MX91x and XM91x5

7421-036, -039, -236, -239, -436, -439

Service Manual

- Start diagnostics
- Maintenance
- Safety and notices
- Trademarks
- Index

September 04, 2014 **www.lexmark.com**

P/N 12G3391

Product information

Product name:

Lexmark MX91x and XM91x5

Machine type:

7421

Model(s):

036, 039, 236, 239, 436, 439

Edition notice

September 04, 2014

The following paragraph does not apply to any country where such provisions are inconsistent with local law: LEXMARK INTERNATIONAL, INC., PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions; therefore, this statement may not apply to you.

This publication could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in later editions. Improvements or changes in the products or the programs described may be made at any time.

References in this publication to products, programs, or services do not imply that the manufacturer intends to make these available in all countries in which it operates. Any reference to a product, program, or service is not intended to state or imply that only that product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any existing intellectual property right may be used instead. Evaluation and verification of operation in conjunction with other products, programs, or services, except those expressly designated by the manufacturer, are the user's responsibility.

Trademarks

Lexmark and Lexmark with diamond design are trademarks of Lexmark International, Inc., registered in the United States and/or other countries.

PCL® is a registered trademark of the Hewlett-Packard Company.

All other trademarks are the property of their respective owners.

© 2014 Lexmark International, Inc.

All rights reserved.

P/N 12G3391

Table of contents

Product information....2

Edition notice....2

Notices and safety information....21

Laser notices....21

Safety information....24

Preface....27

Service manual conventions....27

Change history....27

General information....31

Paper and specialty media guide....31

Using specialty media....31

Paper guidelines....33

Supported paper sizes, types, and weights....37

Data security notice....42

Tools required for service....43

Diagnostic information....45

Troubleshooting overview....45

Performing the initial troubleshooting check....45

Fixing print quality issues....45

Initial print quality check....46

Gray background check....46

Blank pages check....49

Solid black pages check....50

Shadow images check....52

Skewed print check....54

Streaked horizontal or vertical lines check....55

Toner smear check....57

Toner specks check....58

Fixing image quality issues....59

Initial image quality check....59

Flatbed scanner image quality check....60

Paper jams....61

Avoiding jams....62

Understanding jam messages and locations....62
200 paper jams....64
202 paper jams....71
23y paper jams....79
241–242 paper jams....82
243–245 paper jams....93
28y paper jams....107
Understanding the printer messages....119
Cartridge low [88.xy]....119
Cartridge nearly low [88.xy]....119
Cartridge very low [88.xy]....119
Change [paper source] to [custom string] load [orientation]....119
Change [paper source] to [custom type name] load [orientation]....119
Change [paper source] to [paper size] load [orientation]....119
Change [paper source] to [paper type] [paper size] load [orientation]....120
Close door [x]....120
Complex page, some data may not have printed [39]....120
Configuration change, some held jobs were not restored [57]....120
Defective flash detected [51]....120
Disk full [62]....120
Disk full, scan job canceled....121
Disk must be formatted for use in this device....121
Disk near full. Securely clearing disk space.....121
Empty the hole punch box....121
Error reading USB drive. Remove USB.....121
Error reading USB hub. Remove hub.....121
Fax memory full....121
Fax partition inoperative. Contact system administrator.....122
Fax server 'To Format' not set up. Contact system administrator.....122
Fax Station Name not set up. Contact system administrator.....122
Fax Station Number not set up. Contact system administrator.....122
Incorrect paper size, open [paper source] [34]....122
Insert hole punch box....122
Insert Tray [x]....123
Insufficient memory for Flash Memory Defragment operation [37]....123
Insufficient memory to collate job [37]....123
Insufficient memory to support Resource Save feature [35]....123
Insufficient memory, some Held Jobs were deleted [37]....123
Insufficient memory, some held jobs will not be restored [37]....123
Insufficient space between paper stacks in Tray 3....123
Load [paper source] with [custom string] [paper orientation]....124
Load [paper source] with [custom type name] [paper orientation]....124
Load [paper source] with [paper size] [paper orientation]....124
Load [paper source] with [paper type] [paper size] [paper orientation]....124
Load Multipurpose Feeder with [custom string] [paper orientation]....124

Load Multipurpose Feeder with [custom type name] [paper orientation] 125
Load Multipurpose Feeder with [paper size] [paper orientation] 125
Load Multipurpose Feeder with [paper type] [paper size] [paper orientation] 125
Load staples 125
Load staples [G11, G12] 126
[x] maintenance kit very low [80.xy] 126
Memory full [38] 126
Memory full, cannot print faxes 126
Memory full, cannot send faxes 126
No analog phone line connected to modem, fax is disabled. 126
Network [x] software error [54] 126
Not enough free space in flash memory for resources [52] 127
Open door H and remove paper from beneath area H10 127
Paper changes needed 127
Parallel port [x] disabled [56] 127
Photoconductor low [84.xy] 127
Photoconductor very low [84.xy] 127
Printer had to restart. Last job may be incomplete. 127
Reinstall missing or unresponsive cartridge [31.xy] 128
Reinstall missing or unresponsive photoconductor [31.xy] 128
Remove defective disk [61] 128
Remove packaging material, [area name] 128
Remove packaging material, open door C, remove metal clips, remove all screws from scanner carriage 128
Remove paper from all bins 128
Remove paper from bin [x] 128
Remove paper from [linked set bin name] 129
Remove paper from standard output bin 129
Replace all originals if restarting job. 129
Replace cartridge, 0 estimated pages remain [88.xy] 129
Replace cartridge, printer region mismatch [42.xy] 129
Replace jammed originals if restarting job 130
Replace [x] maintenance kit, 0 estimated pages remain [80.xy] 130
Replace missing photoconductor [31.xy] 130
Replace missing waste toner bottle [82.xy] 130
Replace missing cartridge [31.xy] 130
Replace paper pick rollers in [paper source], use parts and instructions in tray 1 or tray 2 compartment [80] 130
Replace photoconductor, 0 pages remain [84.xy] 130
Replace unsupported cartridge [32.xy] 131
Replace unsupported photoconductor [32.xy] 131
Replace waste toner bottle [82.xy] 131
Restore held jobs? 131
Scanner disabled by admin [840.01] 131
Scanner disabled. Contact system administrator if problem persists. [840.02] 131
Scanner jam, remove jammed originals from the scanner [2yy.xx] 131

Scanner maintenance required, use ADF Kit [80] 131
Scanner maintenance required soon, use ADF Kit [80] 131
Serial port [x] disabled [56] 132
Some held jobs were not restored 132
SMTP server not set up. Contact system administrator. 132
Standard network software error [54] 132
Standard USB port disabled [56] 132
Supply needed to complete job 132
The device is operating in Safe Mode. Some print options may be disabled or provide unexpected results. 133
Too many flash options installed [58] 133
Too many trays attached [58] 133
Tray [x] paper size unsupported 133
Unformatted flash detected [53] 133
Unsupported disk 133
Unsupported option in slot [x] [55] 134
Waste toner bottle nearly full [82.xy] 134
Weblink server not set up. Contact system administrator. 134
User attendance messages 134
User attendance messages (0-99) 134
Cartridge or photoconductor error service check 135
Mismatched paper size service check 136
Insufficient memory service check 137
Complex page service check 137
PPDS font error service check 138
Flash memory failure service check 138
Insufficient flash memory service check 139
Network service check 140
Unsupported internal option service check 142
Disabled port service check 143
Unrestored held jobs service check 143
Excess options service check 144
Incompatible hardware option service check 145
Hard disk failure service check 145
Maintenance kit service check 146
Printer hardware errors 146
111 errors 147
12y errors 148
13y errors 153
153 errors 156
16y errors 157
171–182 errors 163
189 errors 164
19y errors 166

600 errors 180
685 errors 181
Steps before starting the 9yy service checks 183
900 errors 185
911–963 errors 190
ADF/scanner hardware errors 192
800 error messages 192
809 error messages 192
816–824 error messages 193
850–891 error messages 193
ADF controller board service check 194
ADF/scanner image controller board service check 195
ADF CIS service check 196
Scanner controller board service check 197
Scanner CCD service check 198
Scanner lamp service check 199
Fax error log codes 199
Escalating a fax issue to second-level support 203
Symptoms 204
3000-sheet tray tray set failure service check 204

Service menus 207

Understanding the printer control panel 207
Using the control panel 207
Understanding the colors of the Sleep button and indicator lights 207
Understanding the home screen 208
Using the touch-screen buttons 210
Menus list 211
Diagnostics Menu 212
Entering the Diagnostics menu 212
Reset Separator Roll and Pick Assembly Counter 212
Reset Maintenance Counter 212
Reset Fuser Counter 212
REGISTRATION 213
SCANNER CALIBRATION 213
PRINT TESTS 214
Print Quality Pages 214
HARDWARE TESTS 215
DUPLEX TESTS 216
INPUT TRAY TESTS 217
OUTPUT BIN TESTS 217
SENSOR TESTS 218
Motor Tests 219

DEVICE TESTS 223
PRINTER SETUP 224
REPORTS 226
EVENT LOG 226
SCANNER TESTS 227
Exit Diags 228
Configuration Menu 229
Entering the Configuration menu 229
Hole Punch Configuration 229
Reset Maintenance Counter 229
USB Scan to Local 229
Print Quality Pages 229
Reports 230
SIZE SENSING 230
Tray Linking 230
Panel Menus 230
PPDS Emulation 231
Download Emuls 231
Safe Mode 231
Energy Conserve 231
Fax Low Power Support 231
Min Copy Memory 232
NumPad Job Assist 232
Format Fax Storage 232
Fax Storage Location 232
ADF Edge Erase 232
FB Edge Erase 233
Scanner Manual Registration 233
Disable Scanner 233
Paper Prompts 233
Envelope Prompts 233
Action for Prompts 234
Jobs on Disk 234
Disk Encryption 234
Font Sharpening 234
Require Standby 234
UI Automation 235
LES Applications 235
Key Repeat Initial Delay 235
Key Repeat Rate 235
Clear Supply Usage History 235
Clear Custom Status 235
USB Speed 236
Automatically Display Error Screens 236
Restore factory defaults 236

Exit Config 237
Entering Invalid engine mode 237
Entering Recovery Mode 237
Entering Safe Mode (EverReady Mode) 238
Accessing the Network SE Menu 238
Service Engineer menu 238
Accessing the Service Engineer (SE) Menu 238
Service Engineer (SE) Menu 238
Fax Service Engineer (SE) Menu 239

Repair information 241

Removal precautions 241
Data security notice 241
Handling ESD-sensitive parts 241
Restoring the printer configuration after replacing the controller board 242
Restoring solutions, licenses, and configuration settings 245
Updating the printer firmware 246
Backing up eSF solutions and settings 247
Understanding the marked or colored screws 248
Ribbon cable connectors 248
Zero Insertion Force (ZIF) connectors 248
Horizontal top contact connector 249
Horizontal bottom contact connector 251
Vertical mount contact connector 253
Horizontal sliding contact connector 255
Low Insertion Force (LIF) connector 257
Adjustments 258
ADF height adjustment 258
ADF registration adjustment 259
ADF separator roller pressure adjustment 260
Flatbed registration adjustment 261
Fuser alignment adjustment 262
MPF separator roller pressure adjustment 263
Pick roller pressure adjustment 265
Scanner carriage belt adjustment 267
3000-sheet tray pick roller pressure adjustment 268
2500-sheet tray transfer guide belt adjustment 270
Removal procedures 271
Left side removals 272
Left cover removal 272
Rear left cover removal 273
Main power supply shield removal 273
Main power supply fan removal 274

Main power supply removal 275
Printhead removal 275
Printhead relay board removal 276
Right side removals 278
Port access door removal 278
Fuser removal 279
Induction heater removal 279
Registration transport assembly 282
Upper right cover removal 283
Redrive belt cover removal 283
Redrive belt removal 284
Transfer roller removal 284
Duplex transport assembly removal 285
Duplex transport jam removal knob removal 286
Duplex transport diverter assembly removal 287
Sensor (fuser exit) removal 288
Fuser exit sensor actuator removal 288
Sensor (duplex pass through 1) removal 289
Duplex pass through 1 actuator removal 290
Duplex transport belt removal 292
Duplex transport gears removal 292
Motor (duplex transport) removal 293
Right door lock removal 295
Tray 2 transport guide 296
MPF removal 297
MPF tray removal 298
Sensor (MPF paper length) removal 299
MPF feed clutch removal 300
MPF lift plate solenoid removal 301
MPF gears removal 302
Sensor (MPF lift plate) removal 303
Sensor (MPF empty) removal 305
MPF feed/separator assembly 306
MPF lift plate assembly removal 308
MPF empty actuator removal 309
Duplex transport guide removal 310
Registration unit latch assembly removal 310
Right door switch actuator removal 312
Right door removal 312
Registration unit assembly removal 314
Registration unit sub-assembly removal 315
Sensor (fusing speed) removal 317
Fusing speed actuator removal 317
Sensor (duplex pass through 2) removal 318
Registration unit belt removal 319

Registration unit gears removal....320
Registration unit lock removal....321
Front side removals....323
Control panel frame removal....323
Control panel board removal....325
Touch screen removal....326
Top front door removal....327
Bottom front door removal....327
Front inner cover removal....328
Waste toner door mount removal....328
Image controller board removal....329
Door switch removal....329
Main power switch removal....330
Sensor (top front door) removal....331
Motor (toner supply) removal....332
Waste toner drive removal....333
Sensor (toner cartridge present) removal....334
Toner agitator removal....335
Developer unit removal....336
Right door switch removal....338
Speaker cover removal....338
Speaker removal....340
Control panel removal....341
Rear side removals....344
Scanner interface cable cover removal....344
Controller board access cover removal....345
Engine board cover removal....346
Upper rear cover removal....346
IHPS shield removal....347
Induction heater magnetic erase board (IHMEB) removal....348
Induction heater power supply (IHPS) removal....350
Noise filter board removal....350
Expansion controller board removal....351
Power-saving board removal....352
Engine controller board removal....353
ADF/scanner image controller board removal....354
Hard drive removal....356
Controller board removal....356
Fax card removal....357
Motor (fuser pressure) removal....358
Paper exit fan duct removal....359
Paper exit fan removal....360
IHPS frame removal....360
Fuser power supply fan removal....361

Motor (toner cartridge) removal 362
Motor (redrive) removal 364
Controller board frame removal 365
Controller board fan removal 366
Motor (transport) removal 367
Motor (developer) removal 368
High voltage board removal 369
Motor (registration) removal 370
Motor (feed) removal 372
Tray 2 transport drive removal 373
Motor (tray 2 transport) removal 374
Feed drive assembly removal 375
Sensor (tray 1 and 2 paper temperature) removal 376
Ozone fan removal 376
Ozone fan duct removal 378
Center cable guide bracket removal 379
Main drive assembly removal 379
Toner cartridge drive assembly removal 382
Duplex transport clutch removal 383
Motor (fuser) removal 384
Fuser drive gearbox removal 385
Toner suction fan removal 387
Top side removals 389
Standard bin base removal 389
Transfer belt fan removal 389
Bin side cover removal 390
ADF and scanner removals 391
ADF assembly removal 391
ADF CIS assembly removal 394
ADF CIS power supply board removal 396
ADF controller board removal 396
ADF cushion removal 396
ADF duplex scan glass removal 396
ADF fan removal 398
ADF feed and pick roller assembly removal 398
ADF feed roller removal 400
ADF front cover removal 402
ADF glass cleaning roller removal 403
ADF left hinge removal 406
ADF pick roller removal 407
ADF right hinge removal 409
ADF rear cover removal 410
ADF registration guide removal 410
ADF scan/exit roller belt removal 411

ADF separator pad removal 412
ADF separator roller removal 412
ADF top cover assembly removal 413
ADF top cover removal 413
ADF tray removal 414
ADF tray bottom cover removal 415
Sensor (ADF CIS clean) removal 415
Sensor (ADF jam access cover) removal 416
Sensor (ADF scan shaft home) removal 417
Sensor (ADF top cover open) removal 418
Sensor (scan glass clean) removal 419
Sensor (scanner cover open) removal 419
Sensor (scanner cover switch) removal 420
Sensor (scanner lamp home) removal 421
Sensor (scanner paper length 1) removal 422
Sensor (scanner paper length 2) removal 423
Sensors (ADF tray section) removal 424
Sensors (ADF top open cover section) removal 425
Scanner CCD lens assembly removal 426
Scanner controller board removal 428
Scanner glass removal 428
Scanner left cover removal 429
Scanner rear cover removal 430
Scanner right cover removal 430
Scanner top cover removal 430
Motor (ADF CIS clean) removal 431
Motor (ADF scan shaft release) removal 432
Motor (ADF feed) removal 433
Motor (ADF scan) removal 435
Motor (ADF registration) removal 436
Motor (CIS glass clean) removal 439
Motor (scanner drive) removal 440
Control panel base removal 440
Control panel bottom cover removal 442
2500-sheet tray removals 442
2500-sheet tray caster wheel removal 442
2500-sheet tray controller board removal 443
2500-sheet tray LED cover removal 444
2500-sheet tray front right cover removal 444
2500-sheet tray left cover removal 445
2500-sheet tray lower right cover removal 445
2500-sheet tray empty LED removal 446
2500-sheet tray rear cover removal 446
2500-sheet tray rear right cover removal 447
2500-sheet tray division board removal 447

2500-sheet tray main tray empty sensor bottom actuator removal 448
2500-sheet tray elevator home sensor actuator removal 449
2500-sheet tray transfer guide stop removal 450
2500-sheet reserve tray paper limit sensor actuator removal 451
2500-sheet tray vertical media transport guide assembly removal 452
2500-sheet tray transport roller removal 453
2500-sheet tray jam access cover removal 454
2500-sheet tray jam access door strap removal 455
2500-sheet tray paper feed assembly removal 456
2500-sheet tray pick assembly removal 456
2500-sheet tray paper stack transfer guide removal 457
2500-sheet reserve tray empty sensor actuator removal 459
2500-sheet tray stopper removal 459
Motor (2500-sheet tray elevator) removal 460
Motor (2500-sheet tray feed) removal 461
Motor (2500-sheet tray transfer guide) removal 462
Motor (2500-sheet tray transport) removal 462
Sensor (2500-sheet tray jam access door) removal 463
Sensor (2500-sheet paper stack transfer) removal 464
Sensor (2500-sheet tray elevator home) removal 465
Sensor (2500-sheet tray main tray empty, bottom) removal 465
Sensor (2500-sheet tray main tray near empty) removal 466
Sensor (2500-sheet tray main tray empty, top) removal 467
Sensor (2500-sheet tray main tray elevator limit) removal 467
Sensor (2500-sheet tray feed) removal 468
Sensor (2500-sheet tray reserve tray empty) removal 469
Sensor (2500-sheet tray reserve tray paper limit) removal 470
Sensor (2500-sheet tray transfer guide home) removal 470
Sensor (2500-sheet tray set) removal 471
Sensor (2500-sheet tray transport) removal 472
2 x 500-sheet tray removals 473
Sensor (2 x 500-sheet tray jam access door) removal 473
2 x 500-sheet tray caster wheel removal 474
Printer rubber stopper removal 474
Tray insert paper length guide removal 475
Tray lock removal 477
2 x 500-sheet tray rollers removal 479
Sensor (2 x 500-sheet tray paper length) removal 479
2 x 500-sheet tray left cover removal 481
2 x 500-sheet tray empty LED cover removal 481
2 x 500-sheet tray empty LED removal 482
2 x 500-sheet tray empty LED mount removal 482
2 x 500-sheet tray rear cover removal 483
Motor (2 x 500-sheet tray lift) removal 483
Sensor (2 x 500-sheet tray near empty) removal 484

Sensor (2 x 500-sheet tray paper width) removal 485
2 x 500-sheet tray feed and transport motors removal 486
2 x 500-sheet tray controller board removal 487
2 x 500-sheet tray jam access door removal 488
2 x 500-sheet tray rear right cover removal 489
2 x 500-sheet tray bottom right cover removal 490
2 x 500-sheet tray 3 transport assembly removal 490
2 x 500-sheet tray 4 transport assembly removal 491
2 x 500-sheet tray transport assembly sensors removal 492
2 x 500-sheet tray tray set actuator removal 493
Sensor (2 x 500-sheet tray transport) removal 494
2 x 500-sheet tray 3 transport belts and gears removal 495
2 x 500-sheet tray 4 transport belts and gears removal 496
3000-sheet tray removals 498
3000-sheet tray rollers removal 498
3000-sheet tray feed and pick belt removal 500
3000-sheet tray caster wheel removal 502
3000-sheet tray release handle removal 503
3000-sheet tray left cover removal 504
3000-sheet tray right cover removal 505
3000-sheet tray front cover removal 505
3000-sheet tray rear cover removal 506
3000-sheet tray door removal 507
3000-sheet tray left top cover removal 508
Dehumidifier removal 509
3000-sheet tray empty LED removal 510
Sensor (3000-sheet tray empty) removal 510
Sensor (3000-sheet tray elevator level) removal 511
Sensor (3000-sheet tray feed) removal 512
3000-sheet tray elevator spring removal 513
3000-sheet tray controller board removal 513
3000-sheet tray door switch removal 514
Motor (3000-sheet tray elevator) removal 515
3000-sheet tray set sensor actuator removal 515
Sensor (3000-sheet tray set) removal 516
Sensor (3000-sheet tray near empty) removal 517
Motor bracket removal 519
3000-sheet tray feed and transport motors removal 519
3000-sheet tray feed roller assembly removal 520
3000-sheet tray pick roller assembly removal 523

Component locations 529

Exterior locations 529
Front view 529

Rear view 531

Maintenance 533

Inspection guide 533

Scheduled maintenance 534

Maintenance kits 534

Resetting the maintenance counter 535

Lubrication specification 535

Cleaning the printer parts 536

Cleaning the printer 536

Cleaning the scanner glass 536

Cleaning the charger and the printhead lens 537

Emptying the hole punch box 540

Parts catalog 542

Legend 542

Assembly 1: Covers 1 543

Assembly 2: Covers 2 545

Assembly 3: Inner covers 547

Assembly 4: Control panel 1 549

Assembly 5: Control panel 2 551

Assembly 6: Printhead 553

Assembly 7: Toner supply 1 555

Assembly 8: Toner supply 2 557

Assembly 9: Waste toner 559

Assembly 10: Developer 561

Assembly 11: Photoconductor lock 563

Assembly 12: Transfer belt 565

Assembly 13: Tray 1 and 2 transport 567

Assembly 14: Tray 1 feed 569

Assembly 15: Tray 1 separator 571

Assembly 16: Tray 2 feed 573

Assembly 17: Tray 2 separator 575

Assembly 18: Tray rail 577

Assembly 19: Tray paper detection 579

Assembly 20: 500-sheet tray—Tray 1 581

Assembly 21: 500-sheet tray—Tray 1 or Tray 2 583

Assembly 22: 500-sheet tray—Tray 2 585

Assembly 23: Registration transport.....587
Assembly 24: Transfer.....589
Assembly 25: Registration unit.....591
Assembly 26: Right door transport.....593
Assembly 27: MPF 1.....595
Assembly 28: MPF 2.....597
Assembly 29: Duplex 1.....599
Assembly 30: Duplex 2.....601
Assembly 31: Fuser.....603
Assembly 32: Exit 1.....605
Assembly 33: Exit 2.....607
Assembly 34: Main and feed drive.....609
Assembly 35: Toner cartridge drive.....611
Assembly 36: Fuser drive 1.....613
Assembly 37: Fuser drive 2.....615
Assembly 38: Ozone duct.....617
Assembly 39: High voltage.....619
Assembly 40: Main power supply.....621
Assembly 41: Electrical 1.....623
Assembly 42: Electrical 2.....625
Assembly 43: ADF covers 1.....627
Assembly 44: ADF covers 2.....629
Assembly 45: ADF CIS 1.....631
Assembly 46: ADF CIS 2.....633
Assembly 47: ADF CIS 3.....635
Assembly 48: ADF paper feed.....637
Assembly 49: ADF paper pick 1.....639
Assembly 50: ADF paper pick 2.....641
Assembly 51: ADF paper pick 3.....643
Assembly 52: ADF paper transport 1.....645
Assembly 53: ADF paper transport 2.....647
Assembly 54: ADF paper transport 3.....649
Assembly 55: ADF paper transport 4.....651
Assembly 56: ADF paper transport 5.....653
Assembly 57: ADF paper transport 6.....655
Assembly 58: Flatbed scanner covers.....657
Assembly 59: Flatbed scanner 1.....659

Assembly 60: Flatbed scanner 2.....661
Assembly 61: Flatbed scanner 3.....663
Assembly 62: 2 x 500-sheet tray—Covers.....665
Assembly 63: 2 x 500-sheet tray—Frame.....667
Assembly 64: 2 x 500-sheet tray—Paper feed.....669
Assembly 65: 2 x 500-sheet tray—Paper size detection.....671
Assembly 66: 2 x 500-sheet tray—Paper transport.....673
Assembly 67: 2 x 500-sheet tray—Paper pick 1.....675
Assembly 68: 2 x 500-sheet tray—Paper pick 2.....677
Assembly 69: 2 x 500-sheet tray—Paper pick 3.....679
Assembly 70: 2 x 500-sheet tray—Tray 3.....681
Assembly 71: 2 x 500-sheet tray—Tray 4.....683
Assembly 72: 2 x 500-sheet tray—Tray 3 or Tray 4 frame.....685
Assembly 73: 3000-sheet tray—Covers.....687
Assembly 74: 3000-sheet tray—Frame 1.....689
Assembly 75: 3000-sheet tray—Frame 2.....691
Assembly 76: 3000-sheet tray—Elevator front section.....693
Assembly 77: 3000-sheet tray—Paper feed 1.....695
Assembly 78: 3000-sheet tray—Paper feed 2.....697
Assembly 79: 3000-sheet tray—Paper transport.....699
Assembly 80: 3000-sheet tray—Elevator rear section.....701
Assembly 81: 3000-sheet tray—Drive section.....703
Assembly 82: 3000-sheet tray—Wiring.....705
Assembly 83: 2500-sheet tray covers.....707
Assembly 84: 2500-sheet tray frame.....709
Assembly 85: 2500-sheet tray paper feed.....711
Assembly 86: 2500-sheet tray paper transport.....713
Assembly 87: 2500-sheet tray paper pick 1.....715
Assembly 88: 2500-sheet tray paper pick 2.....717
Assembly 89: 2500-sheet tray paper pick 3.....719
Assembly 90: 2500-sheet tray insert 1.....721
Assembly 91: 2500-sheet tray insert 2.....723
Assembly 92: 2500-sheet tray insert 3.....725
Assembly 93: 2500-sheet tray insert 4.....727
Assembly 94: Maintenance kits.....729
Assembly 95: Power cords.....731
Assembly 96: Miscellaneous.....733

Appendix A: Printer specifications.....735

Power consumption.....735

Product power consumption.....735

Sleep Mode.....735

Hibernate Mode.....735

Off mode.....736

Total energy usage.....736

Operating clearances.....736

Noise emission levels.....737

Temperature information.....737

Appendix B: Options and features.....739

Available internal options.....739

Media handling options.....739

Appendix C: Theory of operation.....741

POR sequence.....741

Printer control.....741

Print cycle operation.....741

Flowchart.....741

Charge.....742

Expose.....742

Develop.....742

First transfer.....743

Clean (photoconductor).....744

Second transfer.....745

Clean (transfer belt).....745

Fuse.....746

Printer operation.....748

Printer paper path.....748

Tray section.....748

MPF section.....751

2500-sheet tray section.....753

3000-sheet tray section.....756

Registration section.....759

Print section.....760

Exit section.....761

Duplex section.....763

ADF operation.....765

ADF tray section configuration and paper path.....765

ADF document feed section.....766

ADF document registration section 767
ADF document scanning section 767
ADF document exit section 769
Flatbed scanner operation 769

Appendix D: Acronyms 771

Acronyms 771

Index 773

Part number index 785

Part name index 805

Notices and safety information

Laser notices

Laser notice

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR, Chapter I, Subchapter J for Class I (1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 60825-1.

Class I laser products are not considered to be hazardous. The printer contains internally a Class IIIb (3b) laser that is nominally a 15-milliwatt laser operating in the wavelength of 787–800 nanometers. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

Laser-Hinweis

Der Drucker wurde in den USA zertifiziert und entspricht den DHHS-Vorschriften 21 CFR, Kapitel I, Unterkapitel J für Laserprodukte der Klasse I (1); andernorts ist er als Laserprodukt der Klasse I zertifiziert, das den IEC 60825-1-Anforderungen entspricht.

Laserprodukte der Klasse I werden nicht als gefährlich eingestuft. Der Drucker enthält im Inneren einen Laser der Klasse IIIb (3b), und zwar einen 15-Milliwatt-Laser, der im Wellenlängenbereich von 787 bis 800 Nanometern arbeitet. Das Lasersystem und der Drucker sind so konstruiert, dass unter normalen Betriebsbedingungen, bei der Wartung durch den Benutzer oder bei den vorgeschriebenen Wartungsbedingungen Menschen keiner Laserstrahlung ausgesetzt sind, die die Werte für Klasse I überschreitet.

Avis relatif à l'utilisation du laser

L'imprimante est certifiée conforme aux exigences de la réglementation des Etats-Unis relative aux produits laser (DHHS 21 CFR, Chapter I, Subchapter J for Class I (1)). Pour les autres pays, elle est certifiée conforme aux exigences des normes IEC 60825-1 relatives aux produits laser de classe I.

Les produits laser de Classe I ne sont pas considérés comme dangereux. L'imprimante contient un laser de classe IIIb (3b), laser 15 milliwatts opérant sur une longueur d'onde de l'ordre de 787 à 800 nanomètres. Le système laser ainsi que l'imprimante ont été conçus de manière à ce que personne ne soit exposé à des rayonnements laser dépassant le niveau de classe I dans le cadre d'un fonctionnement normal, de l'entretien par l'utilisateur ou de la maintenance.

Avvertenze sui prodotti laser

La stampante è certificata negli Stati Uniti come stampante conforme ai requisiti DHHS 21 CFR, Capitolo I, Sottocapitolo J per i prodotti laser di Classe I (1), mentre in altri paesi è certificata come prodotto laser di Classe I conforme ai requisiti IEC 60825-1.

I prodotti laser di Classe I non sono considerati pericolosi. La stampante contiene un laser di Classe IIIb (3b), che è nominalmente un laser a 15 milliwatt funzionante a una lunghezza d'onda di 787–800 nanometri. Il sistema laser e la stampante sono stati progettati in modo da impedire l'esposizione a radiazioni laser superiori al livello previsto dalla Classe I durante le normali operazioni di stampa, manutenzione o assistenza.

Aviso de láser

Esta impresora se ha certificado en EE. UU. de conformidad con los requisitos de DHHS 21 CFR, capítulo I, subcapítulo J, para los productos láser de Clase I (1), y en otros países está certificada como un producto láser de Clase I de acuerdo con los requisitos de IEC 60825-1.

Los productos láser de Clase I no se consideran peligrosos. La impresora contiene un láser interno de Clase IIIb (3b) que nominalmente es un láser de 15 milivatios que funciona en una longitud de onda de 787–800 nanómetros. El sistema láser y la impresora se han diseñado para que ningún individuo acceda nunca a las radiaciones láser por encima del nivel de Clase I durante su uso normal, ni en tareas de mantenimiento o intervenciones de servicio técnico prescritas.

Aviso sobre laser

A impressora foi certificada nos EUA por estar em conformidade com os requisitos do DHHS 21 CFR, capítulo I, subcapítulo J, para produtos a laser de Classe I (1) e, nos demais países, foi certificada como produto a laser de Classe I em conformidade com os requisitos da IEC 60825-1.

Os produtos a laser de Classe I não são considerados perigosos. A impressora contém, internamente, um laser de Classe IIIb (3b) que é um laser de 15 miliwatts operando no comprimento de onda de 787–800 nanômetros. O sistema do laser e a impressora foram projetados para que jamais haja acesso humano à radiação do laser acima do nível da Classe I durante a operação normal ou a manutenção pelo usuário ou sob as condições de manutenção prescritas.

Laserinformatie

Deze printer is in de Verenigde Staten gecertificeerd als een product dat voldoet aan de vereisten van DHHS 21 CFR, hoofdstuk 1, paragraaf J voor laserproducten van klasse I (1). Elders is de printer gecertificeerd als een laserproduct van klasse I dat voldoet aan de vereisten van IEC 60825-1.

Laserproducten van klasse I worden geacht geen gevaar op te leveren. De printer bevat intern een laser van klasse IIIb (3b), met een nominaal vermogen van 15 milliwatt en een golflengtebereik van 787–800 nanometer. Het lasersysteem en de printer zijn zodanig ontworpen dat gebruikers nooit blootstaan aan laserstraling die hoger is dan het toegestane niveau voor klasse I-apparaten, tijdens normaal gebruik, onderhoudswerkzaamheden door de gebruiker of voorgeschreven servicewerkzaamheden.

Lasererklæring

Denne printer er certificeret i USA i henhold til kravene i DHHS 21 CFR, afsnit I, underafsnit J, for Klasse I-laserprodukter (1) og certificeret andetsteds som et Klasse I-laserprodukt i henhold til kravene i IEC 60825-1.

Klasse I-laserprodukter anses ikke for at være farlige. Printeren indeholder internt en klasse IIIb (3b)-laser, der nominelt er en 15 milliwatt laser, som fungerer i bølgelængdeområdet 787–800 nanometer. Lasersystemet og printeren er udviklet på en sådan måde, at der ikke er en direkte laserstråling, der overskrider Klasse I-niveauet under normal brug, brugers vedligeholdelse eller de foreskrevne servicebetingelser.

Laserilmoitus

Tämä tulostin on sertifioitu Yhdysvalloissa DHHS 21 CFR, Chapter I, Subchapter J -standardin mukaiseksi luokan I (1) -lasertuotteeksi ja muualla IEC 60825-1 -standardin mukaiseksi luokan I lasertuotteeksi.

Luokan I lasertuotteita ei pidetä haitallisina. Tulostimen sisällä on luokan IIIb (3b) laser, joka on nimellisteholtaan 15 mW:n laser ja toimii 787–800 nanometrin aallonpituuksilla. Laserjärjestelmä ja tulostin ovat rakenteeltaan sellaisia, että käyttäjä ei joudu alttiiksi luokkaa 1 suuremmalle säteilylle normaalin käytön, ylläpidon tai huollon aikana.

Lasermeddelande

Skrivaren är certifierad i USA enligt kraven i DHHS 21 CFR, avsnitt I, underavsnitt J för laserprodukter av klass I (1) och i andra länder är den certifierad som en laserprodukt av klass I som uppfyller kraven i IEC 60825-1.

Laserprodukter av klass I anses inte vara skadliga. Skrivaren innehåller en klass IIIb (3b)-laser, vilket är en 15 mW laser som arbetar inom en våglängd på 787–800 nm. Lasersystemet och skrivaren är utformade så att människor aldrig utsätts för laserstrålning över klass I-nivå under normala förhållanden vid användning, underhåll eller service.

Lasermerknad

Skriveren er sertifisert i USA for samsvar med kravene i DHHS 21 CFR, kapittel I, underkapittel J for laserprodukter av klasse I (1), og er andre steder sertifisert som et laserprodukt av klasse I som samsvarer med kravene i IEC 60825-1.

Laserprodukter av klasse I anses ikke som helseskadelige. Skriveren inneholder en intern laser av klasse IIIb (3b) som nominelt er en 15 milliwatt laser, og som opererer i bølgelengder på 787–800 nanometer. Lasersystemet og skriveren er utformet slik at mennesker ikke utsettes for laserstråling utover nivået i klasse I under normal drift, vedlikehold eller foreskrevet service.

Avís sobre el làser

Als EUA, la impressora està certificada de conformitat amb els requisits del capítol I, apartat J del CFR 21 del Departament de Salut i Serveis Humans per a productes làser de classe I (1) i a la resta de països està certificada com a producte làser de classe I d'acord amb els requisits de la norma IEC 60825-1.

Els productes làser de classe I no es consideren perillosos. A l'interior de la impressora hi ha un làser de classe IIIb (3b) que nominalment de 15 mil·liwatts que funciona a una longitud d'ona de 787–800 nanòmetres. El sistema làser y la impressora s'han dissenyat amb l'objectiu d'impedir l'accés humà de la radiació làser superior al nivell de classe I durant un funcionament normal, el manteniment per part de l'usuari o les condicions de servei prescrites.

レーザーに関する通知

本機は、米国においてクラス I（1）レーザー製品に対する DHHS 21 CFR、Chapter I、Subchapter J の要件に準拠し、その他の国では IEC 60825-1 の要件に準拠するクラス I レーザー製品として認可されています。

クラス I レーザー製品は、危険性がないとみなされています。 本機には、クラス IIIb（3b）レーザーが内蔵されています。これは、787 ～ 800 ナノメートルの波長で動作する定格 15 ミリワットのレーザーです。 レーザーシステムとプリンタは、通常の操作、ユーザーによるメンテナンス、または所定のサービス条件の下で、ユーザーがクラス I レベルを超えるレーザー放射に絶対にさらされないように設計されています。

레이저 관련 공지

이 프린터는 미국에서 DHHS 21 CFR, Chapter I, Subchapter J 의 요구 사항을 준수하는 클래스 I(1) 레이저 제품으로 승인되었으며 이외 지역에서 IEC 60825-1 의 요구 사항을 준수하는 클래스 I 레이저 제품으로 승인되었습니다.

Class I 레이저 제품은 위험한 제품으로 간주되지 않습니다. 프린터에는 787–800 나노미터의 파장 영역에서 작동하는 공칭 15 밀리와트 레이저인 클래스 IIIb(3b) 레이저가 내부에 포함되어 있습니다. 레이저 시스템과 프린터는 정상적인 작동, 사용자 유지 관리 또는 사전 설명된 서비스 조건에는 사람에게 클래스 I 수준 이상의 레이저 방사가 노출되지 않도록 설계되었습니다.

激光注意事项

本打印机在美国认证合乎 DHHS 21 CFR Chapter I，Subchapter J 对分类 I（1）激光产品的标准，而在其他地区则被认证是合乎 IEC 60825-1 的分类 I 激光产品。

一般认为分类 I 激光产品不具有危险性。本打印机内部含有分类 IIIb（3b）的激光，在操作过程中会产生额定 15 毫瓦的激光，其波长范围在 787–800nm 之间。本激光系统及打印机的设计，在一般操作、使用者维护或规定内的维修情况下，不会使人体接触分类 I 以上等级的辐射。

雷射聲明

本印表機係經過美國核可，符合 DHHS 21 CFR，Chapter I，Subchapter J 規定的 I (1) 級雷射產品激光注意事項；在美國以外的地區，為符合 IEC 60825-1 規定的 I 級雷射產品。

根據 I 級雷射產品的規定，這類產品不會對人體造成傷害。本機所採用之 IIIb (3b) 級雷射只會產生 15 百萬分之一瓦特 (milliwatt)、波長 787 至 800 億分之一米 (nanometer) 的放射線。使用者只要以正確的方法操作及維護保養，並依照先前所述之維修方式進行修護，此印表機與其雷射系統絕不會產生 I 級以上的放射線，而對人體造成傷害。

Safety information

Safety information

- The safety of this product is based on testing and approvals of the original design and specific components. The manufacturer is not responsible for safety in the event of use of unauthorized replacement parts.
- The maintenance information for this product has been prepared for use by a professional service person and is not intended to be used by others.
- There may be an increased risk of electric shock and personal injury during disassembly and servicing of this product. Professional service personnel should understand this and take necessary precautions.

CAUTION—POTENTIAL INJURY

The lithium battery in this product is not intended to be replaced. There is a danger of explosion if a lithium battery is incorrectly replaced. Do not recharge, disassemble, or incinerate a lithium battery. Discard used lithium batteries according to the manufacturer's instructions and local regulations.

Consignes de sécurité

- La sécurité de ce produit repose sur des tests et des agréations portant sur sa conception d'origine et sur des composants particuliers. Le fabricant n'assume aucune responsabilité concernant la sécurité en cas d'utilisation de pièces de rechange non agréées.
- Les consignes d'entretien et de réparation de ce produit s'adressent uniquement à un personnel de maintenance qualifié.
- Le démontage et l'entretien de ce produit pouvant présenter certains risques électriques, le personnel d'entretien qualifié devra prendre toutes les précautions nécessaires.

AVERTISSEMENT—RISQUE DE BLESSURE

La batterie lithium de ce produit n'est pas destinée à être remplacée. Il existe un risque d'explosion si une batterie lithium est placée de façon incorrecte. Ne rechargez pas, ne démontez pas et n’incinérez pas une batterie lithium. Mettez les batteries lithium usagées au rebut selon les instructions du fabricant et les réglementations locales.

Norme di sicurezza

- La sicurezza del prodotto si basa sui test e sull'approvazione del progetto originale e dei componenti specifici. Il produttore non è responsabile per la sicurezza in caso di sostituzione non autorizzata delle parti.
- Le informazioni riguardanti la manutenzione di questo prodotto sono indirizzate soltanto al personale di assistenza autorizzato.
- Durante lo smontaggio e la manutenzione di questo prodotto, il rischio di subire scosse elettriche e danni alla persona è più elevato. Il personale di assistenza autorizzato deve, quindi, adottare le precauzioni necessarie.

ATTENZIONE — PERICOLO DI LESIONI

La batteria al litio presente del prodotto non deve essere sostituita. In caso di sostituzione errata della batteria al litio, potrebbe verificarsi un'esplosione. Non ricaricare, smontare o bruciare batterie al litio. Smaltire le batterie al litio usate seguendo le istruzioni del produttore e le norme locali.

Sicherheitshinweise

- Die Sicherheit dieses Produkts basiert auf Tests und Zulassungen des ursprünglichen Modells und bestimmter Bauteile. Bei Verwendung nicht genehmigter Ersatzteile wird vom Hersteller keine Verantwortung oder Haftung für die Sicherheit übernommen.
- Die Wartungsinformationen für dieses Produkt sind ausschließlich für die Verwendung durch einen Wartungsfachmann bestimmt.
- Während des Auseinandernehmens und der Wartung des Geräts besteht ein zusätzliches Risiko eines elektrischen Schlags und körperlicher Verletzung. Das zuständige Fachpersonal sollte entsprechende Vorsichtsmaßnahmen treffen.

VORSICHT - VERLETZUNGSGEFAHR

Die Lithiumbatterie in diesem Produkt darf nicht ausgetauscht werden. Wird eine Lithiumbatterie nicht ordnungsgemäß ausgetauscht, besteht Explosionsgefahr. Lithiumbatterien dürfen auf keinen Fall wieder aufgeladen, auseinander genommen oder verbrannt werden. Befolgen Sie zum Entsorgen verbrauchter Lithiumbatterien die Anweisungen des Herstellers und die örtlichen Bestimmungen.

Pautas de Seguridad

- La seguridad de este producto se basa en pruebas y aprobaciones del diseño original y componentes específicos. El fabricante no es responsable de la seguridad en caso de uso de piezas de repuesto no autorizadas.
- La información sobre el mantenimiento de este producto está dirigida exclusivamente al personal cualificado de mantenimiento.
- Existe mayor riesgo de descarga eléctrica y de daños personales durante el desmontaje y la reparación de la máquina. El personal cualificado debe ser consciente de este peligro y tomar las precauciones necesarias.

PRECAUCIÓN: POSIBLES DAÑOS PERSONALES

La batería de litio de este producto no debe reemplazarse. Existe riesgo de explosión si se sustituye incorrectamente una batería de litio. No recargue, desmonte ni incinere una batería de litio. Deseche las baterías de litio según las instrucciones del fabricante y las normativas locales.

Informações de Segurança

- A segurança deste produto baseia-se em testes e aprovações do modelo original e de componentes específicos. O fabricante não é responsável pela segunrança, no caso de uso de peças de substituição não autorizadas.
- As informações de segurança relativas a este produto destinam-se a profissionais destes serviços e não devem ser utilizadas por outras pessoas.

- Risco de choques eléctricos e ferimentos graves durante a desmontagem e manutenção deste produto. Os profissionais destes serviços devem estar avisados deste facto e tomar os cuidados necessários.

ATENÇÃO — RISCO DE FERIMENTO

A bateria de lítio neste produto não deve ser substituída. Existe o risco de explosão se uma bateria de lítio for substituída incorretamente. Não recarregue, desmonte ou incinere uma bateria de lítio. Descarte as baterias de lítio usadas de acordo com as instruções do fabricante e regulamentos locais.

Informació de Seguretat

- La seguretat d'aquest producte es basa en l'avaluació i aprovació del disseny original i els components específics. El fabricant no es fa responsable de les qüestions de seguretat si s'utilitzen peces de recanvi no autoritzades.
- La informació pel manteniment d'aquest producte està orientada exclusivament a professionals i no està destinada a ningú que no ho sigui.
- El risc de xoc elèctric i de danys personals pot augmentar durant el procés de desmuntatge i de servei d'aquest producte. El personal professional ha d'estar-ne assabentat i prendre les mesures convenients.

ATENCIÓ

La bateria de liti d'aquest producte no ha estat dissenyada perquè es substitueixi. Hi ha perill d'explosió si no es substitueix correctament la bateria de liti. No recarregueu, desmunteu o incinereu una bateria de liti. Desfeu-vos de les bateries de liti usades d'acord amb les instruccions del fabricant i les regulacions locals.

안전 사항

- 본 제품은 원래 설계및특정 구성에 대한 테스트 결과로 안정 성이 입증된 것입니다. 따라서 무허가 교체부품을 사용하는 경 우 에는 제조업체에서 안전에 대한 책임을 지지 않습니다.
- 본 제품에 관한 유지 보수 설명 서는 전문 서비스 기술자 용으로 작성된 것이므로, 비 전문가는 사용할 수 없습니다.
- 본 제품을 해체하거나 정비할 경우, 전 기전 인 충 경 을 받거나 상 처를 입을 위험이 커집니다. 전문 서비스 기술자는 이 사실을 숙지하고, 필요한 예방조치를 취하도록 하십시오.

주의—부상 위험

이 제품에 들어 있는 리튬 배터리는 교체할 수 없습니다. 리튬 배터리를 잘못 교체하면 폭발할 위험이 있습니다. 리튬 배터리를 재충전하거나, 분해하거나, 태우지 마십시오. 제조업체의 지침과 지역 규정에 따라 다 쓴 리튬 배터리를 폐기하십시오.

安全信息

- 本**产**品的安全性以原来**设计**和特定**产**品的**测试结**果和**认证为**基**础**。万一使用来**经许**可的替**换**部件，制造商不**对**安全性**负责**。
- 本**产**品的**维护**信息**仅**供**专业**服**务**人**员**使用，并不打算**证**其他人使用。
- 本**产**品在拆卸、**维**修**时**，遭受**电击**或人**员**受**伤**的危**险**性会增高，**专业**服**务**人**员对这**点必**须**有所了触，并采取必要的**预**防措施。

当心—可能的伤害：

本**产**品中的**锂电**池不可更**换**。如果不正确更**换锂电**池，可能会有爆炸危**险**。不要再 充**电**、拆解或焚**烧锂电**池。**丢**弃旧的**锂电**池**时应**按照制造商的指**导**及当地法**规进**行**处**理。

Preface

This manual contains maintenance procedures for service personnel. It is divided into the following chapters:

- **General information**—Provides a general description of the printer, tools, and equipment needed to service the printer
- **Diagnostic information**—Contains diagnostic aids such as error code tables, symptom and service checks that you can use to isolate failing field replaceable units (FRUs)
- **Service menus**—Describes the printer interface, user and service menus
- **Repair information**—Provides instructions for making printer adjustments and for removing and installing FRUs
- **Component locations**—Shows illustrations that identify the basic printer parts
- **Maintenance**—Contains specifications for lubricating the printer and recommendations to prevent printer problems
- **Parts catalog**—Shows illustrations and part numbers for the FRUs
- **Appendix A: Printer specifications**—Contains detailed specifications of the product
- **Appendix B: Options and features**—Contains the available options and other features of the product
- **Appendix C: Theory of operation**—Contains the theory on how the printer operates
- **Appendix D: Acronyms**—Contains a list of the acronyms in the manual and their meanings

Service manual conventions

Note: A *note* provides additional information.

Warning—Potential Damage: A *warning* identifies something that may damage the product hardware or software.

This service manual uses several different types of caution statements:

CAUTION—POTENTIAL INJURY: A *caution* identifies something that may cause harm to the service technician.

CAUTION—SHOCK HAZARD: This type of caution indicates a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you start working, or use caution if the product must receive power to perform the task.

CAUTION—HOT SURFACE: This type of caution indicates a hot surface.

CAUTION—TIPPING HAZARD: This type of caution indicates a tipping hazard.

Change history

September 3, 2014

- Installation information was added to the developer unit removal.
- Cable routing information was added to the induction heater removal.
- Printhead relay board removal was added. The printhead relay board removal was also included as a step for printhead removal.
- Registration unit removal was revised. Step 1 has been replaced with the right door removal.

- Part number 40X9999 has been replaced with 40X9215.
- Old part number 40X9215 has been replaced with 40X9685.
- Updated the Control panel removal topic in the Repair information chapter.
- Added the Speaker removal topic in the Repair information chapter.

August 27, 2014

- Added the following Fixing image quality issues topics:
  - Initial image quality check
  - Flatbed scanner image quality check

August 13, 2014

- Printer motor tests, 2 x 500-sheet tray motor tests, 2500-sheet tray motor tests, and 3000-sheet tray motor tests were revised to include steps for enabling safe mode.
- Control panel 2 parts catalog assembly was added, with new FRUs.
  - 41X0452 (Control panel cover assembly)
  - 41X0455 (Control panel UICC)
  - 41X0453 (Control panel cable kit)
  - 41X0454 (Control panel touch-screen display)
- Photoconductor cleaner was renamed ‘Printhead cleaner’.
- Updated the control panel removal topic in the Repair chapter.

July 7, 2014

- Diagnostic information topics were added or revised.
  - Bullet for cleaning the photoconductor unit and printhead was added to Initial print quality check
  - Power requirement specifications was included in the 2nd bullet of Initial print quality check
  - Checking of pick, feed, and separator rollers have been removed for print quality checks. Transfer roller will be checked instead.
- Repair information topics were added or revised.
  - Step for removing the front inner cover has been included to the Printhead removal
  - Fuser connector cover removal—topic was deleted.
  - Registration transport assembly removal—additional cables disconnected before removing the assembly.
  - Front inner cover removal—callout to screws were revised.
  - Toner agitator removal—additional cables disconnected before removing the assembly.
  - Input options interface cover removal—topic was deleted.
  - Sensor (2500-sheet tray transfer guide, home) removal
  - Step for removing the upper rear cover has been included to the Upper rear cover removal.
  - Steps for removing the center cable guide bracket and high voltage board has been included to the Main drive assembly removal.
  - Sensor (2500-sheet tray set) removal
- Imaging unit has been renamed to Transfer belt unit

- Parts catalog FRUs were added.
  - 40X7104 (Power cord, 2.5 m (right-angled)—USA, Canada, Latin America)
  - 40X0288 (Power cord, 2.5 m (straight)—Argentina)
  - 40X1766 (Power cord, 2.5 m (straight)—Bolivia, Peru)
  - 40X0273 (Power cord, 2.5 m (straight)—Italy, Chile, Uruguay)
  - 40X3141 (Power cord, 2.5 m (straight)—Europe, Middle East, Indonesia, Africa (HV))
  - 40X4596 (Power cord, 2.5 m (straight)—Brazil)
  - 40X0271 (Power cord, 2.5 m (straight)—UK, Ireland, Hong Kong, Italy)
  - 40X0301 (Power cord, 2.5 m (straight)—Australia, New Zealand)
  - 40X0270 (Power cord, 2.5 m (straight)—Japan)
  - 40X1792 (Power cord, 2.5 m (straight)—Korea)
  - 40X0303 (Power cord, 2.5 m (straight)—PRC)
  - 40X1791 (Power cord, 2.5 m (straight)—Taiwan)
  - 40X1774 (Power cord, 2.5 m (straight)—Denmark, Finland, Norway, Sweden)
  - 40X0275 (Power cord, 1.8 m (straight)—Israel)
  - 40X1773 (Power cord, 2.5 m (straight)—South Africa, Hong Kong, Singapore, Thailand, Malaysia)
  - 40X1772 (Power cord, 2.5 m (straight)—Liechtenstein, Switzerland)
  - 40X7229 (Power cord, 2.5 m (straight)—India)
  - 41X0010 (Forms and Bar code card)
  - 41X0012 (IPDS card)
  - 41X0011 (PRESCRIBE card)
  - 41X0030 (Keyboard kit, English)
  - 41X0031 (Keyboard kit, French)
  - 41X0032 (Keyboard kit, Italian)
  - 41X0033 (Keyboard kit, German)
  - 41X0034 (Keyboard kit, Spanish)
  - 40X1368 (USB cable, packaged (2 meters))
  - 40X4819 (Serial interface card, RS-232C)
  - 40X4823 (Parallel interface card, 1284-B)
  - 40X7445 (DDR3 RAM, 2 GB x32)
  - 40X7567 (DDR3 RAM, 1 GB x32)
  - 40X8555 (Flash memory, 256 MB)
  - 40X8556 (Font card, Traditional Chinese)
  - 40X8557 (Font card, Simplified Chinese)
  - 40X8568 (Font card, Korean)
  - 40X8569 (Font card, Japanese)
  - 40X8570 (Font card, Arabic)
  - 40X8571 (Font card, Hebrew)
  - 40X8311 (Card reader, small stick-on case)
  - 40X8312 (Card reader, large stick-on case)

- 40X8313 (Card reader, small snap-on case)
- 40X8314 (Card reader, large snap-on case)
- 40X7858 (Wireless print server kit, MarkNet N8350 802.11b/g/n)
- 40X7854 (Fax card)

General information

The Lexmark™ MX91x MFPs are network-capable, multifunction laser printers that print monochrome print jobs. All information in this service manual pertains to all models unless explicitly noted.

The printers are available in the following models:

Model	Configurations	Machine type / model
MX910de	Mono laser MFP, Networking, Duplex print, Duplex scan, 10.1-in. color touch screen	7421-036
MX911dte	Mono laser MFP, Networking, Duplex print, Duplex scan, 10.1-in. color touch screen	7421-236
MX912dxe	Mono laser MFP, Networking, Duplex print, Duplex scan, 10.1-in. color touch screen	7421-436

For information on diagnosing a problem, see **"Diagnostic information" on page 45**. For information on removing and reinstalling parts, see **"Repair information" on page 241**. For information on identifying the parts, see **"Parts catalog" on page 542**.

Paper and specialty media guide

Notes:

- Make sure that the paper size, type, and weight are set correctly on the computer or control panel.
- Flex, fan, and straighten specialty media before loading them.
- The printer may print at a reduced speed to prevent damage to the fuser.
- For more information on card stock and labels, see the *Card Stock & Label Guide* at **http://support.lexmark.com**.

Using specialty media

Tips on using card stock

Card stock is heavy, single-ply specialty media. Many of its variable characteristics, such as moisture content, thickness, and texture, can significantly affect print quality.

- From the printer control panel, set the paper size, type, texture, and weight in the Paper menu to match the card stock loaded in the tray.
- Print samples on the card stock being considered for use before buying large quantities.
- Specify the paper texture and weight from the tray settings to match the paper loaded in the tray.
- Preprinting, perforation, and creasing may significantly affect the print quality and cause jams or other paper feed problems.
- Before loading the card stock on the tray, flex and fan the card stock to loosen them. Straighten the edges on a level surface.

Tips on using envelopes

- From the printer control panel, set the paper size, type, texture, and weight in the Paper menu to match the envelopes loaded in the tray.
- Print samples on the envelopes being considered for use before buying large quantities.
- Use envelopes designed specifically for laser printers.
- For best performance, use envelopes made from 90-g/m^2 (24-lb) paper or 25% cotton.
- Use only new envelopes from undamaged packages.
- To optimize performance and minimize jams, do not use envelopes that:
  - Have excessive curl or twist.
  - Are stuck together or damaged in any way.
  - Have windows, holes, perforations, cutouts, or embossing.
  - Have metal clasps, string ties, or folding bars.
  - Have an interlocking design.
  - Have postage stamps attached.
  - Have any exposed adhesive when the flap is in the sealed or closed position.
  - Have bent corners.
  - Have rough, cockle, or laid finishes.
- Adjust the width guides to fit the width of the envelopes.
- Before loading the envelopes on the tray, flex the stack of envelopes back and forth to loosen them, and then fan them. Straighten the edges on a level surface.

Note: A combination of high humidity (over 60%) and high printing temperature may wrinkle or seal envelopes.

Tips on using labels

- From the printer control panel, set the paper size, type, texture, and weight in the Paper menu to match the labels loaded in the tray.
- Print samples before buying large quantities.
- For more information on label printing, characteristics, and design, see the *Card Stock & Label Guide* at **http://support.lexmark.com**.
- Use labels designed specifically for laser printers.
- Do not use labels with slick backing material.
- Do not use labels with exposed adhesive.
- Use full label sheets. Partial sheets may cause labels to peel off during printing, resulting in a jam. Partial sheets also contaminate the printer and the cartridge with adhesive, and could void the printer and toner cartridge warranties.
- Before loading labels on the tray, flex and fan labels to loosen them. Straighten the edges on a level surface.

Tips on using letterhead

- Use letterhead specifically for laser printers.
- Print samples before buying large quantities.
- Before loading letterhead, flex and fan the sheets.
- When printing on letterhead, take note of the page orientation.

Source	Printing	Side with the letterhead	Paper orientation
Trays	One-sided	Faceup	Load the sheet with the top edge toward the back of the tray.
	Two-sided	Facedown	Load the sheet with the top edge toward the front of the tray.
Multipurpose feeder	One-sided	Facedown	Load the sheet with the top edge on the left side.
	Two-sided	Faceup	Load the sheet with the top edge on the right side.

Tips on using transparencies

- From the printer control panel, set the paper size, type, texture, and weight in the Paper menu to match the transparencies loaded in the tray.
- Print a test page on the transparencies being considered for use before buying large quantities.
- Use transparencies designed specifically for laser printers.
- Avoid getting fingerprints on the transparencies to prevent print quality problems.
- Before loading transparencies, flex and fan the sheets to prevent them from sticking together.
- When printing on large volumes of transparencies, make sure to print by batches of only up to 20 with an interval of at least three minutes between batches, to prevent the transparencies from sticking together in the bin. You can also remove transparencies from the bin by batches of 20.

Paper guidelines

Selecting the correct paper or specialty media reduces printing problems. For the best print quality, try a sample of the paper or specialty media before buying large quantities.

Paper characteristics

The following paper characteristics affect print quality and reliability. Consider these factors before printing on them:

Weight

The printer trays can feed paper weights between 60–256 g/m^2 (16–68-lb) grain long paper. The multipurpose feeder can feed paper weights between 60–256 g/m^2 (16–68-lb) grain long paper. Paper lighter than 60 g/m^2 (16 lb) might not be stiff enough to feed properly, and may cause jams.

Note: Two-sided printing is supported for 60–169 g/m^2 (16–45-lb) paper.

Curl

Curl is the tendency for paper to curl at its edges. Excessive curl can cause paper feeding problems. Curl can occur after the paper passes through the printer, where it is exposed to high temperatures. Storing paper unwrapped in hot, humid, cold, or dry conditions, even in the trays, can contribute to paper curling prior to printing and can cause feeding problems.

Smoothness

Paper smoothness directly affects print quality. If paper is too rough, toner cannot fuse to it properly. If paper is too smooth, it can cause paper feeding or print quality issues. Always use paper between 100 and 200 Sheffield points.

Moisture content

The amount of moisture in paper affects both print quality and the ability of the printer to feed the paper correctly. Leave paper in its original wrapper until it is time to use it. This limits the exposure of paper to moisture changes that can degrade its performance.

Store paper in its original wrapper in the same environment as the printer for 24 to 48 hours before printing. Extend the time several days if the storage or transportation environment is very different from the printer environment. Thick paper may also require a longer conditioning period.

Grain direction

Grain refers to the alignment of the paper fibers in a sheet of paper. Grain is either *grain long*, running the length of the paper, or *grain short*, running the width of the paper.

For 60–256 g/m^2 (16–68-lb) paper, grain long paper is recommended.

Fiber content

Most high-quality xerographic paper is made from 100% chemically treated pulped wood. This content provides the paper with a high degree of stability, resulting in fewer paper feeding problems and better print quality. Paper containing fibers such as cotton can negatively affect paper handling.

Selecting paper

Using the appropriate paper prevents jams and helps ensure trouble-free printing.

To help avoid paper jams and poor print quality:

- *Always* use new, undamaged paper.
- Before loading paper, know the recommended printable side of the paper. This information is usually indicated on the paper package.
- *Do not* use paper that has been cut or trimmed by hand.
- *Do not* mix paper sizes, types, or weights in the same tray; mixing results in jams.
- *Do not* use coated papers unless they are specifically designed for electrophotographic printing.

Selecting preprinted forms and letterhead

- Use grain long for 60–256-g/m^2 (16–68-lb) paper.
- Use only forms and letterhead printed using an offset lithographic or engraved printing process.
- Avoid paper with rough or heavily textured surfaces.
- Use inks that are not affected by the resin in toner. Inks that are oxidation-set or oil-based generally meet these requirements; latex inks might not.
- Print samples on preprinted forms and letterheads considered for use before buying large quantities. This determines whether or not the ink in the preprinted form or letterhead will affect print quality.
- When in doubt, contact your paper supplier.

Using recycled paper and other office papers

As an environmentally conscientious company, Lexmark supports the use of recycled paper produced specifically for use in laser (electrophotographic) printers.

While no blanket statement can be made that all recycled paper will feed well, Lexmark consistently tests papers that represent recycled cut size copier papers available on the global market. This scientific testing is conducted with rigor and discipline. Many factors are taken into consideration both separately and as a whole, including the following:

- Amount of post-consumer waste (Lexmark tests up to 100% post-consumer waste content.)
- Temperature and humidity conditions (Testing chambers simulate climates from all over the world.)
- Moisture content (Business papers should have low moisture: 4–5%.)
- Bending resistance and proper stiffness means optimum feeding through the printer.
- Thickness (impacts how much can be loaded into a tray)
- Surface roughness (measured in Sheffield units, impacts print clarity and how well toner fuses to the paper)
- Surface friction (determines how easily sheets can be separated)
- Grain and formation (impacts curling, which also influences the mechanics of how the paper behaves as it moves through the printer)
- Brightness and texture (look and feel)

Recycled papers are better than ever; however, the amount of recycled content in a paper affects the degree of control over foreign matter. And while recycled papers are one good path to printing in an environmentally responsible manner, they are not perfect. The energy required to de-ink and deal with additives such as colorants and “glue” often generates more carbon emissions than does normal paper production. However, using recycled papers enables better resource management overall.

Lexmark concerns itself with the responsible use of paper in general based on life cycle assessments of its products. To gain a better understanding of the impact of printers on the environment, the company commissioned a number of life cycle assessments and found that paper was identified as the primary contributor (up to 80%) of carbon emissions caused throughout the entire life of a device (from design to end-of-life). This is due to the energy-intensive manufacturing processes required to make paper.

Thus, Lexmark seeks to educate customers and partners on minimizing the impact of paper. Using recycled paper is one way. Eliminating excessive and unnecessary paper consumption is another. Lexmark is well-equipped to help customers minimize printing and copying waste. In addition, the company encourages purchasing paper from suppliers who demonstrate their commitment to sustainable forestry practices.

Lexmark does not endorse specific suppliers, although a converter’s product list for special applications is maintained. However, the following paper choice guidelines will help alleviate the environmental impact of printing:

1. Minimize paper consumption.
2. Be selective about the origin of wood fiber. Buy from suppliers who carry certifications such as the Forestry Stewardship Council (FSC) or the Program for the Endorsement of Forest Certification (PEFC). These certifications guarantee that the paper manufacturer uses wood pulp from forestry operators that employ environmentally and socially responsible forest management and restoration practices.
3. Choose the most appropriate paper for printing needs: normal 75 or 80 g/m^2 certified paper, lower weight paper, or recycled paper.

Unacceptable paper examples

Test results indicate that the following paper types are at risk for use with laser printers:

- Chemically treated papers used to make copies without carbon paper, also known as *carbonless papers*
- Preprinted papers with chemicals that may contaminate the printer
- Preprinted papers that can be affected by the temperature in the printer fuser
- Preprinted papers that require a registration (the precise location on the page) greater than ± 2.3 mm (± 0.9 in.), such as optical character recognition (OCR) forms. In some cases, registration can be adjusted with a software application to successfully print on these forms.)
- Coated papers (erasable bond), synthetic papers, thermal papers
- Rough-edged, rough or heavily textured surface papers or curled papers
- Recycled papers that fail EN12281:2002 (European testing)
- Paper weighing less than 60 g/m^2 (16 lb)
- Multiple part forms or documents

For more information about Lexmark, go to **www.lexmark.com**. General sustainability-related information can be found at the **Environmental Sustainability** link.

Storing paper

Use these paper storage guidelines to help avoid jams and uneven print quality:

- For best results, store paper where the temperature is 21°C (70°F) and the relative humidity is 40 percent. Most label manufacturers recommend printing in a temperature range of 18–24°C (65–75°F) with relative humidity between 40 and 60 percent.
- Store paper in cartons, on a pallet or shelf, rather than on the floor.
- Store individual packages on a flat surface.
- Do not store anything on top of individual paper packages.
- Take paper out of the carton or wrapper only when you are ready to load it in the printer. The carton and wrapper help keep the paper clean, dry, and flat.

Supported paper sizes, types, and weights

The following tables provide information on standard and optional paper sources and the sizes, types, and weights of paper they support.

Note: For an unlisted paper size, select the closest *larger* listed size.

Paper sizes supported by the printer

Paper sizes supported by the trays and multipurpose feeder

Paper size	Dimensions	Standard 500-sheet tray (Tray 1)	Standard 500-sheet tray (Tray 2)	2 x 500-sheet tray	2500-sheet tray	3000-sheet tray	Multipurpose feeder[3]	Two-sided printing
A4	210 x 297 mm (8.3 x 11.7 in.)	✓	✓	✓	✓[2]	✓[2]	✓[2]	✓
A5	148 x 210 mm (5.8 x 8.3 in.)	✓[1]	✓[1]	✓[1]	X	X	✓	✓
A6	105 x 148 mm (4.1 x 5.8 in.)	X	X	X	X	X	✓[1]	✓
JIS B5	182 x 257 mm (7.2 x 10.1 in.)	✓	✓	✓	X	X	✓	✓
Letter	216 x 279 mm (8.5 x 11 in.)	✓	✓	✓	✓[2]	✓[2]	✓	✓
Legal	216 x 356 mm (8.5 x 14 in.)	✓	✓	✓	X	X	✓	✓
Executive	184 x 267 mm (7.3 x 10.5 in.)	✓	✓	✓	X	X	✓	✓
JIS B4	257 x 364 mm (10.12 x 14.33 in.)	✓	✓	✓	X	X	✓	✓
SRA3	320 x 450 mm (12.6 x 17.7 in.)	X	✓[1]	X	X	X	✓[1]	✓
A3	297 x 420 mm (11.69 x 16.54 in.)	✓	✓	✓	X	X	✓	✓
12 x 18	305 x 457 mm (12 x 18 in.)	X	✓[1]	X	X	X	✓[1]	✓

[1] Supported only in short-edge orientation.

[2] Supported only in long-edge orientation.

[3] Supports paper size without *size sensing*.

[4] Supported only if the width is from 139.7 mm (5.5 in.) to 320 mm (12.6 in.), and the length is from 148 mm (5.83 in.) to 458 mm (18 in.).

Note: Banner is supported in the multipurpose feeder only if the width is up to 296.9 mm (11.69 in.), and the length is up to 1219.2 mm (48 in.). Set the paper size to Universal.

Paper size	Dimensions	Standard 500-sheet tray (Tray 1)	Standard 500-sheet tray (Tray 2)	2 x 500-sheet tray	2500-sheet tray	3000-sheet tray	Multipurpose feeder[3]	Two-sided printing
11 x 17	279.4 x 431.8 mm (11 x 17 in.)	✓	✓	✓	X	X	✓	✓
Oficio	216 x 340 mm (8.5 x 13.4 in.)	✓	✓	✓	X	X	✓	✓
Folio	216 x 330 mm (8.5 x 13 in.)	✓	✓	✓	X	X	✓	✓
Statement	140 x 216 mm (5.5 x 8.5 in.)	✓[1]	✓[1]	✓[1]	X	X	✓	✓
Universal	76.2 x 76.2 mm (3 x 3 in.) to 320 x 1219.2 mm (12.6 x 48 in.)	✓	✓	✓	X	X	✓	✓[4]
7 3/4 Envelope	98 x 191 mm (3.9 x 7.5 in.)	X	X	X	X	X	✓	X
9 Envelope	98 x 225 mm (3.9 x 8.9 in.)	X	X	X	X	X	✓	X
10 Envelope	105 x 241 mm (4.1 x 9.5 in.)	X	X	X	X	X	✓	X
DL Envelope	110 x 220 mm (4.3 x 8.7 in.)	X	X	X	X	X	✓	X
C5 Envelope	162 x 229 mm (6.4 x 9 in.)	X	X	X	X	X	✓	X
B5 Envelope	176 x 250 mm (6.9 x 9.8 in.)	X	X	X	X	X	✓	X
Other Envelope	98 x 162 mm (3.9 x 6.3 in.) to 176 x 250 mm (6.9 x 9.8 in.)	X	X	X	X	X	✓	X

[1] Supported only in short-edge orientation.

[2] Supported only in long-edge orientation.

[3] Supports paper size without *size sensing*.

[4] Supported only if the width is from 139.7 mm (5.5 in.) to 320 mm (12.6 in.), and the length is from 148 mm (5.83 in.) to 458 mm (18 in.).

Note: Banner is supported in the multipurpose feeder only if the width is up to 296.9 mm (11.69 in.), and the length is up to 1219.2 mm (48 in.). Set the paper size to Universal.

Paper sizes supported by the ADF and scanner glass

Paper size	Dimensions	ADF	Scanner glass
Business card		X	✓[1,2]
3 x 5	76.2 x 127 mm (3 x 5 in.)	X	✓[1,2]
4 x 6	101.6 x 152.4 mm (4 x 6 in.)	✓[2]	✓[1,2]
A4	210 x 297 mm (8.3 x 11.7 in.)	✓	✓
A5	148 x 210 mm (5.8 x 8.3 in.)	✓	✓[2]
A6	105 x 148 mm (4.1 x 5.8 in.)	✓[1,2]	✓[1,2]
JIS B5	182 x 257 mm (7.2 x 10.1 in.)	✓	✓
Letter	216 x 279 mm (8.5 x 11 in.)	✓	✓
Legal	216 x 356 mm (8.5 x 14 in.)	✓	✓
Executive	184 x 267 mm (7.3 x 10.5 in.)	✓	✓
JIS B4	257 x 364 mm (10.12 x 14.33 in.)	✓	✓
SRA3	320 x 450 mm (12.6 x 17.7 in.)	X	X
A3	297 x 420 mm (11.69 x 16.54 in.)	✓	✓
12 x 18	305 x 457 mm (12 x 18 in.)	X	X
11 x 17	279.4 x 431.8 mm (11 x 17 in.)	✓	✓
Oficio	216 x 340 mm (8.5 x 13.4 in.)	✓[2]	✓[2]
Folio	216 x 330 mm (8.5 x 13 in.)	✓	✓
Statement	140 x 216 mm (5.5 x 8.5 in.)	✓	✓
Universal	89 x 98.4 mm (3.50 x 3.87 in.) to 297 x 431.8 mm (11.69 x 17.00 in.)	✓[2]	✓[2]
7 3/4 Envelope	98 x 191 mm (3.9 x 7.5 in.)	X	X
9 Envelope	98 x 225 mm (3.9 x 8.9 in.)	X	X
10 Envelope	105 x 241 mm (4.1 x 9.5 in.)	X	X
DL Envelope	110 x 220 mm (4.3 x 8.7 in.)	X	X
C5 Envelope	162 x 229 mm (6.4 x 9 in.)	X	X
B5 Envelope	176 x 250 mm (6.9 x 9.8 in.)	X	X
Other Envelope	98 x 162 mm (3.9 x 6.3 in.) to 176 x 250 mm (6.9 x 9.8 in.)	X	X
Custom Scan Size [x]		✓[2]	✓[2]

[1] Supported only in short-edge orientation.

[2] Supports paper size without *size sensing*.

Paper types and weights supported by the printer

The printer engine supports 60–256-g/m^2 (16–68-lb) paper weights.

Note: Labels, transparencies, envelopes, and card stock always print at reduced speed.

Paper type	Standard 500-sheet tray (Tray 1)	Standard 500-sheet tray (Tray 2)	2 x 500-sheet tray	2500-sheet tray	3000-sheet tray	Multipurpose feeder	ADF	Scanner
Plain Paper[1]	✓	✓	✓	✓	✓	✓	✓	✓
Card Stock[1]	✓	✓	✓	✓	✓	✓	✓	✓
Transparencies[2]	X	X	X	X	X	✓	✓	✓
Recycled[1]	✓	✓	✓	✓	✓	✓	✓	✓
Glossy[1]	✓	✓	✓	✓	✓	✓	✓	✓
Heavy Glossy[1]	✓	✓	✓	✓	✓	✓	✓	✓
Labels	X	X	X	X	X	✓	✓	✓
Vinyl Labels	X	X	X	X	X	X	✓	✓
Bond[1]	✓	✓	✓	✓	✓	✓	✓	✓
Envelope	X	X	X	X	X	✓	✓	✓
Rough Envelope	X	X	X	X	X	✓	✓	✓
Letterhead[1]	✓	✓	✓	✓	✓	✓	✓	✓
Preprinted[1]	✓	✓	✓	✓	✓	✓	✓	✓
Colored Paper[1]	✓	✓	✓	✓	✓	✓	✓	✓
Light Paper[1]	✓	✓	✓	✓	✓	✓	✓	✓
Heavy Paper[1]	✓	✓	✓	✓	✓	✓	✓	✓
Rough Cotton[1]	✓	✓	✓	✓	✓	✓	✓	✓
Custom Type[1]	✓	✓	✓	✓	✓	✓	✓	✓

[1] Paper is supported for two-sided printing.

[2] Print transparencies in batches of only up to 20 to prevent them from sticking together. For more information, see **"Tips on using transparencies" on page 33**.

Paper sizes, types, and weights supported by the finishers

The printer engine supports 60–256 g/m^2 (16–68-lb) paper weights.

Note: When a finisher is installed, the standard finisher bin becomes the default bin even for print jobs that do not require finishing.

Supported paper sizes

Paper size	Staple finisher	Staple, hole punch finisher bin 1	Staple, hole punch finisher bin 2	Booklet finisher
A6	√[3]	√[3]	X	X
A5	√[3]	√[3]	√[2]	X
JIS B5	√	√	√	X
JIS B4	√	√	√	√
Executive	√	√	√	X
Letter	√	√	√	√
A4	√	√	√	√
Legal	√	√[4]	√	√
12 x 18	√[1]	√[3]	√[1]	√
11 x 17	√	√	√	√
SRA3	√[1]	√[3]	√[1]	√
A3	√	√	√	√
Oficio	√[1]	√[3]	√[3]	X
Folio	√[1]	√[3]	√[3]	X
Statement	√[1]	√[3]	√[3]	X
Universal	√	√[3]	√[1]	√[5]

[1] Paper is supported only if the finisher stacks the paper but does not staple or punch holes in it.

[2] Paper is supported only if the finisher stacks or staples the paper but does not punch holes in it.

[3] Paper is supported but the finisher does not stack, staple, or punch holes in it.

[4] Paper is supported only for 2-hole punch.

[5] Paper is supported only if the paper size is between 210 x 279.4 mm (8.27 x 11 in.) and 320 x 457.2 mm (12.6 x 18 in.).

Supported paper types

Paper type	Staple finisher	Staple, hole punch finisher	Booklet finisher
Plain Paper	√	√	√[5]

[1] Print on transparencies by batches of only up to 20 to prevent them from sticking together. For more information, see **"Tips on using transparencies" on page 33**.

[2] Paper is supported only if the finisher stacks the paper but does not staple it.

[3] Paper is supported only if the finisher stacks the paper but does not staple or punch holes in it.

[4] Paper is supported only if the finisher punches holes or stacks the paper but does not staple it.

[5] Paper is supported only if the finisher staples or folds the paper.

Paper type	Staple finisher	Staple, hole punch finisher	Booklet finisher
Card Stock	√[2]	√	X
Transparency[1]	√[2]	√[3]	X
Recycled	√[2]	√	√[5]
Glossy	√[2]	√	√[5]
Heavy Glossy	√[2]	√[4]	X
Labels	√[2]	√[3]	X
Bond	√	√	√[5]
Envelope	√[2]	√[3]	X
Rough Envelope	√[2]	√[3]	X
Letterhead	√	√	√[5]
Preprinted	√	√	√[5]
Colored Paper	√	√	√[5]
Light Paper	√	√	√[5]
Heavy Paper	√[2]	√[4]	X
Rough Cotton	√[2]	√	X
Custom Type	√	√	√[5]

[1] Print on transparencies by batches of only up to 20 to prevent them from sticking together. For more information, see **"Tips on using transparencies" on page 33**.

[2] Paper is supported only if the finisher stacks the paper but does not staple it.

[3] Paper is supported only if the finisher stacks the paper but does not staple or punch holes in it.

[4] Paper is supported only if the finisher punches holes or stacks the paper but does not staple it.

[5] Paper is supported only if the finisher staples or folds the paper.

Data security notice

1 The printer contains various types of memory that store printer and network settings, information from embedded solutions, and user data.

The following are the types of memory and data that they store.

- **Volatile memory**—The printer uses standard random access memory (RAM) to buffer user data temporarily during simple print and copy jobs.
- **Non-volatile memory**—The printer may use two forms of non-volatile memory: EEPROM and NAND (flash memory). Both types are used to store the operating system, printer settings, network information, scanner and bookmark settings, and embedded solutions.

- **Hard disk memory**—The printer hard disk is designed for printer-specific functionality and cannot be used for the long-term storage of data that is not print-related. The hard disk can retain buffered user data from complex print jobs, form data, and font data.

To erase volatile memory, turn off the printer.

To erase the non-volatile and printer hard disk memory, see **"Configuration Menu" on page 229**.

The following parts are capable of storing memory:

- Printer control panel
- User interface controller card (UICC)
- Controller board
- Optional hard disk

Note: The control panel and controller board contain NVRAM.

2 After removing the old part, return it to your next level of support.

Tools required for service

- Flat-blade screwdrivers, various sizes
- #1 Phillips screwdriver, magnetic
- #2 Phillips screwdriver, magnetic
- #2 Phillips screwdriver, magnetic short-blade
- Needle-nose pliers
- Diagonal side cutters
- Spring hook
- Feeler gauges
- Analog or digital multimeter
- Flashlight (optional)

Diagnostic information

CAUTION—SHOCK HAZARD: For personal safety and to prevent damage to the printer, remove the power cord from the electrical outlet before you connect or disconnect any cable, electronic board, or assembly. Disconnect any connections between the printer and the computer or peripherals.

