for the missing secure disk in future sessions.</p>
	Boot Device		Secure Erase	<p>Select the Secure Erase item to erase all of the data on the disk and unlock it if required.</p> <p>This might take a long time.</p> <p>NOTE: The system will be unusable until the system files are reinstalled. The ATA secure-erase command is a one-pass overwrite, which erases the entire disk including firmware. The disk remains an encrypted disk.</p>
			Erase/Unlock	<p>Select the Erase/Unlock item to cryptographically erase all data on the disk and unlock the disk to allow a user to gain access to it from any product.</p> <p>NOTE: The system will be unusable until the system files are reinstalled. It erases the encryption key. The encryption key is erased, so the disk becomes a non-encrypted disk.</p>
			Get Status	<p>This item provides disk status information if any is available.</p>

Table 2-3 Pre-boot menu options (3 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Manage Disk (continued)	Internal Device		<p>Select the Internal Device item to erase the internal device or get a status about the internal device.</p>

Table 2-3 Pre-boot menu options (3 of 7) (continued)

Menu option	First level	Second level	Third level	Description
			Secure Erase	Select the Secure Erase item to erase all of the data on the disk and unlock it if required. This might take a long time. NOTE: The system will be unusable until the system files are reinstalled. The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk.
			Erase/Unlock	Select the Erase/Unlock item to cryptographically erase all of the data on disk and unlock the disk to allow the user to gain access to it from any product. NOTE: The system will be unusable until the system files are reinstalled. The HP High Performance Secure Hard Disk is erased.
			Get Status	This item provides disk status information if any is available.
		External Device		Select the External Device item to erase the external device or get status about the external device.
			Secure Erase	Select the Secure Erase item to erase all of the data on the disk and unlock it if required. This might take a long time. NOTE: The system will be unusable until the system files are reinstalled. The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk.
			Erase/Unlock	Select the Erase/Unlock item to cryptographically erase all of the data on disk and unlock the disk to allow a user to gain access to it from any product. NOTE: The system will be unusable until the system files are reinstalled. The encryption key is erased, so the disk becomes a non-encrypted disk.
			Get Status	This item provides disk status information if any is available.

Table 2-4 Pre-boot menu options (4 of 7)

Menu option	First level	Second level	Third level	Description
Administrator	Configure LAN	IP Mode [DHCP]		The network can be configured to obtain the network settings from a DHCP server or as static.
(continued)	NOTE: This configuration is only active when the Pre-boot menu is open.			Use this item for automatic IP address acquisition from the DHCP server.
		IP Mode [STATIC]		Use this item to manually assign the network addresses.
			IP Address	Use this item to manually enter the IP addresses.
			Subnet Mask	Use this item to manually enter the subnet mask.

Table 2-4 Pre-boot menu options (4 of 7) (continued)

Menu option	First level	Second level	Third level	Description
			Default Gateway	Use this item to manually enter the default gateway.
			Save	Select the Save item to save the manual settings.

Table 2-5 Pre-boot menu options (5 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Startup Options			Select the Startup Options item to specify options that can be set for the next time the product is turned on and initializes to the Ready state.
		Show Revision		Not currently functional: Select the Show Revision item to allow the product to initialize and show the firmware version when the product reaches the Ready state. Once the product power is turned on the next time, the Show Revision item is unchecked so that the firmware revision is not shown.
		Cold Reset		Select the Cold Reset item to clear the IP address and all customer settings. (This item also returns all settings to factory defaults.) NOTE: Items in the Service menu are not reset.
		Skip Disk Load		Select the Skip Disk Load item to disable installed third-party applications.
		Skip Cal		Select the Skip Cal item to skip the product calibration for the very next power-initialization cycle only.
		Lock Service		CAUTION: Select the Lock Service item to lock the Service menu access (both in the Pre-boot menu and the Device Maintenance menu). Service personnel must have the administrator remove the Lock Service setting before they can open the Service menu.
		Skip FSCK		Select the Skip FSCK item to disable Chkdisk/ScanVolume during startup.
Administrator (continued)	Startup Options (continued)	First Power		Not currently functional: This item allows the product to initialize as if it is the first time it has been turned on. For example, the user is prompted to configure first-time settings like date/time, language, and other settings. Select this item so that it is enabled for the next time the product power is turned on. When the product power is turned on the next time, this item is unchecked so that the pre-configured settings are used during configuration, and the first-time setting prompt is not used.

Table 2-5 Pre-boot menu options (5 of 7) (continued)

Menu option	First level	Second level	Third level	Description
		Embedded Jetdirect Off		Select the Embedded Jetdirect Off item to disable the embedded HP Jetdirect. By default this item is unchecked so that HP Jetdirect is always enabled.
		WiFi Accessory		Select the WiFi Accessory item to enable the wireless accessory.

Table 2-6 Pre-boot menu options (6 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Diagnostics			Diagnostics items are useful to diagnose hardware components and their interface connections. Use these items to troubleshoot specific hardware components, and the interface between them and other components.
		Memory	Do Not Run	Use the Do Not Run item to exclude the Memory diagnostic when executing multiple diagnostics.
			Short	Use the Short item to select a brief memory test. NOTE: This test requires about four minutes to execute.
			Long	Use the Long item to select an extended memory test. NOTE: This test requires about twenty minutes to execute.
		Disk	Do Not Run	Use the Do Not Run item to exclude the Disk diagnostic when executing multiple diagnostics.
			Short	Use the Short item to select a brief firmware self-test. NOTE: This test requires about two or three minutes to execute.
			Long	Use the Long item to select an extended firmware self-test. NOTE: This test requires about sixty minutes to execute.
			Optimized	Use the Optimized item to select a test that checks the active sectors on the disk. NOTE: This test requires about thirty minutes to execute.
			Raw	Use the Raw item to select a test that checks every sector on the disk. NOTE: This test requires about fifty minutes to execute.
			Smart	Use the Smart item to select a very brief test that checks the drive self-monitoring analysis and reporting technology (SMART) status—the drive detects and reports reliability indicators to help anticipate disk failures (SMART status).
		ICB Connection		Use the ICB item to select a test that checks the communication between the formatter and interconnect board (ICB).
		CPB		Use the CPB item to verify the integrity of the copy processor board (CPB) and the formatter PCA connections.

Table 2-6 Pre-boot menu options (6 of 7) (continued)

Menu option	First level	Second level	Third level	Description
		Interconnect		Use the Interconnect item to verify the integrity of the interconnect PCA (ICB) and its connections.
		Run Selected		Select the Run Selected item to execute a selected test.
				NOTE: If more than one test is selected, they are executed in sequence.

Table 2-7 Pre-boot menu options (7 of 7)

Menu option	First level	Second level	Third level	Description
Administrator (continued)	Remote Admin	Start Telnet		The Remote Admin item allows a service technician to access to the product Pre-boot menu remotely, and to navigate the menu selections from a remote location.
				IMPORTANT: A Remote Admin connection must be initiated by a person that is physically present at the product.
				This person will also need to provide a randomly generated PIN to the remote service technician.
				NOTE: For more information about using the Remote Admin function, see Remote Admin on page 110 .
		Stop Telnet		
		Refresh IP		
	System Triage	Copy Logs		If the device will not boot to the Ready state, or the diagnostic log feature found in the Troubleshooting menu is not accessible, then use the System Triage item to copy the diagnostic logs to a USB flash drive at the next product start up.
				The files can then be sent to HP to help diagnose the problem.
	Change Svc PWD			Use this item to change the Service menu personal identification number (PIN).
	Reset Svc PWD			If the Service menu personal identification number (PIN) has been changed, use this item to reset it to the original PIN.
Service Tools				This item requires the service access code. If the product does not reach the Ready state, use this item to print the error logs. The logs can be copied to a USB storage accessory when the product is initialized. Send these files to HP to help troubleshoot the cause of the problem.
	Reset Password			Use this item to reset the Pre-boot administrator password.
	Subsystems			For manufacturing use only. Do not change these values.
Developer Tools	Netexec			

Remote Admin

The Remote Admin feature allows remote access the product Pre-boot menu (BIOS environment). The product functions as a telnet server which uses the telnet networking protocol to transmit text data. Any computer (with telnet installed and enabled) can function as the telnet client to remotely display and interact with the Pre-boot menu.

 **IMPORTANT:** While the Remote Admin function allows remote access the Pre-boot menu, for security reasons the Remote Admin connection must be initiated by a person that is physically present at the product.

This section describes the following Remote Admin items.

- [Required software and network connection](#)
- [Connect a remote connection](#)
- [Disconnect a remote connection](#)

Required software and network connection

Before using the Remote Admin feature, make sure that the telnet network protocol is installed, and enabled, on the remote telnet client computer.

 **NOTE:** This section describes enabling and configuring the telnet feature for computers using a Windows® operating system.

HP recommends that the telnet client computer be a Windows based system, however, there are other operating systems that support the telnet network protocol. For information about enabling and configuring the telnet network protocol for other operating systems, see the owner's manual for that operating system.

Telnet client

Enable the Windows telnet client

All computers using the Windows operating system have the telnet client installed, however, the telnet client function might not be enabled by default.

 **NOTE:** The figures and menus in this section are for the Windows 7 Enterprise® operating system. Screens and menu selections might vary slightly for other operating systems.

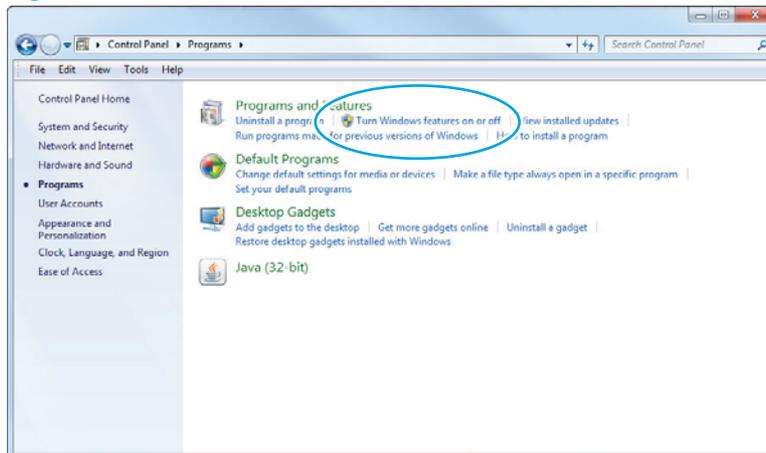
1. Use the **Start** menu to open the **Control Panel**, and then click the **Programs** item to select it.

Figure 2-1 Open the Control Panel



2. Click the **Turn Windows features on or off** item to select it.

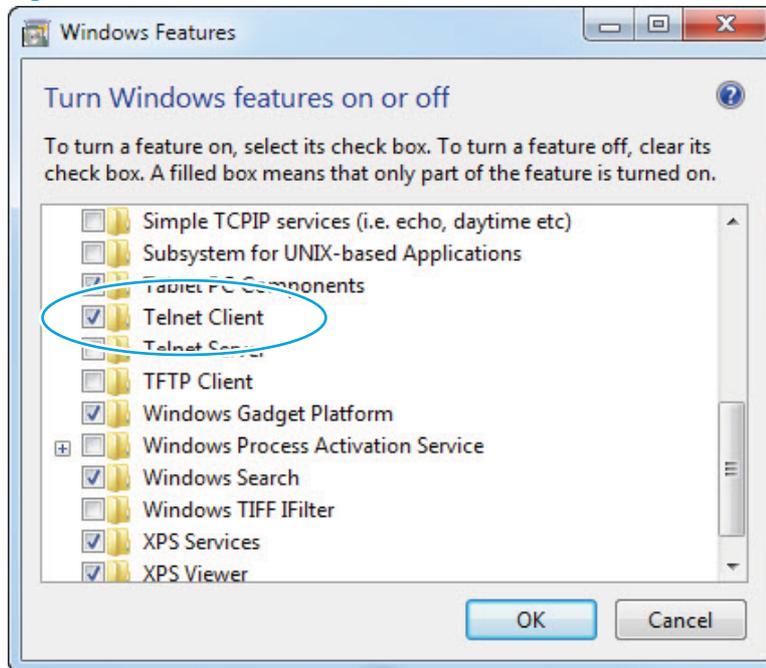
Figure 2-2 Turn Windows features on or off



3. In the **Windows Features** box, scroll down to **Telnet Client**. If the check box is not checked, click the box to select it, and then click the **OK** button.

 **TIP:** If the check box is already checked then the telnet client function is already enabled. Click the **Cancel** button.

Figure 2-3 Enable the telnet client feature



Network connection

The remote telnet client computer must have direct network access to the product for the Remote Admin function to operate. This means that the telnet client computer must be on the same network as the product. The Remote Admin function cannot be accessed through a network firewall or other remote access network security programs.

If a private network is not accessible, ask the network administrator to set up a virtual private network (VPN) connection to the network.

Connect a remote connection

Start the telnet server function at the product

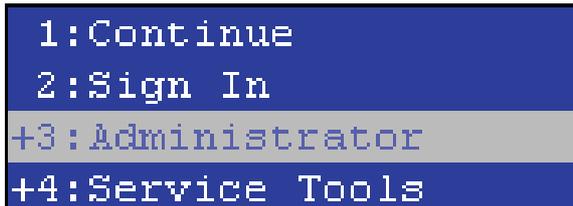
For security reasons the Remote Admin feature must be initiated by a person that is physically present at the product. The following steps must be performed by a person that is physically present at the product.

 **NOTE:** This person might need to sign in with an administrator or service password depending on how the product is configured.

1. Turn the product on.
2. The HP logo displays on the product control panel. When a "1/8" with an underscore displays below the HP logo, touch the logo to open the **Pre-boot** menu.

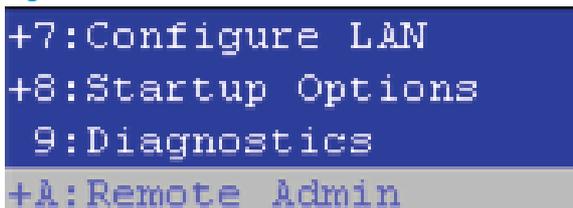
3. Use the arrow buttons on the touchscreen to scroll down and highlight the **+3:Administrator** item, and then touch the **OK** button to select it.

Figure 2-4 Select the +3:Administrator item



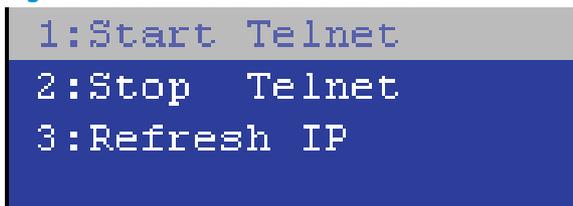
4. Use the arrow buttons on the touchscreen to scroll down and highlight the **+A:Remote Admin** item, and then touch the **OK** button to select it.

Figure 2-5 Select the +A:Remote Admin item



5. Use the arrow buttons on the touchscreen to scroll down and highlight the **1:Start Telnet** item, and then touch the **OK** button to select it.

Figure 2-6 Select the 1:Start Telnet item



6. Do one of the following
 - If a connecting message displays briefly, go to step [7](#).

Figure 2-7 Telnet connecting message



- If an error message displays, use the steps below to identify the problem.

Figure 2-8 Telnet error message

```
Start Telnet
Unable to connect
Contact network
administrator.
```

- a. The product network cable is not correctly connected.
 - b. The BIOS LAN settings are incorrect.
 - The product should be configured to use a static IP address, but is configured to use DHCP instead.
 - The product is configured to use a static IP address, but the IP address is incorrect.
 - c. The product is correctly configured to use DHCP, but the DHCP server is not turned on or is malfunctioning.
7. When the product telnet server function is initialized, the following screen appears. Use the information on this screen to connect the remote telnet client computer to the product.

 **NOTE:** The product is now ready to receive remote telnet client commands.

- **IP:** The static or dynamically allocated IP address for the product.
- **Port:** The standard telnet port (23).
- **Pin:** A randomly generated 4-digit personal identification number (PIN).

Figure 2-9 Telnet server function initialized

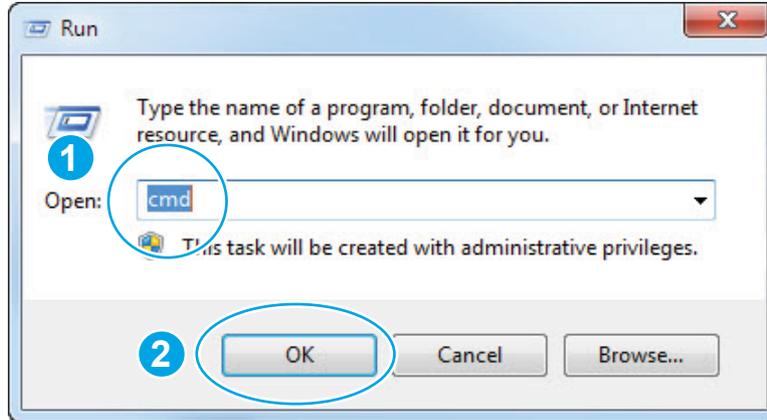
```
Start Telnet
IP: 16.88.109.66
Port: 23
Pin : 4031
```

Start the telnet client function at the remote computer

The following steps establish a Remote Admin connection from a remote computer to the product.

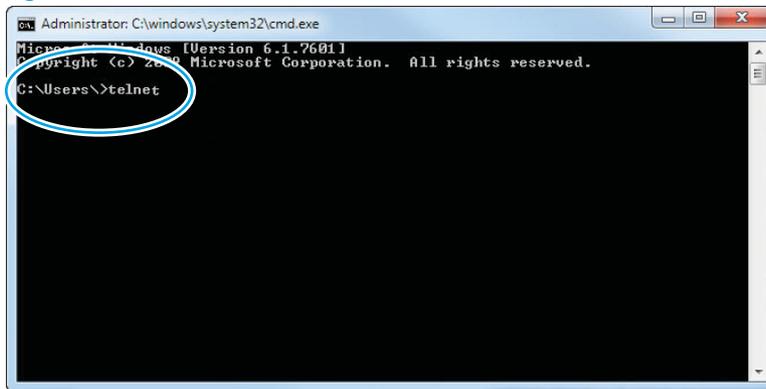
1. From the **Start** menu click **Run** to open a dialog box, type `cmd` in the **Open** field, and then click the **OK** button to open a Windows command window.

Figure 2-10 Open a command window



2. From any displayed directory, type `telnet` at the prompt, and then press the **Enter** key.

Figure 2-11 Start a telnet session

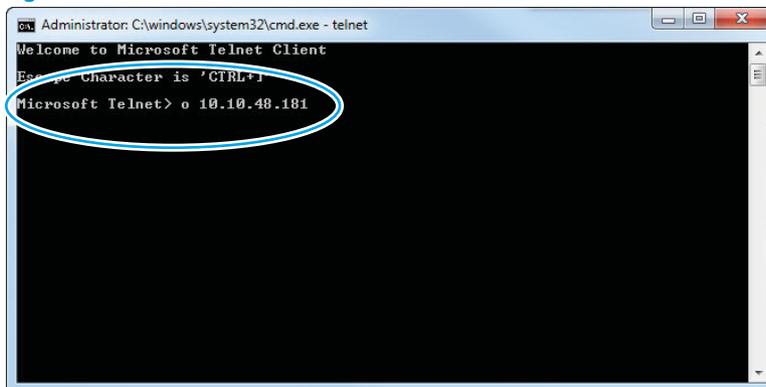


3. Type `<IP ADDRESS>` at the telnet prompt, and then press the **Enter** key.

 **NOTE:** For `<IP ADDRESS>`, substitute the IP address that was displayed in step 7 in [Start the telnet server function at the product on page 112](#).

 **TIP:** If the telnet connection fails to establish a connection, the product is probably behind a firewall or on a different network than the remote telnet client computer. See [Network connection on page 112](#).

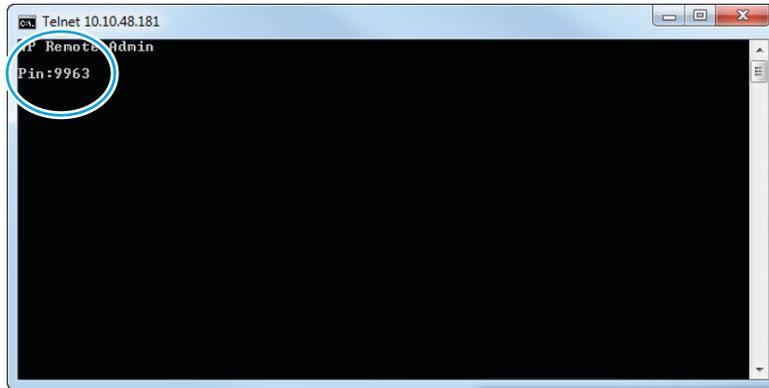
Figure 2-12 Establish a telnet connection



4. Type the PIN that was displayed in step 7 in [Start the telnet server function at the product on page 112](#) at the prompt, and then press the **Enter** key.

 **IMPORTANT:** Make sure to type the PIN correctly. After five incorrect PIN entries, the product terminates the Remote Admin connection. The Remote Admin feature must be re-initiated at the product. See [Start the telnet server function at the product on page 112](#).

Figure 2-13 Enter the PIN

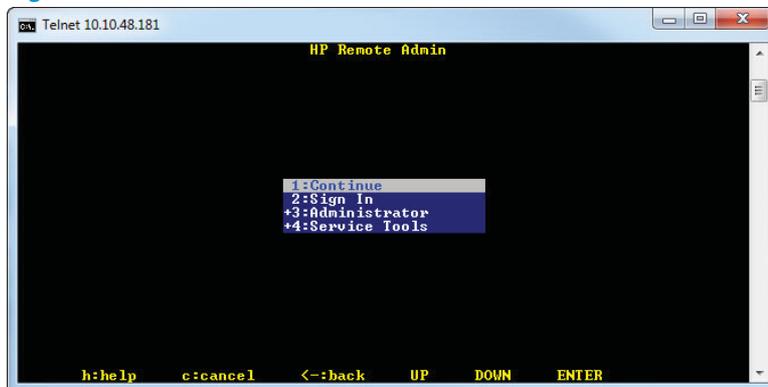


5. The following screen displays when the correct PIN is entered and the Remote Admin connection is successful. For information about the Pre-boot menu and options, see [Pre-boot menu options on page 103](#).

 **NOTE:** Because a Remote Admin connection is an unsecure telnet network protocol connection, the following Pre-boot menu items are disabled for the remote telnet client computer.

- The **+3:Administrator** menu **4:Change Password** item.
- The **+3:Administrator** menu **5:Clear Password** item.
- The **+3:Administrator** menu **6:Disk Manage** item.

Figure 2-14 Remote Admin window



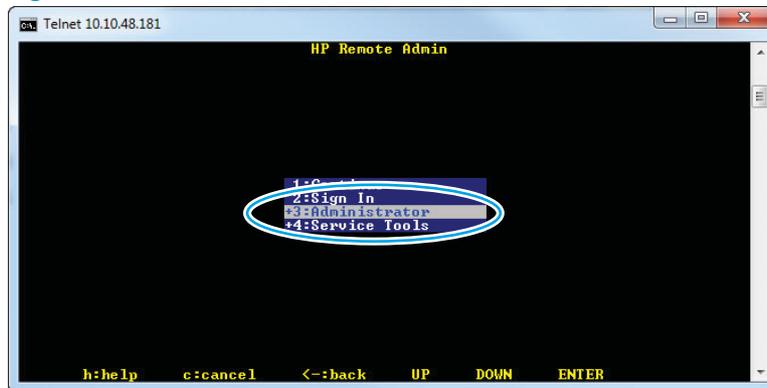
Disconnect a remote connection

The Remote Admin connection can be terminated from the product control panel or the remote telnet client computer.

 **NOTE:** The following procedure describes terminating a Remote Admin connection from the remote telnet client computer.

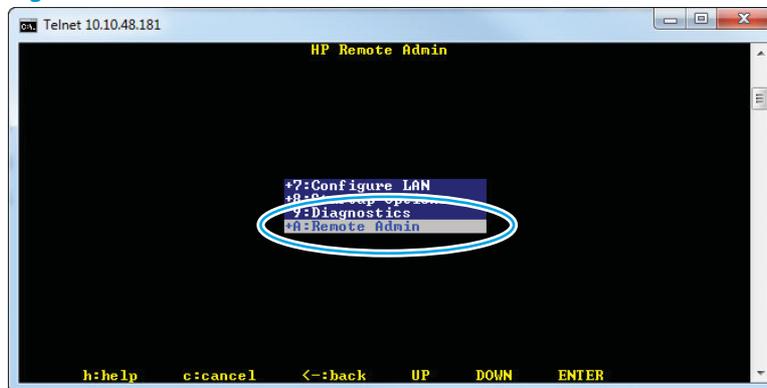
1. From the Pre-boot main menu, use the arrow buttons on the keyboard to scroll down to the **+3:Administrator** item, and then press the **Enter** key.

Figure 2-15 Access the administrator menu



2. Use the arrow buttons on the keyboard to scroll down to the **+A:Remote Admin** item, and then press the **Enter** key.

Figure 2-16 Access the remote admin menu

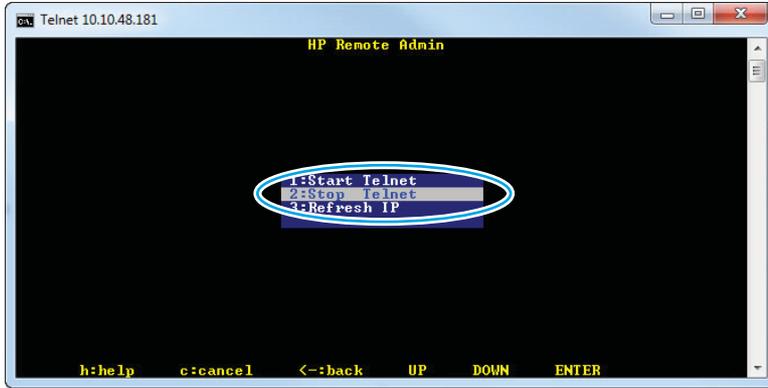


3. Use the arrow buttons on the keyboard to scroll down to the **2:Stop Telnet** item, and then press the **Enter** key. The Remote Admin connection between the product and the remote telnet client computer terminates.

 **IMPORTANT:** The product remains in the Pre-boot menu. Have the person that is physically present at the product do the following:

- Touch the **Home**  button to return to the main Pre-boot menu and highlight the **1:Continue** item, and then touch the **OK** button. The product will continue to initialize.

Figure 2-17 Terminate the telnet connection



Troubleshooting process

Determine the problem source

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

- Use the troubleshooting flowchart to pinpoint the root cause of hardware malfunctions. The flowchart provides guides to the section of this chapter that contain steps to correct the malfunction.

Before beginning any troubleshooting procedure, check the following issues:

- Are supply items within their rated life?
- Does the configuration page reveal any configuration errors?



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

Troubleshooting flowchart

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

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

Table 2-8 Troubleshooting flowchart

1 Power on	Is the product on and does a readable message display?		Follow the power-on troubleshooting checks. See Power subsystem on page 120 .
	Yes ↓	No →	After the control panel display is functional, see step 2.
2 Control panel messages	Does the message Ready display on the control panel?		After the errors have been corrected, go to step 3.
	Yes ↓	No →	
3 Event log	Open the Troubleshooting menu and print an event log to see the history of errors with this product.		If the event log does not print, check for error messages. If paper jams inside the product, see the jams section of the product service manual.
	Does the event log print?		
	Yes ↓	No →	If error messages display on the control panel when trying to print an event log, see the control panel message section of the product troubleshooting service manual. After successfully printing and evaluating the event log, see step 4.
4 Information pages	Open the Reports menu and print the configuration pages to verify that all the accessories are installed.		If accessories that are installed are not listed on the configuration page, remove the accessory and reinstall it. After evaluating the configuration pages, see step 5.
	Are all the accessories installed?		
	Yes ↓	No →	

Table 2-8 Troubleshooting flowchart (continued)

5 Print quality	Does the print quality meet the customer's requirements?		Compare the images with the sample defects in the image defect tables. See the images defects table in the product service manual.
	Yes ↓	No →	After the print quality is acceptable, see step 6.
6 Interface	Can the customer print successfully from the host computer?		Verify that all I/O cables are connected correctly and that a valid IP address is listed on the HP Jetdirect configuration page.
	Yes. This is the end of the troubleshooting process.	No →	If error messages display on the control panel when trying to print an event log, see the control-panel message section of the product troubleshooting service manual. When the customer can print from the host computer, this is the end of the troubleshooting process.

Power subsystem

Power-on checks

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

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

Power-on troubleshooting overview

During normal operation, a cooling fan begins to spin briefly after the product power is turned on. Place a hand over the vents in the rear cover, near the formatter. When the fan is correctly operating, air passing out of the product is felt. Lean close to the product to hear the fan operating. If the fan is operating, the dc side of the power supply is functioning.

After the fan is operating, the main motor turns on (unless the top cover is open, a jam condition is sensed, or the paper-path sensors are damaged). Visually and audibly determine that the main motor is turned on.

If the fan and main motor are operating correctly, the next troubleshooting step is to isolate print engine, formatter, and control panel problems. Perform an engine test. If the formatter is damaged, it might interfere with the engine test. If the engine-test page does not print, try removing the formatter, and then performing the engine test again. If the engine test is then successful, the problem is almost certainly with the formatter, the control panel, or the cable that connects them.

Troubleshooting power on problems

1. Verify that power is available to the product. If the product is plugged into a surge protector or uninterruptible power supply (UPS), remove it, and then plug the product directly into a known operating wall receptacle (make sure that the wall receptacle provides the correct voltage and current for the product).

Unplug any other devices on the same circuit that the product is using.

2. Try another known operating wall receptacle and a different power cord.

3. Listen for startup noises (fans and motors) and illuminated lights on the control panel.



NOTE: Operational fans, motors, and control-panel lights indicate the following:

- AC power is present at the product.
 - The low-voltage power supply (LVPS) is providing either or both 24 Vdc and 5 Vdc voltages.
 - The DC controller microprocessor is functioning.
-

4. If startup noises are not heard, check the following:

- a.** Turn the product off, and then remove the formatter.
- b.** Turn the product on, and then listen for startup noises. If normal startup noises are heard, go to step [5](#).



NOTE: The control panel will be blank with the formatter removed.

- c.** Turn the product off, and then remove any installed accessories (for example, envelope feeders, paper feeders, or output accessories).

Turn the product on, and then listen for startup noises. If normal startup noises are heard, the problem might be with one of the accessories.

- d.** If normal startup noises and lights are still not present, replace the LVPS.
- e.** If after replacing the LVPS normal startup noises are still not heard, replace the DC controller.
- f.** If after replacing the DC controller normal startup noises are still not heard, replace the HVPS.



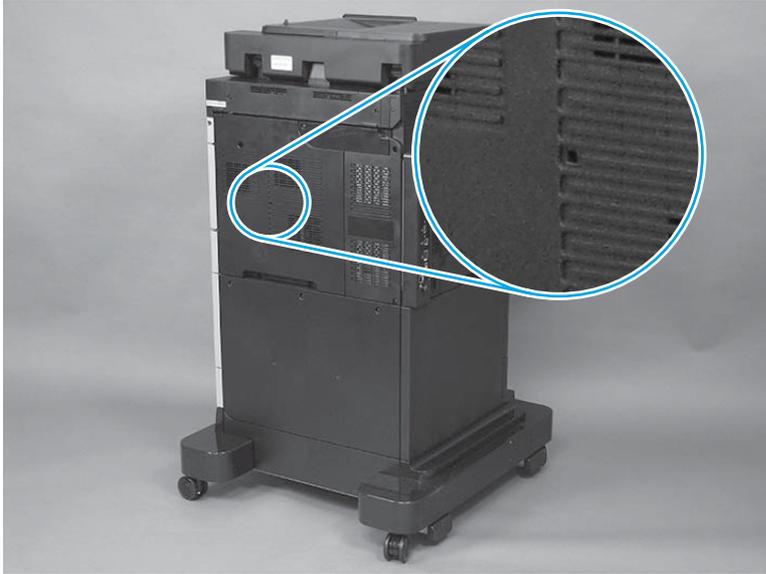
NOTE: If the error persists after replacing these assemblies, escalate the problem to the Global Business Unit (GBU).

5. Try printing an engine test page.

- a.** Use a small pointed object to depress the test-page switch located on the rear of the product.



NOTE: The test page can only use Tray 2 as the paper source, so make sure that paper is loaded in Tray 2.



- b. If the engine test page prints, the print engine is operating normally (a failed engine test print page does not necessarily indicate that the print engine or DC controller is defective).



NOTE: If the engine test page does not print, turn the product off, remove the formatter, and then try the engine test again. If the page prints, the problem might be the formatter.

Troubleshooting a blank control panel

A blank control panel display can be caused by one or more of the following:

- No power to the product.
- Power supply has tripped (over-current/over-voltage/temperature issue).
- Formatter not fully seated.

TIP: The three LEDs on the formatter indicate that the product is functioning correctly.

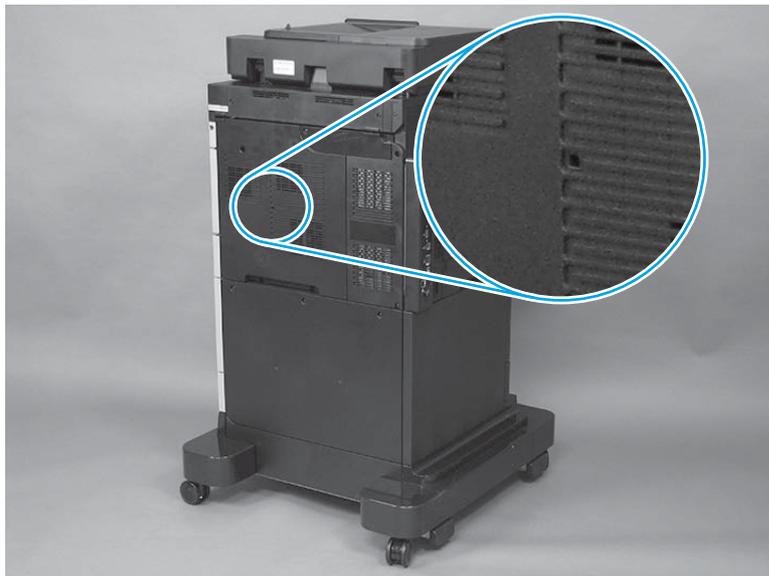
HP recommends fully troubleshooting the formatter and control panel before replacing either assembly. Use the connectivity LED to troubleshoot formatter and control panel errors to avoid unnecessarily replacing these assemblies. See the LED diagnostics section in the product troubleshooting manual.

- Faulty component installed on the formatter (for example, memory DIMM or disk drive).
- Control panel connector not fully seated.
- Faulty formatter.
- Faulty DC controller.
- Faulty control panel.

1. Verify that power is available to the product. If the product is plugged into a surge protector or uninterruptible power supply (UPS), remove it, and then plug the product directly into a known operating wall receptacle (make sure that the wall receptacle provides the correct voltage and current for the product).
2. Make sure that the power switch is in the *on* position.

3. Make sure that the fan runs briefly, which indicates that the power supply is operational.
4. Make sure that the control-panel display wire harness is connected.
5. Make sure that the formatter is seated and operating correctly. Turn off the product and remove the formatter. Reinstall the formatter, make sure the power switch is in the on position, and then verify that the heartbeat LED is blinking and that the connectivity LED is illuminated.
6. Remove any external solutions, and then try to turn the product on again.
7. If the control panel display is blank, but the main cooling fan runs briefly after the product power is turned on, try printing an engine-test page to determine whether the problem is with the control-panel display, formatter, or other product assemblies.
 - a. Remove the formatter.
 - b. Use a small pointed object to depress the test-page switch located on the rear of the product.

 **NOTE:** The test page can only use Tray 2 as the paper source, so make sure that paper is loaded in Tray 2.



- c. If the engine test page prints, the print engine is operating normally (a failed engine test print page does not necessarily indicate that the print engine or DC controller is defective).
 - d. Use the control-panel diagnostics to test the control panel. See the Control panel checks section in the product troubleshooting manual. If the error persists, proceed to step [8](#).
8. If the print engine appears to be correctly operating (the engine test page successfully printed) and the control panel is still blank, replace the low-voltage power supply (LVPS)
9. If after replacing the LVPS normal startup noises and lights are still not present, replace the DC controller.

 **NOTE:** If the error persists after replacing these assemblies, escalate the problem to the Global Business Unit (GBU).

Scanning subsystem

Calibrate the scanner

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

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

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Device Maintenance](#) button.
2. Touch the [Calibration Cleaning](#) button.
3. Touch the [Calibrate Scanner](#) button, and then follow the instructions provided on the screen.

Control panel checks

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

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

 **TIP:** To diagnose control panel problems, see [Control panel diagnostic flowcharts on page 127](#).

Open diagnostic mode

- Tilt the control panel forward, and then do one of the following:
 - On the back side of the control panel, locate the round black-rubber cover near the center of the control panel. Press the button to access the diagnostic mode.
- Repeatedly pressing the button will scroll through additional screens on the control-panel display. Continue to press the button to scroll back to the diagnostic-mode main test screen.

Exit diagnostic mode

Do one of the following:

- Touch the [Cancel](#)  button.
- Wait 20 seconds. The control panel will return to the [Home](#) screen.

Table 2-9 Control panel diagnostic functions

Item	Description	Remarks
	Exits a test	

Cancel button

Table 2-9 Control panel diagnostic functions (continued)

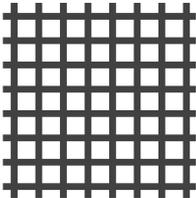
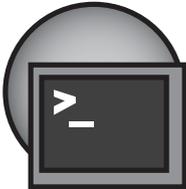
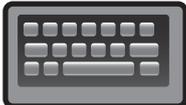
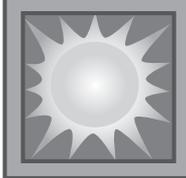
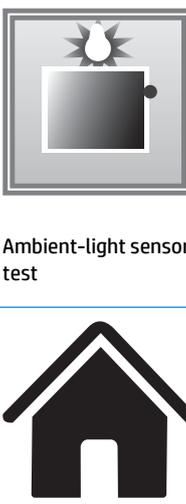
Item	Description	Remarks
	Selects test settings in some of the test windows	
Keypad		
	Verifies that all areas respond to a touch	<p>Use this item to check the accuracy of the touch screen.</p> <p>Use a finger or 3 mm (.118 in) conductive stylus to trace between the grid lines to check the accuracy of the touchscreen calibration.</p> <p>NOTE: The gap between the grid lines is 6 mm (.236 in).</p> <p>When the screen is touched, a line or a dot displays on the screen (the X and Y coordinates of the position on the screen are also displayed).</p>
Red-grid touch test		
	Checks calibration	<p>Use this item to determine if the touchscreen calibration is within the acceptable range.</p> <p>When selected, ten target points (and the X and Y coordinates of the position of the target point) display on the screen.</p> <p>Touching a target causes the X and Y coordinate of that target to appear in the middle of the touchscreen (above the cancel button).</p> <p>NOTE: The product automatically calibrates the touchscreen. A manual touchscreen calibration procedure is not available for this product.</p>
Calibration touch test		
	Selects a test pattern to view on the display.	<p>Use this item to identify touchscreen LED display problems.</p> <ol style="list-style-type: none"> 1. Touch the icon. 2. Touch the up ▲ or down ▼ arrow buttons to scroll through touchscreen LED display test screens.
Touchscreen LED display test		
	Tests sounds	<p>Use this item to test audio functionality.</p> <ol style="list-style-type: none"> 1. Touching this item causes the speaker to emit a tone. 2. Touch the 2 button on the keypad, and then touch this item to cause the speaker to emit a more complex tone.
Speaker test		

Table 2-9 Control panel diagnostic functions (continued)

Item	Description	Remarks
 Firmware information	Shows the firmware version	Touch this item to display the control panel firmware version and firmware build date.
 Keyboard test	Factory use only Tests the product keyboard NOTE: For products with a keyboard feature only.	When this item is selected, pressing a button on the keyboard causes the corresponding character to appear on the control-panel display. <ol style="list-style-type: none"> 1. Touch the icon. 2. Press a button on the keyboard. The corresponding character should appear on the control-panel display.
 Backlight test	Adjusts the backlight	Use this item to adjust the brightness of the control-panel display. <ol style="list-style-type: none"> 1. Touch the icon. 2. Touch the up ▲ or down ▼ arrow buttons to adjust the backlight level.
 Ambient-light sensor test	Checks the ambient light sensor	Use this item to test the ambient-light sensor functionality. <ol style="list-style-type: none"> 1. Touch the icon. 2. Shine a flashlight at the control panel to the left of, and down about 25.4 mm (1 in,) from the Home  button. 3. The numbers displayed below the icon should be any value other than zero.
 Home  button test	Tests the Home  button	Use this item to test the Home button LED and switch functionality. <ol style="list-style-type: none"> 1. Touch the icon. 2. Press the Home button on the right side of the control panel. The LED icon on the control-panel display illuminates if the button LED and switch are correctly functioning.

Control panel diagnostic flowcharts

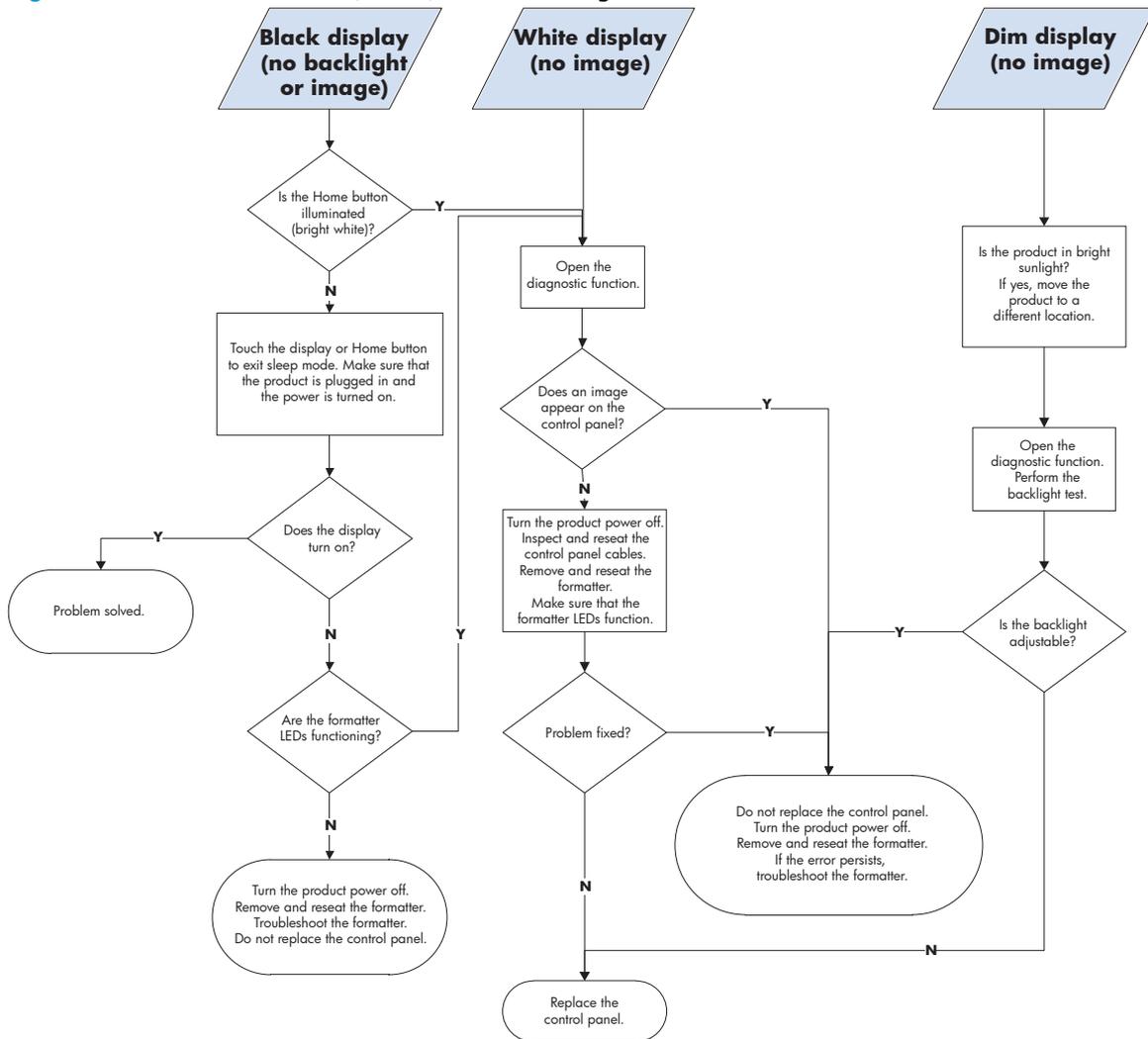
 **TIP:** Tilt the control panel forward. On the back side of the control panel, press the round black-rubber cover near the center of the control panel to access the diagnostic mode.

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

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

Touchscreen black, white, or dim (no image)

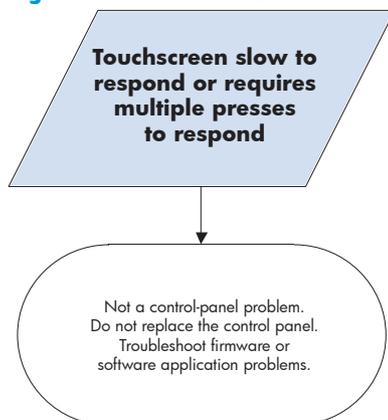
Figure 2-18 Touchscreen blank, white, or dim (no image)



Touchscreen is slow to respond or requires multiple presses to respond

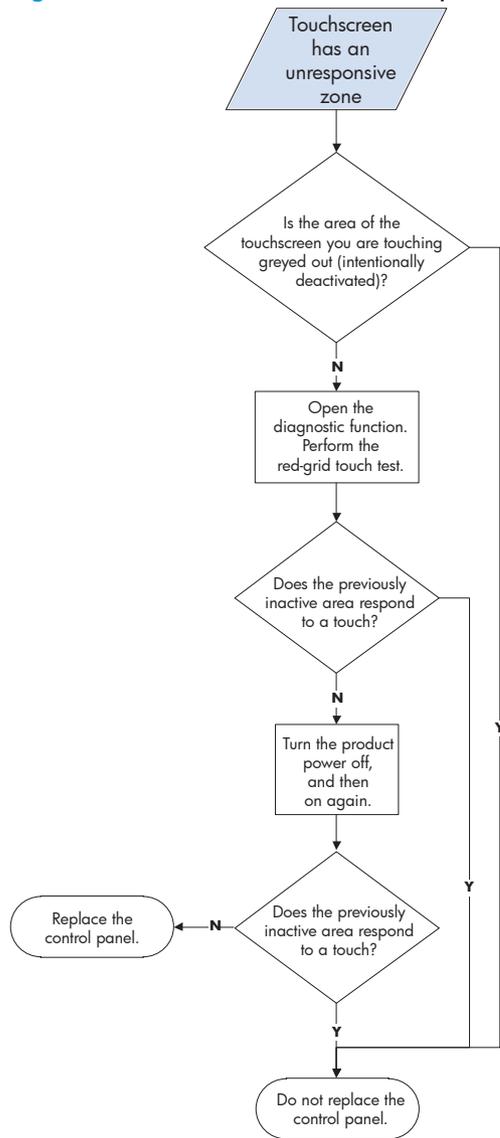
 **TIP:** Use the red-grid touch test to verify that all areas of the touchscreen are correctly functioning. See [Table 2-9 Control panel diagnostic functions on page 124](#).

Figure 2-19 Touchscreen is slow to respond or requires multiple presses to respond



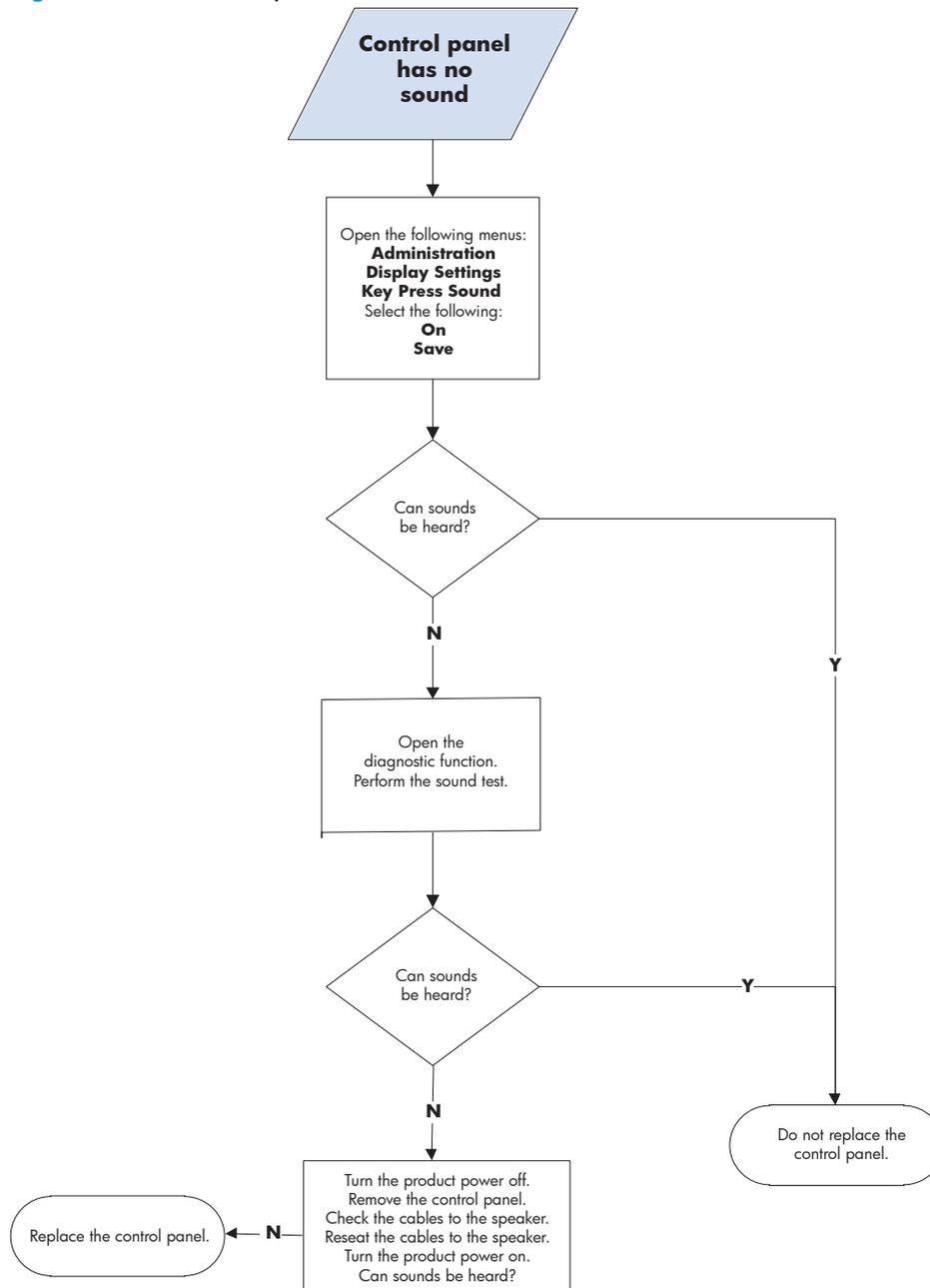
Touchscreen has an unresponsive zone

Figure 2-20 Touchscreen has an unresponsive zone



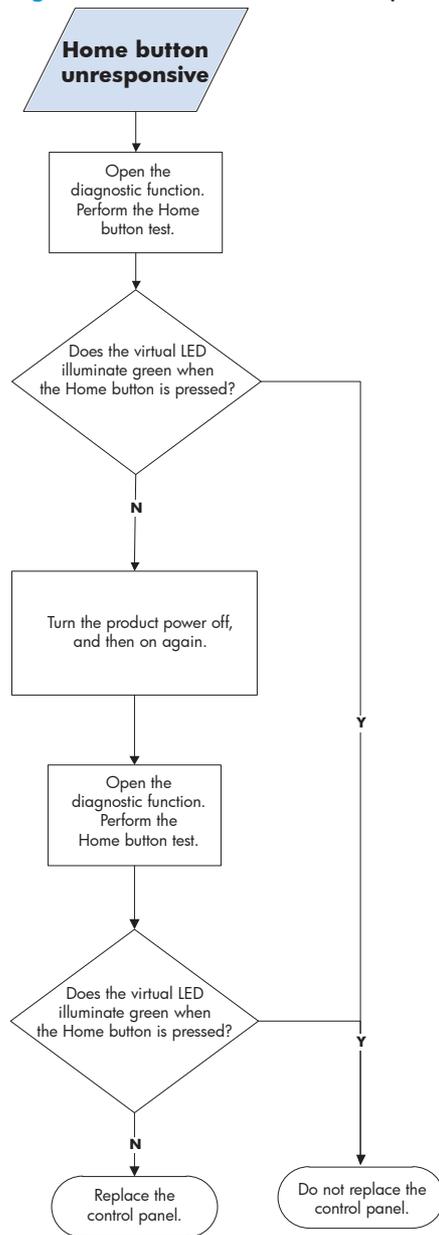
No control panel sound

Figure 2-21 No control panel sound



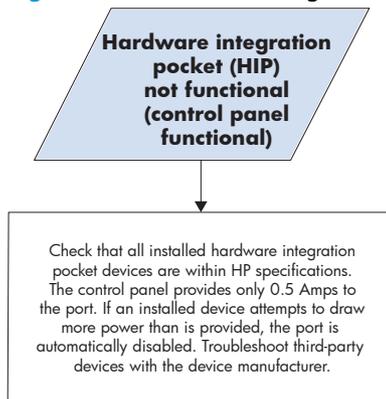
Home button is unresponsive

Figure 2-22 Home button is unresponsive



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

Figure 2-23 Hardware integration pocket (HIP) is not functioning (control panel functional)



Tools for troubleshooting

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

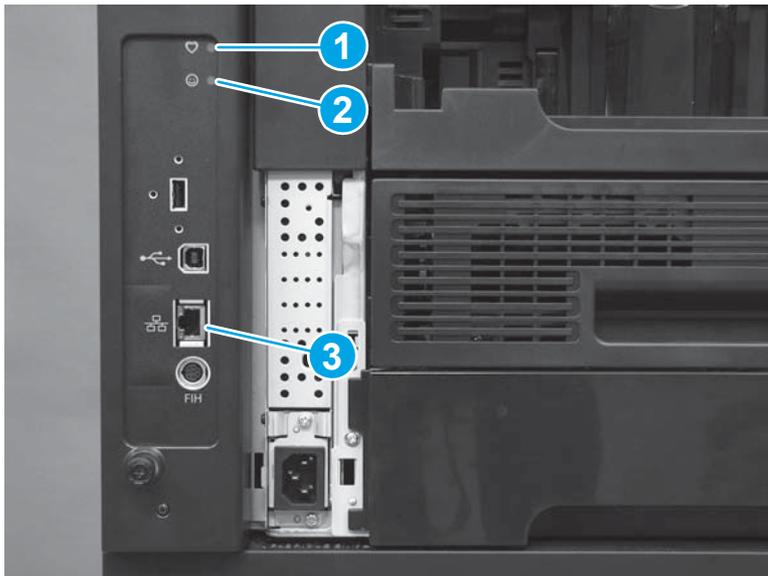
Individual component diagnostics

LED diagnostics

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

Understand lights on the formatter

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



-
- | | |
|---|-------------------|
| 1 | Heartbeat LED |
| 2 | Connectivity LED |
| 3 | HP Jetdirect LEDs |
-

Connectivity LED

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

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

Formatter-to-control panel communication interruptions

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

 **TIP:** If the connectivity LED is illuminated—by an error condition or normal operation—the formatter is fully seated and the power is on. The pins for the LED circuit in the formatter connector are recessed so that this LED will not illuminate unless the formatter is fully seated.

The heartbeat LED operates according to the product state. When the product is initializing, see [Connectivity LED, product initialization on page 135](#). When the product is in **Ready** mode, see [Connectivity LED, product operational on page 137](#).

Connectivity LED, product initialization

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

 **NOTE:** When the initialization process completes, the connectivity LED should be illuminated solid green.

If after initialization, the connectivity LED is not solid green, see [Connectivity LED, product operational on page 137](#).

Table 2-10 Connectivity LED, product initialization

Product initializing state	Connectivity LED, normal state	Connectivity LED, error state
No power (power cable disconnected or power switch off)	Off	Not applicable
Power on (immediately after the power switch pressed)	Red, solid <ul style="list-style-type: none">• Duration should be 1 second or less	Red, solid <ul style="list-style-type: none">• Firmware error; problem finding hardware and booting the serial peripheral interface flash memory<ul style="list-style-type: none">◦ Boot process halted Replace the formatter.
Serial peripheral interface (SPI) flash memory boot	Green, solid	Red, solid <ul style="list-style-type: none">• Firmware error; problem corrupt or missing SPI flash memory<ul style="list-style-type: none">◦ Boot process halted Replace the formatter.
HW checks on board DRAM	Green, solid	Red, solid <ul style="list-style-type: none">• Power on self check failure<ul style="list-style-type: none">◦ Boot process halted Replace the formatter.

Table 2-10 Connectivity LED, product initialization (continued)

Product initializing state	Connectivity LED, normal state	Connectivity LED, error state
Control panel connection initializes	Green, solid NOTE: Control panel communication successful. If an error occurs, a message should appear on the control-panel display.	Yellow, fast flash <ul style="list-style-type: none"> • Formatter to control panel connection failed <ul style="list-style-type: none"> ◦ Boot process continues <p>Check the cables between the formatter and control panel for damage. Make sure that the cables are fully seated.</p>
Pre-boot menu available (including diagnostics)	Green, solid	Red, solid <ul style="list-style-type: none"> • Diagnostic failure <ul style="list-style-type: none"> ◦ Follow diagnostic instructions <p>Turn the power off, and then on again to restart the initialization process.</p>
Accessing disk for firmware image	Green, solid NOTE: If applicable, disk error messages appear on the control-panel display.	Yellow, fast flash <ul style="list-style-type: none"> • Control panel not connected
Firmware boot	Green, solid NOTE: If applicable, error messages appear on the control-panel display.	Yellow, fast flash <ul style="list-style-type: none"> • Control panel not connected
Product operational	Green, heartbeat blink NOTE: If applicable, error messages appear on the control-panel display.	Yellow, fast flash <ul style="list-style-type: none"> • Control panel not connected
49.XX.YY error or initialization freezes	Not applicable	LED off NOTE: An error message (for example, 49.XX.YY) might appear on the control-panel display. Eventually a formatter connection missing message will appear. Turn the power off, and then on again to restart the initialization process. If the error persists, perform a firmware upgrade.
Control panel connection interrupted after the product is operational	Not applicable	Yellow, fast flash <ul style="list-style-type: none"> • Control panel not connected
Sleep Mode	Green, slow blink	Not applicable
Approaching Sleep Mode	Green, slow blink	Not applicable
Wake up from Sleep Mode	Follows initialization progression	Follows initialization progression
Approaching wake up from Sleep Mode	Follows initialization progression	Follows initialization progression

Connectivity LED, product operational

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

Table 2-11 Connectivity LED, product operational

LED color	Description
Green	<ul style="list-style-type: none">• Normal operation<ul style="list-style-type: none">◦ Formatter is operating normally◦ Firmware is operating normally◦ Control panel is connected
Yellow	<ul style="list-style-type: none">• Formatter cannot connect to the control panel<ul style="list-style-type: none">◦ Check control panel connections◦ Verify control panel functionality
Red	<ul style="list-style-type: none">• Formatter error or failure<ul style="list-style-type: none">◦ Serial peripheral interface (SPI) flash memory boot error◦ Power on self test (formatter) failed◦ Diagnostic (formatter) failed
Off	<p>TIP: The connectivity LED is off if the power cable is disconnected, the product power switch is in the off position, or the product is in Sleep Mode.</p> <ul style="list-style-type: none">• Firmware or system freeze<ul style="list-style-type: none">◦ Check control panel for an error message◦ Control panel failure <p>NOTE: This condition is not usually caused by a formatter failure. Turn the power off, and then on again. If the error persists, perform a firmware upgrade.</p>

Heartbeat LED

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

HP Jetdirect LEDs

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

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

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:

- [Network Settings](#)
 - [Embedded Jetdirect Menu](#)
 - [Link Speed](#)
3. Select the appropriate link speed, and then touch the **OK** button.

Engine diagnostics

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

Defeating interlocks

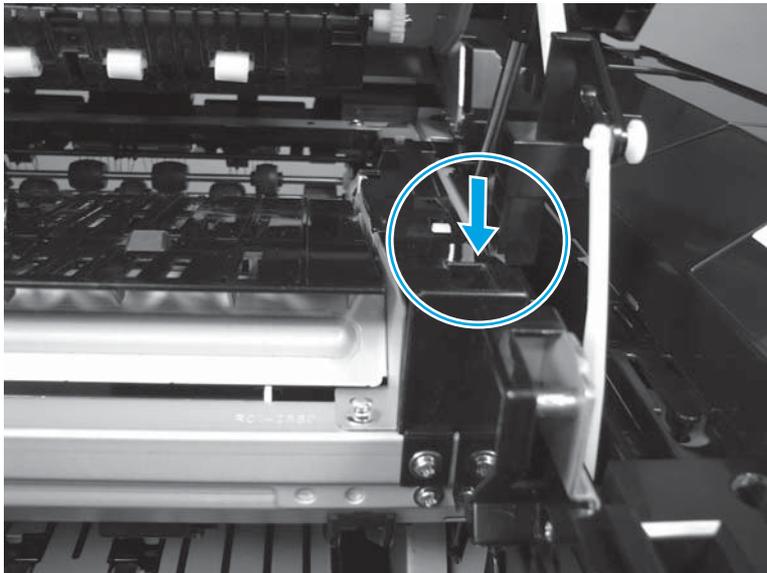
Different tests can be used to isolate different types of issues. For assembly or noise isolation, run the diagnostic test when the top cover is open. To operate the product with the cover open, the top cover switch levers must be depressed to simulate a closed-cover position.

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

1. Open the top cover.
2. Insert a folded piece of paper into each slot to defeat the top switches.

💡 TIP: Fold a stiff piece of paper, for example a business card or index card, into a 10 mm (.375 in) strip with a bend at the end, and insert the strip into the openings under the top cover logic switches.

Figure 2-24 Defeating interlocks



Disable cartridge check

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

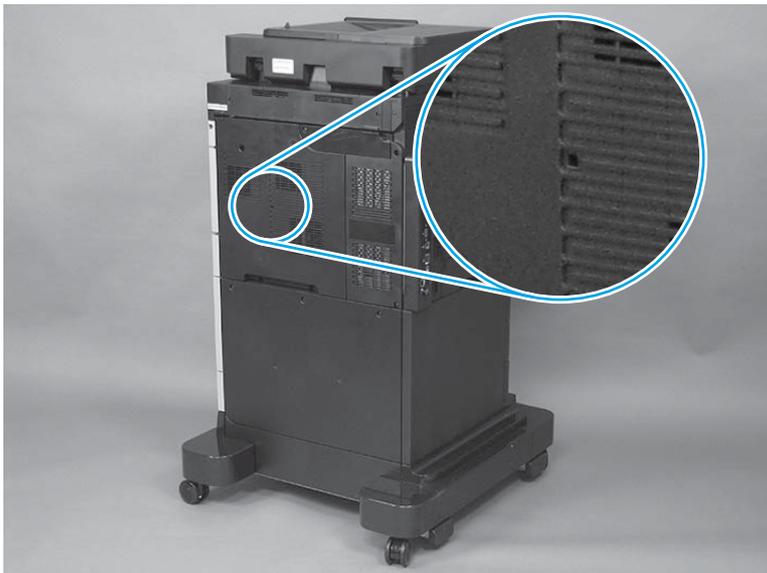
 **NOTE:** Do not remove or exchange the toner cartridge until after beginning the disable cartridge check diagnostic.

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Disable Cartridge Check](#)

Engine test button

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

Figure 2-25 Engine test button



Paper path test

This diagnostic test generates one or more test pages. Use these pages to isolate the cause of jams.

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

- **Print Test Page:** Run the paper-path test from the default settings: Tray 2, no duplex, and one copy. To specify other settings, scroll down the menu, and select the setting, and then scroll back up and select **Print Test Page** to start the test.
 - **Source Tray:** Select Tray 1, Tray 2, or the optional tray.
 - **Test Duplex Path:** Enable or disable two-sided printing.
 - **Number of Copies:** Set the numbers of copies to be printed; the choices are 1, 10, 50, 100, or 500.
1. From the **Home** screen on the product control panel, scroll to and touch the **Administration** button.
 2. Open the following menus:
 - **Troubleshooting**
 - **Diagnostic Tests**
 - **Paper Path Test**
 3. Select the paper-path test options for the test.

Paper path sensors test

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

1. From the **Home** screen on the product control panel, scroll to and touch the **Administration** button.
2. Open the following menus:
 - **Troubleshooting**
 - **Diagnostic Tests**
 - **Paper Path Sensors**

 **NOTE:** Exiting the Paper path sensors menu and then reentering the test will clear the test values from the previous test.

The menu list of sensors and motors for the Paper path sensors test varies depending on which optional accessories are installed.

Table 2-12 Paper-path sensors diagnostic tests

Sensor name	Sensor/Switch number	Replacement part number	Descriptions
Tray 3 Feed sensor ¹	SR4	RM2-0341-000CN	Paper pickup assembly
Tray 4 Feed sensor ¹	SR8	RM2-0341-000CN	Paper pickup assembly
Tray 5 Feed sensor ¹	SR12	RM2-0341-000CN	Paper pickup assembly

Table 2-12 Paper-path sensors diagnostic tests (continued)

Sensor name	Sensor/Switch number	Replacement part number	Descriptions
Pre-feed Sensor	PS102	Not orderable	NA
TOP sensor (top-of-page)	PS103	Not orderable	NA
Paper Width 1	PS106	Not orderable	NA
Paper Width 2	PS108	Not orderable	NA
Fuser delivery sensor	PS700	RM2-5795-000CN (110V; service part) B3M77-67903 (110V; replacement kit) RM2-5796-000CN (220V; service part) B3M78-67903 (220V; replacement kit)	Fuser
Interlock sensors	SW101	RM2-7478-000CN	Door switch cable assembly (SW101)
	SW106	RM2-7476-000CN	Door sensor cable assembly
			NOTE: These assemblies include the switches.
Intermediate Switch (reverse sensor)	PS110	RM2-5799-000CN	Reverse assembly
Inverter Media Stay (reverse jam sensor)	PS111	RM2-5799-000CN	Reverse assembly
Duplex refeed sensor	PS113	B3G84-67903	Duplex assembly kit
Output sensor (delivery sensor)	PS112	RM2-5799-000CN	Reverse assembly
Output bin full sensor	PS104	Not orderable	NA

¹ Only appears if optional input accessories are installed.

Manual sensor tests and tray/bin sensor tests



NOTE: Some of the figures in this section might look different than the M630 product. However, the procedures in this section are correct for the product.

Use these diagnostic tests to manually test the product sensors, switches.

Manual sensor tests

The table in this section lists the sensors and switches available in the [Manual Sensor Test](#).

Use the manual sensor test

The [Manual Sensor Test](#) screen shows the sensor number, sensor name, sensor state (active or inactive), and the number of times the sensor has been toggled (activated).

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Manual Sensor Test](#)
3. Touch the sensor number and name on the [Manual Sensor Test](#) screen to display a sensor location graphic on the control-panel display.
4. Activate the desired sensor, and then check the control-panel display to verify the sensor state (active or inactive).
 - The [State](#) virtual LED next to the sensor number and sensor name illuminates green when the sensor is active.
 - The [Toggle](#) virtual LED next to the sensor number and sensor name illuminates green after the sensor is activated and increments by one each time the sensor is interrupted (activated or deactivated).

For example, opening the front door increments the [PS14 Front door Toggle](#) item count two times—once when the door is opened, and once when the door is closed.

5. Touch the [Reset Sensors](#) button to reset the [Toggle](#) count item.

-or-

Touch the [Cancel](#) button to exit the [Manual Sensor Test](#) screen and return to the [Diagnostic Tests](#) menu.

Table 2-13 Manual sensor diagnostic tests

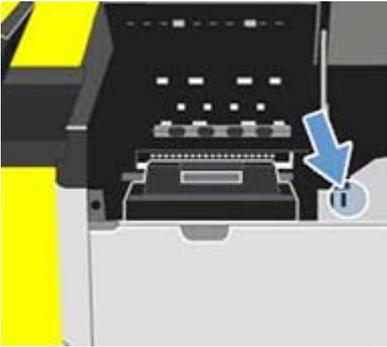
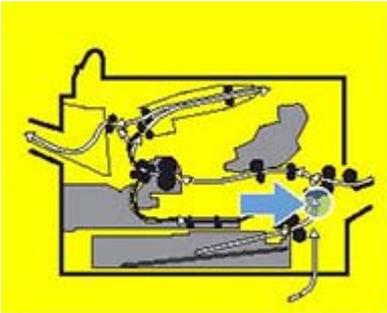
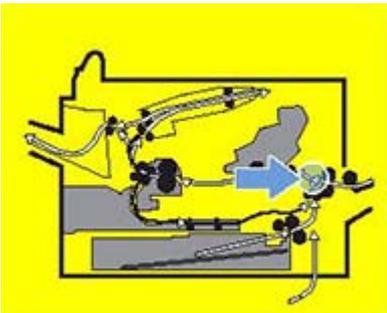
Sensor or switch location	Sensor or switch	Replacement Part number	Description
	SW1 Right Upper Door	Not orderable	NA
	SW106 Cartridge Door	RM2-7476-000CN	Door sensor cable assembly
	PS102 Pre-feed Sensor	Not orderable	NA
	PS103 Top sensor	Not orderable	NA

Table 2-13 Manual sensor diagnostic tests (continued)

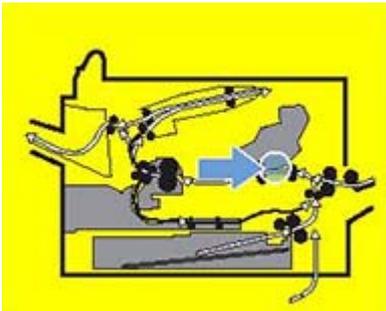
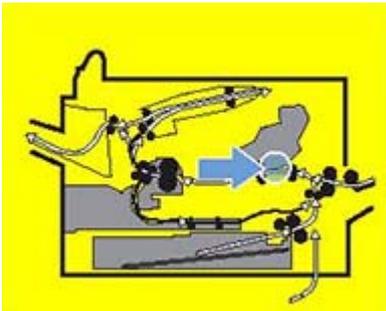
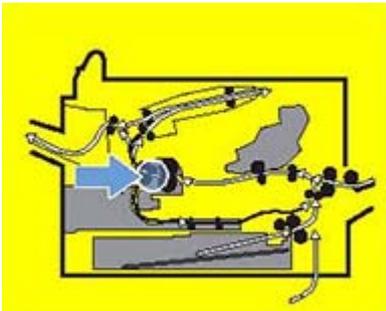
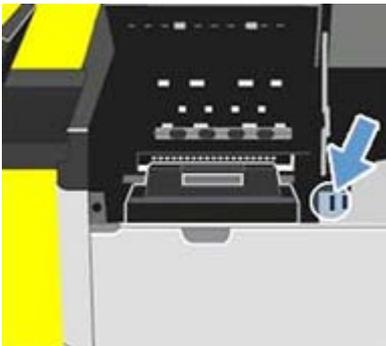
Sensor or switch location	Sensor or switch	Replacement Part number	Description
	PS106 Paper Width 1	Not orderable	NA
	PS108 Paper Width 2	Not orderable	NA
	PS700 Fuser output sensor	RM2-5795-000CN (110V; service part) B3M77-67903 (110V; replacement kit) RM2-5796-000CN (220V; service part) B3M78-67903 (220V; replacement kit)	Fuser
	SW101 Interlock sensor	RM2-7478-000CN	Door switch cable assembly (SW101) NOTE: This assembly includes the switch.

