



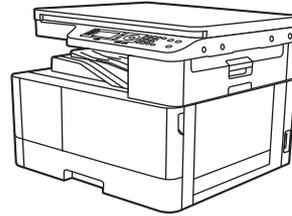
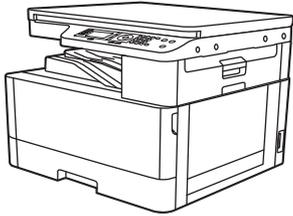
HP LaserJet MFP M433, M436, M437, M438, M439

HP LaserJet MFP M440, M442, M443

HP LaserJet MFP M42523, M42525

HP LaserJet MFP M42623, M42625

## Service Manual



[www.hp.com/videos/LaserJet](http://www.hp.com/videos/LaserJet)

[www.hp.com/support/ljM433MFP](http://www.hp.com/support/ljM433MFP)

[www.hp.com/support/ljM436MFP](http://www.hp.com/support/ljM436MFP)

[www.hp.com/support/ljM437MFP](http://www.hp.com/support/ljM437MFP)

[www.hp.com/support/ljM438MFP](http://www.hp.com/support/ljM438MFP)

[www.hp.com/support/ljM439MFP](http://www.hp.com/support/ljM439MFP)

[www.hp.com/support/ljM440MFP](http://www.hp.com/support/ljM440MFP)

[www.hp.com/support/ljM442MFP](http://www.hp.com/support/ljM442MFP)

[www.hp.com/support/ljM443MFP](http://www.hp.com/support/ljM443MFP)

[www.hp.com/support/ljM42523MFP](http://www.hp.com/support/ljM42523MFP)

[www.hp.com/support/ljM42525MFP](http://www.hp.com/support/ljM42525MFP)

[www.hp.com/support/ljM42623MFP](http://www.hp.com/support/ljM42623MFP)

[www.hp.com/support/ljM42625MFP](http://www.hp.com/support/ljM42625MFP)







HP LaserJet MFP M433, M436, M437, M438,  
M439, M440, M442, M443, M42523,  
M42525, M42623, M42625

Service Manual

## Copyright and License

© Copyright 2020 HP 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 8, 04/2020

## Trademark Credits

Adobe®, Acrobat®, and PostScript® are trademarks of Adobe Systems Incorporated.

Microsoft®, Windows®, Windows® XP, and Windows Vista® are U.S. registered trademarks of Microsoft Corporation.

## Conventions used in this guide

---

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

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

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

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

---



## Revision history

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.

Table -1 Revision history

Revision number	Revision date	Revision notes
2	12/2019	Added HP LaserJet MFP M437, M438, M439, M440, M442, M443, M2523, M2525, M2623, M2625 printer content: <ul style="list-style-type: none"><li>• <a href="#">Product Overview on page 2</a></li><li>• <a href="#">Specifications (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625) on page 11</a></li><li>• <a href="#">System configuration on page 21</a></li><li>• <a href="#">Main components and functions on page 25</a></li><li>• <a href="#">Registration roller on page 28</a></li><li>• <a href="#">Removal: Front cover (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625) on page 128</a></li><li>• <a href="#">Removal: Formatter board on page 133</a></li><li>• <a href="#">SMPS (LVPS) board on page 64</a></li><li>• <a href="#">SMPS (LVPS) board on page 64</a></li><li>• <a href="#">Control panel on page 228</a></li><li>• <a href="#">Tech Mode on page 256</a></li><li>• <a href="#">Control-Panel Error Messages on page 267</a></li><li>• <a href="#">Printing quality problems on page 303</a></li><li>• <a href="#">System diagram on page 311</a></li></ul>
1	3/2019	HP LaserJet MFP M433a HP LaserJet MFP M436n, M436dn, M436nda Service manual initial release



---

# Table of contents

<b>1 Product specs and features</b> .....	<b>1</b>
Product Overview .....	2
Specifications (HP LaserJet MFP M433/M436) .....	3
General Specifications (M433/M436) .....	3
Print specifications (M433/M436) .....	4
Controller and software specification (M433/M436) .....	4
Scan specification (M433/M436) .....	5
Copy specification (M433/M436) .....	6
Paper handling specification (M433/M436) .....	7
Supplies (M433/M436) .....	9
Maintenance parts (M433/M436) .....	9
Optional accessories (M433/M436) .....	10
Specifications (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/ M42625) .....	11
General Specifications (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/ M42525/M42623/M42625) .....	11
Print specifications (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/ M42525/M42623/M42625) .....	12
Controller and software specification (HP LaserJet MFP M437/M438/M439/M440/M442/M443/ M42523/M42525/M42623/M42625) .....	13
Scan specification (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/ M42623/M42625) .....	15
Copy specification (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/ M42623/M42625) .....	16
Paper handling specification (HP LaserJet MFP M437/M438/M439/M440/M442/M443/ M42523/M42525/M42623/M42625) .....	17
Supplies (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/ M42625) .....	18
Dynamic security .....	19
Maintenance parts (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/ M42525/M42623/M42625) .....	19
Optional accessories (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/ M42525/M42623/M42625) .....	20

System configuration .....	21
Feeding system .....	24
Feeding system overview .....	24
Main components and functions .....	25
Cassette .....	27
Pickup roller and friction pad .....	28
Registration roller .....	28
MPF (Multi-Purpose Feeder) unit .....	29
Image Creation .....	31
Printing process overview .....	31
Imaging unit .....	31
Imaging unit overview .....	31
Drum drive .....	32
Developer unit .....	32
Fuser unit .....	35
Fuser unit overview .....	35
Fuser duplex exit drive .....	36
Fuser unit temperature control .....	36
Laser Scanning unit (LSU) .....	38
LSU overview .....	38
Laser scanning optical path .....	39
Laser synchronizing detectors .....	39
Drive system .....	41
Drive motors .....	41
Main drive unit (OPC_DEVE_REGL_MP_pickup) .....	42
Fuser duplex exit drive .....	44
Toner cartridge drive .....	45
Scanner System .....	46
Scanner system overview .....	46
Scanning system components .....	46
Document feeder .....	48
Document feeder overview .....	48
Electrical parts location .....	49
Document feeder drive system .....	50
Overview .....	50
Document feeder original drive assembly .....	50
Document feeder registration drive assembly .....	51
Document feeder feed drive assembly .....	52
Document feeder exit drive assembly .....	52
Original return drive .....	53
Hardware configuration .....	54

Overview .....	54
Circuit Board Locations .....	56
Formatter (Main) board block diagram .....	57
Formatter (Main) board connectors .....	59
OPE board .....	60
SMPS (LVPS) board (HP LaserJet MFP M433a Printer only) .....	61
SMPS (LVPS) board .....	64
HVPS board .....	66
BLU PBA (back light unit) .....	68
Document feeder board .....	69
Tray 3 accessory board .....	70
Sensor location .....	70

## 2 Removal and replacement ..... 73

HP service and support .....	75
Additional service and support for channel partners .....	75
Additional service and support for HP internal personnel .....	75
Removal and replacement strategy .....	76
Electrostatic discharge .....	76
Required tools .....	77
Types of screws .....	77
Service approach .....	77
Before performing service .....	77
Releasing Plastic Latches .....	77
After performing service .....	77
Post-service test .....	78
Print-quality test .....	78
Removal: Toner cartridge .....	79
Introduction .....	79
Overview .....	79
Before performing service .....	79
Required tools .....	79
After performing service .....	79
Post service test .....	80
Remove: Toner cartridge .....	80
Removal: Transfer roller .....	83
Introduction .....	83
Overview .....	83
Before performing service .....	83
Required tools .....	83
After performing service .....	83

Post service test .....	83
Remove: Transfer roller .....	83
Removal: Fuser unit .....	85
Introduction .....	85
Overview .....	85
Before performing service .....	85
Required tools .....	85
After performing service .....	85
Post service test .....	85
Remove: Fuser unit .....	85
Removal: Imaging unit (drum unit and developer) .....	88
Introduction .....	88
Overview .....	88
Before performing service .....	88
Required tools .....	88
After performing service .....	88
Post service test .....	88
Remove: Imaging unit (drum unit and developer) .....	88
Removal: Pickup roller and friction pad .....	111
Introduction .....	111
Overview .....	111
Before performing service .....	111
Required tools .....	111
After performing service .....	111
Post service test .....	111
Remove: Pickup roller and friction pad .....	111
Removal: MP pickup roller and friction pad .....	114
Introduction .....	114
Overview .....	114
Before performing service .....	114
Required tools .....	114
After performing service .....	114
Post service test .....	114
Remove: MP pickup roller and friction pad .....	114
Removal: Document feeder pickup roller assembly .....	119
Introduction .....	119
Overview .....	119
Before performing service .....	119
Required tools .....	119
After performing service .....	119
Post service test .....	119

Remove: Document feeder pickup roller assembly .....	119
Removal: Document feeder friction pad .....	122
Introduction .....	122
Overview .....	122
Before performing service .....	122
Required tools .....	122
After performing service .....	122
Post service test .....	122
Remove: Document feeder friction pad .....	122
Removal: Rear cover .....	124
Introduction .....	124
Overview .....	124
Before performing service .....	124
Required tools .....	124
After performing service .....	124
Post service test .....	124
Remove: Rear cover .....	124
Removal: Front cover (M433/M436) .....	126
Introduction .....	126
Overview .....	126
Before performing service .....	126
Required tools .....	126
After performing service .....	126
Post service test .....	126
Remove: Front cover (M433/M436) .....	126
Removal: Front cover (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625) .....	128
Introduction .....	128
Overview .....	128
Before performing service .....	128
Required tools .....	128
After performing service .....	128
Post service test .....	128
Remove: Front cover (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/ M42625) .....	128
Removal: Left cover .....	131
Introduction .....	131
Overview .....	131
Before performing service .....	131
Required tools .....	131
After performing service .....	131
Post service test .....	131

Remove: Left cover .....	131
Removal: Formatter board .....	133
Introduction .....	133
Overview .....	133
Before performing service .....	133
Required tools .....	133
After performing service .....	133
Post service test .....	133
Remove: Formatter board .....	133
Removal: SMPS (LVPS) board .....	135
Introduction .....	135
Overview .....	135
Before performing service .....	135
Required tools .....	135
After performing service .....	135
Post service test .....	135
Remove: SMPS (LVPS) board .....	135
Removal: Front cover open sensor .....	138
Introduction .....	138
Overview .....	138
Before performing service .....	138
Required tools .....	138
After performing service .....	138
Post service test .....	138
Remove: Front cover open sensor .....	138
Removal: Side unit .....	140
Introduction .....	140
Overview .....	140
Before performing service .....	140
Required tools .....	140
After performing service .....	140
Post service test .....	140
Remove: Side unit .....	140
Removal: Side cover-open sensor .....	142
Introduction .....	142
Overview .....	142
Before performing service .....	142
Required tools .....	142
After performing service .....	142
Post service test .....	142
Remove: Side cover-open sensor .....	142

Removal: Platen cover (a/n/dn models only) .....	145
Introduction .....	145
Overview .....	145
Before performing service .....	145
Required tools .....	145
After performing service .....	145
Post service test .....	145
Remove: Platen cover (a/n/dn models only) .....	145
Removal: Document feeder unit (optional) .....	147
Introduction .....	147
Overview .....	147
Before performing service .....	147
Required tools .....	147
After performing service .....	147
Post service test .....	147
Remove: Document feeder unit (optional) .....	147
Removal: Document feeder cover .....	150
Introduction .....	150
Overview .....	150
Before performing service .....	150
Required tools .....	150
After performing service .....	150
Post service test .....	150
Remove: Document feeder cover .....	150
Removal: Document feeder open cover .....	153
Introduction .....	153
Overview .....	153
Before performing service .....	153
Required tools .....	153
After performing service .....	153
Post service test .....	153
Remove: Document feeder open cover .....	153
Removal: Document feeder stacker .....	155
Introduction .....	155
Overview .....	155
Before performing service .....	155
Required tools .....	155
After performing service .....	155
Post service test .....	155
Remove: Document feeder stacker .....	155
Removal: Document feeder board .....	157

Introduction .....	157
Overview .....	157
Before performing service .....	157
Required tools .....	157
After performing service .....	157
Post service test .....	157
Remove: Document feeder board .....	157
Removal: Document feeder registration-cover-detect sensor .....	159
Introduction .....	159
Overview .....	159
Before performing service .....	159
Required tools .....	159
After performing service .....	159
Post service test .....	159
Remove: Document feeder registration-cover-detect sensor .....	159
Removal: Document feeder motor solenoid clutch .....	161
Introduction .....	161
Overview .....	161
Before performing service .....	161
Required tools .....	161
After performing service .....	161
Post service test .....	161
Remove: Document feeder motor solenoid clutch .....	161
Removal: Document feeder exit idle sensor .....	166
Introduction .....	166
Overview .....	166
Before performing service .....	166
Required tools .....	166
After performing service .....	166
Post service test .....	166
Remove: Document feeder exit idle sensor .....	166
Removal: Document feeder exit sensor .....	168
Introduction .....	168
Overview .....	168
Before performing service .....	168
Required tools .....	168
After performing service .....	168
Post service test .....	168
Remove: Document feeder exit sensor .....	168
Removal: Document feeder length-width sensor .....	170
Introduction .....	170

Overview .....	170
Before performing service .....	170
Required tools .....	170
After performing service .....	170
Post service test .....	170
Remove: Document feeder length-width sensor .....	170
Removal: OPE unit .....	172
Introduction .....	172
Overview .....	172
Before performing service .....	172
Required tools .....	172
After performing service .....	172
Post service test .....	172
Remove: OPE unit .....	172
Removal: Platen unit .....	175
Introduction .....	175
Overview .....	175
Before performing service .....	175
Required tools .....	175
After performing service .....	175
Post service test .....	175
Remove: Platen unit .....	175
Removal: Upper platen .....	179
Introduction .....	179
Overview .....	179
Before performing service .....	179
Required tools .....	179
After performing service .....	179
Post service test .....	179
Remove: Upper platen .....	179
Removal: CIS unit .....	182
Introduction .....	182
Overview .....	182
Before performing service .....	182
Required tools .....	182
After performing service .....	182
Post service test .....	182
Remove: CIS unit .....	182
Removal: Scan drive unit .....	184
Introduction .....	184
Overview .....	184

Before performing service .....	184
Required tools .....	184
After performing service .....	184
Post service test .....	184
Remove: Scan drive unit .....	184
Removal: Scan home-position sensor and cover-open sensor .....	186
Introduction .....	186
Overview .....	186
Before performing service .....	186
Required tools .....	186
After performing service .....	186
Post service test .....	186
Remove: Scan home-position sensor and cover-open sensor .....	186
Removal: Laser/scanner unit (LSU) .....	188
Introduction .....	188
Overview .....	188
Before performing service .....	188
Required tools .....	188
After performing service .....	188
Post service test .....	188
Remove: Laser/scanner unit (LSU) .....	188
Removal: Main drive motor .....	190
Introduction .....	190
Overview .....	190
Before performing service .....	190
Required tools .....	190
After performing service .....	190
Post service test .....	190
Remove: Main drive motor .....	190
Removal: Exit motor (MFP M436nda only) .....	192
Introduction .....	192
Overview .....	192
Before performing service .....	192
Required tools .....	192
After performing service .....	192
Post service test .....	192
Remove: Exit motor (MFP M436nda only) .....	192
Removal: Fuser motor .....	194
Introduction .....	194
Overview .....	194
Before performing service .....	194

Required tools .....	194
After performing service .....	194
Post service test .....	194
Remove: Fuser motor .....	194
Removal: Paper empty, registration, and MP sensor .....	196
Introduction .....	196
Overview .....	196
Before performing service .....	196
Required tools .....	196
After performing service .....	196
Post service test .....	196
Remove: Paper empty, registration, and MP sensor .....	196
Removal: MP clutch .....	200
Introduction .....	200
Overview .....	200
Before performing service .....	200
Required tools .....	200
After performing service .....	200
Post service test .....	200
Remove: MP clutch .....	200
Removal: Registration clutch .....	202
Introduction .....	202
Overview .....	202
Before performing service .....	202
Required tools .....	202
After performing service .....	202
Post service test .....	202
Remove: Registration clutch .....	202
Removal: Fuser fan .....	205
Introduction .....	205
Overview .....	205
Before performing service .....	205
Required tools .....	205
After performing service .....	205
Post service test .....	205
Remove: Fuser fan .....	205
Removal: HVPS board .....	207
Introduction .....	207
Overview .....	207
Before performing service .....	207
Required tools .....	207

After performing service .....	207
Post service test .....	207
Remove: HVPS board .....	207
Removal: Temperature humidity sensor .....	209
Introduction .....	209
Overview .....	209
Before performing service .....	209
Required tools .....	209
After performing service .....	209
Post service test .....	209
Remove: Temperature humidity sensor .....	209
Removal: Developer unit .....	212
Introduction .....	212
Overview .....	212
Before performing service .....	212
Required tools .....	212
After performing service .....	212
Post service test .....	212
Remove: Developer unit .....	212
Removal: SCF (optional Tray 3) .....	222
Introduction .....	222
Overview .....	222
Before performing service .....	222
Required tools .....	222
After performing service .....	222
Post service test .....	222
Remove: SCF board .....	223
Remove: SCF drive unit .....	224
Remove: SCF feed roller .....	226

### 3 Troubleshooting ..... 227

Control panel .....	228
Understanding the status LED .....	230
Clearing jams .....	232
Introduction .....	232
Tray 2 .....	232
In optional Tray 3 .....	234
In Multi-purpose Tray 1 .....	237
Inside the printer .....	238
In the exit area .....	240
In the duplex unit area .....	242

Clearing original document jams .....	244
Original paper jam in front of scanner .....	244
Original paper jam inside of scanner .....	246
Original paper jam in exit area of scanner .....	249
Original paper jam in scanner duplex path .....	251
Firmware upgrades .....	253
Determine the installed version of firmware .....	254
Perform a firmware upgrade .....	255
HP Embedded Web Server .....	255
USB Firmware Upgrade .....	255
Tech Mode .....	256
Overview .....	256
Entering Tech mode .....	256
Tech mode menu .....	256
Tech Mode Menu description .....	258
Control-Panel Error Messages .....	267
11-2T11, Paper mismatch Tray 2 Load [A4] [Plain] Continue ☉ Cancel X .....	267
11-2T21, Paper mismatch Tray 3 Load [A4] [Plain] Continue ☉ Cancel X .....	267
11-2T61, Paper mismatch Tray 1Load [A4] [Plain] Continue ☉ Cancel X .....	267
A1-1110, Error: #A1-1110 / Motor Failure: #A1-1110. Turn off then on. Call for service if the problem persists .....	267
A1-5513, Error: #A1-5513 / Motor Failure: #A1-1110. Turn off then on. Call for service if the problem persists .....	269
A2-1210, Error: #A2-1210 / Fan Failure: #A2-1210. Turn off then on. Call for service if the problem persists .....	270
A2-2110, Error: #A2-2110 / Fan Failure: #A2-2110. Turn off then on. Call for service if the problem persists .....	271
A3-3311, A3-3312, A3-3320, A3-3411, A3-3412 Sensor errors .....	272
C1-1110, C1-111A Toner errors .....	274
C1-1140, C1-1160, C1-1170 Toner errors .....	275
C1-1313, C1-1314 Errors .....	275
C1-1411 Toner Not Installed / Toner cartridge is not installed. Install it .....	277
C1-1512, Toner Not Compatible / Toner cartridge is not compatible. Check guide .....	278
C1-1711, C1-1712 Errors .....	278
C3-1110, Prepare IMG. Unit / Prepare new imaging unit .....	279
C3-1140, C3-1150, C3-1170 Imaging unit errors .....	279
C3-1312, C3-1411, C3-1414 Imaging unit errors .....	280
C3-1512, IMG. Not compatible / Imaging unit is not compatible. Check guide .....	281
C3-1711, C3-1712 Imaging unit errors .....	282
C9-2110, C9-2120, Prepare TR. Roller / Prepare with new transfer roller .....	282
C9-2220, Error: #C9-2220 / TR Failure: #C9-2220. Install TR roller again .....	283

H1-1210, Paper jam in tray 3 .....	284
H1-1220 Tray 3 door is open. Close it .....	284
H1-1230, Error: #H1-1230 / Input System Failure: #H1-1230. Check tray 3 connection .....	285
H1-1252, H1-1254, Paper is empty in tray 3 / Paper is empty in tray 3. Load paper .....	285
M1-1110, Paper jam in tray 2 .....	285
M1-1610, Paper jam in tray 1 .....	286
M1-5112, M1-5113, Paper empty in tray 2 / Paper is empty in tray 2. Load paper .....	287
M1-5120, All Trays Empty / Paper is empty in all trays. Load paper .....	288
M1-5610, Paper Normal in Tray 1 .....	288
M1-5612, Paper empty in Tray 1. Load paper .....	289
M2-1110, M2-2210 Jam inside errors .....	289
M3-1110, Jam in exit area .....	291
S2-331D, Waiting for low temp / Waiting delay time for lower fixing temperature... ..	292
S2-3321, Supplying Toner / Supplying and mixing toner to developer unit. Please wait... ..	292
S2-3421, Calibrating density / Calibrating image density. Please wait... ..	292
S2-4210, Front door is open. Close it .....	293
S2-4410, Right door is open. Close it .....	293
S3-3122, Scanner Locked / Scanner is locked. Press Stop button .....	293
S3-3211, ADF connection error .....	295
S6-3123, IP Conflict / This IP address conflicts with that of other system .....	295
U1-2132, U1-2315, U1-2320, U1-2330, U1-2334, U1-2340, U1-234H Fuser unit failure errors ..	295
U2-1111, U2-1112, U2-1113, U2-1114 LSU failure errors .....	296
U3-3211, U3-3213, U3-3214, U3-3311, U3-3313, U3-3314 Original paper jam / Original paper jam inside of scanner. Remove jam .....	298
U3-3411, U3-3413, U3-3414 Original paper jam / Original paper jam inside of scanner. Remove jam .....	299
U3-3511, U3-3513, U3-3514 Original paper jam / Original paper jam inside of scanner. Remove jam .....	300
U3-3711, U3-3713, U3-3714 Original paper jam / Original paper jam inside of scanner. Remove jam .....	301
U3-4210 Scanner door open / Top door of scanner is open. Close the door .....	302
Printing quality problems .....	303
Adjusting the document feeder skew .....	308
Other errors .....	310
System diagram .....	311

Index .....	315
-------------	-----

---

# 1 Product specs and features

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

# Product Overview

**Table 1-1** HP LaserJet MFP M433/M436 product overview

Item	Description
Printing speed	<ul style="list-style-type: none"><li>• Up to 20 ppm on A4 or Letter M433</li><li>• Up to 23 ppm on A4 or Letter M436</li></ul>
Scan speed (ADF)	30 ipm @ color 200dpi, 30 ipm @ mono 300dpi
Processor	600 MHz
Memory	128 MB
Option unit	Document feeder (M436n/dn only)

**Table 1-2** HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/42525/M42623/M42625 product overview

Item	Description
Printing speed	<ul style="list-style-type: none"><li>• Up to 22ppm on A4 or Letter M437,M438</li><li>• Up to 23ppm on A4 or Letter M441,M42523,M42623</li><li>• Up to 24ppm on A4 or Letter M439,M440,M442</li><li>• Up to 25ppm on A4 or Letter M443,M42525,M42625</li></ul>
Scan speed (ADF)	33 ipm @ color 200dpi, 33 ipm @ mono 300dpi
Processor	600 MHz
Memory	<ul style="list-style-type: none"><li>• 256MB (M437n,M438n,M439n,M440n,M42523n,M42623n only)</li><li>• 512MB</li></ul>
Option unit	<ul style="list-style-type: none"><li>• Document feeder</li><li>• Optional tray</li></ul>

# Specifications (HP LaserJet MFP M433/M436)

Product specifications are subject to change without notice.

## General Specifications (M433/M436)

**Table 1-3** General specifications (M433/M436)

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

**Table 1-3 General specifications (M433/M436) (continued)**

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

## Print specifications (M433/M436)

**Table 1-4 Print specifications (M433/M436)**

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

## Controller and software specification (M433/M436)

**Table 1-5 Controller and software specification (M433/M436)**

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

**Table 1-5 Controller and software specification (M433/M436) (continued)**

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

**Table 1-6 Interface (M433/M436)**

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

**Table 1-7 Network Interface (M433/M436)**

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

## Scan specification (M433/M436)

**Table 1-8 Scan specification (M433/M436)**

Item	Specification
Scan method	D-CIS

**Table 1-8 Scan specification (M433/M436) (continued)**

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

## Copy specification (M433/M436)

**Table 1-9 Copy specification (M433/M436)**

Item	Specification	
Copy Speed	Up to 20 cpm in A4 & Letter	
FCOT	From Ready	Less than 7.4 seconds (from platen)
	From Sleep	Less than 22.2 seconds (from platen)

**Table 1-9 Copy specification (M433/M436) (continued)**

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

## Paper handling specification (M433/M436)

**Table 1-10 Paper handling specification (M433/M436)**

Item		Specification
Standard Capacity		<ul style="list-style-type: none"> <li>250-sheet cassette Tray (20 lb or 80 g/m<sup>2</sup>)</li> <li>100-sheet MP tray (20 lb or 80 g/m<sup>2</sup>)</li> </ul>
	Max. Input Capacity	<ul style="list-style-type: none"> <li>HP LaserJet MFP M436nda Printer: 600 sheets @ 20 lb or 80 g/m<sup>2</sup> (Tray 2 + Optional Tray + Tray 1)</li> <li>HP LaserJet MFP M436n/M436dn Printer: 350 sheets @ 20 lb or 80 g/m<sup>2</sup> (Tray 2 + Tray 1)</li> </ul>
Printing	Max. Size	297 x 432 mm (11.7" x 17")

**Table 1-10 Paper handling specification (M433/M436) (continued)**

Item	Specification
	Min. Size–Tray 1 125 x 101.6 mm (4.92 x 4 inches)
	Min. Size–Tray 2/3 148.5 x 182 mm (5.83 x 7.17 inches)
	Margin(T/B/L/R) 4.2+/-1.5mm
MP Tray	Capacity • Plain Paper: 100 sheets @ 80 g/m <sup>2</sup>
	Media sizes A4,A5, B5 (JIS), Letter, Executive, Statement, A3, B4 (JIS), 8K, 16K, Ledger, Legal, Oficio 8.5 x 13, Oficio 216 x 1340, 4x6
	Media type Plain, HP LaserJet 90g, Light 60-74g, Intermediate 85-95 g, Bond, Recycled, Mid-Weight 96-110g, Heavy 111-130g Preprinted, Letterhead, Prepunched, Cardstock, Colored
	Media weight • 16 ~ 43 lb (60 to 163 g/m <sup>2</sup> ): Simplex • 16 ~ 28 lb (60 to 110 g/m <sup>2</sup> ): Duplex
	Sensing Paper Empty Detect: Yes
	Standard Cassette Tray
	Media sizes A3/A4/A5/B4 (JIS)/B5 (JIS)/Ledger/Legal/Oficio/Letter/Executive/4x6/8K/16K
	Media types Plain, Mid-weight, Light, HP LaserJet, Colored, Preprinted, Recycled, Intermediate, Letterhead, Prepunched
	Media weight • 16 - 29 lb • 60 - 110 gsm
	Sensing Paper Empty: Yes
Optional Cassette Tray (M436 only)	Capacity 250 sheets @ 20 lb (80g/m <sup>2</sup> )
	Media sizes A3/A4/A5/B4 (JIS)/B5 (JIS)/Ledger/Legal/Oficio 8.5 x 13, Oficio 216 x 340 mm/Letter/Executive/8K/16K
	Media types Plain, Mid-weight, Light, HP LaserJet, Colored, Preprinted, Recycled, Intermediate, Letterhead, Prepunched
	Media weight • 16 - 29 lb • 60 - 110 gsm
	Sensing Paper Empty: Yes
	Document feeder
2-sided document scanning No	
Document size • Width: 128–297 mm • Length:128–432 mm	

**Table 1-10 Paper handling specification (M433/M436) (continued)**

Item	Specification
Document weight	• 60~128g/m <sup>2</sup> (16-34lbs)
Sensing	Paper Empty, Paper Width, Paper Length

## Supplies (M433/M436)

When supplies reach the end of their life span, you can order the following supplies for your printer.

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

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

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

**Table 1-11 Supplies (M433/M436)**

Item	Description	Part number	Life
Toner Cartridge	Standard-capacity replacement black toner cartridge	CF256A	7,400 pages <sup>2</sup>
	High-capacity replacement black toner cartridge	CF256X	13,700 <sup>2</sup>
Imaging unit <sup>1</sup>	Replacement imaging drum	CF257A	8,000 pages <sup>3</sup>
Developer	Replacement developer unit	JC96-08455A	200,000 pages <sup>3</sup>

<sup>1</sup> The imaging unit must be installed by a service technician.

<sup>2</sup> Print cartridge life is approximate, based on average A4/Letter-size page count with ISO coverage. Declared cartridge yield value in accordance with ISO/IEC 19798. Actual yields vary considerably based on images printed and other factors. For more information, go to [www.hp.com/go/learnaboutesupplies](http://www.hp.com/go/learnaboutesupplies).

<sup>3</sup> Fuser, drum, developer, tray rollers, PTB and ADF rollers life are approximate values based on A4/Letter equivalent simplex pages. These values might vary with environment, usage, media type, or average print job size.

## Maintenance parts (M433/M436)

**Table 1-12 Maintenance parts (M433/M436)**

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

**Table 1-12 Maintenance parts (M433/M436) (continued)**

Item	Kit number	Life
Document feeder Pick-Up roller assembly (optional)	JC97-04009A	Approx. 120,000 pages
Document feeder Friction Pad (optional)	JC97-04733A	Approx. 50,000 pages

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

## Optional accessories (M433/M436)

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

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

**Table 1-13 Option accessories (M433/M436)**

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

<sup>a</sup> M436n/M436dn Only

<sup>b</sup> Plain paper 80 g/m<sup>2</sup> (20 lbs bond)

# Specifications (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

Product specifications are subject to change without notice.

## General Specifications (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

**Table 1-14 General specifications (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)**

Item		Specification	
Function		<ul style="list-style-type: none"> <li>HP LaserJet MFP M437n, M438n, M439n, M440n, M42523n, M42623n: Print Copy, Scan, Network</li> <li>HP LaserJet MFP M437dn, M437nda, M439dn, M439nda, M42523dn, M42525dn, M438dn, M438nda, M440dn, M440nda, M42623dn, M42625dn, M442dn, M443nda: Print Copy, Scan, Network, Duplex</li> </ul>	
	Temperature		
	Operating	10 ~ 30 °C (50 ~ 86 °F)	
	Storage	-20 ~ 40 °C (-4 ~ 104 °F)	
Humidity	Operating	20~80% RH	
	Storage	10~90% RH	
Acoustic Noise Level (Sound Power/Pressure)	Printing	<ul style="list-style-type: none"> <li>Tray 2: 51 dBA</li> <li>Tray 3: 53 dBA</li> <li>MP Tray 1: 53 dBA</li> </ul>	
		Copying	<ul style="list-style-type: none"> <li>Tray 2: 51 dBA (@platen), 55 dBA (@document feeder)</li> <li>Tray 3: 53 dBA(@platen), 57 dBA (@document feeder)</li> <li>MP Tray 1: 53 dBA(@platen), 57 dBA (@document feeder)</li> </ul>
	Power Supply	Input Voltage	AC 220-240V (-10%~6%)/5A
	Rated Frequency	50Hz / 60Hz	
Power Consumption	Ready	80 W	
	Printing	22 ppm 550 W	
		23 ppm 560 W	
		24 ppm 580 W	
		25 ppm 600 W	

**Table 1-14** General specifications (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625) (continued)

Item	Specification	
Copying		22 ppm 550 W
		23 ppm 560 W
		24 ppm 580 W
		25 ppm 600 W
Scanning		80 W
Power Off		0.2 W
Dimension (W x L x H)	n/dn models	560 x 540 x 417 mm (22.05 x 21.26 x 16.42 inches)
	nda models	560 x 583.5 x 504.5 mm (22.5 x 22.97 x 19.86 inches)
Weight	n/dn models	25 kg (55.12 lbs)
	nda models	30.00 kg (66.14 lbs)
Reliability & Service	Recommended Printing Volume (AMPV)	2,000 to 5,000 sheets/month
	Max. Monthly Print Volume	50,000 sheets/month

## Print specifications (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

**Table 1-15** Print specifications (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

Item	Specification	
Engine Speed	Simplex/Duplex	simplex 22 ppm / duplex 12 ppm
		simplex 23 ppm / duplex 13 ppm
		simplex 24 ppm / duplex 12 ppm
		simplex 25 ppm / duplex 13 ppm
FPOT	From Ready	Less than 9.2 sec
	From Sleep	Less than 22.2 sec
Resolution	Optical	600 x 600 x 2 bit dpi
	Enhanced	1200 x 1200 dpi
Printer Language		PCL6, PS

# Controller and software specification (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

**Table 1-16** Controller and software specification (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

Item	Specification
Processor	600 MHz
Memory	256 MB (M437n, M438n, M439n, M440n, M42523n, M42623n only) 512 MB
Memory Expansion	N/A
Storage	N/A
Printer driver	Supporting OS <b>Windows</b> <ul style="list-style-type: none"> <li>Windows 7 (32/64 bit), Windows 2008 Server R2, Windows 8 (32/64 bit), Windows 8.1 (32/64 bit), Windows 10 (32/64 bit), Windows 2012 Server, Windows 2016 Server</li> </ul> <b>Linux</b> <ul style="list-style-type: none"> <li>Red Hat Enterprise Linux : 5, 6, 7, Fedora : 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, openSUSE : 11.2, 11.4, 12.1, 12.1, 12.3, 13.1, 13.2, 42.1, Ubuntu : 11.10, 12.04, 12.10, 13.04, 13.10, 14.04, 14.10, 15.04, 15.10, 16.04, 16.10, 17.04, 17.10, 18.04, 18.10, 19.04, SUSE Linux Enterprise Desktop : 10, 11, 12, Debian : 6, 7, 8, 9, Linux Mint : 15, 16, 17, 18</li> </ul>
Default Driver	PCL6
Driver feature	[Windows] <ul style="list-style-type: none"> <li>Watermark, Overlay, N-up printing, Poster printing</li> <li>Manual duplex and auto duplex (depending on model)</li> </ul>
WHQL (Windows Hardware Quality Labs)	Windows 7 (32/64 bit), Windows 2008 Server R2, Windows 8 (32/64 bit), Windows 8.1 (32/64 bit), Windows 10 (32/64 bit), Windows 2012 Server, Windows 2016 Server
Scan driver	TWAIN Yes

**Table 1-16** Controller and software specification (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625) (continued)

Item	Specification
	WIA
	Yes
	Supporting OS
	<p><b>Windows</b></p> <ul style="list-style-type: none"> <li>Windows 7 (32/64 bit), Windows 2008 Server R2, Windows 8 (32/64 bit), Windows 8.1 (32/64 bit), Windows 10 (32/64 bit), Windows 2012 Server, Windows 2016 Server</li> </ul> <p><b>Linux</b></p> <ul style="list-style-type: none"> <li>Red Hat Enterprise Linux : 5, 6, 7, Fedora : 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, openSUSE : 11.2, 11.4, 12.1, 12.1, 12.3, 13.1, 13.2, 42.1, Ubuntu : 11.10, 12.04, 12.10, 13.04, 13.10, 14.04, 14.10, 15.04, 15.10, 16.04, 16.10, 17.04, 17.10, 18.04, 18.10, 19.04, SUSE Linux Enterprise Desktop : 10, 11, 12, Debian : 6, 7, 8, 9, Linux Mint : 15, 16, 17, 18</li> </ul>

**Table 1-17** Interface (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

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

**Table 1-18** Network Interface (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

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

## Scan specification (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

**Table 1-19** Scan specification (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

Item	Specification	
Scan method	D-CIS	
Compatibility	TWAIN, WIA	
Color Mode	Mono/Gray/Color	
Scan Speed	B/W	33 ipm @ A4 and Letter
	Gray	33 ipm @ A4 and Letter
	Color	33 ipm @ A4 and Letter
Resolution	Optical	<ul style="list-style-type: none"> <li>Platen: up to 600 x 600 dpi</li> <li>Document feeder: up to 600 x 600 dpi</li> </ul>
Scan Size	Document feeder	<ul style="list-style-type: none"> <li>Max. Document Width: Max. 297 mm</li> <li>Max. Document Width: Max. 297 mm • Effective Scan Width: Max. 291 mm</li> <li>Max. Document Length: Max. 432 mm</li> <li>Effective Scan Length: Max 424 mm</li> </ul>
	platen	<ul style="list-style-type: none"> <li>Max. Document Width: Max. 297 mm</li> <li>Max. Document Width: Max. 297 mm • Effective Scan Width: Max. 291 mm</li> <li>Max. Document Length: Max. 432 mm</li> <li>Effective Scan Length: Max 424 mm</li> </ul>
Scan-to	PC (Network)	Yes
	HDD	No
	USB	No
	Email	Yes
	Client	No
	SMB	Yes
	FTP	Yes
	HTTP(S)	No
	WSD	Yes
Multi Destination	No	
Scan File Format	PDF, Single-Page-TIFF, JPEG, Multi-Page-TIFF, Single-Page-PDF, TIFF, Editable PDF for Win7/8/8.1/10 using the HP Scan application	

## Copy specification (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

Table 1-20 Copy specification (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

Item	Specification	
Copy Speed	Simplex/Duplex	simplex 22 ppm / duplex 12 ppm
		simplex 23 ppm / duplex 13 ppm
		simplex 24 ppm / duplex 12 ppm
		simplex 25 ppm / duplex 13 ppm
FCOT	From Ready	Less than 7.7 seconds (from platen)
	From Sleep	Less than 22.2 seconds (from platen)
	From Coldboot	Less than 22.2 seconds (from platen)
Copy Original Type	Text	<ul style="list-style-type: none"> <li>Platen: Scan 600 x 600 , Printing 600 x 600</li> <li>Document feeder: Scan 600 x 600 , Printing 600 x 600</li> </ul>
	Text/Photo	<ul style="list-style-type: none"> <li>Platen: Scan 600 x 600 , Printing 600 x 600</li> <li>Document feeder: Scan 600 x 600 , Printing 600 x 600</li> </ul>
	Photo	<ul style="list-style-type: none"> <li>Platen: Scan 600 x 600 , Printing 600 x 600</li> <li>Document feeder: Scan 600 x 600 , Printing 600 x 600</li> </ul>
	Map	<ul style="list-style-type: none"> <li>Platen: Scan 600 x 600 , Printing 600 x 600</li> <li>Document feeder: Scan 600 x 600 , Printing 600 x 600</li> </ul>
Max. Original Size	Platen	297 x 432 mm (11.7" x 17")
	Document feeder	297 x 432 mm (11.7" x 17")
Copy Feature	Multi Copy	1-+999
	Reduce/Enlarge	25~400%
	ID Card Copy	Yes
	N-up	2/4/8/16-up (A5), 2/4/8-up (A4), 2/4-up (A3)
	Collation Copy	Yes (NDA only)

## Paper handling specification (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

**Table 1-21 Paper handling specification (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)**

Item		Specification	
Standard Capacity		<ul style="list-style-type: none"> <li>250-sheet cassette Tray (20 lb or 80 g/m<sup>2</sup>)</li> <li>100-sheet MP tray (20 lb or 80 g/m<sup>2</sup>)</li> </ul>	
Max. Input Capacity		<ul style="list-style-type: none"> <li>600 sheets @ 20 lb or 80 g/m<sup>2</sup> (Tray 2 + Optional Tray + Tray 1)</li> <li>HP LaserJet MFP M437n/M438n Printer: 350 sheets @ 20 lb or 80 g/m<sup>2</sup> (Tray 2 + Tray 1)</li> </ul>	
Printing	Max. Size	297 x 432 mm (11.7" x 17")	
	Min. Size–Tray 1	125 x 101.6 mm (4.92 x 4 inches)	
	Min. Size–Tray 2/3	148.5 x 182 mm (5.83 x 7.17 inches)	
	Margin(T/B/L/R)	4.2+/-1.5mm	
MP Tray	Capacity	<ul style="list-style-type: none"> <li>Plain Paper: 100 sheets @ 80 g/m<sup>2</sup></li> </ul>	
	Media sizes	A4,A5, B5 (JIS), Letter, Executive, Statement, A3, B4 (JIS), 8K, 16K, Ledger, Legal, Oficio 8.5 x 13, Oficio 216 x 1340, 4x6	
	Media type	Plain, HP LaserJet 90g, Light 60–74g, Intermediate 85–95 g, Bond, Recycled, Mid-Weight 96–110g, Heavy 111–130g Preprinted, Letterhead, Prepunched, Cardstock, Colored	
	Media weight	<ul style="list-style-type: none"> <li>16 ~ 43 lb (60 to 163 g/m<sup>2</sup>): Simplex</li> <li>16 ~ 28 lb (60 to 110 g/m<sup>2</sup>): Duplex</li> </ul>	
	Sensing	Paper Empty Detect: Yes	
	Standard Cassette Tray		Capacity
		Media sizes	A3/A4/A5/B4 (JIS)/B5 (JIS)/Ledger/Legal/Oficio/Letter/Executive/4x6/8K/16K
		Media types	Plain, Mid-weight, Light, HP LaserJet, Colored, Preprinted, Recycled, Intermediate, Letterhead, Prepunched
		Media weight	<ul style="list-style-type: none"> <li>16 - 29 lb</li> <li>60 - 110 gsm</li> </ul>
		Sensing	Paper Empty: Yes
Optional Cassette Tray		Capacity	250 sheets @ 20 lb (80g/m <sup>2</sup> )
		Media sizes	A3/A4/A5/B4 (JIS)/B5 (JIS)/Ledger/Legal/Oficio 8.5 x 13, Oficio 216 x 340 mm/Letter/Executive/8K/16K

**Table 1-21** Paper handling specification (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625) (continued)

Item	Specification	
	Media types	Plain, Mid-weight, Light, HP LaserJet, Colored, Preprinted, Recycled, Intermediate, Letterhead, Prepunched
	Media weight	<ul style="list-style-type: none"> <li>• 16 - 29 lb</li> <li>• 60 - 110 gsm</li> </ul>
	Sensing	Paper Empty: Yes
Document feeder	Capacity	100 sheets (20lb, 80 g/m <sup>2</sup> )
	2-sided document scanning	No
	Document size	<ul style="list-style-type: none"> <li>• Width: 128–297 mm</li> <li>• Length: 128–432 mm</li> </ul>
	Document weight	<ul style="list-style-type: none"> <li>• 60~128g/m<sup>2</sup> (16-34lbs)</li> </ul>
	Sensing	Paper Empty, Paper Width, Paper Length

## Supplies (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

When supplies reach the end of their life span, you can order the following supplies for your printer.

-  **WARNING!** When purchasing new toner cartridges or other supplies, these must be purchased in the same country/region as the machine you are using. Otherwise, new toner cartridges or other supplies will be incompatible with your machine due to different configurations of toner cartridges and other supplies according to the specific country/region conditions.
-  **CAUTION:** HP does not recommend using non-genuine HP toner cartridge such as refilled or remanufactured toner. HP cannot guarantee non-genuine HP toner cartridge's quality. Service or repair required as a result of using non-genuine HP toner cartridges will not be covered under the machine's warranty.
-  **NOTE:** Depending on the options, percentage of image area and job mode used, the toner cartridge's life span may differ.

**Table 1-22** Supplies (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

Item	Description	Part number
Toner Cartridge	HP 333A Black Original LaserJet Toner Cartridge China (IT Channel)	W1333A
Toner Cartridge	HP 333X High Yield Black Original LaserJet Toner Cartridge (IT Channel)	W1333X
Toner Cartridge	HP 334A Black Original LaserJet Toner Cartridge (OA Channel)	W1334A
Toner Cartridge	HP 334X High Yield Black Original LaserJet Toner Cartridge (OA Channel)	W1334X

**Table 1-22 Supplies (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625) (continued)**

Item	Description	Part number
Toner Cartridge	HP 335A Black Original LaserJet Toner Cartridge [Rest of AP and EMEA (IT Channel)]	W1335A
Toner Cartridge	HP 335X High Yield Black Original LaserJet Toner Cartridge [Rest of AP and EMEA (IT Channel)]	W1335X
Toner Cartridge	HP 336A Black Original LaserJet Toner Cartridge [Rest of APJ (OA Channel) ]	W1336A
Toner Cartridge	HP 336X High Yield Black Original LaserJet Toner Cartridge [Rest of APJ (OA Channel) ]	W1336X
Imaging unit <sup>1</sup>	Replacement imaging drum	CF257A

<sup>1</sup> The imaging unit must be installed by a service technician.

## Dynamic security

Certain HP printers use cartridges that have security chips or electronic circuitry. Cartridges using a non-HP chip or modified or non-HP circuitry\* might not work. And, those that work today might not work in the future.

As is standard in the printing business, HP has a process for authenticating cartridges. HP continues to use security measures to protect the quality of our customer experience, maintain the integrity of our printing systems, and protect our intellectual property. These measures include authentication methods that change periodically and might prevent some third-party supplies from working now or in the future. HP printers and original HP cartridges deliver the best quality, security and reliability. When cartridges are cloned or counterfeited, the customer is exposed to quality and potential security risks, compromising the printing experience.

\* Non-HP chips and modified or non-HP electronic circuitry are not produced or validated by HP. HP cannot guarantee that these chips or circuitry will work in your printer now or in the future. If you are using a non-original HP cartridge, please check with your supplier to ensure your cartridge has an original HP security chip or unmodified HP electronic circuitry.

## Maintenance parts (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

**Table 1-23 Maintenance parts (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)**

Item	Kit number	Life
Pick-up roller and friction pad	W7U01-67903	Approx. 100,000 pages
MP Pick-up roller and 50k friction pad (for MP Tray)		
Transfer roller	W7U01-67901	Approx. 100,000 pages
Fuser unit	W7U01-67902	Approx. 100,000 pages
Document feeder Pick-Up roller assembly (optional)	JC97-04009A	Approx. 120,000 pages
Document feeder Friction Pad (optional)	JC97-04733A	Approx. 50,000 pages



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

## Optional accessories (HP LaserJet MFP M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

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



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

**Table 1-24** Option accessories (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

Accessory	Function	Part name
Document feeder <sup>a</sup>	Automatic document feeder	X0R65A
Optional tray <sup>c</sup>	If you are experiencing frequent paper supply problems, you can attach an additional 250 <sup>b</sup> sheet tray.	X0R64A

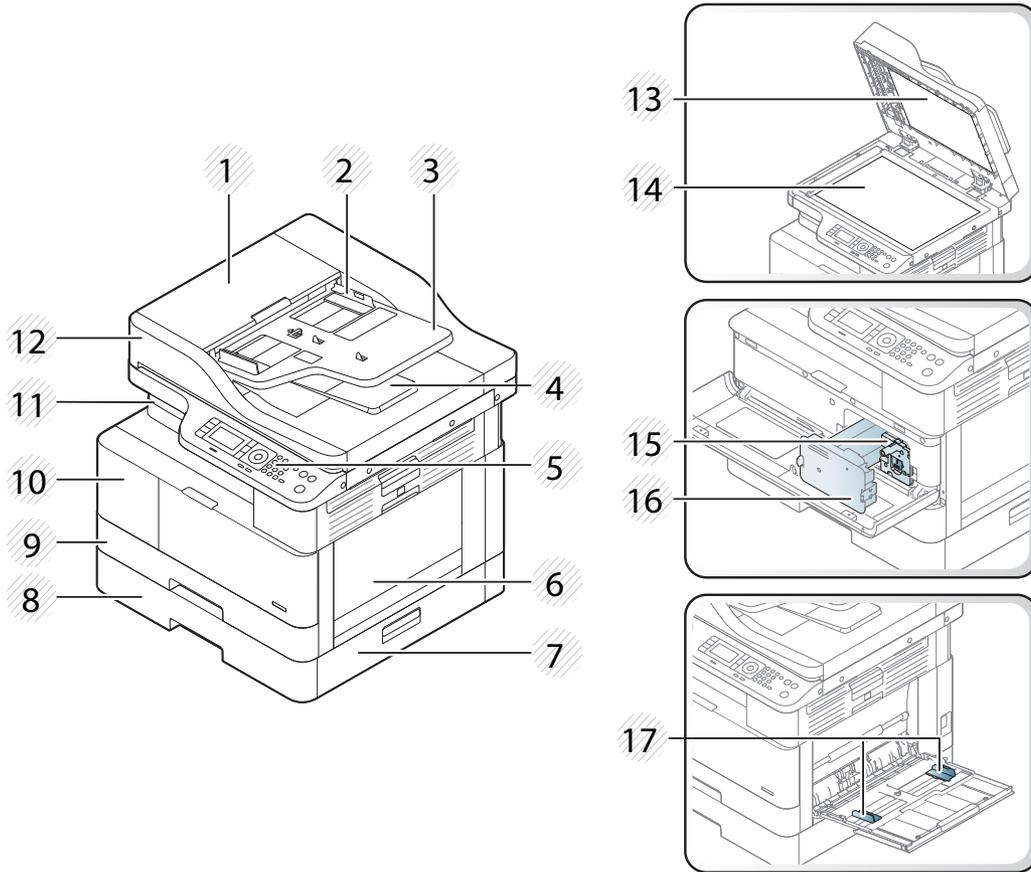
<sup>a</sup> M438dn/M439n/M439dn/M440n/M440dn/M42623n/M42623dn/M42625n/M42625dn Only

<sup>b</sup> Plain paper 80 g/m<sup>2</sup> (20 lbs bond)

<sup>c</sup> M437dn/M437nda/M438dn/M438nda/M439n/M439dn/M439nda/M440n/M440dn/M440nda/M42523n/M42523dn/M42525n/M42525dn/M42623n/M42623dn/M42625n/M42625dn Only

# System configuration

Figure 1-1 Front View



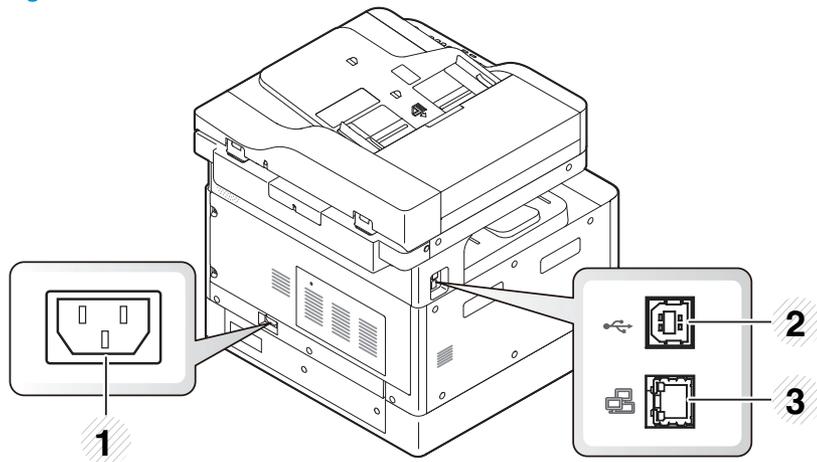
1	Automatic document feeder cover
2	Automatic document feeder width guide
3	Automatic document feeder input tray
4	Automatic document feeder output tray
5	Control panel
6	Tray 1 (multi-purpose tray)
7	Tray 3 jam cover (optional Tray 3)
8	Second Cassette Feeder (optional Tray 3)
9	Tray 2
10	Front cover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

16	Toner cartridge
17	Paper width guides on a multipurpose tray



**NOTE:** HP LaserJet MFP M437n, M437dn, M438n, M438dn, M439n, M439dn, M440n, M440dn, M442dn, M42523n, M42523dn, M42525n, M42525dn, M42623n, M42623dn, M42625n, M42625dn printer models are equipped with a platen cover.