CAUTION—POTENTIAL INJURY: The printer weight is greater than 18 kg (40 lb) and requires two or more trained personnel to lift it safely. Use the handholds on the side of the printer. Make sure your fingers are not under the printer when you lift or set the printer on the floor or another stable surface.

CAUTION—HOT SURFACE: The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching it.

Troubleshooting overview

Performing the initial troubleshooting check

- With the power cord unplugged from the electrical outlet, check that the cord is free from breakage, short circuits, disconnected wires, or incorrect connections.
- Make sure that the printer is properly grounded.
- Make sure that the power supply line voltage is within 10% of the rated line voltage.
- Make sure that the printer is securely installed on a level surface in a well-ventilated area.
- Make sure that the temperature and relative humidity are within the specifications. See **"Temperature information" on page 737**.
- Avoid locations that:
  - Generate ammonia gas
  - Are exposed to direct sunlight
  - Are near open flames
  - Are dusty
- Make sure that the recommended paper for this printer is used.
- Do a test print with paper from a newly opened package, and then check the result.

Fixing print quality issues

- **"Initial print quality check" on page 46**
- **"Gray background check" on page 46**
- **"Blank pages check" on page 49**
- **"Solid black pages check" on page 50**
- **"Shadow images check" on page 52**
- **"Skewed print check" on page 54**
- **"Streaked horizontal or vertical lines check" on page 55**

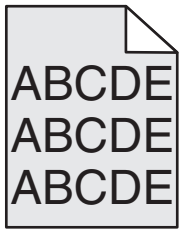
- **"Toner smear check" on page 57**
- **"Toner specks check" on page 58**

Initial print quality check

Before troubleshooting print problems, perform the following:

- Clean the photoconductor unit and printhead. For more information, see **"Cleaning the charger and the printhead lens" on page 537**.
- Make sure that the printer is located in an area that follows the recommended operating environment and power requirement specifications.
- Check the status of supplies. Replace supplies that are low or empty.
- Load 20-lb plain letter or A4 paper. Make sure that the paper guides are properly set and locked. From the control panel, set the paper size and type to match the paper loaded in the tray.
- Print and keep the menu settings page. The original menu settings page will be used to restore the customer's custom settings if necessary.
- Make sure that the Print resolution and Toner darkness on the menu settings page are set to their default values.
- Check the transfer roller, toner cartridge, and transfer belt for damage, and replace if necessary.
- Print the print quality pages to see if the problem remains. Use tray 1 to test print quality problems. Look for variations in the print from what is expected.
- Make sure that the correct print driver is used to prevent print problems. If the wrong print driver is installed, incorrect characters could print, and the copy may not fit the page correctly.

Gray background check

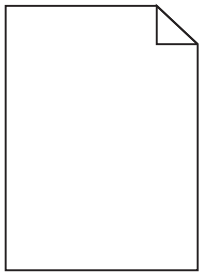


Actions	Yes	No
Step 1 **a** Navigate to **Settings** > **Allow Background Removal**. Make sure that the value is set to **On**. **b** Navigate to **Settings** > **Print Settings** > **Quality Menu**. Decrease the toner darkness (8 is the default value). Does the problem remain?	Go to step 2.	The problem is solved.

Actions	Yes	No
Step 2 Perform print quality calibration. Navigate to: **Settings** > **Print Settings** > **Quality Menu** > **Adjust Print Quality** Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Enter the Configuration menu, and then select **Print Quality Pages**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Enter the Configuration menu, and then navigate to: **Automatic Image Stabilization** > **Auto Align Adj** Make sure that the value is set to **On**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the sensor (toner density) is free of dust or debris. **b** Reseat the sensor cable. **c** Check the sensor and its cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Observe the toner density solenoid. Is it working properly?	Go to step 7.	The problem is solved.
Step 7 Check the solenoid and its actuator for wear or damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Make sure that the cartridge and photoconductor are installed. **b** Make sure that the cartridge and photoconductor are supported. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Printed Page Count** Does the page count reach 300K or 600K?	Go to step 10.	Go to step 11.

Actions	Yes	No
Step 10 Check the following parts for damage or contamination, and replace if necessary. • Transfer roller • Transfer belt • Developer unit Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Make sure that the erase LED is properly installed. **b** Check the LED for damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **CAUTION—SHOCK HAZARD:** Do not perform this step if the printer is on. **a** Make sure that the following cables are properly connected: • High voltage charge cable • High voltage transfer cable • High voltage toner charge cable **b** Make sure that the high voltage charge and developer contacts are secure. **c** Check the high voltage board cables and contacts for damage, and replace if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **CAUTION—SHOCK HAZARD:** Do not perform this step if the printer is on. **a** Make sure that the high voltage board cables are properly connected. **b** Check the high voltage board for damage, and replace if necessary. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Make sure that the printhead is properly installed. **b** Check the printhead for damage, and replace if necessary. See **"Printhead removal" on page 275**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Blank pages check



Actions	Yes	No
Step 1 **a** Navigate to **Settings** > **Allow Background Removal**. Make sure that the value is set to **On**. **b** Navigate to **Settings** > **Print Settings** > **Quality Menu**. Decrease the toner darkness (8 is the default value). Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Configuration menu, and then select **Print Quality Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the cartridge and photoconductor are installed. **b** Make sure that the cartridge and photoconductor are supported. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Printed Page Count** Does the page count reach 300K or 600K?	Go to step 5.	Go to step 6.
Step 5 Check the following parts for damage or contamination, and replace if necessary: • Transfer roller • Transfer belt • Developer unit Does the problem remain?	Go to step 6.	The problem is solved.

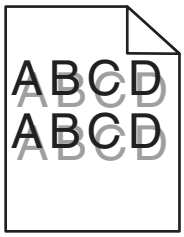
Actions	Yes	No
Step 6 **a** Make sure that the erase LED is properly installed. **b** Check the LED for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **CAUTION—SHOCK HAZARD:** Do not perform this step if the printer is on. **a** Make sure that the following cables are properly connected: • High voltage charge cable • High voltage transfer cable • High voltage toner charge cable **b** Make sure that the high voltage charge and developer contacts are secure. **c** Check the high voltage board cables and contacts for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **CAUTION—SHOCK HAZARD:** Do not perform this step if the printer is on. **a** Make sure that the high voltage board cables are properly connected. **b** Check the high voltage board for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Make sure that the printhead is properly installed. **b** Check the printhead for damage, and replace if necessary. See **"Printhead removal" on page 275**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Solid black pages check

Actions	Yes	No
Step 1 **a** Navigate to **Settings** > **Allow Background Removal**. Make sure that the value is set to **On**. **b** Navigate to **Settings** > **Print Settings** > **Quality Menu**. Decrease the toner darkness (8 is the default value). Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Configuration menu, and then select **Print Quality Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the cartridge and photoconductor are installed. **b** Make sure that the cartridge and photoconductor are supported. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Printed Page Count** Does the page count reach 300K or 600K?	Go to step 5.	Go to step 6.
Step 5 Check the following parts for damage or contamination, and replace if necessary: • Transfer roller • Transfer belt • Developer unit Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Make sure that the erase LED is properly installed. **b** Check the LED for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 **CAUTION—SHOCK HAZARD:** Do not perform this step if the printer is on. **a** Make sure that the following cables are properly connected: • High voltage charge cable • High voltage transfer cable • High voltage toner charge cable **b** Make sure that the high voltage charge and developer contacts are secure. **c** Check the high voltage board cables and contacts for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **CAUTION—SHOCK HAZARD:** Do not perform this step if the printer is on. **a** Make sure that the high voltage board cables are properly connected. **b** Check the high voltage board for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Make sure that the printhead is properly installed. **b** Check the printhead for damage, and replace if necessary. See **"Printhead removal" on page 275**. Does the problem remain?	Contact the next level of support.	The problem is solved.

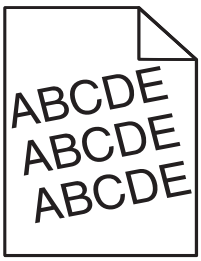
Shadow images check



Actions	Yes	No
Step 1 Make sure that the paper type and weight are supported. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the exit roller for wear, damage, or contamination, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Check the exit belt for proper tension, and adjust if necessary. **b** Check the exit gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the transfer roller for wear, damage, or contamination, and replace if necessary. See **"Transfer roller removal" on page 284**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the registration unit is properly installed. **b** Make sure that the unit is clear of obstructions. **c** Check the unit for damage, and replace if necessary. See **"Registration unit assembly removal" on page 314**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensor (fusing speed) for damage. Is it free of damage?	Go to step 7.	Go to step 9.
Step 7 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Fusing speed** Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 10.
Step 8 **a** Reseat the fusing speed sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.

Actions	Yes	No
Step 9 Replace the sensor (fusing speed). See **"Sensor (fusing speed) removal" on page 317**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Make sure that the fuser and its cable are properly connected. **b** Check the fuser for damage, and replace if necessary. See **"Fuser removal" on page 279**. Does the problem remain?	Contact the next level of support.	The problem is solved.

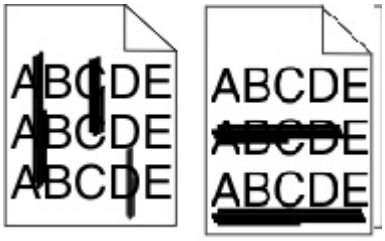
Skewed print check



Actions	Yes	No
Step 1 Make sure that the following parts are properly installed: • Printhead • Transfer belt • Developer unit • Photoconductor Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **REGISTRATION** > **[source tray]** > **Print Quick Test** Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the registration roller for wear or damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.

Actions	Yes	No
Step 4 **a** Check the registration belt for proper tension, and adjust if necessary. **b** Check the registration gear and belt for wear or damage, and replace if necessary. See **"Registration unit belt removal" on page 319** and **"Registration unit gears removal" on page 320**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the following rollers for wear or damage, and replace if necessary: • Pick roller • Feed roller • Separator roller • Transport roller Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Check the roller belts for proper tension, and adjust if necessary. **b** Check the roller gears and belts for wear or damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Streaked horizontal or vertical lines check

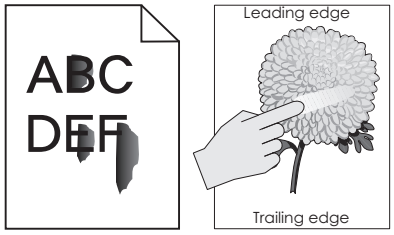


Actions	Yes	No
Step 1 **a** Make sure that the photoconductor and printhead are clean. **b** Make sure that the photoconductor and printhead are properly installed. **c** Check the photoconductor for damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.

Actions	Yes	No
Step 2 **a** Make sure that the toner cartridge supply is not low. **b** Check the photoconductor for contamination or damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Printed Page Count** Does the page count reach 300K or 600K?	Go to step 4.	Go to step 5.
Step 4 Check the following for damage: • Developer unit • Transfer belt • Transfer roller Replace the parts if necessary. See **"Transfer roller removal" on page 284**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the erase LED is properly installed. **b** Check the LED for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **CAUTION—SHOCK HAZARD:** Do not perform this step if the printer is on. **a** Make sure that the following cables are properly connected: • High voltage charge cable • High voltage transfer cable • High voltage toner charge cable **b** Make sure that the high voltage charge and developer contacts are secure. **c** Check the high voltage board cables and contacts for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 **CAUTION—SHOCK HAZARD:** Do not perform this step if the printer is on. **a** Make sure that the high voltage board cables are properly connected. **b** Check the high voltage board for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Make sure that the printhead is properly installed. **b** Check the printhead for damage, and replace if necessary. See **"Printhead removal" on page 275**. Does the problem remain?	Contact the next level of support.	The problem is solved.

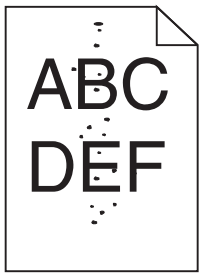
Toner smear check



Actions	Yes	No
Step 1 Make sure that the paper type and weight are supported. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the environment for proper humidity. Remove or reduce sources of humidity if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the fuser and its cable are properly connected. **b** Check the fuser for damage, and replace if necessary. See **"Fuser removal" on page 279**. Does the problem remain?	Go to step 4.	The problem is solved.

Actions	Yes	No
Step 4 **a** Make sure that the induction heater is properly installed. **b** Reseat the heater cable. **c** Check the heater and its cable for damage, and replace if necessary. See **"Induction heater removal" on page 279**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the induction heater power supply is properly installed. **b** Reseat the power supply cables. **c** Check the power supply and its cables for damage, and replace if necessary. See **"Induction heater power supply (IHPS) removal" on page 350**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Toner specks check



Actions	Yes	No
Step 1 **a** Make sure that the photoconductor and printhead are clean. **b** Make sure that the photoconductor and printhead are properly installed. **c** Check the photoconductor for damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the cartridge and photoconductor are installed. **b** Make sure that the cartridge and photoconductor are supported. Does the problem remain?	Go to step 3.	The problem is solved.

Actions	Yes	No
Step 3 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Printed Page Count** Does the page count reach 300K or 600K?	Go to step 4.	Go to step 5.
Step 4 Check the following for damage: • Developer unit • Transfer belt • Transfer roller Replace the parts if necessary. See **"Transfer roller removal" on page 284**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the fuser and its cable are properly connected. **b** Check the fuser for damage, and replace if necessary. See **"Fuser removal" on page 279**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fixing image quality issues

Initial image quality check

Before troubleshooting image quality problems, perform the following:

- Perform a print test to ensure that the defect is not due to printer problem.
- Make sure that the document is placed correctly.
- Make sure that the image data is properly transmitted.
- Make sure that the scanner or ADF is free of debris or dust.
- Make sure all ADF and scanner cables are properly installed.
- Make sure that the scanner and ADF are properly aligned. For more information, see **"ADF height adjustment" on page 258**.
- Make sure that the printer is placed on a level surface.
- Reset the scanner quality adjustment to the default values.

Flatbed scanner image quality check

Actions	Yes	No
Step 1 Check the ADF cushion for dust, crease marks, or damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the scanner glass is free of debris or dust. **b** Check the glass for proper alignment, and adjust if necessary. **c** Check the glass for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Reset the printer, and then check the scanner lamp for movement. Does the scanner lamp move smoothly?	Go to step 7.	Go to step 4.
Step 4 **a** Make sure that the sensor (scanner lamp home) is installed properly. **b** Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (scanner) for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Check the scanner motor belt for proper tension, and adjust if necessary. **b** Check the gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Make sure that the scanner lamp cable and connectors are properly installed. **b** Check the cable and connectors for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Make sure that the scanner lamp is properly installed. **b** Check the lamp for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.

Actions	Yes	No
Step 9 Check the scanner CCD lens for proper alignment, and adjust if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Make sure that the scanner sensor cable is properly installed. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the scanner CCD lens for damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the scanner controller card for damaged pins, and replace if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Make sure that the scanner CCD cable is properly installed. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Make sure that the ADF/scanner image controller board is properly installed. **b** Check the board for damaged pins, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Paper jams

- **“Avoiding jams” on page 62**
- **“Understanding jam messages and locations” on page 62**
- **“200 paper jams” on page 64**
- **“202 paper jams” on page 71**
- **“23y paper jams” on page 79**
- **“241–242 paper jams” on page 82**
- **“243–245 paper jams” on page 93**
- **“28y paper jams” on page 107**

Avoiding jams

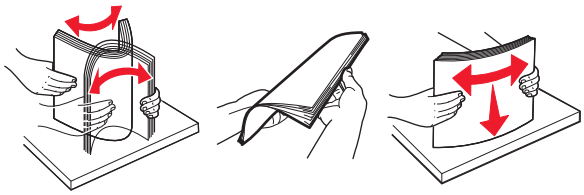
Load paper properly

- Make sure that the paper lies flat in the tray.
- Do not remove a tray while the printer is printing.
- Do not load a tray while the printer is printing. Load it before printing, or wait for a prompt to load it.
- Do not load too much paper. Make sure that the stack height is below the maximum paper fill indicator.
- Do not slide paper into the tray. Load paper as shown in the illustration.

- Make sure that the paper guides are properly positioned.
- Push the tray firmly into the printer after loading paper.

Use recommended paper

- Use only recommended paper or specialty media.
- Do not load wrinkled, creased, damp, bent, or curled paper.
- Flex, fan, and straighten paper before loading it.



- Do not use paper that has been cut or trimmed by hand.
- Do not mix paper sizes, weights, or types in the same tray.
- Make sure that the paper size and type are set correctly on the Embedded Web Server or the computer.

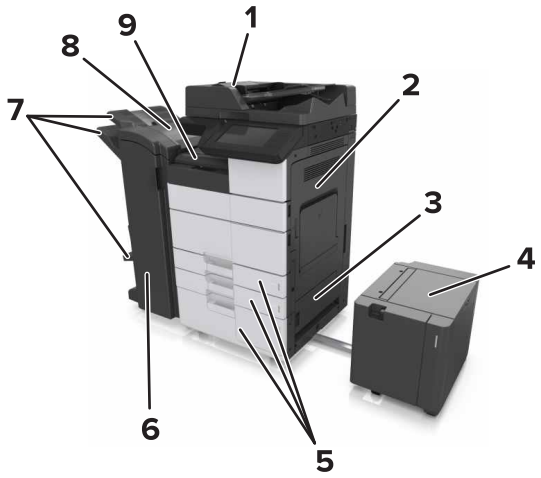
  Note: Depending on your operating system, access the Paper menu using Local Printer Settings Utility or Printer Settings.
- Store paper according to manufacturer recommendations.

Understanding jam messages and locations

When a jam occurs, a message indicating the jam location and information to clear the jam appears on the printer display. Open the doors, covers, and trays indicated on the display to remove the jam.

Notes:

- When Jam Assist is set to On, the printer flushes blank pages or pages with partial prints after a jammed page has been cleared. Check your printed output for blank pages.
- When Jam Recovery is set to On or Auto, the printer reprints jammed pages. However, the Auto setting reprints jammed pages only if adequate printer memory is available.



	Area name
1	Automatic document feeder (ADF)
2	Door C
3	Door D
4	Door F
5	Trays
6	Door H
7	Finisher bins
8	Door J
9	Area G

Area name	Control panel message	What to do
ADF	[x]-page jam, press latch at area E to open ADF's top cover. [28y.xx]	Open the ADF top door, and then remove the jammed paper.
Multipurpose feeder	[x]-page jam, clear jammed paper from the multipurpose feeder. [200.xx]	Remove the jammed paper from the feeder.
Door C, trays	[x]-page jam, open door C and clear all jammed paper. [2yy.xx]	Open door C, and then remove the jammed paper.
	[x]-page jam, slide the 3000-sheet tray and open door C. [2yy.xx]	Pull out the tray, and then remove the jammed paper.

Area name	Control panel message	What to do
Door D, trays	[x]-page jam, open door D and clear all jammed paper. [24y.xx]	Open door D, and then remove the jammed paper. Pull out the tray, and then remove the jammed paper.
	[x]-page jam, slide the 3000-sheet tray and open door D. [24y.xx]	
Doors C and F	[x]-page jam, slide the 3000-sheet tray and open door F. [24y.xx]	Pull the 3000-sheet tray, and then remove the jammed paper from the side of the tray. Open door F, and then remove the jammed paper.
Area G, doors C, J, and H, finisher bin	[x] page jam, open doors G, H, and J and clear jammed paper. [4yy.xx]	Open door G, and then remove the jammed paper. Open door H, and then remove the jammed paper.
Doors C and G, finisher bin	[x]-page jam, press latch beside door G and slide finisher to the left. Leave paper in bin. [40y.xx]	Slide the staple finisher to the left, and then remove the jammed paper.
Area G, doors C, J, and H, finisher bin	[x]-page jam, open door H and rotate knob SD3 clockwise. Leave paper in bin. [426.xx–428.xx]	Open door H, and then remove the jammed paper.

200 paper jams

[x]-page jam, clear jammed paper from multipurpose feeder. [200.xx]

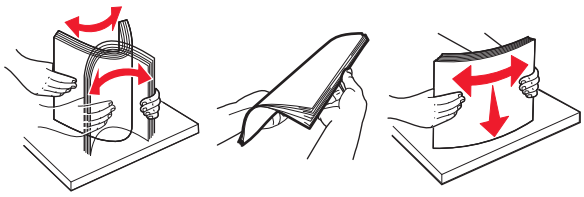
1. Remove all paper from the multipurpose feeder.
2. Remove the jammed paper.

3. Open door C to remove any paper fragments.

   Note: Make sure that door C does not hit any cable attached to the printer.

4. Close door C.

5 Flex the sheets back and forth to loosen them, and then fan them. Do not fold or crease the paper. Straighten the edges on a level surface.



6 Reload the paper.

200 paper jam messages

Error code	Description	Action
200.06	The sensor (registration) did not detect the paper fed from the MPF.	See "MPF jam service check" on page 68.
200.09	While feeding from the MPF, skew correction did not complete at the registration roller.	
200.16	The sensor (registration) did not detect the paper fed from tray 1.	See "Registration jam service check" on page 65.
200.19	While feeding from tray 1, skew correction did not complete at the registration roller.	
200.91	The paper remains detected at the sensor (registration) after the printer is turned on.	
200.92	Paper size error was detected.	
200.93	While feeding from tray 2, tray 3 or tray 4, skew correction did not complete at the registration roller.	
200.99	The sensor (registration) did not detect the paper fed from tray 2, tray 3, tray 4, or tray 5.	

Registration jam service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Do most of the recent error codes end with a 1? (Example: 241.11, 200.91)	Go to step 2.	Go to step 8.
Step 2 Make sure that the registration paper path, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the registration sensor actuator for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the sensor (registration). Is it free of damage?	Go to step 5.	Go to step 7.
Step 5 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Registration** Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 **a** Reseat the registration sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the sensor (registration). Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Enter the Diagnostics menu, and then navigate to: **INPUT TRAY TESTS** > **Feed Tests** > **Tray 1** Does the leading edge of the paper reach the sensor (registration)?	Go to step 10.	Go to step 9.
Step 9 Check the tray 2 transport roller for damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the registration roller for wear or damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Registration** Does the motor run?	Go to step 15.	Go to step 12.

Action	Yes	No
Step 12 **a** Reseat the registration motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Check the registration belt for proper tension, and adjust if necessary. **b** Check the registration gear and belt for wear or damage, and replace if necessary. See **"Registration unit belt removal" on page 319** and **"Registration unit gears removal" on page 320**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Replace the motor (registration). See **"Motor (registration) removal" on page 370**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Check the feed belts for proper tension, and adjust if necessary. **b** Check the feed gears and belts for wear or damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Is tray 1 the paper source?	Go to step 18.	Go to step 17.
Step 17 **a** Check the tray 2 transport drive belt for proper tension, and adjust if necessary. **b** Check the tray 2 transport drive gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Make sure that the paper feed drive assembly is properly installed. **b** Make sure that the assembly is clear of obstructions. **c** Check the assembly for damage, and replace if necessary. See **"Feed drive assembly removal" on page 375**. Does the problem remain?	Go to step 19.	The problem is solved.

Action	Yes	No
Step 19 **a** Make sure that the registration transport assembly is properly installed. **b** Make sure that the assembly is clear of obstructions. **c** Check the assembly for damage, and replace if necessary. See **"Registration transport assembly" on page 282**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Make sure that the blue screws and marked screws in the paper path area are tightened. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Check the expansion controller board pins for damage, and replace if necessary. See **"Expansion controller board removal" on page 351**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

MPF jam service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Do most of the recent error codes end with a 1? (Example: 241.11, 200.91)	Go to step 2.	Go to step 8.
Step 2 Make sure that the MPF paper path, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the MPF empty sensor actuator for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Check the sensor (MPF empty). Is it free of damage?	Go to step 5.	Go to step 7.
Step 5 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **MPF empty** Does the sensor status change while toggling the sensor?	Go to step 6.	Go to step 8.
Step 6 **a** Reseat the MPF empty sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the sensor (MPF empty). Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Make sure that the MPF lift plate, including the cam and gears, are properly installed. **b** Check the plate, including the cam and gears, for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Observe the MPF lift plate solenoid. Is it working properly?	Go to step 11.	Go to step 10.
Step 10 **a** Reseat the MPF lift plate solenoid cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the MPF lift plate solenoid, including the actuator for wear or damage, and replace if necessary. See **"MPF lift plate solenoid removal" on page 301**. Does the problem remain?	Go to step 12.	The problem is solved.

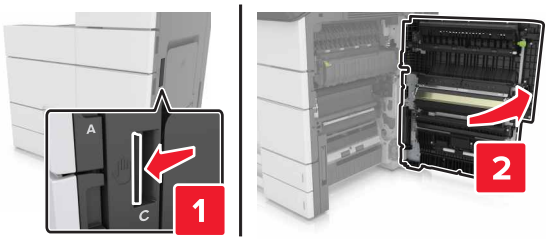
Action	Yes	No
Step 12 Observe the MPF lift plate clutch. Is it working properly?	Go to step 14.	Go to step 13.
Step 13 **a** Reseat the MPF lift plate clutch cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the MPF lift plate clutch for damage, and replace if necessary. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the sensor (MPF lift plate). Is it free of damage?	Go to step 16.	Go to step 18.
Step 16 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **MPF lift plate position** Does the sensor status change while toggling the sensor?	Go to step 19.	Go to step 17.
Step 17 **a** Reseat the MPF lift plate sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Replace the sensor (MPF lift plate). See **"Sensor (MPF lift plate) removal" on page 303**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Paper feed** Does the motor run?	Go to step 23.	Go to step 20.
Step 20 **a** Reseat the feed motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 21.	The problem is solved.

Action	Yes	No
Step 21 **a** Check the paper feed belt for proper tension, and adjust if necessary. **b** Check the paper feed gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Replace the motor (feed). See **"Motor (feed) removal" on page 372**. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 **a** Make sure that the MPF is properly installed. **b** Check the MPF for damage, and replace if necessary. See **"MPF removal" on page 297**. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

202 paper jams

[x]-page jam, open door C and clear all jammed paper. [2yy.xx]

1 Open door C. Make sure that it does not hit any cable attached to the printer.

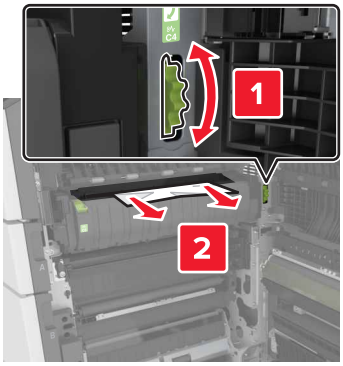


2 Remove the jammed paper from any of the following locations:

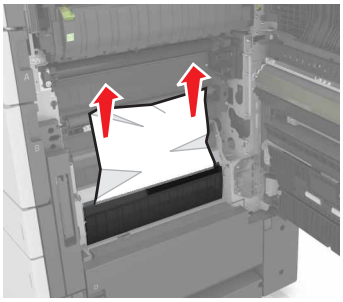
Note: Make sure that all paper fragments are removed.

CAUTION—HOT SURFACE: The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching it.

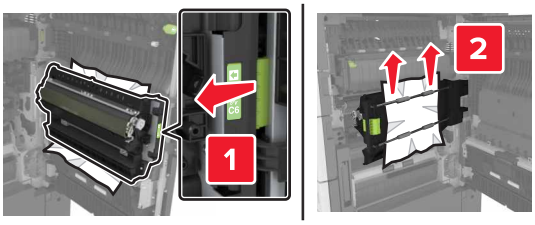
- Fuser area



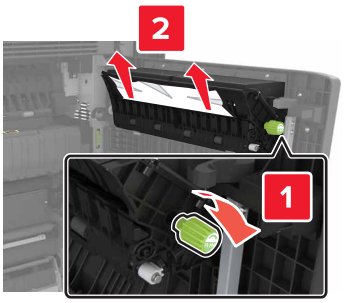
- Below the fuser area



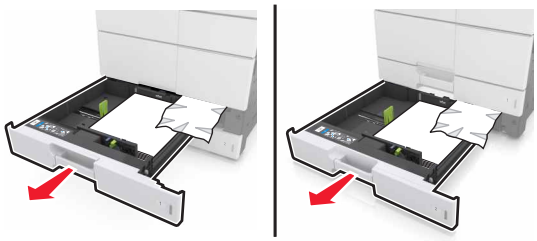
- Duplex area



- Above the duplex area



3 Open the standard trays, and then locate the jammed paper.



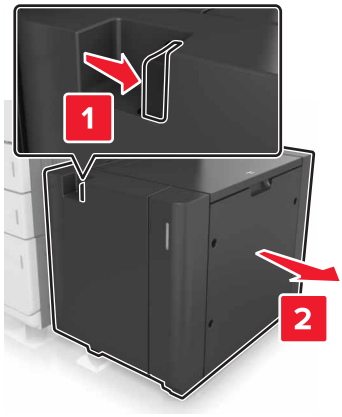
4 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.

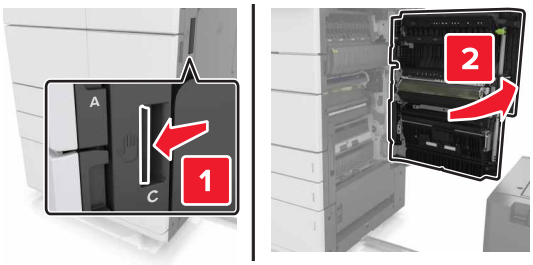
5 Close the trays and door C.

[x]-page jam, slide the 3000-sheet tray and open door C. [2yy.xx]

1 Slide the 3000-sheet tray.



2 Open door C. Make sure that it does not hit any cable attached to the printer.

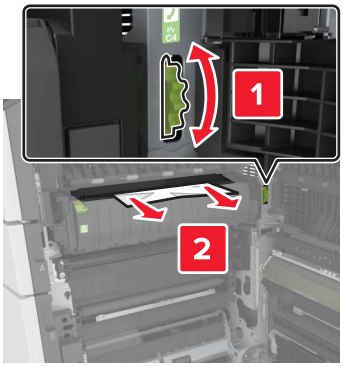


3 Remove the jammed paper from any of the following locations:

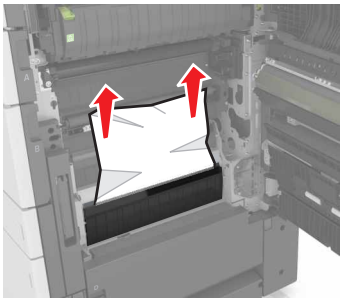
Note: Make sure that all paper fragments are removed.

CAUTION—HOT SURFACE: The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching it.

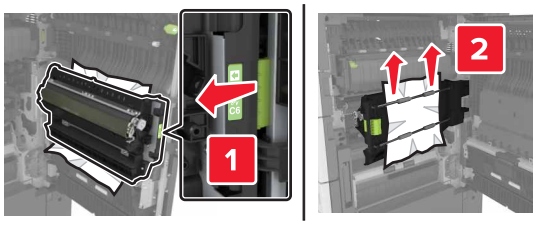
- Fuser area



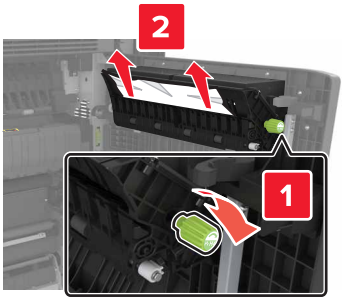
- Below the fuser area



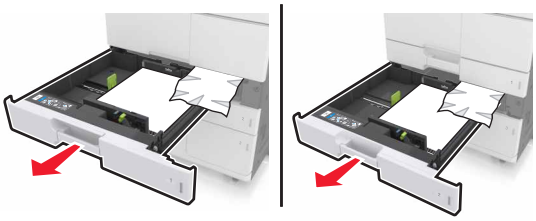
- Duplex area



- Above the duplex area



4 Open the standard trays, and then locate the jammed paper.



5 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.

6 Close the trays and door C.

7 Slide the 3000-sheet tray back into place.

202 paper jam messages

Error code	Description	Action
202.91	The paper remains detected at the sensor (exit) after the printer is turned on.	See "Exit jam service check" on page 76.
202.93	The sensor (fuser exit) did not detect the paper.	
202.95	The paper remains detected at the sensor (fuser exit) during a print job.	

Exit jam service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Do most of the recent error codes end with a 1? (Example: 241.11, 200.91)	Go to step 2.	Go to step 8.
Step 2 Make sure that the exit paper path, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the exit sensor actuator for damage, and replace if necessary. See "Fuser exit sensor actuator removal" on page 288. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the sensor (exit). Is it free of damage?	Go to step 5.	Go to step 7.
Step 5 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Paper exit** Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 **a** Reseat the exit sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 Replace the sensor (exit). Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Enter the Diagnostics menu, and then navigate to: **INPUT TRAY TESTS** > **Feed Tests** > **Tray 1** Does the leading edge of the paper reach the fuser?	Go to step 9.	Go to step 10.
Step 9 Does the leading edge of the paper reach the sensor (fuser exit)?	Go to step 14.	Go to step 13.
Step 10 Check the registration roller for wear or damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Make sure that the registration transport assembly is properly installed. **b** Make sure that the assembly is clear of obstructions. **c** Check the assembly for damage, and replace if necessary. See **"Registration transport assembly" on page 282**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Make sure that the registration unit is properly installed. **b** Make sure that the unit is clear of obstructions. **c** Check the unit for damage, and replace if necessary. See **"Registration unit assembly removal" on page 314**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the fuser for wear or damage, and replace if necessary. See **"Fuser removal" on page 279**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the fuser exit clutch for wear or damage, and replace if necessary. See **"Fuser removal" on page 279**. Does the problem remain?	Go to step 15.	The problem is solved.

Action	Yes	No
Step 15 **a** Make sure that the duplex transport assembly is properly installed. **b** Make sure that the assembly is clear of obstructions. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the assembly, including its exit roller and gears for damage, and replace if necessary. See **"Duplex transport assembly removal" on page 285**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 **a** Check the fuser belt for proper tension, and adjust if necessary. **b** Check the fuser gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Make sure that the exit guide assembly is properly installed. **b** Make sure that the assembly is clear of obstructions. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the exit guide assembly, including the rollers and diverter for wear or damage, and replace if necessary. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Check the diverter solenoid for proper operation. Check the solenoid for wear or damage, and replace if necessary. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Redrive forward** Does the motor run?	Go to step 25.	Go to step 22.
Step 22 **a** Reseat the redrive motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 23.	The problem is solved.

Action	Yes	No
Step 23 **a** Check the redrive belt for proper tension, and adjust if necessary. **b** Check the redrive gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Replace the motor (redrive). See **"Motor (redrive) removal" on page 364**. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Make sure that the blue screws and marked screws in the paper path area are tightened. Does the problem remain?	Go to step 26.	The problem is solved.
Step 26 Check the expansion controller board pins for damage, and replace if necessary. See **"Expansion controller board removal" on page 351**. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

23y paper jams

23y paper jam messages

Error code	Description	Action
230.91	The paper remains detected at the sensor (duplex pass through 1) after the printer is turned on.	See **"Duplex jam service check" on page 80**.
230.93	The sensor (duplex pass through 1) did not detect the paper.	
232.93	The paper remains detected at the sensor (registration) during a duplex job.	
232.99	Skew correction did not complete at the registration roller during a duplex job.	

Duplex jam service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Do most of the recent error codes end with a 1? (Example: 241.11, 200.91)	Go to step 2.	Go to step 5.
Step 2 Make sure that the duplex paper path, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the duplex pass through 1 and duplex pass through 2 sensor actuator for damage, and replace if necessary. See **"Duplex pass through 1 actuator removal" on page 290**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the sensor (duplex pass through 1) and sensor (duplex pass through 2) for damage, and replace if necessary. See **"Sensor (duplex pass through 1) removal" on page 289** and **"Sensor (duplex pass through 2) removal" on page 318**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Enter the Diagnostics menu, and then navigate to: **INPUT TRAY TESTS** > **Feed Tests** > **Tray 1** Does the leading edge of the paper reach the sensor (duplex pass through 1)?	Go to step 6.	Go to step 7.
Step 6 Does the leading edge of the paper reach the sensor (registration)?	Go to step 14.	Go to step 13.
Step 7 **a** Check the duplex transport belt for proper tension, and adjust if necessary. **b** Check the duplex transport gear and belt for wear or damage, and replace if necessary. See **"Duplex transport belt removal" on page 292** and **"Duplex transport gears removal" on page 292**. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 **a** Make sure that the duplex transport assembly is properly installed. **b** Make sure that the assembly is clear of obstructions. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the duplex transport assembly, including its rollers and guides for damage, and replace if necessary. See **"Duplex transport assembly removal" on page 285**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Duplex transport tray** Does the motor run?	Go to step 13.	Go to step 11.
Step 11 **a** Reseat the duplex transport motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the motor (duplex transport). See **"Motor (duplex transport) removal" on page 293**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Make sure that the registration unit is properly installed. **b** Check the unit, including the duplex pass through 2 and duplex exit rollers for wear or damage, and replace if necessary. See **"Registration unit assembly removal" on page 314**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Transport tray** Does the motor run?	Go to step 18.	Go to step 15.
Step 15 **a** Reseat the transport motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.

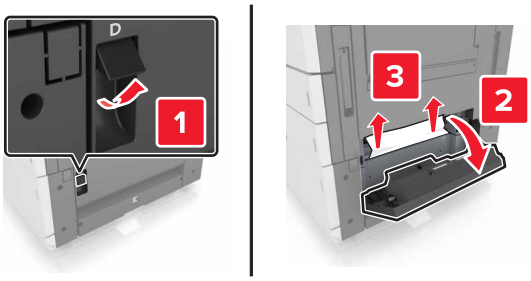
Action	Yes	No
Step 16 **a** Check the transport motor belt for proper tension, and adjust if necessary. **b** Check the transport motor gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Replace the motor (transport). See **"Motor (transport) removal" on page 367**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the expansion controller board pins for damage, and replace if necessary. See **"Expansion controller board removal" on page 351**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

241–242 paper jams

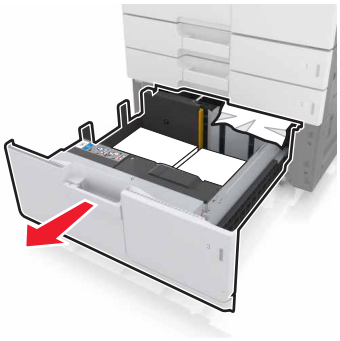
[x]-page jam, open door D and clear all jammed paper. [24y.xx]

1 Open door D, and then remove the jammed paper.

Note: Make sure that all paper fragments are removed.

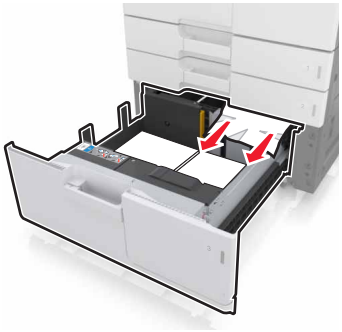


2 Open the optional tray, and then locate the jammed paper.



3 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.



4 Close the tray and door D.

241–242 paper jam messages

Error code	Description	Action
241.11	The paper remains detected at the sensor (tray 1 feed) after the printer is turned on.	See "Tray 1 feed jam service check" on page 84.
241.91	The paper remains detected at the sensor (tray 1 feed) after the printer is turned on.	
242.21	The paper remains detected at the sensor (tray 2 feed) after the printer is turned on.	See "Tray 2 feed jam service check" on page 87.
242.26	The sensor (tray 2 transport) did not detect the paper.	
242.91	The paper remains detected at the sensor (tray 2 transport) after the printer is turned on.	
242.93	The sensor (tray 2 transport) did not detect the paper from tray 3.	See "2 x 500-sheet tray 3 jam service check" on page 98.
242.93	The sensor (tray 2 transport) did not detect the paper from the 3000-sheet tray.	See "3000-sheet tray transport jam service check" on page 91.

Tray 1 feed jam service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Do most of the recent error codes end with a 1? (Example: 241.11, 200.91)	Go to step 2.	Go to step 7.
Step 2 Make sure that the tray 1 feed paper path, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor (tray 1 paper feed). Is it free of damage?	Go to step 4.	Go to step 6.
Step 4 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Tray 1 paper feed** Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 **a** Reseat the tray 1 paper feed sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the sensor (tray 1 paper feed). Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Enter the Diagnostics menu, and then navigate to: **INPUT TRAY TESTS** > **Feed Tests** > **Tray 1** Does the leading edge of the paper reach the sensor (tray 1 paper feed)?	Go to step 14.	Go to step 8.
Step 8 Check the tray 1 feed, pick, and separator rollers for damage, and replace if necessary. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Paper feed** Does the motor run?	Go to step 13.	Go to step 10.
Step 10 **a** Reseat the feed motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Check the paper feed belt for proper tension, and adjust if necessary. **b** Check the paper feed gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the motor (feed). See **"Motor (feed) removal" on page 372**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Check the tray 1 paper feed clutch for damage, and replace if necessary. **b** Reseat the clutch cable. Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Registration** Does the motor run?	Go to step 18.	Go to step 15.
Step 15 **a** Reseat the registration motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.

Action	Yes	No
Step 16 **a** Check the registration belt for proper tension, and adjust if necessary. **b** Check the registration gear and belt for wear or damage, and replace if necessary. See **"Registration unit belt removal" on page 319** and **"Registration unit gears removal" on page 320**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Replace the motor (registration). See **"Motor (registration) removal" on page 370**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Make sure that the registration unit is properly installed. **b** Make sure that the unit is clear of obstructions. **c** Check the unit for damage, and replace if necessary. See **"Registration unit assembly removal" on page 314**. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 **a** Make sure that the paper feed drive assembly is properly installed. **b** Make sure that the assembly is clear of obstructions. **c** Check the assembly for damage, and replace if necessary. See **"Feed drive assembly removal" on page 375**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 **a** Make sure that the paper feed unit is properly installed. **b** Make sure that the unit is clear of obstructions. **c** Check the unit for damage, and replace if necessary. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Make sure that the blue screws and marked screws in the paper path area are tightened. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Tray 2 feed jam service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Do most of the recent error codes end with a 1? (Example: 241.11, 200.91)	Go to step 2.	Go to step 7.
Step 2 Make sure that the tray 2 feed paper path, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor (tray 2 paper feed). Is it free of damage?	Go to step 4.	Go to step 6.
Step 4 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Tray 2 paper feed** Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 **a** Reseat the tray 2 paper feed sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the sensor (tray 2 paper feed). Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Enter the Diagnostics menu, and then navigate to: **INPUT TRAY TESTS** > **Feed Tests** > **Tray 2** Does the leading edge of the paper reach the sensor (tray 2 paper feed)?	Go to step 8.	Go to step 9.
Step 8 Does the leading edge of the paper reach the sensor (tray 2 transport)?	Go to step 15.	Go to step 10.

Action	Yes	No
Step 9 Check the tray 2 feed, pick, and separator rollers for damage, and replace if necessary. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Paper feed** Does the motor run?	Go to step 14.	Go to step 11.
Step 11 **a** Reseat the feed motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check the paper feed belt for proper tension, and adjust if necessary. **b** Check the paper feed gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the motor (feed). See **"Motor (feed) removal" on page 372**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Make sure that the paper feed drive assembly is properly installed. **b** Make sure that the assembly is clear of obstructions. **c** Check the assembly for damage, and replace if necessary. See **"Feed drive assembly removal" on page 375**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Tray 2 vertical transport** Does the motor run?	Go to step 19	Go to step 16.
Step 16 **a** Reseat the tray 2 transport motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
Step 17 **a** Check the transport drive belt for proper tension, and adjust if necessary. **b** Check the transport drive assembly for wear or damage, and replace if necessary. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Replace the motor (tray 2 transport). Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check the tray 2 transport roller for damage, and replace if necessary. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 **a** Make sure that the tray transport guide is properly installed. **b** Make sure that the guide is clear of obstructions. **c** Check the guide for damage, and replace if necessary. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 **a** Make sure that the paper feed unit is properly installed. **b** Make sure that the unit is clear of obstructions. **c** Check the unit for damage, and replace if necessary. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Make sure that the blue screws and marked screws in the paper path area are tightened. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Check the expansion controller board pins for damage, and replace if necessary. See **"Expansion controller board removal" on page 351**. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2 x 500-sheet tray 3 transport jam service check

Action	Yes	No
Step 1 Make sure that the paper path between tray 2 and tray 3, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **INPUT TRAY TESTS** > **Feed Tests** > **Tray 3** **b** Check the movement and position of the paper. Does the leading edge of the paper reach the sensor (tray 2 transport)?	Go to step 3.	Go to step 7.
Step 3 Check the sensor (tray 2 transport). Is it free of damage?	Go to step 4.	Go to step 6.
Step 4 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Tray 2 transport** Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 5.
Step 5 **a** Reseat the sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the sensor (tray 2 transport). Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the tray 3 transport roller for damage, and replace if necessary. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **2 x 500-Sheet Tray Motor Tests** > **Tray 3 transport** Does the motor run?	Go to step 12.	Go to step 9.

Action	Yes	No
Step 9 **a** Reseat the motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the tray 3 transport belt for proper tension, and adjust if necessary. **b** Check the transport gear and belt for wear or damage, and replace if necessary. See **"2 x 500-sheet tray 3 transport belts and gears removal" on page 495**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the motor (2 x 500-sheet tray 3 transport). See **"2 x 500-sheet tray feed and transport motors removal" on page 486**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the 2 x 500-sheet tray controller board pins for damage, and replace if necessary. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

3000-sheet tray transport jam service check

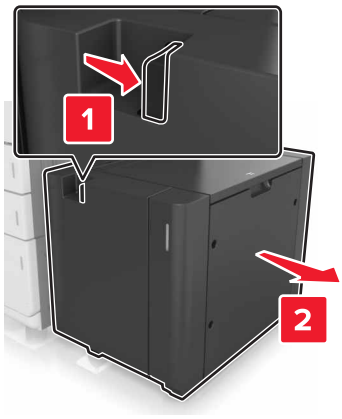
Action	Yes	No
Step 1 **a** Make sure that the tray is free of debris. **b** Make sure that the tray is properly installed and aligned to the printer. **c** Reseat the interface cable that is plugged into the 2500- or 2 x 500-sheet tray. **d** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 **a** Remove the rear cover. **b** Make sure that the sensor (3000-sheet tray set) is properly installed. **c** Make sure that the sensor is free of debris or dust. **d** Reseat the cable on the sensor and the cable CN5 on the controller board. **e** Check the sensor for damage. Is it free of damage?	Go to step 3.	Go to step 4.
Step 3 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **3000-Sheet Tray Sensor Tests** > **Tray set** Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. See **"Sensor (3000-sheet tray set) removal" on page 516**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Reseat the cable on the rest of the sensors. **b** Reseat the cable CN5 on the controller board. **c** If necessary, reseat all the junction connectors on the cables. **d** Make sure that the cables do not block the path of moving parts. **e** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Reseat the cable on all of the motors and on the top door switch. **b** Reseat the cables CN3 and CN4 on the controller board. **c** If necessary, reseat all the junction connectors on the cables. **d** Make sure that the cables do not block the path of moving parts. **e** Check the cables for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

243–245 paper jams

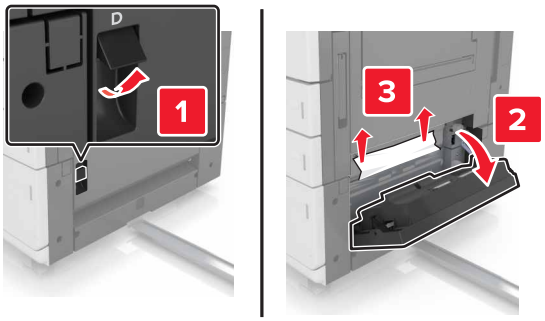
[x]-page jam, slide the 3000-sheet tray and open door D. [24y.xx]

1 Slide the 3000-sheet tray.

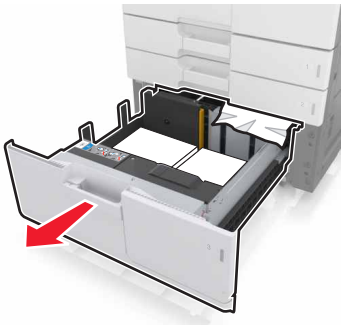


2 Open door D, and then remove the jammed paper.

Note: Make sure that all paper fragments are removed.

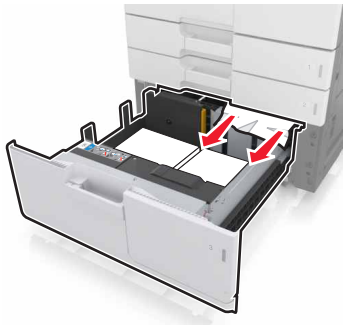


3 Open the optional tray, and then locate the jammed paper.



4 Remove the jammed paper.

Note: Make sure that all paper fragments are removed.



5 Close the tray and door D.

6 Slide the 3000-sheet tray back into place.

243 paper jam messages

Error code	Description	Action
243.31	2 x 500-sheet tray: The paper remains detected at the sensor (tray 3 feed) after the printer is turned on.	See **“2 x 500-sheet tray 3 jam service check” on page 98**.
243.31	2500-sheet tray: The paper remains detected at the sensor (tray 3 feed) after the printer is turned on.	See **“2500-sheet tray jam service check” on page 95**.
243.36	2 x 500-sheet tray: The sensor (tray 3 transport) did not detect the paper.	See **“2 x 500-sheet tray 3 jam service check” on page 98**.
243.36	2500-sheet tray: The sensor (tray 3 transport) did not detect the paper.	See **“2500-sheet tray jam service check” on page 95**.
243.43	2 x 500-sheet tray: The paper remains detected at the sensor (tray 3 transport) during a print job.	See **“2 x 500-sheet tray 4 transport jam service check” on page 102**.
243.43	2500-sheet tray: The paper remains detected at the sensor (tray 3 transport) during a print job.	See **“2500-sheet tray jam service check” on page 95**.
243.91	2 x 500-sheet tray: The paper remains detected at the sensor (tray 3 transport) after the printer is turned on.	See **“2 x 500-sheet tray 3 jam service check” on page 98**.
243.91	2500-sheet tray: The paper remains detected at the sensor (tray 3 transport) after the printer is turned on.	See **“2500-sheet tray jam service check” on page 95**.

244 paper jam messages

Error code	Description	Action
244.41	The paper remains detected at the sensor (tray 4 feed) after the printer is turned on.	See "2 x 500-sheet tray 4 jam service check" on page 100.
244.46	The sensor (tray 4 transport) did not detect the paper.	See "2 x 500-sheet tray 4 jam service check" on page 100.
244.46	The sensor (3000-sheet tray feed) did not detect the paper.	See "3000-sheet tray feed jam service check" on page 104.
244.91	The paper remains detected at the sensor (tray 4 transport) after the printer is turned on.	See "2 x 500-sheet tray 4 jam service check" on page 100.
244.91	The paper remains detected at the sensor (3000-sheet tray transport) after the printer is turned on.	See "3000-sheet tray jam service check" on page 106.

245 paper jam messages

Error code	Description	Action
245.56	The sensor (3000-sheet tray feed) did not detect the paper.	See "3000-sheet tray feed jam service check" on page 104.
245.91	The paper remains detected at the sensor (3000-sheet tray transport) after the printer is turned on.	See "3000-sheet tray jam service check" on page 106.

2500-sheet tray jam service check

Actions	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** **b** Check the last digits of the error codes. Do most of the recent error codes end with a 1? (Example: 241.11, 200.91)	Go to step 2.	Go to step 7.
Step 2 Make sure that the 2500-sheet tray feed paper path, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor (2500-sheet tray feed) for damage. Is it free of damage?	Go to step 4.	Go to step 6.

Actions	Yes	No
Step 4 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **2500-Sheet Tray Sensor Tests** Does the sensor status change while toggling the sensor?	Go to step 13.	Go to step 5.
Step 5 **a** Reseat the 2500-sheet tray feed sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the sensor (2500-sheet tray feed). See **"Sensor (2500-sheet tray feed) removal" on page 468**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **INPUT TRAY TESTS** > **Feed Tests** > **Tray 3** **b** Observe the movement and position of the paper. Does the leading edge of the paper reach the sensor (2500-sheet tray feed)?	Go to step 13.	Go to step 8.
Step 8 Check the 2500-sheet tray feed, pick, and separator rollers for wear or damage, and replace if necessary. See **"2500-sheet tray paper feed assembly removal" on page 456** and **"2500-sheet tray pick assembly removal" on page 456**. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Make sure that the motor (2500-sheet tray feed) is properly installed. **b** Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **2500-Sheet Tray Motor Tests** > **Tray feed** Does the motor run?	Go to step 17.	Go to step 10.
Step 10 **a** Reseat the 2500-sheet tray feed and transport motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.

Actions	Yes	No
Step 11 **a** Check the 2500-sheet tray feed and transport motor belt for proper tension, and adjust if necessary. **b** Check the 2500-sheet tray feed and transport motor belt and gears for wear or damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the motor (2500-sheet tray feed). See **"Motor (2500-sheet tray feed) removal" on page 461**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the sensor (2500-sheet tray transport) for damage. Is it free of damage?	Go to step 14.	Go to step 16.
Step 14 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **2500-Sheet Tray Sensor Tests** Does the sensor status change while toggling the sensor?	Go to step 17.	Go to step 15.
Step 15 **a** Reseat the 2500-sheet tray transport sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the sensor (2500-sheet tray transport). See **"Sensor (2500-sheet tray transport) removal" on page 472**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Check the 2500-sheet tray controller board pins for damage, and replace if necessary. See **"2500-sheet tray controller board removal" on page 443**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2 x 500-sheet tray 3 jam service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Do most of the recent error codes end with a 1? (Example: 241.11, 200.91)	Go to step 2.	Go to step 7.
Step 2 Make sure that the tray 3 feed paper path, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor (2 x 500-sheet tray 3 feed). Is it free of damage?	Go to step 4.	Go to step 6.
Step 4 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **2 x 500-Sheet Tray Sensor Tests** > **Tray 3 feed** Does the sensor status change while toggling the sensor?	Go to step 13.	Go to step 5.
Step 5 **a** Reseat the sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the sensor (2 x 500-sheet tray 3 feed). See **"2 x 500-sheet tray transport assembly sensors removal" on page 492**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Enter the Diagnostics menu, and then navigate to: **INPUT TRAY TESTS** > **Feed Tests** > **Tray 3** Does the leading edge of the paper reach the sensor (2 x 500-sheet tray 3 paper feed)?	Go to step 13.	Go to step 8.
Step 8 Check the tray 3 feed, pick, and separator rollers for damage, and replace if necessary. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **2 x 500-Sheet Tray Motor Tests** > **Tray 3 feed** Does the motor run?	Go to step 17.	Go to step 10.
Step 10 **a** Reseat the motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Check the paper feed belt for proper tension, and adjust if necessary. **b** Check the paper feed gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the motor (2 x 500-sheet tray 3 transport). See **"2 x 500-sheet tray feed and transport motors removal" on page 486**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the sensor (2 x 500-sheet tray 3 transport). Is it free of damage?	Go to step 14.	Go to step 16.
Step 14 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **2 x 500-Sheet Tray Sensor Tests** > **Tray 3 transport** Does the sensor status change while toggling the sensor?	Go to step 17.	Go to step 15.
Step 15 **a** Reseat the sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the sensor (2 x 500-sheet tray 3 transport). See **"2 x 500-sheet tray transport assembly sensors removal" on page 492**. Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
Step 17 Check the 2 x 500-sheet tray controller board pins for damage, and replace if necessary. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2 x 500-sheet tray 4 jam service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Do most of the recent error codes end with a 1? (Example: 241.11, 200.91)	Go to step 2.	Go to step 7.
Step 2 Make sure that the tray 4 feed paper path, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor (2 x 500-sheet tray 4 feed). Is it free of damage?	Go to step 4.	Go to step 6.
Step 4 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **2 x 500-Sheet Tray Sensor Tests** > **Tray 4 feed** Does the sensor status change while toggling the sensor?	Go to step 13.	Go to step 5.
Step 5 **a** Reseat the sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the sensor (2 x 500-sheet tray 4 feed). See **"2 x 500-sheet tray transport assembly sensors removal" on page 492**. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 Enter the Diagnostics menu, and then navigate to: **INPUT TRAY TESTS** > **Feed Tests** > **Tray 4** Does the leading edge of the paper reach the sensor (2 x 500-sheet tray 4 paper feed)?	Go to step 13.	Go to step 8.
Step 8 Check the tray 4 feed, pick, and separator rollers for damage, and replace if necessary. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **2 x 500-Sheet Tray Motor Tests** > **Tray 4 feed** Does the motor run?	Go to step 17.	Go to step 10.
Step 10 **a** Reseat the motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Check the paper feed belt for proper tension, and adjust if necessary. **b** Check the paper feed gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the motor (2 x 500-sheet tray 4 transport). See **"2 x 500-sheet tray feed and transport motors removal" on page 486**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the sensor (2 x 500-sheet tray 4 transport). Is it free of damage?	Go to step 14.	Go to step 16.
Step 14 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **2 x 500-Sheet Tray Sensor Tests** > **Tray 4 transport** Does the sensor status change while toggling the sensor?	Go to step 17.	Go to step 15.

Action	Yes	No
Step 15 **a** Reseat the sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the sensor (2 x 500-sheet tray 4 transport). See **"2 x 500-sheet tray transport assembly sensors removal" on page 492**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Check the 2 x 500-sheet tray controller board pins for damage, and replace if necessary. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2 x 500-sheet tray 4 transport jam service check

Action	Yes	No
Step 1 Make sure that the paper path between tray 3 and tray 4, including the sensors, are free of debris or dust. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **INPUT TRAY TESTS** > **Feed Tests** > **Tray 4** **b** Check the movement and position of the paper. Does the leading edge of the paper reach the sensor (tray 3 transport)?	Go to step 3.	Go to step 7.
Step 3 Check the sensor (tray 3 transport). Is it free of damage?	Go to step 4.	Go to step 6.
Step 4 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Tray 3 transport** Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 5.

Action	Yes	No
Step 5 **a** Reseat the sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the sensor (tray 3 transport). See **"2 x 500-sheet tray transport assembly sensors removal" on page 492**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the tray 4 transport roller for damage, and replace if necessary. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **2 x 500-Sheet Tray Motor Tests** > **Tray 4 transport** Does the motor run?	Go to step 12.	Go to step 9.
Step 9 **a** Reseat the motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the tray 4 transport belt for proper tension, and adjust if necessary. **b** Check the transport gear and belt for wear or damage, and replace if necessary. See **"2 x 500-sheet tray 4 transport belts and gears removal" on page 496**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the motor (2 x 500-sheet tray 4 transport). See **"2 x 500-sheet tray feed and transport motors removal" on page 486**. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Check the 2 x 500-sheet tray controller board pins for damage, and replace if necessary. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

3000-sheet tray feed jam service check

Action	Yes	No
Step 1 **a** Open the top door. **b** Make sure that the tray is free of debris. **c** Make sure that the tray is properly installed and aligned to the printer. **d** Reseat the interface cable that is plugged into the 2500- or 2 x 500-sheet tray. **e** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the feed, separator, and pick rollers are properly installed. **b** Make sure that the rollers are free of debris or dust. **c** Check the rollers for wear or damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Remove the left top cover. **b** Make sure that the transport roller is properly installed. **c** Make sure that the roller is free of debris or dust. **d** Check the roller for wear or damage, and replace if necessary. See **"3000-sheet tray feed roller assembly removal" on page 520**. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 **a** Make sure that the following sensors are properly installed: • Sensor (3000-sheet tray elevator level) • Sensor (3000-sheet tray empty) • Sensor (3000-sheet tray feed) **b** Make sure that the sensors are free of debris or dust. **c** Reseat the cable on the sensors and the cable CN5 on the controller board. **d** Check the sensors for damage. Are they free of damage?	Go to step 5.	Go to step 6.
Step 5 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **3000-Sheet Tray Sensor Tests** > **Tray upper limit** or **Tray paper feed** Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 6.
Step 6 Replace the sensor. See **"Sensor (3000-sheet tray elevator level) removal" on page 511** or **"Sensor (3000-sheet tray feed) removal" on page 512**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Test the motor (3000-sheet tray feed) and motor (3000-sheet tray transport). Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **3000-Sheet Tray Motor Tests** > **Tray feed** or **Tray transport** Do the motors run?	Go to step 9.	Go to step 8.
Step 8 **a** Reseat the cable on the motor and the cable CN4 on the controller board. **b** Check the motors and cables for damage, and replace if necessary. See **"3000-sheet tray feed and transport motors removal" on page 519**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the belts and gears connected to the motors for wear or damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 **a** Reseat the cable on the rest of the sensors. **b** Reseat the cable CN5 on the controller board. **c** If necessary, reseat all the junction connectors on the cables. **d** Make sure that the cables do not block the path of moving parts. **e** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Reseat the cable on the rest of the motors and on the top door switch. **b** Reseat the cables CN3 and CN4 on the controller board. **c** If necessary, reseat all the junction connectors on the cables. **d** Make sure that the cables do not block the path of moving parts. **e** Check the cables for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

3000-sheet tray jam service check

Action	Yes	No
Step 1 **a** Open the top door. **b** Make sure that the tray is free of debris. **c** Make sure that the tray is properly installed and aligned to the printer. **d** Reseat the interface cable that is plugged into the 2500- or 2 x 500-sheet tray. **e** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the sensor (3000-sheet tray feed) is properly installed. **b** Make sure that the sensor is free of debris or dust. **c** Reseat the cable on the sensor and the cable CN5 on the controller board. **d** Check the sensor for damage. Is it free of damage?	Go to step 3.	Go to step 4.
Step 3 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **3000-Sheet Tray Sensor Tests** > **Tray paper feed** Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 4.

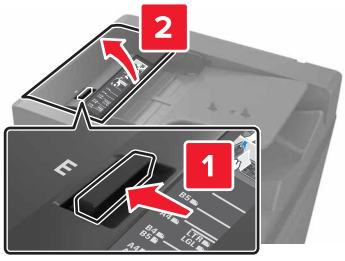
Action	Yes	No
Step 4 Replace the sensor. See **"Sensor (3000-sheet tray feed) removal" on page 512**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Reseat the cable on all of the sensors. **b** Reseat the cable CN5 on the controller board. **c** If necessary, reseat all the junction connectors on the cables. **d** Make sure that the cables do not block the path of moving parts. **e** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Reseat the cable on all of the motors and on the top door switch. **b** Reseat the cables CN3 and CN4 on the controller board. **c** If necessary, reseat all the junction connectors on the cables. **d** Make sure that the cables are not in the path of moving parts. **e** Check the cables for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

28y paper jams

[x]-page jam, press latch at area E to open ADF's top cover. [28y.xx]

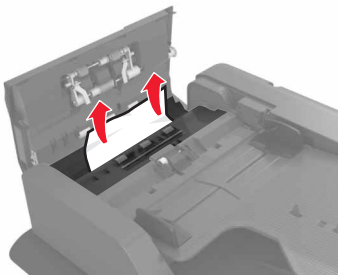
1 Remove all original documents from the ADF tray.

2 Open the ADF top cover.



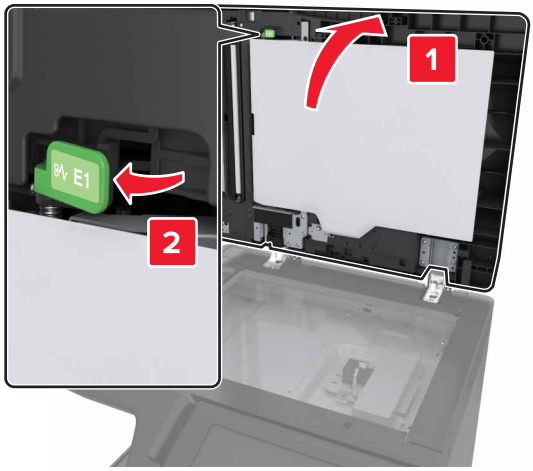
3 Remove jammed paper.

Note: Make sure that all paper fragments are removed.



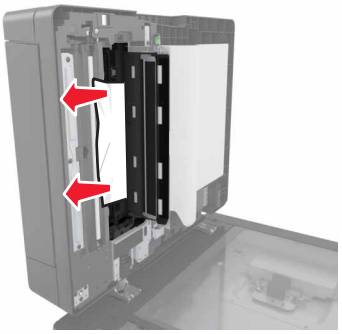
4 Close the cover.

5 Open the scanner cover, and then open the bottom ADF door.

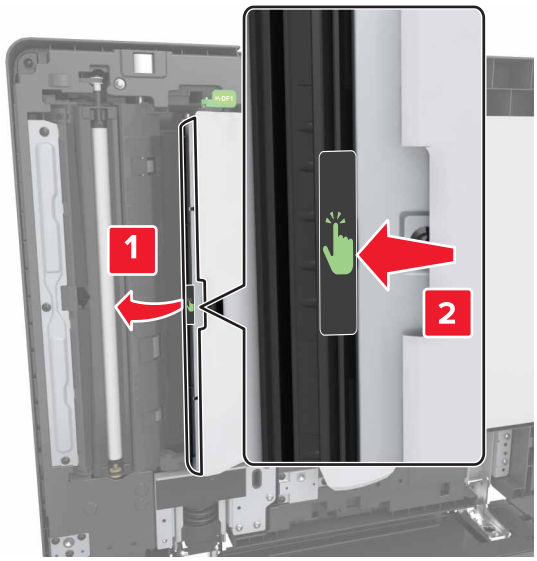


6 Remove jammed paper.

Note: Make sure that all paper fragments are removed.



7 Close the door.



8 Close the scanner cover.

28y paper jam messages

Error code	Description	Action
280.13	The sensor (ADF registration) did not detect the paper.	See "ADF registration jam service check" on page 110.
280.15	The paper remains detected at the sensor (ADF registration) during a job.	
281.11	The paper remains detected at the sensor (ADF feed) after the printer is turned on.	See "ADF feed jam service check" on page 112.
281.13	The sensor (ADF feed) did not detect the picked paper.	
281.15	The paper remains detected at the sensor (ADF feed) during a job.	
282.13	The sensor (ADF exit) did not detect the paper after scanning.	See "ADF exit jam service check" on page 115.
282.15	The paper remains detected at the sensor (ADF exit) during a job.	

Error code	Description	Action
283.11	The paper remains detected at the sensor (ADF scan) after the printer is turned on.	See "ADF scan jam service check" on page 116.
283.12	The paper was detected earlier than expected at the sensor (ADF scan).	
283.13	The sensor (ADF scan) did not detect the paper after registration.	
283.15	The paper remains detected at the sensor (ADF scan) during a job.	

ADF registration jam service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Does the error log show persistent 280.x1 jam?	Go to step 2.	Go to step 7.
Step 2 Clear the sensor (ADF document separation) and sensor (ADF registration) paper paths of debris or dust. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor actuators for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Enter the Diagnostics menu, and then navigate to: **SCANNER TESTS** > **Sensor Test** Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 **a** Reseat the sensor cables. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensor (ADF document separation) and sensor (ADF registration) for damage, and replace if necessary. See "Sensors (ADF top open cover section) removal" on page 425. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 Check the ADF registration rollers for wear or damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Make sure that the roller belts have proper belt tension. **b** Check the roller belts for wear or damage, and replace if necessary. **c** Make sure that the roller gears are properly aligned. **d** Check the roller gears for wear or damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the actuators of the following sensors for damage, and replace if necessary: • Sensor (ADF mixed paper width 1) • Sensor (ADF mixed paper width 2) • Sensor (ADF mixed paper width 3) Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Remove the ADF rear cover and locate the motor drive. **b** Open the ADF top cover. **c** Bypass the sensor (ADF top cover open) and observe if the ADF registration gear rotates. **d** Observe the motor (ADF registration) if it is working properly. Does the motor run?	Go to step 12.	Go to step 11.
Step 11 **a** Reseat the ADF registration motor cable. **b** Check the motor cable for damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Make sure that the ADF registration belt has correct belt tension. **b** Check the ADF registration gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 13.	The problem is solved.

Actions	Yes	No
Step 13 Replace the motor (ADF registration). See **"Motor (ADF registration) removal" on page 436**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Make sure that the blue screws and marked screws along the paper path are tightened. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the ADF controller board for damaged pins, and replace if necessary. See **"ADF controller board removal" on page 396**. **Note:** Make sure to perform ADF scanner adjustment after replacing the ADF controller board. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Make sure that the ADF CIS cable is properly installed. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF feed jam service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Does the error log show persistent 281.x1 jam?	Go to step 3.	Go to step 2.
Step 2 Does the error log show persistent 281.13 or 281.15 jam?	Go to step 8.	Go to step 4.
Step 3 Make sure the sensor (ADF document separation) and sensor (ADF registration) paper paths are free of debris or dust. Does the problem remain?	Go to step 4.	The problem is solved.

Actions	Yes	No
Step 4 Check the sensor actuators for damage and proper operation, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Enter the Diagnostics menu, and then navigate to: **SCANNER TESTS** > **Sensor Test** Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 **a** Reseat the sensor cables. **b** Check the sensor cable for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the sensor (ADF document separation) and sensor (ADF registration) for damage, and replace if necessary. See **"Sensors (ADF top open cover section) removal" on page 425**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the following rollers for wear or damage, and replace if necessary: • ADF pick roller. See **"ADF pick roller removal" on page 407**. • ADF feed roller. See **"ADF feed roller removal" on page 400**. • ADF separator roller. See **"ADF separator roller removal" on page 412**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Make sure that the ADF pick assembly is properly installed. **b** Make sure that the paper path is free of debris or dust. **c** Check the ADF pick assembly for wear or damage, and replace if necessary. See **"ADF feed and pick roller assembly removal" on page 398**. Does the problem remain?	Go to step 10.	The problem is solved.

Actions	Yes	No
Step 10 **a** Remove the ADF rear cover and locate the motor drive. **b** Open the ADF top cover. **c** Bypass the sensor (ADF top cover open) and observe if the ADF feed drive gear rotates. **d** Observe the motor (ADF feed) if it is working properly. Does the motor run?	Got to step 12.	Go to step 11.
Step 11 **a** Reseat the ADF feed motor cable. **b** Check the motor cable for damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Make sure that the ADF feed belt has correct belt tension. **b** Check the ADF feed gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the motor (ADF feed). See **"Motor (ADF feed) removal" on page 433**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Make sure that the blue screws and marked screws along the paper path are tightened. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the ADF controller board for damaged pins, and replace if necessary. See **"ADF controller board removal" on page 396**. **Note:** Make sure to perform ADF scanner adjustment after replacing the ADF controller board. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Make sure that the ADF CIS cable is properly installed. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF exit jam service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Does the error log show persistent 282.x1 jam?	Go to step 2.	Go to step 3.
Step 2 Open the ADF, and then clear the sensor (ADF exit) of debris or dust within the sensor paper path. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor actuator for damage and proper operation, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Enter the Diagnostics menu, and then navigate to: **SCANNER TESTS** > **Sensor Test** Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 **a** Reseat the sensor cable. **b** Check the sensor cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensor (ADF exit) for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the ADF exit roller and ADF scan roller 2 for wear or damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Make sure that the belts have correct belt tension. **b** Check the belts and gears for wear or damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.

Actions	Yes	No
Step 9 Make sure that the blue screws and marked screws along the paper path are tightened. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the ADF controller board for damaged pins, and replace if necessary. See **"ADF controller board removal" on page 396**. **Note:** Make sure to perform ADF scanner adjustment after replacing the ADF controller board. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Make sure that the ADF CIS cable is properly installed. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF scan jam service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **EVENT LOG** > **Display Log** Does the error log show persistent 283.x1 jam?	Go to step 2.	Go to step 3.
Step 2 Open the ADF, and then clear the sensor (ADF scan) of debris or dust within the sensor paper path. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Enter the Diagnostics menu, and then navigate to: **SCANNER TESTS** > **Sensor Test** Does the sensor status change while toggling the sensor?	Go to step 6.	Go to step 4.
Step 4 **a** Reseat the sensor cable. **b** Check the sensor cable for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Actions	Yes	No
Step 5 Check the sensor (ADF scan) for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Enter the Diagnostics menu, and then navigate to: **SCANNER TESTS** > **Feed Test** Is the test successful?	Go to step 8.	Go to step 7.
Step 7 Observe the leading and trailing edge location of the paper along the paper path while performing a feed test. Does the leading edge of the paper reach the ADF scan glass area?	Go to step 12.	Go to step 8.
Step 8 Observe the motor (ADF scan) if it is working properly. Does the motor run?	Go to step 10.	Go to step 9.
Step 9 **a** Remove the ADF rear cover. **b** Reseat the ADF scan motor cable. **c** Check the motor cable for damage, and replace if necessary. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Make sure that the ADF scan motor belts have correct belt tension. **b** Check the motor gears and belts for wear or damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the ADF scan roller 1 for wear or damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Observe the motor (CIS glass clean) if it is working properly. Is the motor working properly?	Go to step 14.	Go to step 13.

Actions	Yes	No
Step 13 **a** Remove the ADF rear cover. **b** Reseat the CIS glass clean motor cable. **c** Check the motor cable for damage, and replace if necessary. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Make sure that the CIS glass clean belt has correct belt tension. **b** Check the CIS glass clean gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Check the ADF glass clean roller and CIS glass clean roller for wear or damage, and replace if necessary. See **"ADF glass cleaning roller removal" on page 403**. **b** Check the ADF glass clean gear and CIS glass clean gear for wear or damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Make sure that the blue screws and marked screws along the paper path are tightened. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 **a** Make sure that the ADF scan cleaning assembly and ADF CIS scan cleaning assembly are properly installed **b** Make sure that the paper path is clear of debris or dust. **c** Check the assemblies for damage, and replace if necessary. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the ADF controller board for damaged pins, and replace if necessary. See **"ADF controller board removal" on page 396**. **Note:** Make sure to perform ADF scanner adjustment after replacing the ADF controller board. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 **a** Make sure that the ADF CIS cable is properly installed. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Understanding the printer messages

Cartridge low [88.xy]

You may need to order a replacement toner cartridge. If necessary, touch **Continue** on the printer control panel to clear the message and continue printing.

Cartridge nearly low [88.xy]

If necessary, touch **Continue** on the printer control panel to clear the message and continue printing.

Cartridge very low [88.xy]

You may need to replace the toner cartridge very soon.

If necessary, touch **Continue** on the control panel to clear the message and continue printing.

Change [paper source] to [custom string] load [orientation]

Try one or more of the following:

- Load the correct size and type of paper in the tray, specify the paper size and type in the Paper menu on the control panel, and then touch **Finished changing paper**.
- Touch **Use current [paper source]** to use the available paper size and type in the tray.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Cancel the print job.

Change [paper source] to [custom type name] load [orientation]

Try one or more of the following:

- Load the correct size and type of paper in the tray or feeder, specify the paper size and type in the Paper menu on the printer control panel, and then touch **Finished changing paper**.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Cancel the print job.

Change [paper source] to [paper size] load [orientation]

Try one or more of the following:

- Load the correct size and type of paper in the tray or feeder, specify the size and type of paper in the Paper menu on the control panel, and then touch **Finished changing paper**.
- Touch **Use current [paper source]** to use the available size and type of paper in the current tray or feeder.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Cancel the print job.

Change [paper source] to [paper type] [paper size] load [orientation]

Try one or more of the following:

- Load the correct size and type of paper in the tray or feeder, specify the paper size and type in the Paper menu on the control panel, and then touch **Finished changing paper**.
- Touch **Use current [paper source]** to use the available paper size and type in the tray.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Cancel the print job.

Close door [x]

Close the specified door.

Complex page, some data may not have printed [39]

Try one or more of the following:

- From the control panel, touch **Continue** to clear the message and continue printing.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Cancel the print job.
- Install additional printer memory.

Configuration change, some held jobs were not restored [57]

Held jobs are invalidated because of the following possible changes in the printer:

- The printer firmware has been updated.
- The tray for the print job has been removed.
- The print job is sent from a flash drive that is no longer attached to the USB port.
- The printer hard disk contains print jobs that were stored when the hard disk was installed in a different printer model.

From the printer control panel, touch **Continue** to clear the message.

Defective flash detected [51]

Try one or more of the following:

- Replace the defective flash memory card.
- From the printer control panel, touch **Continue** to ignore the message and continue printing.
- Cancel the current print job.

Disk full [62]

Try one or more of the following:

- From the control panel, touch **Continue** to clear the message and continue printing.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.

- Delete fonts, macros, and other data stored in the printer hard disk.
- Install a hard disk with larger capacity.

Disk full, scan job canceled

Try one or more of the following:

- Touch **Continue** to clear the message and continue scanning.
- Delete fonts, macros, and other data stored in the printer hard disk.
- Install a hard disk with higher capacity.

Disk must be formatted for use in this device

From the printer control panel, touch **Format disk** to format the printer hard disk and clear the message.

Note: Formatting deletes all the files stored in the printer hard disk.

Disk near full. Securely clearing disk space.

Try one or more of the following:

- Touch **Continue** to clear the message and continue printing.
- Delete fonts, macros, and other data stored on the printer hard disk.
- Install a hard disk with higher capacity.

Empty the hole punch box

Try one or more of the following:

- Empty the hole punch box.
- Select **Continue** on the printer control panel to clear the message and continue printing.
- Cancel the print job.

Error reading USB drive. Remove USB.

An unsupported USB device is inserted. Remove the USB device, and then insert a supported one.

Error reading USB hub. Remove hub.

An unsupported USB hub has been inserted. Remove the USB hub, and then install a supported one.

Fax memory full

From the printer control panel, touch **Continue** to clear the message.

Fax partition inoperative. Contact system administrator.

Try one or more of the following:

- From the printer control panel, touch **Continue** to clear the message.
- Turn off the printer, and then turn it back on. If the message appears again, then contact your system support person.

Fax server 'To Format' not set up. Contact system administrator.

Try one or more of the following:

- From the printer control panel, touch **Continue** to clear the message.
- Complete the Fax Server setup. If the message appears again, then contact your system support person.

Fax Station Name not set up. Contact system administrator.

Try either of the following:

- From the printer control panel, touch **Continue** to clear the message.
- Complete the Analog Fax setup. If the message appears again after completing the setup, then contact your system support person.

Fax Station Number not set up. Contact system administrator.

Try one or more of the following:

- From the printer control panel, touch **Continue** to clear the message.
- Complete the Analog Fax setup. If the message appears again after completing the setup, then contact your system support person.

Incorrect paper size, open [paper source] [34]

Try one or more of the following:

- Load the correct paper size and type in the tray or feeder, and then specify the paper size and type in the Paper menu on the control panel.
- Make sure that the correct paper size and type are specified in Print Properties or the Print dialog settings.
- Check the length and width guides and make sure that the paper is loaded properly in the tray or feeder.
- From the control panel, touch **Continue** to clear the message and then print using a different tray.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Cancel the print job.