Table 2-13 Manual sensor diagnostic tests (continued)

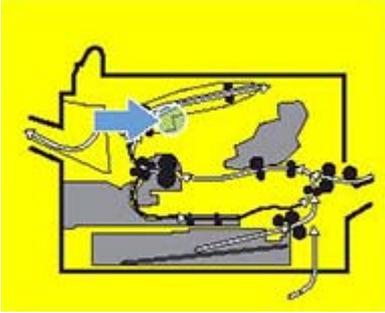
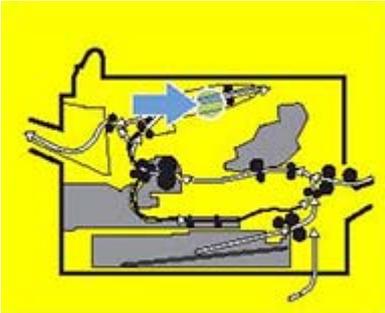
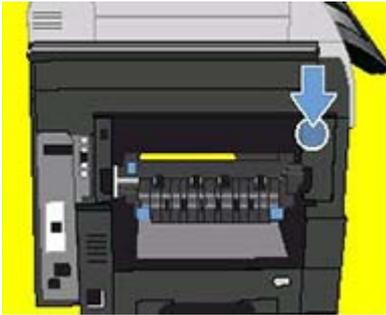
Sensor or switch location	Sensor or switch	Replacement Part number	Description
	PS110 Intermediate Switchback (reverse sensor)	RM2-5799-000CN	Reverse assembly
	PS111 Inverter Media Stay (reverse jam sensor)	RM2-5799-000CN	Reverse assembly
	PS113 Duplexer refeed sensor	RM2-5828-000CN (service part) B3G84-67903 (replacement kit)	Duplexer

Table 2-13 Manual sensor diagnostic tests (continued)

Sensor or switch location	Sensor or switch	Replacement Part number	Description
	PS112 Output sensor (delivery sensor)	RM2-5799-000CN	Reverse assembly
	PS104 Output bin full sensor	Not orderable	NA

Tray/bin manual sensor test

The table in this section lists the sensors and switches available in the [Tray/Bin Manual Sensor Test](#).

Use the tray/bin manual sensor test

The [Tray/Bin Manual Sensor Test](#) screen shows the sensor number, sensor name, sensor state (active or inactive), and the number of times the sensor has been toggled (activated).

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Tray/Bin Manual Sensor Test](#)
3. Touch the sensor number and name on the [Tray/Bin Manual Sensor Test](#) screen to display a sensor location graphic on the control-panel display.
4. Activate the desired sensor, and then check the control-panel display to verify the sensor state (active or inactive).
 - The [State](#) virtual LED next to the sensor number and sensor name illuminates green when the sensor is active.
 - The [Toggle](#) virtual LED next to the sensor number and sensor name illuminates green after the sensor is activated and increments by one each time the sensor is interrupted (activated or deactivated).

For example, opening Tray 2 increments the [SW7,8 Tray 2 Paper Size Toggle](#) item count two times—once when the tray is opened, and once when the tray is closed.

5. Touch the [Reset Sensors](#) button to reset the [Toggle](#) count item.

-or-

Touch the [Cancel](#) button to exit the [Manual Sensor Test](#) screen and return to the [Diagnostic Tests](#) menu.

Table 2-14 Tray/bin manual sensors

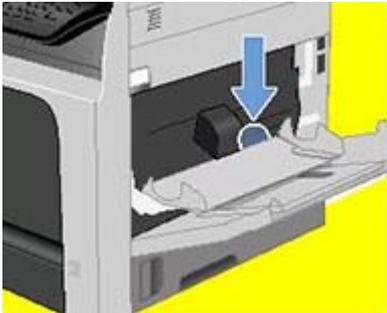
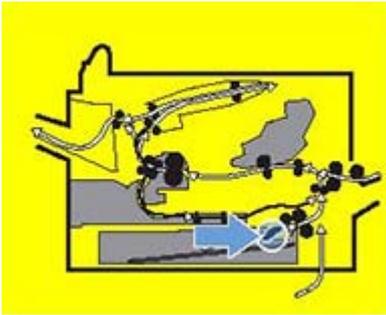
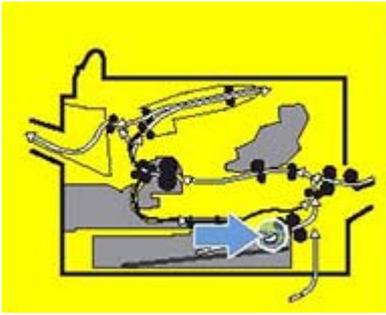
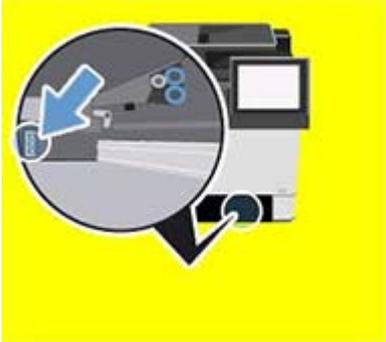
Sensor or switch location	Sensor or switch name	Replacement part number	Descriptions
	PS114 Tray 1 paper sensor (Tray 1 media out sensor)	RM2-5822-000CN	MP (Tray 1) pickup assembly

Table 2-14 Tray/bin manual sensors (continued)

Sensor or switch location	Sensor or switch name	Replacement part number	Descriptions
	PS101 Tray 2 paper sensor (Tray 2 media out sensor)	RM1-5919-000CN	Paper pickup assembly
	PS107, PS907 Tray 2 paper surface (Tray 2 media stack surface sensor 1 and Tray 2 media stack surface sensor 2)	RM1-5919-000CN	Paper pickup assembly
	SW102 Tray 2 paper size	RM1-7179-000CN	Size detect cable
	PS104 Output bin full sensor	Not orderable	NA

Print/stop test

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

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Print/Stop Test](#)
3. Enter a range, and then touch the [OK](#) button.
 - After the print job is completed press [OK](#) button to return to the [Troubleshooting](#) menu before the timer times out.
 - After the timer times out, touch the [Stop](#) button. Activate the door switch to restart the engine and return it to a normal state.



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

Component tests

Use the procedure below to test various product mechanical and electromechanical assemblies.

Component test (special-mode test)

This test activates individual parts independently to isolate problems.

Each component test can be performed once or repeatedly. If the [Repeat](#) option is enabled from the drop-down menu, the test cycles the component on and off. This process continues for two minutes, and then the test terminates.



NOTE: The front or side door interlocks must be defeated to run the component tests. Some tests might require that the ITB and toner cartridges be removed. A control-panel display prompt appears indicate removing some, or all of the cartridges, during certain tests.

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Component Test](#)
3. Select the component test options for the test.

Table 2-15 Component test details

Component test	Item tested	Replacement part number	Comments
Feed motor	M101	RM2-5942-000CN Feed motor assembly	Activates the specified motor for 10 seconds.
Drum motor	M102	RM1-8358-000CN Drum motor assembly	Activates the specified motor at a specific speed for 10 seconds.
Fuser motor	M299	RM1-5051-020CN Fixing motor assembly	Activates the specified motor for 10 seconds.
Cassette lifter motor	M103	RM1-5914-000CN Lifter assembly	Activates the specified motor for 10 seconds.
Merge motor	M104	RM2-5942-000CN Merge motor assembly	Activates the specified motor for 10 seconds.
Intermediate switchback motor (reverse motor)	M105	RM2-5799-000CN Reverse assembly	Activates the specified motor for 10 seconds.
Duplexer Reverse Motor	M107	RM2-5828-000CN (service part) B3G84-67903 (replacement kit) Duplexer	Activates the specified motor at a specific speed for 10 seconds.
Output motor (delivery motor)	M106	RM2-5799-000CN Reverse assembly	Activates the specified motor at a specific speed for 10 seconds.
Duplex Refeed Motor	M107	RM2-5828-000CN (service part) B3G84-67903 (replacement kit) Duplexer	Activates the specified motor at a specific speed for 10 seconds.
Tray 1 Pickup Solenoid	SL102	RM2-5822-000CN MP (Tray 1) pickup assembly	Activates the specified solenoid for 10 seconds. Activates the specified items at a specific speed for 10 seconds.
Tray 2 Pickup Solenoid	SL101	RM1-5919-000CN Paper pickup assembly	Activates the specified solenoid for 10 seconds.
Feed Roller Clutch	CL101	RM1-8411-010CN Paper feed roller assembly	Activates the specified clutch for 10 seconds.
Face-Up Face-Down solenoid	SL105	RM2-5799-000CN Reverse assembly	Activates the specified solenoid for 10 seconds.
Switchback (reverse) Alienation Solenoid	SL106	RM2-5799-000CN Reverse assembly	Activates the specified solenoid for 10 seconds.

Table 2-15 Component test details (continued)

Component test	Item tested	Replacement part number	Comments
Laser Scanner Motor	M108	RM1-8406-000CN Laser scanner assembly	Activates the specified motor for 10 seconds.
Repeat	Not applicable	Not applicable	Choose Off to execute the test once. Choose On to execute the test continuously.

Scanner tests

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

Scanner tests

This section lists the sensors available in the [Scanner Tests](#).

Document feeder and image scanner sensor replacement parts

If a document feeder or image scanner sensor fails, replace the following assemblies:

- Document feeder sensors
 - Document feeder whole unit kit; B3G86-67901
-  **NOTE:** Includes the white foam backing kit.
- Image scanner whole unit kit; B3G86-67905
-  **NOTE:** Includes the white foam backingkit.

Use the scanner tests

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

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Scanner Tests](#)
 - [Sensors](#)
3. Touch the sensor name on the [Scanner Tests](#) screen to display a sensor location graphic on the control-panel display.
4. Activate the desired sensor, and then check the control-panel display to verify the sensor state (active or inactive).
 - The [State](#) virtual LED next to the sensor number and sensor name illuminates green when the sensor is active.
 - The [Toggle](#) virtual LED next to the sensor number and sensor name illuminates green after the sensor is activated and increments by one each time the sensor is interrupted (activated or deactivated).

For example, opening the flatbed cover increments the [Flatbed cover Toggle](#) item count two times—once when the door is opened, and once when the door is closed.
5. Touch the [Reset Sensors](#) button to reset the [Toggle](#) count item.

-or-

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

Scanner tests sensors

- ADF paper present
- ADF Y (length)
- ADF jam cover
- ADF paper path skew
- ADF paper path pick success
- Paper path sensor 1 (unreachable)
- Paper path sensor 2 (unreachable)
- Flatbed Y (length)
- Flatbed cover

Diagrams

Use the diagrams in this section to identify product components.

Block diagrams

Sensors

Sensors (product base)

Figure 2-26 Sensors (product base)

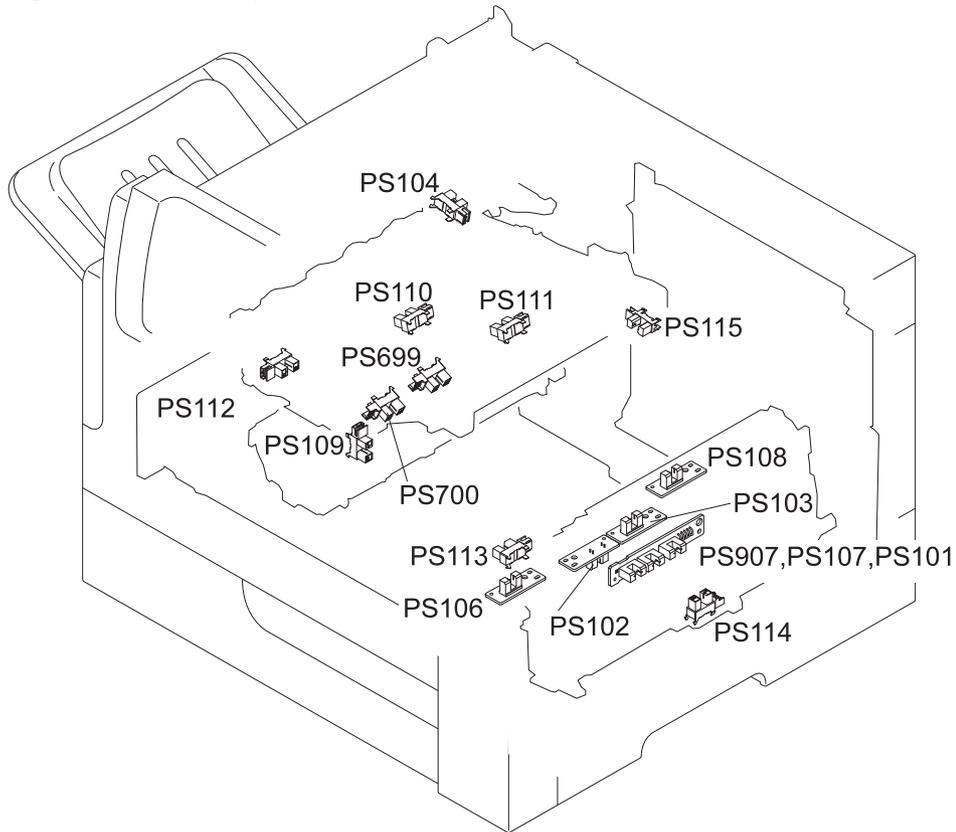


Table 2-16 Sensors (product base)

Sensor	Description	Sensor	Description
PS101	Cassette media out sensor	PS111	Switchback jam sensor
PS102	Pre-feed sensor	PS112	Delivery sensor
PS103	TOP sensor	PS113	Duplex re-pickup sensor
PS104	Output-bin media-full sensor	PS114	MP tray media-out sensor
PS106	Media width 1 sensor	PS115	Cartridge sensor
PS107	Cassette media stack surface 1 sensor	PS699	Fuser pressure release sensor
PS108	Media width 2 sensor	PS700	Fuser output sensor
PS109	Duplex side registration sensor	PS907	Cassette media stack surface 2 sensor
PS110	Switchback sensor		

Sensors (1x500-sheet paper feeder and 1x500-sheet paper feeder with cabinet)

NOTE: The diagram shows the 1x500-sheet paper feeder with cabinet. The sensors are the same for the 1x500-sheet paper feeder.

Figure 2-27 Sensors (1x500-sheet paper feeder and 1x500-sheet paper feeder with cabinet)

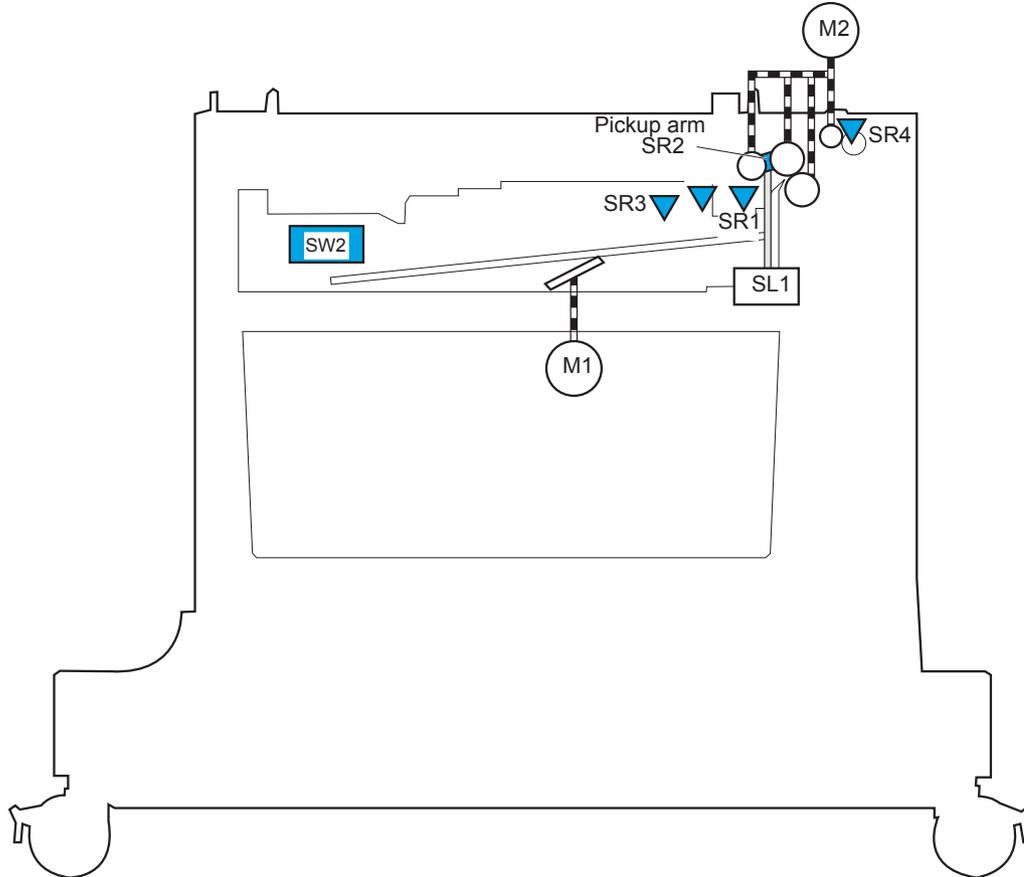


Table 2-17 Sensors (1x500-sheet paper feeder and 1x500-sheet paper feeder with cabinet)

Sensor	Description
SR1	Tray 3 paper surface sensor 1
SR2	Tray 3 paper surface sensor 2
SR3	Tray 3 paper presence sensor
SR4	Tray 3 paper present sensor
SW2	Tray 3 paper size switches

Sensors (2,500-sheet high-capacity feeder) (HCI)

Figure 2-28 Sensors (2,500-sheet high-capacity feeder) (HCI)

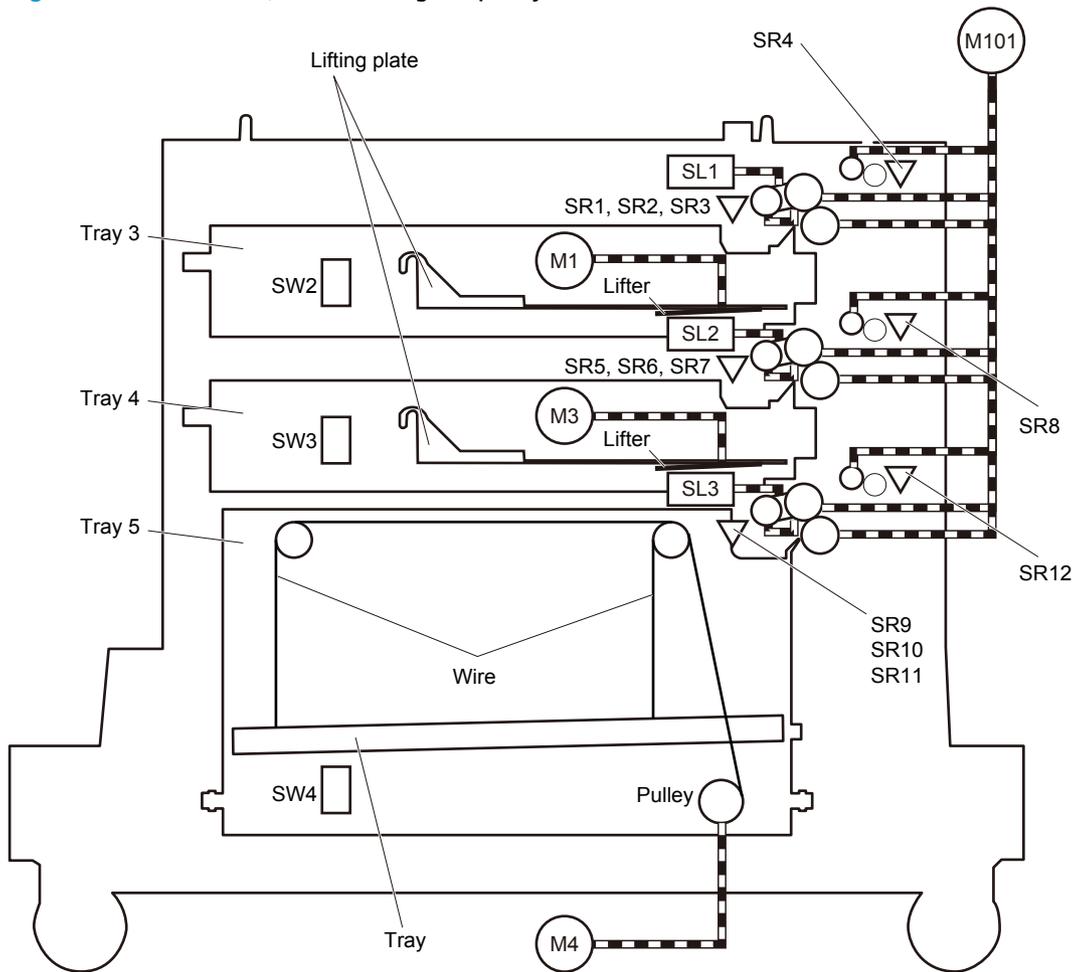


Table 2-18 Sensors (2,500-sheet high-capacity feeder) (HCI)

Sensor	Description	Sensor	Description
SW1	Right door open detection switch	SR5	Tray 4 media stack surface sensor 1
SW2	Tray 3 media size switch	SR6	Tray 4 media stack surface sensor 2
SW3	Tray 4 media size switch	SR7	Tray 4 media out sensor
SW4	Tray 5 media size switch	SR8	Tray 4 media feed sensor
SR1	Tray 3 media stack surface sensor 1	SR9	Tray 5 media stack surface sensor 1
SR2	Tray 3 media stack surface sensor 2	SR10	Tray 5 media stack surface sensor 2
SR3	Tray 3 media out sensor	SR11	Tray 5 media out sensor
SR4	Tray 3 media feed sensor	SR12	Tray 5 media feed sensor

Sensors (stapling mailbox)

Figure 2-29 Sensors (SSMBM)

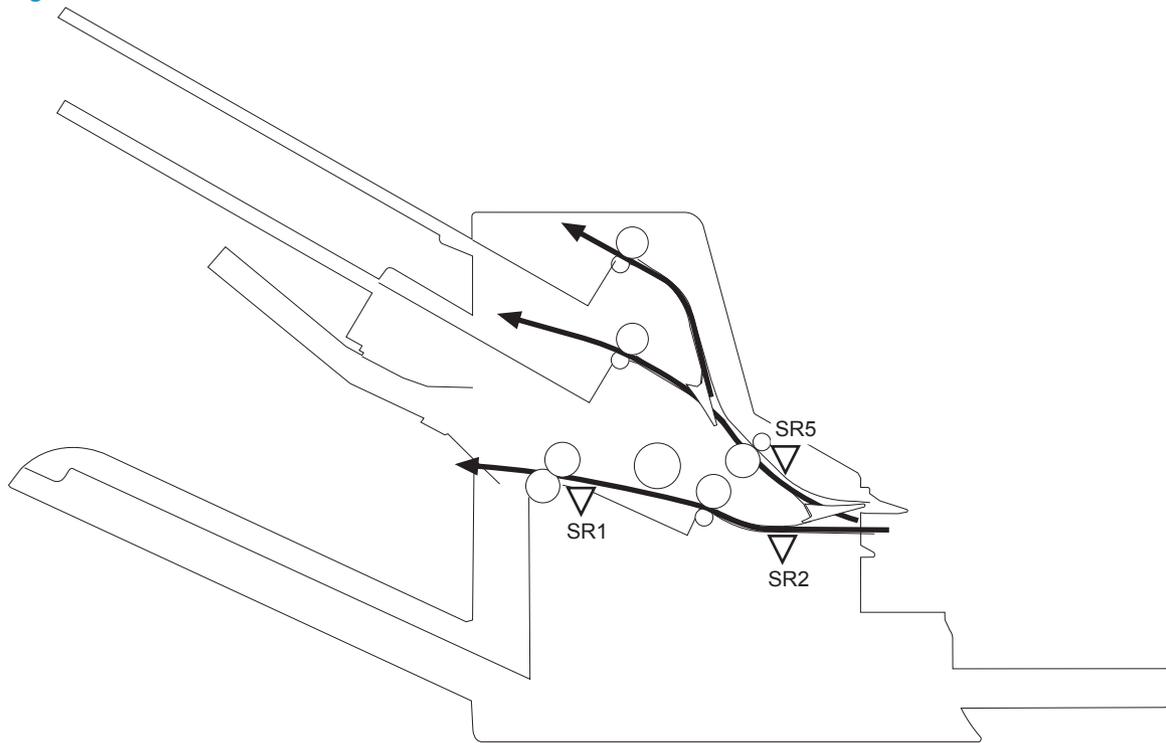


Table 2-19 Sensors (SSMBM)

Sensor	Description
SR1	Output bin 3 delivery sensor
SR2	Staple stacker multi-bin mailbox media feed sensor 1
SR5	Staple stacker multi-bin mailbox media feed sensor 2

Switches (product base)

Figure 2-30 Switches (product base)

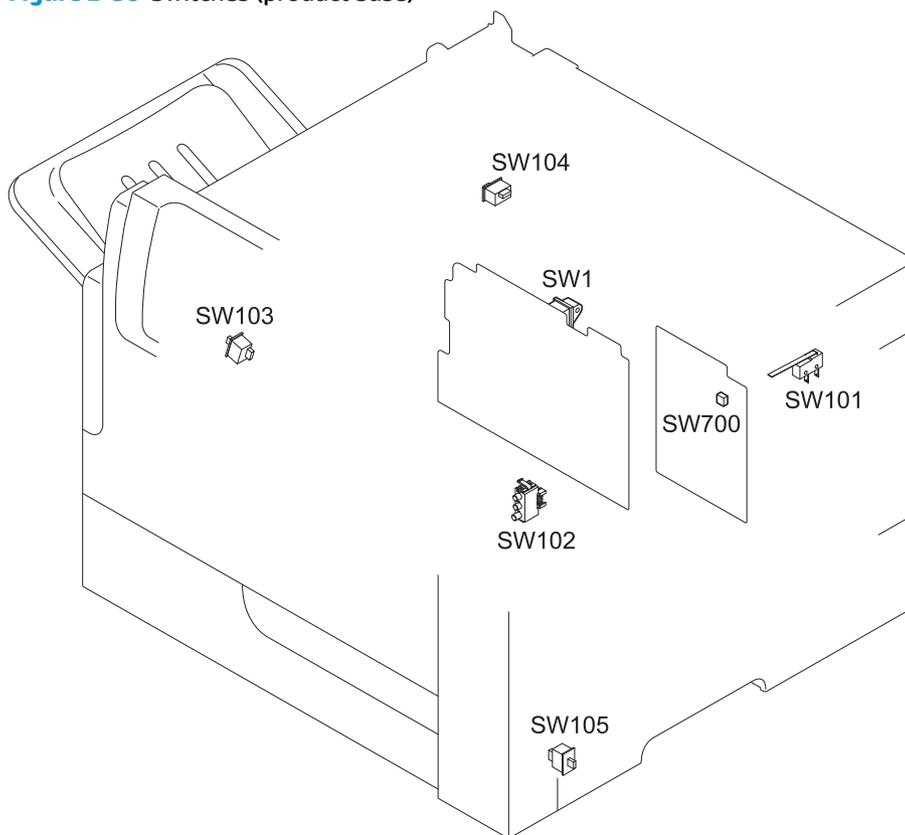


Table 2-20 Switches (product base)

Item	Description	Item	Description
SW1	Power switch	SW104	Output accessory detection switch
SW101	Interlock switch	SW105	Cassette door-open-detection switch
SW102	Cassette media size switch	SW700	Test-print switch
SW103	Face-up bin detection switch		

Solenoids (product base)

Figure 2-31 Solenoids (product base)

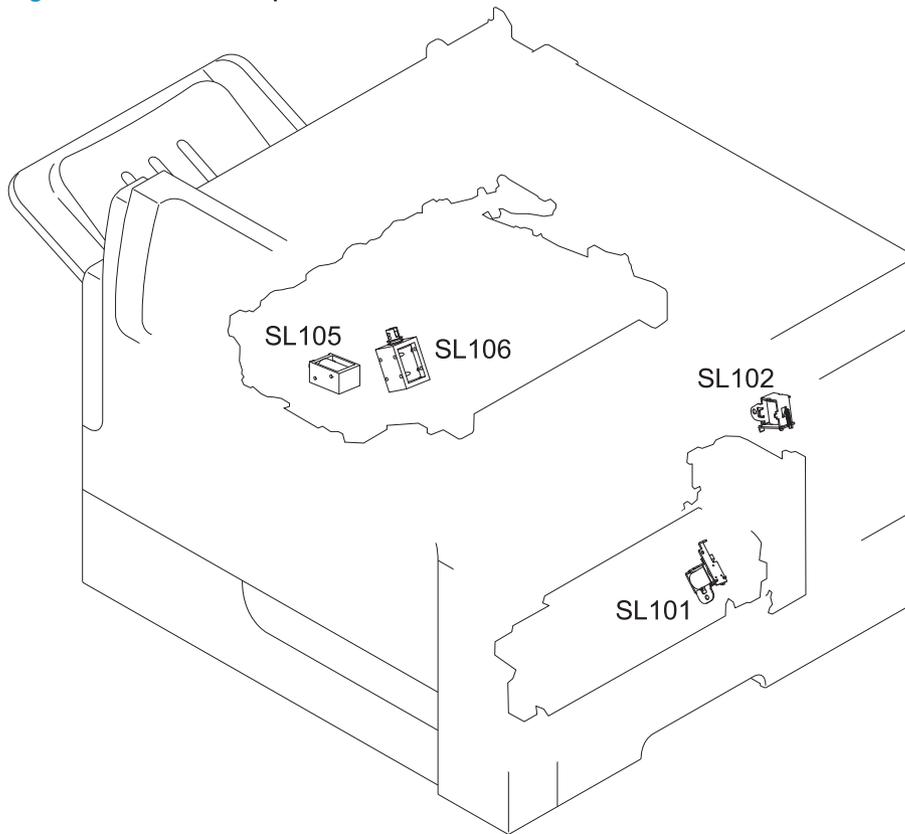


Table 2-21 Solenoids (product base)

Item	Description
SL101	Cassette pickup solenoid
SL102	MP tray pickup solenoid
SL105	Face-up solenoid
SL106	Switchback roller disengagement solenoid

Clutch (product base)

Figure 2-32 Clutch (product base)

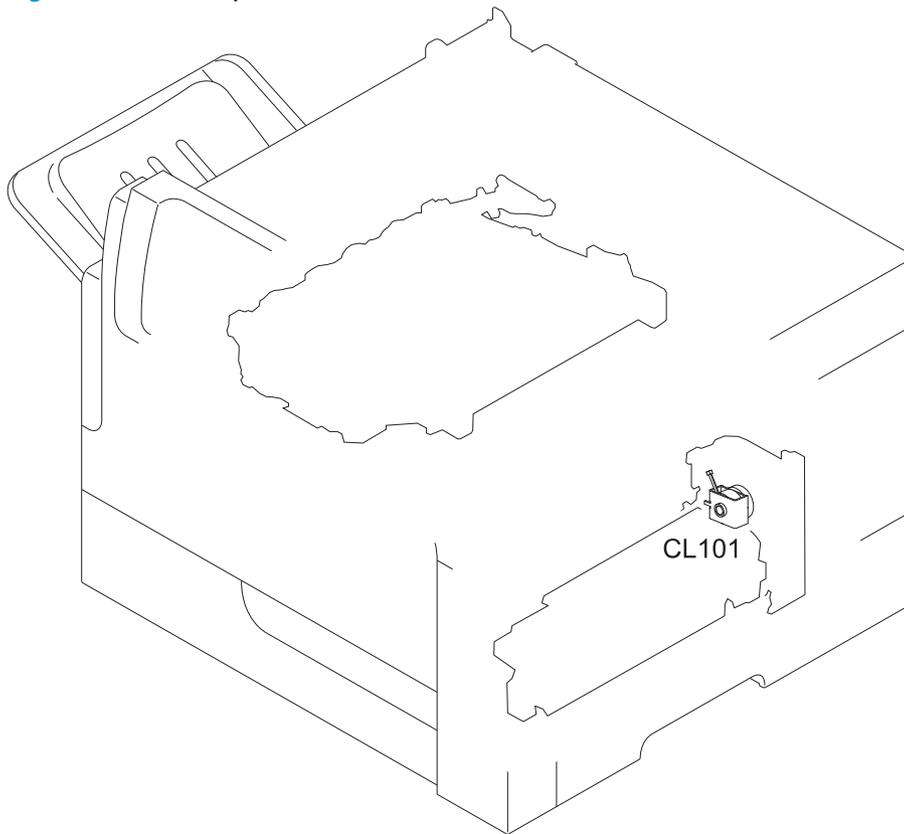


Table 2-22 Clutch (product base)

Item	Description
CL101	Media feed clutch

Motors

Motors (product base)

Figure 2-33 Motors (product base)

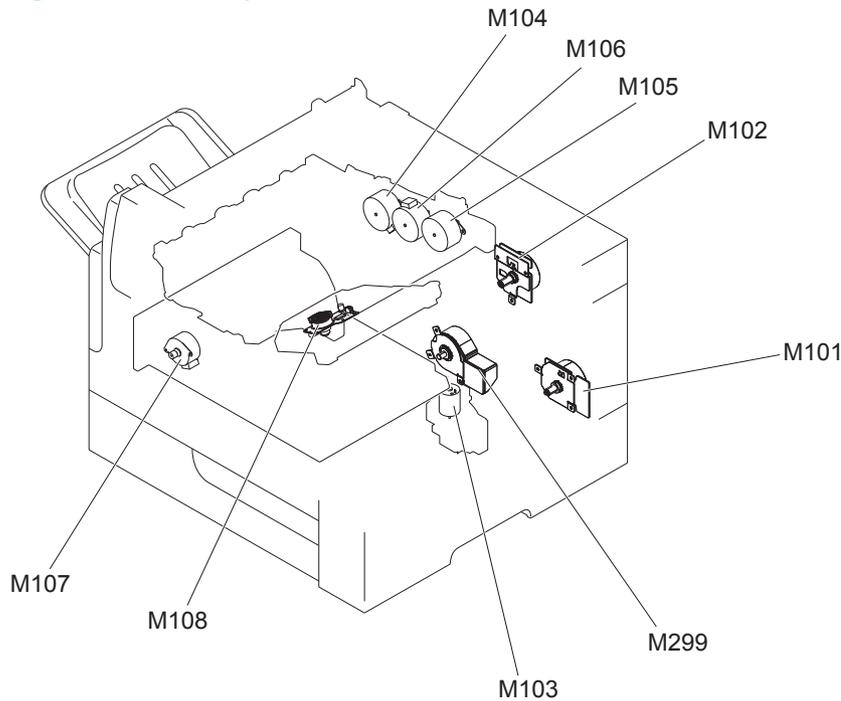


Table 2-23 Motors (product base)

Item	Component	Component driven
M101	Feed motor	Cassette pickup roller, MP tray pickup roller, feed roller and rollers for the input accessory
M102	Drum motor	Photosensitive drum, primary charging roller and transfer roller
M103	Cassette lifter motor	Lifter for the cassette
M104	Intermediate switchback motor	Intermediate switchback roller
M105	Switchback motor	Switchback roller
M106	Delivery motor	Intermediate feed roller and delivery roller
M107	Duplex re-pickup motor	Duplex feed roller
M108	Laser/scanner motor	Scanner mirror
M299	Fuser motor	Pressure roller and fuser delivery roller Pressurizes or releases the pressure roller

Motors (1 x 500-sheet paper feeder)

Figure 2-34 Motors (1 x 500-sheet paper feeder)

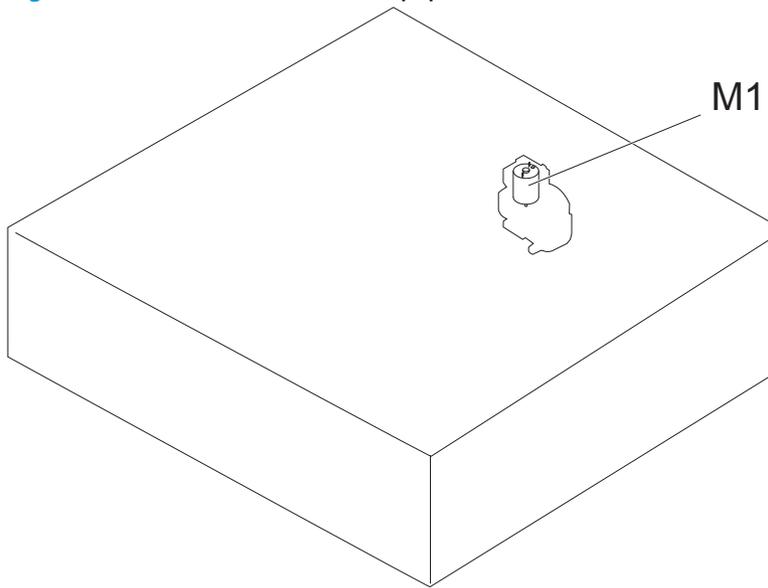


Table 2-24 Motors (1 x 500-sheet paper feeder)

Item	Component	Component driven
M1	Paper feeder cassette lifter motor	Lifter of the paper feeder cassette

Motors (1x500-sheet paper deck with cabinet)

Figure 2-35 Motors (1x500-sheet paper feeder)

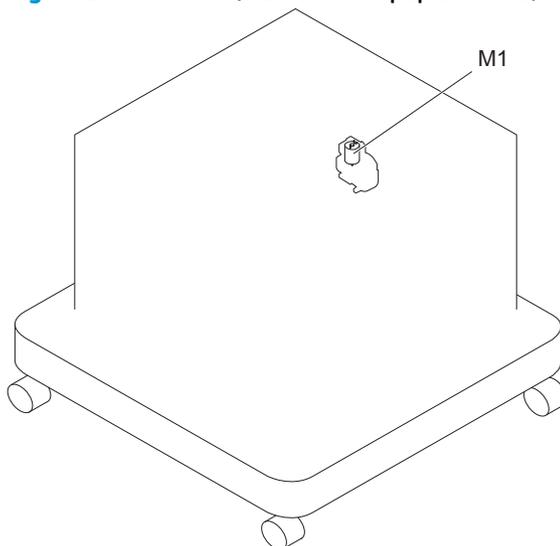


Table 2-25 Motors (1x500-sheet and 3 x 500-sheet paper deck)

Item	Component	Component driven
M1	Paper feeder Tray 3 lifter motor	Lifter of the paper feeder Tray 3

Motors (2,500-sheet high-capacity feeder) (HCI)

Figure 2-36 Motors (2,500-sheet high-capacity feeder) (HCI)

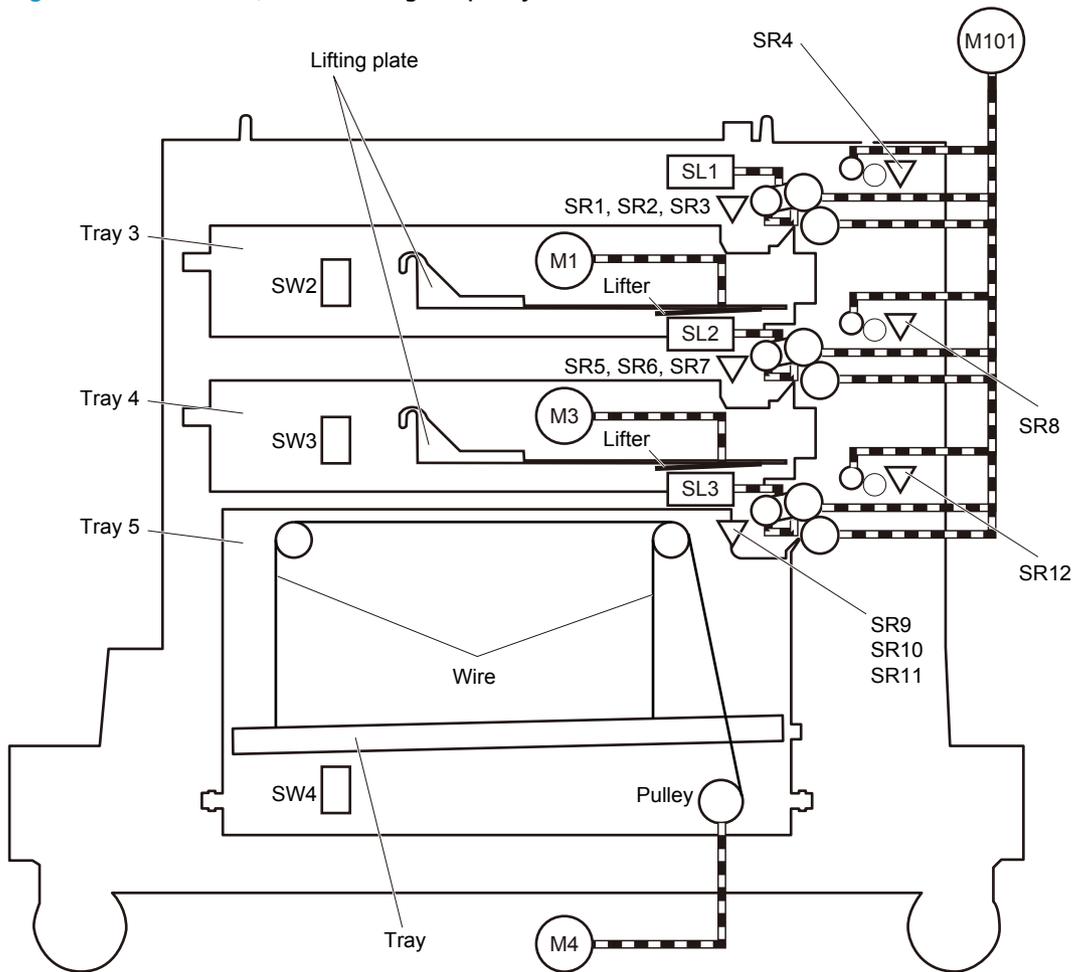


Table 2-26 Motors (1x500-sheet and 3 x 500-sheet paper deck)

Item	Component	Component driven
M1	Paper feeder Tray 3 lifter motor	Lifter of the paper feeder Tray 3
M2	Paper feeder Tray 4 lifter motor	Lifter of the paper feeder Tray 4
M3	Paper feeder Tray 5 lifter motor	Lifter of the paper feeder Tray 5

Motors (stapling mailbox)

Figure 2-37 Motors (SSMBM)

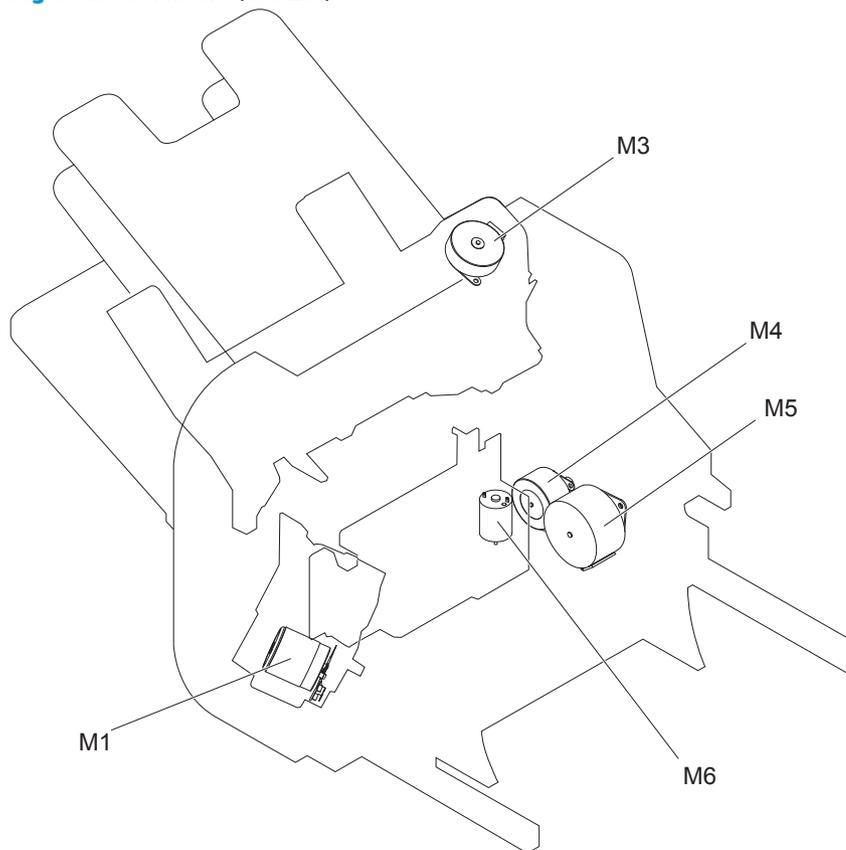


Table 2-27 Motors (SSMBM)

Item	Component	Component driven
M1	Stapler motor	Stapler
M3	Jogger motor	Jogger guide
M4	Paddle motor	Alignment roller Dis/engagement of the alignment roller Dis/engagement of the output bin 3 upper delivery roller
M5	Staple stacker multi-bin mailbox feed motor	Staple stacker multi-bin mailbox feed roller, staple stacker multi-bin mailbox delivery roller, output bin 3 upper delivery roller and output bin 3 lower delivery roller
M6	Staple stacker multi-bin mailbox lifter motor	Output bin 3

Fans (product base)

Figure 2-38 Fans (product base)

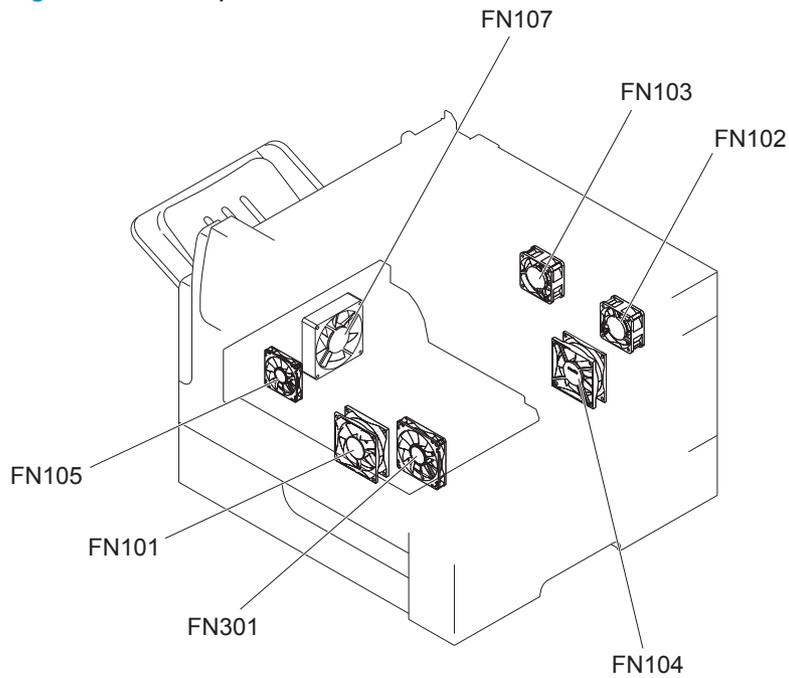


Table 2-28 Fans (product base)

Item	Component	Cooling area	Type	Speed
FN101	Main fan	Cartridge area, engine power supply area and laser/scanner area	Intake	Full/half
FN102	Laser/scanner fan	Laser/scanner area	Intake	Full
FN103	Cartridge front side fan	Cartridge area	Intake	Full
FN104	Low-voltage power supply fan	Low-voltage power supply area	Intake	Full/half
FN105	Switchback fan	Switchback area	Intake	Full
FN107	Duplex fan	Duplex feed area	Intake	Full
FN301	Cartridge fan	Cartridge area	Intake	Full

Main assemblies

Main assemblies (product base; 1 of 2)

Figure 2-39 Main assemblies (product base; 1 of 2)

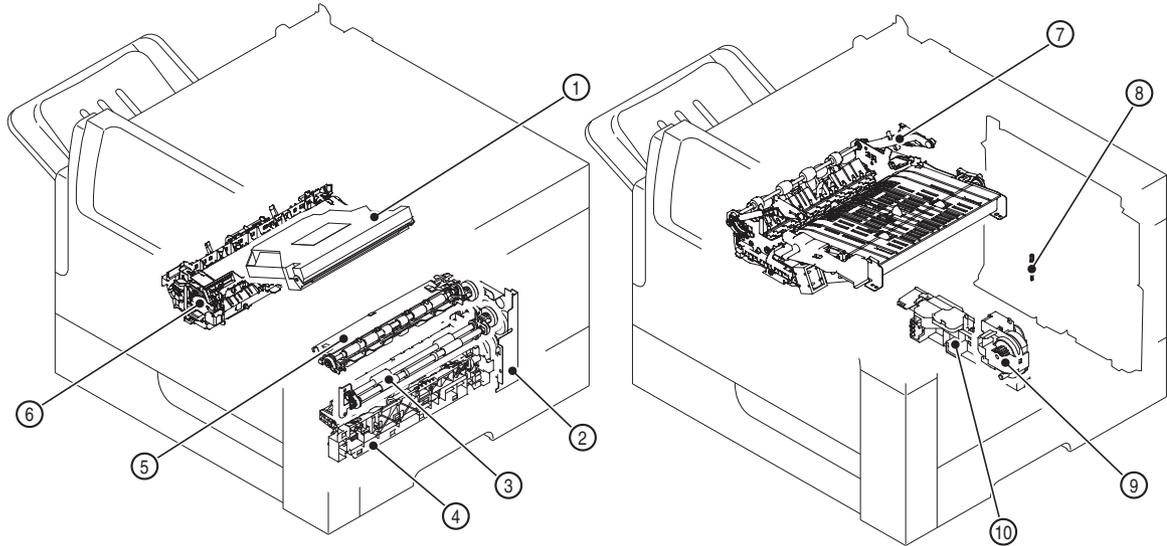


Table 2-29 Main assemblies (product base; 1 of 2)

Item	Description	Item	Description
1	Laser/scanner assembly	6	Fuser
2	Pickup drive assembly	7	Switchback assembly
3	Feed roller assembly	8	Environment sensor assembly
4	Cassette pickup assembly	9	Lifter drive assembly
5	Registration assembly	10	Cassette lifter assembly

Main assemblies (product base; 2 of 2)

Figure 2-40 Main assemblies (product base; 2 of 2)

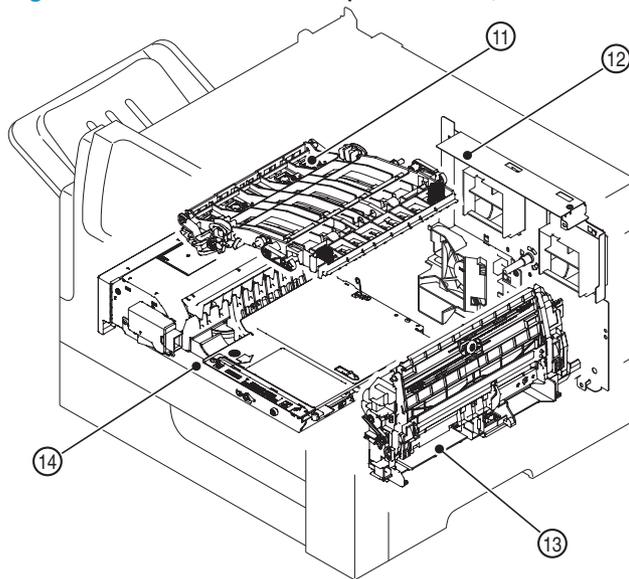


Table 2-30 Main assemblies (product base; 2 of 2)

Item	Description	Item	Description
11	Laser/scanner assembly	13	Fuser
12	Pickup drive assembly	14	Switchback assembly

Main assemblies (1x500-sheet paper feeder)

Figure 2-41 Main assemblies (1x500-sheet paper feeder)

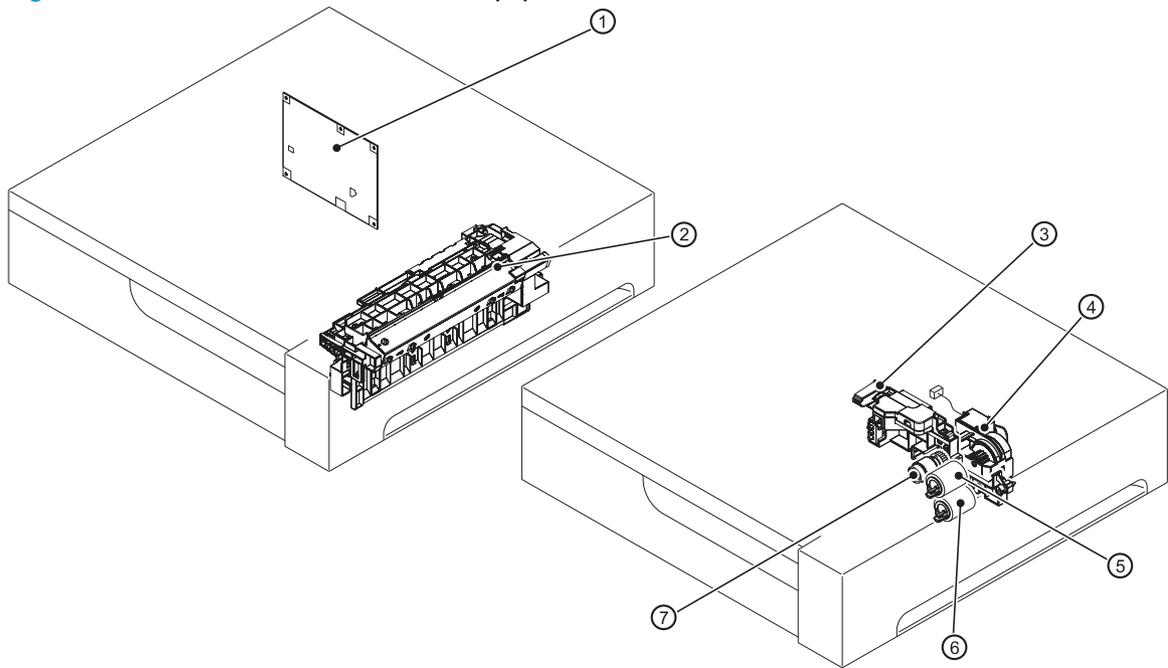


Table 2-31 Main assemblies (1 x 500-sheet paper feeder)

Item	Description	Item	Description
1	Paper feeder controller PCA	5	Paper feeder feed roller
2	Paper feeder pickup assembly	6	Paper feeder separation roller
3	Paper feeder lifter assembly	7	Paper feeder pickup roller
4	Paper feeder lifter drive assembly		

Main assemblies (1x500-sheet paper feeder with cabinet)

Figure 2-42 Main assemblies (1x 500-sheet paper feeder with cabinet)

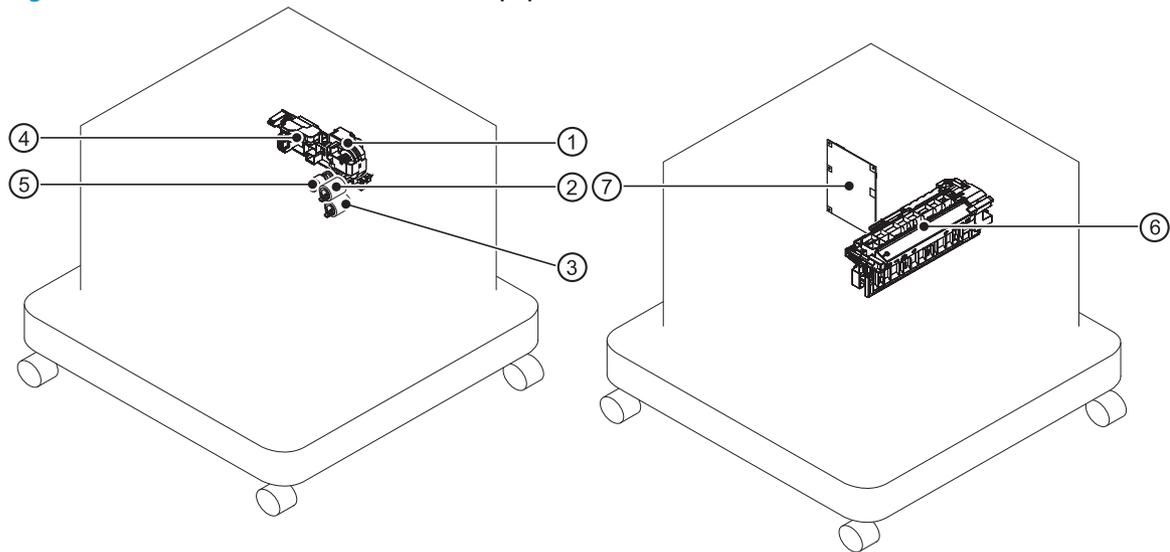


Table 2-32 Main assemblies (1x500-sheet paper feeder with cabinet)

Item	Description	Item	Description
1	Paper deck lifter drive assembly	5	Paper deck cassette pickup roller
2	Paper deck cassette feed roller	6	Paper deck pickup assembly
3	Paper deck cassette separation roller	7	Paper deck controller PCA
4	Paper deck lifter assembly		

Main assemblies (2,500-sheet high-capacity feeder) (HCI)

Figure 2-43 Main assemblies (2,500-sheet high-capacity feeder) (HCI)

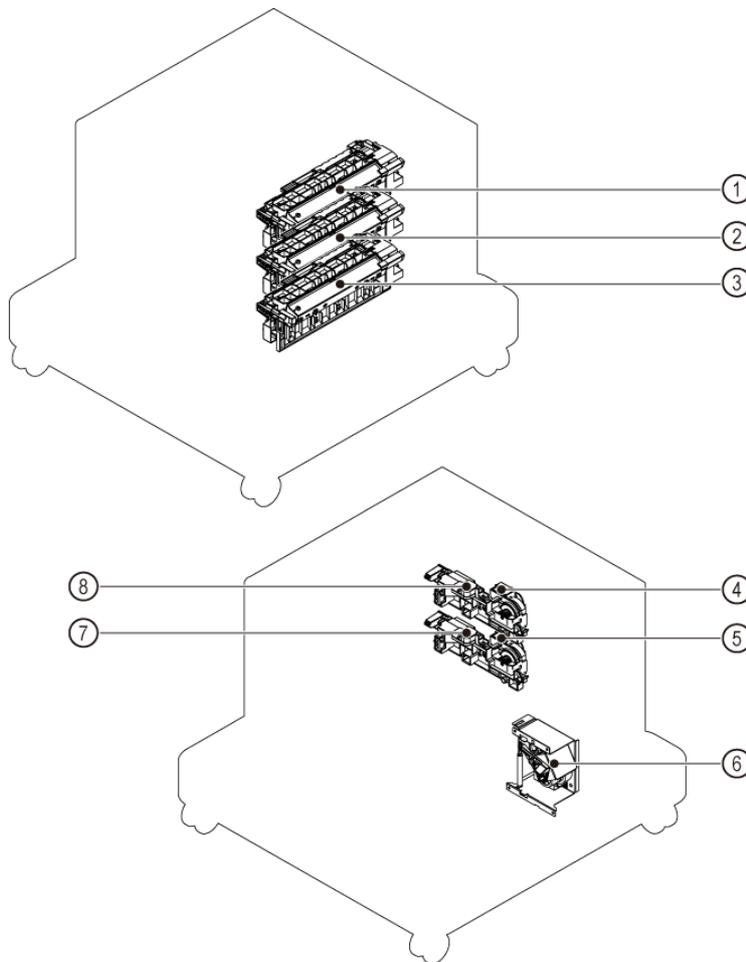


Table 2-33 Main assemblies (2,500-sheet high-capacity feeder) (HCI)

Item	Description	Item	Description
1	Tray 3 pickup assembly	5	Tray 4 lifter drive assembly
2	Tray 4 pickup assembly	6	Tray 5 lifter drive assembly
3	Tray 5 pickup assembly	7	Tray 4 lifter assembly
4	Tray 3 lifter drive assembly	8	Tray 5 lifter assembly

Main assemblies (stapling mailbox; 1 of 2)

Figure 2-44 Main assemblies (SSMBM; 1 of 2)

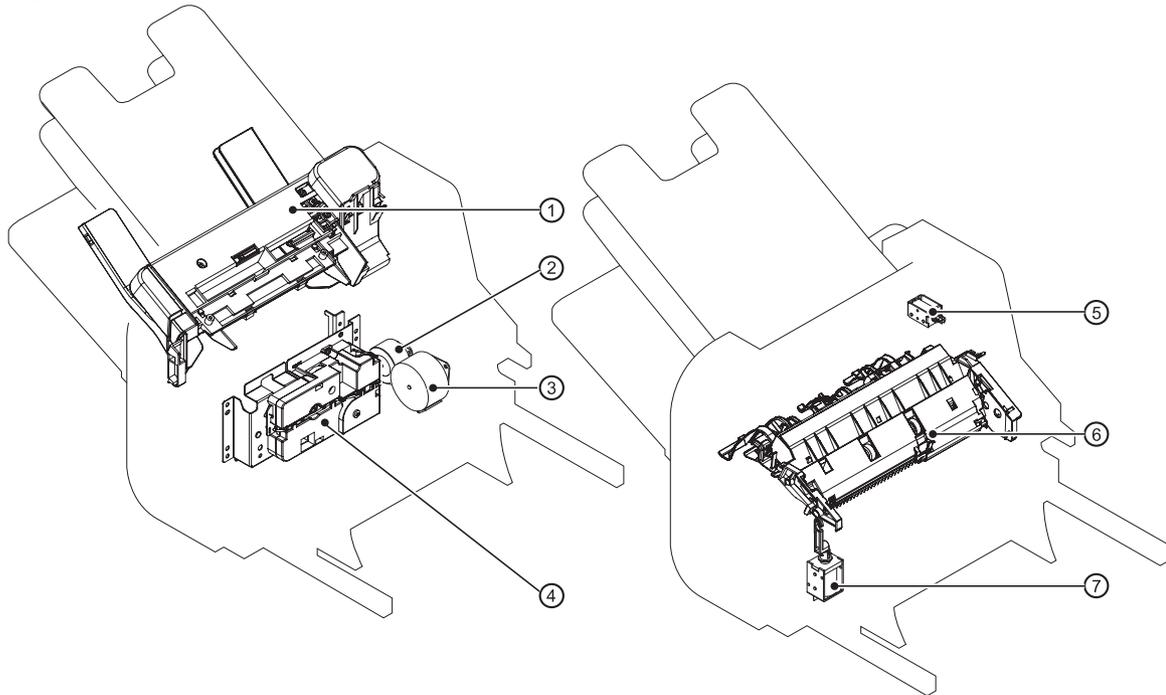


Table 2-34 Main assemblies (SSMBM; 1 of 2)

Item	Description	Item	Description
1	Jogger assembly	5	Output bin solenoid
2	Paddle motor	6	Stage top assembly
3	Staple stacker multi-bin mailbox feed motor	7	Inlet solenoid
4	Output bin 3 drive assembly		

Main assemblies (stapling mailbox; 2 of 2)

Figure 2-45 Main assemblies (SSMBM; 2 of 2)

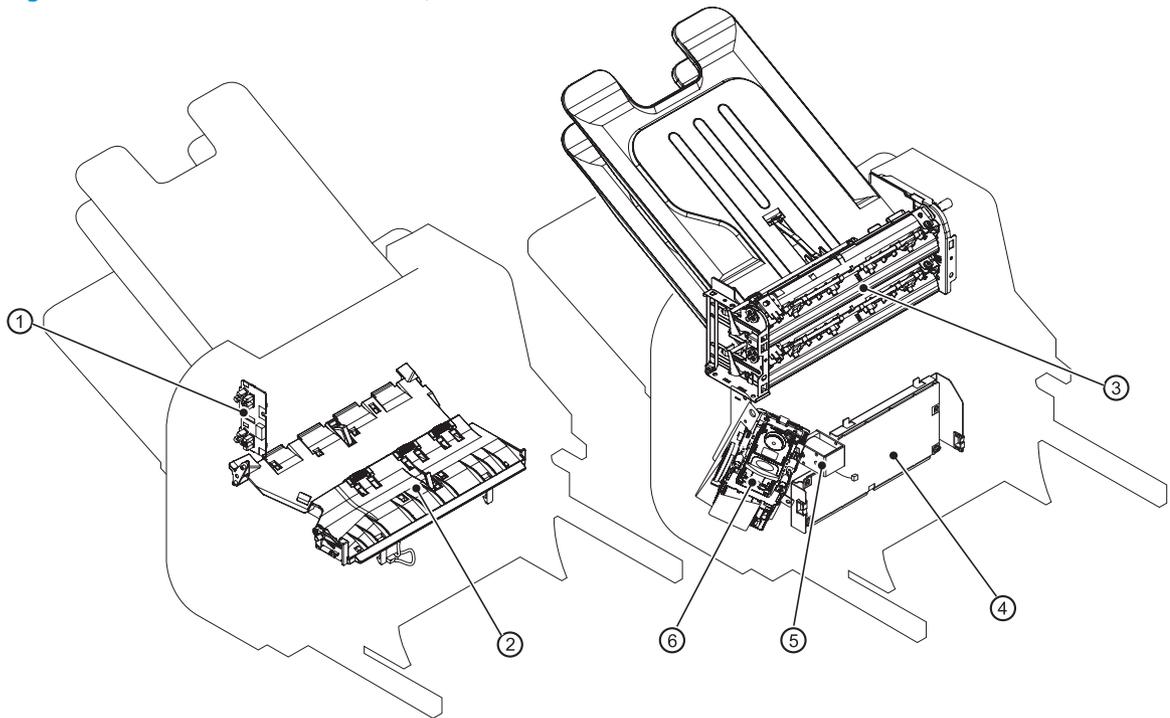


Table 2-35 Main assemblies (SSMBM; 2 of 2)

Item	Description
1	Output bin sensor PCA
2	Stage assembly
3	Multi-bin mailbox output bin assembly
4	Staple stacker multi-bin mailbox controller PCA
5	Stamp solenoid
6	Stapler assembly

Main PCAs (product base)

Figure 2-46 Main PCAs (product base)

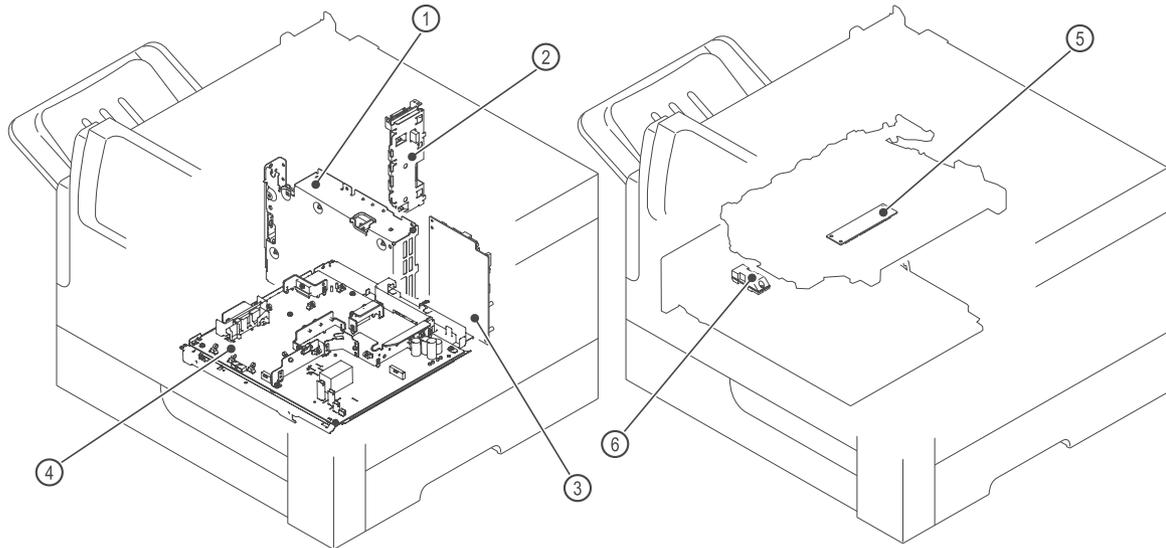


Table 2-36 Main PCAs (product base)

Item	Description	Item	Description
1	Low-voltage power supply assembly	4	Engine power supply assembly
2	Interconnect board (ICB)	5	Switchback connector PCA
3	DC controller	6	Duplex connector PCA

Rollers (product base)

Figure 2-47 Rollers (product base)

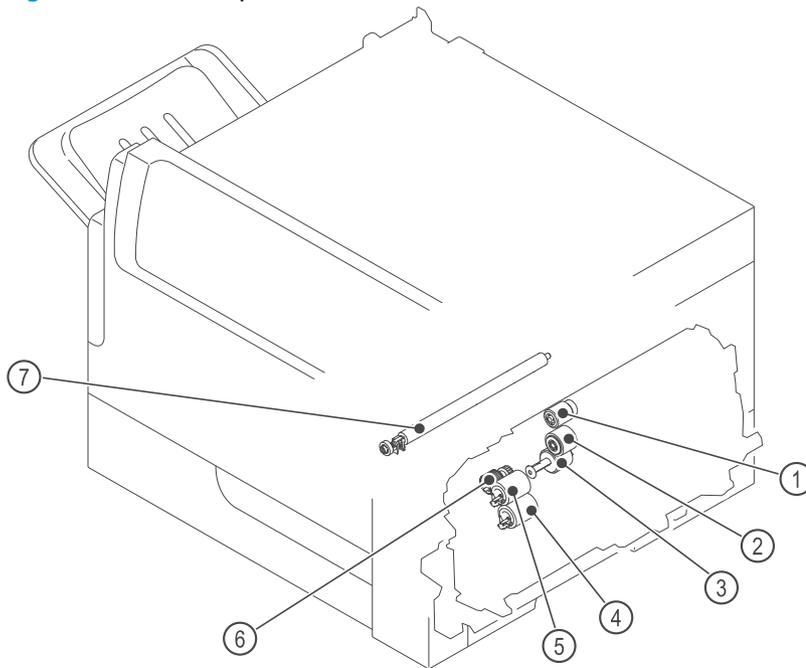


Table 2-37 Rollers (product base)

Item	Description	Item	Description
1	MP tray pickup roller	5	Cassette feed roller
2	MP tray feed roller	6	Cassette pickup roller
3	MP tray separation roller	7	Transfer roller
4	Cassette separation roller		

DC controller connections

Each of the connections on the DC controller PCA is indicated in the following figure.