Figure 1-2 Rear view



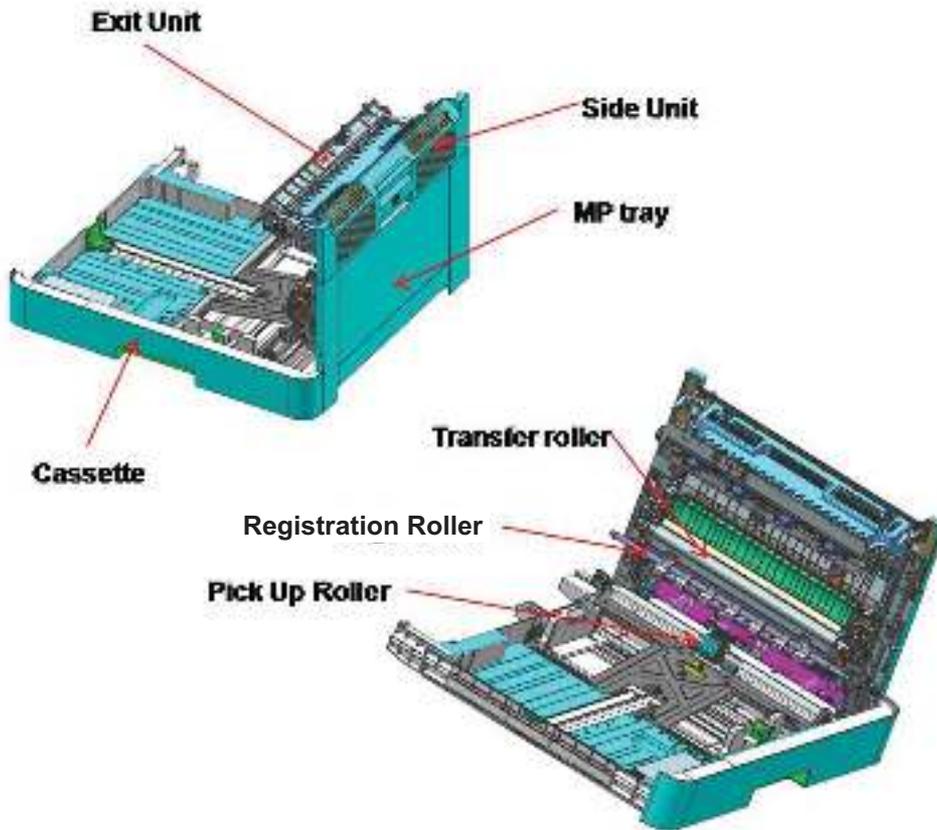
1	Power receptacle
2	USB port
3	Network port



# Feeding system

## Feeding system overview

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



## Main components and functions

Figure 1-4 Sensor, Clutch, Motor

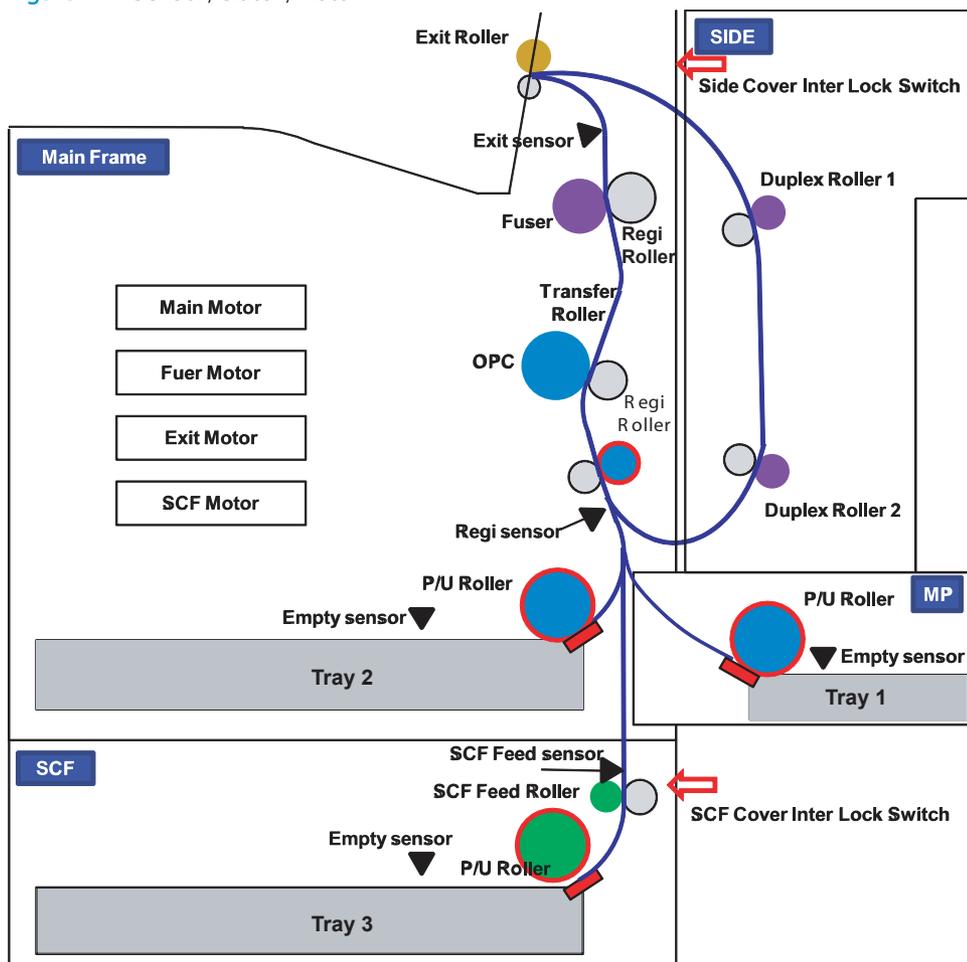


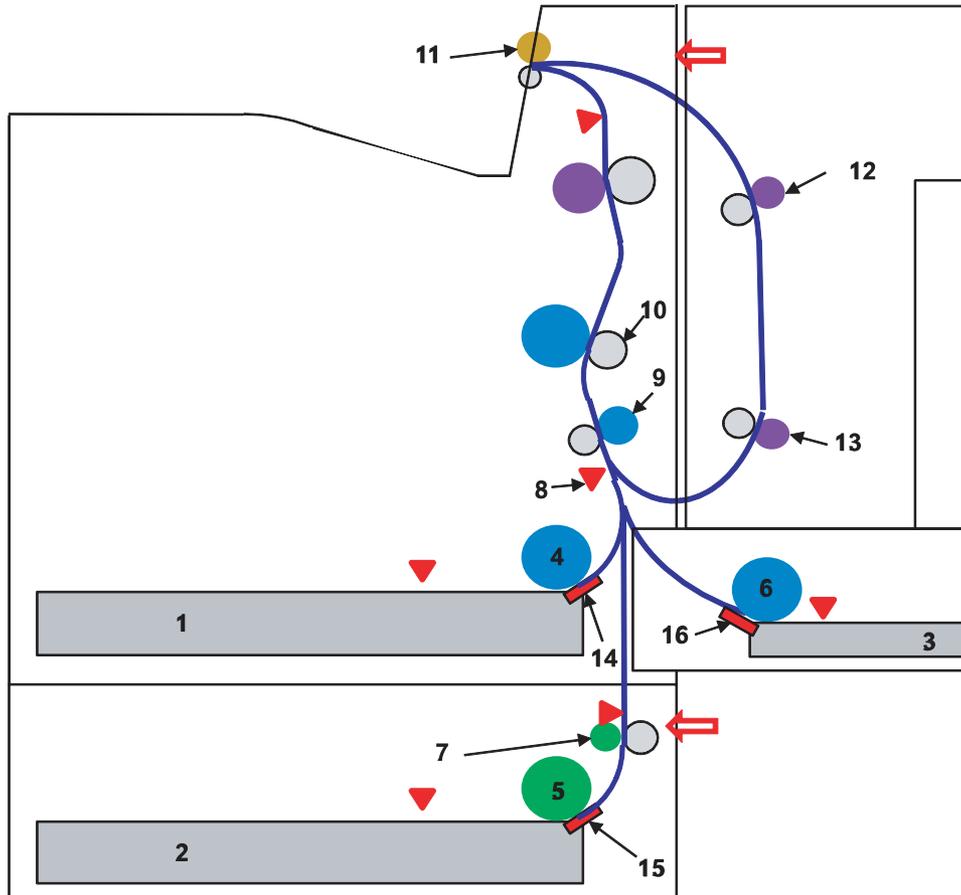
Table 1-28 Sensor, Clutch, Motor

Item	Function
Side Interlock Switch	Detects that the side cover is open.
Front cover Interlock Switch	Detects that the front cover is open.
SCF Interlock Switch	Detects that the SCF cover is open.
Multi-purpose Tray 1 Empty Sensor	Detects that Multipurpose Tray1 is empty.
Tray 2 Empty Sensor	Detects that Tray2 is empty.
Tray 3 (SCF) Empty Sensor	Detects that Tray 3 (SCF) is empty.
SCF Feed Sensor	Detects the jam on SCF path.
Registration Sensor	Detects the jam on regi path.
Exit Sensor	Detects the jam on exit path.
SCF Motor	Controls the SCF operation.
MP (Tray 1) Pickup Clutch	Controls the MP pickup roller operation.
Exit Motor	Controls the exit roller operation.

**Table 1-28** Sensor, Clutch, Motor (continued)

Item	Function
Tray 2 Pickup Clutch	Controls the Tray 2 pickup roller operation.
Tray 3 (SCF) Pickup Clutch	Controls the Tray 3 (SCF) pickup roller operation.
Registration Clutch	Controls the registration roller operation.

**Figure 1-5** Rollers and friction pad



**Table 1-29** Rollers and friction pad

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

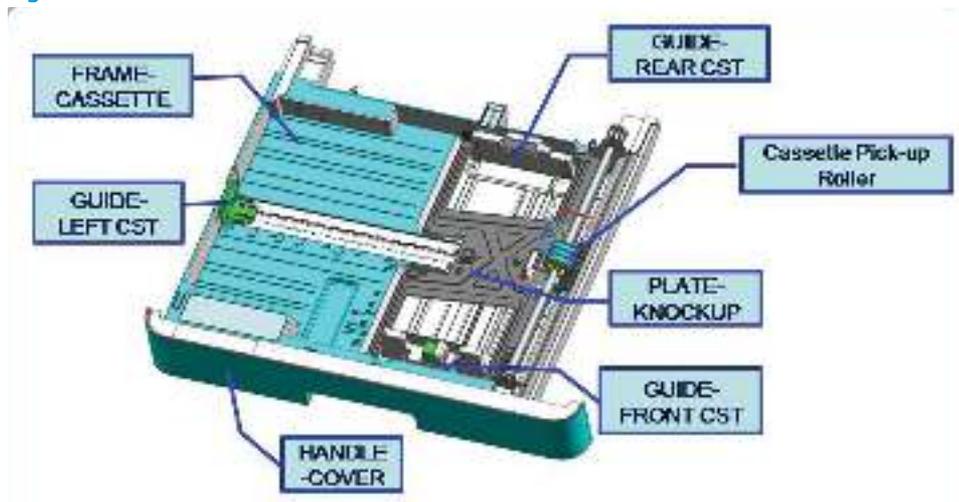
**Table 1-29** Rollers and friction pad (continued)

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

## Cassette

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

**Figure 1-6** Cassette



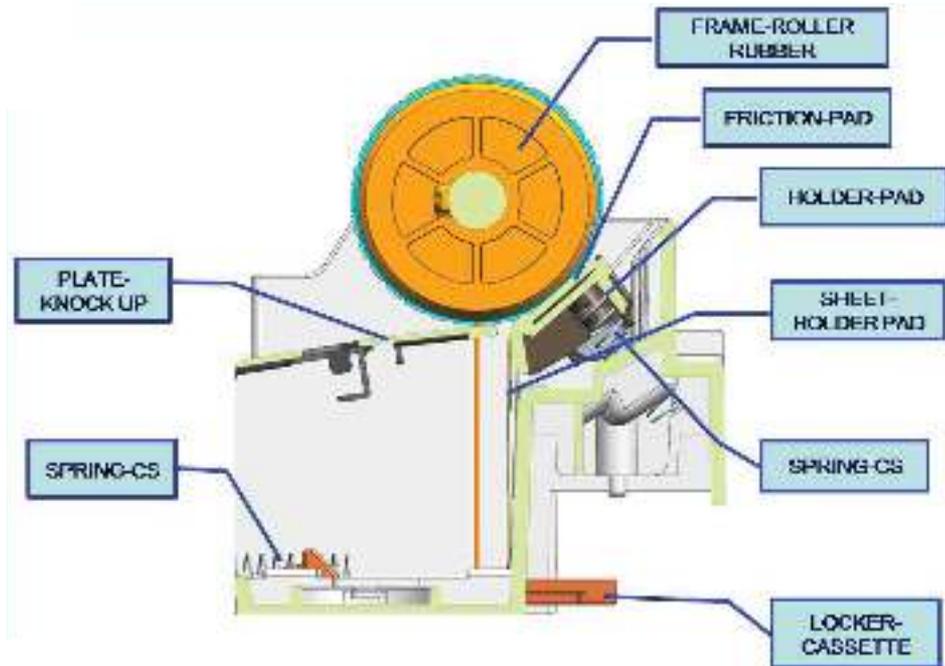
**Table 1-30** Cassette

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

## Pickup roller and friction pad

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

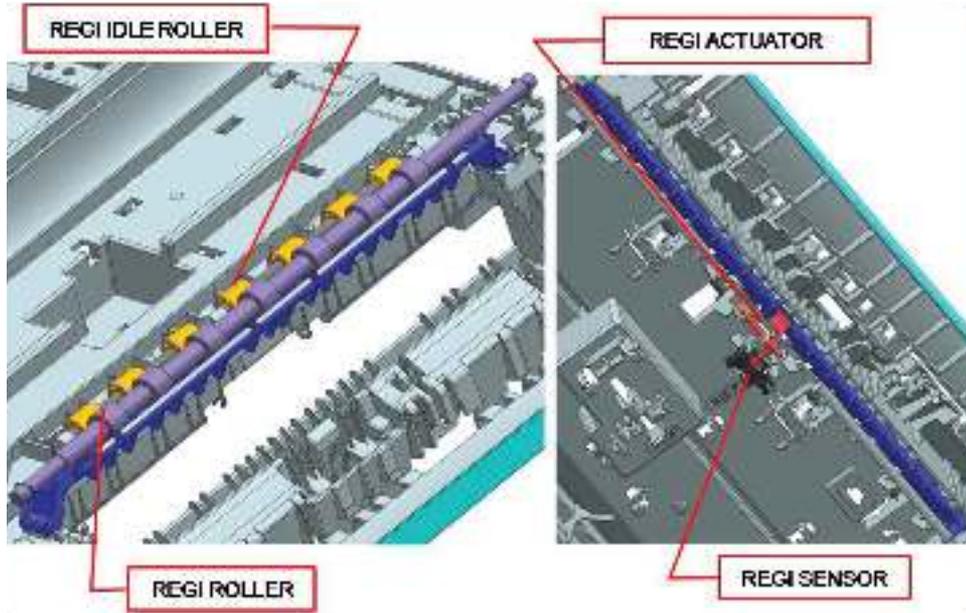
Figure 1-7 Pickup roller and friction pad



## Registration roller

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

Figure 1-8 Registration roller



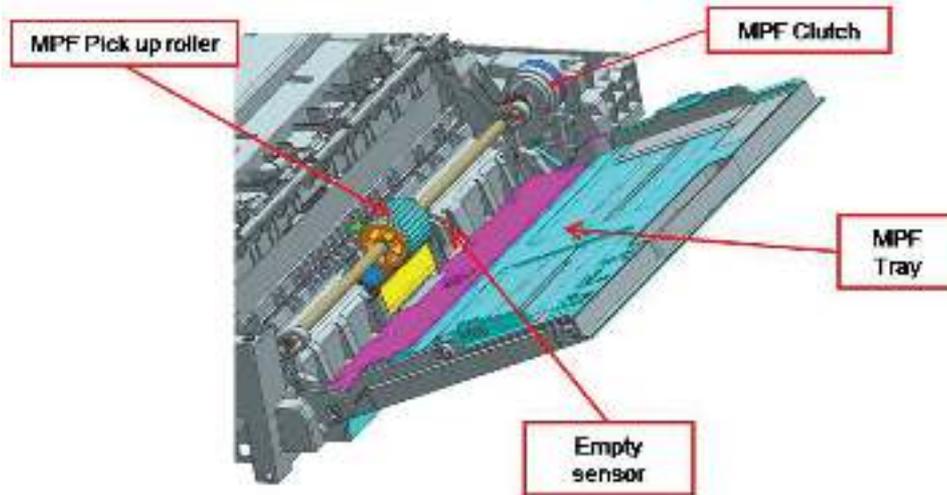
### Specification

- Skew
  - Top skew: Simplex : 1.5 mm / Duplex : 1.8 mm
  - Side skew: Simplex : 2.2 mm / Duplex : 2.6 mm
- Margin
  - Top margin: Simplex :  $4.5 \pm 1.5$  mm / Duplex :  $4.5 \pm 1.8$  mm
  - Side margin: Simplex :  $4.5 \pm 2.0$  mm / Duplex :  $4.5 \pm 2.6$  mm

### MPF (Multi-Purpose Feeder) unit

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

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



### Specification

- Capacity: 100 sheets ( 80g/m<sup>2</sup> paper standard)
- Media size: max 11.7" × 17" (297×432 mm)/Min 6"×4" (152.4×101.6mm)
- Media weight: Plain paper 60 ~ 163 g/m<sup>2</sup>

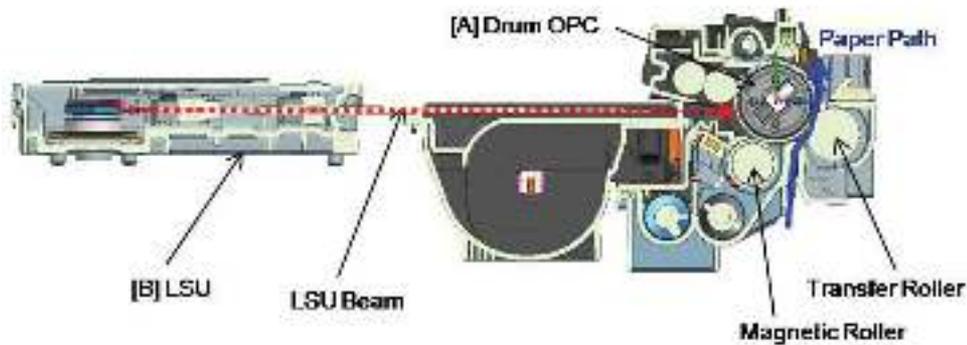
# Image Creation

## Printing process overview

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

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

Figure 1-10 Printing process overview



1. **OPC drum charge:** The charge roller gives the drum a negative charge.
2. **Laser exposure:** Light produced by a laser diode hits the charged OPC through the lens and mirrors.
3. **Development:** The magnetic roller carries negatively-charged toner to the latent image on the drum surface.
4. **Transfer:** The transfer roller opposite the OPC drum transfers toner from the drum to the paper.
5. **Cleaning for OPC drum:** The cleaning blade removes remaining toner on the drum surface after image transfer to the paper.

Using Century Star media can contaminate the OPC surface. Contamination causes light vertical streaks during printing. Select [Automatic](#) from the OPC cleaning menu to initiate a cleaning event every 1,000 pages.

6. **Quenching for OPC drum:** Discharge cleaning is done by illuminating the whole area of the drum with the cleaning lamp at the end of every job.

## Imaging unit

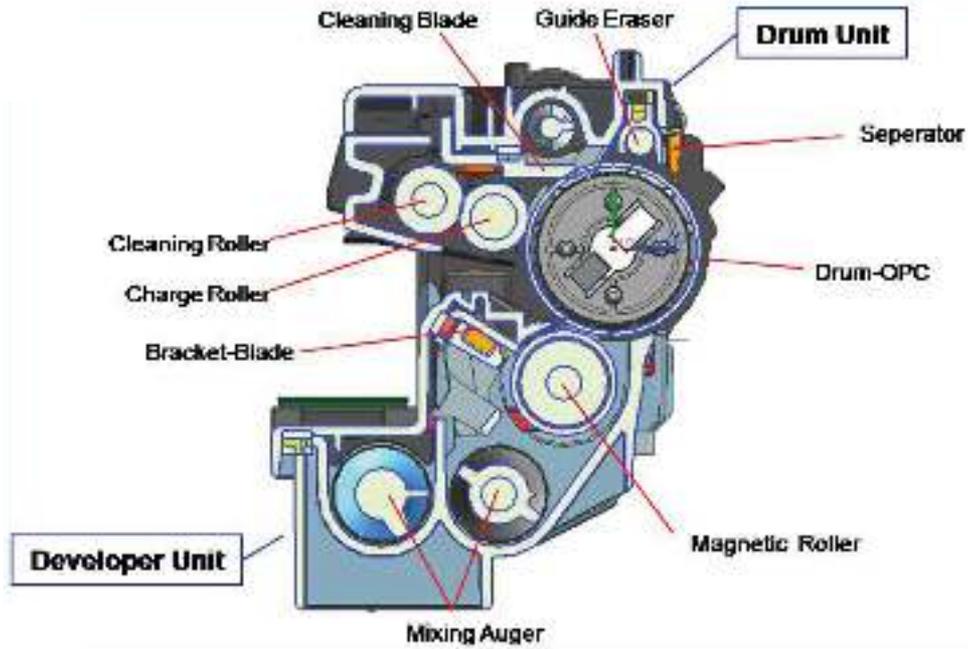
### Imaging unit overview

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

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

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

Figure 1-11 Imaging unit overview

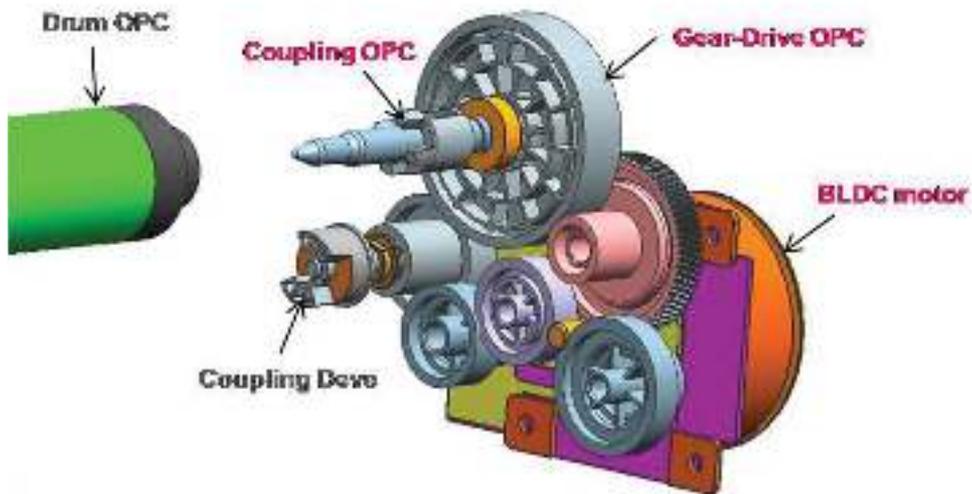


## Drum drive

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

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

Figure 1-12 Drum drive



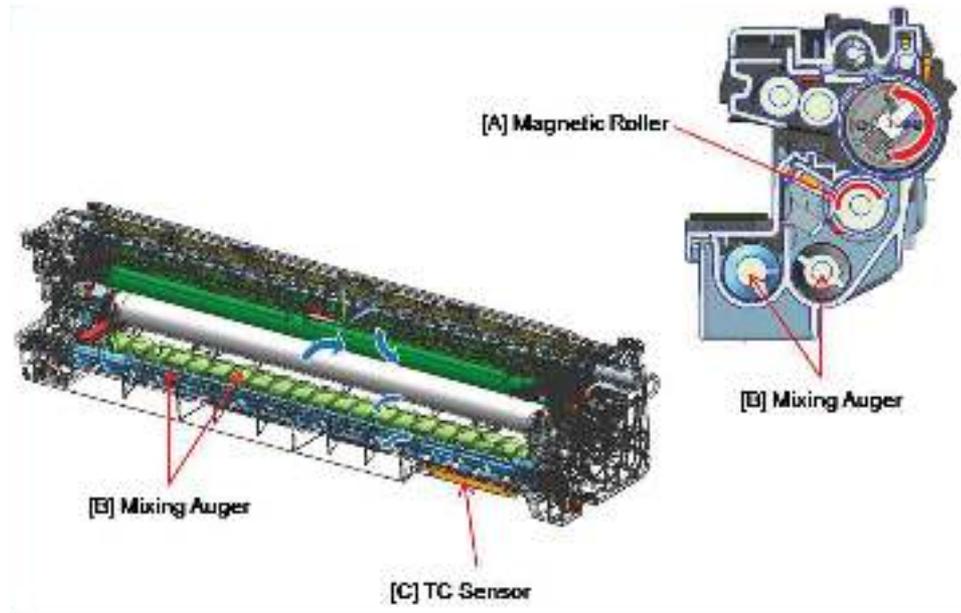
## Developer unit

This printer uses a dual-component development system.

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

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

Figure 1-13 Developer unit



### Developer Circulation

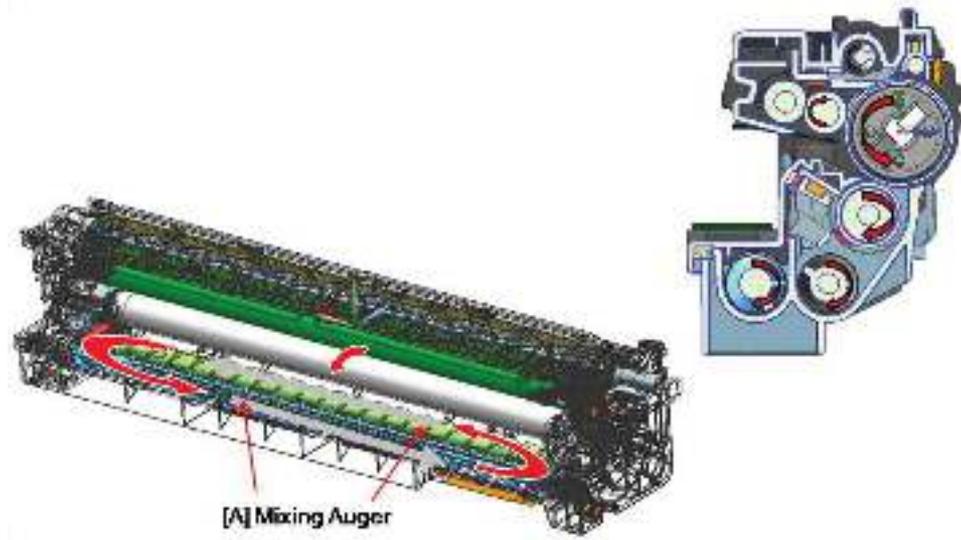
Two mixing augers (callout B) circulate the developer forward and backward to agitate the developer in order to mix the developer and toner well.

This occurs at the following times:

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

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

Figure 1-14 Developer Circulation



# Fuser unit

## Fuser unit overview

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

Figure 1-15 Fuser unit overview

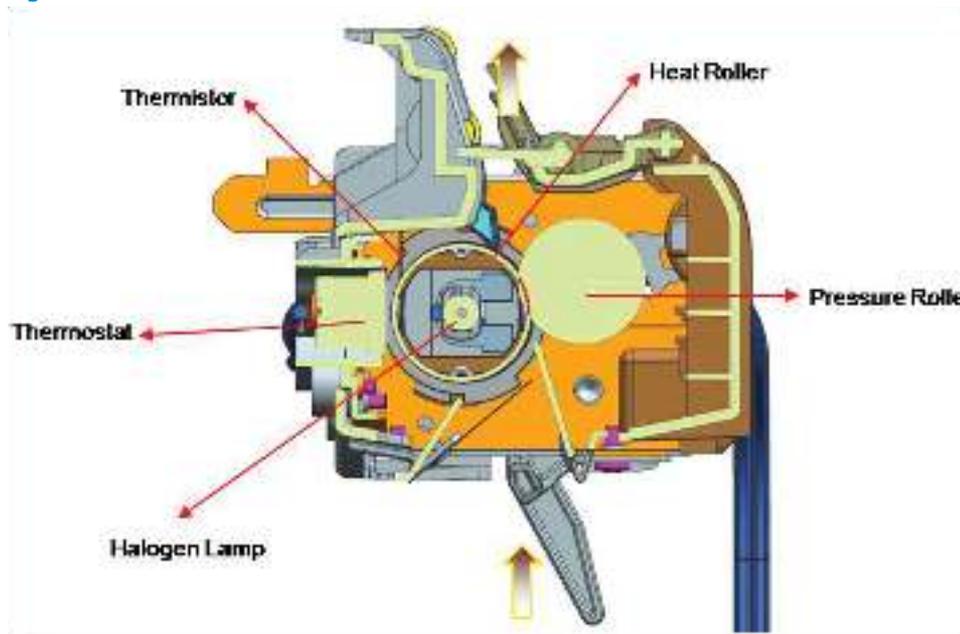


Table 1-31 Fuser unit overview

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

## Fuser duplex exit drive

Figure 1-16 Fuser duplex exit drive

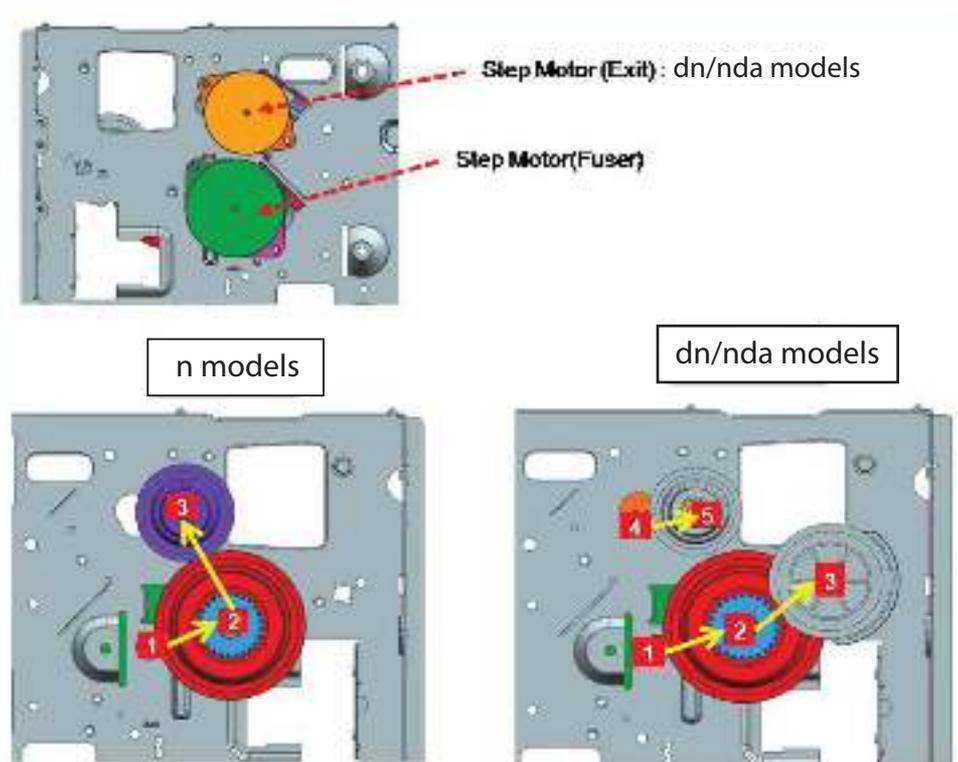


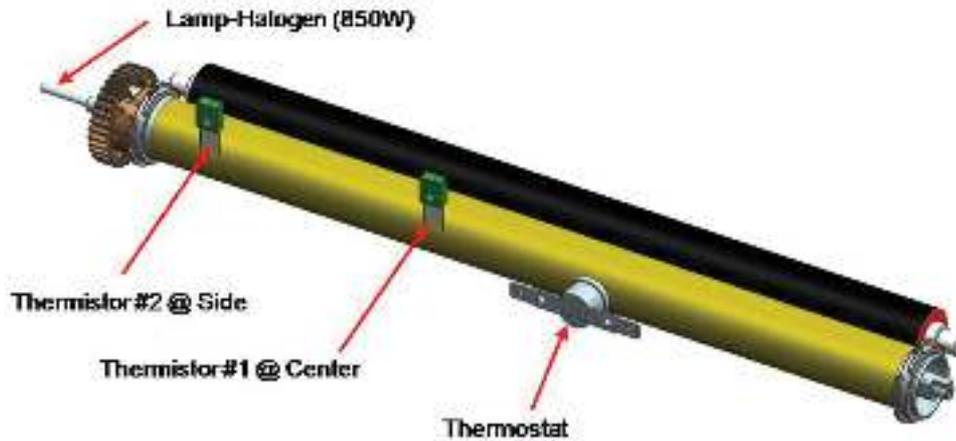
Table 1-32 Fuser duplex exit drive

Power Train	<ul style="list-style-type: none"> <li>Fuser/Duplex: Step Motor</li> <li>Exit: Step Motor</li> </ul>
<ul style="list-style-type: none"> <li>1 → 2 (Fuser driving) → 3 GEAR RDCN EXIT (Exit driving; n printer models)</li> <li>1 → 2 (Fuser driving) → 3 GEAR Duplex (Duplex driving; dn/nda printer models)</li> <li>4 → 5 GEAR RDCN EXIT (Exit driving; dn/nda printer models)</li> </ul>	

## Fuser unit temperature control

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

Figure 1-17 Fuser unit temperature control



### Overheat Protection

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

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

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

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

# Laser Scanning unit (LSU)

## LSU overview

Figure 1-18 LSU overview

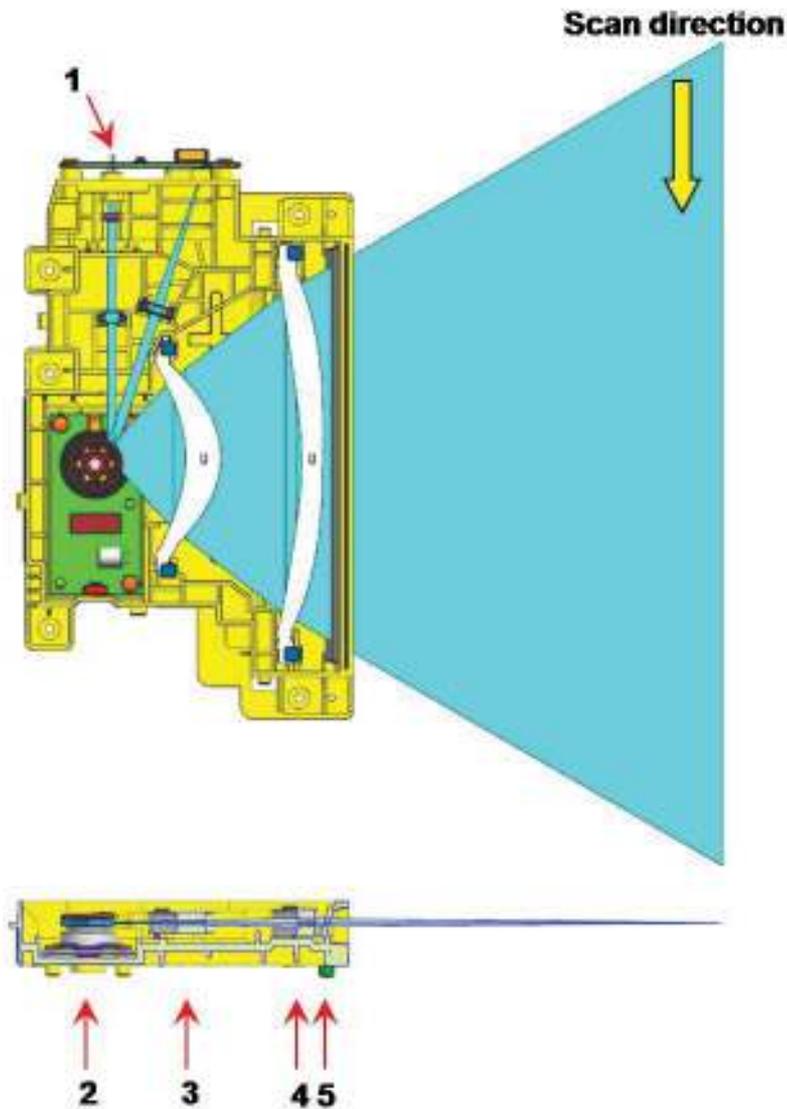


Table 1-33 LSU overview

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

## Laser scanning optical path

Figure 1-19 Laser scanning optical path

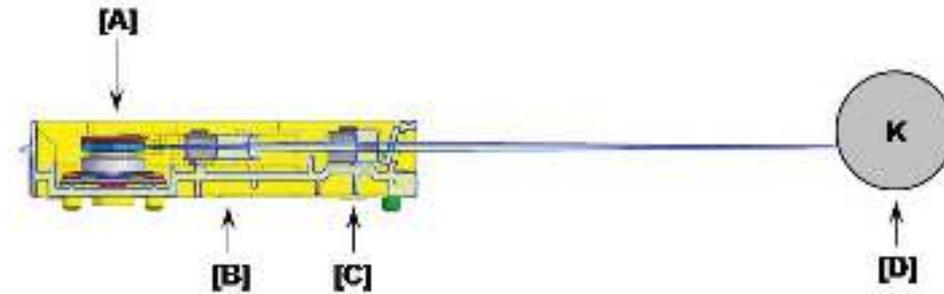


Table 1-34 Laser scanning optical path

Item	Specification	Remarks
LD unit	Laser Diode: Single Beam driving IC for Single LD	
H/W interface	Harness:14 Pin (Interface with set )	FFC cable

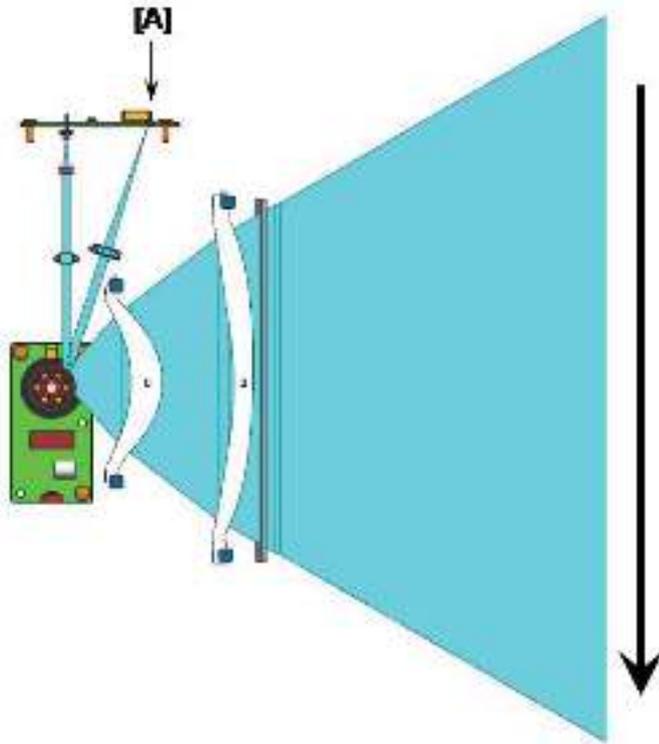
## Laser synchronizing detectors

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

### Main Scan Start Detection

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

Figure 1-20 Laser synchronizing detectors



# Drive system

## Drive motors

This section shows the motor locations and functions.

Figure 1-21 Drive motors

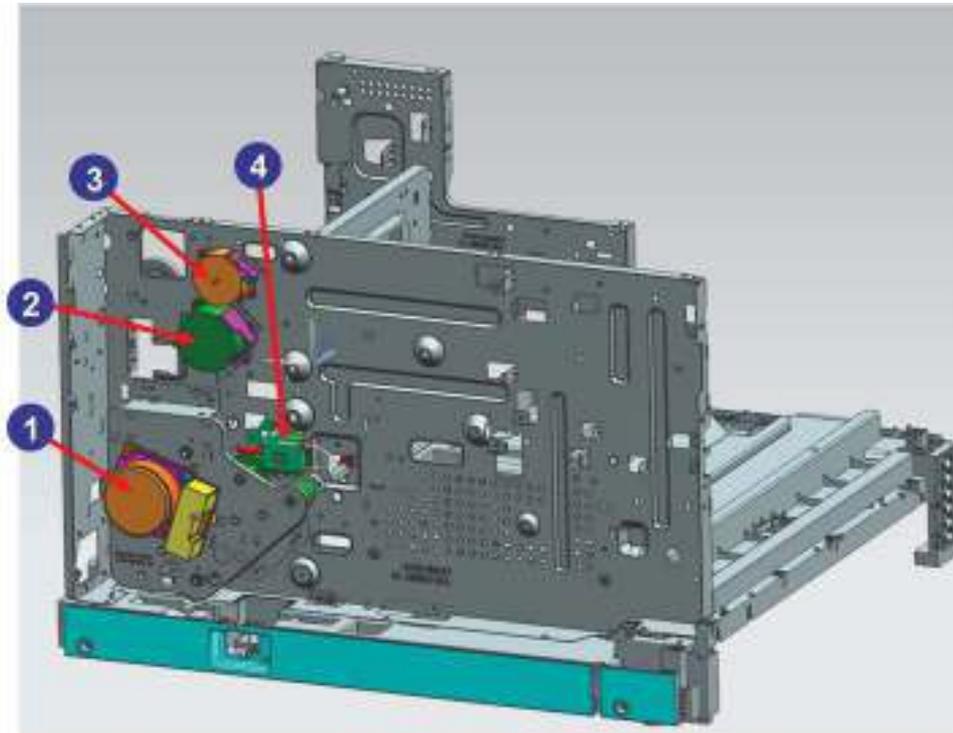


Table 1-35 Drive motors

Item	Motor	Motor type	Qty	Function
1		BLDC	1	OPC/DEVE/Registration/MP/pickup drive
	OPC/DEVE/PH	E-Clutch	3	Registration/MP/pickup drive engages
2	Fuser	STEP	1	<ul style="list-style-type: none"> <li>• n models: Fuser/Exit drive</li> <li>• dn/nda models: Fuser/Duplex drive</li> </ul>
3	Exit	STEP	1	Exit drive
	<b>NOTE:</b> Only dn/nda models.			
4	Toner Cartridge	DC	1	Toner cartridge drive

## Main drive unit (OPC\_DEVE\_REGI\_MP\_pickup)

Figure 1-22 Main drive unit—front view

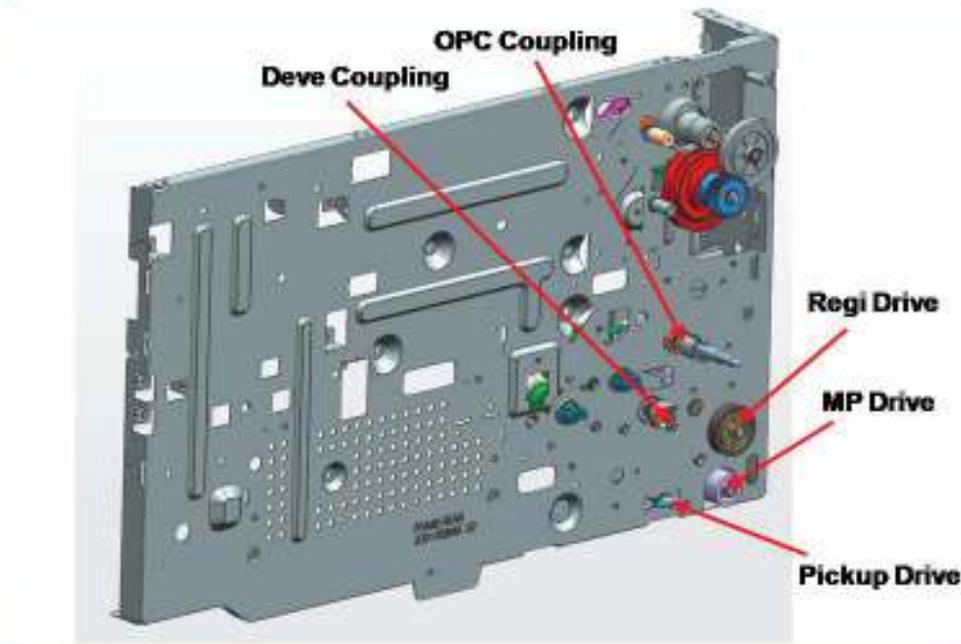


Figure 1-23 Main drive unit—rear view

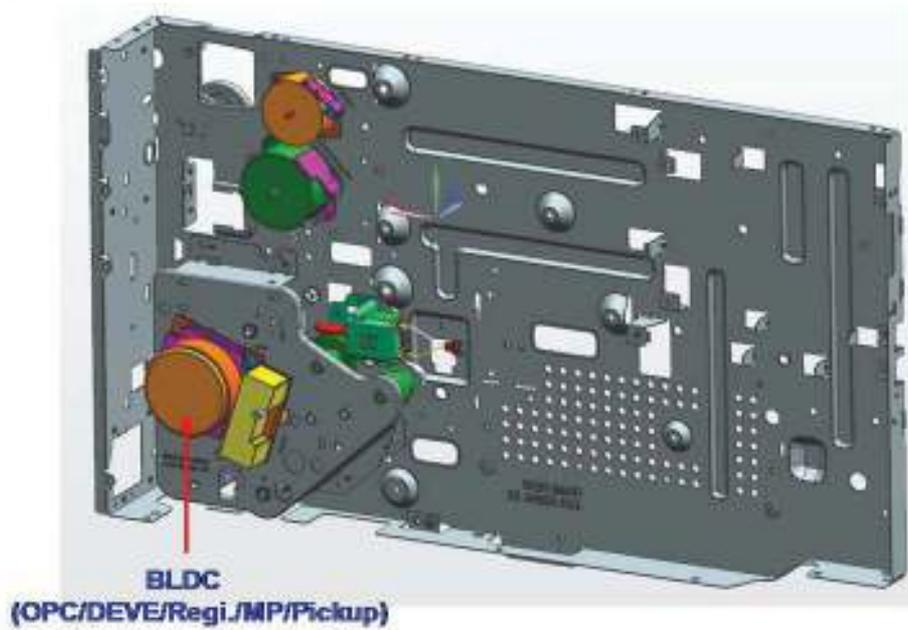


Figure 1-24 Main drive (OPC/Deve)

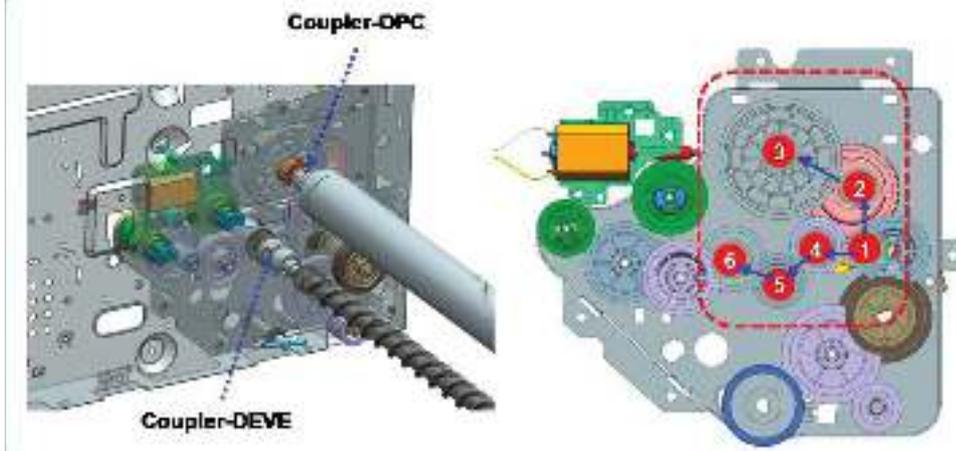


Table 1-36 Main drive (OPC/Deve)