Insert hole punch box

Insert the hole punch box into the finisher, and then touch **Continue** to clear the message.

Insert Tray [x]

Try one or more of the following:

- Insert the specified tray into the printer.
- Cancel the print job.
- Reset the active bin for a linked set of bins by selecting **Reset active bin** on the printer control panel.

Insufficient memory for Flash Memory Defragment operation [37]

Try one or more of the following:

- From the printer control panel, touch **Continue** to stop the defragmentation and continue printing.
- Delete fonts, macros, and other data in the printer memory.
- Install additional printer memory.

Insufficient memory to collate job [37]

Try one or more of the following:

- From the printer control panel, touch **Continue** to print the part of the job already stored and begin collating the rest of the print job.
- Cancel the current print job.

Insufficient memory to support Resource Save feature [35]

Install additional printer memory or touch **Continue** to disable Resource Save, clear the message, and continue printing.

Insufficient memory, some Held Jobs were deleted [37]

From the printer control panel, touch **Continue** to clear the message.

Insufficient memory, some held jobs will not be restored [37]

Try one or more of the following:

- From the printer control panel, touch **Continue** to clear the message.
- Delete other held jobs to free up additional printer memory.

Insufficient space between paper stacks in Tray 3

Move the paper stacks apart, and then touch **Continue** on the control panel to clear the message and continue printing.

Load [paper source] with [custom string] [paper orientation]

Try one or more of the following:

- Load the tray or feeder with the correct size and type of paper, and then touch **Finished loading paper** on the control panel.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Cancel the current job.

Load [paper source] with [custom type name] [paper orientation]

Try one or more of the following:

- Load the tray or feeder with the correct size and type of paper, and then touch **Finished loading paper** on the control panel.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Cancel the print job.

Load [paper source] with [paper size] [paper orientation]

Try one or more of the following:

- Load the tray or feeder with the correct size of paper, and then touch **Finished loading paper** on the control panel.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Cancel the current job.

Load [paper source] with [paper type] [paper size] [paper orientation]

Try one or more of the following:

- Load the specified tray or feeder with the correct size and type of paper, and then touch **Finished loading paper** on the control panel.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Cancel the current job.

Load Multipurpose Feeder with [custom string] [paper orientation]

Try one or more of the following:

- Load the feeder with the correct size and type of paper.
- From the control panel, touch one of the following:
  - **Prompt each page, paper loaded** or **Do not prompt, paper loaded**—To clear the message and continue printing.
  - **Automatically select paper**—To use the paper loaded in the tray.
  - **Reset active bin**—To reset the active bin for a linked set of bins.
- Cancel the print job.

Load Multipurpose Feeder with [custom type name] [paper orientation]

Try one or more of the following:

- Load the feeder with the correct size and type of paper.
- From the control panel, touch one of the following:
  - **Prompt each page, paper loaded** or **Do not prompt, paper loaded**—To clear the message and continue printing.
  - **Automatically select paper**—To use the paper loaded in the tray.
  - **Reset active bin**—To reset the active bin for a linked set of bins.
- Cancel the print job.

Load Multipurpose Feeder with [paper size] [paper orientation]

Try one or more of the following:

- Load the feeder with the correct size of paper.
- From the control panel, touch one of the following:
  - **Prompt each page, paper loaded** or **Do not prompt, paper loaded**—To clear the message and continue printing.
  - **Automatically select paper**—To use the paper loaded in the tray.
  - **Reset active bin**—To reset the active bin for a linked set of bins.
- Cancel the print job.

Load Multipurpose Feeder with [paper type] [paper size] [paper orientation]

Try one or more of the following:

- Load the feeder with the correct size and type of paper.
- From the control panel, touch one of the following:
  - **Prompt each page, paper loaded** or **Do not prompt, paper loaded**—To clear the message and continue printing.
  - **Automatically select paper**—To use the paper loaded in the tray.
  - **Reset active bin**—To reset the active bin for a linked set of bins.
- Cancel the print job.

Load staples

Try one or more of the following:

- Replace or insert the staple cartridge in the finisher.

  For instructions on inserting or replacing a staple cartridge in the finisher, touch **More information** on the printer control panel.
- From the printer control panel, touch **Continue** to clear the message and continue printing.
- From the printer control panel, touch **Cancel job** to cancel the print job.

Load staples [G11, G12]

Try one or more of the following:

- Replace or insert the staple cartridge into the finisher.

  For instructions on replacing or inserting the staple cartridge into the finisher, touch **More information** on the control panel.
- From the control panel, touch **Continue** to clear the message and continue printing.
- Cancel the print job.

[x] maintenance kit very low [80.xy]

You may need to replace the maintenance kit very soon. For more information, go to **http://support.lexmark.com** or contact customer support, and then report the message.

If necessary, touch **Continue** to clear the message and continue printing.

Memory full [38]

Try one or more of the following:

- From the control panel, touch **Cancel job** to clear the message.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Install additional printer memory.

Memory full, cannot print faxes

From the printer control panel, touch **Continue** to clear the message without printing. Held faxes attempt to print after the printer is restarted.

Memory full, cannot send faxes

1. From the printer control panel, touch **Continue** to clear the message and cancel the fax job.
2. Try one or more of the following:
   - Reduce the fax resolution, and then resend the fax job.
   - Reduce the number of pages in the fax, and then resend the fax job.

No analog phone line connected to modem, fax is disabled.

Connect the printer to an analog phone line.

Network [x] software error [54]

Try one or more of the following:

- From the printer control panel, touch **Continue** to continue printing.
- Turn off the printer, wait for about 10 seconds, and then turn the printer back on.

- Update the network firmware in the printer or print server. For more information, go to **http://support.lexmark.com**.

Not enough free space in flash memory for resources [52]

Try one or more of the following:

- From the control panel, touch **Continue** to clear the message and continue printing.
- Touch **Reset active bin** to reset the active bin for a linked set of bins.
- Delete fonts, macros, and other data stored in the flash memory.
- Install a flash memory card with larger capacity.

Note: Downloaded fonts and macros not previously stored in the flash memory are deleted.

Open door H and remove paper from beneath area H10

Remove the paper from the specified area.

Paper changes needed

Try one or more of the following:

- Touch **Use current supplies** to clear the message and continue printing.
- Cancel the current print job.

Parallel port [x] disabled [56]

Try one or more of the following:

- From the printer control panel, touch **Continue** to clear the message.
- Enable the parallel port. From the printer control panel, navigate to:

  Network/Ports > **Parallel [x]** > **Parallel Buffer** > **Auto**

Note: The printer discards any data received through the parallel port.

Photoconductor low [84.xy]

You may need to order a replacement photoconductor. If necessary, select **Continue** on the control panel to clear the message and continue printing.

Photoconductor very low [84.xy]

You may need to replace the photoconductor unit very soon.

If necessary, touch **Continue** on the control panel to clear the message and continue printing.

Printer had to restart. Last job may be incomplete.

From the printer control panel, touch **Continue** to clear the message and continue printing.

For more information, visit **http://support.lexmark.com** or contact customer support.

Reinstall missing or unresponsive cartridge [31.xy]

Try one or more of the following:

- Check if the toner cartridge is missing. If missing, install the toner cartridge.

  For information on installing the cartridge, see the "Replacing supplies" section of the *User's Guide*.
- If the toner cartridge is installed, then remove the unresponsive toner cartridge, and then reinstall it.

  Note: If the message appears after reinstalling the supply, then the cartridge is defective. Replace the toner cartridge.

Reinstall missing or unresponsive photoconductor [31.xy]

Try one or more of the following:

- If the photoconductor unit is missing, then install it.
- If the photoconductor unit is installed, then remove and then reinstall it.

  Note: If the message appears after reinstalling the supply, then replace the defective photoconductor unit.

Remove defective disk [61]

Remove and replace the defective printer hard disk.

Remove packaging material, [area name]

Remove any remaining packaging material from the specified location.

Remove packaging material, open door C, remove metal clips, remove all screws from scanner carriage

Open door C and the scanner cover, and then remove any remaining packaging material.

Note: Make sure door C does not hit any cable attached to the printer.

Remove paper from all bins

Remove the paper from all of the bins. The printer automatically senses paper removal and resumes printing.

If removing the paper does not clear the message, then touch **Continue**.

Remove paper from bin [x]

Remove the paper from the specified bin. The printer automatically senses paper removal and resumes printing.

If removing the paper does not clear the message, then touch **Continue**.

Remove paper from [linked set bin name]

Remove paper from the specified bin. The printer automatically detects paper removal and resumes printing.

If removing the paper does not clear the message, then touch **Continue**.

Remove paper from standard output bin

Remove the paper stack from the standard bin.

Replace all originals if restarting job.

Try one or more of the following:

- Touch **Cancel job** to clear the message and cancel the scan job.
- Touch **Scan from automatic feeder** to continue scanning from the ADF immediately after the last successful scan job.
- Touch **Scan from flatbed** to continue scanning from the scanner immediately after the last successful scan job.
- Touch **Finish job without further scanning** to end the last successful scan job.
- Touch **Restart job** to restart the scan job with the same settings from the previous scan job.

Replace cartridge, 0 estimated pages remain [88.xy]

Replace the toner cartridge to clear the message and continue printing. For more information, see the instruction sheet that came with the supply or see the “Replacing supplies” section of the *User’s Guide*.

Note: If you do not have a replacement cartridge, then see the “Ordering supplies” section of the *User’s Guide* or visit **www.lexmark.com**.

Replace cartridge, printer region mismatch [42.xy]

Install a toner cartridge that matches the region number of the printer. *x* indicates the value of the printer region. *y* indicates the value of the cartridge region. x and y can have the following values:

Printer and toner cartridge regions

Region number	Region
0	Global
1	United States, Canada
2	European Economic Area (EEA), Switzerland
3	Asia Pacific, Australia, New Zealand
4	Latin America
5	Africa, Middle East, rest of Europe
9	Invalid

Notes:

- The x and y values represent .**xy** in the code that appears on the printer control panel.
- The x and y values must match for printing to continue.

Replace jammed originals if restarting job

Try one or more of the following:

- Touch **Cancel job** to clear the message and cancel the scan job.
- Touch **Scan from automatic feeder** to continue scanning from the ADF immediately after the last successful scan job.
- Touch **Scan from flatbed** to continue scanning from the scanner immediately after the last successful scan job.
- Touch **Finish job without further scanning** to end the last successful scan job.
- Touch **Restart job** to restart the scan job with the same settings from the previous scan job.

Replace [x] maintenance kit, 0 estimated pages remain [80.xy]

The printer is scheduled for maintenance. For more information, go to **http://support.lexmark.com** or contact your service representative, and then report the message.

Replace missing photoconductor [31.xy]

Install the missing photoconductor unit to clear the message.

Replace missing waste toner bottle [82.xy]

Install the missing waste toner bottle to clear the message. For more information, see the instruction sheet that came with the supply.

Replace missing cartridge [31.xy]

Install the missing cartridge to clear the message.

Replace paper pick rollers in [paper source], use parts and instructions in tray 1 or tray 2 compartment [80]

Try one or more of the following:

- Replace the pick rollers, and then touch **Rollers replaced** on the control panel to clear the message and continue printing.
- Touch **Continue and replace later (Jams may continue to occur)** to ignore the message and continue printing.

Replace photoconductor, 0 pages remain [84.xy]

Replace the photoconductor unit to clear the message and continue printing.

Replace unsupported cartridge [32.xy]

Remove the toner cartridge, and then install a supported one to clear the message and continue printing. For more information, see the instruction sheet that came with the supply or see the “Replacing supplies” section of the *User’s Guide*.

Note: If you do not have a replacement cartridge, then see the “Ordering supplies” section of the *User’s Guide* or visit **www.lexmark.com**.

Replace unsupported photoconductor [32.xy]

Remove the photoconductor unit, and then install a supported one to clear the message and continue printing.

Replace waste toner bottle [82.xy]

Replace the waste toner bottle to clear the message.

Restore held jobs?

Try one or more of the following:

- From the printer control panel, touch **Restore** to restore all held jobs stored in the printer hard disk.
- From the printer control panel, touch **Do not restore** if you do not want to restore any of the print jobs.

Scanner disabled by admin [840.01]

Print without the scanner, or contact your system support person.

Scanner disabled. Contact system administrator if problem persists. [840.02]

Try one or more of the following:

- Touch **Continue with scanner disabled** to return to the home screen, and then contact your system support person.
- Touch **Reboot and automatically enable scanner** to cancel the job.

  Note: This attempts to enable the scanner.

Scanner jam, remove jammed originals from the scanner [2yy.xx]

Remove the jammed paper from the scanner.

Scanner maintenance required, use ADF Kit [80]

The printer is scheduled for maintenance. For more information, go to **http://support.lexmark.com** or contact your service representative, and then report the message.

Scanner maintenance required soon, use ADF Kit [80]

Contact customer support, and then report the message. The printer is scheduled for maintenance.

Serial port [x] disabled [56]

Try one or more of the following:

- From the printer control panel, touch **Continue** to clear the message.

  The printer discards any data received through the specified serial port.
- Make sure Serial Buffer is not set to Disabled.
- From the printer control panel, set Serial Buffer to Auto in the Serial [x] menu.

Some held jobs were not restored

From the printer control panel, touch **Continue** to delete the indicated job.

Note: Held jobs that are not restored remain in the printer hard disk and are inaccessible.

SMTP server not set up. Contact system administrator.

From the printer control panel, touch **Continue** to clear the message.

Note: If the message appears again, then contact your system support person.

Standard network software error [54]

Try one or more of the following:

- From the printer control panel, touch **Continue** to continue printing.
- Turn off the printer, and then turn it back on.
- Update the network firmware in the printer or print server. For more information, go to **http://support.lexmark.com** or contact customer support, and then report the message.

Standard USB port disabled [56]

Try one or more of the following:

- From the printer control panel, touch **Continue** to clear the message.
- Enable the USB port. From the printer control panel, navigate to:

  Network/Ports > **USB Buffer** > **Auto**

Note: The printer discards any data received through the USB port.

Supply needed to complete job

Do either of the following:

- Install the missing supply to complete the job.
- Cancel the current job.

The device is operating in Safe Mode. Some print options may be disabled or provide unexpected results.

Touch **Continue** on the control panel to clear the message and continue printing.

Too many flash options installed [58]

Try one or more of the following:

- Touch **Continue** on the control panel to continue printing.
- Remove the extra flash memory:
  1. Turn off the printer.
  2. Unplug the power cord from the electrical outlet.
  3. Remove the extra flash memory.
  4. Connect the power cord to a properly grounded electrical outlet.
  5. Turn the printer back on.

Too many trays attached [58]

1. Turn off the printer.
2. Unplug the power cord from the electrical outlet.
3. Remove the extra trays.
4. Connect the power cord to a properly grounded electrical outlet.
5. Turn the printer back on.

Tray [x] paper size unsupported

Replace with a supported paper size.

Unformatted flash detected [53]

Try one or more of the following:

- From the printer control panel, touch **Continue** to stop the defragmentation and continue printing.
- Format the flash memory.

  Note: If the error message remains, then the flash memory may be defective and needs to be replaced.

Unsupported disk

Remove the unsupported printer hard disk, and then insert a supported one.

Unsupported option in slot [x] [55]

1. Turn off the printer.
2. Unplug the power cord from the electrical outlet.
3. Remove the unsupported option card from the printer controller board, and then replace it with a supported card.
4. Connect the power cord to a properly grounded electrical outlet.
5. Turn the printer back on.

Waste toner bottle nearly full [82.xy]

You may need to order a waste toner bottle. If necessary, touch **Continue** on the printer control panel to clear the message and continue printing.

Weblink server not set up. Contact system administrator.

From the printer control panel, touch **Continue** to clear the message.

Note: If the message appears again, then contact your system support person.

User attendance messages

User attendance messages (0-99)

Error code	Description	Action
31	A supply-related error was detected: • The cartridge is missing or undetected. • The photoconductor is missing or undetected. • The cartridge is defective. • The photoconductor is defective.	See **"Cartridge or photoconductor error service check" on page 135**.
32	The cartridge or photoconductor is unsupported.	
34	Paper size mismatch was detected.	See **"Mismatched paper size service check" on page 136**.
35	The printer memory is insufficient to enable Resource Save.	See **"Insufficient memory service check" on page 137**.
37	The printer memory was insufficient to do the job.	
38	Memory is full.	
39	The page is too complex to print.	See **"Complex page service check" on page 137**.
42	The cartridge is incompatible due to printer region mismatch.	See **"Cartridge or photoconductor error service check" on page 135**.
50	PPDS encountered a font error.	See **"PPDS font error service check" on page 138**.

Error code	Description	Action
51	The flash memory is defective.	See "Flash memory failure service check" on page 138.
52	The flash memory is insufficient.	See "Insufficient flash memory service check" on page 139.
53	Unformatted flash was detected.	See "Flash memory failure service check" on page 138.
54	The printer was not able to connect with the network.	See "Network service check" on page 140.
55	The internal option installed is unsupported.	See "Unsupported internal option service check" on page 142.
56	The parallel port, serial port, or standard USB port is disabled.	See "Disabled port service check" on page 143.
57	Some held jobs were not restored due to configuration change.	See "Unrestored held jobs service check" on page 143.
58	Excess number of options detected: • Too many flash or optional firmware cards are installed. • Too many input trays are installed.	See "Excess options service check" on page 144.
59	The input option or output option is incompatible.	See "Incompatible hardware option service check" on page 145.
61	The hard disk is defective.	See "Hard disk failure service check" on page 145.
62	The hard disk is full.	
80	The printer requires maintenance. The appropriate maintenance kit needs to be installed.	See "Maintenance kit service check" on page 146.
82	The waste toner bottle is full or nearly full.	See "Cartridge or photoconductor error service check" on page 135.
84	The photoconductor supply is low, very low, or empty.	
88	The toner cartridge supply is low, very low, or empty.	

Cartridge or photoconductor error service check

Action	Yes	No
Step 1 **a** Make sure that the cartridge or photoconductor is installed. **b** Check if the cartridge or photoconductor is supported, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 **a** Make sure that the cartridge or photoconductor is properly installed. **b** Make sure that the cartridge or photoconductor cables are properly connected. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the cartridge or photoconductor contacts for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Mismatched paper size service check

Action	Yes	No
Step 1 **a** Make sure that the tray paper length and tray paper width guides are properly installed. **b** Check the guides for wear or damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the paper width and paper length sensor actuators for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Reseat the paper width and paper length sensor cables. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the paper width and paper length sensors for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Insufficient memory service check

Action	Yes	No
Step 1 Reset the printer, and then navigate to: **Paper Menu** > **Print Settings** > **Download Target** > **Disk** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 If applicable, install extra memory card. If applicable, make sure that the additional memory card is properly installed. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Complex page service check

Action	Yes	No
Step 1 Reset the printer, and then navigate to: **Paper Menu** > **Print Settings** > **Download Target** > **Disk** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **PRINTER TESTS** > **Tray 1** > **Single** Does the problem remain?	Go to step 4.	Go to step 3.

Action	Yes	No
Step 3 If applicable, install extra memory card. If applicable, make sure that the additional memory card is properly installed. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

PPDS font error service check

Action	Yes	No
Step 1 Navigate to **Settings** > **PPDS Menu** > **Best Fit**. Make sure that the value is set to **On**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that the font is supported by the memory card. Replace the memory card if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Flash memory failure service check

Action	Yes	No
Step 1 Navigate to **Settings** > **Print settings** > **Job Accounting Menu Settings** > **Log Near Full Level**. Make sure that the value is set to maximum. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 If applicable, make sure that the optional memory card is supported. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Make sure that the firmware version is the latest, and update if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Insufficient flash memory service check

Action	Yes	No
Step 1 Navigate to **Settings** > **Print settings** > **Utilities Menu** > **Format Flash** > **Yes**. Does the problem remain?	Go to step 3.	Go to step 2.
Step 2 Navigate to **Settings** > **Print settings** > **Job Accounting Menu Settings** > **Log Near Full Level**. Make sure that the value is set to maximum. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 If applicable, make sure that the optional memory card is supported. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Make sure that the firmware version is the latest, and update if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Network service check

Note: Before starting this service check, print the network setup page. This page is found under **Menu** > **Reports** > **Network Settings**. Consult the network administrator to make sure that the physical and wireless network settings displayed on the network settings page for the printer are properly configured. If a wireless network is used, then make sure that the printer is in the range of the host computer or wireless access point. Make sure that there is no electronic interference in the wireless network. Have the network administrator check that the printer is using the correct SSID, and wireless security protocols. For more network troubleshooting information, consult the *Lexmark Network Setup Guide*.

Actions	Yes	No
Step 1 If the printer is physically connected to the network, make sure that the Ethernet cable is properly connected on both ends. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 If the network is wireless, check the online status of the printer under Printers and Faxes on the host computer. Delete all print jobs in the print queue. Is the printer online and in Ready state?	Go to step 4.	Go to step 3.
Step 3 Change the printer status to online. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the IP address displayed on the network settings page. Does it match the IP address in the port of the drivers using the printer?	Go to step 9.	Go to step 5.
Step 5 **Note:** A printer should use a static IP address on a network. Does the LAN use DHCP?	Go to step 6.	Go to step 8.
Step 6 Check the first two segments of the IP address. Does the IP address start with 169.254?	Go to step 7.	Go to step 8.
Step 7 Reset the printer. Does the problem remain?	Go to step 9.	The problem is solved.
Step 8 Reset the address on the printer to match the IP address on the driver. Does the problem remain?	Go to step 9.	The problem is solved.

Actions	Yes	No
Step 9 Have the network administrator check if the printer and computer IP address have identical subnet addresses. Are the subnet addresses the same?	Go to step 11.	Go to step 10.
Step 10 Using the subnet address supplied by the network administrator, assign a unique IP address to the printer. **Note:** The printer IP address should match the IP address on the print driver. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Is the printer physically connected (Ethernet cable) to the network?	Go to step 12.	Go to step 15.
Step 12 Try using a different Ethernet cable. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Have the network administrator check the network drop for activity. Is the network drop functioning properly?	Go to step 14.	Contact the network administrator.
Step 14 Replace the controller board. See **"Controller board removal" on page 356**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Is the printer on the same wireless network as the other devices?	Go to step 17.	Go to step 16.
Step 16 Assign the correct wireless network to the printer. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Are the other devices on the wireless network communicating properly?	Go to step 18.	Contact the network administrator.
Step 18 Make sure that the wireless card on the controller board is properly installed. Does the problem remain?	Go to step 19.	The problem is solved.

Actions	Yes	No
Step 19 If there is an attached antenna, check it for damage, and replace if necessary. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Make sure that the antenna is properly connected to the wireless card. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the wireless card. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Replace the controller board. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Unsupported internal option service check

Action	Yes	No
Step 1 If applicable, make sure that the option cards are supported. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Make sure that the firmware version is the latest, and update if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Disabled port service check

Action	Yes	No
Step 1 **a** Make sure that the cables connected to ports are properly installed. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Network/Ports menu and make sure that the applicable port settings are enabled. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 If applicable, make sure that the option card is supported. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Make sure that the firmware version is the latest, and update if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Unrestored held jobs service check

Action	Yes	No
Step 1 Reset the printer, and then resend the print job. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the hard disk and memory card are supported and properly installed. **b** Check the hard disk and memory card for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **a** If applicable, remove all internal options. **b** Reset the printer, and then resend the print job. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Excess options service check

Action	Yes	No
Step 1 Reset the printer, and then resend the print job. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 If applicable, make sure that the internal option is supported. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** If applicable, remove all internal options. **b** Reset the printer, and then resend the print job. Does the problem remain?	Go to step 6.	Go to step 4.
Step 4 Check if the number of internal options installed is allowed, and remove the excess option. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check if the number of input options installed is allowed, and remove the excess option. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Incompatible hardware option service check

Action	Yes	No
Step 1 **Warning—Potential Damage:** Do not perform this step if the printer is on. **a** Reseat the hardware option cables. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the firmware version of the hardware option if it is supported by the engine firmware. Update the firmware if necessary. **Note:** Contact the next level of support for the correct firmware version. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the hardware option controller board pins for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Hard disk failure service check

Action	Yes	No
Step 1 Delete unnecessary files: • Navigate to **Settings** > **Print Settings** > **Utilities Menu** > **Delete Downloads on Disk** > **Yes**. • Enter the Configuration menu, and then navigate to **Settings** > **Jobs on Disk** > **Delete**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that the firmware version is the latest. **Note:** The latest firmware versions are available on the Technical service bulletins at **support.lexmark.com**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the hard disk cable is properly installed. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 **a** Make sure that the hard disk is properly installed. **b** Check the hard disk for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Maintenance kit service check

Action	Yes	No
Warning—Potential Damage: Do not perform this step if the printer is on. **a** Replace the required maintenance kit. **b** Reset the maintenance counter: • For 300K, enter the Configuration menu, and then navigate to **Reset Maintenance counter** > **Reset 300K Maintenance Kit**. • For 600K, enter the Diagnostics menu, and then navigate to **Reset Maintenance counter** > **Reset 600K Maintenance Kit**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Printer hardware errors

- **"111 errors" on page 147**
- **"12y errors" on page 148**
- **"13y errors" on page 153**
- **"153 errors" on page 156**
- **"16y errors" on page 157**
- **"171–182 errors" on page 163**
- **"189 errors" on page 164**
- **"19y errors" on page 166**
- **"600 errors" on page 180**
- **"685 errors" on page 181**
- **"Steps before starting the 9yy service checks" on page 183**
- **"900 errors" on page 185**
- **"911–963 errors" on page 190**

111 errors

111 error messages

Error code	Description	Action
111.01	The printhead motor malfunctioned.	See "Printhead failure service check" on page 147.
111.06	The printhead laser malfunctioned.	

Printhead failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the printhead FFC is properly connected. **b** Check the FFC for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Polygon** Does the motor run?	Go to step 5.	Go to step 4.
Step 4 **a** Make sure that the printhead is properly installed. **b** Check the printhead for damage, and replace if necessary. See "Printhead removal" on page 275. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the printhead relay board pins for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the controller board pins for damage, and replace if necessary. See "Controller board removal" on page 356. Does the problem remain?	Contact the next level of support.	The problem is solved.

12y errors

12y error messages

Error code	Description	Action
120.00	The motor (fuser) did not run.	See **"Motor (fuser) failure service check" on page 148**.
120.06	The motor (fuser) did not run at the correct timing.	
121.02	The fuser temperature did not reach the required level during warm-up.	See **"Fuser temperature failure service check" on page 150**.
121.60	The fuser thermistor (main) was not detected.	
121.61	The fuser temperature (main) did not reach the required level.	
121.62	The fuser temperature (main) went over the required level.	
121.64	The fuser thermistor (edge) was not detected.	
121.65	The fuser temperature (edge) did not reach the required level.	
121.66	The fuser temperature (edge) went over the required level.	
121.68	The fuser thermistor (middle) was not detected.	
121.69	The fuser temperature (middle) did not reach the required level.	
121.70	The fuser temperature (middle) went over the required level.	
121.80	The fuser roller did not retract.	See **"Fuser roller pressure failure service check" on page 152**.
121.85	The heating roller did not turn.	
121.86	Contamination was detected at the sensor (fuser temperature).	See **"Fuser temperature failure service check" on page 150**.

Motor (fuser) failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that the paper width is supported (less than 6.77 in. (172 mm)). Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Fusing tray** Does the motor run?	Go to step 7.	Go to step 4.
Step 4 **a** Reseat the fuser motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Check the fuser motor belt for proper tension, and adjust if necessary. **b** Make sure that the fuser motor gear is properly lubricated. **c** Check the fuser motor gear and belt for wear or damage, and replace if necessary. See **"Fuser drive gearbox removal" on page 385**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the motor (fuser). See **"Motor (fuser) removal" on page 384**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the fusing speed sensor actuator for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the sensor (fusing speed). Is it free of damage?	Go to step 9.	Go to step 11.
Step 9 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Fusing speed** Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 10.
Step 10 **a** Reseat the fusing speed sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Replace the sensor (fusing speed). See **"Sensor (fusing speed) removal" on page 317**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fuser temperature failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the environment for humidity. Remove or reduce sources of humidity if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the sensor (fuser temperature) is free from dust. **b** Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Make sure that the sensor (registration humidity) is free from dust. **b** Check the sensor for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Observe the paper exit fan. Is it working properly?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 **a** Make sure that the paper exit fan cable is properly connected. **b** Check the paper exit fan for damage, and replace if necessary. See **"Paper exit fan removal" on page 360**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Make sure that the fuser is properly installed. **b** Make sure that the fuser cable is properly connected. **c** Check the fuser for damage, and replace if necessary. See **"Fuser removal" on page 279**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the induction heater. Is it working properly?	Go to step 10.	Go to step 9.
Step 9 **a** Make sure that the induction heater cable is properly connected. **b** Check the induction heater for damage, and replace if necessary. See **"Induction heater removal" on page 279**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Make sure that the induction heater power supply is properly installed. **b** Check the induction heater power supply cable connections, and reseat if necessary. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fuser roller pressure failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Remove the fuser. See **"Fuser removal" on page 279**. **b** Observe the fuser roller while moving the gears and levers engaged to it. Check if the roller properly retracts, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor (fusing pressure home). Is it free of damage?	Go to step 4.	Go to step 6.
Step 4 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Fusing pressure home** Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 **a** Reseat the fusing pressure home sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the sensor (fusing pressure home). Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Reseat the fuser cables. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Make sure that the fuser is properly installed. **b** Check the fuser for wear or damage, and replace if necessary. See **"Fuser removal" on page 279**. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

13y errors

13y error messages

Error code	Description	Action
133.01	The toner density is above normal.	See **"Toner density failure service check" on page 153**.
133.03	The sensor (toner density) malfunctioned.	
133.04	The sensor (toner density) did not perform the correct adjustments.	
136.06	The motor (developer) did not run at the correct timing.	See **"Motor (developer) failure service check" on page 155**.

Toner density failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **Reset Image Stabilization** > **Restore factory toner density** Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Enter the Configuration menu, and then navigate to: **Automatic Image Stabilization** > **Auto Align Adj** Make sure that the value is set to **On**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Make sure that the developer is properly installed. **b** Make sure that the developer is supported. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 **a** Make sure that the toner is properly installed. **b** Make sure that the toner is supported. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Make sure that the sensor (toner density) is free of dust or debris. **b** Reseat the toner density sensor cable. **c** Check the sensor (toner density) and its cable for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Make sure that the toner agitator is properly installed. **b** Check the agitator for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Make sure that the sensor (toner cartridge present) is free of dust or debris. **b** Reseat the toner cartridge present sensor cable. **c** Check the sensor (toner cartridge present) and its cable for damage, and replace if necessary. See **"Sensor (toner cartridge present) removal" on page 334**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Observe the motor (toner supply). Is it working properly?	Go to step 11.	Go to step 10.
Step 10 **a** Make sure that the toner supply motor cable is properly connected. **b** Check the motor (toner supply) and its cable for damage, and replace if necessary. See **"Motor (toner supply) removal" on page 332**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Observe the motor (toner cartridge). Is it working properly?	Go to step 13.	Go to step 12.

Action	Yes	No
Step 12 **a** Make sure that the toner cartridge motor cable is properly connected. **b** Check the motor (toner cartridge) and its cable for damage, and replace if necessary. See **"Motor (toner cartridge) removal" on page 362**.	Go to step 13.	The problem is solved.
Step 13 Check the image controller board pins for damage, and replace if necessary. See **"Image controller board removal" on page 329**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (developer) failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Developing tray** Does the motor run?	Go to step 6.	Go to step 3.
Step 3 **a** Reseat the developer motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Check the developer belt for proper tension, and adjust if necessary. **b** Check the developer gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Replace the motor (developer). See **"Motor (developer) removal" on page 368**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the developer for proper operation. Is it working properly?	Go to step 9.	Go to step 7.
Step 7 Make sure that the cable is properly connected to the developer and the image controller board. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the developer for damage, and replace if necessary. See **"Developer unit removal" on page 336**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

153 errors

153 error messages

Error code	Description	Action
153.00	The motor (transport) failed.	See **"Motor (transport) failure service check" on page 157**.
153.06	The motor (transport) did not run at the correct timing.	

Motor (transport) failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Transport tray** Does the motor run?	Go to step 6.	Go to step 3.
Step 3 **a** Reseat the transport motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Check the transport motor belt for proper tension, and adjust if necessary. **b** Check the transport motor gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the motor (transport). See **"Motor (transport) removal" on page 367**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

16y errors

16y error messages

Error code	Description	Action
163.04	The motor (tray 3 feed) did not reach the required speed.	See **"2 x 500-sheet tray 3 feed failure service check" on page 160**.
163.04	The motor (2500-sheet tray paper feed) did not reach the required speed.	See **"2500-sheet tray feed failure service check" on page 158**.

Error code	Description	Action
164.04	The motor (tray 4 feed) did not reach the required speed.	See "2 x 500-sheet tray 4 feed failure service check" on page 161.
167.04	The motor (tray 3 transport) did not reach the required speed.	See "2 x 500-sheet tray 3 transport failure service check" on page 162.
167.04	The motor (2500-sheet tray transport) did not reach the required speed.	See "2500-sheet tray transport failure service check" on page 159.
168.04	The motor (tray 4 transport) did not reach the required speed.	See "2 x 500-sheet tray 4 transport failure service check" on page 163.

2500-sheet tray feed failure service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset engine Service Error** **Note:** Do this every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Check the 2500-sheet tray feed and transport motor belt for proper tension, and adjust if necessary. **b** Check the 2500-sheet tray feed and transport motor gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the 2500-sheet tray feed, pick, and separator rollers for damage, and replace if necessary. See "2500-sheet tray paper feed assembly removal" on page 456 and "2500-sheet tray pick assembly removal" on page 456. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the motor (2500-sheet tray feed). See "Motor (2500-sheet tray feed) removal" on page 461. Does the problem remain?	Go to step 5.	The problem is solved.

Actions	Yes	No
Step 5 Check the 2500-sheet tray controller board pins for damage, and replace if necessary. See **"2500-sheet tray controller board removal" on page 443**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2500-sheet tray transport failure service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset engine Service Error** **Note:** Do this step every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Check the 2500-sheet tray feed and transport motor belt for proper tension, and adjust if necessary. **b** Check the 2500-sheet tray feed and transport motor gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the 2500-sheet tray transport rollers for damage, and replace if necessary. See **"2500-sheet tray transport roller removal" on page 453**. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the motor (2500-sheet tray transport). See **"Motor (2500-sheet tray transport) removal" on page 462**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the 2500-sheet tray controller board pins for damage, and replace if necessary. See **"2500-sheet tray controller board removal" on page 443**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2 x 500-sheet tray 3 feed failure service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Check the tray 3 feed belt for proper tension, and adjust if necessary. **b** Check the feed belt and gears for wear or damage, and replace if necessary. See **"2 x 500-sheet tray 3 transport belts and gears removal" on page 495**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray 3 feed, pick, and separator rollers for wear or damage, and replace if necessary. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the motor (2 x 500-sheet tray 3 feed). See **"2 x 500-sheet tray feed and transport motors removal" on page 486**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the 2 x 500-sheet tray controller board pins for damage, and replace if necessary. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2 x 500-sheet tray 4 feed failure service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Check the tray 4 feed belt for proper tension, and adjust if necessary. **b** Check the feed belt and gears for wear or damage, and replace if necessary. See **"2 x 500-sheet tray 4 transport belts and gears removal" on page 496**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray 4 feed, pick, and separator rollers for wear or damage, and replace if necessary. **Note:** If the page count is over 50K, then clean the rollers. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the motor (2 x 500-sheet tray 4 feed). See **"2 x 500-sheet tray feed and transport motors removal" on page 486**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the 2 x 500-sheet tray controller board pins for damage, and replace if necessary. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2 x 500-sheet tray 3 transport failure service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Check the tray 3 transport belt for proper tension, and adjust if necessary. **b** Check the transport belt and gears for wear or damage, and replace if necessary. See **"2 x 500-sheet tray 4 transport belts and gears removal" on page 496**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray 3 transport roller for wear or damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the motor (2 x 500-sheet tray 3 transport). See **"2 x 500-sheet tray feed and transport motors removal" on page 486**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the 2 x 500-sheet tray controller board pins for damage, and replace if necessary. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2 x 500-sheet tray 4 transport failure service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Check the tray 4 transport belt for proper tension, and adjust if necessary. **b** Check the transport belt and gears for wear or damage, and replace if necessary. See **"2 x 500-sheet tray 4 transport belts and gears removal" on page 496**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the tray 4 transport roller for wear or damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the motor (2 x 500-sheet tray 4 transport). See **"2 x 500-sheet tray feed and transport motors removal" on page 486**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the 2 x 500-sheet tray controller board pins for damage, and replace if necessary. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

171–182 errors

171–182 error messages

Error code	Description	Action
171.00	The paper exit fan did not run.	See **"Fan failure service check" on page 164**.
172.00	The main power supply fan did not run.	
178.00	The fuser power supply fan did not run.	
179.00	The fuser fan did not run.	
180.00	The ozone fan did not run.	
182.00	The controller board fan did not run.	

Fan failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat the fan cable. Reseat also the cable connecting the fan to the board. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the fan for damage and functionality, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

189 errors

189 error messages

Error code	Description	Action
189.00	The 2 x 500-sheet tray communication failed.	See **"2 x 500-sheet tray communication error service check" on page 165**.
189.00	The 2500-sheet tray communication failed.	See **"2500-sheet tray communication error service check" on page 166**.
189.01	The expansion controller board communication failed.	See **"Expansion controller board failure service check" on page 165**.
189.61	The staple, hole punch finisher communication failed.	
189.61	The staple finisher communication failed.	
189.63	The horizontal paper transport communication failed.	
189.64	The hole punch booklet finisher communication failed.	

2 x 500-sheet tray communication error service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat the 2 x 500-sheet tray interface cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the 2 x 500-sheet tray controller board pins for damage, and replace if needed. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Expansion controller board failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that the interface cable is properly connected to the finisher and to the expansion controller board. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the expansion controller board pins for damage, and replace if necessary. See **"Expansion controller board removal" on page 351**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2500-sheet tray communication error service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** **Note:** Do this step every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat the 2500-sheet tray interface cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the 2500-sheet tray controller board pins for damage, and replace if necessary. See **"2500-sheet tray controller board removal" on page 443**. Does the problem remain?	Contact the next level of support.	The problem is solved.

19y errors

190–194 error messages

Error code	Description	Action
190.10	The MPF lift plate did not move to the correct position.	See **"MPF lift plate failure service check" on page 167**.
190.10	The elevator plate did not move to the correct position.	See **"3000-sheet tray elevator failure service check" on page 175**.
191.10	The tray 1 lift plate did not move to the correct position.	See **"Tray 1 lift plate failure service check" on page 169**.
192.10	The tray 2 lift plate did not move to the correct position.	See **"Tray 2 lift plate failure service check" on page 171**.
193.10	The tray 3 lift plate did not move to the correct position.	See **"2 x 500-sheet tray 3 lift plate failure service check" on page 172**.
194.10	The tray 4 lift plate did not move to the correct position.	See **"2 x 500-sheet tray 4 lift plate failure service check" on page 173**.

196–197 error messages

Error code	Description	Action
196.10	The 2500-sheet tray lift plate did not move to the correct position.	See **"2500-sheet tray lift plate failure service check" on page 177**.
196.11	The 2500-sheet tray transfer guide did not move to the correct position.	See **"2500-sheet tray transfer guide motor failure service check" on page 179**.
196.60	Communication error occurred between the induction heater and the controller board.	See **"Induction heater failure service check" on page 176**.
196.61	The induction heater monitor malfunctioned.	
196.62	The power supplied to the induction heater is abnormal.	
196.63	The voltage supplied to the induction heater is abnormal.	
197.10	3000-sheet tray elevator did not move to the correct position.	See **"3000-sheet tray elevator failure service check" on page 175**.

MPF lift plate failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the MPF lift plate, including the cam and gears, are properly installed. **b** Check the plate, including the cam and gears, for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Observe the MPF lift plate solenoid. Is it working properly?	Go to step 5.	Go to step 4.
Step 4 **a** Reseat the MPF lift plate solenoid cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the MPF lift plate solenoid, including the actuator for wear or damage, and replace if necessary. See **"MPF lift plate solenoid removal" on page 301**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Observe the MPF lift plate clutch. Is it working properly?	Go to step 8.	Go to step 7.
Step 7 **a** Reseat the MPF lift plate clutch cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the MPF lift plate clutch for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the sensor (MPF lift plate). Is it free of damage?	Go to step 10.	Go to step 12.
Step 10 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **MPF lift plate position** Does the sensor status change while toggling the sensor?	Go to step 13.	Go to step 11.
Step 11 **a** Reseat the MPF lift plate sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the sensor (MPF lift plate). See **"Sensor (MPF lift plate) removal" on page 303**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Paper feed** Does the motor run?	Go to step 17.	Go to step 14.

Action	Yes	No
Step 14 **a** Reseat the feed motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Check the paper feed belt for proper tension, and adjust if necessary. **b** Check the paper feed gear and belt for wear or damage, and replace if necessary. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the motor (feed). See **"Motor (feed) removal" on page 372**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 **a** Make sure that the MPF is properly installed. **b** Check the MPF for damage, and replace if necessary. See **"MPF removal" on page 297**. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Tray 1 lift plate failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Tray 1 Lift** Does the motor run?	Go to step 5.	Go to step 3.

Action	Yes	No
Step 3 **a** Reseat the tray 1 lift motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the motor (tray 1 lift). Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the tray set actuator is properly installed. **b** Check the actuator for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensor (tray 1 lift plate level). Is it free of damage?	Go to step 7.	Go to step 9.
Step 7 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Tray 1 lift plate limit** Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Reseat the tray 1 lift plate level sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor (tray 1 lift plate level). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Tray 2 lift plate failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **PRINTER MOTOR TESTS** > **Tray 2 lift** Does the motor run?	Go to step 5.	Go to step 3.
Step 3 **a** Reseat the tray 2 lift motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the motor (tray 2 lift). Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the tray set sensor actuator is properly installed. **b** Check the actuator for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensor (tray 2 lift plate level). Is it free of damage?	Go to step 7.	Go to step 9.
Step 7 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **PRINTER SENSOR TESTS** > **Tray 2 lift plate limit** Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Reseat the tray 2 lift plate level sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Replace the sensor (tray 2 lift plate level). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2 x 500-sheet tray 3 lift plate failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **2 x 500-Sheet Tray Motor Tests** > **Tray 3 lift** Does the motor run?	Go to step 5.	Go to step 3.
Step 3 **a** Reseat the motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the motor. See **"Motor (2 x 500-sheet tray lift) removal" on page 483**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the tray 3 tray set actuator is properly installed. **b** Check the actuator for damage, and replace if necessary. **"2 x 500-sheet tray tray set actuator removal" on page 493**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensor (2 x 500-sheet tray 3 lift plate level). Is it free of damage?	Go to step 7.	Go to step 9.

Action	Yes	No
Step 7 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **2 x 500-Sheet Tray Sensor Tests** > **Tray 3 lift plate limit** Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Reseat the sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor (2 x 500-sheet tray 3 lift plate level). See **"2 x 500-sheet tray transport assembly sensors removal" on page 492**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the 2 x 500-sheet tray controller board pins for damage, and replace if necessary. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2 x 500-sheet tray 4 lift plate failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **2 x 500-Sheet Tray Motor Tests** > **Tray 4 lift** Does the motor run?	Go to step 5.	Go to step 3.
Step 3 **a** Reseat the motor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Replace the motor. See **"Motor (2 x 500-sheet tray lift) removal" on page 483**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the tray 4 tray set actuator is properly installed. **b** Check the actuator for damage, and replace if necessary. **"2 x 500-sheet tray tray set actuator removal" on page 493**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensor (2 x 500-sheet tray 4 lift plate level). Is it free of damage?	Go to step 7.	Go to step 9.
Step 7 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **2 x 500-Sheet Tray Sensor Tests** > **Tray 4 lift plate limit** Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Reseat the sensor cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the sensor (2 x 500-sheet tray 4 lift plate level). See **"2 x 500-sheet tray transport assembly sensors removal" on page 492**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the 2 x 500-sheet tray controller board pins for damage, and replace if necessary. See **"2 x 500-sheet tray controller board removal" on page 487**. Does the problem remain?	Contact the next level of support.	The problem is solved.

3000-sheet tray elevator failure service check

Action	Yes	No
Step 1 **a** Make sure that the tray is properly installed and aligned to the printer. **b** Reseat the interface cable that is plugged into the 2500- or 2 x 500-sheet tray. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **MOTOR TESTS** > **3000-Sheet Tray Motor Test** > **Tray elevator** Does the motor run?	Go to step 4.	Go to step 3.
Step 3 **a** Make sure that the motor (3000-sheet tray elevator) is properly installed. **b** Reseat the cable on the motor and the cable CN3 on the controller board. **c** Check the motor for damage, and replace if necessary. See **"Motor (3000-sheet tray elevator) removal" on page 515**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Reseat the cable on all of the sensors. **b** Reseat the cable CN5 on the controller board. **c** If necessary, reseat all of the junction connectors on the cables. **d** Make sure that the cables do not block the path of moving parts. **e** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Reseat the cable on the rest of the motors and on the top door switch. **b** Reseat the cables CN3 and CN4 on the controller board. **c** If necessary, reseat all of the junction connectors on the cables. **d** Make sure that the cables do not block the path of moving parts. **e** Check the cables for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Induction heater failure service check

Action	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the induction heater is properly installed. **b** Reseat the induction heater cable. **c** Check the induction heater and its cable for damage, and replace if necessary. See **"Induction heater removal" on page 279**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the induction heater magnetic erase board is properly installed. **b** Reseat the induction heater magnetic erase board cables. **c** Check the induction heater magnetic erase board and its cables for damage, and replace if necessary. See **"Induction heater magnetic erase board (IHMEB) removal" on page 348**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Make sure that the induction heater power supply is properly installed. **b** Reseat the induction heater power supply cables. **c** Check the induction heater power supply and its cables for damage, and replace if necessary. See **"Induction heater power supply (IHPS) removal" on page 350**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the fuser is properly installed. **b** Make sure that the fuser cable is properly connected. **c** Check the fuser for damage, and replace if necessary. See **"Fuser removal" on page 279**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2500-sheet tray lift plate failure service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset engine Service Error** **Note:** Do this step every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the motor (2500-sheet tray elevator) is properly installed. **b** Enter the Diagnostics menu, and then navigate to: **Motor Tests** > **2500-Sheet Tray Motor Tests** > **Elevator Test** **c** Observe if the motor is working properly. **Note:** Remove tray 1 and tray 2 to observe the motor movement properly. Does the motor run?	Go to step 6.	Go to step 3.
Step 3 **a** Reseat the 2500-sheet tray elevator motor cable on both sides. **b** Check the motor cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Check the coupling for wear or damage, and replace if necessary. **b** Check the motor gears, rollers, and belts for wear or damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the motor (2500-sheet tray elevator). See **"Motor (2500-sheet tray elevator) removal" on page 460**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Make sure that the actuators of the sensor (tray elevator home) and sensor (main tray elevator limit) are properly installed and aligned. **b** Check the actuators for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **2500-Sheet Tray Sensor Tests** Does the sensor status change while toggling the sensor?	Go to step 9.	Go to step 8.
Step 8 **a** Make sure that the sensor cables are properly installed. **b** Make sure to route the cables properly. **c** Make sure to reseat the cables on the 2500-sheet tray controller board and the sensors. **d** Make sure to reseat the junction connectors of the cables. **e** Make sure that the cables do not snag on moving objects. **f** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Remove the tray insert. **b** Make sure that the sensor (tray elevator home) and sensor (main tray elevator limit) are properly installed. **c** Check the sensors for damage, and replace if necessary. See **"2500-sheet tray elevator home sensor actuator removal" on page 449** and **"Sensor (2500-sheet tray main tray elevator limit) removal" on page 467**. Does the problem remain?	Contact the next level of support.	The problem is solved.

2500-sheet tray transfer guide motor failure service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset engine Service Error** **Note:** Do this step every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the motor (2500-sheet tray transfer guide) is properly installed. **b** Enter the Diagnostics menu, and then navigate to: **Motor Tests** > **2500-Sheet Tray Motor Tests** > **Elevator Test** **c** Observe if the motor is working properly. **Note:** Remove tray 1 and tray 2 to observe the motor movement properly. Does the motor run?	Go to step 6.	Go to step 3.
Step 3 **a** Reseat the 2500-sheet tray transfer guide motor cable on both sides. **b** Check the motor cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Make sure that the motor belts have correct belt tension. **b** Check the motor gears, rollers, and belts for wear or damage, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the motor (2500-sheet tray transfer guide). See **"Motor (2500-sheet tray transfer guide) removal" on page 462**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Make sure that the 2500-sheet tray elevator home sensor actuator is properly installed and aligned with the sensor. **b** Check the actuators for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **2500-Sheet Tray Sensor Tests** Does the sensor status change while toggling the sensor?	Go to step 9.	Go to step 8.
Step 8 **a** Make sure that the sensor cables are properly installed. **b** Make sure to route the cables properly. **c** Make sure to reseat the cables on the 2500-sheet tray controller board and the sensors. **d** Make sure to reseat the junction connectors of the cables. **e** Make sure that the cables do not snag on moving objects. **f** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Remove the tray insert. **b** Make sure that the sensor (transfer guide home) and sensor (2500-sheet tray elevator home) are properly installed. **c** Check the sensors for damage, and replace if necessary. See **"Sensor (2500-sheet tray transfer guide home) removal" on page 470** and **"Sensor (2500-sheet tray elevator home) removal" on page 465**. Does the problem remain?	Contact the next level of support.	The problem is solved.

600 errors

600 error messages

Error code	Description	Action
600.00	The image was not ready during a print job from the MPF.	See **"Unready image service check" on page 181**.
600.01	The image was not ready during a print job from tray 1.	
600.02	The image was not ready during a print job from tray 2.	
600.03	The image was not ready during a print job from tray 3.	
600.04	The image was not ready during a print job from tray 4.	
600.05	The image was not ready during a print job from tray 5.	
600.10	The image was not ready during a duplex print job.	

Unready image service check

Action	Yes	No
Step 1 Make sure that the Page description language (PDL) of the print job is supported. Install the supporting option card if necessary. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Enter the Diagnostics menu, and then navigate to: **PRINT TESTS** > **Tray 1** Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the printhead and board cables are properly connected. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the printhead is properly installed. **b** Check the printhead for damage, and replace if necessary. See **"Printhead removal" on page 275**. Does the problem remain?	Contact the next level of support.	The problem is solved.

685 errors

685 error messages

Error code	Description	Action
685.xx	Original document size mismatch detected at the ADF.	See **"ADF document size mismatch service check" on page 182**.

ADF document size mismatch service check

Action	Yes	No
Step 1 Make sure that the scanner paper size setting matches the source tray paper size setting Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that there is no document on the flatbed scanner when copying from the ADF. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Enter the Configuration menu, and then select **SIZE SENSING**. **a** Make sure that Tray Sensing is set to **Auto** for the 500-sheet trays. **b** Make sure that the paper size settings for 2500-sheet tray and 3000-sheet tray matches the supported paper size of the source tray. **c** Make sure that the correct paper size is set. The printer can only detect one paper size at a time for the following: • Oficio/Folio Sensing • Statement/A5 Sensing • Executive/B5 Sensing Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **SCANNER TESTS** > **Sensor Test** **b** Manually toggle the following sensors: • Sensor (ADF paper width) • Sensor (ADF paper length 1) • Sensor (ADF paper length 2) Does the sensor status change while toggling the sensors?	Go to step 7.	Go to step 5.
Step 5 **a** Reseat the sensor cables. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the sensors for damage, and replace if necessary. See **"Sensors (ADF tray section) removal" on page 424**. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 Check the paper width and paper length sensors of the source tray for damage, and replace if necessary. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Make sure that the source tray is properly installed. **b** Make sure that the paper path is clear of debris or dust. **c** Make sure that the tray length and width guides are working properly. **d** Check the tray insert for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Steps before starting the 9yy service checks

Before starting the service checks in this section, you will need to retrieve certain information. This will aid your next level of support in diagnosing the problem before replacing the controller board.

Warning—Potential Damage: Do not replace the controller board unless directed by your next level of support.

1. Collect the history information and firmware logs (Fwdebug and logs.tar.gz) from the SE menu.
2. Collect the settings from the menu settings page.
3. Collect information from the user.

Note: Not all of the items can be retrieved from the printer you are working on.

A. Collecting the history information from the SE menu

Note: Make sure your printer is connected to a network or to a print server.

1. From a Web browser, type **`http://printer_IP_address/se`**, and then press **Enter**.

   Notes:

   - **`printer_IP_address`** is the TCP/IP address of the printer
   - **`se`** is required to access the printer diagnostic information

2. Click **History Information**, copy all information, and then save it as a text file.
3. E-mail the text file to your next level of support.

B. Collecting the firmware logs (Fwdebug and logs.tar.gz) from the SE menu

Notes:

- Make sure your printer is connected to a network or to a print server.
- Some printers are designed to restart automatically after a 9yy error. On these printers, you can retrieve the secondary crash code information using the SE menu.

- Fwedebugs can also be referred to as LBtrace. If FWEdebugs does not appear in the list, then look for LBtrace. Multiple LBtrace logs can appear in the list of links referred to in step 2.

1. From a Web browser, type **`http://printer_IP_address/se`**, and then press **Enter**.
2. Click **List Fwedebugs captured during reboots**. This will provide you a list of the secondary crash codes retrieved from prior reboots.

   Note: If there are Fwedebugs listed, click **Dump Fwedebug log0**, **Dump Fwedebug log1**, and **Dump Fwedebug log2**. Clicking these links will dump the debug logs to the computer. Take note of the destination folder where the logs are saved.
3. E-mail the logs to your next level of support.

   Note: Some printer SE menus give you the option of clicking **Logs Gzip Compressed**. If this option is shown in the menu, then click it and retrieve the compressed log file. Take note of the destination folder where the log file is saved.

C. Collecting the settings from the menu settings page

Note: The menu settings page is different for each printer. For more information see the *User's Guide*. Your next level of support will tell you which page they want to see.

Copying the menu settings page from the Embedded Web Server (EWS)

Note: Make sure your printer is connected to a network or to a print server.

1. From a Web browser, type **`http://printer_IP_address`**, and then press **Enter**.
2. Click Settings, and then select one of the settings page from the links shown on the page.
3. Copy all information, and then save it as a text file.
4. E-mail the text file to your next level of support.

Printing the menu settings page

1. From the home screen, navigate to **Reports** > **Menu Settings Page**.
2. Print the menu settings page, and then use Scan to E-mail to send it to your next level of support.

D. Collecting information from the user

Ask the user for information about the following:

- Print job being run
- Operating system used
- Print driver used
- Other information on what was happening when the 9yy error occurred.

900 errors

900 error messages

Error code	Description	Action
900.xx	RIP firmware errors	Go to "System software error service check" on page 185.

System software error service check

There are different types of 900.xx errors that can occur. There may be a communication problem (bad cable, network connection, and so on) software issue, or a hardware problem with the controller board, or ISP (internal solutions port). The communication and software aspects should be checked first. Determine if the problem is constant or intermittent. Use the troubleshooting procedure below to isolate the issue. Take any notes as instructed. You will need that information in the event you need to contact your next level of support.

Before troubleshooting:

1. Perform the "Steps before starting the 9yy service checks" on page 183.
2. Determine the operating system used when the error occurred. If possible determine whether a PostScript or PCL file was sent to the printer when the error occurred. Ask the customer which Lexmark Solutions applications are installed on the printer.

Action	Yes	No
Step 1 Reset the printer. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Write down the exact 900.xx error code that appears on the display. **b** Turn off the printer. **c** Clear the print queues. **d** Disconnect all communication cables, and remove all memory options. **e** Remove any installed ISP. **f** POR the printer into the Diagnostics menu. Does the error remain during startup?	Go to step 3.	Go to step 6.
Step 3 Check all the cables connected to the controller board for proper connectivity. Are the cables properly connected?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 **a** Properly connect the cables to the controller board. **b** POR the printer into the Diagnostics menu. Does the error remain during startup?	Go to step 5.	Go to step 6.
Step 5 **a** Replace the controller board. **b** POR the printer. Does the error remain during startup? **Note:** If an error different from the original 900.xx is displayed, consult the service check for that error.	Go to step 31.	The problem is solved.
Step 6 Print the following: • Error log • Menu settings page • Network settings page Does the error remain while these pages were printing?	Go to step 31.	Go to step 7.
Step 7 **Note:** Before performing this step, write down the following information about the file being sent to the printer: • Application used • Operating system • Driver type • File type (PCL, PostScript, XPS, etc.) **a** Reattach the communications cable. **b** Reset the printer. **c** Send the printer a print job. Does the error remain?	Go to step 8.	Go to step 10.
Step 8 **a** Reset the printer. **b** Send a different print job to the printer. Does the error remain?	Go to step 9.	Go to step 10.

Action	Yes	No
Step 9 **a** Upgrade the firmware. **Note:** Contact your next level of support for the correct firmware level to use. **b** Reset the printer. **c** Send the printer a print job. Does the error remain?	Go to step 31.	Go to step 10.
Step 10 Is the printer an MFP?	Go to step 11.	Go to step 13.
Step 11 Run a copy job. Does the error remain?	Go to step 31.	Go to step 12.
Step 12 Run a scan to PC job. Does the error remain?	Go to step 31.	Go to step 13.
Step 13 Is there optional memory installed?	Go to step 14.	Go to step 16.
Step 14 **a** Reinstall the memory. **b** Send a print job to the printer. Does the error remain?	Go to step 15.	Go to step 16.
Step 15 **a** Install a Lexmark-recommended memory option. **b** Send a print job to the printer. Does the error remain?	Go to step 31.	The problem is solved.
Step 16 Is there a modem installed?	Go to step 17.	Go to step 21.
Step 17 **a** Reinstall the modem. **b** Reset the printer. Does the error remain?	Go to step 18.	Go to step 20.

Action	Yes	No
Step 18 **a** Upgrade the firmware if it was not upgraded in a previous step. **Note:** Contact your next level of support for the correct firmware level to use. **b** Reset the printer. **c** Send the printer a print job. Does the error remain?	Go to step 19.	The problem is solved.
Step 19 **a** Replace the modem. **b** Reset the printer. Does the error remain?	Go to step 31.	The problem is solved.
Step 20 Run a fax job. Does the error remain?	Go to step 31.	Go to step 21.
Step 21 Is there an ISP option installed?	Go to step 22.	The problem is solved.
Step 22 **a** Reinstall the first ISP option. **b** Reset the printer. Does the error remain?	Go to step 24.	Go to step 23.
Step 23 Run a job to test the option. Does the error remain?	Go to step 24.	Go to step 26.
Step 24 **a** Upgrade the firmware if it was not upgraded in a previous step. **Note:** Contact your next level of support for the correct firmware level to use. **b** Reset the printer. **c** Send the printer a print job. Does the error remain?	Go to step 25.	The problem is solved.
Step 25 **a** Replace the faulty ISP option. **b** Reset the printer. Does the error remain?	Go to step 31.	Go to step 26.

Action	Yes	No
Step 26 Are there any more ISP options to install?	Go to step 27.	The problem is solved.
Step 27 **a** Install the next ISP option. **b** Reset the printer. Does the error remain?	Go to step 29.	Go to step 28.
Step 28 Run a job to test the option. Does the error remain?	Go to step 29.	Go to step 26.
Step 29 **a** Upgrade the firmware if it was not upgraded in a previous step. **Note:** Contact your next level of support for the correct firmware level to use. **b** Reset the printer. **c** Send the printer a print job. Does the error remain?	Go to step 30.	Go to step 26.
Step 30 **a** Replace the faulty ISP option. **b** Reset the printer. Does the error remain?	Go to step 31.	Go to step 26.
Step 31 Contact your next level of support. You will need the following information: • Exact 900.xx error digits and complete error message • Printed menu settings page • Printed network settings page • Device error log • A sample print file if the error appears to be isolated to a single file • File/Application used if the error is related to specific print file • Device operating system • Driver used (PCL/PS) • Frequency of the occurrence of the error		

911–963 errors

911–916 error messages

Error code	Description	Action
911.72	Finisher abnormality was detected when controlling the exit roller pressure.	See "Option controller board error service check" on page 191.
911.225	Finisher abnormality was detected when driving the motors.	
916.165	Destination abnormality was detected.	See "Engine and controller board error service check" on page 190.

919 error messages

Error code	Description	Action
919.52	Engine communication error was detected.	See "Engine and controller board error service check" on page 190.
919.208	Engine backup media access error was detected.	
919.212	K DR backup media access error was detected.	
919.22	K TB backup media access error was detected.	
919.224	Engine backup data discord was detected.	
919.225	Engine board exchange abnormality was detected.	
919.226	Engine flash ROM writing error was detected.	
919.227	Engine flash ROM device abnormality was detected.	
919.228	Engine firmware download communication error was detected.	
919.24	Engine control abnormality was detected.	

Engine and controller board error service check

Action	Yes	No
Step 1 **a** Reset the printer. **b** Make sure that the cables are properly connected to the engine controller board and controller board. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the engine controller board pins for damage, and replace if necessary. See "Engine controller board removal" on page 353. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Check the controller board pins for damage, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Make sure that the firmware version is the latest. Does the problem remain?	Contact the next level of support.	The problem is solved.

Option controller board error service check

Action	Yes	No
Step 1 **a** Reset the printer. **b** Make sure that the cables are properly connected to the option controller board and controller board. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the engine controller board pins for damage, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the option controller board pins for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Make sure that the firmware version is the latest. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF/scanner hardware errors

800 error messages

Error code	Description	Action
800.04	A timing error occurred during a scan job at the front side of the document.	See "ADF controller board service check" on page 194.
800.15	The CIS clamp adjustment failed.	See "ADF CIS service check" on page 196.
800.16	The CIS gain adjustment failed.	
800.23	A timing error occurred during a scan job at the back side of the document.	See "Scanner controller board service check" on page 197.
800.25	The CCD power supply malfunctioned.	See "Scanner CCD service check" on page 198.
800.7	The image data was not detected.	See "Scanner controller board service check" on page 197.

809 error messages

Error code	Description	Action
809	Scanner controller board was not detected.	See "Scanner controller board service check" on page 197.
809.01	The scanner controller board communication failed.	
809.02	The scanner controller board communication failed.	
809.03	ADF controller board was not detected.	See "ADF controller board service check" on page 194.
809.04	The ADF controller board communication failed.	
809.05	The ADF controller board communication failed.	
809.06	Scanning speed went over the required level.	

816–824 error messages

Error code	Description	Action
816.7	Scanner clamp or gain adjustment failed.	See "Scanner CCD service check" on page 198.
820	Scanner lamp exposure did not reach the required level.	See "Scanner lamp service check" on page 199.
820.01	Scanner lamp exposure went over the required level.	
824	The sensor (scanner lamp home) did not detect the scanner lamp at its home position.	
824.01	The scanner lamp remains detected at its home position during a scan job.	

850–891 error messages

Error code	Description	Action
850	CIS lamp exposure did not reach the required level.	See "ADF CIS service check" on page 196.
850.1	CIS lamp exposure went over the required level.	
855	The ADF fan failed.	See "ADF controller board service check" on page 194.
890	Sensor (ADF CIS clean) error was detected at the start of a scan job.	
890.01	Sensor (ADF CIS clean) error was detected during a scan job.	
891	Sensor (ADF scan shaft home) error was detected during a scan job.	
891.01	Sensor (ADF scan glass clean) error was detected during a scan job.	

ADF controller board service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** **Note:** Do this step every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat the interface cable connecting the engine controller board and the image controller board. **b** Reseat all of the cables on the ADF controller board and reseat the cable connectors on the other end of the connection. **c** Make sure to tighten the blue screws and marked screws. **d** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the ADF controller board for damaged pins, and replace if necessary. See **"ADF controller board removal" on page 396**. **Note:** Make sure to perform ADF scanner adjustment after replacing the ADF controller board. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the ADF/scanner image controller board for damaged pins, and replace if necessary. See **"ADF/scanner image controller board removal" on page 354**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the controller board for damaged pins, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF/scanner image controller board service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** **Note:** Do this step every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat the ADF CIS data cable on the ADF controller board and the image controller board. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the ADF/scanner image controller board is mounted properly on the controller board. **b** Check the ADF/scanner image controller board for damaged pins, and replace if necessary. See **"ADF/scanner image controller board removal" on page 354**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the controller board for damaged pins, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF CIS service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** **Note:** Do this step every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat the interface cable connecting the engine controller board and the image controller board. **b** Reseat all of the cables on the engine controller board and reseat the cable connectors on the other end of the connection. **c** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Reseat the ADF CIS power supply board cable and ADF CIS power supply cable. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the ADF CIS power supply board for proper installation and damage, and replace if necessary. See **"ADF CIS power supply board removal" on page 396**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Reseat the ADF CIS data cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the ADF CIS assembly for proper installation and damage, and replace if necessary. See **"ADF CIS assembly removal" on page 394**. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 Check the ADF/scanner image controller board for damaged pins, and replace if necessary. See **"ADF/scanner image controller board removal" on page 354**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the ADF controller board for damaged pins, and replace if necessary. See **"ADF controller board removal" on page 396**. **Note:** Make sure to perform ADF scanner adjustment after replacing the ADF controller board. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the controller board for damaged pins, and replace if necessary. See **"Controller board removal" on page 356**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Scanner controller board service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** **Note:** Do this step every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat all of the cables on the scanner controller board and reseat the cable connectors on the other end of the connection. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the scanner controller board for damaged pins, and replace if necessary. See **"Scanner controller board removal" on page 428**. Does the problem remain?	Go to step 4.	The problem is solved.

Actions	Yes	No
Step 4 Check the engine controller board for damaged pins, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Scanner CCD service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** **Note:** Do this step every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat all of the cables on the scanner controller board and engine controller board. **b** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Reseat the scanner CCD cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the scanner CCD lens assembly for proper installation and damage, and replace if necessary. See **"Scanner CCD lens assembly removal" on page 426**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the scanner controller board for damaged pins, and replace if necessary. See **"Scanner controller board removal" on page 428**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the engine controller board for damaged pins, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Scanner lamp service check

Actions	Yes	No
Step 1 Enter the Diagnostics menu, and then navigate to: **PRINTER SETUP** > **Reset Engine Service Error** **Note:** Do this step every time a service error would occur to clear the error and restore the engine settings. Does the error remain?	Go to step 2.	The problem is solved.
Step 2 **a** Reseat the scanner lamp cable. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the scanner lamp for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the scanner controller board for damaged pins, and replace if necessary. See **"Scanner controller board removal" on page 428**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the engine controller board for damaged pins, and replace if necessary. See **"Engine controller board removal" on page 353**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fax error log codes

Error code	Description	Action
000	No error occurred during fax transmission.	No action is needed.
200	Error occurred when transmitting training.	• Check line quality. • Select a lower Max Speed value under Fax Send settings. • Adjust the transmit level.
3XX	Error occurred when receiving image data.	• Check line quality. • Adjust Receive Threshold. • Select a lower Max Speed value under Fax Receive settings.

Error code	Description	Action
4XX	Error occurred when sending image data.	• Check line quality. • Adjust 'Transmit Level'. • Select a lower 'Max Speed' value under Fax Receive settings.
5XX	Received unknown response from remote fax device.	No action needed. Issue is with the other device.
6XX	Error occurred when receiving a frame.	• Check line quality. • Adjust 'Receive Threshold'.
7XX	Error occurred when sending a frame.	• Check line quality. • Adjust 'Transmit Level'. • Select a lower 'Max Speed' value under Fax Send settings.
800	Received EOT unexpectedly from the modem in V34 mode.	If error persists, then disable V34 modulation scheme.
802	Too many timeouts occurred during ECM reception.	If error persists, then disable ECM mode.
803	Fax cancelled by user	No action needed.
804	Unexpectedly received a disconnect command from the remote end.	• Check line quality. • Adjust Transmit Level/Receive Threshold values. • Remote device could be requesting an unsupported feature.
805	Remote fax device failed to respond to the DCS command.	• Adjust Transmit Level/Receive Threshold values. • Remote device could be malfunctioning.
808	T1 timeout occurred when trying to establish a connection with a remote fax device.	Adjust Transmit Level/Receive Threshold values.
809	T2 Timeout occurred due to loss of command/response synchronization.	Adjust Transmit Level/Receive Threshold values.
80A	T5 Timeout occurred when transmitting image data to remote fax device.	• Check line quality. • Adjust 'Transmit Level'. • Select a lower 'Max Speed' value under Fax Send settings.
80B	Too many errors when transmitting in ECM mode.	• Check line quality. • Adjust 'Transmit Level'. • Select a lower 'Max Speed' value under Fax Send settings.
80C	Remote device failed to respond to the CTC command.	• Select a lower 'Max Speed' value under Fax Send settings. • Adjust 'Transmit Level'.

Error code	Description	Action
80D	Received too many requests from remote end to repeat the previous command sent.	• Check line quality. • Adjust 'Transmit Level'. • Check if line conditions on remote end will facilitate a good connection.
80E	Functional limitation-Remote fax device does not support G3 receive capability.	No action needed. Issue with the remote device.
811	Failed to detect a fax device at the remote end.	• Make sure that MFD is answering to fax call and not a voice call. • Decrease value of 'Rings To Answer' setting.
812	No more data rates available in V34 modulation scheme.	Adjust to a lower modulation scheme.
813	Timeout occurred after waiting too long to receive a good frame.	Adjust "Receive Threshold".
814	Tried too many times at selected speed using V34 modulation scheme.	• Adjust 'Transmit Level'. • Adjust to a lower modulation scheme.
815	Fax transmission was interrupted due to power failure.	Troubleshoot MFP if error persists.
818	Fax transmission failed due to insufficient memory to store scanned image.	Adjust 'Memory Use' setting to allocate more memory for send jobs.
819	Fax transmission failed due to insufficient memory to store received image.	Adjust 'Memory Use' setting to allocate more memory for receive jobs.
81A	A timeout occurred during transmission of a page in ECM mode.	Select a lower 'Max Speed' value under Fax Send settings.
880	Failure to transmit training successfully in V17, V29, V27 terminal modulation schemes.	• Select a lower "Max Speed" under Fax Send settings. • Adjust the "Transmit Level". • Check line quality.
881	Failure to transmit training successfully in V33, V29, V27 terminal modulation schemes.	• Select a lower "Max Speed" under Fax Send settings. • Adjust the "Transmit Level". • Check line quality.
882	Failure to transmit training successfully in V17, V29 terminal modulation schemes.	• Select a lower "Max Speed" under Fax Send settings. • Adjust the "Transmit Level". • Check line quality.
883	Failure to transmit training successfully in V17, V27 terminal modulation schemes.	• Select a lower "Max Speed" under Fax Send settings. • Adjust the "Transmit Level". • Check line quality.

Error code	Description	Action
884	Failure to transmit training successfully in V29, V27 terminal modulation schemes.	• Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
885	Failure to transmit training successfully in V17 terminal modulation scheme.	• Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
886	Failure to transmit training successfully in V29 terminal modulation scheme.	• Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
887	Failure to transmit training successfully in V27 terminal modulation scheme.	• Select a lower “Max Speed” under Fax Send settings. • Adjust the “Transmit Level”. • Check line quality.
888	Failure to transmit training successfully at 2400 bps in V27 terminal modulation scheme.	• Adjust “Transmit Level”. • Check line quality.
889	Failed to connect at the minimum speed supported by the MFP.	• Adjust “Transmit Level”. • Incompatible connection.
88A	Failed to connect using V.34 modulation scheme.	• Check line quality. • Adjust to a lower modulation scheme. • Adjust Transmit Level Receive Threshold values.
901	No fax tones detected from remote end.	• Check the destination phone number. • Make sure that the remote fax is authorized to receive faxes.
902	No dial tone detected.	• Check by enabling ‘Behind a PABX’ setting. • Check phone line. • Check MFD modem hardware.
903	Busy tone detected.	Check with remote end if successive attempts fail.
904	Hardware error detected.	
905	A timeout occurred after dialing the number and waiting for a response.	Check with remote end if successive attempts fail.
906	Fax cancelled by user.	No action needed.
907	Modem detected a digital line connection.	Make sure that the MFP is connected to an analog line.

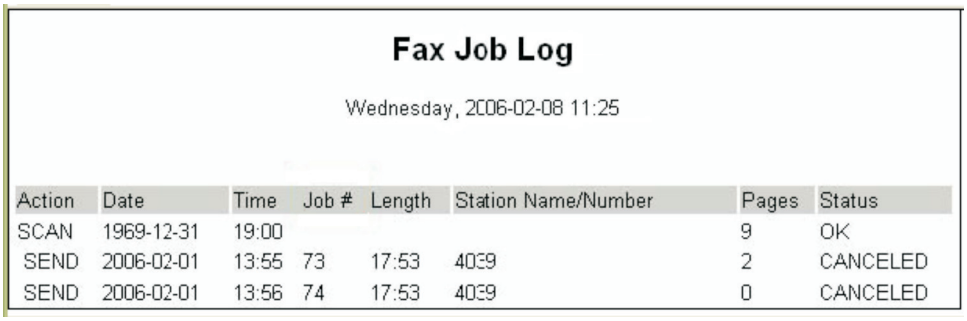
Error code	Description	Action
908	Phone line was disconnected	Restore phone line connection.
A00	Received request for unsupported function from remote fax device.	No action needed.
A01	Received request for unsupported image width from remote fax device.	No action needed.
A02	Received request for unsupported image resolution from remote fax device.	No action needed.
A03	Received request for unsupported compression type from remote fax device.	No action needed.
A04	Received request for unsupported image length from remote fax device.	No action needed.
F00	Unknown error occurred.	No action needed.

Escalating a fax issue to second-level support

Before contacting the second-level support, go to the SE menu on the MFP, and then generate a Fax error file. This file contains printer settings information and debug information that will help second-level support determine the cause of a failure.

To generate the fax error file, perform the following steps:

1. In a Web browser, type **`http://MFP/<IP address>/se`**.
2. The MFP's SE menu page will display. Click the "Dump Job History" link. The following displays:



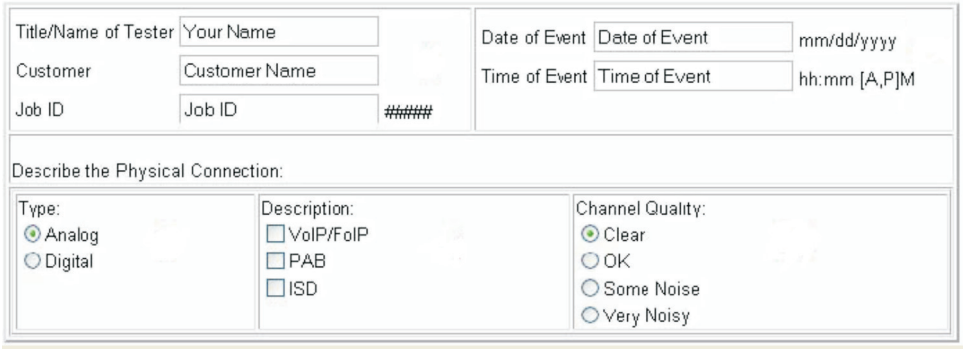
Fax Job Log

Wednesday, 2006-02-08 11:25

Action	Date	Time	Job #	Length	Station Name/Number	Pages	Status
SCAN	1969-12-31	19:00				9	OK
SEND	2006-02-01	13:55	73	17:53	4039	2	CANCELED
SEND	2006-02-01	13:56	74	17:53	4039	0	CANCELED

3. Write down the type of connection, the type of error, and the job in which the error occurred.
4. In the Web browser address bar, type **`http://MFP/<IP address>/se`**.
5. Click **Report a Fax Problem**. The fax check list displays.

6 Fill in the requested information. This is where you will type in the information you retrieved in step 3. Second-level support can assist you if you have questions about the information requested on the page.



Note: The fields requesting the code levels, model number, and type of problem are auto-filled. If the information is not in the fields, it can be retrieved from the SE menu. The SE menu can be accessed by pressing ****411** or typing **http://MFP/<IP address>/se** in a Web browser.

7 After all the requested information is entered into the Fax Checklist Web page, press the **Submit** button on the bottom of the page. A dialogue asking you to save the file appears.

Note: The file generated by the MFP is not automatically transmitted to second-level support. It is placed on the computer desktop.

8 Enter a name for the file, and indicated where you want to save the file.

9 Press **OK**. The file appears on the desktop.

10 E-mail the file to second-level support.

Symptoms

3000-sheet tray tray set failure service check

Action	Yes	No
Step 1 **a** Make sure that the tray is properly installed and aligned to the printer. **b** Reseat the interface cable that is plugged into the 2500- or 2 x 500-sheet tray. **c** Reset the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Remove the rear cover. **b** Make sure that the tray set sensor actuator and spring are properly installed. **c** Check the actuator and spring for damage, and replace if necessary. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **a** Make sure that the sensor (3000-sheet tray set) is properly installed. **b** Make sure that the sensor is free of debris or dust. **c** Reseat the cable on the sensor and the cable CN5 on the controller board. **d** Check the sensor for damage. Is it free of damage?	Go to step 4.	Go to step 5.
Step 4 Enter the Diagnostics menu, and then navigate to: **SENSOR TESTS** > **3000-Sheet Tray Sensor Test** > **Tray set** Does the sensor status change while toggling the sensor?	Go to step 6.	Go to step 5.
Step 5 Replace the sensor. See **"Sensor (3000-sheet tray set) removal" on page 516**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Reseat the cable on the rest of the sensors. **b** Reseat the cable CN5 on the controller board. **c** If necessary, reseat all of the junction connectors on the cables. **d** Make sure that the cables do not block the path of moving parts. **e** Check the cables for damage, and replace if necessary. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Reseat the cable on all the motors and on the top door switch. **b** Reseat the cables CN3 and CN4 on the controller board. **c** If necessary, reseat all of the junction connectors on the cables. **d** Make sure that the cables do not block the path of moving parts. **e** Check the cables for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Service menus

Understanding the printer control panel

Using the control panel

Use the		To
1	Display	• View the printer status and messages. • Set up and operate the printer.
2	Home button	Go to the home screen.
3	Sleep button	Enable Sleep mode or Hibernate mode. The following actions wake the printer from Sleep mode: • Touching the control panel home screen • Opening the scanner cover The following actions wake the printer from Hibernate mode: • Pressing the Sleep button until the printer wakes • Performing a power-on reset using the main power switch
4	Keypad	Enter numbers, letters, or symbols.
5	Start button	Start a job, depending on which mode is selected.
6	Clear all / Reset button	Reset the default settings of a function, such as copying, faxing, or scanning.
7	Stop or Cancel button	Stop all printer activity.
8	Indicator light	Check the status of the printer.

Understanding the colors of the Sleep button and indicator lights

The colors of the Sleep button and indicator lights on the printer control panel signify a certain printer status or condition.