Figure 2-48 DC controller PCA connectors

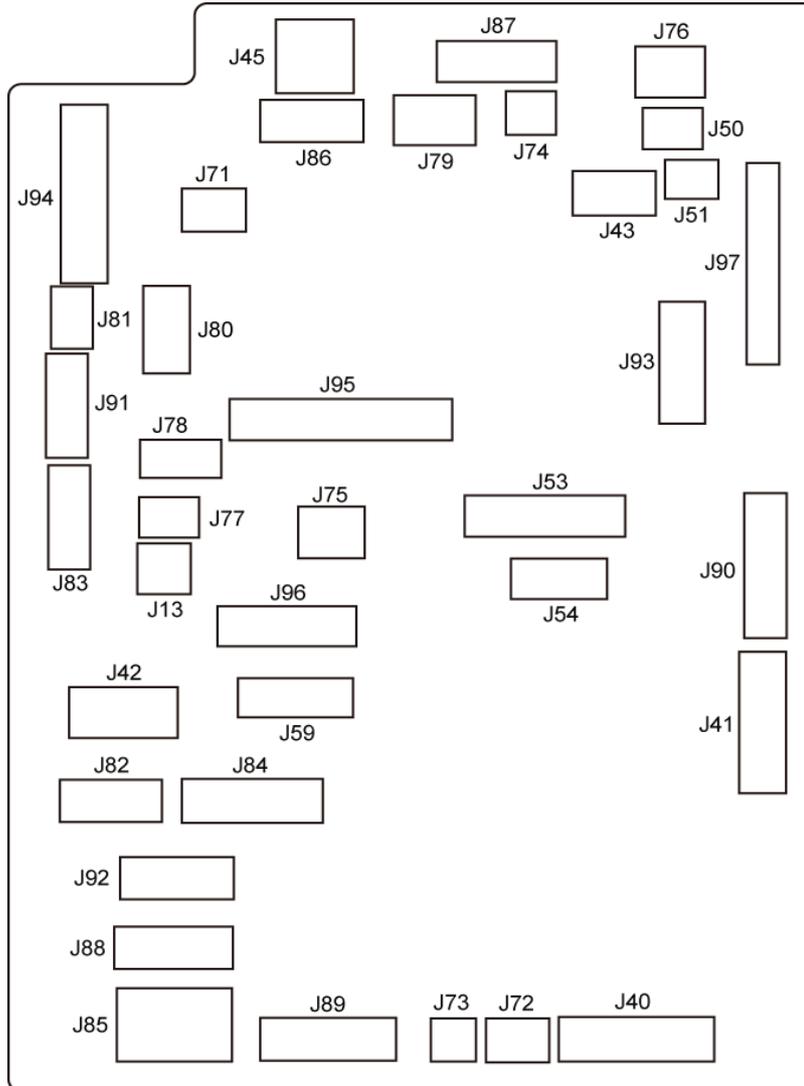


Table 2-38 DC controller connectors

Item	Description	Item	Description
J13	Cartridge door open detection switch (SW106)	J79	Cartridge front-side fan (FN103)
J40	Merge motor (M104)	J80	Empty
	Switchback (reverse) motor (M105)		
	Delivery motor (M106)		

Table 2-38 DC controller connectors (continued)

Item	Description	Item	Description
J41	Switchback (reverse) jam sensor (PS111) Face-up solenoid (SL105) Switchback (reverse) roller disengagement solenoid (SL106) Switchback (reverse) sensor (PS110) Delivery sensor (PS112)	J81	MP (Tray 1) media out switch (PS114)
J42	Environmental sensor (TH3) LVPS fan (FN104)	J82	Fuser pressure release sensor (PS699) Fuser output sensor (PS700) Main thermistor (TH1) Sub thermistor (TH2)
J43	Face up bin detection switch (SW103) Switchback fan (FN105)	J83	Envelope feeder
J45	Image scanner assembly	J84	Duplex repick motor (M107) Duplex Fan (FN107) Duplex side registration sensor (PS109) Duplex repick sensor (PS113)
J50	Cartridge sensor (PS115)	J85	HVPS
J51	Output accessory detection switch (SW104)	J86	Scanner motor (M108)
J53	LVPS	J87	Drum motor (M102)
J54	LVPS	J88	Paper feeder or HCI
J59	Empty	J89	Fuser motor (M299)
J71	MP (Tray 1) pickup solenoid (SL102)	J90	Stapling mailbox
J72	Cassette (Tray 2) media size switch (SW102)	J91	Feed motor (M101)
J73	Cassette (Tray 2) lifter motor (M103)	J92	Cassette (Tray 2) pickup solenoid (SL101) Cassette (Tray 2) media out sensor (PS101) Cassette (Tray 2) media stack surface 1 sensor (PS107) Cassette (Tray 2) media stack surface 2 sensor (PS907)
J74	Memory tag (E-label; TG101)	J93	Laser scanner

Table 2-38 DC controller connectors (continued)

Item	Description	Item	Description
J75	Laser scanner fan (FN102)	J94	Prefeed sensor (PS102) TOP sensor (PS103) Media width sensor 1 (PS106) Media width sensor 2 (PS108) Power switch (SW1061) Cassette (Tray 2) door open switch (SW105)
J76	Output bin full sensor (PS104)	J95	HVPS
J77	Media feed clutch (CL101)	J96	HVPS
J78	Interlock switch (SW101)	J97	ICB

Scanner controller board (SCB) connectors

Figure 2-49 Scanner controller board (SCB) connectors

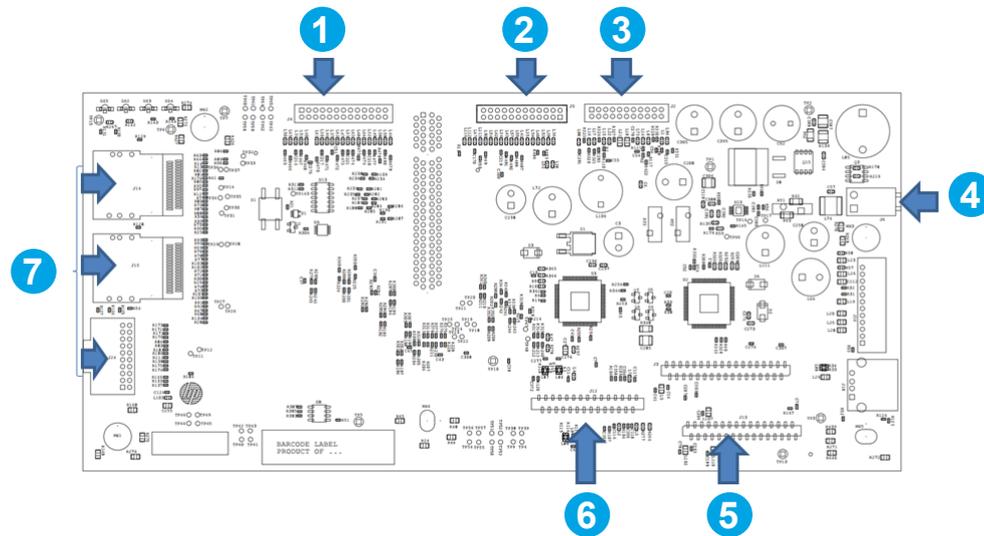


Table 2-39 Scanner controller board (SCB) connectors

Item	Description	Item	Description
1	Document feeder sensors	5	Image scanner (A4)
2	Document feeder motors	6	Backside background selector
3	Document feeder	7	Formatter
4	Power (LVPS)		

1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high-capacity feeder connectors

Figure 2-50 1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high-capacity feeder connectors

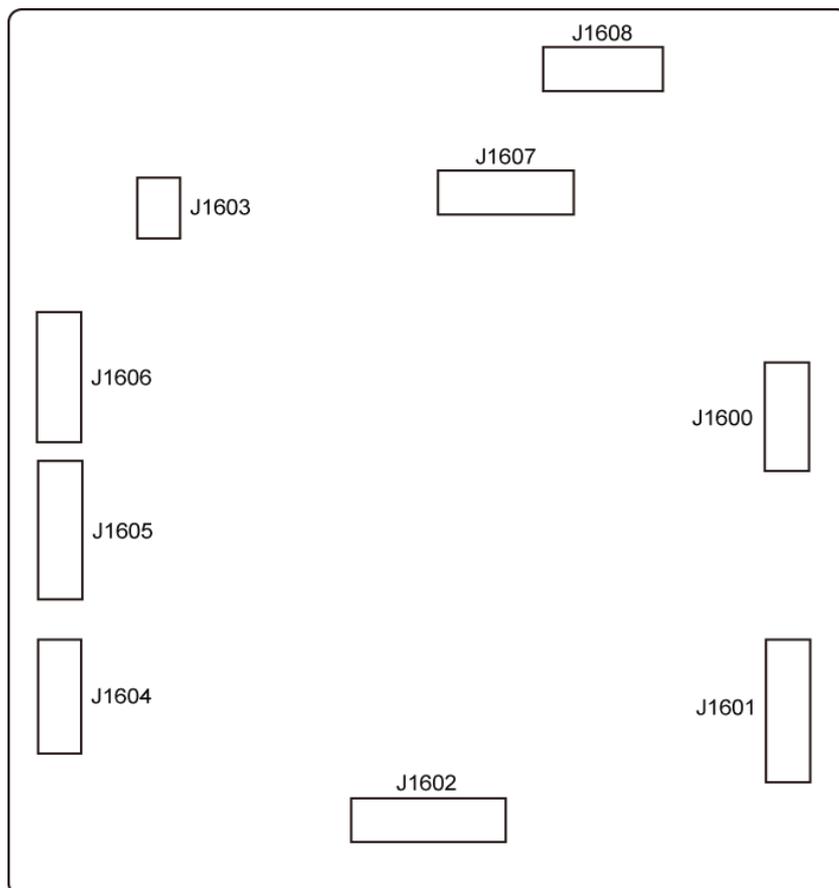


Table 2-40 1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high-capacity feeder connectors

Item	Description	Item	Description
J1600	Empty	J1605	Tray 4 media stack surface sensor 1 (SR5) ¹ Tray 4 media stack surface sensor 2 (SR6) ¹ Tray 4 media out sensor (SR7) ¹ Tray 4 media feed sensor 1 (SR8) ¹ Tray 4 pickup solenoid (SL2) ¹
J1601	Tray 5 lifter motor (M4) ¹ Tray 5 media size switch (SW4) ¹	J1606	Tray 3 lifter motor (M1) Tray 3 media size switch (SW2)

Table 2-40 1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high-capacity feeder connectors (continued)

Item	Description	Item	Description
J1602	Tray 5 media stack surface sensor 1 (SR9) ¹ Tray 5 media stack surface sensor 2 (SR10) ¹ Tray 5 media out sensor (SR11) ¹ Tray 5 media feed sensor 1 (SR12) ¹ Tray 5 pickup solenoid (SL3) ¹	J1607	Tray 3 media stack surface sensor 1 (SR1) Tray 3 media stack surface sensor 2 (SR2) Tray 3 media out sensor (SR3) ¹ Tray 3 media feed sensor 1 (SR4) Tray 3 pickup solenoid (SL1)
J1603	Right door open detection switch (SW1) ¹	J1608	DC controller PCA
J1604	Tray 4 lifter motor (M3) ¹ Tray 4 media size switch (SW3) ¹		

¹ 2,500-sheet high-capacity feeder (HCI) only.

Stapling mailbox connectors

Figure 2-51 Stapling mailbox connectors

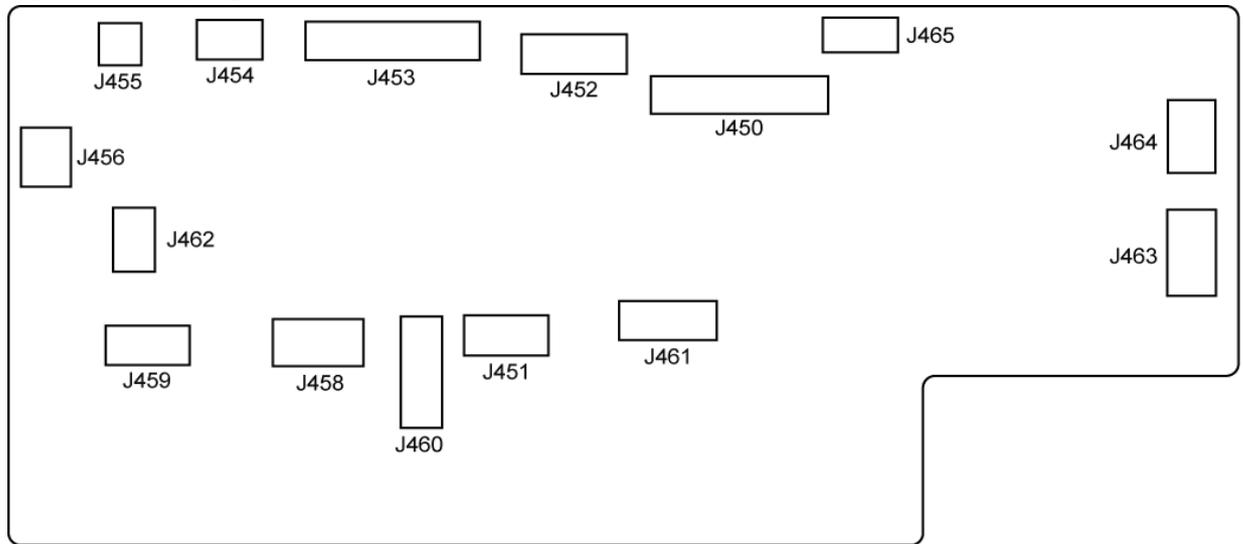


Table 2-41 Stapling mailbox connectors

Item	Description	Item	Description
J450	DC controller PCA	J459	Jogger motor (M3)
J451	Output bin 3 delivery sensor (SR1) Stapling mailbox media feed sensor 1 (SR2)	J460	Empty
J452	Output bin 1 media presence sensor (PS2501) Output bin 2 media-full sensor (PS2502) Output bin 2 media presence sensor (PS2503) Output bin 1 media-full sensor (PS2504)	J461	Stapling mailbox feed motor (M5)

Table 2-41 Stapling mailbox connectors (continued)

Item	Description	Item	Description
J453	Output bin 3 media-full sensor (SR3) Alignment roller sensor (SR4) SSMBM media feed sensor 2 (SR5) Jogger sensor (SR6) Output bin 3 upper delivery roller sensor (SR7)	J462	Stamp solenoid (SL1) Inlet solenoid (SL2)
J454	Output bin 3 upper limit sensor (PS2601) Output bin 3 lower limit sensor (PS2602)	J463	Stapler sensor (PH011) Staple out sensor (PH013) Staple ready sensor (PH012)
J455	SSMBM lifter motor (M6)	J464	Stapler motor (M1)
J456	Output bin solenoid (SL3)	J465	SSMBM door open detection switch (SW1)
J458	Paddle motor (M4)		

General timing chart

Figure 2-52 General timing chart (1 of 2)

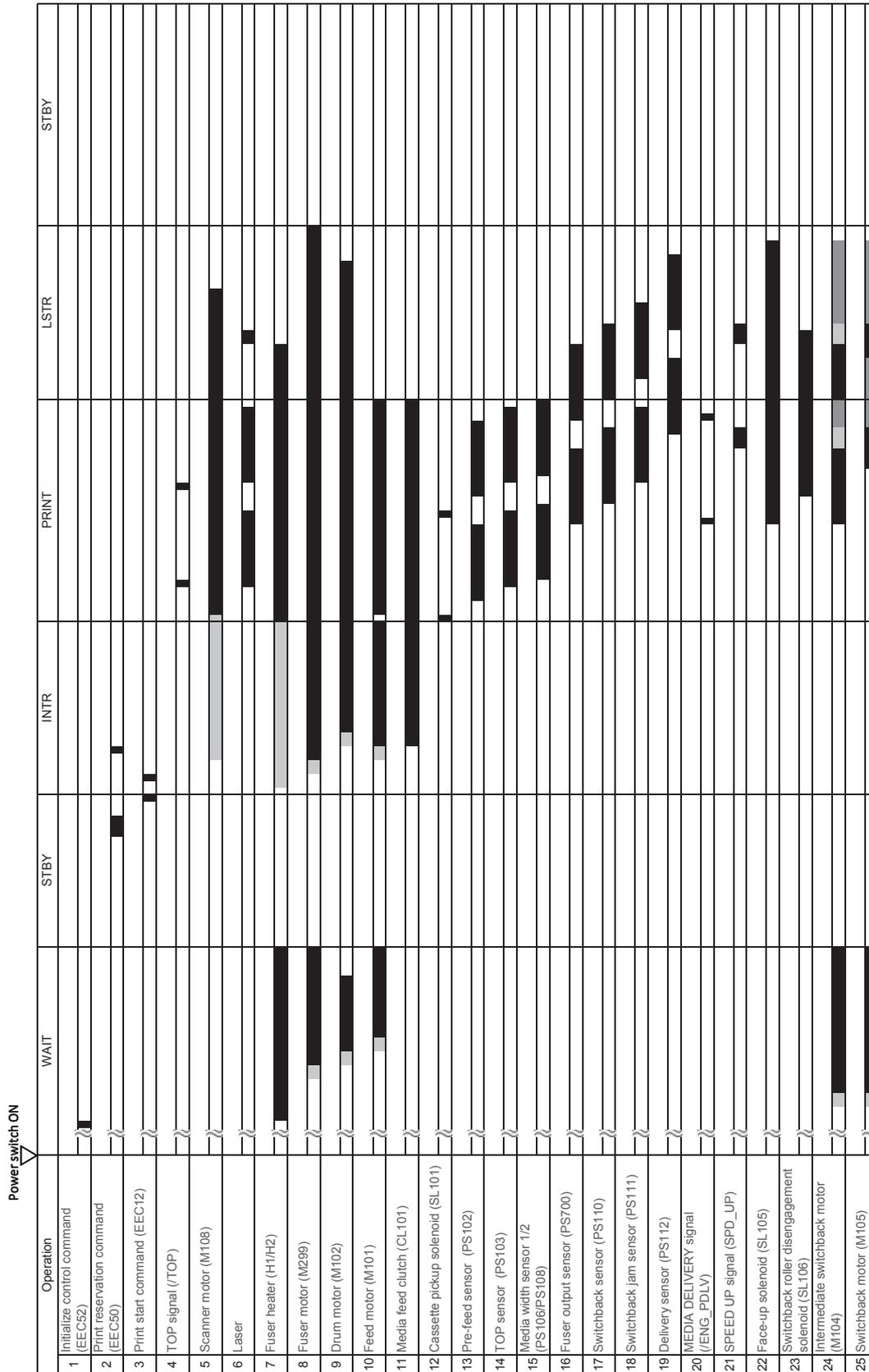
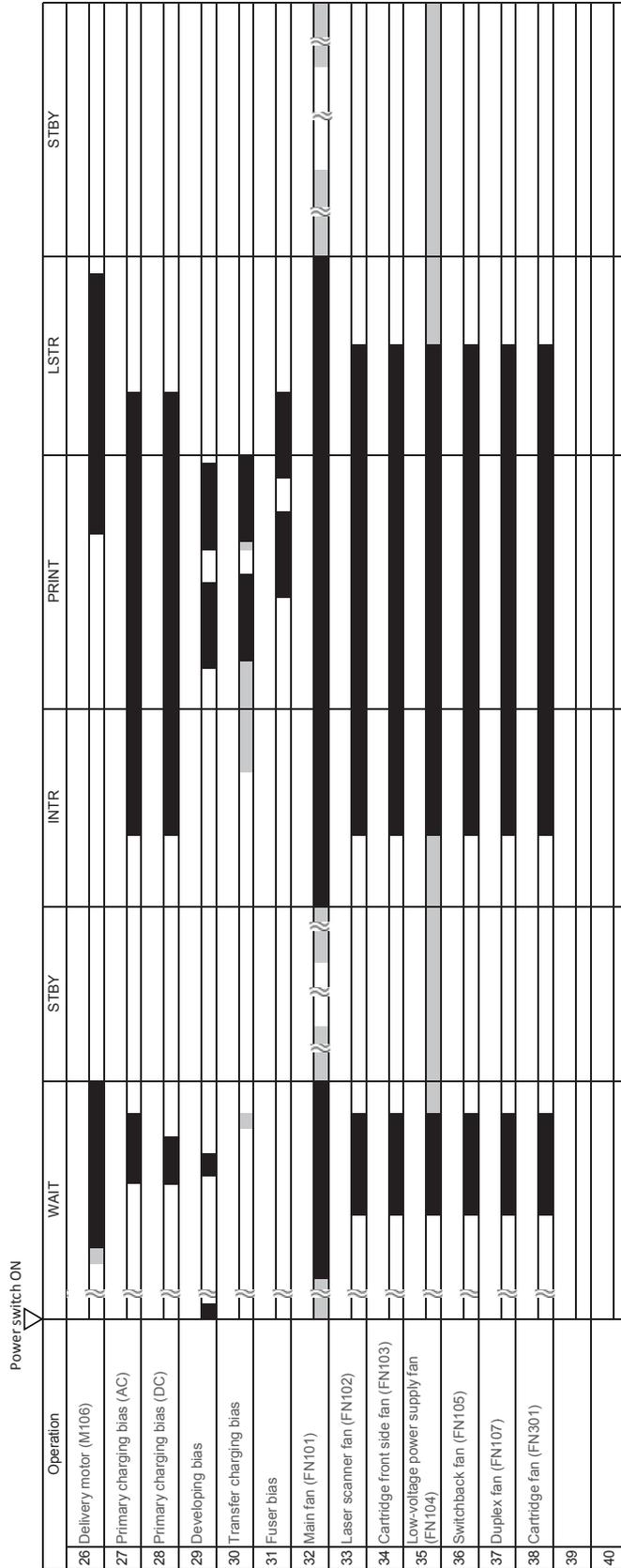


Figure 2-53 General timing chart (2 of 2)



General circuit diagrams

Figure 2-54 General circuit diagram (product base) (1 of 2)

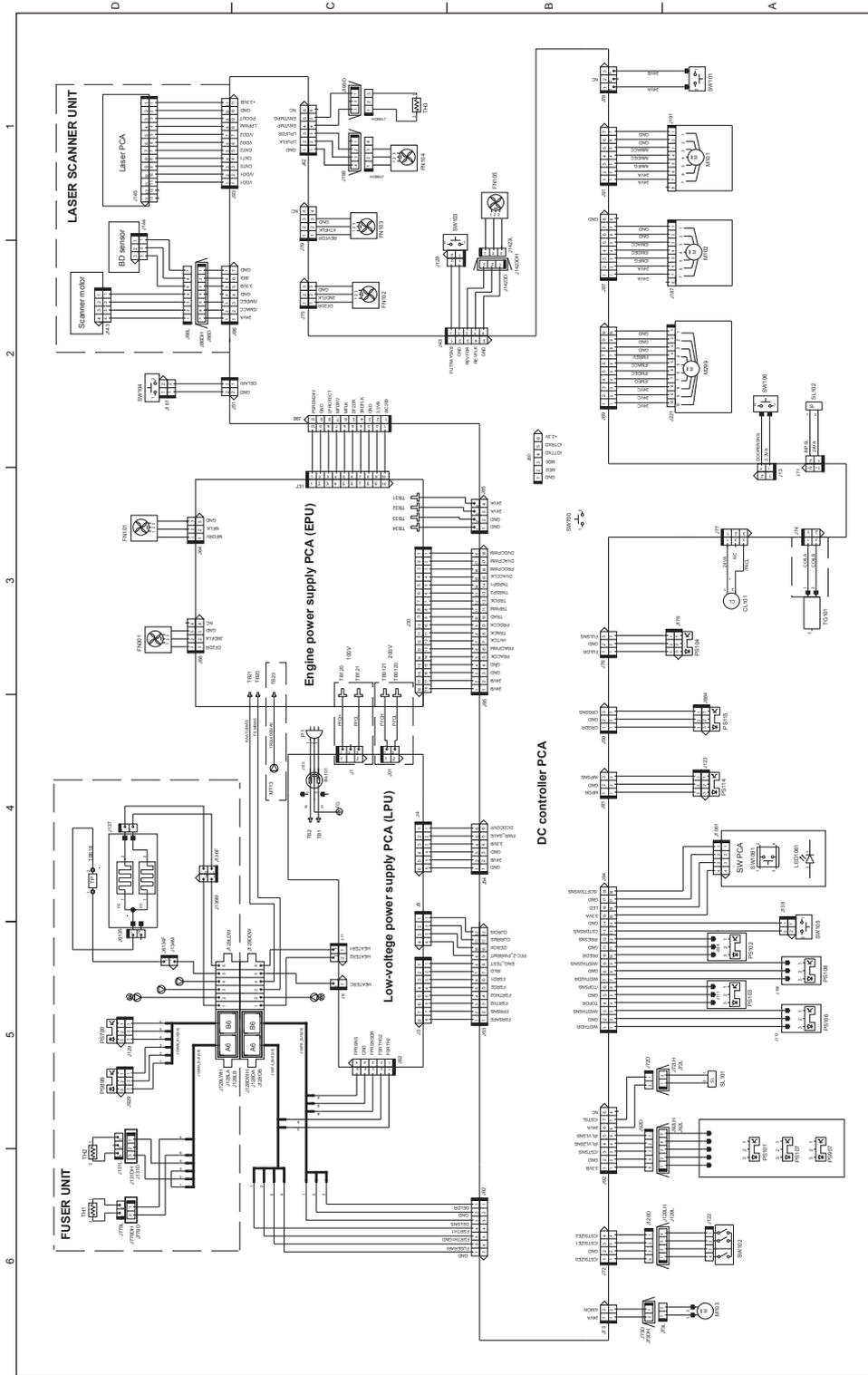


Figure 2-56 General circuit diagram 1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high-capacity feeder (HCI)

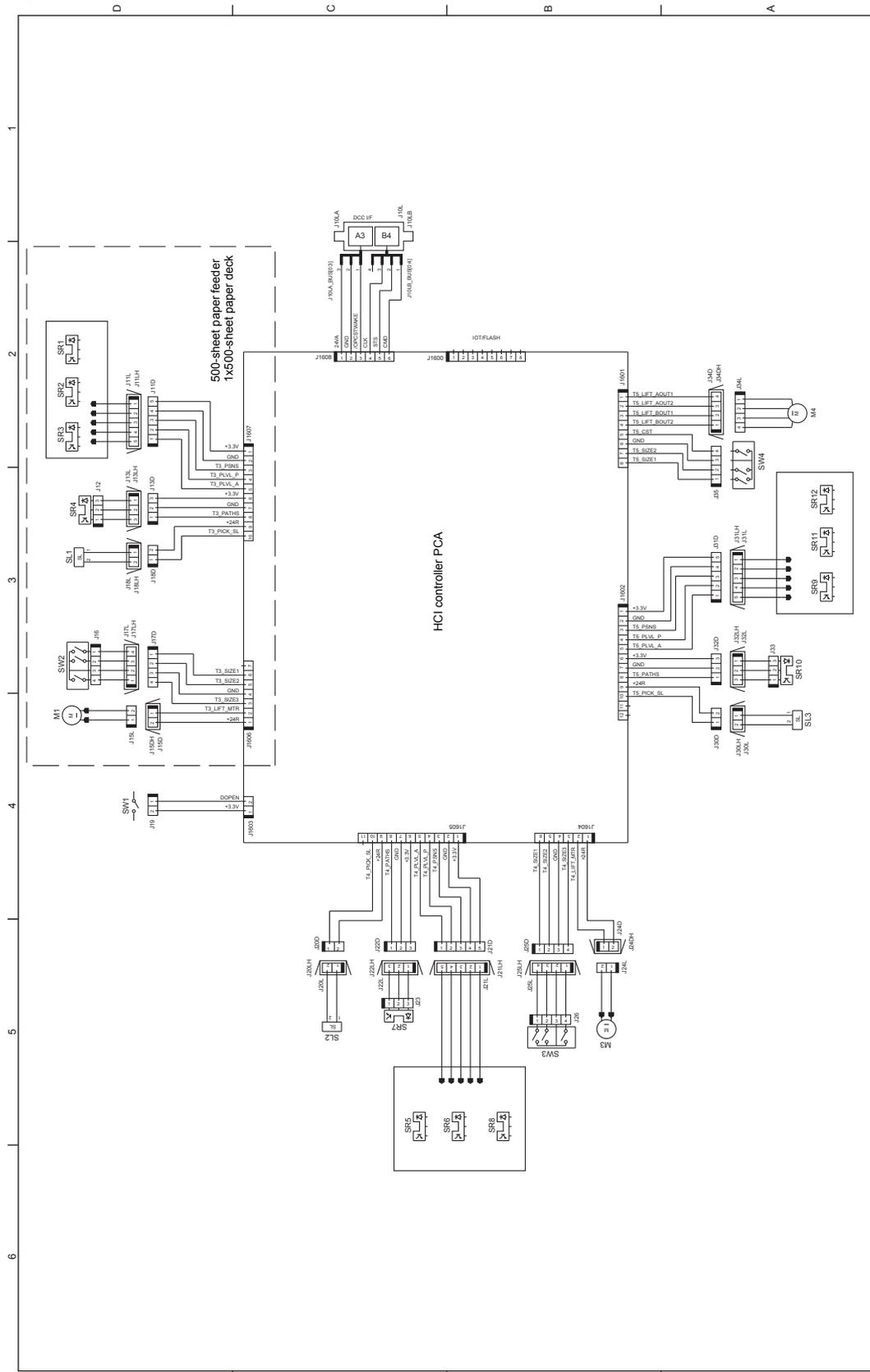


Figure 2-57 General circuit diagram for the stapling mailbox

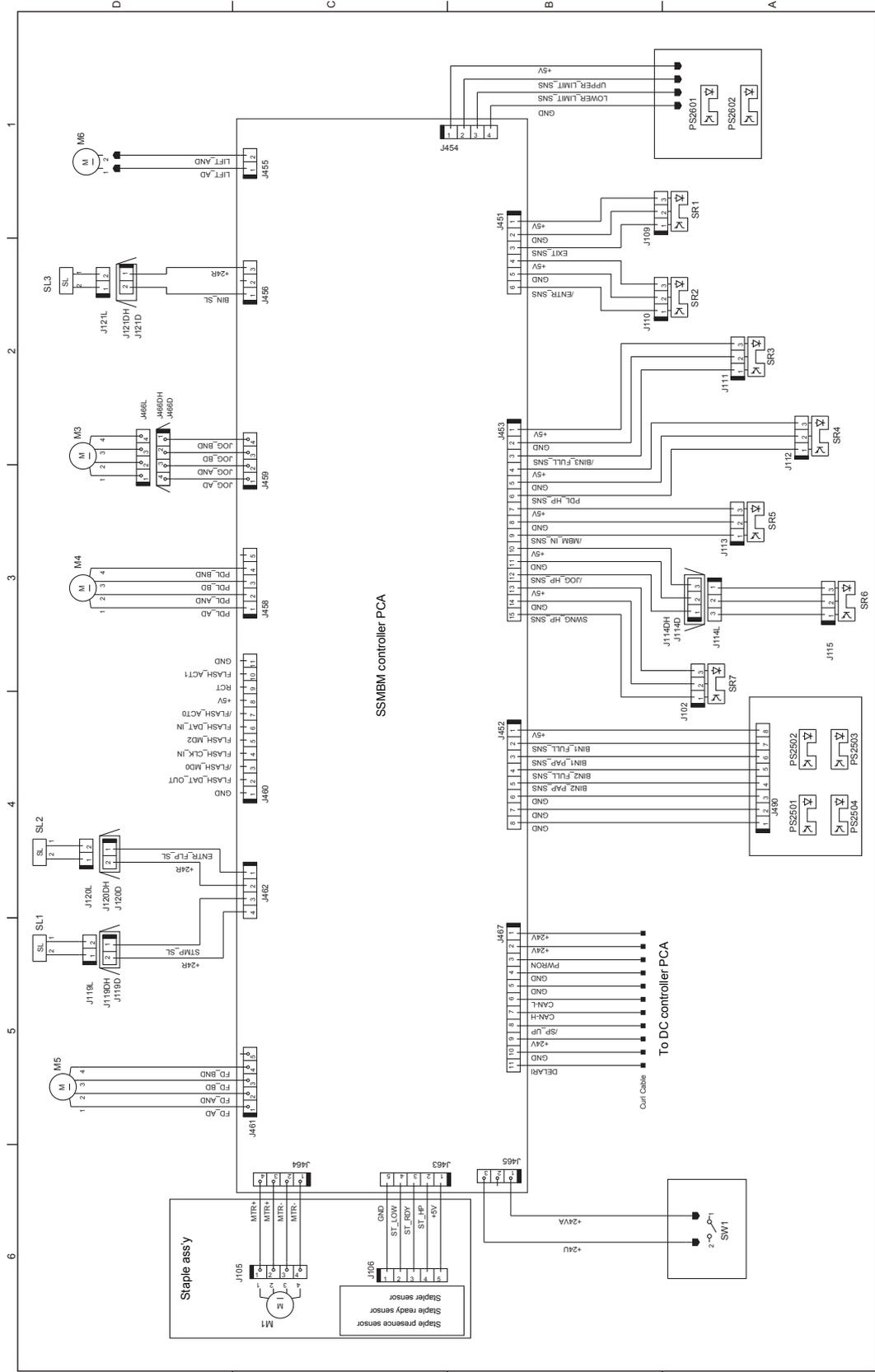
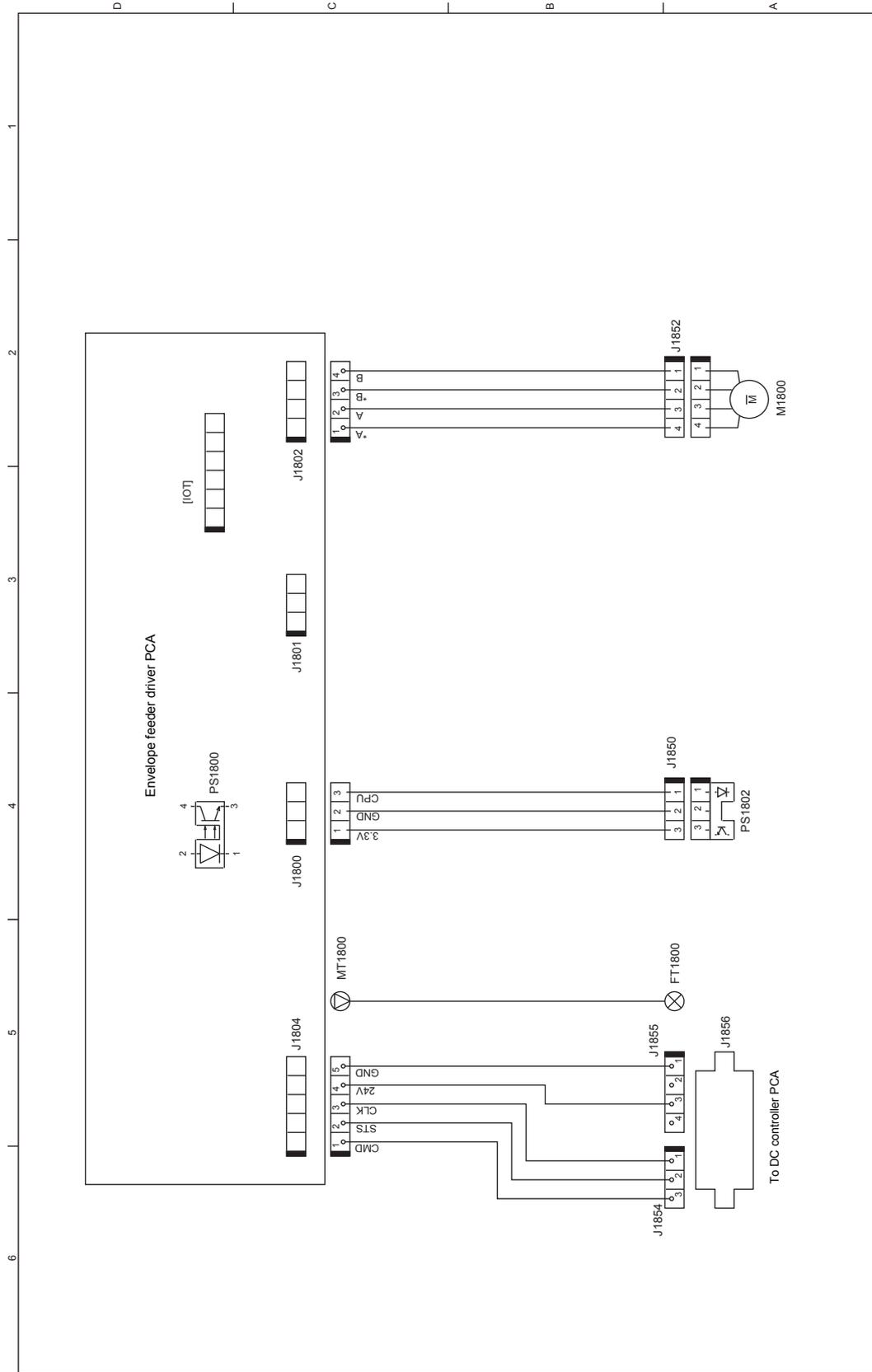


Figure 2-58 General circuit diagram for the envelope feeder



Internal print-quality test pages

Print quality troubleshooting pages

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



NOTE: To get further assistance in print quality troubleshooting, go to www.hp.com/support/ljMFPM630 and select PQ Troubleshooting Tools.

1. From the **Home** screen on the product control panel, scroll to and touch the **Administration** button.
2. Open the following menus:
 - **Troubleshooting**
 - **Print Quality Pages**
 - **Print PQ Troubleshooting Page**
3. Touch the **Print** button. The product prints a print-quality troubleshooting procedure page and a black print-quality troubleshooting page.

Follow the instructions on the print-quality troubleshooting procedure page.

Figure 2-59 Print-quality troubleshooting procedure page

Print Quality Troubleshooting Procedure HP LaserJet M630 **Page 1**

1. Check the Control Panel

Check the control panel to see if it displays any messages that indicate Replace supply item or indicate Very Low supply. If it does, replace the supply item. (Part name and numbers as well as ordering information are listed at the bottom of Section 2.)

2. Troubleshoot Your Print Quality Issue

Print a Cleaning Page by going to Device Maintenance -> Calibration/Cleaning -> Cleaning Page. Wait for this page to print, then reprint the PQTroubleshooting procedure.
If a print quality defect appears on the page, then replace the black toner cartridge.

 Black Cartridge
CF325X

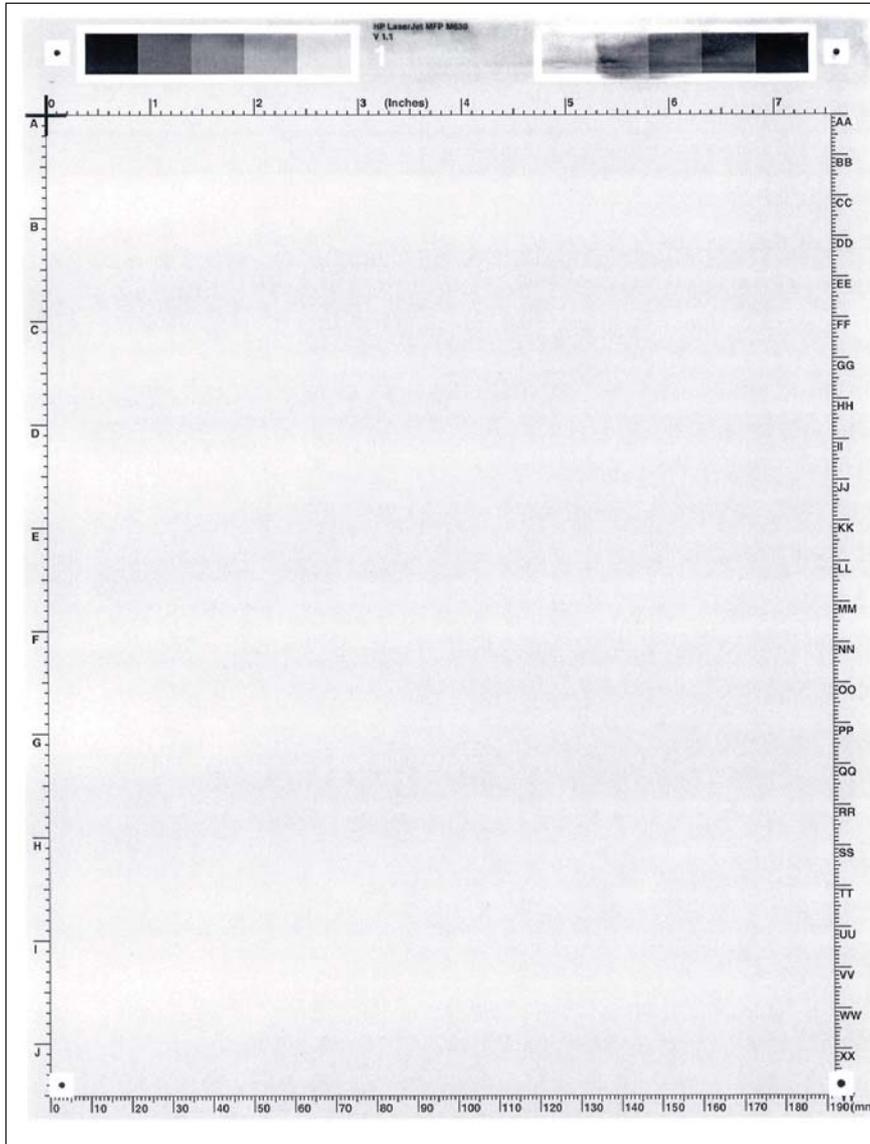
To order supplies, please visit:
www.hp.com/ghp/buyonline.html

3. Further Assistance

If this troubleshooting procedure did not produce clear results or if your print quality defect is unresolved, please go to the web site below for further assistance.
www.hp.com/support/1j4806
www.hp.com/go/hpsc

Jun/21/2013 9:09:44 AM  English (United States)

Figure 2-60 Black print-quality troubleshooting page



Grids

The grids are in inches and millimeters. They are labeled with letters and numbers so that defects can be described by position and by distance between repeats.

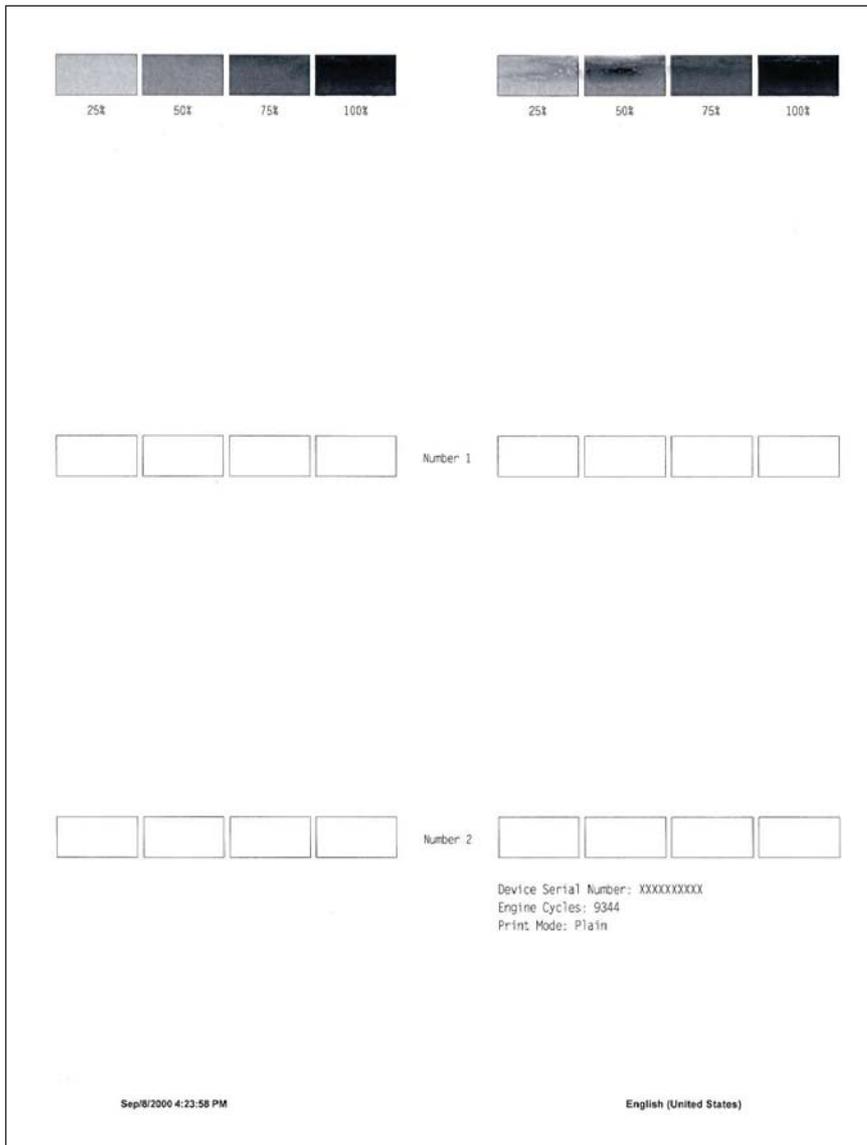
Grey scale ramp patches

Used to detect offset for the OPC or developer in the toner cartridge or offset in the fuser.

Fuser test page

Use the fuser test page to evaluate problems with fuser print quality.

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Print Quality Pages](#)
 - [Fuser Test Page](#)
3. Touch the [Print](#) button.



Cleaning page

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the following menus:
 - [Calibration/Cleaning](#)
 - [Cleaning Page](#)
3. Touch the [Print](#) button to print the page.
4. The cleaning process can take several minutes. When it is finished, discard the printed page.

Enable and configure auto cleaning

Use the procedure in this section to enable and configure the automatic cleaning function.

To enable the auto cleaning function

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the following menus:
 - [Calibration/Cleaning](#)
 - [Auto Cleaning](#)
3. Select the [Enable](#) item, and then touch the [Save](#) button.

To configure the auto cleaning function

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the following menus:
 - [Calibration/Cleaning](#)
3. Open one the following menus:
 - [Cleaning Interval](#)
Default setting: 1000 pages
 - [Auto Cleaning Size](#)
Default setting: Letter
4. After selection an option item, touch the [Save](#) button

Print configuration page

Up to three pages print when you print a configuration page. In addition to the main configuration page, the HP embedded Jetdirect configuration pages print.

Configuration page

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

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Reports](#)
 - [Configuration/Status Pages](#)
3. Touch [Configuration Page](#) to select it.
4. Touch the [View](#) button to view the information on the control panel, or touch the [Print](#) button to print the pages.

Figure 2-61 Configuration page

Configuration Page
HP LaserJet M630
Page 1

1 Device Information

Product Name: HP LaserJet M806
 Device Name: HP LaserJet M806
 Model Number: CZ245A
 DC Controller Version: 6.117
 Tray 1 Version: 3.103
 Duplex Unit Version: 2.103
 HCL Tray Version: 3.101
 Device Serial Number: MT10100145
 Formatter Number: WT001D1
 Firmware Version: FutureSmart 3 Beta
 (2354063_383867)
 Firmware Revision: 2354063_383867
 Firmware Datecode: 20130428
 Service ID: 23142
 PS Wait Time-out: 300 seconds
 Engine Cycles*: 4661
 *Not weighted for billing

2 Installed Personalities and Options

PCL: 20010402
 PCLXL: 20010402
 POSTSCRIPT: 20010402
 PDF: 20050131
 AirPrint: 2040201
 Internal Disk: Hard Disk: Enabled
 Serial Number: W0V5QW49
 Model: HP Secure Hard Disk
 Capacity: 305245 MB
 Hard Disk Encryption Status: Drive is not yet encrypted.
 Embedded HP JetDirect J8028E: 10.10.48.33

3 HP Web Services

HP Web Services: Disabled
 ePrint: Disabled

4 Memory

Total RAM: 1024 MB

5 Event Log

Number of Entries in Use: 4
 Three Most Recent Entries:

Number	Cycles	Event
4	4543	10.99.40
3	4508	10.99.40
2	0	10.00.15

6 Security

Hard Disk Encryption Status:
 Internal Disk: Drive is not yet encrypted.
 Job Data Encryption Status: Encrypted
 Job Data Persistence: Persistent (not volatile)
 File Erase Mode: Non-Secure Fast Erase (No overwrite)
 Control Panel Password: Disabled
 Support Key: FCE4-R4WB-D9YN
 Host USB plug and play: enabled
 Device USB: Enabled

7 Paper Trays and Options

Default Paper Size: Letter
 Tray 1 Size: Any Size
 Tray 1 Type: Any Type
 Tray 2 Size: Ledger (11x17)
 Tray 2 Type: Plain
 Tray 3 Size: Legal
 Tray 3 Type: Plain
 Tray 4 Size: Letter
 Tray 4 Type: Plain
 Tray 5 Size: Letter
 Tray 5 Type: Plain
 Duplex Unit
 Device Name: HP LaserJet Stapler Stacker and 2/3
 Hole Puncher Mailbox
 Model: CZ995A
 Manufacturer: HEWLETT PACKARD
 Firmware Revision: M102_04_02_28_02_39
 1: Output Bin 1: 300 Sheets, Standard bin
 1: Output Bin 2: 1300 Sheets, Upper-left bin
 2: Output Bin 3: 1700 Sheets, Lower-left bin

Jun/21/2013 9:19:55 AM

English (United States)

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

HP embedded Jetdirect page

The second configuration page is the HP embedded Jetdirect page, which contains the following information:
Always make sure the status line under the general information line indicates: **I/O Card Ready**.

Figure 2-62 HP embedded Jetdirect page

Embedded Jetdirect Page
HP LaserJet M630
Page 1

<p>1 ----- General Information -----</p> <p>Status: I/O Card Ready</p> <p>Model Number: J8028E</p> <p>Hardware Address: 38EA76EA7DA</p> <p>Firmware Version: J0123s00237</p> <p>LAA: 38EA76EA7DA</p> <p>Port Config: 1000T FULL</p> <p>Auto Negotiation: On</p> <p>Manufacturing ID: 5319531900****</p> <p>Date Manufactured: 05/2013</p> <p>WS Registration: Not Registered</p> <p>ePrint: Not Applicable</p> <p>Email: Not Applicable</p>	<p>4 ----- TCP/IP -----</p> <p>IPv4: Enabled</p> <p>IPv6: Enabled</p> <p>Host Name: NPI6EA7DA</p> <p>IPv4 Domain Name: aquent.int</p> <p>IPv6 Domain Name: Not Specified</p> <p>Primary DNS Server: 10.10.58.209</p> <p>Secondary DNS Server: 10.10.58.210</p> <p>DNS (IPv6): Not Specified</p> <p>WINS Server: 10.10.58.209</p> <p>Idle Timeout: 270 sec</p>	<p>5 ----- IPv4 -----</p> <p>Status: Ready</p> <p>IP Address: 10.10.48.33</p> <p>Subnet Mask: 255.255.255.0</p> <p>Default Gateway: 10.10.48.1</p> <p>Config By: Manual</p> <p>BOOTP/DHCP Server: Not Specified</p> <p>TFTP Server: Not Specified</p> <p>Bonjour Service Name: HP LaserJet M806 [6EA7DA]</p>
<p>2 ----- Security Settings -----</p> <p>BOOTP: Not Specified</p> <p>IPsec: Disabled</p> <p>Secure Web: HTTPS Required</p> <p>Cert Expires: 2018-05-01 00:00 UTC</p> <p>SNMP Versions: 1,2</p> <p>SNMP Set Only Name: Not Specified</p> <p>SNMP Get Only Name: Not Specified/Default</p> <p>Access List: Not Specified</p> <p>Admin Password: Not Specified</p> <p>Announcement Agent: Failed</p>	<p>6 ----- IPv6 -----</p> <p>Status: Ready</p> <p>Link-Local: fe80::3aea:a7ff:fe6e:a7da</p> <p>Stateless: Not Configured</p> <p>DHCPv6: Not Configured</p> <p>Manual: Not Configured</p>	
<p>3 ----- Network Statistics -----</p> <p>Total Packets Received: 745342</p> <p>Unicast Packets Received: 35362</p> <p>Bad Packets Received: 0</p> <p>Framing Errors Received: 0</p> <p>Total Packets Transmitted: 61110</p> <p>Unsendable Packets: 0</p> <p>Transmit Collisions: 0</p> <p>Transmit Late Collisions: 0</p> <p>Last Wake: 00016298000000000000000000000000</p> <p>00000000000000000000000000000000</p> <p>00000000000000000000000000000000</p>		

Jun/21/2013 9:19:55 AM
English (United States)

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

Finding important information on the configuration pages

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

Table 2-42 Important information on the configuration pages

Type of information	Specific information	Configuration page
Firmware date codes When you use the remote firmware upgrade procedure, all of these firmware components are upgraded.	DC controller	Look on the main configuration page, under "Device Information."
	Firmware datecode	Look on the main configuration page, under "Device Information."
	HP embedded Jetdirect firmware version	Look on the HP embedded Jetdirect page, under "General Information."
Accessories and internal storage All optional devices that are installed on the product should be listed on the main configuration page. In addition, separate pages print for the optional paper handling devices and the fax accessory. These pages list more-detailed information for those devices.	Embedded HP Jetdirect	Look on the main configuration page, under "Installed Personalities and Options." Shows model and ID.
	Total RAM	Look on the main configuration page, under "Memory."
	Duplex unit	Look on the main configuration page, under "Paper Trays and Options."
Finishing accessories	Installed finishing accessory type	Look on the main configuration page, under "Paper Trays and Options."
Engine cycles and event logs Total page counts and maintenance kit counts are important for ongoing product maintenance. The configuration page lists only the three most recent errors. To see a list of the 50 most recent errors, print an event log from the Diagnostics menu.	Engine cycles	Look on the main configuration page, under "Device Information."
Maintenance Kit Interval: and Pages Since Last Maintenance:	Number of pages before the product prompts the user to install a maintenance kit.	Look on the main configuration page, under "Device Information."
Document Feeder Kit Interval: and Pages Since Last Doc Feeder Maintenance:	Number of pages before the product prompts the user to install a document feeder maintenance kit.	Look on the main configuration page, under "Device Information."
Event-log information	Event-log information	Look on the main configuration page, under "Event Log."

Print quality troubleshooting tools

Print quality troubleshooting tools: repetitive defects ruler

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



NOTE: Do not use solvents or oils to clean rollers. Instead, rub the roller with lint-free paper. If dirt is difficult to remove, rub the roller with lint-free paper that has been dampened with water.

Distance between defects	Product components that cause the defect
38 mm (1.45 in.)	Primary charging roller ¹
47 mm (1.85 in.)	Transfer roller
50 mm (1.97 in.)	Feed roller Pre-registration roller
63 mm (2.48 in.)	Tray 1 pickup roller Developing roller
79 mm (3.11 in.)	Tray 1 feed roller Tray 1 separation roller Tray 2 pickup roller Tray 2 feed roller Tray 2 separation roller
94 mm	Photosensitive drum (toner cartridge) ¹
94 mm (3.70 in.)	Fuser sleeve assembly Pressure roller

¹ The primary charging roller and photosensitive drum cannot be cleaned because they are internal assemblies in the toner cartridge. If one of these assemblies is causing the defect, replace the toner cartridge.

Control-panel menus

Administration menu

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

Reports menu

To display: At the product control panel, select the [Administration](#) menu, and then select the [Reports](#) menu.

Table 2-43 Reports menu

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

Table 2-43 Reports menu (continued)

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

General Settings menu

To display: At the product control panel, select the [Administration](#) menu, and then select the [General Settings](#) menu.

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

Table 2-44 General Settings menu

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

Table 2-44 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Sleep Timer Settings	Sleep Mode/Auto Off After		Range: 1 to 120 minutes Default = 60 minutes	Set the number of minutes after which the product enters Sleep or Auto Off mode. Use the arrow buttons on the control panel to increase or decrease the number of minutes.
	Wake/Auto On to These Events			All Events* Network port Power button only	
Print Quality	Image Registration	Adjust Tray <X>	Print Test Page		<p>Shift the margin alignment to center the image on the page from top to bottom and from left to right. You can also align the image on the front with the image printed on the back.</p> <p>Use the Adjust Tray <X> menu to adjust the registration settings for each tray. Before adjusting these values, print a registration test page. It provides alignment guides in the X and Y directions so you can determine which adjustments are necessary. You can adjust values for X1 Shift, X2 Shift, Y1 Shift, and Y2 Shift.</p> <p>Use the Print Test Page option to print a page to test the image registration. It provides alignment guides in the X and Y directions so you can determine which adjustments are necessary.</p>

Table 2-44 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			X1 Shift	-5.00 mm to 5.00 mm	<p>The direction that is perpendicular to the way the paper passes through the product is referred to as X. This is also known as the scan direction. X1 is the scan direction for a single-sided page or for the second side of a two-sided page. X2 is the scan direction for the first side of a two-sided page.</p> <p>The direction that the paper feeds through the product is referred to as Y. Y1 is the feed direction for a single-sided page or for the second side of a two-sided page. Y2 is the feed direction for the first side of a two-sided page.</p>
			Y1 Shift		
			X2 Shift		
			Y2 Shift		
	Optimize	Line Detail		Normal*	Use this setting if you have scattered lines in printed pages.
				Alternate 1	
				Off	
		Restore Optimize			Use to return all the settings in the Optimize menu to the factory-default values.
	Resolution			300 x 300 dpi*	Sets the resolution at which the product prints.
				600 x 600 dpi*	
				FastRes 1200	
				ProRes 1200	
	REt			On	Use this setting to enable or disable Resolution Enhancement technology (REt), which produces smoother angles, curves, and edges.
				Off	
	Economode			On	Use this setting to enable or disable the Economode feature, which conserves toner.
				Off	

Table 2-44 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Toner density			Lighter print (M830) Darker print (M830) Range: 1 to 5 (M806; default: 3)	
Jam Recovery				Auto* Off On	<p>This product provides a jam recovery feature that reprints jammed pages. Select one of the following options:</p> <p>Auto: The product attempts to reprint jammed pages when sufficient memory is available. This is the default setting.</p> <p>Off: The product does not attempt to reprint jammed pages. Because no memory is used to store the most recent pages, performance is optimal.</p> <p>NOTE: When using this option, if the product runs out of paper and the job is being printed on both sides, some pages can be lost.</p> <p>On: The product always reprints jammed pages. Additional memory is allocated to store the last few pages printed. This might cause overall performance to suffer.</p>
Auto Recovery				Enabled Disabled*	The product attempts to reprint jammed pages when sufficient memory is available. This is the default setting.
Manage Stored Jobs	General Stored Job Settings			Job Name* Date Default Folder Name	List the jobs either alphabetically or chronologically, and select a default folder for stored jobs.

Table 2-44 General Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Temporary Stored Job Settings	Retain Temporary Jobs After Reboot		Do not retain	Select how temporary jobs are treated when the power is turned off, and then on again
				Personal job only	
				All temporary jobs	
		Delete Temporary Jobs After:		Off*	Select if, or for how long, temporary jobs are stored.
				1 hour	
				4 hours	
				1 day	
				1 week	
		Temporary Job Storage Limit		1 to 300 jobs	Select the maximum number of stored jobs allowed.
Enable Retrieve from USB				Enabled Disabled*	Enables the product to open a file from a USB drive.
Hold Off Print Job				Enabled* Disabled	Enable this feature if you want to prevent print jobs from starting while a user is initiating a copy job from the control panel. Held print jobs start printing after the copy job is finished, provided that no other copy job is in the print queue.
Restore Factory Settings					Use to restore all product settings to their factory defaults.

Copy Settings menu

To display: At the product control panel, select the [Administration](#) menu, and then select the [Copy Settings](#) menu.

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

Table 2-45 Copy Settings menu

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

Table 2-45 Copy Settings menu (continued)

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

Table 2-45 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
Collate or Staple/Collate			Collate on (Sets in page order)*	If you are making more than one copy, select the Collate on (Sets in page order) option to assemble the pages in the correct order in each set of copies.
			Collate off (Pages grouped)	
NOTE: The Staple/Collate item is displayed if the 3-bin stapling mailbox accessory is installed.			None	Select the Collate off (Pages grouped) option to group the same pages together. For example, if you are making five copies of an original document that has two pages, all five first pages would be grouped together and all five second pages would be grouped together.
			Top Left	
			Top Right	Use the Staple/Collate item to set the default staple position.
Reduce/Enlarge	Schedule		Auto*	Use to scale the size of the document up or down. Select one of the predefined percentages, or select the Schedule field and type a percentage between 25 and 400. The Auto option automatically scales the image to fit the paper size in the tray.
			100%	
			75%	
			50%	
			125%	
			150%	
			200%	
			Range X-Y (25-400%)	
	Auto Include Margins	The product reduces the image slightly to fit the entire scanned image within the printable area on the page.		
Paper Selection			Manually feed	For the best image quality, select the appropriate paper type from the control panel menu or from the print driver.
			Automatically select	
			Tray 1: Any Type, Any Size	
			Tray 2: Plain, Letter (8.5x11)	

Table 2-45 Copy Settings menu (continued)

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

Table 2-45 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
	2-Sided Format		Book-style Flip-style Book-style original; Flip-style copy Flip-style original; Book-style copy	<p>If you are making two-sided copies, select a 2-sided format option.</p> <p>Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge.</p> <p>Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge.</p> <p>Book-style original; Flip-style copy: The back side of the original is printed right-side-up, but the back side of the copy is printed upside-down. Use this option when the original is bound along the left edge, but you want the copies to be bound along the top edge.</p> <p>Flip-style original; Book-style copy: The back side of the original is printed upside-down, but the back side of the copy is printed right-side-up. Use this option when the original is bound along the top edge, but you want the copies to be bound along the left edge.</p>
Optimize Text/Picture			Manually adjust* Optimize For slider	<p>Manually adjust: Use to manually optimize the setting for each document.</p> <p>Use this setting to optimize the output for a particular type of content.</p>

Table 2-45 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
			Text	<p>Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books. If you see bands of irregular intensity on copies, try selecting the Printed picture setting to improve the quality.</p> <p>Photograph: Use for photographic prints.</p>
			Printed picture	
			Photograph	
Pages per Sheet			One (1)	<p>Copies multiple pages onto one sheet of paper.</p> <p>NOTE: Before using this screen, use the Content Orientation screen to describe the original document orientation.</p>
			Two (2)	
			Four (4)	
	Page Order		Right, then down	<p>If you are printing four pages per sheet, select the page order. To print the pages in rows, select the Right, then down option. To print the pages in columns, select the Down, then right option.</p>
			Down, then right	
	Add Page Borders			<p>If you are printing two or more pages per sheet and you want to print a border around each page, select the Add Page Borders option.</p>
Original Size			Select from a list of sizes that the product supports.	Describes the page size of the original document.
Booklet	Booklet Format			<p>Use to copy two or more pages onto one sheet of paper so you can fold the sheets in the center to form a booklet. The product arranges the pages in the correct order. For example, if the original document has eight pages, the product prints pages 1 and 8 on the same sheet.</p>
			Original Size	<p>Select from a list of sizes that the product supports.</p> <p>Describes the page size of the original document.</p>

Table 2-45 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
	Sides		<p>1-sided original, 1-sided output</p> <p>2-sided original, 2-sided output</p> <p>1-sided original, 2-sided output</p> <p>2-sided original, 1-sided output</p>	Select the original and output job sides
	Orientation		<p>Portrait*</p> <p>Landscape</p>	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top.
	Borders on Each Page			To print a border around each page, select the Borders on Each Page option.
Edge-to-Edge			<p>Normal (recommended)*</p> <p>Edge-to-Edge output</p>	Use to avoid shadows that can appear along the edges of copies when the original document is printed close to the edges. Combine with the Reduce/Enlarge feature to ensure that the entire page is printed on the copies. When the Edge-to-Edge feature is turned on, the product minimizes margins and prints as close to the edge of the paper as possible.
Job Build			<p>Job Build off*</p> <p>Job Build on</p>	Use to combine several original documents into one job. Also use this feature to scan an original document that has more pages than the document feeder can accommodate at one time. The product temporarily saves all the scanned images. After you have scanned all the pages for the job, touch the Finish option to finish the job.

Table 2-45 Copy Settings menu (continued)

First level	Second level	Third level	Values	Description
2-sided ID scan			ID scan off* ID scan on	2-sided ID scan allows scanning of both sides of an identification card, placing both images on one side of the printed page.
Book Mode			Book Mode off* Book Mode on	Use Book Mode to scan pages from a book. Choose additional options when Book Mode on is selected.

Scan/Digital Send Settings menu

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

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

Table 2-46 Scan/Digital Send Settings menu

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

Table 2-46 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Default Job Options	Image Preview		Make optional* Require preview Disable preview	<p>Defines the default job options for each function. If you do not specify the job options when creating the job, the default options are used. For complete setup, go to the HP Embedded Web Server by typing the IP address of the product into a Web browser.</p> <p>Use the Image Preview feature to scan a document and display a preview before completing the job. Select whether this feature is available on the product.</p> <p>Make optional: The feature is optional, depending on the user who is signed in.</p> <p>Require preview Previews are required for all users.</p> <p>Disable preview: Previews are disabled for all users.</p>
		Default File Name			<p>The product is shipped with a factory default file name of [Untitled] for any scanned files that are sent or saved. Use this feature to specify a different default file name. If you are saving a file to a network folder or USB storage product and a file with the default file name already exists, a number is appended to the file name, for example, [Untitled]001.</p>

Table 2-46 Scan/Digital Send Settings menu (continued)

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

Table 2-46 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Optimize Text/Picture		Manually adjust* Text Printed picture Photograph	<p>Use to optimize the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture.</p> <p>Manually adjust: Use to manually optimize the setting for text or for pictures.</p> <p>Text: Use to optimize the text portion of the copy when text and/or pictures are on the original.</p> <p>Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books.</p> <p>Photograph: Best suited for making copies of printed pictures.</p>
		Output Quality		High (large file) Medium* Low (small file)	<p>Use to select the quality for the output. Higher-quality images require a larger file size than lower-quality images. Larger files take more time to send, and some recipients might have trouble receiving larger files.</p>
		Original Sides		1-sided 2-sided	<p>Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.</p>

Table 2-46 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Orientation	Automatically detect Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation.
			2-Sided Format	Book-style Flip-style	<p>Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge.</p> <p>Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge.</p>

Table 2-46 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Resolution		400 dpi 300 dpi 200 dpi 150 dpi* 75 dpi	Sets the resolution for sent documents. Higher resolution images have more dots per inch (dpi), so they show more detail. Lower resolution images have fewer dots per inch and show less detail, but the file size is smaller. Some file types, for example a file that will be processed with OCR, require a specific resolution. When these file types are selected, the Resolution setting might automatically change to a valid value.
		Content Orientation	Orientation	Auto Detect Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation.
			2-Sided Format	Book-style* Flip-style	Use to configure the default style for 2-sided print jobs. If the Book-style option is selected, the back side of the page is printed the right way up. This option is for print jobs that are bound along the left edge. If the Flip-style option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.

Table 2-46 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Color/Black		Automatically detect* Color Black/Gray Black	Use to enable or disable color scanning. Automatically detect: Automatically scans documents in color if at least one page has color. Color: Scans documents in color. Black/Gray: Scans documents in grayscale. Black: Scans documents in black and white with a compressed file size.
		Original Size		Select from a list of supported sizes.	Use to describe the page size of the original document.
		Notification		Do not notify* Notify when job completes Notify only if job fails	Configure to receive notification about the status of a sent document. Do not notify: Turns off this feature. Notify when job completes: Select to receive notification for this job only.
				Print E-mail	Notify only if job fails: Select to receive notification only if the job is not sent successfully. Print: Select to print the notification at this product.
			Include Thumbnail		NOTE: When sending an analog fax, select Include Thumbnail to receive a thumbnail image of the first page of the fax in your notification.

Table 2-46 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
			Notification E-mail address		E-mail: Select to receive the notification in an email. Touch the text box following Email Address , and then type the email address for the notification.
		Image Adjustment	Darkness		Use to improve the overall quality of the copy. Adjust the Darkness setting to increase or decrease the amount of white and black in the colors.
			Contrast		Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page.
			Background Cleanup		Adjust the Background Cleanup setting if you are having trouble copying a faint image.
			Sharpness		Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
			Automatic Tone		
			Default		Select this to make the selected Image Adjustment setting the default value.

Table 2-46 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Job Build		Job Build off* Job Build on	Use to combine several original documents into one job. Also use to scan an original document that has more pages than the document feeder can accommodate at one time. The product temporarily saves all the scanned images. After you have scanned all the pages for the job, touch Finish to finish the job.
		Cropping Options		Do not crop* Crop to content	Use this menu item to automatically crop the scan for digital sending. Use the Crop to content option to scan the smallest possible area that has detectable content.
		Erase Edges		Use Inches Back side erase Front side erase	Use this menu item to remove blemishes, such as dark borders or staple marks, by cleaning the specified edges of the scanned image. In each of the text boxes enter the measurements, in millimeters or inches, for how much of the top edge, bottom edge, left edge, and right edge to clean.
		Blank Page Suppression		Disabled* Enabled	Use to prevent blank pages in the original document from being included in the output document.
Save to Network Folder Settings	Default Job Options				use these menus to select the default options for jobs that are saved to a network location.
Save to USB Settings	Default Job Options				use these menus to select the default options for job that are saved to a USB flash drive.

Table 2-46 Scan/Digital Send Settings menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Digital Send Service Setup	Allow Usage of Digital Sending Software (DSS) Server			Enabled* Disabled	Configure how the product interacts with the HP Digital Sending Software (DSS) server. HP DSS handles digital sending tasks, such as faxing, emailing, and sending scanned documents to a network folder or USB storage device. Use the Allow Usage of Digital Sending Software (DSS) Server option to configure the product to use HP DSS.
	Allow Transfer to New Digital Sending Software (DSS) Server			Enabled* Disabled	Use the Allow Transfer to New Digital Sending Software (DSS) Server option to specify whether DSS management of a product is transferable to a different DSS.

Fax Settings menu (fax models only)

To display: At the product control panel, select the [Administration](#) menu, and then select the [Fax Settings](#) menu.

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

Table 2-47 Fax Settings menu (fax models only)

Second level	Third level	Fourth level	Values	Description
Fax Send Setup	Fax Setup Wizard			Configure settings for sending faxes from the product. Use the Fax Setup Wizard feature to set up options for faxing. NOTE: To set up LAN fax or Internet fax, use the HP Embedded Web Server. To open the HP Embedded Web Server, type the product network address into a Web browser. To configure the fax features, select the Fax tab.
	Fax Dialing Settings	Fax Dial Volume	Off Low* High	These settings control how the fax modem dials the outgoing fax number when faxes are sent.
		Dialing Mode	Tone* Pulse	
		Redial Interval	1 – 5 Minutes Default = 5 minutes	
		Fax Send Speed	Fast* Medium Slow	
		Dialing Prefix		
		Detect Dial Tone		
		Redial on Error	Range: 0 – 9 Default = 2	
		Redial on No Answer	Range: 0 – 2 Default = 0	
		Redial on Busy	Range: 0 – 9 Default = 3	

Table 2-47 Fax Settings menu (fax models only) (continued)

Second level	Third level	Fourth level	Values	Description
	General Fax Send Settings	Fax Number Confirmation	Enabled Disabled*	If this feature is enabled, you must enter the fax number twice.
		PC Fax Send	Enabled* Disabled	Enables users who have the correct driver installed to send faxes through the product from their computers.
		JBIG Compression	Enabled* Disabled	The JBIG compression reduces fax-transmission time, which can result in lower phone charges. However, using JBIG compression sometimes causes compatibility problems with older fax machines. If this occurs, turn off the JBIG compression.
		Error Correction Mode	Enabled* Disabled	When error-correction mode is enabled and an error occurs during fax transmission, the product sends or receives the error portion again.
		Fax Header	Prepend* Overlay	Use to prepend or overlay the fax header page.
		Fax Number Speed Dial Matching	Enabled Disabled*	Use this item to match the fax number that you type to numbers that are saved as a speed dial.
	Billing Codes	Enable Billing Codes	Off On*	<p>When billing codes are enabled, a prompt displays that asks the user to enter the billing code for an outgoing fax. This prompt does not appear if the Allow users to edit billing codes check box is not checked.</p> <p>You can also use the billing codes report in the Reports menu to view the list of the billing codes that have been used for faxes that have been sent from the product. The list is grouped by billing code and also shows fax details. This feature can be used for billing or usage tracking.</p>

Table 2-47 Fax Settings menu (fax models only) (continued)

Second level	Third level	Fourth level	Values	Description
		Default Billing Code		Specify a default billing code for faxing. If you specify a default billing code, this code displays in the Billing Code field when the user sends an outgoing fax. If this field is blank, no default billing code is provided for the user.
		Minimum Length	Range: 1 – 16 Default = 1	Specify the required length of the billing code. Billing codes can be between 1 and 16 characters long.
		Allow users to edit billing codes	Off On*	
Default Job Options	Image Preview		Make optional* Require preview Disable preview	Use the Image Preview feature to scan a document and display a preview before completing the job. Select whether this feature is available on the product. Make optional: The feature is optional, depending on the user who is signed in. Require preview Previews are required for all users. Disable preview: Previews are disabled for all users.
	Resolution		Standard (100 x 200dpi)* Fine (200 x 200dpi) Superfine (300 x 300dpi)	Select the resolution for outgoing faxes. If you increase the resolution, faxes might be clearer but they could transmit more slowly. Some file types, for example a file that will be processed with OCR, require a specific resolution. When these file types are selected, the Resolution setting might be automatically changed to a valid value.