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

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

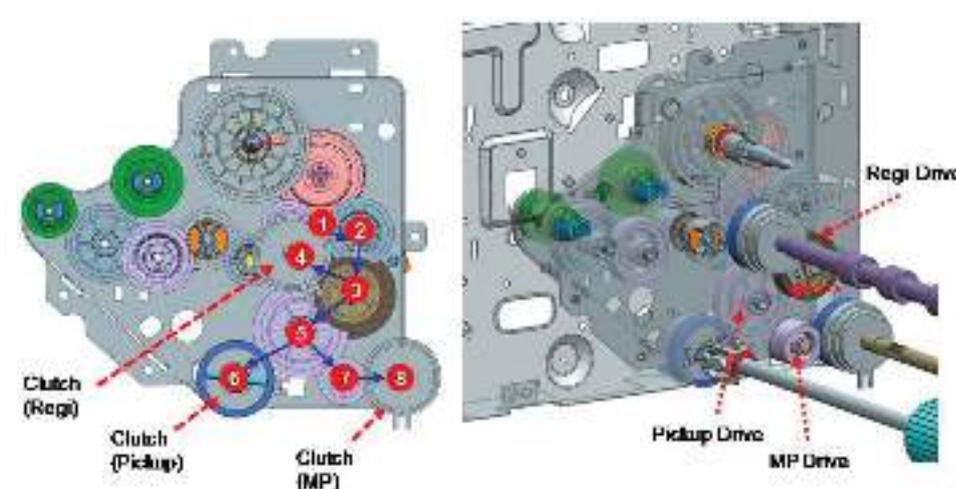


Table 1-37 Main drive (Registration/MP/Feed 1,2)

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

## Fuser duplex exit drive

Figure 1-26 Fuser duplex exit drive

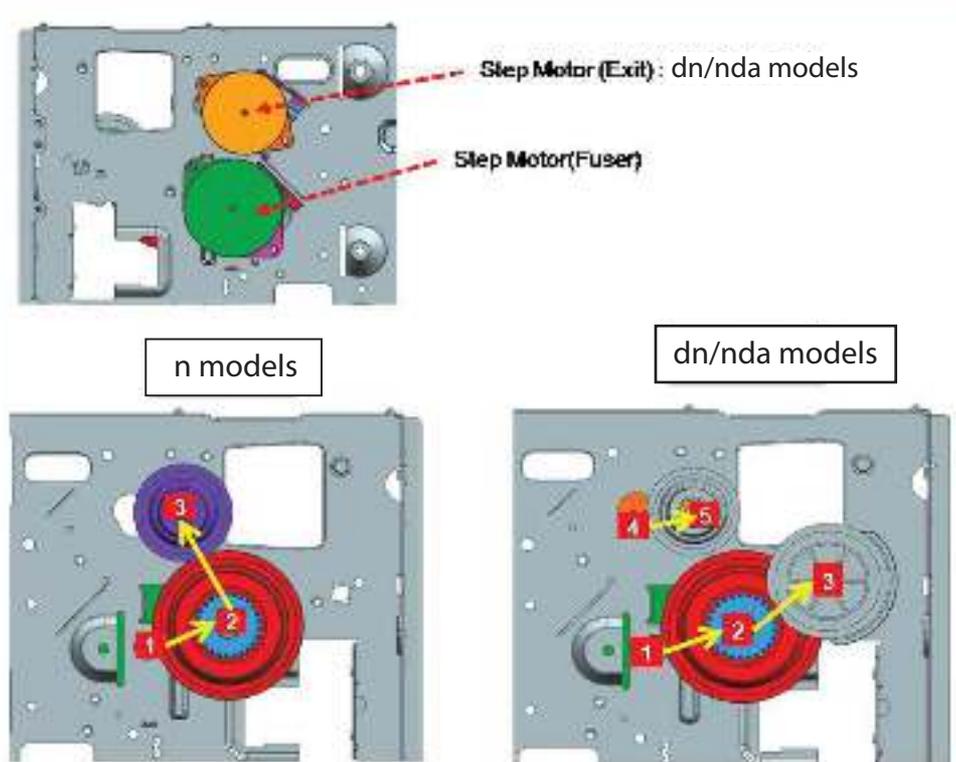


Table 1-38 Fuser duplex exit drive

Power Train	<ul style="list-style-type: none"> <li>Fuser/Duplex: Step Motor</li> <li>Exit: Step Motor</li> </ul>
<ul style="list-style-type: none"> <li>1 → 2 (Fuser driving) → 3 GEAR RDCN EXIT (Exit driving; n models)</li> <li>1 → 2 (Fuser driving) → 3 GEAR Duplex (Duplex driving; dn/nda models)</li> <li>4 → 5 GEAR RDCN EXIT (Exit driving; dn/nda models)</li> </ul>	

## Toner cartridge drive

Figure 1-27 Toner cartridge drive

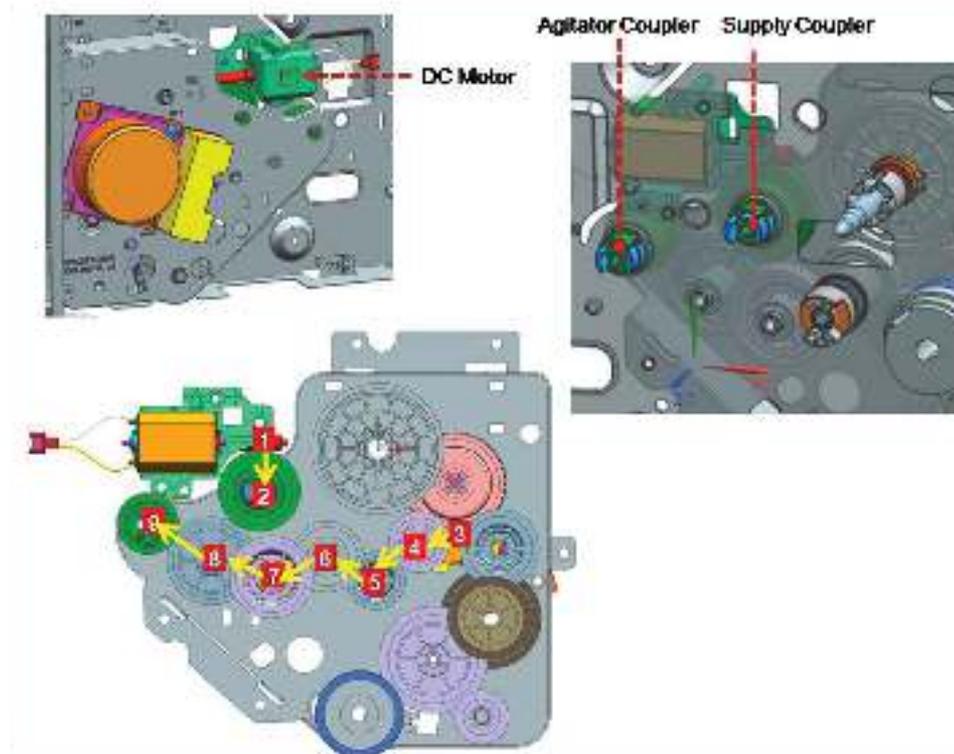


Table 1-39 Toner cartridge drive

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

# Scanner System

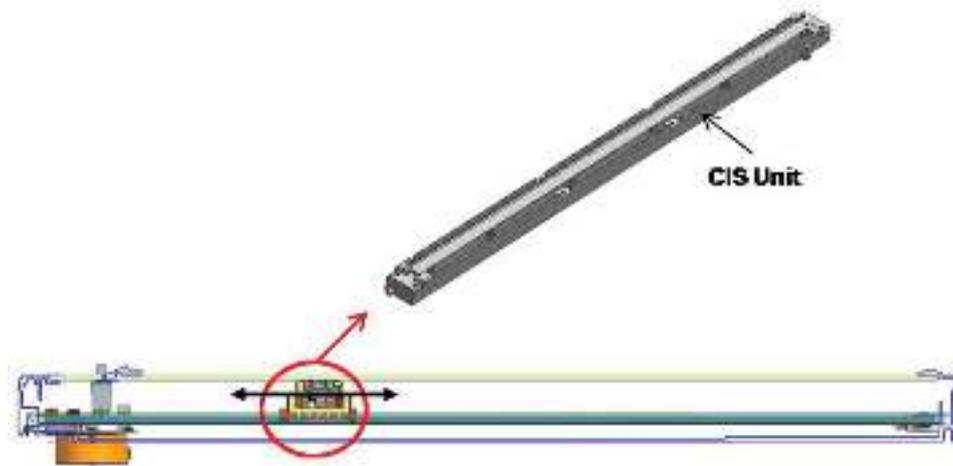
## Scanner system overview

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

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

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

Figure 1-28 Scanner system overview



## Scanning system components

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

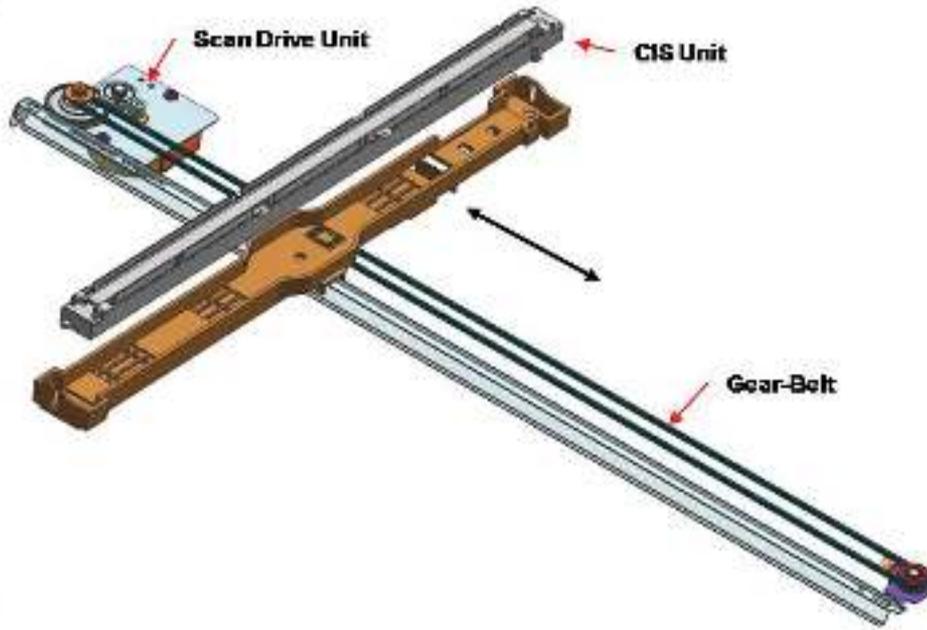
- **CIS (Contact Image Sensor)**

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

- **Scan Drive unit**

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

Figure 1-29 Scanning system components



# Document feeder

## Document feeder overview

Figure 1-30 Document feeder overview

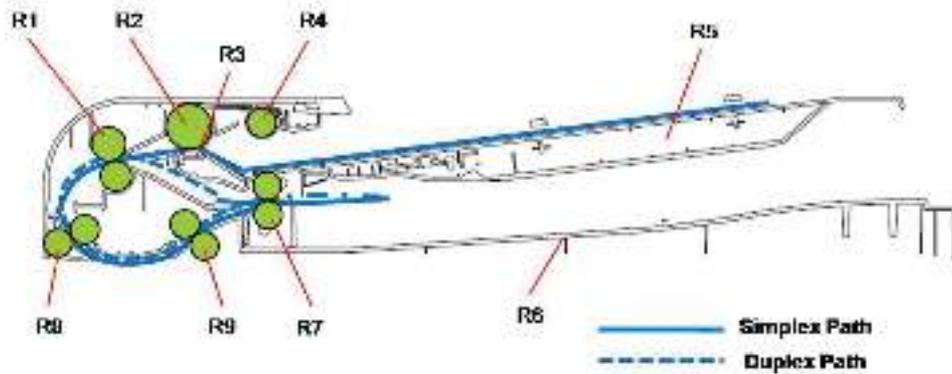


Table 1-40 Document feeder overview

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

## Electrical parts location

Figure 1-31 Electrical parts location

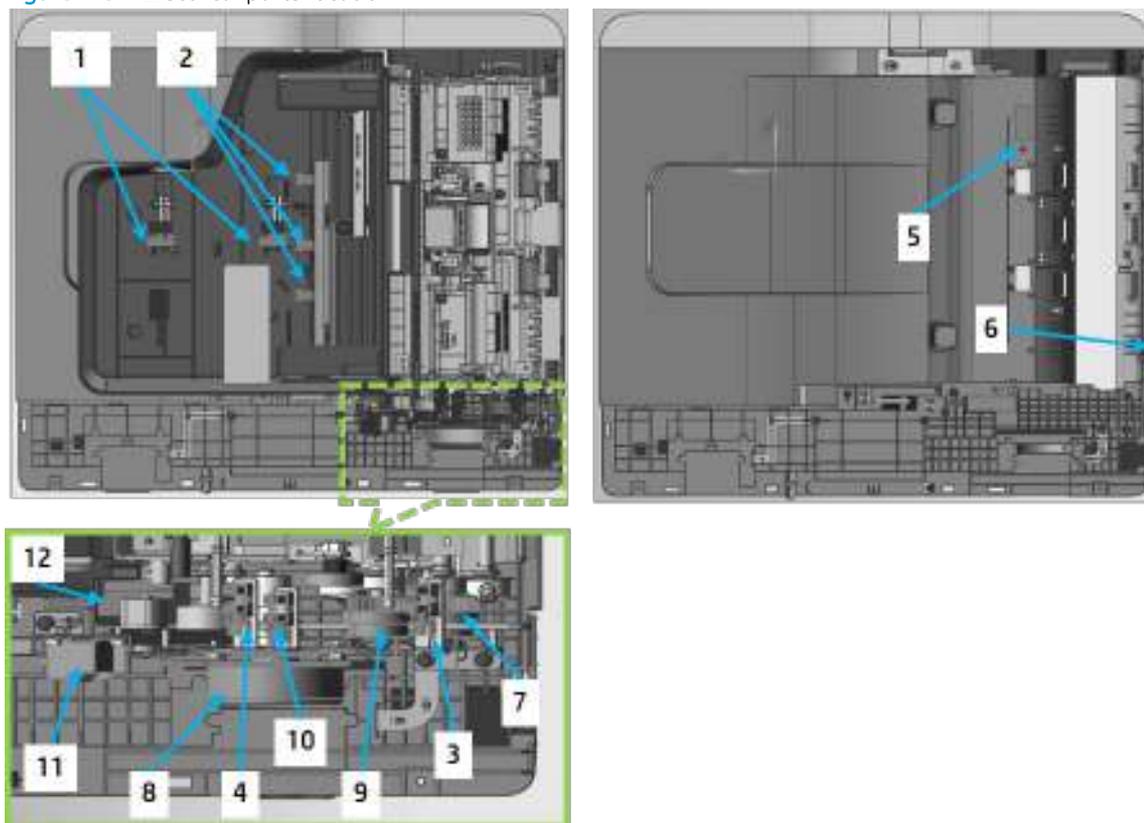


Table 1-41 Electrical parts location

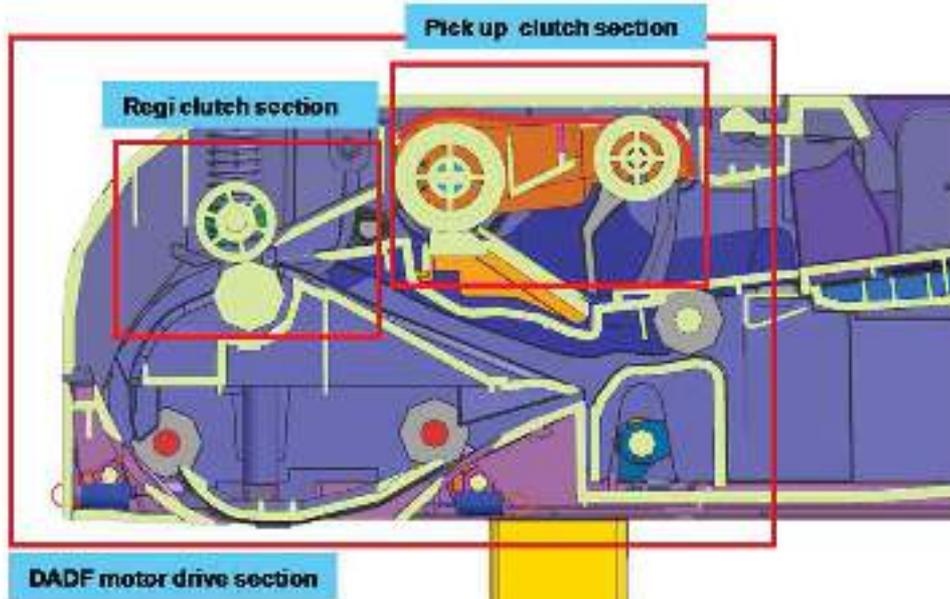
Callout	Description	Parts number	Controller board
1	Photo-interrupter (Original length sensor)	0604-001393	PCA, ADF
2	Photo-interrupter (Original width sensor)	0604-001393	PCA, ADF
3	Photo-interrupter (Original registration sensor)	0604-001393	PCA, ADF
4	Photo-interrupter (Original existence detection Sensor)	0604-001393	PCA, ADF
5	Photo-interrupter (Original exit sensor)	0604-001393	PCA, ADF
6	Photo-interrupter (Scan sensor)	0604-001393	PCA, ADF
7	Clutch-electric (Registration clutch)	JC47-00033G	PCA, ADF
8	BLDC motor	JC31-00156C	PCA, ADF
9	Clutch-electric (Pickup clutch)	JC47-00033G	PCA, ADF
10	Photo-interrupter (Cover open/Close sensor)	0604-001393	PCA, ADF
11	Solenoid-pick up (Exit roller solenoid)	JC33-00007A	PCA, ADF
12	Photo-interrupter (Holder exit idle disengage/Engage sensor)	0604-001393	PCA, ADF

## Document feeder drive system

### Overview

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

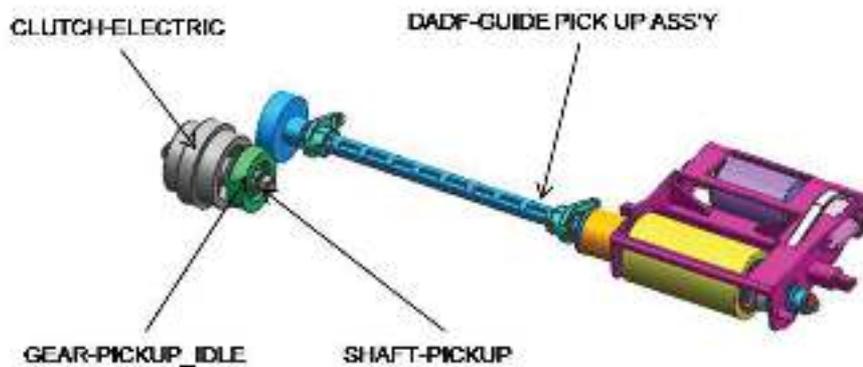
Figure 1-32 Document feeder drive system



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

### Document feeder original drive assembly

Figure 1-33 Document feeder original drive assembly



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

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

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

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

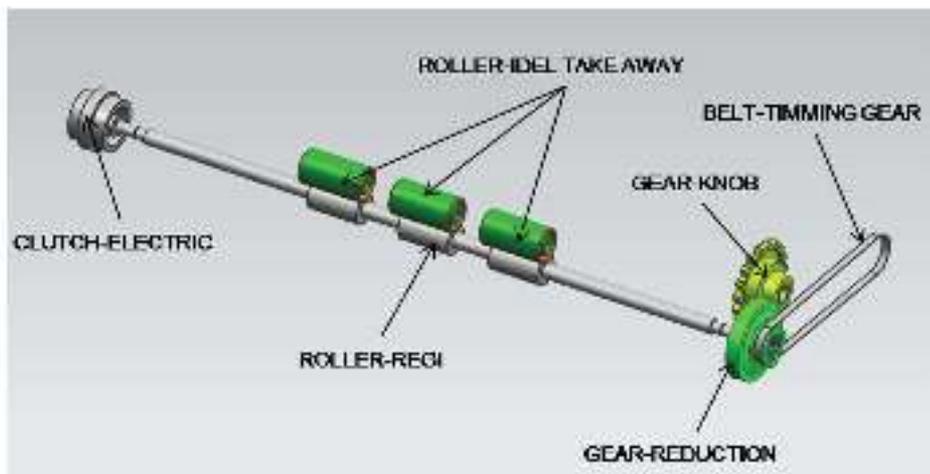
The ADF roller provides the power while the paper is picked up and transferred to the registration roller. When the pickup drive is stopped and registration roller is driven, the document feeder roller becomes idle.

The normal process is:

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

## Document feeder registration drive assembly

Figure 1-34 Document feeder registration drive assembly



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

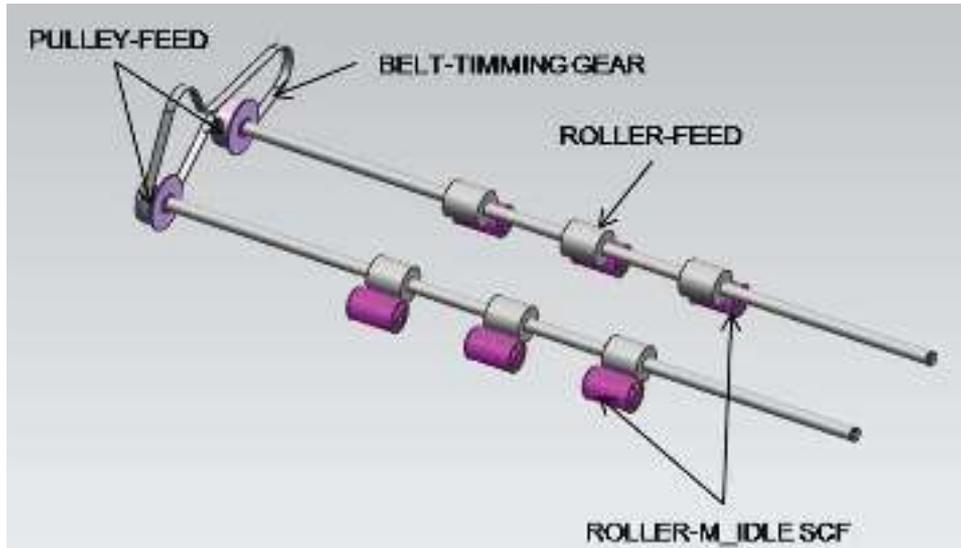
The registration roller aligns the leading edge of the original. When original is placed in the Nip, the roller is rotated for alignment.

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

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

## Document feeder feed drive assembly

Figure 1-35 Document feeder feed drive assembly



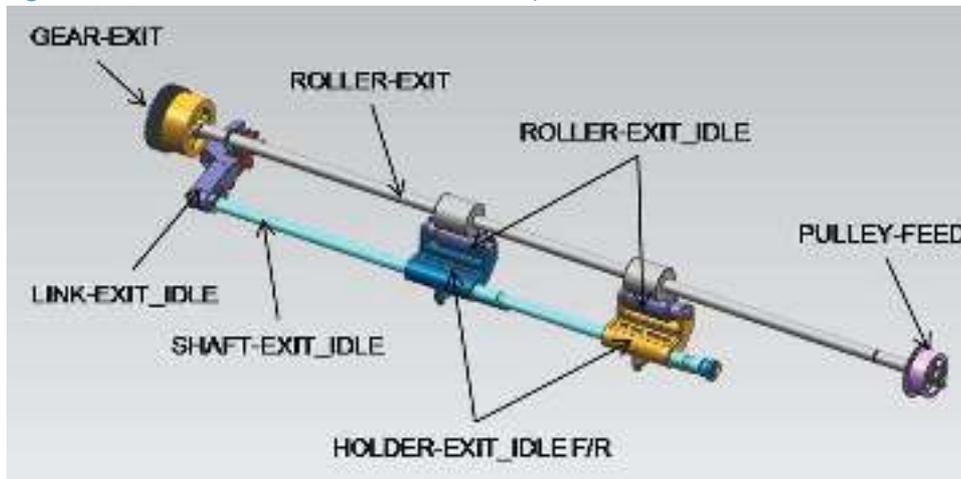
The ROLLER FEED is driven by the BELT-TIMING that is connected to Motor.

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

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

## Document feeder exit drive assembly

Figure 1-36 Document feeder exit drive assembly



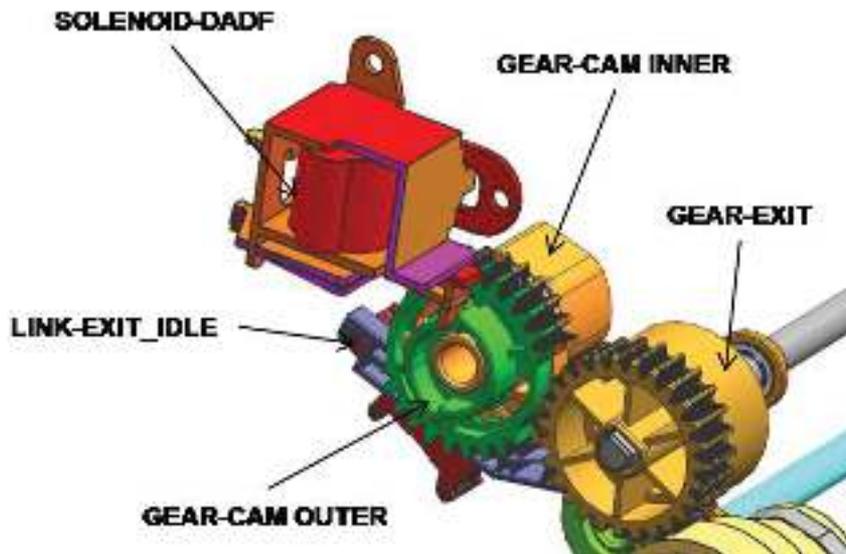
The power from the motor is transferred to GEAR-EXIT and ROLLER-EXIT. The paper is transferred to the exit. At duplex mode, counter rotation occurs.

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

The space between rollers is adjusted by LINK-EXIT\_IDLE and SENSOR-EXIT\_IDLE.

## Original return drive

Figure 1-37 Original return drive



The solenoid works only during duplex mode.

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

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

# Hardware configuration

## Overview

The Electrical Circuit System consists of the following:

- Main board (System board)
- OPE board
- HVPS board
- SMPS board
- Document feeder board (Optional)
- SCF board (Optional)

Figure 1-38 Electrical Circuit (M433/M436)

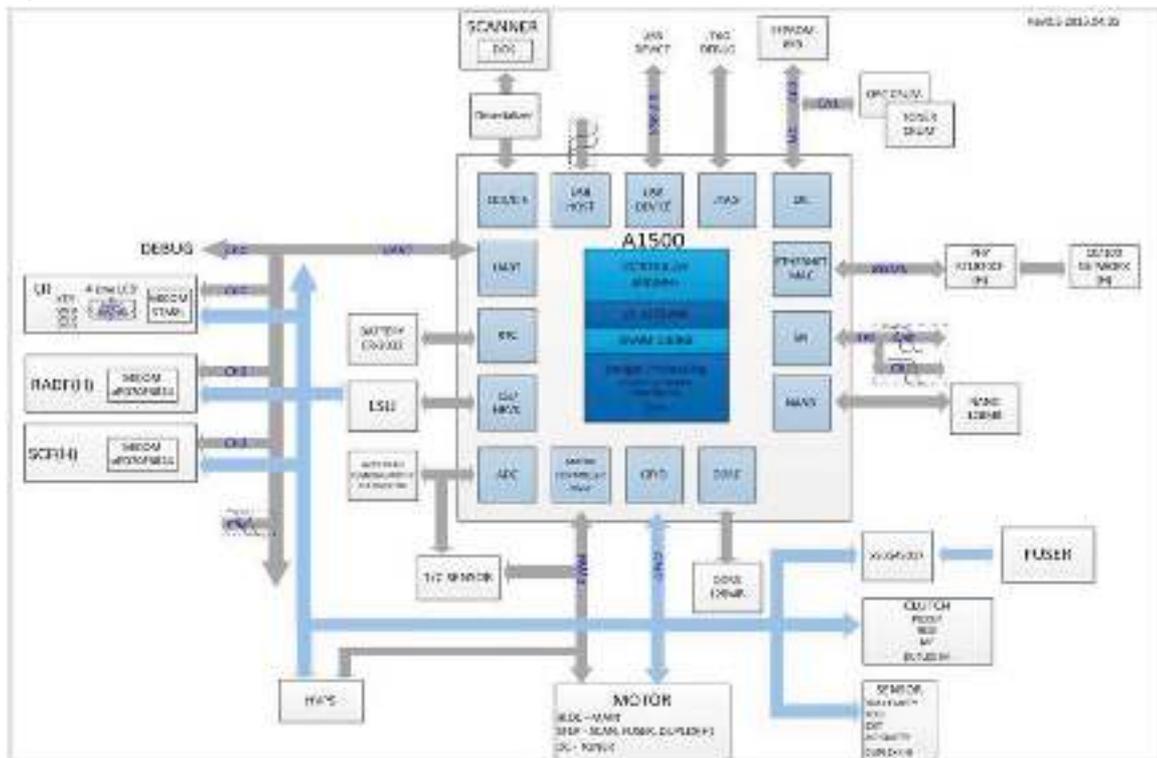
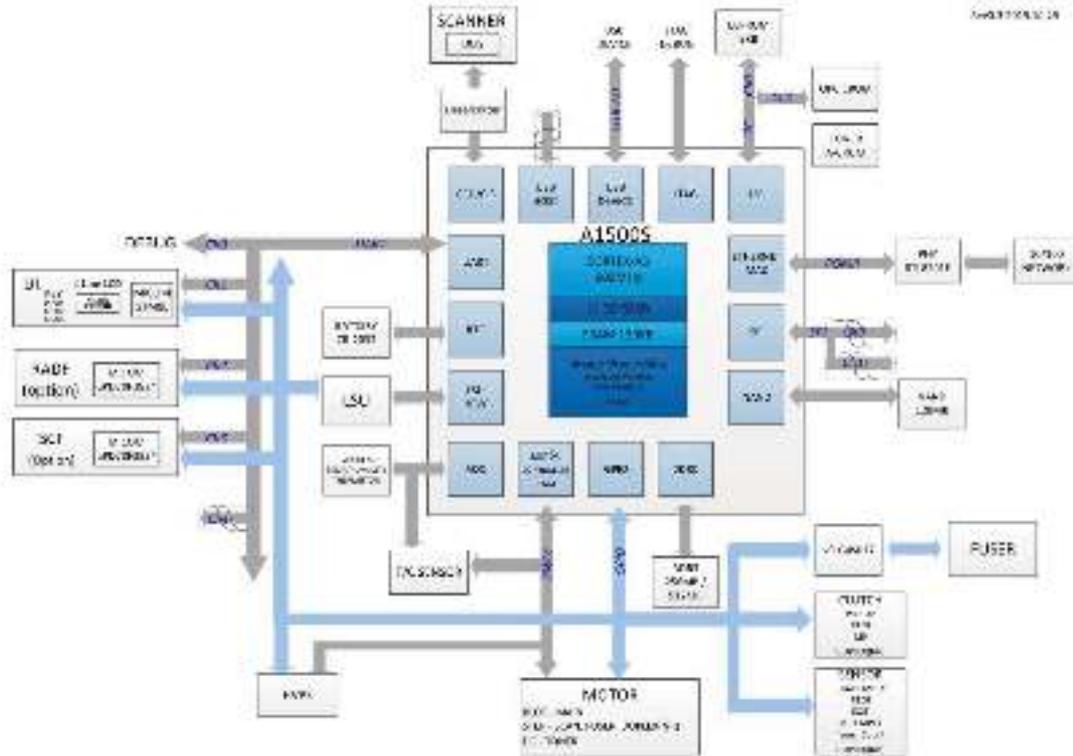


Figure 1-39 Electrical Circuit (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)



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

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

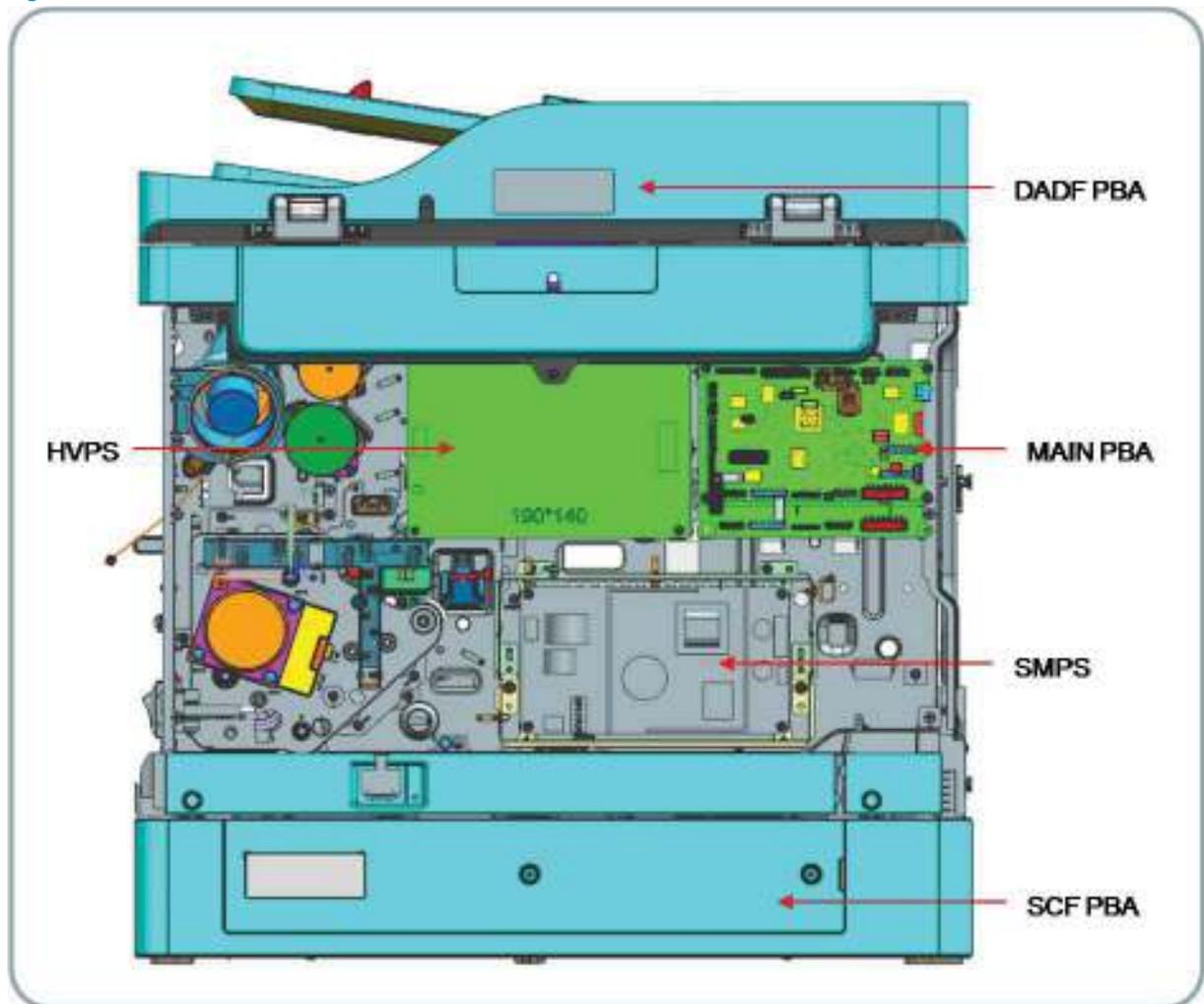
The video controller on the main board receives print data from the host through the network or USB port, and it receives copy data from the scan controller. It takes this information and generates printable video bitmap data. The generated data is sent to the engine controller.

The main board adopted 600MHz CPU, DDR3 256MB / 512 MB.

## Circuit Board Locations

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

Figure 1-40 Circuit Board Locations



## Formatter (Main) board block diagram

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

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

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

Figure 1-41 Main board diagram (M433/M436)

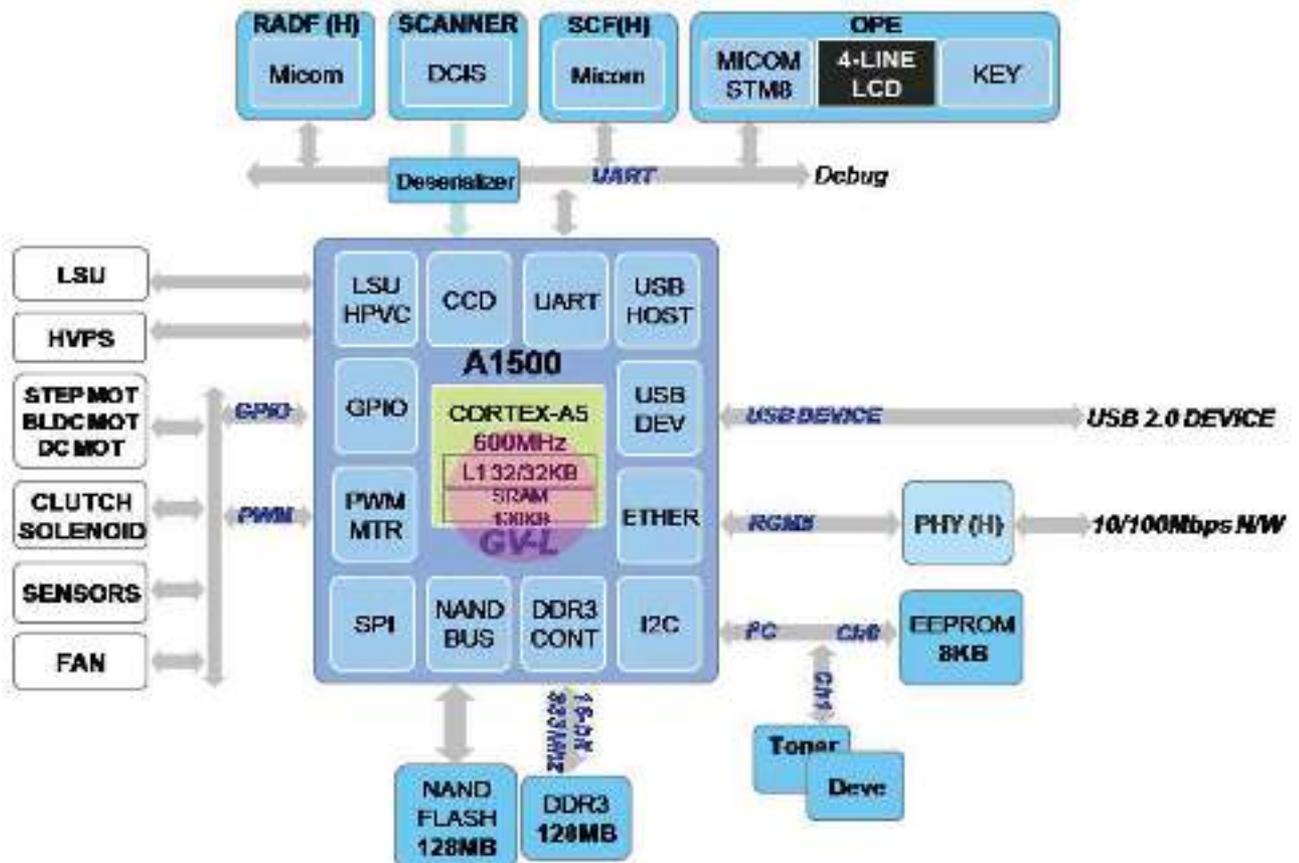
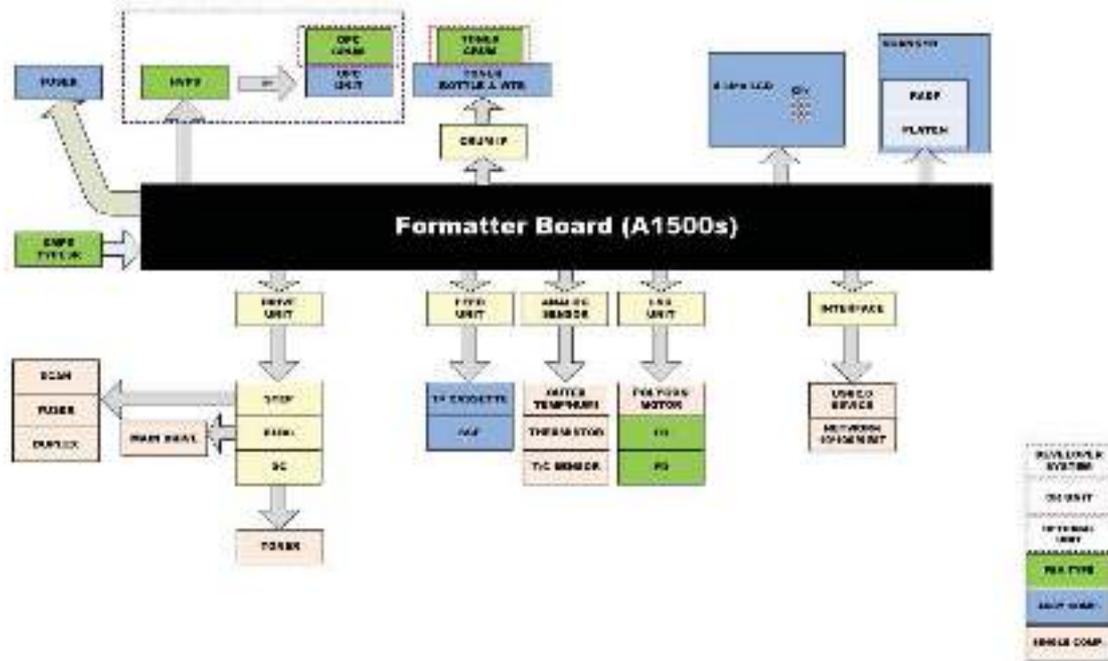


Figure 1-42 Main board diagram (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)



## Formatter (Main) board connectors

Figure 1-43 Formatter (Main) board

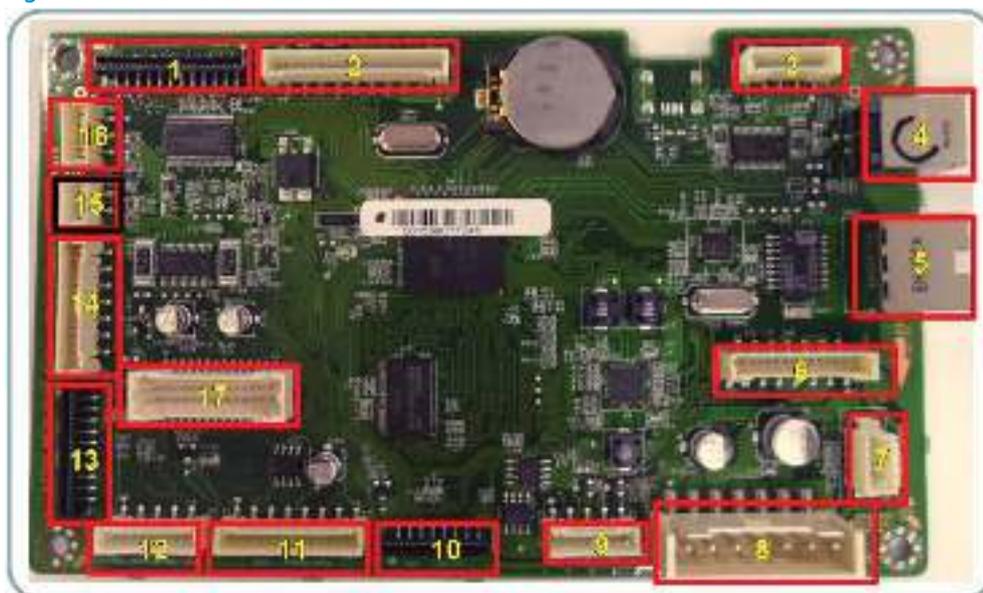


Table 1-42 Formatter (Main) board

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

## OPE board

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

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

Figure 1-44 OPE board (1 of 2)

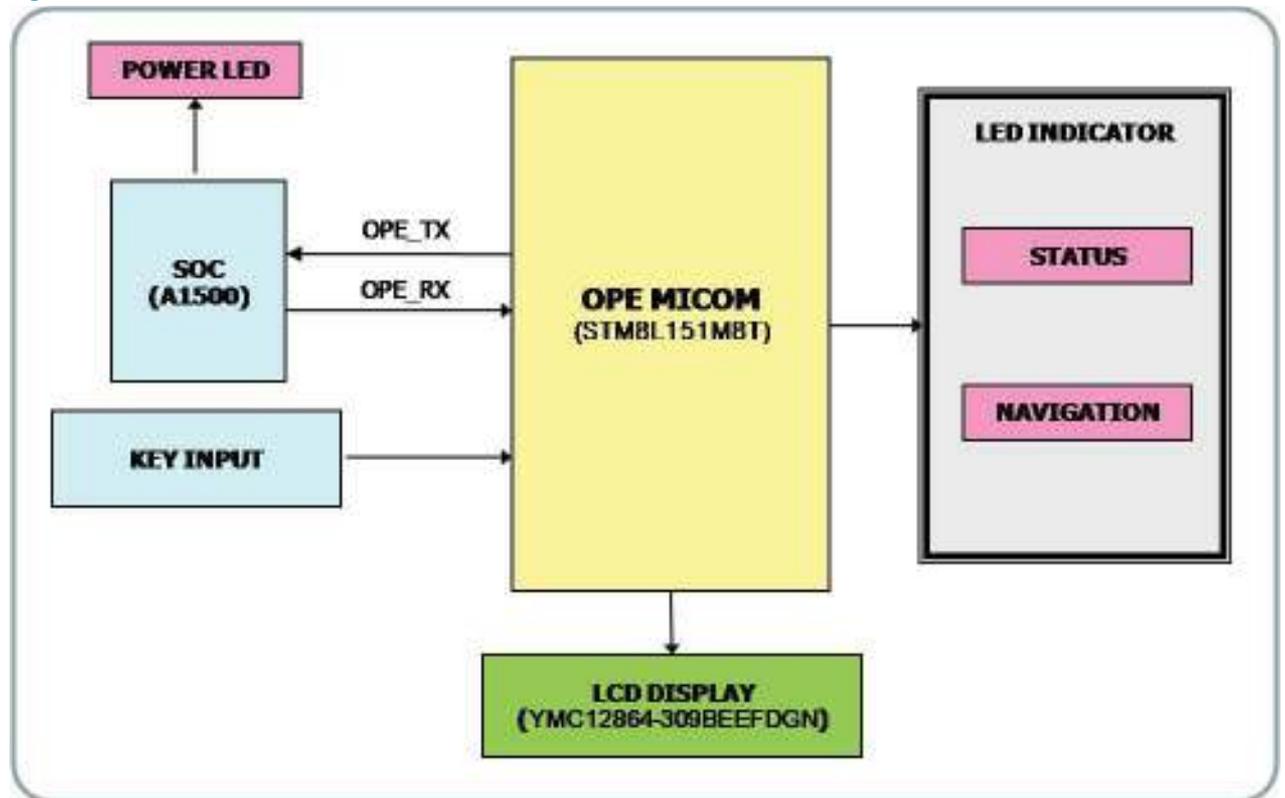


Figure 1-45 OPE board (2 of 2)

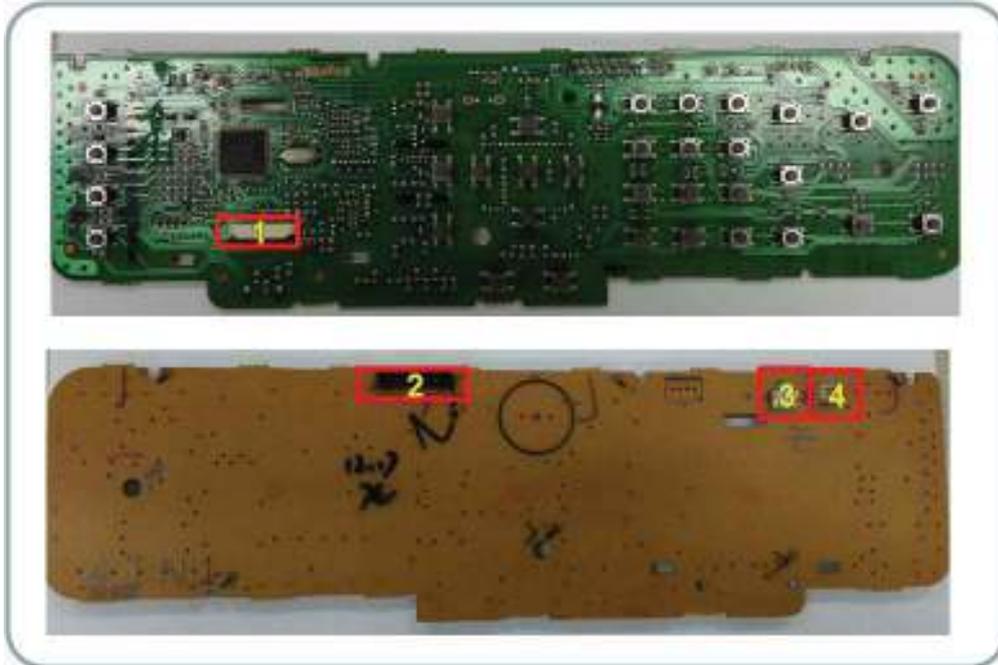


Table 1-43 OPE board

1	FFC connector to four-Line LCD
2	Interface to connector to main board
3	Interface connector to BLU (Back Light unit) PBA
4	Not Used