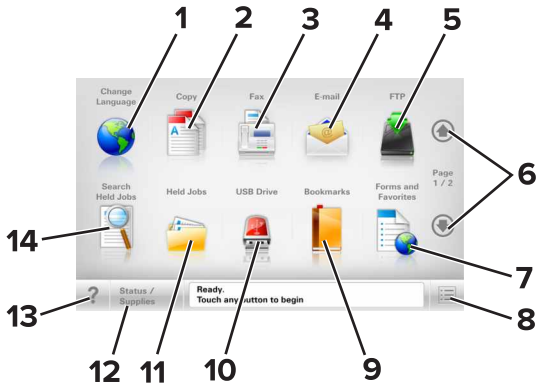
Indicator light	Printer status
Off	The printer is off or in Hibernate mode.
Blinking green	The printer is warming up, processing data, or printing.
Solid green	The printer is on, but idle.
Blinking red	The printer requires user intervention.

Sleep button light	Printer status
Off	The printer is off, idle or in Ready state.
Solid amber	The printer is in Sleep mode.
Blinking amber	The printer is entering or waking from Hibernate mode.
Blinking amber for 0.1 second, then goes completely off for 1.9 seconds in a slow, pulsing pattern	The printer is in Hibernate mode.

Understanding the home screen

When the printer is turned on, the display shows a basic screen, referred to as the home screen. Touch the home screen buttons and icons to initiate an action such as copying, faxing, or scanning; to open the menu screen; or to respond to messages.

Note: Your home screen may vary depending on your home screen customization settings, administrative setup, and active embedded solutions.



Touch		To
1	Change Language	Launch the Change Language pop-up window that lets you change the primary language of the printer.
2	Copy	Access the Copy menus and make copies.
3	Fax	Access the Fax menus and send fax.
4	E-mail	Access the E-mail menus and send e-mails.
5	FTP	Access the File Transfer Protocol (FTP) menus and scan documents directly to an FTP server.
6	Arrows	Scroll up or down.

Touch		To
7	Forms and Favorites	Quickly find and print frequently used online forms.
8	Menu icon	Access the printer menus. **Note:** The menus are available only when the printer is in Ready state.
9	Bookmarks	Create, organize, and save a set of bookmarks (URL) into a tree view of folders and file links. **Note:** The tree view supports only bookmarks created from this function, and not from any other application.
10	USB Drive	View, select, print, scan, or e-mail photos and documents from a flash drive. **Note:** This icon appears only when you return to the home screen while a memory card or flash drive is connected to the printer.
11	Held Jobs	Display all current held jobs.
12	Status/Supplies	• Show a warning or error message whenever the printer requires intervention to continue processing. • Access the messages screen for more information on the message, and how to clear it.
13	Tips	Open a context-sensitive Help dialog.
14	Search Held Jobs	Search for one or more of the following items: • User name for held or confidential print jobs • Job names for held jobs, excluding confidential print jobs • Profile names • Bookmark container or print job names • USB container or print job names for supported file types

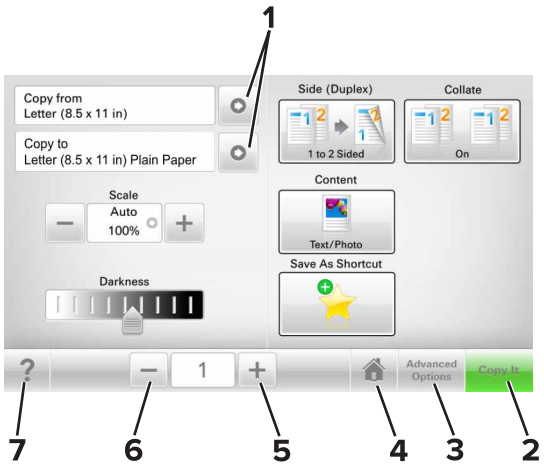
Features

Feature	Description
Menu trail line Example: Menus > Settings > Copy Settings > Number of Copies	A menu trail line is located at the top of each menu screen. This feature shows the path taken to arrive at the current menu. Touch any of the underlined words to return to that menu. Number of Copies is not underlined because it is the current screen. If you touch an underlined word on the “Number of Copies” screen before the number of copies is set and saved, then the selection is not saved, and it does not become the default setting.
Attendance message alert 	If an attendance message affects a function, then this icon appears and the red indicator light blinks.
Warning 	If an error condition occurs, then this icon appears.

Feature	Description
Status message bar	• Show the current printer status such as **Ready** or **Busy**. • Show printer conditions such as **Toner Low** or **Cartridge Low**. • Show intervention messages so the printer can continue processing.
Printer IP address Example: **123.123.123.123**	The IP address of your network printer is located at the upper left corner of the home screen and appears as four sets of numbers separated by periods. You can use the IP address when accessing the Embedded Web Server so you can view and remotely configure printer settings even when you are not physically near the printer.

Using the touch-screen buttons

Note: Your home screen, icons, and buttons may vary, depending on your home screen customization settings, administrative setup, and active embedded solutions.



	Touch	To
1	Arrows	View a list of options.
2	Copy It	Print a copy.
3	Advanced Options	Select a copy option.
4	Home	Go to the home screen.
5	Increase	Select a higher value.
6	Decrease	Select a lower value.
7	Tips	Open a context-sensitive Help dialog.

Other touch-screen buttons

Touch	To
Accept	Save a setting.
Cancel	• Cancel an action or a selection. • Exit a screen and return to the previous screen without saving changes.
Reset	Reset values on the screen.

Menus list

Paper Menu

Default Source
Paper Size/Type
Configure MP
Substitute Size
Paper Texture
Paper Loading
Custom Types
Custom Names
Custom Scan Sizes
Custom Bin Names
Universal Setup
Bin Setup

Reports

Menu Settings Page
Device Statistics
Stapler Test
Network Setup Page
Network [x] Setup Page
Shortcut List
Fax Job Log
Fax Call Log
Copy Shortcuts
E-mail Shortcuts
Fax Shortcuts
FTP Shortcuts
Profiles List
Print Fonts
Print Directory
Print Demo
Asset Report
Event Log Summary

Network/Ports

Active NIC
Standard Network[1]
Standard USB
Parallel [x]
Serial [x]
SMTP Setup

Security

Edit Security Setups
Miscellaneous Security Settings
Confidential Print
Erase Temporary Data Files
Security Audit Log
Set Date and Time

[1] Depending on the printer setup, this menu appears as Standard Network or Network [x].

[2] This menu appears only when one or more DLEs are installed.

Paper Menu	Reports	Network/Ports	Security
Settings	**Help**	**Manage Shortcuts**	**Option Card Menu[2]**
General Settings	Print All Guides	Fax Shortcuts	A list of installed DLEs (Download Emulators) appears.
Copy Settings	Copy Guide	E-mail Shortcuts	
Fax Settings	E-mail Guide	FTP Shortcuts	
E-mail Settings	Fax Guide	Copy Shortcuts	
FTP Settings	FTP Guide	Profile Shortcuts	
Flash Drive Menu	Print Defects Guide		
Print Settings	Information Guide		
	Supplies Guide		

[1] Depending on the printer setup, this menu appears as Standard Network or Network [x].

[2] This menu appears only when one or more DLEs are installed.

Diagnostics Menu

Entering the Diagnostics menu

1. Turn off the printer.
2. Press and hold **3** and **6** while turning on the printer.
   Release the buttons when the splash screen appears.

Reset Separator Roll and Pick Assembly Counter

This setting resets the value of the counter that tracks the usage of the 200K ADF maintenance kit.

Reset Maintenance Counter

This setting resets the value of the counter that tracks the usage of the multipurpose feeder maintenance roller kit.

1. Enter the Diagnostics menu, and then select **Reset Maintenance Counter**.
2. Select the kit to reset.

Reset Fuser Counter

This setting resets the fuser counter to zero.

Note: This setting appears only if the **Maintenance Warning and Intervention** configuration ID bit is enabled.

Enter the Diagnostics menu, and then select **Reset Fuser Counter**.

REGISTRATION

This menu allows you to perform the following:

1. Adjust the top and left margin values of the installed trays.
2. View how the change in margin values affect the overall registration of the printer.

To set the registration:

1. Print a Quick Test page.
   a. Enter the Diagnostics menu, and then navigate to:
   REGISTRATION > **Quick Test**
   b. Retain this page to determine the changes you need for the margin settings. The alignment diamonds in the margins should touch the margins of the page.
2. Change the value of the margin settings.

Margin	Value	Description
Top Margin	-15 to +15	Moves the top margin of the installed trays either up or down
Left Margin	-15 to +15	Moves the left margin of the tray to the right or left

SCANNER CALIBRATION

Scanner Calibration

This test calibrates the black and white values for the ADF and flatbed. Use the following values to manually adjust a replacement scanner.

Menu items	Values
Flatbed Black	-10 to 10*
ADF Front Black	-10 to 10*
ADF Back Black	-10 to 10*
Flatbed White	-10 to 10*
ADF Front White	-10 to 10*
ADF Back White	-10 to 10*
* The default value is 0.	

To adjust a calibration value, do the following steps:

1. Enter the Diagnostics menu, and then select **Scanner Calibration**.
2. Select a calibration value to adjust.
3. To view the result for an ADF front adjustment, place a test page image side up and touch **Copy Quick Test**. Compare the results to the original, and adjust if necessary.
4. To view the result for an ADF back adjustment, place a test page image side down and touch **Copy Quick Test**. Compare the results to the original, and adjust if necessary.

5 To view the result for a flatbed adjustment, do the following:

   a Remove any paper from the ADF. Compare the results to the original, and adjust if necessary.

   b Place a test page on the flatbed and touch **Copy Quick Test**. Compare the results to the original, and adjust if necessary.

Reset flatbed, ADF front, and ADF back calibration values

These settings revert the selected scan source IQT black and white values back to the Nominal Black and Nominal White settings.

Note: Perform this test only on a replacement scanner.

To reset a scanner calibration value, do the following:

1 Enter the Diagnostics menu, and then select **SCANNER CALIBRATION**.

2 Select a calibration value to adjust.

3 Apply the changes.

PRINT TESTS

This test determines if the printer can print on paper from any of the input trays. Each installed tray is available within the Print Tests menu.

The content of the test page varies depending on the paper in the selected input tray.

- If the selected tray contains paper, then a page similar to the Quick Test page is printed but without the print registration diamonds information.
- If the selected tray contains envelopes, then an envelope print test pattern is printed. If Continuous is selected, then the envelope print test pattern is printed on the first envelope and the rest of the envelopes are blank.

The Print Test page always prints one-sided, regardless of the duplex setting or the presence of the duplex option.

1 Enter the Diagnostics menu, and then select **PRINT TESTS**.

2 Select the paper source.

3 Select any of the following:

   - **Single**—This option prints a single Print Test page (no buttons are active while the test page is printing).
   - **Continuous**—This option continuously prints the Print Test page until **X** is pressed.

Print Quality Pages

This setting lets you view the values of a broad range of the printer settings and test the printer ability to generate an acceptable printed output.

Enter the Diagnostics menu, and then navigate to:

PRINT TESTS > **Print Quality Pages**

HARDWARE TESTS

Panel Test

This test verifies the function of the control panel display.

1. Enter the Diagnostics menu, and then navigate to:

   Hardware Tests > **Panel Test**

2. Exit the test.

Button Test

This test verifies the function of each button on the control panel.

1. Enter the Diagnostics menu, and then navigate to:

   HARDWARE TESTS > **Button Test**

   A pattern matching the control panel buttons appear on the display.

2. Press the control panel button to highlight the represented button on the display.
3. Release the button to remove the highlight.
4. Exit the test.

DRAM Test

This test checks the validity of the standard and optional dynamic random access memory (DRAM). The test repeatedly writes patterns of data to the DRAM to verify that each bit in the memory can be set and read correctly.

1. Enter the Diagnostics menu, and then navigate to:

   HARDWARE TESTS > **DRAM Test**

2. Testing and resetting the printer messages appear on the display.
3. After the printer resets, the results of the test appear: **`DRAM Test [x] P:###### F:######`**.
   - **`[x]`** represents the size of the installed DRAM.
   - **`P:######`** represents the number of times the memory test passed and finished successfully. The maximum pass count is 999,999.
   - **`F:#####`** represents the number of times the memory test failed and finished with errors. The maximum pass count is 999,999.
4. After the maximum pass or fail count is reached or when all the DRAM has been tested, the test stops and the final results appear.

Serial 1 Wrap

This test checks the operation of the serial port hardware using a wrap plug. Each signal is tested. If the test fails, then replace the controller board.

1. Disconnect the serial interface cable, and then install the wrap plug.
2. Enter the Diagnostics menu, and then navigate to:

   HARDWARE TESTS > **Serial 1 Wrap**
3. Select a test from the list.
   - If the test passes, then the Pass Count increases by 1.
   - If the test fails, then a failure message appears on the display and the Fail Count increases by 1.

   The test stops after the maximum count is reached or when a failure occurs.

USB HS Test Mode

This test checks the USB ports for USB high speed certification.

1. Enter the Diagnostics menu, and then navigate to:

   HARDWARE TESTS > **USB HS Test Mode**
2. Select the port and the type of test.

Ports	Tests
Port 0	Test J
Port 1	Test K
Port 2	Test SEO NAK
Port 3	Test Packet
	Test Force Enable

3. To exit the test, reset the printer.
4. If the test fails, then replace the USB cable.

DUPLEX TESTS

Quick Test

This test determines if the top margin at the back of a duplexed page is set correctly.

1. Enter the Diagnostics menu, and then navigate to:

   DUPLEX TESTS > **Quick Test**
2. Select any of the following:
   - **Single**—This option prints a single Quick Test page.
   - **Continuous**—This option continuously prints the Quick Test page until **X** is pressed.

   The printer attempts to print the page from the default paper source.
3. Check the page for the correct offset between the placement of the first scan line on both sides of a duplexed sheet.

Top Margin

This setting controls the offset between the placement of the first scan line on both sides of a duplexed sheet.

Note: If adjustment is necessary, adjust first the top margin in the Registration menu. You can adjust next the duplex top margin.

1. Enter the Diagnostics menu, and then navigate to:

   DUPLEX TESTS > **Top Margin**

2. Change the margin values.

   Changing the value by 1 unit moves the margin by 1/100 inch. A positive value moves the text down the page and widens the top margin. A negative value moves the text up the page and narrows the top margin.

3. Apply the changes.

INPUT TRAY TESTS

Feed Tests

This test feeds blank pages through the paper path.

1. Enter the Diagnostics menu, and then navigate to:

   INPUT TRAY TESTS > **Feed Tests**

2. Select the input source.

   All installed sources appear.

3. Select any of the following:
   - **Single**—This option feeds a single page.
   - **Continuous**—This option continuously feeds pages until **X** is pressed.

OUTPUT BIN TESTS

Feed Tests

This test verifies if paper can be fed to a specific output bin. No information is printed on the paper.

1. Enter the Diagnostics menu, and then navigate to:

   OUTPUT BIN TESTS > **Feed Tests**

2. Select the output bin.

   All installed output bins appear.

3. Select one of the following:
   - **Single**—This option feeds a single page.
   - **Continuous**—This option continuously feeds pages until **X** is pressed.

SENSOR TESTS

PRINTER SENSOR TESTS

These tests verify that the printer sensors are working properly.

1. Enter the Diagnostics menu, and then navigate to:
   SENSOR TESTS > **PRINTER SENSOR TESTS**
2. Select a sensor.
3. Manually toggle the sensor.

   Note: The sensor status on the screen toggles between **Open** and **Close** when the sensor is working properly.

2 x 500-Sheet Tray Sensor Tests

These tests verify that the 2 x 500-sheet tray sensors are working properly.

1. Enter the Diagnostics menu, and then navigate to:
   SENSOR TESTS > **2 x 500-Sheet Tray Sensor Test**
2. Select a sensor.
3. Manually toggle the sensor.

   Note: The sensor status on the screen toggles between **Open** and **Close** when the sensor is working properly.

2500-Sheet Tray Sensor Tests

These tests verify that the 2500-sheet tray sensors are working properly.

1. Remove the tray inserts from tray 1 and tray 2.
2. Enter the Diagnostics menu, and then navigate to:
   SENSOR TESTS > **2500-Sheet Tray Sensor Tests**
3. Select a sensor.
4. Manually toggle the sensor.

   Note: The sensor status on the screen toggles between **Open** and **Close** when the sensor is working properly.

3000-Sheet Tray Sensor Tests

These tests verify that the 3000-sheet tray sensors are working properly.

1. Remove the tray inserts from tray 1 and tray 2.
2. Enter the Diagnostics menu, and then navigate to:
   SENSOR TESTS > **3000-Sheet Tray Sensor Tests**
3. Select a sensor.
4. Manually toggle the sensor.

   Note: The sensor status on the screen toggles between **Open** and **Close** when the sensor is working properly.

Staple and Hole Punch Finisher Sensor Tests

These tests verify that the staple and hole punch finisher sensors are working properly.

1. Remove the tray inserts from tray 1 and tray 2.
2. Enter the Diagnostics menu, and then navigate to:
   SENSOR TESTS > **Staple and Hole Punch Finisher Sensor Test**
3. Select a sensor.
4. Manually toggle the sensor.

   Note: The sensor status on the screen toggles between **Open** and **Close** when the sensor is working properly.

Hole Punch Booklet Finisher Sensor Tests

These tests verify that the hole punch booklet finisher sensors are working properly.

1. Remove the tray inserts from tray 1 and tray 2.
2. Enter the Diagnostics menu, and then navigate to:
   SENSOR TESTS > **Hole Punch Booklet Finisher Sensor Tests**
3. Select a sensor.
4. Manually toggle the sensor.

   Note: The sensor status on the screen toggles between **Open** and **Close** when the sensor is working properly.

Staple Finisher Sensor Tests

These tests verify that the staple finisher sensors are working properly.

1. Remove the tray inserts from tray 1 and tray 2.
2. Enter the Diagnostics menu, and then navigate to:
   SENSOR TESTS > **Staple Finisher Sensor Tests**
3. Select a sensor.
4. Manually toggle the sensor.

   Note: The sensor status on the screen toggles between **Open** and **Close** when the sensor is working properly.

Motor Tests

PRINTER MOTOR TESTS

These tests verify that the printer motors are properly working.

Note: If these tests are not performed in safe mode, then the control panel may become unresponsive.

1. Enter the Diagnostics menu, and then close the bottom front door.
2. Navigate to:
   Motor Tests > **PRINTER MOTOR TESTS**

3 Open the bottom front door and right door.

4 Select **Registration**.

5 Press **X** three times.

6 Close the bottom front door and right door.

Note: If the engine does not initialize, then the motor test is in safe mode.

7 Select a motor.

8 Check if the motor runs.

Note: Not all motors run the same way.

The following motors run, and then stop after a preset duration:

- MPF tray lift-up plate elevator down
- Tray 1 lift
- Tray 2 lift
- Fusing pressure release

The following motors continuously run, unless the test is canceled:

- Registration
- Paper feed
- Tray 2 vertical transport
- Polygon
- Transport
- Fusing
- Developing
- Duplex transport
- Redrive forward
- Redrive reverse

2x500-Sheet Tray Motor Tests

These tests verify that the 2 x 500-sheet tray motors are properly working.

Note: If these tests are not performed in safe mode, then the control panel may become unresponsive.

1 Enter the Diagnostics menu, and then close the bottom front door.

2 Navigate to:

Motor Tests > **PRINTER MOTOR TESTS**

3 Open the bottom front door and right door.

4 Select **Registration**.

5 Press **X** three times.

6 Close the bottom front door and right door.

Note: If the engine does not initialize, then the motor test is in safe mode.

7 Navigate to:

Motor Tests > **2x500-Sheet Tray Motor Tests**

8 Select a motor.

9 Check if the motor runs.

Note: Not all motors run the same way.

The following motors run, and then stop after a preset duration:

- Tray 3 lift
- Tray 4 lift

The following motors continuously run, unless the test is canceled:

- Tray 3 paper feed
- Tray 4 paper feed
- Tray 3 transport
- Tray 4 transport

2500-Sheet Tray Motor Tests

These tests verify that the 2500-sheet tray motors are properly working.

Note: If these tests are not performed in safe mode, then the control panel may become unresponsive.

1 Enter the Diagnostics menu, and then close the bottom front door.

2 Navigate to:

Motor Tests > **PRINTER MOTOR TESTS**

3 Open the bottom front door and right door.

4 Select **Registration**.

5 Press **X** three times.

6 Close the bottom front door and right door.

Note: If the engine does not initialize, then the motor test is in safe mode.

7 Navigate to:

Motor Tests > **2500-Sheet Tray Motor Tests**

8 Select a motor.

9 Check if the motor runs.

Note: Not all motors run the same way.

The following motors run, and then stop after a preset duration:

- Elevator UP
- Elevator DOWN
- Transfer guide HOME
- Transfer guide AWAY

The following motors continuously run, unless the test is canceled:

- Tray feed
- Tray transport

3000-Sheet Tray Motor Tests

These tests verify that the 3000-sheet tray motors are properly working.

Note: If these tests are not performed in safe mode, then the control panel may become unresponsive.

1. Enter the Diagnostics menu, and then close the bottom front door.
2. Navigate to:

   Motor Tests > **PRINTER MOTOR TESTS**
3. Open the bottom front door and right door.
4. Select **Registration**.
5. Press **X** three times.
6. Close the bottom front door and right door.

   Note: If the engine does not initialize, then the motor test is in safe mode.
7. Navigate to:

   Motor Tests > **3000-Sheet Tray Motor Tests**
8. Select a motor.
9. Check if the motor runs.

   Notes:

   - If Tray elevator is selected—the motor runs, and then stops after a preset duration.
   - If Tray feed or Tray transport is selected—the motor continuously runs, unless the test is canceled.

Staple Finisher Motor Tests

These tests verify that the staple finisher motors are working properly.

1. Enter the Diagnostics menu, and then navigate to:

   Motor Tests > **Staple Finisher Motor Tests**
2. Select a motor.
3. Check if the motor runs.

Staple and Hole Punch Finisher Motor Tests

These tests verify that the staple and hole punch finisher motors are working properly.

1. Enter the Diagnostics menu, and then navigate to:

   Motor Tests > **Staple and Hole Punch Finisher Motor Tests**
2. Select a motor.

3 Check if the motor runs.

Booklet Maker Motor Tests

These tests verify that the booklet maker motors are working properly.

1 Enter the Diagnostics menu, and then navigate to:

Motor Tests > **Booklet Maker Motor Tests**

2 Select a motor.

3 Check if the motor runs.

DEVICE TESTS

Quick Disk Test

This test performs a non-destructive read/write test on one block per track on the disk. If the block is good, then the saved data is written back to the disk.

1 Enter the Diagnostics menu, and then navigate to:

DEVICE TESTS > **Quick Disk Test**

2 Exit the test.

Disk Test/Clean

Warning—Potential Damage: This test destroys all data on the printer hard disk.

This test may run for approximately 1.5 hours depending on the disk size.

1 Enter the Diagnostics menu, and then navigate to:

DEVICE TESTS > **Disk Test/Clean**

You cannot cancel the test once it has started.

2 Exit the test.

Flash Test

This test examines the condition of the flash drive.

Warning—Potential Damage: This test destroys all data on the flash drive.

1 Enter the Diagnostics menu, and then navigate to:

Device Tests > **Flash Test**

You cannot cancel the test once it has started.

2 Exit the test.

3 Reformat the flash drive using the Flash Format setting in the Utilities menu.

PRINTER SETUP

Defaults

Warning—Potential Damage: Modifying printer setting defaults restores the NVRAM space to its factory settings.

This setting determines whether the printer uses the U.S. or Non-U.S. factory default value for the following settings:

Printer default values	U.S. value	Non-U.S. value
Paper Sizes setting in the General Settings menu	U.S.	Metric
Default Paper Size (paper feeding sources which do not have hardware size sensing capabilities)	Letter	A4
Default Envelope Size (envelope feeding sources which do not have hardware size sensing capability)	10 Envelope	DL Envelope
Fax Paper Size	Letter	A4
PCL Symbol Set	PC-8	PC-850
PPDS Code Page	437	850
Universal Units of Measure	Inches	Millimeters

1. Enter the Diagnostics menu, and then navigate to:

   PRINTER SETUP > **Defaults**

2. Select a default value.
3. Apply the changes.

Printed Page Count

This setting gauges the amount of usage on the printer. The value of the Printed Page Count setting equals the value of the Picked Sides meter. After all print tests are completed, the value resets to zero.

Enter the Diagnostics menu, and then navigate to:

PRINTER SETUP > **Printed Page Count**

Note: The value of the setting cannot be changed manually.

Permanent Page Count (Perm page count)

This setting indicates the number of pages that are printed. After all print tests are completed, the value resets to zero.

Enter the Diagnostics menu, and then navigate to:

PRINTER SETUP > **Perm Page Count**

Note: The Permanent Page Count value cannot be reset.

Processor ID

This setting indicates the ID of the processor on the controller board.

Enter the Diagnostics menu, and then navigate to:

PRINTER SETUP > **Processor ID**

Edge to Edge

This setting shifts all four margins to the physical edges of the page. This feature does not work in PPDS emulation.

Enter the Diagnostics menu, and then navigate to:

PRINTER SETUP > **Edge to Edge**

Enable Edge to Edge Copy

This setting determines whether the printer accepts the ADF or flatbed edge erase value when performing an ADF or flatbed copy.

Enter the Diagnostics menu, and then navigate to:

PRINTER SETUP > **Enable Edge to Edge Copy**

Parallel Strobe Adjustment (Par 1 Strobe Adj)

This setting adjusts the factory default setting for how long the strobe is sampled to determine that valid data is available on the parallel port.

Each time the value increases by one, the strobe is sampled 50 nanoseconds longer than the default value. Each time the value decreases by one, the strobe is sampled 50 nanoseconds less than the default value. The range of values is between -4 and +6, in increments of one. A value of zero indicates that no change is made from the factory setting.

Enter the Diagnostics menu, and then navigate to:

PRINTER SETUP > **Par 1 Strobe Adj**

Reset Engine Service Error

This setting restores the engine to normal functioning mode after a fatal error occurs that places the engine into lockdown mode.

Enter the Diagnostics menu, and then navigate to:

PRINTER SETUP > **Reset Engine Service Error**

Restore Backup Data

This setting transfers the settings from the engine controller board to the printer controller board and vice versa.

Enter the Diagnostics menu, and then navigate to:

PRINTER SETUP > **Restore Backup Data**

Restoring backup data when replacing the printer controller board

After installing a new controller board, select **Engine card to controller card** to create a backup copy of the existing engine controller board settings into the new controller board.

Restoring backup data when replacing the engine controller board

1. Before removing the old engine controller board, select **Engine card to controller card** to move the current engine settings into the controller board.
2. After installing the new engine controller board, select **Controller card to engine card** to move the engine board settings stored on the controller board to the new engine controller board.

Reset Fuser Counter

This setting resets the fuser counter to zero.

Note: This setting appears only if the **Maintenance Warning and Intervention** configuration ID bit is enabled.

Enter the Diagnostics menu, and then navigate to:

PRINTER SETUP > **Reset Fuser Counter**

REPORTS

Menu Settings Page

This report shows the Diagnostics menu settings and their current values.

Enter the Diagnostics menu, and then navigate to:

REPORTS > **Menu Settings Page**

Installed Licenses

This report shows the installed licenses and their features.

Enter the Diagnostics menu, and then navigate to:

REPORTS > **Installed Licenses**

EVENT LOG

Display Log

This setting displays the panel text that appears when the event occurs.

Enter the Diagnostics menu, and then navigate to:

EVENT LOG > **Display Log**

Print Log

This setting prints the various printer events.

Note: The events that appear in the report vary depending on the operational history of the printer.

Enter the Diagnostics menu, and then navigate to:

EVENT LOG > **Print Log**

Clear Log

This setting clears current information in the EVENT LOG.

1. Enter the Diagnostics menu, and then navigate to:
   EVENT LOG > **Clear Log**
2. Select a setting.
3. Apply the changes.

Print Log Summary

This prints a summary of the printed event logs.

Enter the Diagnostics menu, and then navigate to:

EVENT LOG > **Print Log Summary**

SCANNER TESTS

ADF Front Magnification

This setting adjusts the ADF front magnification levels.

1. Enter the Diagnostics menu, and then navigate to:
   SCANNER TESTS > **ADF Front Magnification**
2. Select **ADF Front Vertical Magnification** or **ADF Front Horizontal Magnification**.
3. Adjust the magnification setting, and then apply the changes.

ADF Back Magnification

This setting adjusts the ADF back magnification levels.

1. Enter the Diagnostics menu, and then navigate to:
   SCANNER TESTS > **ADF Back Magnification**
2. Select **ADF Back Vertical Magnification** or **ADF Back Horizontal Magnification**.
3. Adjust the magnification setting, and then apply the changes.

FB Magnification

This setting adjusts the flatbed magnification levels.

1. Enter the Diagnostics menu, and then navigate to:
   SCANNER TESTS > **FB Magnification**
2. Select **Flatbed Vertical Magnification** or **Flatbed Horizontal Magnification**.
3. Adjust the magnification setting, and then apply the changes.

ASIC Test

This setting scans the ASIC memory of the scanner.

Enter the Diagnostics menu, and then navigate to:

SCANNER TESTS > **ASIC Test**

Feed Test

This test allows for a continuous feed from the ADF or flatbed.

1. Enter the Diagnostics menu, and then navigate to:

   SCANNER TESTS > **Feed Test**

2. Select a paper size, and then start the test.

Sensor Tests

These tests verify that the flatbed sensors and ADF scanner sensors are working properly.

1. Enter the Diagnostics menu, and then navigate to:

   SCANNER TESTS > **Sensor Tests**

2. Select a sensor.
3. Manually toggle the sensor.

   The status of the sensor toggles between **0** and **1** if the sensor is working properly.

Scanner Calibration Reset

Before starting the test, make sure that the scanner glass and backing material are clean.

1. Enter the Diagnostics menu, and then navigate to:

   SCANNER TESTS > **Scanner Calibration Reset**

2. Select a setting.
3. Apply the changes.

To verify the result, do the following:

1. Load the ADF with a document containing light and dark content.
2. Print a two-sided copy of the document.

   Notes:

   - If the back side of the copy has vertical streaks, clean the scanner glass and backing material, and then print another copy.
   - If the streaks still appear, then repeat the cleaning and verification procedure or replace the ADF.

Exit Diags

Select this setting to exit the Diagnostics Menu screen. The printer performs a POR, and then restarts in normal mode.

This menu appears as a soft button at the bottom right corner of the display.

Configuration Menu

Entering the Configuration menu

1. Turn off the printer.
2. Press and hold **2** and **6** while turning on the printer.
   Release the buttons when the splash screen appears.

Hole Punch Configuration

The values in this setting determine which values appear in the Hole Punch Mode setting and which value is the default.

1. Enter the Configuration menu, and then select **Hole Punch Configuration**.
2. Select from the following options:
   - **2/3-hole**—Only the 2 holes and 3 holes values appear. The 3 holes value is the default.
   - **2/4-hole**—Only the 3 holes and 4 holes values appear. The 4 holes value is the default.
   - **Swedish**—Only the 4 holes value appears.
   - **Japanese**—Only the 2 holes value appears.
3. Apply the changes.

Reset Maintenance Counter

This setting resets the selected maintenance count value to zero.

1. Enter the Configuration menu, and then select **Reset Maintenance Counter**.
2. Select the maintenance kit to reset.

USB Scan to Local

This setting determines whether the USB device driver enumerates as a USB Simple device (single interface) or as a USB Composite device (multiple interfaces).

1. Enter the Configuration menu, and then select **USB Scan to Local**.
2. Select a setting.
3. Apply the changes.

Print Quality Pages

This setting prints a report that contains a limited set of the information that appears in the Diagnostics version of the Print Quality Pages report. See **"Print Quality Pages" on page 214**.

Enter the Configuration menu, and then select **Print Quality Pages**.

Reports

Menu Settings Page

This report lists the Configuration menu settings and the value of each setting.

1. Enter the Configuration menu, and then navigate to:

   Reports > **Menu Settings Page**

2. Return to the Configuration Menu screen.

Event Log

This setting prints a report of the detailed events in the print log. See **"Print Log" on page 226**.

1. Enter the Configuration menu, and then navigate to:

   Reports > **Event Log**

2. Return to the Configuration Menu screen.

SIZE SENSING

This setting controls whether the printer automatically registers the size of the paper loaded in a tray with a size-sensing mechanism.

Enter the Configuration menu, and then select **SIZE SENSING**.

Note: Due to engine limitations, trays 1 through 4 cannot simultaneously sense the following paper sizes:

- Oficio/Folio
- Statement/A5
- Executive/B5

The value of each setting determines which of the paper sizes the trays sense automatically. The values apply to all automatic trays except for the multipurpose feeder. The multipurpose feeder supports these paper sizes regardless of the value of this setting.

Tray Linking

This setting enables the printer to link automatically the trays that contain the same paper type and size.

1. Enter the Configuration menu, and then select **Tray Linking**.
2. Select a setting.
3. Apply the changes.

Panel Menus

This setting determines whether to enable access to the printer menus.

1. Enter the Configuration menu, and then select **Panel Menus**.
2. Select a setting.

3 Apply the changes.

PPDS Emulation

This setting determines if the printer can recognize and use the PPDS data stream.

1 Enter the Configuration menu, and then select **PPDS Emulation**.

2 Select a setting.

3 Apply the changes.

Download Emuls

This menu appears only if at least one download emulator (DLE) is installed. The default setting is Disable. All download emulators are automatically re-enabled after two PORs.

Enter the Configuration menu, and then select **Download Emuls**.

Safe Mode

When Safe Mode is enabled, the printer operates in a special limited mode with as much functionality as possible despite known issues. For more information about Safe Mode and the Safe Mode print behavior, see **"Entering Safe Mode (EverReady Mode)" on page 238**.

1 Enter the Configuration menu, and then select **Safe Mode**.

2 Select a setting, and then apply the changes.

3 Reset the printer.

Energy Conserve

This setting controls which values appear on the Power Saver menu.

1 Enter the Configuration menu, and then select **Energy Conserve**.

2 Select a setting.

3 Apply the changes.

Fax Low Power Support

This setting allows you to select the power settings for fax.

- **Auto**—Determines whether the printer supports the fax portion of the low power architecture
- **Permit Sleep**—Allows the fax chip to enter the low power mode
- **Disable Sleep**—Does not allow the fax chip to enter the low power mode

1 Enter the Configuration menu, and then select **Fax Low Power Support**.

2 Select a setting.

3 Apply the changes.

Min Copy Memory

This setting determines how much DRAM is allowed to be stored in the priority queue for copy jobs.

Note: The values appear only if the amount of installed DRAM is at least twice the amount of the value.

1. Enter the Configuration menu, and then select **Min Copy Memory**.
2. Select a setting.
3. Apply the changes.

NumPad Job Assist

This setting determines if you can configure and initiate a job using the hard buttons of the control panel.

1. Enter the Configuration menu, and then select **NumPad Job Assist**.
2. Select a setting.
3. Apply the changes.

Format Fax Storage

This setting enables you to format the non-volatile storage for faxes.

1. Enter the Configuration menu, and then select **Format Fax Storage**.

   Note: If an advanced password has been established, then enter the password to change the setting. If no advanced password exists, then establish one by using the keyboard that appears on the screen.
2. Apply the changes.

Fax Storage Location

This setting allows you to store faxes on the hard disk or NAND.

Note: This setting appears only if a hard disk is installed. The printer automatically stores all buffered faxes on NAND when no hard disk is installed.

1. Enter the Configuration menu, and then select **Fax Storage Location**.
2. Select a setting.
3. Apply the changes.

ADF Edge Erase

This setting sets the size of the no-print area around an ADF scan job.

1. Enter the Configuration menu, and then select **ADF Edge Erase**.
2. Select a setting.
3. Apply the changes.

FB Edge Erase

This setting sets the size of the no-print area around a flatbed scan job.

1. Enter the Configuration menu, and then select **FB Edge Erase**.
2. Select a setting.
3. Apply the changes.

Scanner Manual Registration

Use this setting to register the flatbed and ADF on the scanner. Perform a registration adjustment whenever the ADF, flatbed, or controller board is replaced.

Note: This setting does not appear if the Disable Scanner setting is set to Auto Disabled.

Enter the Configuration menu, and then select **Scanner Manual Registration**.

For more information on adjusting the scanner registration, see **"ADF registration adjustment" on page 259** and **"Flatbed registration adjustment" on page 261**.

Disable Scanner

Use this setting to disable the scanner if it is not working properly.

1. Enter the Configuration menu, and then select **Disable Scanner**.
2. Select a setting, and then apply the changes.
3. Reset the printer.

Paper Prompts

This setting determines the input source to which the printer directs a paper change prompt.

Note: The value of **"Action for Prompts" on page 234** may override the value of this setting.

1. Enter the Configuration menu, and then select **Paper Prompts**.
2. Select a setting.
3. Apply the changes.

Envelope Prompts

This setting determines the input source to which the printer directs an envelope change prompt.

Note: The value of **"Action for Prompts" on page 234** may override the value of this setting.

1. Enter the Configuration menu, and then select **Envelope Prompts**.
2. Select a setting.
3. Apply the changes.

Action for Prompts

This gives you the option to allow the printer to resolve change prompt situations without requiring any user assistance.

1. Enter the Configuration menu, and then select **Action for Prompts**.
2. Select a setting.
3. Apply the changes.

Jobs on Disk

This setting allows you to delete buffered jobs from the printer hard disk.

1. Enter the Configuration menu, and then select **Jobs on Disk**.
2. Select a setting.
3. Apply the changes.

Disk Encryption

This setting controls whether the printer encrypts the information that it writes on the hard disk.

1. Enter the Configuration menu, and then select **Disk Encryption**.
2. Select a setting.
3. Apply the changes.

Font Sharpening

This setting sets a text point-size value below which the high-frequency screens are used when printing font data.

1. Enter the Configuration menu, and then select **Font Sharpening**.
2. Select a setting.
3. Apply the changes.

Require Standby

This setting allows you to enable the Standby Mode.

1. Enter the Configuration menu, and then select **Require Standby**.
2. Select a setting.
3. Apply the changes.

UI Automation

This setting allows external developers to measure the stability of their applications by performing their own automated testing against the printer.

1. Enter the Configuration menu, and then select **UI Automation**.
2. Select a setting.
3. Apply the changes.

LES Applications

This setting allows you to enable the Lexmark Embedded Solutions (LES) applications.

1. Enter the Configuration menu, and then select **LES Applications**.
2. Select a setting.
3. Apply the changes.

Key Repeat Initial Delay

This setting determines the length of delay before a repeating key starts repeating.

1. Enter the Configuration menu, and then select **Key Repeat Initial Delay**.
2. Select a setting.
3. Apply the changes.

Key Repeat Rate

This setting indicates the number of presses per second for a repeating key.

1. Enter the Configuration menu, and then select **Key Repeat Rate**.
2. Select a setting.
3. Apply the changes.

Clear Supply Usage History

This setting reverts the supply usage history (number of pages and days remaining) to its factory default settings.

1. Enter the Configuration menu, and then select **Clear Supply Usage History**.
2. Apply the changes.

Clear Custom Status

This setting erases the defined strings for the default or alternate custom messages.

1. Enter the Configuration menu, and then select **Clear Custom Status**.
2. Apply the changes.

USB Speed

This setting determines the throughput of the USB port on the printer.

1. Enter the Configuration menu, and then select **USB Speed**.
2. Select a setting.
3. Apply the changes.

Automatically Display Error Screens

This setting allows the automatic display of existing printer-related messages on the home screen after the printer remains inactive.

1. Enter the Configuration menu, and then select **Automatically Display Error Screens**.
2. Select a setting.
3. Apply the changes.

Restore factory defaults

Restore Settings

This setting restores the printer to its network or base settings

1. Enter the Configuration menu, and then navigate to:

   Restore Factory Defaults > **Restore Settings**
2. Select a setting.
3. Apply the changes.

Erase Printer Memory

This setting makes any sensitive information on the volatile or non-volatile storage of the printer completely indecipherable.

Enter the Configuration menu, and then navigate to **Restore Factory Defaults** > **Erase Printer Memory**.

Erase Hard Disk

This setting performs a disk wipe operation and erases all data.

Note: Do not reset the printer while a disk wipe operation is going on to avoid corrupting the disk.

1. Enter the Configuration menu, and then navigate to:

   Restore Factory Defaults > **Erase Hard Disk**

2. Select any of the following:
   - **Single Pass Erase** overwrites all data and the file system. This wipe is faster but less secure since it is possible to retrieve the deleted data with forensic data-retrieval techniques.
   - **Multiple Pass Erase** overwrites all data without rewriting the file system. This wipe is DoD 5220.22-M compliant since the deleted data is irretrievable.
3. Apply the changes.

Out of Service Erase

This setting clears the settings, apps, jobs, and faxes on the printer memory and all content on the hard disk.

1. Enter the Configuration menu, and then navigate to:

   Restore Factory Defaults > **Out of Service Erase**

2. Select a setting.
3. Apply the changes.

Exit Config

Select this menu to exit the Configuration Menu screen. The printer performs a POR, and then restarts in normal mode.

This menu appears as a soft button at the bottom right corner of the display.

Entering Invalid engine mode

This mode allows the printer to load the correct firmware code.

1. Turn off the printer.
2. Press and hold **3**, **4**, and **6** while turning on the printer.
3. Release the buttons after 10 seconds.

Entering Recovery Mode

This mode allows the printer to receive firmware updates using a USB connection.

1. Turn off the printer.
2. Press and hold **7** and **8** while turning on the printer.
3. Release the buttons after 10 seconds.

Entering Safe Mode (EverReady Mode)

This mode enables the printer to temporarily offer minimal print capabilities.

1. Turn off the printer.
2. Press and hold **7** and **6** while turning on the printer.
3. Release the buttons after 10 seconds.

Accessing the Network SE Menu

This menu contains settings for fine tuning the communication settings for the network interfaces and protocols.

1. Navigate to:

   Networks/Ports > **Standard Network** > **Standard Network Setup**
2. Press and hold **6**, **7**, and **9**.

Service Engineer menu

Accessing the Service Engineer (SE) Menu

From a Web browser on a host computer, add **/se** to the printer IP address.

Service Engineer (SE) Menu

Use this menu as directed by the next level of support.

Top level menu	Intermediate menu
Print SE Menus	--
General	Copyright
Code Revision Info	• Network Code Level • Network Compile Info • Printer Code Level • Printer Compile Info
History	• Print History • Mark History • History Mode
MAC	• Set Card Speed • LAA • Keep Alive
NVRAM	• Dump NVRAM • Reinit NVRAM

Top level menu	Intermediate menu
TCP/IP	• netstat-r • arp-a • Allow SNMP Set • MTU • Meditech Mode • RAW LPR Mode • Gather Debug • Enable Debug

Fax Service Engineer (SE) Menu

Use this menu for the fax transmission and fax reception service checks. Use this menu as directed by the next level of support.

In Ready mode, type ****411** to enter the Fax SE Menu.

Repair information

Removal precautions

CAUTION—SHOCK HAZARD: For personal safety and to prevent damage to the printer, remove the power cord from the electrical outlet before you connect or disconnect any cable, electronic board, or assembly. Disconnect any connections between the printer and the computer or peripherals.

Data security notice

1 The printer contains various types of memory that store printer and network settings, information from embedded solutions, and user data.

The following are the types of memory and data that they store.

- **Volatile memory**—The printer uses standard random access memory (RAM) to buffer user data temporarily during simple print and copy jobs.
- **Non-volatile memory**—The printer may use two forms of non-volatile memory: EEPROM and NAND (flash memory). Both types are used to store the operating system, printer settings, network information, scanner and bookmark settings, and embedded solutions.
- **Hard disk memory**—The printer hard disk is designed for device-specific functionality and cannot be used for the long-term storage of data that is not print-related. The hard disk can retain buffered user data from complex print jobs, form data, and font data.

To erase volatile memory, turn off the printer.

To erase the non-volatile and printer hard disk memory, see **"Configuration Menu" on page 229**.

The following parts are capable of storing memory:

- Printer control panel
- User interface controller card (UICC)
- Controller board
- Optional hard disk

Note: The control panel and controller board contain NVRAM.

2 After removing the old part, return it to your next level of support.

Handling ESD-sensitive parts

Many electronic products use parts that are known to be sensitive to electrostatic discharge (ESD). To prevent damage to ESD-sensitive parts, do the following:

- Turn off the printer before removing logic boards.
- Keep the parts in their original packing material until you are ready to install them into the printer.
- Make the least-possible movements with your body to prevent an increase of static electricity from clothing fibers, carpets, and furniture.
- Put the ESD wrist strap on your wrist. Connect the wrist band to the system ground point. This action discharges any static electricity in your body to the printer.

- Hold the parts by their edge connector shroud. Do not touch its pins. If you are removing a pluggable module, then use the correct tool.
- If possible, keep all parts in a grounded metal cabinet.
- Do not place the parts on the printer cover or on a metal table. If you need to put down the parts, then put them into their packing material.
- Prevent parts from being accidentally touched by other personnel. Cover the printer when you are not working on it.
- Be careful while working with the parts when cold-weather heating is used. Low humidity increases static electricity.

Restoring the printer configuration after replacing the controller board

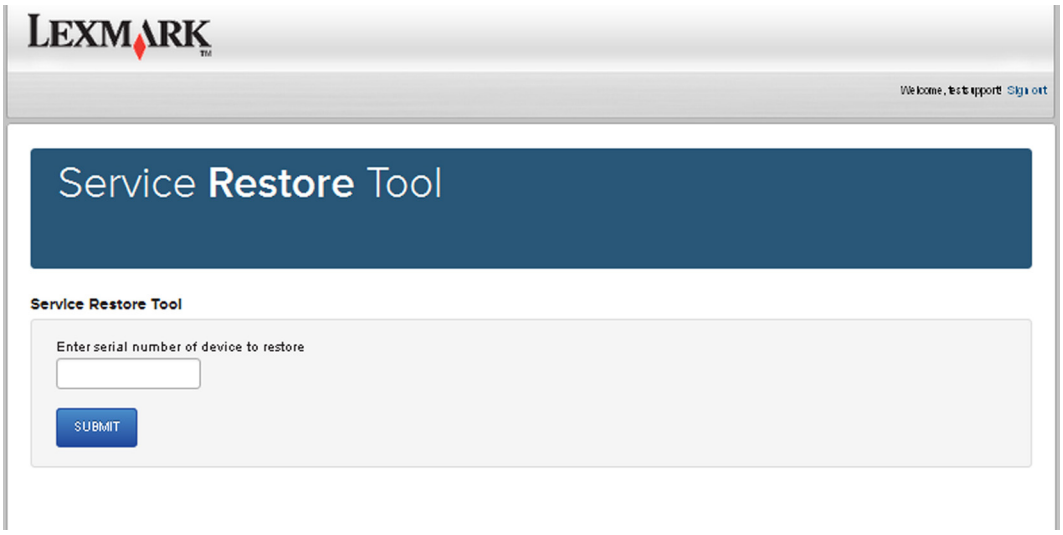
Restore the printer to its correct configuration to complete the replacement service. Use the Service Restore Tool to download the software bundle, and then flash the printer settings and Embedded Solutions.

Note: The software bundle contains the latest version of the firmware, applications, and software licenses from the Lexmark Virtual Solutions Center (VSC). The printer firmware may be at a different level from what was used before replacing the controller board.

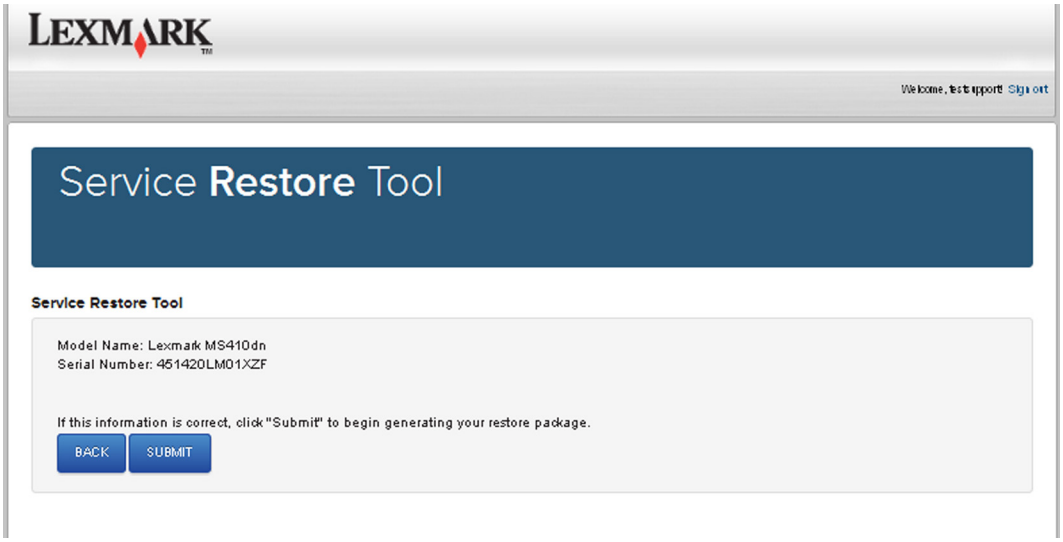
Using the Service Restore Tool

1. Go to **https://cdp.lexmark.com/service-restore-tool/** to access the tool.
2. Log in using your Lexmark or partner login.

   If your login fails, then contact your next level of support.
3. Enter the printer serial number, and then submit the information.

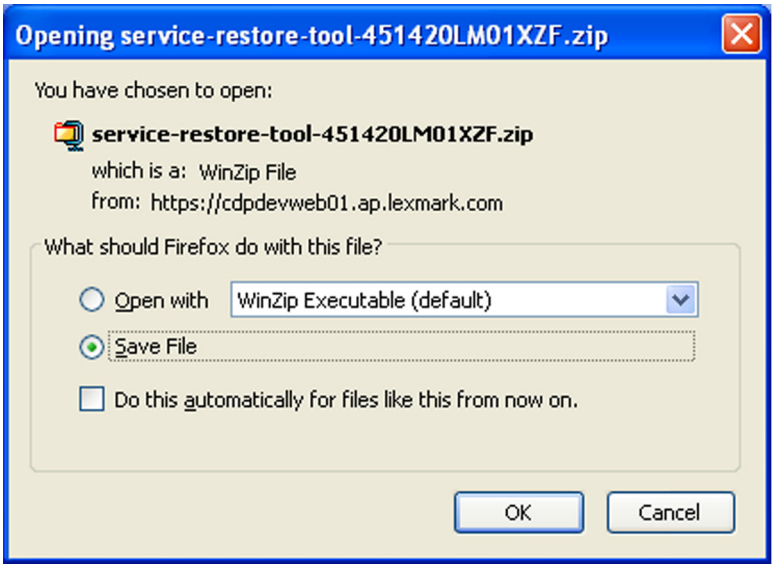


Note: Make sure that the serial number that appears on the verification screen is correct.



4 Save the zip file.

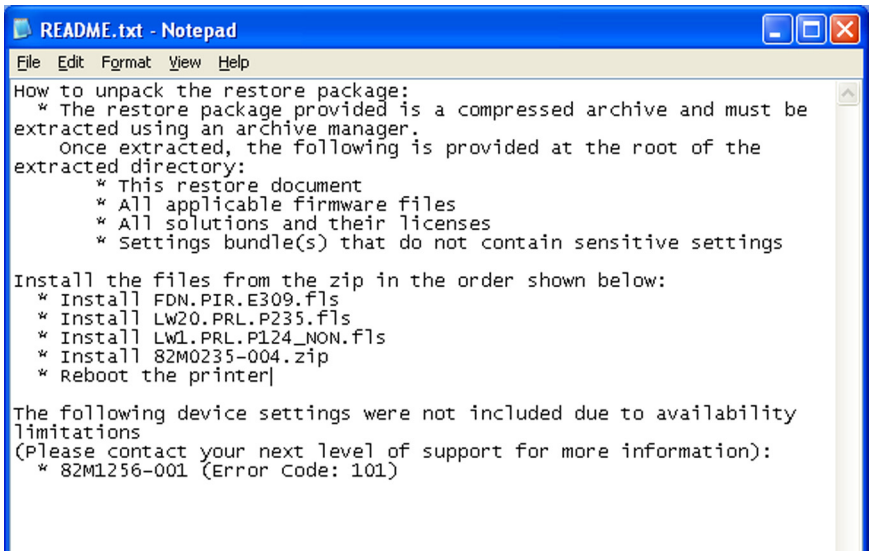
Note: Make sure that the serial number in the zip file matches the serial number of the printer being restored.



5 Extract the contents of the zip file, open the *Readme* file, and then follow the instructions in the file.

Notes:

- Perform the install instructions on the *Readme* file in the exact order shown. Only restart the printer when instructed to in the file.
- For more information on how to flash the downloaded files, see **"Updating the printer firmware " on page 246**.
- To load the zip files that are extracted from the Service Restore Tool, see **"Restoring solutions, licenses, and configuration settings" on page 245**.



6 After performing the installation instructions in the *Readme* file, confirm from the customer if all the eSF apps have been installed.

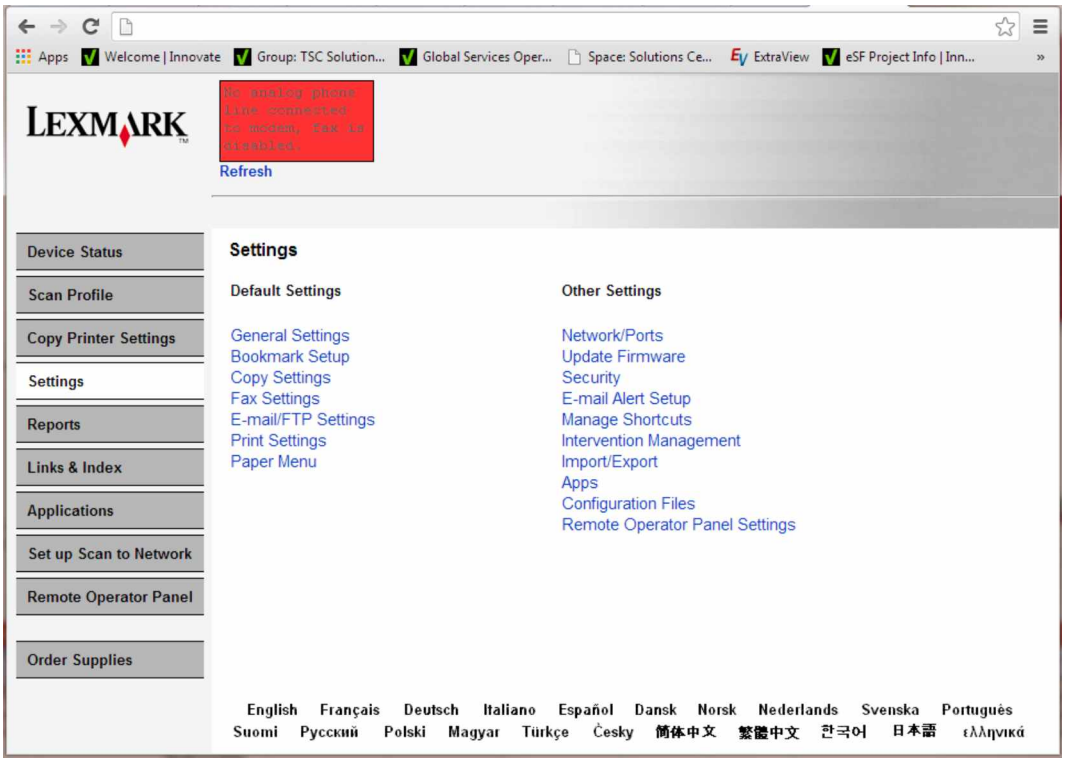
Notes:

- If you are unable to access the administrative menus to verify that the printer is restored, then ask the customer for access rights.
- If a 10.00 error is displayed after you restart the printer, then contact the next level of support.

Restoring solutions, licenses, and configuration settings

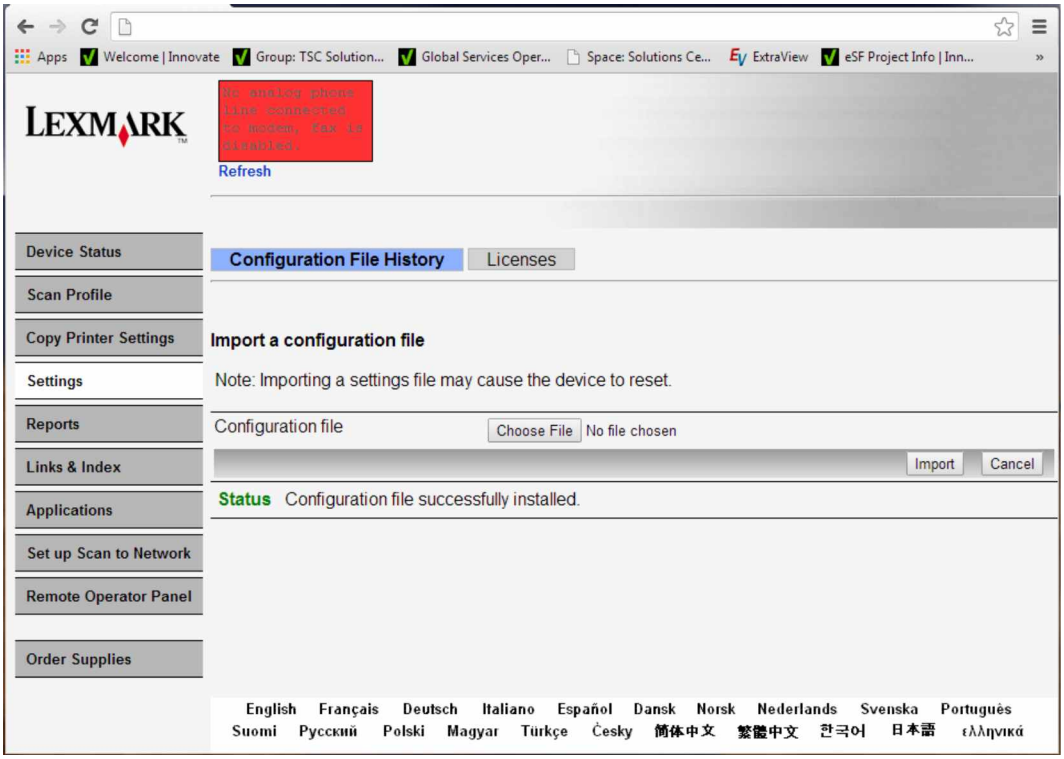
To load the zip files that are extracted from the Service Restore Tool, do the following:

1. Open a Web browser, and then type the printer IP address.
2. Navigate to **Settings** > **Configuration Files**.



3. From the Configuration File History tab, navigate to **Import** > **Choose File**.
4. Select the zip file from the expanded Service Restore Tool package.

5 Click **Import**.



6 Repeat steps 3 to 5 for the other zip files that are included in the expanded zip file.

Updating the printer firmware

Warning—Potential Damage: Before updating the printer firmware, ask the next level of support for the correct code. Using an incorrect code level may damage the printer.

The printer must be in ready state in order to update the firmware.

Using a flash drive

This option is available only in printer models with front USB port.

Make sure to enable the Enable Drive and Update Code settings. You can find the settings in the Flash drive menu under the Settings menu.

1 Insert the flash drive into the USB port.

2 From the home screen, navigate to **USB Menu: Print from USB** > **Accept** or **OK**.

3 Select the file that you need to flash.

Note: Do not turn off the printer while the update is going on.

Using a network computer

Using the File Transfer Protocol (FTP)

Make sure that the printer is in ready state before flashing the printer.

1. Turn on the printer.
2. Obtain the IP address:
   - From the home screen
   - From the TCP/IP section of the Network/Ports menu
3. From the command prompt of a network computer, open an FTP session to the printer IP address.
4. Use a PUT command to place the firmware file on the printer.

   The printer performs a POR sequence and terminates the FTP session.
5. Repeat steps 2 through 4 for the other files.

Using the Embedded Web Server

Make sure that the printer is in ready state before flashing the printer.

1. Open a Web browser, and then type the printer IP address.
2. From the home page, navigate to **Configuration** > **Update Firmware**.
3. Select the file to use.

   The printer performs a POR sequence and terminates the FTP session.
4. Repeat steps 2 through 4 for the other files.

Backing up eSF solutions and settings

Note: Export the eSF solutions and settings from the printer before replacing the controller board.

Exporting eSF solutions and settings file

1. POR the printer into Invalid engine mode. See **"Entering Invalid engine mode" on page 237**.
2. Open a Web browser, and then type the printer IP address.

   Note: If the Web page cannot be accessed or an error occurs when starting the printer into Invalid engine mode, then data backup is not an option. Inform the customer that the data cannot be saved.
3. Navigate to **Settings** > **Solutions** > **Embedded Solutions**.
4. From the Embedded Solutions page, select the applications that you want to export.
5. Click **Export**.

   Note: There is a size limit of 128 KB on the export file.

Importing eSF solutions and settings file

After replacing the controller board, import back to the printer the eSF solutions and settings that were exported.

1. POR the printer into Invalid engine mode. See **"Entering Invalid engine mode" on page 237**.
2. Open a Web browser, and then type the printer IP address.

   Note: If the Web page cannot be accessed or an error occurs when starting the printer into Invalid engine mode, then data backup is not an option. Inform the customer that the data cannot be saved.
3. Navigate to **Settings** > **Solutions** > **Embedded Solutions**.
4. From the Embedded Solutions page, select the applications that you want to import.
5. Click **Import**.

Understanding the marked or colored screws

Some parts are secured by screws that are specially marked or colored.

- **Blue or green**—These screws may loosen due to vibrations and loads during use or transport.
- **Red**—These screws secure parts that are difficult to install, adjust, or align. Do not remove or loosen the parts with red screws unless the parts are defective.

  Note: In some cases, the part is secured by multiple screws but only one screw is marked in red. This part should not also be removed or loosened unnecessarily.

Ribbon cable connectors

Zero Insertion Force (ZIF) connectors

These connectors are used on the boards and cards that are installed in the printer.

To avoid damaging the connectors and their cables, observe the following:

- Do not insert the cables where the contacts are facing the locking actuator.
- Do not insert the cables diagonally into the ZIF socket.
- Avoid using a fingernail or sharp object to open the locking actuator.
- Avoid pressing against the cables when opening the locking actuator.

These are the types of the ZIF connectors that are used in this printer:

- Horizontal top contact connector
- Horizontal bottom contact connector
- Vertical mount contact connector
- Horizontal sliding connector

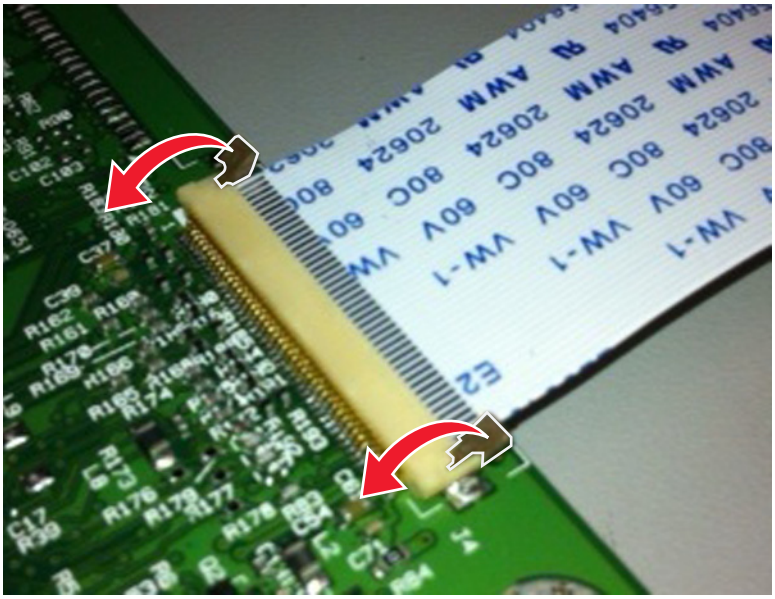
Horizontal top contact connector

This connector uses a back flip locking actuator to lock the ribbon cable into the ZIF connector.

Warning—Potential Damage: When opening or closing this type of actuator, lift or close the two tabs located on each end of the actuator. The two tabs should be moved simultaneously. Do not close the actuator from the center.

Removing the cable

1 Unlock the actuator.



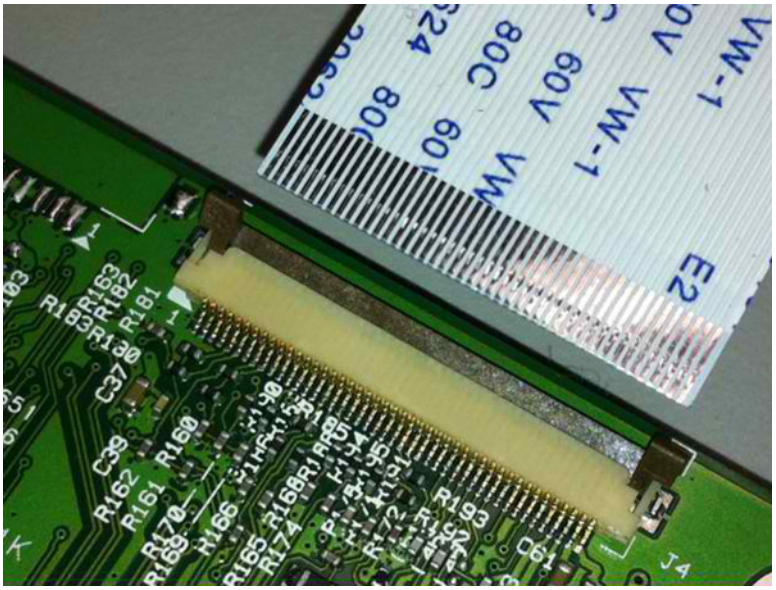
2 Remove the cable.

Inserting the cable

Make sure that the actuator is unlocked before installing the cable. The tabs are vertical when the actuator is locked.

1 Insert the cable on top of the actuator with the contacts facing up.

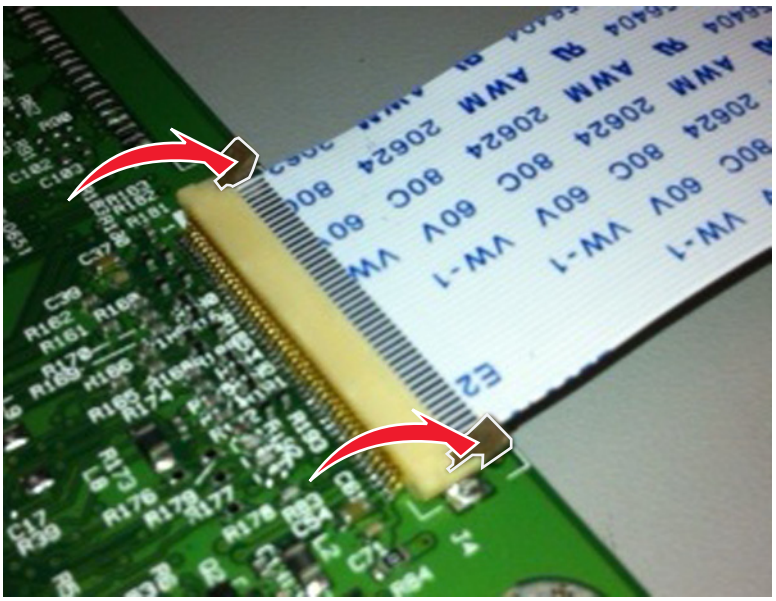
Note: Make sure that the cable is installed squarely into the connector to avoid intermittent failures.



2 Rotate the locking actuator to the locked position.

Notes:

- Do not move the cable while locking the actuator.
- If the cable moves, open the actuator, reposition the cable, and then close the actuator.



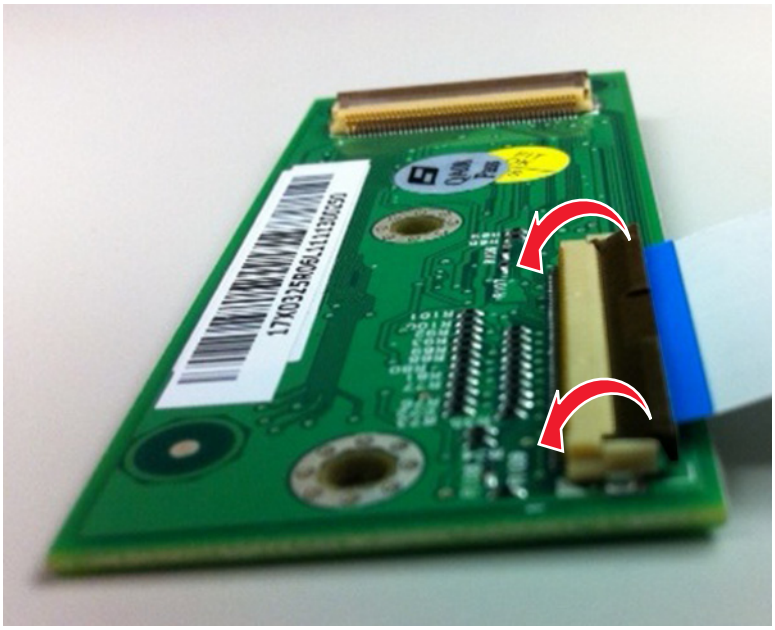
Horizontal bottom contact connector

This connector uses a flip locking actuator to lock the ribbon cable into the ZIF connector.

Warning—Potential Damage: When opening or closing this type of actuator, gently lift the center of the actuator using your finger. Do not use a fingernail or screwdriver to open the actuator to avoid damaging the ribbon cable. Do not close the actuator from its ends.

Removing the cable

1 Unlock the actuator.



2 Remove the cable.

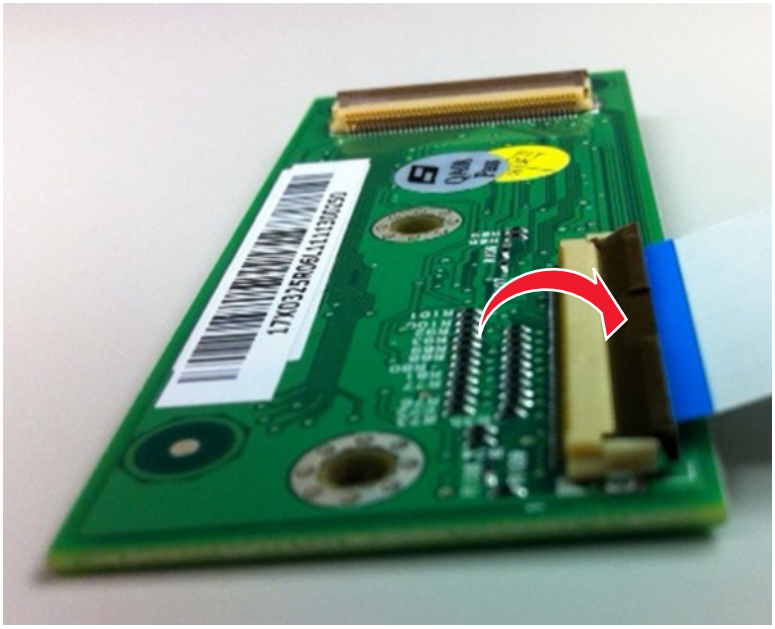
Inserting the cable

1 Make sure that the actuator is in the open position.

2 Insert the cable below the actuator with the contacts facing downward and away from the locking actuator.

Note: Make sure that the cable is installed squarely into the connector to avoid intermittent failures.

3 Rotate the locking actuator to the locked position.



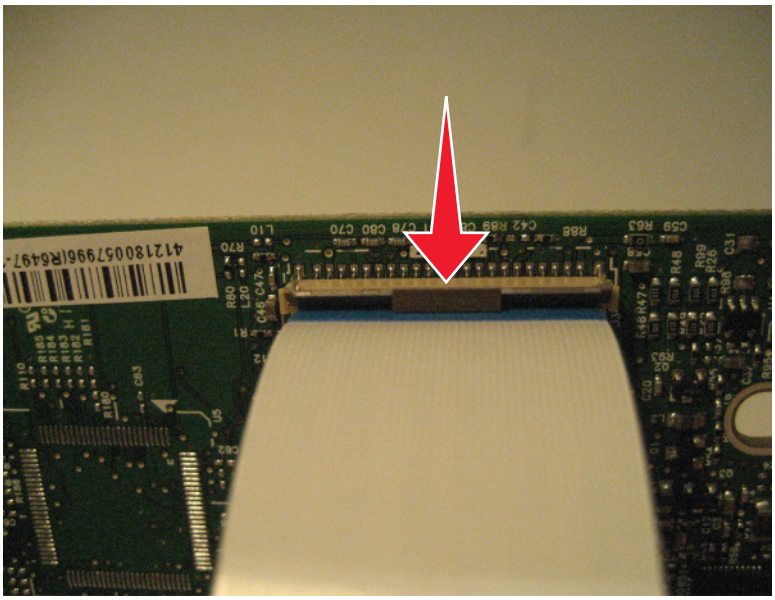
Vertical mount contact connector

This connector uses a back flip locking actuator to lock the ribbon cable into the ZIF connector.

Warning—Potential Damage: When opening or closing this type of actuator, gently lift the center of the actuator using your finger. Do not use a fingernail or screwdriver to open the actuator to avoid damaging the ribbon cable. Do not close the actuator from its ends.

Removing the cable

1 Rotate the locking actuator from the center of the actuator to the unlocked position.



2 Remove the cable.

Inserting the cable

1 Make sure that the locking actuator is in the open position.

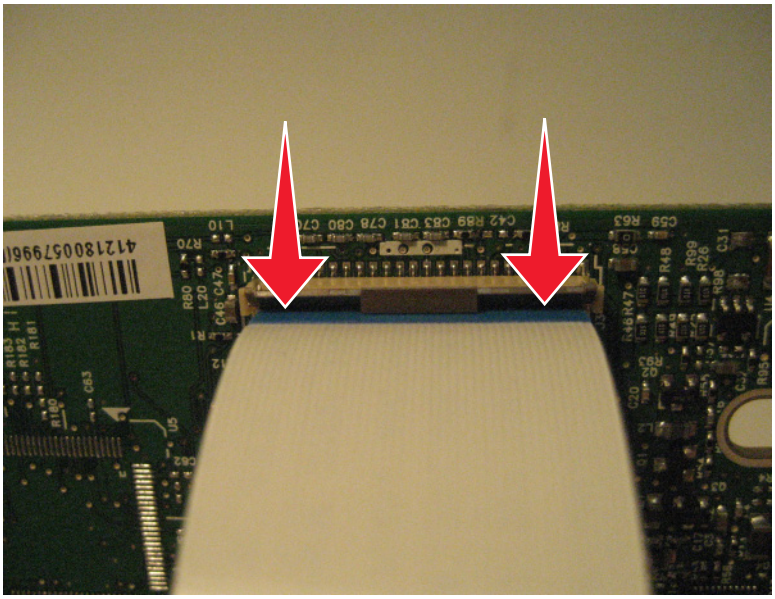
2 Insert the cable on top of the actuator with the contacts facing away from the locking actuator.

Note: Make sure that the cable is installed squarely into the connector to avoid intermittent failures.

3 Rotate the locking actuator to the locked position.

Notes:

- Do not move the cable while locking the actuator.
- If the cable moves, open the actuator, reposition the cable, and then close the actuator.



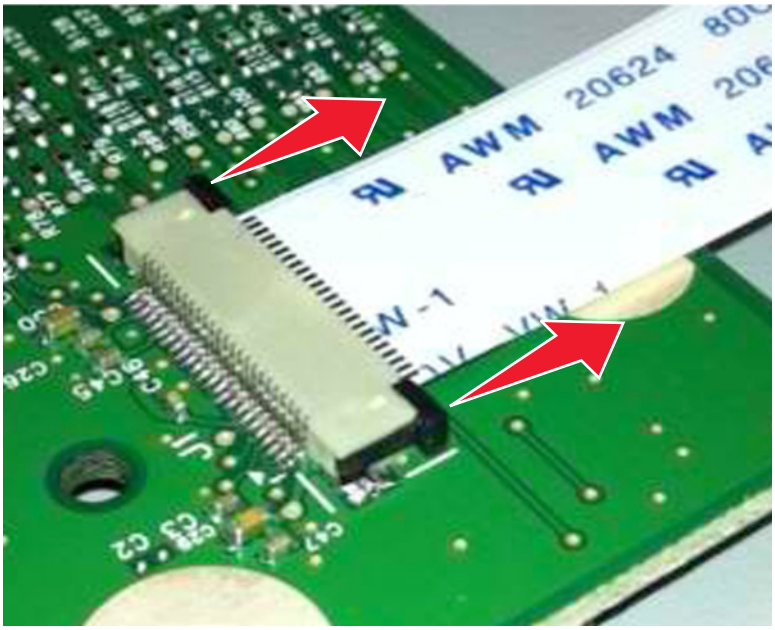
Horizontal sliding contact connector

This connector uses a slide locking actuator to lock the ribbon cable into the ZIF connector.

Warning—Potential Damage: When opening or closing this type of actuator, gently push or pull the two tabs located on each end of the actuator. Do not close the actuator from the center of the actuator. Do not use a screwdriver to open or close the actuator to avoid damage to the cable or connector.

Removing the cable

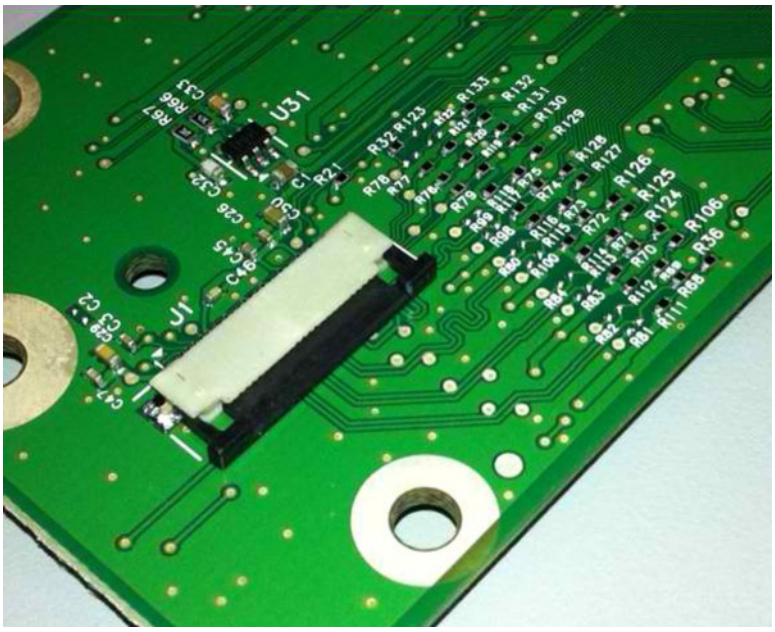
1. Slide the tabs away from the connector.



2. Remove the cable.

Inserting the cable

1. Make sure that the locking actuator is in the open position. If you are opening the connector, then pull back the end tabs using equal force to avoid breaking the connector.