Table 2-47 Fax Settings menu (fax models only) (continued)

Second level	Third level	Fourth level	Values	Description
	Original Sides		1-sided* 2-sided	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.
		Orientation	Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait: This setting means the short edge of the page is along the top. Landscape: This setting means the long edge of the page is along the top.
		2-Sided Format	Book-style* Flip-style	Book-style: The back side of the original is printed right-side-up, and the back side of the copy is printed the same way. Use this option for originals and copies that are bound along the left edge. Flip-style: The back side of the original is printed upside-down, and the back side of the copy is printed the same way. Use this option for originals and copies that are to be bound along the top edge.

Table 2-47 Fax Settings menu (fax models only) (continued)

Second level	Third level	Fourth level	Values	Description
	Notification		Do not notify* Notify when job completes Notify only if job fails	Use to receive notification about the status of a sent document. Do not notify: Turns off this feature. Notify when job completes: Select to receive notification for this job only. Notify only if job fails: Select to receive notification only if the job is not sent successfully.
			Print E-mail	Print: Select to print the notification at this product. E-mail: Select to receive the notification in an email. Touch the text box following Email Address, and then enter the email address for the notification.
		Include Thumbnail		When sending an analog fax, select Include Thumbnail to receive a thumbnail image of the first page of the fax in your notification.
		Notification E-mail address		Provide the email address that will receive notifications.
	Content Orientation	Orientation	Portrait* Landscape	For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait: This setting means the short edge of the page is along the top. Landscape: This setting means the long edge of the page is along the top.

Table 2-47 Fax Settings menu (fax models only) (continued)

Second level	Third level	Fourth level	Values	Description
		2-Sided Format	Book-style* Flip-style	Use to configure the default style for 2-sided print jobs. If the Book-style option is selected, the back side of the page is printed the right way up. This option is for print jobs that are bound along the left edge. If the Flip-style option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.
	Original Size		Select from a list of sizes that the product supports.	Use to describe the page size of the original document.
	Image Adjustment	Darkness		Use to improve the overall quality of the copy. Adjust the Darkness setting to increase or decrease the amount of white and black in the colors.
		Contrast		Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page.
		Background Cleanup		Adjust the Background Cleanup setting if you are having trouble copying a faint image.
		Sharpness		Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother.
		Automatic Tone		The product automatically adjusts the Darkness , Contrast , and Background Cleanup settings to the most appropriate for the scanned document.
		Default		Select this to make the selected Image Adjustment setting the default value.

Table 2-47 Fax Settings menu (fax models only) (continued)

Second level	Third level	Fourth level	Values	Description
	Optimize Text/Picture	Manually adjust*	Optimize For Text Printed picture Photograph	Optimizes the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture. Manually adjust: Use to manually optimize the setting for text or for pictures. Text: Use to optimize the text portion of the copy where text and/or pictures are on the original. Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books. Photograph: Best suited for making copies of printed pictures.
	Job Build		Job Build off* Job Build on	Use to divide a complex job into smaller segments. This is useful when you are copying or scanning an original document that has more pages than the document feeder can hold, or when you want to combine pages that have different sizes into one job. You can use either the glass or the document feeder to scan the original documents.
	Blank Page Suppression		Disabled* Enabled	Prevents blank pages in the original document from being included in the output document.
Fax Receive Setup	Ringer Volume		Off Low* High	Use to configure settings for receiving faxes.
	Rings To Answer		Range: 1–6 Default = 1	
	Fax Send Speed		Fast* Medium Slow	

Table 2-47 Fax Settings menu (fax models only) (continued)

Second level	Third level	Fourth level	Values	Description
	Ring Interval		Range: 220–600 ms Default = 600 ms	
	Ring Frequency		Range: 1–200 Default = 68hz	
Fax Printing Schedule			Always store faxes Always print faxes* Use Fax Printing Schedule	If you have concerns about the security of private faxes, use this feature to store faxes rather than having them automatically print. Select Incoming Fax Options, and then you can choose to always store faxes, always print them, or you can set up a schedule for each day of the week.
	Schedule	Add (plus sign) Edit Delete	Print incoming faxes Store incoming faxes Time Event Days	If you are using a fax printing schedule, use this menu to configure when to print faxes.
	Touch this to set up a fax printing schedule if you selected the Use Fax Printing Schedule option.			

Table 2-47 Fax Settings menu (fax models only) (continued)

Second level	Third level	Fourth level	Values	Description
Blocked Fax Numbers	Fax Number to Block			<p>The blocked fax list can contain up to 30 numbers. When the product receives a call from one of the blocked fax numbers, it deletes the incoming fax. It also logs the blocked fax in the activity log along with job-accounting information.</p> <p>Add blocked numbers: Enter a fax number into the Fax Number to Block field, and then touch the arrow button to add a new number to the blocked fax list.</p> <p>To remove blocked numbers: Select a number and touch the Delete button to delete it from the blocked fax list.</p> <p>To clear all blocked numbers: Touch the Delete All button to clear all of the numbers from the blocked fax list.</p> <p>You can also use the Blocked Fax List report in the Information menu to view the list of the fax numbers that have been blocked on this product.</p>
Default Job Options	Notification		<p>Do not notify*</p> <p>Notify when job completes</p> <p>Notify only if job fails</p>	<p>Configure to receive notification about the status of a sent document.</p> <p>Do not notify: Turns off this feature.</p> <p>Notify when job completes: Select to receive notification for this job only.</p> <p>Notify only if job fails: Select to receive notification only if the job is not sent successfully.</p>
			<p>Print</p> <p>E-mail*</p>	<p>E-mail: Select to receive the notification in an email. Touch the text box following Email Address, and then enter the email address for the notification.</p>

Table 2-47 Fax Settings menu (fax models only) (continued)

Second level	Third level	Fourth level	Values	Description
		Include Thumbnail		NOTE: When sending an analog fax, select Include Thumbnail to receive a thumbnail image of the first page of the fax in your notification.
		Notification E-mail address		
	Stamp Received Faxes		Enabled Disabled*	Use this option to add the date, time, sender's phone number, and page number to each page of the faxes that this product receives.
	Fit to Page		Enabled* Disabled	Use to shrink faxes that are larger than Letter-size or A4-size so that they can fit onto a Letter-size or A4-size page. If this feature set to Disabled , faxes larger than Letter or A4 will flow across multiple pages.
	Paper Selection		Automatic* Select from a list of the trays.	
	Sides		1-sided* 2-sided	Use to describe the layout for each side of the original document. First select whether the original document is printed on one side or both sides. Then touch the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is printed on both sides, also select the 2-sided format that matches the original document.
Enable Billing Codes			Disabled* Enabled	Use to forward received faxes to another fax machine.
	Type of Fax Job to Forward		All faxes Sent faxes Received faxes	
	Fax Forwarding Number			
Clear Fax Activity Log				Clears all events from the Fax Activity Log list.

General Print Settings menu

To display: At the product control panel, select the [Administration](#) menu, and then select the [General Print Settings](#) menu.

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

Table 2-48 General Print Settings menu

First level	Second level	Values	Description
Manual Feed		Enabled Disabled*	Use to enable or disable the manual-feed feature, which allows the user to feed paper into the product by hand. When this feature is enabled, the user can select manual feed from the control panel as the paper source for a job. If a tray is not specified as part of a job, manual feed is selected.
Courier Font		Regular* Dark	Select which version of the Courier font you want to use. The factory default setting is Regular , which uses an average stroke width. The Dark setting can be used if a heavier Courier font is needed.
Wide A4		Enabled Disabled*	Changes the printable area of A4-size paper. If you enable this option, eighty 10-pitch characters can be printed on a single line of A4 paper.
Print PS Errors		Enabled Disabled*	Use this feature to select whether a PostScript (PS) error page is printed when the product encounters a PS error.
Print PDF Errors		Enabled Disabled*	Selects whether a PDF error page is printed when the product encounters a PDF error.
Personality		Auto* PCL POSTSCRIPT PDF	Configures the default print language or personality for the product. Normally you should not change the product language. If you change the setting to a specific product language, the product does not automatically switch from one language to another unless specific software commands are sent to it.
PCL	Form Length	Range: 5 – 128 Default = 60	Controls the PCL print-command options. PCL is a set of product commands that Hewlett-Packard developed to provide access to product features. Use the Form Length feature to select the user-soft default vertical form length.

Table 2-48 General Print Settings menu (continued)

First level	Second level	Values	Description
	Orientation	Portrait* Landscape	Select the orientation that is most often used for copy or scan originals. Select the Portrait option if the short edge is at the top or select the Landscape option if the long edge is at the top.
	Font Source	Internal*	Selects the font source for the user-soft default font. The list of available options varies depending on the installed product options.
	Font Number	Range: 0 – 110 Default = 0	Specifies the font number for the user-soft default font using the source that is specified in the Font Source menu. The product assigns a number to each font and lists it on the PCL font list. The font number displays in the Font # column of the printout.
	Font Pitch	Range: 0.44 – 99.99 Default = 10	If the Font Source option and the Font Number setting indicate a contour font, then use this feature to select a default pitch (for a fixed-spaced font).
	Font Point Size	Range: 4.00 – 999.75 Default = 12.00	If the Font Source option and the Font Number setting indicate a contour font, then use this feature to select a default point size (for a proportional-spaced font).
	Symbol Set	Select from a list of symbol sets.	Select any one of several available symbol sets from the control panel. A symbol set is a unique grouping of all the characters in a font. The factory default value for this option is PC-8. Either PC-8 or PC-850 are recommended for line-draw characters.
	Append CR to LF	No* Yes	Configure whether a carriage return (CR) is appended to each line feed (LF) encountered in backwards-compatible PCL jobs (pure text, no job control). Select Yes to append the carriage return. The default setting is No . Some environments, such as UNIX, indicate a new line by using only the line-feed control code. This option allows the user to append the required carriage return to each line feed.

Table 2-48 General Print Settings menu (continued)

First level	Second level	Values	Description
	Suppress Blank Pages	No* Yes	This option is for users who are generating their own PCL, which could include extra form feeds that would cause blank pages to be printed. When the Yes option is selected, form feeds are ignored if the page is blank.
	Media Source Mapping	Standard* Classic	Use to select and maintain input trays by number when you are not using the product driver, or when the software program has no option for tray selection. The following options are available: Standard: Tray numbering is based on newer HP LaserJet models. Classic: Tray numbering is based on HP LaserJet 4 and older models.

Default Print Options menu

To display: At the product control panel, select the [Administration](#) menu, and then select the [Default Print Options](#) menu.

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

Table 2-49 Default Print Options menu

First level	Second level	Values	Description
Number of Copies		Range: 1–32000 Default = 1	Sets the default number of copies for a copy job. This default applies when the Copy function or the Quick Copy function is initiated from the product Home screen.
Default Paper Size		Select from a list of sizes that the product supports.	Configures the default paper size used for print jobs.
Default Custom Paper Size	X Dimension	Range: 3–8.5 inches Default = 8.5 inches	Configures the default paper size that is used when the user selects Custom as the paper size for a print job.
	Y Dimension	Range: 5–14 inches Default = 14 inches	
	Use Inches	Enabled* Disabled	
Paper Path		Automatic* Face-up (straightest path) Face-down (correct order)	Use this item to select the appropriate paper path through the product for the print job.
Sides		1-sided* 2-sided	Use to indicate whether the original document is printed on one or both sides, and whether the copies should be printed on one or both sides. For example, select the 1-sided original, 2-sided output option when the original is printed on one side, but you want to make two-sided copies. Select the Orientation setting to specify portrait or landscape orientation and to select the way the second sides are printed.

Table 2-49 Default Print Options menu (continued)

First level	Second level	Values	Description
2-Sided Format		Book-style* Flip-style	Configures the default style for 2-sided print jobs. If the Book-style option is selected, the back side of the page is printed the right way up. This option is for print jobs that are bound along the left edge. If the Flip-style option is selected, the back side of the page is printed upside-down. This option is for print jobs that are bound along the top edge.
Edge-to-Edge		Normal (recommended)* Edge-to-Edge output	Use to avoid shadows that can appear along the edges of copies when the original document is printed close to the edges.

Display Settings menu

To display: At the product control panel, select the [Administration](#) menu, and then select the [Display Settings](#) menu.

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

Table 2-50 Display Settings menu

First level	Second level	Values	Description
Display Brightness		Range: -10 to 10 The default value is 0.	Use to specify the intensity of the LCD control-panel display.
Key Press Sound		On* Off	Use to specify whether you hear a sound when you touch the screen or press buttons on the control panel.
Language Settings	Language	Select from a list of languages that the product supports.	Use to select a different language for control-panel messages and specify the default keyboard layout. When you select a new language, the keyboard layout automatically changes to match the factory default for the selected language.
	Keyboard Layout	Each language has a default keyboard layout. To change it, select from a list of layouts.	Select the default keyboard layout that matches the language you want to use.
How to Connect Button		Display* Hide	Use this menu item to display or hide the How to Connect Button on the Home screen.
Date and Time		Show Date and Time* Hide Date and Time	Select whether to display or hide the date and time on the control panel Home screen.
Inactivity Timeout		Range: 10 – 300 seconds Default = 60 seconds	Specifies the amount of time that elapses between any activity on the control panel and when the product resets to the default settings. When the timeout expires, the control-panel display returns to the Home menu, and any user signed in to the product is signed out.

Table 2-50 Display Settings menu (continued)

First level	Second level	Values	Description
Clearable Warnings		On	Use this feature to set the period that a clearable warning displays on the control panel. If the On setting is selected, clearable warnings appear until the Clearable Warnings button is pressed. If the Job setting is selected, clearable warnings stay on the display during the job that generated the warning and disappear from the display when the next job starts.
		Job*	
Continuable Events		Auto-continue (10 seconds)*	Use this option to configure the product behavior when the product encounters certain errors. If the Auto-continue (10 seconds) option is selected, the job will continue after 10 seconds. If the Touch OK to continue option is selected, the job will stop and require the user to press the OK button before continuing.
		Touch OK to continue	

Manage Supplies menu

To display: At the product control panel, select the [Administration](#) menu, and then select the [Manage Supplies](#) menu.

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

Table 2-51 Manage Supplies menu

First level	Second level	Third level	Fourth level	Values	Description
Supplies Status				Print View	
Supply Settings	Black Cartridge	Low Threshold Settings		1-100% Default = 10%	Set the estimated percentage at which the product notifies you when the toner cartridge is very low.
		Very Low Settings		Stop Prompt to continue* Continue	<p>Specifies how the product notifies you when the toner cartridge is very low.</p> <p>Stop: The product stops until you replace the toner cartridge.</p> <p>Prompt to continue: The product stops and prompts you to replace the toner cartridge. You can acknowledge the prompt and continue printing.</p> <p>Continue: The product alerts you that a toner cartridge is very low, but it continues printing.</p>
	Document Feeder Kit	Low Threshold Settings		1-100% Default = 10%	Set the percentage at which the product notifies you when a document feeder kit is needed.

Table 2-51 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Very Low Settings		<p>Stop</p> <p>Prompt to continue*</p> <p>Continue</p>	<p>Configure how the product responds when the document feeder kit is reaching the end of its estimated life.</p> <p>Stop: The product stops until you replace the document feeder kit.</p> <p>Prompt to continue: The product stops and prompts you to replace the document feeder kit. You can acknowledge the prompt and continue printing</p> <p>Continue: The product alerts you that the document feeder kit is very low, but it continues printing.</p>
	Maintenance Kit	Low Threshold Settings		<p>1-100%</p> <p>Default = 10%</p>	<p>Set the percentage at which the product notifies you when the maintenance kit is needed.</p>
		Very Low Settings		<p>Stop</p> <p>Prompt to continue*</p> <p>Continue</p>	<p>Configure how the product responds when the maintenance kit is reaching the end of its estimated life.</p> <p>Stop: The product stops until you replace the maintenance kit.</p> <p>Prompt to continue: The product stops and prompts you to replace the maintenance kit. You can acknowledge the prompt and continue printing</p> <p>Continue: The product alerts you that the maintenance kit is very low, but it continues printing.</p>

Table 2-51 Manage Supplies menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Store Usage Data			On supplies Not on supplies	The Store Usage Data menu provides a way to suppress the toner cartridges from storing most of the information gathered exclusively for the purpose of understanding the usage of the product. Select the On supplies setting to store the data on the toner cartridge memory chip. Select the Not on supplies setting to suppress the information from being stored on the memory chip.
Supply Messages		Low Message		On* Off	Use to configure whether a message displays on the control panel when supplies are getting low, but have not yet reached the low threshold.
Reset Supplies	New Document Feeder Kit New Maintenance Kit			Reset Cancel	Select this option if you have installed a new document feeder kit or preventative maintenance kit.

Manage Trays menu

To display: At the product control panel, select the **Administration** menu, and then select the **Manage Trays** menu.

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

Table 2-52 Manage Trays menu

First level	Values	Description
Use Requested Tray	Exclusively* First	Controls how the product handles jobs that have specified a specific input tray. Two options are available: Exclusively: The product never selects a different tray when the user has indicated that a specific tray should be used, even if that tray is empty. First: The product pulls from another tray if the specified tray is empty, even though the user specifically indicated a tray for the job.
Manually Feed Prompt	Always* Unless loaded	Indicate whether a prompt should appear when the type or size for a job does not match the specified tray and the product pulls from the multipurpose tray instead. Two options are available: Always: A prompt always displays before using the multipurpose tray. Unless loaded: A message displays only if the multipurpose tray is empty.
Size/Type Prompt	Display* Do not display	Controls whether the tray configuration message displays whenever a tray is closed. Two options are available: Display: Shows the tray configuration message when a tray is closed. The user is able to configure the tray settings directly from this message. Do not display: Prevents the tray configuration message from automatically appearing.
Use Another Tray	Enabled* Disabled	Use to turn on or off the control-panel prompt to select another tray when the specified tray is empty. Two options are available: Enabled: When this option is selected, the user is prompted either to add paper to the selected tray or to choose a different tray. Disabled: When this option is selected, the user is not given the option of selecting a different tray. The product prompts the user to add paper to the tray that was initially selected.

Table 2-52 Manage Trays menu (continued)

First level	Values	Description
Alternative Letterhead Mode	Disabled* Enabled	Use to load letterhead or preprinted paper into the tray the same way for all print jobs, whether you are printing to one side of the sheet or to both sides of the sheet. When this option is selected, load the paper as you would for printing on both sides. See the user documentation that came with the product for instructions about loading letterhead for printing on both sides. When this option is selected, the product speed slows to the speed required for printing on both sides.
Duplex Blank Pages	Auto* Yes	Control how the product handles two-sided jobs (duplexing). Two options are available: Auto: Enables Smart Duplexing, which instructs the product not to process blank pages. Yes: Disables Smart Duplexing and forces the duplexer to flip the sheet of paper even if it is printed on only one side. This might be preferable for certain jobs that use paper types such as letterhead or prepunched paper.
Image rotation	Left to right Alternate	Select to rotate the print job on the page.
Override A4/Letter	Yes* No	Prints on letter-size paper when an A4 job is sent but no A4-size paper is loaded in the product (or to print on A4 paper when a letter-size job is sent but no letter-size paper is loaded). This option will also override A3 with ledger-size paper and ledger with A3-size paper.

Network Settings menu

To display: At the product control panel, select the [Administration](#) menu, and then select the [Network Settings](#) menu.

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

Table 2-53 Network Settings menu

First level	Values	Description
IO Timeout	Range: 5 – 300 sec Default = 15	Use to set the I/O timeout period in seconds. I/O timeout refers to the elapsed time before a print job fails. If the stream of data that the product receives for a print job gets interrupted, this setting indicates how long the product will wait before it reports that the job has failed.
Embedded Jetdirect Menu	See Table 2-54 Embedded Jetdirect Menu on page 246 for details. These menus have the same structure. If an additional HP Jetdirect network card is installed in the EIO slot, then both menus are available.	

Table 2-54 Embedded Jetdirect Menu

First level	Second level	Third level	Fourth level	Values	Description
Information	Print Sec Report			Yes No*	Yes: Prints a page that contains the current security settings on the HP Jetdirect print server. No: A security settings page is not printed.
TCP/IP	Enable			On* Off	On: Enable the TCP/IP protocol. Off: Disable the TCP/IP protocol.
	Host Name			Use the arrow buttons to edit the host name. NPIXXXXXX*	An alphanumeric string, up to 32 characters, used to identify the product. This name is listed on the HP Jetdirect configuration page. The default host name is NPIxxxxxx, where xxxxxx is the last six digits of the LAN hardware (MAC) address.

Table 2-54 Embedded Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	IPv4 Settings	Config Method		Bootp DHCP* Auto IP Manual	<p>Specifies the method that TCP/IPv4 parameters will be configured on the HP Jetdirect print server.</p> <p>Bootp (Bootstrap Protocol): Use for automatic configuration from a BootP server.</p> <p>DHCP (Dynamic Host Configuration Protocol): Use for automatic configuration from a DHCPv4 server. If selected and a DHCP lease exists, the DHCP Release menu and the DHCP Renew menu are available to set DHCP lease options.</p> <p>Auto IP: Use for automatic link-local IPv4 addressing. An address in the form 169.254.x.x is assigned automatically.</p> <p>If you set this option to the Manual setting, use the Manual Settings menu to configure TCP/IPv4 parameters.</p>
		Manual Settings NOTE: This menu is available only if you select the Manual option under the Config Method menu.	IP Address	Enter the address.	(Available only if the Config Method option is set to the Manual option.) Configure parameters directly from the product control panel:
			Subnet Mask	Enter the address.	
			Default Gateway	Enter the address.	

Table 2-54 Embedded Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Default IP		Auto IP* Legacy	Specify the IP address to default to when the print server is unable to obtain an IP address from the network during a forced TCP/IP reconfiguration (for example, when manually configured to use BootP or DHCP). NOTE: This feature assigns a static IP address that might interfere with a managed network. Auto IP: A link-local IP address 169.254.x.x is set. Legacy: The address 192.0.0.192 is set, consistent with older HP Jetdirect products.
		Primary DNS		Range: 0 – 255 Default = xxx.xxx.xx.xx	Specify the IP address (n.n.n.n) of a Primary Domain Name System (DNS) Server.
		Secondary DNS		Range: 0 – 255 Default = 0.0.0.0	Specify the IP address (n.n.n.n) of a Secondary DNS Server.
	IPv6 Settings	Enable		Off On*	Use this item to enable or disable IPv6 operation on the print server. Off: IPv6 is disabled. On: IPv6 is enabled.
		Address	Manual Settings	Enable Address	Use this item to enable and manually configure a TCP/IPv6 address.

Table 2-54 Embedded Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		DHCPV6 Policy		Router Specified Router Unavailable* Always	<p>Router Specified: The stateful auto-configuration method to be used by the print server is determined by a router. The router specifies whether the print server obtains its address, its configuration information, or both from a DHCPv6 server.</p> <p>Router Unavailable: If a router is not available, the print server should attempt to obtain its stateful configuration from a DHCPv6 server.</p> <p>Always: Whether a router is available, the print server always attempts to obtain its stateful configuration from a DHCPv6 server.</p>
		Primary DNS			
		Secondary DNS			
	Proxy Server			Select from a provided list.	<p>Specifies the proxy server to be used by embedded applications in the product. A proxy server is typically used by network clients for Internet access. It caches Web pages, and provides a degree of Internet security, for those clients.</p> <p>To specify a proxy server, enter its IPv4 address or fully-qualified domain name. The name can be up to 255 octets.</p> <p>For some networks, you might need to contact your Internet Service Provider (ISP) for the proxy server address.</p>

Table 2-54 Embedded Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Proxy Port			Default = 0080	Enter the port number used by the proxy server for client support. The port number identifies the port reserved for proxy activity on your network, and can be a value from 0 to 65535.
	Idle Timeout			Default = 0270	The time period, in seconds, after which an idle TCP print data connection is closed (default is 270 seconds, 0 disables the timeout).
Security	Secure Web			HTTPS Required* HTTPS Optional	For configuration management, specify whether the HP Embedded Web Server will accept communications using HTTPS (Secure HTTP) only, or both HTTP and HTTPS. HTTPS Required: For secure, encrypted communications, only HTTPS access is accepted. The print server will appear as a secure site.
	IPSEC			Keep Disable*	Specify the IPsec status on the print server. Keep: IPsec status remains the same as currently configured. Disable: IPsec operation on the print server is disabled.
	802.1X			Reset Keep*	Specify whether the 802.1X settings on the print server are reset to the factory defaults. Reset: The 802.1X settings are reset to the factory defaults. Keep: The current 802.1X settings are maintained.

Table 2-54 Embedded Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Reset Security			Yes No*	<p>Specify whether the current security settings on the print server will be saved or reset to factory defaults.</p> <p>Yes: Security settings are reset to factory defaults.</p> <p>No: The current security settings are maintained.</p>
Diagnostics	Embedded Tests	LAN HW Test		Yes No*	<p>Provides tests to help diagnose network hardware or TCP/IP network connection problems.</p> <p>Embedded tests help to identify whether a network fault is internal or external to the product. Use an embedded test to check hardware and communication paths on the print server. After you select and enable a test and set the execution time, you must select the Execute option to initiate the test.</p> <p>Depending on the execution time, a selected test runs continuously until either the product is turned off, or an error occurs and a diagnostic page is printed.</p> <p>CAUTION: Running this embedded test will erase your TCP/IP configuration.</p> <p>This test performs an internal loopback test. An internal loopback test will send and receive packets only on the internal network hardware. There are no external transmissions on your network.</p>

Table 2-54 Embedded Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		HTTP Test		Yes No*	<p>This test checks operation of HTTP by retrieving predefined pages from the product, and tests the HP Embedded Web Server.</p> <p>Select the Yes option to choose this test, or the No option to not choose it.</p>
		SNMP Test		Yes No*	<p>This test checks operation of SNMP communications by accessing predefined SNMP objects on the product.</p> <p>Select the Yes option to choose this test, or the No option to not choose it.</p>
		Data Path Test		Yes No*	<p>This test helps to identify data path and corruption problems on an HP postscript level 3 emulation product. It sends a predefined PS file to the product, However, the test is paperless; the file will not print.</p> <p>Select the Yes option to choose this test, or the No option to not choose it.</p>
		Select All Tests		Yes No*	<p>Use this item to select all available embedded tests.</p> <p>Select the Yes option to choose all tests. Select the No option to select individual tests.</p>

Table 2-54 Embedded Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Execution Time [H]		Range: 1 – 24 hours Default = 1 hour	Specify the length of time (in hours) that an embedded test will be run. If you select zero (0), the test runs indefinitely until an error occurs or the product is turned off. Data gathered from the HTTP, SNMP, and Data Path tests is printed after the tests have completed.
		Execute		No* Yes	No: Do not initiate the selected tests. Yes: Initiate the selected tests.
	Ping Test	Dest Type		IPv4 IPv6	This test is used to check network communications. This test sends link-level packets to a remote network host, then waits for an appropriate response. To run a ping test, set the following items: Dest Type Specify whether the target product is an IPv4 or IPv6 node.
		Dest IPv4		Range: 0 – 255 Default = 127.0.0.1	Enter the IPv4 address.
		Dest IPv6		Select from a provided list. Default = ::1	Enter the IPv6 address.
		Packet Size		Default = 64	Specify the size of each packet, in bytes, to be sent to the remote host. The minimum is 64 (default) and the maximum is 2048.
		Timeout		Default = 001	Specify the length of time, in seconds, to wait for a response from the remote host. The maximum is 100.

Table 2-54 Embedded Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		Count		Default = 004	Specify the number of ping test packets to send for this test. Select a value from 0 to 100. To configure the test to run continuously, select 0.
		Print Results		Yes No*	
		Execute		Yes No*	No: Do not initiate the selected tests. Yes: Initiate the selected tests.
	Ping Results	Packets Sent		Default = 00000	Shows the number of packets (0 - 65535) sent to the remote host since the most recent test was initiated or completed..
		Packets Received		Default = 00000	Shows the number of packets (0 - 65535) received from the remote host since the most recent test was initiated or completed. The default is 0.
		Percent Lost		Default = 000	Shows the percent (0 to 100) of ping test packets that were sent with no response from the remote host since the most recent test was initiated or completed.
		RTT Min		Default = 0000	Shows the minimum detected roundtrip-time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		RTT Max		Default = 0000	Shows the maximum detected roundtrip-time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.

Table 2-54 Embedded Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
		RTT Average		Default = 0000	Shows the average round-trip-time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		Ping In Progress		Yes No*	Shows whether a ping test is in progress. Yes Indicates a test in progress. No Indicates that a test completed or was not run.
		Refresh		Yes No*	When viewing the ping test results, this item upgrades the ping test data with current results. Select the Yes option to upgrade the data, or the No option to maintain the existing data. However, a refresh automatically occurs when the menu times out or you manually return to the main menu.

Table 2-54 Embedded Jetdirect Menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
Link Speed				Auto*	<p>The link speed and communication mode of the print server must match the network. The available settings depend on the product and installed print server. Select one of the following link configuration settings:</p> <p>CAUTION: If you change the link setting, network communications with the print server and network product might be lost.</p> <p>The print server uses auto-negotiation to configure itself with the highest link speed and communication mode allowed. If auto-negotiation fails, either the 100TX Half feature or the 10T Half feature is set depending on the detected link speed of the hub/switch port. (A 1000T half-duplex selection is not supported.)</p>
				10T Half	10 Mbps, half-duplex operation.
				10T Full	10 Mbps, full-duplex operation.
				10T Auto	100 Mbps, half-duplex operation.
				100TX Half	100 Mbps, full-duplex operation.
				100TX Full	Limits auto-negotiation to a maximum link speed of 100 Mbps.
				100TX Auto	1000 Mbps, full-duplex operation.

Troubleshooting menu

To display: At the product control panel, select the [Administration](#) menu, and then select the [Troubleshooting](#) menu.

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

Table 2-55 Troubleshooting menu

First level	Second level	Third level	Fourth level	Values	Description
Event Log				Print	Use to print a list of the 1,000 most recent events in the Event Log. For each event, the printed log shows the error number, page count, error code, and description or personality.
Paper Path Page				Print	Shows information about pages that have been printed.
Fax Fax models only	Fax T.30 Trace	Print T.30 Report		Print	Use to print or configure the fax T.30 trace report. T.30 is the standard that specifies handshaking, protocols, and error correction between fax machines.
		When to Print Report		Never automatically print* Print after every fax Print only after fax send jobs Print after any fax error Print only after fax send errors Print only after fax receive errors	Configure the T.30 report to print after certain events. You can choose to print the report after every fax job, every fax job sent, every fax job received, every send error, or every receive error.
	Fax V.34			Normal* Off	Use to disable V.34 modulations if several fax failures have occurred or if phone line conditions require it.
	Fax Speaker Mode			Normal* Diagnostic	Used by a technician to evaluate and diagnose fax issues by listening to the sounds of fax modulations.

Table 2-55 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Fax Log Entries			On Off*	The standard fax log includes basic information such as the time and whether the fax was successful. The detailed fax log shows the intermediate results of the redial process not shown in the standard fax log.
Print Quality Pages	Print PQ Troubleshooting pages			Print	Use to print pages that help you resolve problems with print quality.
	Print Fuser Test Page			Print	
Diagnostic Tests	Disable Cartridge Check				Disables the toner cartridge.
	Paper Path Sensors			Select from a list of the product sensors.	Initiates a test of the paper path sensors.
	Paper Path Test	Print Test Page			
		Source Tray		Select from a list of the available trays.	Generates a test page for testing paper handling features. You can define the path that is used for the test in order to test specific paper paths.
		Test Duplex Path		Off* On	
		Number of Copies		Range: 1–500 Default = 1	Sets the default number of copies for a copy job. This default applies when the Copy or Quick Copy function is initiated from the product Home screen. The factory default setting is 1.
	Manual Sensor Test			Select from a list of available components. Reset Sensors	Test the product sensors and switches for correct operation. Each sensor is displayed on the control-panel screen, along with its status. Manually trip each sensor and watch for it to change on the screen. Press the Stop button to abort the test.

Table 2-55 Troubleshooting menu (continued)

First level	Second level	Third level	Fourth level	Values	Description
	Tray/Bin Manual Sensor Test			Select from a list of available components. Reset Sensors	Test the sensors in the trays and bins for correct operation. Each sensor is displayed on the control-panel screen, along with its status. Manually trip each sensor and watch for it to change on the screen. Press the Stop button to abort the test.
	Component Test			Select from a list of available components.	Use to exercise individual parts independently to isolate noise, leaking, or other issues. To start the test, select one of the components. The test will run the number of times specified by the Repeat option. You might be prompted to remove parts from the product during the test. Press the Stop button to abort the test.
	Continuous Scan			2-sided	
	Scanner Tests			Sensors	
Retrieve Diagnostic Data				Create device data file Create zipped debug information file Include crash dump files Clean up debug information Send to E-mail Export to USB	Create files that contain information about the product that can help identify the cause of problems.
Generate Debug Data				Start	

Device Maintenance menu

Backup/Restore menu

To display: At the product control panel, select the **Device Maintenance** menu, and then select the **Backup/Restore** menu.

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

Table 2-56 Backup/Restore menu

First level	Second level	Third level	Values	Description
Backup Data	Enable Scheduled Backups	Backup Time	Enter a time	
		Days Between Backups	Enter the number of days	
	Backup Now			
	Export Last Backup			
Restore Data			Insert a USB drive that contains the backup file.	

Calibration/Cleaning menu

To display: At the product control panel, select the [Device Maintenance](#) menu, and then select the [Calibration/Cleaning](#) menu.

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

Table 2-57 Calibration/Cleaning menu

First level	Second level	Third level	Values	Description
Calibration/Cleaning	Cleaning Settings	Auto Cleaning	Off* On	Use to select the Auto Cleaning menu or the Cleaning Interval menu.
		Cleaning Interval	Select from a list of cleaning intervals.	Use to set the interval when the cleaning page should be printed. The interval is measured by the number of pages printed.
		Cleaning Size	Select from a list of support sizes.	Select the paper size to use for the cleaning page.
	Cleaning Page		Print	Use to process the cleaning page that was created by using the Create Cleaning Page menu. The process takes up to 1.5 minutes.
	Calibrate Scanner			Touch Next to calibrate the device scanner. Messages on the control-panel display will lead you through the calibration process.
	Clean Rollers		Reset Cancel	Maintenance History screen is view only. There are two options: the Reset option to reset the page count, or the Cancel option to go back to the previous screen.

Table 2-57 Calibration/Cleaning menu (continued)

First level	Second level	Values	Description
Clean Document Feeder Settings	Low Threshold Settings	Range: 0 – 100% Default = 10%	Configure cleaning settings for the document feeder.
	Very Low Settings	Stop Prompt to continue* Continue	
USB Firmware Upgrade			Follow the onscreen prompts to upgrade the firmware using a USB flash device.
HP FutureSmart Level		Change Cancel	Use this item to change the HP FutureSmart version. CAUTION: Each FutureSmart level includes changes to existing functionality and a set of new features.

USB Firmware Upgrade menu

To display: At the product control panel, select the [Device Maintenance](#) menu, and then select the [USB Firmware Upgrade](#) menu.

Insert a USB storage device with a firmware upgrade bundle into the USB port, and follow the on-screen instructions.

Service menu

To display: At the product control panel, select the [Device Maintenance](#) menu, and then select the [Service](#) menu.

The [Service](#) menu is locked and requires a PIN for access. This menu is intended for use by authorized service personnel. See the Service mode function section in the product troubleshooting manual.

Control panel message document (CPMD)

Control-panel message types

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



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

A control-panel message displays temporarily and might require the user to acknowledge the message by touching the **OK** button to resume printing or by touching the **Stop** button to cancel the job. With certain messages, the job might not finish printing or the print quality might be affected. If the message is related to printing and the auto-continue feature is on, the product will attempt to resume printing after the message has appeared for 10 seconds without acknowledgement.

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

Control-panel messages and event log entries



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



TIP: Some control-panel messages and event log entries refer to a specific product sensor or switch in the recommended action to solve the problem. See the diagrams in the clear jams section of the product troubleshooting manual for sensor and switch locations.

10.XX.YZ Error Messages

10.00.00, 10.00.10 Supply memory error

Description

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

Memory error (Y = 0)

- **10.00.00** (event code)
Black print cartridge

Memory tag missing (Y = 1)

- **10.00.10** (event code)
Black print cartridge

Recommended action

1. Remove, and then reinstall the indicated print cartridge.
2. If the error reappears, turn the power off, and then on.
3. Check the cartridge memory tag. If it is damaged, replace the cartridge.
4. If the error persists, replace the indicated print cartridge.

10.23.5X Fuser Kit Reset

Description

- **10.23.50** (event code)
The fuser kit life was reset above the order threshold.
- **10.23.51** (event code)
The fuser kit life was reset above the replace threshold.
- **10.23.52** (event code)
The fuser kit life was reset above the reset threshold.

Recommended action

No action necessary.

10.23.70 Printing Past Very Low

Description

The product indicates when fuser kit is very low. The actual remaining fuse kit life might vary.
You do not need to replace the fuser yet unless print quality is unacceptable.



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

Recommended action

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



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

10.XX.33 Used Supply In Use

Description

The print cartridge is used.

- **10.00.33** (event code)
Black print cartridge

Recommended action

If you believe this is a genuine HP supply, go to www.hp.com/go/anticounterfeit.



NOTE: Using a cartridge that is near its end-of-life can cause this event code.

10.XX.34 Used Supply In Use

Description

The print cartridge is used.

- **10.00.34** (event code)

Black print cartridge

Recommended action

If you believe this is a genuine HP supply, go to www.hp.com/go/anticounterfeit.



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

10.XX.40 Genuine HP Supplies Installed

Description

A genuine HP print cartridge has been installed.

- **10.00.40** (event code)

Black print cartridge

Recommended action

No action necessary.

10.XX.41 Unsupported Supply In Use

Description

The installed print cartridge is for a different product.

- **10.00.41** (event code)

Black print cartridge

Recommended action

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



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

10.XX.70 Printing past very low

Description

The product indicates when a supply level is very low. The actual remaining print cartridge life might vary.

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



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

- **10.00.70** (event code)

Black print cartridge

Recommended action

If print quality is no longer acceptable, replace the print cartridge. See the parts chapter in the service manual for the correct cartridge part number.



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

10.YY.15 Install <supply>

Description

The indicated supply has been removed or installed incorrectly.

- **10.00.70** (event code)
Black print cartridge
- **10.23.15** (event code)
Fuser kit

Recommended action

Replace or install the indicated supply.

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

10.YY.35 Incompatible <supply>

Description

The indicated supply is not compatible with this product.

- **10.00.35** (event code)
Black print cartridge
- **10.23.35** (event code)
Fuser kit

Recommended action



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

Install a supply that is designed for this product.

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

11.XX.YZ Error Messages

11.00.01 or 11.00.02 Internal clock error

Description

The product real time clock has experienced an error.

01=dead clock

02=dead real time clock

Recommended action

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

13.XX.YZ Error Messages

13.XX -Manual sensor test for troubleshooting-

Description

Manual sensor test

Recommended action

1. From the Home screen, scroll to and touch the [Administration](#) button.
2. Touch the [Troubleshooting](#) button, and then touch the [Diagnostic Tests](#) button.
3. Touch the [Manual Sensor Test](#) button.
4. Activate a switch or sensor, and then watch the control-panel display for the switch or sensor state to change from green to clear or clear to green. It might take a few seconds to change.

Manual Sensor Test screen



Sensor or switch and number

- Right Lower Door ----- SW1
- Right Upper Door ----- SW105
- Cartridge door (top cover) ----- SW101
- Tray 5 Feed ----- SR12
- Tray 4 Feed ----- SR8
- Tray 3 Feed ----- SR4
- Pre-feed ----- PS102
- TOP ----- PS103
- Paper width 1 ----- PS106
- Paper width 2 ----- PS107

- Fuser output ----- PS700
- Intermediate Switchback ----- PS110
- Inverter media Stay ----- PS111
- Duplexer Refeed ----- PS113
- Output ----- PS112
- Output bin Full ----- PS104

13.80.Ax Jam inside left cover

Description

Paper jam in stapler/stacker input feed sensor SR5

- **13.80.A1**
Stopped going to Bin 1
- **13.80.A2**
Stopped going to Bin 2

Recommended action

1. Follow the on screen instructions to locate and remove the paper or obstruction.
2. Inspect the paper path and remove any obstructions.
3. Remove and reattach output accessory.
4. Verify that the input sensor (SR5) responds correctly.
5. Replace Output Accessory.

13.84.A4 Jam inside left cover

Description

A jam exists in the lower bin area.

Recommended action

1. Follow the on screen instructions to locate and remove the paper or obstruction.
2. Inspect the paper path and remove any obstructions.
3. Remove and reattach output accessory.
4. Verify that the input sensor (SR5) responds correctly.
5. Replace Output Accessory.

13.85.Ax Jam inside left cover

Description

A jam exists in the accessory output bin area.

- **13.80.A1**
Output Bin 1
- **13.80.A2**
Output Bin 2
- **13.80.A3**
Output Bin 3
- **13.80.A4**
Lower Output Bin

Recommended action

1. Follow the on screen instructions to locate and remove the paper or obstruction.
2. Inspect the paper path and remove any obstructions.
3. Remove and reattach output accessory.
4. Verify that the input sensor (SR5) responds correctly.
5. Replace Output Accessory.

13.A1.D1 Jam in Tray 1

Description

Paper Delay Jam in Tray 1.

This jam occurs when the paper does not reach the TOP sensor (Registration sensor) (PS-103) in designated amount of time after the start of paper pick-up from Tray 1.

This is a no-pick jam from tray 1 (MP Tray).

Recommended action

1. Clear the jam in the area indicated.
2. Make sure that the MP tray paper guides are set to the correct paper size in the tray, and that the paper is not overload above the marking shown on the tray side guide
3. Check the Tray 1 pickup and feed rollers for wear, damage or paper dusk. Clean or replace the rollers as needed.
4. Perform a test print job, do the rollers turn and feed paper when the product tries to print from Tray 1?
 - IF YES:
Test the feed sensor using the sensor test under the- [Administration - Troubleshooting - Diagnostic Tests](#) menu to verify that the sensor is functioning properly.
 - IF NO:
Run the Tray 1 pickup/feed motor drive test under the – [Administration - Troubleshooting - Diagnostic Tests](#)- menu to verify that the feed motor is functioning properly

If the test fails or if there is an abnormal noise replace the MP (Tray 1) pickup assembly.

13.A1.FF Paper Jam

Description

Residual paper Jam in tray 1.

This jam occurs when residual paper is detected at the (Registration sensor) (PS103) at power on.

Recommended action

1. Clear the jam in the area indicated.
2. Close the door to allow the product to attempt to clear the jam.
3. Make sure sensor PS103 flag moves smoothly and that sensor is not damaged. If the flag is damaged replace the MP tray assembly.
4. Test the feed sensor using the sensor test under the - [Administration - Troubleshooting - Diagnostic Tests](#) menu to verify that the sensor is functioning properly.
5. If tray 1 does not function properly, replace the MP (Tray 1) pickup assembly.

13.A2.A2 Jam in tray 2

Description

Paper Stay Jam tray 2

This jam occurs when the Prefeed sensor (PS102) does not detect the trailing edge of the paper within a specified period of time from when the sensor detected the leading edge.

Recommended action

1. Open tray, remove any jammed paper, and then close the tray.
2. Open and close the right door and clear any paper found to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on the tray.
4. Avoid loading paper that is damaged (ex. bent, torn, dusty, wrinkled, and curled) and or that is out of specification for the tray and product.
5. Verify that the Tray 2 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.
6. Use the component tests to run the Tray 2 pickup/feed motor drive test. If the motor is not functioning properly, replace the pickup assembly.
7. Use the manual sensor tests to toggle the Prefeed sensor PS102. If the sensor is not functioning properly.
8. Check the connectors at the sensor and feed motor, and the DC controller PCA.
9. If the error persists, replace the paper pickup assembly.

13.A2.D2 Jam in tray 2

Description

Paper Delay Jam from tray 2

This jam occurs when the paper does not reach the Prefeed sensor (PS102) in designated amount of time after the start of paper pick-up from Tray 2.

This is a no-pick jam from tray 2.

Recommended action

1. Open tray, remove any jammed paper, and then close the tray.
2. Open and close the right door and clear any paper found to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on the tray.
4. Avoid loading paper that is damaged (ex. bent, torn, dusty, wrinkled, and curled) and or that is out of specification for the tray and product.
5. Verify that the Tray 2 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.
6. Use the component tests to run the Tray 2 pickup/feed motor drive test. If the motor is not functioning properly, replace the pickup assembly.
7. Use the manual sensor tests to toggle the Prefeed sensor PS102. If the sensor is not functioning properly.
8. Check the connectors at the sensor and feed motor, and the DC controller PCA.
9. If the error persists, replace the paper pickup assembly.

13.A2.FF

Description

Residual Media Jam in Tray 2

This jam occurs when residual media is detected at the prefeed sensor (PS102).

Recommended action

1. Open Tray 2, remove any jammed paper, and then close the tray.
2. Open and close the upper right door to allow the product to attempt to clear the jam.
3. Make sure that the Tray 2 pickup, feed, and separation roller are installed correctly and show no damage or wear.
4. Clean or replace the pickup/feed rollers as needed.
5. Check the connectors at the sensor, feed motor, and the DC controller PCA.
6. Open the following menus:

- **Administration**
 - **Troubleshooting**
 - **Diagnostic Tests**
7. Test PS102 using the Tray/Bin Manual sensor test to verify that the sensors are functioning correctly.
 8. Run the Tray 2 pickup/feed motor drive test to verify that the feed motor is functioning correctly (listen for the motor to activate). If it is not, replace the pickup assembly.
 9. If the error persists, replace the paper pickup assembly.

13.A3.A3 Jam in tray 3

Description

Paper Stay Jam In Tray 3.

This jam occurs when the Tray feed sensor (SR4) does not detect the trailing edge of the paper within a specified period of time from when the sensor detected the leading edge.

Recommended action

1. Open tray, remove any jammed paper, and then close the tray.
2. Open and close any door on the product to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.
4. Avoid loading paper that is damaged (ex. bent, torn, dusty, wrinkled, and curled) and or out of specification for the product.
5. Verify that the Tray 3 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.
6. Use the component tests to run the Tray 3 pickup/feed motor drive test. If the motor is not functioning properly, replace the Pick up Motor.
7. Use the manual sensor tests to toggle SR4. If the sensor is not functioning properly, replace the Tray 3 Pick up Assembly.
8. Check the following connectors for Tray 3 on the HCI controller and assembly. (J13, J408 Media feed sensor) (J18, J408 Pick up assembly (J14, J409 Pick up motor)
9. If the error persists, replace the Tray 3 paper pickup assembly.

13.A3.D3 Jam in tray 3

Description

Paper Delay Jam In Tray 3.

This jam occurs when the paper does not reach the Tray 3 feed sensor (SR4) in designated amount of time after the start of paper pick-up from Tray 3.

This is a no-pick jam from tray 3.

Recommended action

1. Open tray, remove any jammed paper, and then close the tray.
2. Open and close any door on the product to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.
4. Avoid loading paper that is damaged (ex. bent, torn, dusty, wrinkled, and curled) and or out of specification for the product.
5. Verify that the Tray 3 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.
6. Use the component tests to run the Tray 3 pickup/feed motor drive test. If the motor is not functioning properly, replace the Pick up Motor.
7. Use the manual sensor tests to toggle SR4. If the sensor is not functioning properly, replace the Tray 3 Pick up Assembly.
8. Check the following connectors for Tray 3 on the HCI controller and assembly. (J13, J408 Media feed sensor) (J18, J408 Pick up assembly (J14, J409 Pick up motor)
9. If the error persists, replace the Tray 3 paper pickup assembly.

13.A3.FF Paper Jam**Description**

Residual paper jam in Tray 3.

This jam occurs when residual paper is detected at the Tray 3 feed sensor (SR4) at power on.

Recommended action

1. Open the tray, and right door and remove any jammed paper, and then close the tray.
2. Open and close any door on the product to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.
4. Verify that the Tray 3 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.
5. Use the manual sensor tests to toggle SR4. If the sensor is not functioning properly, replace the Tray 3 Pick up Assembly.
6. Check the following connectors for Tray 3 on the HCI controller and assembly. (J13, J408 Media feed sensor) (J18, J408 Pick up assembly (J14, J409 Pick up motor)
7. If the error persists, replace the Tray 3 paper pickup assembly.

13.A4.A4 Jam in tray 4**Description**

Paper Stay Jam In Tray 4.

This jam occurs when the paper does not reach the Tray 4 feed sensor (SR8) in designated amount of time after the start of paper pick up from Tray 4.

Recommended action

1. Open the tray, remove any jammed paper, and then close the tray.
2. Open and close any door on the product to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper being installed into the tray, and that the tray is not over filled above fill mark on tray.
4. Avoid loading paper that is damaged (ex. bent, torn, dusty, wrinkled, and curled) and or out of specification.
5. Verify that the Tray 4 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.
6. Use the component tests to run the Tray 4 pickup/feed motor drive test. If the motor is not functioning properly, replace the Pick up Motor.
7. Use the manual sensor tests to toggle SR8. If the sensor is not functioning properly, replace the Tray 4 pick up assembly.
8. Check the following connectors for Tray 4 on the HCI controller and assembly. (J22, J406 Media feed sensor) (J20 J406 Pick up assembly) (J14, J409 Pick up motor)
9. If the error persists, replace the Tray 4 paper pickup assembly.

13.A4.D4 Jam in tray 4

Description

Paper Delay Jam In Tray 4.

This jam occurs when the paper does not reach the Tray 4 feed sensor (SR8) in designated amount of time after the start of paper pick-up from Tray 4.

This is a no-pick jam from tray 4.

Recommended action

1. Open the tray, remove any jammed paper, and then close the tray.
2. Open and close any door on the product to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper being installed into the tray, and that the tray is not over filled above fill mark on tray.
4. Avoid loading paper that is damaged (ex. bent, torn, dusty, wrinkled, and curled) and or out of specification.
5. Verify that the Tray 4 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.
6. Use the component tests to run the Tray 4 pickup/feed motor drive test. If the motor is not functioning properly, replace the Pick up Motor.
7. Use the manual sensor tests to toggle SR8. If the sensor is not functioning properly, replace the Tray 4 pick up assembly.

8. Check the following connectors for Tray 4 on the HCI controller and assembly. (J22, J406 Media feed sensor) (J20 J406 Pick up assembly) (J14, J409 Pick up motor)
9. If the error persists, replace the Tray 4 paper pickup assembly.

13.A4.FF Paper Jam

Description

Residual paper jam in Tray 4.

This jam occurs when residual paper is detected at the Tray 4 feed sensor (SR8) at power on.

Recommended action

1. Open Tray, and right door and remove any jammed paper, and then close the tray.
2. Open and close any door on the product to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.
4. Verify that the Tray 4 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.
5. Use the component tests to run the Tray 4 pickup/feed motor drive test. If the motor is not functioning properly, replace the Pick up motor.
6. Use the manual sensor tests to toggle SR8. If the sensor is not functioning properly, replace the Tray 4 pick up assembly.
7. Check the connectors for Tray 4 on the HCI controller and assembly. (J22, J406 Media feed sensor) (J20 J406 Pick up assembly)
8. If the error persists, replace the Tray 4 paper pickup assembly.

13.A5.A5 Jam in tray 5

Description

Paper Stay Jam In Tray 5.

This jam occurs when the paper does not reach the Tray 5 feed sensor (SR12) in designated amount of time after the start of paper pick up from Tray 5.

Recommended action

1. Open the tray, remove any jammed paper, and then close the tray.
2. Open and close any door on the product to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.
4. Avoid loading paper that is damaged (ex. bent, torn, dusty, wrinkled, and curled) and or out of specification
5. Verify that the Tray 5 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.

6. Use the component tests to run the Tray 5 pickup/feed motor drive test. If the motor is not functioning properly, replace the Pick up Motor.
7. Use the manual sensor tests to toggle SR12. If the sensor is not functioning properly, replace the Tray 5 pick up assembly.
8. Check the connectors for Tray 5 on the HCI controller and assembly. (J32, J403 Media feed sensor) (J30, J403 Pick up assembly) (J14, J409 Pick up motor)
9. If the error persists, replace the Tray 5 paper pickup assembly.

13.A5.D5 Jam in tray 5

Description

Paper Delay Jam In Tray 5.

This jam occurs when the paper does not reach the Tray 5 feed sensor (SR12) in designated amount of time after the start of paper pick-up from Tray 5.

This is a no-pick jam from tray 5.

Recommended action

1. Open the tray, remove any jammed paper, and then close the tray.
2. Open and close any door on the product to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.
4. Avoid loading paper that is damaged (ex. bent, torn, dusty, wrinkled, and curled) and or out of specification
5. Verify that the Tray 5 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.
6. Use the component tests to run the Tray 5 pickup/feed motor drive test. If the motor is not functioning properly, replace the Pick up Motor.
7. Use the manual sensor tests to toggle SR12. If the sensor is not functioning properly, replace the Tray 5 pick up assembly.
8. Check the connectors for Tray 5 on the HCI controller and assembly. (J32, J403 Media feed sensor) (J30, J403 Pick up assembly) (J14, J409 Pick up motor)
9. If the error persists, replace the Tray 5 paper pickup assembly.

13.A5.FF Paper Jam

Description

Residual paper jam in Tray 5.

This jam occurs when residual paper is detected at the Tray 5 feed sensor (SR12) at power on.

Recommended action

1. Open the tray, and right door and remove any jammed paper, and then close the tray.
2. Open and close any door on the product to allow the product to attempt to clear the jam.
3. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.
4. Verify that the Tray 5 pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged. Clean or replace the rollers as needed.
5. Use the manual sensor tests to toggle SR12. If the sensor is not functioning properly, replace the Tray 5 pick up assembly.
6. Check the connectors for Tray 5 on the HCI controller and assembly (J32, J403 Media feed sensor) (J30, J403 Pick up assembly)
7. If the error persists, replace the Tray 5 paper pickup assembly.

13.AA.EE Paper Jam

Description

HCI Door Open Jam.

This jam occurs when the HCI right door (SW1) is opened during printing.

Recommended action

1. Close the lower right door to allow the product to attempt to clear the jam.
2. Test SW1 using the manual sensor switch test under the – [Administration- Troubleshooting- Diagnostic Tests](#)- menu to verify that the switch is functioning properly.
3. Replace the SW1 sensor assembly.

13.Ax.EE

Description

This jam occurs when a door is opened during printing.

- **13.AB.EE** (event code)
HCI door open
- **13.BB.EE** (event code)
Right door open

Recommended action

Make sure that the doors are fully closed.

Test sensor using the manual sensor switch test under the – [Administration- Troubleshooting- Diagnostic Tests](#)- menu to verify that the switch is functioning properly.

13.B2.Az Paper Jam

Description

Paper stopped at the registration jam, from the tray indicated.

This jam occurs when the paper is present longer than "the expected paper length plus 50mm or more" when detected at the registration sensor PS103.

- 13.B2.A1 = Tray 1
- 13.B2.A2 = Tray 2
- 13.B2.A3 = Tray 3
- 13.B2.A4 = Tray 4
- 13.B2.A5 = Tray 5
- 13.B2.AD = Duplexer

Recommended action

1. Open the top cover and clear the jam in the indicated area. Inspect the paper path and make sure that no paper is blocking the paper path.
2. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.
3. Test TOP sensor/Registration Sensor (PS103) using the manual sensor test under the following:

[Administration](#)

[Troubleshooting](#)

[Diagnostic Test](#)

[Manual Sensor Test](#)

elevate the case following your standard support process.

4. If the sensor is functioning properly, run a few pages to check where the leading edge of the paper actually stops.
5. Check the area where the leading edge of the paper has stopped for blockage or damage. Remove any obstructions that are found.

13.B2.Bz Jam in top cover

Description

Multifeed jam at registration sensor (Top Sensor) PS103

- **13.B2.B1**

- This jam occurs when a multifeed is detected at the Registration sensor PS103 when printing from the Tray 1.
- **13.B2.B2**
This jam occurs when a multifeed is detected at the Registration sensor PS103 when printing from the Tray 2.
 - **13.B2.B3**
This jam occurs when the media is present longer than "the expected media length plus 50mm" or more is detected at the Registration sensor PS103 when printing from the Tray 3.
 - **13.B2.B4**
This jam occurs when a multifeed is detected at the Registration sensor PS103 when printing from the Tray 4.
 - **13.B2.B5**
This jam occurs when a multifeed is detected at the Registration sensor PS103 when printing from the Tray 5.
 - **13.B2.AD**
This jam occurs when a multifeed is detected at the Registration sensor PS103 when printing from the Duplexer.

Recommended action

Multifeeds are a media or tray pickup issue. Perform the following steps

1. Open top cover and clear the jam in the indicated area. Inspect the paper path and ensure no paper blocking the paper path.
2. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray
3. Make sure the type and quality of the media that you are using meet HP specifications.
4. Make sure that the Tray pickup, feed, and separation roller are installed correctly and show no damage or wear.
5. Clean or replace the pickup/feed rollers as needed.
6. Check the paper tray for damage and replace tray as needed..

13.B2.DD Jam in duplexer

Description

Paper Delay Jam at Registration Top

This is a paper delay jam at registration sensor PS103 from the duplexer re-feed..

Recommended action

1. Open top cover and right door and inspect the paper path and ensure no paper blocking the paper path.
2. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.

3. Verify that the media meets HP media specifications.
4. Remove the duplexer and remove any media or obstructions found.

 **NOTE:** Make sure and check Duplexer re-feed path for media and obstructions indicated in the follow image.

Figure 2-63 Removing paper Stuck in Duplex re-feed path.



This area is above tray 2 pickup roller assembly. The arrow indicates duplex refeed path.

5. If issue remains, replace the duplexer

13.B2.Dz Jam in top cover

Description

Paper Delay Jam at Registration Top

Paper Delay jam at Registration area's TOP sensor (PS103) (Late arriving at sensor)

13.B2.Dz ("z" being the tray which the paper was fed from: Tray 1-6) An error code appears on the control panel as 13.B2.D(1-6). Paper Jam.

- **13.B2.D1**

This jam occurs when the paper is picked from Tray 1 and SP103 is not triggered.

- **13.B2.D2**

This jam occurs when the paper is picked from Tray 2 and PS102 is triggered, but PS103 is not triggered.

- **13.B2.D3:**

This jam occurs when the paper is picked from Tray 3 and SR4 is triggered, but PS103 is not triggered.

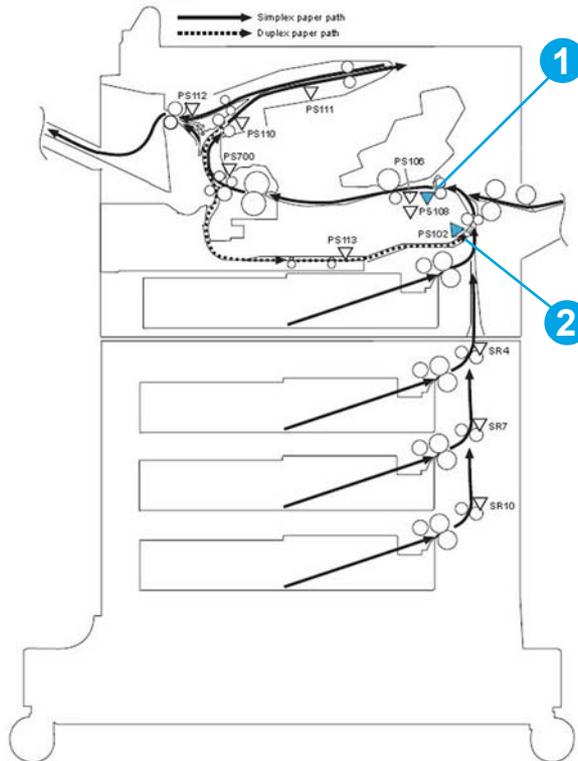
- **13.B2.D4:**

This jam occurs when the paper is picked from Tray 5 and SR8 is triggered, but PS103 is not triggered.

- **13.B2.D5:**

This jam occurs when the paper is picked from Tray 5 and SR12 is triggered, but PS103 is not triggered.

- **Figure 2-64** Jam detection sensors



Call Out 1 — PS103 Top Sensor

Call Out 2 — PS102 Prefeed Sensor

 **NOTE:** PS102 and PS103 are not replaceable or removable.

Recommended action

If paper was fed from Tray 1 (MP) (13.B2.D1): Probable cause is a tray 1 misfeed (mispick). Replace Tray 1 feed rollers and make sure paper is properly identified in control panel.

If paper was fed from Trays 2-5 or the duplexer:

The error indicates that the paper did activate PS102 (Prefeed Sensor) but did not reach PS103 (TOP Sensor).

Before beginning repair:

IF printer is found still signaling error:

- Before opening the printer, do a control panel test (See “Manual Sensor test” section in this document) to see what sensors are activated and write them down. (Especially note the states of PS101, PS102, PS103, PS107, and PS907).
- Note locations or any paper found in paper path and especially those found just before or after PS103 in the registration area.

Run a set of internal pages:

- Are all of the 13.B2.Dx errors from the same paper tray?
- How often are they occurring?

Try to recreate the error:

- Using the Event log, determine which tray(s) the error is occurring from then run single sided copies from that tray to try to recreate the error.
- Replace the feed, Pickup and separation rollers for paper trays with errors.
- Adjust the paper tray guides and load the paper according to procedure stated at the end of this document.

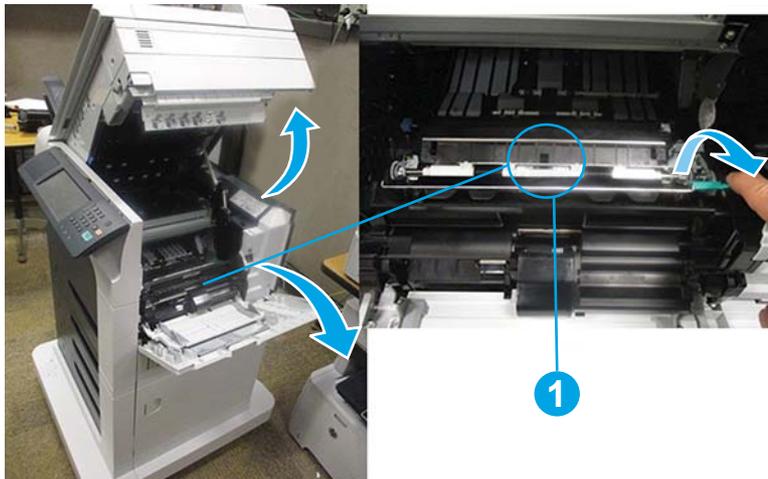
Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.

- Try to recreate the error again, using that same tray.
- If error still occurs, then continue to the troubleshooting section of this document **before** removing the jammed paper from the printer.

Troubleshooting Steps:

1. 1. Open the top cover and MP door and remove the toner cartridge to expose the paper path at the registration area. Inspect the paper path, take note as to where any paper and the paper's leading edge is located and if simplex or duplex job was being run. Also inspect the leading edge of the paper for any signs of the paper catching on something.

Figure 2-65 Opening to the registration assembly



2. If the leading edge of the paper closest to the registration assembly is past PS103 then the problem is most likely with the sensing of the paper with PS103
3. Use Manual sensor test to verify consistent operation of the Registration TOP sensor.

[Administration](#)

[Troubleshooting](#)

[Diagnostic Test](#)

[Manual Sensor Test](#)

Scroll down until PS103 TOP is displayed

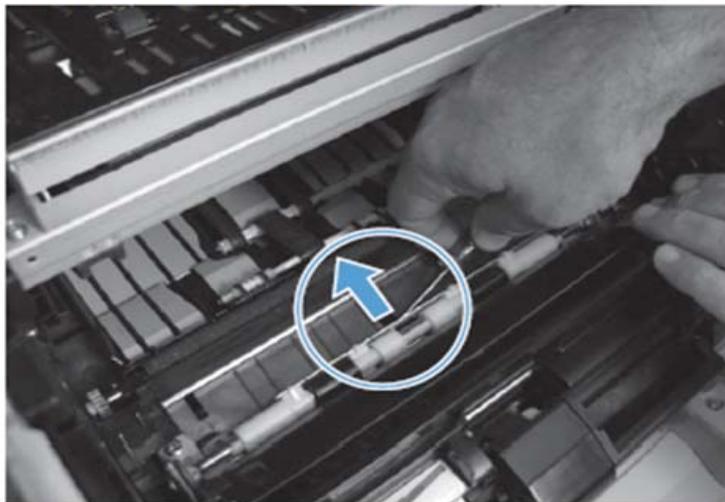
When activating PS103 sensor, watch the control panel display for the sensor state to change from green to clear or clear to green. It might take a few seconds to change as you toggle sensor flag.

Manually activating PS103

- Open the top cover, and then remove the print cartridge. Raise the registration plate and with a small flat blade screwdriver carefully activate the sensor flag while looking at the control panel for a response from the switch.

 **IMPORTANT:** Test the sensor at least 20 times or more since the error is probably intermittent.

 **NOTE:** The sensor flag is up against the set of white rollers and is very hard to see. You will need to swing the guide plate that is part of the white roller assembly out of the way to get to the sensor flag.



Manual Sensor test PASSES:

If Manual test to PS103 passes (Also test PS101, PS107, PS907 in tray 2 feed area or related sensors in tray indicated in error)

- a. Clean PS103 by using can of compressed air with the blow straw attached for pinpoint cleaning, insert blow straw into the sensor flag opening and blow a couple of short bursts of air at different angles onto the sensor. Then retest PS103 sensor. (This is done because of the error most likely being an intermittent error and you need to make sure that the sensor is clean)
- b. Test- Run 200 single sided page test from tray that was associated with error.
- c. Check if the pre-registration roller is dirty, worn or deformed. Clean the pre-registration roller if dirty. Replace the roller if it is worn or deformed.
- d. Check the registration assembly. Verify the spring of the registration is in correct position. Replace the registration assembly if the registration shutter is scarred or worn.
- e. Replace the Feed Roller Assembly, clean PS102 using can of compressed air while replacing Feed Roller Assembly and it is exposed. Also replace the Paper Pickup Assembly for the tray that the error is associated with only.

Manual Sensor test FAILS:

- a. Disconnect and reconnect the PS103 connector (J94) on the DC controller PCA and check the wiring for any damage and retest the sensor.
- b. If manual sensor test fails again, clean PS103 by using can of compressed air with the blow straw attached for pinpoint cleaning, insert blow straw into the sensor flag opening and blow a couple of short bursts of air at different angles onto the sensor. Then retest PS103 sensor.
- c. If still no response, replace the DC Controller and retest PS103.
- d. If still no response from PS103, replace the printer. (PS103 is not orderable or removable.)



NOTE: Only the base product needs to be replaced. Installed accessories or optional devices can be transferred to the replacement base product.

13.B2.FF Paper Jam**Description**

Residual paper jam in the registration area.

This jam occurs when residual paper is detected at the registration sensor (PS103) at power on.

Recommended action

1. Open the top cover and clear the jam in the indicated area. Inspect the paper path and make sure no paper is blocking the paper path.
2. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.
3. Test printer from other trays to verify functionality and if issue is specific to a one specific tray.
4. Try flossing the printer through the jam access door.
 - Place paper in access door.
 - Turn off then back on printer.
 - Watch for Page to be pulled into printer and fed through paper path.
5. Verify if print job was being duplexed.
6. Check if the pre-registration roller is dirty, worn or deformed. Clean the pre-registration roller if dirty. Replace the roller if it is worn or deformed.
7. Check the registration assembly. Verify the spring of the registration is in correct position. Replace the registration assembly if the registration shutter is scarred or worn.
8. Check and reconnect the connector (J94) on the DC controller PCA.

13.B9.Az Fuser Jam**Description**

Fuser delivery stay.

This jam occurs when the fuser delivery sensor (PS700) does not detect the trailing edge of the paper within a specified period of time from when the sensor detected the leading edge.

This jam code might be caused by:

- An accordion jam at the fuser exit, something blocking the paper before the output rollers.
- The output bin rollers not turning, there is very little distance from the fuser exit and the output bin
- A sticky fuser exit flag, if it stuck or even delayed momentarily in the activated position.
- Issues with the duplexer — Error occurs only on Duplex jobs, Simplex jobs will print OK.
- **13.B9.A1**
The fuser is printing in Auto-Sense mode Normal.
- **13.B9.A2**
The fuser is printing in fuser mode Normal.
- **13.B9.A3**
The fuser is printing in fuser mode Light 1 or Light 2.
- **13.B9.A4**
The fuser is printing in fuser mode Heavy 1.
- **13.B9.A5**
The fuser is printing in fuser mode Heavy 2.
- **13.B9.A6**
The fuser is printing in fuser mode Heavy 3.
- **13.B9.A7**
The fuser is printing in fuser mode Glossy media 1.
- **13.B9.A8**
The fuser is printing in fuser mode Glossy media 2
- **13.B9.A9**
The fuser is printing in fuser mode Glossy media 3.
- **13.B9.AB**
The fuser is printing in fuser mode Transparency.
- **13.B9.AC**
The fuser is printing in fuser mode Label.
- **13.B9.AD**
The fuser is printing in fuser mode Envelope 1 or Envelope 2.

Recommended action

 **CAUTION:** Use caution when handling the fuser. The fuser might be hot when the product is operating.

1. Open the output door, and then clear any jammed paper.
2. Remove any jammed paper from the device. Thoroughly inspect the area the jam occurred and clear all paper from the paper path.
3. Make sure that the paper meets HP specifications.
4. Ensure the Toner Cartridge and Transfer Roller are seated properly.
5. Remove the fuser, and then clear any jammed paper.
6. Verify there is no debris from a previous jam stuck in the fuser or rollers leading into or exiting the fuser.
7. Verify that the fuser exit flag (PS700) moves freely and is not damaged.
8. Run the sensor test and confirm the fuser exit flag is functioning properly.
9. Replace the fuser.

13.B9.Bz Jam in fuser

Description

This jam occurs when a near complete overlap (less than 5 to 15 mm of non-overlap) multi-feed jam is detected.