## SMPS (LVPS) board (HP LaserJet MFP M433a Printer only)

 **NOTE:** For all other models, see [SMPS \(LVPS\) board on page 64](#).

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

Figure 1-46 SMPS (LVPS) board—M433a



## Specification

General Input/Output Voltage

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

## Connection

- **Table 1-44 SMPS (LVPS) board-M433a**

1	AC_Inlet
2	FUSER_AC Output
3	OUTPUT_DC
4	SIGNAL_LVPS~MAIN Board

## Input/Output connector

- **Table 1-45 AC Input Connector (CON1)**

PIN ASSIGN	PIN NO	Description
1	AC_L	AC Input
2	AC_N	

- **Table 1-46 Fuser AC output Connector (CON2)**

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

- **Table 1-47 DC Output Connector (CON3)**

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

- **Table 1-48 Signal Connector (CON4)**

PIN ASSIGN	PIN NO	Description
1	GND	Ground
2	24V_ON_OFF	24V_ON_OFF

**Table 1-48** Signal Connector (CON4) (continued)

PIN ASSIGN	PIN NO	Description
3	Relay on	Fuser Relay
4	24VS	Photo Triac Bias
5	Fuser On	Fuser On

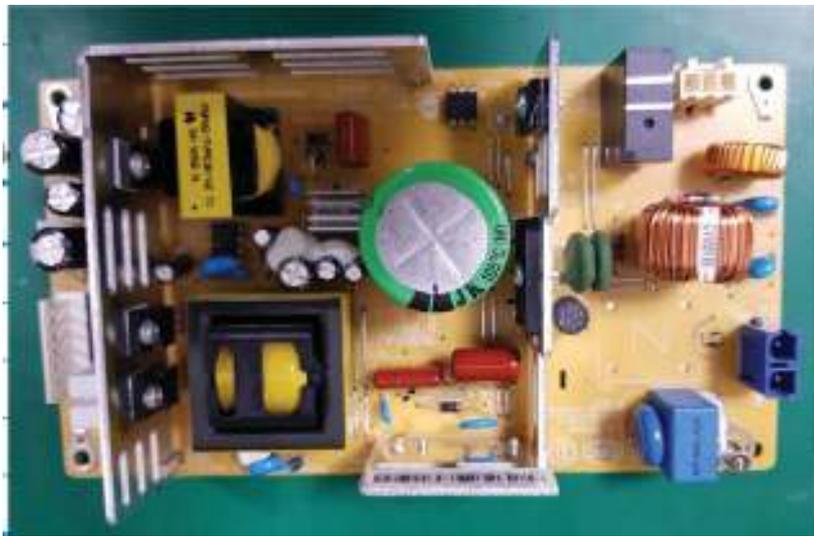
## SMPS (LVPS) board

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

Figure 1-47 SMPS (LVPS) board (M436)



Figure 1-48 SMPS (LVPS) board (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)



### Specification

General Input/Output Voltage

- AC 220V (220V ~ 240V)
- Input current: 5A
- Output power (max): 164W
  - DC 5V:20W/DC 24V:144W

## Connection

- **Table 1-49 SMPS (LVPS) board**

1	AC_Inlet
2	FUSER_AC Output
3	OUTPUT_DC
4	SIGNAL_LVPS~ MAIN Board

## Input/output connector

- **Table 1-50 AC input connector (CON1)**

PIN ASSIGN	PIN NO	Description
1	AC_L	AC Input
2	AC_N	

- **Table 1-51 Fuser AC output connector (CON2)**

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

- **Table 1-52 DC Output Connector (CON3)**

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

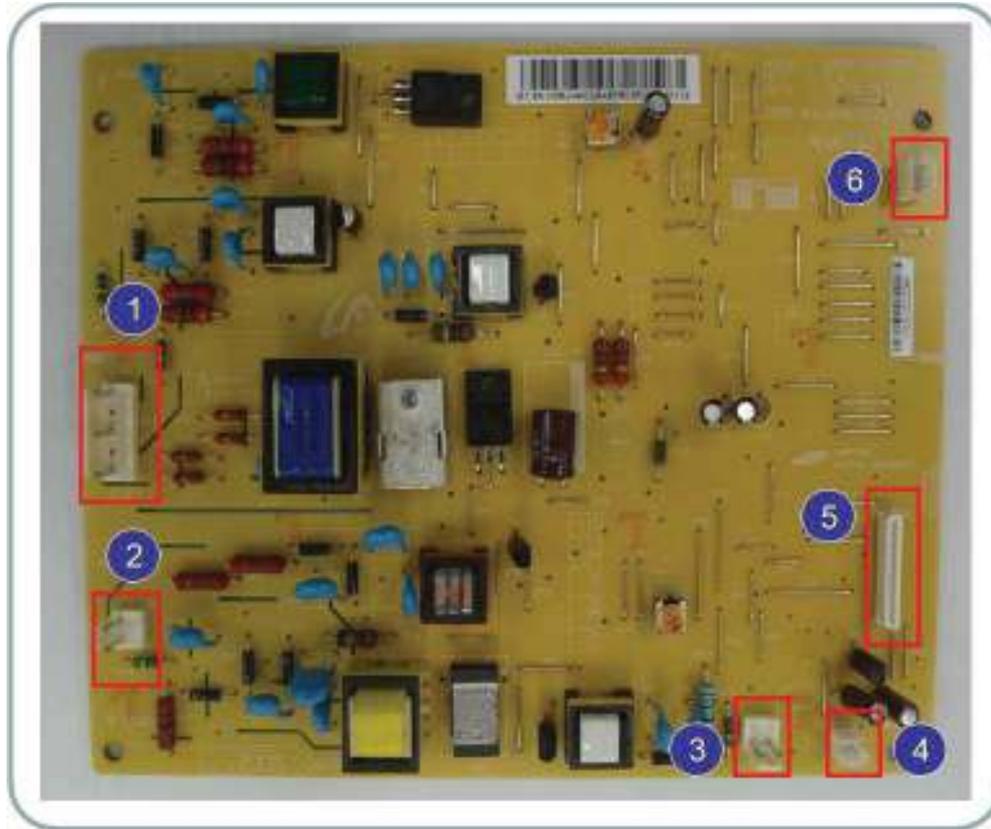
- **Table 1-53 Signal Connector (CON4)**

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

## HVPS board

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

Figure 1-49 HVPS board



### Connection

- **Table 1-54 HVPS board**

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

### Input/Output connector

- **Table 1-55 AC Input Connector (CN1)**

PIN ASSIGN	PIN NO	Description
1	SAW	High Voltage
2	—	

**Table 1-55 AC Input Connector (CN1) (continued)**

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

- **Table 1-56 AC Input Connector (CN2)**

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

- **Table 1-57 AC Input Connector (CN3)**

PIN ASSIGN	PIN NO	Description
1,2	Fuser	High Voltage

- **Table 1-58 AC Input Connector (CN4)**

PIN ASSIGN	PIN NO	Description
1	FAN_SMPS	Low Voltage
2	AGND	

- **Table 1-59 DC Output Connector (CON3)**

PIN ASSIGN	PIN NO	Description
1	FAN_SMPS	
2	nEN_THV	
3	24V	
4	PWM THV	
5	24V	
6	PWM MHV	
7	PWM VPP AC	
8	nEN DEV AC	
9	PWM DEV AC	
10	PWM DEV DC	
11	PWM SAW	
12	AGND	
13	AGND	
14	ADC MHV READ	
15	AGND	
16	ADC THV READ	

Table 1-59 DC Output Connector (CON3) (continued)

PIN ASSIGN	PIN NO	Description
17	nOUT_BIN_FULL	
18	3.3V PS	
19	DGND	
20	PWM FUSER BIAS	

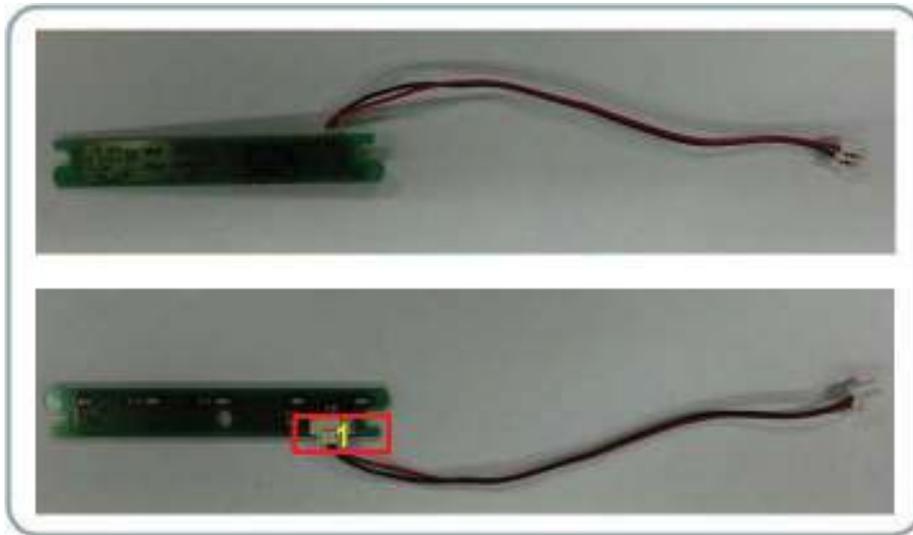
- Table 1-60 AC Input Connector (CN7)

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

## BLU PBA (back light unit)

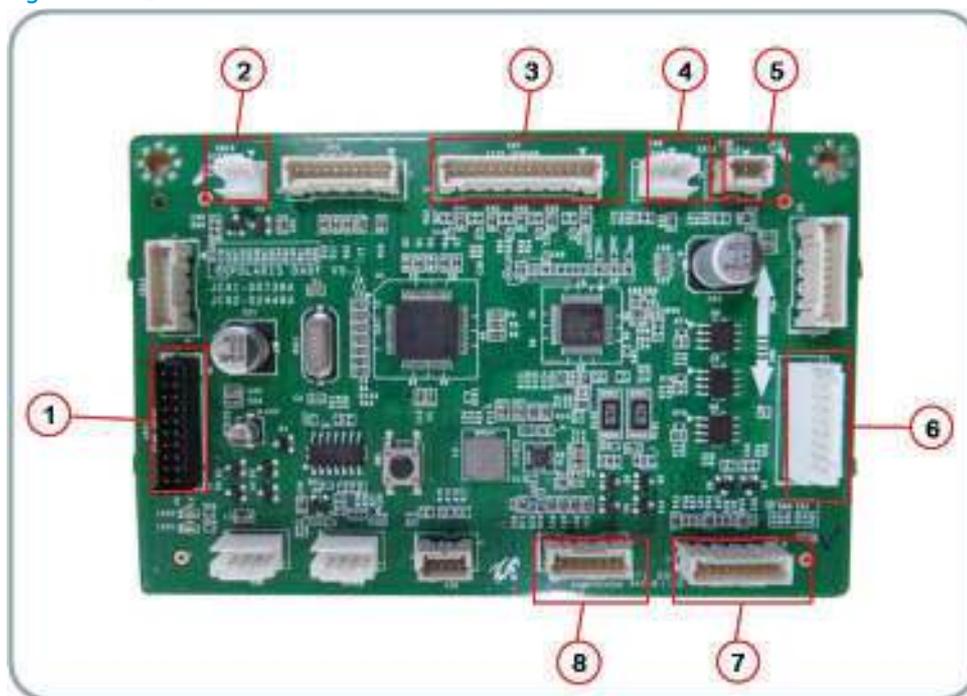
This PBA provides the backlight function to the LCD and is assembled to the OPE PBA.

Figure 1-50 BLU PBA



## Document feeder board

Figure 1-51 Document feeder board



### Connection

- **Table 1-61 Document feeder board**

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

## Tray 3 accessory board

Figure 1-52 Tray 3 accessory board

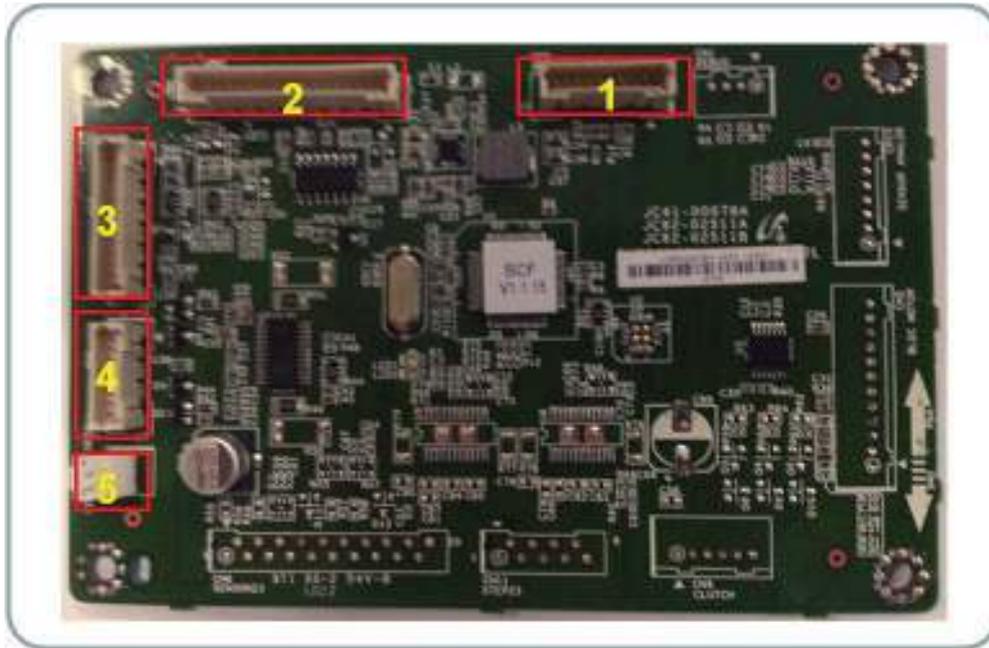


Table 1-62 Tray 3 accessory board

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

## Sensor location

The following diagrams shows the sensor locations and related errors.

Figure 1-53 Sensor location (1 of 2)

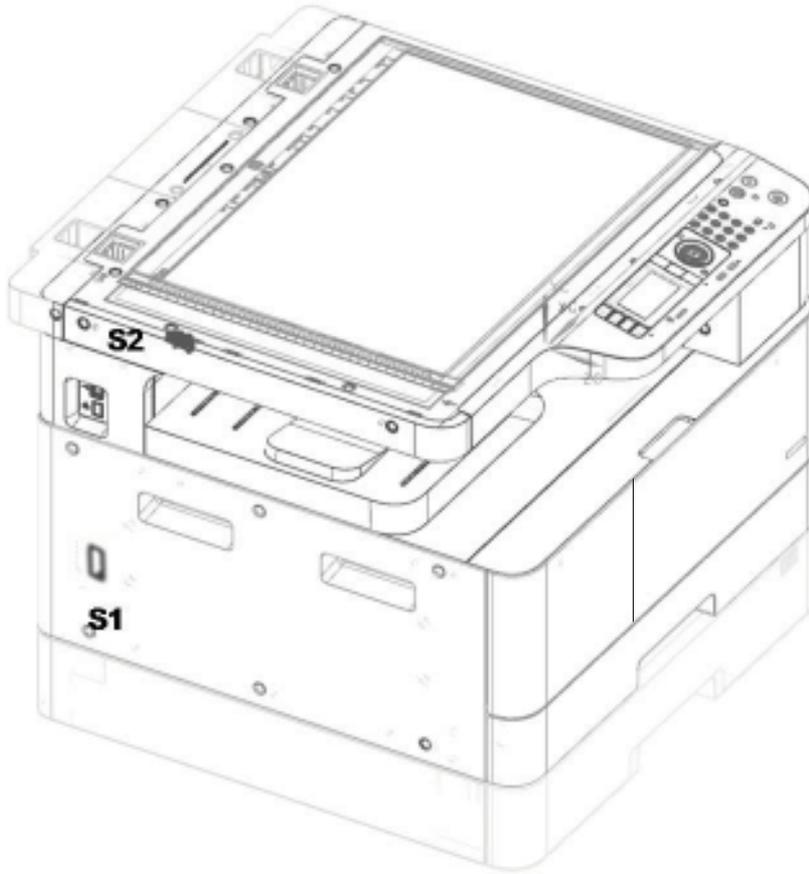


Table 1-63 Sensor location (1 of 2)

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

Figure 1-54 Sensor location (2 of 2)



Table 1-64 Sensor location (2 of 2)

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

---

## 2 Removal and replacement

- [HP service and support](#)
- [Removal and replacement strategy](#)
- [Service approach](#)
- [Removal: Toner cartridge](#)
- [Removal: Transfer roller](#)
- [Removal: Fuser unit](#)
- [Removal: Imaging unit \(drum unit and developer\)](#)
- [Removal: Pickup roller and friction pad](#)
- [Removal: MP pickup roller and friction pad](#)
- [Removal: Document feeder pickup roller assembly](#)
- [Removal: Document feeder friction pad](#)
- [Removal: Rear cover](#)
- [Removal: Front cover \(M433/M436\)](#)
- [Removal: Front cover \(M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625\)](#)
- [Removal: Left cover](#)
- [Removal: Formatter board](#)
- [Removal: SMPS \(LVPS\) board](#)
- [Removal: Front cover open sensor](#)
- [Removal: Side unit](#)
- [Removal: Side cover-open sensor](#)
- [Removal: Platen cover \(a/n/dn models only\)](#)
- [Removal: Document feeder unit \(optional\)](#)
- [Removal: Document feeder cover](#)
- [Removal: Document feeder open cover](#)

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

# HP service and support

Learn about HP access to additional service and support information.

## Additional service and support for channel partners

Channel partners, go to [partner.hp.com](http://partner.hp.com), and then use the steps below to access the HP Web-based Interactive Search Engine (WISE).

### Access WISE for Channel partners

1. Select **Services & Support** (near the top of the screen).
2. Under **Services Delivery**, select **Technical Support**.
3. Select **Technical Documentation**.

### Find information about the following topics

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

## Additional service and support for HP internal personnel

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

### Americas (AMS)

- [WISE - English](#)
- [WISE - Spanish](#)
- [WISE - Portuguese](#)
- [WISE - French](#)

### Asia Pacific / Japan (APJ)

- [WISE - English](#)
- [WISE - Japanese](#)
- [WISE - Korean](#)
- [WISE - Chinese \(simplified\)](#)

- [WISE - Chinese \(traditional\)](#)
- [WISE - Thai](#)

#### Europe / Middle East / Africa (EMEA)

- [WISE - English](#)

## Removal and replacement strategy

---

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

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

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

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

---

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

## Electrostatic discharge

---

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

---

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

---

## Required tools

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

## Types of screws

---

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

---

## Service approach

---

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

---

## Before performing service

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

## Releasing Plastic Latches

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

## After performing service

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

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

## Post-service test

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

### Print-quality test

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

# Removal: Toner cartridge

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

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

A toner cartridge has almost reached its estimated cartridge life:

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

---

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

 **NOTE:**

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

## Introduction

### Overview

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

## Post service test

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

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

## Remove: Toner cartridge

1. Open the front door. Push the two tabs on the toner cartridge inward and pull out to remove it.

Figure 2-1 Remove the toner cartridge



2. Remove the replacement toner cartridge from its packaging. Save all packaging for recycling the used toner cartridge.

 **NOTE:** Keep the orange plug in place. It is required for toner cartridge replacement.

Figure 2-2 Unpack the replacement toner cartridge



3. Hold the toner cartridge as shown and rotate the toner cartridge end to end to redistribute toner in the cartridge.

Figure 2-3 redistribute toner



4. Pull the red or orange pull tab and remove it completely.

Figure 2-4 Remove the pull tab



5. Align toner cartridge with the opening and push it in until toner cartridge locks into place. An audible click indicates the cartridge is locked into place. Close the front door.

Figure 2-5 Install the toner cartridge



# Removal: Transfer roller

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

## Remove: Transfer roller

1. Open the side cover.



2. Remove the transfer roller as shown.



# Removal: Fuser unit

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

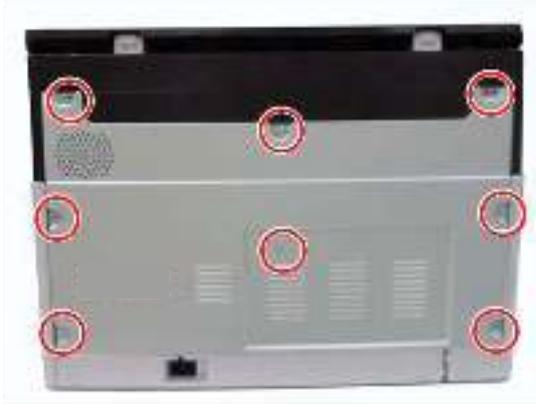
## Post service test

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

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

## Remove: Fuser unit

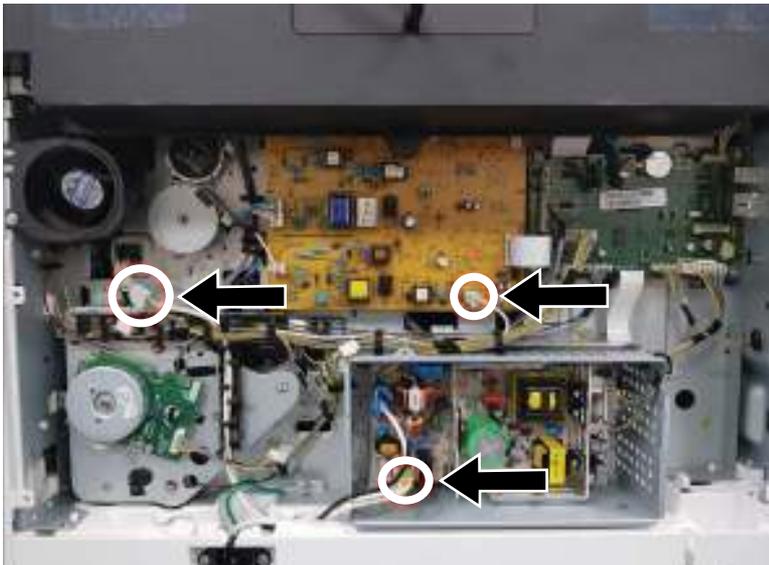
1. Remove eight screws and then release the rear cover.



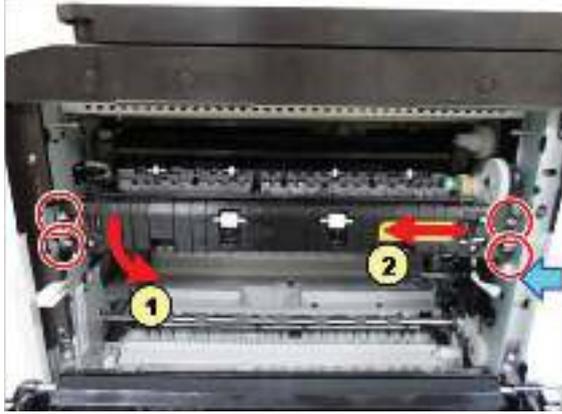
2. Open the side cover.



3. Unplug the SMPS, HVPS, and thermistor connectors.



4. Remove four screws. Remove the fuser unit by pulling it in the direction of the arrows (callouts 1, 2).



# Removal: Imaging unit (drum unit and developer)

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

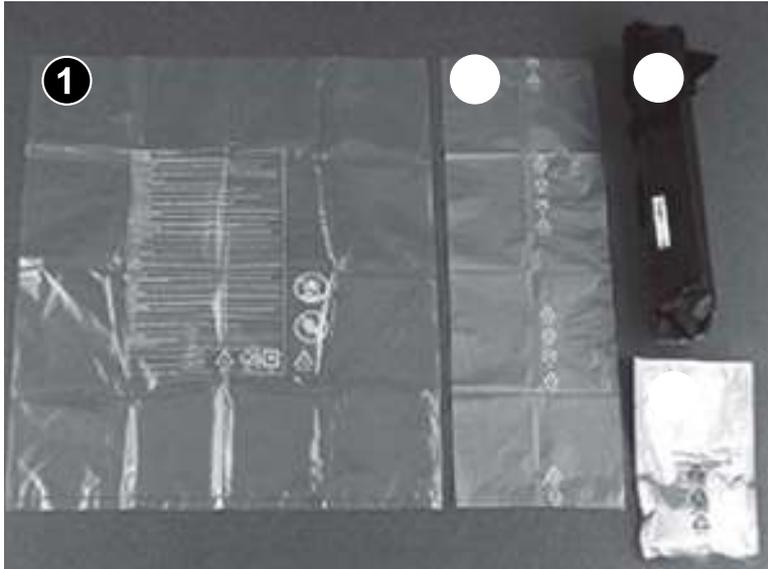
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder. Verify that the print quality meets customer expectations.

## Remove: Imaging unit (drum unit and developer)

1. Check the contents of the kit:
  - Large plastic bag (workstation protection; callout 1).
  - Long narrow bag (toner disposal; callout 2).

- Drum unit (replacement assembly; callout 3).
- Developer beads pouch (replacement developer material; callout 4).

Figure 2-6 Check kit contents



2. Set the large plastic bag (callout 1; step 2) on a work surface next to the printer.

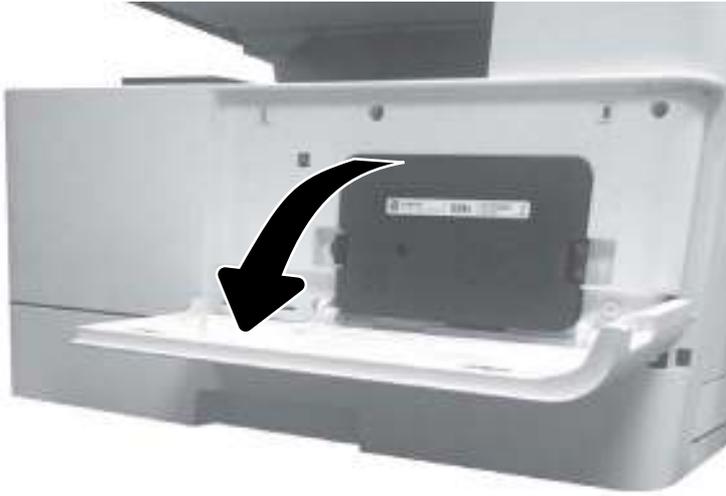
 **IMPORTANT:** The plastic bag prevents spilled toner from contacting the work surface.

Figure 2-7 Protect the work surface



3. Open the front cover.

Figure 2-8 Open the front cover



4. Open the right door.

---

**CAUTION:** To avoid damage to the drum roller, the right door must

---

Figure 2-9 Open the right door



5. Remove the toner cartridge.

Figure 2-10 Remove the toner cartridge



6. Release the cable from the cable guide (callout 1), disconnect the connector (callout 2), and then remove two screws (callout 3)

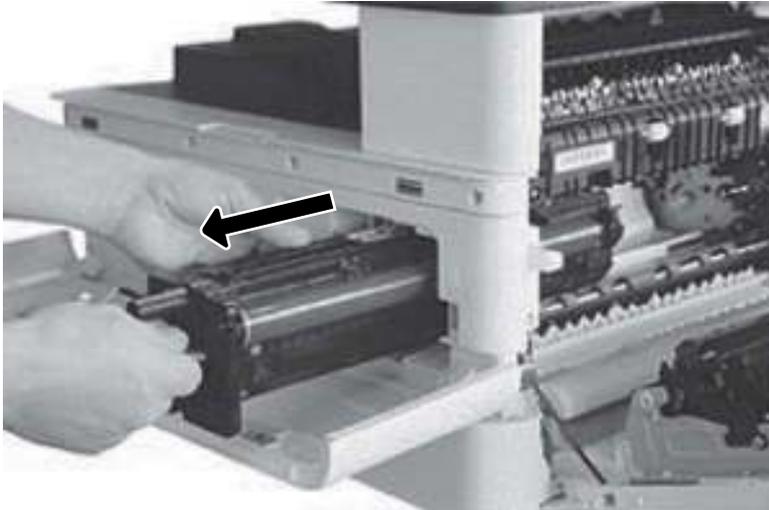
Figure 2-11 Disconnect connector and remove two screws



7. Use the lever to slide the imaging unit out of the printer.

**⚠ CAUTION:** Do not touch the exposed blue roller surface. Do not excessively tilt or turn the unit over to avoid spilling toner.

Figure 2-12 Remove the imaging unit



8. Set the imaging unit on the large plastic bag.

Figure 2-13 Imaging unit on the plastic bag



9. Remove eight screws securing both side covers.

**CAUTION:** Do not touch the exposed drum roller surface.

Figure 2-14 Remove eight screws (1 of 2)

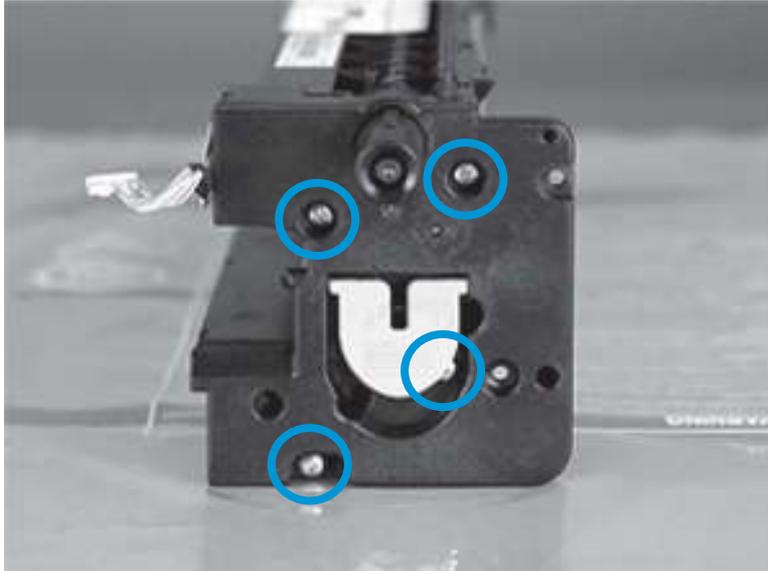
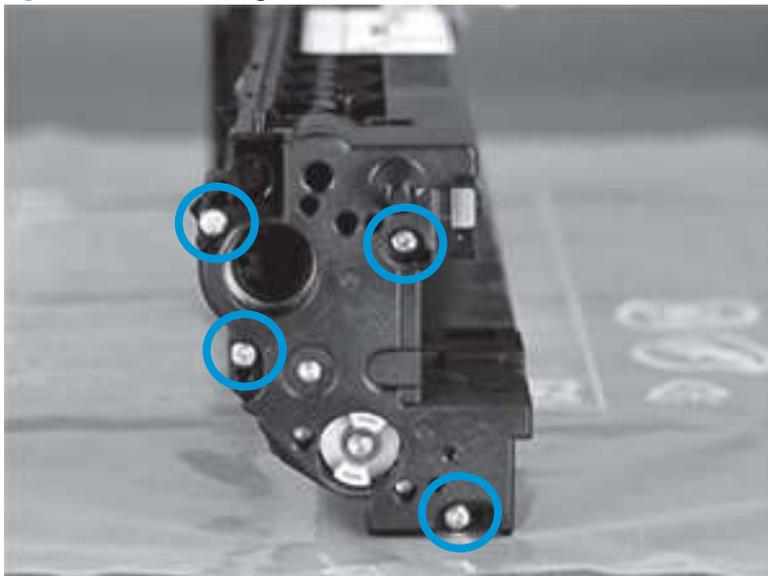


Figure 2-15 Remove eight screws (2 of 2)

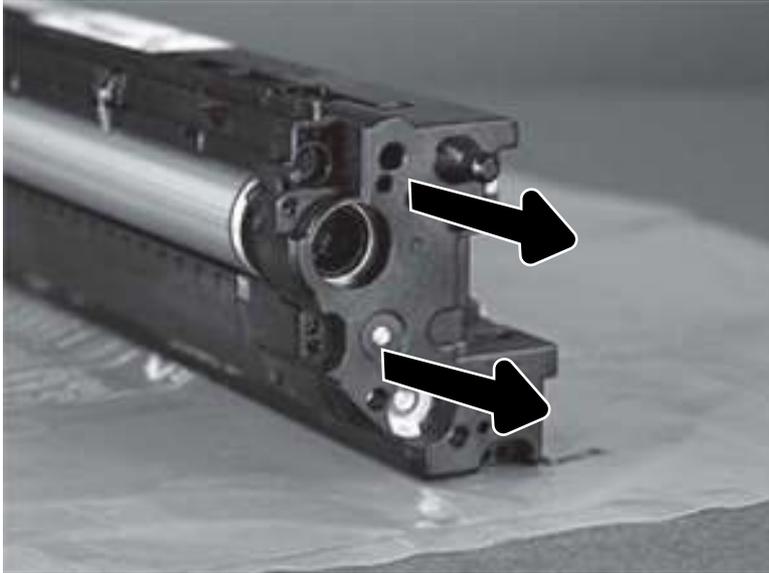


10. Remove the left and right covers of the imaging unit.

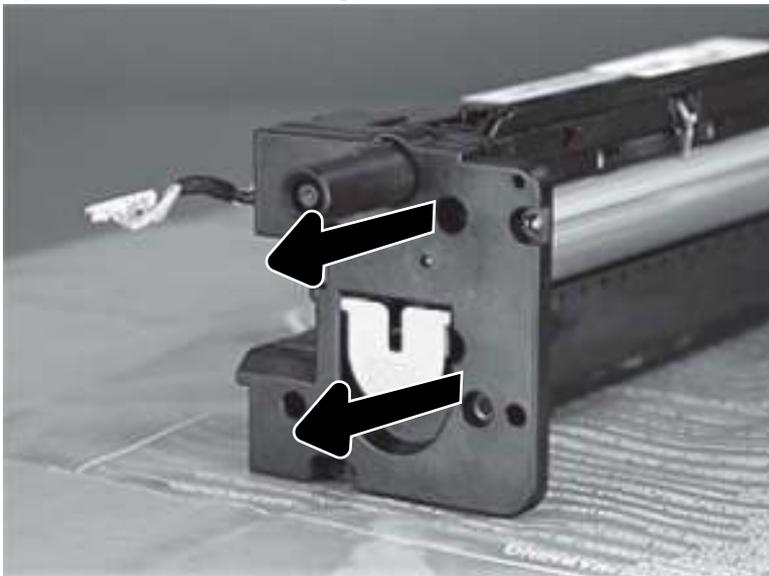
 **IMPORTANT:** Set these parts aside for reuse during installation.

 **TIP:** It might take some force to remove these covers. Rock a cover from side-to-side while pulling on it away from the unit to make removal easier.

**Figure 2-16** Remove left and right covers (1 of 2)



**Figure 2-17** Remove left and right covers (2 of 2)



11. Disconnect one connector, and then release the cable from the guide on the imaging drum unit.

Figure 2-18 Disconnect the connector

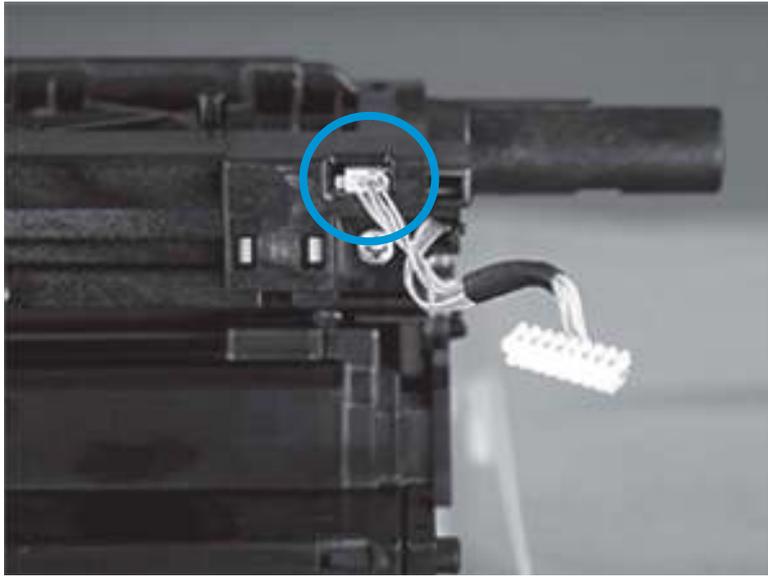
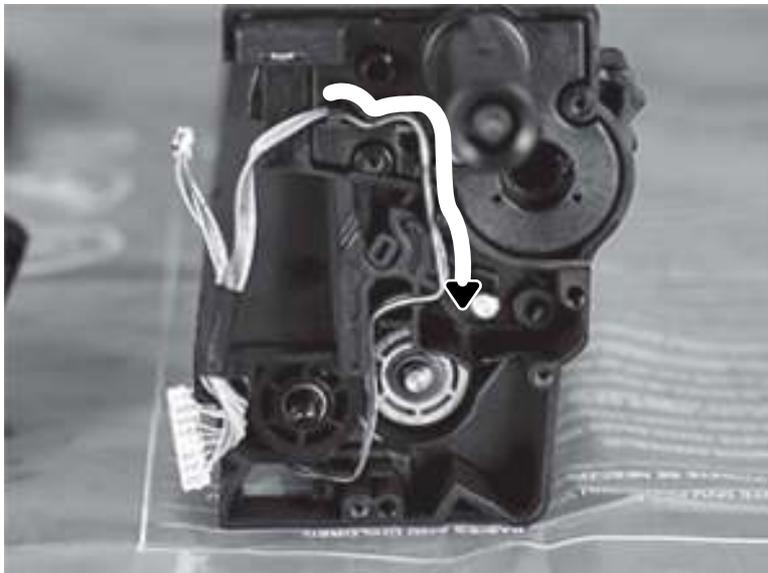
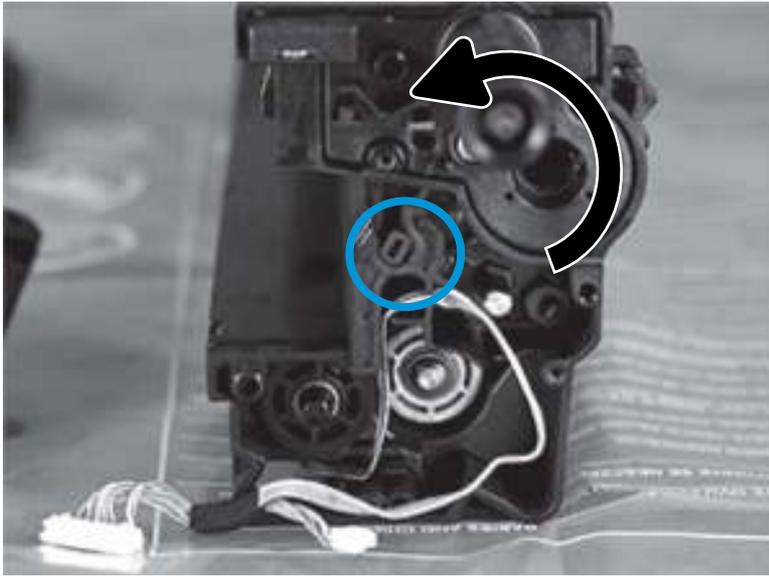


Figure 2-19 Release the cable



12. Pivot the drum unit on the pin.

Figure 2-20 Pivot the drum



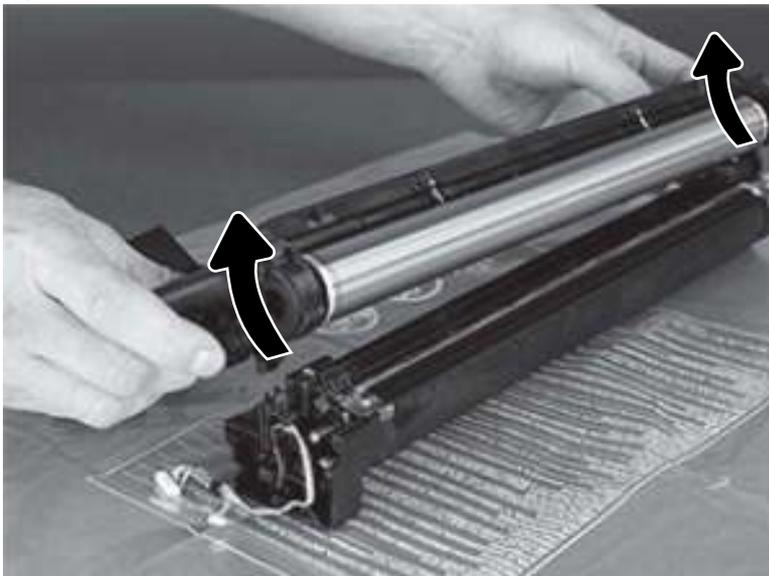
13. Lift the drum unit (upper assembly) away from the developer unit (lower assembly).

---

 **NOTE:** Dispose of the removed drum unit.

---

Figure 2-21 Lift the upper assembly off of the lower assembly



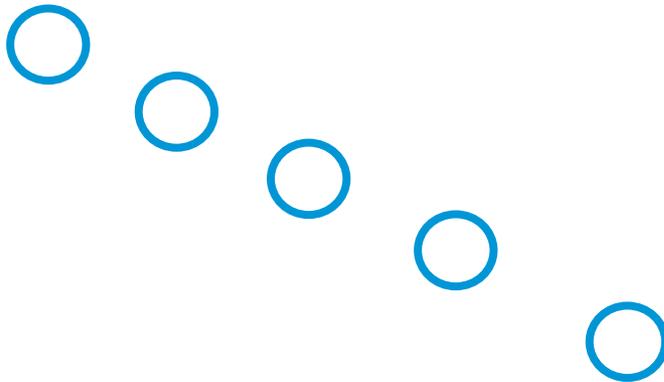
14. On the developer unit, remove two screws.

Figure 2-22 Remove two screws



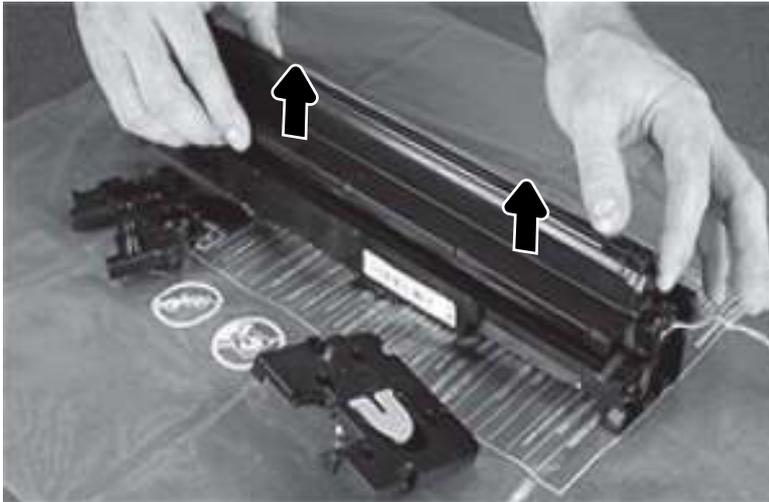
15. Release the developer cover tabs.

Figure 2-23 Release cover tabs



16. Lift up to release the developer cover, and then remove it.

Figure 2-24 Remove the developer cover



17. Insert the developer unit in the provided long narrow plastic bag.

---

**⚠ CAUTION:** Do not turn the developer unit upside-down before placing it in the bag because toner will pour out.

---

Figure 2-25 Place the developer unit in the plastic bag



18. With the developer unit fully enclosed in the bag, turn it over to dump out any remaining toner.

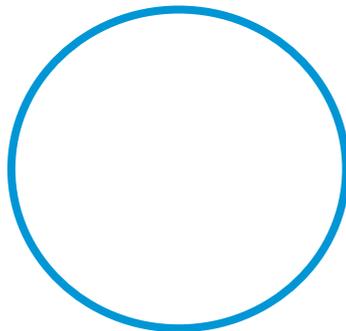
**CAUTION:** To prevent damage to the unit, do not tap or bump the unit to remove toner.

Figure 2-26 Empty the developer unit



19. Remove the developer unit from the bag, carefully fold up bag and then dispose of the bag and toner.

Figure 2-27 Dispose of the bag and toner

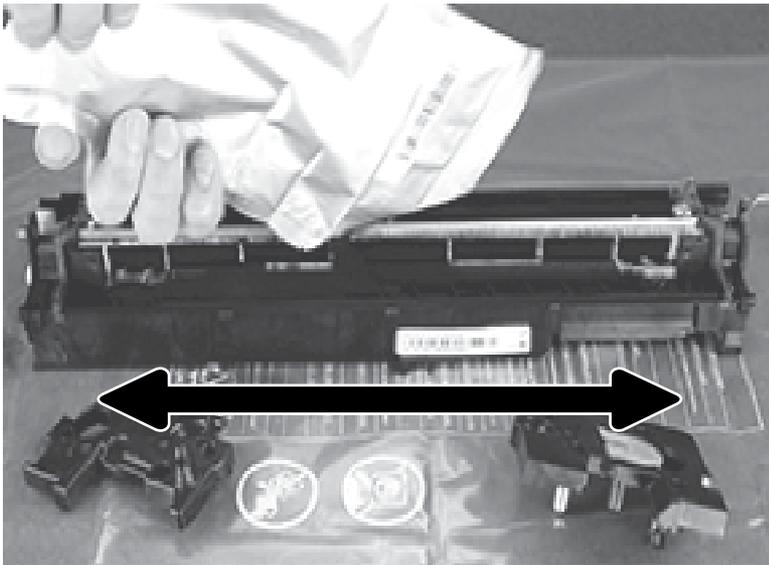


20. Open the developer beads pouch, and then pour the contents into the developer unit evenly.

 **NOTE:** Empty the entire contents of the pouch into the developer unit.

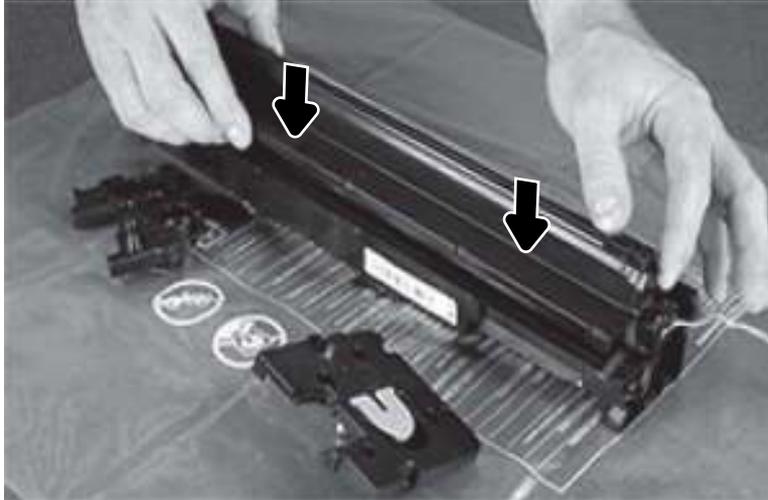
**Figure 2-28** Fill the developer unit with toner (1 of 2)

**Figure 2-29** Fill the developer unit with toner (2 of 2)



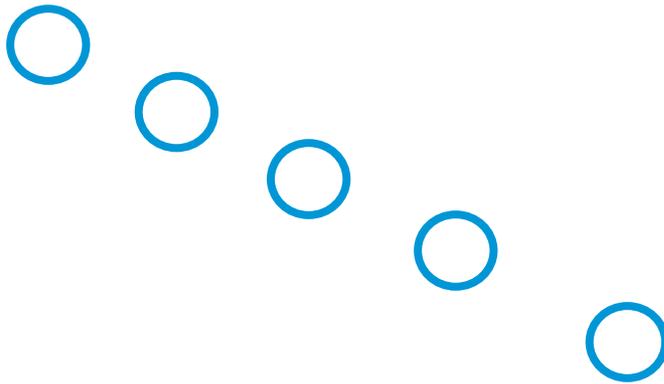
21. Reinstall the developer cover.