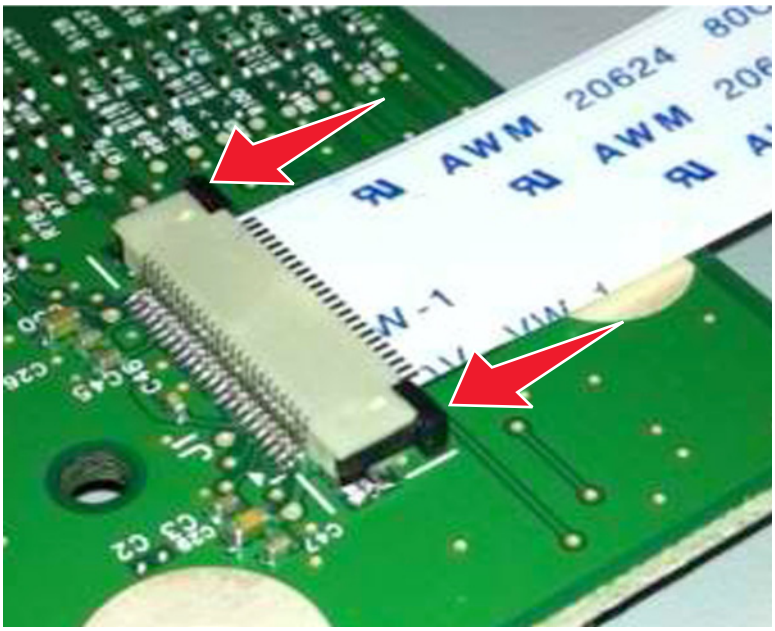


2. Insert the cable on top of the actuator with the contacts facing away from the locking actuator.

3. Slide the locking actuator toward the connector to lock the cable.

Notes:

- Do not move the cable while locking the actuator.
- If the cable moves, open the actuator, reposition the cable, and then close the actuator.

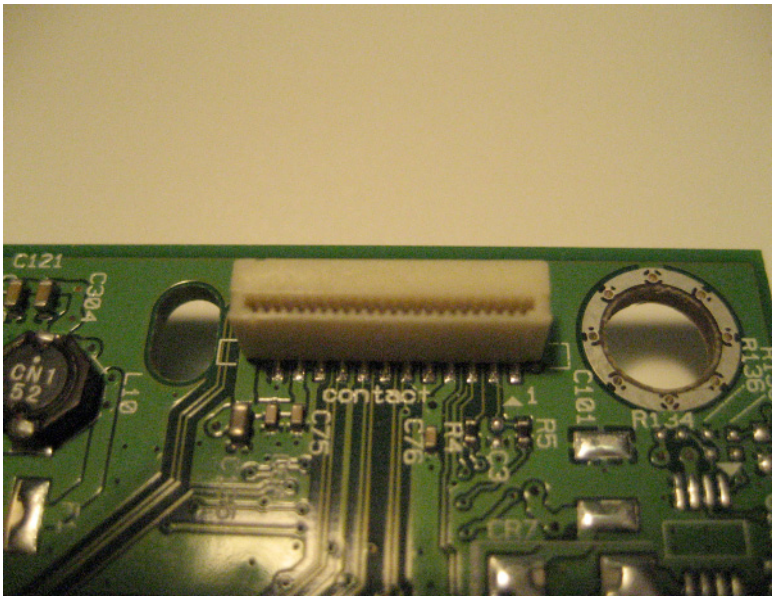


Low Insertion Force (LIF) connector

Warning—Potential Damage: When installing a cable into an LIF connector, avoid bending the edges of the cables and damaging the contacts on the cables.

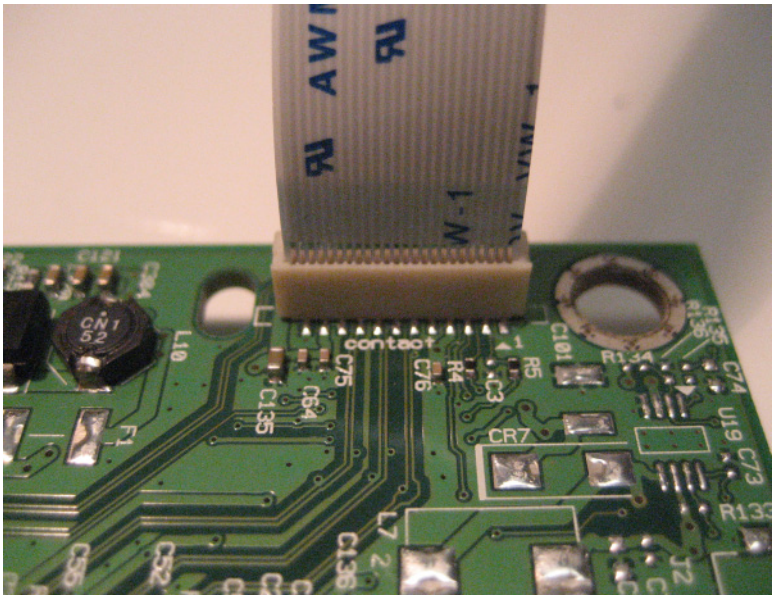
Inserting the cable

1 Make sure that the contacts of the controller board and connectors are on the same side.



2 Insert the cable.

Note: Make sure that the cable is installed straight into the connector to avoid intermittent failures.

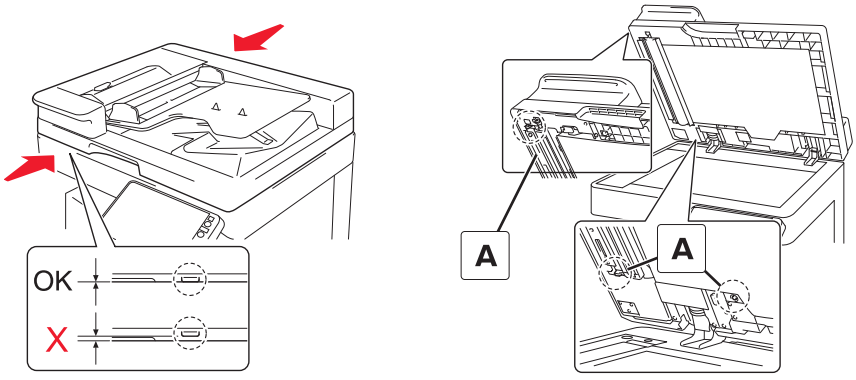


Adjustments

ADF height adjustment

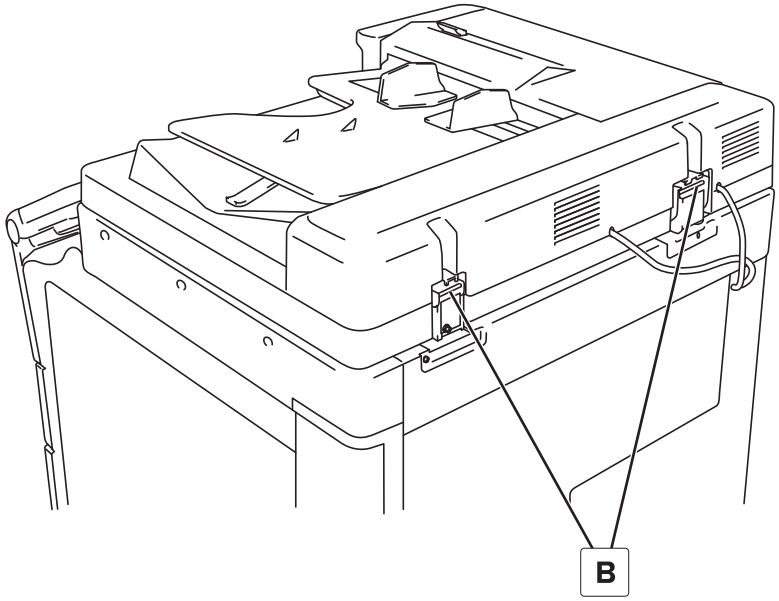
Jams may occur when clearance between the ADF and flatbed scanner is too low. Image quality issues may also occur when the clearance is too high. Perform this step to correct the clearance between the ADF and flatbed scanner or when replacing the ADF assembly.

1 Check the clearance between the flatbed scanner and the protrusions (A) on the ADF side.



Note: Make sure that there is no clearance between the protrusion on the ADF and the flatbed scanner.

2 If there is any clearance, turn the two adjustment screws (B) clockwise or counterclockwise to lift or lower the rear side.



ADF registration adjustment

1 Enter the Configuration Menu, and then navigate to:

Scanner Manual Registration > **Print Quick Test**

2 Place the Quick Tests page on the ADF and then select **Copy Quick Test**.

Do this step to view the current ADF registration values.

3 Select from the following options:

- **ADF**—This setting adjusts the ADF registration of a simplex scanner.
- **ADF Front**—This setting adjusts the ADF front side registration of a duplex scanner.
- **ADF Back**—This setting adjusts the ADF back side registration of a duplex scanner.

The current values of the horizontal adjust and top margin registration settings appear.

4 Adjust the value of the horizontal adjust and top margin settings.

5 Apply the changes.

6 Repeat step 2 to view the updated values.

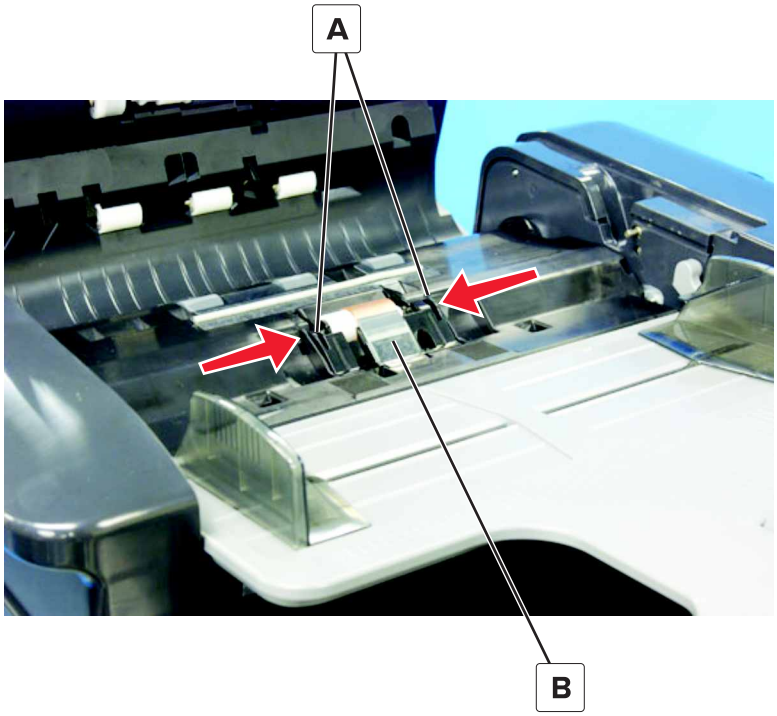
7 Repeat steps 3 through 5 to make further adjustments.

ADF separator roller pressure adjustment

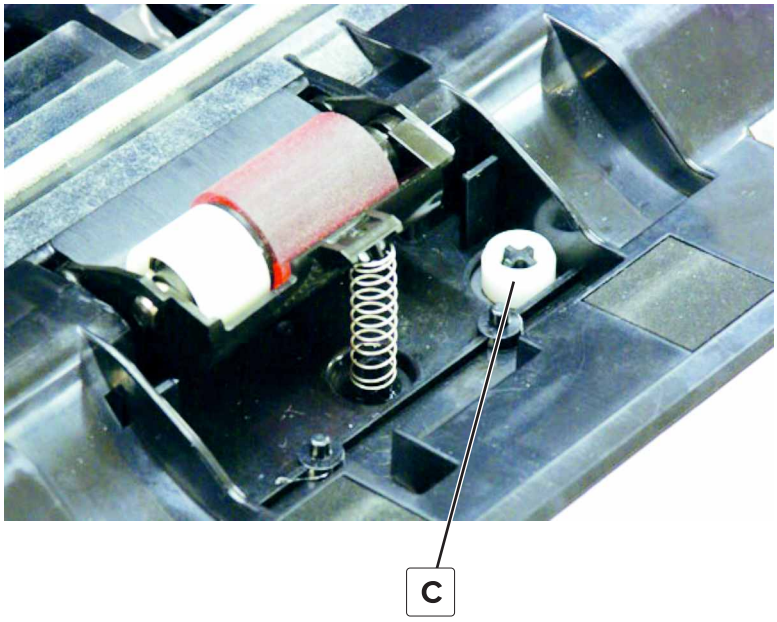
Jams may occur if the improper level of pressure is applied in feeding thin paper. Perform this step to increase or decrease the ADF separator roller pressure.

1 Open the ADF top cover.

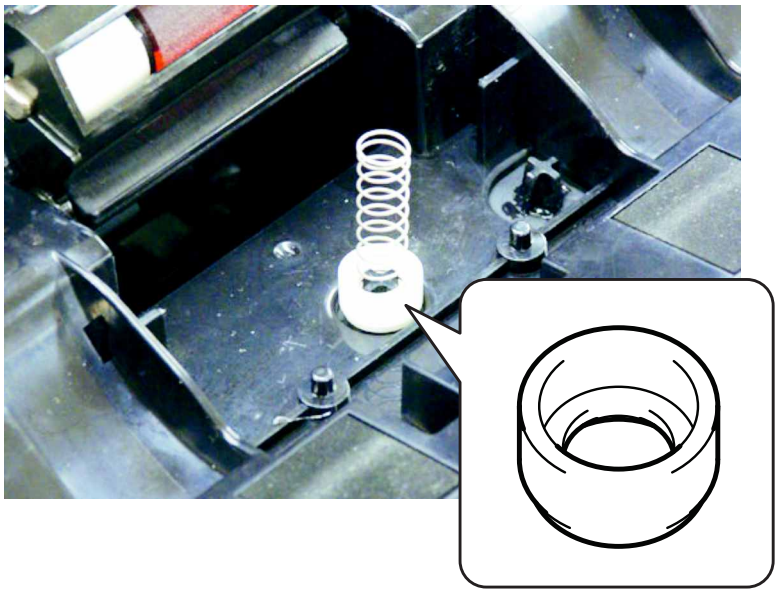
2 Grip both sides of the ADF separator pad (A), and then remove the cover (B).



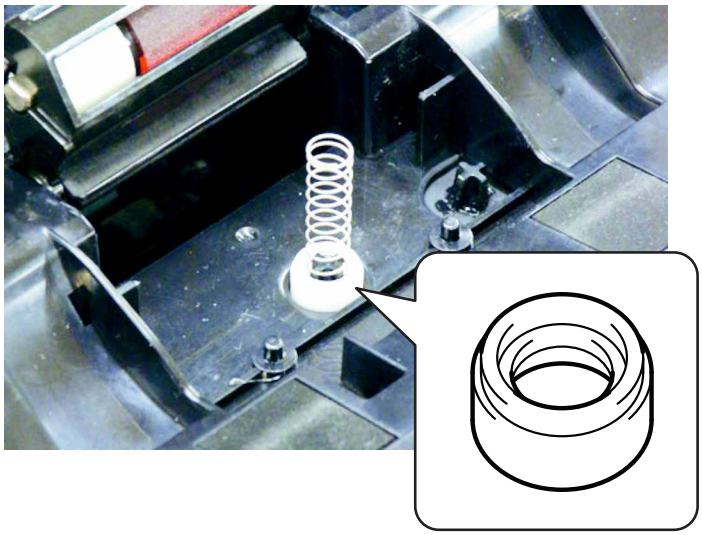
3 Remove the spacer (C).



4 Set the spacer on the lower part of the spring with its deeper groove facing up.



5 If the spring force is not enough, set the spacer on the lower part of the spring with its shallow groove facing up.



Flatbed registration adjustment

1 Enter the Configuration Menu, and then navigate to:

Scanner Manual Registration > **Print Quick Test**

2 Remove all the pages from the ADF, place the Quick Test page on the flatbed, and then select **Copy Quick Test**.

Do this step to view the current flatbed registration values.

3 Select **Flatbed**.

The current values of the left margin and right margin registration settings appear.

4 Adjust the left and right margins.

5 Apply the changes.

6 Repeat step 2 to view the updated values.

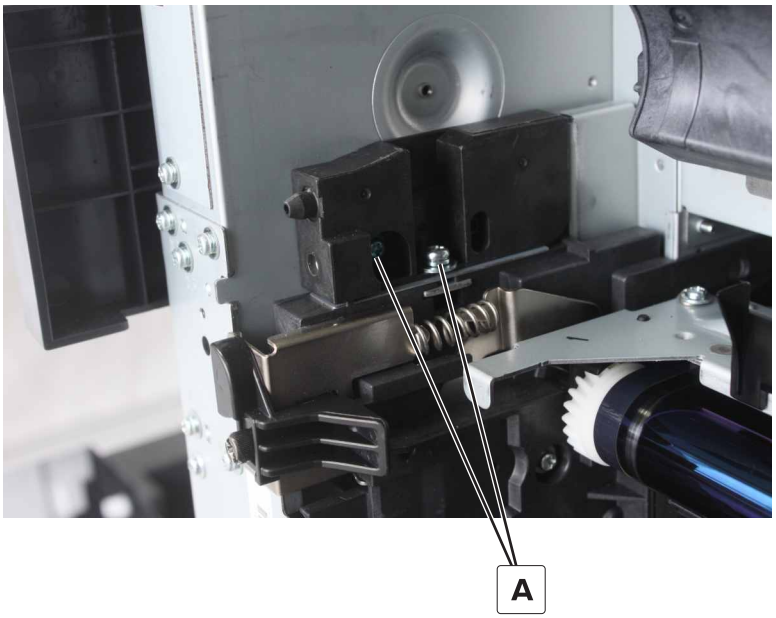
7 Repeat steps 3 through 5 to make further adjustments.

Fuser alignment adjustment

Fuser misalignment may cause wrinkles on the paper. Perform this procedure to align the fuser with the registration unit assembly.

1 Remove the fuser. See **"Fuser removal" on page 279**.

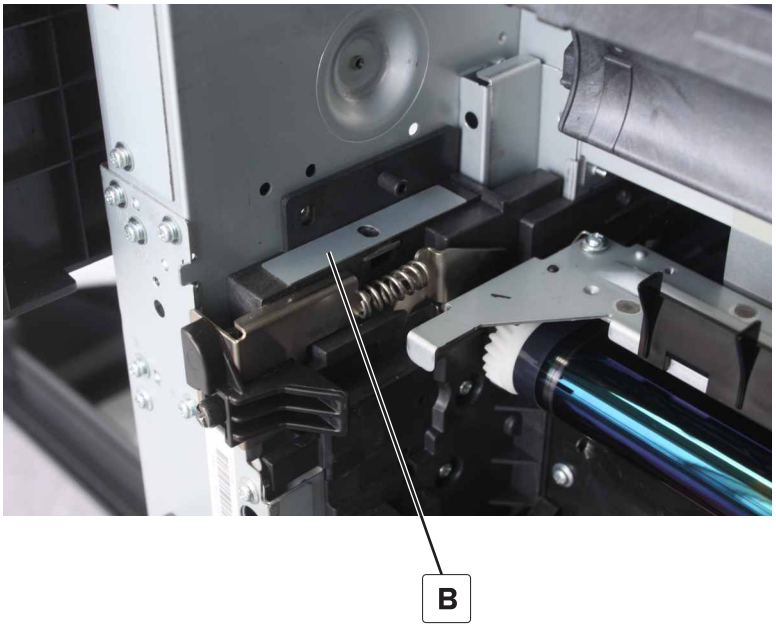
2 Remove the two screws (A), and then remove the fuser mount.



3 Add or decrease the number of plates to adjust the position of the fuser.

Notes:

- A single plate (B) has a thickness of 0.6 mm.
- The default number of plates is 1.

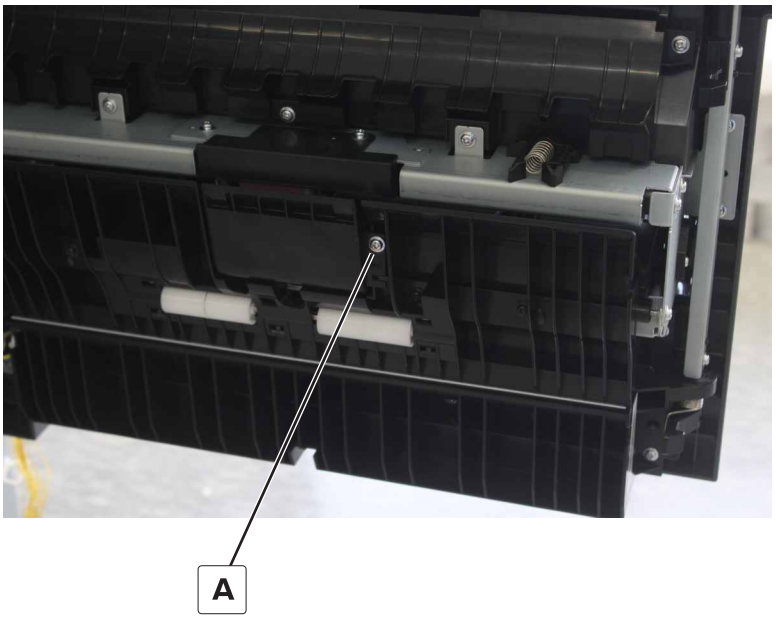


4 Perform a print job to verify the adjustment.

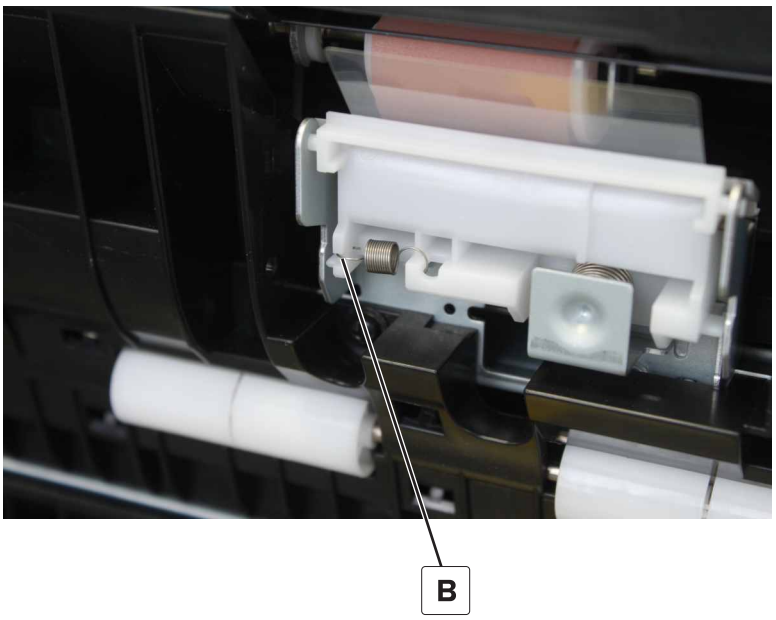
MPF separator roller pressure adjustment

Jams may occur if the improper level of pressure is applied in picking thick paper from the MPF tray. Perform this procedure to adjust the separator roller pressure.

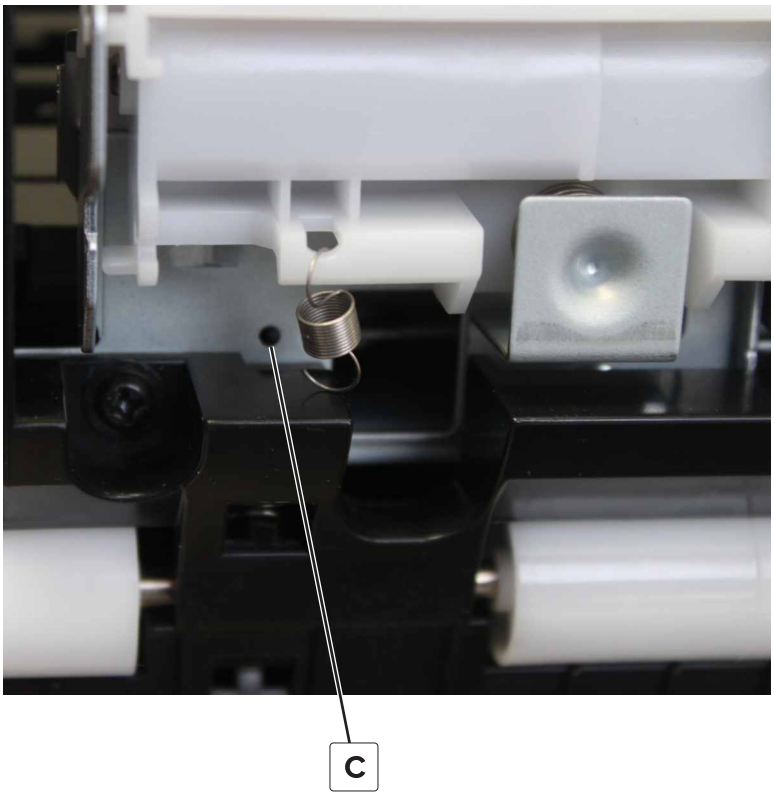
1 Open the right door, remove the screw (A), and then remove the cover.



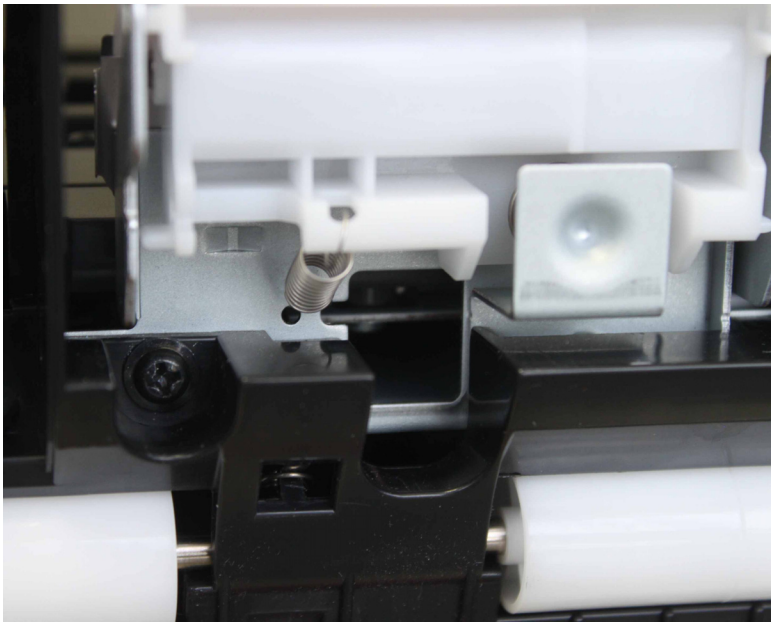
2 Release the hook (B).



3 Attach the hook to the hole (C).



Note: The correct position is shown in the following illustration.



4 Perform a print job to verify the adjustment.

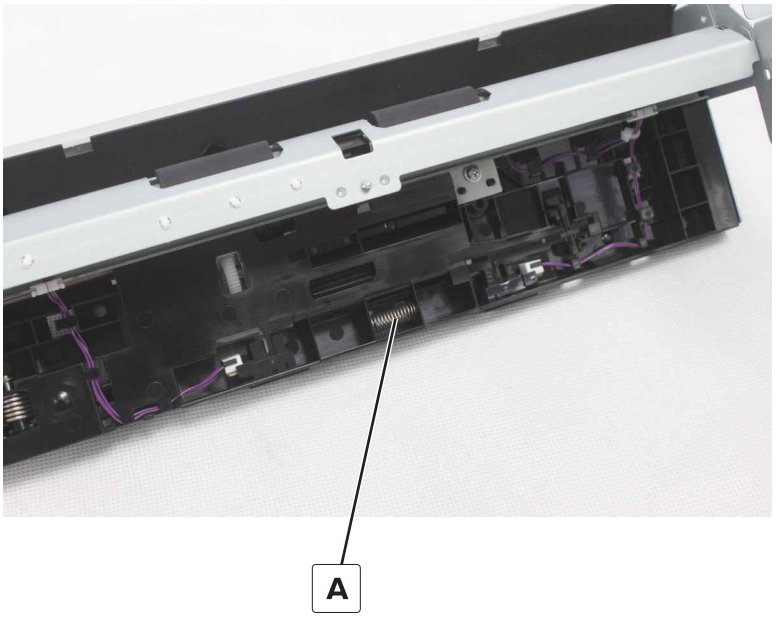
Pick roller pressure adjustment

Jams may occur if the improper level of pressure is applied in picking thin paper. Perform this step to increase or decrease the pick roller pressure.

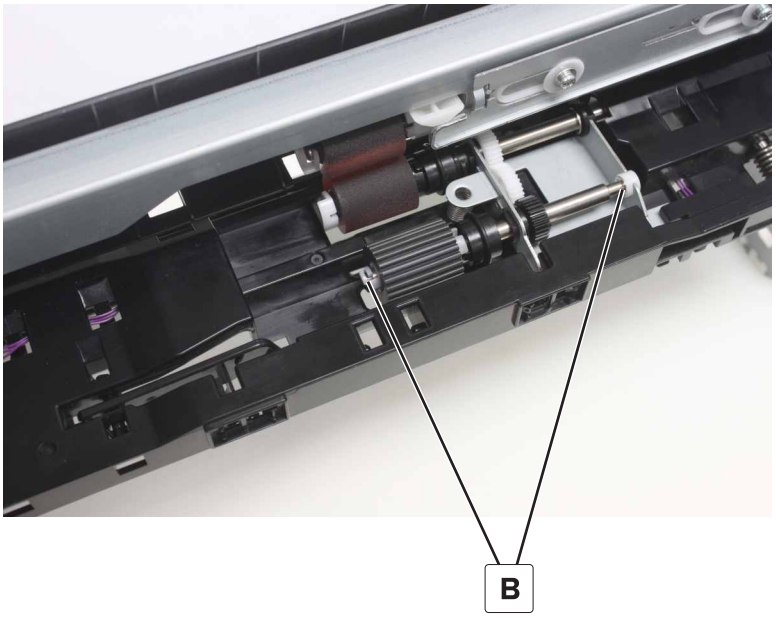
1 Remove the tray 1 and 2 paper feed unit.

2 Remove the replacement spring (A).

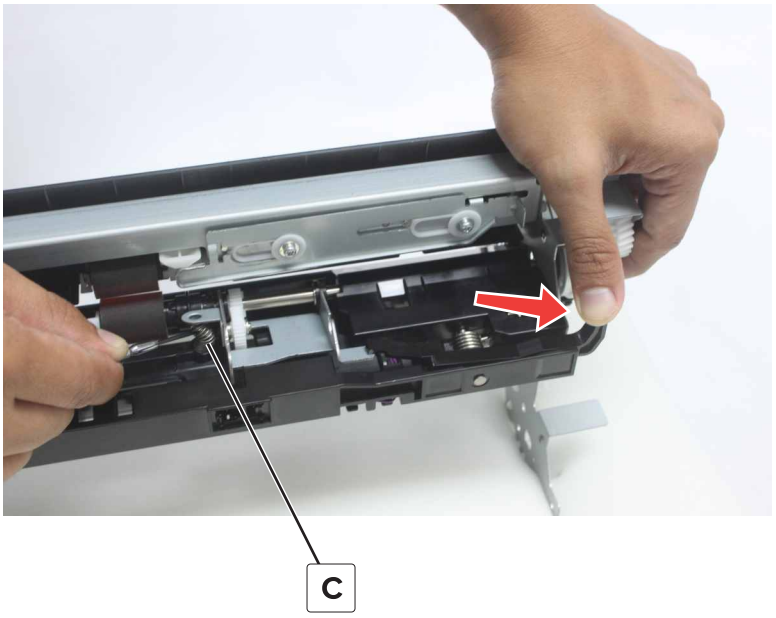
Note: This spring should have higher or lower tension than the spring it replaces.



3 Release the clips (B), and then remove the pick tire, bushing, and shaft.



4 Press the lever, remove the spring (C), and then install the replacement spring from step 2.

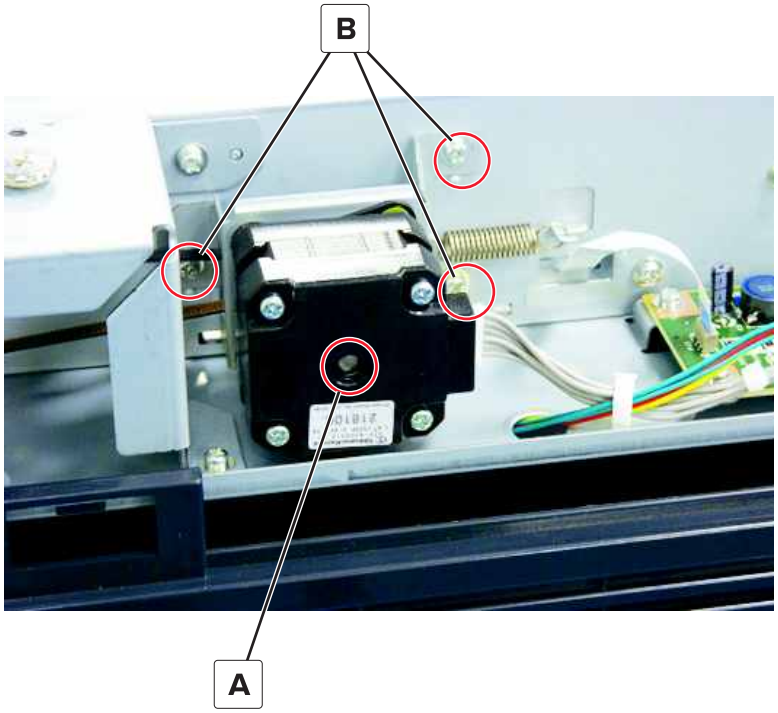


5 Perform a print job to verify the adjustment.

Scanner carriage belt adjustment

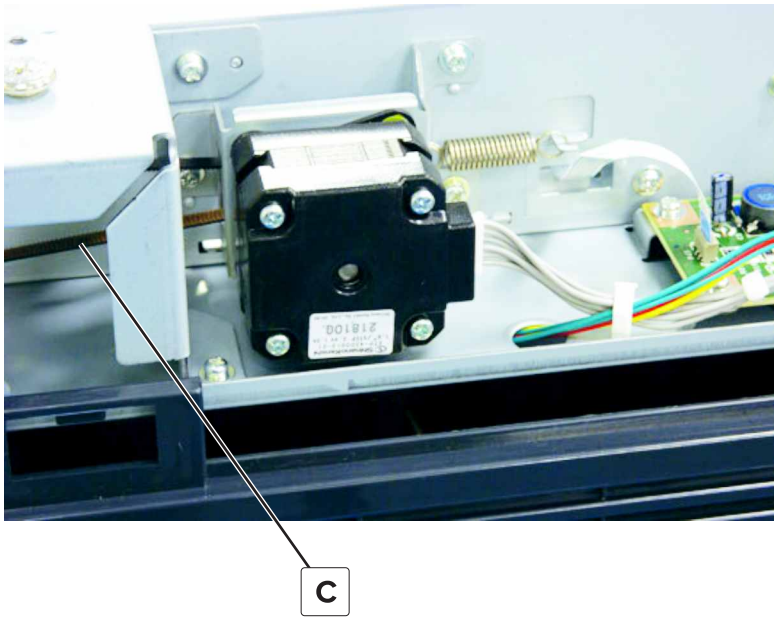
Loose scanner carriage belt may affect the scan speed of the scanner lamp and cause scan quality issues. Perform this step to correct the scanner drive belt tension or after replacing the motor (scanner drive).

1 Attach the spring to the motor (scanner drive) (A), and then temporarily secure the motor with three screws (B).



Note: Do not fully tighten the screws.

2 Attach the scanner carriage belt (C).

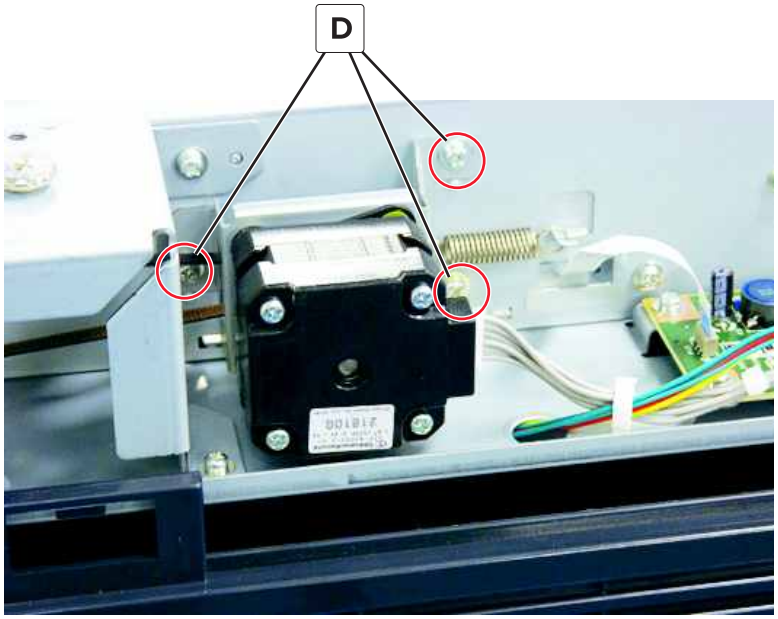


Notes:

- Make sure that the belt tension is not too loose or too tight.
- Make sure that the drive belt is kept tight by the spring.

3 Turn the drive gear.

4 Tighten the three screws (D).



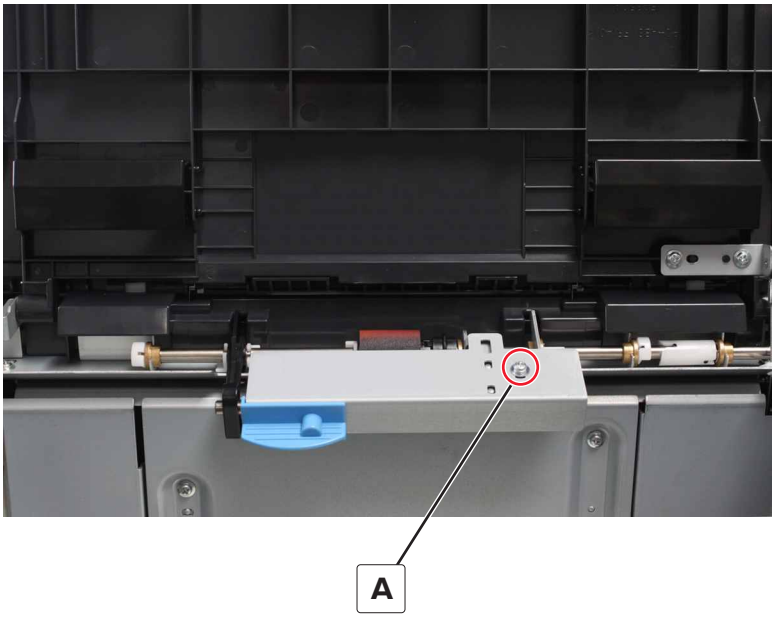
Note: Make sure that the belt tension is not too loose or too tight.

3000-sheet tray pick roller pressure adjustment

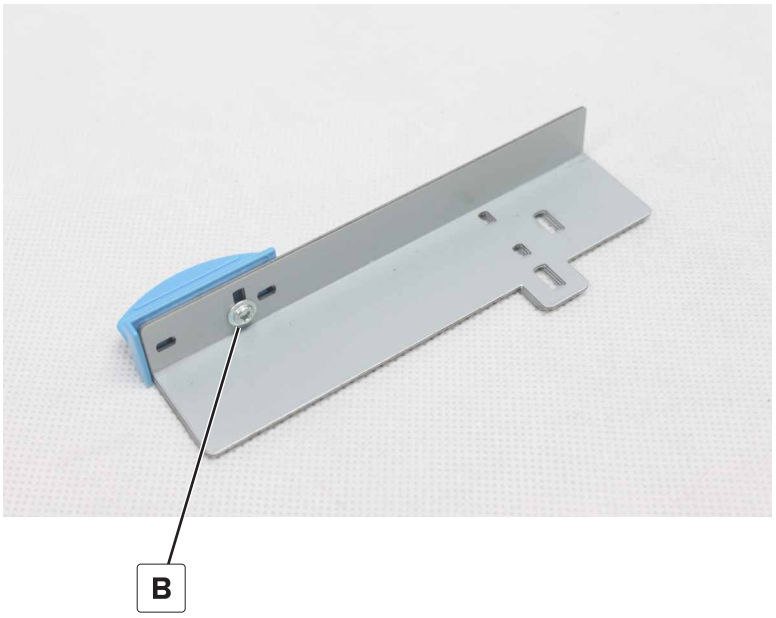
Jams may occur if the improper level of pressure is applied when picking thin paper. Perform this procedure to increase the pick roller pressure.

1 Remove the screw (A), and then remove the plates.

Installation note: Replace this screw with an M3 x 10 mm screw.

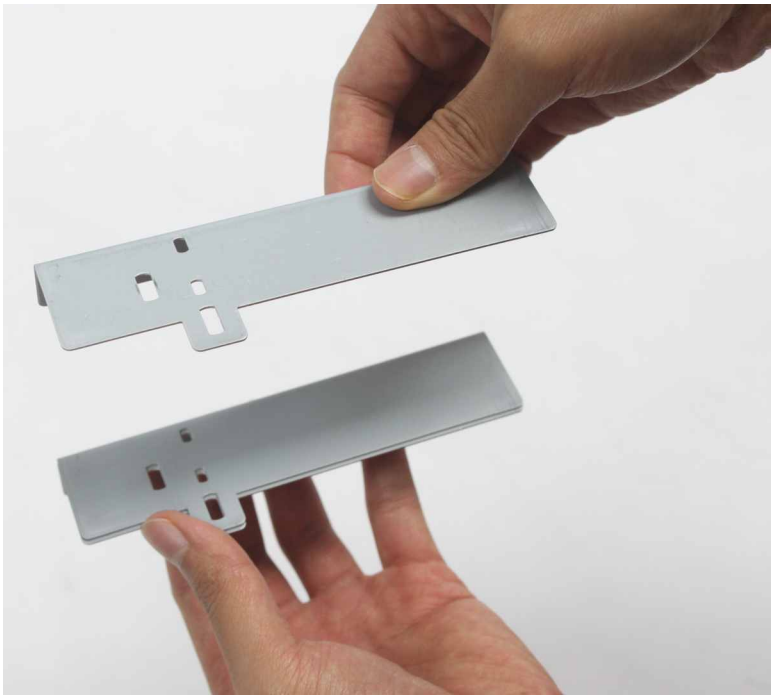


2 Remove the screw (B), and then remove the handle.



3 Add one or more plates.

Note: A total of four plates can be installed.



4 Perform a print job to verify the adjustment.

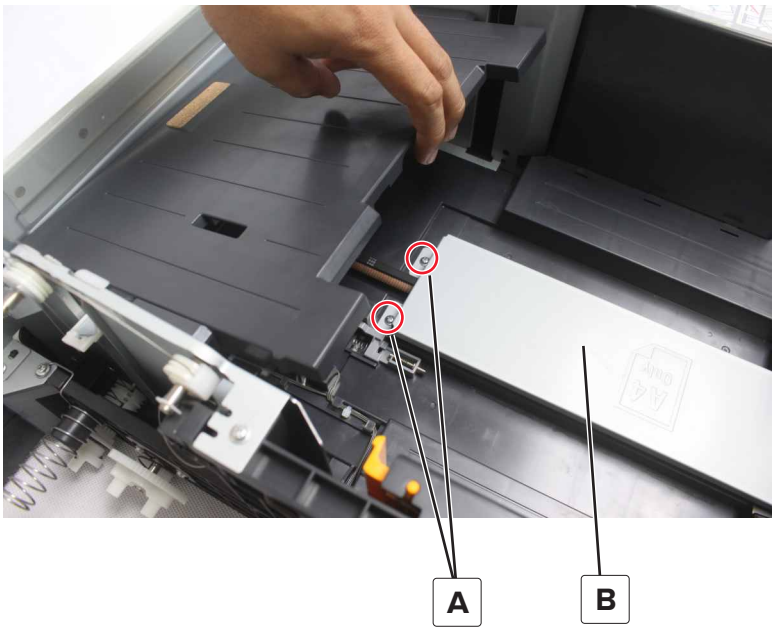
2500-sheet tray transfer guide belt adjustment

Loose transfer guide belt may cause paper stack transfer failure. Perform this step to correct the transfer guide belt tension.

1 Remove the tray insert.

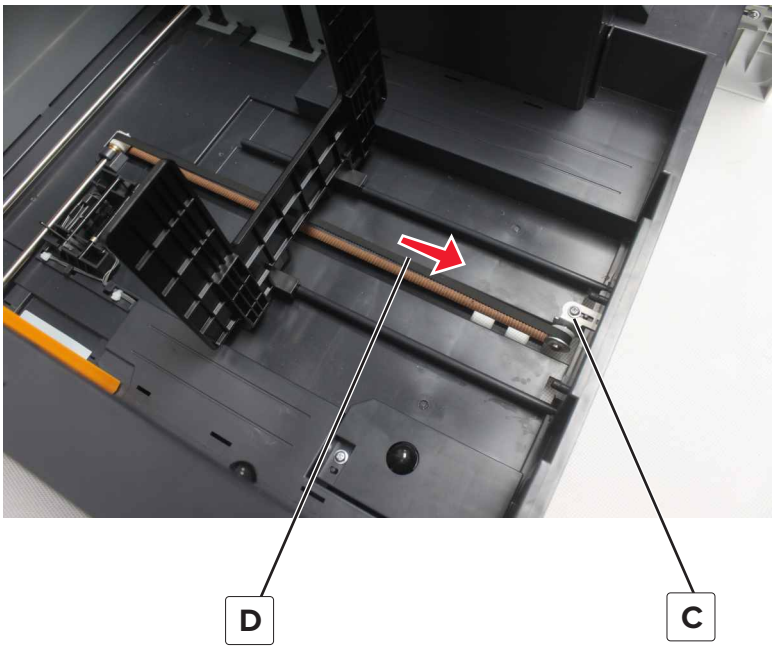
2 Raise the main tray.

3 Remove the two screws (A), and then remove the belt cover (B).



4 Move the paper stack transfer guide.

5 Loosen the tension screw (C) and then move the belt (D) to adjust.



6 Retighten the tension screw.

Removal procedures

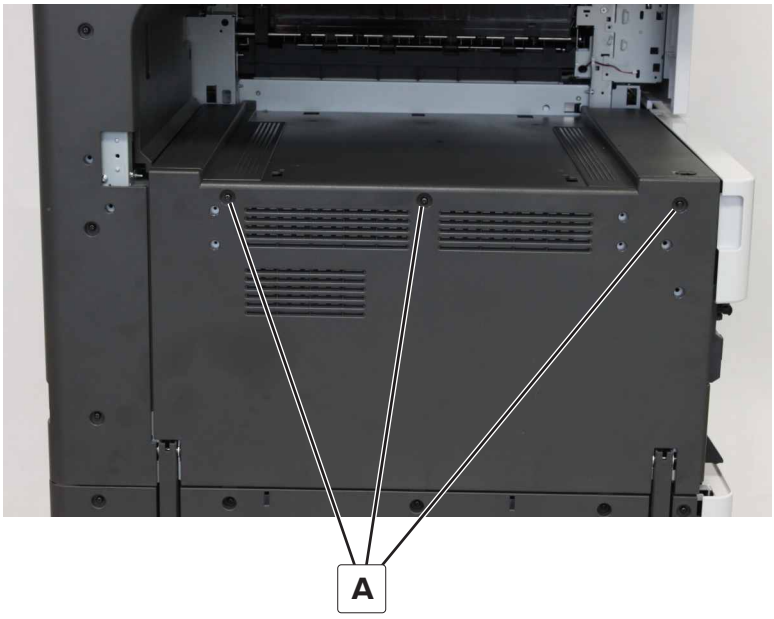
When replacing printer parts, consider the following:

- Some removal procedures require removing cable ties. Replace cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.
- Remove the toner cartridges, imaging units, developer units, photoconductor units, and trays before removing other printer parts.
- Place the imaging or photoconductor unit on a clean, smooth, and flat surface. Do not expose the photoconductor drum to light.
- Disconnect all external cables from the printer to prevent possible damage during service.
- Unless otherwise stated, reinstall the parts in reverse order of removal.
- When reinstalling a part held by several screws, start all screws before the final tightening.

Left side removals

Left cover removal

1 Remove the three screws (A).



2 Remove the cover.

Rear left cover removal

1 Remove the left cover. See **"Left cover removal" on page 272**.

2 Remove the three screws (A), and then remove the cover.

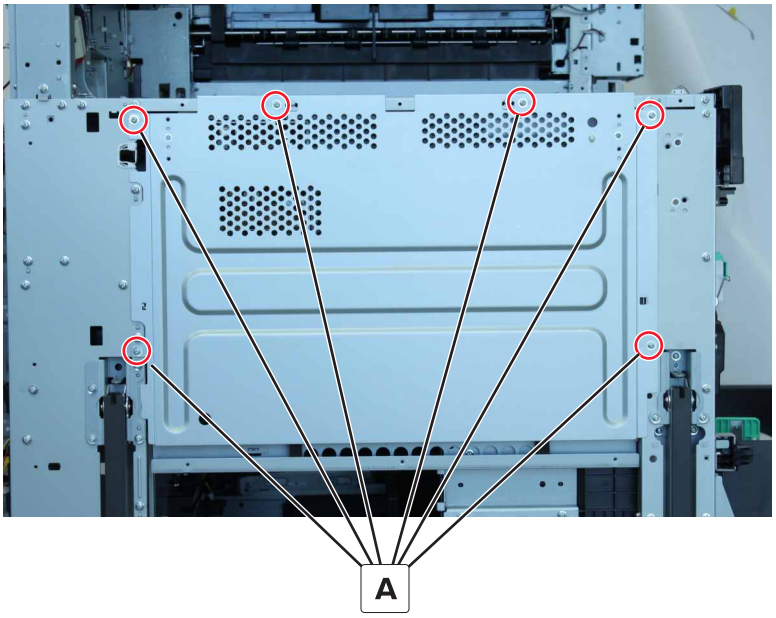
Main power supply shield removal

Note: This part is not a FRU.

1 Remove the left cover. See **"Left cover removal" on page 272**.

2 Remove the rear left cover. See **"Rear left cover removal" on page 273**.

3 Remove the six screws (A), and then remove the shield.



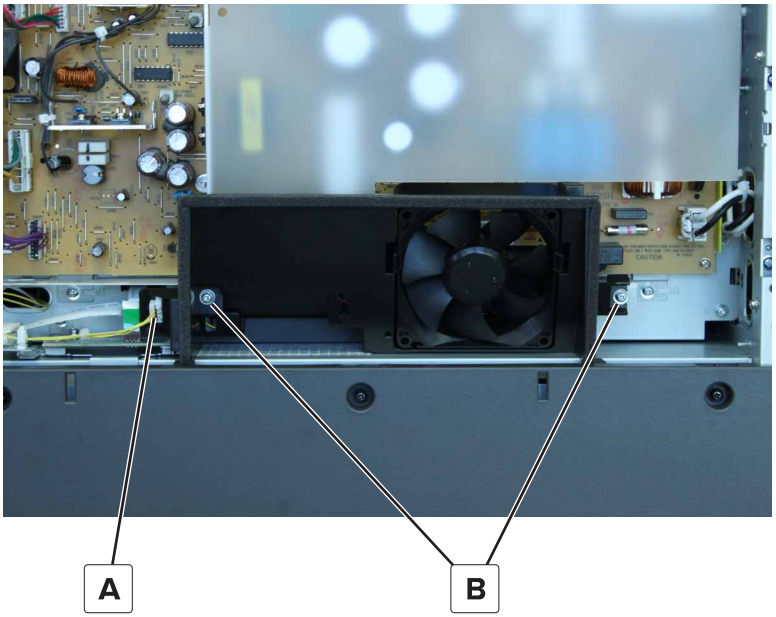
Main power supply fan removal

1 Remove the left cover. See **"Left cover removal" on page 272**.

2 Remove the rear left cover. See **"Rear left cover removal" on page 273**.

3 Remove the main power supply shield. See **"Main power supply shield removal" on page 273**.

4 Disconnect the cable (A), and then remove the two screws (B).



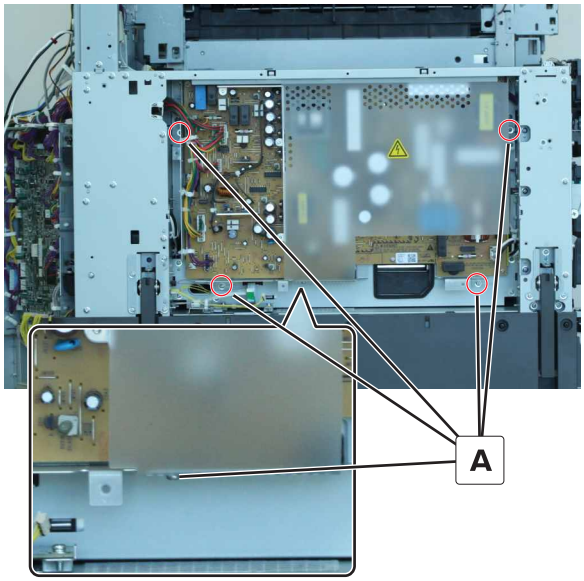
5 Remove the fan.

Main power supply removal

CAUTION—SHOCK HAZARD: The main power supply capacitors may have residual voltage. Do not touch the parts under the insulated area. The printer must be turned off for four hours to dissipate the charge.

CAUTION—FIRE HAZARD: To prevent fire, do not replace fuse with the incorrect type and rating.

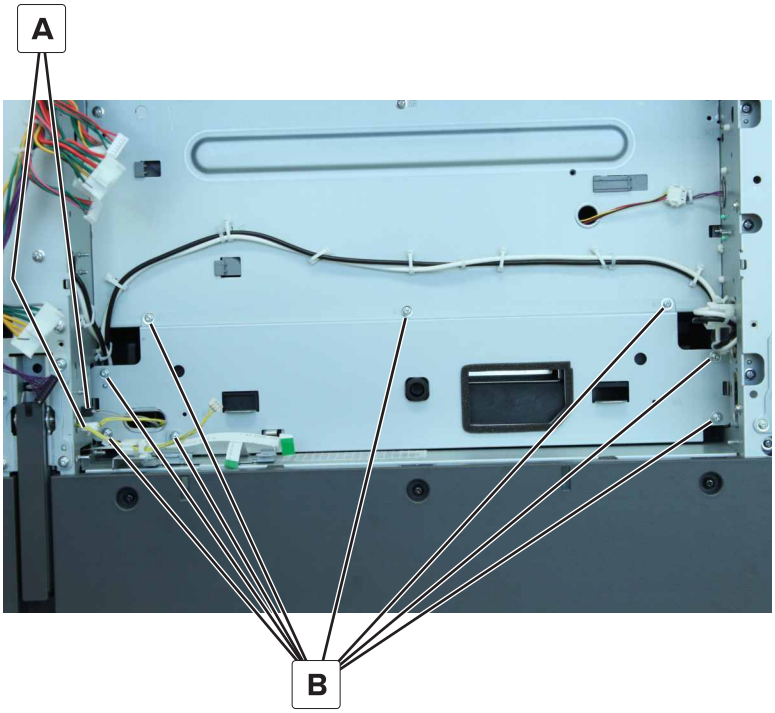
1. Remove the left cover. See **"Left cover removal" on page 272**.
2. Remove the rear left cover. See **"Rear left cover removal" on page 273**.
3. Remove the main power supply shield. See **"Main power supply shield removal" on page 273**.
4. Remove the main power supply fan. See **"Main power supply fan removal" on page 274**.
5. Disconnect all cables from the power supply, remove the five screws (A), and then remove the power supply.



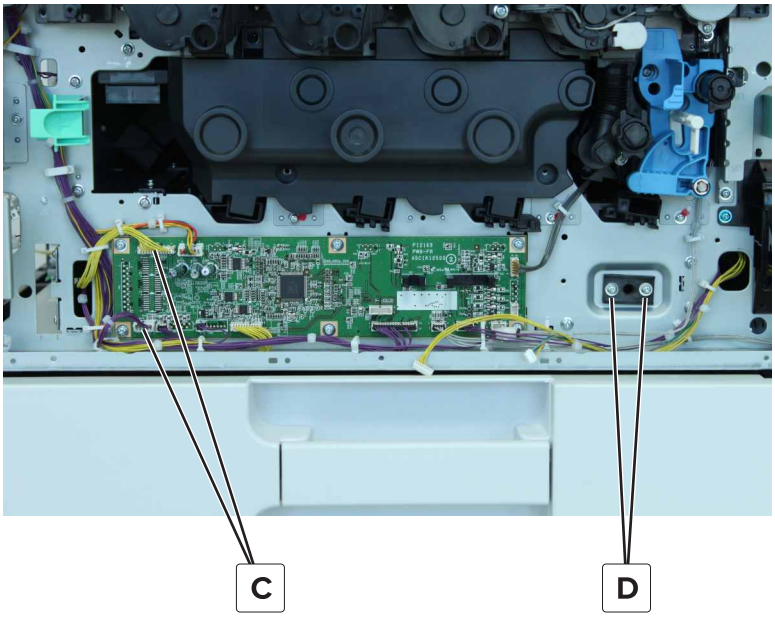
Printhead removal

1. Remove the top front door. See **"Top front door removal" on page 327**.
2. Remove the bottom front door. See **"Bottom front door removal" on page 327**.
3. Remove the front inner cover. See **"Front inner cover removal" on page 328**.
4. Remove the waste toner door mount. See **"Waste toner door mount removal" on page 328**.
5. Remove the left cover. See **"Left cover removal" on page 272**.
6. Remove the rear left cover. See **"Rear left cover removal" on page 273**.
7. Remove the main power supply shield. See **"Main power supply shield removal" on page 273**.
8. Remove the main power supply fan. See **"Main power supply fan removal" on page 274**.
9. Remove the main power supply. See **"Main power supply removal" on page 275**.
10. Remove the printhead relay board. See **"Printhead relay board removal" on page 276**.

11 Disconnect the two cables (A), and then remove the eight screws (B) from the cover.



12 From the front, disconnect the two cables (C), and then remove the two screws (D).



13 Remove the cover and printhead.

Printhead relay board removal

1 Remove the top front door. See **"Top front door removal" on page 327**.

2 Remove the bottom front door. See **"Bottom front door removal" on page 327**.

3 Remove the front inner cover. See **"Front inner cover removal" on page 328**.

4 Remove the waste toner door mount. See **"Waste toner door mount removal" on page 328**.

5 Remove the left cover. See **"Left cover removal" on page 272**.

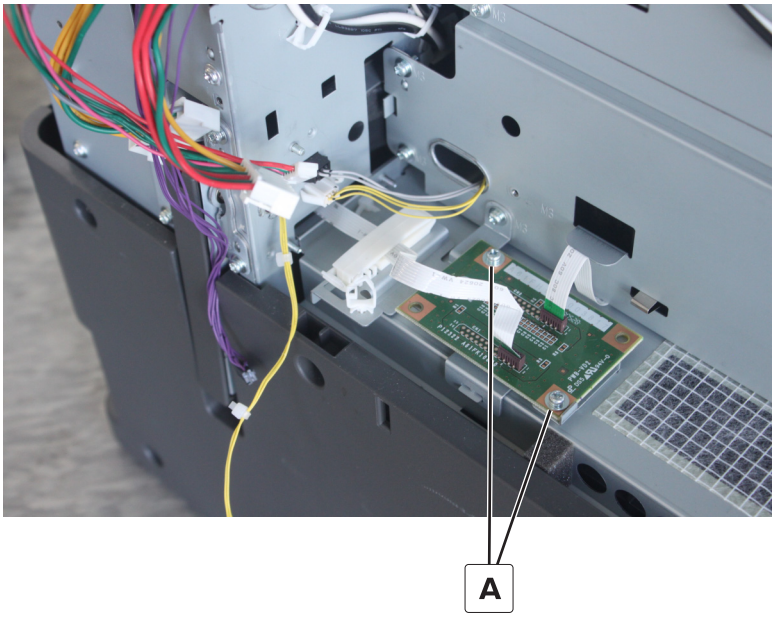
6 Remove the rear left cover. See **"Rear left cover removal" on page 273**.

7 Remove the main power supply shield. See **"Main power supply shield removal" on page 273**.

8 Remove the main power supply fan. See **"Main power supply fan removal" on page 274**.

9 Remove the main power supply. See **"Main power supply removal" on page 275**.

10 Disconnect the cables, and then remove the two screws (A).

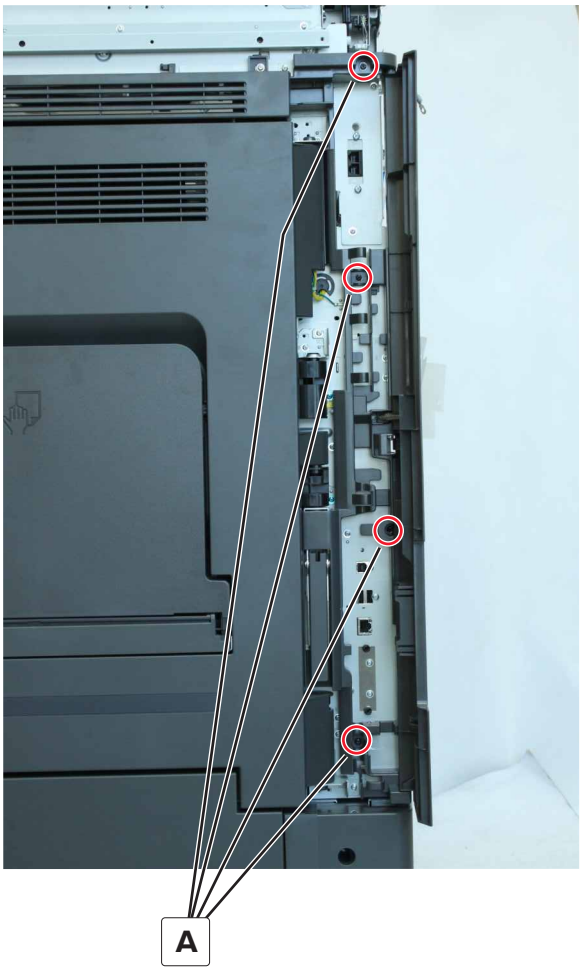


11 Remove the board.

Right side removals

Port access door removal

1 Open the door, and then remove the four screws (A).

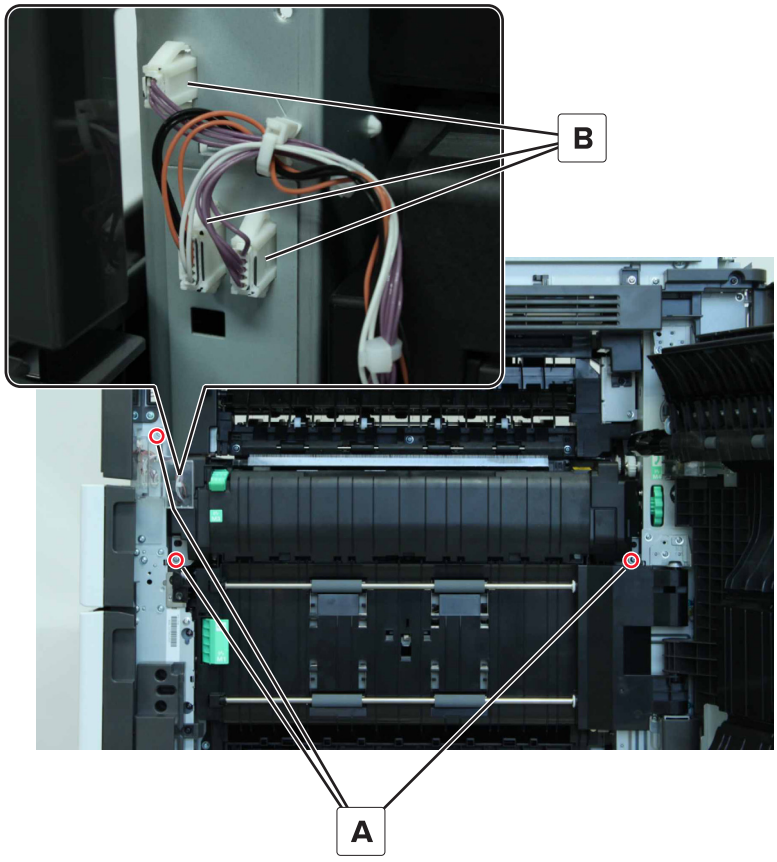


2 Remove the door.

Fuser removal

1 Open the right door.

2 Remove the three screws (A). Remove the fuser connector cover, and then disconnect the three fuser cables (B).



3 Remove the fuser.

Note: If the fuser rollers are not retracted, the fuser may be hard to remove. To retract the fuser roller, turn on the printer to initiate warm-up, and then turn off the printer.

Induction heater removal

1 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

2 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

3 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

4 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

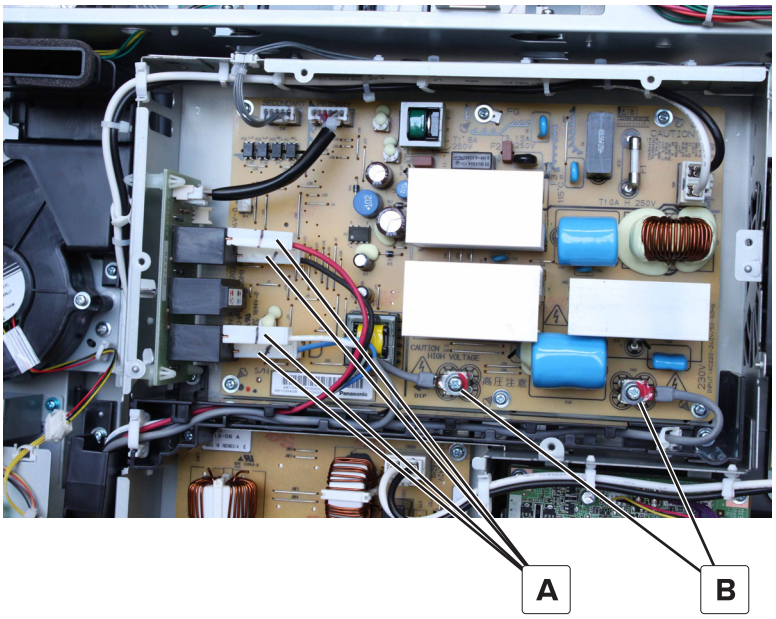
5 Remove the induction heater power supply shield. See **"IHPS shield removal" on page 347**.

6 Remove the fuser. See **"Fuser removal" on page 279**.

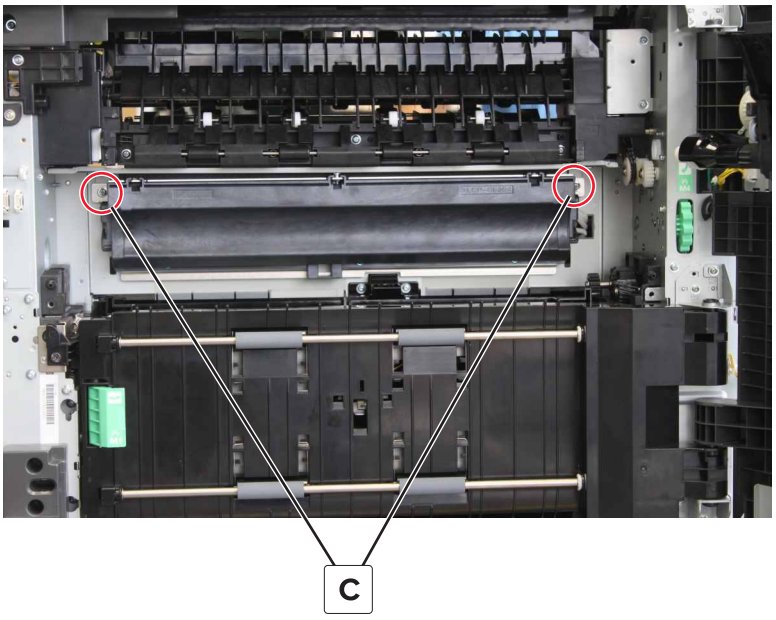
7 Remove the left cover. See **"Left cover removal" on page 272**.

8 Remove the standard bin base. See **"Standard bin base removal" on page 389**.

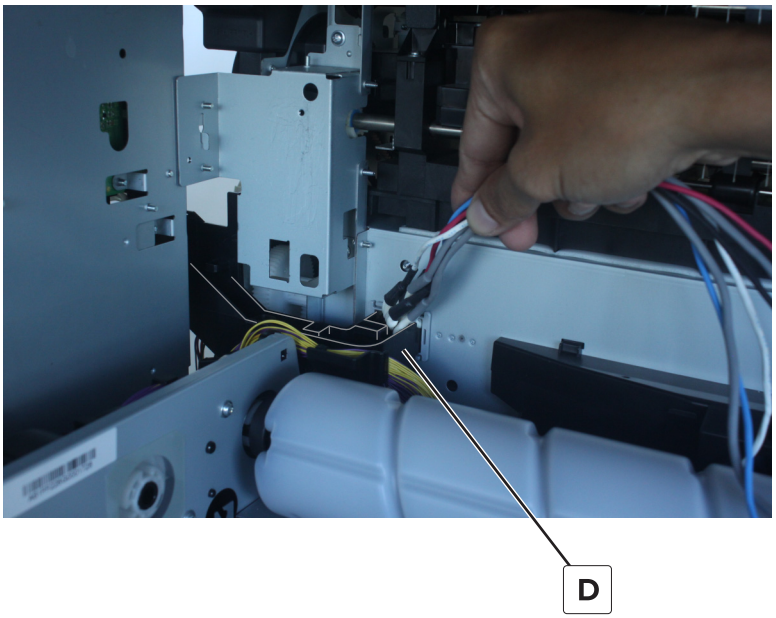
9 From the rear side, disconnect the four cables (A), and then remove the two screws (B).



10 Remove the two screws (B).

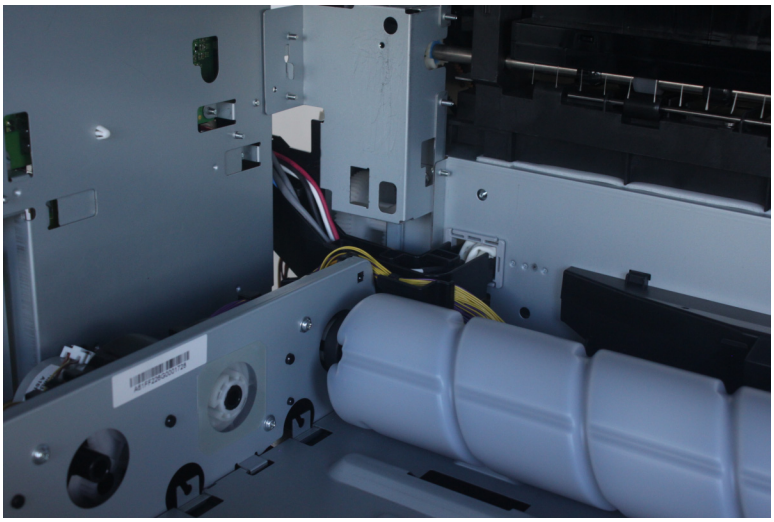


11 Behind the heater, release the cables from the guide (D).



12 Remove the heater.

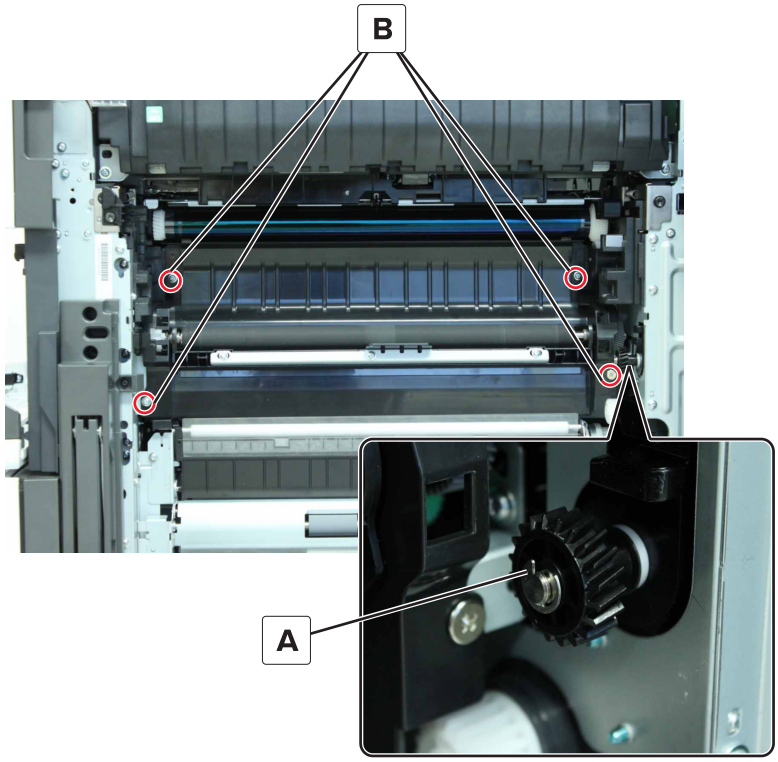
Installation note: Make sure that the cables are properly routed.



Registration transport assembly

1 Remove the fuser. See **"Fuser removal" on page 279**.

2 Remove the clip (A), and then remove the gear. Remove the four screws (B).

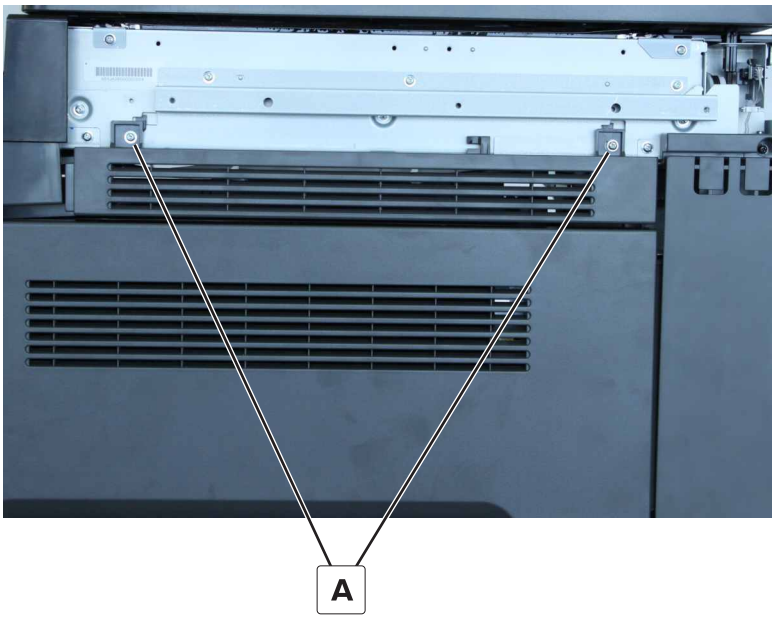


3 Disconnect the cables from the image controller board, and then remove the assembly.

Upper right cover removal

Note: This part is not a FRU.

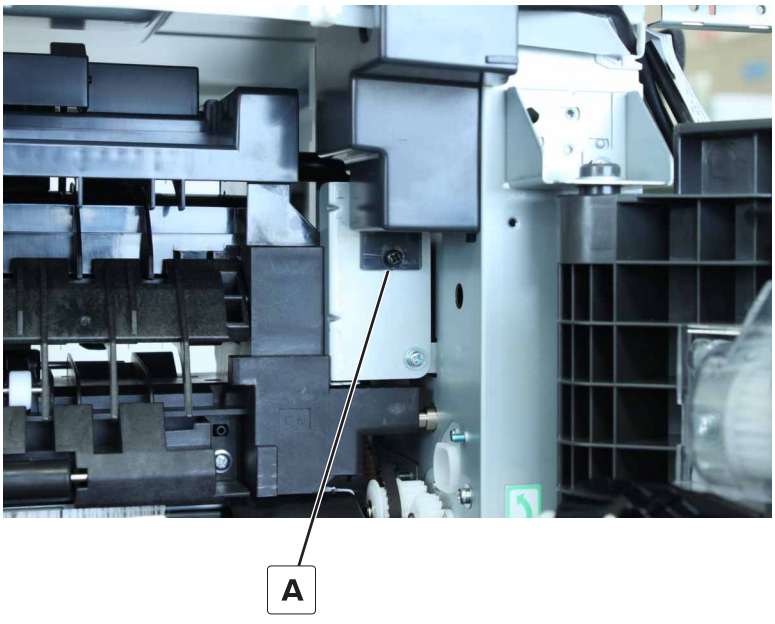
1. Remove the scanner right cover. See **"Scanner right cover removal" on page 430**.
2. Remove the two screws (A), and then remove the cover.



Redrive belt cover removal

Note: This part is not a FRU.

1. Open the right door.
2. Remove the screw (A), and then remove the cover.



Redrive belt removal

1 Remove the motor (redrive). See **“Motor (redrive) removal” on page 364**.

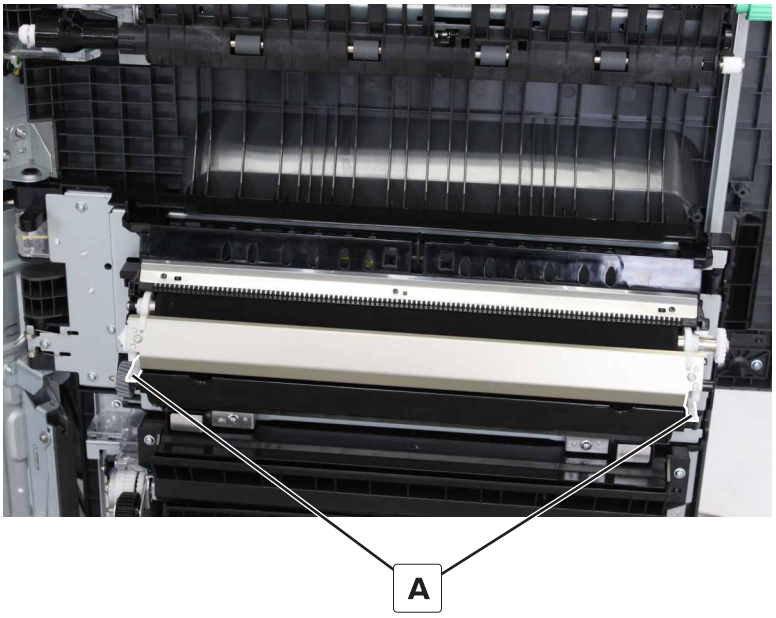
2 Remove the redrive belt cover. See **“Redrive belt cover removal” on page 283**.