- **13.B9.B1**
Multi-Feed jam is detected when printing from Tray 1.
- **13.B9.B2**
Multi-Feed jam is detected when printing from Tray 2.
- **13.B9.B3**
Multi-Feed jam is detected when printing from Tray 3.
- **13.B9.B4**
Multi-Feed jam is detected when printing from Tray 4.
- **13.B9.B5**
Multi-Feed jam is detected when printing from Tray 5.

Recommended action

1. Remove any jammed paper from the device.
2. Make sure paper meets HP specifications and is loaded in trays correctly.
3. Make sure that the tray width and length guides are set to the correct paper size being installed into the tray and that the tray is not over filled above fill mark on tray.
4. Verify that the tray pickup, feed, and separation rollers are correctly installed and that they are not worn or damaged.
5. Clean or replace the pickup/feed rollers as needed

13.B9.Dz Jam in fuser

Description

Fuser delivery delay jam.

This jam occurs when the paper does not reach the fuser output sensor (PS700) in designated amount of time after the Registration sensor (PS103) sensed the leading edge when printing.

Z = Tray Printing from.

- **13.B9.D1**
Fuser delivery delay jam when printing from Tray 1.
- **13.B9.D2**
Fuser delivery delay jam when printing from Tray 2.
- **13.B9.D3**
Fuser delivery delay jam when printing from Tray 3.
- **13.B9.D4**
Fuser delivery delay jam when printing from Tray 4.
- **13.B9.D5**
Fuser delivery delay jam when printing from Tray 5.
- **13.B9.DD**
Fuser delivery delay jam when printing from Duplexer.

Recommended action

1. Open rear output bin and check for media or obstructions.
2. Remove any jammed paper from the device. Thoroughly inspect the area the jam occurred and clear all paper from the paper path.

Paper stopped before fuser:

1. Check the registration area for any blockage, lift registration flap and look for a bit of paper or any blockage.
2. Verify where the leading edge of the paper is when the jam occurs.
3. Verify that the transfer roller is seated properly and not worn or deformed. Replaced it if necessary.
4. If Paper is stopped below toner cartridge in the registration assy, preform manual sensor test on PS103.
5. Make sure the sensor moves freely and is not damaged. If sensor does not function elevate the issue following your standard support process.
6. Check Media path between transfer and fuser.

7. Check the Paper Feed Assembly for damage or loose belts (see following image)

Figure 2-66 Paper feed assembly belt



8. If belt is extremely loose and will not stay centered when printing, replacing the Paper Feed Assembly.

Paper stopped in or at fuser

CAUTION: Use caution when handling the fuser. The fuser might be hot when the product is operating.

1. Remove the fuser and inspect the fuser sleeve, pressure roller and delivery roller for blockage and/or damage. Replace fuser as needed.
2. Test fuser delivery sensor (PS700) using the manual sensor test in the [Administration, Troubleshooting, Diagnostic Tests](#) menu to verify that the sensor is functioning properly. If the sensor fails the test, replace the fuser.
3. Run the Fuser motor drive test under the [Administration, Troubleshooting, Diagnostic Tests, Component Test](#) menu to verify that the fuser drive and gears are functioning properly. If they are not, replace the fuser drive assembly.

13.B9.FF

Description

Residual paper jam fuser output sensor.

This jam occurs when residual paper is detected at the fuser output sensor (PS700) at power on.

Recommended action

1. Open output door and clear the jam in the indicated area.
2. Close the door so that the product attempts to clear the paper path.
3. Test Fuser Delivery sensor (SP700) using the Tray/Bin manual sensor test in the [Administration, Troubleshooting, Diagnostic Tests](#) menu to verify that the sensor is functioning properly, replace fuser if the sensor fails the test.

13.C3.Az

Description

Media stay jam Engine Switch Back area, Paper Delivery sensor. Paper present at PS112 after specified time limit.

Z = Fuser Mode

- **13.C3.A1**
The fuser is printing in fuser mode **Auto Sense** special case distinguished from "typed" Normal.
- **13.C3.A2**
The fuser is printing in fuser mode **Normal**.
- **13.C3.A3**
The fuser is printing in fuser mode **Light 1** or **Light 2** (see the event log secondary jam information digits for specific mode).
- **13.C3.A4**
The fuser is printing in fuser mode **Heavy 1**.
- **13.C3.A5**
The fuser is printing in fuser mode **Heavy 2**.
- **13.C3.A6**
The fuser is printing in fuser mode **Heavy media 3**.
- **13.C3.A7**
The fuser is printing in fuser mode **Glossy media 1**.
- **13.C3.A8**
The fuser is printing in fuser mode **Glossy media 2**.
- **13.C3.A9**
The fuser is printing in fuser mode **Glossy media 3**.
- **13.C3.AB**
The fuser is printing in fuser mode **Transparency**.
- **13.C3.AC**
The fuser is printing in fuser mode **Label**.

Recommended action

1. Follow the on screen instructions to locate and remove the paper or obstruction.
2. Make sure the type and quality of the media that you are using meet HP specifications.

3. Inspect the paper path and remove any obstructions.
4. If issue persists replace Reversing assembly.

13.C3.Dz

Description

Media Delay jam Engine Switch Back area, Paper Delivery sensor. Paper present at PS112 after specified time limit.

Z = Fuser Mode

- **13.C3.D1**
The fuser is printing in fuser mode **Auto Sense** special case distinguished from "typed" Normal.
- **13.C3.D2**
The fuser is printing in fuser mode **Normal**.
- **13.C3.D3**
The fuser is printing in fuser mode **Light 1** or **Light 2** (see the event log secondary jam information digits for specific mode).
- **13.C3.D4**
The fuser is printing in fuser mode **Heavy 1**.
- **13.C3.D5**
The fuser is printing in fuser mode **Heavy 2**.
- **13.C3.D6**
The fuser is printing in fuser mode **Heavy media 3**.
- **13.C3.D7**
The fuser is printing in fuser mode **Glossy media 1**.
- **13.C3.D8**
The fuser is printing in fuser mode **Glossy media 2**.
- **13.C3.D9**
The fuser is printing in fuser mode **Glossy media 3**.
- **13.C3.DB**
The fuser is printing in fuser mode **Transparency**.
- **13.C3.DC**
The fuser is printing in fuser mode **Label**.

Recommended action

1. Follow the on screen instructions to locate and remove the paper or obstruction.
2. Make sure the type and quality of the media that you are using meet HP specifications.
3. Inspect the paper path and remove any obstructions.
4. If issue persists replace Reversing assembly.

13.D3.Dz

Description

Jam in Duplexer

This jam occurs when the media does not reach the Duplex re-feed sensor (PS113) in designated amount of time.

Z = Fuser Mode

- **13.D3.D1**
The fuser is printing in fuser mode **Auto Sense** special case distinguished from "typed" Normal.
- **13.D3.D2**
The fuser is printing in fuser mode **Normal**.
- **13.D3.D3**
The fuser is printing in fuser mode **Light 1** or **Light 2** (see the event log secondary jam information digits for specific mode).
- **13.D3.D4**
The fuser is printing in fuser mode **Heavy 1**.
- **13.D1.D5**
The fuser is printing in fuser mode **Heavy 2**.
- **13.D3.D6**
The fuser is printing in fuser mode **Heavy media 3**.
- **13.D3.D7**
The fuser is printing in fuser mode **Glossy media 1**.
- **13.D3.D8**
The fuser is printing in fuser mode **Glossy media 2**.
- **13.D3.D9**
The fuser is printing in fuser mode **Glossy media 3**.
- **13.D3.DB**

The fuser is printing in fuser mode **Transparency**.

- **13.D1.DC**

The fuser is printing in fuser mode **Label**.

Recommended action

1. Follow the on screen instructions to locate and remove the paper or obstruction.
2. Ensure the type and quality of the media that you are using meet HP specifications.
3. Make sure that customer is using HP Genuine cartridge and test this printer with another working or new cartridge.
4. Test duplexing from multiple trays to see if issue is TRAY specific or not.
5. Perform the continuous test in simplex mode at least 50 pages to make sure that issue is occurring while printing duplex printing only.
6. Remove the duplexer and clean the printer duplex path properly for any debris or dust.
7. Check and Clean the status charge eliminator. (Next to transfer roller).
8. Where is the leading and trailing edge of the paper during the error state?
 - Stuck in switchback assembly?
 - Stopped at input of Duplexer?

STUCK in switchback assembly:

Check assembly for blockage.

1. Check sensor in assembly using sensor test.
2. If faulty or issue with switchback assembly, Replace the assembly

Stopped at Duplexer:

1. Make sure the duplex re-feed sensor PS113 is clear of paper and is not damaged.
2. Check to ensure the duplex re-feed motor M107 is functioning properly (Use component test to check duplexer re-feed motor function)
3. If either of these tests fail replace the Duplexing unit.

13.FF.FF

Description

A power on residual paper jam has occurred (sensor).

Recommended action

1. Follow the on screen instructions to locate and remove the paper or obstruction.
2. Inspect the paper path and remove any obstructions.
3. Use the Manual sensors test or Tray/Bin manual sensors test to isolate a faulty door switch or sensor.

13.XX.YZ Error Messages

20.00.00 Insufficient memory <device>

Description

Event log message 20.00.00.

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

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

Recommended action

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

21.00.00 Page Too Complex Event log error message 21.00.00.

Description

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

Recommended action

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

30.XX.YZ Error Messages

30.01.01

Description

The flatbed cover sensor was interrupted.

The scanner flatbed cover is open.

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

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

Recommended action

No action required.

This error message should automatically clear.

If the error persists, open the scanner tests to test the flatbed cover sensor.

1. If the cover is closed, check the cover sensor at the right rear of the scanner for correct mechanical functionality, using the scanner sensor test in the [Administration / Troubleshooting / Diagnostics / ScannerTests](#) Menu.
2. Check the connectors on the scanner control board (SCB) for loose connections.
3. Replace the lid-sensor assembly.

4. Replace the scanner control board (SCB).
5. Replace the image scanner assembly.

30.01.06

Description

Scanner fan error.

Recommended action

1. Turn the product off, and then on again.
2. During the MFP initialization sequence, listen to the fan to determine if it is operating.
3. If the error persists, turn the product off, and then check the fan wire-harness connectors.
4. If the fan is not operating, replace the fan.
5. If the error persists, replace the Scan Control Board (SCB).



NOTE: You might want to provide both parts the fan and the SCB to the on-site technician.

Have the technician verify that the connector on the scanner controller PCB is firmly seated. Also, make sure that the connection for the fan in the base of the scanner assembly is firmly seated.

30.01.08 Home position error

Description

The scanner optic failed to return to the home position.

Recommended action

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

30.01.14 Scan system EEPROM error

Description

Scanner control board (SCB) EEPROM error.

Recommended action

1. Turn the product off, and then on again.
2. Make sure all connectors on the scanner control board (SCB) are seated fully.
3. Make sure the product has the latest scanner control board (SCB) firmware version.
4. Replace the scanner control board (SCB).

30.01.15 Scanner error

Description

Scanner did not initialize (internal error).

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

Recommended action

1. Turn the product off, and then on again.
2. Make sure that all covers are installed correctly and that the document feeder and document feeder jam cover are closed.
3. Check all sensors on the scanner to make sure they are not blocked.
4. Look through the vents on back of scanner to see if the GREEN LEDs on the scanner control board (SCB) are illuminated.
5. Check all connections for scanner control board (SCB) to print engine.
6. Replace the scanner control board (SCB).

30.01.18 Scanner Error

Description

Scanner internal optical sensor error.

Recommended action

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

30.01.19 Scanner lamp error

Description

Scanner internal lamp sensor error.

Recommended action

1. Turn the product off, and then on again.
2. Verify that the scanner lamp turns on and off approximately 12 seconds after the product is turned on.
3. Test the lower lamp using the scanner test located in the [Diagnostics menu](#).
4. Re-seat the interconnect cables between the optical carriage and the scanner control board (SCB).
5. Replace the image scanner assembly (ISA).

30.01.30 or 30.01.32

Description

HP image ASIC error.

Recommended action

1. Turn the product off, and then on again.
2. Check the connections on the scanner control board (SCB).
3. Replace the scanner control board (SCB).

30.01.36 Upgrade Error try downloading upgrade again

Description

Scanner firmware upgrade error.

Recommended action

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

30.01.41 Scanner error

Description

The formatter lost connections with the scanner control board (SCB) or communication was corrupted.

Recommended action

1. Turn the product off, and then on.
2. Remove and then re-seat the formatter.
3. Upgrade the firmware.
4. Verify that all cables are connected to the product and to the interconnect board, and scanner control board (SCB).
5. Verify that the scanner control board (SCB) has power.
6. Replace the scanner control board (SCB).
7. Replace the formatter.

30.01.42 Scanner error

Description

Internal product communication error.

Recommended action

1. Turn the product off, and then on again.
2. If the error persists, turn the product off, and then check the scanner control board (SCB) connectors.

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

30.01.43 Scanner memory failure

Description

Scan memory error.

Recommended action

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

30.01.44

Description

Copy processor board (CPB) / Scanner control board (SCB) communication error.

Recommended action

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

30.01.45

Description

Internal Copy processor board (CPB) communication error.

CPB code assertion error for the copy processor board firmware.

Recommended action

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

30.01.46 Scanner Error

Description

The firmware cannot find the copy processor board.

Recommended action

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

30.01.48 Scanner error

Description

Scanner error.

Scanner power is not connected.

Recommended action

1. Turn the product off, and then on again.
2. If the error persists, turn the product off, and then check the scanner wire-harness connectors and the scanner power supply fan.
3. If the error persists, replace image scanner assembly.

30.01.49

Description

Scanner inverter fan error.

Recommended action

1. Turn the product off, and then on again.
2. If the error persists, turn the product off, and then check the scanner wire-harness connectors and the scanner power supply fan.
3. If the error persists, replace the scanner power supply, the scanner power supply fan, or the SCB.

30.01.50 Scanner error

Description

Internal scanner control board (SCB) error.

Recommended action

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

30.03.14

Description

A non-fatal error has occurred.

A scanner EEPROM (NVM) error has occurred.

Recommended action

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

30.03.20

Description

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

Recommended action

1. Turn the product off, and then on again.
2. Verify that the FFCs between scanner and the scanner control board (SCB) are connected.
3. Replace the image scanner assembly.

30.03.22 Scanner failure

Description

Front side illumination calibration failure.

The scan module cannot see the illumination module, or marginal illumination.

The optical assembly may not be parked under the calibration strip.

Recommended action

1. Turn the product off, and then on again.
2. Upgrade the firmware.
3. Check the event log for other scanner errors, and then resolve those errors.
4. Check the scan module FFC connection.
5. Replace the image scanner assembly.

30.03.23 Scanner failure

Description

Flatbed alignment calibration error.

Recommended action

1. Turn the product off, and then on again.
2. Upgrade the firmware.
3. Replace the image scanner assembly.

30.03.30 Scanner Failure

Description

Flatbed motor shutdown.

The scanner control board (SCB) cannot communicate with the flatbed scanner motor.

Recommended action

1. Turn the product off, and then on again. As the product turns on, verify that the scan head moves.
2. Verify that the drive belt is in the correct position.
3. Run diagnostics on the flatbed scanner to see if the scan bar moves.
4. Check the cable connection to the scanner control board (SCB).
5. Replace the image scanner assembly.

30.03.45 Scanner Error To continue turn off then on

Description

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

Recommended action

1. Turn the product off, and then on again.
2. Upgrade the firmware.
3. Replace the scanner control board (SCB).
4. Replace the image scanner assembly.

31.XX.YZ Error Messages

31.01.47 Document feeder not detected

Description

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

Recommended action

1. Turn the product off and then on.
2. If error persists, replace document feeder.



NOTE: Before replacing the document feeder, technicians should verify that the connections between the document feeder and the product are fully seated.

31.03.14

Description

Backside scanner EEPROM (NVM) error.

A non-fatal error has occurred.

Recommended action

No action required.

31.03.20 backside scanner not detected**Description**

Backside scanner not detected.

Recommended action

1. Turn the product off, and then on.
2. Verify the cables between scanner and scanner control board (SCB) are connected.
3. Replace the document feeder assembly.

31.03.22 Scanner calibration failure**Description**

Backside illumination calibration failure.

Recommended action

1. Turn the product off, and then on.
2. Upgrade the firmware.
3. Verify the cables between scanner and scanner control board (SCB) are connected.
4. Replace the document feeder assembly.

31.03.30 Document feeder pick motor error**Description**

The document feeder pick motor is not turning.

Recommended action

1. Verify that the paper meets the product specifications.
2. Make sure that the input tray is not overloaded and the tray guides are properly aligned to both edges of the paper.
3. Check the event log for document feeder errors, and then resolve any errors first.
4. Open and close the top cover to see if the pick motor turns without posting this error. If the motor turns, then the motor is good.
5. Verify that the motor cables are connected.
6. Re-seat the document feeder to the scanner control board (SCB).
7. Replace the document feeder.

31.03.31 Document feeder motor stall

Description

The document feeder feed motor is not turning.

Recommended action

1. Verify that the paper meets the product specifications.
2. Make sure that the input tray is not overloaded and the tray guides are properly aligned to both edges of the paper.
3. Check the event log for document feeder errors, and then resolve those errors first.
4. Verify that the motor cables are connected.
5. Re-seat the document feeder to the scanner control board (SCB).
6. Replace the document feeder assembly.

31.03.32

Description

The document feeder de-skew motor is not turning.

Recommended action

1. Verify that the paper meets the product specifications.
2. Make sure that the input tray is not overloaded.
3. Check the event log for document feeder errors, and then resolve any errors first.
4. Verify that the motor cables are connected.
5. Re-seat the document feeder to scanner control board (SCB) cables.
6. Replace the document feeder assembly.

31.03.33 Backside scanner calibration area dirty

Description

The white area used for backside scanner calibration is dirty.

Recommended action

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

31.03.34 Background missing

Description

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

Recommended action

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

No action necessary.

31.13.00 Document feeder multi-pick error**Description**

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

Recommended action

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

31.13.01**Description**

document feeder job error, pick error.

Paper pick was initiated, but the page didn't did not make it to the pick success sensor.

Recommended action

1. Open the document feeder lid, pull sheets back into input tray, and then resume the job.
2. Check the paper guides and make sure that they are set to the correct paper width.
3. Make sure that the input tray is not overloaded and the tray guides are properly aligned to both edges of the paper.
4. Check the document feeder page count for roller life.
5. Verify that the paper meets the product specifications.
6. Clean the document feeder pick and feeder rollers and clean separation pad, if worn or damage replace roller kit.
7. Open the following menus:

- [Administration](#)
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Scanner Tests](#)
8. Actuate the pick-success sensor. If the sensor does not show functionality when tested, replace the document feeder.
 9. If sensor is not available for replacement or does not resolve issue, replace the document feeder assembly.

31.13.02

Description

Document feeder job error, feed jam.

The paper passed the pick success sensor, and then jammed in the document feeder paper path.

Recommended action

1. Clear the paper path and try feeding the page again.
2. Verify that the paper meets the product specifications.
3. Check the paper guides and make sure that they are set to the correct paper width.
4. Verify that the paper path is clear.
5. Clean the document feeder pick and feeder rollers and clean Separation pad. If worn or damage replace roller kit.
6. Open the following menus:
 - [Administration](#)
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Scanner Tests](#)
7. Actuate the pick-success sensor. If the sensor does not show functionality when tested, replace the document feeder.
8. If sensor is not available for replacement or does not resolve issue replace the document feeder assembly.

31.13.13

Description

The document feeder jam access door is open.

Recommended action

1. Verify that the jam access cover is closed.
2. Verify that the flag is not broken off.
3. Open the following menus:
 - [Administration](#)
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Scanner Tests](#)
4. Actuate the pick-success sensor. If the sensor does not show functionality when tested, replace the document feeder.
5. If the sensor is not available for replacement or does not resolve issue replace the document feeder assembly.

31.13.14**Description**

Document feeder job error: over current.

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

Recommended action

1. Verify that the paper meets the product specifications.
2. Make sure that the document feeder input tray is not overloaded.
3. Check the event log for document feeder errors, and then resolve those errors first.
4. Open and close the top cover to see if the pick motor turns without posting this error. If there is no error, then the motor is good.
5. Verify that the motor cables are connected.
6. Re-seat the document feeder to the scanner control board (SCB).
7. Replace the document feeder.

31.13.15**Description**

This is a duplex re-feed jam in the document feeder.

The paper jam occurs on the backside copy. The duplex re-feed does not make it to the deskew sensor.

Recommended action

1. Remove the jammed paper.
2. Verify that there is nothing in the paper path of the duplex re-feed area.

3. Retry the copy job.
4. Replace the document feeder assembly.

32.XX.YX and 33.XX.YZ Error Messages

32.08.A1, 32.08.A2, 32.08.A3

Description

32.08.A1 (event code)

Shutdown event-boot after abnormal shutdown.

32.08.A2 (event code)

Boot from normal shutdown event.

32.08.A3 (event code)

Regular boot event.

Recommended action

No action necessary.

32.1C.XX

Description

32.1C.05 (event code)

The restore job ticket was submitted with invalid credentials.

32.1C.06 (event code)

The backup job ticket was submitted with invalid credentials.

32.1C.07 (event code)

Backup restore permissions error.

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

32.1C.08 (event code)

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

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

32.1C.09 (event code)

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

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

32.1C.0A (event code)

Backup file is invalid

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

32.1C.0D (event code)

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

32.1C.11 (event code)

Backup/restore timeout while communicating with the engine.

The backup was aborted because the product is busy.

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

Not enough space exists to perform the backup.

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

Scheduled backup failure.

32.1C.15 (event code)

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

32.1C.2E (event code)

The restore was aborted because the product is busy.

32.1C.2F (event code)

Reset failure.

32.1C.40 (event code)

The backup operation completed successfully (informational).

32.1C.41 (event code)

The backup operation encountered an error (informational).

32.1C.42 (event code)

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

32.1C.43 (event code)

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

32.1C.44 (event code)

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

32.1C.45 (event code)

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

32.1C.46 (event code)

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

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

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

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

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

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

The backup job ticket was submitted with a bad encryption.

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

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

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

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

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

Reset aborted (informational).

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

Unknown reset error (informational).

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

The restore operation completed successfully (informational).

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

The restore operation encountered an error.

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

The restore operation completed, but with a warning message.

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

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

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

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

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

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

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

An unusual error occurred when running the restore.

Recommended action

32.1C.05 (event code)

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

32.1C.06 (event code)

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

32.1C.07 (event code)

Retry the job.

32.1C.08 (event code)

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

Remove any stored jobs, and then retry.

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

32.1C.09 (event code)

Use a valid backup file.

32.1C.0A (event code)

Use a valid backup file.

Reboot, and then observe the state of the product.

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

32.1C.0D (event code)

Reboot, and then retry the backup/restore.

32.1C.11 (event code)

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

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

Free up disk space, and then try again.

32.1C.15 (event code)

- Use the current backup file.

32.1C.2E (event code)

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

Turn the product off then on, and then retry.

32.1C.2F (event code)

Turn the product off then on, and then retry.

32.1C.40 (event code)

No action necessary.

32.1C.41 (event code)

No action necessary.

32.1C.42 (event code)

No action necessary.

32.1C.43 (event code)

No action necessary.

32.1C.44 (event code)

No action necessary.

32.1C.45 (event code)

No action necessary.

32.1C.46 (event code)

No action necessary.

32.1C.47 (event code)

No action necessary.

32.1C.48 (event code)

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

Check that the server and the share exists.

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

32.1C.49 (event code)

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

32.1C.4A (event code)

Retry the job.

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

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

32.1C.56 (event code)

No action necessary.

32.1C.57 (event code)

No action necessary.

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

No action necessary.

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

No action necessary.

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

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

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

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

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

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

Check that the server and the share exist.

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

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

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

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

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

Retry the job.

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

Retry the job.

33.01.XX

Description

- **33.01.01** (event code)
A restore process has occurred.
- **33.01.02** (event code)
A save process has occurred.
- **33.01.03** (event code)
Save recover functionality OK after previously being disabled.

Recommended action

No action necessary.

33.02.01 Used board/disk installed

Description

Used board disk installed.

An encrypted board or disk with existing data previously locked to a different product has replaced the original. If you continue, data is permanently lost.

Recommended action

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

33.03.03 Incompatible formatter installed.

Description

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

Recommended action

Turn the product off, and then install the correct formatter in the product.



NOTE: If it is believed that this formatter is the correct part number and model for this product, install a replacement formatter, and then return the formatter in question to HP for evaluation.

33.03.XX

Description

- **33.02.01** (event code)
Save recover engine storage ID unexpected length.
- **33.03.02** (event code)
Data size mismatch unable to recover DCC MVRAM.

Recommended action

Turn the product off, and then on again.

If the error persists, replace the image control board (ICB) and return to HP for evaluation.

40.XX.YZ Error Messages

40.00.01 USB I/O buffer overflow To continue, touch "OK"

Description

The USB buffer has overflowed.

Recommended action

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

40.00.02 Embedded I/O buffer overflow To continue, touch “OK”**Description**

The product has experienced a JetDirect buffer overflow.

Recommended action

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

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

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

Recommended action

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

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

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

Recommended action

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

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

The USB device has been removed.

Recommended action

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

40.08.0X USB storage accessory removed**Description**

X = 0 or ;1 information code.

Secure file erase is enabled.

Recommended action

No action necessary.

40.OX.05 USB storage accessory removed**Description**

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

The USB storage accessory was removed.

Recommended action

No action necessary.

41.XX.YZ Error Messages**41.01.YZ****Description**

Event log error message: 41.01.YZ.

An unknown misprint error occurred on the product.

Y = Type, Z = Tray

- Y = 0: Photo Media (1, 2, or 3)
- Y = 1: Auto Sense (Normal)
- Y = 2: Normal (typed not from Auto Sense)
- Y = 3: Light media 1, 2, or 3 mode
- Y = 4: Heavy media 1
- Y = 5: Heavy media 2
- Y = 6: Heavy media 3
- Y = 7: Glossy media 1
- Y = 8: Glossy media 2
- Y = 9: Glossy media 3
- Y = A: Glossy film
- Y = B: OHT
- Y = C: Label
- Y = D: Envelope 1, 2, or 3 mode
- Y = E: Rough
- Y = F: Other mode

- Z = 0: From unknown tray
- Z = 1: From Tray 1
- Z = 2: From Tray 2
- Z = 3: From Tray 3
- Z = 4: From Tray 4
- Z = 5: From Tray 5
- Z = 6: From Tray 6
- Z = 7: From Tray 7
- Z = 8: From Tray 8
- Z = 9: From Tray 9
- Z = D: From duplex

Recommended action

1. Touch **OK** to clear the error.
2. If the error is not cleared, Turn the product off, and then on again.
3. If the error returns, check the wire harness from the laser scanner to the DC controller.
4. If the error persists, replace the laser/scanner assembly.
5. Replace the DC controller.

41.02.00 Error

Description

A beam detected misprint error occurred.

Recommended action

1. To clear the error message, touch **OK**.
2. If the error persists, turn the product off, and then on again.
3. If the error returns, check the wire harness from the laser/scanners to the DC controller.
4. If the error persists, replace the laser/scanner assembly.

41.03.FZ Unknown Misprint Error

Description

This is a general misprint error. Either media is loaded off-center with the side guides in the tray or a media width sensor failure occurred from an unknown tray. The error will be one of the following:

- **41.03.F0**
- **41.03.F1**
- **41.03.F2**

- **41.03.F3**
- **41.03.F4**
- **41.03.F5**
- **41.03.FD**

Recommended action

1. Reload the tray, verifying that the guides in the tray are flush with the loaded media in the tray.
2. Try the print job again.

Watch the mechanism to see if it is functioning correctly. If the linkage is broken, replace the paper tray.

3. If the error persists, print a Configuration Page and note the paper size for the tray in question.
 - If the size is not reported correctly, run the tray size sensor test in the **Diagnostic** menu.
 - If the tray size sensors test as **GOOD**, replace the paper tray.
 - If the tray size sensors test as **BAD**, check the cable connections between the tray size sensor and the DC Controller.

If the cable connections are plugged in correctly and the cables are not compromised, replace the correct component that contains the tray size sensing switches.

41.03.YZ Unexpected size in tray <X>

Description

The product detected a different paper size than expected.

Y = Type, Z = Tray

- Y = 0 Size mismatch. Detected media is longer or shorter than expected.
- Y = A Size mismatch. Detected media too long.
- Y = B Size mismatch. Detected media too short.
- Y = C Size mismatch. Inter-page gap error.
- Z = D Source is the duplexer.
- Z = E Source is the envelope feeder.
- Z = 1 Source is Tray 1.
- Z = 2 Source is Tray 2.
- Z = 3 Source is Tray 3.
- Z = 4 Source is Tray 4.
- Z = 5 Source is Tray 5.

Recommended action

1. Touch **OK** to use another tray.
2. Print a configuration page to verify the size and type to which the trays are set.
3. Make sure that the tray is loaded with the correct paper size and that the sliding paper guides are correctly adjusted to the correct paper size.
4. Verify that the error is not occurring as a result of an unexpected paper size trigger caused by a multi-page feed.
5. Verify that the Toner cartridge and the transfer roller are seated properly.
6. Use the Tray/Bin manual sensor test to verify that the cassette media switch is correctly functioning.
7. Check paper path sensors for proper operation and that they do not stick at all. Replace any damaged sensor or assembly.
8. Reconnect the connectors for the media sensor, intermediate-transfer belt, and the DC controller PCA.
9. Test registration assembly motor and clutch. If not function properly replace the registration assembly. If the error persists, replace the lifter assembly.

41.04.YZ Printer Error

Description

An unknown misprint error occurred on the product.

Y = Type, Z = Tray

- Y = 0: Photo Media (1, 2, or 3)
- Y = 1: Auto Sense (Normal)
- Y = 2: Normal (typed not from Auto Sense)
- Y = 3: Light media 1, 2, or 3 mode
- Y = 4: Heavy media 1
- Y = 5: Heavy media 2
- Y = 6: Heavy media 3
- Y = 7: Glossy media 1
- Y = 8: Glossy media 2
- Y = 9: Glossy media 3
- Y = A: Glossy film
- Y = B: OHT
- Y = C: Label
- Y = D: Envelope 1, 2, or 3 mode

- Y = E: Rough
- Y = F: Other mode
- Z = D Source is the duplexer.
- Z = 0 Source is the envelope feeder.
- Z = 1 Source is Tray 1.
- Z = 2 Source is Tray 2.
- Z = 3 Source is Tray 3.
- Z = 4 Source is Tray 4.
- Z = 5 Source is Tray 5.

Recommended action

1. Touch **OK** to clear the error .
2. If error does not clear, turn the product off, and then on again.
3. Swap out or re-seat each toner cartridge to test it.
4. Check the toner cartridges before replacing any other parts (HP original?, connectors, etc.).
5. Re-seat the connections to the laser/scanner and the DC controller.
6. If the error persists, replace the affected laser/scanner.
7. Replace the DC controller.

41.05.YZ Unexpected type in tray <X>

Description

The product can detect the type of paper in the paper path, and it adjusts the print mode accordingly.

The product uses two types of media sensors:

- **Reflection:** Detects the glossiness of the paper.
- **Transmission:** Detects the thickness of the paper.

Tray X is loaded with a media type (transparencies, envelopes, etc.) that is different than what they tray is configured to use.

Y = Expected type, Z = Detected type

- Y = 0: Photo Media (1, 2, or 3)
- Y = 1: Auto Sense (Normal)
- Y = 2: Normal (typed not from Auto Sense)
- Y = 3: Light media 1, 2, or 3 mode
- Y = 4: Heavy media 1
- Y = 5: Heavy media 2

- Y = 6: Heavy media 3
- Y = 7: Glossy media 1
- Y = 8: Glossy media 2
- Y = 9: Glossy media 3
- Y = A: Glossy film
- Y = B: OHT
- Y = C: Label
- Y = D: Envelope 1, 2, or 3 mode
- Y = E: Rough
- Y = F: Other mode
- Z = 0: Photo Media (1, 2, or 3)
- Z = 1: Auto Sense (Normal)
- Z = 2: Normal (typed not from Auto Sense)
- Z = 3: Light media 1, 2, or 3 mode
- Z = 4: Heavy media 1
- Z = 5: Heavy media 2
- Z = 6: Heavy media 3
- Z = 7: Glossy media 1
- Z = 8: Glossy media 2
- Z = 9: Glossy media 3
- Z = A: Glossy film
- Z = B: OHT
- Z = C: Label
- Z = D: Envelope 1, 2, or 3 mode
- Z = E: Rough
- Z = F: Other mode

Recommended action

1. Load the tray with the size and type of paper indicated, or use another tray if available.
2. If this message displays and the tray is loaded with the correct paper type, check the print driver settings to make sure they match the tray type settings.
3. Check all application and product settings to make sure that the **Type** setting is correct.

41.XX.YZ Error To continue, touch “OK”

Description

This section covers all other errors of the form 41.XX.YZ not covered in the previous sections.

A product error has occurred.

XX = error type

Y = fuser mode

Z = input tray

- XX = 02 Beam detect misprint
- XX = 09 Sub thermistor abnormally high
- XX = 10 Pickup failure.
- XX = 11 Illegal Duplex.
- XX = 18 Scan line inclination adjustment
- XX = 20 Image drum HV
- Y = 0: Photo Media (1, 2, or 3)
- Y = 1: Auto Sense (Normal)
- Y = 2: Normal (typed not from Auto Sense)
- Y = 3: Light media 1, 2, or 3 mode
- Y = 4: Heavy media 1
- Y = 5: Heavy media 2
- Y = 6: Heavy media 3
- Y = 7: Glossy media 1
- Y = 8: Glossy media 2
- Y = 9: Glossy media 3
- Y = A: Glossy film
- Y = B: OHT
- Y = C: Label
- Y = D: Envelope 1, 2, or 3 mode
- Y = E: Rough
- Y = F: Other mode
- Z = 0 Envelope feeder
- Z = 1 Tray 1

- Z = 2 Tray 2
- Z = 3 Tray 3
- Z = 4 Tray 4
- Z = 5 Tray 5
- Z = 6 Tray 6
- D Duplexer

Recommended action

1. To clear the message, touch the **OK** button.
2. If the message displays again, turn the product off, and then on again.
3. If the error persists, replace the DC Controller PCA.

42.XX.YZ Error Messages

42.XX.YZ

Description

Internal system failure

Recommended action

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

44.XX.XX Error Messages

44.01.XX Error Event log message

Description

A digital send error has occurred.

Recommended action

No action necessary. This error message should automatically clear.

Try to send the job again.

If error does not clear or returns:

- Use optimal resolution and image quality settings.
- wait till all the digital send jobs have been processed.
- Reboot and retry job.
- Verify if there is an attachment limit on the email.
- Verify network connectivity, SMTP gateways, access to folder share.

44.03.XX Error Event log message

Description

A digital send error has occurred.

Recommended action

Try to send the job again.

If error does not clear or returns:

- Use optimal resolution and image quality settings.
- wait till all the digital send jobs have been processed.
- Reboot and retry job.
- Verify if there is an attachment limit on the email.
- Verify network connectivity, SMTP gateways, access to folder share.

44.10.XX Error Event log message

Description

A send to e-mail error has occurred.

Recommended action

No action necessary.

44.34.XX Error Event log message

Description

A fax error has occurred.

Recommended action

1. Try to send the job again.
2. Check the fax settings to make sure they are set to the proper settings for the environment.
3. If the issue persists, see document - "Solve fax problems", for additional fax troubleshooting information.

44.92.XX Error Event log message

Description

A fax error has occurred.

Recommended action

1. Try to send the job again.
2. Check the fax settings to make sure they are set to the proper settings for the environment.
3. If the issue persists, see document - "Solve fax problem" for additional fax troubleshooting information.

47.XX.XX Error Messages

47.00.XX

Description

Back channel internal error.

Recommended action

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

47.01.XX

Description

Image transformer internal error.

Recommended action

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

47.02.XX

Description

Job parser internal error.

Recommended action

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

47.03.XX

Description

Print job internal error.

Recommended action

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

47.04.XX

Description

Print spooler 9100 internal error.

Recommended action

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

47.05.00

Description

Print spooler framework internal error.

Recommended action

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

47.06.XX

Description

Print application internal error.

Recommended action

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

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

Description

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

Y = Calibration type, Z = Event

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

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

Recommended action

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

48.XX.YY Error Messages

48.XX.YY

Description

A job framework internal error has occurred.

Recommended action

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

49.XX.YY Error Messages

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

Description

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

Recommended action

1. Turn the product off, and then on.
2. If the error persists, check the following:
 - The error might be caused by a network connectivity problem, such as a bad interface cable, a bad USB port, or an invalid network configuration setting.
 - The error might be caused by the print job, due to an invalid print driver, a problem with the software application, or a problem with the file being printed.
 - Upgrading the product firmware might help resolve the error. See the product user guide for more information.

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

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

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

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



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

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

50.WX.YZ Error Messages

50.WX.YZ Fuser error To continue turn off then on

Description

The fuser has experienced an error.

W = fuser error code, X = fuser mode, Y = previous printer sleep state, Z = next printer sleep state

Recommended action

W = 1 or W = 2

Low fuser temperature 1 or fuser warm-up failure

1. Reinstall the fuser. Check the connector (J128) between the fuser and the product. If it is damaged, replace the fuser.
2. W = 1: Reconnect the connector (J82) on the DC controller PCA.

-or-

- W = 2: Reconnect the connectors (J53, J54 and J82) on the DC controller PCA.
3. Replace the fuser.
4. W = 2: Reconnect the connector (J62) on the low-voltage power supply PCA.
5. If the error persists, replace the low-voltage power supply.

W = 3

High fuser temperature 1

1. Reinstall the fuser. Check the connector (J128) between the fuser and the product. If it is damaged, replace the fuser.
2. Reconnect the connector (J82) on the DC controller PCA.
3. Replace the fuser.
4. If the error persists, replace the low-voltage power supply.

W = 4

Drive circuit fault

1. Check the power source. Make sure the power source meets product requirements.



NOTE: If the power source does not meet the power frequency requirement of 40 to 70Hz, the fuser temperature control does not work properly and causes this error.

2. Reconnect the connector (J53) on the DC controller PCA.
3. If the error persists, replace the low-voltage power supply.

W = 7

Fuser pressure-release mechanism failure

1. Reinstall the fuser. Check the connector (J128) between the fuser and the product. If it is damaged, replace the fuser.
2. Check the fuser pressure-release sensor flag. If it is damaged, replace the fuser.
3. Reconnect the connector (J221) of the fuser motor and the connector (J89) on the DC controller PCA.

4. Use the fuser motor (M299) drive test in the component test to verify that the fuser motor is properly functioning. If it is not, replace the fuser motor.
5. Replace the fuser.

W = 8

Low fuser temperature 2

1. Reinstall the fuser. Check the connector (J128) between the fuser and the product. If it is damaged, replace the fuser.
2. Reconnect the connector (J54) on the DC controller PCA.
3. Replace the fuser.
4. Reconnect the connector (J62) on the low-voltage power supply PCA.
5. If the error persists, replace the low-voltage power supply.

W = 9

High fuser temperature 2

1. Reinstall the fuser. Check the connector (J128) between the fuser and the product. If it is damaged, replace the fuser.
2. Reconnect the connector (J54) on the DC controller PCA.
3. Replace the fuser.
4. Reconnect the connector (J62) on the low-voltage power supply PCA.
5. If the error persists, replace the low-voltage power supply.

51.XX.YZ, 52.XX.YZ Error Messages

51.00.10 Beam detect error

Description

A printer beam detect error occurred in the laser scanner.

Recommended action

1. Turn the product off, and then on.
2. If the error persists, replace the laser/scanner and Laser scanner cable.

On-site technician perform the following before replacing parts.

1. Reconnect connector (J145) on the laser/scanner.
2. Reconnect connectors (J86 and J93) on the DC controller.
3. If the error persists, replace the laser/scanner and Laser scanner cable.

51.00.19 / 51.00.20 Laser Scanner Error - Laser malfunction

Description

A printer laser scanner error occurred.

Recommended action

1. Turn the product off, and then on.
2. If the error persists, replace the laser/scanner and Laser scanner cable.

On-site technician perform the following before replacing parts.

1. Reconnect connector (J145) on the laser/scanner.
2. Reconnect connectors (J86 and J93) on the DC controller.
3. If the error persists, replace the laser/scanner and Laser scanner cable.

52.00.00/52.00.20 Scanner Startup/Rotation error

Description

A printer laser scanner startup (52.00.00) or rotation (52.00.20) error occurred.

Recommended action

1. Turn the product off, and then on.
2. Use the scanner motor (M108) drive test in the component test to verify that the scanner motor is properly functioning.

Listen for a high pitched whine from the motor. If laser scanner motor is not functioning, replace the laser scanner.

On-site technician perform the following before replacing parts.

1. Reconnect connector (J145) on the laser/scanner.
2. Reconnect connectors (J86 and J93) on the DC controller.
3. If the error persists, replace the laser/scanner.

54.XX.YZ Error Messages

54.00.03 (EVENT LOG ONLY)

Description

Environmental sensor abnormality warning; Environmental sensor (TH3) failure

Recommended action

1. Turn the product off, and then on.
2. If the environment sensor (TH3) has been removed or replaced, check the connector (J199) on the environment sensor and the connector (J42) on the DC controller PCA.
3. If the error persists, replace the environment sensor cable assembly.

54.06.21 (EVENT LOG ONLY)

Description

Primary laser/scanner beam detect abnormality

Recommended action

1. Turn the product off, and then on.
2. If the product has had parts removed or replace, check the connector (J86) on the DC controller PCA.
3. If the error persists, replace the laser/scanner assembly.

55.XX.YZ, 56.XX.YZ Error Messages

55.00.01, 55.00.03 or 55.00.04 DC Controller Error

Description

The communication link between the formatter and DC controller was lost.

- 55.00.01–DC controller memory error.
- 55.00.03–DC controller no engine response
- 55.00.04–DC controller communications time out

Recommended action

Turn the product off and then on.

Verify that the all connectors on the DC controller are seated correctly.

If the error persists, replace the DC controller.

55.00.05 Engine Firmware RFU Error

Description

The firmware upgrade failed.

Recommended action

Turn the product off and then on.

If issue remains re-send upgrade.

55.01.06, 55.02.06 DC controller error To continue turn off then on

Description

NVRAM memory warning

- 55.01.06 (event code)
NVRAM memory data error warning
- 55.02.06 (event code)
NVRAM memory access error warning

Recommended action

Turn the product off, then on.

If the error persists, replace the DC controller PCA.

56.00.01 Illegal Input Printer Error**Description**

The product experienced an illegal input.

Recommended action

Turn the product off, then on.

Remove any third-party hardware and test again

56.00.YY**Description**

The product experienced a communication error with the optional paper trays.

Recommended action

1. Turn the product off, then on.
2. If the error persists, reseal the optional paper trays (1 x 500-sheet feeder and/or 3 x 500-sheet feeder).
3. Check the input connectors for damage. If a connector is damaged, replace the connector.

57.XX.YZ Error Messages

NOTE: Use the wiring diagram to trace back where the fan gets its supply voltage.

The connectors are supplied in the troubleshooting steps. If after following the steps provided the issue is not resolved it may be a voltage source issue from the DC Controller or LVPS. Depending which FAN is failing one of these parts may need to be replaced as a following step.

57.00.01 Main fan (FN101) failure**Description**

The product experienced a Main fan (FN101) failure.

Recommended action

Turn the product off, then on.

Listen for fan noise at the back corner of the product. If no noise is heard, replace the main fan (FN101).

If this part has been removed or replace, check the connector (J95) on the DC controller PCA and the connector (J64) on the low-voltage power supply assembly.

57.00.02 Laser/scanner fan (FN102) failure**Description**

The product has experienced a Laser/scanner fan (FN102) failure.

Recommended action

1. Turn the product off, then on.
2. If this part has been removed or replace, check the connector (J75) on the DC controller PCA.
3. If the error persists, replace the laser/scanner fan (FN102).

57.00.03 Cartridge fan failure (FM301)**Description**

The product has experienced a cartridge fan (FM301) error.

Recommended action

1. Turn the product off, then on.
2. Listen for fan noise at the middle back of the product. If no noise is heard, replace the cartridge front-side fan (FM103).
3. If this part has been removed or replace, check the connector (J79) on the DC controller PCA.
4. If the error persists, replace the cartridge front-side fan (FM103).

57.00.05 Switchback fan (FM105) failure**Description**

The product has experienced an Switchback fan (FM105) failure.

Recommended action

1. Turn the product off, then on.
2. Listen for fan noise at the front-left side of the product. If no noise is heard, replace the switchback fan (FM105).
3. If this part has been removed or replace, check the connector (J43) on the DC controller PCA.
4. Reconnect the intermediate connector (J1423) on the switchback fan.
5. If the error persists, replace the switchback fan (FM105).

57.00.06 Low-voltage power supply fan (FM104) failure**Description**

The product has experienced a Low-voltage power supply fan (FM104) failure.

Recommended action

1. Turn the product off, then on.
2. While the product starts up, listen for fan noise at the middle back of the product. If no noise is heard, replace the LVPS fan (FM104).
3. If this part has been removed or replace, check the connector (J42) on the DC controller PCA.

4. Check the connector (J198) on the low-voltage power supply fan.
5. If the error persists, replace the LVPS fan (FM104).

57.00.07 Duplex fan (FM107) failure

Description

The product has experienced an Duplex fan (FM107) failure.

Recommended action

1. Turn the product off, then on.
2. While the product starts up, listen for fan noise at the left side of the product. If no noise is heard, replace the duplex fan (FM107).
3. If this part has been removed or replace, check the connector (J84) on the DC controller PCA.
4. If the error persists, replace the duplexer.
5. If the error persists, replace the DC Controller.

58.XX.YZ Error Messages

58.00.02 Error

Description

Environmental sensor (TH3) failure.

Recommended action

1. Turn the product off and then back on.
2. If this part has been removed or replace, check the connector (J42) on the DC controller PCA.
3. Reconnect the intermediate connector (J199) on the environmental sensor.
4. If the error persists, replace the environmental sensor (TH3).

58.00.03 Error

Description

DC controller CPU failure.

Recommended action

1. Turn the product off and then back on.
2. Check all of the connectors on the DC controller PCA.
3. If the error persists, replace the DC controller PCA.

58.00.04 Error

Description

The product experienced a low voltage power supply unit malfunction.

Recommended action

1. Turn the product off and then back on.



NOTE: This error might be caused by source power related issues.

Determine if the area where the product is located has experienced brown outs or is subject to power quality issues.

2. Ensure product is plug into dedicated power outlet.
3. If error persists, replace the Low Voltage Power Supply (LVPS).

58.01.04 Error

Description

24V power supply error during operation.

During regular printing operation the 24V power supply experienced an error.

Recommended action

1. Turn the product off and then back on.



NOTE: This error might be caused by source power related issues.

Determine if the area where the product is located has experienced brown outs or is subject to power quality issues.

2. Ensure product is plug into dedicated power outlet.
3. If error persists, replace the Low Voltage Power Supply (LVPS).

58.02.04 Error

Description

24V power supply error during boot or wake.

During product power on or when waking from sleep mode, the printer experienced an error with the 24V power supply.

Recommended action

1. Turn the product off and then back on.



NOTE: This error might be caused by source power related issues.

Determine if the area where the product is located has experienced brown outs or is subject to power quality issues.

2. Ensure product is plug into dedicated power outlet.
3. If error persists, replace the Low Voltage Power Supply (LVPS).

59.XX.YZ Error Messages

59.00.00 or 59.00.10 Error To continue turn off then on

Description

Feed motor (M101) failure (start-up or rotational).

Recommended action

1. Use the feed motor (M101) drive test in the Component test to verify that the motor is properly functioning. If is not, replace the feed motor (M101).
2. If the product has been serviced, check the connector (J191) on the feed motor and the connector (J91) on the DC controller PCA.
3. Replace the feed motor (M101).

59.00.30 or 59.00.40 Error To continue turn off then on

Description

Fuser motor (M299) failure (start-up or rotational).

Recommended action

1. Use the fuser motor (M299) drive test in the Component test to verify that the motor is properly functioning. If it is not, replace the fuser motor (M299).
2. Reconnect the connector (J221) on the feed motor and the connector (J89) on the DC controller PCA.
3. Replace the fuser motor (M299).

59.05.50 59.05.60 Error To continue turn off then on

Description

A motor startup error has occurred Drum motor (M102).

Recommended action

1. Use the drum motor (M102) drive test in the Component test to verify that the motor is properly functioning. If it is not, replace the drum motor.
2. If the product has been serviced, check the connector (J187) on the ITB motor and the connector (J87) on the DC controller PCA.
3. Replace the Drum motor (M102)

59.A2.02 Error

Description

Media input source 2 lifter motor malfunction (M103).

Recommended action

1. Use the Tray/Bin manual sensor test to verify that the Tray 2 paper (PS107 and PS907) surface sensors are properly functioning.
2. If this part has been removed or replaced, check the connector (J73 and J94) on the on the DC controller PCA.
3. If the error persists, replace the lifter drive assembly (Tray 2).

59.A3.03 Error**Description**

Media input source 3 lifter motor malfunction (M1).

Recommended action

Use the following to troubleshoot the error:

1x500-sheet/3x500-sheet paper deck:

1. Use the Tray/Bin manual sensor test to verify that the Tray 3 paper (SR1 and SR2) surface sensors are properly functioning.
2. If this part has been removed or replaced, check the connector (1606 and 1607) on the on the paper feeder controller PCA.
3. If the error persists, replace the lifter drive assembly (Tray 3).

59.A4.04 Error**Description**

Media input source 4 lifter motor malfunction (M3).

3x500 sheet paper deck only.

Recommended action

1. Use the Tray/Bin manual sensor test to verify that the Tray 4 paper (SR5 and SR8) surface sensors are properly functioning.
2. If this part has been removed or replaced, check the connector (1604 and 1605) on the on the sheet feeder controller PCA.
3. If the error persists, replace the lifter drive assembly (Tray 4).

59.A5.05 Error**Description**

Media input source 5 lifter motor malfunction (M4).

3x500 sheet paper deck only.

Recommended action

1. Use the Tray/Bin manual sensor test to verify that the Tray 5 paper (SR9 and SR12) surface sensors are properly functioning.
2. If this part has been removed or replace, check the connector (1601 and 1602) on the on the sheet feeder controller PCA.
3. If the error persists, replace the lifter drive assembly (Tray 5).

60.00.0Y, 62.00.00 Error Messages**60.00.02 Tray 2 lifting error****Description**

Tray 2 lifting error. Tray 2 did not raise to the paper surface sensor in the required amount of time.

Recommended action

1. Remove the tray and manually rotate the gear on the rear of the tray to make sure that the lift mechanism is working.
2. With the tray removed, pressing any of the paper size switches will cause the tray lift motor to run. If the motor does not work, replace the lifter assembly.
3. Use the Tray/Bin manual sensor test to verify that the Tray 2 paper (PS107 and PS907) surface sensors are properly functioning.
4. If this part has been removed or replace, check the connector (J73 and J94) on the on the DC controller PCA.
5. If the error persists, replace the lifter drive assembly (Tray 2).

60.00.03 Tray 3 lifting error**Description**

Tray 3 lifting error. Tray 3 did not raise to the paper surface sensor in the required amount of time.

Recommended action

1. Remove the tray and manually rotate the gear on the rear of the tray to make sure that the lift mechanism is working.
2. With the tray removed, pressing any of the paper size switches will cause the tray lift motor to run. If the motor does not work, replace the lifter assembly.
3. Use the Tray/Bin manual sensor test to verify that the Tray 3 paper (SR1 and SR2) surface sensors are properly functioning.
4. If this part has been removed or replace, check the connector (1606 and 1607) on the on the paper feeder controller PCA.
5. If the error persists, replace the lifter drive assembly (Tray 3).

60.00.04 Tray 4 lifting error

Description

Tray 4 lifting error. Tray 4 did not raise to the paper surface sensor in the required amount of time.

Recommended action

1. Remove the tray and manually rotate the gear on the rear of the tray to make sure that the lift mechanism is working.
2. With the tray removed, pressing any of the paper size switches will cause the tray lift motor to run. If the motor does not work, replace the lifter assembly.
3. Use the Tray/Bin manual sensor test to verify that the Tray 3 paper (SR5 and SR6) surface sensors are properly functioning.
4. If this part has been removed or replaced, check the connector (1604 and 1605) on the on the paper feeder controller PCA.
5. If the error persists, replace the lifter drive assembly (Tray 4).

60.00.05 Tray 5 lifting error

Description

Tray 5 lifting error. Tray 5 did not raise to the paper surface sensor in the required amount of time.

Recommended action

1. Remove the tray and manually rotate the gear on the rear of the tray to make sure that the lift mechanism is working.
2. With the tray removed, pressing any of the paper size switches will cause the tray lift motor to run. If the motor does not work, replace the lifter assembly.
3. Use the Tray/Bin manual sensor test to verify that the Tray 3 paper (SR8 and SR9) surface sensors are properly functioning.
4. If this part has been removed or replaced, check the connector (1601 and 1602) on the on the paper feeder controller PCA.
5. If the error persists, replace the lifter drive assembly (Tray 5).

62.00.00 No system To continue turn off then on

Description

The product experienced an internal system failure.

Recommended action

1. Turn the product off, then on.
2. If the error persists, reload the firmware. If the error still persists, perform a firmware upgrade.
3. If the firmware upgrade does not resolve the problem, replace the hard disk.

65.X0.AZ Error Messages

65.80.A0, 65.80.A1: Output accessory Failure

Description

Output accessory disconnected.

An external paper handling accessory connection has been interrupted.

Recommended action

1. Turn the product off.
2. Make sure that the communication cable from the finisher to the engine is installed correctly.
3. Make sure that all packing materials have been removed from the paper handling accessory.
4. Check the paper path for obstructions, or jammed paper.
5. Turn the product on. If the error persists, replace the accessory.

66.WX.YZ Error Messages

66.00.20

Description

Over Current Error.

This is an output device failure related message.

Recommended action

1. Turn the product off, and then on.
2. Make sure that the finisher is connected correctly.
3. If the error persists, replace the Stapler/Stacker Unit.

66.00.40

Description

NVRAM Error.

This is a finisher control board NVRAM error. The checksum for the finisher stacker controller PCA has an error when the power is turned on.

Recommended action

1. Turn the product off, and then on.
2. Make sure that the finisher is connected correctly.
3. If the error persists, replace the Stapler/Stacker Unit.

66.00.50

Description

This is a CAN-CPU sequence error.

Recommended action

1. Turn the product off, and then on.
2. Make sure that the finisher is connected correctly.
3. If the error persists, replace the Stapler/Stacker Unit.

66.00.77

Description

This is a device communication error.

The communication between the print engine and the finisher has been interrupted or lost.

Recommended action

1. Turn the product off, and then on.
2. Make sure that the finisher is connected correctly.
3. If the error persists, replace the Stapler/Stacker Unit.

66.00.79

Description

This is a JetLink communication error.

The product has lost JetLink communication with the output device.

Recommended action

1. Turn off the product, and then disconnect the finisher.
2. Inspect and reconnect the JetLink cable (power and communication cable) from the finisher to the product.
3. Reconnect the finisher to the product.
4. Turn the product on.
5. If the error persists, replace the stacker controller PCA or the Stapler/Stacker Unit.

66.80.YY Stapler/Stacker failure

Description

An external paper handling accessory error has occurred.

- **66.80.01** (event code)

- Y-align malfunction

 - **66.80.02** (event code)
- Jogger malfunction

 - **66.80.03** (event code)
- Stapler malfunction

 - **66.80.21** (event code)
- Lift up malfunction

 - **66.80.22** (event code)
- Lift down malfunction

 - **66.80.23** (event code)
- Lift sensor malfunction

 - **66.80.33** (event code)
- Output roller malfunction

 - **66.80.35** (event code)
- Self priming malfunction

 - **66.80.51** (event code)
- System error (FW error)

 - **66.80.55** (event code)
- System error 5 (FW error)

 - **66.80.56** (event code)
- System error 6 (FW error)

 - **66.80.57** (event code)
- System error 7 (FW error)

 - **66.80.58** (event code)
- System error 8 (FW error)

 - **66.80.59** (event code)
- System error 9 (FW error)

 - **66.80.60** (event code)
- System error 10 (FW error)

 - **66.80.61** (event code)
- System error 11 (FW error)

- **66.80.62** (event code)
System error 12 (FW error)
- **66.80.63** (event code)
System error 13 (FW error)
- **66.80.64** (event code)
System error 14 (FW error)
- **66.80.65** (event code)
System error 15 (FW error)
- **66.80.70** (event code)
Page-info in flush
- **66.80.71** (event code)
Flush request in PDLV
- **66.80.72** (event code)
Delivery notice error
- **66.80.73** (event code)
Flush request in checking paper path
- **66.80.74** (event code)
Checking paper path start in PDLV
- **66.80.75** (event code)
Flush request in flush
- **66.80.76** (event code)
Non-flush complete

Recommended action

1. Turn off the product, and then disconnect the finisher.
2. Inspect and reconnect the JetLink cable (power and communication cable) from the finisher to the product.
3. Inspect the finisher for paper jams.
4. Reconnect the finisher to the product.
5. Turn the product on.
6. If the error persists, replace the Stapler/Stacker Unit.

70.XX.YY Error Messages

70.00.00 Error To continue turn off then on

Description

DC controller failure.

Recommended action

1. Turn the product off, and then on.
2. If the error persists, replace the DC controller.
- 3.

80.XX.YY, 82.XX.YY Error Messages

80.0X.YY Embedded Jetdirect Error

Description

An Embedded HP JetDirect print server critical error has occurred.

- **80.01.80:** (event log) No heartbeat
- **80.01.81:** (event log) Reclaim timeout
- **80.01.82:** (event log) Invalid data length
- **80.01.8B:** (event log) Invalid max outstanding packet header field
- **80.01.8C:** (event log) Invalid channel mapping response
- **80.03.01:** (event log) No PGP buffers
- **80.03.02:** (event log) Channel table full
- **80.03.03:** (event log) Producer index not reset
- **80.03.04:** (event log) Consumer index not reset
- **80.03.05:** (event log) Queue position size too small
- **80.03.06:** (event log) Transport overflow
- **80.03.07:** (event log) No overflow packets
- **80.03.08:** (event log) Invalid identify response
- **80.03.09:** (event log) Invalid channel map return status
- **80.03.10:** (event log) Invalid reclaim return status
- **80.03.12:** (event log) Datagram invalid buffer
- **80.03.13:** (event log) Max stream channels
- **80.03.14:** (event log) Max datagram channels
- **80.03.15:** (event log) Card reset failed

- **80.03.16:** (event log) Self-test failure
- **80.03.17:** (event log) Unknown PGP packet
- **80.03.18:** (event log) Duplicate I/O channel

Recommended action

1. Turn the product off, and then on.
2. Remove the RJ45 cable.
3. Turn the product off, and then on.
4. Reconnect the RJ45 cable.
5. If the error persists, replace the formatter.

82.73.46, 82.73.47

Description

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

Recommended action

1. Turn the product off, and then on.
2. Use the **Clean Disk** item in the **Preboot** menu.
3. Reload the firmware.

98.0X.0Y Error Messages

98.00.01 or 98.01.00 Corrupt data in firmware volume

Description

Data corrupt has occurred in the firmware volume.

Recommended action

1. Turn the product off, and then on.
2. Use the **Clean Disk** item in the **Preboot** menu.
3. Reload the firmware.

98.00.02 Corrupt data in the solutions volume

Description

Data corrupt has occurred in the solutions volume.

Recommended action

1. Turn the product off, and then on.
2. Use the **Clean Disk** item in the **Preboot** menu.
3. Reload the firmware.

98.00.03 Corrupt data in the configuration volume**Description**

Data corrupt has occurred in the configuration volume.

Recommended action

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

98.00.04 Corrupt data in the job data volume**Description**

Data corrupt has occurred in the job data volume.

Recommended action

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

99.XX.YY Error Messages**99.00.01 Upgrade not performed file is corrupt****Description**

A remote firmware upgrade (RFU) was not performed.

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

Recommended action

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

99.00.02 Upgrade not performed timeout during receive**Description**

A remote firmware upgrade (RFU) was not performed.

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

Recommended action

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

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

99.00.03 Upgrade not performed error writing to disk

Description

A remote firmware upgrade (RFU) was not performed.

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

Recommended action

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

99.00.04 Upgrade not performed timeout during receive

Description

A remote firmware upgrade (RFU) was not performed.

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

Recommended action

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

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

99.00.05 Upgrade not performed timeout during receive

Description

A remote firmware upgrade (RFU) was not performed.

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

Recommended action

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

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

99.00.06 Upgrade not performed error reading upgrade

Description

A remote firmware upgrade (RFU) was not performed.

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

Recommended action

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

99.00.07 Upgrade not performed error reading upgrade

Description

A remote firmware upgrade (RFU) was not performed.

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

Recommended action

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

99.00.08 Upgrade not performed error reading upgrade

Description

A remote firmware upgrade (RFU) was not performed.

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

Recommended action

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

99.00.09 Upgrade canceled by user

Description

A remote firmware upgrade (RFU) was not performed.

The RFU was canceled by the user.

Recommended action

Resend the RFU.

99.00.10 Upgrade canceled by user

Description

A remote firmware upgrade (RFU) was not performed.

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

Recommended action

Resend the RFU.

99.00.11 Upgrade canceled by user

Description

A remote firmware upgrade (RFU) was not performed.
The RFU was canceled by the user when reading the rest of the header.

Recommended action

Resend the RFU.

99.00.12 Upgrade not performed the file is invalid

Description

A remote firmware upgrade (RFU) was not performed.
The header number is 1, but the header size does not match version 1 size.

Recommended action

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

99.00.13 Upgrade not performed the file is invalid

Description

A remote firmware upgrade (RFU) was not performed.
The header number is 2, but the header size does not match version 2 size.

Recommended action

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

99.00.14 Upgrade not performed the file is invalid

Description

A remote firmware upgrade (RFU) was not performed.
The file is invalid.

Recommended action

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

99.00.2X

Description

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

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

Recommended action

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

99.00.27 only:

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

99.01.XX

Description

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

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

Recommended action

Reload the firmware.

99.02.01

Description

Firmware installation was successful.

Recommended action

No action necessary.

99.02.09

Description

Firmware upgrade cancelled by user.

Recommended action

No action necessary.

99.09.60 Unsupported disk

Description

This is a **Preboot** menu error.

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

Recommended action

Install the correct hard disk for this product.

99.09.61 Unsupported disk

Description

This is a **Preboot** menu error.

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

Recommended action

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

99.09.62 Unknown disk

Description

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

Recommended action

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

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

99.09.63 Incorrect disk

Description

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

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

Recommended action

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

99.09.64 Disk malfunction

Description

A fatal hard disk failure has occurred.

Recommended action

Replace the hard disk.

99.09.65 Disk data error

Description

Disk data corruption has occurred.

Recommended action

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

99.09.66 No disk installed

Description

A disk drive is not installed in the product.

Recommended action

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

99.09.67 Disk is not bootable please download firmware

Description

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

Recommended action

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



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

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

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

99.09.67 Disk is not bootable please download firmware

Description

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

Recommended action

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



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

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

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

99.XX.YY

Description

A message of this form indicates a firmware installation error.

Recommended action

Reload the firmware.

Alpha Error Messages

Accept bad signature

Description

The product is performing a remote firmware upgrade, and the code signature is invalid.

Event Log will list 99.00.28.

Recommended action

Download the RFU file again. Make sure that you download the file for the correct product model. Attempt the firmware upgrade again.

ADF not detected

Description

The ADF was not detected when the product initialized.

Recommended action

Make sure that the document feeder cables are connected and fully seated.

Authentication required**Description**

A user name and password are required.

Recommended action

Type the user name and password, or contact the network administrator.

Bad optional tray connection**Description**

The optional tray is not connected, not connected correctly, or a connection is not working correctly.

Recommended action

1. Turn the product off.
2. Remove and then reinstall the optional tray.
3. Remove the tray and inspect the connectors on the tray and product for damage. If either of them are broken, have bent pins, or otherwise appear damaged, replace them.
4. Carefully reposition product base onto the optional tray. HP recommends that two people lift the product.
5. If the problem continues, replace the connector for the tray.

Binname full**Description**

The specified output bin is full.

Recommended action

- ▲ Empty the bin to continue printing.

Calibration reset pending**Description**

A calibration reset occurs when all jobs are processed.

Recommended action

- ▲ To begin the reset sooner, cancel all jobs by pressing the [Stop](#) button.

Canceling...<jobname>**Description**

The product is canceling the current job <jobname>.

Recommended action

No action necessary.

Cartridge low**Description**

This message appears even though the print cartridge is new.

Recommended action

1. Remove, and then reinstall the print cartridge.
2. Make sure a genuine HP supply is used.
3. If the error persists, replace the print cartridge.

Cartridge Memory Abnormal**Description**

This message appears even though the print cartridge is new.

Recommended action

1. Remove, and then reinstall the print cartridge.
2. Reconnect connector (J74) on the DC controller PCA.
3. If the error persists, replace the print cartridge.

Cartridge out**Description**

This message appears even though the print cartridge is new.

Recommended action

1. Remove, and then reinstall the print cartridge.
2. Make sure a genuine HP supply is used.
3. If the error persists, replace the print cartridge.

Checking engine**Description**

The product is conducting an internal test.

Recommended action

No action necessary.

Checking paper path**Description**

The product is checking for possible paper jams.

Recommended action

No action necessary.

Chosen personality not available To continue, touch “OK”**Description**

A print job requested a product language (personality) that is not available for this product. The job will not print and will be cleared from memory.

Recommended action

Print the job by using a print driver for a different language, or add the requested language to the product (if possible). To see a list of available personalities, print a configuration page.

Cleaning disk <X> complete Do not power off**Description**

A storage device is being sanitized or cleaned.

Recommended action

Do not turn off the product. The product's functions are unavailable. The product will automatically restart when finished.

Cleaning....**Description**

The product is performing an automatic cleaning cycle. Printing will continue after the cleaning is complete.

Recommended action

This process can take a few minutes, do not stop or open printer.

No action necessary.

Clearing activity log**Description**

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

Recommended action

No action necessary.

Clearing event log**Description**

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

Recommended action

No action necessary.

Clearing paper path

Description

The product is attempting to eject jammed paper.

paper is detected in the paper path. The product will attempt to eject it.

Recommended action

No action necessary. Check the progress at the bottom of the control panel display.

If a jam is not cleared, remove the paper.

Close lower right door

Description

The 3 x 500-sheet optional paper feeder right door is open.

Recommended action

1. Close the door.
2. Use the lower-right door switch (SW1) test in the Manual sensor test to verify that the switch is properly functioning. If the switch fails the test, replace the switch.
3. Check the sensor flag on the lower-right door assembly. If it is damaged, replace the door assembly.

Close lower right upper cover

Description

This message appears even though the right upper cover is closed.

Recommended action

1. Close the right upper cover.
2. Use the right upper cover switch (SW105) test in the Manual sensor test to verify that the switch is properly functioning. If the switch fails the test, replace the switch.
3. Reconnect the connector (J94) on the DC controller PCA.
4. If the problem persists, replace the right upper cover switch (SW105).

Close stapler/stacker multi bin mailbox door

Description

This message appears even though the stapler/stacker multi bin mailbox door is closed.

Recommended action

1. Check the stapler/stacker door sensor flag. If the flag is damaged, replace the sensor flag.
2. Reconnect the connector (J465) on the stapler/stacker controller PCA.

Close top cover

Description

This message appears even though the top cover is closed.

Recommended action

1. Use the cartridge door (top cover) switch (SW101) test in the Manual sensor test to verify that the switch is properly functioning. If the switch fails the test, replace the switch.
2. Reconnect the connector (J78) on the DC controller PCA.
3. If the problem persists, replace the cartridge door (top cover) switch (SW101).

Communication lost message appears on the control panel in five different languages

Description

A Communication Lost message appears on the control panel in five different languages.

The communication path from the control panel to the formatter includes the Control Panel, USB cable, image control board (ICB), and the formatter.

Recommended action

1. Power down the product and re-seat the formatter.
2. Re-seat the USB cable connection at the rear of the control panel (swing the control panel up 90 degrees for better access).
3. Turn the product off and then back on again.
4. Does the message reappear in 20 - 30 seconds?
5. If YES:

Check the Heartbeat LED on the formatter (is it flashing?).

If the Heartbeat LED is NOT flashing, replace the formatter.

If the formatter Heartbeat LED is flashing, then the Communication Lost message could also be caused by:

- Bad USB connection at the ICB
 - Bad Control Panel
 - Bad ICB
6. If the error persists after replacing the formatter, or formatter is good, the control panel USB cable might not be seated properly at the ICB connection on top of the engine.

Cooling device

Description

The product is cooling.

Recommended action

No action is necessary.

Data received**Description**

The product is waiting for more data to continue the print job. To print the remaining data, touch the Clear button. To close the dialog and wait for the command to print the last page, touch the **OK** button.

Recommended action

No action necessary.

Data received To print last page press “OK”**Description**

The product is waiting for the command to print the last page.

Recommended action

Touch the OK button to print the last page of the job.

Digital send communication error**Description**

A digital send job failed and cannot be delivered.

Recommended action

Try to send the job again.

Document feeder pick error**Description**

31.01.03 (event code)

A document feeder pick error occurred.

Recommended action

The document feeder rollers might be dirty or damaged. Clean or replace the rollers.

EIO <X> disk initializing**Description**

The specified EIO disk device is initializing.

Recommended action

No action necessary.

EIO <X> disk not functional

Description

Event log message 82.01.YY, 82.02.YY.

The specified EIO disk device is initializing. For example, if X = 1, the disk in slot 1 is not functional.

Recommended action

1. Turn the product off, and then on again.
2. If the error persists, turn the product off, and then remove and reinstall the disk.

EIO <X> disk spinning up

Description

The EIO disk in slot <X> is spinning up its platter. Jobs that require disk access must wait.

For example, if X = 1, the disk in slot 1 is spinning up.

Recommended action

No action necessary.

EIO device failure

Description

The EIO device file system must be initialized before it can be used.

Recommended action

Initialize the EIO file system.

EIO device failure To clear touch “OK”

Description

The specified device failed.

Recommended action

Touch the OK button to clear the message.

EIO file operation failed

Description

A PJI file system command attempted to perform an illogical operation, such as downloading a file to a directory that does not exist.

Recommended action

Touch the OK button to clear the message.

EIO file system is full

Description

A PJI file system command attempted to write data to the disk but was unsuccessful due to the disk being full.

Recommended action

Touch the OK button to clear the message.

EIO is write protected

Description

The device is protected and no new files can be written to it.

Recommended action

Touch the OK button to clear the message.

EIO not initialized

Description

The EIO disk file system must be initialized before it can be used.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the component.

Event log is empty

Description

No product events are in the log.

Recommended action

No action necessary.

Expected drive missing

Description

The product cannot find the encrypted hard drive.

Recommended action

Install the encrypted hard drive.

External device initializing

Description

An external device is initializing.

Recommended action

No action necessary.

Fax is disabled — ignoring call

Description

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

Recommended action

Use the **Administration** menu to configure the required fax settings.

Flatbed cover open or Close Flatbed cover

Description

The platen glass cover is open or the open/closed sensor is not functioning correctly.

Recommended action

1. Close the flatbed cover.
2. If the error persists, perform a Sensors diagnostic in the **Diagnostics** menu on the product control panel to test the flatbed open/closed sensor.
3. Clean, adjust, or replace the sensor as needed.