Figure 2-30 Install the developer cover



22. Verify that the cover tabs are all aligned and set correctly.

Figure 2-31 Check the cover tabs



23. Reinstall two screws.

Figure 2-32 Install two screws



24. Remove the replacement drum unit from the shipping package.

Figure 2-33 Remove the replacement unit from the package (1 of 2)

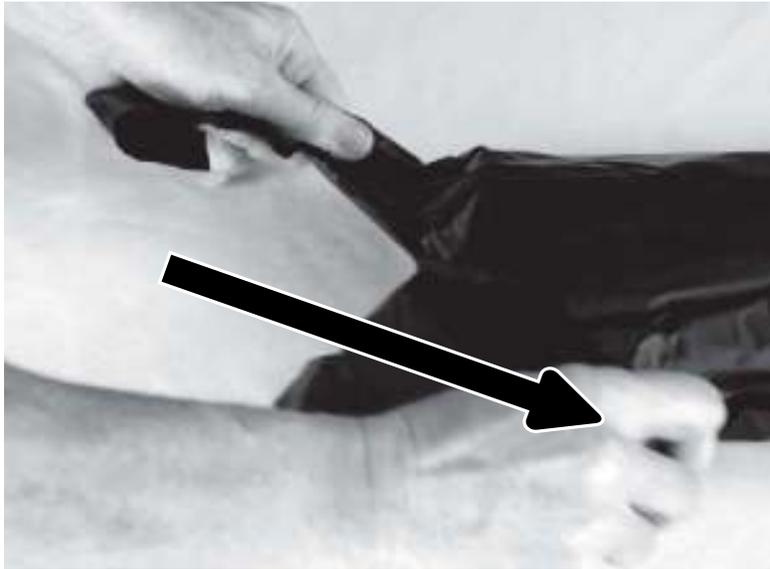
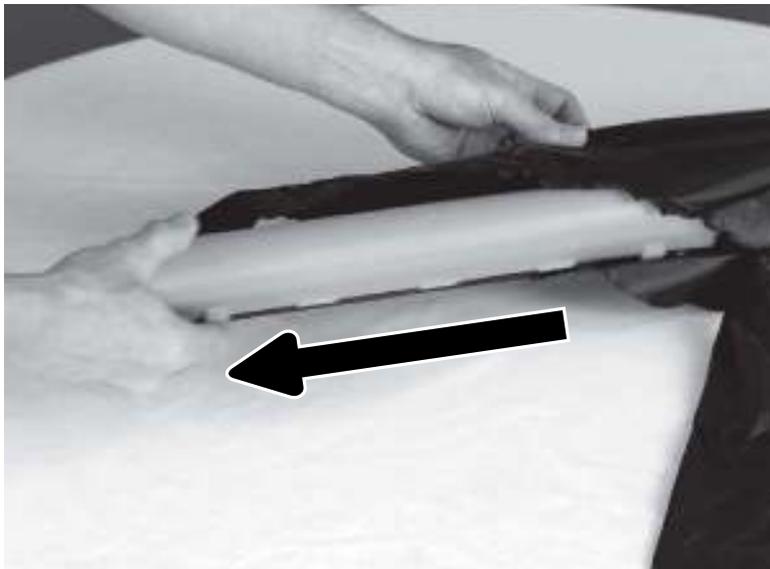


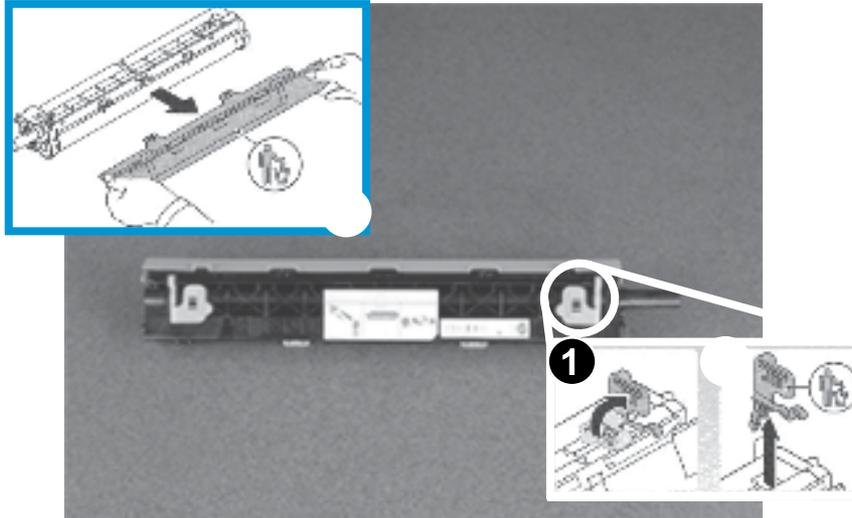
Figure 2-34 Remove the replacement unit from the package (2 of 2)



25. Remove the orange shipping locks (callout 1/2), and then remove the orange roller cover (callout 3).

**⚠ CAUTION:** After removing the orange roller cover, do not touch the exposed roller surface.

Figure 2-35 Remove the shipping restraints



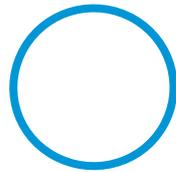
26. Align the pins on each the drum unit with the slots in the developer unit.

Figure 2-36 Align drum unit pins with slots

27. Place the drum unit on the developer unit with the pins in the slots.

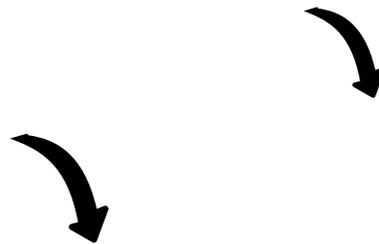
 **IMPORTANT:** Make sure that both pins (on each end of the drum unit) are in the developer unit slots.

**Figure 2-37** Install the drum unit on the developer unit



28. Rotate the drum unit down onto the developer unit.

**Figure 2-38** Rotate the drum unit onto the developer unit



29. Install the cable in the guide on the imaging drum unit, and then connect one connector.

Figure 2-39 Install the cable



Figure 2-40 Connect the connector



30. Install the left and right covers of the imaging unit.

Figure 2-41 Install left and right covers (1 of 2)

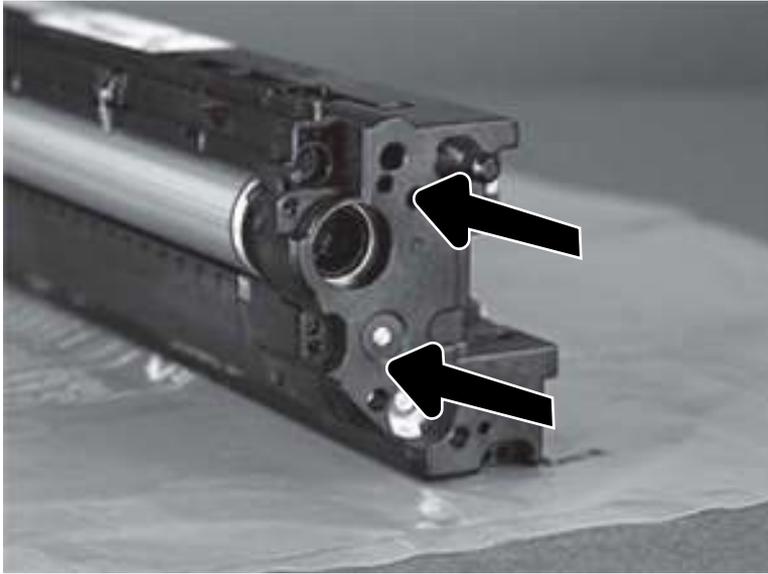
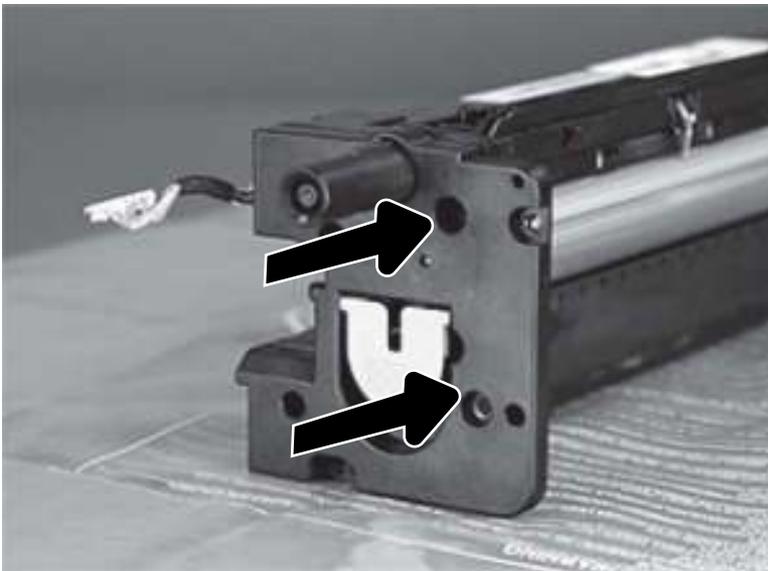


Figure 2-42 Install left and right covers (2 of 2)



31. Install eight screws securing both side covers.

Figure 2-43 Install eight screws (1 of 2)

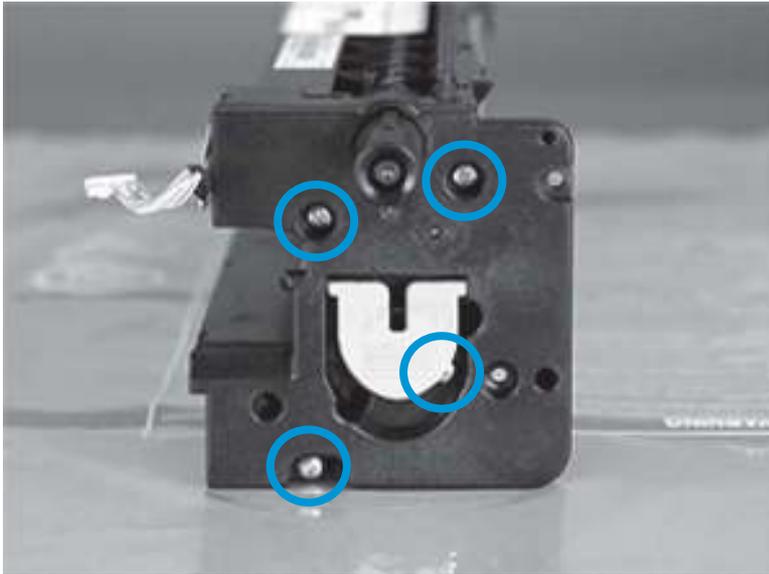
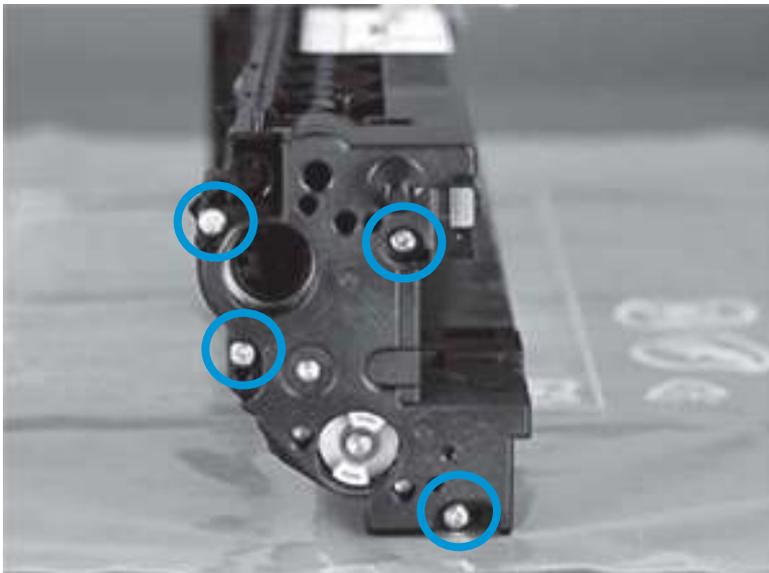


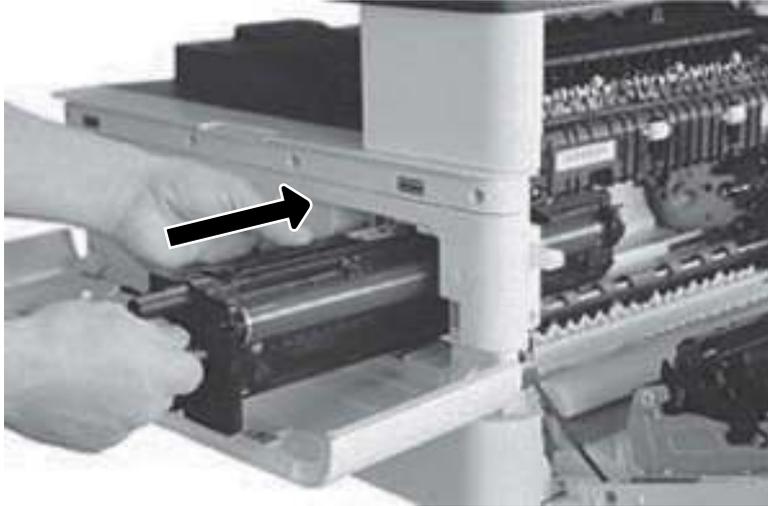
Figure 2-44 Install eight screws (2 of 2)



32. Reinstall the imaging unit.

**CAUTION:** To avoid damage, make sure that the right door is open before installing the imaging unit.

Figure 2-45 Install the imaging unit



33. Reinstall two screws (callout 1), reconnect the connector (callout 2) and then reinstall the cable in the cable guide (callout 3).

Figure 2-46 Install two screws and connect one connector

1

34. Reinstall the toner cartridge.

---

 **NOTE:** Close the front and right door.

---

**Figure 2-47** Install the toner cartridge



35. Turn the printer power on.

---

 **NOTE:** After installing a replacement imaging unit, the toner calibration starts automatically.

---

# Removal: Pickup roller and friction pad

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

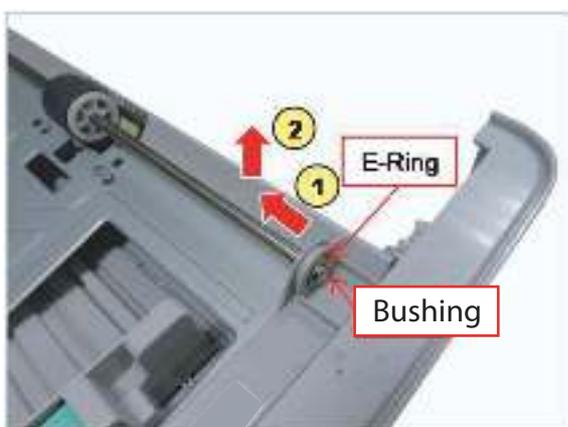
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder. Verify that the print quality meets customer expectations.

## Remove: Pickup roller and friction pad

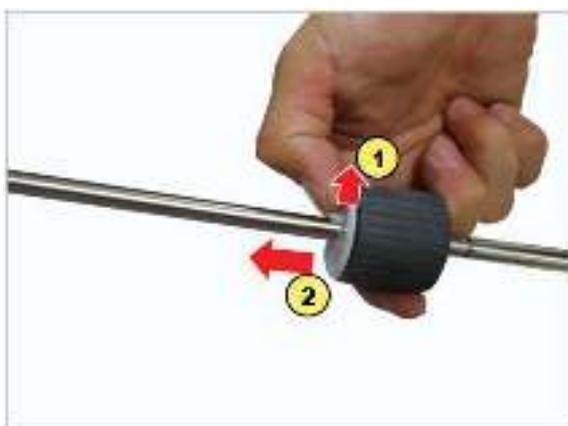
1. Remove the cassette.



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



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



4. Pull and release the friction pad.



# Removal: MP pickup roller and friction pad

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

## Remove: MP pickup roller and friction pad

1. Open the side cover.



2. Remove two screws.



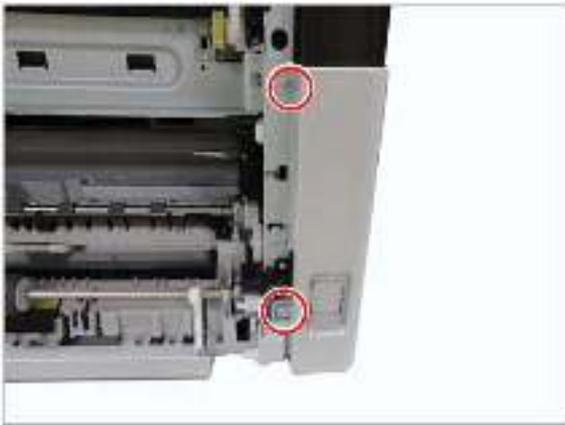
3. Release the side unit.



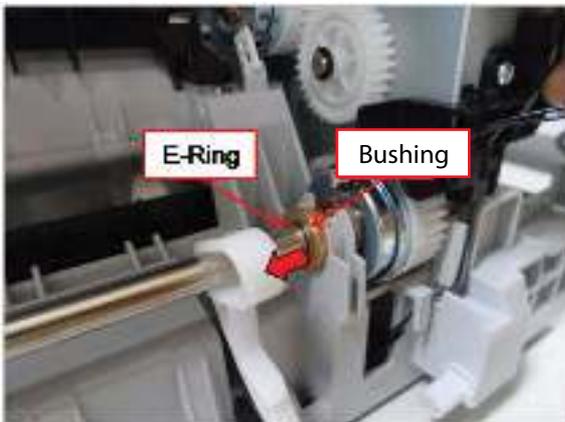
4. Remove the MP guide.



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



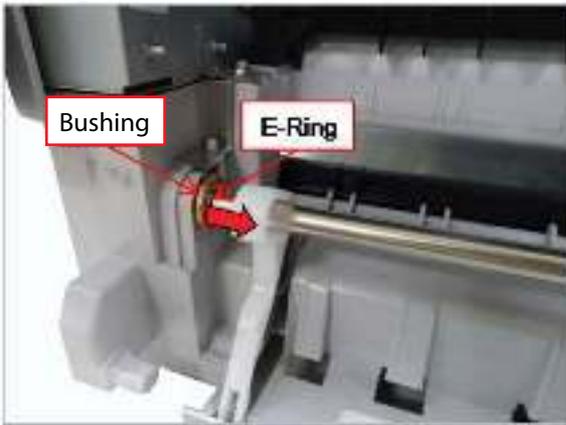
6. Remove the e-ring. Pull the bushing to the left.



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



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



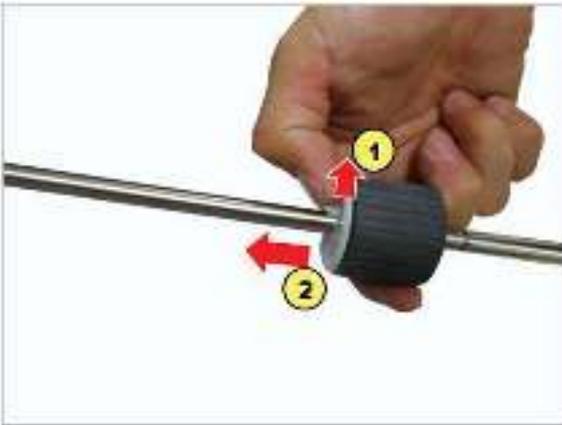
9. Release both linkers from the bottom.



10. Release the MP pickup assembly.



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



12. Pull and release the MP friction pad.



# Removal: Document feeder pickup roller assembly

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Document feeder pickup roller assembly

1. Open the document-feeder open cover.

Figure 2-48 Open the cover

2. Remove the spring.

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



# Removal: Document feeder friction pad

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

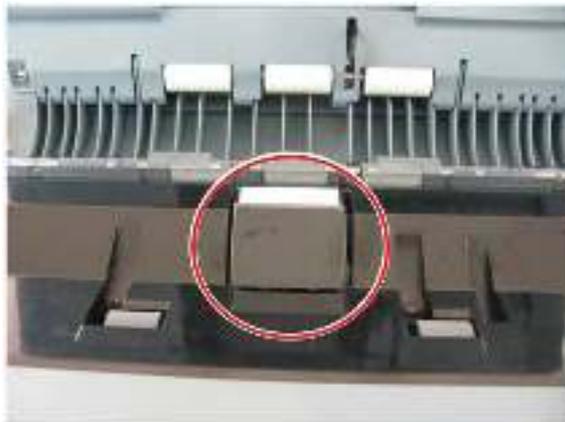
## Remove: Document feeder friction pad

1. Open the document feeder-open cover.

Figure 2-49 Open the cover

2. Remove the document feeder friction pad.

Figure 2-50 Remove the pad



# Removal: Rear cover

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

### Remove: Rear cover

- ▲ Remove the rear cover after removing eight screws.



# Removal: Front cover (M433/M436)

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

### Remove: Front cover (M433/M436)

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

3. Remove the front cover after removing seven screws.



# Removal: Front cover (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

## Introduction

### Overview

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

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

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

## Remove: Front cover (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

1. Remove two screws securing the rear cover.

Figure 2-51 Remove two screws



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

Figure 2-52 Remove the left cover



3. Open the front cover.
4. Remove the toner cartridge and imaging unit.

5. Remove four screws (callout 1), and then remove front cover by pulling it in the directions shown in the figure (callout 2/3).

 **NOTE:** There are two hooks along the left-side of the cover.

**Figure 2-53** Remove the front cover (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)



# Removal: Left cover

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Left cover

1. Remove two screws securing the rear cover.



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



# Removal: Formatter board

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

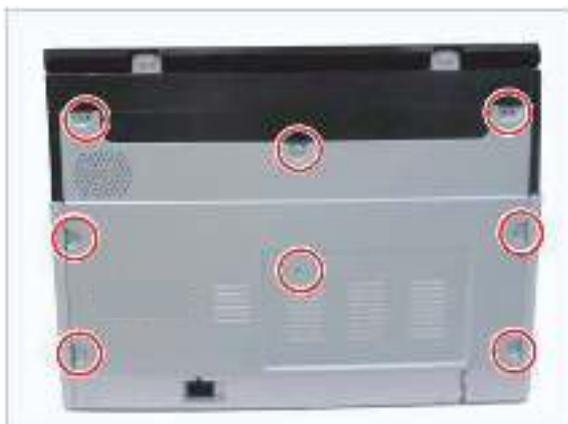
### Post service test

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

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

## Remove: Formatter board

1. Remove the rear cover after removing eight screws.



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



3. Do the following.

---

 **NOTE:** HP LaserJet MFP M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625 only.

---

- a. Access the [Service Utilities](#) submenu, scroll to and select [Set SN](#), and then press the **OK** button.
- b. The current and new serial number appear on the control-panel display. Use the **Up** and **Down** buttons to set a new serial number digit, and then press the **OK** button to advance to the next digit.  
Press the **Back** button change a previously entered digit.
- c. After entering the last new serial number digit, press **OK** to confirm and save the new serial number.

---

 **NOTE:** Press **Cancel** at anytime to exit the menu without saving changes.

---

If the new serial number cannot be read when entered, a system error code appears on the control-panel display.

---

- d. When the new serial number is correctly entered and saved, the message **OK** appears on the control-panel display.

---

 **NOTE:** When the printer is restarted after entering a new serial number, an NVM setting sequence synchronizes the serial number stored in backup memory.

---

# Removal: SMPS (LVPS) board

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

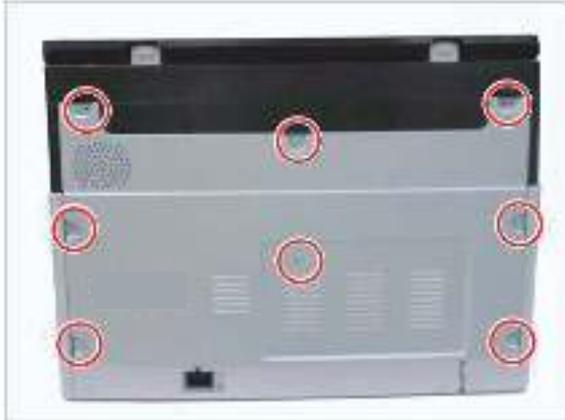
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

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

## Remove: SMPS (LVPS) board

1. Remove the rear cover after removing eight screws.

Figure 2-54 Remove screw from rear cover



2. M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625 only: Remove the SMPS (LVPS fan).

Figure 2-55 Remove the fan

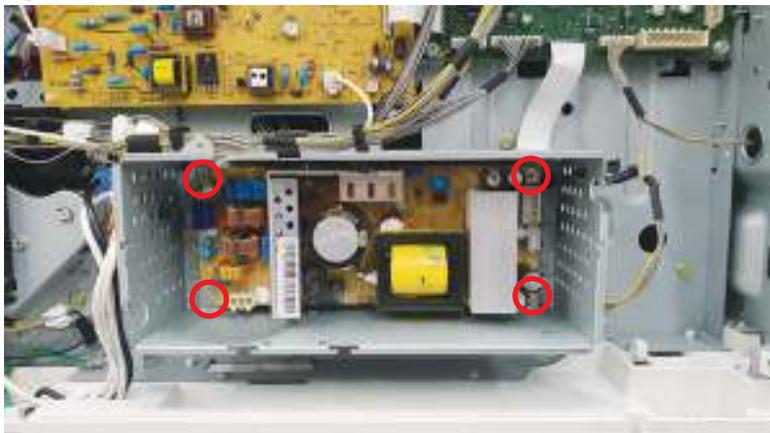


3. Unplug all connectors on the SMPS (LVPS) board. Remove four screws. Remove the SMPS (LVPS) board.

Figure 2-56 SMPS (LVPS)



Figure 2-57 SMPS (LVPS) M433a only



# Removal: Front cover open sensor

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Front cover open sensor

1. Remove the front cover after removing seven screws (see [Removal: Front cover \(M433/M436\) on page 126](#) or [Removal: Front cover \(M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625\) on page 128](#)).

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



# Removal: Side unit

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

### Remove: Side unit

1. Open the side cover.



2. Remove two screws.



3. Release the side unit.



# Removal: Side cover-open sensor

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Side cover-open sensor

1. Open the side cover.



2. Remove one screw.



3. Remove the sensor cover.



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



# Removal: Platen cover (a/n/dn models only)

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Platen cover (a/n/dn models only)

- ▲ Pull up and release the platen cover.



# Removal: Document feeder unit (optional)

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

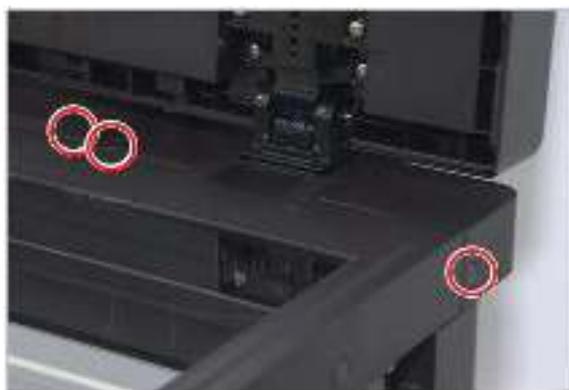
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder. Verify that the print quality meets customer expectations.

## Remove: Document feeder unit (optional)

1. Remove eight screws. Remove the rear cover.



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



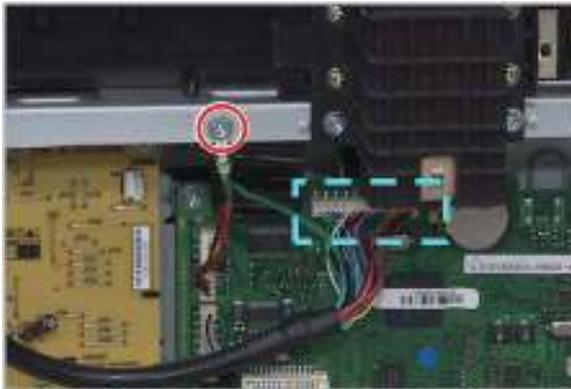
3. Remove the document feeder connector cover.



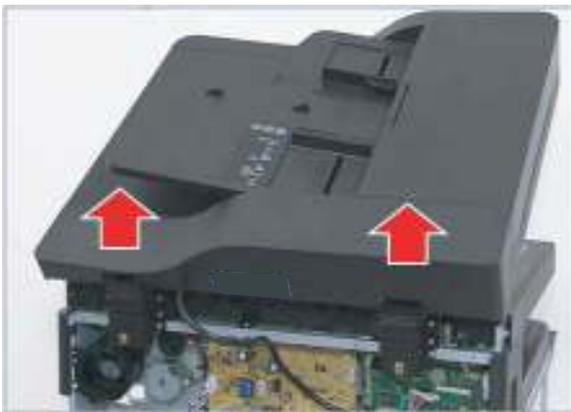
4. Remove the platen rear-cover.



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



6. Lift up and release the document feeder unit.



# Removal: Document feeder cover

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

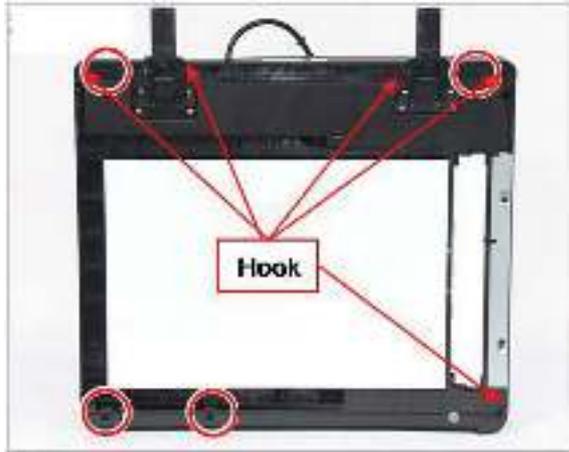
## Post service test

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

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

## Remove: Document feeder cover

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



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



3. Push and release the stacker lock.



4. Remove two screws.



5. Remove the document feeder front cover.



6. Remove the document feeder rear cover.



# Removal: Document feeder open cover

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Document feeder open cover

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

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



# Removal: Document feeder stacker

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

## Remove: Document feeder stacker

1. Remove the document feeder covers (see [Removal: Document feeder cover on page 150](#)).

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



# Removal: Document feeder board

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

## Remove: Document feeder board

1. Remove the document feeder rear cover.



2. Unplug all connectors on the document feeder board.
3. Remove the document feeder board after removing two screws.



# Removal: Document feeder registration-cover-detect sensor

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

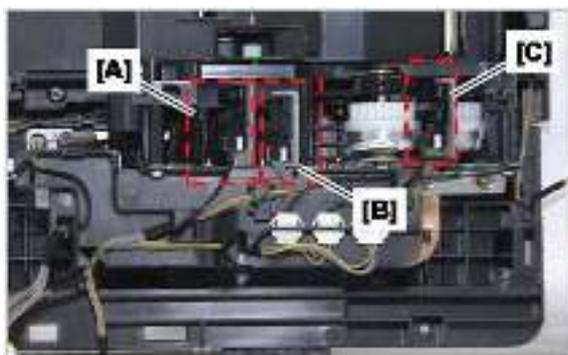
## Post service test

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

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

## Remove: Document feeder registration-cover-detect sensor

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



# Removal: Document feeder motor solenoid clutch

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

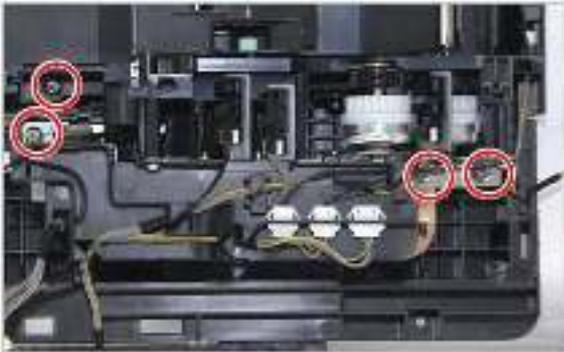
## Remove: Document feeder motor solenoid clutch

1. Remove the document feeder covers.

2. Unplug all connectors on the document feeder board.



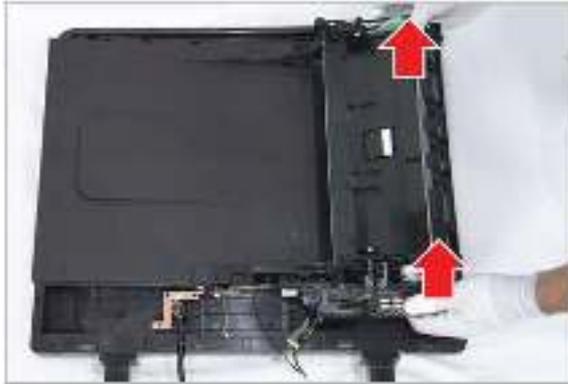
3. Remove four screws.



4. Remove two screws.



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



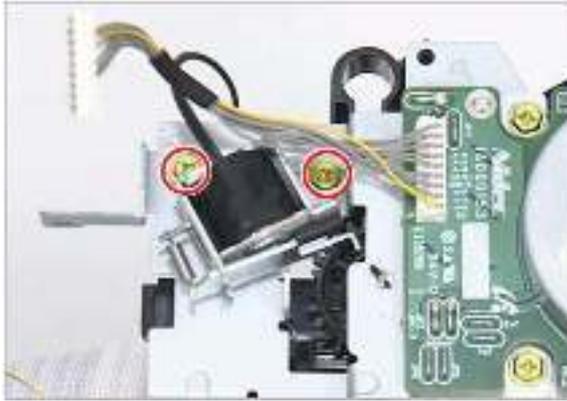
6. Release the harness holder after removing two screws.



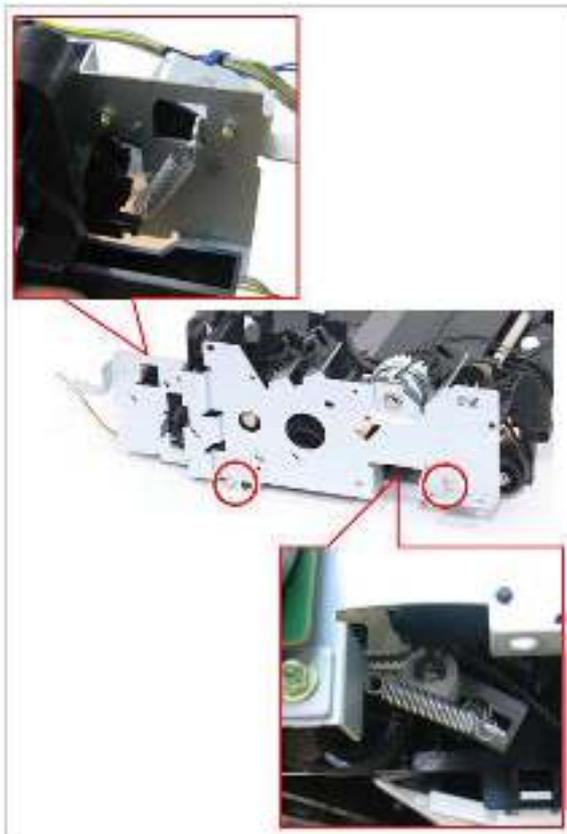
7. Unplug the connector. Remove four screws. Release the motor.



8. Release the solenoid after removing two screws.



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



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



# Removal: Document feeder exit idle sensor

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

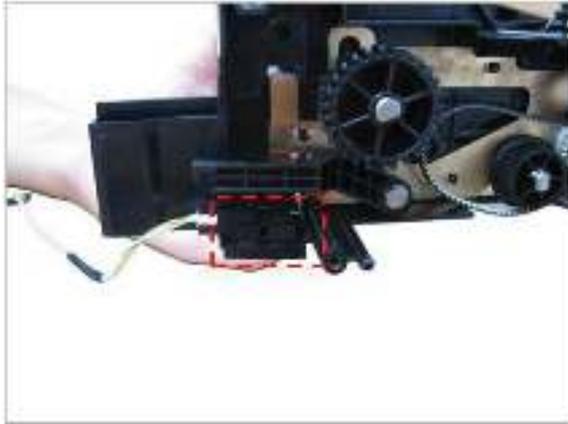
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

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

## Remove: Document feeder exit idle sensor

1. Remove the motor bracket.

2. Remove the sensor after unplugging the connector.



# Removal: Document feeder exit sensor

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Document feeder exit sensor

1. Remove the document feeder main frame.

2. Remove the sensor after unplugging the connector.



# Removal: Document feeder length-width sensor

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Document feeder length-width sensor

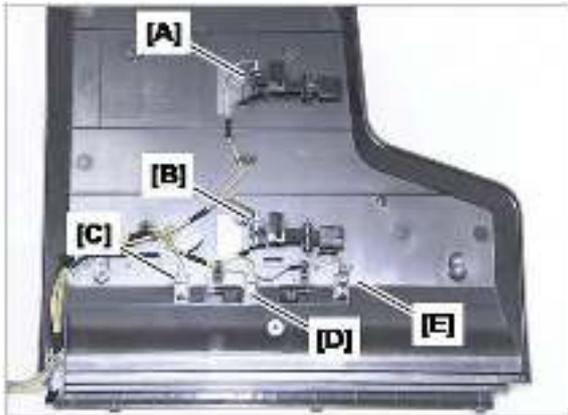
1. Remove the document feeder stacker.

2. Release the sensor cover after removing five screws.



3. Remove the defective sensor after unplugging the connector.

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



# Removal: OPE unit

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

### Remove: OPE unit

1. Remove the platen cover or document feeder unit.

2. Remove the cap-hole and screw.



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



4. Pull up the front of the OPE unit.



5. Release the OPE unit after unplugging the connector.



# Removal: Platen unit

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Platen unit

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

4. Remove the two cap holes and two screws.



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



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



7. Remove three screws.



8. Remove four screws.



9. Remove two screws.



10. Unplug the scan cables from the main board.



11. Lift up and release the platen unit.



---

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

---

# Removal: Upper platen

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Upper platen

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

4. Remove two cap holes and two screws.



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



6. Remove seven screws.



7. Lift up and release the upper platen.



# Removal: CIS unit

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

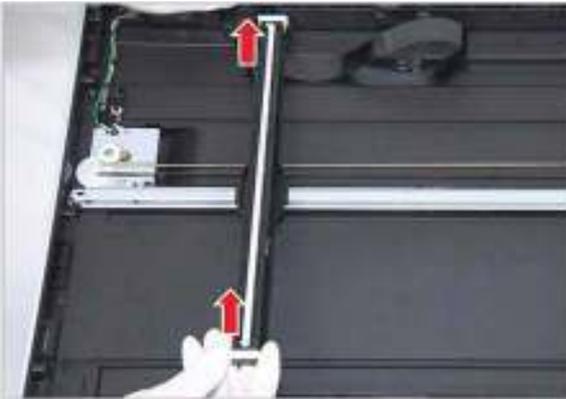
## Remove: CIS unit

1. Remove the upper platen.

2. Unplug the CIS flat cable.



3. Release the CIS from its holder.



# Removal: Scan drive unit

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Scan drive unit

1. Remove the upper platen (see [Removal: Platen cover \(a/n/dn models only\) on page 145](#)).

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



3. Unplug the motor connector.



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

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

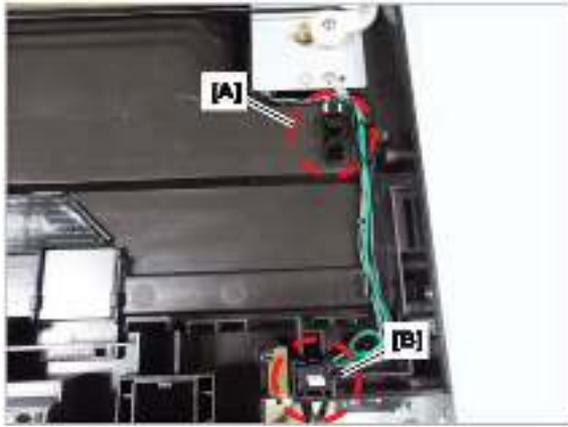
### Post service test

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

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

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

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



# Removal: Laser/scanner unit (LSU)

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

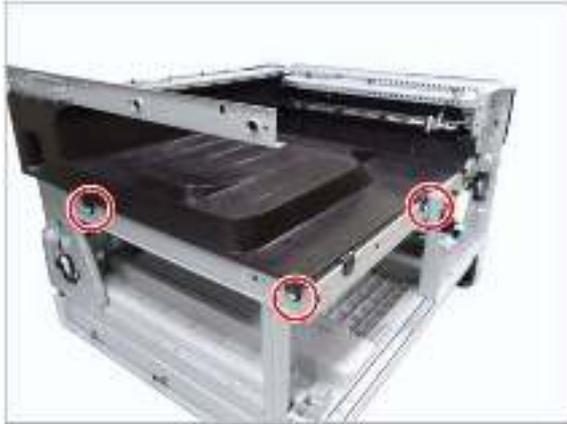
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

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

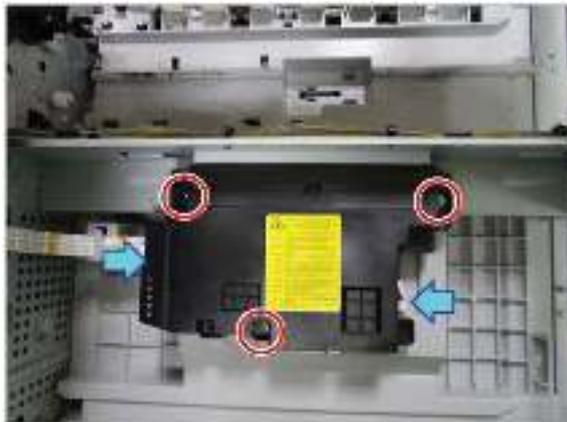
## Remove: Laser/scanner unit (LSU)

1. Remove the left cover and front cover.

2. Remove the exit cover after removing three screws.



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



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



# Removal: Main drive motor

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

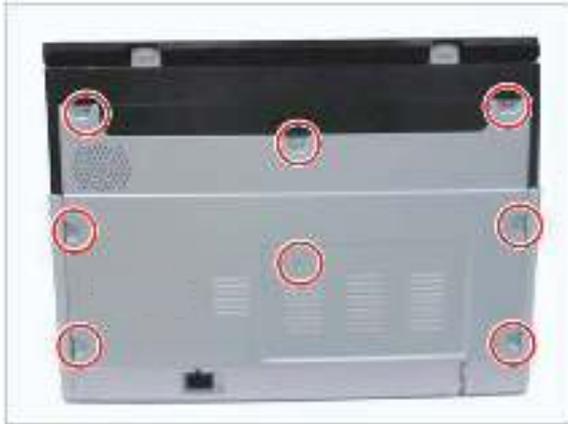
### Post service test

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

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

### Remove: Main drive motor

1. Remove the rear cover after removing eight screws.



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



# Removal: Exit motor (MFP M436nda only)

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Exit motor (MFP M436nda only)

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

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



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



# Removal: Fuser motor

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

## Remove: Fuser motor

1. Remove the rear cover.

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



# Removal: Paper empty, registration, and MP sensor

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

## Remove: Paper empty, registration, and MP sensor

1. Remove the cassette.



2. Open the front cover.



3. Open the side cover.

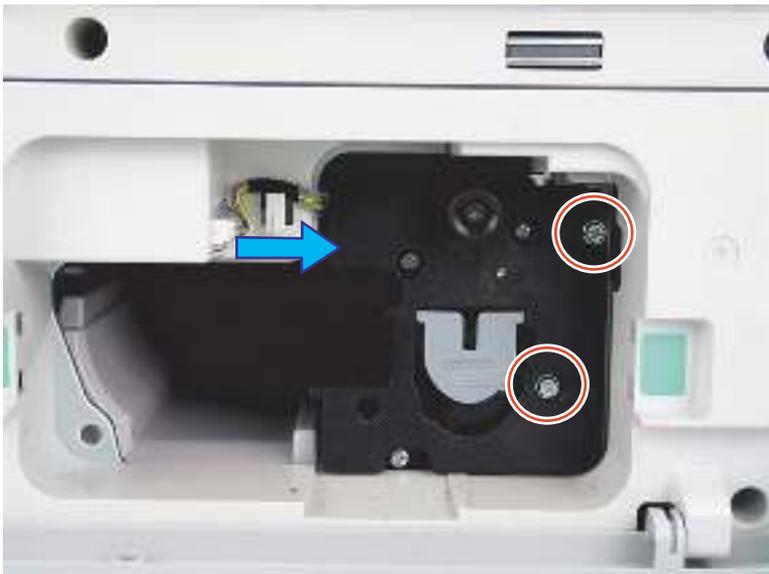


4. Remove the toner cartridge while pushing both hooks.

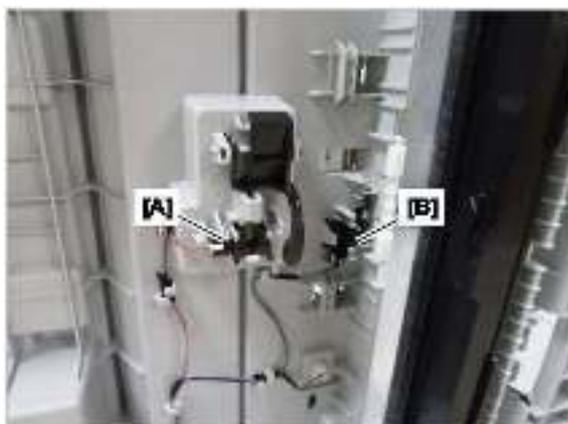


5. Unplug the connector. Remove two screws. Remove the imaging unit.

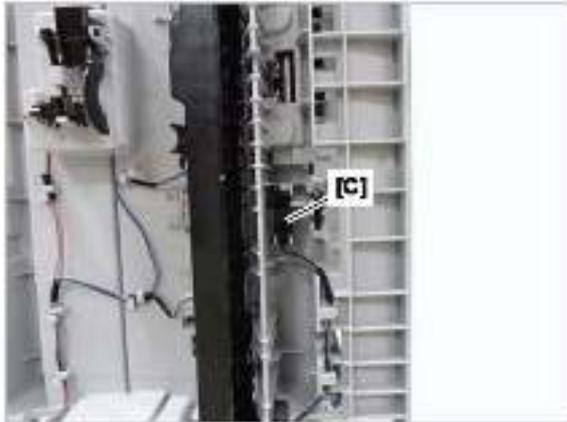
**⚠ CAUTION:** Do not turn the imaging unit upside down. Toner will spill out.



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



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



# Removal: MP clutch

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

### Remove: MP clutch

1. Remove the MP shaft assembly.



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



# Removal: Registration clutch

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

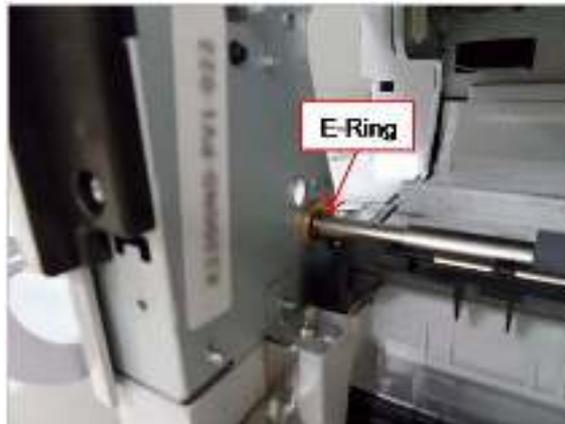
After replacing major assemblies (for example, the document feeder) or internal parts (for example, the formatter board), perform the following post service tests:

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

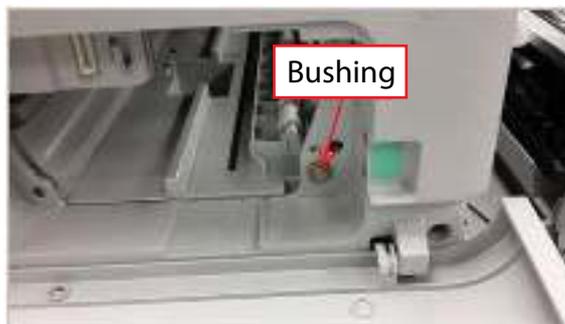
## Remove: Registration clutch

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

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



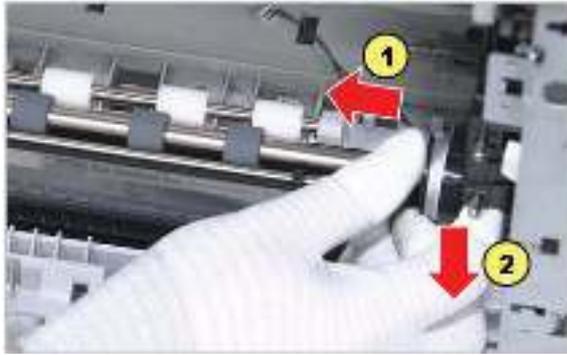
4. Remove the bushing from the front.



5. Unplug the registration clutch connector.



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



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

# Removal: Fuser fan

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

## Before performing service

### Turn the printer power off

- Disconnect the power cable.

---

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

---

## Required tools

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

## After performing service

### Turn the printer power on

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

## Post service test

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

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

## Remove: Fuser fan

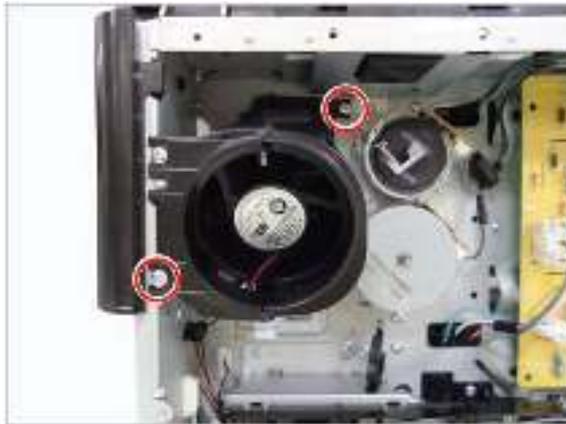
1. Remove the rear cover after removing eight screws.



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



4. Remove the fuser fan after removing two screws.



# Removal: HVPS board

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

### Remove: HVPS board

1. Remove the rear cover after removing eight screws.



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



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



# Removal: Temperature humidity sensor

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

## Remove: Temperature humidity sensor

1. Remove two screws securing the rear cover.



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



3. Release the sensor hook.



4. Unplug the sensor connector.



# Removal: Developer unit

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

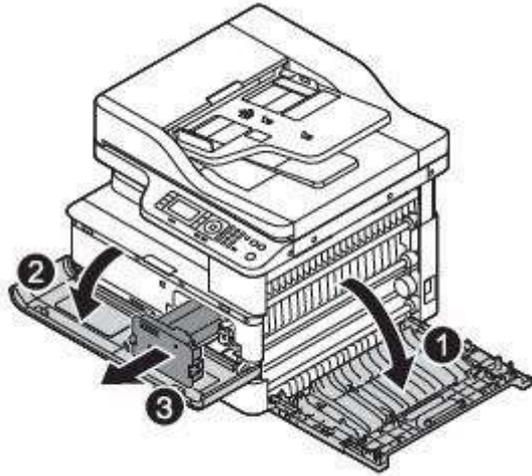
### Post service test

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

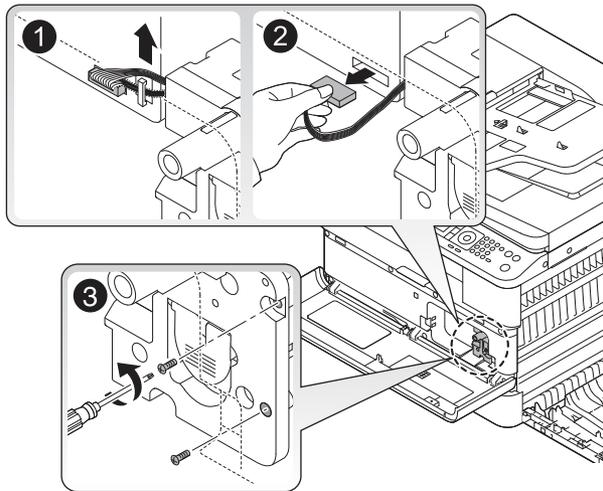
- When the power is turned on, listen for normal startup sounds.
- Check the control-panel display for error messages.
- Copy a page using the flat bed glass and/or the document feeder. Verify that the print quality meets customer expectations.