3 Remove the redrive belt.

Transfer roller removal

1 Open the right door.

2 Release the latches (A).

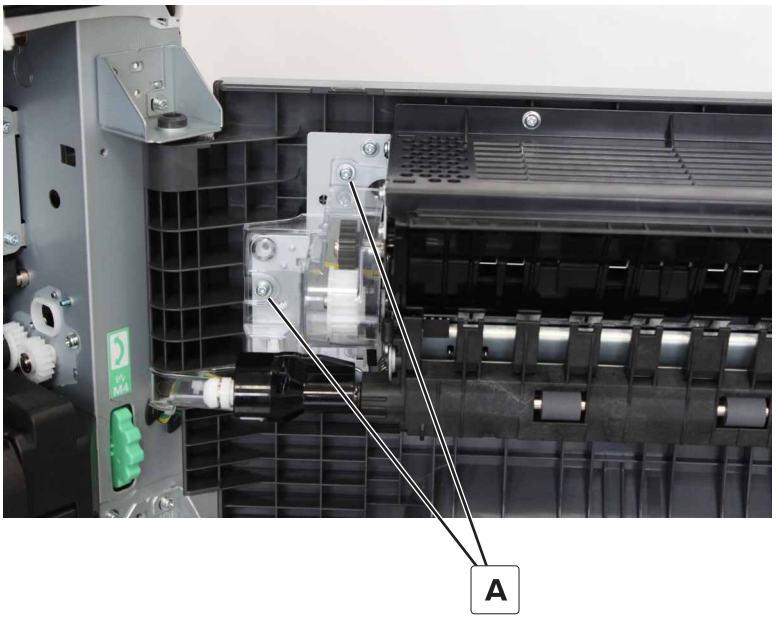


3 Remove the transfer roller.

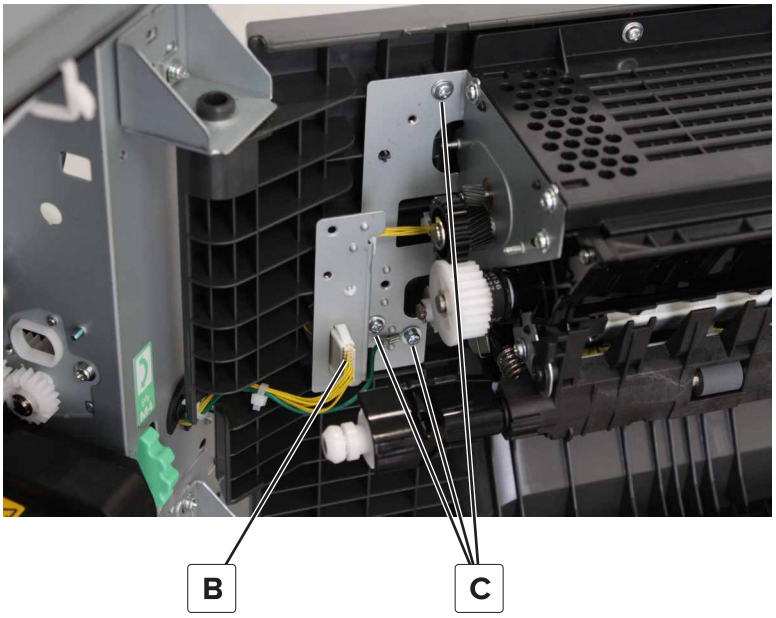
Duplex transport assembly removal

1 Open the right door.

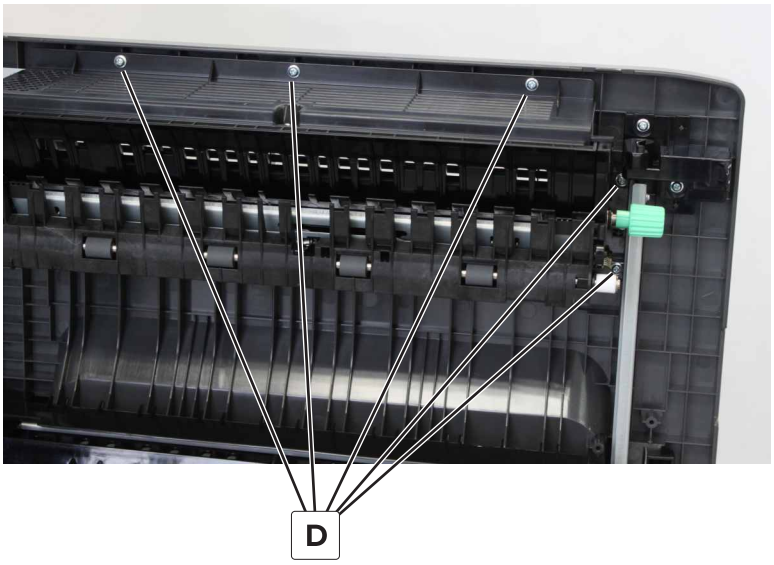
2 Remove the two screws (A), and then remove the cover.



3 Disconnect the cable (B), and then remove the three screws (C).



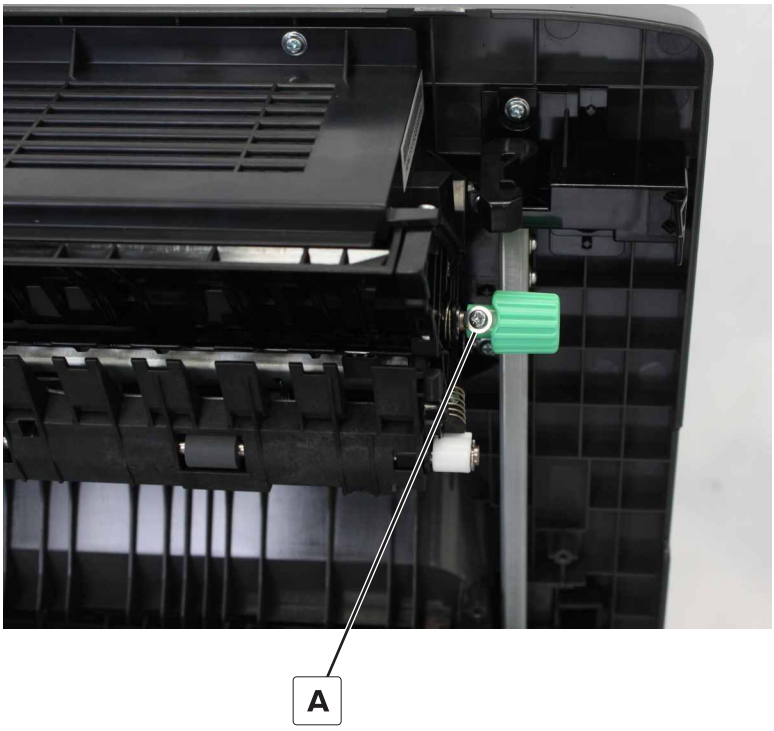
4 Remove the five screws (D), and then remove the assembly.



Duplex transport jam removal knob removal

1 Open the right door.

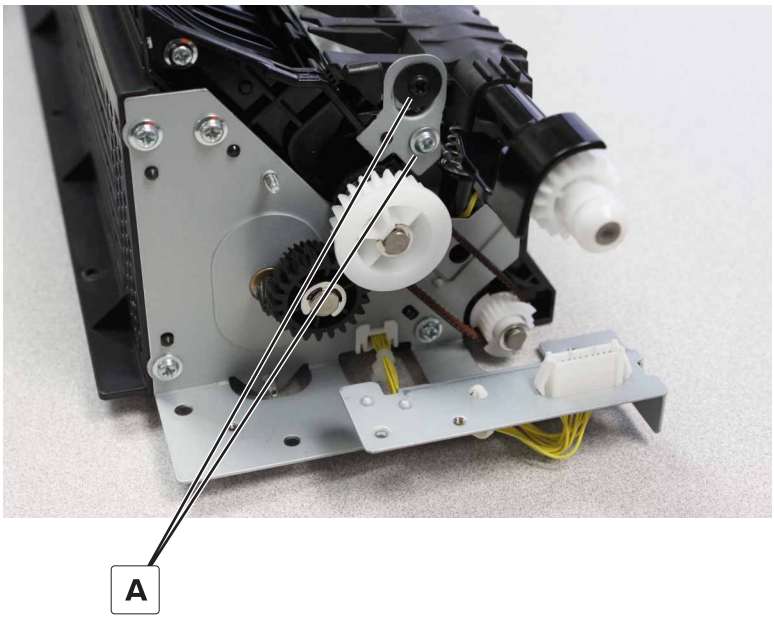
2 Remove the screw (A), and then remove the knob.



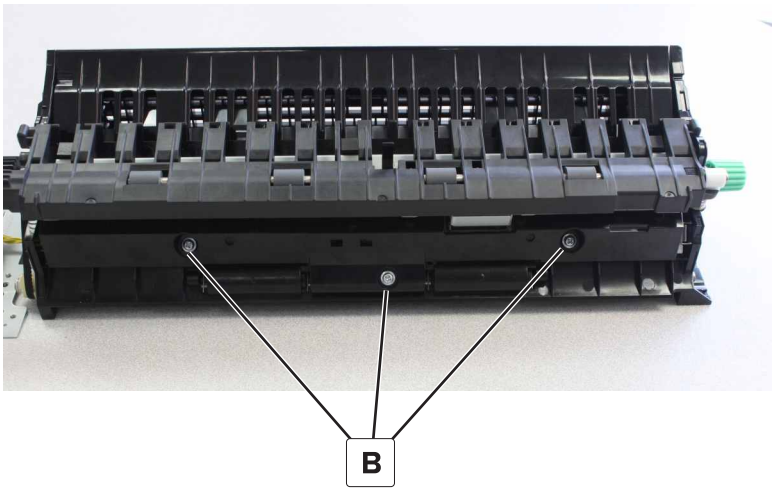
Duplex transport diverter assembly removal

Note: This part is not a FRU.

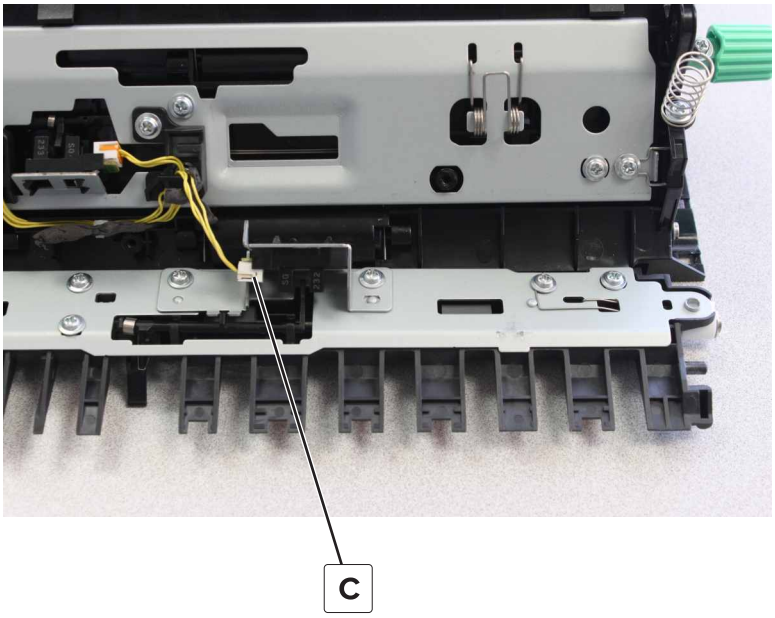
1. Remove the duplex transport assembly. See **"Duplex transport assembly removal" on page 285**.
2. Remove the two screws (A), and then remove the bracket.



3. Remove the three screws (B), and then lift the diverter assembly.



4 Disconnect the cable (C), and then remove the assembly.

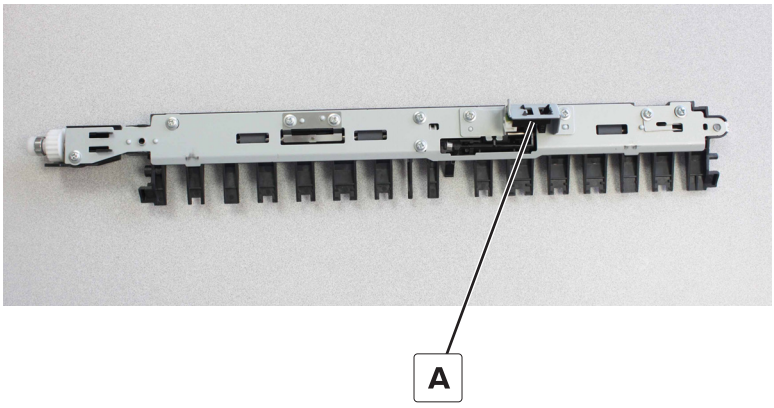


Sensor (fuser exit) removal

1 Remove the duplex transport assembly. See **"Duplex transport assembly removal" on page 285**.

2 Remove the duplex transport diverter assembly. See **"Duplex transport diverter assembly removal" on page 287**.

3 Remove the sensor (A).

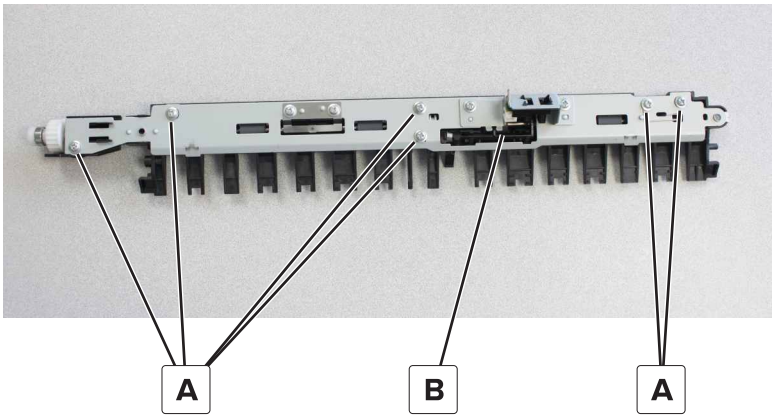


Fuser exit sensor actuator removal

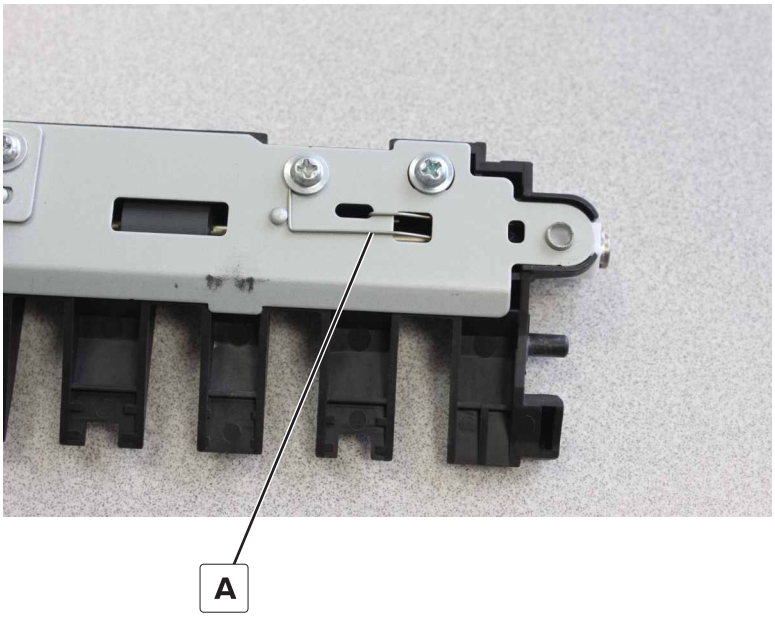
1 Remove the duplex transport assembly. See **"Duplex transport assembly removal" on page 285**.

2 Remove the duplex transport diverter assembly. See **"Duplex transport diverter assembly removal" on page 287**.

3 Remove the six screws (A), remove the diverter bracket, and then remove the sensor actuator (B).



Installation note: Make sure that the ground retainers (A) are correctly installed.

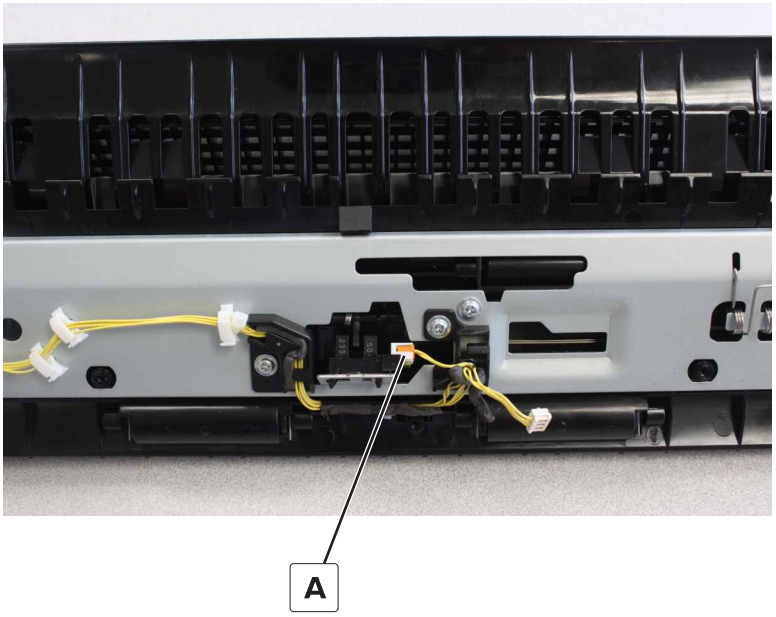


Sensor (duplex pass through 1) removal

1 Remove the duplex transport assembly. See **"Duplex transport assembly removal" on page 285**.

2 Remove the duplex transport diverter assembly. See **"Duplex transport diverter assembly removal" on page 287**.

3 Disconnect the cable (A), and then remove the sensor.

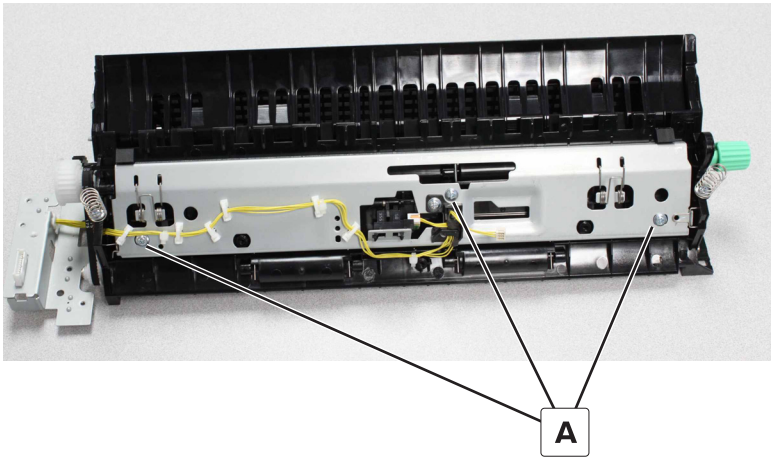


Duplex pass through 1 actuator removal

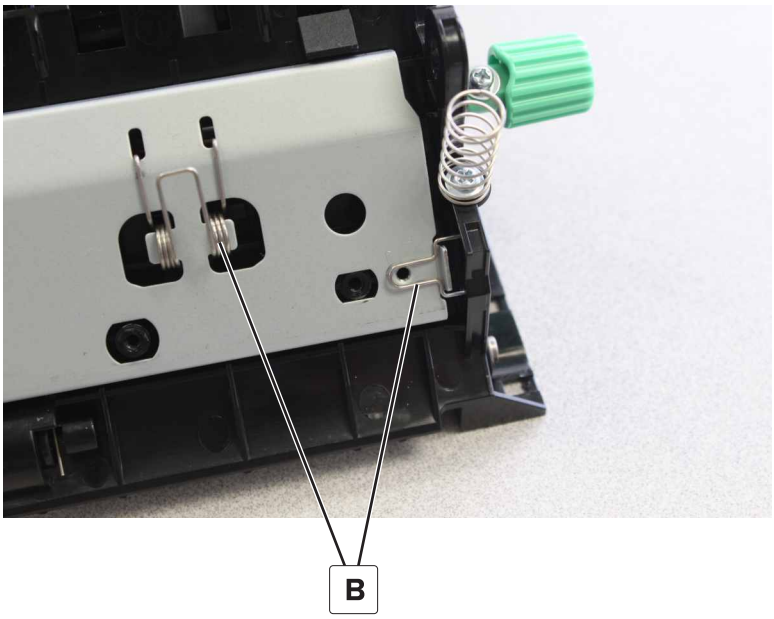
1 Remove the duplex transport assembly. See **"Duplex transport assembly removal" on page 285**.

2 Remove the duplex transport diverter assembly. See **"Duplex transport diverter assembly removal" on page 287**.

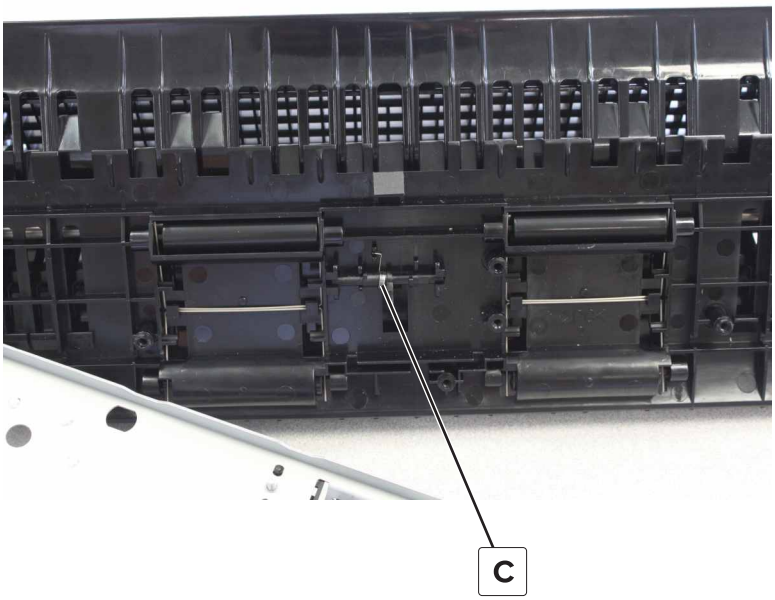
3 Remove the three screws (A).



4 Release the retainers (B), and then remove the bracket.



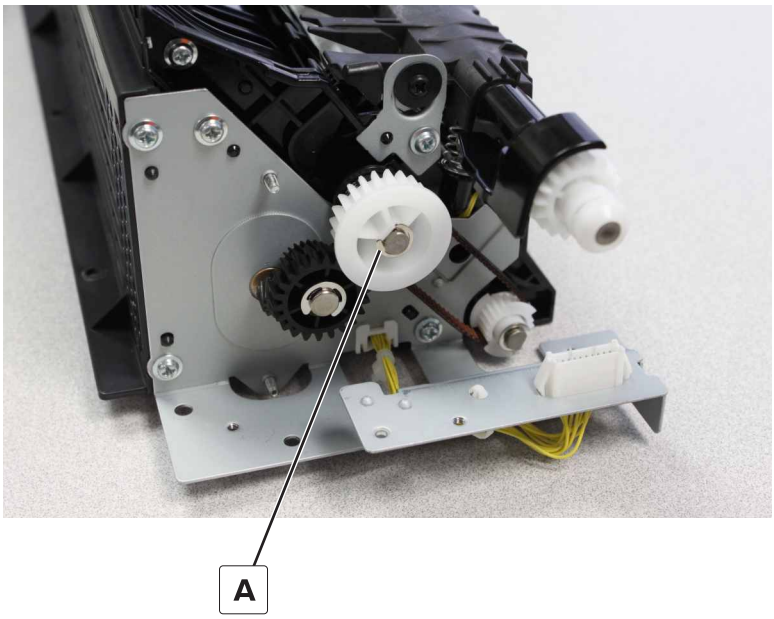
5 Remove the actuator (C).



Duplex transport belt removal

1 Remove the duplex transport assembly. See **"Duplex transport assembly removal" on page 285**.

2 Release the clip (A), and then remove the gear.

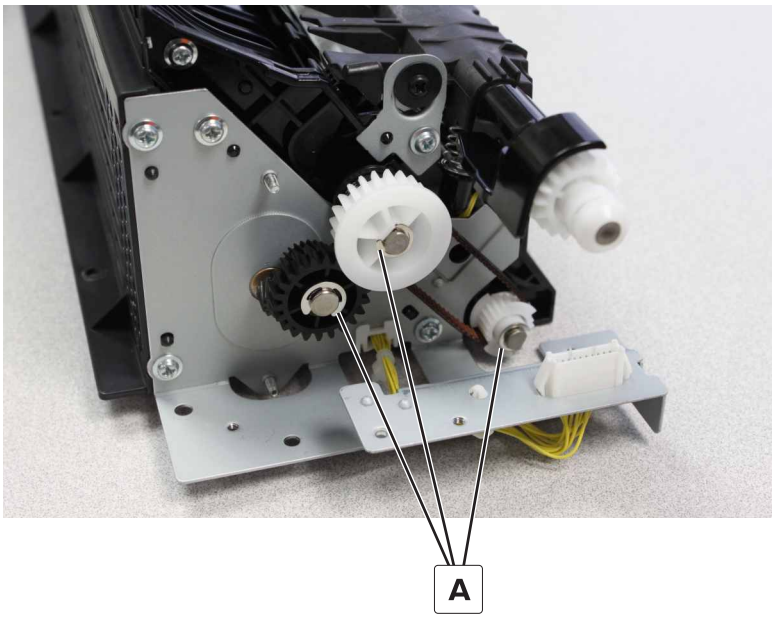


3 Remove the belt.

Duplex transport gears removal

1 Remove the duplex transport assembly. See **"Duplex transport assembly removal" on page 285**.

2 Remove the three clips (A), and then remove the gears.



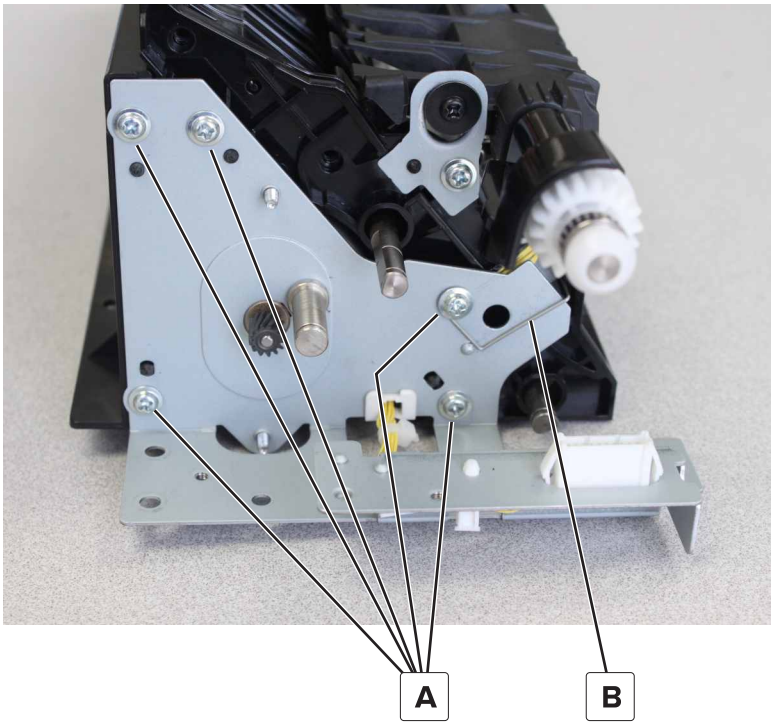
Note: The duplex transport gear assembly includes the gears, bushings, clips, and washers.

Motor (duplex transport) removal

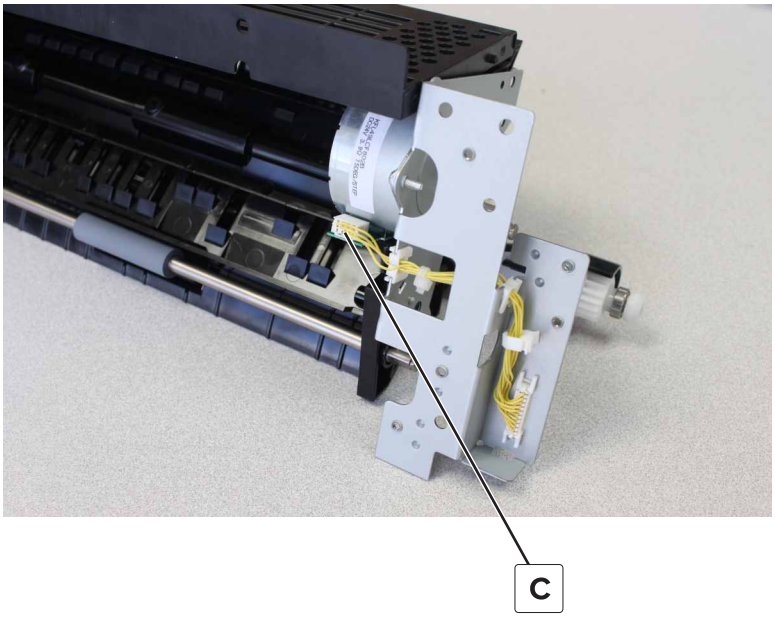
1 Remove the duplex transport assembly. See **"Duplex transport assembly removal" on page 285**.

2 Remove the five screws (A).

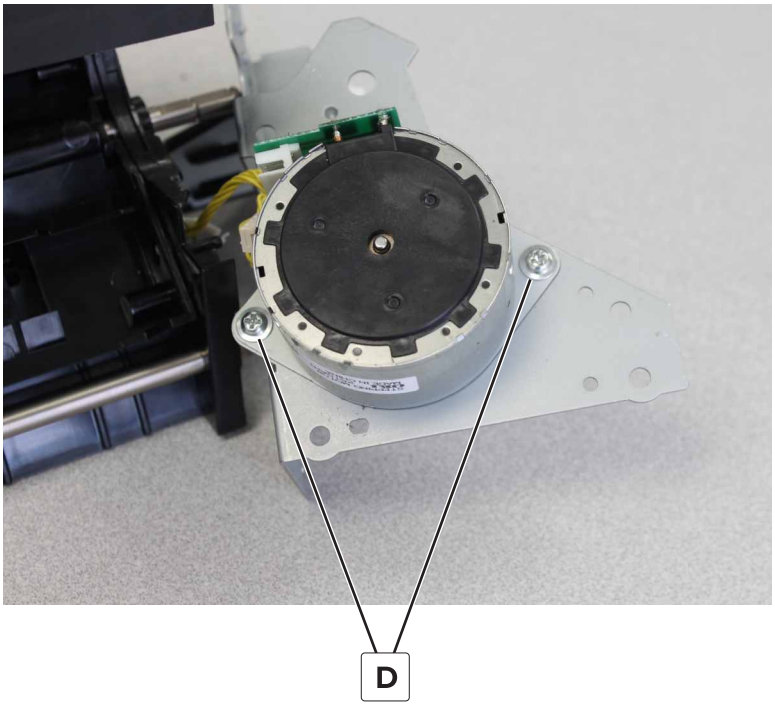
Note: Take note of the original position of the retainer (B).



3 Disconnect the cable (C).



4 Move away the bracket, and then remove the two screws (D).



5 Remove the motor.

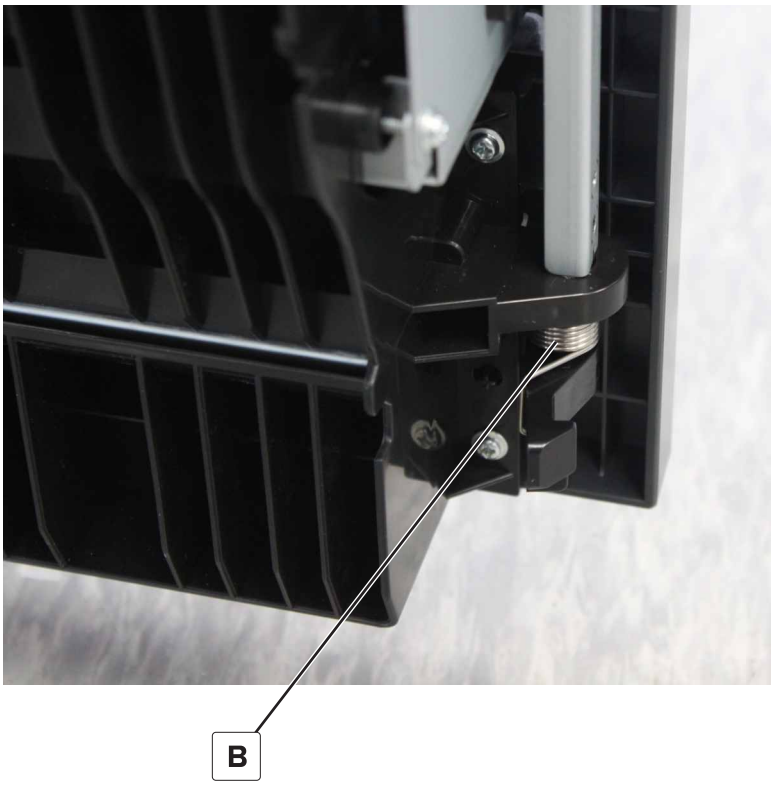
Right door lock removal

1 Open the right door.

2 Remove the six screws (A).

3 Release the spring (B), and then remove the lock.

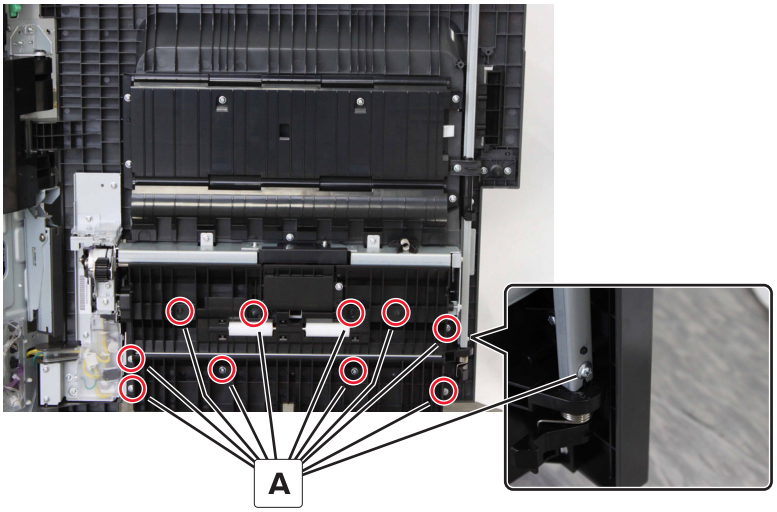
Installation note: Make sure that the bottom spring (B) is correctly installed.



Tray 2 transport guide

1 Open the right door.

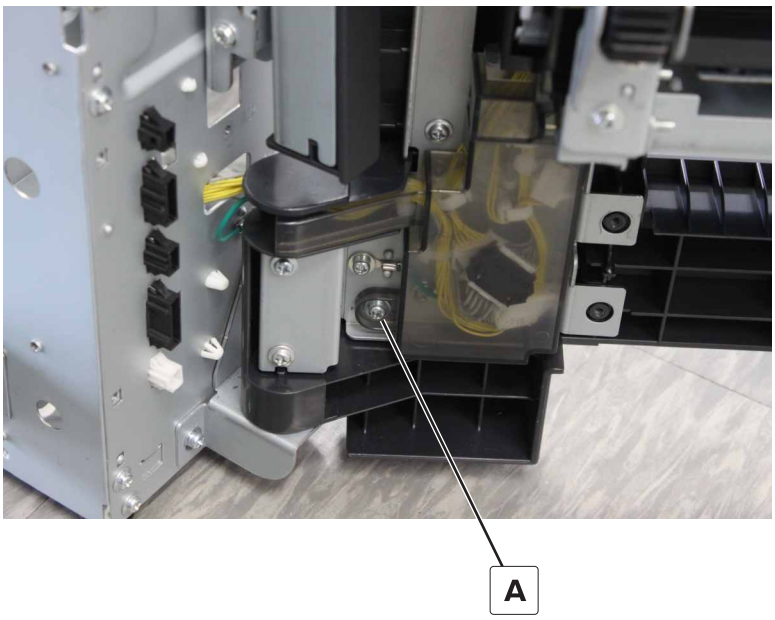
2 Remove the 11 screws (A), and then remove the guide.



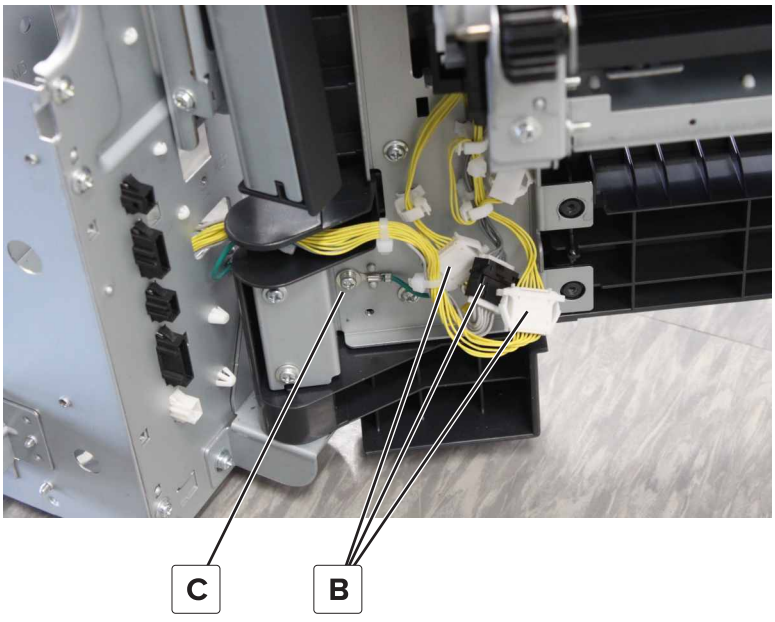
MPF removal

1 Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.

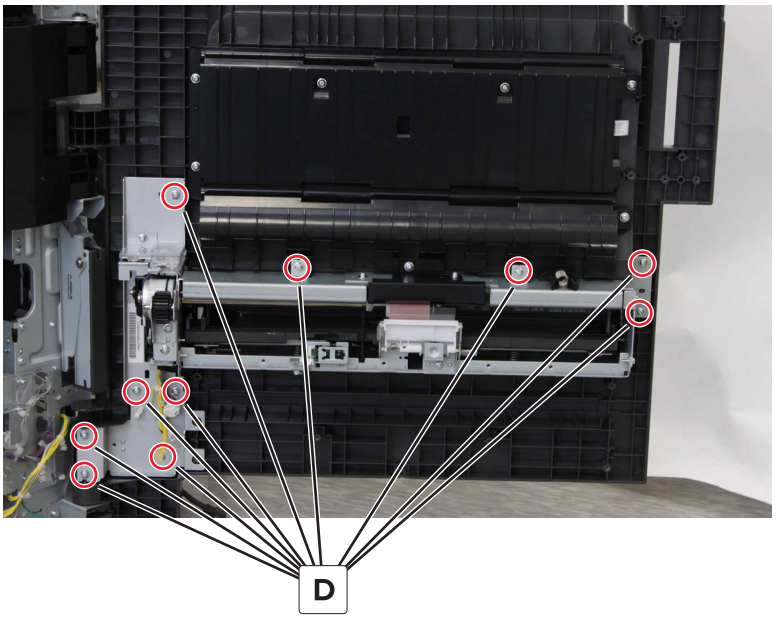
2 Remove the screw (A), and then remove the cover.



3 Disconnect the three cables (B), and then remove the ground screw (C).



4 Remove the 10 screws (D), and then remove the assembly.



Installation note: Secure the cables to their clips.

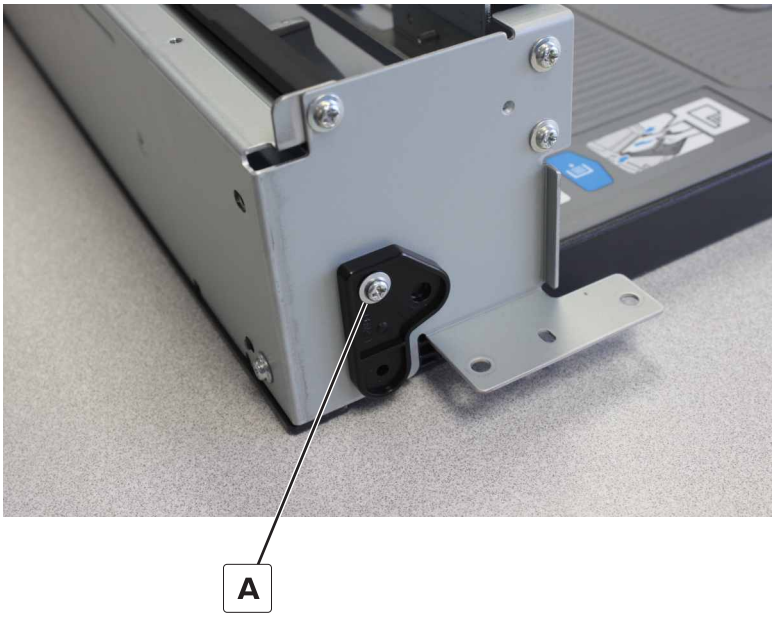
MPF tray removal

Note: This part is not a FRU.

1 Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.

2 Remove the MPF. See **"MPF removal" on page 297**.

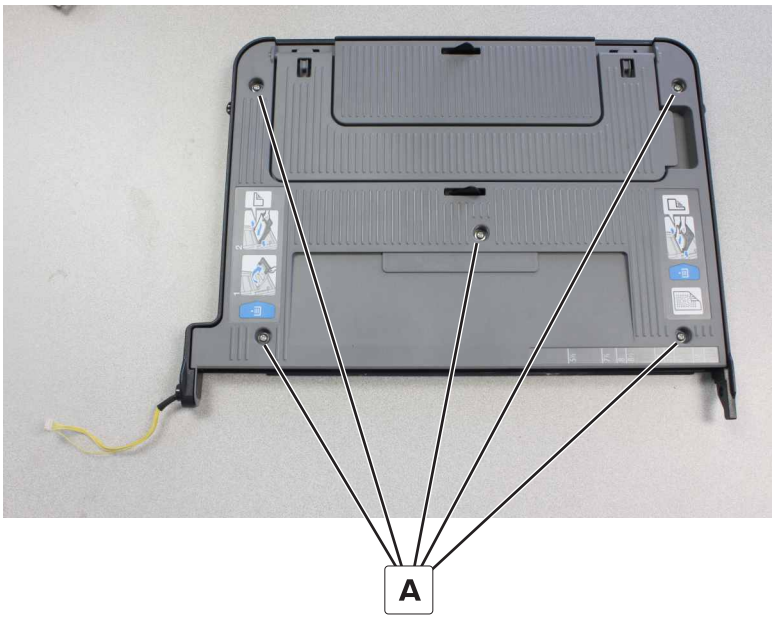
3 Remove the screw (A), and then remove the hinge.



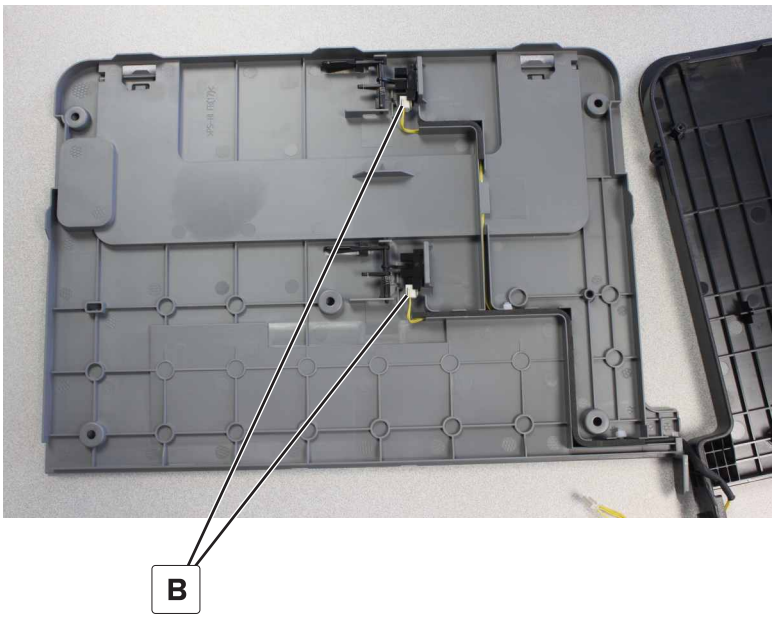
4 Remove the MPF tray.

Sensor (MPF paper length) removal

1. Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.
2. Remove the MPF. See **"MPF removal" on page 297**.
3. Remove the MPF tray. See **"MPF tray removal" on page 298**.
4. Remove the five screws (A), and then lift the cover.



5. Disconnect the cable (B), and then remove the sensor.

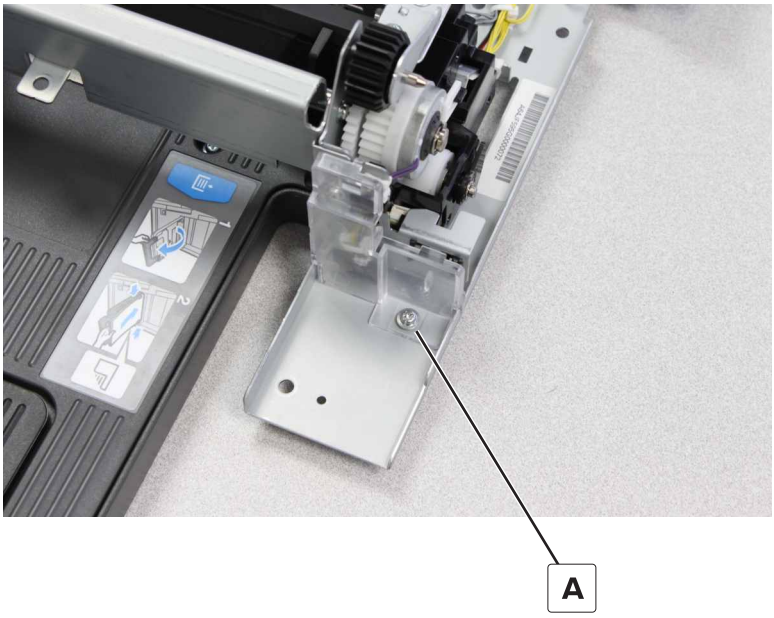


MPF feed clutch removal

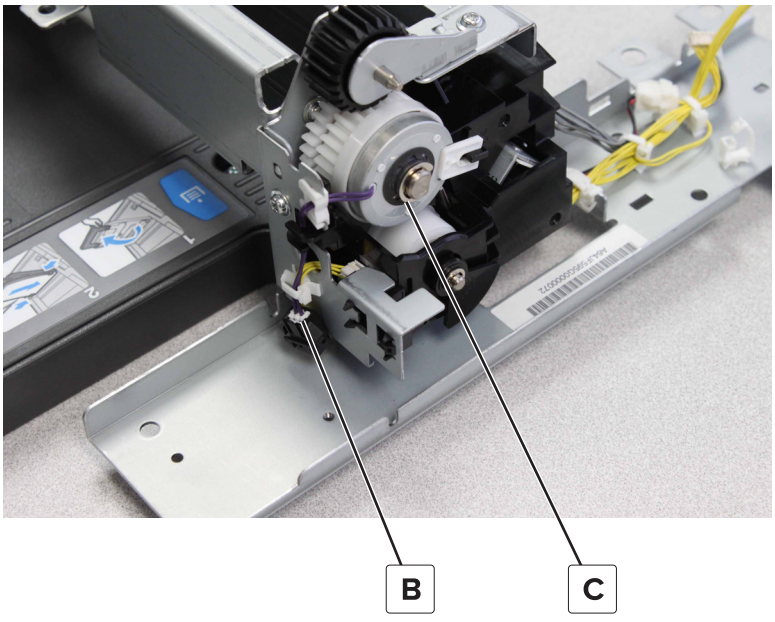
1 Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.

2 Remove the MPF. See **"MPF removal" on page 297**.

3 Remove the screw (A), and then remove the cover.



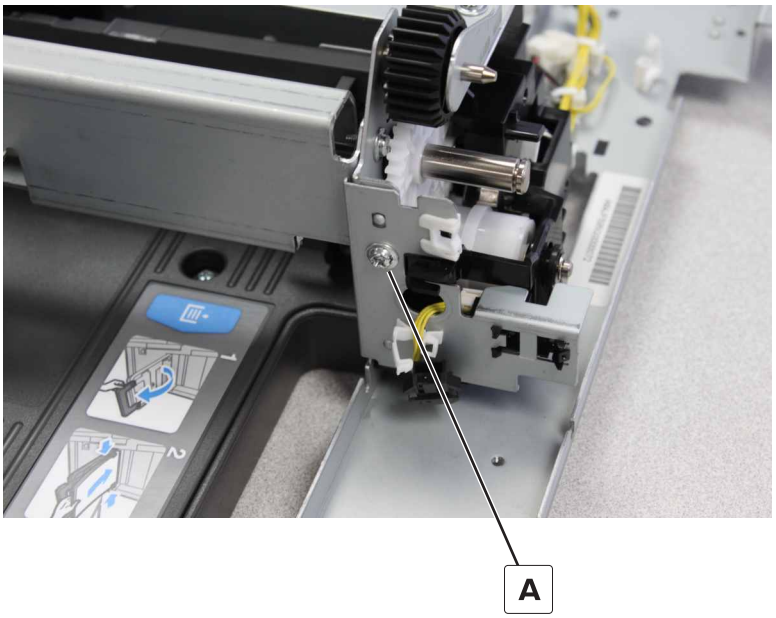
4 Disconnect the cable (B), and then release the clip (C).



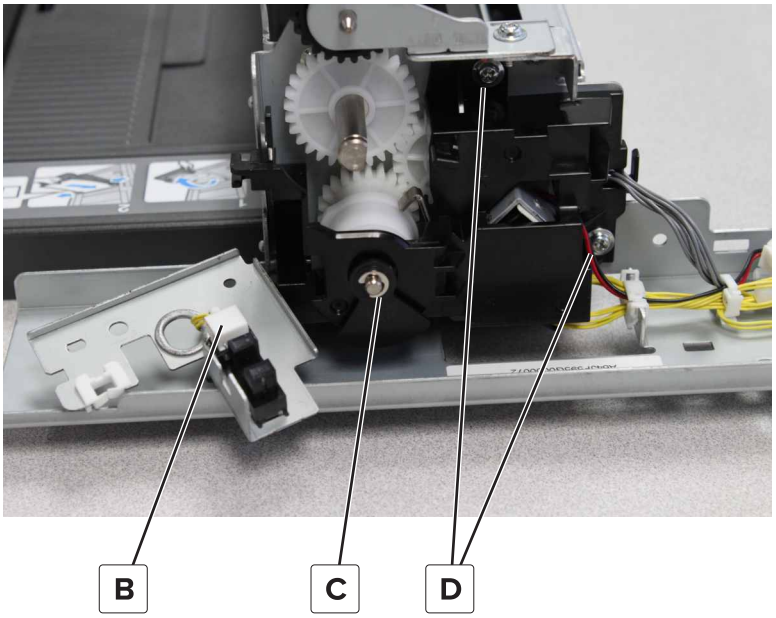
5 Remove the clutch.

MPF lift plate solenoid removal

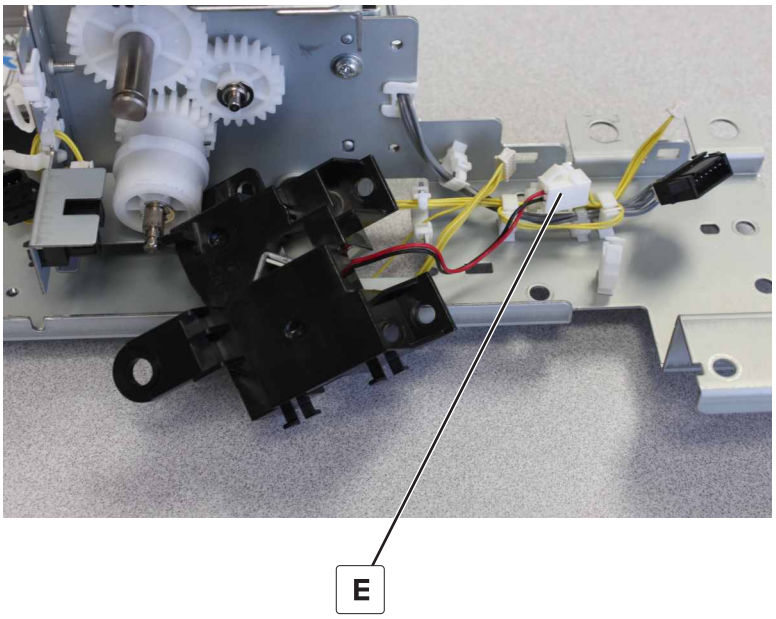
1. Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.
2. Remove the MPF. See **"MPF removal" on page 297**.
3. Remove the MPF feed clutch. See **"MPF feed clutch removal" on page 300**.
4. Remove the screw (A), and then move away the bracket.



5. Disconnect the cable (B), release the clip (C), and then remove the two screws (D).



6 Disconnect the cable (E), and then remove the solenoid.



MPF gears removal

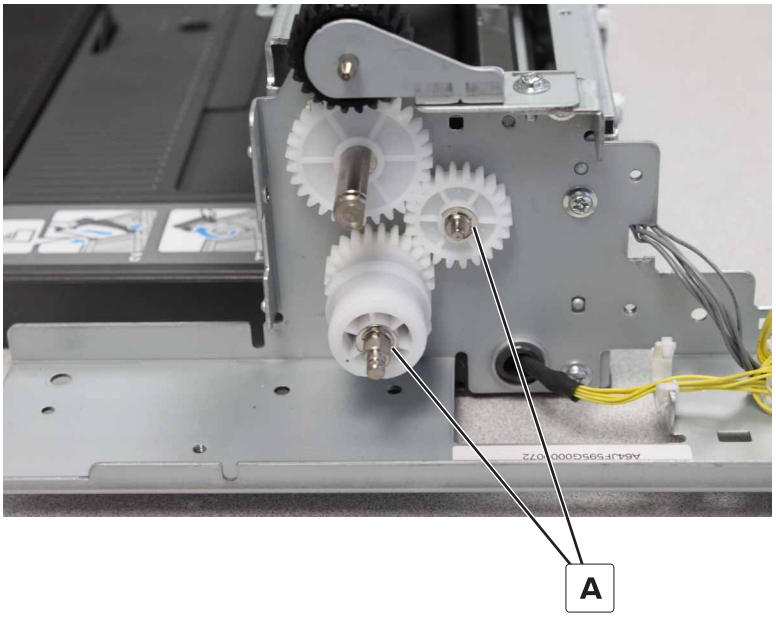
1 Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.

2 Remove the MPF. See **"MPF removal" on page 297**.

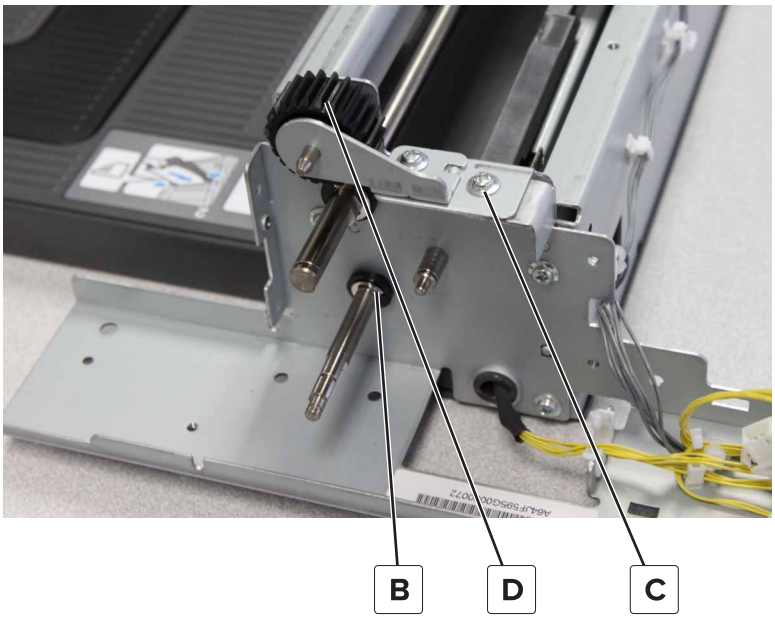
3 Remove the MPF feed clutch. See **"MPF feed clutch removal" on page 300**.

4 Move the MPF lift plate solenoid out of the way. See **"MPF lift plate solenoid removal" on page 301**.

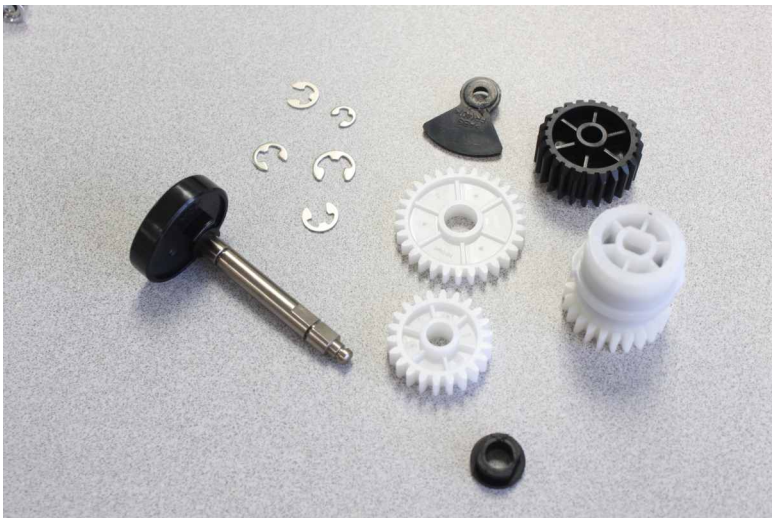
5 Release the two clips (A), and then remove the gears.



6 Release the clip (B), and then remove the bushing. Remove the screw (C), remove the bracket, and then remove the gear (D).



Note: The MPF gears include the gears, bushing, clips, cam, and actuator.

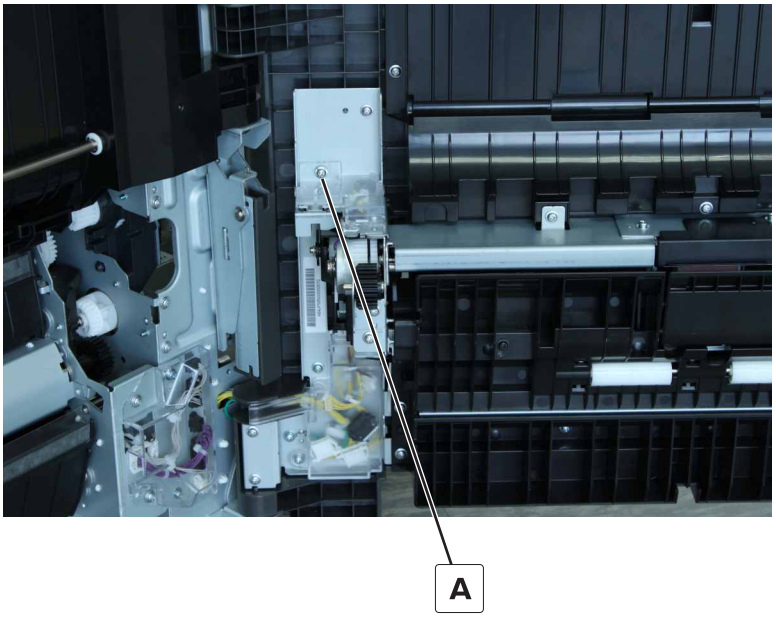


Sensor (MPF lift plate) removal

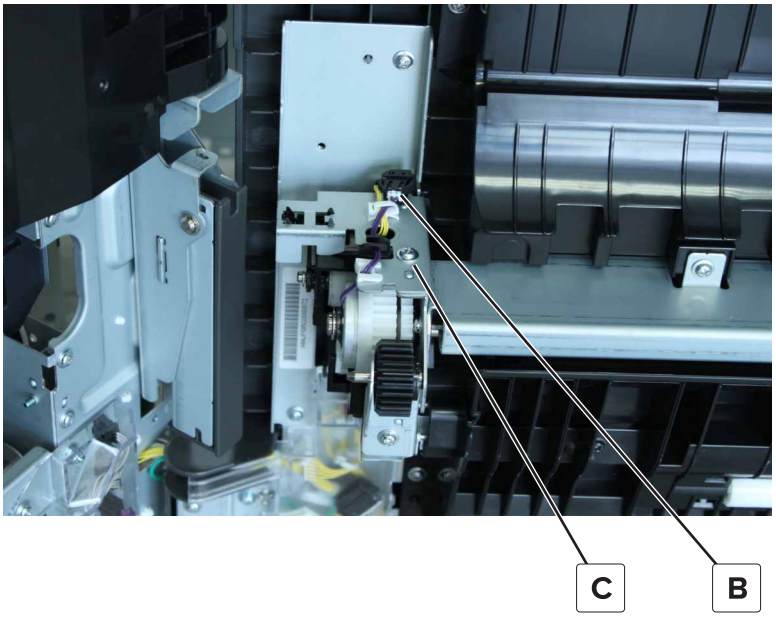
1 Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.

2 Remove the MPF. See **"MPF removal" on page 297**.

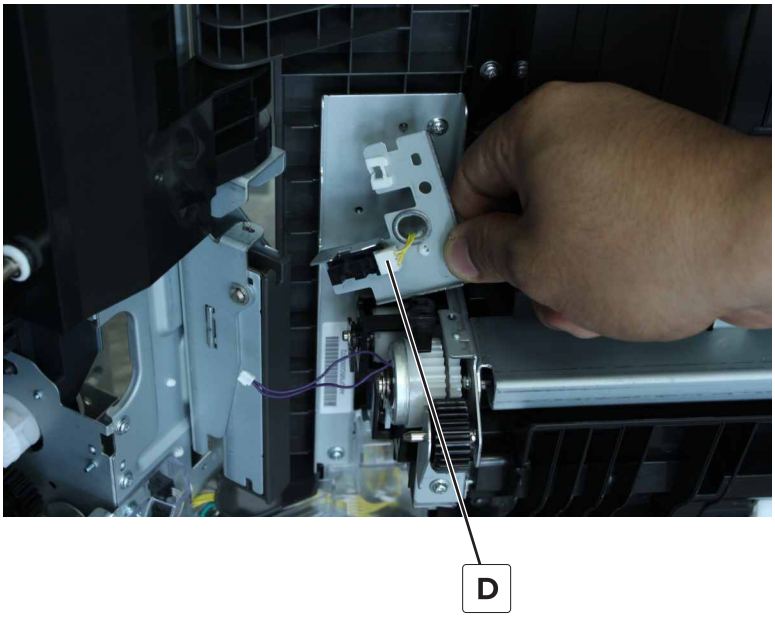
3 Remove the screw (A), and then remove the cover.



4 Disconnect the cable (B), and then remove the screw (C).



5 Lift the bracket, and then disconnect the cable (D).



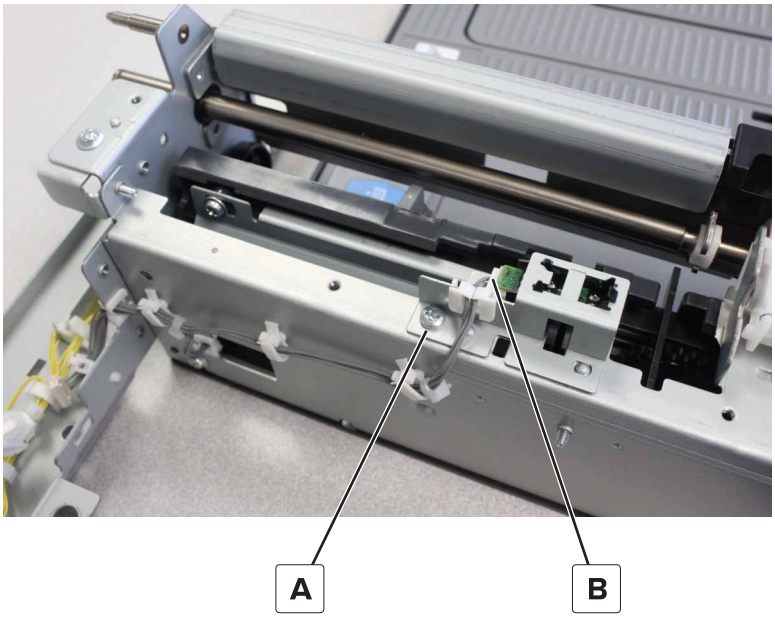
6 Remove the sensor.

Sensor (MPF empty) removal

1 Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.

2 Remove the MPF. See **"MPF removal" on page 297**.

3 Remove the screw (A), and then disconnect the cable (B).



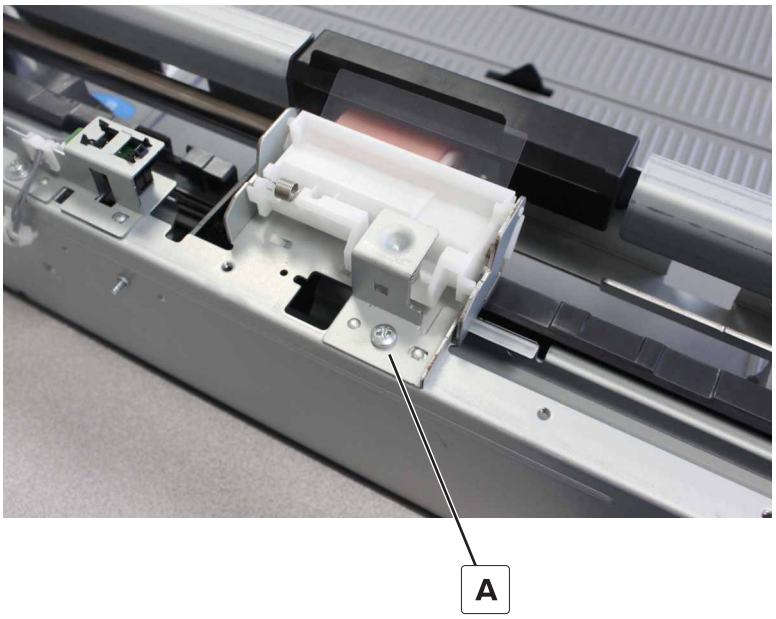
4 Remove the sensor.

MPF feed/separator assembly

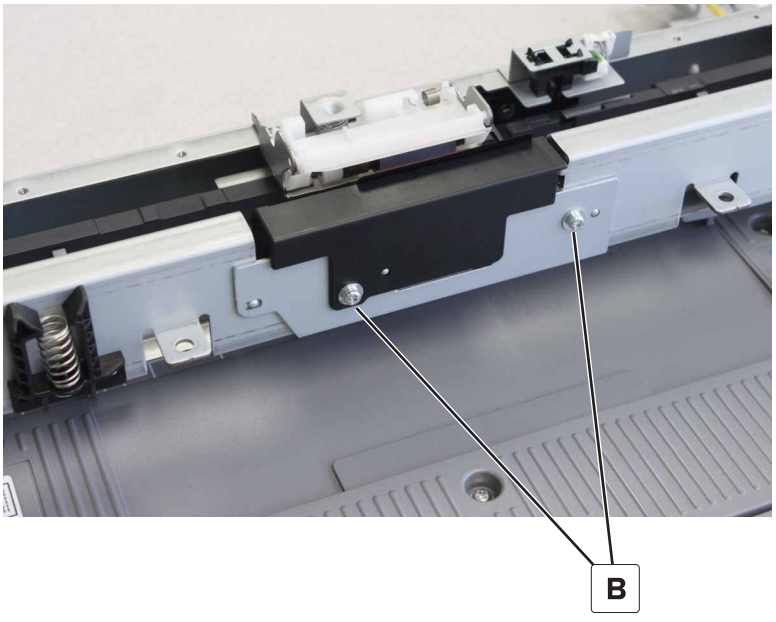
1 Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.

2 Remove the MPF. See **"MPF removal" on page 297**.

3 Remove the screw (A), remove the bracket, and then remove the separator spring.



4 Remove the two screws (B), and then remove the cover and bracket.

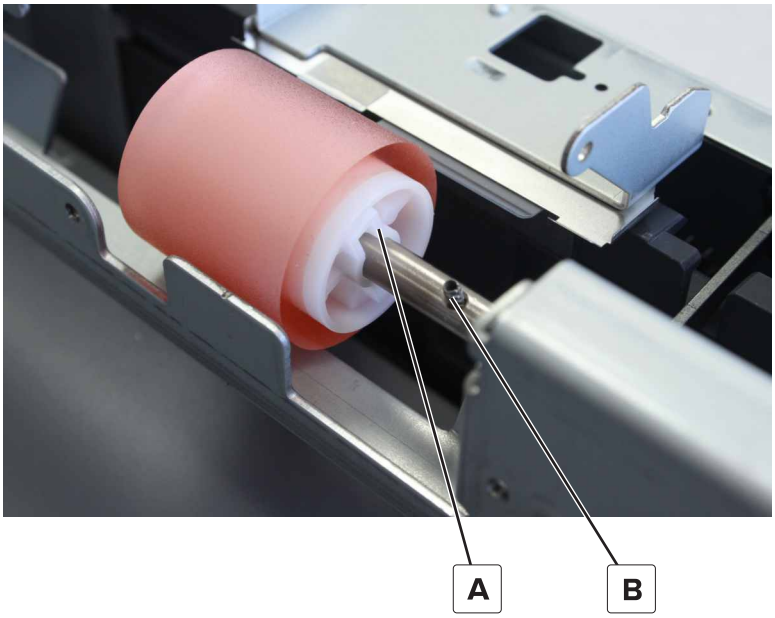


5 Remove the separator roller.

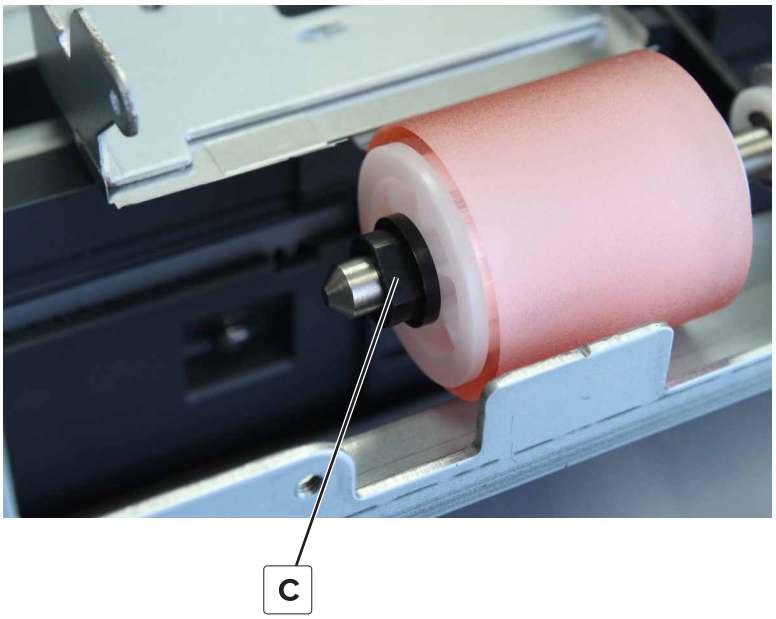
Note: The MPF feed/separator assembly includes the pick roller, separator roller, spring, and bushing.

Installation notes:

- Make sure that the separator roller slot (A) aligns with the pin (B) on the shaft.



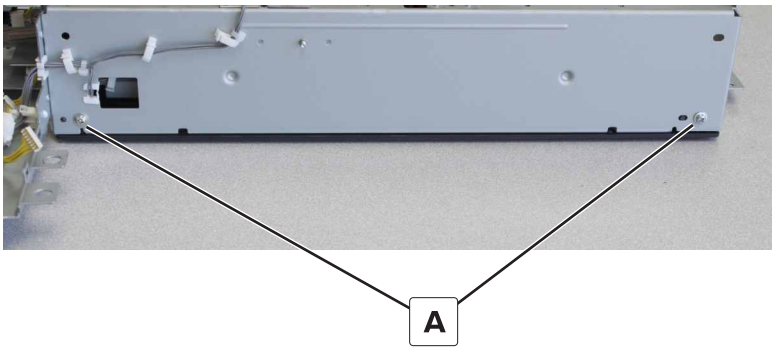
- Make sure that the bushing (C) is correctly positioned onto the shaft.



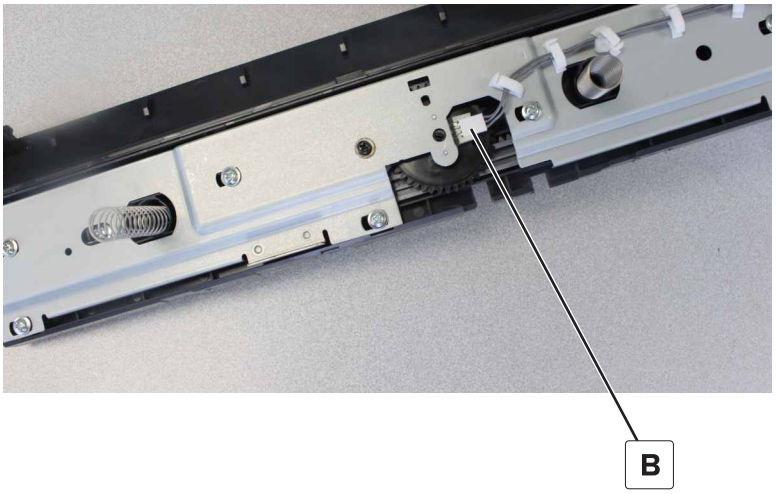
MPF lift plate assembly removal

Note: This part is not a FRU.

1. Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.
2. Remove the MPF. See **"MPF removal" on page 297**.
3. Remove the MPF tray. See **"MPF tray removal" on page 298**.
4. Remove the two screws (A), and then move away the plate.



5 Disconnect the cable (B), and then release it from the cable clips.



6 Remove the assembly.

MPF empty actuator removal

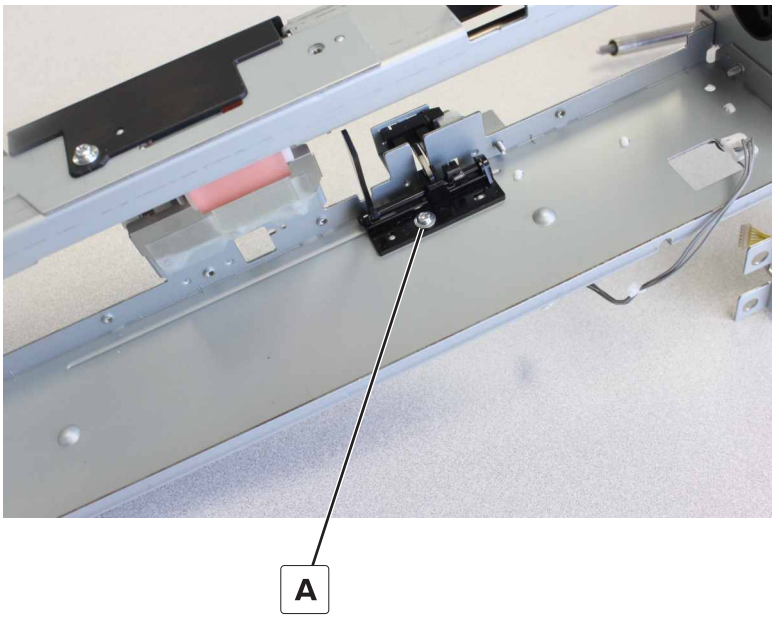
Note: This part is not a FRU.

1 Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.

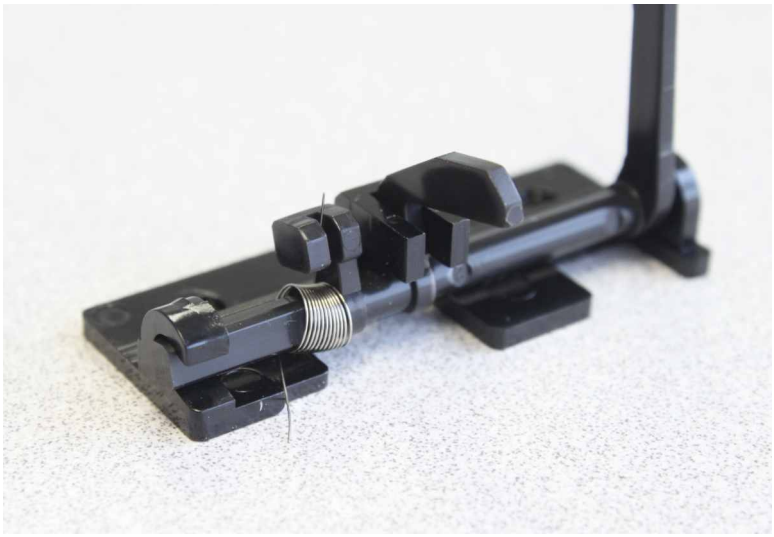
2 Remove the MPF. See **"MPF removal" on page 297**.

3 Remove the MPF tray. See **"MPF tray removal" on page 298**.

4 Remove the screw (A), and then remove the actuator with spring.



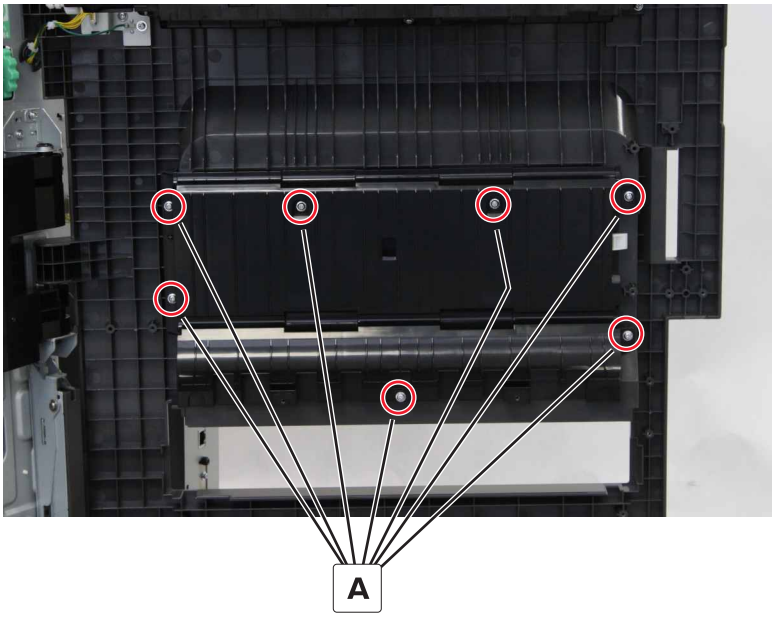
Installation note: Make sure that the spring is correctly positioned on the actuator base.



Duplex transport guide removal

Note: This part is not a FRU.

1. Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.
2. Remove the MPF. See **"MPF removal" on page 297**.
3. Remove the seven screws (A), and then remove the guide.