Fuser Kit low

Description

10.23.60 (event code)

The product indicates when a supply is low.

Recommended action

Replace the fuser.

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

Fuser Kit very low To continue, touch “OK”

Description

10.23.70 (event code)

The product indicates when a supply is very low.

After an HP supply has reached the very low threshold, the HP premium protection warranty for that supply has ended.

Recommended action

Replace the fuser.

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

Gateways failed

Description

There is an incorrect gateways configuration.

Recommended action

Use the **EIO <X> Jetdirect** menu to configure the default gateway.

Genuine HP supply installed

Description

10.00.40 (event code) - Black print cartridge

A new genuine HP toner cartridge has been installed.

Recommended action

Touch the Hide button to remove this message.

HP Secure hard drive disabled

Description

The HP high-performance hard disk is disabled, or the product does not recognize the hard disk.

After an encrypted hard disk is paired with a specific product, it cannot be used in another product unless it is re-initialized.



NOTE: After the encrypted hard disk is paired to the product, all other hard disks are disabled.

Recommended action

Remove the drive or use the HP Embedded Web Server for more information.

1. Open the embedded Web server by typing the product IP address into a Web browser.
2. Select the **Digital Sending** tab.
3. Select the **Security** link from the left navigation menu, and open the **Hard Disk and Mass Storage Security Settings** section.
4. The following options are available.
 - **Disk Init** : This option does not affect the disk encryption status.
 - **NVram Init** : This option does not affect the disk encryption status.
 - **Disable Hard Disk Encryption and Reboot** : This option completely erases the hard disk including all stored jobs, digital-send settings, and authentication settings. All pre-loaded fonts, after-market fonts, and other programs must be reloaded.
 - **Reinitialize Hard Disk** : This option has the same effect as the Disable Hard Disk Encryption and Reboot , but it does not restart the product.

Incompatible <Supply>

Description

The indicated supply is not compatible with this product.

- **10.00.35:** (event code) Black toner cartridge
- **10.23.35:** (event code) Fuser kit

Recommended action

Replace the supply with one that is designed for this product.

Incompatible supplies

Description

Print cartridges or other supply items are installed that were not designed for this product. The product cannot print with these supplies installed.

Event codes are supply specific.

Recommended action

Touch the **OK** button to identify the incompatible supplies.

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

Initializing

Description

The product is starting.

Recommended action

No action necessary.

Initializing scanner Please wait

Description

The product is waiting for the scanner to initialize.

Recommended action

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

Install fuser unit

Description

10.23.15: (event code) Fuser Kit

The fuser has been removed or installed incorrectly.

Recommended action

 **WARNING!** The fuser can be hot while the product is in use. Turn the product off, and then wait for the fuser to cool before handling it.

1. Remove the output bin or stapler/stacker.
2. Remove the fuser entrance guide.
3. Remove the fuser then reinstall it.
4. IF message remains, replace the fuser.

Replace or reinstall the print cartridge correctly to continue printing.

Install Supplies

Description

More than one supply is missing or is installed incorrectly.

- **10.00.15** (event code): Black print cartridge
- **10.23.15** (event code): Fuser kit

Recommended action

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

Touch the OK button a second time for more information about the specific supply.

Insert the supply item or make sure the installed supply item is fully seated.

Internal disk device failure To clear touch “OK”

Description

82.OX.YY (event code)

The internal disk failed.

Recommended action

1. Touch the **OK** button to clear the error.
2. If the error persists, turn off the product, and then remove and reinstall the hard drive.
3. Turn on the product.
4. If the error persists, replace the internal hard drive.

Internal disk file operation failed

Description

A PjL system command attempted to perform an invalid operation, such as downloading a file to a nonexistent directory.

Recommended action

Touch the OK button to clear the error.

Internal disk file system is full

Description

A PJL system command attempted to write data to the internal disk, but failed because the disk is full.

Recommended action

Touch the **OK** button to clear the error.

Internal disk is write protected

Description

The internal disk is write protected and no new files can be written to it.

Recommended action

Touch the **OK** button to clear the error.

Internal disk not found

Description

The internal disk was not found at start up.

Recommended action

Turn the product off, and then on.

Internal disk not functional

Description

82.OX.YY (event code)

The internal hard drive is not functioning properly.

Recommended action

1. Turn off the product, and then remove and reinstall the hard drive.
2. Turn on the product.
3. If the error persists, replace the internal hard drive.

Internal disk not initialized

Description

The file system on the internal disk must be initialized before it can be used.

Recommended action

Initialize the file system on the internal disk.

Internal disk spinning up

Description

The internal disk device is spinning up its platter. Jobs that require disk access must wait.

Recommended action

No action necessary.

Jam in document feeder**Description**

31.01.02 (event code)

A document feeder jam has occurred.

Recommended action

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

Job not stapled due to mixed sizes**Description**

This message displays when the job to staple has more than one paper size (paper width).

Recommended action

Paper with different widths cannot be stapled. Use the same width paper for the entire print job.

Load Tray <X>: [Type], [Size] To use another tray, press “OK”**Description**

This message displays when the indicated tray is selected, but is not loaded, and other paper trays are available for use.

It also displays when the tray is configured for a different paper type or size than the print job requires.

Recommended action

1. Load the correct paper in the tray.
2. If prompted, confirm the size and type of paper loaded.
3. Otherwise, press the OK button to select another tray.
4. If error persists, use the cassette paper present sensor test in the Tray/bin manual sensor test to verify that the sensor is functioning correctly.
5. Make sure that the sensor flag on the paper presence sensor is not damaged and moves freely.
6. Reconnect the corresponding connector.
 - MP tray: connector (J191) on the MP tray media feed sensor and the connector (J91) on the DC controller PCA.
 - Printer cassette: connectors (J22) on the cassette media feed sensor and the connector (J1605) on the DC controller PCA.
 - 1 X 500-sheet paper feeder cassette: connector (J32) on the paper feeder cassette media feed sensor and the connector (J1602) on the paper feeder controller PCA.
 - Paper deck cassette 1: connector (J32) on the paper deck cassette 1 media feed sensor and connector (J1602) on the paper deck controller PCA 1

- Paper deck cassette 2: connector (J13) on the paper deck cassette 2 media feed sensor and connector (J1607) on the paper deck controller PCA 2.
- Paper deck cassette 3: connector (J13) on the paper deck cassette 3 media feed sensor and connector (J607) on the paper deck controller PCA 3.

Loading program <XX>

Description

Programs and fonts can be stored on the product's file system and are loaded into RAM when the product is turned on. The number <XX> specifies a sequence number indicating the current program being loaded.

Recommended action

No action necessary.



NOTE: Do not turn the product off.

Manually feed output stack Then touch "OK" to print second side

Description

The first side of a manual duplex job printed and the product is waiting for the user to insert the output stack to complete the second side. For the normal Manually Feed message, printing continues automatically when the paper is reinserted. With this message, printing stops until the user touches the OK button, which allows time for straightening the output stack.

Recommended action

1. Maintaining the same orientation, remove the pages from the output bin.
2. Flip the document printed side up.
3. Load the document in Tray 1.
4. Touch the OK button to print the second side of the job.

Manually feed: <Type><Size> To use another tray, press "OK"

Description

This message displays when manual feed is selected, Tray 1 is loaded, and other trays are available.

Recommended action

1. Load tray with the requested paper.
2. If paper is already in tray, press the [Help](#) button to exit the message, and then press the [OK](#) button to print.
3. To use another tray, clear paper from Tray 1, press the [Help](#) button to exit the message, and then press the [OK](#) button.

Moving solenoid and motor

Description

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

Recommended action

No action necessary.

To exit, press the [Stop](#) button .

Moving solenoid To exit press**Description**

The solenoid is moving as part of a component test.

Recommended action

No action necessary.

To exit, press the [Stop](#) button

No job to cancel**Description**

The user pressed the Stop button , but the product is not actively processing any jobs.

Recommended action

No action necessary.

Non HP Supply Installed**Description**

10.99.31 (event code)

A non-HP supply is detected.

This message is displayed for about 6 seconds when a new non HP supply is installed.

The product does not provide supply status messages for non-HP supplies.

Recommended action

Press OK to continue.

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

Output Bin Full**Description**

The **Output Bin Full** message displays when the output bin is full and paper must be removed before printing can continue.

Recommended action

If this message appears even though the output bin is not full.

1. Make sure that the output bin sensor flag is not damaged and can move freely. If the flag is damaged, replace the flag.
2. Use the output bin full sensor (PS104) test in the Manual sensor test to test the sensor. If it does not respond, replace the output bin full sensor (PS104).

Paused. Press to Resume

Description

This message displays when the product is paused and shows the job queue. The product is paused, and there are no error messages pending at the display. The I/O continues receiving data until memory is full.

Recommended action

Press the [Stop](#) button

Performing Paper Path Test

Description

The product is performing a paper-path test.

Recommended action

No action necessary.

Please wait...

Description

The product is in the process of clearing data.

Recommended action

No action necessary.

Printing Configuration

Description

The product is printing the Configuration page.

Recommended action

No action necessary.

Printing Demo Page

Description

The demo page is being generated. The product will return to the Ready state when the page is complete.

Recommended action

No action necessary.

Printing engine test

Description

The product is printing an engine Test page.

Recommended action

No action necessary.

Printing Event Log

Description

The product is printing the Event Log page.

Recommended action

No action necessary.

Printing File Directory

Description

The product is printing the File Directory pages.

Recommended action

No action necessary.

Printing Font List

Description

The product is printing the Font List pages.

Recommended action

No action necessary.

Printing Help Page

Description

The product is printing the Help page.

Recommended action

No action necessary.

Printing Menu Map

Description

The product is printing the Menu Map pages.

Recommended action

No action necessary.

Printing stopped To continue, touch “OK”

Description

The product displays this message when a print/stop test is run and the time expires.

Recommended action

Touch the OK button to continue.

Printing Supplies Status Page

Description

The product is printing the Supplies Status page.

Recommended action

No action necessary.

Printing Usage Page

Description

The product is printing the Usage page.

Recommended action

No action necessary.

Processing

Description

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

Recommended action

No action necessary.

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

Description

The product is processing a duplexed job.

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

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

Recommended action

No action necessary.

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

Description

The product is processing a job from the tray indicated.

Recommended action

No action necessary.

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

Description

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

Recommended action

No action necessary.

RAM disk device failure To clear touch "OK"

Description

The specified device failed.

Recommended action

Touch the OK button to clear the error.

RAM disk file operation failed To clear touch "OK"

Description

A PJI command was received that attempted to perform an invalid operation, such as downloading a file to a nonexistent directory.

Recommended action

Touch the OK button to clear the error.

RAM disk file system is full To clear touch "OK"

Description

The hard disk is full.

Recommended action

Touch the OK button to clear the error.

RAM disk is write protected To clear touch "OK"

Description

The RAM device is write protected and no new files can be written to it.

Recommended action

Touch the OK button to clear the error.

RAM disk not initialized

Description

The file system on the RAM disk must be initialized before it can be used.

Recommended action

Initialize the file system on the RAM disk.

Ready

Description

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

Recommended action

No action necessary.

Ready <IP Address>

Description

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

Recommended action

No action necessary.

Reattach output bin

Description

This message displays when the standard output bin is detached at power-up or optional output bin (stapler/stacker) and does not have the Jetlink cable attached at power-up.

Recommended action

Touch the Hide button to remove this message.

Receiving Upgrade

Description

The product is receiving a firmware upgrade.

Recommended action

Do not turn the product off until it reaches the Ready state.

Remove print cartridge

Description

The product is testing the print-cartridge motor.

Recommended action

To perform the test, remove the print cartridge from the product.

To cancel, press the [Stop](#) button.

Remove USB accessory**Description**

This message displays when an unsupported USB device is inserted into a host USB port on the product.

Recommended action

Remove the unsupported USB device.

Replace <Supply>**Description**

This alert displays only if the product is configured to stop when a supply reaches the very low threshold. The product indicates when a supply level is at its estimated end of life. The actual life remaining might be different than estimated.

The supply does not need to be replaced now unless the print quality is no longer acceptable.

HP recommends that the customer have a replacement supply available to install when print quality is no longer acceptable.

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



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

- **10.00.70** : (event code) Black toner cartridge

10.23.70 (event code) Fuser Kit

Recommended action

Replace the specified supply.

Or, configure the product to continue printing using the [Manage Supplies](#) menu on the product control panel.

Replace Supplies**Description**

This alert displays only if the product is configured to stop when a supply reaches the very low threshold. The product indicates when a supply level is at its estimated end of life. The actual life remaining might be different than estimated.

The supply does not need to be replaced now unless the print quality is no longer acceptable.

HP recommends that the customer have a replacement supply available to install when print quality is no longer acceptable.

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



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

- **10.00.70** : (event code) Black toner cartridge
10.23.70 (event code) Fuser Kit

Recommended action

Replace the specified supply.

Or, configure the product to continue printing using the [Manage Supplies](#) menu on the product control panel.

Resend external accessory firmware

Description

An external accessory requires a firmware upgrade. Printing can continue, but jams might occur if the job uses the external accessory.

Recommended action

Perform a firmware upgrade.

Resend Upgrade

Description

A firmware upgrade did not complete successfully.

Recommended action

Upgrade the firmware again.

Restore Factory Settings

Description

The product is restoring factory settings.

Recommended action

No action necessary.

RFU Load Error Send full RFU on <X> Port

Description

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

Recommended action

Resend the firmware upgrade.

ROM disk device failed To clear touch “OK”

Description

The specified device failed.

Recommended action

Touch the **OK** button to clear the error.

ROM disk file operation failed To clear touch “OK”**Description**

A PJI command was received that attempted to perform an invalid operation, such as downloading a file to a nonexistent directory.

Recommended action

Touch the **OK** button to clear the error.

ROM disk file system is full To clear touch “OK”**Description**

The hard disk is full.

Recommended action

Touch the **OK** button to clear the error.

ROM disk is write protected To clear touch “OK”**Description**

The ROM device is write protected and no new files can be written to it.

Recommended action

Touch the **OK** button to clear the error.

ROM disk not initialized To clear touch “OK”**Description**

The file system on the ROM disk must be initialized before it can be used.

Recommended action

Initialize the file system on the ROM disk.

Rotating Motor**Description**

This message displays during the execution of a component test and the component that is moving is a single motor.

Recommended action

Touch the **Hide** button to remove this message.

Sanitizing disk <X> complete Do Not power off

Description

The hard disk is being cleaned.

Recommended action

Contact the network administrator.

Size mismatch in Tray <X>

Description

The paper in the listed tray does not match the size specified for that tray.

Recommended action

1. Load the correct paper.
2. Make sure that the paper is positioned correctly.
3. Close the tray, and then make sure that the control panel lists the correct size and type for the specified tray.
4. If necessary, use the control panel menus to reconfigure the size and type settings for the specified tray.
5. If this message appears even though the correct size paper is loaded in the correct paper tray perform the following.
 - Use the Tray size switch test in the Tray/Bin manual sensor test to test the switch. If it does not respond, replace the lifter drive assembly.
 - Reconnect tray connectors on the media size switch, and then reconnect connector on the DC controller to tray.
 - If the error persists, replace the lifter drive assembly.

Sleep mode on

Description

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

Recommended action

No action necessary.

Staple Cartridge low

Description

The product indicates when a supply level is low. 20 to 50 staples remain in the cartridge.

Recommended action

Replace the staple cartridge.

Staple Cartridge very low

Description

The product staple cartridge is at end of life



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

Recommended action

Replace the staple cartridge.

Stapler/Stacker staple jam

Description

13.89.33 (Event code)

Recommended action

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

See 13.89.XX jam message troubleshooting for more steps.

Supplies low

Description

Multiple supplies on the product have reached the user defined low threshold.

Recommended action

Replace the supply when print quality is no longer acceptable.

Supply Memory Warning

Description

The product cannot read or write to the e-label or the e-label is missing.

Recommended action

No action necessary.

The unit has corrupt data

Description

Data corruption has occurred in the firmware volume.

- **98.00.01:** Corrupt data in the firmware volume
- **98.00.02:** Corrupt data in the solutions volume
- **98.00.03:** Corrupt data in the configuration volume
- **98.00.04:** Corrupt data in the job data volume

Recommended action

For **98.00.01**, **98.00.02**, and **98.00.03**, perform the following steps:

1. Turn the product off, and then on again.
2. Use the **Clean Disk** item in the **Preboot** menu.
3. Reload the firmware.

For **98.00.04**, perform the following steps:

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

Too many jobs in queue

Description

This message displays when the user selects a USB file to print, and 100 files are already in the print queue.

Recommended action

To select another file, touch the **OK** button.

Too many pages in job to staple

Description

The job contains more pages than can be stapled.

Recommended action

Send the job to the stacker bin or make the job page count smaller.

Tray <X> [type] [size]

Description

The paper in the specified tray is detected as the specified size and type.

The custom switch was not changed.

Recommended action

If the paper is a custom size or type, change the custom-size switch on the tray as necessary.

Tray <X> empty: [Type], [Size]

Description

The specified tray is empty and the current job does not need this tray to print.

- X = 1: Tray 1
- X = 2: Tray 2
- X = 3: Tray 3
- X = 4: Tray 4
- X = 5: Tray 5

Recommended action

Refill the tray at a convenient time.



NOTE: This could be a false message. If the tray is loaded without removing the shipping lock, the product does not sense that the paper is loaded. Remove the shipping lock, and then load the tray.

Tray <X> lifting

Description

The product is in the process of lifting paper in the indicated tray.

- X = 2: Tray 2
- X = 3: Tray 3
- X = 4: Tray 4
- X = 5: Tray 5

Recommended action

No action necessary.

Tray <X> open

Description

The specified tray is open or not closed completely.

- X = 2: Tray 2
- X = 3: Tray 3
- X = 4: Tray 4
- X = 5: Tray 5

Recommended action

1. Close the tray.
2. If this message displays after the lifter drive assembly was removed or replaced, make sure that the connector of the assembly is connected correctly and fully seated.
3. If the error persists, use the Media size switches (SW102, SW2, SW3,) test in the Tray/Bin manual sensor test to test the switches. If they do not respond, replace associated the lifter drive assembly.
4. If the switches do not respond, replace the associated lifter drive assembly.

Tray <X> overfilled

Description

The tray is filled above the stack-height mark.

- X = 2: Tray 2
- X = 3: Tray 3

- X = 4: Tray 4
- X = 5: Tray 5

The overfilled condition is sensed by the stack surface sensor when the tray is first closed. If the stack surface sensor does not move down (because the tray is too full), the overfilled message will be displayed and the tray will not be available for printing.

Recommended action

1. Open the tray and remove paper until the tray filled indicators can be seen.
2. Close the tray.
3. If the issue persists after removing paper from the tray, replace Paper Pickup Assembly.



NOTE: Before replacing the Paper Pickup Assembly perform the following steps.

- a. Perform a tray bin sensor test for the paper stack sensor of the tray in question.
(Example) Perform a manual sensor test for SR24 tray 2 paper surface sensor.

This test requires the activation of the tray closed lever which releases the sensor arms for the paper surface sensors.
- b. Verify that all connections from the DC Controller to the Paper pickup assembly and Lifting drive assembly are fully seated and connected. A loose or missing connection can cause this error.
- c. If this message appears after lifter drive assembly was removed or replaced, make sure that the connector on the assembly is correctly connected and fully seated.
- d. If the error persists, replace the paper pickup assembly.

Type mismatch Tray <X>

Description

The specified tray contains a paper type that does not match the configured type.

Recommended action

The specified tray will not be used until this condition is addressed. Printing can continue from other trays.

1. Load the correct paper in the specified tray.
2. On the product control, make sure that the type loaded in the tray matches the specified setting for the tray.

Unsupported drive installed To continue, touch “OK”

Description

A non-supported hard drive has been installed. The drive is unusable by this product.

Recommended action

1. Turn the product off.
2. Remove the hard drive.
3. Turn the product on.

Unsupported supply in use OR Unsupported supply installed To continue, touch “OK”**Description**

The product has one or more HP genuine supplies, designed for a different product, in use.

- **10.00.41** (event code): Black print cartridge

Recommended action

Install the correct supplies for this product. See the parts chapter in the service manual for supply part numbers.

Unsupported tray configuration**Description**

The product has too many optional trays installed.

Recommended action

Turn the product off, remove the unsupported trays, and then turn the product on.

Unsupported USB accessory detected Remove USB accessory**Description**

A non-supported USB accessory has been connected.

Recommended action

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

Upgrade Error**Description**

30.01.36 (event code)

There was a scanner control board (SCB) upgrade error.

Recommended action

1. Turn the product off, and then on.
2. Resend the upgrade.
3. If the error persists, replace the SCB.

USB accessory not functional

Description

A parameter in the USB accessory is not functioning correctly.

Recommended action

1. Turn the product off.
2. Remove the USB accessory.
3. Insert a replacement USB accessory.
4. Turn the product on.

USB hubs are not fully supported Some operations may not work properly

Description

Some USB hubs require more power than the product has available.

Recommended action

Remove the USB hub.

USB is write protected To clear touch “OK”

Description

The USB device is write protected and no new files can be written to it.

Recommended action

Touch the OK button to clear the error.

USB needs too much power

Description

Power requirements for the USB device attached to the product are beyond supported limits.

Recommended action

1. Remove the USB device.
2. Turn the product off, and then on.
3. Try a similar accessory that has its own power supply or requires less power.

USB needs too much power Remove USB and Then Turn Off then On

Description

A USB accessory is drawing too much electrical current. Printing cannot continue.

Recommended action

1. Turn the product off.
2. Remove the USB accessory.

3. Turn the product on.
4. Try a similar USB accessory that has its own power supply or requires less power.

USB not initialized

Description

The file system on the USB device must be initialized before it can be used.

Recommended action

Use the HP Embedded Web Server or HP Web Jetadmin to initialize the USB device.

USB storage accessory removed Clearing any associated data

Description

This message displays for about 6 seconds after a USB device is removed.

Recommended action

Touch the Hide button to remove this message.

USB storage device failure To clear touch “OK”

Description

The specified device failed.

Recommended action

Touch the OK button to clear this error.

USB storage file operation failed To clear touch “OK”

Description

A PJL file system command was received that attempted to perform an invalid operation, such as downloading a file to a nonexistent directory.

Recommended action

Touch the OK button to clear this error.

USB storage file system is full To clear touch “OK”

Description

The file system on the installed USB device is full.

Recommended action

Touch the OK button to clear this error.

Used supply installed To continue, touch “OK” OR Used supply in use Description

Description

The toner cartridges or supplies has been previously used.

Recommended action

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

Verifying, Please Wait**Description**

This message displays when the product is retrieving a print job from device memory, but can cause the product control panel to lock up.

The user enter the **Retrieve from Device Memory** menu to print a job. After selecting the desired print jobs, **Verifying, Please Wait** displays on the control panel. The status bar will move for a moment, and then lock up. Typically, if the user waits a few minutes, the error will clear and the job will print.

In rare cases, the message will lock up permanently and force the user to power cycle the product.

The event log might show the following errors as a result of power cycling the product during lockup:

- **48.05.05**
- **98.03.11**

Recommended action

Turn the product off and then on again.

Make sure the firmware is the latest revision.

Waiting for Tray <X> to lift**Description**

The specified tray is in the process of lifting paper to the top of the tray (so it can feed correctly).

Recommended action

No action necessary.

Windows Login Required to Use this Feature**Description**

Windows login is required for the selected feature or job.

Recommended action

Enter the necessary Windows login information.

Control panel: event log messages

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

Figure 2-67 Sample event log

Event Log Page 1

1 HP LaserJet MFP M630

Device Information

Device Serial **3**: XXXXXXX **4**

2 Number	Date and Time	4 Cycles	5 Event	6 Firmware	7 Description or Personality	8 Consecutive Repeats
50	1/2/2014 8:28:12 AM	62	40.08.00	2302176_420411	Secure file erase is disabled	0
49	1/2/2014 8:27:41 AM	61	10.99.34	2302176_420411	Used supply in use	0
48	1/2/2014 8:25:09 AM	0	32.08.A3	2302176_420411	Normal boot up	0
47	1/2/2014 8:25:06 AM	0	33.02.02	2302176_420411	Save/Recover disabled	0
46	1/2/2014 8:24:53 AM	0	99.06.01	2302176_420411	Finisher installation successful	0
45	1/2/2014 8:21:43 AM	61	32.08.A2	2302176_420411	Normal shutdown	0
44	12/19/2013 3:05:54 PM	61	10.99.34	2302176_420411	Used supply in use	0
43	12/19/2013 2:59:26 PM	0	32.08.A3	2302176_420411	Normal boot up	0
42	12/19/2013 2:59:24 PM	0	33.02.02	2302176_420411	Save/Recover disabled	0
41	12/19/2013 2:59:11 PM	0	99.06.01	2302176_420411	Finisher installation successful	0
40	12/19/2013 2:57:38 PM	61	32.08.A2	2302176_420411	Normal shutdown	0
39	12/19/2013 2:53:14 PM	61	10.99.34	2302176_420411	Used supply in use	0
38	12/19/2013 2:45:54 PM	0	32.08.A3	2302176_420411	Normal boot up	0
37	12/19/2013 2:45:52 PM	0	33.02.02	2302176_420411	Save/Recover disabled	0
36	12/19/2013 2:45:39 PM	0	99.06.01	2302176_420411	Finisher installation successful	0
35	12/19/2013 2:44:05 PM	61	32.08.A2	2302176_420411	Normal shutdown	0
34	12/19/2013 8:30:32 AM	60	40.08.00	2302176_420411	Secure file erase is disabled	0
33	12/18/2013 2:05:44 PM	59	10.99.34	2302176_420411	Used supply in use	0
32	12/18/2013 2:03:21 PM	0	32.08.A3	2302176_420411	Normal boot up	0
31	12/18/2013 2:03:18 PM	0	33.02.02	2302176_420411	Save/Recover disabled	0
30	12/18/2013 2:03:06 PM	0	99.06.01	2302176_420411	Finisher installation successful	0
29	12/18/2013 2:01:32 PM	59	32.08.A2	2302176_420411	Normal shutdown	0
28	12/18/2013 1:54:54 PM	59	10.99.34	2302176_420411	Used supply in use	0
27	12/18/2013 1:47:09 PM	0	32.08.A3	2302176_420411	Normal boot up	0
26	12/18/2013 1:47:07 PM	0	33.02.02	2302176_420411	Save/Recover disabled	0
25	12/18/2013 1:46:54 PM	0	99.06.01	2302176_420411	Finisher installation successful	0
24	12/18/2013 1:45:19 PM	59	32.08.A2	2302176_420411	Normal shutdown	0

Jan/6/2014 2:10:37 PM English (United States)

Table 2-58 Sample event log page

Item	Description	Item	Description
1	Product information	5	Event log code
2	Event number	6	Firmware version number
3	Date and time	7	Description of personality
4	Engine cycles	8	Consecutive Repeats

Print or view an event log



NOTE: The event log in using the [Administration](#) menu shows only a subset of events. For a complete event log, use the [Service](#) menu.

Print or view the event log from the Administration menu

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Event Log](#)
3. The event log displays on the screen. To print it, touch the [Print](#) button.

Print or view the event log from the Service menu

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the [Service](#) menu.
3. On the sign-in screen, select the [Service Access Code](#) option from the drop-down list.
4. Enter the following service access code for the product:
 - 09063014
5. Touch the [Print Event Log](#) or [View Event Log](#) item.

Clear the event log

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the [Service](#) menu.
3. On the sign-in screen, select the [Service Access Code](#) option from the drop-down list.
4. Enter the following service access code for the product:
 - 09063014
5. Select the [Clear Event Log](#) item, and then touch the [OK](#) button.

Clear jams

Jam sensor locations

Use the figures below to identify the locations of sensors or switches where reoccurring jams are found.

Paper path sensor locations

Use the diagrams in this section to locate the paper path sensors in the product.

Figure 2-68 Sensors (product base)

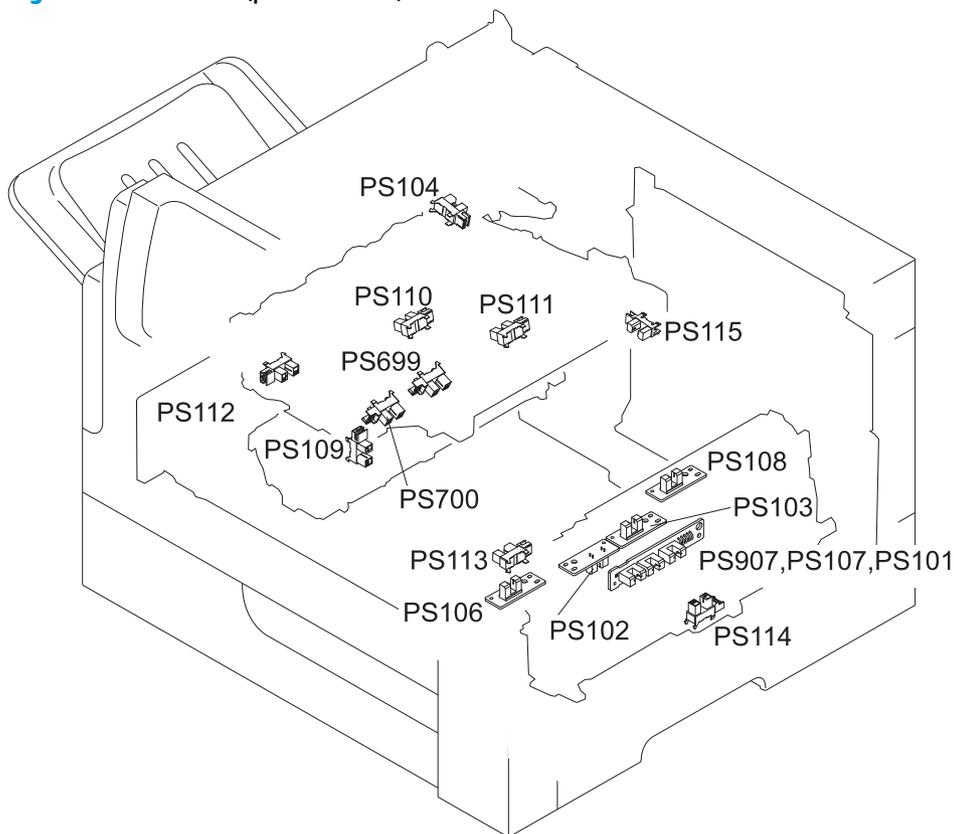


Table 2-59 Sensors (product base)

Sensor	Description	Sensor	Description
PS101	Cassette media out sensor	PS111	Switchback jam sensor
PS102	Pre-feed sensor	PS112	Delivery sensor
PS103	TOP sensor	PS113	Duplex re-pickup sensor
PS104	Output-bin media-full sensor	PS114	MP tray media-out sensor
PS106	Media width 1 sensor	PS115	Cartridge sensor
PS107	Cassette media stack surface 1 sensor	PS699	Fuser pressure release sensor
PS108	Media width 2 sensor	PS700	Fuser output sensor
PS109	Duplex side registration sensor	PS907	Cassette media stack surface 2 sensor
PS110	Switchback sensor		

Figure 2-69 1x500-sheet paper-feeder and 1x500-sheet paper-feeder with storage cabinet sensors and switches¹

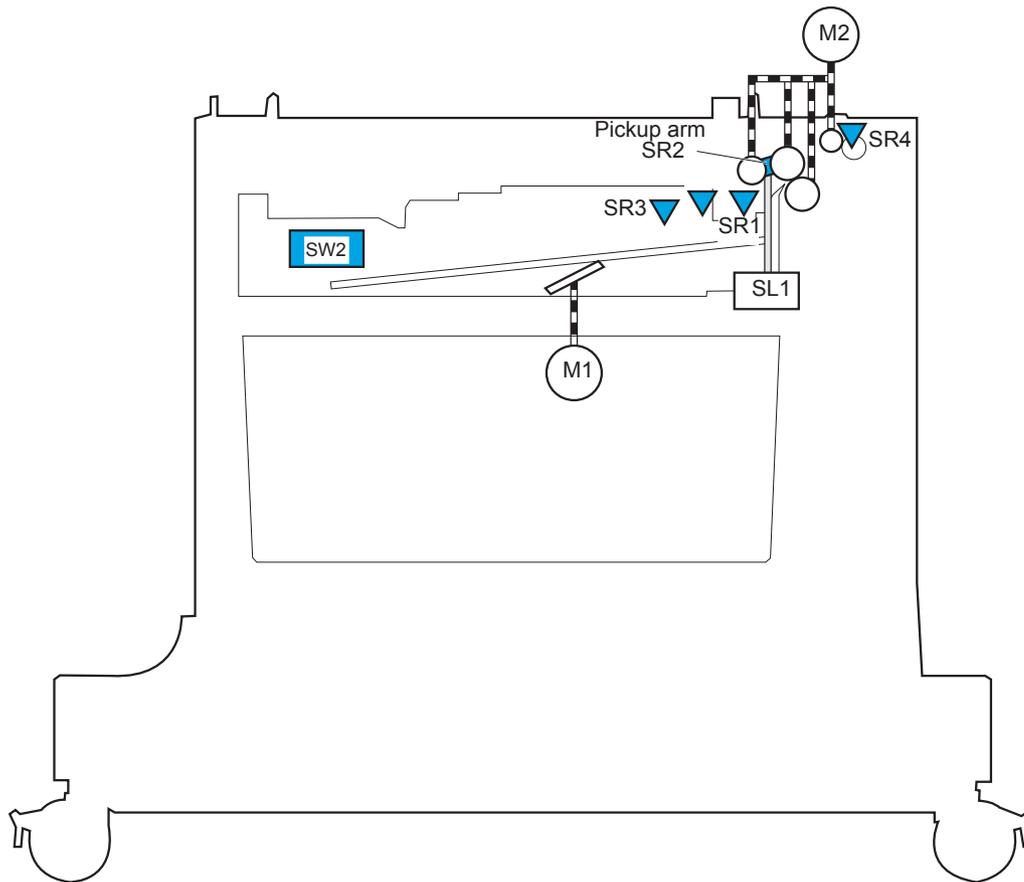


Table 2-60 1x500-sheet paper-feeder and 1x500-sheet paper-feeder with storage cabinet sensors and switches¹

Item	Description
SR1	Tray 3 paper surface sensor 1
SR2	Tray 3 paper surface sensor 2
SR3	Tray 3 paper presence sensor
SR4	Tray 3 paper present sensor
SW2	Tray 3 paper size switches

¹ The diagram shows the 1x500-sheet paper feeder with cabinet. The sensors are the same for the 1x500-sheet paper feeder.

Figure 2-70 2,500-sheet high-capacity feeder (HCI) sensors and switches

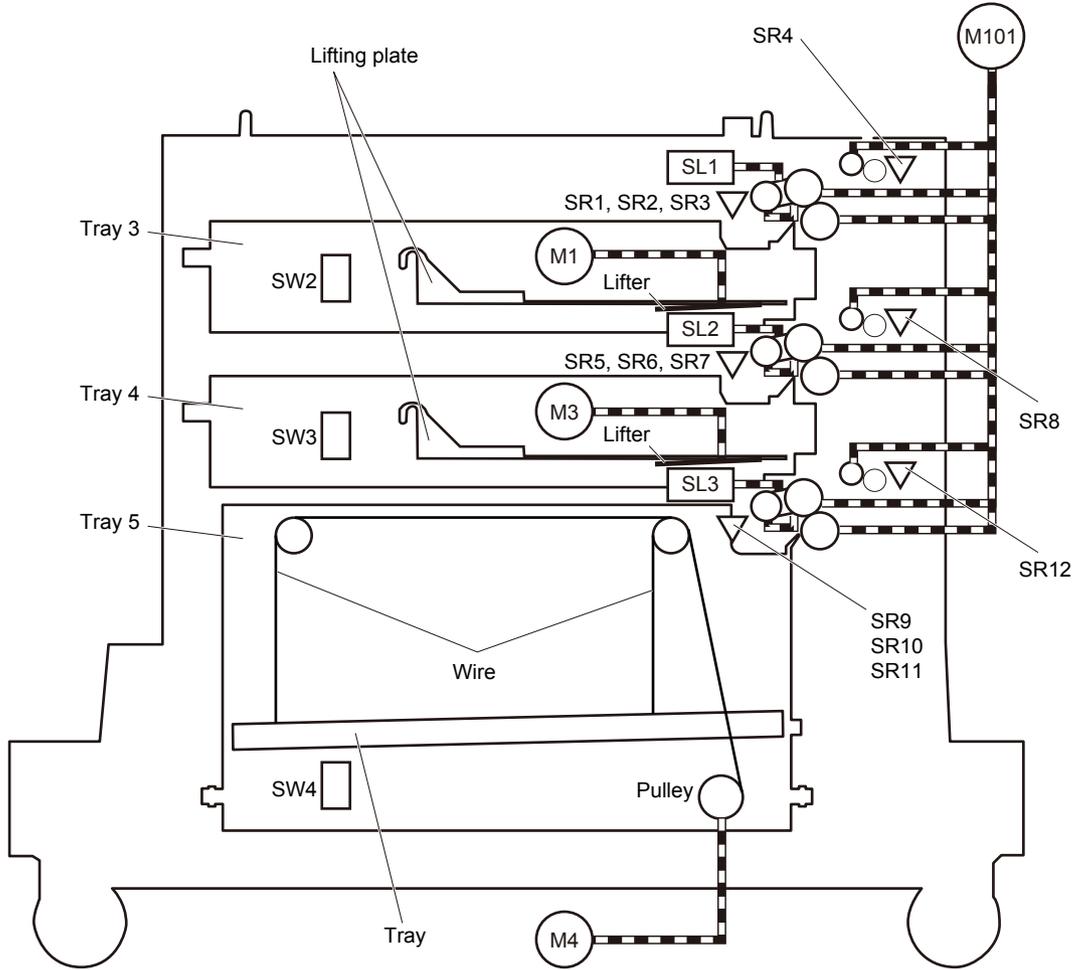


Table 2-61 2,500-sheet high-capacity feeder (HCI) sensors and switches

Sensor	Description	Sensor	Description
SW1	Right door open detection switch	SR5	Tray 4 media stack surface sensor 1
SW2	Tray 3 media size switch	SR6	Tray 4 media stack surface sensor 2
SW3	Tray 4 media size switch	SR7	Tray 4 media out sensor
SW4	Tray 5 media size switch	SR8	Tray 4 media feed sensor
SR1	Tray 3 media stack surface sensor 1	SR9	Tray 5 media stack surface sensor 1
SR2	Tray 3 media stack surface sensor 2	SR10	Tray 5 media stack surface sensor 2
SR3	Tray 3 media out sensor	SR11	Tray 5 media out sensor
SR4	Tray 3 media feed sensor	SR12	Tray 5 media feed sensor

Figure 2-71 Stapling mailbox sensors

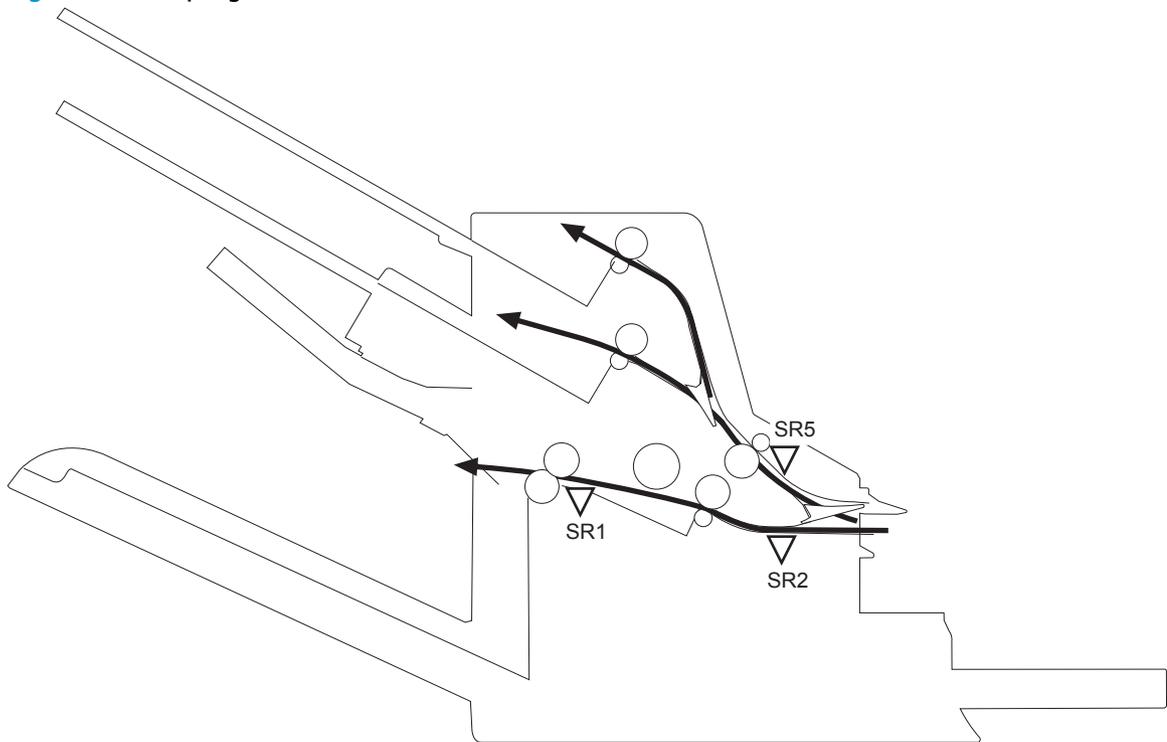
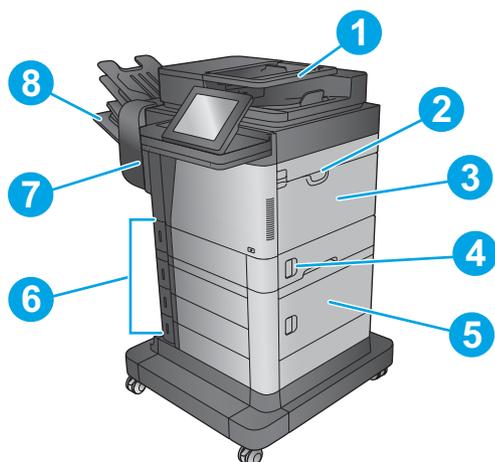


Table 2-62 3-bin stapling mailbox accessory sensors

Sensor	Description
SR1	Output bin 3 delivery sensor
SR2	Staple stacker multi-bin mailbox media feed sensor 1
SR5	Staple stacker multi-bin mailbox media feed sensor 2

Jam locations



1	Document feeder	See Clear jams in the document feeder on page 394 .
2	Top cover area	See Clear jams under the top cover and in the registration area on page 413 .
3	Tray 1	See Clear jams in Tray 1 on page 398 .
4	Right door	See Clear jams in the right door on page 406 .
5	Lower right door	See Clear jams in the lower-right door on page 407 .
6	Trays 2–5	See Clear jams in Tray 2, 3, or 4 on page 401 and Clear jams in the 1,500-sheet high-capacity input tray (Tray 5) on page 403 .
7	Duplexer and fuser	See Clear jams in the duplexer and fuser on page 408 .
8	Output bin (M630dn, M630f) Stapling mailbox (M630z)	See Clear jams in the output bin on page 416 , Clear jams in the stapling mailbox accessory on page 417 , and Clear staple jams in the stapling mailbox accessory on page 419 .

Auto-navigation for clearing jams

The auto-navigation feature assists you in clearing jams by providing step-by-step instructions on the control panel. When you complete a step, the product displays instructions for the next step until you have completed all steps in the procedure.

Experiencing frequent or recurring paper jams?

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

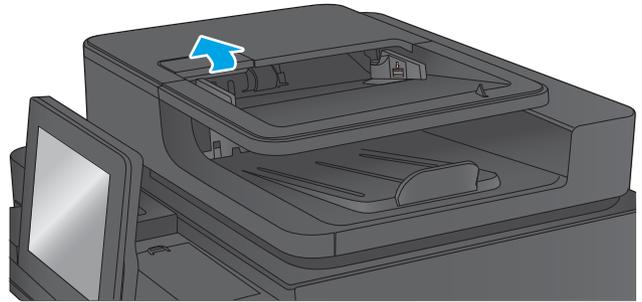
1. Use only paper that meets HP specifications for this product.
2. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.
3. Use paper that has not previously been printed or copied on.
4. Make sure the tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.

5. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides so they are touching the paper stack without bending it.
6. Make sure that the tray is fully inserted in the product.
7. If you are printing on heavy, embossed, or perforated paper, use the manual feed feature and feed sheets one at a time.
8. From the Home screen on the product control panel, scroll to and touch the [Trays](#) button. Verify that the tray is configured correctly for the paper type and size.
9. Make sure the printing environment is within recommended specifications.

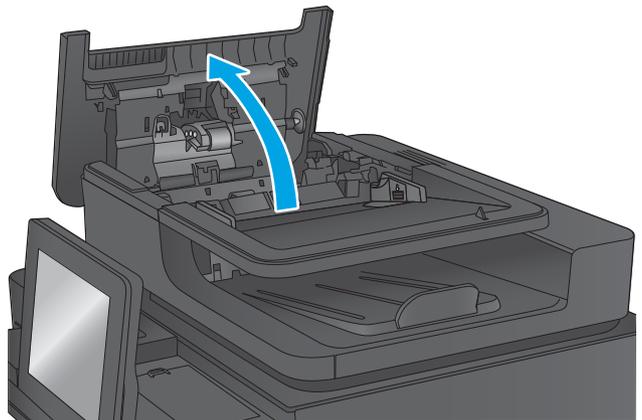
Clear jams in the document feeder

The following information describes how to clear paper jams in the document feeder. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

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

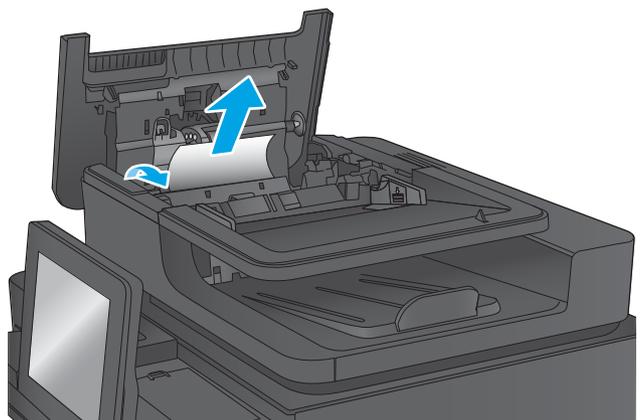


2. Open the document-feeder cover.



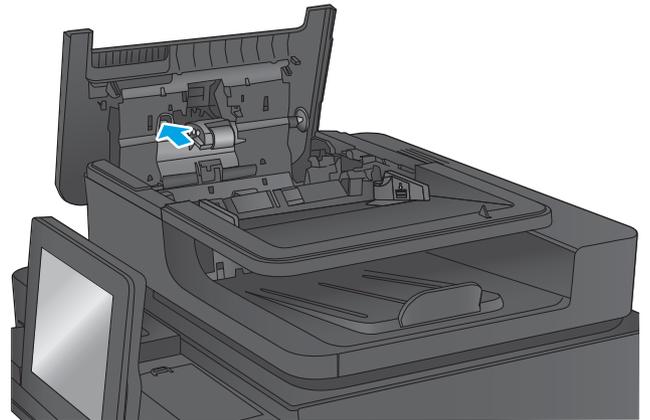
3. Lift the jam-access door, and remove any jammed paper.

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

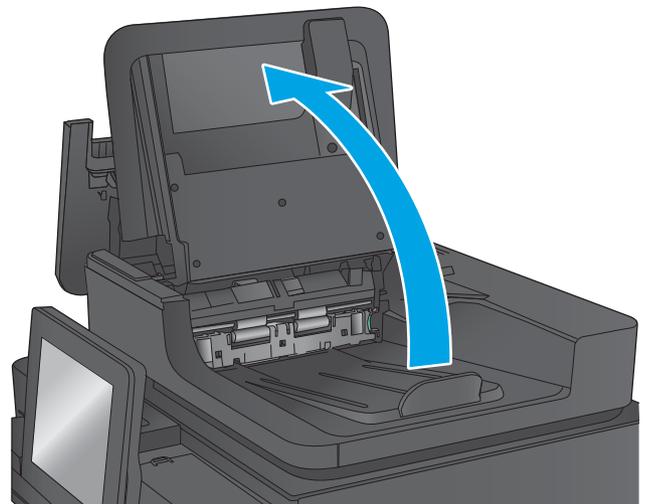


4. Press on the door next to the document-feeder rollers to make sure it is closed completely.

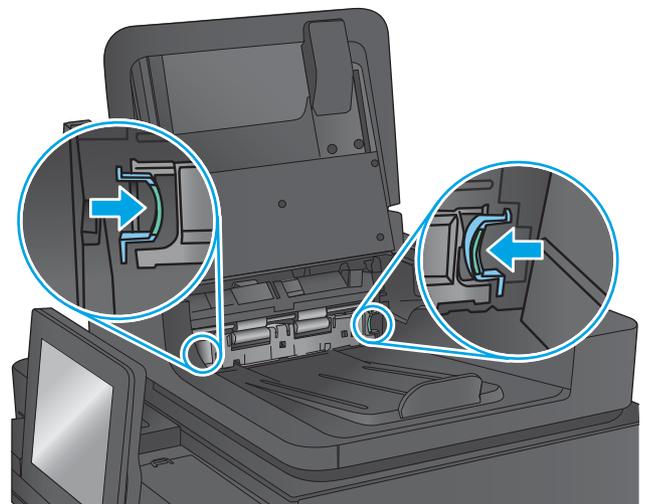
TIP: If the product is experiencing continuous document feeder jams, make sure that the document-feeder rollers are correctly installed. The rollers snap into place. Make sure that they are securely held in place.



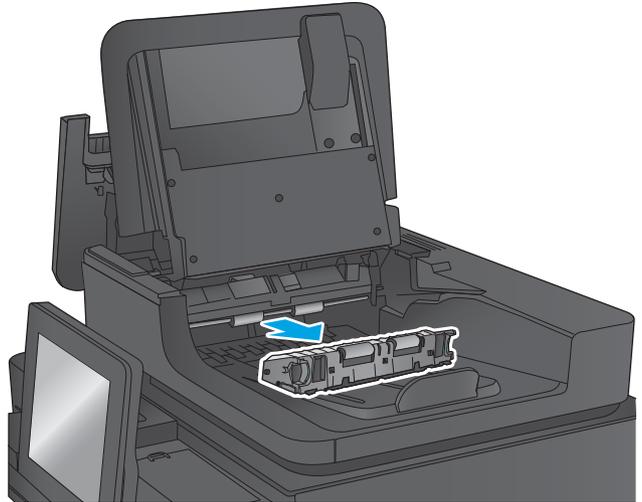
5. Lift the document-feeder input tray.



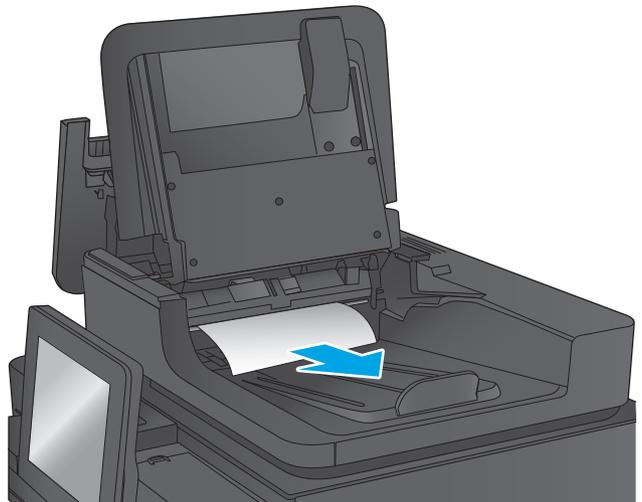
6. Squeeze inward on the two slots at each end of the backside-background selector assembly.



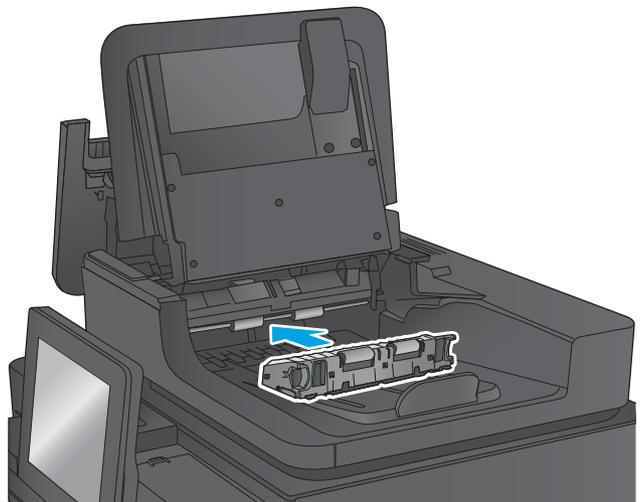
7. Remove the backside-background selector assembly by pulling it out.



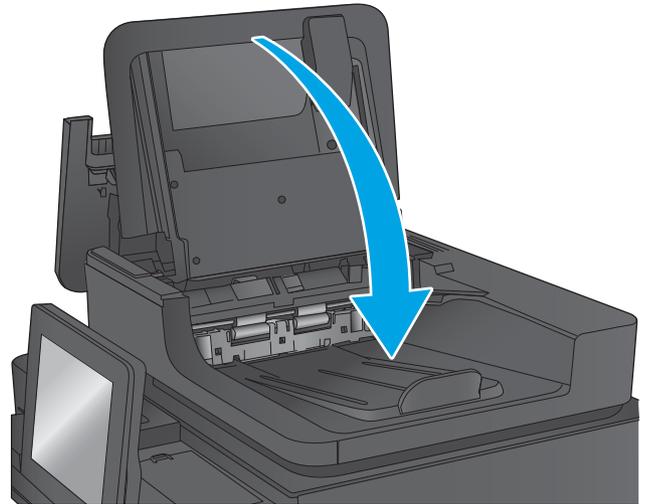
8. Remove any jammed paper.



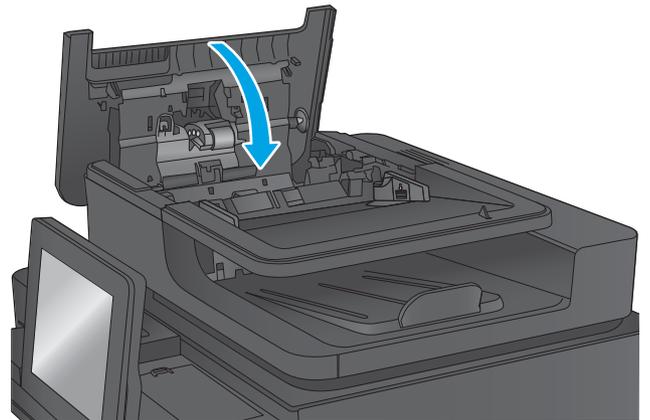
9. Reinstall the backside-background selector assembly by sliding it in until it locks into place.



10. Lower the document-feeder input tray.



11. Close the document-feeder cover.



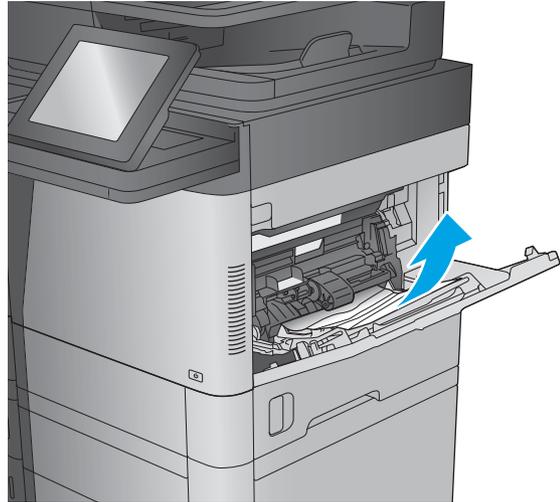
 **NOTE:** To avoid jams, make sure the guides in the document-feeder input tray are adjusted tightly against the document. Remove all staples and paper clips from original documents.

Original documents that are printed on heavy, glossy paper can jam more frequently than originals that are printed on plain paper.

Clear jams in Tray 1

The following information describes how to clear a paper jam in Tray 1. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

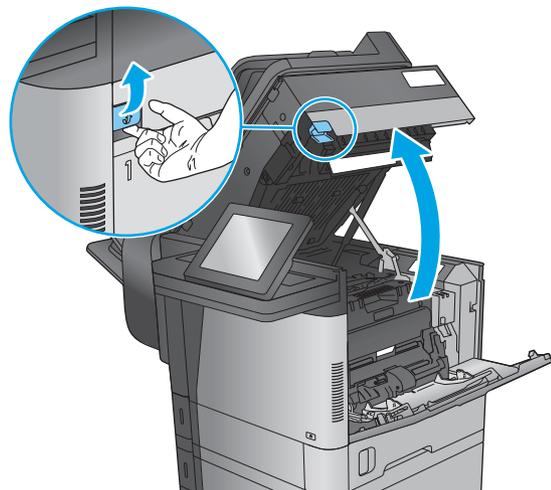
1. If jammed paper is visible in Tray 1, clear the jam by gently pulling the paper straight out. Touch the **OK** button to clear the message.



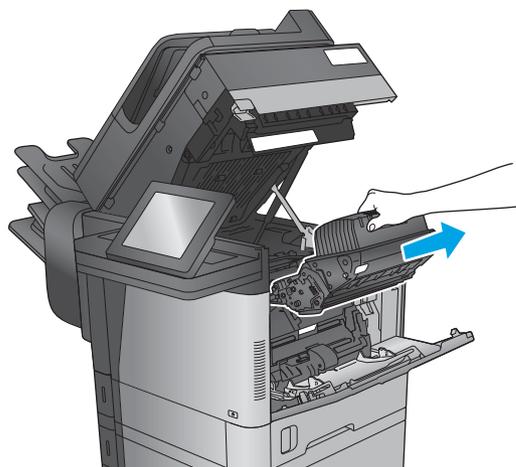
2. If the paper is difficult to remove, first remove the envelope-feeder cover (or the optional envelope feeder, if it is installed), and then try pulling the paper straight out.



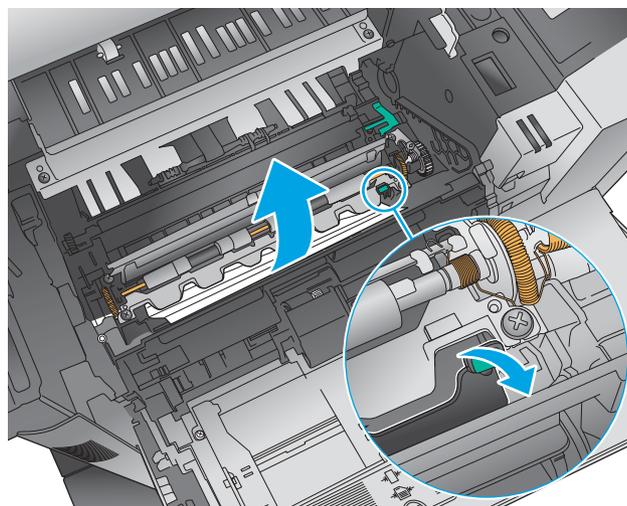
3. If the paper is difficult to remove, or if no jammed paper is visible in Tray 1, lift the top-cover-release latch and open the top cover.



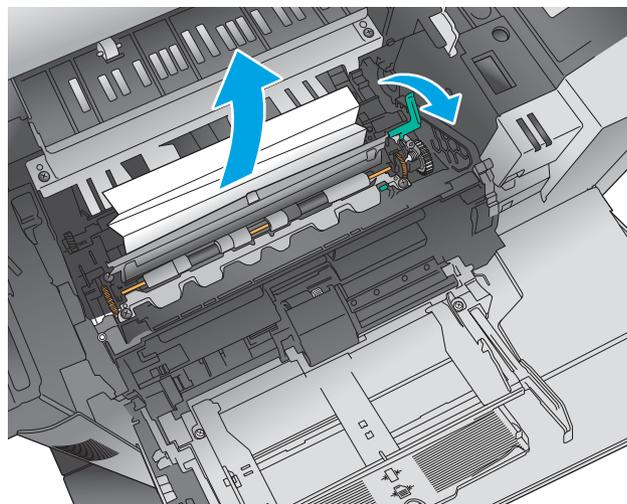
4. Remove the toner cartridge.



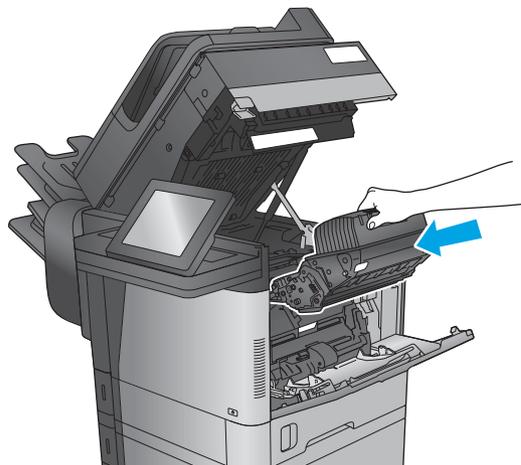
5. At the front of the registration roller, lift the small green tab to raise the plastic roller shield, and then pull any jammed paper straight out.



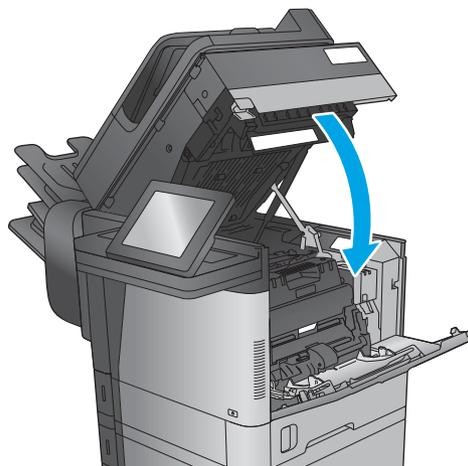
6. At the back of the roller, use the longer green tab to raise the metal shield, and then pull any jammed paper straight out.



7. Install the toner cartridge.



8. Close the top cover.



9. Insert the envelope-feeder cover and close Tray 1 (or reinstall the optional envelope feeder).

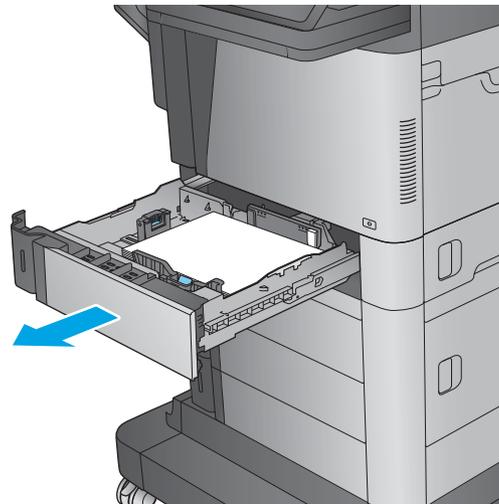


Clear jams in Tray 2, 3, or 4

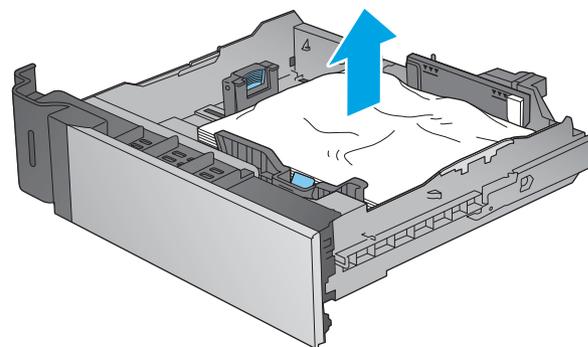
The following information describes how to clear a paper jam in Trays 2, 3, or 4. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

 **NOTE:** The following procedure shows Tray 2. The method to clear jams in Trays 3 and 4 is the same.

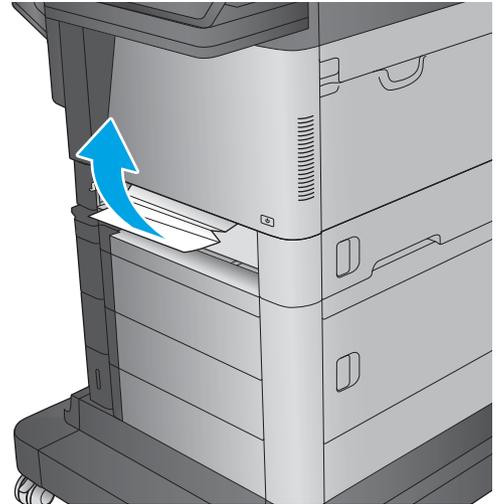
1. Pull the tray completely out of the product by pulling and lifting it up slightly.



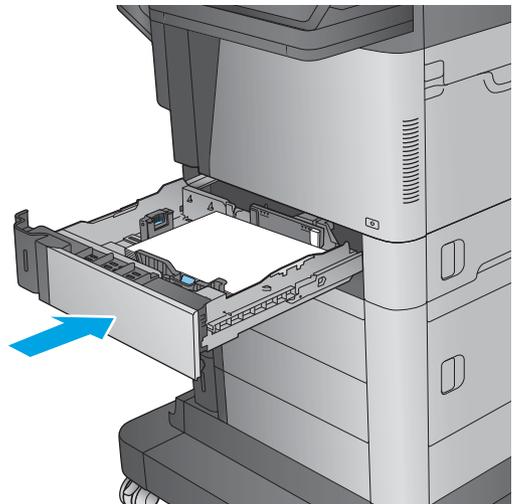
2. Remove any jammed or damaged sheets of paper.



3. Remove any paper from the feed rollers inside the product.



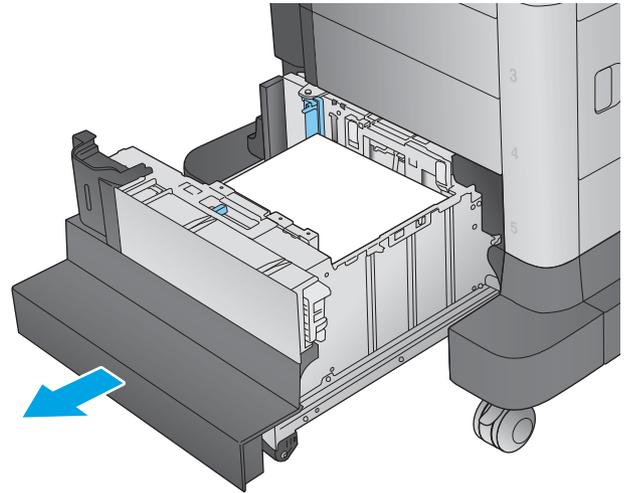
4. Reinsert and close the tray.



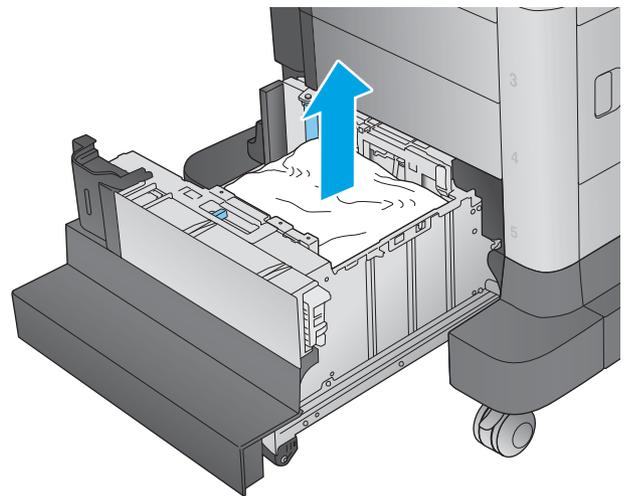
Clear jams in the 1,500-sheet high-capacity input tray (Tray 5)

The following information describes how to clear a paper jam in the 1,500-sheet high-capacity tray (Tray 5). When a jam occurs, the control panel displays an animation that assists in clearing the jam.

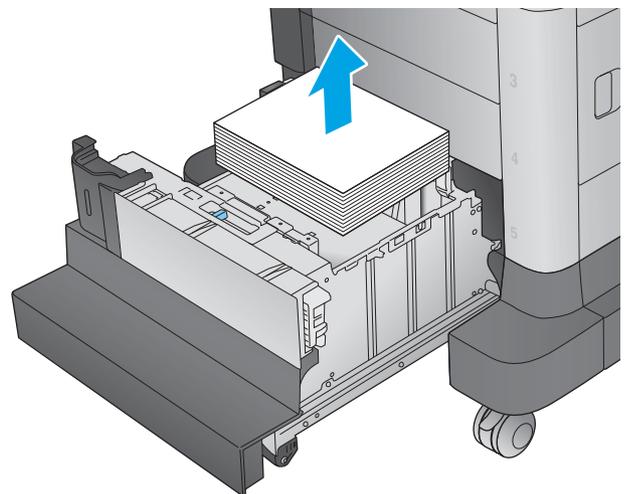
1. Open the 1,500-sheet high-capacity input tray.



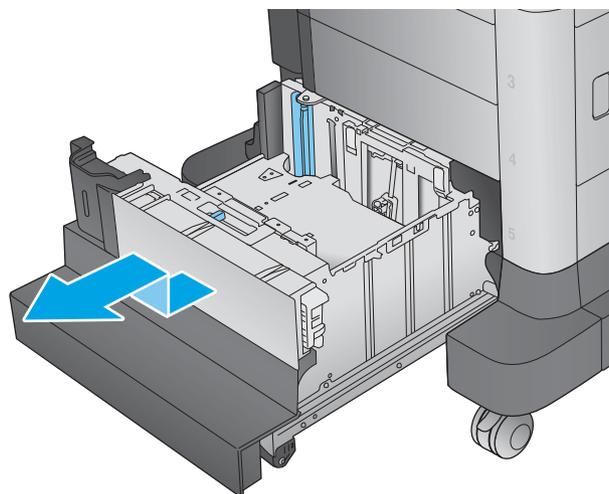
2. Remove and discard any damaged sheets.



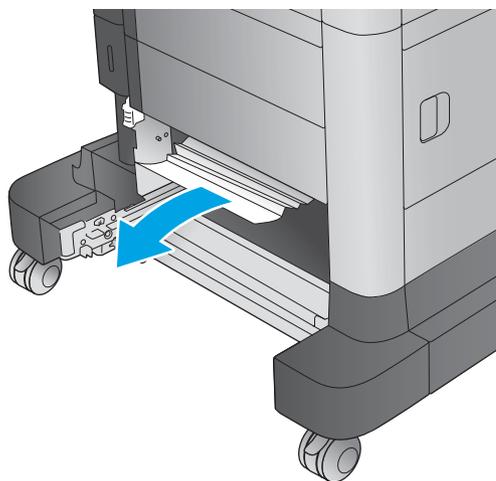
3. Remove the paper from the tray.