## Remove: Developer unit

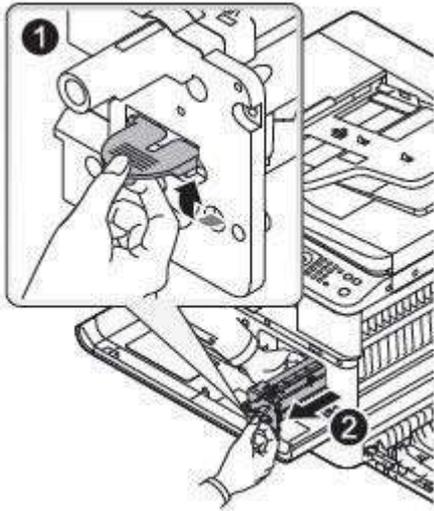
1. Open the side cover and front cover, and then remove the toner cartridge.



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



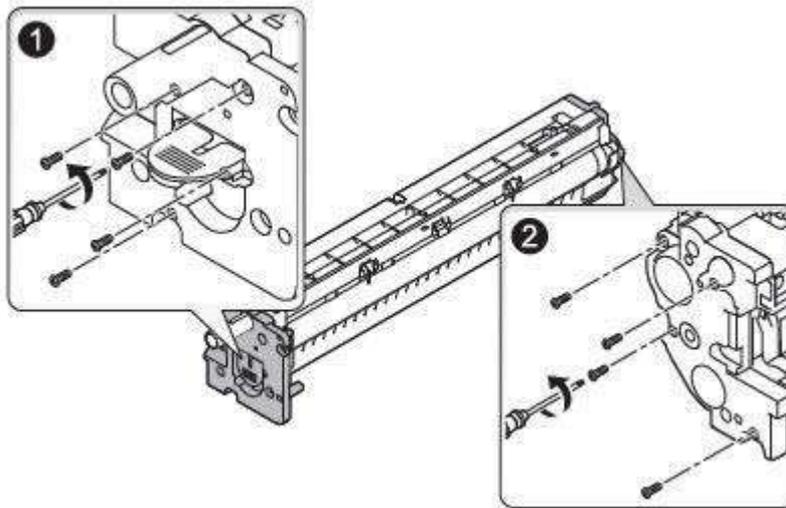
3. Take off the imaging unit while holding the lever.



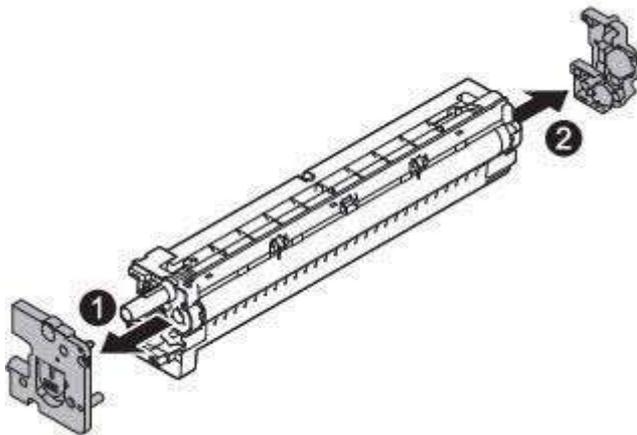
**CAUTION:** Place imaging unit on a flat surface to prevent toner from spilling.



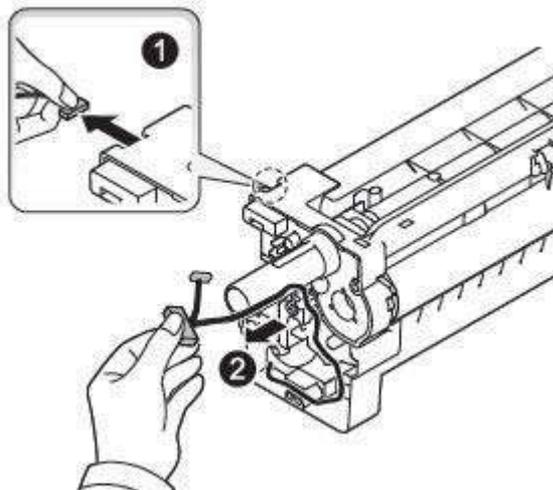
4. Remove eight screws securing both side covers.



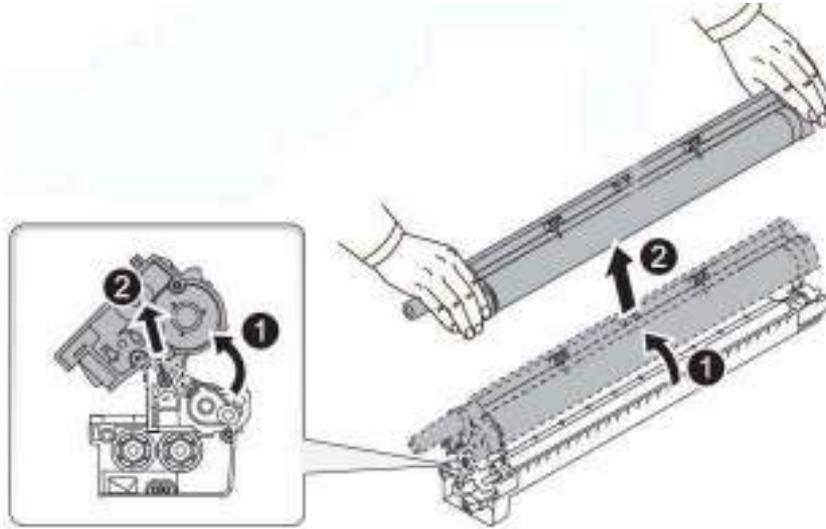
5. Remove the left and right cover of the imaging unit.



6. Unplug the connector.



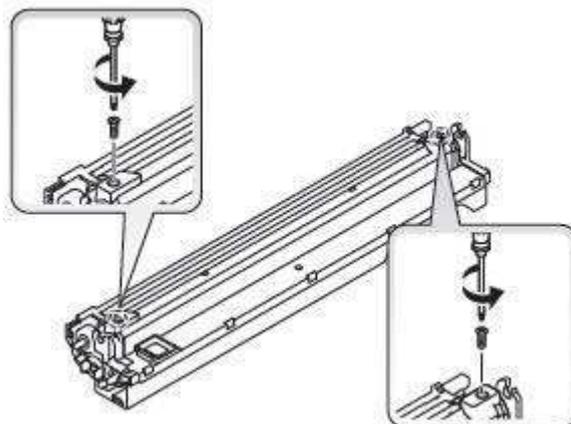
7. Separate the drum unit from the developer unit.



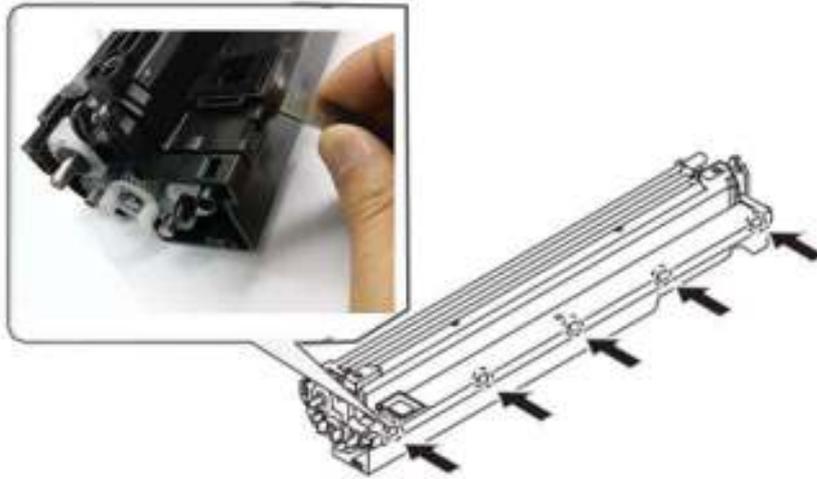
8. Unpack the new developer unit.



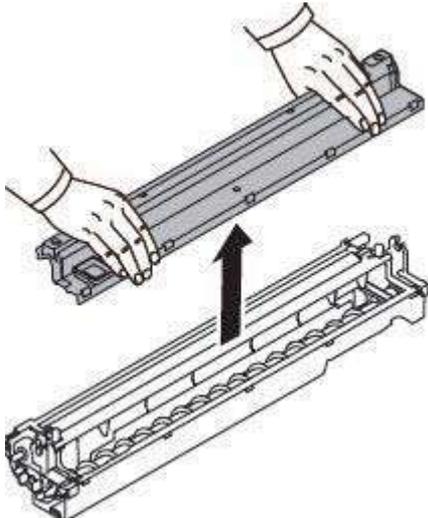
9. Remove two screws.



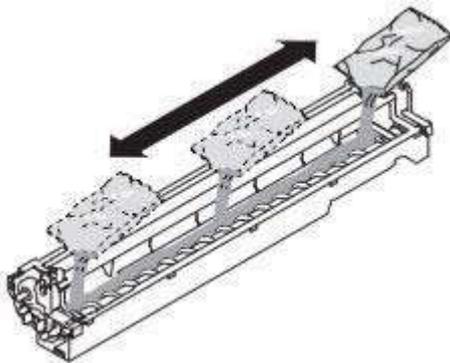
10. Unlock the hook.



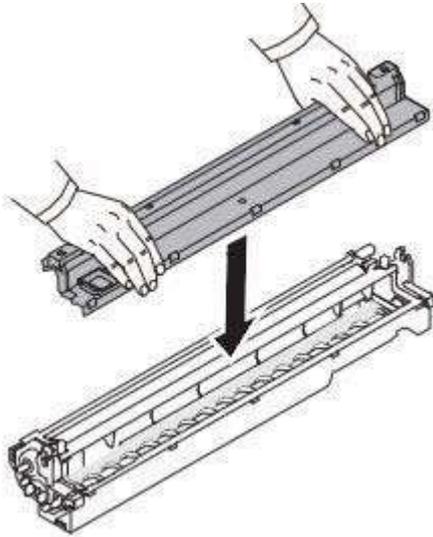
11. Lift up and release the developer cover.



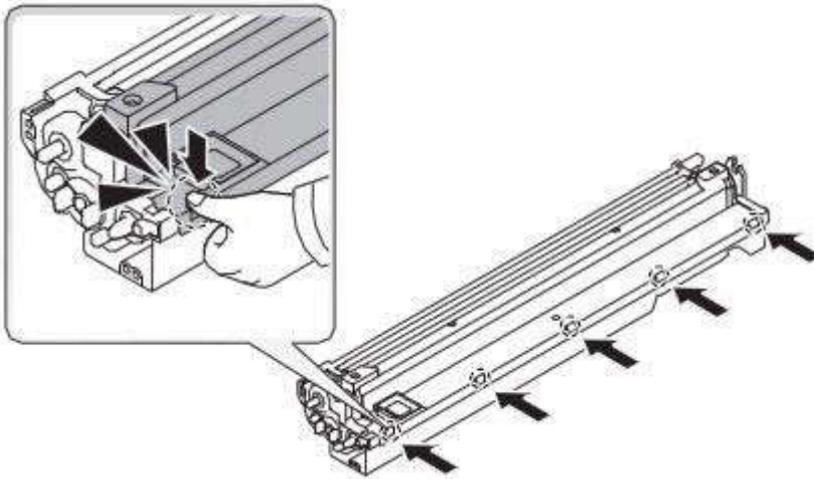
12. Pour the toner into the developer unit evenly.



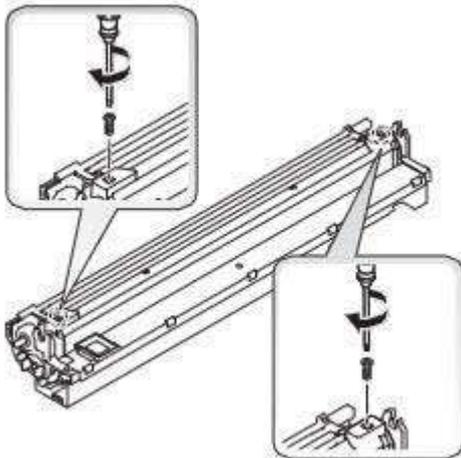
13. Close the developer cover.



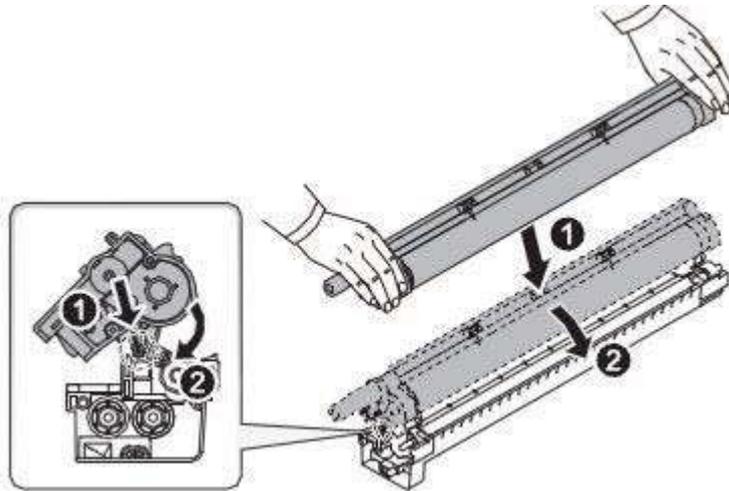
14. Check the locking.



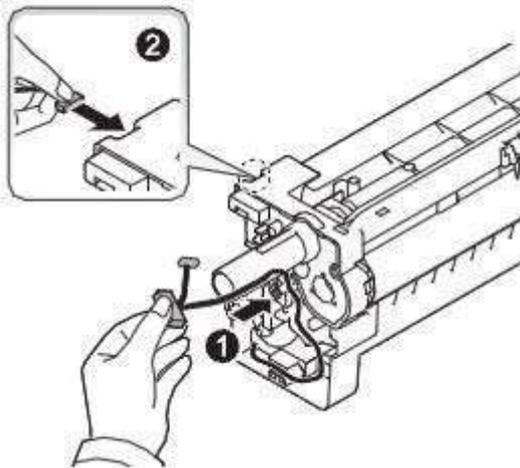
15. Tighten two screws.



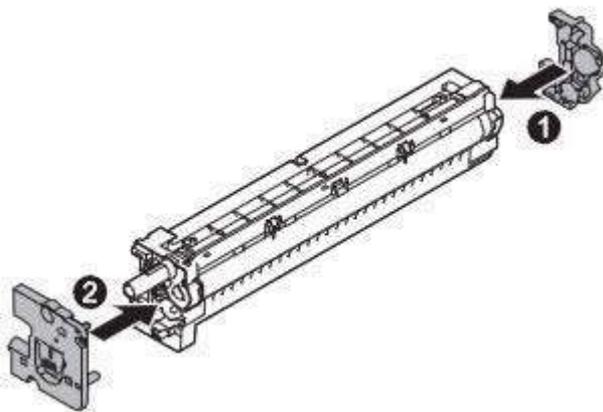
16. Assemble the drum unit with the developer unit.



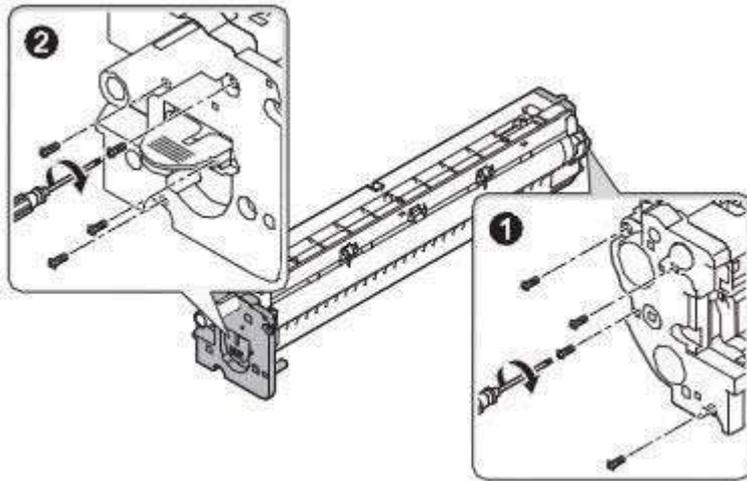
17. Connect the cable.



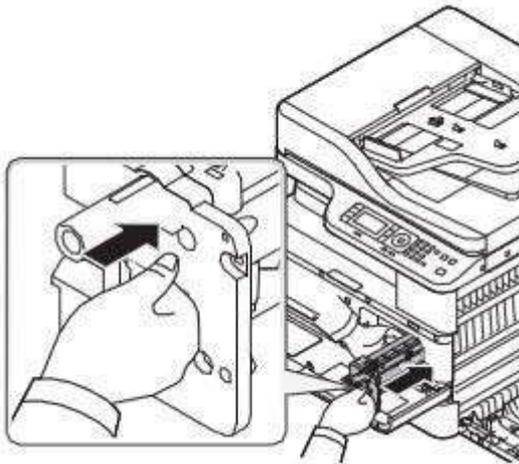
18. Assemble the left cover and right cover.



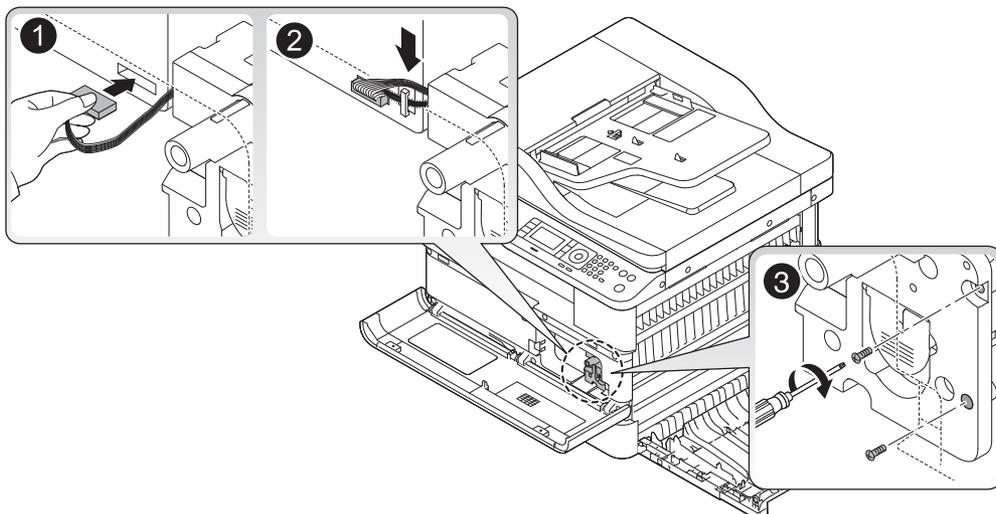
19. Tighten eight screws.



20. Install the imaging unit.



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



22. Install the toner cartridge.
23. Turn the printer power on, wait for the printer to reach the **Ready** state, and then do the following.
  - a. At the printer control panel, access the service **Tech Menu**.
    1. Press **Menu, #, 1, 0, 0, 4, 3, 6, 1, 6, Menu** in sequence.
    2. When **Tech Menu** displays, press the **OK** button.
  - b. Scroll to, and then select **Service Function**.
  - c. Scroll to, and then select **TC Unit**.
  - d. Close the front and side covers.
  - e. The message **Calibrating Image Density** appears on the control-panel display while the printer distributes and mixes the replacement developer beads.
  - f. When the printer returns to the **Ready** state, it is ready for normal operation.

# Removal: SCF (optional Tray 3)

## Introduction

### Overview

---

 **NOTE:** Some figures might show a printer that looks different than the one being serviced. However, the procedures are correct for this printer (M433, M436, M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625). Always thoroughly read the instructions that accompany each figure.

---

This topic provides the procedures to remove and replace assemblies.

### Before performing service

#### Turn the printer power off

- Disconnect the power cable.

---

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

---

### Required tools

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

### After performing service

#### Turn the printer power on

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

### Post service test

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

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

## Remove: SCF board

1. Remove two screw-caps.



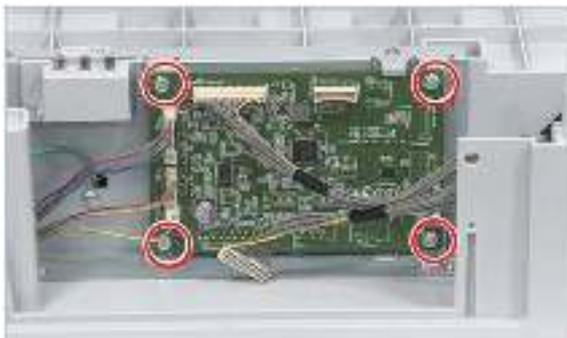
2. Remove two screws.



3. Remove the side cover.



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



## Remove: SCF drive unit

1. Remove two screw caps.



2. Remove two screws.



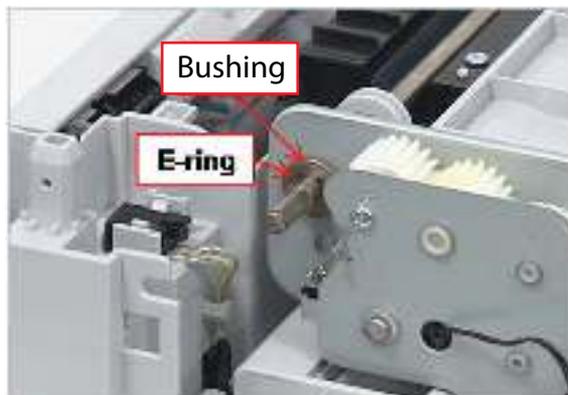
3. Remove the side cover.



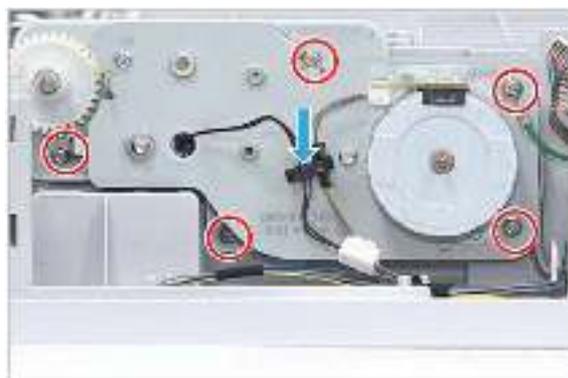
4. Remove the e-ring. Release the pickup idle gear.



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



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



## Remove: SCF feed roller

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

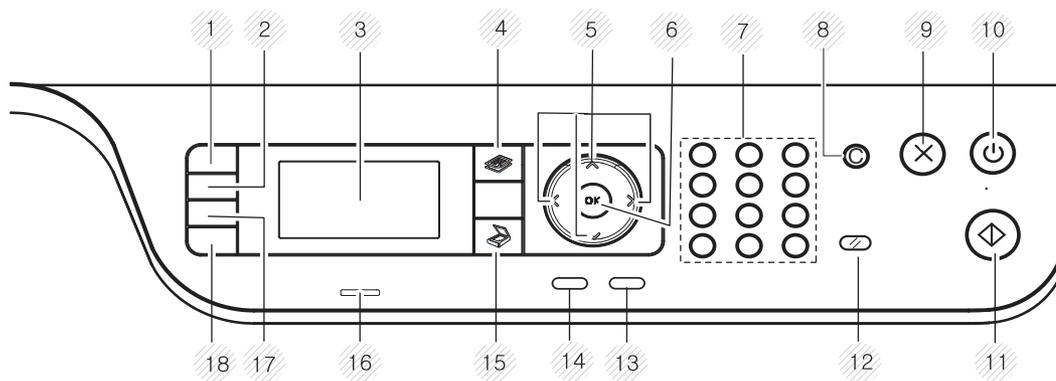


---

# 3 Troubleshooting

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

## Control panel



1	ID Copy	Allows you to copy both sides of an ID card like a driver's license on a single side of paper.
2	Reduce/Enlarge	You can reduce or enlarge the size of a copied image from 25% to 400% when you copy original documents from the scanner glass.
3	Display screen	Shows the current status and prompts during an operation.  Touch the <a href="#">Reset</a> button to clear changes, release the printer from a paused state, reset the copy count field, display hidden errors, and restore the default settings (including the language and keyboard layout).
4	Copy 	Switches to Copy mode.
5	Arrows	Scroll through the options available in the selected menu, and increase or decrease values.
6	OK	Confirms the selection on the screen.
7	Numeric keypad	Enter the number of copies.
8	Clear 	Reset the number of copies.
9	Stop 	Stops current operation.
10	Power/Wake Up 	Turns the power on or off, or wakes up the printer from the power save mode. If you need to turn the printer off, press this button for more than three seconds.
11	Start 	Begins a copying job.
12	Reset 	Reset the copy settings to default values.

---

13	Back	Sends you back to the upper menu level.
		
14	Menu	Enters Menu mode and scrolls through the available menus.
		
15	Scan	Switches to Scan mode.
		
16	Status LED	Indicates the status of your machine.
17	Paper Select	Select the tray you want from the display screen.
18	Darkness	Adjusts the brightness level to make a copy for easier reading, when the original contains faint markings and dark images.

---

## Understanding the status LED

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

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

---

 **NOTE:**

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

# Clearing jams

## Introduction

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

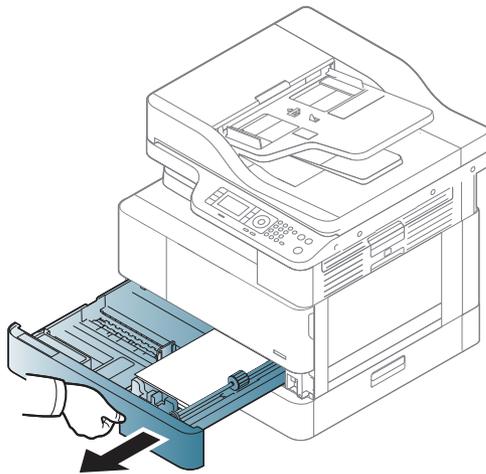
 **NOTE:** To avoid tearing the paper, pull the jammed paper out slowly and gently.

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

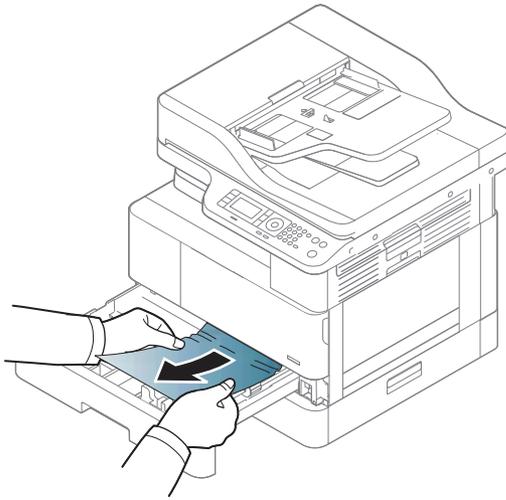
- [Tray 2](#)
- [In optional Tray 3](#)
- [In Multi-purpose Tray 1](#)
- [Inside the printer](#)
- [In the exit area](#)
- [In the duplex unit area](#)
- [Clearing original document jams](#)

## Tray 2

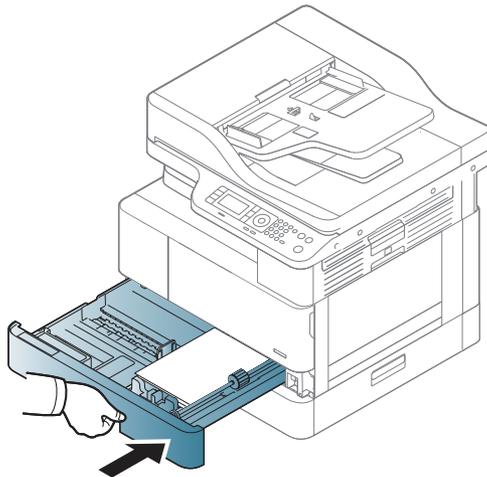
1. Pull out the tray.



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

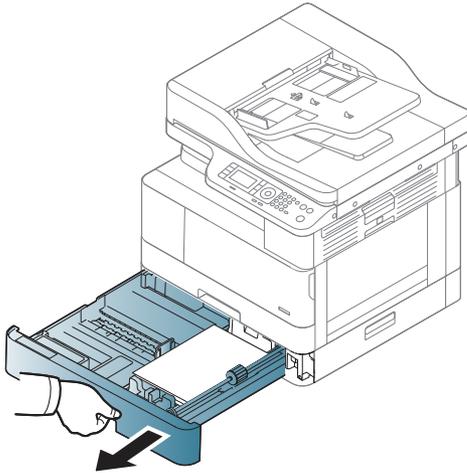


3. Insert the tray back into the printer until it snaps into place.

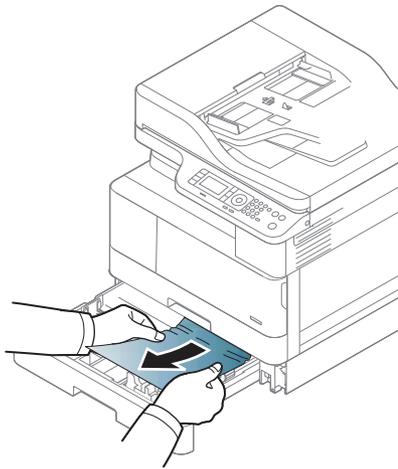


## In optional Tray 3

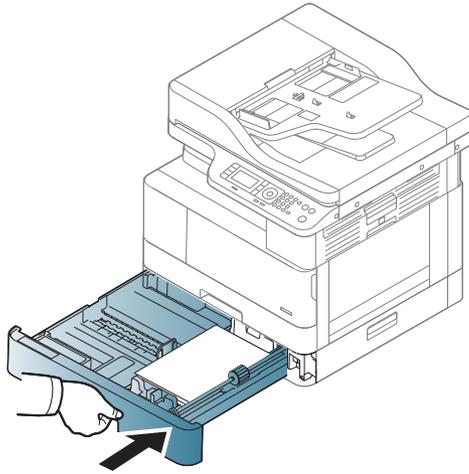
1. Pull out optional tray.



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

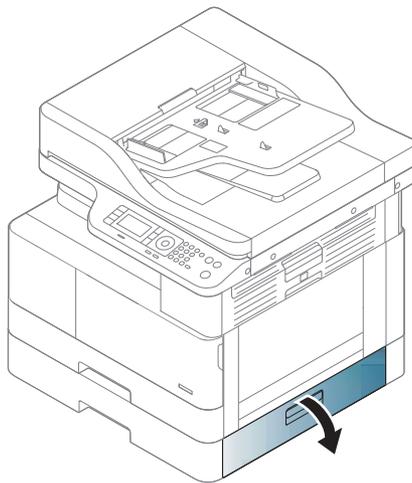


3. Insert tray back into the printer until it snaps into place.

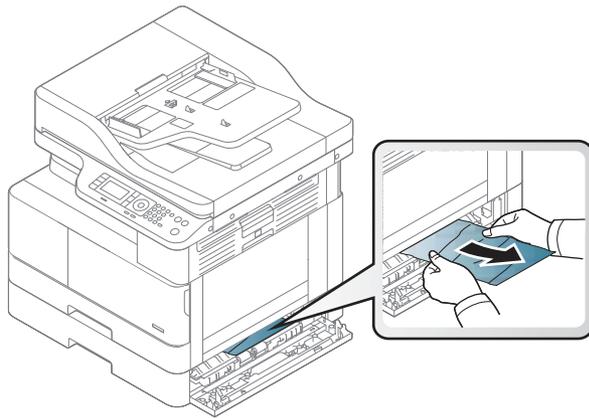


If you do not see the paper in this area, stop and go to next step:

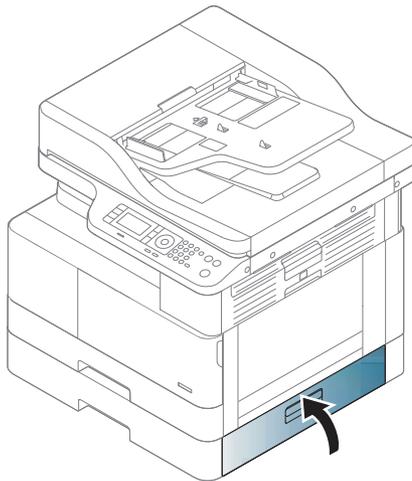
4. Open the SCF jam cover.



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

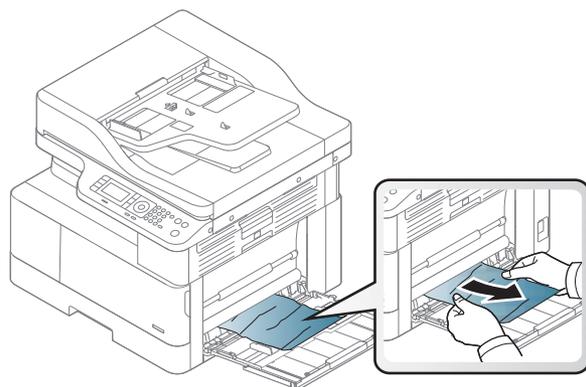


6. Close the SCF jam cover.



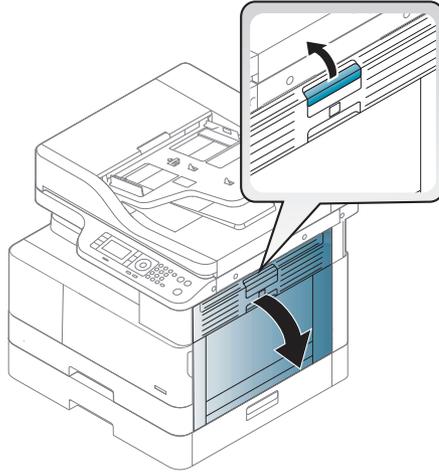
## In Multi-purpose Tray 1

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

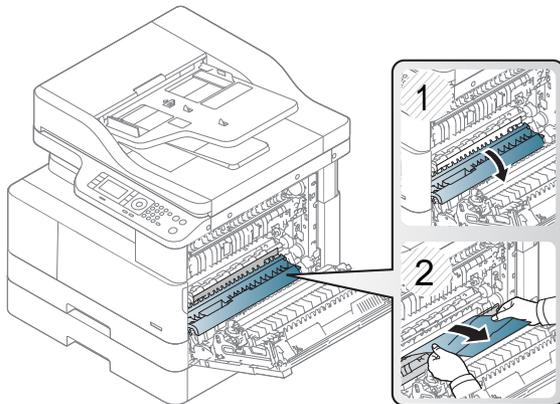


## Inside the printer

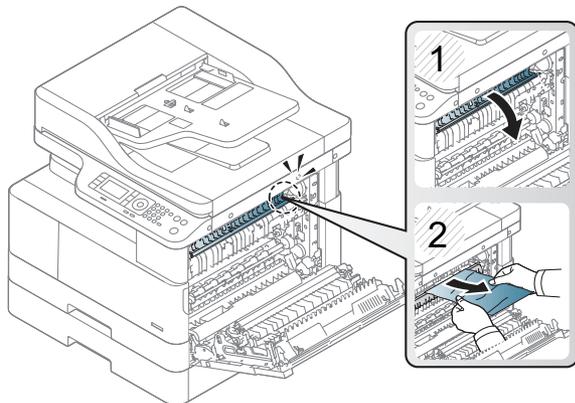
1. Open the side cover.



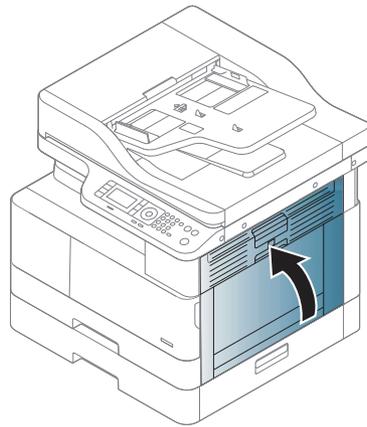
2. Open the jam guide and remove the jammed paper.



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



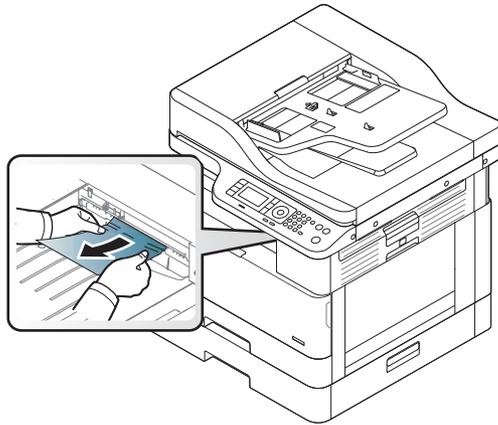
4. Close the side cover.



## In the exit area

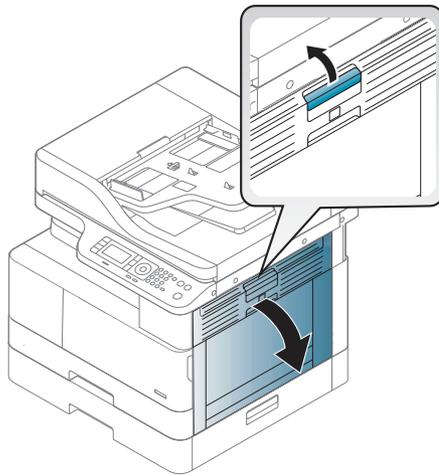
**! CAUTION:** The fuser area is hot. Take care when removing paper from the printer.

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

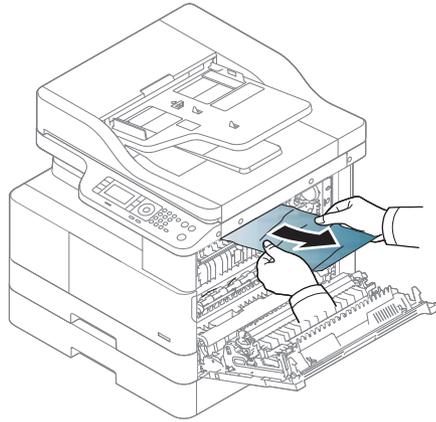


If you do not see the paper in this area, stop and go to next step:

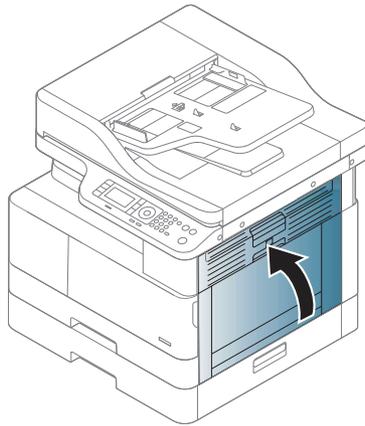
2. Open the side cover.



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

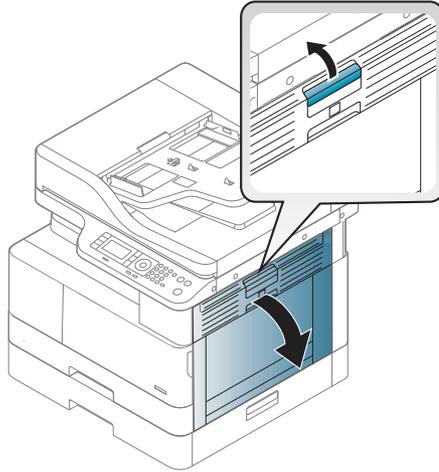


4. Close the side cover.

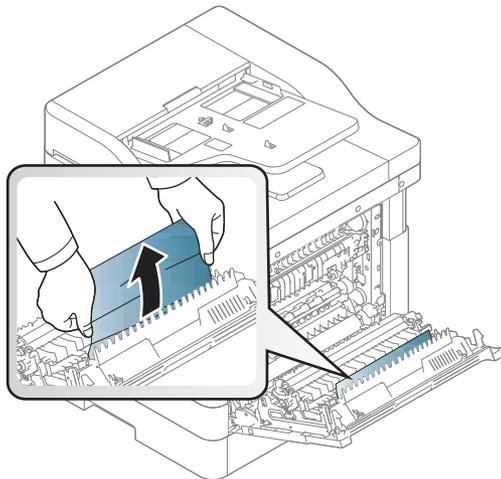


## In the duplex unit area

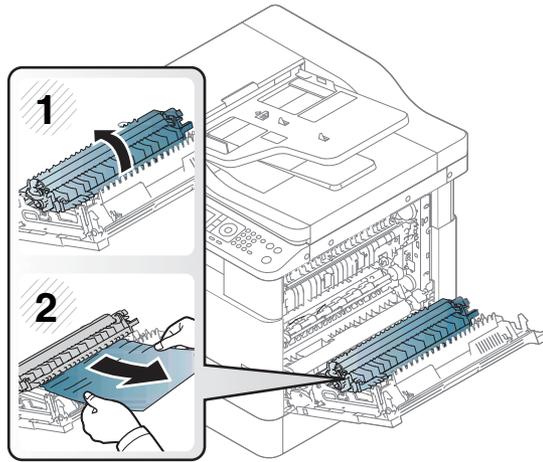
1. Open the side cover.



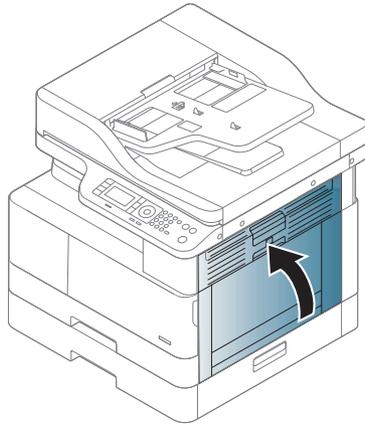
2. Remove the jammed paper from the transfer roller assembly.



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



4. Close the side cover.



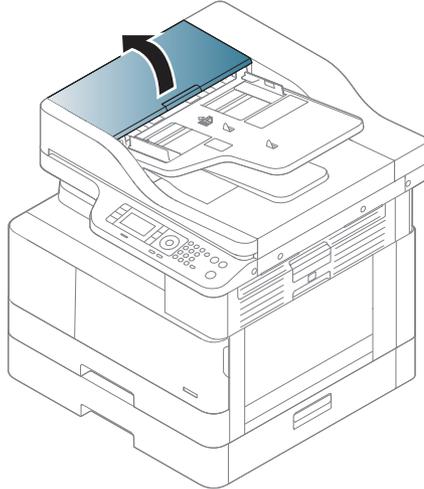
## Clearing original document jams

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

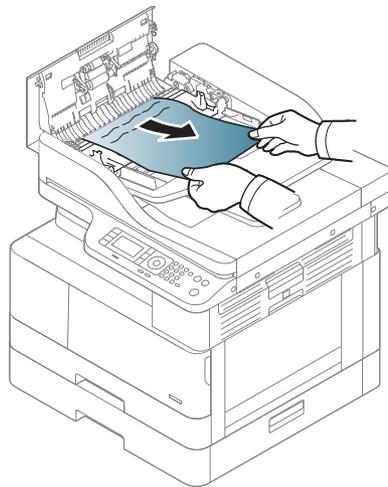
 **CAUTION:** To avoid tearing the document, remove the jammed document slowly and carefully.

### Original paper jam in front of scanner

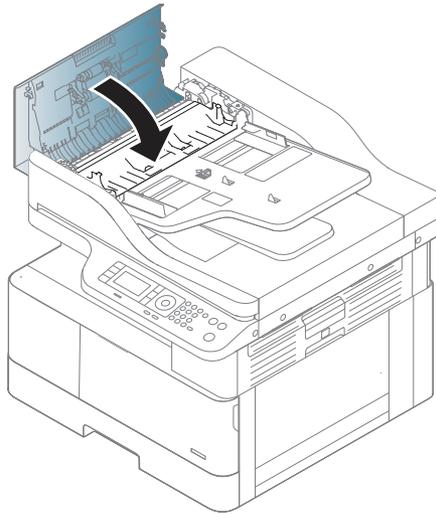
1. Open the document feeder cover.



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

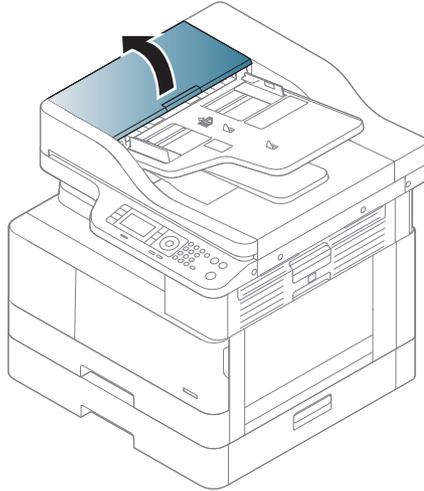


3. Close the document feeder cover.

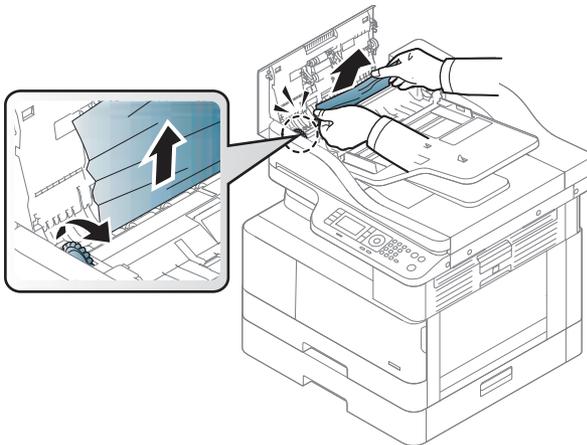


## Original paper jam inside of scanner

1. Open the document feeder cover.

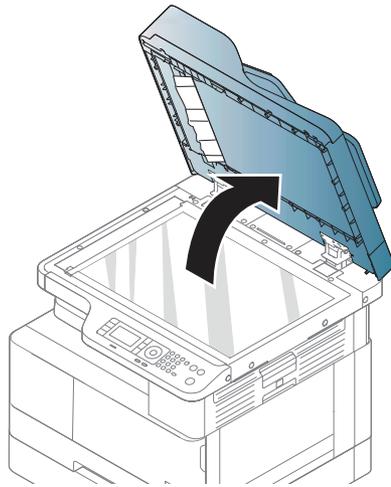


2. Gently remove the original carefully from the document feeder.

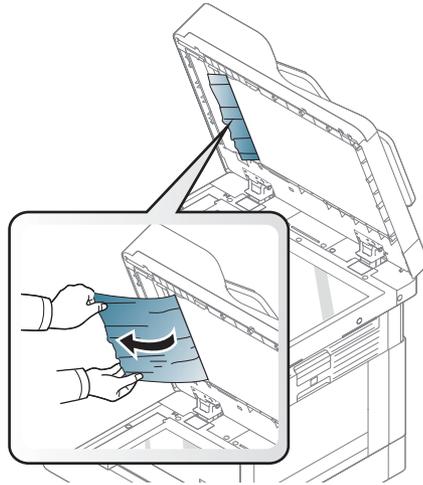


If you do not see the paper in this area, stop and go to next step:

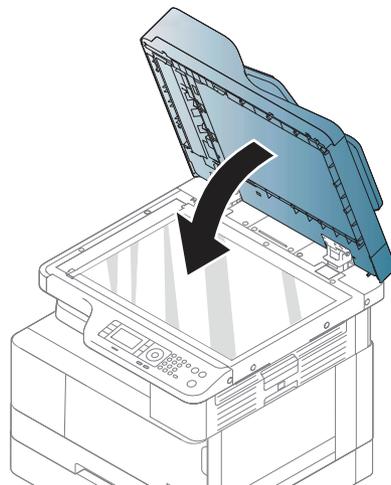
3. Open the scanner lid.



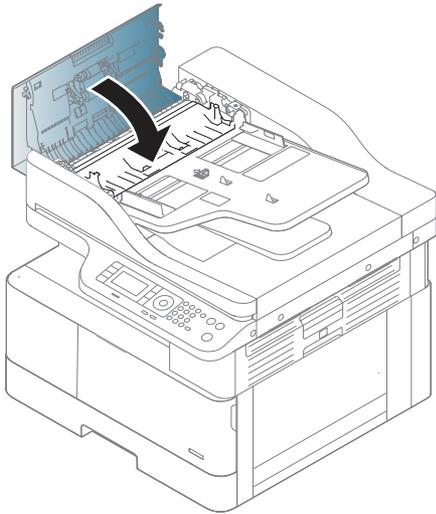
4. Grasp the misfeed original, and remove the paper from the feed area by carefully pulling it.