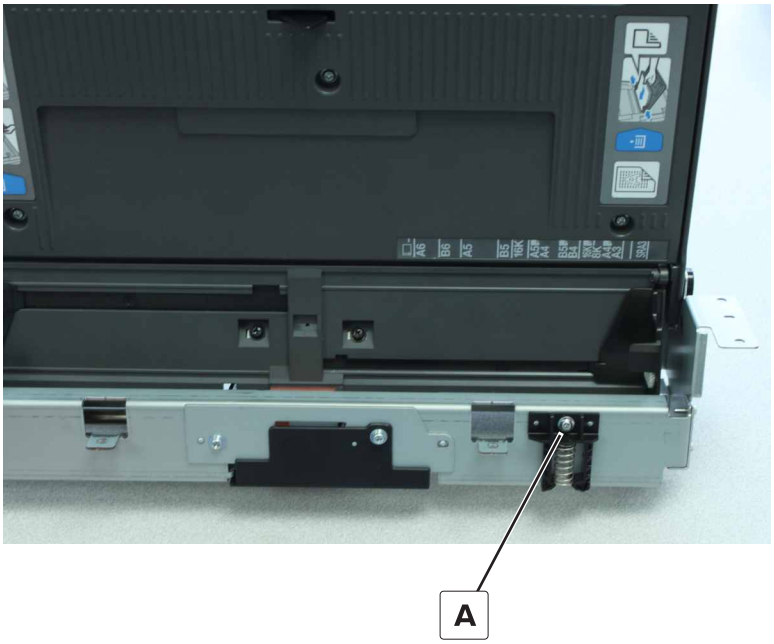


Registration unit latch assembly removal

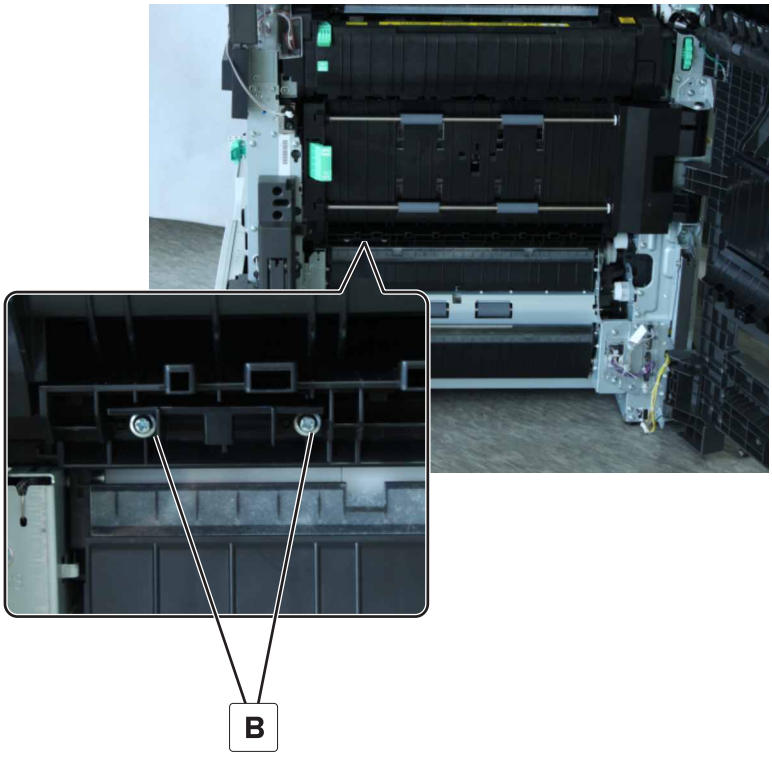
Note: This part is not a FRU.

1. Remove the tray 2 transport guide. See **"Tray 2 transport guide" on page 296**.
2. Remove the MPF. See **"MPF removal" on page 297**.

3 Remove the screw (A), and then remove the latch and spring.



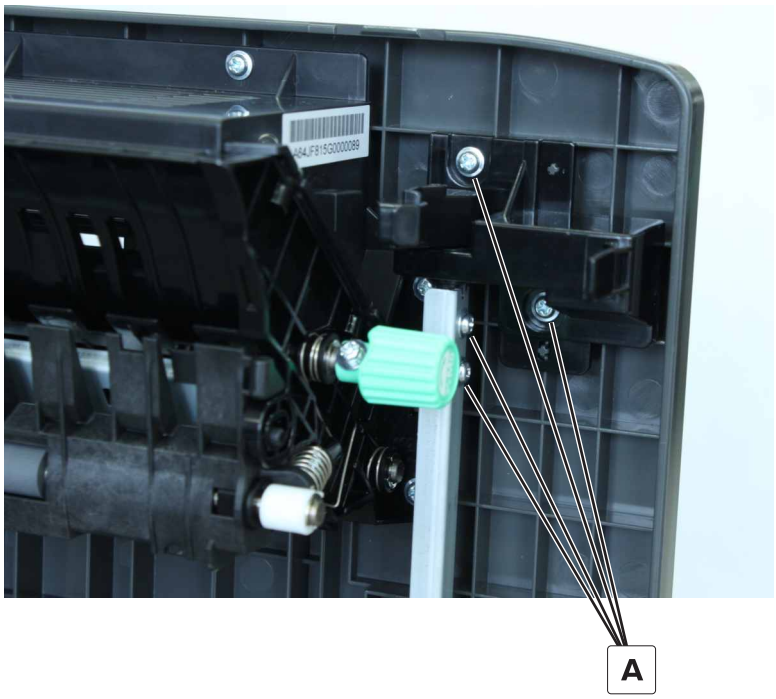
4 On the rear side of the printer, remove the two screws (B), and then remove the latch.



Right door switch actuator removal

1 Open the right door.

2 Remove the four screws (A), and then remove the actuator.



Right door removal

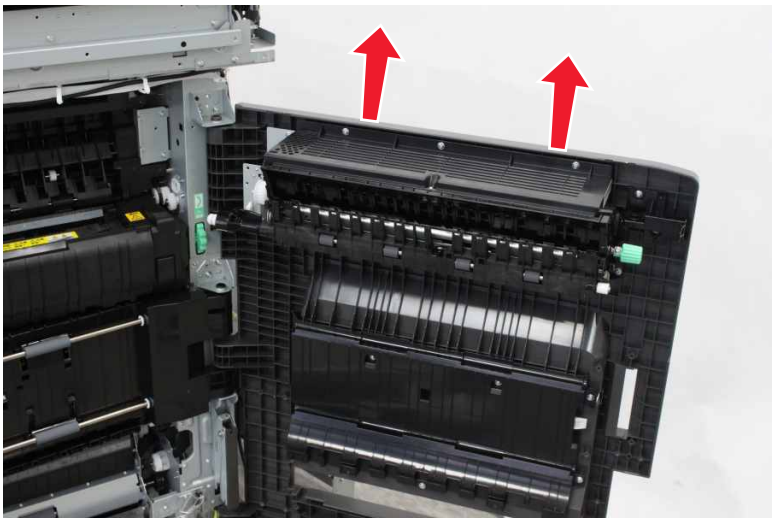
Note: This part is not a FRU.

1 Open the right door.

Installation note: Before removing the door, take note of the alignment of the door hinge.

2 Remove the two screws (A), and then remove the upper hinge.

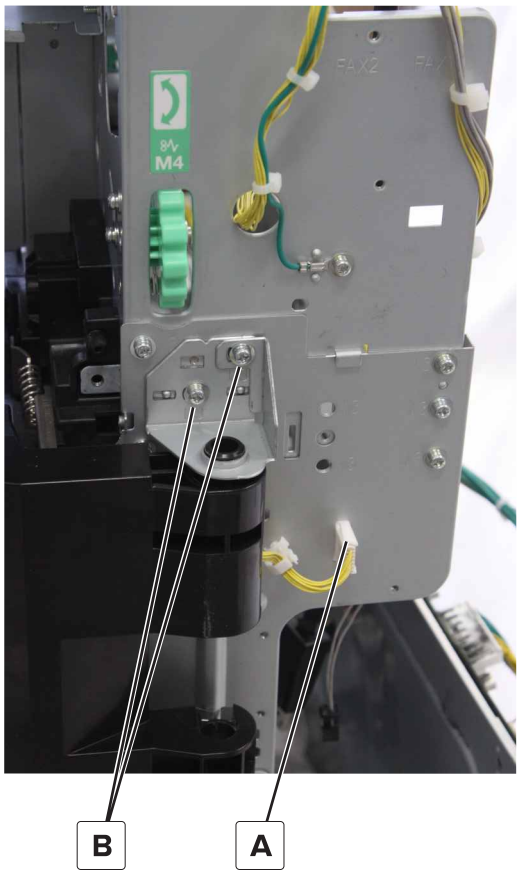
3 Remove the door.



Registration unit assembly removal

1 Remove the right door. See **"Right door removal" on page 312**.

2 Disconnect the cable (A), and then remove the two screws (B).

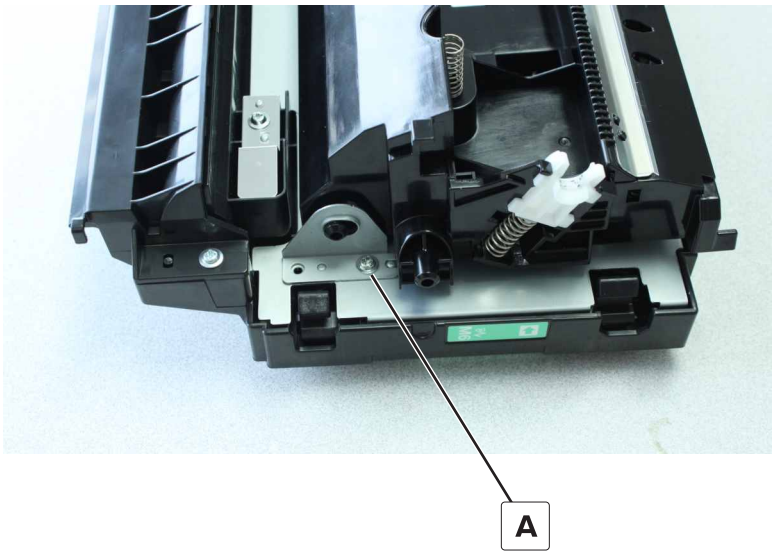


3 Lift the registration unit to release, and then remove.

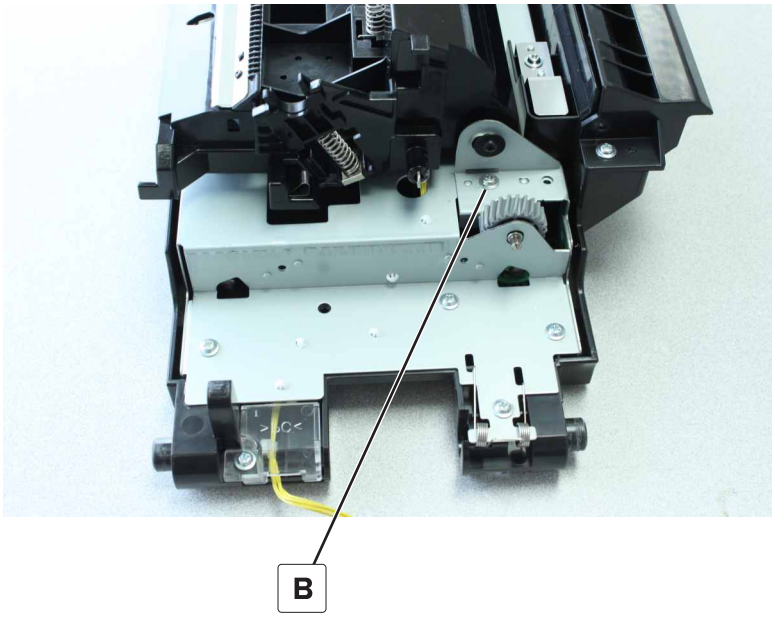
Registration unit sub-assembly removal

Note: This part is not a FRU.

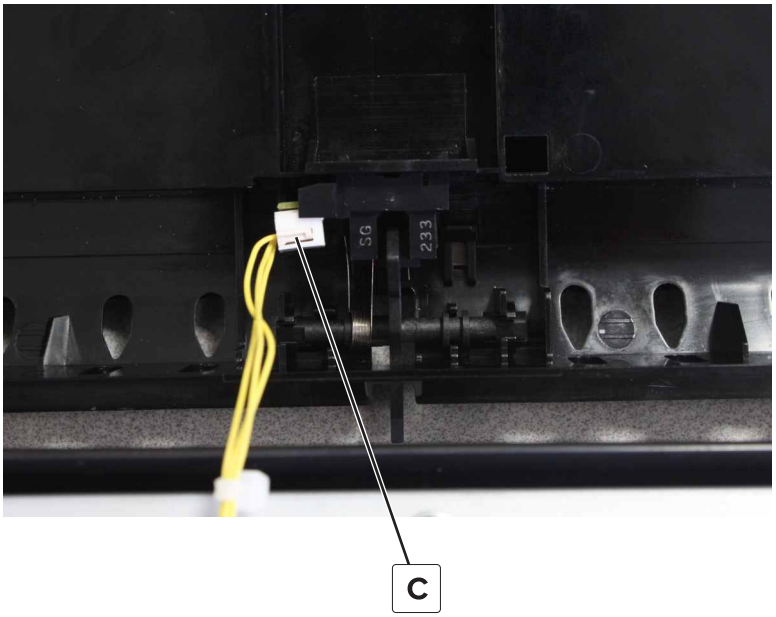
1. Remove the registration unit assembly. See **"Registration unit assembly removal" on page 314**.
2. Remove the screw (A) from the right bracket.



3. Remove the screw (B) from the left bracket.

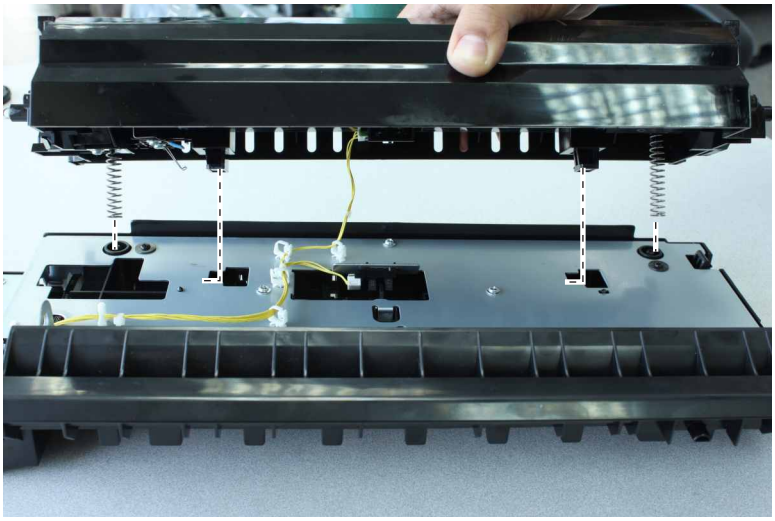


4 Disconnect the cable (C), and then remove the sub-assembly.



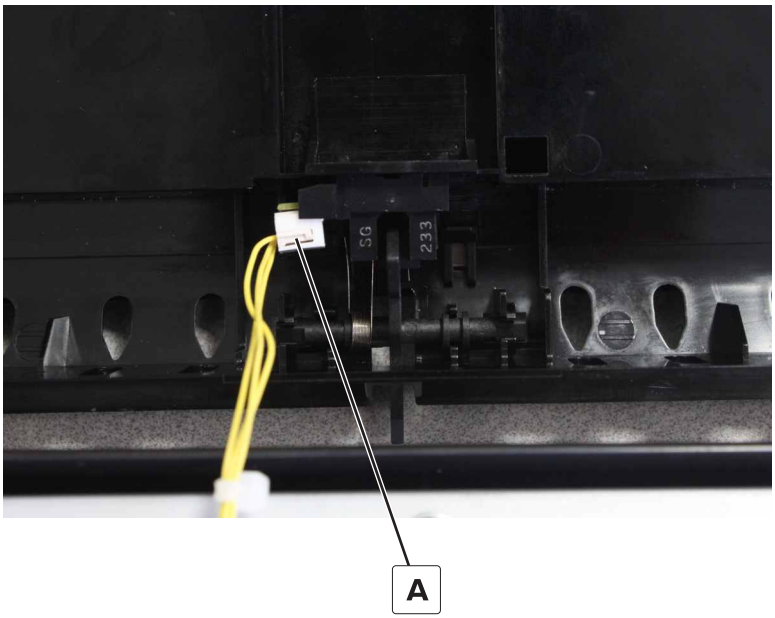
CAUTION—POTENTIAL INJURY: This part has sharp points.

Installation note: Align the two springs while pushing down the assembly, and then move the assembly to the left to lock.



Sensor (fusing speed) removal

1. Remove the registration unit assembly. See **"Registration unit assembly removal" on page 314**.
2. Remove the registration unit sub-assembly. See **"Registration unit sub-assembly removal" on page 315**.
3. Disconnect the cable (A), and then remove the sensor.

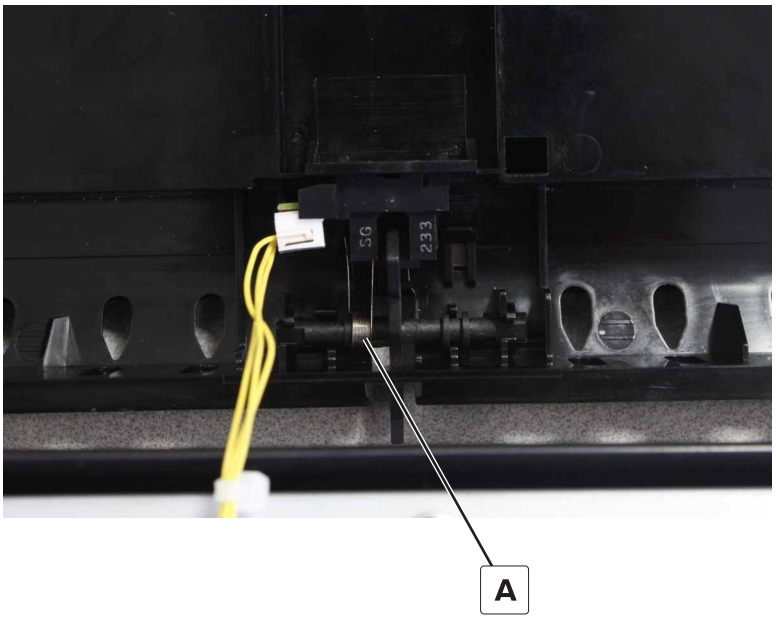


Fusing speed actuator removal

Note: This part is not a FRU.

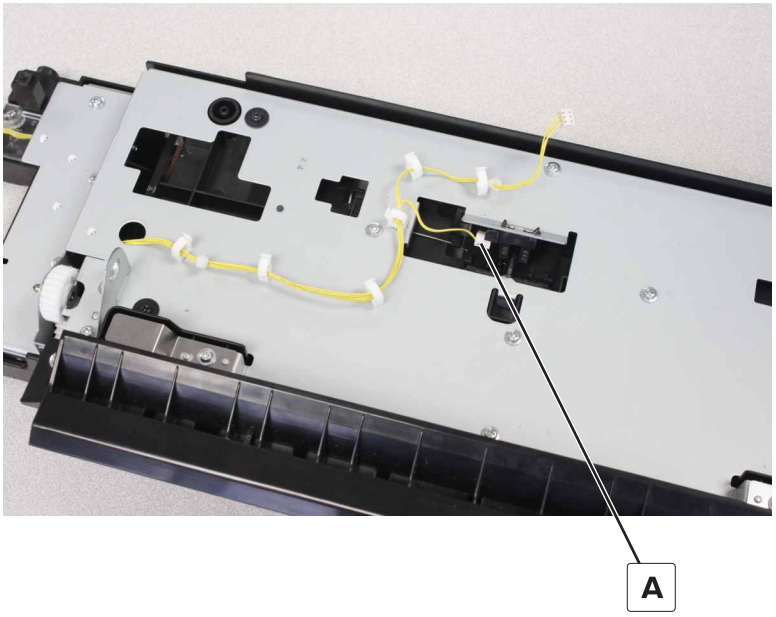
1. Remove the registration unit assembly. See **"Registration unit assembly removal" on page 314**.
2. Remove the registration unit sub-assembly. See **"Registration unit sub-assembly removal" on page 315**.
3. Release the spring (A), and then remove the actuator.

Installation note: Make sure that the spring (A) is correctly positioned on the actuator base.



Sensor (duplex pass through 2) removal

1. Remove the registration unit assembly. See **"Registration unit assembly removal" on page 314**.
2. Remove the registration unit sub-assembly. See **"Registration unit sub-assembly removal" on page 315**.
3. Disconnect the cable (A), and then remove the sensor.

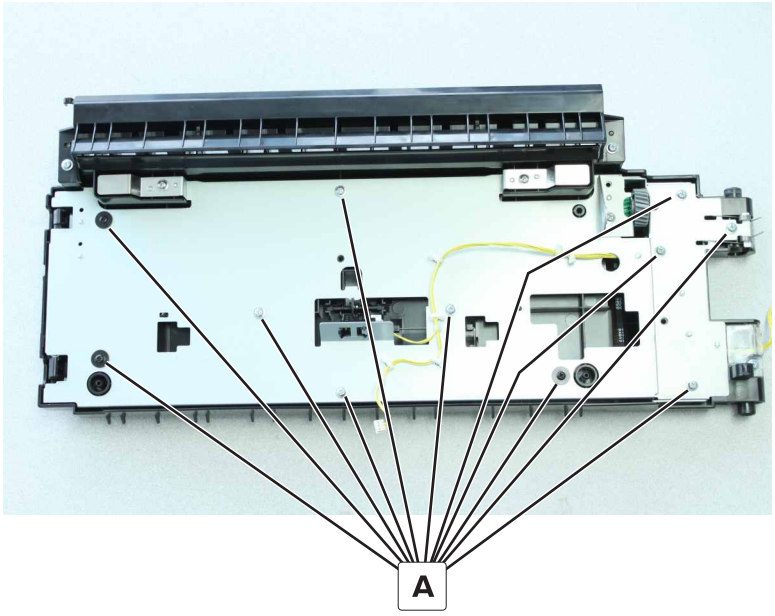


Registration unit belt removal

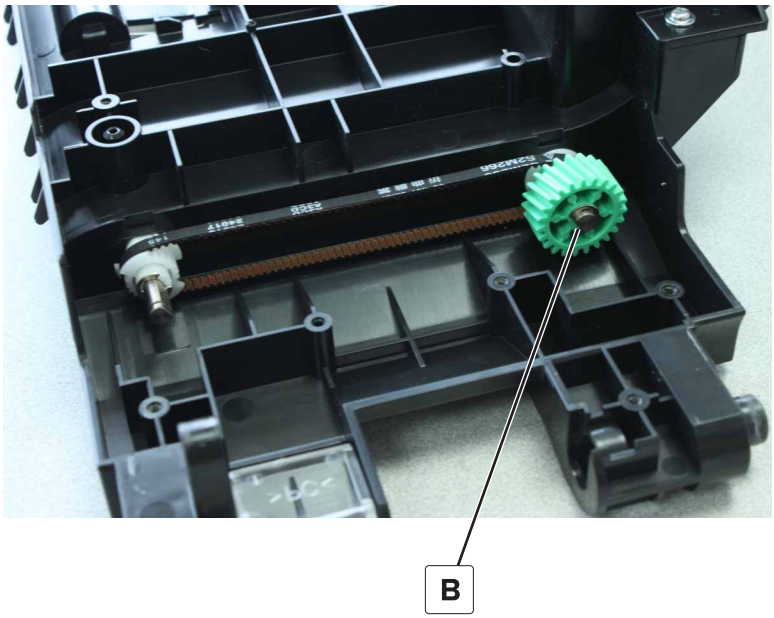
1 Remove the registration unit assembly. See **"Registration unit assembly removal" on page 314**.

2 Remove the registration unit sub-assembly. See **"Registration unit sub-assembly removal" on page 315**.

3 Remove the 11 screws (A), and then remove the plate.



4 Release the clip (B), and then remove the gear.



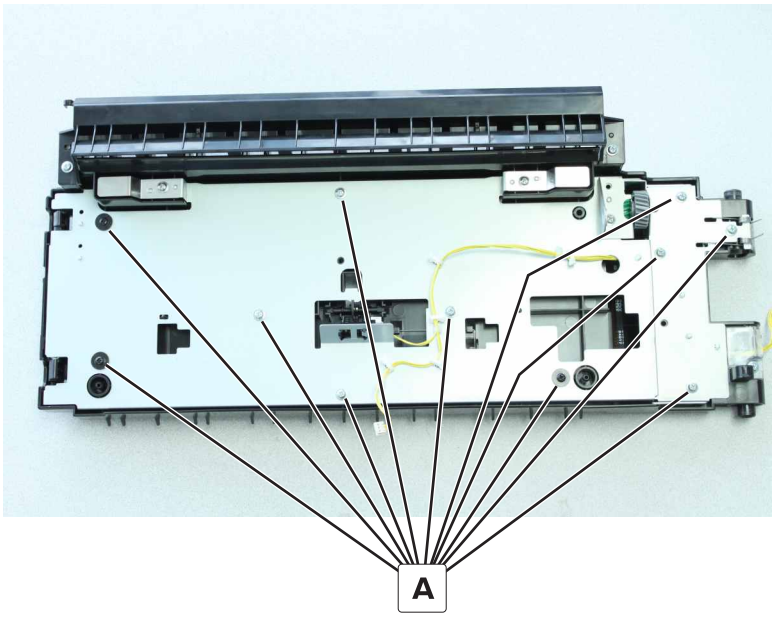
5 Remove the belt.

Registration unit gears removal

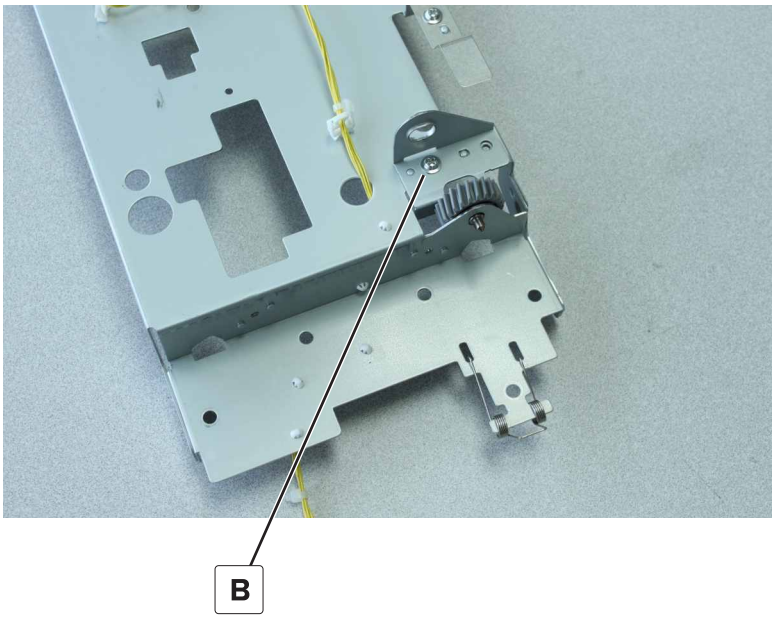
1 Remove the registration unit assembly. See **"Registration unit assembly removal" on page 314**.

2 Remove the registration unit sub-assembly. See **"Registration unit sub-assembly removal" on page 315**.

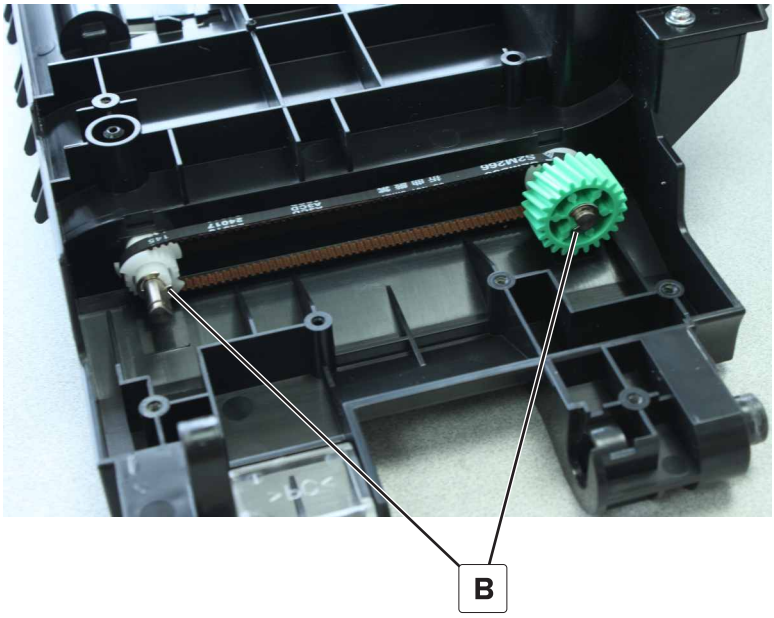
3 Remove the 11 screws (A), and then remove the plate.



4 Remove the screw (B), remove the bracket, and then remove the gear.



5 Release the two clips (C), and then remove the gears.



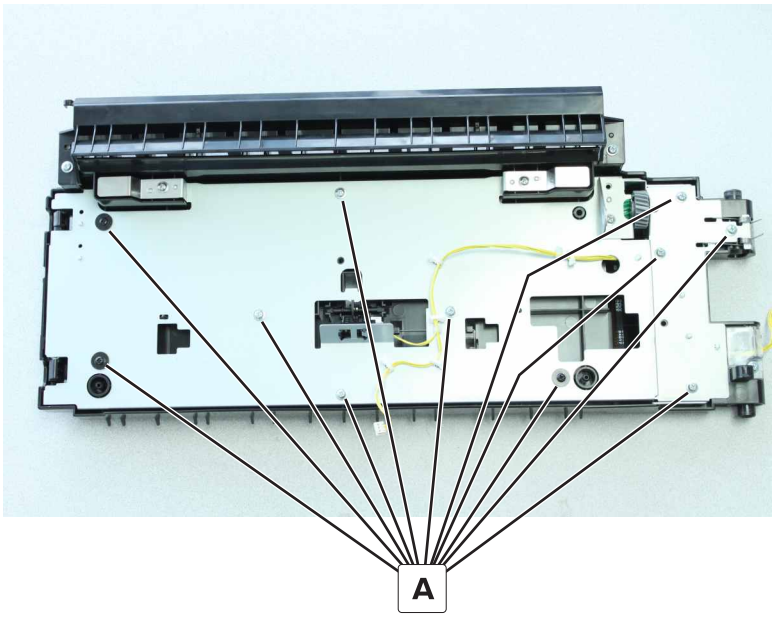
Note: The registration gear pack includes the gears, bushings, and clips.

Registration unit lock removal

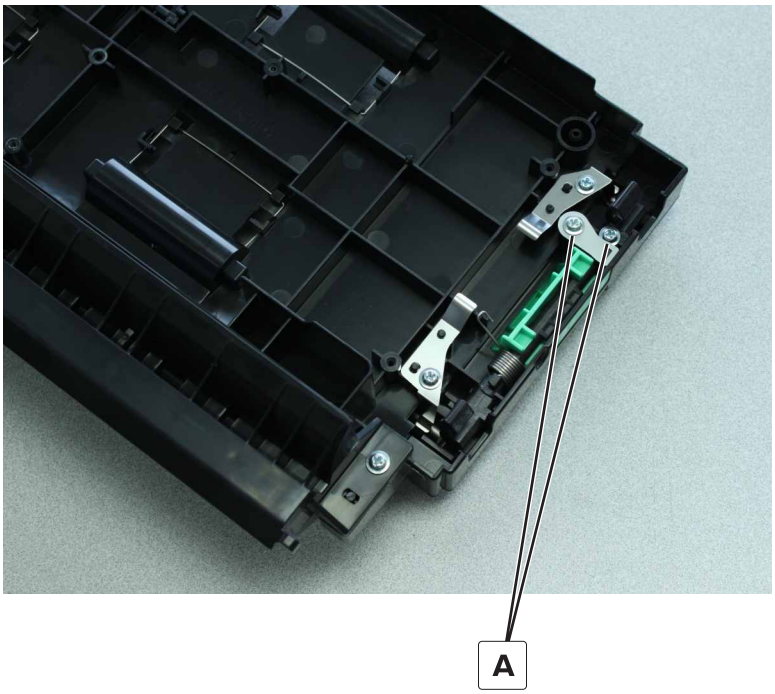
1 Remove the registration unit assembly. See **"Registration unit assembly removal" on page 314**.

2 Remove the registration unit sub-assembly. See **"Registration unit sub-assembly removal" on page 315**.

3 Remove the 11 screws (A), and then remove the plate.



4 Remove the two screws (A), and then remove the lock.

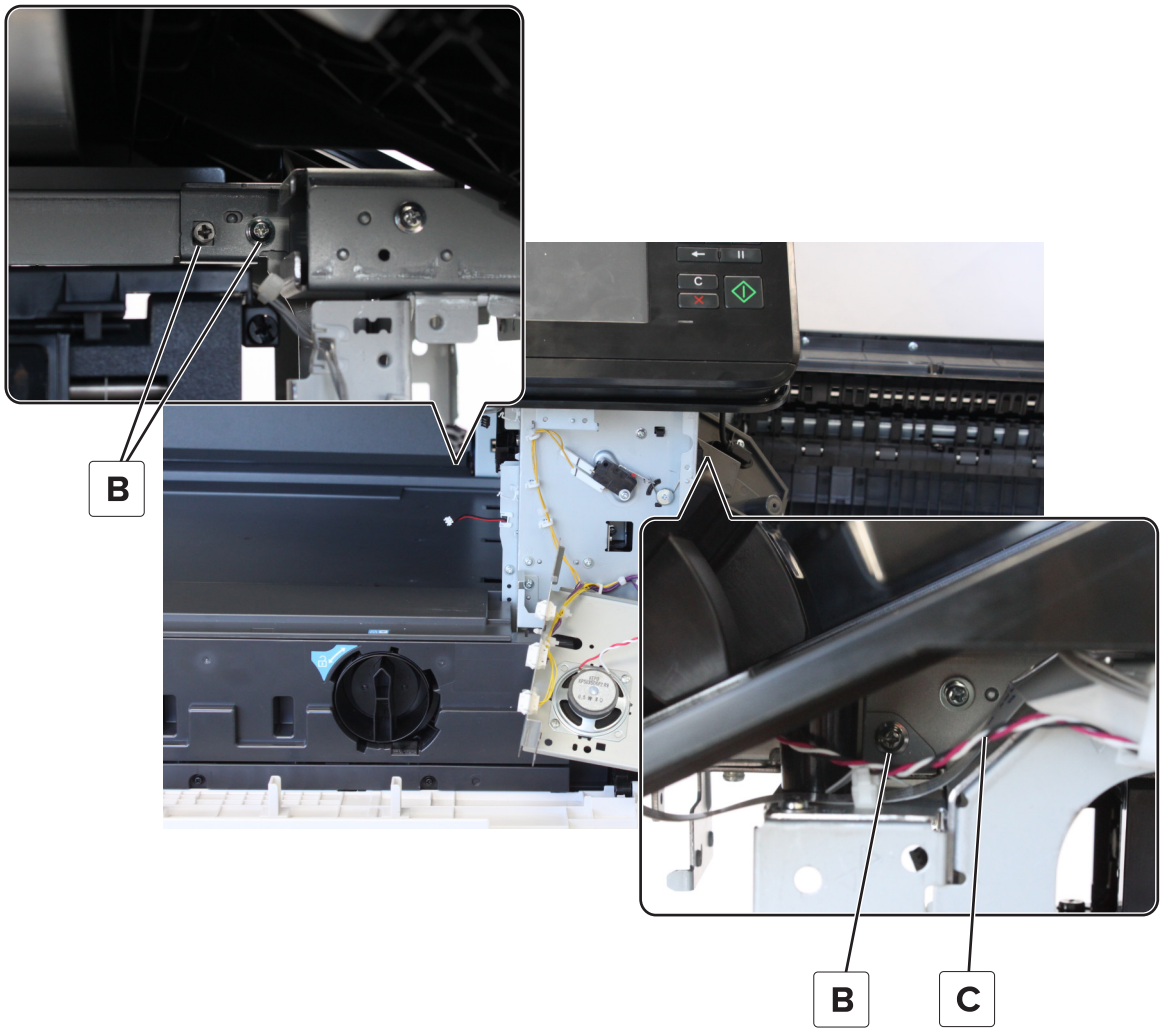


Front side removals

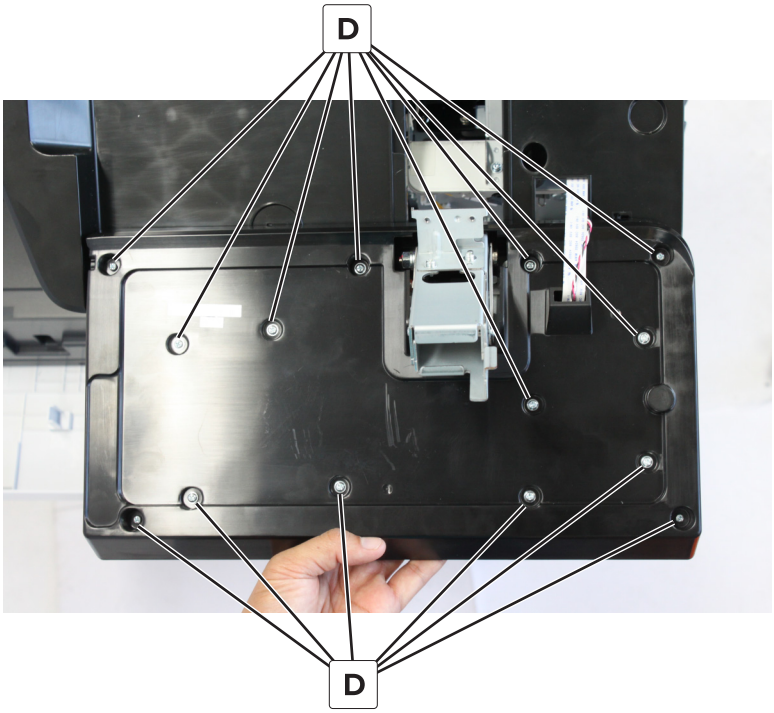
Control panel frame removal

Note: This part is not a FRU.

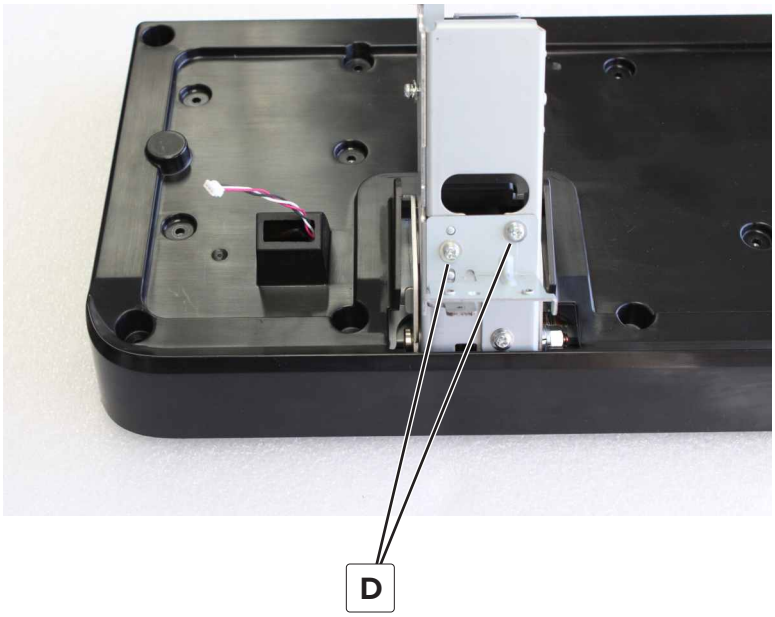
1. Remove the speaker cover. See **"Speaker cover removal" on page 338**.
2. Remove the three screws (A), and then disconnect the control panel board cable (B).



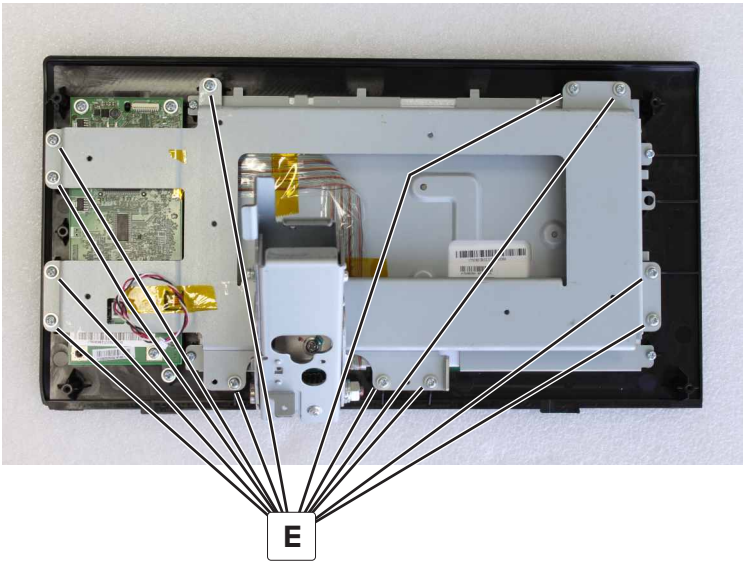
3 Remove the 14 screws (C) behind the control panel.



4 Remove the two screws (D), and then remove the cover.



5 Remove the 12 screws (E), and then remove the frame.

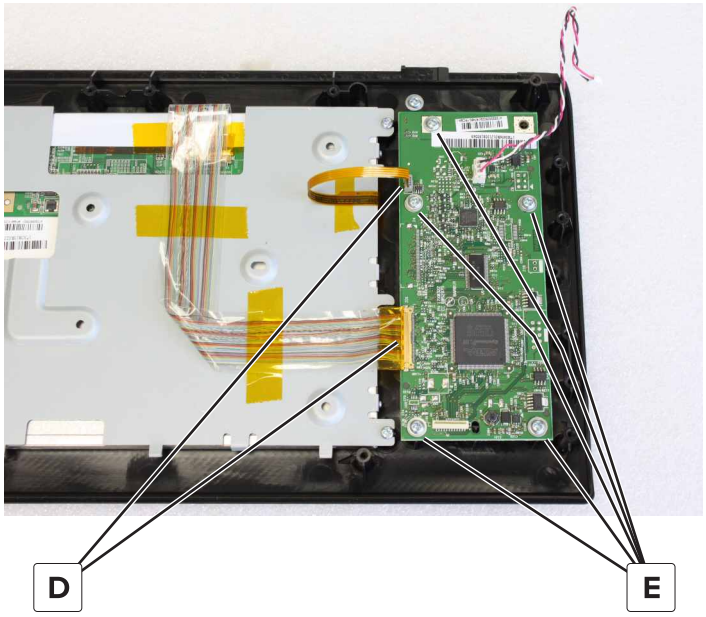


Control panel board removal

1 Remove the speaker cover. See **"Speaker cover removal" on page 338**.

2 Remove the control panel frame. See **"Control panel frame removal" on page 323**.

3 Disconnect the two cables (D), and then remove the five screws (E).



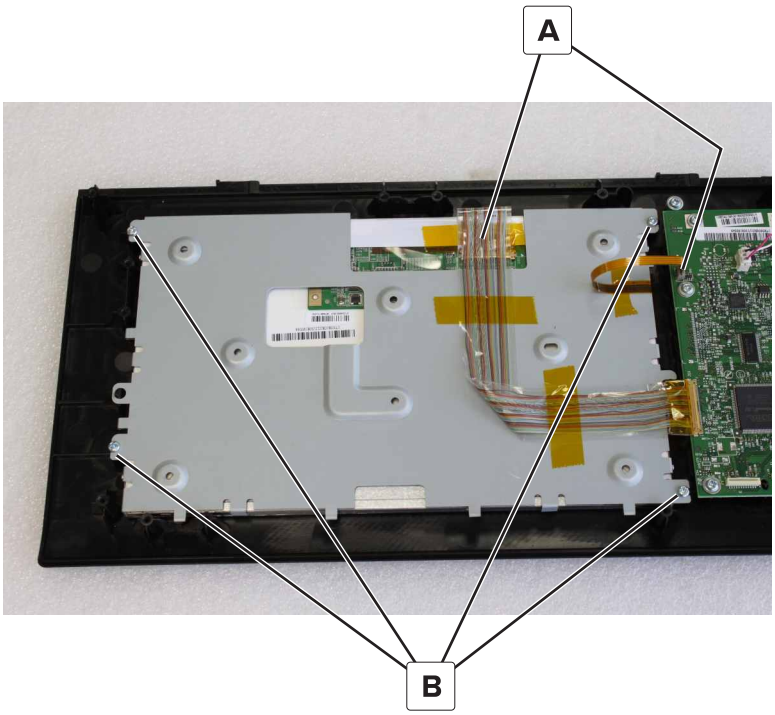
4 Remove the board.

Touch screen removal

1 Remove the speaker cover. See **"Speaker cover removal" on page 338**.

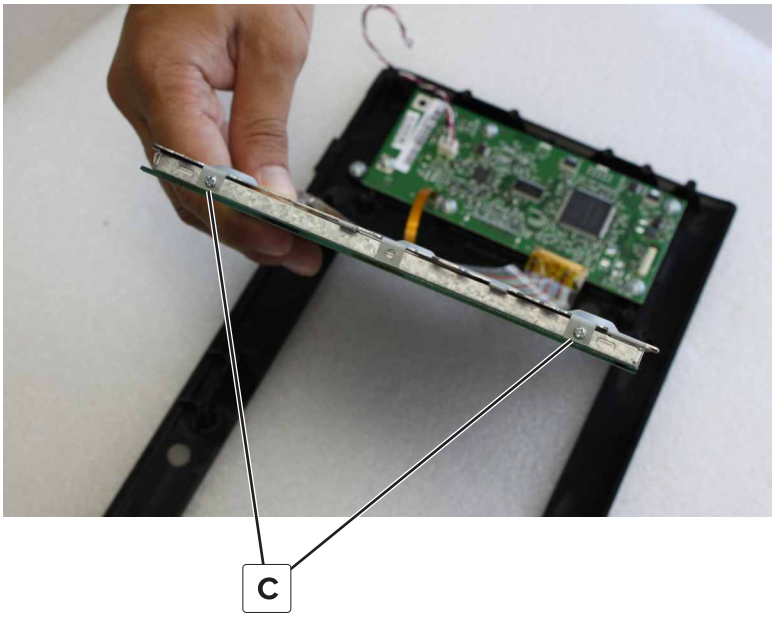
2 Remove the control panel frame. See **"Control panel frame removal" on page 323**.

3 Disconnect the two cables (A), remove the four screws (B), and then remove the shield.



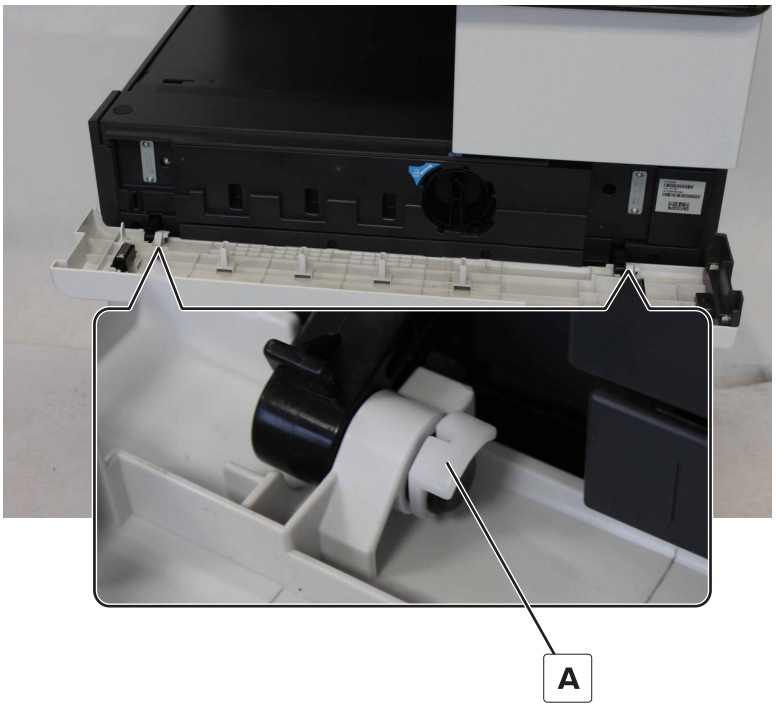
4 Remove the two screws (C), and then remove the two screws from the opposite side.

Note: Use a #1 Phillips screwdriver.



Top front door removal

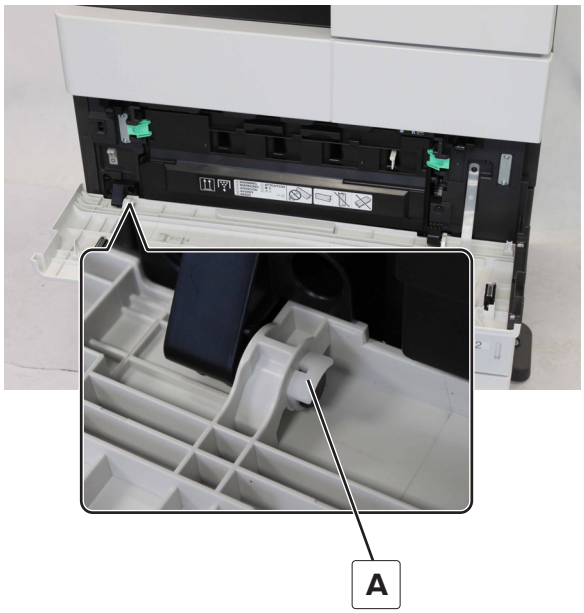
1 Open the door, and then remove the two clips (A).



2 Slightly move the door to the right to release, and then remove.

Bottom front door removal

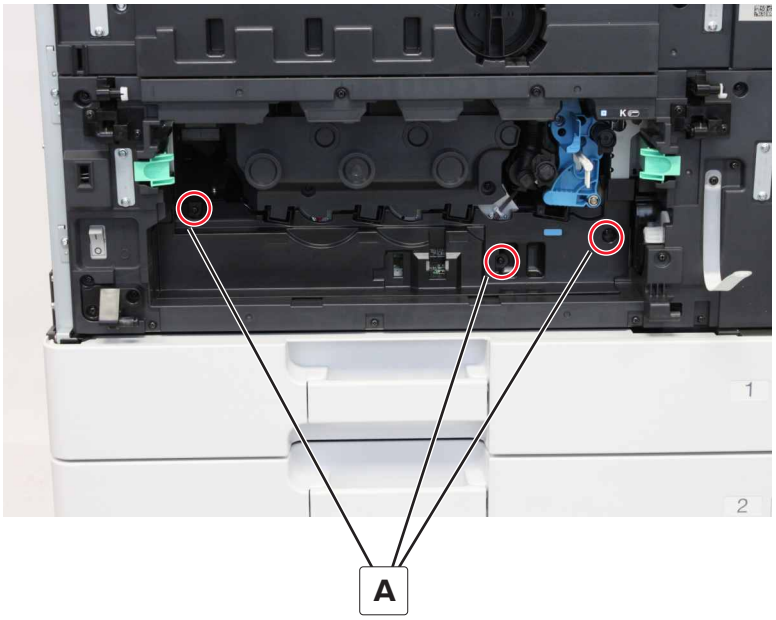
1 Open the door, and then remove the clip (A).



2 Slightly move the door to the right to release, and then remove.

Front inner cover removal

1. Remove the top front door. See **"Top front door removal" on page 327**.
2. Remove the bottom front door. See **"Bottom front door removal" on page 327**.
3. Remove the three screws (A), and then remove the cover.



Waste toner door mount removal

1. Remove the top front door. See **"Top front door removal" on page 327**.
2. Remove the bottom front door. See **"Bottom front door removal" on page 327**.
3. Remove the 11 screws (A), and then remove the door mount.

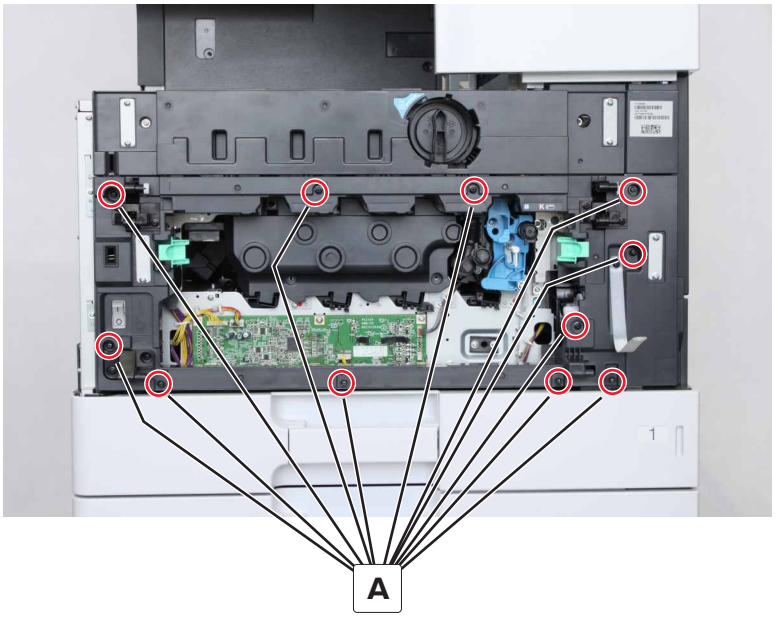
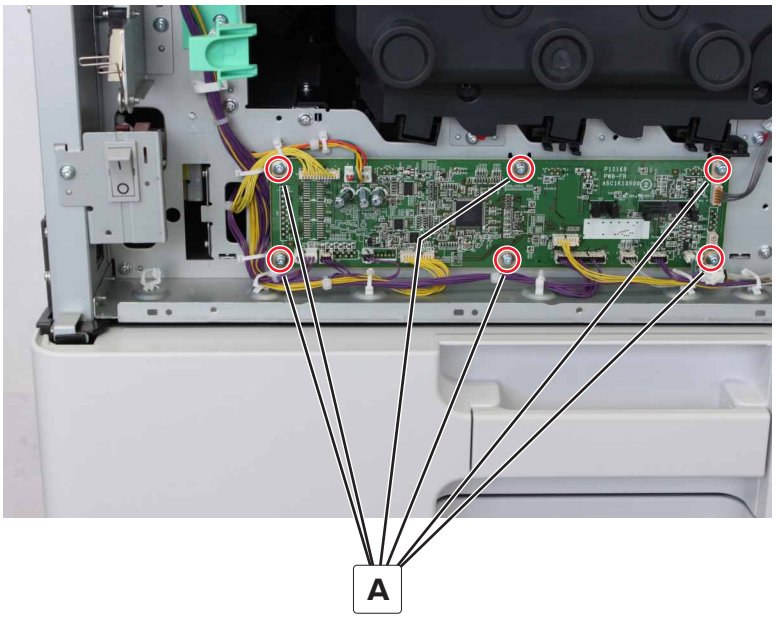


Image controller board removal

1. Remove the top front door. See **"Top front door removal" on page 327**.
2. Remove the bottom front door. See **"Bottom front door removal" on page 327**.
3. Remove the waste toner door mount. See **"Waste toner door mount removal" on page 328**.
4. Disconnect the cables, and then remove the six screws (A).

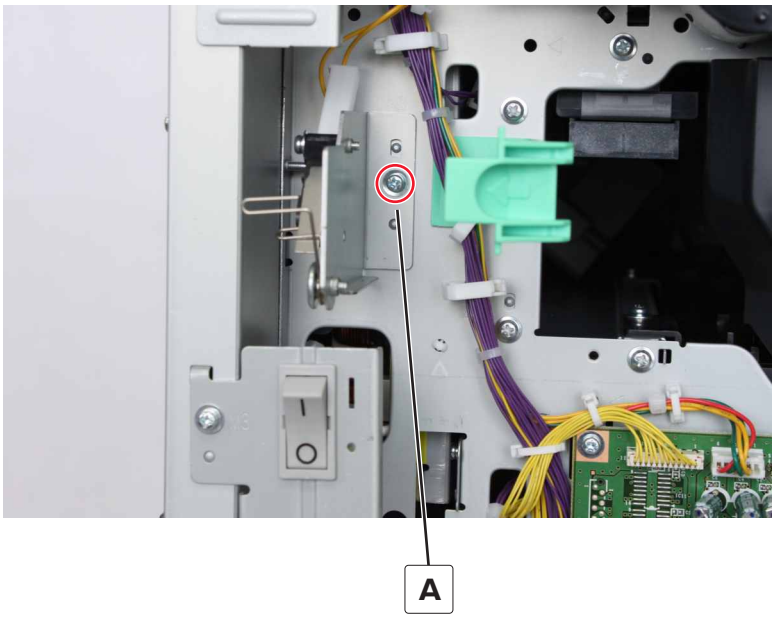


5. Remove the board.

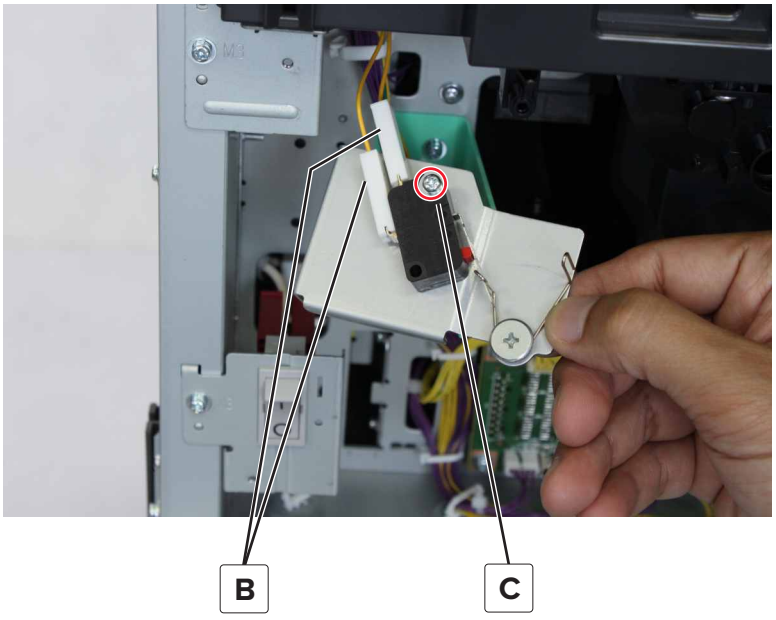
Door switch removal

1. Remove the top front door. See **"Top front door removal" on page 327**.
2. Remove the bottom front door. See **"Bottom front door removal" on page 327**.
3. Remove the waste toner door mount. See **"Waste toner door mount removal" on page 328**.

4 Remove the screw (A), and then move away the bracket.



5 Disconnect the two cables (B), and then remove the screw (C).



6 Release the retainer, and then remove the switch.

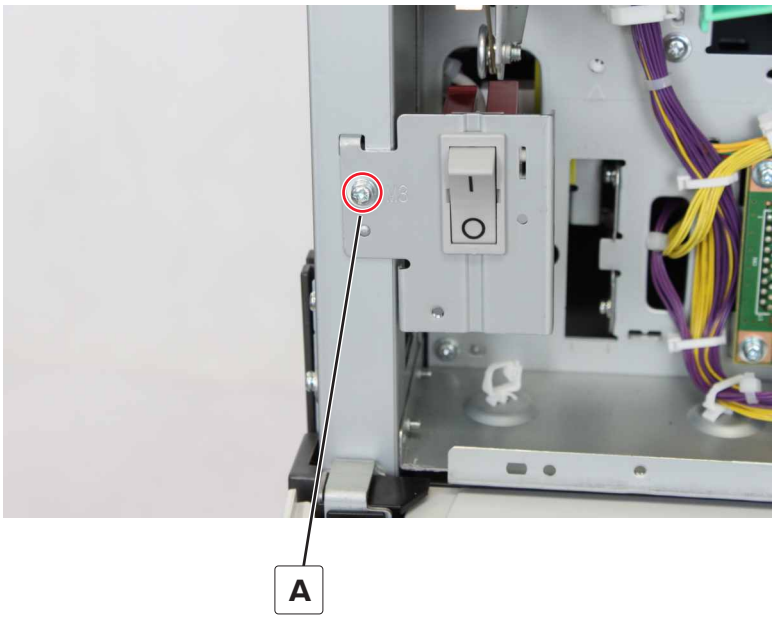
Main power switch removal

1 Remove the top front door. See **"Top front door removal" on page 327**.

2 Remove the bottom front door. See **"Bottom front door removal" on page 327**.

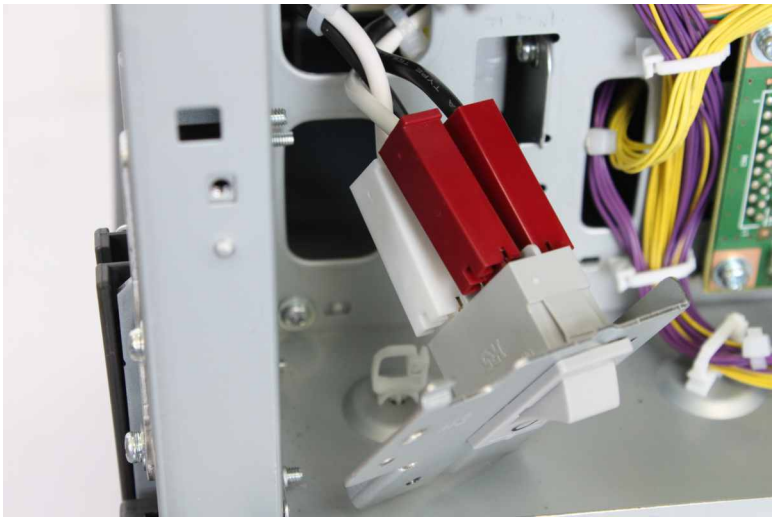
3 Remove the waste toner door mount. See **"Waste toner door mount removal" on page 328**.

4 Remove the screw (A), and then move away the switch.



5 Disconnect the four cables and remove the switch.

Installation note: Red connectors are on top, while white connectors are at the bottom. Black cables are on the right, while white cables are on the left.



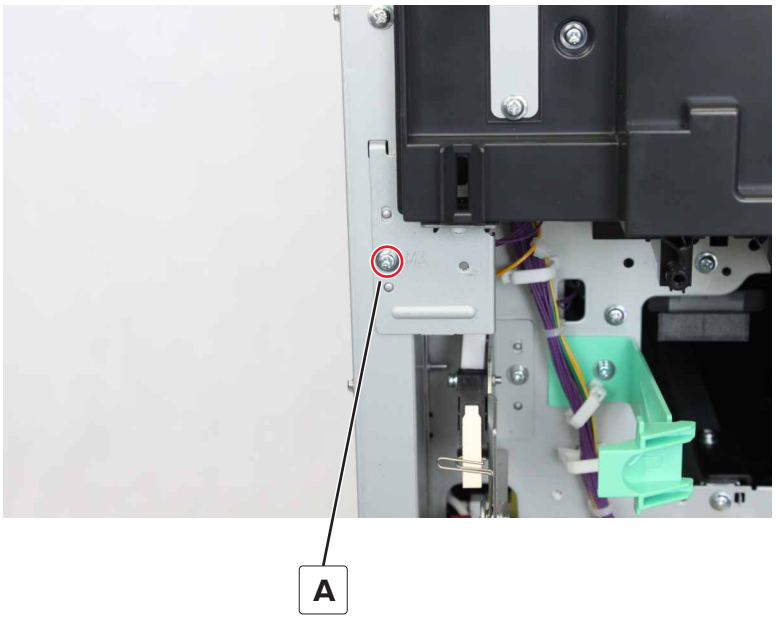
Sensor (top front door) removal

1 Remove the top front door. See **"Top front door removal" on page 327**.

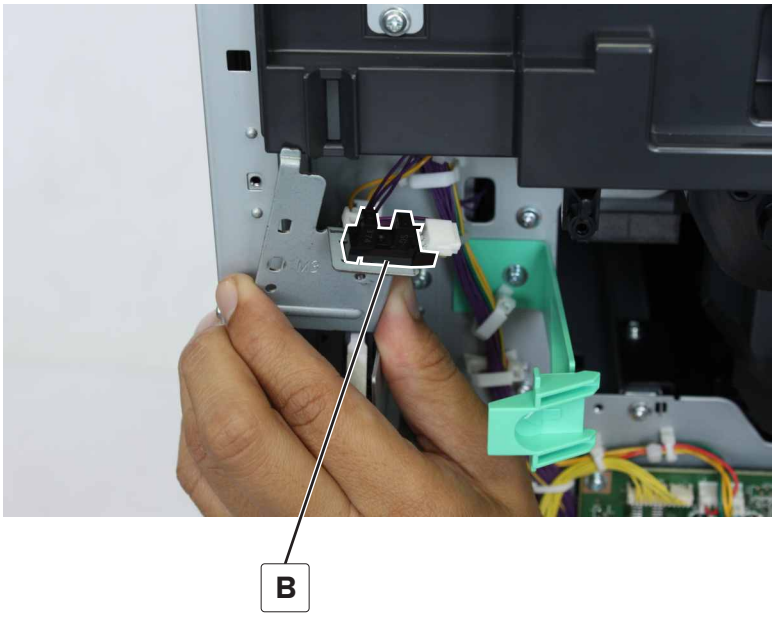
2 Remove the bottom front door. See **"Bottom front door removal" on page 327**.

3 Remove the waste toner door mount. See **"Waste toner door mount removal" on page 328**.

4 Remove the screw (A), and then move away the bracket.



5 Disconnect the cable, and then remove the sensor (B).



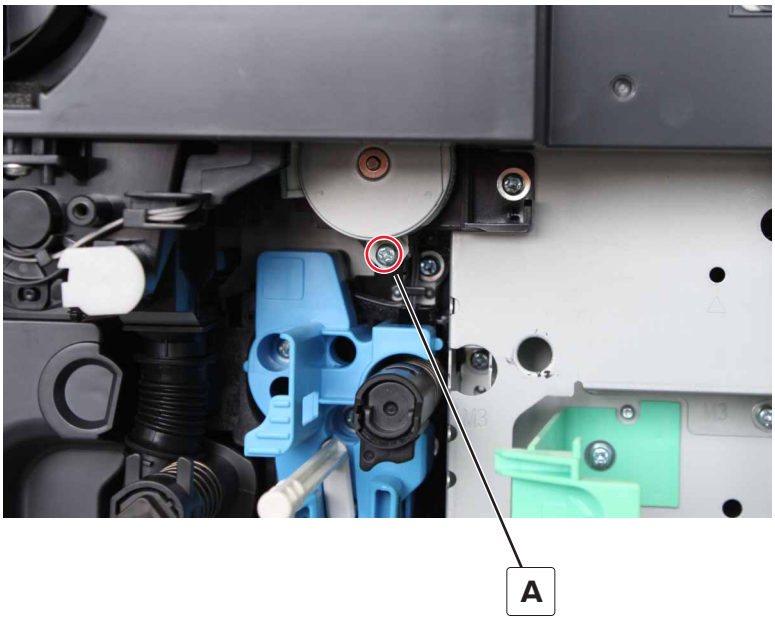
Motor (toner supply) removal

1 Remove the top front door. See **"Top front door removal" on page 327**.

2 Remove the bottom front door. See **"Bottom front door removal" on page 327**.

3 Remove the waste toner door mount. See **"Waste toner door mount removal" on page 328**.

4 Remove the screw (A), and then disconnect the cable.



5 Remove the motor.

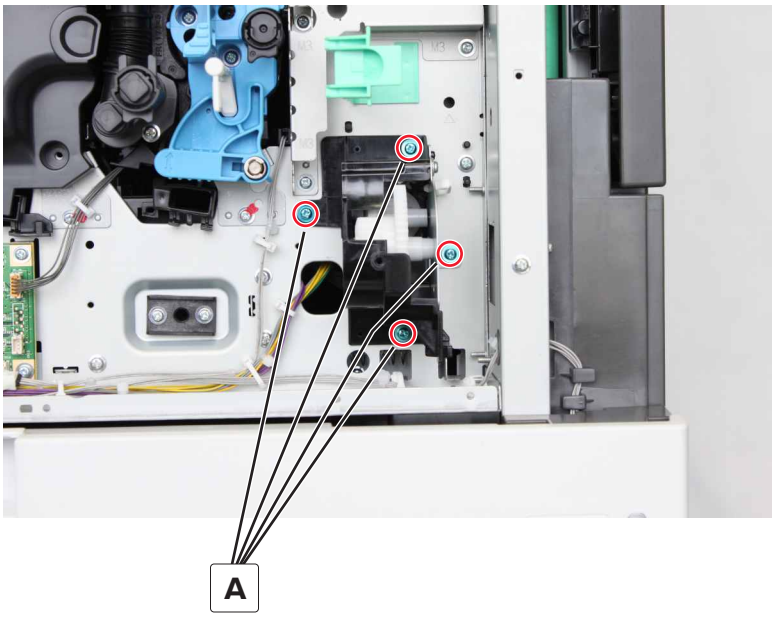
Waste toner drive removal

1 Remove the top front door. See "Top front door removal" on page 327.

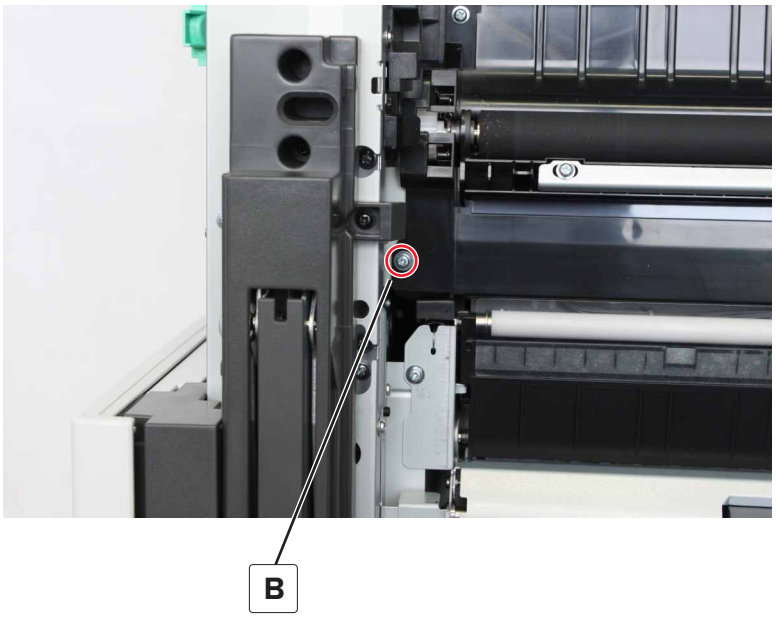
2 Remove the bottom front door. See "Bottom front door removal" on page 327.

3 Remove the waste toner door mount. See "Waste toner door mount removal" on page 328.

4 Remove the four screws (A).



5 From the right, remove the screw (B).



6 Remove the waste toner drive.

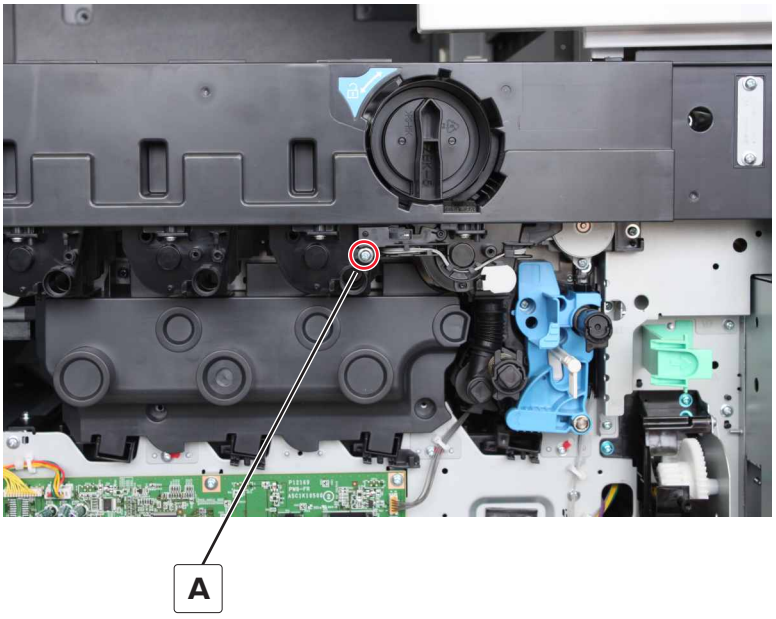
Sensor (toner cartridge present) removal

1 Remove the top front door. See "Top front door removal" on page 327.

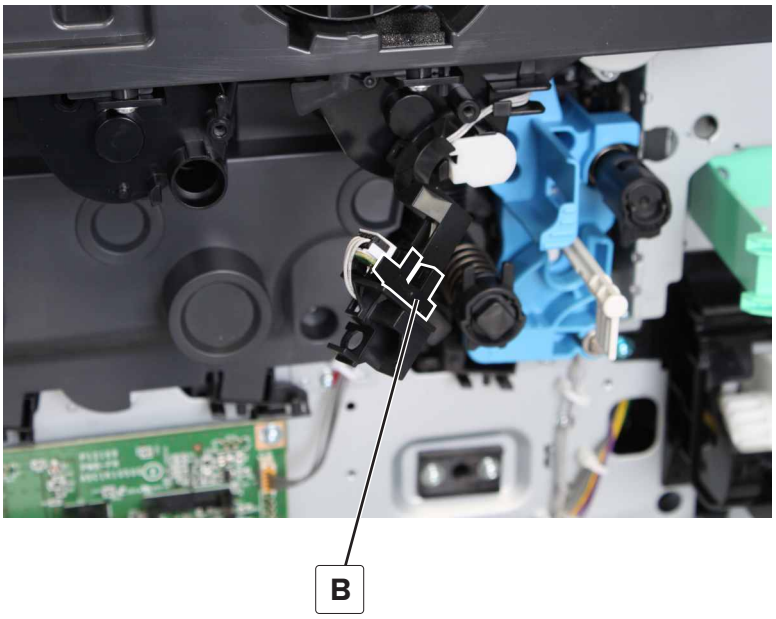
2 Remove the bottom front door. See "Bottom front door removal" on page 327.

3 Remove the waste toner door mount. See "Waste toner door mount removal" on page 328.

4 Remove the screw (A), and then move away the bracket.



5 Disconnect the cable, and then remove the sensor (B).



Toner agitator removal

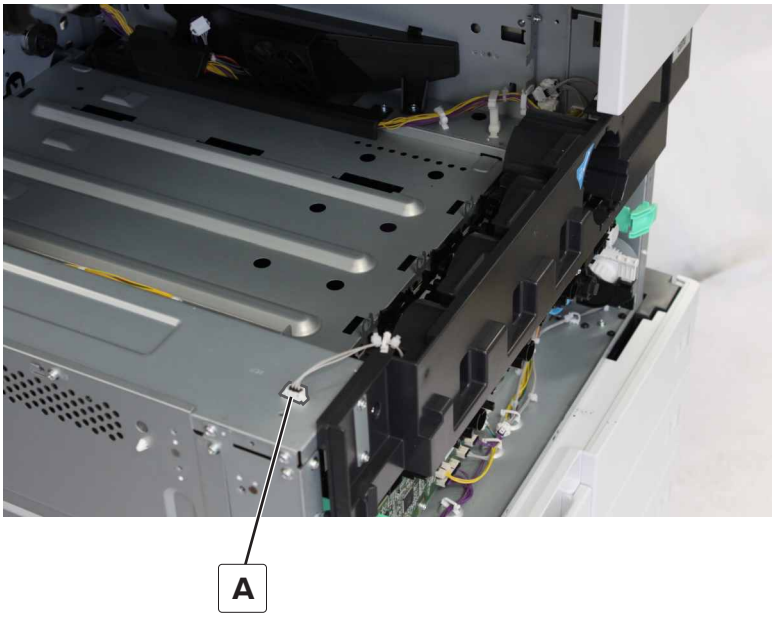
1 Remove the standard bin base. See **"Standard bin base removal" on page 389**.

2 Remove the top front door. See **"Top front door removal" on page 327**.

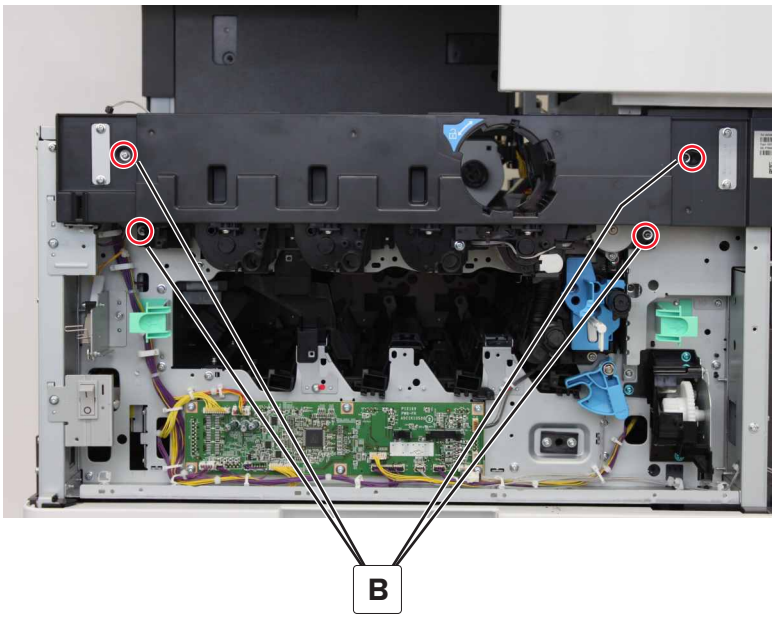
3 Remove the bottom front door. See **"Bottom front door removal" on page 327**.

4 Remove the waste toner door mount. See **"Waste toner door mount removal" on page 328**.

5 Disconnect the cable (A).



6 Remove the four screws (B).



7 Disconnect the cables, and then remove the assembly.

Developer unit removal

1 Remove the standard bin base. See **"Standard bin base removal" on page 389**.

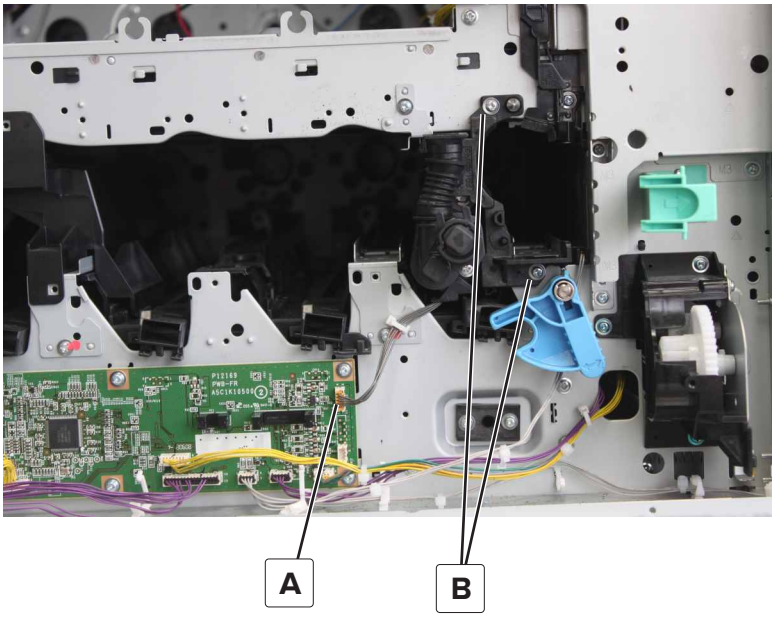
2 Remove the top front door. See **"Top front door removal" on page 327**.