4. Lift the tray up and then pull it straight out to remove it.

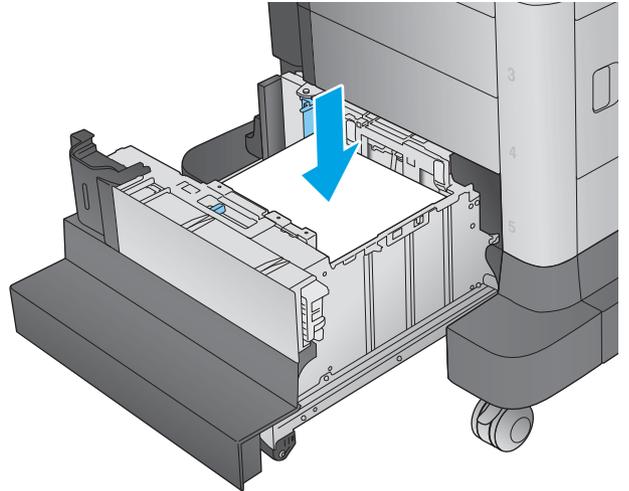


5. If jammed paper is in the feed area, pull it down to remove it.

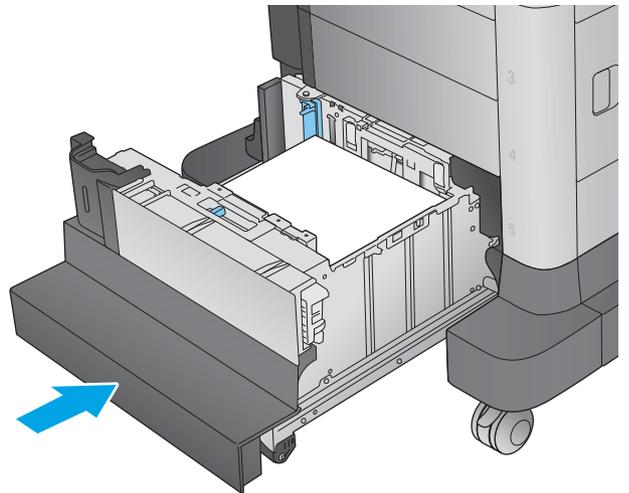


6. Reinstall the tray, and then load full reams of paper into the tray. The tray holds 1,500 sheets of paper.

NOTE: For best results, load full reams of paper. Avoid dividing reams into smaller sections.



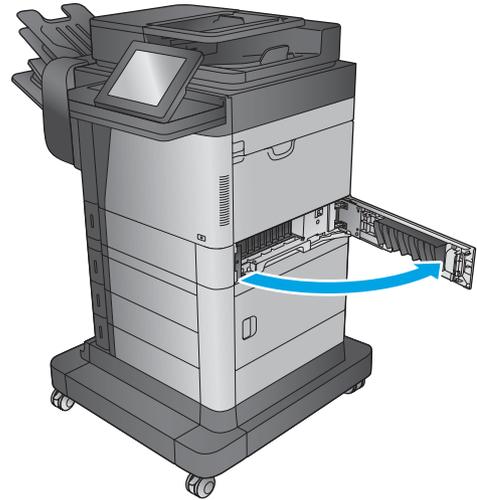
7. Close the tray.



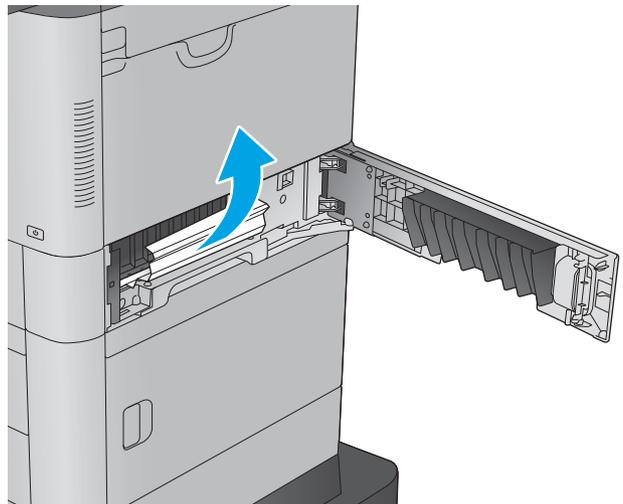
Clear jams in the right door

The following information describes how to clear a paper jam in the right door. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

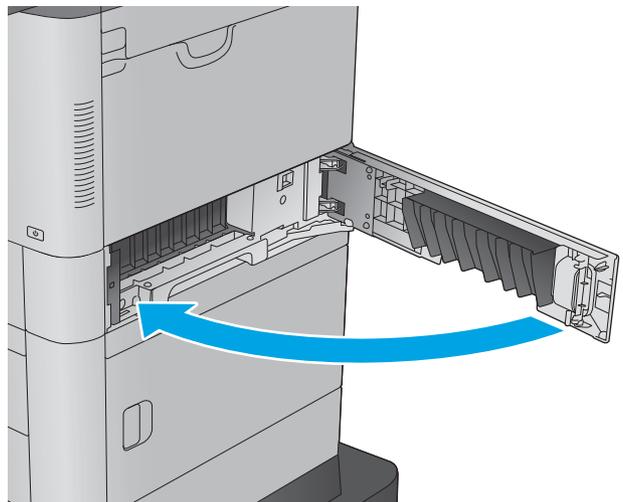
1. Open the right door.



2. Remove any jammed paper.



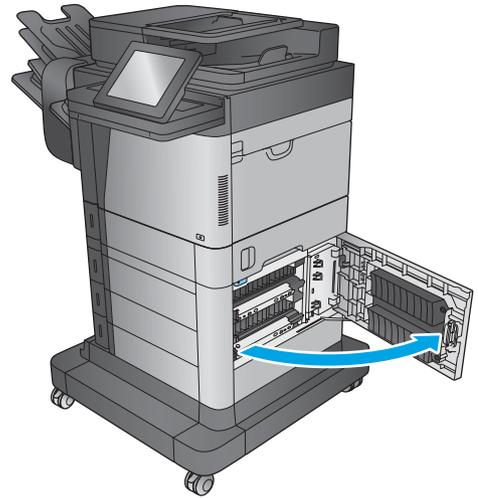
3. Close the right door.



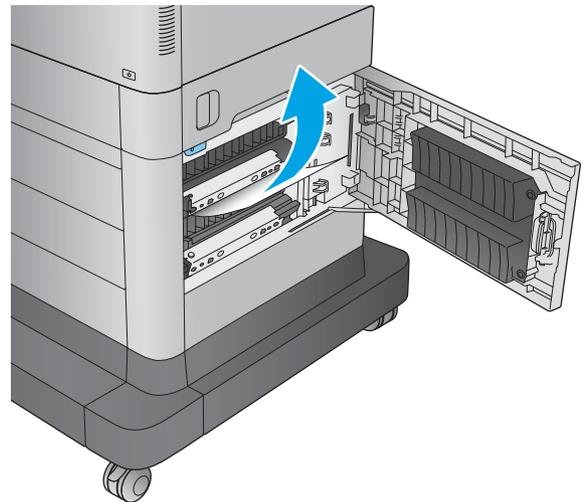
Clear jams in the lower-right door

The following information describes how to clear a paper jam in the lower-right door. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

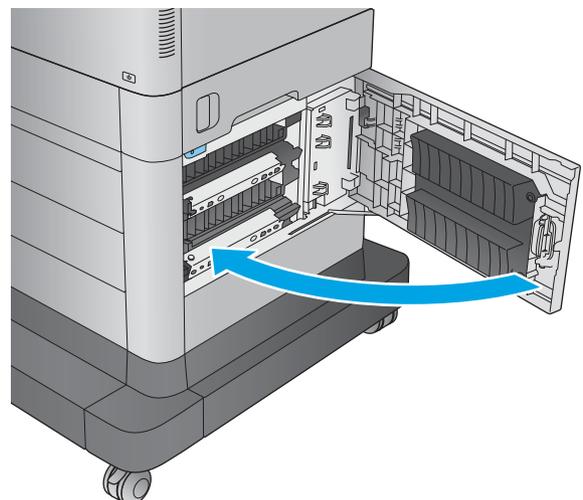
1. Open the lower-right door.



2. Remove any jammed paper.



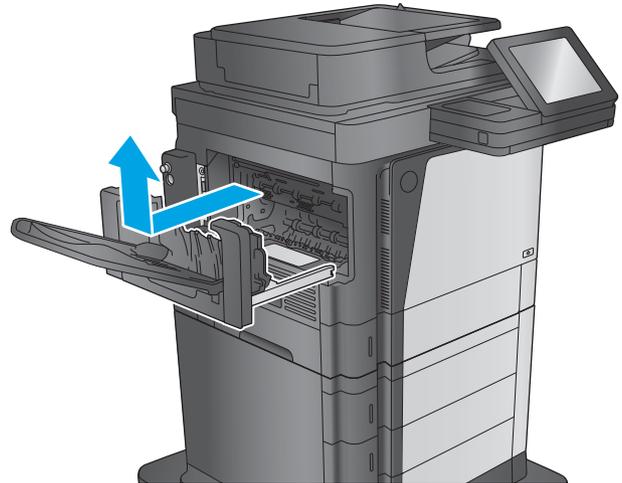
3. Close the lower-right door.



Clear jams in the duplexer and fuser

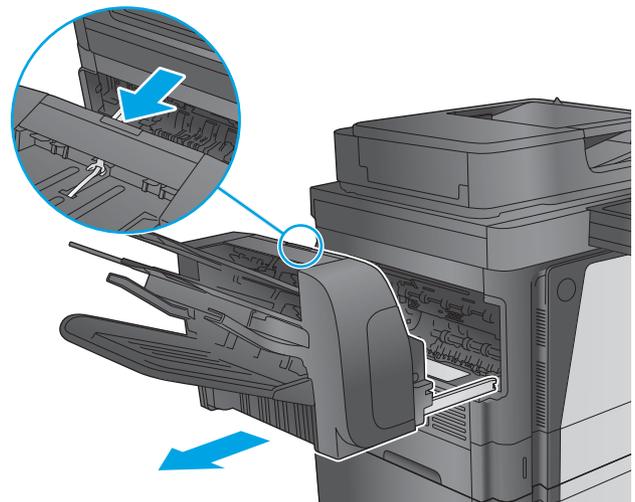
The following information describes how to clear a paper jam in the duplexer or fuser area. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

1. **M630dn and M630f:** Pull the output bin and bezel straight out, and then lift up to remove them.

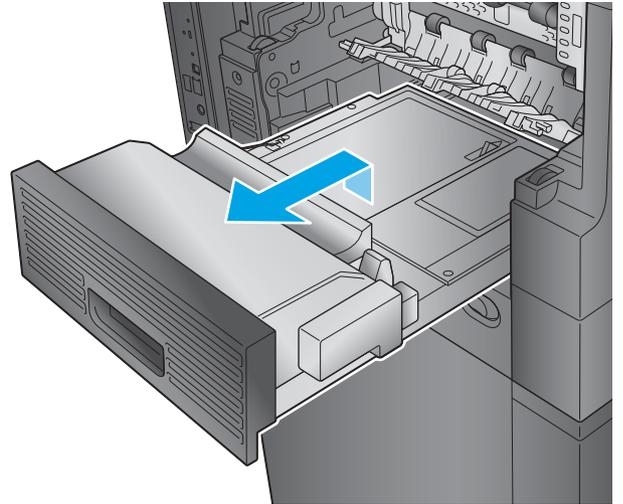


2. **M630z (or other models if the stapling mailbox is installed):** Press the button to release the stapling mailbox, and remove it from the product.

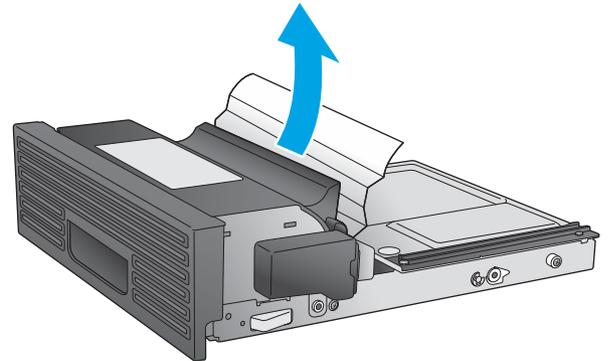
CAUTION: Do *not* disconnect the connector. The cord is long enough to set the stapling mailbox on the floor. If the connector is disconnected, reconnect it and restart the product after clearing the jam so the product recognizes the accessory.



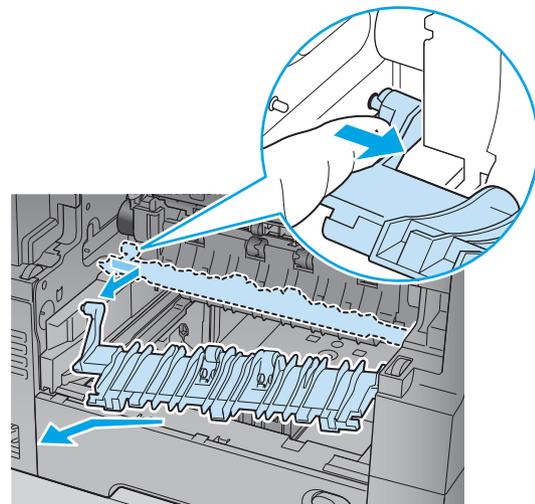
3. Slide the duplexer away from the product to remove it.



4. If paper is jammed in the duplexer, carefully remove the paper.

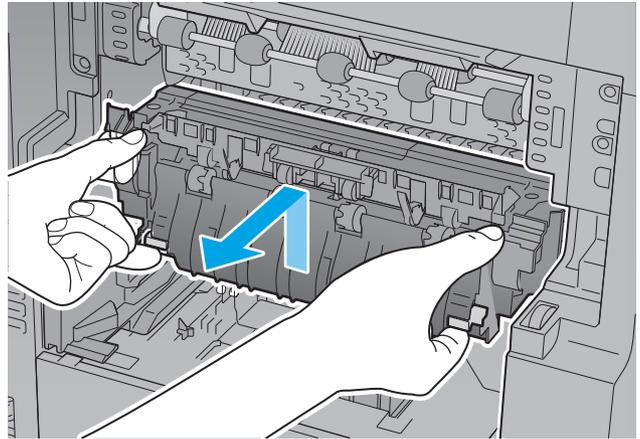


5. Carefully flex the left-hand side of the fuser-entrance guide to release it, and then rotate the guide out and away from the product to remove it.

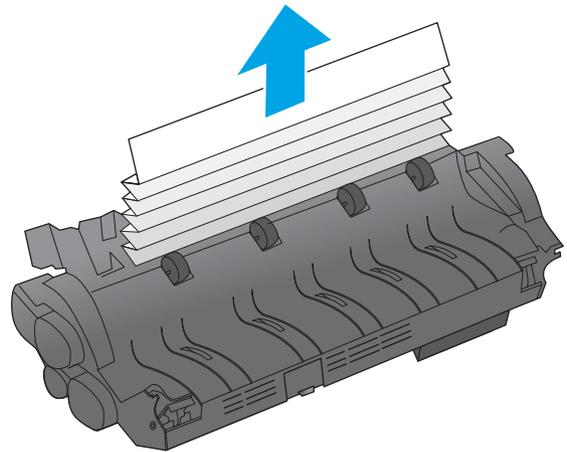


6. Squeeze the two blue tabs on the fuser to release it, slightly lift it up and then pull the fuser straight out of the product to remove it.

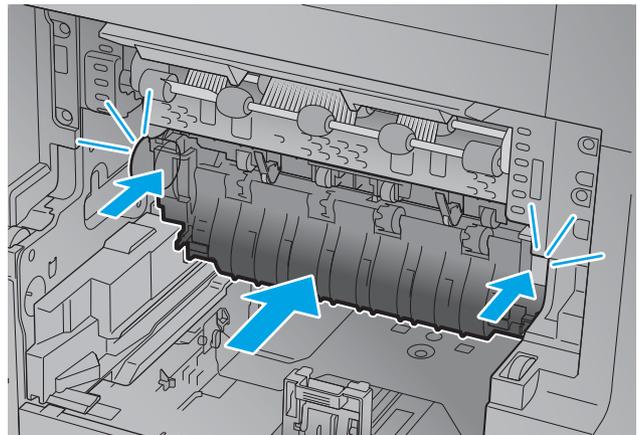
CAUTION: The fuser can be hot while the product is in use.



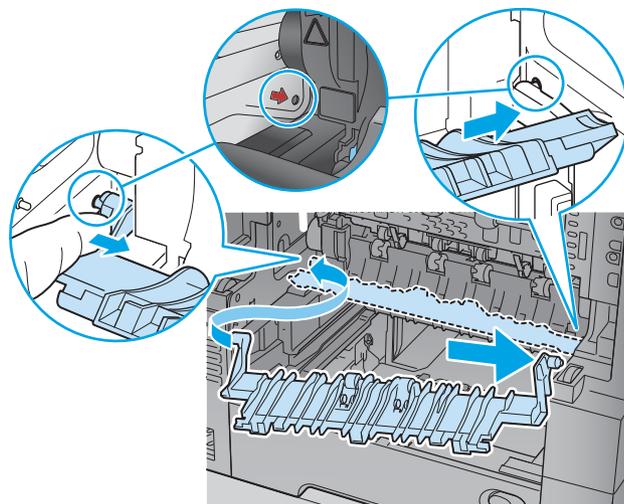
7. Clear the jam by carefully pulling the paper straight out.



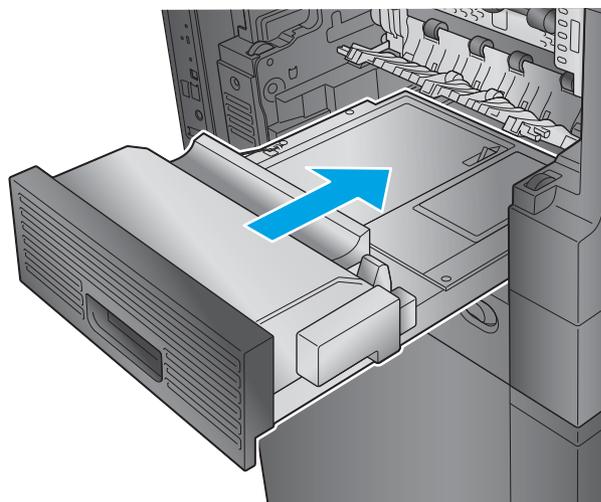
8. Push the fuser straight into the product until it snaps into place.



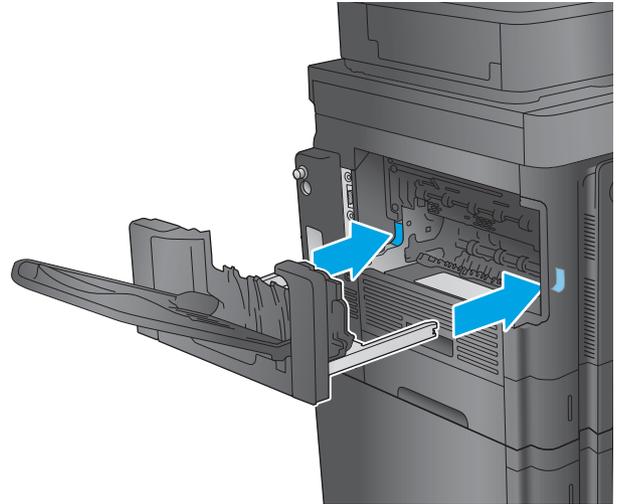
9. Insert the right-hand side of the fuser-entrance guide into the product, carefully flex the left-hand side of the guide, and then push it back into the product until the pins on the guide snap into the holes on the product chassis.



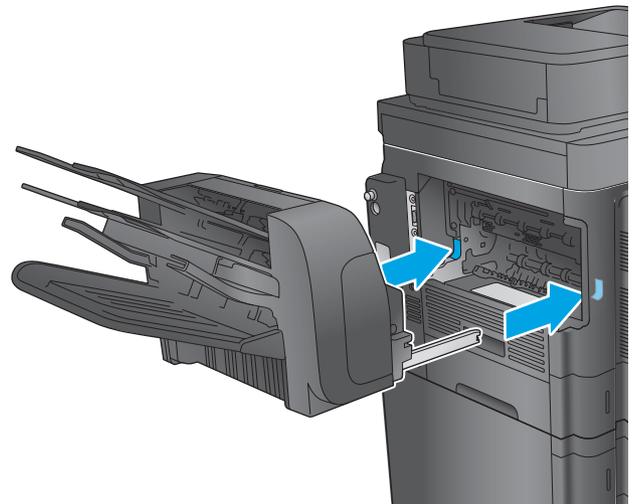
10. Slide the duplexer into the product to install it.



11. **M630dn and M630f:** Install the output bin and bezel.



12. **M630z (and other models if the stapling mailbox is installed):** Align the stapling mailbox with the tracks in the product, and slide it into the product.



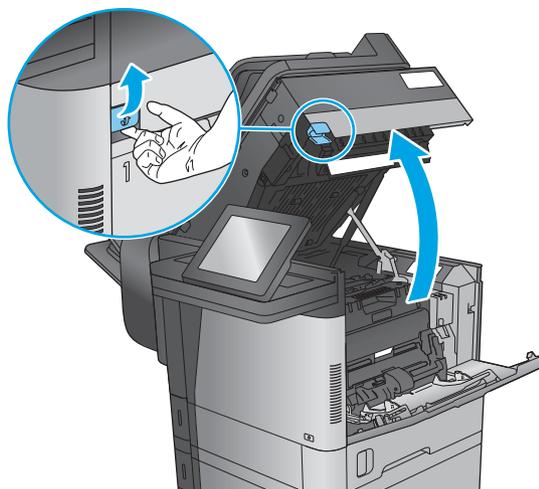
Clear jams under the top cover and in the registration area

The following information describes how to clear a paper jam under the top cover. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

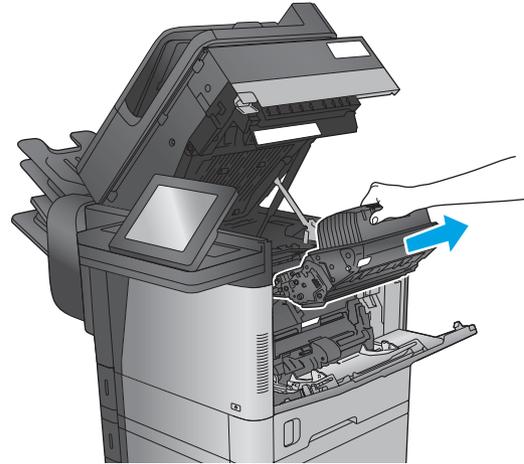
1. Open Tray 1 and remove the the envelope-feeder cover (or remove the optional envelope feeder, if it is installed).



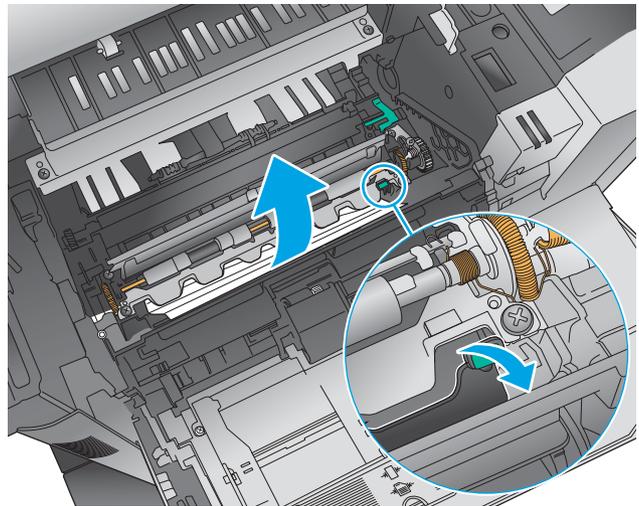
2. Lift the top-cover-release latch and open the top cover.



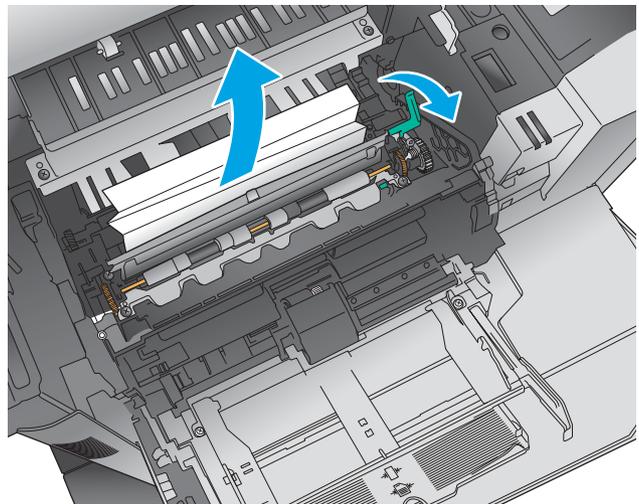
3. Remove the toner cartridge.



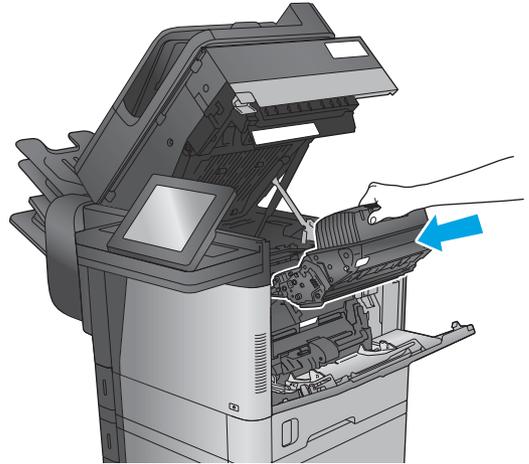
4. At the front of the registration roller, lift the small green tab to raise the plastic roller shield, and then pull any jammed paper straight out.



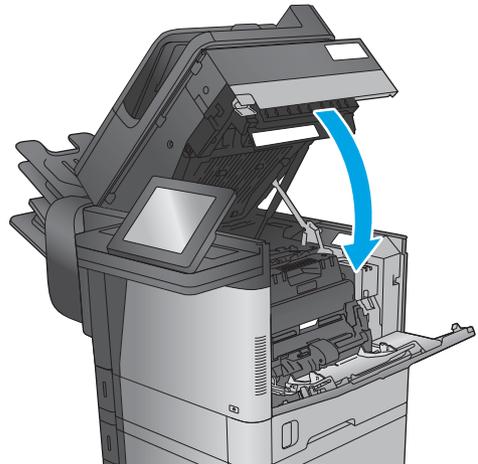
5. At the back of the roller, use the longer green tab to raise the metal shield, and then pull any jammed paper straight out.



6. Install the toner cartridge.



7. Close the top cover.



8. Insert the envelope-feeder cover.



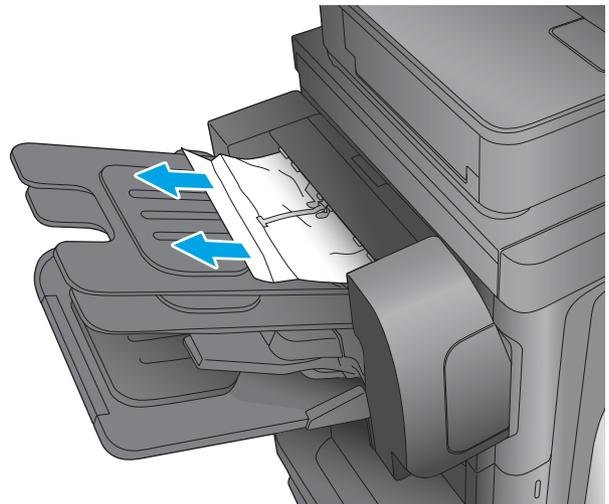
Clear jams in the output bin

The following information describes how to clear a paper jam in the output bin. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

1. **M630dn and M630f:** If paper is visible in the output bin, grasp the leading edge and remove it.



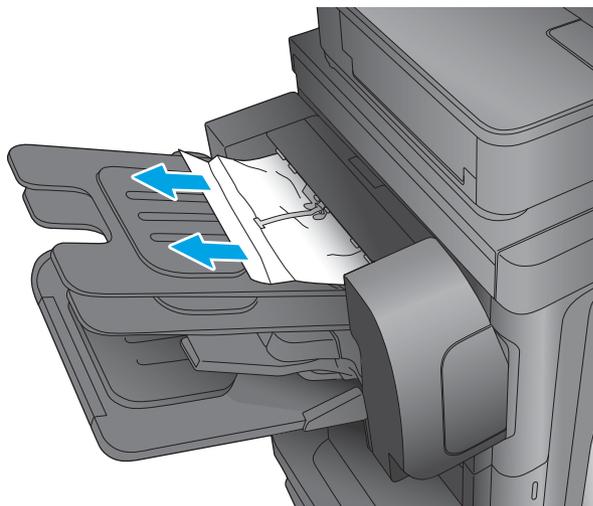
2. **M630z:** Remove any jammed paper from the mailbox bins.



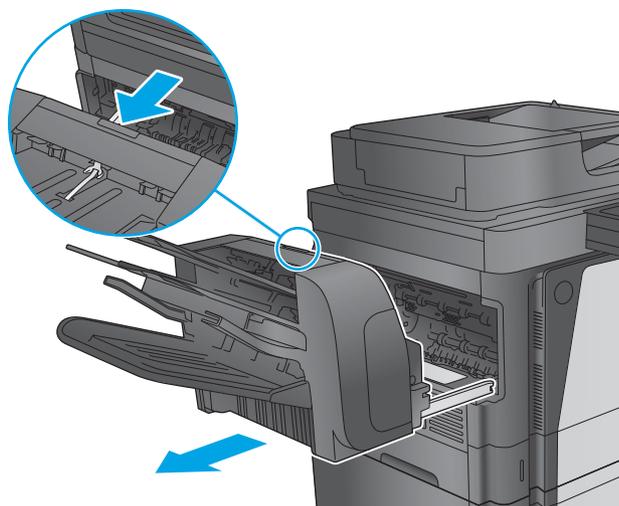
Clear jams in the stapling mailbox accessory

The following information describes how to clear a paper jam in the stapling mailbox accessory. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

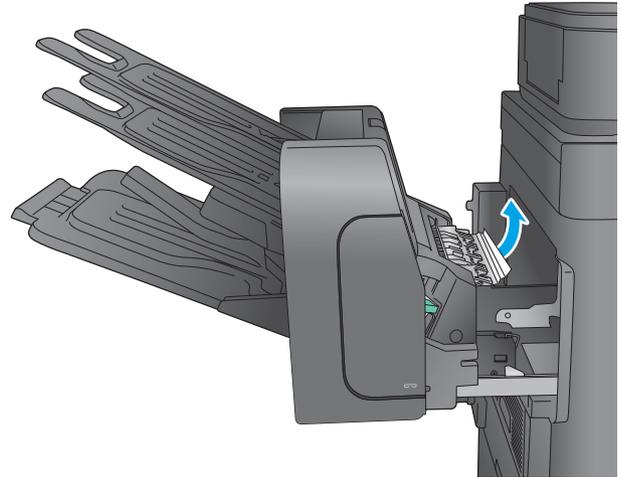
1. Remove any jammed paper from the mailbox bins.



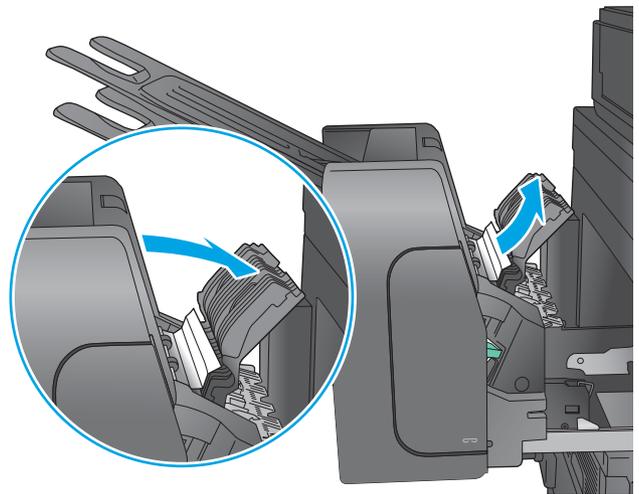
2. Press the button to release the stapling mailbox, and slide it away from the product.



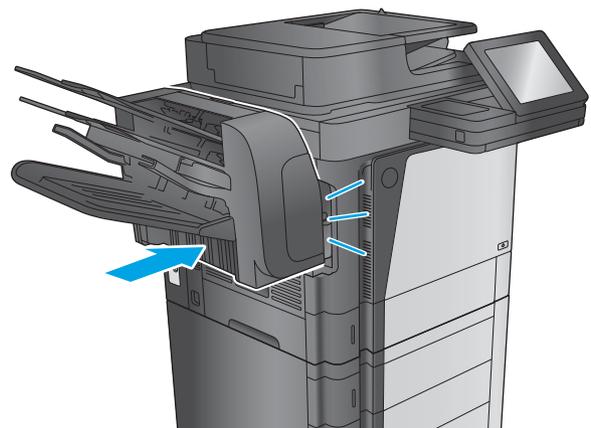
3. If jammed paper is visible underneath the paper guide, pull it straight out.



4. Open the jam-access door. If jammed paper is visible inside the jam-access door, pull it straight up to remove it.



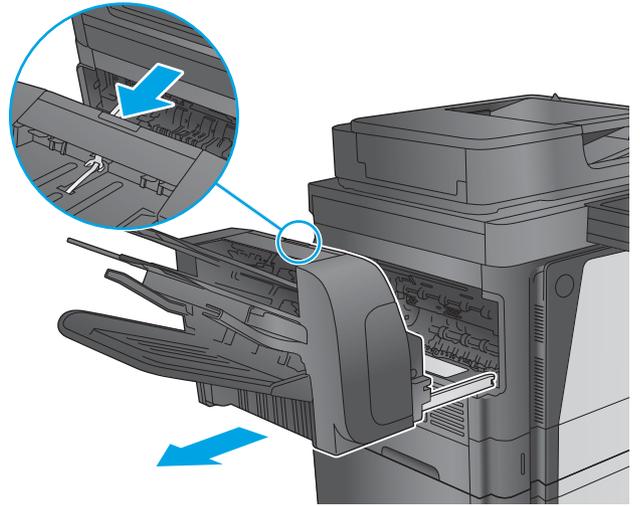
5. Attach the stapling mailbox.



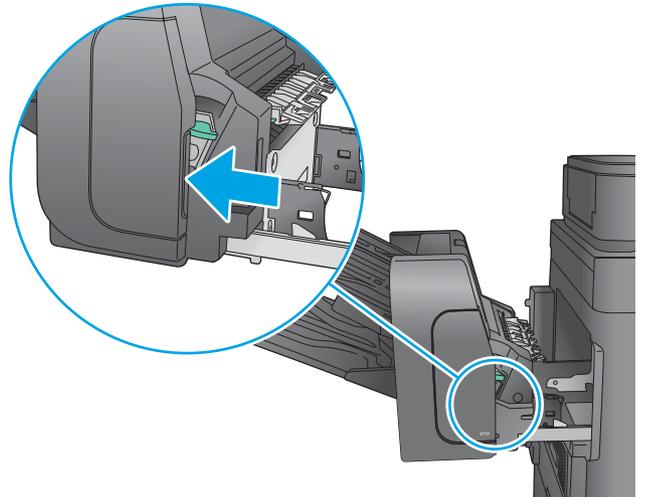
Clear staple jams in the stapling mailbox accessory

The following information describes how to clear a staple jam in the stapling mailbox accessory. When a jam occurs, the control panel displays an animation that assists in clearing the jam.

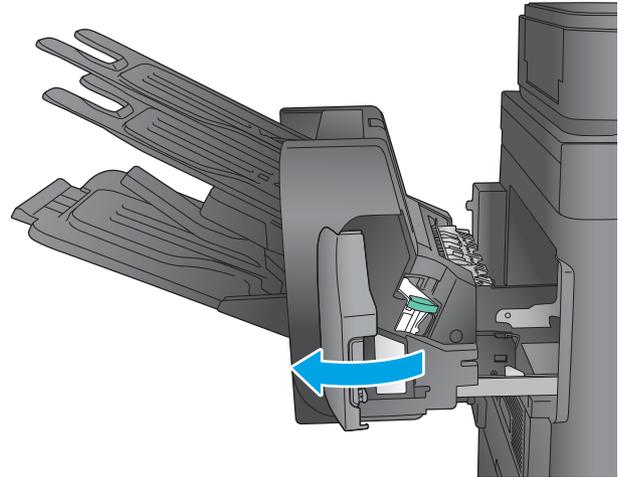
1. Press the button to release the stapling mailbox, and slide it away from the product.



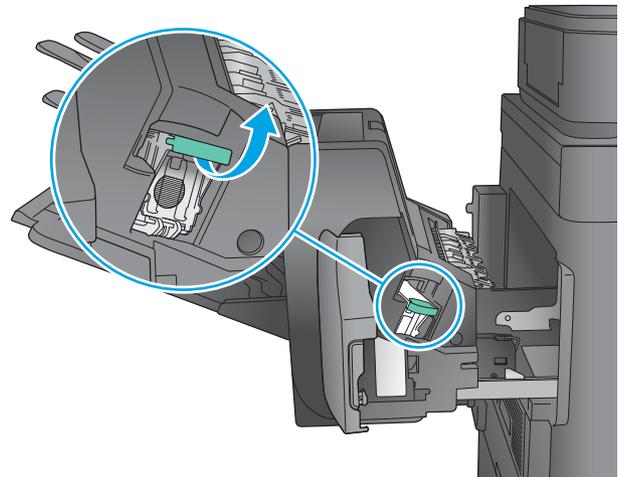
2. Press the latch to release the stapler door.



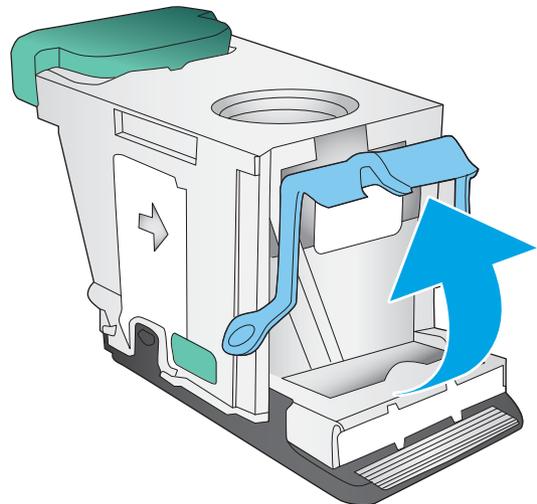
3. Open the stapler door.



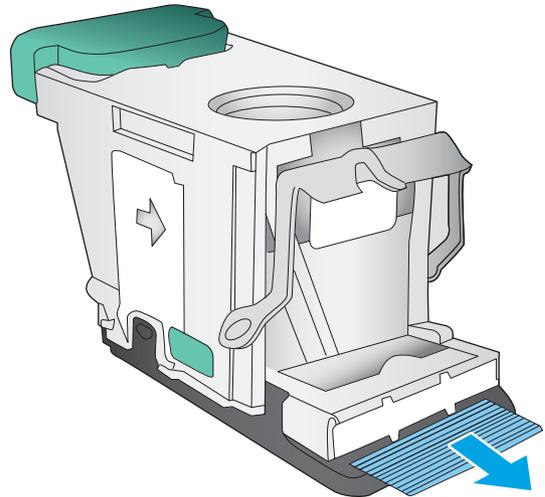
4. Lift the green tab on the staple cartridge up, and then pull the staple cartridge straight out.



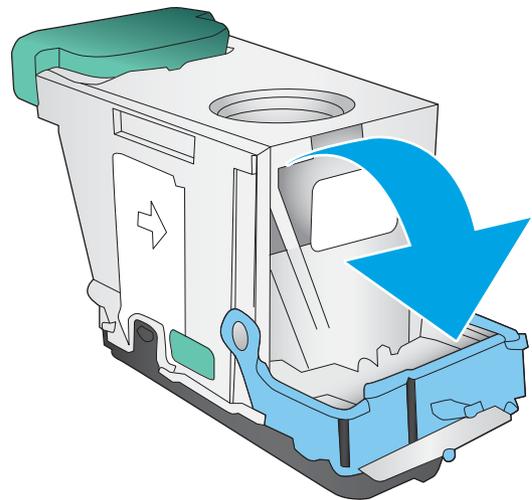
5. Lift up on the small lever at the back of the staple cartridge.



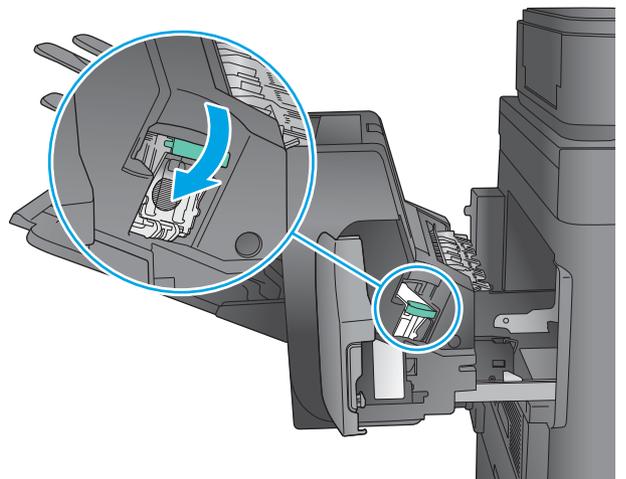
6. Remove the jammed staples.



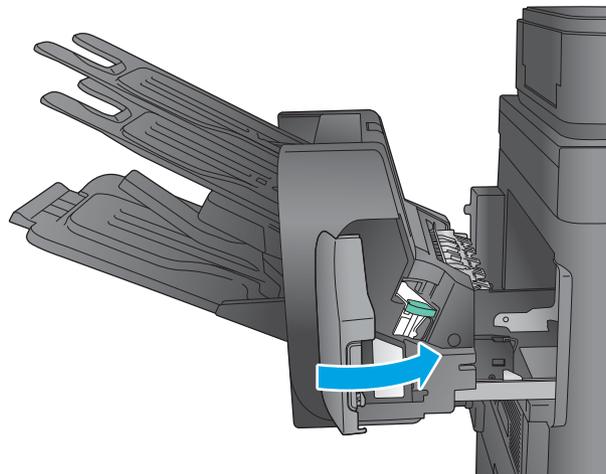
7. Close the lever at the back of the staple cartridge. Be sure that it snaps into place.



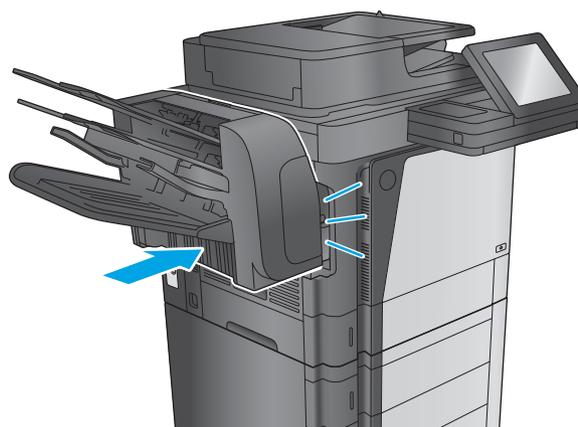
8. Insert the staple cartridge into the stapler and push down on the green handle until it snaps into place.



9. Close the stapler door.



10. Slide the stapling mailbox toward the product until it latches in place.



Change jam recovery

This product provides a jam recovery feature that reprints jammed pages.

1. From the Home screen on the product control panel, scroll to and touch the [Administration](#) button.
 2. Open the [General Settings](#) menu, and then open the [Jam Recovery](#) menu.
 3. Select one of the following options:
 - [Auto](#) — The product attempts to reprint jammed pages when sufficient memory is available. This is the default setting.
 - [Off](#) — The product does not attempt to reprint jammed pages. Because no memory is used to store the most recent pages, performance is optimal.
-
-  **NOTE:** Some pages can be lost if the product runs out of paper while printing a duplex job with Jam Recovery set to [Off](#).
-
- [On](#) — The product always reprints jammed pages. Additional memory is allocated to store the last few pages printed.

Paper feeds incorrectly or becomes jammed

- [The product does not pick up paper](#)
- [The product picks up multiple sheets of paper](#)
- [The document feeder jams, skews, or picks up multiple sheets of paper](#)
- [Prevent paper jams](#)

The product does not pick up paper

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



NOTE: Tray 1 and Tray 2 are optimal for paper pickup when using special paper or media other than 20lb plain paper. For Tray 1 and Tray 2 the product increases the number of attempts to pickup a page, which increases the reliability of successfully picking the page from the tray and decreases the possibility of a mis-pick jam.

HP recommends using Tray 1 or Tray 2 if the product is experiencing excessive or reoccurring jams from trays other than Tray 1 and Tray 2, or for print jobs that require media other than 20lb plain paper.

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

The product picks up multiple sheets of paper

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

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

The document feeder jams, skews, or picks up multiple sheets of paper

- The original might have something on it, such as staples or self-adhesive notes, that must be removed.
- Check that all rollers are in place and that the roller-access cover inside the document feeder is closed.
- Make sure that the top document-feeder cover is closed.
- The pages might not be placed correctly. Straighten the pages and adjust the paper guides to center the stack.
- The paper guides must be touching the sides of the paper stack to work correctly. Make sure that the paper stack is straight and the guides are against the paper stack.
- The document feeder input tray or output bin might contain more than the maximum number of pages. Make sure the paper stack fits below the guides in the input tray, and remove pages from the output bin.
- Verify that there are no pieces of paper, staples, paper clips, or other debris in the paper path.
- Clean the document-feeder rollers and the separation pad. Use compressed air or a clean, lint-free cloth moistened with warm water. If misfeeds still occur, replace the rollers.
- From the Home screen on the product control panel, scroll to and touch the [Supplies](#) button. Check the status of the document-feeder kit, and replace it if necessary.

Prevent paper jams

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

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

Use manual print modes

Try the following manual print modes to see if they solve the image-quality problems.



NOTE: Tray 1 and Tray 2 are optimal for paper pickup when using special paper or media other than 20lb plain paper. For Tray 1 and Tray 2 the product increases the number of attempts to pickup a page, which increases the reliability of successfully picking the page from the tray and decreases the possibility of a mis-pick jam.

HP recommends using Tray 1 or Tray 2 if the product is experiencing excessive or reoccurring jams from trays other than Tray 1 and Tray 2, or for print jobs that require media other than 20lb plain paper.

Select a manual print mode

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [General Settings](#)
 - [Print Quality](#)
 - [Adjust Paper Types](#) or [Optimize](#)
3. Select a paper type, and then select the mode to adjust.
4. Select a value for the mode, and then touch the [Save](#) button.

Table 2-63 Print modes¹ under the Adjust Paper Types submenu

Print Mode	<ul style="list-style-type: none">• Plain• HP EcoSMART Lite²• Light• Bond• Recycled• Heavy 111-130g• Extra Heavy 131-175g• Cardstock• Transparency• Labels• Letter Head• Envelope• Heavy Envelope• Preprinted• Prepunched• Colored• Rough• Heavy Rough• UserType1 to N³• Restore Modes
------------	---

¹ Not all print modes are available for all paper types.

² Only available in resistance, humidity, and paper curl modes (not available in print mode).

³ User types are not shown in the menu until they are enabled by using the HP Embedded Web Server or Web JetAdmin.

Table 2-64 Print modes under the Optimize submenu

Resistance Mode	Use this mode when the product is installed in low humidity environment and image defects result when using high-resistivity paper.
High Humidity Mode	Use this mode when the product is installed in a high humidity environment and lower density images occur.
Curl Mode	Use this mode when the media curls and jams in the toner cartridge. Typically, this occurs when light weight short grain media is used.
Low Speed Mode	Use this item when smears and/or spots—image defect mottle—appear on the printed page.
Quiet Mode	Use this item if the product is producing too much noise.

Table 2-64 Print modes under the **Optimize** submenu (continued)

Line Detail	Use this item when a toner explosion image defect occurs. The default setting is Normal . Use the Alternate setting if the defect occurs because of poor quality paper, or the product is installed in a high humidity environment.
Restore Optimize	Use Restore Optimize to reset the menu defaults.

Solve image quality problems

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

Image defects table

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

Table 2-65 Image defects table

Problem	Sample	Cause	Solution
Print is light or faded on entire page.		Poor contact exists between the transfer roller and its shaft.	Clean the contact. If the problem remains after cleaning, check the contact for damage. Replace any deformed or damaged parts.
Image is too dark.		Poor contact exists in the primary charging bias or developing bias contacts between the toner cartridge and the product.	Clean each toner cartridge contact. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts. Replace the toner cartridge.
Page is blank.		<p>Poor developing bias contact exists with the cartridge.</p> <p>The laser shutter open-close projection part of the cartridge is damaged.</p> <p>The laser shutter arm and the laser shutter are malfunctioning or damaged.</p> <p>The laser/scanner is defective.</p>	<p>Clean the contact. If the problem remains after cleaning, check the contact for damage. Replace any deformed or damaged parts.</p> <p>Replace the toner cartridge.</p> <p>If the laser shutter arm or the laser shutter does not move smoothly or if any part is damaged, replace any defective part.</p> <p>Replace the laser/scanner.</p>

Table 2-65 Image defects table (continued)

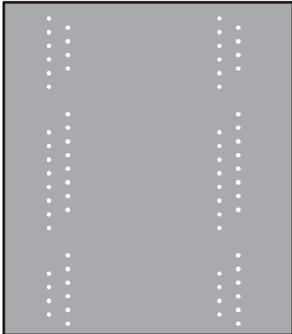
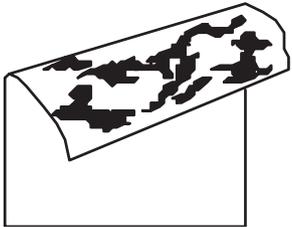
Problem	Sample	Cause	Solution
The page all black.		Poor contact exists in the primary charging bias or developing bias contacts between the toner cartridge and the product.	Clean each contact. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts. Replace the toner cartridge.
		The primary charging roller is defective.	Replace the toner cartridge.
White spots appear in an image		Poor contact exists in the static charge eliminator.	Clean the contact.
		The transfer roller is deformed or has deteriorated.	Replace the transfer roller.
		Poor contact exists between the transfer roller and its shaft.	Clean the contact.
The back of the page is dirty.		The paper is dirty.	Use clean paper that meets HP specifications and that has been stored properly.
		Dirt on the leading edge of the page might signify that dirt exists on the cassette pickup roller.	Clean the cassette pickup roller. If the dirt does not come off, replace the roller.
		Repetitive defects might indicate that dirt exists on the cassette feed roller, feed roller, Tray1 separation roller, pre-registration roller, transfer roller, or pressure roller.	Use the repetitive defects ruler to identify the dirty roller and then clean it. If the dirt does not come off, replace the roller.
		The feed belt, feed guide, or fuser inlet guide is dirty.	Clean the dirty part.

Table 2-65 Image defects table (continued)

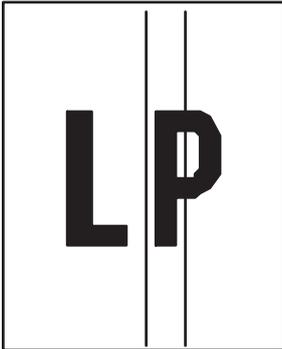
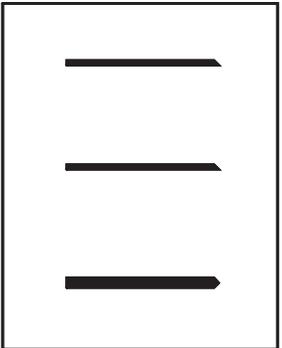
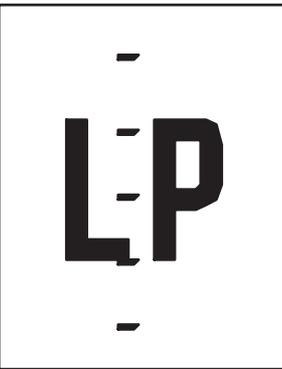
Problem	Sample	Cause	Solution
Vertical streaks or bands appear on the page.		Scratches are present on the circumference of the photosensitive drum.	Replace the toner cartridge.
		The fuser inlet guide is dirty.	Clean the fuser inlet guide.
Horizontal lines or bands appear on the page.		Horizontal scratches on the photosensitive drum.	Replace the toner cartridge.
		The fuser sleeve is dirty, deformed or worn.	Replace the fuser.
The front of the page is dirty.		Dirt on leading edge of image (MP tray pickup roller).	Clean the MP tray pickup roller. If the dirt does not come off, replace the roller.
		Repetitive dirt (cassette separation roller, feed roller, MP tray feed roller, pre-registration roller, fuser sleeve or cartridge).	Use the repetitive defects ruler to identify the dirty roller. Clean the dirty part. If the dirt does not come off, replace the corresponding part.
		The delivery roller is dirty.	Clean the delivery roller.

Table 2-65 Image defects table (continued)

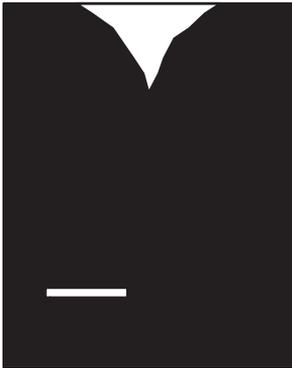
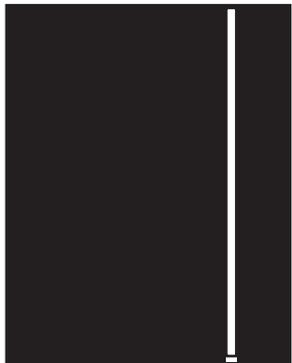
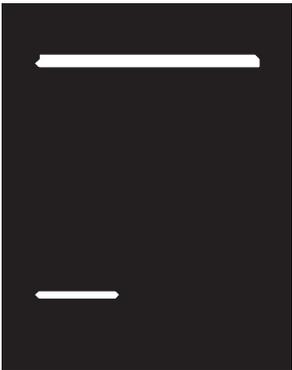
Problem	Sample	Cause	Solution
Dropouts appear.		The transfer roller is dirty, deformed or has deteriorated.	Replace the transfer roller.
		Poor toner sensor contact exists with the cartridge.	Clean the contact.
		The photosensitive drum, primary charging roller, developing roller or toner sensor is defective.	Replace the toner cartridge.
		Scratches or foreign substance on the fuser sleeve.	Replace the fuser.
Vertical white lines appear in a particular color.		Scratches exist on the circumference of the photosensitive drum.	Replace the toner cartridge.
		The developing roller is defective.	
		Dirt is adhering to the laser beam window.	Clean the laser beam window.
		Foreign substance adheres to the fuser inlet guide or the guide is dirty.	Clean the fuser inlet guide.
		Scratches or foreign substance on the fuser sleeve.	Replace the fuser.
A horizontal white line appears on the page.		Horizontal scratches are present on the photosensitive drum.	Replace the toner cartridge.
		The fuser sleeve is defective.	Replace the fuser.

Table 2-65 Image defects table (continued)

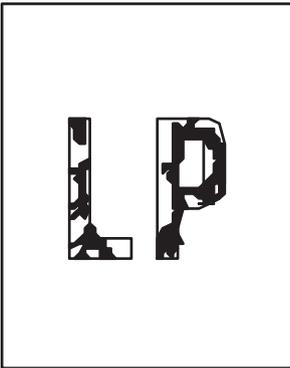
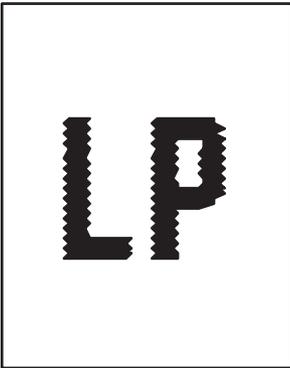
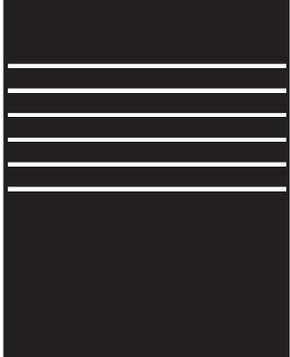
Problem	Sample	Cause	Solution
The toner is not fully fused to the paper.		<p>The pressure roller is dirty.</p> <hr/> <p>The fuser roller or pressure roller is scarred or deformed.</p>	<p>Perform the pressure roller cleaning procedure. If the dirt does not come off, replace the pressure roller.</p> <hr/> <p>Replace the fuser.</p>
The printed page contains misformed characters.		<p>A poor connection exists on the laser/scanner assembly.</p> <hr/> <p>A poor connection exists on the DC controller PCA.</p> <hr/> <p>The laser/scanner unit is defective.</p>	<p>Reconnect the following laser/scanner assembly connectors: J143, J144, and J145.</p> <hr/> <p>Reconnect the following DC controller PCA connectors: J86 and J93.</p> <hr/> <p>Replace the laser/scanner.</p>
The printed page contains wrinkles or creases.		<p>The roller or paper feed guide is dirty.</p> <hr/> <p>A feed roller is deformed or has deteriorated.</p> <hr/> <p>The paper feed guide is damaged.</p>	<p>Clean any dirty components.</p> <hr/> <p>Replace any deformed or deteriorated rollers.</p> <hr/> <p>Replace the paper-feed-guide unit.</p>
Repetitive horizontal lines		<p>A roller is dirty.</p>	<p>See repetitive image defect ruler. Clean the indicated roller. If the contaminate does not come off, replace the appropriate roller or assembly.</p>

Table 2-65 Image defects table (continued)

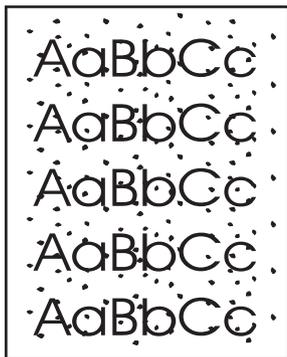
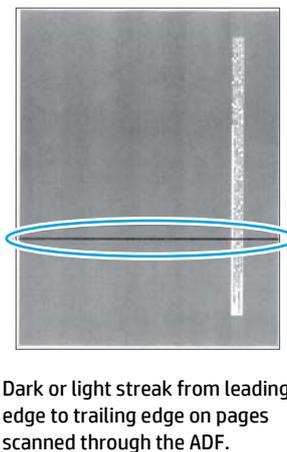
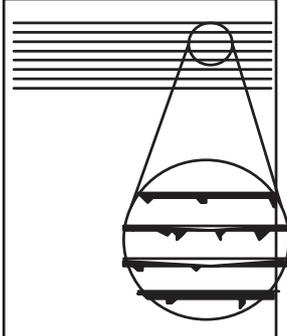
Problem	Sample	Cause	Solution
Pages have flecks of toner		Residual toner exists in the paper path.	<p>Execute a cleaning page to clean the contaminants off the fuser. The cleaning page might need to be run several time to clean the fuser. Do not replace the fuser.</p> <p>NOTE: Cleaning the fuser with HP Tough Paper provides better results than with plain paper. You might need to execute the cleaning process several times to remove all contaminants on the fuser.</p>
Pages have flecks of toner down the right side		The fuser is dirty.	Clean the fuser. If the error persists, replace the fuser.
Streaks on document feeder scans	 <p>Dark or light streak from leading edge to trailing edge on pages scanned through the ADF.</p>	The ADF glass (small glass to the left of the flatbed glass) is contaminated.	<p>Clean the glass with a water dampened lint-free cloth.</p> <p>TIP: Align a printed page with the streak on it with the glass, to help find the location of the contamination.</p>
Toner smears appear on the paper.		<p>The product has residual paper.</p> <p>The fuser inlet guide is dirty.</p>	<p>Remove the residual paper.</p> <p>Clean the fuser inlet guide.</p>

Table 2-65 Image defects table (continued)

Problem	Sample	Cause	Solution
Text or graphics are skewed on the printed page when the document feeder is used for the print job.	 <p>TIP: Make sure that the original image is not skewed.</p>	<p>The document feeder guides are not set correctly, pressed against the original.</p> <p>The scanner needs to be calibrated.</p>	<p>Make sure that the side guides are correctly set against the page.</p> <p>If the error persists and the defect is isolated to the document feeder, replace the document feeder.</p> <ol style="list-style-type: none"> From the Home screen on the control panel, scroll to and touch the Device Maintenance button. Open the following menus: <ul style="list-style-type: none"> Calibration/Cleaning Calibrate Scanner Touch the Next button to start the calibration process. Follow the on-screen prompts. Wait while the product calibrates the scanner. If the error persists and the defect is isolated to the scanner, replace the scanner.
Text or graphics are skewed on the printed page.		<p>The registration shutter spring is unhooked.</p> <p>The registration shutter spring is deformed.</p>	<p>Check the spring and place it in the correct position.</p> <p>Replace the transfer assembly.</p>

Table 2-65 Image defects table (continued)

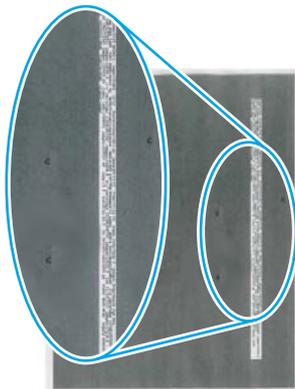
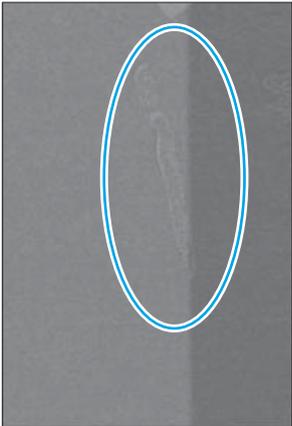
Problem	Sample	Cause	Solution
Spots on a document feeder or flatbed scan.		The document feeder glass or flatbed glass is contaminated.	Clean the document feeder glass or flatbed glass with a water dampened lint-free cloth.
Missing trailing edge of ADF scans.		<p>The image in the print job is skewed.</p> <p>The copy image might be getting stopped early due to static interfering with the ADF paper path deskew sensor in the ADF.</p> <p>TIP: The page does not jam, but is skewed when printed.</p>	<p>Make sure that the image is properly placed on the page before the job is copied.</p> <p>Replace the document feeder.</p>

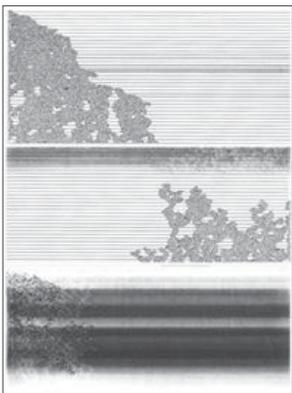
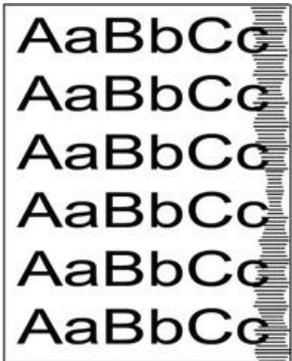
Table 2-65 Image defects table (continued)

Problem	Sample	Cause	Solution
Smeared toner or water-like marks.		<p>Printing in a high temperature/ high humidity environment and/ or with paper which has been exposed to a high temperature/ high humidity environment.</p> <p>Paper acclimated to this type of environment has a high moisture content, which can cause the paper to curl as it enters the fuser.</p>	<p>Replace the paper with a unopened package of paper that is acclimated to the environment where the product is operating.</p> <p>Printing the job using different paper (75 g/m2 or heavier).</p> <p>If the error persists, the product might need to be moved to an area of lower temperature/humidity.</p>
Shifted or cut-off scans.		<p>The document feeder guides are not set correctly, pressed against the original.</p> <p>The scanner needs to be calibrated.</p>	<p>Make sure that the side guides are correctly set against the page.</p> <p>If the error persists and the defect is isolated to the document feeder, replace the document feeder.</p> <ol style="list-style-type: none"> 1. From the Home screen on the control panel, scroll to and touch the Device Maintenance button. 2. Open the following menus: <ul style="list-style-type: none"> • Calibration/Cleaning • Calibrate Scanner 3. Touch the Next button to start the calibration process. Follow the on-screen prompts. 4. Wait while the product calibrates the scanner. 5. If the error persists and the defect is isolated to the scanner, replace the scanner.

Randomly-shaped smears that meander, but are mostly in the feed direction. The smears resemble a mark made by water droplets. They might be described as looking like a snail or slug mark on the page.

Images copied or scanned are shifted, in some case the shift might be enough for part of the image to be cut off. In this example, the image at the top of the page is missing.

Table 2-65 Image defects table (continued)

Problem	Sample	Cause	Solution
Bubble or cloud print.	 <p data-bbox="459 705 751 863">Customers might describe an image quality defect that resembles bubbles. This defect typically starts near the edges of the pages, but in severe cases it might cover most or all the page.</p>	Bubble print is most often related to poor grounding of the toner cartridge and is typically caused by damaged grounding contacts.	<ol style="list-style-type: none"> <li data-bbox="1094 285 1437 468">1. Inspect the grounding contacts inside the product. Look for damaged, loose, misaligned, contaminated, or obstructed contacts. Clean contaminated contacts. If possible, repair bent or mis aligned contacts. <li data-bbox="1094 495 1437 625">2. Verify that the grounding contacts or springs are properly positioned such that they make positive contact with the grounding point on the cartridge. <li data-bbox="1094 653 1437 783">3. Inspect the cartridge itself to make sure that the grounding points are not damaged, contaminated or obstructed. If damaged, replace the cartridge. <li data-bbox="1094 810 1437 888">4. If another cartridge is available, test the product using that cartridge. <li data-bbox="1094 915 1437 989">5. If the error persists, escalate the problem to the Global Business Unit.
Tire Tracks.		This defect typically occurs when the toner cartridge has far exceeded its rated life.	Replace the toner cartridge.

Clean the product

Over time, particles of toner and paper accumulate inside the product. This can cause print-quality problems during printing. Cleaning the product eliminates or reduces these problems.

Clean the paper path and toner-cartridge areas every time that the toner cartridge is changed or whenever print-quality problems occur. As much as possible, keep the product free from dust and debris.

To clean the product exterior, use a soft, water-moistened cloth.

Print a cleaning page

Print a cleaning page to remove dust and excess toner from the fuser if you are having any of the following problems:

- Specks of toner are on the printed pages.
- Toner is smearing on the printed pages.
- Repeated marks occur on the printed pages.

Use the following procedure to print a cleaning page.

1. From the Home screen on the product control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the following menus:
 - [Calibration/Cleaning](#)
 - [Cleaning Page](#)
3. Touch the [Print](#) button to print the page.
4. The cleaning process can take several minutes. When it is finished, discard the printed page.

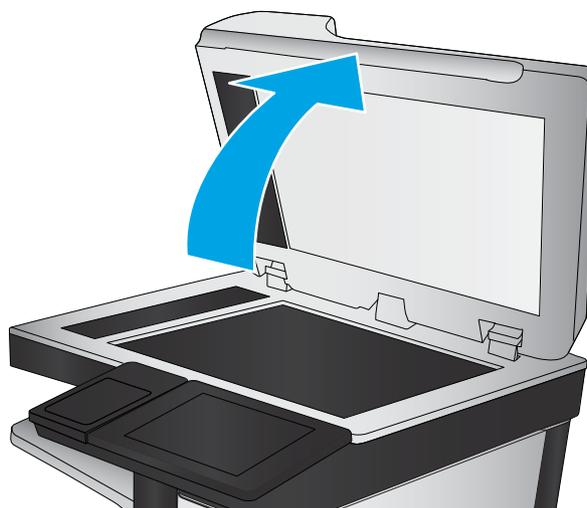
Check the scanner glass for dirt or smudges

Over time, specks of debris might collect on the scanner glass and white plastic backing which can affect performance. Use the following procedure to clean the scanner glass and white plastic backing.

1. Press the power button to turn off the product, and then disconnect the power cable from the electrical outlet.



2. Open the scanner lid. Align paper that has copy defects with the scanner glass to identify the locations of dirt or smudges.

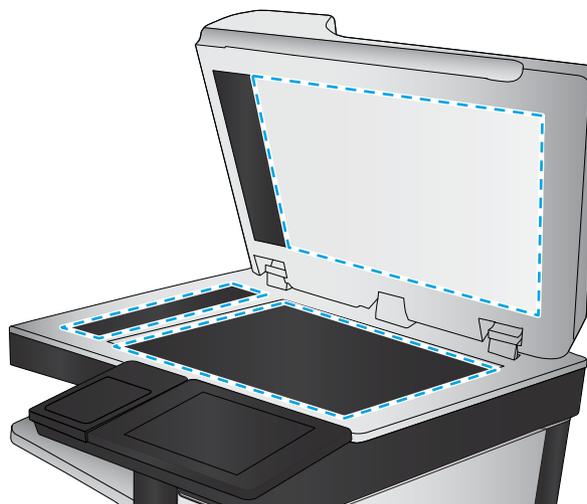


3. Clean the scanner glass, the document feeder strips, and the white plastic backing with a soft cloth or sponge that has been moistened with nonabrasive glass cleaner.

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

NOTE: If the product is experiencing streaks on copies when using the document feeder, be sure to clean the small strip of glass on the left side of the scanner.

TIP: See this English-language video for a demonstration of how to identify and clean debris that causes streaks on copies: www.youtube.com/watch?v=CGn7FJvH8sE.

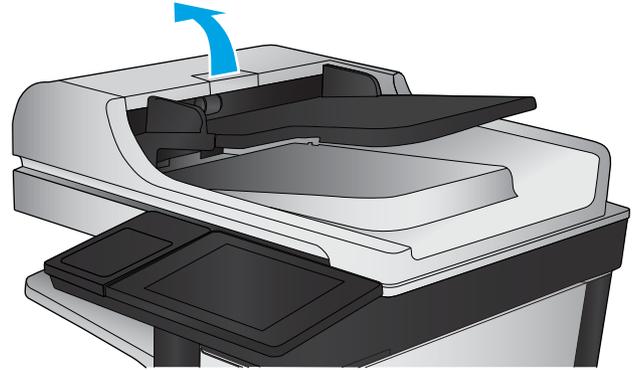


4. Dry the glass and white plastic parts with a chamois or a cellulose sponge to prevent spotting.
5. Connect the power cable to an outlet, and then press the power button to turn the product on.

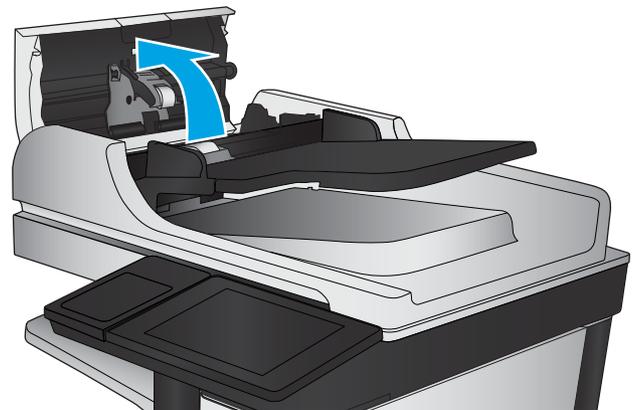


Clean the pickup rollers and separation pad in the document feeder

1. Lift the document-feeder latch.

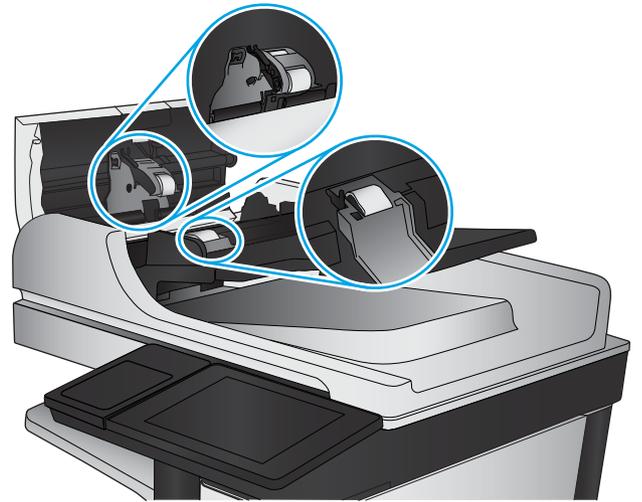


2. Open the document-feeder cover.



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

NOTE: Lift up the roller assembly to access and clean the second roller.