5. Close the scanner lid.

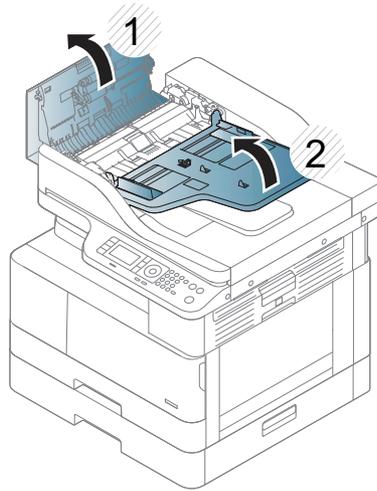


6. Close the document feeder cover.

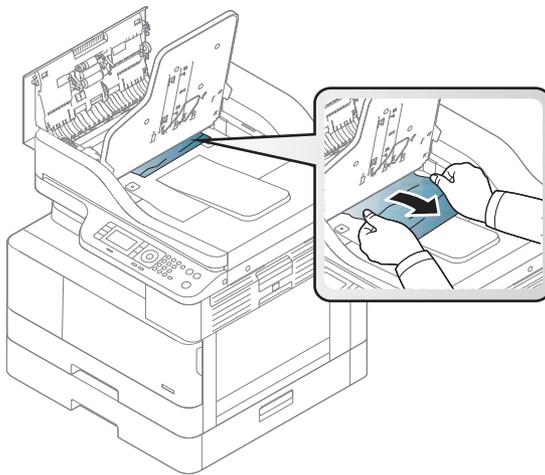


## Original paper jam in exit area of scanner

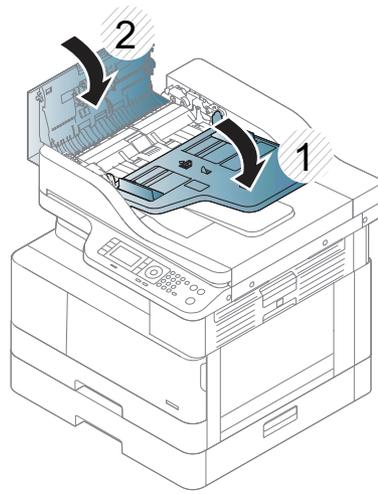
1. Open the Cover-Open and lift up the stacker.



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

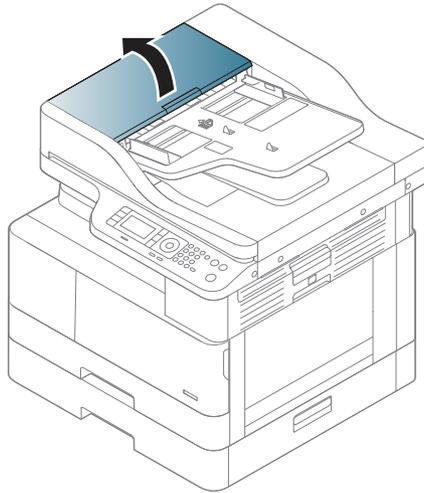


3. Close the Cover-Open and pull down the stacker.

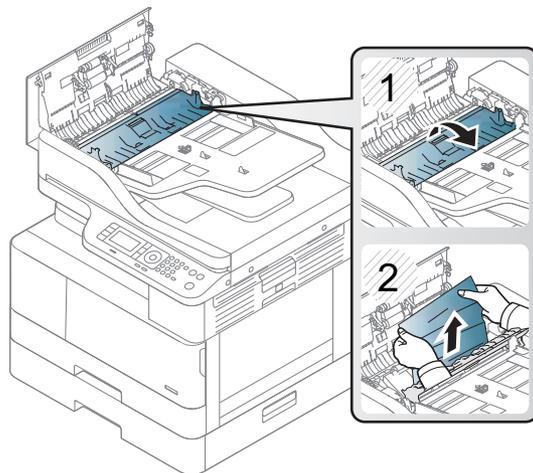


## Original paper jam in scanner duplex path

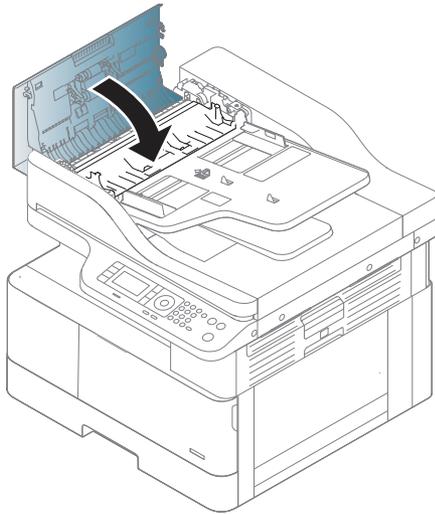
1. Open the document feeder cover.



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



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



# Firmware upgrades

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

- In the US, go to [www.hp.com/support/ljM433MFP](http://www.hp.com/support/ljM433MFP) or [www.hp.com/support/ljM436MFP](http://www.hp.com/support/ljM436MFP) or [www.hp.com/support/ljM437MFP](http://www.hp.com/support/ljM437MFP) or [www.hp.com/support/ljM438MFP](http://www.hp.com/support/ljM438MFP) or [www.hp.com/support/ljM439MFP](http://www.hp.com/support/ljM439MFP) or [www.hp.com/support/ljM440MFP](http://www.hp.com/support/ljM440MFP) or [www.hp.com/support/ljM442MFP](http://www.hp.com/support/ljM442MFP) or [www.hp.com/support/ljM443MFP](http://www.hp.com/support/ljM443MFP) or [www.hp.com/support/ljM42523MFP](http://www.hp.com/support/ljM42523MFP) or [www.hp.com/support/ljM42525MFP](http://www.hp.com/support/ljM42525MFP) or [www.hp.com/support/ljM42623MFP](http://www.hp.com/support/ljM42623MFP) or [www.hp.com/support/ljM42625MFP](http://www.hp.com/support/ljM42625MFP).
  - a. Select **Get drivers, Software, and Firmware**, and then select the appropriate product by name.

---

 **NOTE:** More than one product model might be listed. Make sure to select the correct model so that the upgraded firmware supports all of the product functions.
  - b. Select the driver language and operating system.
  - c. Locate the firmware download, and then select **Download**.
- Outside the U.S., go to [www.hp.com/support](http://www.hp.com/support).
  - a. Select your country/region.
  - b. Select **Drivers & Downloads**.
  - c. Enter the product name in the **Find my product** dialogue box, and then select **Go**.

---

 **TIP:** Click on the **How do I find my product name/number?** link to see a short video on identifying the printer name and number.
  - d. Select the appropriate product by name.

---

 **NOTE:** More than one product model might be listed. Make sure to select the correct model so that the upgraded firmware supports all of the product functions.
  - e. Select the driver language and operating system.
  - f. Locate the firmware download, and then select **Download**.
- [Determine the installed version of firmware](#)
- [Perform a firmware upgrade](#)

## Determine the installed version of firmware



---

**NOTE:** Print a configuration page to determine the installed revision of firmware.

---

### Print the configuration page from an LCD control panel

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

## Perform a firmware upgrade

The firmware bundle is a .bdl file. This file requires an interactive upgrade method. The traditional FTP, LPR or Port 9100 methods of upgrading are not available. Use one of the following methods to upgrade the firmware for this product.

### HP Embedded Web Server

---

 **NOTE:** The product should be at the **Ready** state.

The firmware update might take 10 minutes or longer based on the input/output (I/O) transfer rates and the time it takes for the product to reinitialize.

---

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

---

 **NOTE:** Do not close the browser window OR interrupt communication until the HP Embedded Web Server (EWS) displays the confirmation page.

---

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

### USB Firmware Upgrade

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

# Tech Mode

## Overview

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

## Entering Tech mode

### To enter Tech mode (Passcode)

1. Press **Menu, #, 1, 0, 0, 4, 3, 6, 1, 6, Menu** in sequence.
2. When **Tech Menu** displays, press the **OK** button.

## Tech mode menu



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

Depth1	Depth2	Depth3	Depth4
Information	Report	Configuration	
		Supplies Information	
		Usage Counter	
		Error Information	
Maintenance Counts	Clear Counts	Enter Passcode <b>NOTE:</b> Press <b>Menu, #, 1, 0, 0, 4, 3, 6, 1, 6, Menu</b> in sequence	Document feeder Scan
			Platen scan
			Developer
			Fuser
			Transfer Roller
			MP Tray 1 Roller
			MP Tray 1 Friction Pad
			Tray 3 Roller
			Tray 3 Friction Pad
			MP Roller
			MP Friction Pad
			Document feeder roller
			Document feeder rubber pad
Diagnostics	Engine	NVM Initialize	
		NVM Read/Write	
		Test Routines	
	Scanner	NVM Read/Write	

Depth1	Depth2	Depth3	Depth4
		Test Routines	
		Shading Test	Shading&Print
			Print
		Scan Aging	
	Adjustment	Print Adjustment	Image Position
			Print Test Pattern
		Scan Area Adjustment	Automatic Adjustment
			Manual Adjustment
		RADF	Automatic Adjustment
			Manual Adjustment
		Adjustment Report	Print?
		Clear Settings	Clear?
	System	Switch Test	
Service Functions	Clear All Memory		
	Clear Admin Password	Yes/No	
	Engine Footer	Off	
		On	
	F/W Upgrade	Off	
		On	
	Part Replacement Alert	OPC unit	Off
			On
		Fuser	Off
			On
	EIUL	Off	
		On	
	TC Init.	Initialize Now?	
	Low Alert Level	Toner	[1-30]%
		OPC unit	[1-30]%
	Count of Large Page	1 Count Up	
		2 Count Up	
	AJR	Off	
		On	
	SFE	5	Off
			On

Depth1	Depth2	Depth3	Depth4
	LetterGothic	ThickOn	
		ThickOff	
	Set SN	Alphanumeric 10 characters	

## Tech Mode Menu description

### Information > Report

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

### Maintenance

- **Clear Counts**  
This function resets the count information for the selected item.  
After replacing the corresponding maintenance part, execute this menu (use Passcode [Menu, #, 1, 0, 0, 4, 3, 6, 1, 6, Menu](#) in sequence).

### Diagnostics > Engine

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

**Table 3-1** NVRAM Read/Write

Code	LCD	Meaning
103-0031	0031-Registration Curl On	Buckle Control:Registration On Curl
103-0032	0032-Dup Curl On1	Buckle Control:Duplex Registration On Curl (x1)
105-0030	0030-MHV DC K	Charger HV Black DC Duty
106-0030	0030-Deve DC K	Deve DC Black

**Table 3-1 NVRAM Read/Write (continued)**

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

- **Test Routines**

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

Code	LCD	Meaning	State Displayed
100-0000	0000-Main BLDC	Main BLDC Motor is On/Off	On[Off]
100-0001	0001-Main Slow	Main BLDC Motor Slow On/Off	On[Off]
100-0010	0010-Main BLDC Rdy	Detect if Main BLDC Motor runs at normal speed	High[Low]
100-0120	0120-Exit Mot Fwd	Exit Motor Forward Fast On/Off	On[Off]
100-0130	0130-Exit Mot Slow	Exit Motor Forward Slow On/Off	On[Off]
100-0131	0131-Exit Mot Bwd	Exit Motor Forward Backward On/Off	On[Off]
100-0132	0132-Exit Bwd Slow	Exit Motor Forward Backward Slow On/Off	On[Off]
100-0260	0260-SMPS Fan	Start/Stop SMPS. Fan run	On[Off]
101-0000	0000-MP Feed Clutch	Engages drive to pickup a paper from bypass Tray(MP Tray).	On[Off]
101-0010	0010-Tray 2 Pickup	Engages drive to pickup a paper from Multipurpose Tray1.	On[Off]
101-0020	0020-Tray 3 Pickup	Engages drive to pickup a paper from tray2. (Optional)	On[Off]
101-0050	0050-Registration	Engages drive to registration rolls.	On[Off]
101-0130	0130-T3 Feed Mot	T3 Feed Motor On/Off	On[Off]
101-0131	0131-T3 Feed Slow	T3 Feed Motor Slow On/Off	On[Off]
102-0010	0010-Tray 2 Empty	Detect when paper is in Tray 2.	High[Low]
102-0080	0080-Tray 3 Empty	Detect when paper is in tray2.	High[Low]

Code	LCD	Meaning	State Displayed
102-0280	0280-MP Empty	Detect when paper is in Bypass Tray (MP Tray).	High[Low]
102-0300	0300-T3 Feed Sens	Detect when a paper is at T3 Feed sensor. (optional)	High[Low]
102-0310	0310-Tray 3 Door	Detect when T3 is closed.	Closed[Opened]
102-0360	0360-Registration Sens	Detect when a paper is at registration. sensor.	High[Low]
102-0370	0370-Exit Sens	Detect when a paper is at Exit. sensor.	High[Low]
105-0030	0030-K MHV Bias	Black MHV bias voltage on at normal drive level	On[Off]
105-0070	0070-K MHV Bias R	Black Detect what the MHV value is on the MHV Roller	Numeric 3 digits
106-0030	0030-K Dev Bias	Black Dev bias voltage on at normal drive level	On[Off]
107-0030	0030-K THV Bias	Black THV bias voltage on at normal drive level	On[Off]
107-0031	0031-K THV- Bias	Black THV bias voltage on at normal drive level	On[Off]
107-0070	0070-K THV Bias R	Detect what the THV value is on the THV Roller	Numeric 3 digits
107-0110	0110-Detach Bias	Detach bias voltage on at normal drive level	On[Off]
107-0160	0160-Erase Lamp	Erase Lamp 1	On[Off]
109-0000	0000-Temp A	Detect what the temperature A is on fuser.	Numeric 3 digits
109-0010	0010-Temp B	Detect what the temperature B is on fuser.	Numeric 3 digits
109-0013	0013-Outer Temp	Outer Temperature	Numeric 3 digits
109-0014	0014-Humidity	Humidity	Numeric 3 digits
109-0030	0030-Fuser Mot Fwd	Fuser Motor Forward On/Off	On[Off]
109-0032	0032-Fuser Fwd Slow	Fuser Motor Forward Slow On/Off	On[Off]
109-0040	0040-Fuser Fan Run	Fuser Fan Motor On/Off	On[Off]
110-0000	0000-LSU Mot1 Rdy	Detect if LSU motor1 runs at normal speed.	High[Low]
110-0060	0060-LSU Mot1 Run	LSU Motor1 On/Off	On[Off]
110-0110	0110-LD Power4	LSU LD4 Power On/Off (black)	On[Off]
110-0170	0170-LSU HSync4	Detect LSU HSync4 (black)	High[Low]

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

## Diagnostics > Scanner

- **NVRAM Read/Write**

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

- **Test Routines**

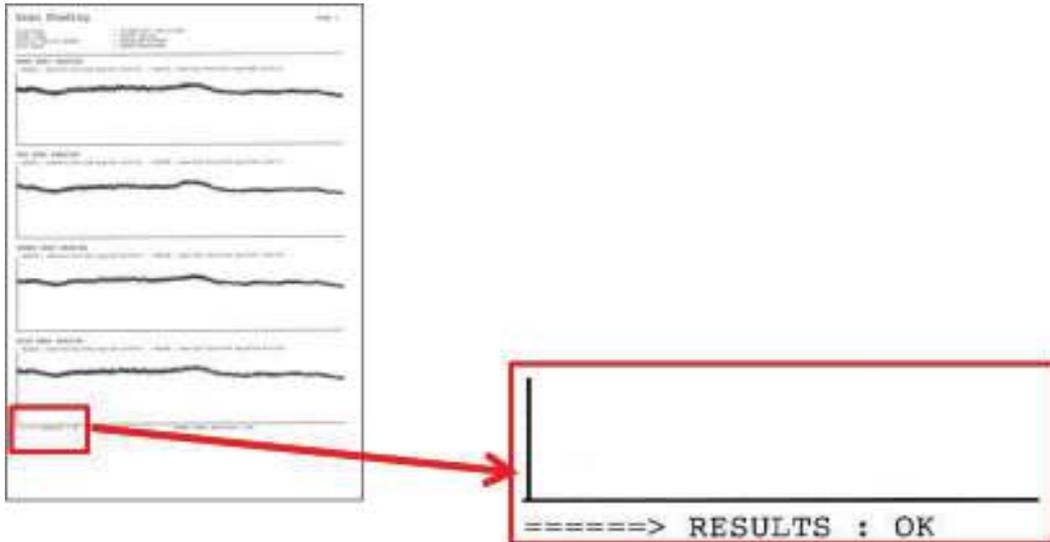
This menu can perform the operation test for the scan components.

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

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

- **Shading Test**

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



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

## Adjustment > Print Adjustment > Image Position

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

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

### How to adjust :

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

Tray	Adjustment item	Value range (unit: 0.1 mm)
All	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm
Tray 1	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm
Tray 2	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm
Tray 3	Simplex Leading Edge	[-5~5]mm
	Simplex Side Edge	[-5~5]mm
	Duplex Leading Edge	[-5~5]mm
	Duplex Side Edge	[-5~5]mm

## Adjustment > Print Adjustment > Print Test Patterns

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

### Scan Area Adjustment

- **Automatic Adjustment**  
This menu executes the scan area adjustment automatically.
- **Manual Adjustment**  
This menu executes the scan area adjustment manually.

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

### Document feeder area adjustment

- **Automatic Adjustment**

This menu executes the scan area adjustment automatically.

- **Manual Adjustment**

This menu executes the scan area adjustment manually.

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

### Diagnostics > System

- **Switch Test**

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

### Service Function

- **Clear All Mem**

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

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



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

---

- **Clear Admin Password**

This menu resets the Admin password.

- **Engine Footer**

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

- **F/W Upgrade**

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

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

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

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

- **TC Init.**

- Initialize Now?

- **Low Alert Level**

- Toner

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

- OPC unit

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

- **Count of Large Page**

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

- **AJR (ADF jam recovery)**

Use this item for document feeder jam recovery. Usually, if a document jam occurs the job is canceled. When AJR is enabled, the prompts [Continue](#) or [Cancel](#) appear. Select [Continue](#) to retry scanning without canceling the job.

- **SFE**

Basically the printer rotates the image so that the user views the printed page in a portrait orientation when the printed page is picked up. However, this printing method takes a considerably long time. If customers are dissatisfied with long print times, try using SFE to solve the problem. When SFE is enabled, the image does not rotate and print speed (output) increases.

- **LetterGothic**

Use this item to control the thickness of printed characters.

- **Set SN**

Use this item to enter a new serial number after installing a replacement formatter board.

# Control-Panel Error Messages

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



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

---

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

### Description

Paper in tray 2 is not proper.

### Recommended action

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

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

### Description

Paper in tray 3 is not proper.

### Recommended action

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

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

### Description

Paper in tray 1 is not proper.

### Recommended action

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

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

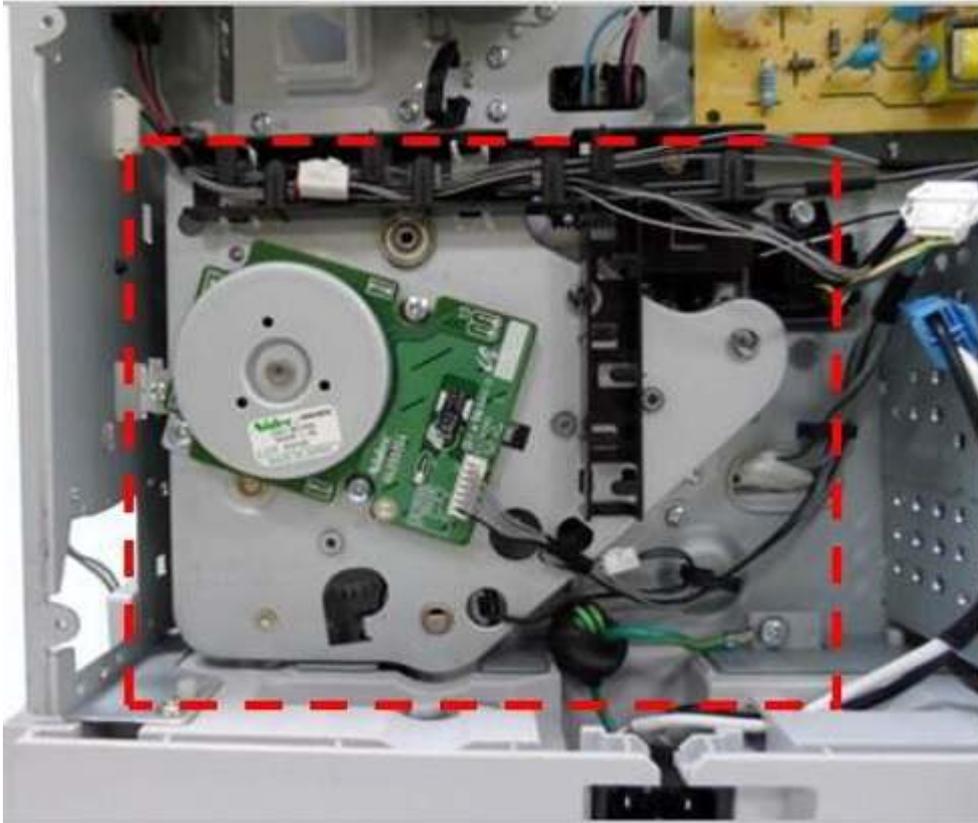
### Description

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

### Recommended action

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

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



- If the problem persists, replace the Main Board PBA:

Model	Main Board PBA, HP Part #	Model	Main Board PBA, HP Part #
M433a	JC92-02607K	M440dn	8AF47-60001
M436n/M436dn	JC92-02607G	M440nda	8AF48-60001
M436nda	JC92-02607H	M442dn	8AF71-60001
M437n	7ZB19-60001	M443nda	8AF72-60001
M437dn	7ZB20-60001	M42523n	7ZB25-60001
M437nda	7ZB21-60001	M42523dn	7ZB26-60001
M438n	8AF43-60001	M42525n	7ZB27-60001
M438dn	8AF44-60001	M42525dn	7ZB28-60001
M438nda	8AF45-60001	M42623n	8AF49-60001
M439n	7ZB22-60001	M42623dn	8AF50-60001
M439dn	7ZB23-60001	M42625n	8AF51-60001
M439nda	7ZB24-60001	M42625dn	8AF52-60001
M440n	8AF46-60001		

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

### Description

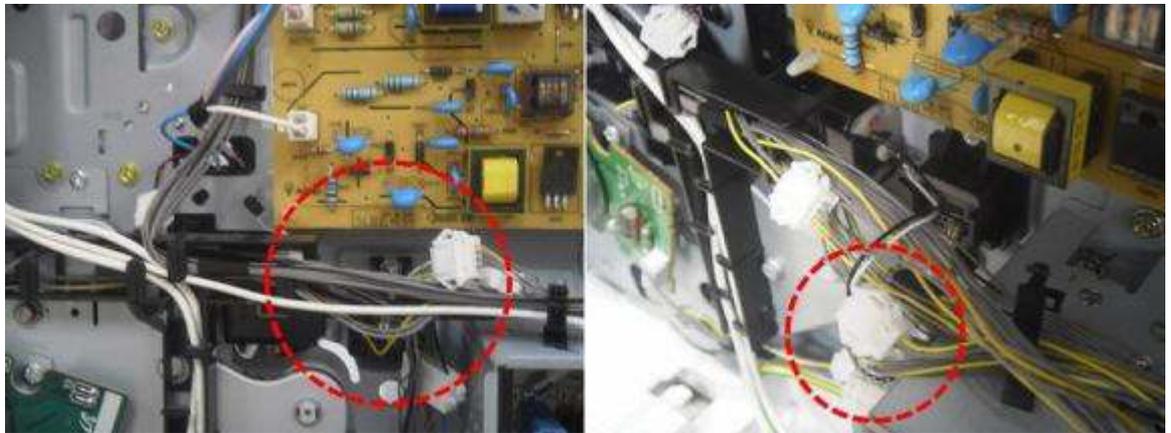
The motor related to toner supply has a problem.

### Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. Open the front cover. If the toner pipe is blocked, open it.
4. Check the seal is removed on toner and cartridge drum.
5. Turn the printer off then on. If the error persists, check the following steps.
6. From the control panel, enter Tech Mode and select the toner supply motor test:

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

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



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

Model	LVPS (SMPS), HP Part #
M433a	JC44-00090H
M436n/M436dn/M436nda	JC44-00223A
All others	JC44-00223G

Figure 3-1 LVPS connector



Figure 3-2 LVPS M433a connector



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

Model	Main Board PBA, HP Part #	Model	Main Board PBA, HP Part #
M433a	JC92-02607K	M440dn	8AF47-60001
M436n/M436dn	JC92-02607G	M440nda	8AF48-60001
M436nda	JC92-02607H	M442dn	8AF71-60001
M437n	7ZB19-60001	M443nda	8AF72-60001
M437dn	7ZB20-60001	M42523n	7ZB25-60001
M437nda	7ZB21-60001	M42523dn	7ZB26-60001
M438n	8AF43-60001	M42525n	7ZB27-60001
M438dn	8AF44-60001	M42525dn	7ZB28-60001
M438nda	8AF45-60001	M42623n	8AF49-60001
M439n	7ZB22-60001	M42623dn	8AF50-60001
M439dn	7ZB23-60001	M42625n	8AF51-60001
M439nda	7ZB24-60001	M42625dn	8AF52-60001
M440n	8AF46-60001		

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

### Description

SMPS fan does not operate.

**Recommended action**

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

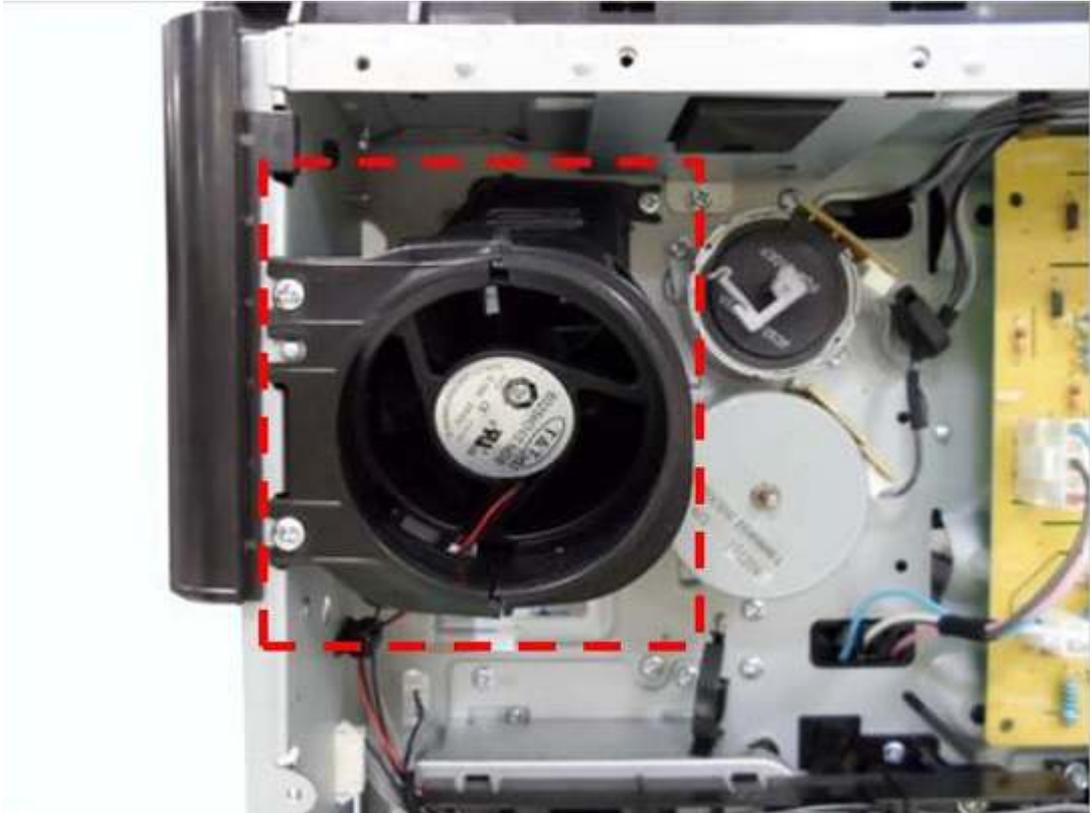
**A2-2110, Error: #A2-2110 / Fan Failure: #A2-2110. Turn off then on. Call for service if the problem persists****Description**

Fuser fan does not operate.

**Recommended action**

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

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



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

### Description

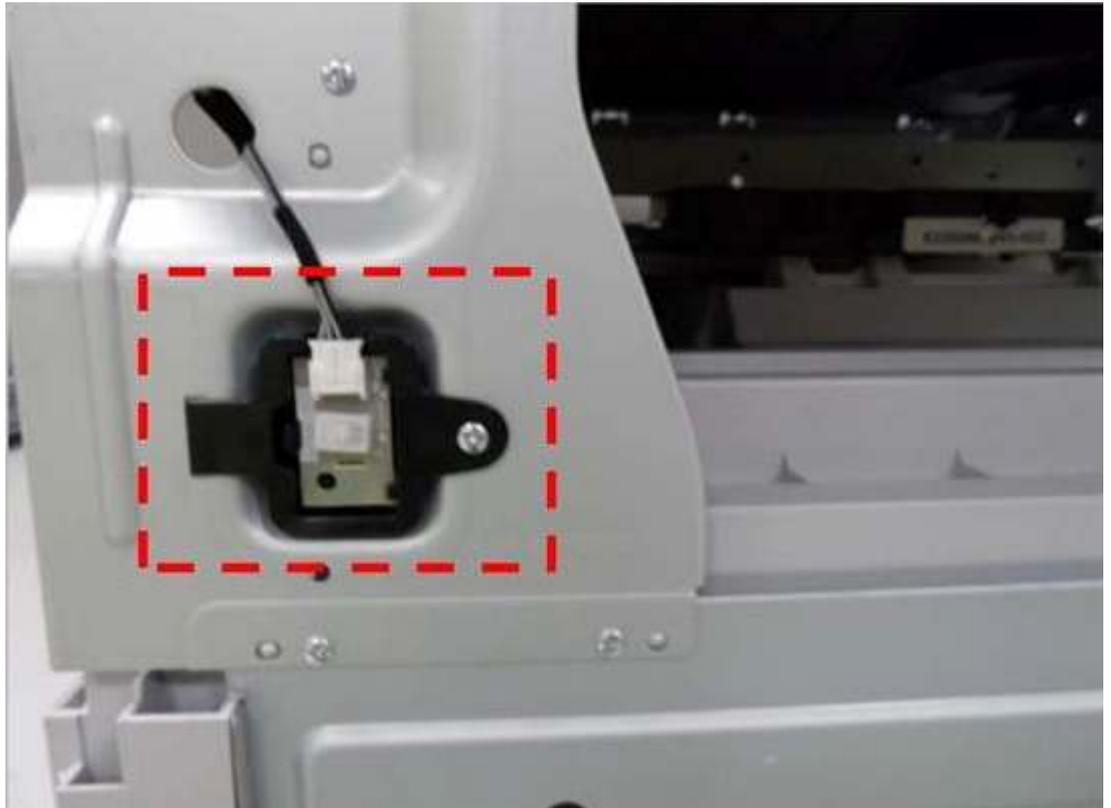
- **A3-3311**, Error: #A3-3311 / Sensor Failure: #A3-3311. Turn off then on. Call for service if the problem persists
- **A3-3312**, Error: #A3-3312 / Sensor Failure: #A3-3312. Turn off then on. Call for service if the problem persists
- **A3-3320**, Not proper Room Temp / The room temperature is not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

Temperature/Humidity sensor is defective.

### Recommended action

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

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



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

Model	Main Board PBA, HP Part #	Model	Main Board PBA, HP Part #
M433a	JC92-02607K	M440dn	8AF47-60001
M436n/M436dn	JC92-02607G	M440nda	8AF48-60001
M436nda	JC92-02607H	M442dn	8AF71-60001
M437n	7ZB19-60001	M443nda	8AF72-60001
M437dn	7ZB20-60001	M42523n	7ZB25-60001
M437nda	7ZB21-60001	M42523dn	7ZB26-60001
M438n	8AF43-60001	M42525n	7ZB27-60001
M438dn	8AF44-60001	M42525dn	7ZB28-60001
M438nda	8AF45-60001	M42623n	8AF49-60001
M439n	7ZB22-60001	M42623dn	8AF50-60001
M439dn	7ZB23-60001	M42625n	8AF51-60001
M439nda	7ZB24-60001	M42625dn	8AF52-60001
M440n	8AF46-60001		

## C1-1110, C1-111A Toner errors

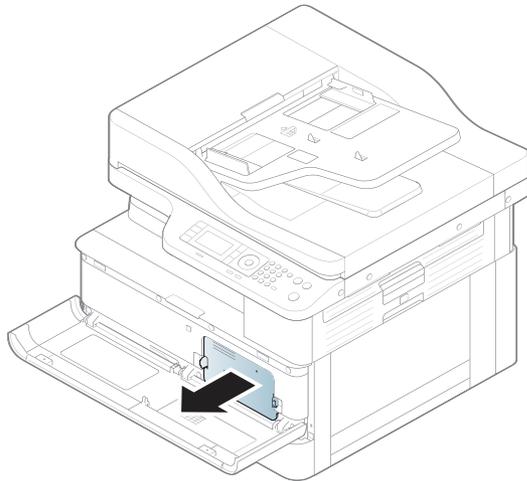
### Description

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

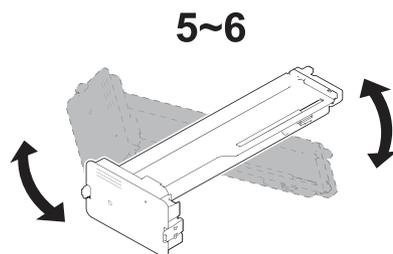
Toner remaining is 5 ~ 30% of its life.

### Recommended action

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



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



5. Reinstall the toner cartridge.
6. If the toner cartridge yield is expired, have the customer purchase a new toner cartridge.

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

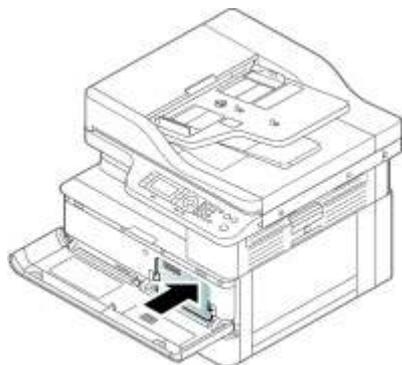
### Description

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

The toner cartridge is at the end of its life.

### Recommended action

1. Check the life remaining of the toner cartridge.
2. If the toner cartridge yield is expired, have the customer purchase a new toner cartridge.



## C1-1313, C1-1314 Errors

### Description

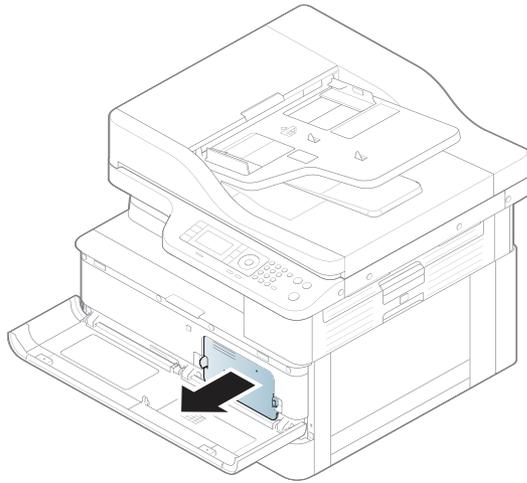
- **C1-1313**, Shake toner cart. / Shake toner cartridge and then install. Call for service if the problem persists
- **C1-1314**, Remove seal tape / Did not supply enough toner. Remove seal tape of toner cartridge or shake it. Call for service if the problem persists

Toner supply is inefficient or abnormal.

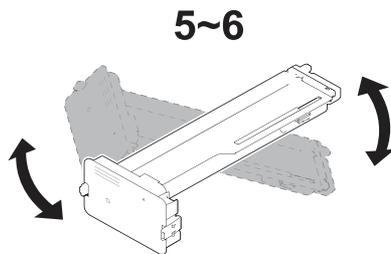
### Recommended action

1. Turn the printer off.
2. Open the front cover.

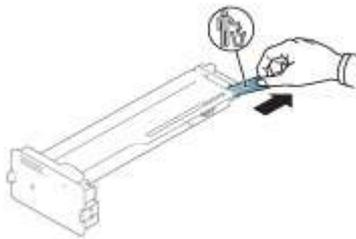
3. Take out the toner cartridge.



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



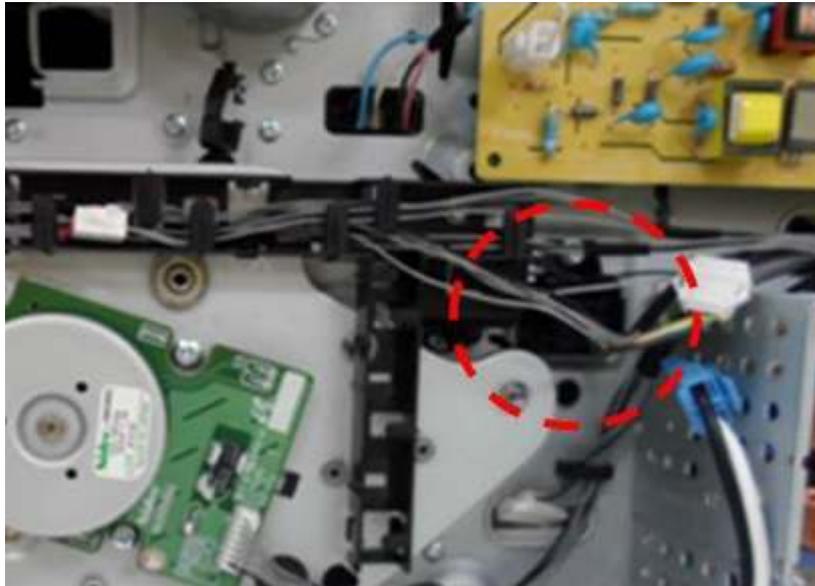
5. Check if the seal tape is removed. If not, remove it.



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

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

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



9. If the problem persists, replace the toner cartridge.

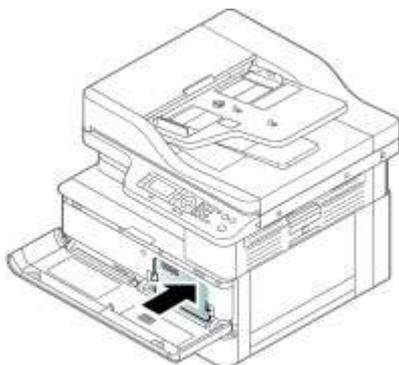
## C1-1411 Toner Not Installed / Toner cartridge is not installed. Install it

### Description

The toner cartridge is not installed or not detected.

### Recommended action

1. Open the front cover. Check if the toner cartridge is installed.
2. Remove and reinstall the toner cartridge.
3. If the error persists, check if the toner cartridge modular jack is contaminated or deformed.
  - ▲ If the jack is damaged, replace the cartridge.



4. Replace the toner cartridge with a new one.

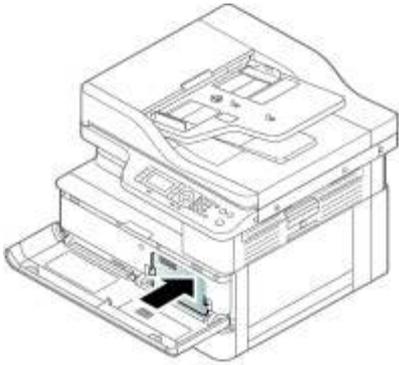
## C1-1512, Toner Not Compatible / Toner cartridge is not compatible. Check guide

### Description

Toner cartridge is not compatible.

### Recommended action

1. Open the front cover. Check if the toner cartridge is installed.
2. Remove the toner cartridge and re-install.
3. If the error persists, remove the toner cartridge.
4. If the toner cartridge is not HP genuine, have the customer purchase a new toner cartridge.



## C1-1711, C1-1712 Errors

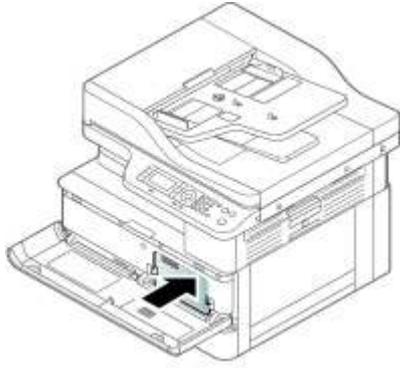
### Description

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

The toner cartridge is not installed or not detected.

### Recommended action

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



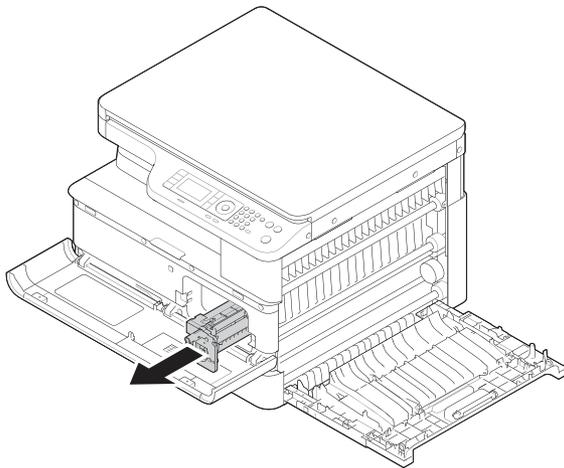
## C3-1110, Prepare IMG. Unit / Prepare new imaging unit

### Description

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

### Recommended action

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



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

### Description

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

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

#### Recommended action

1. Check the life remaining of the Imaging Unit.

---

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

---

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

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

#### Description

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

The imaging unit is not installed, not detected, or non-genuine HP toner is used (C3-1414).

---

 **NOTE:** For the non-genuine HP toner (C3-1414) error, the organic photo conductor (OPC) drum is not rotating smoothly because toner powder is caked inside the OPC unit. Using non-genuine toner is causing the caked toner powder. The caked toner powder causes the cleaning blade to overturn and the waste agitator to break, resulting in the imaging unit error.

---

#### Recommended action

---

 **IMPORTANT:** For **HP non-genuine toner C3-1414 errors**: Explain to the customer that using HP non-genuine toner caused the problem. Service or repair resulting from HP non-genuine toner use **is not** covered under the printer warranty.

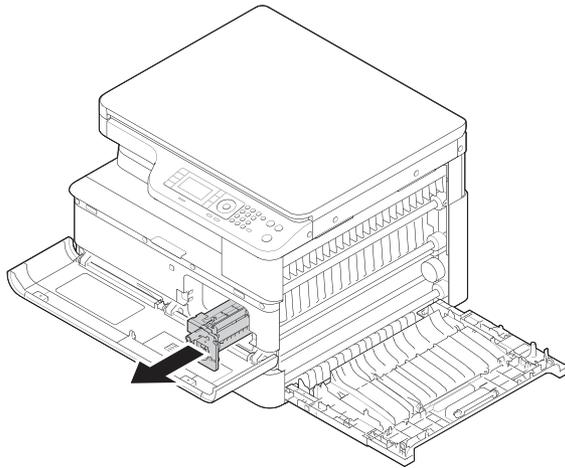
---

The Imaging Unit (HP Part #: CF257-67901) must be replaced.

---

1. Open the front cover. Check if the imaging unit is installed.
2. Remove and reinstall the imaging unit.
3. If the error persists, check if the Imaging Unit connector is contaminated or deformed.
  - ▲ If the connector is damaged, replace the Imaging Unit (HP Part #: CF257A-67902).

4. If the error persists, replace the Imaging Unit (HP Part #: CF257A-67902).



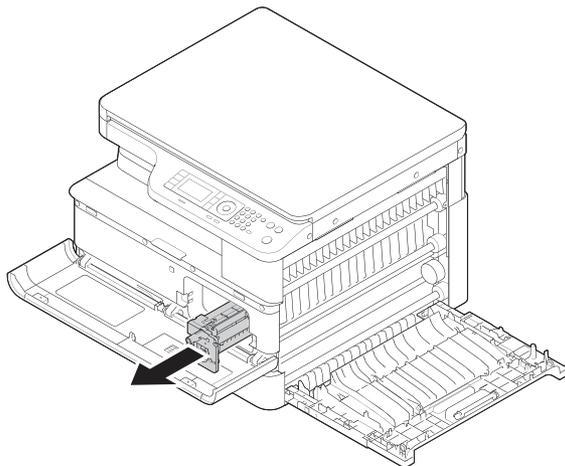
### C3-1512, IMG. Not compatible / Imaging unit is not compatible. Check guide

#### Description

The imaging unit is not installed or not detected.

#### Recommended action

1. Open the front cover. Remove the toner cartridge.
2. Remove and reinstall the Imaging Unit.
3. Install the toner cartridge and close the front cover.
4. Check the part # of the installed Imaging Unit. (HP part numbers are CF257A and CF257A-67902.)
  - ▲ If the Imaging Unit is not HP genuine, have the customer purchase a new Imaging Unit (HP Part #: CF257A).



## C3-1711, C3-1712 Imaging unit errors

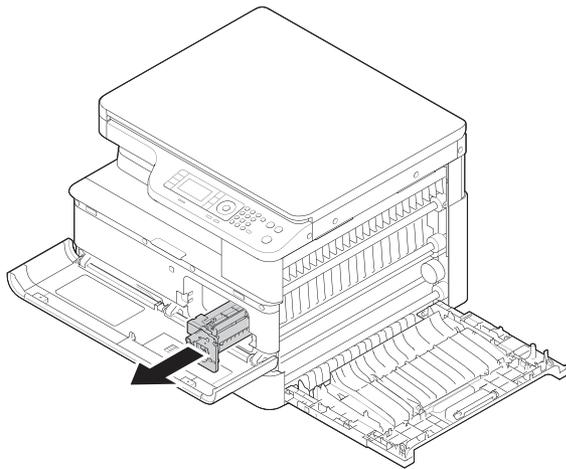
### Description

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

The imaging unit is not installed or not detected.

### Recommended action

1. Open the front cover. Check if the imaging unit is installed.
2. Remove and reinstall the Imaging Unit.
3. If the error persists, check if the Imaging Unit connector is contaminated or deformed.
  - ▲ If the connector is damaged, replace the Imaging Unit (HP Part #: CF257A-67902).
4. If the error persists, replace the Imaging Unit (HP Part #: CF257A-67902).



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

### Description

Transfer roller is at the end of its life.

### Recommended action

1. Open the side cover.

2. Have the customer purchase a new Transfer Roller Kit (HP Part #: W7U01-67901).



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

#### Description

Transfer roller is at the end of its life.

#### Recommended action

1. Open the side cover.
2. Have the customer purchase a new Transfer Roller Kit (HP Part #: W7U01-67901).



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



## H1-1210, Paper jam in tray 3

### Description

Paper jam has occurred in tray 3. (Pickup roller is worn out.)

### Recommended action

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

## H1-1220 Tray 3 door is open. Close it

### Description

Tray 3 cassette is pulled out. Insert it properly.

**Recommended action**

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

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

**Description**

Communication error has occurred between the copier and SCF.

**Recommended action**

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

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

**Description**

Paper in tray 3 is empty or near empty. / The photo sensor is defective.

**Recommended action**

1. Remove tray 3 and load the paper.
2. If the message persists, send an on-site technician to replace the SCF Cassette Tray (HP Part #: JC90-01226B).

## M1-1110, Paper jam in tray 2

**Description**

Paper jam has occurred in tray 2.

**Recommended action**

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

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



## M1-1610, Paper jam in tray 1

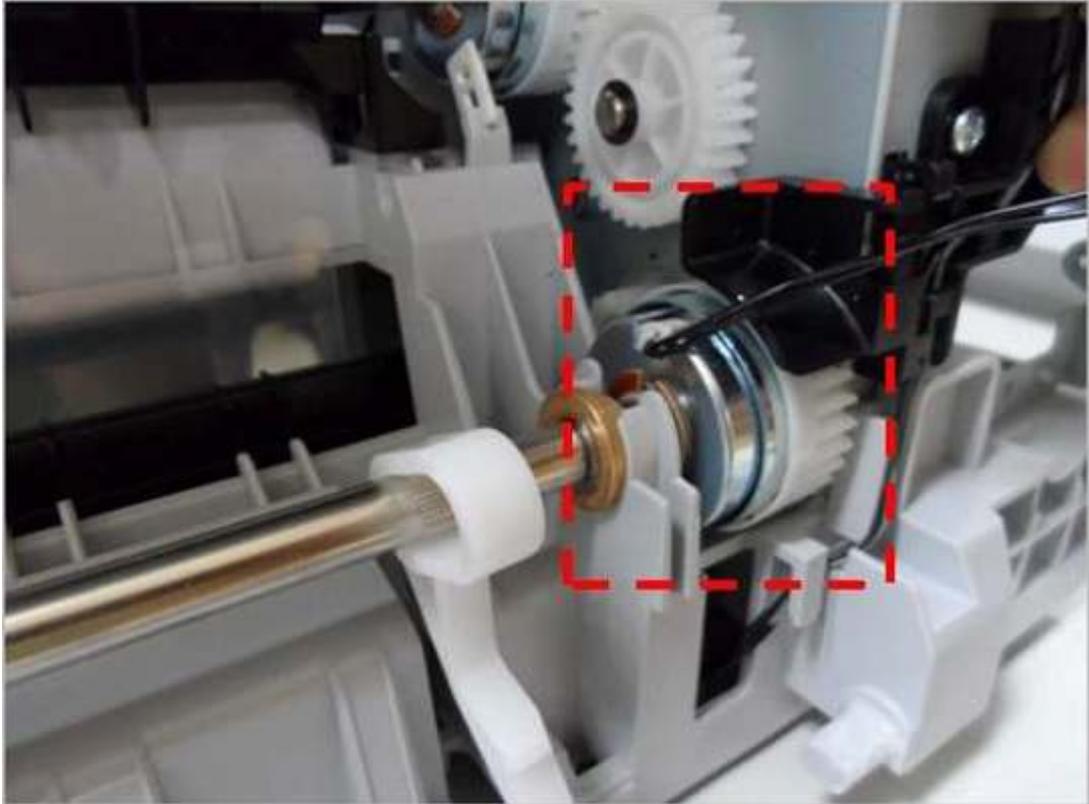
### Description

Paper jam has occurred in tray 1.

### Recommended action

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

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



## M1-5112, M1-5113, Paper empty in tray 2 / Paper is empty in tray 2. Load paper

### Description

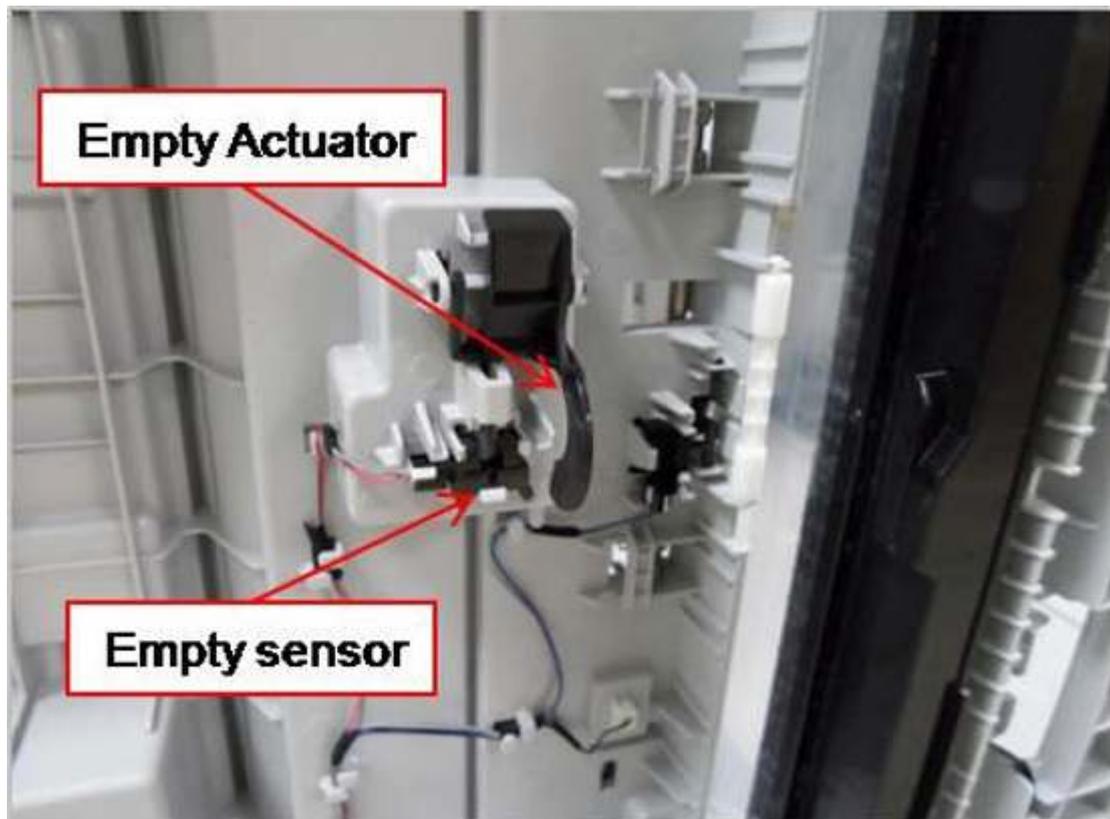
Paper in tray 2 is empty or almost empty. / The photo sensor is defective.

### Recommended action

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

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

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



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

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

### Description

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

### Recommended action

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

## M1-5610, Paper Normal in Tray 1

### Description

Paper in tray 1 is normal.

### Recommended action

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

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

### Description

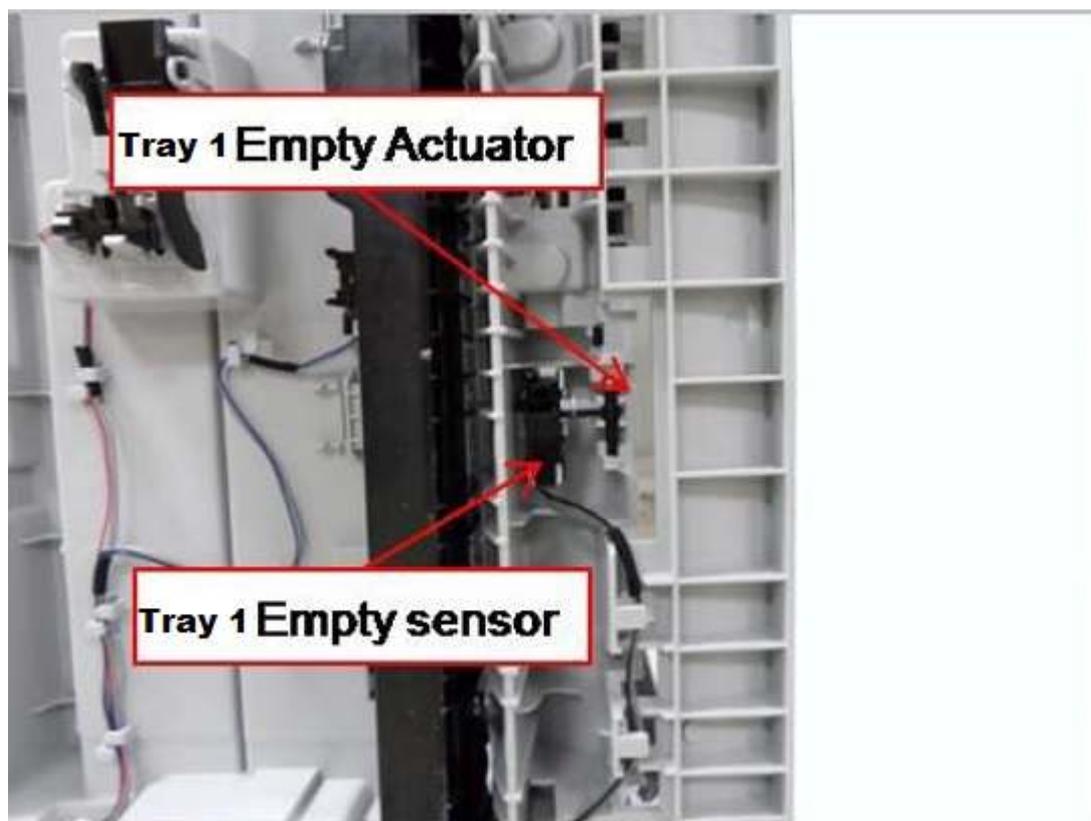
Paper in tray 1 is empty or almost empty. / The photo sensor is defective.

### Recommended action

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

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

5. Check if the Tray 1 Empty Sensor works normally. If needed, replace it (HP Part #: 0604-001393).
6. Check if the Tray 1 Empty Actuator is assembled correctly. If needed, replace it (HP Part #: JC66-03969A).



## M2-1110, M2-2210 Jam inside errors

### Description

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



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



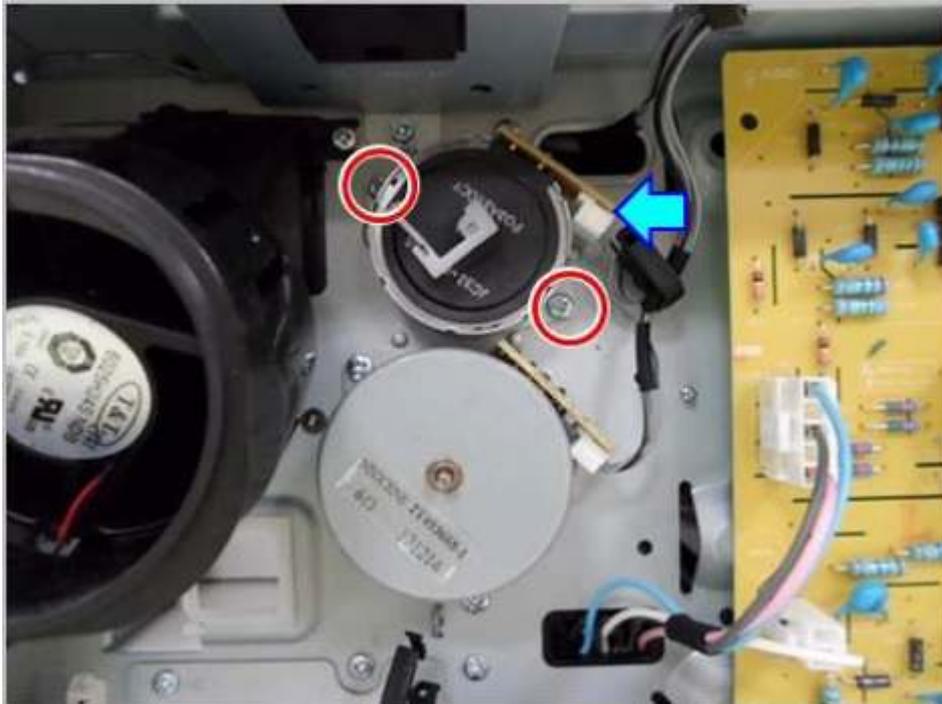
## M3-1110, Jam in exit area

### Description

Paper jam has occurred in the exit area.

### Recommended action

1. Remove any jammed paper from the output tray.
2. If the message persists, send an on-site technician to perform the remaining steps.
3. Turn the printer off.
4. Remove the Exit Unit. If there are any defective parts, replace the Exit Unit (HP Part #: JC9-01221B).
5. Check if the Exit Motor works normally.
  - ▲ Unplug and reconnect the motor cable. If the connection is OK, replace the Exit Motor (HP Part #: JC93-00452D).



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

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

#### Description

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

#### Recommended action

Please wait. This error will disappear.

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

#### Description

Toner is supplying.

#### Recommended action

Please wait. This error will disappear.

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

#### Description

The printer is calibrating.

#### Recommended action

Please wait. This error will disappear.

## S2-4210, Front door is open. Close it

### Description

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

### Recommended action

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

## S2-4410, Right door is open. Close it

### Description

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

### Recommended action

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

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

### Description

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

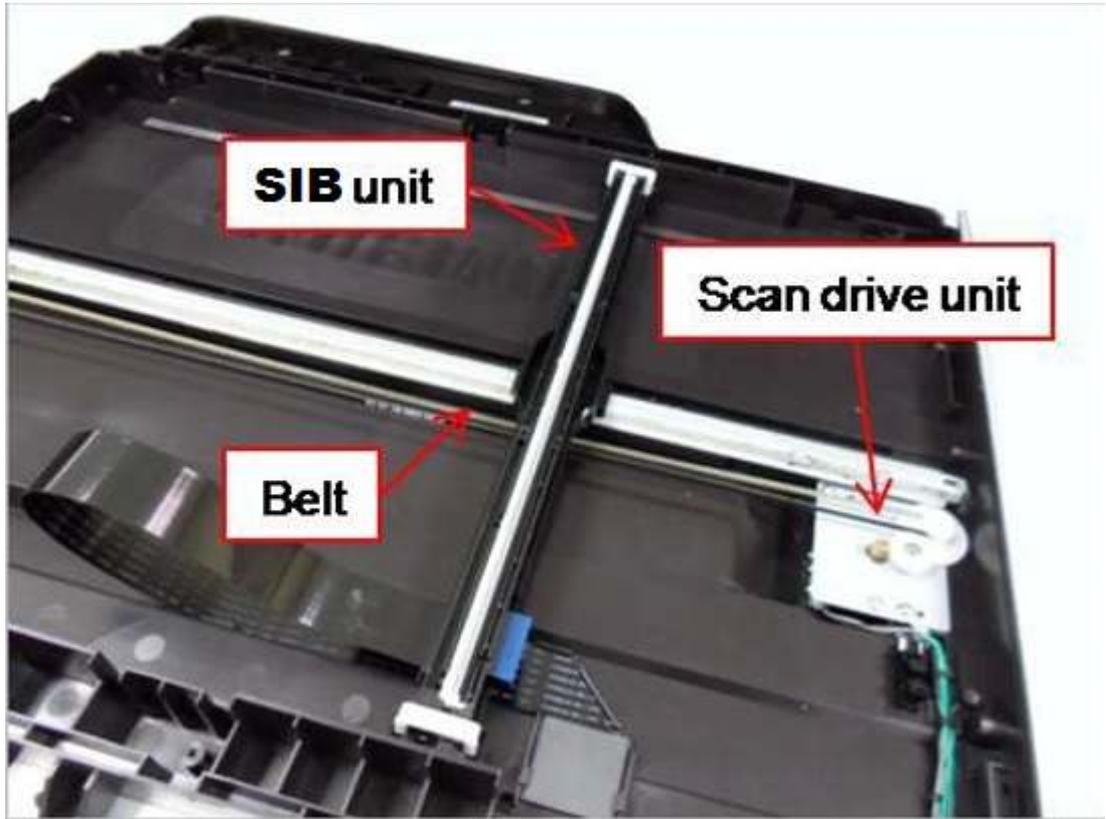
### Recommended action

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

#### HP Part #

- 0605-001508 (M433,M436)
  - 0605-001255 (M437, M438, M439, M440, M442, M443, M42523, M42525, M42623, M42625)
6. Check if there is any defective part in the scanner unit. (Belt, Motor etc.)
    - Belt

- Scan Motor



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

Model	Main Board PBA, HP Part #	Model	Main Board PBA, HP Part #
M433a	JC92-02607K	M440dn	8AF47-60001
M436n/M436dn	JC92-02607G	M440nda	8AF48-60001
M436nda	JC92-02607H	M442dn	8AF71-60001
M437n	7ZB19-60001	M443nda	8AF72-60001
M437dn	7ZB20-60001	M42523n	7ZB25-60001
M437nda	7ZB21-60001	M42523dn	7ZB26-60001
M438n	8AF43-60001	M42525n	7ZB27-60001
M438dn	8AF44-60001	M42525dn	7ZB28-60001
M438nda	8AF45-60001	M42623n	8AF49-60001
M439n	7ZB22-60001	M42623dn	8AF50-60001
M439dn	7ZB23-60001	M42625n	8AF51-60001
M439nda	7ZB24-60001	M42625dn	8AF52-60001
M440n	8AF46-60001		

## S3-3211, ADF connection error

### Description

Opening and closing the document feeder can cause interference between the wire harness and the harness socket causing a poor or broken connection.

### Recommended action

1. Disconnect the harness, and then reconnect it.
2. If the error persists, replace the wire harness (HP Part #: JC39-01978A)

 **NOTE:** HP is redesigning this wire harness to prevent this error.

---

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

### Description

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

### Recommended action

Change the printer's IP address.

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

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

### Description

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

The temperature control of the Fuser Unit is abnormal.

### Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. Turn the printer off, remove, then re-install the Fuser Unit.
4. If the error persists. Turn the printer off and remove the Fuser Unit.
  - a. Check the fuser connector for bent or broken pins.
  - b. Check if the input voltage is normal.
  - c. Check if the thermistor is twisted or contaminated; and is in contact with the Heat Roller.
5. After confirming continuity in the fuser connector and the error still exists; replace the below parts in order:
  - Fuser Unit (HP Part #: JC91-01217A)
  - LVPS-SMPS Power Supply  
HP Part #:
    - JC44-00090H (M433a)
    - JC44-00223A (M436n/M436dn/M436nda)
    - JC44-00223G (others)
  - HVPS (HP Part #: JC44-00229A)

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

### Description

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

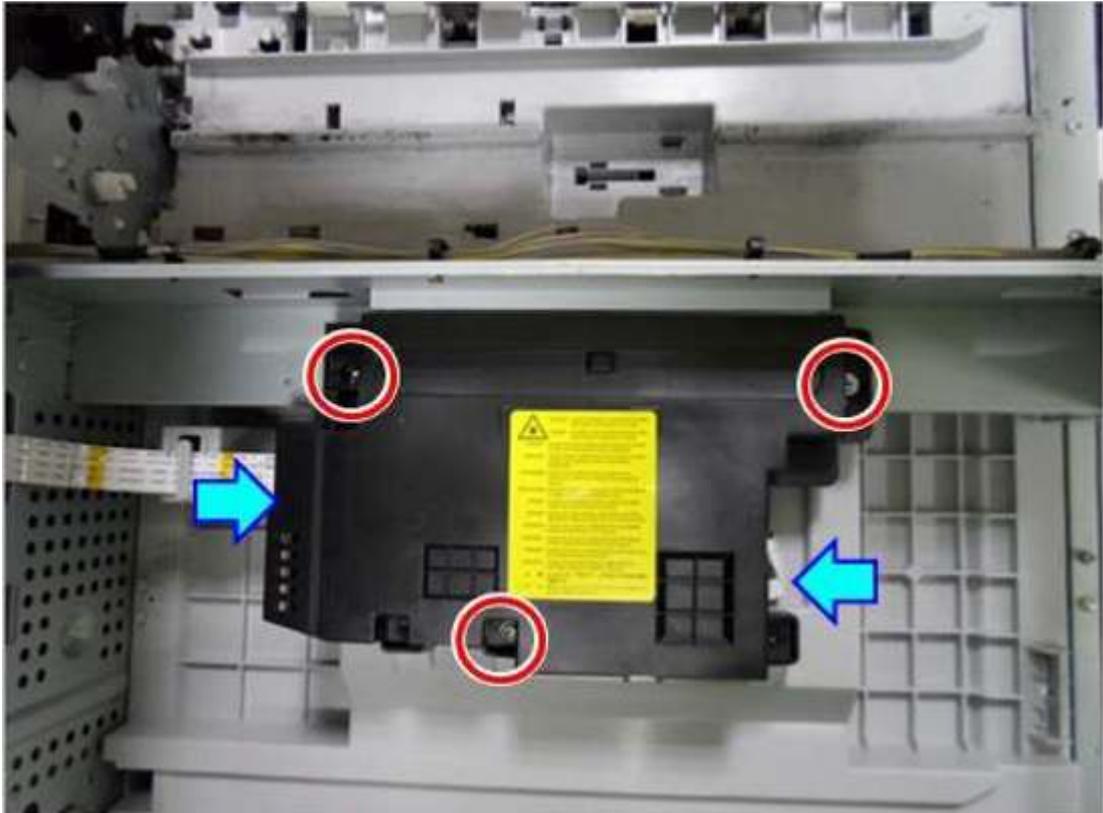
The Laser Scanner Unit (LSU) has experienced an error.

### Recommended action

1. Turn the printer off then on.
2. If the error persists, send an on-site technician to perform the remaining steps.
3. From the control panel, enter Tech Mode and execute the LSU motor tests:

[Menu > # > 10043616 > Menu > Tech Menu > Diagnostics > Engine > Test Routines > 110 – LSU > 0000 – LSU Mot 1Rdy & 00602 – LSU Mot 1Run](#)

4. If there is no sound, remove the platen unit. Check if the LSU harness is connected on the main board properly.
5. If it is OK, remove the top cover. Check if the LSU harness is connected on the LSU board properly.
6. Check if the LSU harness is defective. If needed replace it (HP Part #: JC39-01996A).
7. Reconnect the LSU harness and then execute the LSU motor test again.
8. If the error persists, replace the LSU (HP Part #: JC97-04301A).



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

Model	Main Board PBA, HP Part #	Model	Main Board PBA, HP Part #
M433a	JC92-02607K	M440dn	8AF47-60001
M436n/M436dn	JC92-02607G	M440nda	8AF48-60001
M436nda	JC92-02607H	M442dn	8AF71-60001
M437n	7ZB19-60001	M443nda	8AF72-60001
M437dn	7ZB20-60001	M42523n	7ZB25-60001
M437nda	7ZB21-60001	M42523dn	7ZB26-60001
M438n	8AF43-60001	M42525n	7ZB27-60001
M438dn	8AF44-60001	M42525dn	7ZB28-60001
M438nda	8AF45-60001	M42623n	8AF49-60001

Model	Main Board PBA, HP Part #	Model	Main Board PBA, HP Part #
M439n	7ZB22-60001	M42623dn	8AF50-60001
M439dn	7ZB23-60001	M42625n	8AF51-60001
M439nda	7ZB24-60001	M42625dn	8AF52-60001
M440n	8AF46-60001		

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

### Description

Jam has occurred inside the ADF unit.

### Recommended action

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

Part	HP Part #
Actuator Registration	JC66-03148A
ADF Registration Photo Sensor	0604-001393



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

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



5. Check if the Registration Clutch operates normally. Check if the clutch cable is connected correctly. If the clutch is defective, replace it (HP Part #: JC47-00033G).

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

#### Description

Jam has occurred inside the ADF unit.

#### Recommended action

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

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



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

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

#### Description

Jam has occurred inside the ADF unit.

#### Recommended action

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

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



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

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

#### Description

Jam has occurred inside the ADF unit.

#### Recommended action

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

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



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

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

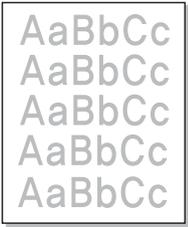
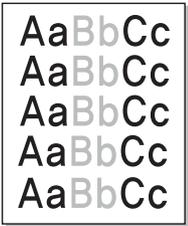
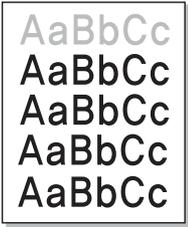
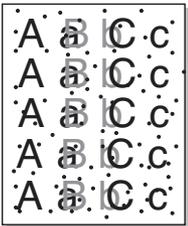
### Description

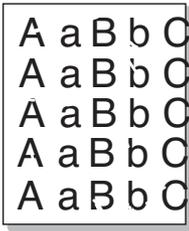
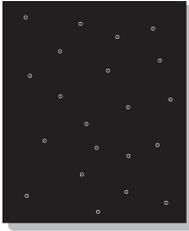
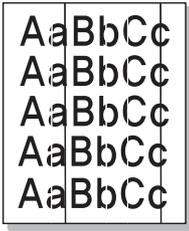
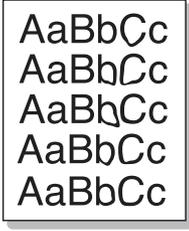
ADF cover is open.

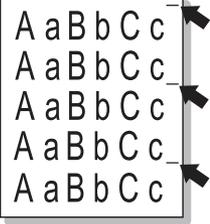
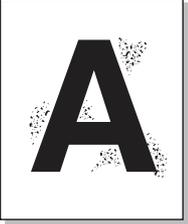
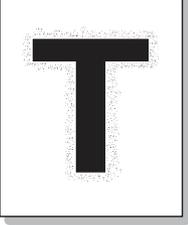
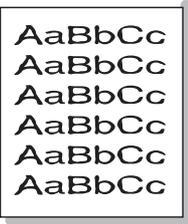
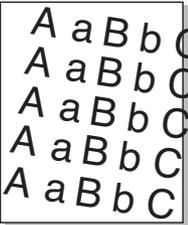
### Recommended action

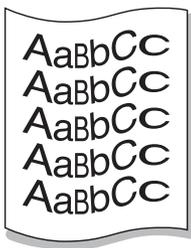
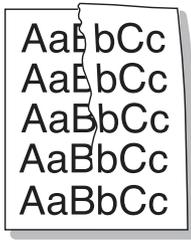
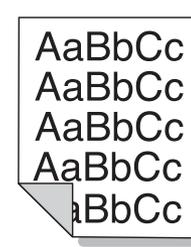
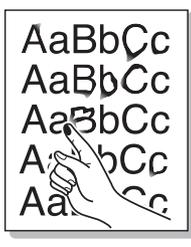
1. Close the ADF cover properly.
2. If the message persists, send an on-site technician to perform the remaining steps.
3. Check the ADF Cover Open Photo Sensor and its cable. If needed, replace it (HP Part #: 0604-001393).
4. Check for damaged ribs or broken parts on the underside of the ADF Cover.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

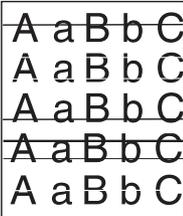
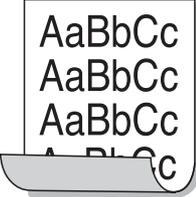
# Printing quality problems

Condition	Example	Suggested solutions
Haze/light print		<p>Perform an <a href="#">OPC Cleaning</a> procedure.</p> <p><b>OPC Cleaning</b></p> <ol style="list-style-type: none"> <li>Open the following menus: <ul style="list-style-type: none"> <li><a href="#">System Setup</a></li> <li><a href="#">Machine Setup</a></li> <li><a href="#">OPC Cleaning</a></li> </ul> </li> <li>Select <a href="#">Execute Now</a>, and then press the <a href="#">OK</a> button.</li> <li>After the <a href="#">OPC Cleaning</a> procedure is complete, select the <a href="#">Off</a> item before exiting the menus.</li> </ol> <p><b>NOTE:</b> When using Century Star media, it may contaminate the OPC surface. Select <a href="#">Automatic</a> from the OPC cleaning menu to initiate a cleaning every 1,000 pages. Cleaning will take up to 5 minutes each time.</p>
Light or faded print		<ul style="list-style-type: none"> <li>If a vertical white streak or faded area appears on the page, the toner supply is low. Install a new toner cartridge.</li> <li>The paper may not meet paper specifications; for example, the paper may be too moist or rough.</li> <li>If the entire page is light, the print resolution setting is too low or the toner save mode is on. Adjust the print resolution and turn the toner save mode off. See the help screen of the printer driver.</li> <li>A combination of faded or smeared defects may indicate that the toner cartridge needs cleaning. Clean the inside of your printer.</li> <li>The surface of the LSU part inside the printer may be dirty. Clean the inside of your printer. If these steps do not correct the problem, contact a service representative.</li> </ul>
The top half of the paper is printed lighter than the rest of the paper		<p><b>The toner might not adhere properly to this type of paper.</b></p> <ul style="list-style-type: none"> <li>Change the printer option and try again. Go to <b>Printing Preferences</b>, click the <b>Paper</b> tab, and set the paper type to <b>Recycled</b>.</li> </ul>
Toner specks		<ul style="list-style-type: none"> <li>The paper may not meet specifications; for example, the paper may be too moist or rough.</li> <li>The transfer roller may be dirty. Clean the inside of your printer.</li> <li>The paper path may need cleaning. If these steps do not correct the problem, contact a service representative.</li> </ul>

Condition	Example	Suggested solutions
Dropouts		<p>If faded areas, generally rounded, occur randomly on the page:</p> <ul style="list-style-type: none"> <li>• A single sheet of paper may be defective. Try reprinting the job.</li> <li>• The moisture content of the paper is uneven or the paper has moist spots on its surface. Try a different brand of paper.</li> <li>• The paper lot is bad. The manufacturing processes can cause some areas to reject toner. Try a different kind or brand of paper.</li> <li>• Change the printer option and try again. Go to <b>Printing Preferences</b>, click the <b>Paper</b>, and set type to <b>Thick</b>.</li> </ul> <p>If these steps do not correct the problem, contact a service representative.</p>
White Spots		<p>If white spots appear on the page:</p> <ul style="list-style-type: none"> <li>• The paper is too rough and a lot of dirt from paper falls to the inner components within the printer, so the transfer roller may be dirty. Clean the inside of your printer.</li> <li>• The paper path may need cleaning. Clean the inside of your printer.</li> </ul> <p>If these steps do not correct the problem, contact a service representative.</p>
Vertical lines		<p>If black vertical streaks appear on the page:</p> <ul style="list-style-type: none"> <li>• The surface (drum part) of the cartridge inside the printer has probably been scratched. Remove the cartridge and install a new one.</li> </ul> <p>If white vertical streaks appear on the page:</p> <ul style="list-style-type: none"> <li>• The surface of the LSU part inside the printer may be dirty. Clean the inside of your printer. If these steps do not correct the problem, contact a service representative.</li> </ul>
Black or color background		<ul style="list-style-type: none"> <li>• Change to a lighter weight paper.</li> <li>• Check the environmental conditions: very dry conditions or a high level of humidity (higher than 80% RH) can increase the amount of background shading.</li> <li>• Remove the old toner cartridge and install a new one.</li> <li>• Thoroughly redistribute the toner.</li> </ul>
Toner smear		<ul style="list-style-type: none"> <li>• Clean the inside of the printer.</li> <li>• Check the paper type and quality.</li> <li>• Remove the toner cartridge and install a new one.</li> </ul>

Condition	Example	Suggested solutions
Vertical repetitive defects		<p>If marks repeatedly appear on the printed side of the page at even intervals:</p> <ul style="list-style-type: none"> <li>The toner cartridge may be damaged. If you still have the same problem, remove the toner cartridge and, install a new one.</li> <li>Parts of the printer may have toner on them. If the defects occur on the back of the page, the problem will likely correct itself after a few more pages.</li> <li>The fusing assembly may be damaged. Contact a service representative.</li> </ul>
Background scatter		<p>Background scatter results from bits of toner randomly distributed on the printed page.</p> <ul style="list-style-type: none"> <li>The paper may be too damp. Try printing with a different batch of paper. Do not open packages of paper until necessary so that the paper does not absorb too much moisture.</li> <li>Select <b>Thick</b> from the <b>Printing Preferences</b> window.</li> <li>If background scatter covers the entire surface area of a printed page, adjust the print resolution through your software application or in <b>Printing Preferences</b>. Ensure the correct paper type is selected. For example: If Thicker Paper is selected, but Plain Paper actually used, an overcharging can occur causing this copy quality problem.</li> <li>If you are using a new toner cartridge, redistribute the toner first.</li> </ul>
Toner particles are around bold characters or pictures		<p>The toner might not adhere properly to this type of paper.</p> <ul style="list-style-type: none"> <li>Change the printer option and try again. Go to <b>Printing Preferences</b>, click the <b>Paper tab</b>, and set the paper type to <b>Recycled</b>.</li> <li>Ensure the correct paper type is selected. For example: If Thicker Paper is selected, but Plain Paper actually used, an overcharging can occur causing this copy quality problem.</li> </ul>
Misformed characters		<ul style="list-style-type: none"> <li>If characters are improperly formed and producing hollow images, the paper stock may be too slick. Try different paper.</li> </ul>
Page skew		<ul style="list-style-type: none"> <li>Ensure that the paper is loaded properly.</li> <li>Check the paper type and quality.</li> <li>Ensure that the guides are not too tight or too loose against the paper stack.</li> </ul>

Condition	Example	Suggested solutions
Curl or wave		<ul style="list-style-type: none"> <li>• Ensure that the paper is loaded properly.</li> <li>• Check the paper type and quality. Both high temperature and humidity can cause paper curl.</li> <li>• Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.</li> </ul>
Wrinkles or creases		<ul style="list-style-type: none"> <li>• Ensure that the paper is loaded properly.</li> <li>• Check the paper type and quality.</li> <li>• Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.</li> </ul>
Back of printouts are dirty		<ul style="list-style-type: none"> <li>• Check for leaking toner. Clean the inside of the printer.</li> </ul>
Solid color or black pages		<ul style="list-style-type: none"> <li>• The toner cartridge may not be installed properly. Remove the cartridge and reinsert it.</li> <li>• The toner cartridge may be defective. Remove the toner cartridge and install a new one.</li> <li>• The printer may require repairing. Contact a service representative.</li> </ul>
Loose toner		<ul style="list-style-type: none"> <li>• Clean the inside of the printer.</li> <li>• Check the paper type, thickness, and quality.</li> <li>• Remove the toner cartridge and then, install a new one.</li> </ul> <p>If the problem persists, the printer may require repair. Contact a service representative.</p>

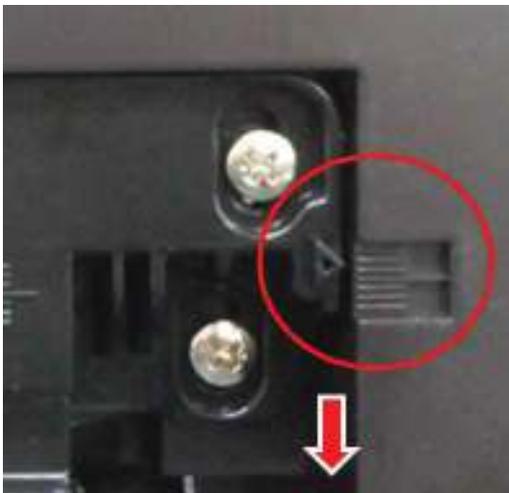
Condition	Example	Suggested solutions
<p><b>Character voids</b></p>		<p>Character voids are white areas within parts of characters that should be solid black:</p> <ul style="list-style-type: none"> <li>You may be printing on the wrong surface of the paper. Remove the paper and turn it around.</li> <li>The paper may not meet paper specifications.</li> </ul>
<p><b>Horizontal stripes</b></p>		<p>If horizontally aligned black streaks or smears appear:</p> <ul style="list-style-type: none"> <li>The toner cartridge may be installed improperly. Remove the cartridge and reinsert it.</li> <li>The toner cartridge may be defective. Remove the toner cartridge and install a new one.</li> </ul> <p>If the problem persists, the printer may require repairing. Contact a service representative.</p>
<p><b>Curl</b></p>		<p>If the printed paper is curled or paper does not feed into the printer:</p> <ul style="list-style-type: none"> <li>Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.</li> <li>Change the printer's paper option and try again. Go to Printing Preferences, click the Paper tab, and set type to Thin.</li> </ul>
<ul style="list-style-type: none"> <li>An unknown image repetitively appears on a few sheets</li> <li>Loose toner</li> <li>Light print or contamination occurs</li> </ul>		<p>Your printer is probably being used at an altitude of 1,000 m (3,281 ft) or above. The high altitude may affect the print quality, such as loose toner or light imaging.</p>
<p><b>Vertical Streaks</b></p> <p>When using Century Star media, it may contaminate the OPC surface. This will cause light vertical streaks during printing.</p>		<p>Use the control panel to initiate <a href="#">OPC Cleaning</a> mode.</p> <ol style="list-style-type: none"> <li>On the control panel, press Menu  &gt; <b>System Setup</b> &gt; <b>Machine Setup</b> &gt; <b>OPC Cleaning</b>.</li> <li>Select <b>Automatic</b> to initiate a cleaning every 1,000 pages.</li> </ol> <p><b>NOTE:</b> The OPC cleaning takes approximately 5 minutes to complete.</p>

## Adjusting the document feeder skew

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



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



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



## Other errors

### Multi-feeding

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

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

### No-Power

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

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

# System diagram

Figure 3-3 SMPS diagram shown is TYPE3R (M433/M436)

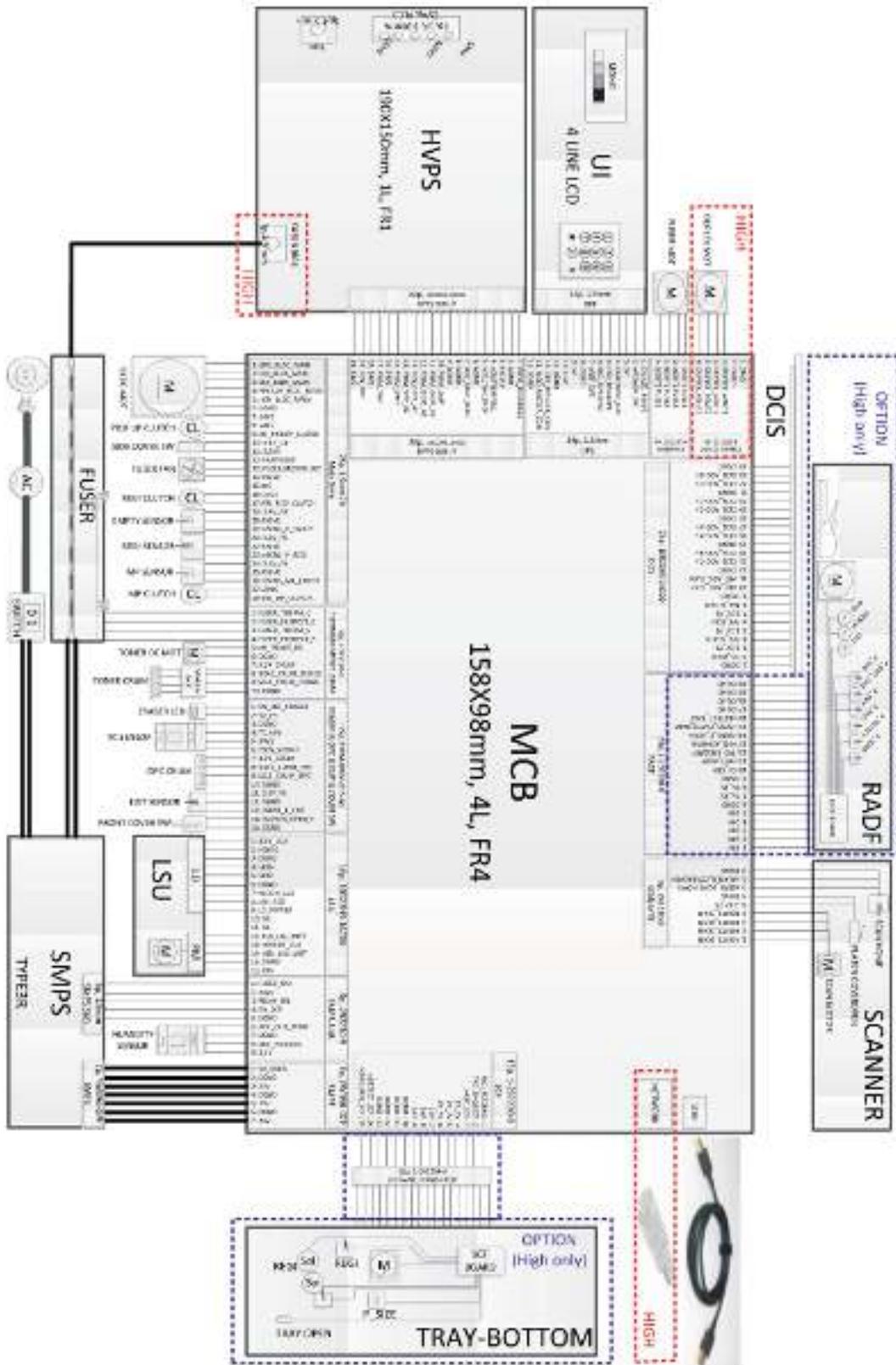


Figure 3-4 System Diagram (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

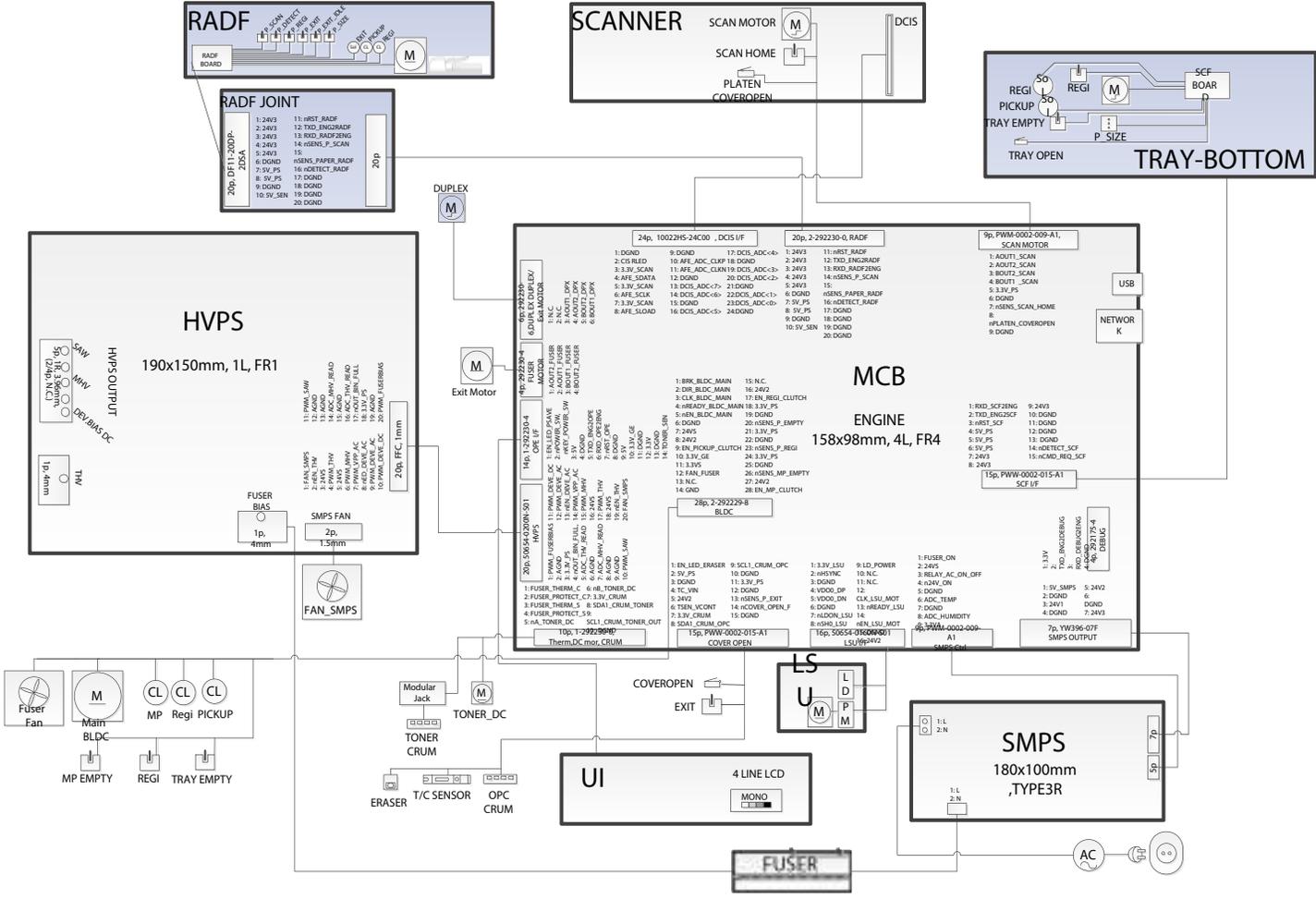


Table 3-2 System diagram

No	Connector	To Connector	Description
1	Main PBA	Duplex Motor	HARNES-DUPLEX_STEP
2	Main PBA	Main Drive unit	HARNES-MAIN_DRIVE

**Table 3-2 System diagram (continued)**

No	Connector	To Connector	Description
3	Main PBA	Thermistor(Fuser)_Toner DC motor_Toner CRUM Joint	HARNESS-THERMISTOR_TONER DC_CRUM
4	Main PBA	OPC CRUM_TC sensor_Eraser_Exit Sensor	HARNESS-OPC CRUM_TC SEN_ERASER_EXIT SEN
5	Main PBA	Fuser Motor	HARNESS-FUSER STEP
6	Main PBA	OPE PBA	HARNESS-OPE
7	Main PBA	Registration Clutch_Empty Sensor_Registration Sensor	HARNESS-REGI_CL_EMPTY SEN_REGI_SEN
8	Main PBA	MP Sensor	HARNESS-MP_SEN_MP_CL
9	Main PBA	Scan Motor_Scan Home Sensor_platen cover open	HARNESS-SCAN
10	Main PBA	SMPS	HARNESS SMPS / PSPN-TYPE3R (7-7 pin) (M436n/M436dn/M436nda models)
10	Main PBA	SMPS	HARNESS SMPS/PSPN2-TYPE3 (M433a models) (5-7 pin)
11	Main PBA	SMPS	HARNESS-SMPS_SUB
12	Main PBA	LSU	CBF FLAT CABLE-FFC_LSU
13	Main PBA	DCIS	CBF FLAT CABLE-FFC_DCIS
14	Main PBA	HVPS	CBF FLAT CABLE-HVPS I/F



# Index

## A

after-service checklist 77

## C

cautions iii

Channel partners support

HP Channel Services Network (CSN) 75

checklists

after-service 77

preservice 77

CIS unit

removing and replacing 182

conventions, document iii

## D

determine the installed version of firmware 254

developer unit

developer unit 212

removing and replacing 212

document conventions iii

document feeder board

removing and replacing 157

document feeder cover

removing and replacing 150

document feeder exit idle sensor

removing and replacing 166

document feeder exit sensor

removing and replacing 168

document feeder friction pad

removing and replacing 122

document feeder length-width sensor

removing and replacing 170

document feeder motor solenoid

clutch

removing and replacing 161

document feeder open cover

removing and replacing 153

document feeder pickup roller

assembly

removing and replacing 119

document feeder registration-cover-detect sensor

removing and replacing 159

document feeder stacker

removing and replacing 155

document feeder unit (optional)

removing and replacing 147

document revisions v

## E

electrostatic discharge (ESD) 76

embedded web server 255

ESD (electrostatic discharge)

precaution during parts removal 76

exit motor (MFP M436nda only)

removing and replacing 192

## F

firmware, downloading new 253

formatter board

removing and replacing 133

front cover (M433/M436)

removing and replacing 126

front cover (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625)

removing and replacing 128

front cover open sensor

removing and replacing 138

fuser fan

fuser fan 205

removing and replacing 205

fuser motor

removing and replacing 194

fuser unit

removing and replacing 85

## H

history, revisions v

HP Channel Services Network (CSN)

Channel partners support 75

HVPS board

HVPS board 207

removing and replacing 207

## I

imaging unit

removing and replacing 88

## L

laser/scanner unit (LSU)

removing and replacing 188

left cover

removing and replacing 131

## M

main drive motor

removing and replacing 190

MP clutch

paper MP clutch 200

removing and replacing 200

MP pickup roller and friction pad

removing and replacing 114

## N

notes iii

## O

OPE unit

removing and replacing 172

- P**
- paper empty, registration, and MP sensor
    - paper empty, registration, and MP sensor 196
    - removing and replacing 196
  - parts
    - screws 77
  - pickup roller and friction pad
    - removing and replacing 111
  - platen cover (a/n/dn models only)
    - removing and replacing 145
  - platen unit
    - removing and replacing 175
  - pliers, required 77
  - post-service tests 78
  - preservice checklist 77
  - print quality
    - test 78
- R**
- rear cover
    - removing and replacing 124
  - registration clutch
    - registration clutch 202
    - removing and replacing 202
  - removing parts
    - cautions for 76
    - checklists 77
    - CIS unit 182
    - document feeder board 157
    - document feeder cover 150
    - document feeder exit idle sensor 166
    - document feeder exit sensor 168
    - document feeder friction pad 122
    - document feeder length-width sensor 170
    - document feeder motor solenoid clutch 161
    - document feeder open cover 153
    - document feeder pickup roller assembly 119
    - document feeder registration-cover-detect sensor 159
    - document feeder stacker 155
    - document feeder unit (optional) 147
  - exit motor (MFP M436nda only) 192
  - formatter board 133
  - front cover (M433/M436) 126
  - front cover (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625) 128
  - front cover open sensor 138
  - fuser motor 194
  - fuser unit 85
  - imaging unit 88
  - laser/scanner unit (LSU) 188
  - left cover 131
  - main drive motor 190
  - MP pickup roller and friction pad 114
  - OPE unit 172
  - pickup roller and friction pad 111
  - platen cover (a/n/dn models only) 145
  - platen unit 175
  - rear cover 124
  - scan drive unit 184
  - scan home-position sensor and cover-open sensor 186
  - side cover-open sensor 142
  - side unit 140
  - SMPS (LVPS) board 135
  - toner cartridge 79
  - tools, required 77
  - transfer roller 83
  - upper platen 179
- replacing
- parts 76
- replacing parts
- CIS unit 182
  - developer unit 212
  - document feeder board 157
  - document feeder cover 150
  - document feeder exit idle sensor 166
  - document feeder exit sensor 168
  - document feeder friction pad 122
  - document feeder length-width sensor 170
  - document feeder motor solenoid clutch 161
  - document feeder open cover 153
  - document feeder pickup roller assembly 119
  - document feeder registration-cover-detect sensor 159
  - document feeder stacker 155
  - document feeder unit (optional) 147
  - document feeder exit motor (MFP M436nda only) 192
  - document feeder registration-cover-detect sensor 159
  - document feeder stacker 155
  - document feeder unit (optional) 147
  - exit motor (MFP M436nda only) 192
  - formatter board 133
  - front cover (M433/M436) 126
  - front cover (M437/M438/M439/M440/M442/M443/M42523/M42525/M42623/M42625) 128
  - front cover open sensor 138
  - fuser fan 205
  - fuser motor 194
  - fuser unit 85
  - HVPS board 207
  - imaging unit 88
  - laser/scanner unit (LSU) 188
  - left cover 131
  - main drive motor 190
  - MP clutch 200
  - MP pickup roller and friction pad 114
  - OPE unit 172
  - paper empty, registration, and MP sensor 196
  - pickup roller and friction pad 111
  - platen cover (a/n/dn models only) 145
  - platen unit 175
  - rear cover 124
  - registration clutch 202
  - scan drive unit 184
  - scan home-position sensor and cover-open sensor 186
  - SCF (optional Tray 3) 222
  - SCF board 223
  - SCF drive unit 224
  - SCF feed roller 226
  - side cover-open sensor 142
  - side unit 140
  - SMPS (LVPS) board 135
  - temperature humidity sensor 209
  - toner cartridge 79

- transfer roller 83
- upper platen 179
- revision history, document v

## S

- scan drive unit
  - removing and replacing 184
- scan home-position sensor and cover-open sensor
  - removing and replacing 186
- SCF (optional Tray 3)
  - removing and replacing 222
  - SCF (optional Tray 3) 222
- SCF board
  - removing and replacing 223
  - SCF board 223
  - SCF board, removing and replacing 223
- SCF drive unit
  - removing and replacing 224
  - SCF drive unit 224
  - SCF drive unit, removing and replacing 224
- SCF feed roller
  - removing and replacing 226
  - SCF feed roller 226
  - SCF feed roller, removing and replacing 226
- screwdrivers, required 77
- screws
  - replacing 76
- service
  - tools, required 77
- service and support information
  - WISE and CSN 75
- side cover-open sensor
  - removing and replacing 142
- side unit
  - removing and replacing 140
- SMPS (LVPS) board
  - removing and replacing 135
- static precautions 76

## T

- temperature humidity sensor
  - removing and replacing 209
  - temperature humidity sensor 209

- tests
  - post-service 78
  - print-quality 78

- tips iii
- toner cartridge
  - removing and replacing 79
- tools, required 77
- transfer roller
  - removing and replacing 83

## U

- upgrade firmware 255
- upgrades, downloading product firmware 253
- upper platen
  - removing and replacing 179

## W

- warnings iii
- Web-based Interactive Search Engine
  - WISE 75
- WISE
  - Web-based Interactive Search Engine 75