4. Close the document-feeder cover.

If the error persists, install a document feeder roller kit (L2718A).

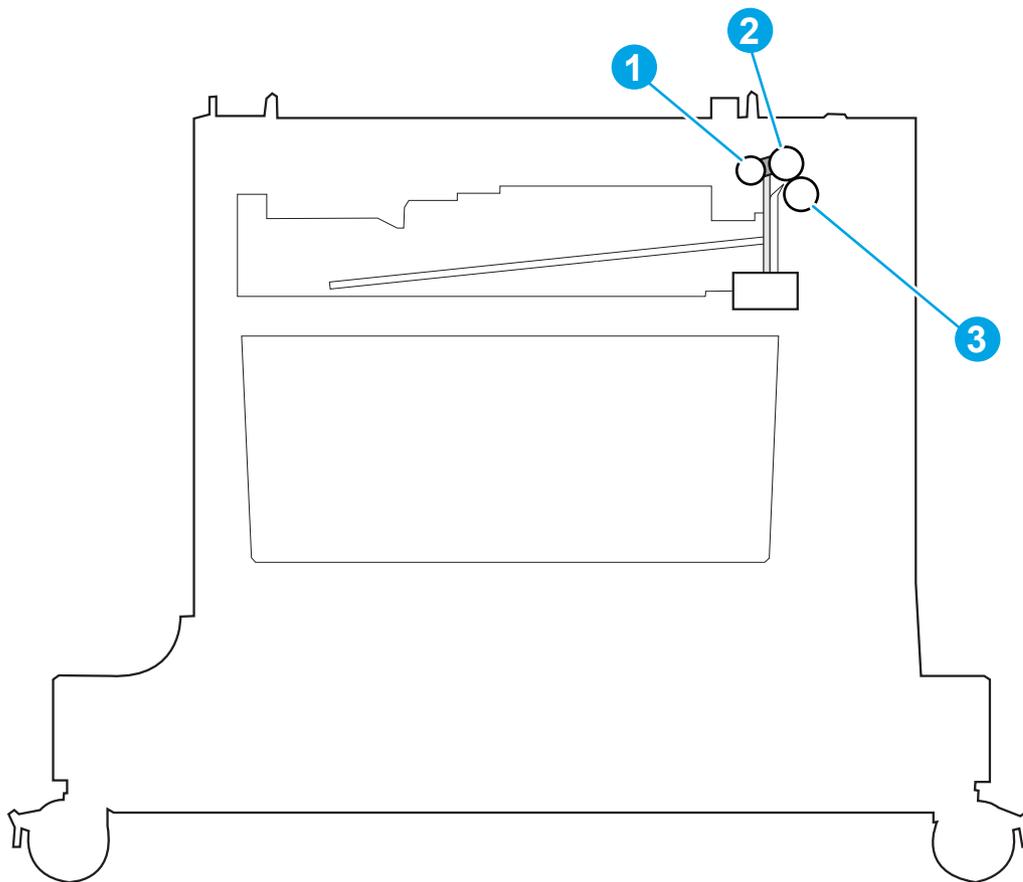
Clean the pickup, feed, and separation rollers in the 1x500-sheet paper-feeder and 1x500-sheet paper-feeder with storage cabinet

 **NOTE:** The 1x500-sheet paper-feeder with storage cabinet is shown below, however, the rollers are in the same location in the 1x500-sheet paper-feeder.

Remove the tray and locate the rollers in the feeder.

- Pickup roller (callout 1)
- Feed roller (callout 2)
- Separation roller (callout 3)

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



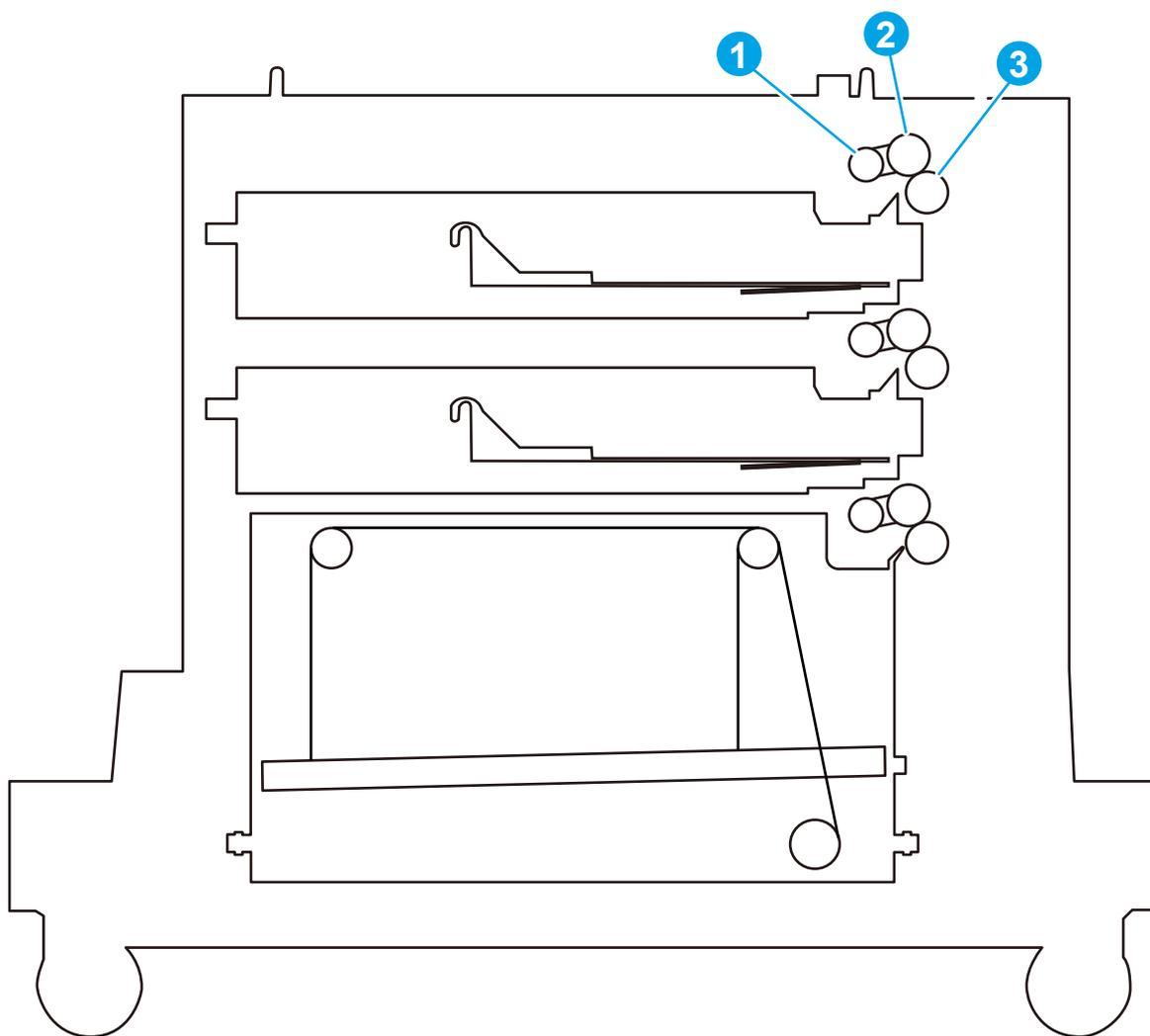
Clean the pickup, feed, and separation rollers in the 2,500-sheet high-capacity feeder (HCI)

Remove the trays and locate the rollers in the feeder.

 **TIP:** There is one set of rollers for each tray.

- Pickup rollers (callout 1)
- Feed rollers (callout 2)
- Separation rollers (callout 3)

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



Solve performance problems

 **NOTE:** Tray 1 and Tray 2 are optimal for paper pickup when using special paper or media other than 20lb plain paper. For Tray 1 and Tray 2 the product increases the number of attempts to pickup a page, which increases the reliability of successfully picking the page from the tray and decreases the possibility of a mis-pick jam.

HP recommends using Tray 1 or Tray 2 if the product is experiencing excessive or reoccurring jams from trays other than Tray 1 and Tray 2, or for print jobs that require media other than 20lb plain paper.

Table 2-66 Solve performance problems

Problem	Cause	Solution
Pages print but are totally blank.	The document might contain blank pages.	Check the original document to see if content is present on all of the pages.
	The product might be malfunctioning.	To check the product, print a Configuration page.
Pages print very slowly.	Heavier paper types can slow the print job.	Print on a different type of paper.
	Complex pages can print slowly.	Proper fusing might require a slower print speed to ensure the best print quality.
	Large batches, narrow paper, and special paper such as gloss, transparency, cardstock, and HP Tough Paper can slow the print job.	Print in smaller batches, on a different type of paper, or on a different size of paper.
Pages did not print.	The product might not be pulling paper correctly.	Make sure paper is loaded in the tray correctly.
	The paper is jamming in the product.	Clear the jam.
	The USB cable might be defective or incorrectly connected.	<ul style="list-style-type: none"> • Disconnect the USB cable at both ends and reconnect it. • Try printing a job that has printed in the past. • Try using a different USB cable.
	Other devices are running on the host computer.	The product might not share a USB port. If an external hard drive or network switchbox is connected to the same port as the product, the other device might be interfering with the product. To connect and use the product, disconnect the other device or use two USB ports on the host computer.

Solve connectivity problems

Solve USB connection problems

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

- Verify that the cable is connected to the computer and to the product.
- Verify that the cable is not longer than 2 m (6.65 ft). Try using a shorter cable.
- Verify that the cable is working correctly by connecting it to another product. Replace the cable if necessary.

Solve wired network problems

Check the following items to verify that the product is communicating with the network. Before beginning, print a configuration page from the product control panel and locate the product IP address that is listed on this page.

- [Poor physical connection](#)
- [The computer is using the incorrect IP address for the product](#)
- [The computer is unable to communicate with the product](#)
- [The product is using incorrect link and duplex settings for the network](#)
- [New software programs might be causing compatibility problems](#)
- [The computer or workstation might be set up incorrectly](#)
- [The product is disabled, or other network settings are incorrect](#)



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

Poor physical connection

1. Verify that the product is attached to the correct network port using a cable of the correct length.
2. Verify that cable connections are secure.
3. Look at the network port connection on the back of the product, and verify that the amber activity light and the green link-status light are lit.
4. If the problem continues, try a different cable or port on the hub.

The computer is using the incorrect IP address for the product

1. Open the printer properties and click the **Ports** tab. Verify that the current IP address for the product is selected. The product IP address is listed on the product configuration page.
2. If you installed the product using the HP standard TCP/IP port, select the box labeled **Always print to this printer, even if its IP address changes**.

3. If you installed the product using a Microsoft standard TCP/IP port, use the hostname instead of the IP address.
4. If the IP address is correct, delete the product and then add it again.

The computer is unable to communicate with the product

1. Test network communication by pinging the network.
 - a. Open a command-line prompt on your computer. For Windows, click **Start**, click **Run**, type `cmd`, and then press **Enter**.
 - b. Type `ping` followed by the IP address for your product.

For Mac OS X, open the Network Utility, and then supply the IP address in the correct field in the **Ping** pane.
 - c. If the window displays round-trip times, the network is working.
2. If the ping command failed, verify that the network hubs are on, and then verify that the network settings, the product, and the computer are all configured for the same network.

The product is using incorrect link and duplex settings for the network

Hewlett-Packard recommends leaving these settings in automatic mode (the default setting). If you change these settings, you must also change them for your network.

New software programs might be causing compatibility problems

Verify that any new software programs are correctly installed and that they use the correct print driver.

The computer or workstation might be set up incorrectly

1. Check the network drivers, print drivers, and the network redirection settings.
2. Verify that the operating system is configured correctly.

The product is disabled, or other network settings are incorrect

1. Review the configuration page to check the status of the network protocol. Enable it if necessary.
2. Reconfigure the network settings if necessary.

Service mode functions

Service menu

The [Service](#) menu is PIN-protected for added security. Only authorized service people have access to the [Service](#) menu. When selecting [Service](#) from the list of menus, the product prompts the user to enter an eight-digit personal identification number (PIN).



NOTE: The product automatically exits the [Service](#) menu after about one minute if no items are selected or changed.

1. From the Home screen on the product control panel, scroll to and touch the [Device Maintenance](#) button.
2. Open the [Service](#) menu.
3. On the sign-in screen, select [Service Access Code](#) from the drop-down list.
4. Enter the following service access code for the product:
 - 09063014

The following menu items appear in the [Service](#) menu:

First level	Second level	Value	Description
Event Log	Print		Print or view the event log.
	View		
Clear Event Log			Use this item to clear the product event log.
Cycle Counts	Total Engine Cycles		Set the page count that was stored in NVRAM prior to installing a new formatter.
	Refurbish Cycle Count		Use this item to record the page count when the product was refurbished.
	Document Feeder Kit Count		Total number of pages since the document feeder kit was replaced.
	Document Feeder Kit Interval		Use this item to set the interval that causes the product to prompt the customer to replace document feeder maintenance kit.
	Clean Rollers Count		Total number of pages since the document feeder rollers were cleaned.

First level	Second level	Value	Description
	Clean Rollers Interval		Use this item to set the interval that causes the product to prompt the customer to clean the document feeder rollers and separation pad.
	ADF Count		Set the total pages fed through the document feeder.
	Flatbed Count		Set the total pages scanned from the flatbed.
	ADF Simplex Count		Set the total single-sided pages fed through the document feeder.
	ADF Duplex Count		Set the total two-sided pages fed through the document feeder.
	Copy Scan Count		Set the total copy pages that have been scanned.
	Send Scan Count		Set the number of scanned pages sent to email.
	Fax Scan Count		Set the number of scanned pages that have been faxed.
	NOTE: FAX models only.		
	Copy Pages Count		Set the number of scanned pages that have been printed.
Scanner Settings	ADF Settings	Leading edge front	Set the calibration values.
		Leading edge back	WARNING! Do not change these values unless instructed to do so.
		Trailing edge front	
		Trailing edge back	
		Left side front	
		Left side back	
	Glass Settings	Leading edge glass	
		Left Side Glass	
Serial Number			Set the serial number.

First level	Second level	Value	Description
Service ID			Use this item to show the date that the product was first used on the control panel. This eliminates the need for users to keep paper receipts for proof of warranty.
Cold Reset Paper			When you perform a cold reset, the paper size that is stored in NVRAM is reset to the default factory setting. If you replace a formatter board in a country/region that uses A4 as the standard paper size, use this menu to reset the default paper size to A4. LETTER and A4 are the only available values.
Low Alerts		Enable Disable	Reset low alert levels: <ul style="list-style-type: none"> Reset to level 1 Reset to level 2 Reset to level 3 Set to non-HP managed mode
New Registration Roller		Yes No	Reset the counter for the registration roller after replacing the registration assembly.
Media Sensor Value			Use this item to record the media sensor value found on a replacement paper pickup assembly.
PTT Test Mode			Test the internal modem for the analog fax accessory.
NOTE: FAX models only.			
	Hook Operations	Off Hook On Hook	
	Generate Random Data	Select a value from the list.	
	Generate DTMF Tone Burst	Select a value from the list.	
	Generate DTMF Continuous Tone	Select a value from the list.	
	Generate Pulse Burst	Select a value from the list.	

First level	Second level	Value	Description
	Generate Tone Dial Number	Enter dial number.	
	Generate Pulse Dial Number	Enter dial number.	
	Generate Single Modem Tone	Range: 1100–2100 Hz Default = 2100 Hz	
	Line Measurements		
	Fax Transmit Signal Loss		
Test Support	Continuous Scan	2-sided Save to Disk	
	Continuous Copy	2-sided Save to Disk	
	Raw Scan	2-sided Mechanical Calibration	
	Continuous Print from USB		
	Automatic Calibrations	Disabled Enabled*	
	Runtime Configuration	MercStine Standard StandardEIC Workflow WorkflowEIC Reconfigure	

Product resets

Restore factory-set defaults

1. From the Home screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [General Settings](#)
 - [Restore Factory Settings](#)
3. A verification message advises that completing the reset function might result in loss of data. Touch the [Reset](#) button to complete the process.



NOTE: The product restarts automatically after the reset operation completes.

Restore the service ID

Restore the service ID

When replacing the formatter, the date is lost. Use this menu item to reset the date to the original date that the product was first used. The date format is YYDDD. Use the following formula to calculate the dates:

1. To calculate YY, subtract 1990 from the calendar year. For instance, if the product was first used in 2002, calculate YY as follows: $2002 - 1990 = 12$. $YY = 12$.
2. Subtract 1 from 10 (October is the tenth month of the year): $10 - 1 = 9$.
 - Multiply 9 by 30: $9 \times 30 = 270$ or add 17 to 270: $270 + 17 = 287$. Thus, $DDD = 287$.

Convert the service ID to an actual date

Use the product Service ID number to determine whether the product is still under warranty. Use the following formula to convert the Service ID into the installation date as follows:

1. Add 1990 to YY to get the actual year that the product was installed.
2. Divide DDD by 30. If there is a remainder, add 1 to the result. This is the month.
3. The remainder from the calculation in step 2 is the date.

Using the Service ID 12287 as an example, the date conversion is as follows:

1. $12 + 1990 = 2002$, so the year is 2002.
2. 287 divided by $30 = 9$ with a remainder of 17 . Because there is a remainder, add 1 to 9 to get 10, which represents October.
3. The remainder in step 2 is 17, so that is the date.
4. The complete date is 17-October-2002.



NOTE: A six-day grace period is built into the date system.

Product cold reset

Cold reset using the Pre-boot menu

1. Turn the product on.
2. The HP logo displays on the product control panel. When an underscore displays below the HP logo, touch the logo to open the **Pre-boot** menu.
3. Use the down arrow ▼ button to highlight **Administrator**, and then touch the **OK** button.
4. Use the down arrow ▼ button to highlight **Startup Options** item, and then touch the **OK** button.
5. Use the down arrow ▼ button to highlight the **Cold Reset** item, and then touch the **OK** button.
6. Touch the **Home**  button to highlight **Continue**, and then touch the **OK** button.



NOTE: The product will initialize.

Format Disk and Partial Clean functions

Active and repository firmware locations

The firmware bundle consists of multiple parts. The main components are the Windows CE Operating System and the product/peripheral firmware files.

There are two locations/partitions on the hard drive where the firmware components are stored:

- The Active, where the operating system and firmware currently are executing.
- The Repository, the recovery location.

If the Active location is damaged, or a [Partial Clean](#) was performed, the product automatically copies over the OS and firmware files from the Repository location and the product recovers.

If both the Active and Repository locations are damaged, or a [Format Disk](#) was performed, then both locations are gone and the error message **99.09.67** displays on the control-panel display. The user must upload the firmware to the product in order for it to function again.

 **CAUTION:** The [Format Disk](#) option performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) will be completely lost. HP does not recommend this action.

Partial Clean

The [Partial Clean](#) option erases all partitions and data on the disk drive, except for the firmware repository where a backup copy of the firmware file is stored. This allows the disk drive to be reformatted without having to download a firmware upgrade file to return the product to a bootable state.

Characteristics of a Partial Clean

- Customer-defined settings, third-party solutions, firmware files, and the operating system are deleted.
- Rebooting the product restores the firmware files from the Repository location, but does not restore any customer-defined settings.
- For previous HP products, a Hard Disk Initialization is similar to executing the [Partial Clean](#) function for this product.

 **CAUTION:** HP recommends backing-up product configuration data before executing a [Partial Clean](#) to retain customer-defined settings (if needed). See the [Backup/Restore](#) item in the [Device Maintenance](#) menu.

Reasons for performing Partial Clean

- The product continually boots up in an error state.



NOTE: Try clearing the error prior to executing a [Partial Clean](#).

- The product will not respond to commands from the control panel.
- Executing the [Partial Clean](#) function is helpful for troubleshooting hard disk problems.
- To reset the product by deleting all solutions and customer-defined settings.
- The product default settings are not properly working.

Execute a Partial Clean

1. Turn the product on.
2. The HP logo displays on the product control panel. When a "1/8" with an underscore displays below the HP logo, touch the logo to open the [Pre-boot](#) menu.
3. Use the down arrow ▼ button to highlight the [+3:Administrator](#) item, and then touch the [OK](#) button.
4. Use the down arrow ▼ button to highlight [Partial Clean](#) and then touch the [OK](#) button.
5. Touch the [OK](#) button again.
6. Touch the [Home](#)  button to highlight [Continue](#), and then touch the [OK](#) button.

 **NOTE:** The product initializes.

Format Disk

The [Format Disk](#) option erases the entire disk drive.

 **CAUTION:** After executing a [Format Disk](#) option, the product is *not* bootable.

Characteristics of a Format Disk

- Customer-defined settings, third-party solutions, firmware files, and the operating system are deleted.

 **NOTE:** Rebooting the product *does not* restore the firmware files.

- Rebooting the product restores the firmware files from the Repository location, but does not restore any customer-defined settings.
- After executing the [Format Disk](#) function, the message **99.09.67** displays on the control panel.
- After executing the [Format Disk](#) function, the product firmware must be reloaded.

 **CAUTION:** HP recommends not using the [Format Disk](#) option unless an error occurs and the solution in the product service manual recommends this solution. After executing the [Format Disk](#) function, the product is unusable.

HP recommends backing-up product configuration data before executing a [Format Disk](#) to retain customer-defined settings (if needed). See the [Backup/Restore](#) item in the [Device Maintenance](#) menu.

Reasons for performing Format Disk

- The product continually boots up in an error state.

 **NOTE:** Try clearing the error prior to executing a [Format Disk](#).

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

Execute a Format Disk

1. Turn the product on.
2. The HP logo displays on the product control panel. When a "1/8" with an underscore displays below the HP logo, touch the logo to open the [Pre-boot](#) menu.
3. Use the down arrow ▼ button to highlight the [+3:Administrator](#) item, and then touch the [OK](#) button.
4. Use the down arrow ▼ button to highlight [Format Disk](#), and then touch the [OK](#) button.
5. Touch the [OK](#) button again.



NOTE: When the [Format Disk](#) operation is complete, reload the product firmware.

Solve fax problems

Checklist for solving fax problems

Use the following checklist to help identify the cause of any fax-related problems you encounter:

- **Are you using the fax cable supplied with the fax accessory?** This fax accessory has been tested with the supplied fax cable to meet RJ11 and functional specifications. Do not substitute another fax cable; the analog-fax accessory requires an analog-fax cable. It also requires an analog phone connection.
- **Is the fax/phone line connector seated in the outlet on the fax accessory?** Make sure that the phone jack is correctly seated in the outlet. Insert the connector into the outlet until it "clicks."



NOTE: Verify that the phone jack is connected to the fax port rather than to the network port. The ports are similar.

- **Is the phone wall jack working properly?** Verify that a dial tone exists by attaching a phone to the wall jack. Can you hear a dial tone, and can you make or receive a phone call?

What type of phone line are you using?

- **Dedicated line:** A standard analog fax/phone line assigned to receive or send faxes.



NOTE: The phone line should be for product fax use only and not shared with other types of telephone devices. Examples include alarm systems that use the phone line for notifications to a monitoring company.

- **PBX system:** A business-environment phone system. Standard home phones and the fax accessory use an analog phone signal. Some PBX systems are digital and might not be compatible with the fax accessory. You might need an interfacing Analog Telephone Adapter (ATA) to connect the fax machine to digital PBX systems.
- **Roll-over lines:** A phone system feature where a new call "rolls over" to the next available line when the first incoming line is busy. Try attaching the product to the first incoming phone line. The fax accessory answers the phone after it rings the number of times set in the rings-to-answer setting.

Are you using a surge-protection device?

A surge-protection device can be used between the wall jack and the fax accessory to protect the fax accessory against electrical power passed through the phone lines. These devices can cause some fax communication problems by degrading the quality of the phone signal. If you are having problems sending or receiving faxes and are using one of these devices, connect the product directly to the phone jack on the wall to determine whether the problem is with the surge-protection device.

Are you using a phone company voice-messaging service or an answering machine?

If the rings-to-answer setting for the messaging service is lower than the rings-to-answer setting for the fax accessory, the messaging service answers the call, and the fax accessory cannot receive faxes. If the rings-to-answer setting for the fax accessory is lower than that of the messaging service, the fax accessory answers all calls.

Does your phone line have a call-waiting feature?

If the fax telephone line has an activated call-waiting feature, a call-waiting notice can interrupt a fax call in progress, which causes a communication error. Ensure that a call-waiting feature is not active on the fax telephone line.

Check fax accessory status

If the analog-fax accessory does not appear to be functioning, print a [Configuration Page](#) report to check the status.

1. From the Home screen, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Reports](#)
 - [Configuration/Status Pages](#)
 - [Configuration Page](#)
3. Touch the [Print](#) button to print the report, or touch the [View](#) button to view the report on the screen. The report consists of several pages.



NOTE: The product IP address or host name is listed on the Jetdirect Page.

On the Fax Accessory Page of the Configuration Page, under the Hardware Information heading, check the Modem Status. The following table identifies the status conditions and possible solutions.



NOTE: If the Fax Accessory Page does not print, there might be a problem with the analog fax accessory. If you are using LAN fax or Internet fax, those configurations could be disabling the feature.

Operational / Enabled ¹	The analog-fax accessory is installed and ready.
Operational / Disabled ¹	<p>The fax accessory is installed, but you have not configured the required fax settings yet.</p> <p>The fax accessory is installed and operational; however, the HP Digital Sending utility has either disabled the product fax feature or has enabled LAN fax. When LAN fax is enabled, the analog-fax feature is disabled. Only one fax feature, either LAN fax or analog fax, can be enabled at a time.</p> <p>NOTE: If LAN fax is enabled, the Fax feature is unavailable on the product control panel.</p>
Non-Operational / Enabled/Disabled ¹	The product has detected a firmware failure. Upgrade the firmware.
Damaged / Enabled/Disabled ¹	The fax accessory has failed. Reseat the fax accessory card and check for bent pins. If the status is still DAMAGED, replace the analog-fax accessory card.

¹ ENABLED indicates that the analog-fax accessory is enabled and turned on; DISABLED indicates that LAN fax is enabled (analog fax is turned off).

General fax problems

The following are some common fax problems.

The fax failed to send

JBIG is enabled, and the receiving fax machine does not have JBIG capability.

Turn off the JBIG setting.

An Out of Memory status message displays on the product control panel

The product storage disk is full.

Delete some stored jobs from the disk. From the Home screen on the product control panel, touch the [Retrieve from Device Memory](#) button. Open the list of stored jobs or stored faxes. Select a job to delete, and then touch the [Delete](#) button.

Print quality of a photo is poor or prints as a gray box

You are using the wrong page-content setting or the wrong resolution setting.

Try setting the [Optimize Text/Picture](#) option to [Photograph](#) setting.

You touched the Stop button to cancel a fax, but the fax was still sent

If the job is too far along in the sending process, you cannot cancel the job.

This is normal operation.

No fax address book button displays

The fax address book feature has not been enabled.

Use the HP MFP Digital Sending Software Configuration utility to enable the fax address book feature.

Not able to locate the Fax settings in HP Web Jetadmin

Fax settings in HP Web Jetadmin are located under the device's status page drop-down menu.

Select **Digital Sending and Fax** from the drop-down menu.

The header is appended to the top of the page when the overlay option is enabled

For all forwarded faxes, the product appends the overlay header to the top of a page.

This is normal operation.

A mix of names and numbers is in the recipients box

Names and numbers can both display, depending on where they are from. The fax address book lists names, and all other databases list numbers.

This is normal operation.

A one-page fax prints as two pages

The fax header is being appended to the top of the fax, pushing text to a second page.

To print a one page fax on one page, set the overlay header to overlay mode, or adjust the fit-to-page setting.

A document stops in the document feeder in the middle of faxing

A jam is in the document feeder.

Clear the jam, and send the fax again.

The volume for sounds coming from the fax accessory is too high or too low

The volume setting needs to be adjusted.

Adjust the volume in the [Fax Send Settings](#) menu and the [Fax Receive Settings](#) menu.

Use Fax over VoIP networks

VoIP technology converts the analog phone signal into digital bits. These are then assembled into packets which travel on the Internet. The packets are converted and transmitted back to analog signals at or near the destination.

Transmission of information on the Internet is digital instead of analog. Therefore, there are different constraints on the fax transmission that might require different fax settings than the analog Public Switched Telephone Network (PSTN). Fax is very dependent upon timing and signal quality, so a fax transmission is more sensitive to a VoIP environment.

The following are suggested changes in settings for the HP LaserJet Analog Fax Accessory 500 when it is connected to a VoIP service:

- Begin with the fax speed set in Medium (V.17). This might be helpful in environments where a new VoIP networks is in use.
- If numerous errors or retries occur with the fax speed set to Fast, set it to Medium (V.17).
- If errors and retries persist, set the fax speed to Slow (V.29) because some VoIP systems cannot handle the higher signal rates associated with fax.
- In rare cases, if errors persist, turn off ECM on the product. The image quality might decrease. Ensure that the image quality is acceptable with ECM off before using this setting.
- If the preceding setting changes have not improved the VoIP fax reliability, contact your VoIP provider for help.

Problems with receiving faxes

Problem	Cause	Solution
Incoming fax calls are not being answered by the fax accessory (no fax detected).	The rings-to-answer setting might not be set correctly.	Check the rings-to-answer setting.
	The fax cable might not be connected correctly, or the fax cable is not working.	Check the installation. Make sure to use the fax cable that came with the product or with the fax accessory.
	The phone line might not be working.	Disconnect the fax accessory from the phone jack, and then connect a phone. Try to make a phone call to ensure the phone line is working.
	If a PBX system is in use, the ring signals might not be configured correctly.	Check the ring-signal configuration on the PBX system.
	A voice-messaging service might be interfering with incoming faxes.	Do one of the following: <ul style="list-style-type: none"> • Use a phone line dedicated to fax calls. • Decrease the rings-to-answer for the fax accessory to a number less than the rings-to-answer for the voice mail. • If the error persists, contact your Global Business Unit (GBU) for alternative workarounds to this problem.
Faxes are being received very slowly.	The product might be receiving a complex fax, such as one with many graphics.	Complex faxes take longer to transmit.
	The sending fax machine might have a slow modem speed.	The fax accessory only receives the fax at the fastest modem speed the sending fax machine can use. Wait for the fax transmission to complete.
	The resolution at which the fax was sent or is being received is very high. A higher resolution typically results in better quality, but also requires a longer transmission time.	Ask the sender to decrease the resolution and resend the fax.
	If there is a poor phone-line connection, the fax accessory and the sending fax machine slow down the transmission to adjust for errors.	Ask the sender to resend the fax. Ask the phone company to check the phone line.
Faxes are not printing on the product.	No paper is in the input tray.	Load paper. Any faxes received while the input tray is empty are stored and will print after the tray has paper.
	The Fax Printing Schedule feature is in use.	Faxes print according to the schedule. To print faxes immediately, disable the Fax Printing Schedule feature.
	The product is either low on toner or has run out of toner.	If configured, the product stops printing as soon as it is low on toner or runs out of toner. Any faxes received are stored in memory and print after the toner has been replaced.

Problem	Cause	Solution
	The incoming call might be a voice call.	Incoming voice calls usually show up in the call report as a No Fax Detected error. Because these are voice calls and not a fax error, no action is necessary.
	The incoming fax was interrupted.	Verify that the fax telephone line does not have an activated call-waiting feature. A call-waiting notice can interrupt a fax call in progress, which causes a communication error.
	The Fax Printing Schedule feature is set to the Always store faxes option.	Change the Fax Printing Schedule setting to the Always print faxes option.

Problems with sending faxes

Problem	Cause	Solution
Faxes are transmitting very slowly.	The product might be sending a complex fax, such as one with many graphics.	Complex faxes take longer to transmit.
	The receiving fax machine might have a slow modem speed.	The fax accessory only sends the fax at the fastest modem speed the receiving fax machine can use. Wait for the fax transmission to complete.
	The resolution at which the fax was sent or is being received is very high. A higher resolution typically results in better quality, but also requires a longer transmission time.	Decrease the resolution and change the Optimize Text/Picture option.
	If there is a poor phone-line connection, the fax accessory and the receiving fax machine slow down the transmission to adjust for errors.	Cancel and resend the fax. Ask the phone company to check the phone line.
	The document might have a gray background, which can increase fax transmission time.	Use the Image Adjustment feature to clean up the background shading.
Faxes quit during sending.	The receiving fax machine might be malfunctioning.	Try sending to another fax machine.
	The phone line might not be working.	Disconnect the fax accessory from the phone jack, and connect a phone. Try to make a phone call to ensure the phone line is working.
	The phone line might be noisy or poor quality.	Try using a slower fax speed to improve the reliability of transmission. Use the Fax Dialing Settings menu to set the fax speed for sending faxes.
	A call-waiting feature might be active.	Verify that the fax telephone line does not have an activated call-waiting feature. A call-waiting notice can interrupt a fax call in progress, which causes a communication error.
The fax accessory is receiving faxes but is not sending them.	If the fax accessory is on a PBX system, the PBX system might be generating a dial tone the fax accessory cannot detect.	Disable the detect-dial-tone setting.
	There might be a poor phone connection.	Try again later.
	The receiving fax machine might be malfunctioning.	Try sending to another fax machine.
	The phone line might not be working.	Disconnect the fax accessory from the phone jack, and connect a phone. Try to make a phone call to ensure the phone line is working.
Outgoing fax calls keep dialing.	The fax accessory automatically redials a fax number if the Redial on Busy option is on or if the Redial on No Answer option is on.	This is normal operation. To prevent the fax from resending, set the Redial on Busy option to 0, set the Redial on No Answer option to 0, and set the Redial on Error option to 0.

Problem	Cause	Solution
Sent faxes are not arriving at the receiving fax machine.	The receiving fax machine might be turned off or might have an error condition, such as being out of paper.	Ask the recipient to make sure the fax machine is turned on and ready to receive faxes.
	A fax might be in memory because it is waiting to redial a busy number, or there are other jobs ahead of it waiting to be sent.	If a fax job is in memory for either of these reasons, an entry for the job displays in the fax log. Print the fax activity log, and check the Result column for jobs with a Pending designation.

Fax error messages on the product control panel

If the fax process is interrupted or an error occurs during a fax transmission or reception, a two-part status/error description is generated by the fax subsystem on the product. Normal or successful faxes also generate messages indicating success. The message information consists of a text description and a numeric code (a few messages do not include numeric codes). Only the text part of the message is displayed on the product control panel; however, both the text message and numeric code are listed in the Fax Activity Report, Fax Call Report, and the Fax T.30 Trace. The numeric code is shown in parentheses after the text part of the message in the reports.

The fax modem generates the numeric code. Usually a numeric code of (0) indicates a normal modem response. Some messages always display a numeric code of (0), other messages can have a range of numeric codes, and a few messages have no numeric code. Usually a numeric code of (0) indicates an error was not associated with the fax modem, but occurred in another part of the fax system or other product system such as the printing system. Non-zero error codes give further detail into the particular action or process that the modem is executing, and they do not necessarily indicate that there is a problem with the modem.

Persistent error messages with numeric codes different than those listed here require assistance of customer support. Print a Fax T.30 Trace report before contacting customer support to help identify the problem. This report contains details of the last fax call.

1. From the Home screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Fax](#)
 - [Fax T.30 Trace](#)
3. Select the [Print T.30 Report](#) option to print the report.

Send-fax messages

Table 2-67 Send-fax messages

Message	Error No.	Description	Action
Cancelled	0	Someone cancelled the fax at the product control panel.	None.
Success	n/a	The fax was sent successfully.	None.
Fail Busy	0	The receiving fax machine is busy.	The fax will be retired automatically (if configured), otherwise try resending fax later.
No Answer	0 or 17	The receiving fax machine is not answering the call, or a person answered the call.	The receiving fax machine might be disconnected or turned off; contact the receiver to check the machine. Try resending.
No Dial	0	No dial tone is detected when sending the fax.	Verify the phone line is active; set the sending fax to "not" to detect a dial tone.
Failed	Any	The fax might be corrupted or not sent.	Try resending fax.
Failed	0	Incompatible page width, or page had too many bad lines.	Try resending fax; if the error persists, contact service.
Failed	17 or 36	Lost telephone connection between sender and receiver. The issue might be due to voice calls interrupting the fax, or a person answering the call.	Try resending the fax.
Failed or Communication Error	Any besides 17 or 36	General communications issue where the fax transmission was interrupted or did not proceed as expected.	Try resending fax; if the error persists, contact support.
Space Fail	0	Unable to read or write the fax image file to disk; could be corrupt product disk or no space available on the product's disk.	Try resending fax; if the error persists, contact support.
Memory Error	0	Out of memory on product.	If the error persists, delete items from the product memory, such as stored jobs or saved faxes.
Power Failure	0	A power failure occurred on the sending fax product during the fax transmission.	Try resending the fax.

Receive-fax messages

Table 2-68 Receive-fax messages

Message	Error No.	Description	Action
Success	n/a	The fax transmission was successful.	None.
Blocked	n/a	The receiving fax machine is using the blocked-number feature and is blocking this fax.	None.
Failed	Any	The fax might be corrupted or not sent.	Ask the sender to resend the fax; if the error persists, contact support.
Failed	0	Incompatible page width or page had too many bad lines.	Ask the sender to resend the fax; if the error persists, contact support.
Failed	17, 36	Lost telephone connection or interruption between sender/ receiver.	Ask the sender to resend the fax (if the sending machine does not automatically retry).
Failed	Any besides 17 or 36	General communications issue where the fax transmission was interrupted or did not proceed as expected.	Ask the sender to resend the fax; if the error persists, contact support.
Space Fail	0	Unable to read or write image file to disk; could be corrupt product disk or no space on disk.	Ask the sender to resend the fax; if the error persists, contact support.
Memory Error	0	Out of memory on product.	If the error persists, delete items from the product memory, such as stored jobs or saved faxes.
Print Fail	0	The received image file cannot be decoded.	Ask the sender to resend the fax; enable Error Correction Mode if it is not already enabled.
Power Failure	0	A power failure occurred during the fax reception.	Ask the sender to resend the fax.
No Fax Detected	17, 36	A voice call was made to the fax.	None

Service settings

These items in the control-panel menus are intended to be used when an HP service representative is assisting you.

Settings in the Troubleshooting menu

1. From the Home screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Fax](#)

Fax T.30 Trace	This is a printed report of all the communications between the sending and receiving fax machines for the last Fax transmission or reception. The report contains detailed error codes and other information that might be useful in troubleshooting a particular problem related to sending or receiving a fax. Print this report before contacting HP customer support.
Fax V.34	This setting controls the modem's method of transmission. The Normal setting allows the modem to select any of the supported fax speeds up to 33,600 bps. The Off setting sets the fax speed to 14,400 bps or lower, depending on the speed settings for sending and receiving.
Fax Speaker Mode	In Normal mode, the modem speaker is turned on during dialing, through the initial connection, and then it turns off. In Diagnostic mode, the speaker is turned on and remains on for all fax communications until the setting is returned to Normal mode.
Fax Log Entries	The Standard fax log includes basic information such as the time and whether the fax was successful. The Detailed fax log shows the intermediate results of the redial process not shown in the Standard fax log.

Firmware upgrades

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

- In the US, go to www.hp.com/support/ljMFPM630 . Click **Drivers & Software**.
- Outside the US, follow these steps:
 1. Go to www.hp.com/support.
 2. Click the appropriate country/region link.
 3. Click **Drivers & Downloads**.
 4. In the **Find my product** field, enter the product name (HP LaserJet Enterprise MFP M630), 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 product name and number.

5. Click the product name link to go to the product support page.

If more than one link appears, scroll to, and then click on the correct link for the product model.

6. Click the **DRIVERS, SOFTWARE & FIRMWARE** link.
7. From the **Select your product's operating system** list, click the **Cross operating system (BIOS, Firmware, Diagnostics, etc.)** link.
8. From the **Downloads** list, find the firmware bundle, and then click the **DOWNLOAD** button.

 **TIP:** For more information about a listed firmware bundle, click the on firmware bundle's name in the list to go to the firmware bundles description page (the firmware bundle is downloadable from this page).

Determine the installed revision of firmware

Print a configuration page to determine the installed revision of firmware.

1. From the [Home](#) screen on the product control panel, scroll to and touch the [Administration](#) button.
2. Open the following menus:
 - [Reports](#)
 - [Configuration/Status Pages](#)
3. Select the [Configuration Page](#) item, and then touch the [Print](#) button.
4. On the configuration page, look in the section marked Device Information for the firmware datecode and firmware revision.

Firmware datecode and firmware revision examples

- 20140408 (firmware datecode)
- 2357348 470111 (firmware revision)

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. Select the **Firmware Upgrade** link from the **General** tab or from the **Troubleshooting** tab.
4. Browse to the location that the firmware upgrade file was downloaded to, and then select the firmware file—the file has a .bdl file extension. Select the **Install** button to perform the upgrade.

 **NOTE:** Do not close the browser window OR interrupt communication until the HP Embedded Web Server (EWS) displays the confirmation page.

5. Select **Restart Now** from the EWS confirmation page, or turn the product off, and then on again using the power switch.
6. After the product reinitializes, print a configuration page and verify that the latest firmware version has been installed.

USB flash drive (Pre-boot menu)

 **IMPORTANT:** Only use this method of performing a firmware upgrade if the product cannot initialize to the **Ready** state.

1. Copy the .bdl file to a portable USB flash drive.
2. Turn the product on.
3. The HP logo displays on the product control panel. When a "1/8" with an underscore displays below the HP logo, touch the logo to open the **Pre-boot** menu.
4. Touch the down arrow ▼ button to highlight **Administrator**, and then touch the **OK** button.
5. Touch the down arrow ▼ button to highlight **Download**, and then touch the **OK** button.
6. Insert the USB flash drive with the .bdl file on it.

 **NOTE:** If the error message **No USB Thumbdrive Files Found** displays on the control-panel display, try using a different portable storage device.

7. Touch the down arrow ▼ button to highlight **USB Thumbdrive**, and then touch the **OK** button.
8. Touch the down arrow ▼ button to highlight the .bdl file, and then touch the **6** button.

 **NOTE:** The upgrade process can take 10 minutes or longer to complete.

 **TIP:** If there is more than one .bdl file on the storage device, make sure to select the correct file for this product.

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

USB flash drive (control-panel menu)

 **NOTE:** USB flash drives that are not using a FAT32 format, or do not have a CD formatted partition, might not be recognized by the product. If the product does not recognize a USB flash drive, try using a different USB flash drive.

 **TIP:** The USB port on the product must be enabled. If it is disabled, use the **Enable Retrieve from USB** item in the **General Settings** menu to enable it.

1. Copy the .bdl file to a portable USB flash drive.
2. Turn the product on, and then wait until it reaches the **Ready** state.
3. From the **Home** screen on the product control panel, scroll to and touch the **Device Maintenance** button.
4. Touch the **USB Firmware Upgrade** button.
5. Insert the portable USB storage device with the .bdl file on it into the USB port on the front of the product.
6. Touch the .bdl file, and then touch the **Upgrade** button.

 **TIP:** If there is more than one .bdl file on the storage device, make sure to select the correct file for this product.

7. Select one of the following options:

- **Upgrade**



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

- **Re-install**
- **Downgrade**

8. When the upgrade is complete, the product will initialize to the **Ready** state. Print a configuration page and verify that the upgrade firmware version was installed.

A Product specifications

- [Product dimensions](#)
- [Product space requirements](#)
- [Power consumption, electrical specifications, and acoustic emissions](#)
- [Environmental specifications](#)
- [Certificate of Volatility](#)

Product dimensions

Table A-1 Physical specifications

Height	Depth	Width	Weight
457 mm (17.99 in)	510 mm (20.08 in)	742 mm (20.21 in)	37.45 kg (82.45 lb)

Table A-2 Accessory dimensions

Product	Height	Depth	Width	Weight
1x500 sheet feeder	102 mm (4.0 in)	527 mm (20.8 in)	508 mm (20.0 in)	8.1 kg (17.8 lb)
1x500 sheet feeder with cabinet	546 mm (21.5 in)	676 mm (26.6 in)	660 mm (26.0 in)	21.4 kg (47.1 lb)
2,500-sheet high-capacity input tray	546 mm (21.5 in)	676 mm (26.6 in)	640 mm (26.0 in)	30.5 kg (67.0 lb)
3-bin stapling mailbox (M680)	368 mm (14.5 in)	400 mm (15.8 in)	445 mm (17.5 in)	8.0 kg (17.6 lb)

Product space requirements

HP recommends that enough space is provided around the product to make sure there is sufficient space to open doors and covers, provide proper ventilation, and for service personnel to remove covers and internal assemblies.

Figure A-1 Product space requirements

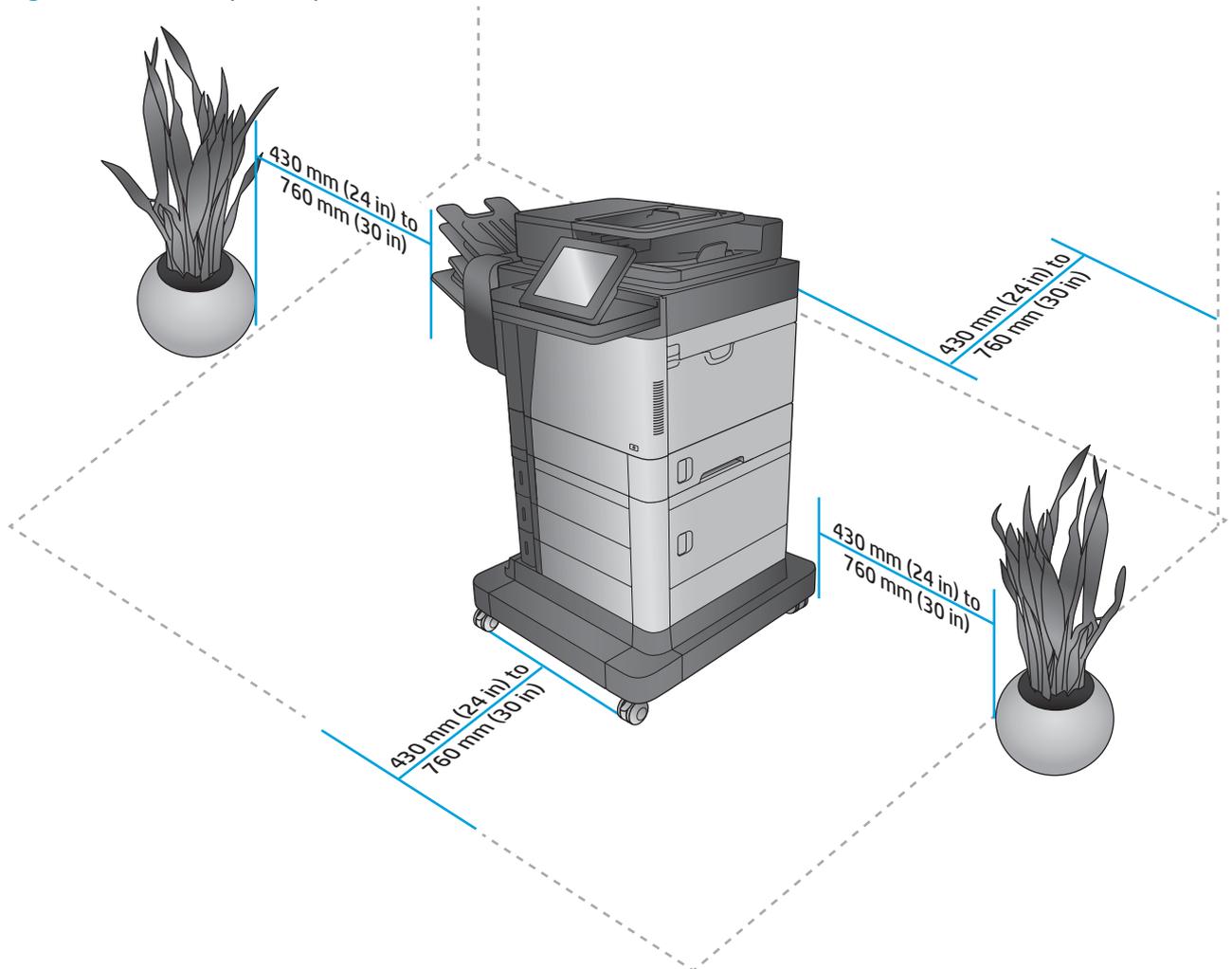


Table A-3 Product space requirements

Item	Recommended spacing
From the left-side or right-side of the product, input accessory, or finishing accessory to an obstruction	430 mm (17 in) to 760 mm (30 in)
From the front-side of the product, input accessory, or finishing accessory to an obstruction	610 mm (24 in) to 1010 mm (40 in)
From the back-side of the product, input accessory, or finishing accessory to an obstruction	460 mm (18 in) to 760 mm (30 in)

Power consumption, electrical specifications, and acoustic emissions

For more information, go to www.hp.com/support/ljMFPM630. In the left-hand side navigation bar select **Learn and Use**, and then select **Specifications**.

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

Environmental specifications

Table A-4 Operating-environment specifications

Environment	Recommended	Allowed
Temperature	7.5° to 32.5°C (45.5° to 90.5°F)	15° to 30°C (59° to 86°F)
Relative humidity	5% to 90% relative humidity (RH)	10% to 80% RH
Altitude	Not applicable	0 to 3048 m (0 to 10,000 ft)

Certificate of Volatility

Figure A-2 Certificate of Volatility 1 of 2)

Hewlett-Packard Certificate of Volatility				
Model: HP LaserJet Enterprise MFP M630		Part Number: M630 – B3G84A		Address: Hewlett Packard Company 11311 Chinden Blvd Boise, ID 83714
Volatile Memory				
Does the device contain volatile memory (Memory whose contents are lost when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (SRAM, DRAM, etc): DDR2 - DRAM	Size: 1.5 GB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: Video buffer, image buffer and system memory	Steps to clear memory: When the printer is powered off, the memory is erased.
Type (SRAM, DRAM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Type (SRAM, DRAM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No	Function:	Steps to clear memory:
Non-Volatile Memory				
Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (Flash, EEPROM, etc): Formatter SPI Flash	Size: 4 MB	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function: BIOS	Steps to clear memory: Firmware update
Type (Flash, EEPROM, etc):	Size:	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function:	Steps to clear memory:
Type (Flash, EEPROM, etc): None	Size:	User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Function:	Steps to clear memory:
Mass Storage				
Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below				
Type (HDD, Tape, etc): Hard-disk drive (HDD)	Size: 320 GB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: Firmware and user data	Steps to clear memory: Firmware update
Type (HDD, Tape, etc): Solid State Storage Device (SSD)	Size: 8 MB	User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Function: Firmware and user data	Steps to clear memory: Firmware update

Figure A-3 Certificate of Volatility (2 of 2)

USB			
Does the item accept USB input and if so, for what purpose (i.e Print Jobs, device firmware updates, scan upload)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
User can do scan to USB, walkup port print and firmware upgrade through USB walkup port			
Can any data other than scan upload be sent to the USB device)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below			
System diagnostic information can also be downloaded to USB drive			
RF/RFID			
Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below			
Purpose:			
Frequency:		Bandwidth:	
Modulation:		Effective Radiate Power (ERP):	
Specifications:			
Other Transmission Capabilities			
Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below:			
Purpose:			
Frequency:		Bandwidth:	
Modulation:		Effective Radiate Power (ERP):	
Specifications:			
Other Capabilities			
Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below:			
Purpose: Fax modem for receipt and sending of faxes			
Specifications:			
Author Information			
Name:	Title: Technical Marketing Engineer	Email:	Business Unit: IPG
			Date Prepared: 06-24-14

Index

Symbols/Numerics

- 1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high-capacity feeder
 - connectors, diagrams 179
- 1x500-sheet paper feeder
 - location 59
 - media feed sensors 70
 - paper jam detection 70
 - signal flow and component locations 62
- 1X500-sheet paper feeder rollers
 - cleaning 444
- 1x500-sheet paper feeder with cabinet
 - location 60
 - media feed sensors 71
 - paper jam detection 70
 - signal flow and component locations 63
- 2,500-sheet high-capacity feeder (HCI) rollers
 - cleaning 445
- 2,500-sheet high-capacity paper feeder
 - location 61
 - media feed sensors 72
 - paper jam detection 70
 - signal flow and component locations 65

A

- accessories 197
- acoustic specifications 476
- automatic delivery
 - stapling mailbox 96

B

- bands, troubleshooting 431

- basic product operation 2
- blank pages
 - troubleshooting 446
- blank pages, troubleshooting 429
- block diagram, system 3

C

- cables
 - USB, troubleshooting 446
- cautions iii
- central processing unit 8
- certificate of volatility 477
- characters, troubleshooting 433
- checklist
 - problems 98
- circuit diagrams 184
- clean the paper path
 - cleaning page printing 193
- cleaning
 - paper path 439
 - pressure roller 21
 - product 439
 - rollers 442, 444, 445
 - scanner glass 440
- cleaning page 260
- clutch
 - identification 0
 - location 35
- clutch (product base)
 - block diagram 161
- cold reset 451
- component test
 - special mode test 150
- components
 - diagnostic tests 150
- configuration page 134
- configuration pages
 - information 197
 - printing 194

- connections
 - DC controller 176
- connectivity LED 137
- connectors
 - 1x500-sheet feeder, 1x500-sheet feeder with cabinet, and 2,500-sheet high-capacity feeder 179
 - scanner controller board (SBC) 178
 - stapling mailbox 180
- control panel
 - Administration menu 199
 - Backup/Restore menu 259
 - Calibrate/Cleaning menu 260
 - connections diagram 176
 - Copy Settings menu 206
 - Display Settings menu 239
 - fax Settings menu (fax models only) 224
 - General Settings menu 201
 - Manage Supplies menu 241
 - Manage Trays menu 244
 - messages, types of 263
 - Network Settings menu 246
 - Print Options menu 237
 - Print Settings menu 234
 - Reports menu 199
 - Scan/Digital Send Settings menu 214
 - Service menu 262
 - specifications 9
 - troubleshooting menu 257
 - USB Firmware Upgrade menu 262
- control panel diagnostic flowcharts 127
- control-panel menus 199
- conventions, document iii

- copy
 - improve quality 440
- copying
 - quality, troubleshooting 429
- counts 449
 - copy scan 450
 - document feeder 450
 - document feeder duplex 450
 - document feeder simplex 450
 - flatbed cycle 450
 - page, reset 449
 - refurbish cycle 449
 - reset after replacing formatter 449
 - send scan 450
 - See also* pages counts
- CPU 8
- creases, troubleshooting 433
- current settings pages 101
- D**
- dark image, troubleshooting 429
- date
 - product first used 451
- DC controller
 - connections, diagrams 176
 - functions 11
 - operation 11
 - voltage detection 16
- defeating
 - interlocks 139
- defects, repeating 198
- delivery operation
 - stapling mailbox 84
- demo page 134
- deskew operation 78
- determine problem source 119
- determine the installed revision of
 - firmware 469
- developing stage 28
- diagnostics
 - component 150
 - engine 139
 - LED 134
 - networks 251
- diagrams
 - block 155
 - circuit 184
 - clutch (product base) 161
 - DC controller connections 176
 - fans (product base) 166
 - main assemblies 167
 - main assemblies (1x500-sheet paper feeder with cabinet) 170
 - main assemblies (1x500-sheet paper feeder) 169
 - main assemblies (2,500-sheet high-capacity feeder) (HCI) 171
 - main assemblies (product base) 167
 - main assemblies (stapling mailbox) 172
 - main assemblies PCAs 174
 - main PCAs (product base) 174
 - motors 162
 - motors (1 x 500-sheet paper feeder) 163
 - motors (1x500-sheet paper feeder with cabinet) 163
 - motors (2,500-sheet high-capacity feeder) (HCI) 164
 - motors (product base) 162
 - motors (stapling mailbox) 165
 - rollers 175
 - rollers (product base) 175
 - sensors (1x500-sheet paper feeder and 1x500-sheet paper feeder with cabinet) 156
 - sensors (2,500-sheet high-capacity feeder) (HCI) 157
 - sensors (product base) 155
 - sensors (SSMBM) 158
 - solenoids (product base) 160
 - switches (product base) 159
 - timing 182
- document conventions iii
- document feed system 73
- document feeder
 - books, copying 79
 - e-duplex operation 76
 - front-side and back-side background selecto 77
 - hinges 79
 - jams 394
 - paper path 75
 - paper-feeding problems 425
 - sensors 73
 - simplex operation 75
- document feeder count
 - document feeder pages 449
- document feeder interval 449
- document feeder paper path 75
- document feeder rollers
 - cleaning 442
- drum cleaning stage 30
- duplex printing accessory
 - connections diagram 176
- duplexer
 - clearing jams 408
- duplexing
 - operations 53
 - side registration adjustment operation 53
- E**
- electrical specifications 476
- electrophotographic process 26
- embedded web server 470
- engine
 - diagnostics 139
 - test page 140
- engine power supply
 - connections diagram 176
- engine-control system
 - components 10
 - functions 10
 - operation 10
- envelope feeder
 - connections diagram 176
- EP process 26
- error messages
 - types of 263
- event log 101, 134
 - clear 102, 387, 449
 - information 197
 - print 387
 - view 387
- event-log messages 386
- F**
- faded print 429
- failure detection
 - laser/scanner 23
 - stapling mailbox 84
- fans
 - connections diagram 176
 - locations 13
 - operation 13

- fans (product base)
 - block diagram 166
- fax
 - feeding problems 459
- feeding problems 459
- firmware
 - date codes 197
 - formatter 8
 - version information 196
- firmware, downloading new 468
- flowcharts
 - troubleshooting 119
- formatter
 - connections diagram 176
 - control system 6
 - CPU 8
 - firmware 8
 - hardware 6
 - hardware components 6
 - input/output 8
 - memory 8
 - nonvolatile random access memory (NVRAM) 8
 - NVRAM 8
 - random access memory (RAM) 8
 - resets after replacing 449
 - Resolution Enhancement technology (REt) 8
 - scanner interface 9
- formatter lights 134
- formatter-control system
 - functions 6
 - operation 6
- fuser
 - clearing jams 408
 - components 18
 - connections diagram 176
 - failure detection 20
 - heater protection 20
 - temperature control 19
- fuser circuit 19
- fuser failure detection 20
- fuser-control circuit 18
- fuses, overcurrent/overvoltage protection 16
- fusing
 - description 47
- fusing stage 29

H

- hardware
 - formatter 6
- hardware integration pocket (HIP) is not functionin 133
- high-voltage power supply (HVPS) 14
- home button is unresponsive 132
- horizontal lines, troubleshooting 431
- HP embedded Jetdirect page 196
- HP Jetdirect print server
 - configuration page 196
 - lights 134

I

- image capture system 73
- image formation, stages 26
 - developing 28
 - drum cleaning 30
 - fusing 29
 - laser-beam exposure (writing) 27
 - primary charge (conditioning) 27
 - separation 29
 - transfer 28
- image quality issues
 - examples and solutions 429
- image-formation system
 - components 24
 - motor control 25
 - operation 24
- imaging drums
 - diagnostic test 140
- individual component disagnostics 134
- input/output
 - formatter 8
- installation
 - date calculation 451
- interlocks
 - defeating 139
- interpret control-panel messages and event log entries 263
- IPv4 information 196
- IPv6 information 196

J

- jam detection
 - stapling mailbox 94
- jams
 - 1,500-sheet high-capacity input tray (Tray 5) 403
 - auto-navigation 392
 - causes of 392, 425
 - detection in paper feeder 70
 - detection operations 55
 - diagnostic test for 141
 - document feeder 394
 - duplexer 408
 - fuser 408
 - locations 392
 - lower-right door 407
 - output bin 416
 - recovery 423
 - right door 406
 - sensor locations 388
 - sensors 388
 - sensors and switches 1x500-sheet feeders 389
 - sensors and switches HCI 390
 - sensors mailbox 391
 - staples in the stapling mailbox accessory 419
 - stapling mailbox accessory 417
 - top cover 413
 - Tray 1 398
 - Tray 2, 3, and 4 401
- Jetdirect print server 196
- lights 134

L

- laser-beam exposure (writing)
 - stage 27
- laser/scanner
 - failure detection 23
 - safety 23
- laser/scanner assembly
 - connections diagram 176
- laser/scanner system
 - components 22
 - functions 22
 - operation 22
- LEDs. *See* lights
- light print, troubleshooting 429

- lights
 - formatter 134
 - troubleshooting with 134
- lines, troubleshooting 431
- link speed settings 256
- loose toner, troubleshooting 433
- low-voltage power supply (LVPS)
 - 15
 - converted DC voltages 16
 - functions 17
- low-voltage power supply circuit 15
- lower-right door
 - clear jams 407
- M**
- mailbox/job separator mode
 - stapling mailbox 93
- main assemblies (1x500-sheet paper feeder with cabinet)
 - block diagram 170
- main assemblies (1x500-sheet paper feeder)
 - block diagram 169
- main assemblies (2,500-sheet high-capacity feeder) (HCI)
 - block diagram 171
- main assemblies (product base)
 - block diagram 167
- main assemblies (stapling mailbox)
 - block diagram 172
- main PCAs (product base)
 - block diagram 174
- main product systems
 - relationship between 2
- manual print modes 426
- media size detection components
 - Tray 2 40
- memory
 - formatter 8
 - information 194
 - nonvolatile random access memory (NVRAM) 8
 - random access memory (RAM) 8
 - types 8
- memory chip
 - toner cartridge 31
- Memory Enhancement technology (MEt) 9
- menu map 101
- messages
 - types of 263
- modem speed 461
- motor control
 - stapling mailbox 83
- motors
 - connections diagram 176
 - identification 0
 - locations 12, 35
 - operation 12
- motors (1 x 500-sheet paper feeder)
 - block diagram 163
- motors (1x500-sheet paper feeder with cabinet)
 - block diagram 163
- motors (2,500-sheet high-capacity feeder) (HCI)
 - block diagram 164
- motors (product base)
 - block diagram 162
- motors (stapling mailbox)
 - block diagram 165
- N**
- networks
 - diagnostics 251
 - HP embedded Jetdirect configuration page 196
 - link speed settings 256
- no control panel sound 131
- nonvolatile random access memory (NVRAM) 8
- notes iii
- NVRAM 8
- O**
- operation
 - engine-control system 10
 - fans 13
 - image formation system 24
 - laser/scanner system 22
 - motors 12
 - pickup, feed, and delivery system 33
 - pickup-and-feed block 38
 - power supply, high-voltage 14
 - power supply, low-voltage 15
 - sequence of (product) 4
 - sequence of (scanner) 5
 - Sleep mode 6
- operations
 - jam detection 55
 - scanner 73
 - temperature detection 21
- output bin
 - clear jams 416
- output bin 3 lift operation
 - stapling mailbox 92
- output bin paper-full detection 52
- overcurrent/overvoltage protection 16
- P**
- pages
 - blank 446
 - not printing 446
 - printing slowly 446
- pages count 449
- reset 449
- See also* counts
- paper
 - default size reset 451
 - jam detection 70
 - jams 392, 425
 - size detection 67
 - stop in path for testing 150
 - tray-presence detection 67
 - wrinkled 433
- paper delivery
 - face-down 50
 - face-up 51
- paper feed speed control 44
- paper feeder
 - jam detection 70
 - optional 1 x 500-sheet 59
 - optional 1 x 500-sheet with cabinet 59
 - optional 2,500-sheet high-capacity 59
 - pickup and feed components 62
 - tray lift operation 68
- paper jams
 - detection 56
 - document feeder 394
 - locations 392
 - lower-right door 407
 - output bin 416
 - right door 406
 - stapling mailbox accessory 417
 - top cover 413

- Tray 1 398
- Tray 2, 3, and 4 401
- Tray 5 403
- paper path
 - diagnostic test 141
 - stop movement for testing 150
- paper pickup problems
 - solving 424
- paper-length detection 46
- paper-path
 - test, sensors 141
- paper-width detection 46
- password
 - Service menu PIN 449
- PBX systems troubleshooting 463
- phone lines troubleshooting 463
- physical specifications 474
- pickup, feed, and delivery
 - paper-feeder 62
- pickup, feed, and delivery system
 - operation 33
- pickup-and-feed block
 - operation 38
- PJL (product job language)
 - functions 9
- PML (printer management language) 9
- power
 - consumption 476
- power subsystem 120
- power supply
 - connections diagram 176
 - overcurrent/overvoltage protection 16
 - safety 16
 - troubleshooting 120
- power supply, high-voltage
 - operation 14
- power supply, low-voltage
 - functions 17
 - operation 15
- power-on troubleshooting
 - overview 120
- power-save mode. *See* sleep mode
- pre-boot menu options 103
- pressure roller
 - pressurization and depressurization control 48
- pressure roller cleaning 21

- primary charge (conditioning)
 - stage 27
- print quality
 - built-in troubleshooting pages 189
 - manual print modes 426
 - test pages 189
 - troubleshooting 429
- print quality troubleshooting 198
- Print Test Page 202
- printer management language (PML) 9
- printing
 - modes, manual 426
 - stop for testing 150
 - troubleshooting 446
- problem-solving
 - event-log messages 386
 - messages, types of 263
 - networks 251
- Process Cleaning Page 260
- processor 8
- product cold reset 453
- product job language (PJL)
 - functions 9
- product resets 452
- product sequence of operation 4
- product space requirements 475

Q
quality. *See* print quality

R

- RAM 8
- random access memory (RAM) 8
- repeating defects, troubleshooting 198
- repetitive defects ruler 198
- resolution
 - troubleshooting quality 429
- Resolution Enhancement technology (REt) 8
- restore factory settings 452
- restore the service ID 453
- reverse and delivery control 49
- reversing assembly
 - operations 47
- right door
 - clear jams 406

- Rollers (product base)
 - block diagram 175
- ruler, repetitive defect 198

S

- safety
 - laser/scanner 23
- safety, power supply 16
- scanner
 - operations 73
 - sequence of operation 5
 - tests 153
- scanner controller board (SBC)
 - connectors, diagrams 178
- scanner glass
 - cleaning 440
- scanner interface
 - formatter 9
- scanner sequence of operation 5
- scanner settings 450
- scanning/image capture system 73
- security settings information 196
- sensors
 - ADF 73
 - connections diagram 176
 - diagnostic tests 141
 - fuser-control circuits 18
 - identification 0
 - jam detection 55
 - locations 34
 - temperature detection 21
 - tests, manual 143
 - tests, manual tray/bin 148
- sensors (1x500-sheet paper feeder and 1x500-sheet paper feeder with cabinet)
 - block diagram 156
- sensors (2,500-sheet high-capacity feeder) (HCI)
 - block diagram 157
- sensors (product base)
 - block diagram 155
- sensors (SSMBM)
 - block diagram 158
- separation stage 29
- sequence of operation, product 4
- sequence of operation, scanner 5
- serial number 450

- Service ID
 - convert to date 451
 - restore 451
- Service menu options 449
- service mode functions 449
- service settings 467
- settings
 - restore factory 452
- size specifications, product 474
- skew
 - prevention operations 45
- Sleep (power save) mode 17
- Sleep mode
 - operation 6
- sleep settings 6
- slow fax reception 461
- slow fax transmission 463
- solenoids
 - identification 0
 - locations 35
- solenoids (product base)
 - block diagram 160
- solve connectivity problems 447
- solve performance problems 446
- solve problems 97
- solving
 - direct-connect problems 447
- space requirements, product 475
- specifications
 - electrical and acoustic 476
 - physical 474
 - space requirements 475
- stacker mode
 - stapling mailbox 93
- stages, image formation 26
- staple jams
 - stapling mailbox accessory 419
- staple operation
 - stapling mailbox 86
- stapler
 - stapling mailbox 91
- stapling mailbox 81
 - automatic delivery 96
 - connectors, diagrams 180
 - delivery operation 84
 - failure detection 84
 - jam detection 94
 - mailbox/job separator mode 93
 - motor control 83
 - optional, operations 81
 - output bin 3 lift operation 92
 - stacker mode 93
 - staple operation 86
 - stapler 91
- stapling mailbox accessory
 - clear jams 417
 - clear staple jams 419
- status
 - messages, types of 263
- status page 134
- status, fax accessory page 458
- stop printing for test 150
- streaks, troubleshooting 431
- switches
 - connections diagram 176
 - identification 0
 - location 36
 - paper feeder 67
- switches (product base)
 - block diagram 159
- system block diagram 3
- systems
 - main product 2

T

- T.30 Trace report 467
- TCP/IP information 196
- temperature
 - detection sensor 21
 - fuser sleeve temperature protection 20
 - fuser-control circuits 18
- temperature control, fuser 19
- tests
 - component tests list and descriptions 151
 - disable cartridge check 140
 - engine 140
 - manual sensor and tray bin sensor 143
 - networks 251
 - paper path 141
 - paper-path sensors 141
 - print/stop 150
 - scanner 153
 - scanner tests 153
 - tray/bin manual sensor 148
- text, troubleshooting 433
- timing chart 182
- tips iii
- toner
 - loose, troubleshooting 433
- toner cartridge
 - cartridge life detection 31
 - cartridge presence detection 31
 - components 31
 - memory chip 31
 - toner level detection 31
- toner cartridges
 - diagnostic test 140
- top cover
 - jams 413
- touchscreen blank, white, or dim (no image) 128
- touchscreen has an unresponsive zone 130
- touchscreen is slow to respond 129
- transfer stage 28
- tray
 - lift operation 68
 - presence detection 67
- Tray 1
 - jams 398
 - paper pickup operation 43
 - paper presence detection 44
- Tray 2
 - jams 401
 - media-size detection components 40
 - multiple-feed prevention 42
 - paper pickup operation 39
 - paper presence detection 41
 - paper size detection 40
 - tray lift operation 41
 - tray-present detection 40
- Tray 3
 - jams 401
 - tray lift operation 68
- Tray 4
 - jams 401
 - tray lift operation 68
- Tray 5
 - paper jams 403
 - tray lift operation 69
- tray selection - use requested tray 244
- trays
 - jam detection 55
- troubleshooting 97
 - blank pages 446

- checklist 98
- clean the paper path 193
- configuration page 134
- configuration pages 194
- control panel checks 124
- demo page 134
- direct-connect problems 447
- event log 134
- flowchart 119
- jams 388, 392, 425
- lights, using 134
- lines, printed pages 431
- network problems 447
- pages not printing 446
- pages printing slowly 446
- paper feed problems 424
- PBX systems 463
- power 120
- print quality 189
- print quality issues 429
- process 119
- repeating defects 198
- reports and tools 134
- scanner calibration 124
- scanning subsystem 124
- slow fax reception 461
- slow fax transmission 463
- status page 134
- text 433
- USB cables 446
- wired network 447
- wrinkles 433

U

- understand lights on the formatter
 - formatter lights 134
- understand the lights on the formatter
 - connectivity LED 134
 - connectivity LED, product 135
 - connectivity LED, product operating 137
 - heartbeat LED 137
 - HP Jetdirect LEDs 137
- upgrade firmware 470
- upgrades, downloading product firmware 468

- USB flash drive
 - firmware upgrade, control panel 471
 - firmware upgrade, pre-boot menu 470
- USB port
 - troubleshooting 446
- Use Requested Tray 244

V

- vertical lines, troubleshooting 431
- VoIP 460
- voltage detection
 - DC controller 16

W

- warnings iii
- warranty date information 451
- white spots, troubleshooting 430
- wrinkles, troubleshooting 433