3 Remove the bottom front door. See **"Bottom front door removal" on page 327**.

4 Remove the waste toner door mount. See **"Waste toner door mount removal" on page 328**.

5 Remove the toner agitator. See **"Toner agitator removal" on page 335**.

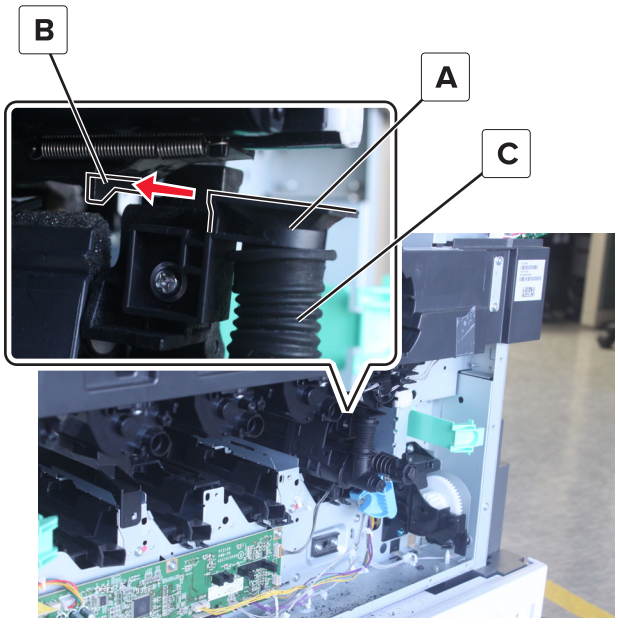
6 Disconnect the cable (A), remove the two screws (B) and then remove the unit.



Installation warning: If the following notes are not implemented, then the toner may leak or get stuck. Toner supply failure will cause a blank print or low toner error.

Installation notes:

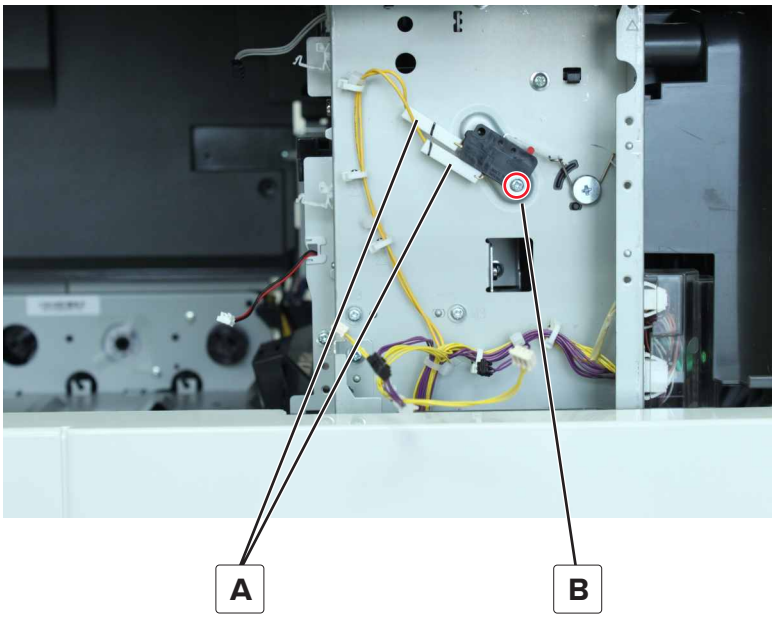
- Do not install the developer unit if the toner agitator is not yet installed.
- Make sure that the developer unit funnel (A) pushes the toner agitator valve (B). The valve opens to supply the toner to the funnel.
- Make sure that the rubber intake (C) is properly installed.



Right door switch removal

1 Remove the speaker cover.

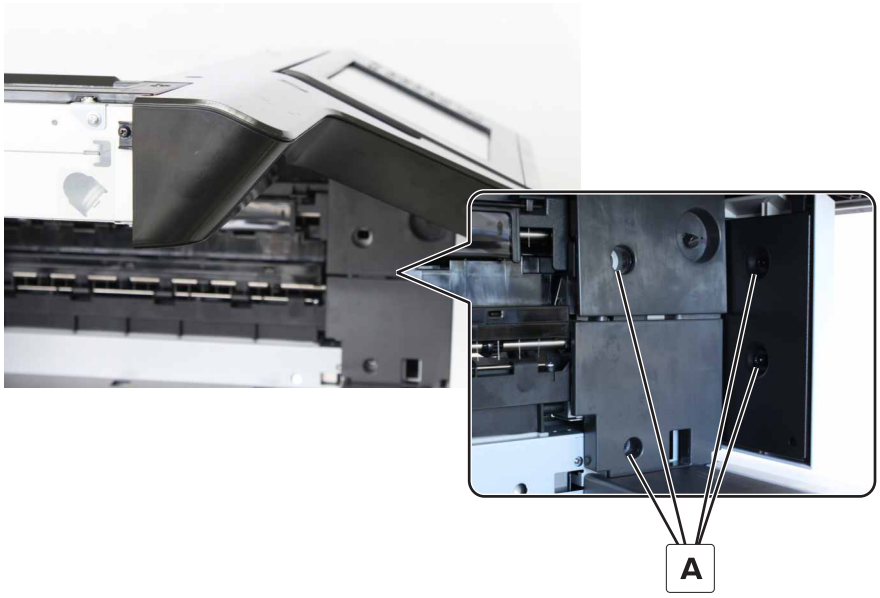
2 Disconnect the two cables (A), and then remove the screw (B).



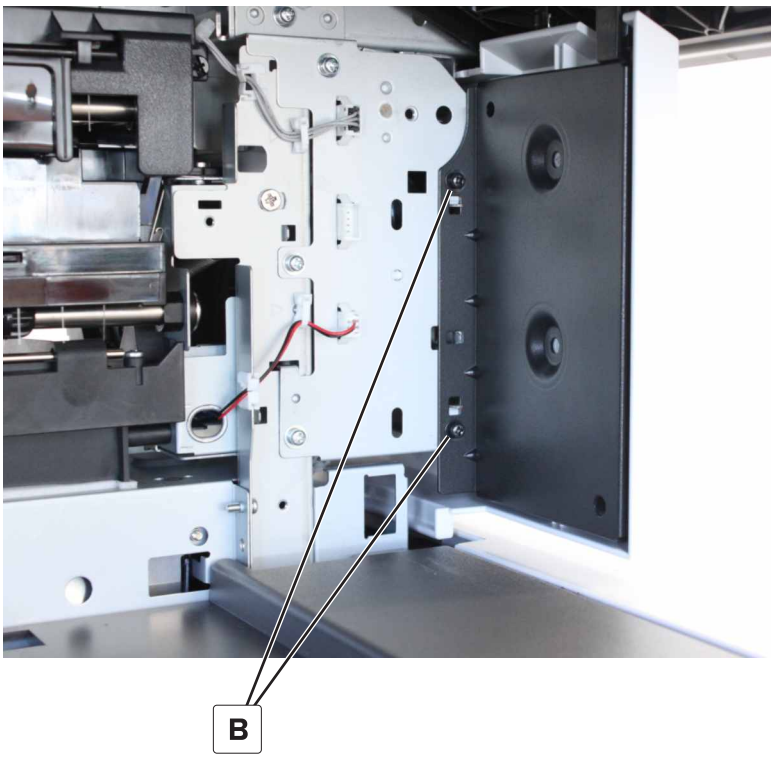
3 Remove the switch.

Speaker cover removal

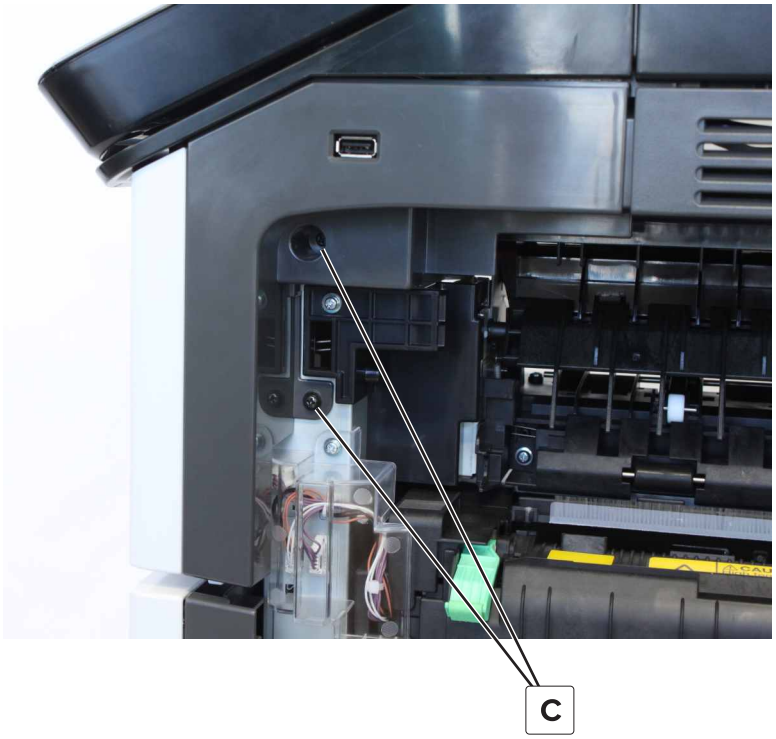
1 Remove the four screws (A) securing the cover.



2 Remove the two screws (B) securing the metal frame, and then remove the metal frame.



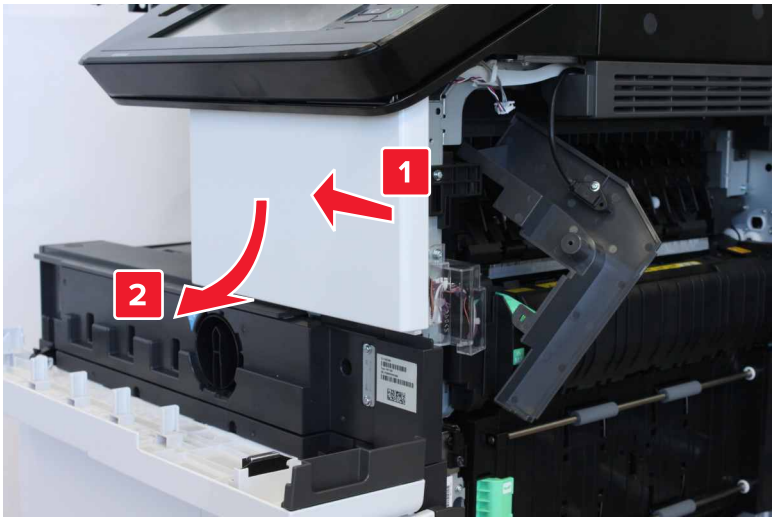
3 Remove the two screws (C) to disengage the USB cover.



Note: Do not remove the USB cable from the cover.

4 Open the cartridge door.

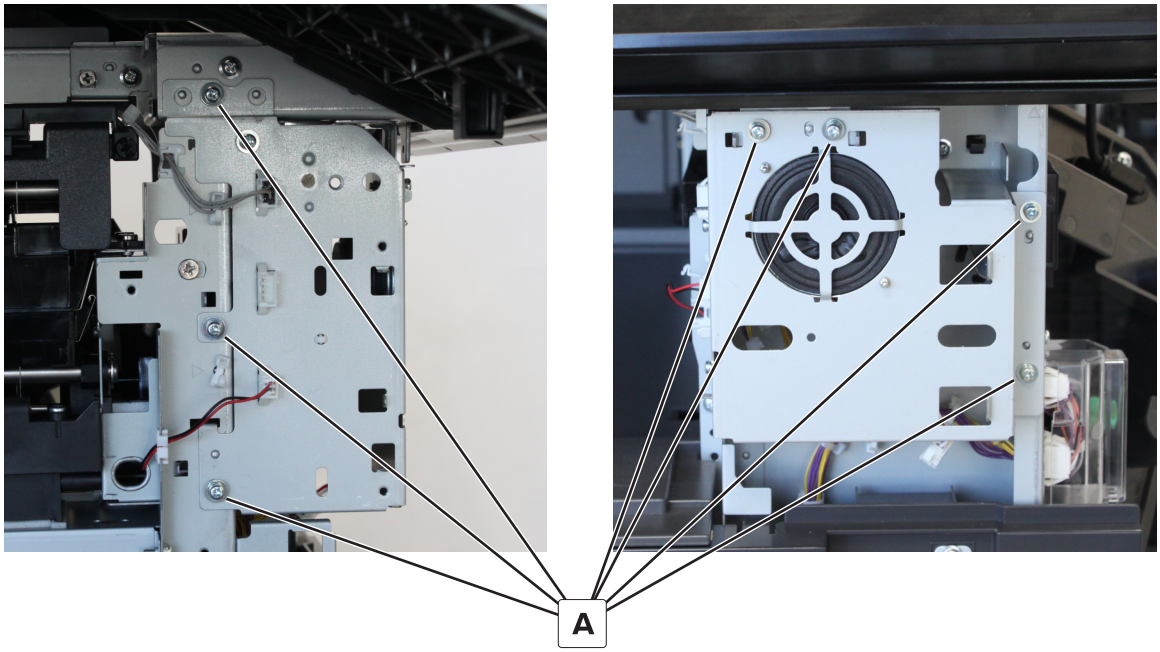
5 Remove the speaker cover.



Speaker removal

1 Remove the speaker cover. See **"Speaker cover removal" on page 338**.

2 Remove the screws (A), and then remove the speaker frame.

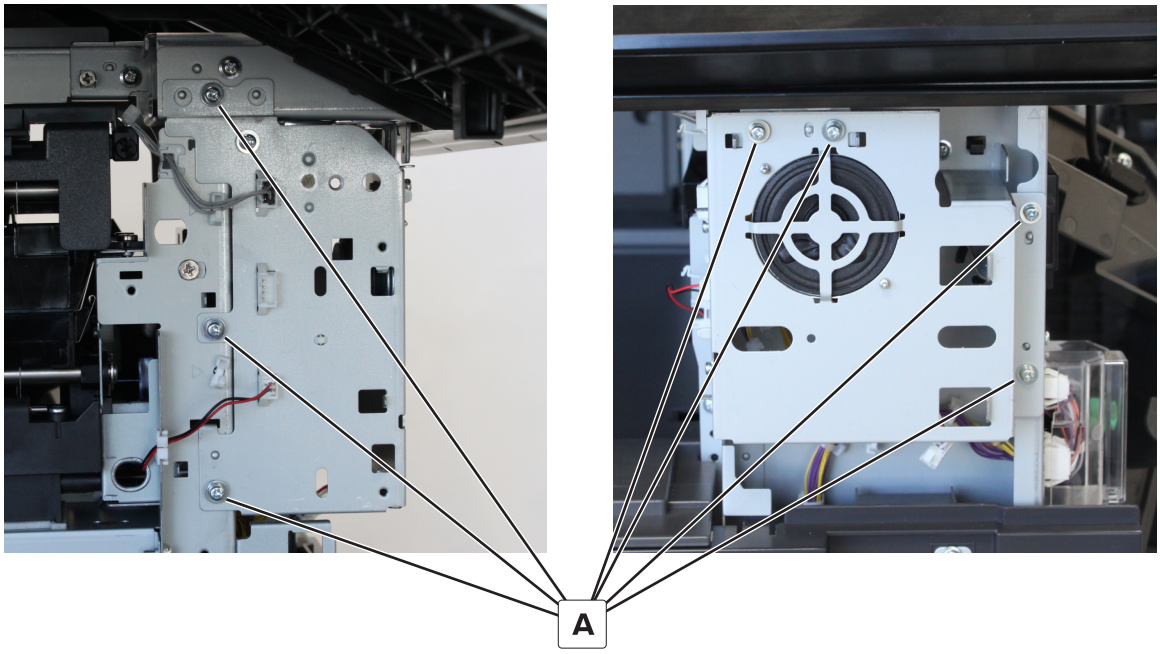


3 Disconnect the speaker cable, and then remove the speaker.

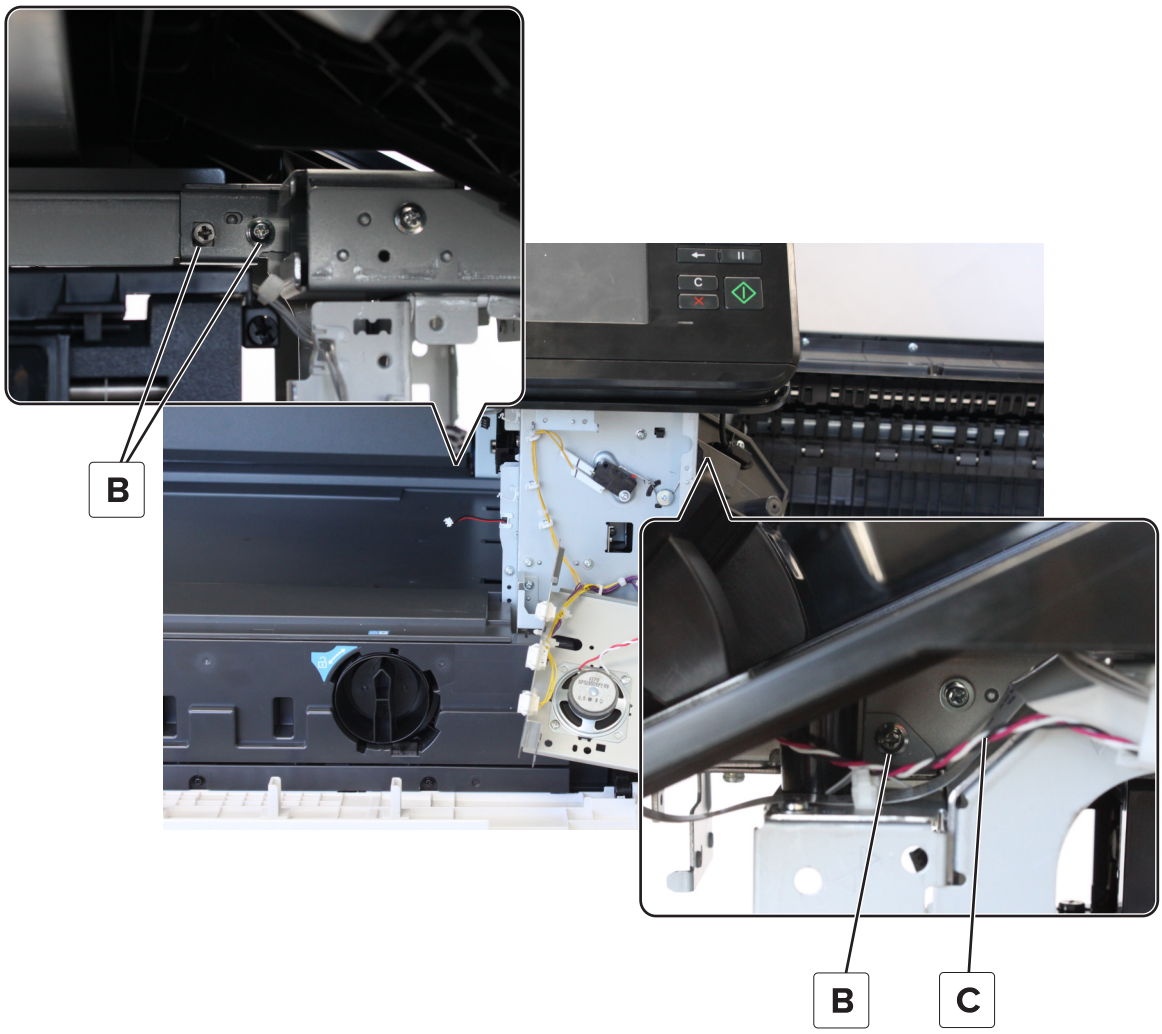
Control panel removal

1 Remove the speaker cover. See **"Speaker cover removal" on page 338**.

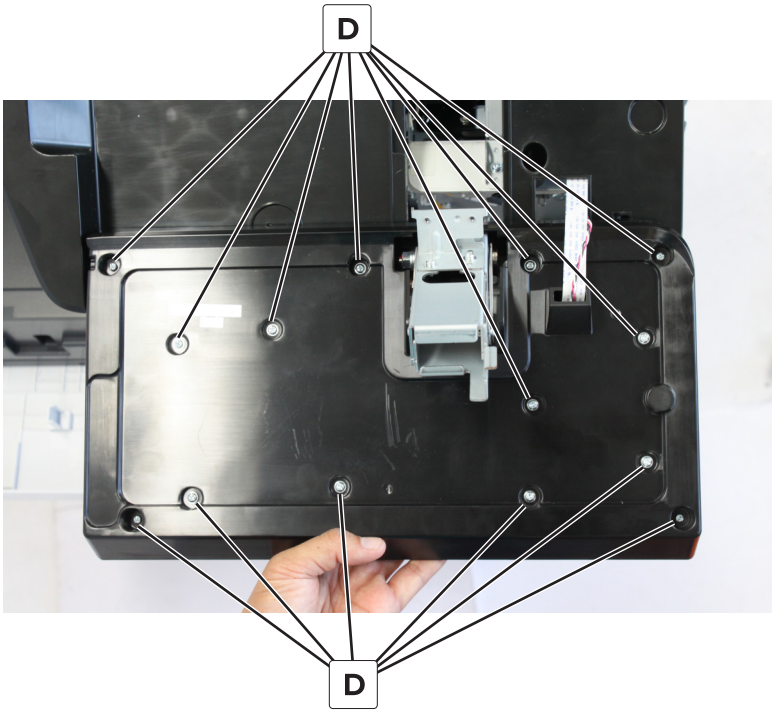
2 Remove the screws (A), and then remove the speaker frame.



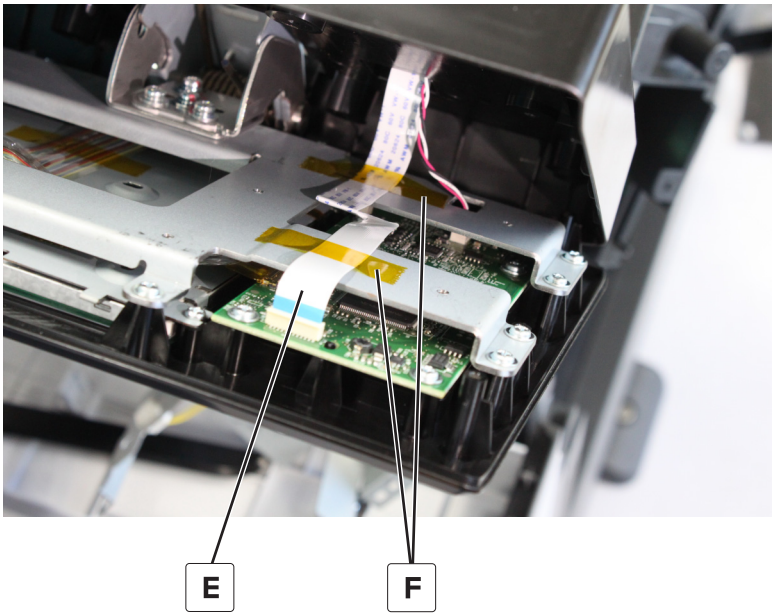
3 Remove the three screws (B), and then disconnect the control panel board cable (C).



4 Turn over the control panel, and then remove the 14 screws (D) to remove the bottom cover of the control panel.



5 Disconnect the control panel ZIF cable (E), and then remove the pieces of tape (F).

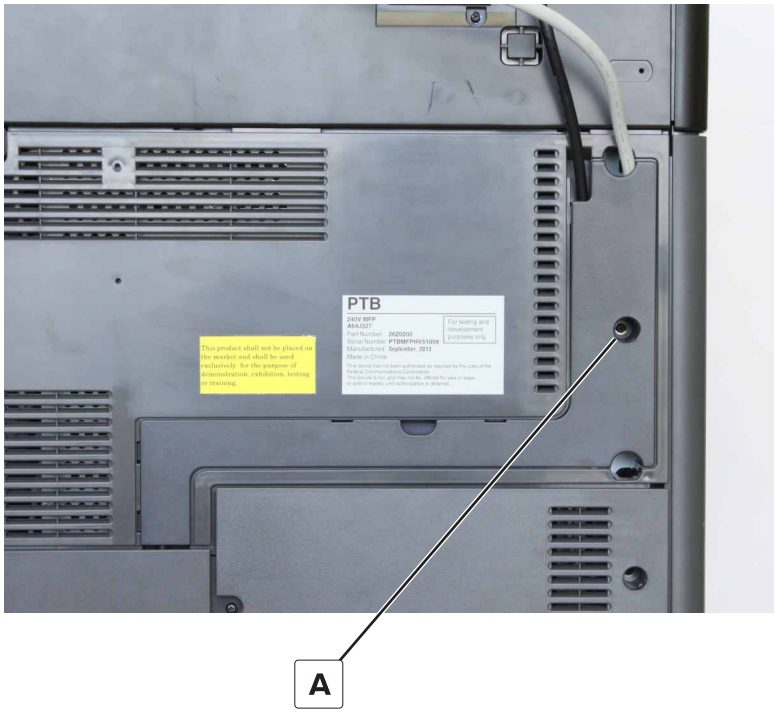


6 Remove the control panel.

Rear side removals

Scanner interface cable cover removal

1 Remove the screw (A).



2 Remove the cover.

Controller board access cover removal

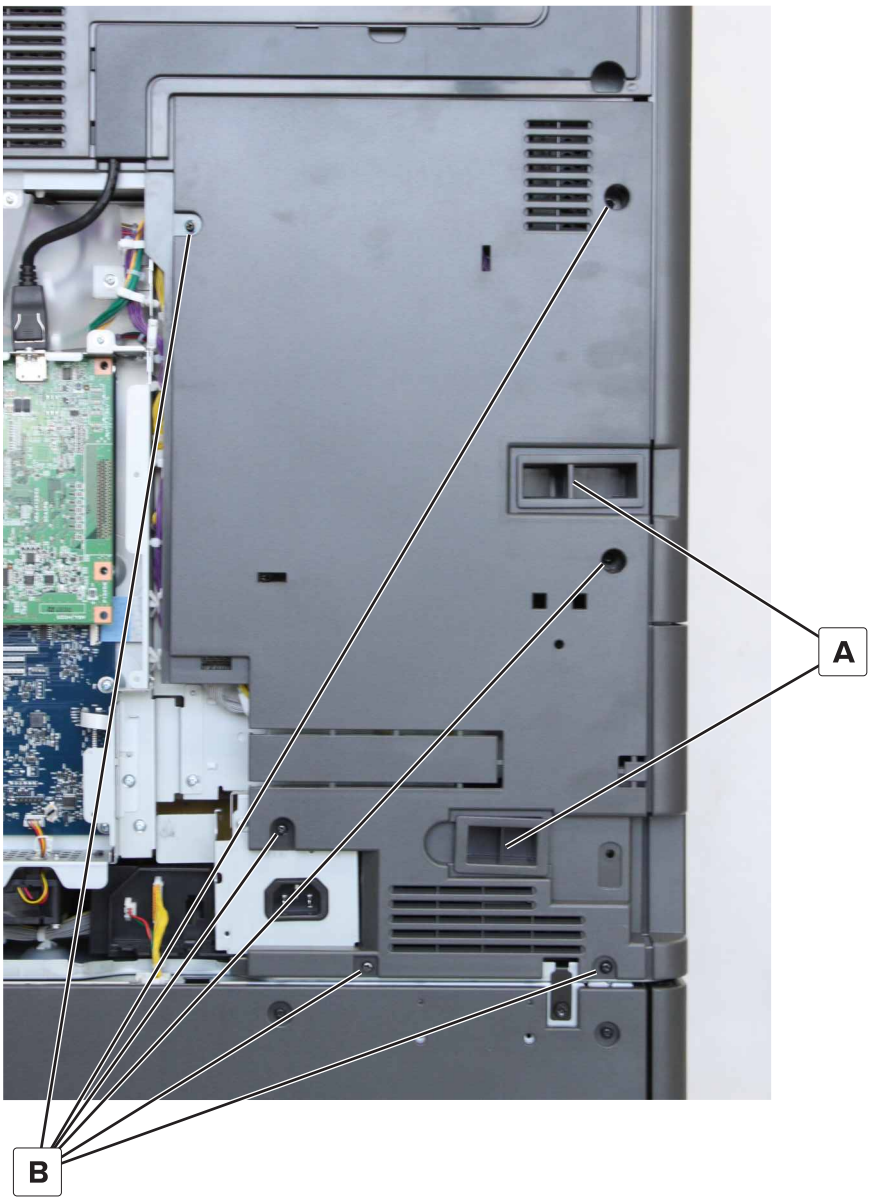
1 Remove the seven screws (A).

2 Remove the input options interface cover, and then remove the controller board cover.

Engine board cover removal

1 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

2 Remove the two filters (A), and then remove the six screws (B).



3 Remove the cover.

Upper rear cover removal

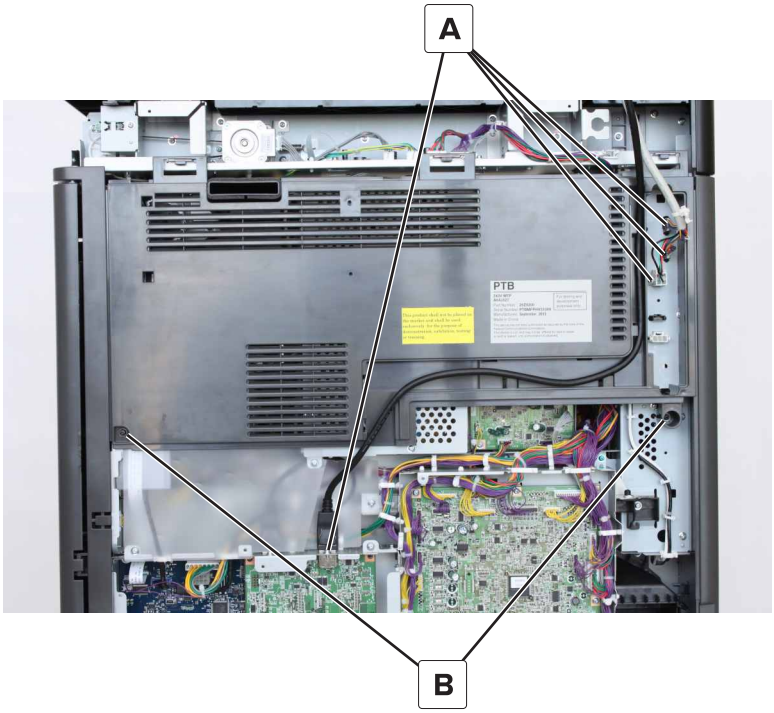
1 Remove the scanner rear cover. See **"Scanner rear cover removal" on page 430**.

2 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

3 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

4 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

5 Disconnect the four cables (A), and then remove the two screws (B).



6 Remove the cover.

IHPS shield removal

Note: This part is not a FRU.

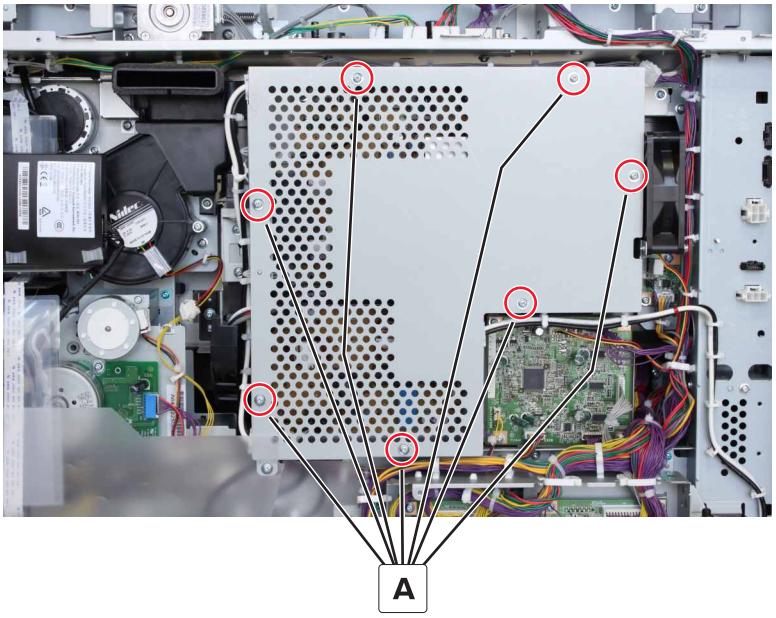
1 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

2 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

3 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

4 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

5 Remove the seven screws (A), and then remove the shield.



Induction heater magnetic erase board (IHMEB) removal

1 Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.

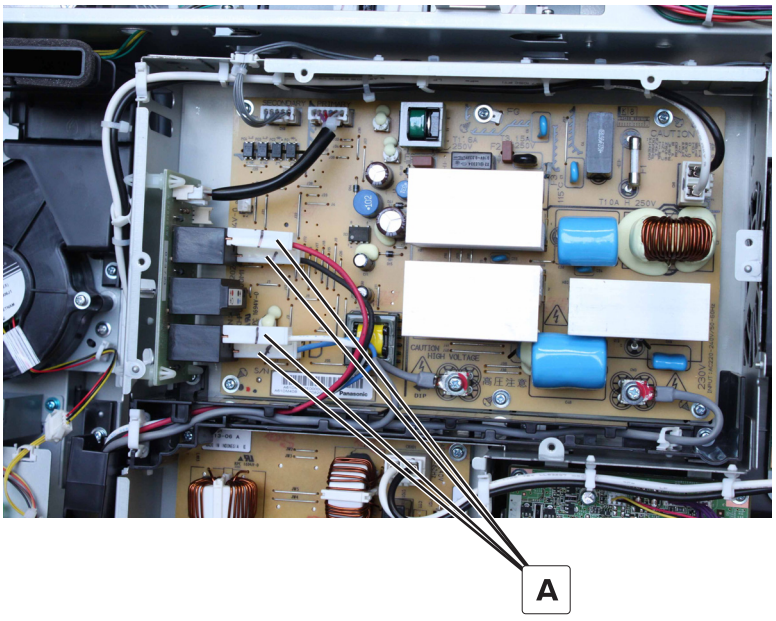
2 Remove the controller board access cover. See "Controller board access cover removal" on page 345.

3 Remove the engine board cover. See "Engine board cover removal" on page 346.

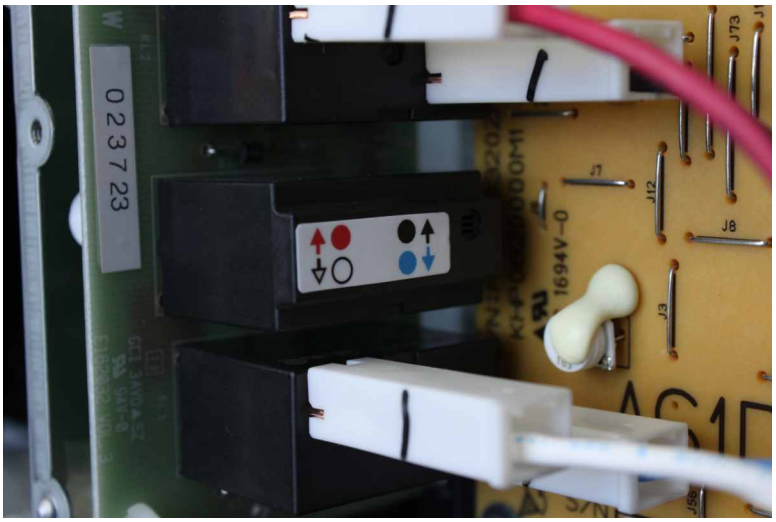
4 Remove the upper rear cover. See "Upper rear cover removal" on page 346.

5 Remove the induction heater power supply shield. See "IHPS shield removal" on page 347.

6 Disconnect the four cables (A).



Installation note: Follow the arrangement of the colored symbols to install the cables to their correct positions.

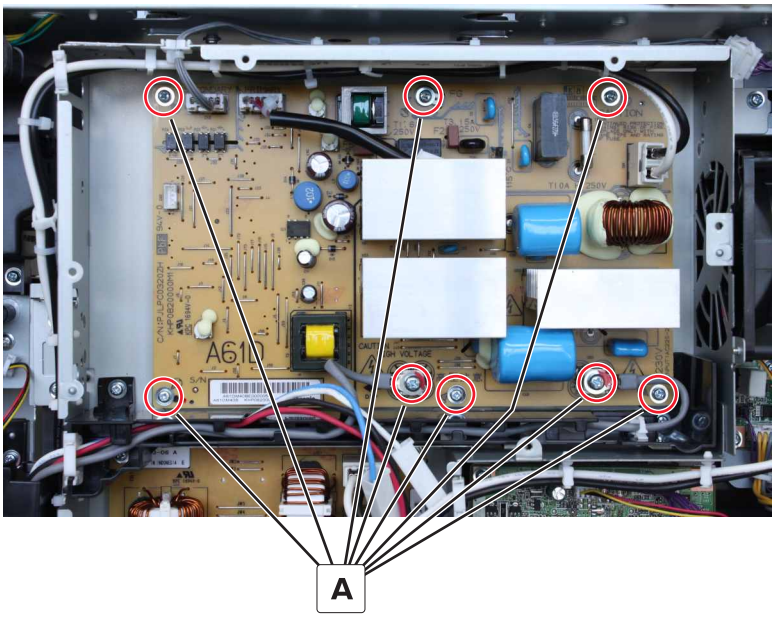


7 Release the four latches (B), and then remove the board.

8 Release the four latches that are still attached on the board.

Induction heater power supply (IHPS) removal

1. Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.
2. Remove the controller board access cover. See "Controller board access cover removal" on page 345.
3. Remove the engine board cover. See "Engine board cover removal" on page 346.
4. Remove the upper rear cover. See "Upper rear cover removal" on page 346.
5. Remove the induction heater power supply shield. See "IHPS shield removal" on page 347.
6. Remove the induction heater magnetic erase board. See "Induction heater magnetic erase board (IHMEB) removal" on page 348.
7. Disconnect the cables, and then remove the eight screws (A).

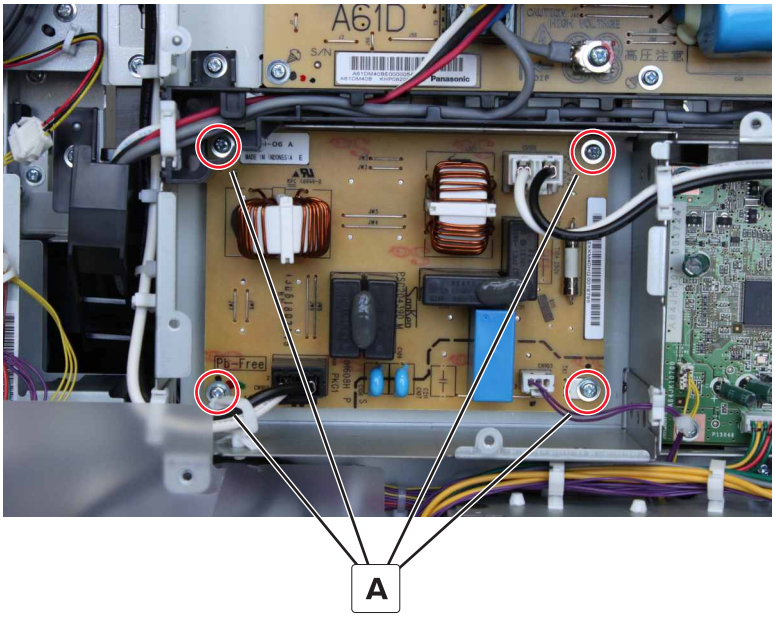


8. Remove the power supply.

Noise filter board removal

1. Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.
2. Remove the controller board access cover. See "Controller board access cover removal" on page 345.
3. Remove the engine board cover. See "Engine board cover removal" on page 346.
4. Remove the upper rear cover. See "Upper rear cover removal" on page 346.
5. Remove the IHPS shield. See "IHPS shield removal" on page 347.

6 Disconnect the cables, and then remove the four screws (A).



7 Remove the board.

Expansion controller board removal

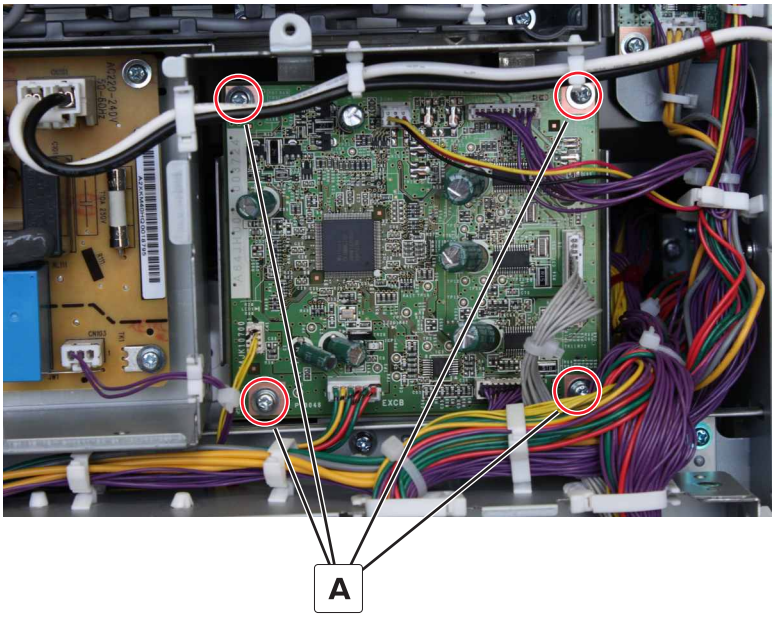
1 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

2 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

3 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

4 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

5 Disconnect the cables, and then remove the four screws (A).



6 Remove the board.

Power-saving board removal

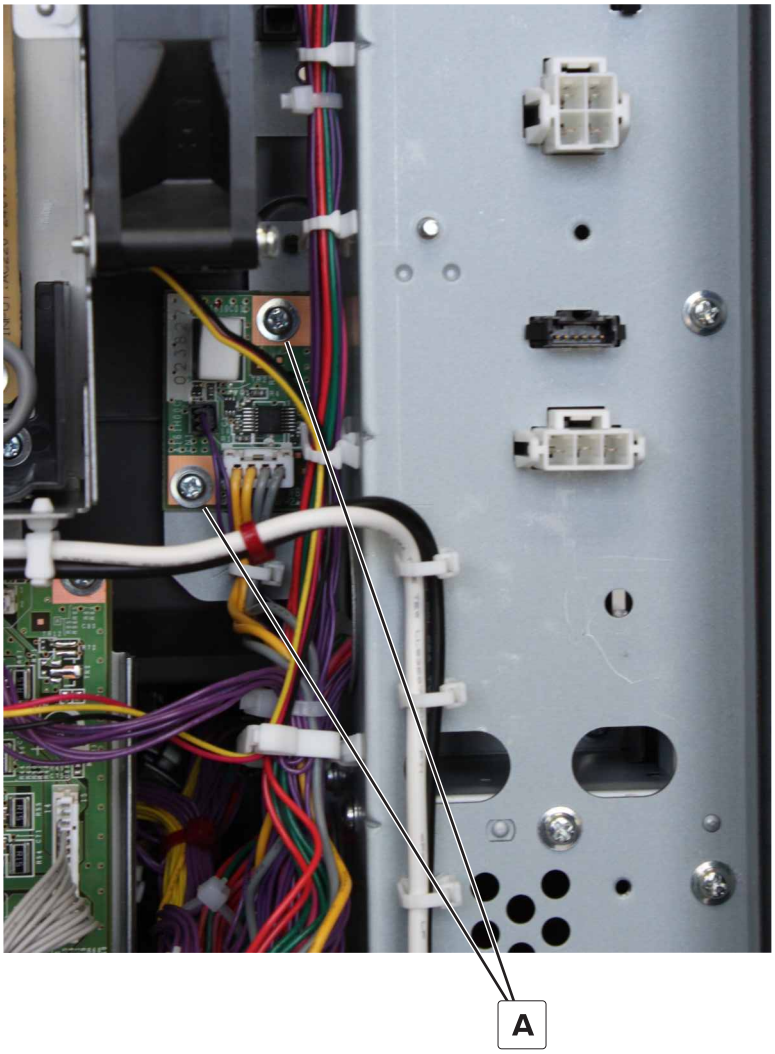
1 Remove the scanner interface cable cover. See **“Scanner interface cable cover removal” on page 344**.

2 Remove the controller board access cover. See **“Controller board access cover removal” on page 345**.

3 Remove the engine board cover. See **“Expansion controller board removal” on page 351**.

4 Remove the upper rear cover. See **“Upper rear cover removal” on page 346**.

5 Disconnect the cables, and then remove the two screws (A).



6 Remove the board.

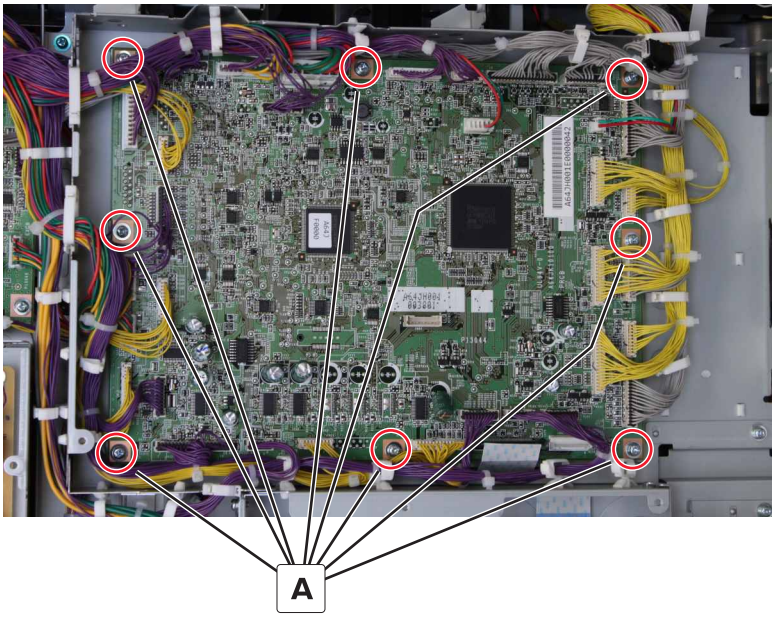
Engine controller board removal

Warning—Potential Damage: Do not replace the engine controller board and controller board at the same time. Before removing the engine controller board, copy its settings to the controller board to avoid losing its original settings. See **"Restore Backup Data" on page 225**.

1 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

2 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

3 Disconnect the cables, and then remove the eight screws (A).



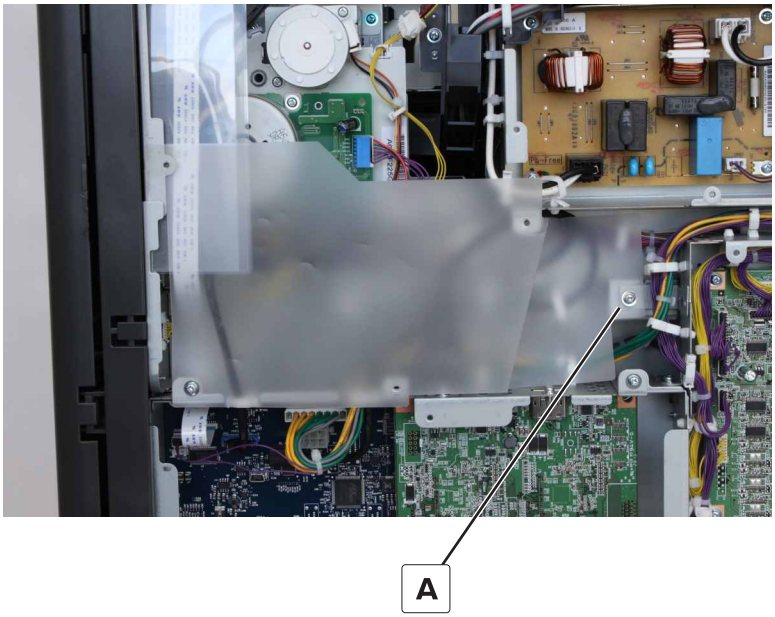
4 Remove the board.

ADF/scanner image controller board removal

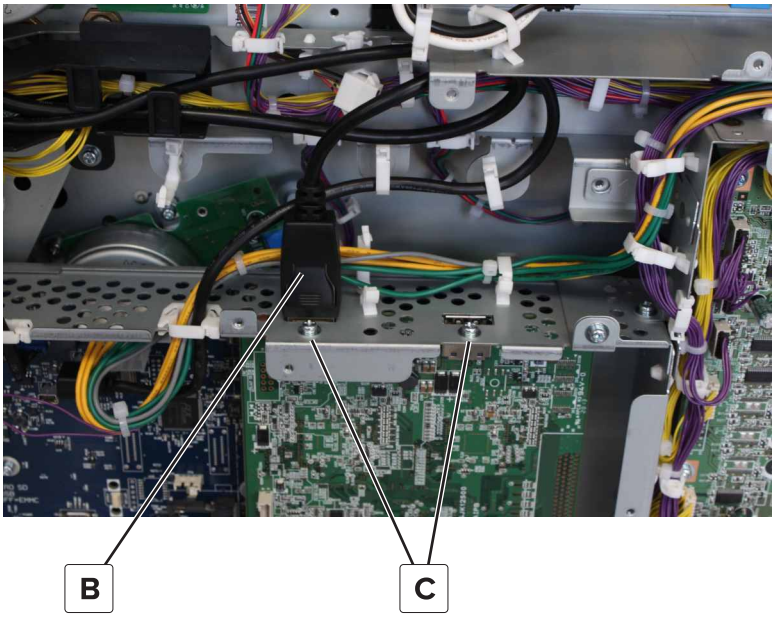
1 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

2 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

3 Remove the screw (A) from the cover.

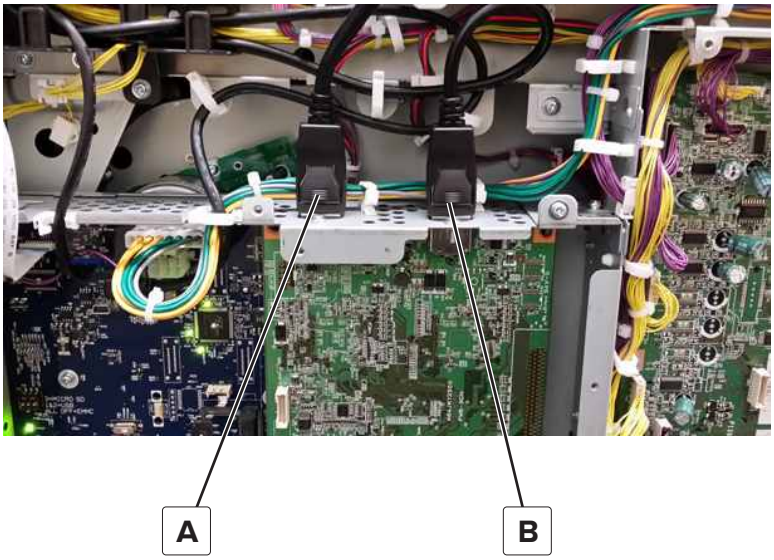


4 Disconnect the cable (B), and then remove the two screws (C).



5 Remove the board.

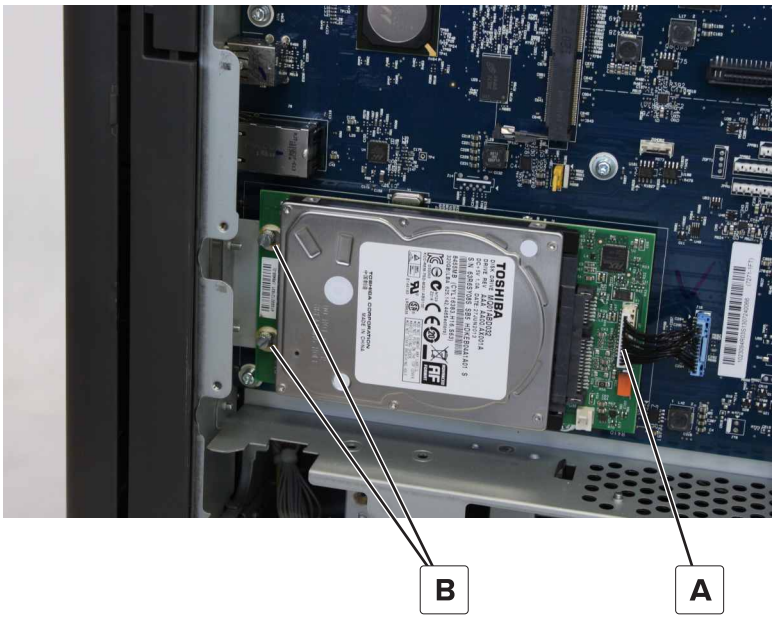
Installation note: Connect the scanner CCD cable (A) and ADF CIS data cable (B) as shown in the illustration. If the cables are connected to the wrong socket, then an Invalid Scanner Code error will occur.



Hard drive removal

Note: This part is not a FRU.

1. Remove the controller board cover. See **"Controller board access cover removal" on page 345**.
2. Disconnect the cable (A), and then remove the two screws (B).



3. Remove the hard drive.

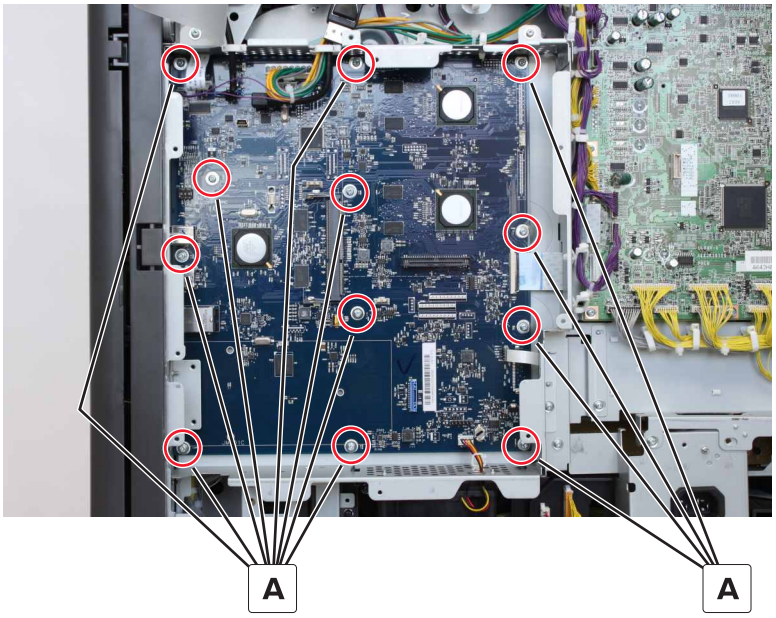
Controller board removal

Warning—Potential Damage: Do not replace the engine controller board and controller board at the same time. Before removing the controller board, copy its settings to the engine board to avoid losing its original settings. See **"Restore Backup Data" on page 225**.

Note: Back up the eSF solutions and settings before replacing the controller board. For more information, see **"Backing up eSF solutions and settings" on page 247**.

1. Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.
2. Remove the ADF/scanner image controller board. See **"ADF/scanner image controller board removal" on page 354**.
3. Remove the hard drive. See **"Hard drive removal" on page 356**.

4 Disconnect the cables, and then remove the 12 screws (A).



5 Remove the board.

Installation notes:

a After installing the new controller board, restore the printer configuration. See **"Restoring the printer configuration after replacing the controller board" on page 242**.

b Restore the eSF solutions and settings. See Importing eSF solutions and settings file under **"Backing up eSF solutions and settings" on page 247**.

c Create a backup of the engine settings by copying them from the engine controller board to the new controller board. See **"Restore Backup Data" on page 225**.

Fax card removal

Note: This part is not a FRU.

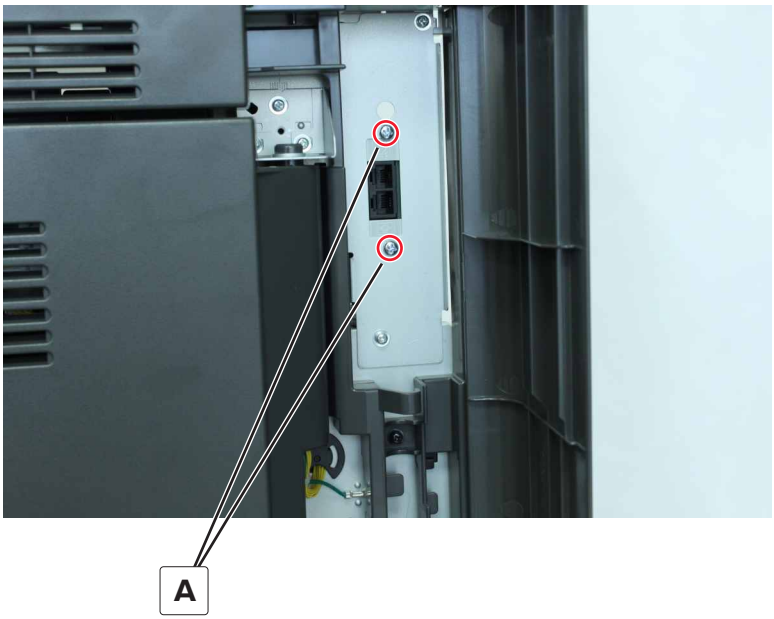
1 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

2 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

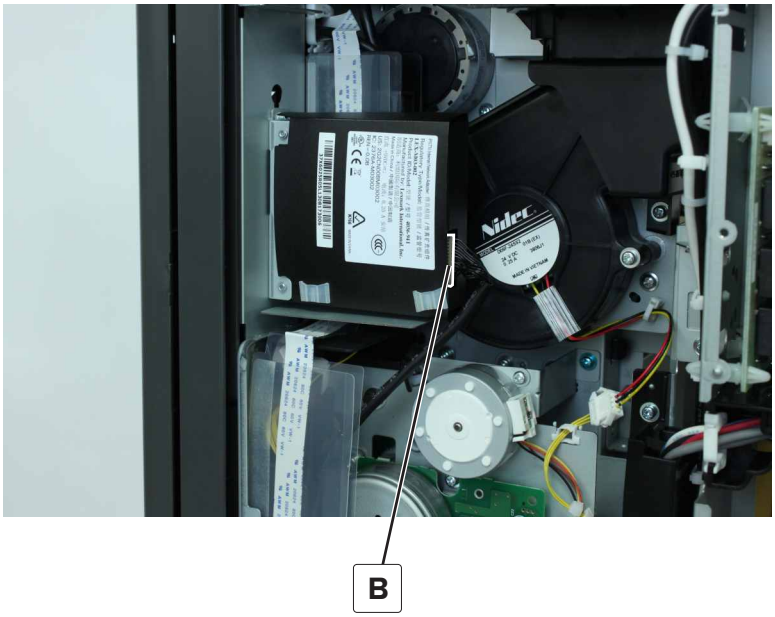
3 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

4 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

5 Open the port access door, and then remove the two screws (A).



6 Disconnect the cable (B), and then remove the card.



Motor (fuser pressure) removal

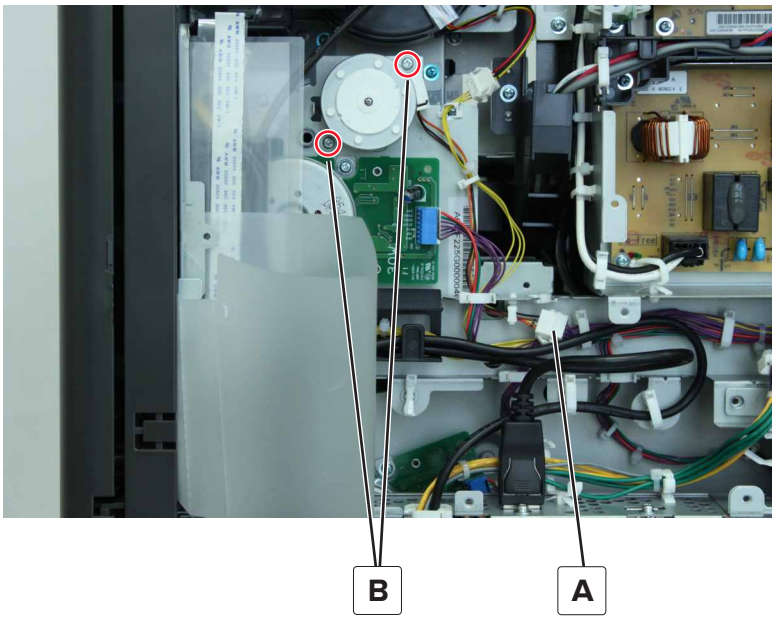
1 Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.

2 Remove the controller board access cover. See "Controller board access cover removal" on page 345.

3 Remove the engine board cover. See "Engine board cover removal" on page 346.

4 Remove the upper rear cover. See "Upper rear cover removal" on page 346.

5 Disconnect the cable (A), and then remove the two screws (B).



6 Remove the motor.

Paper exit fan duct removal

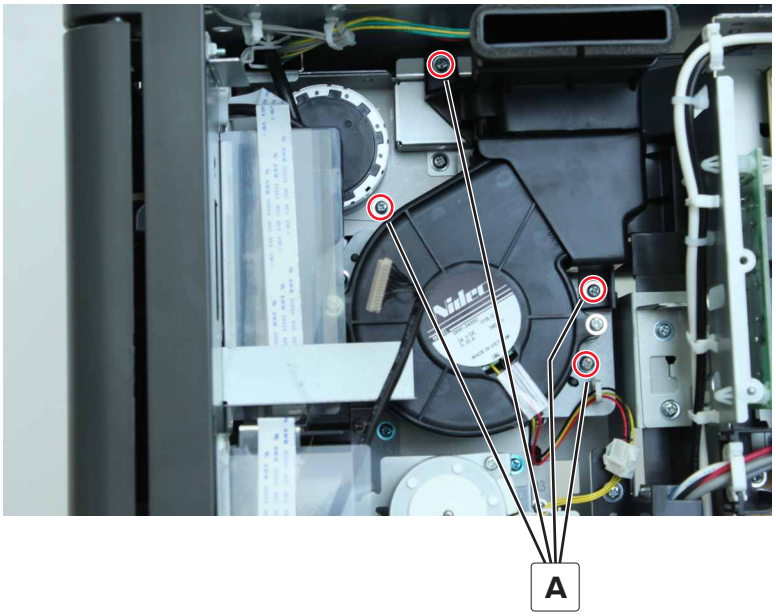
1 Remove the scanner interface cable cover. See “Scanner interface cable cover removal” on page 344.

2 Remove the controller board access cover. See “Controller board access cover removal” on page 345.

3 Remove the engine board cover. See “Engine board cover removal” on page 346.

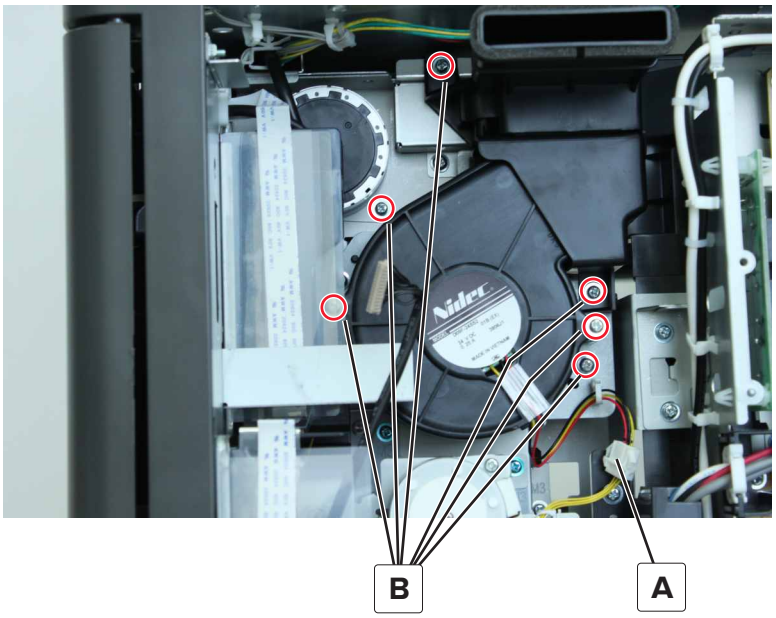
4 Remove the upper rear cover. See “Upper rear cover removal” on page 346.

5 Remove the four screws (A), and then remove the duct.



Paper exit fan removal

1. Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.
2. Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.
3. Remove the engine board cover. See **"Engine board cover removal" on page 346**.
4. Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.
5. Disconnect the cable (A), and then remove the six screws (B).



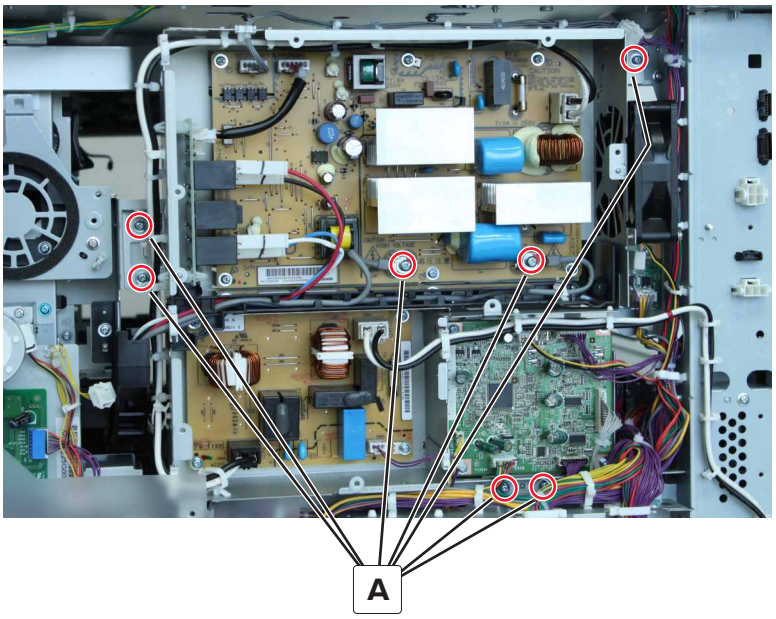
6. Remove the duct, and then remove the fan.

IHPS frame removal

Note: This part is not a FRU.

1. Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.
2. Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.
3. Remove the engine board cover. See **"Engine board cover removal" on page 346**.
4. Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.
5. Remove the IHPS shield. See **"IHPS shield removal" on page 347**.

6 Remove the seven screws (A).



7 Disconnect the cables within the frame, and then release them from the guides.

8 Remove the frame.

Fuser power supply fan removal

1 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

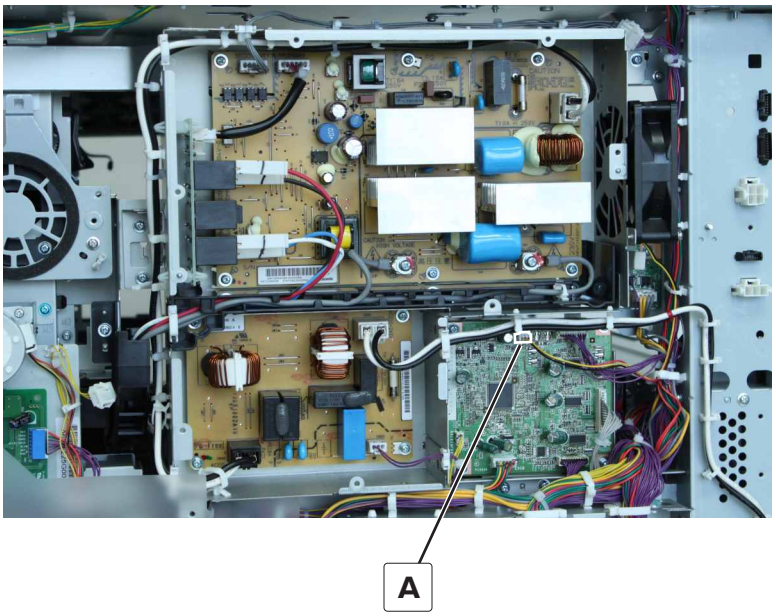
2 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

3 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

4 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

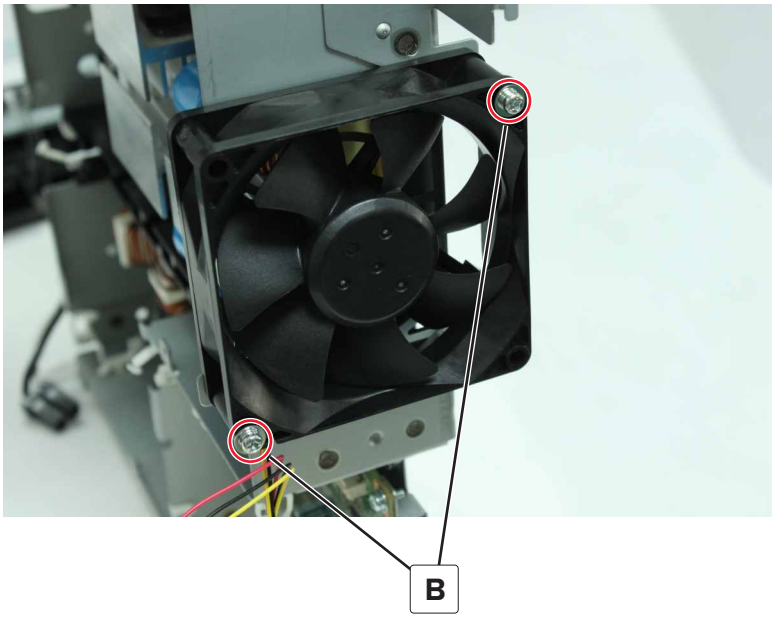
5 Remove the IHPS shield. See **"IHPS shield removal" on page 347**.

6 Disconnect the cable (A).



7 Remove the IHPS frame. See "IHPS frame removal" on page 360.

8 Remove the two screws (B), and then remove the fan.



Motor (toner cartridge) removal

1 Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.

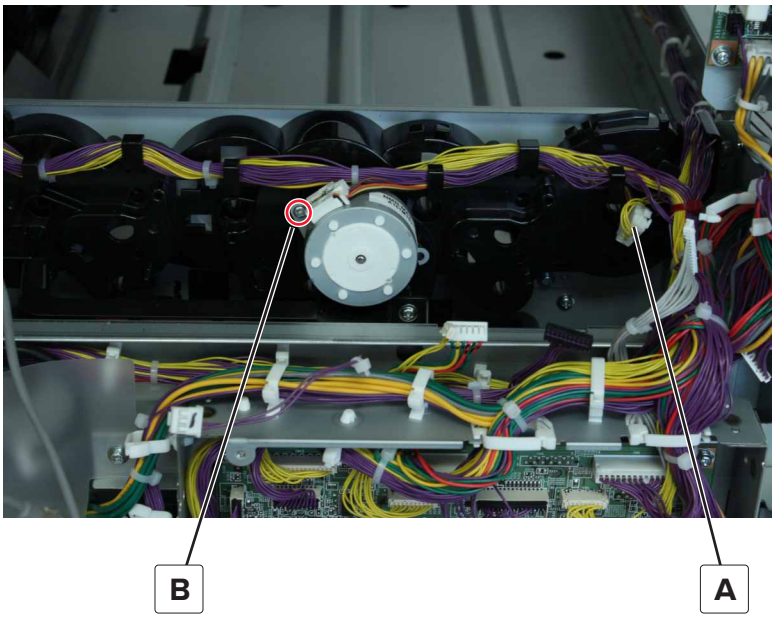
2 Remove the controller board access cover. See "Controller board access cover removal" on page 345.

3 Remove the engine board cover. See "Engine board cover removal" on page 346.

4 Remove the upper rear cover. See "Upper rear cover removal" on page 346.

5 Remove the IHPS shield. See **“IHPS shield removal” on page 347**.

6 Disconnect the cable (A) and then remove the motor screw (B).

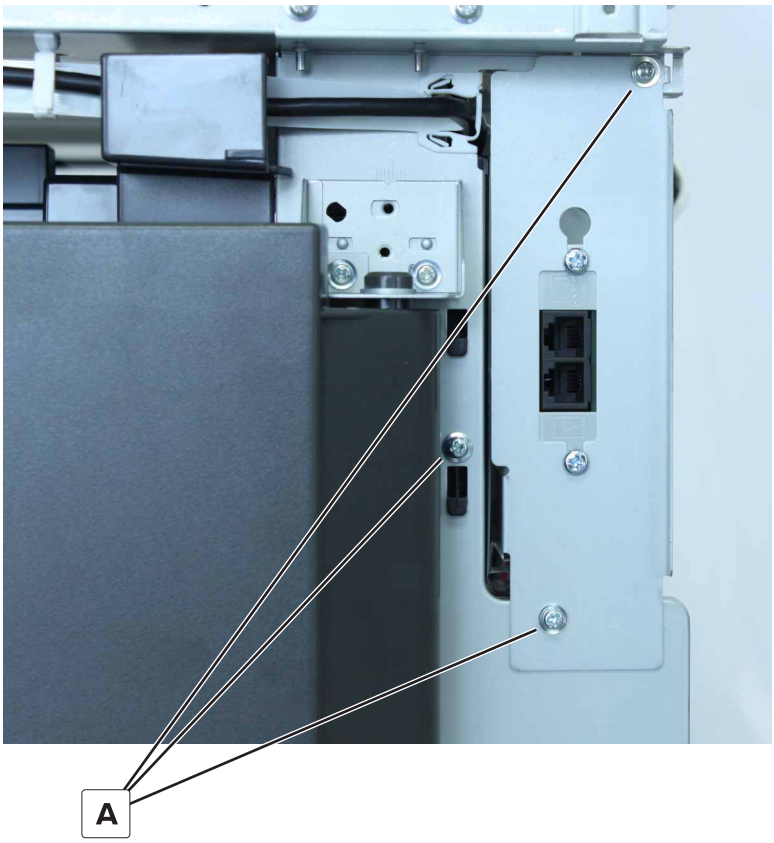


7 Release the cable from the guides, and then remove the motor.

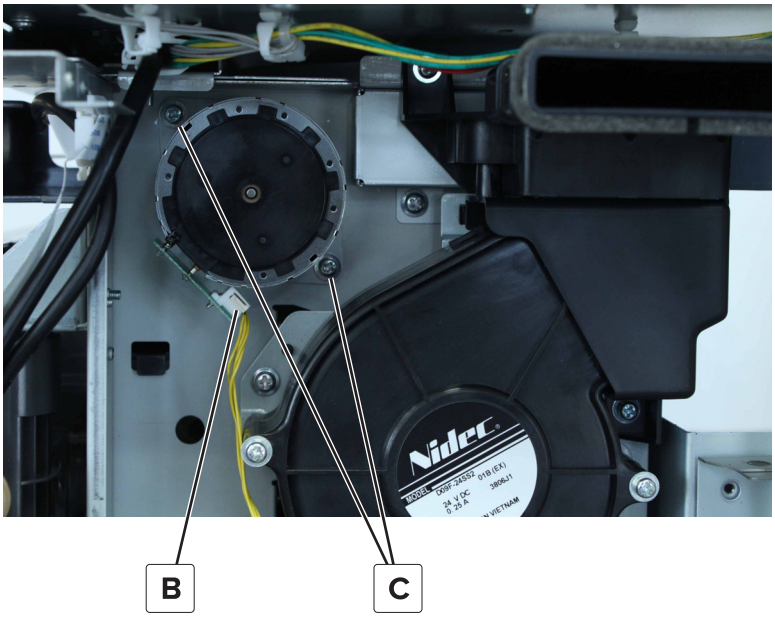
Motor (redrive) removal

1 Remove the port access door. See **"Port access door removal" on page 278**.

2 Remove the three screws (A), and then remove the bracket.



3 From the rear, disconnect the cable (B), and then remove the two screws (C).

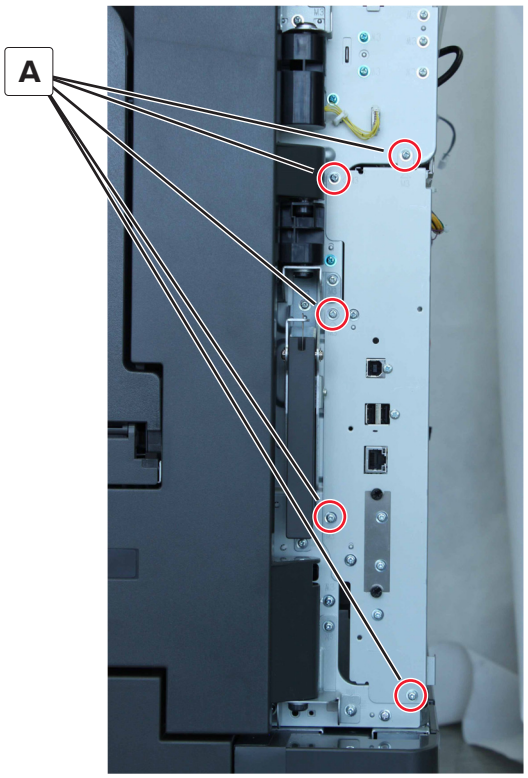


4 Remove the motor.

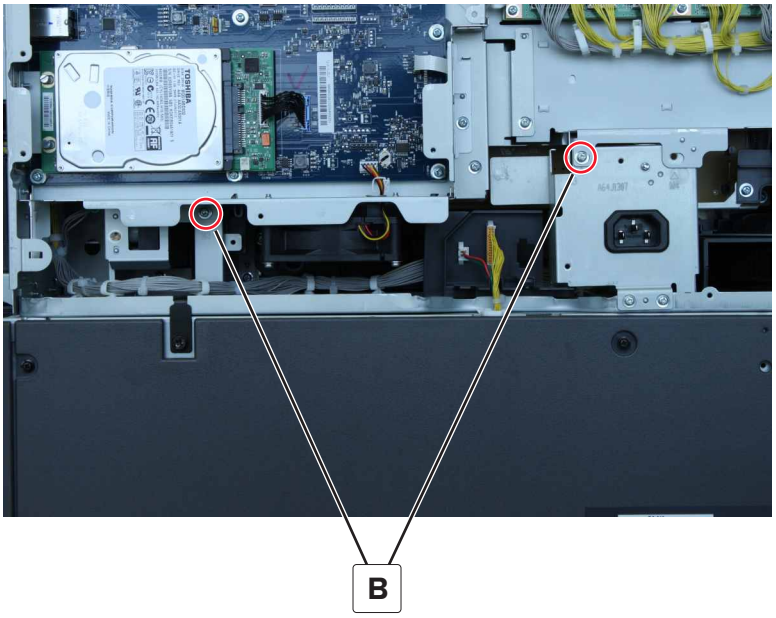
Controller board frame removal

Note: This part is not a FRU.

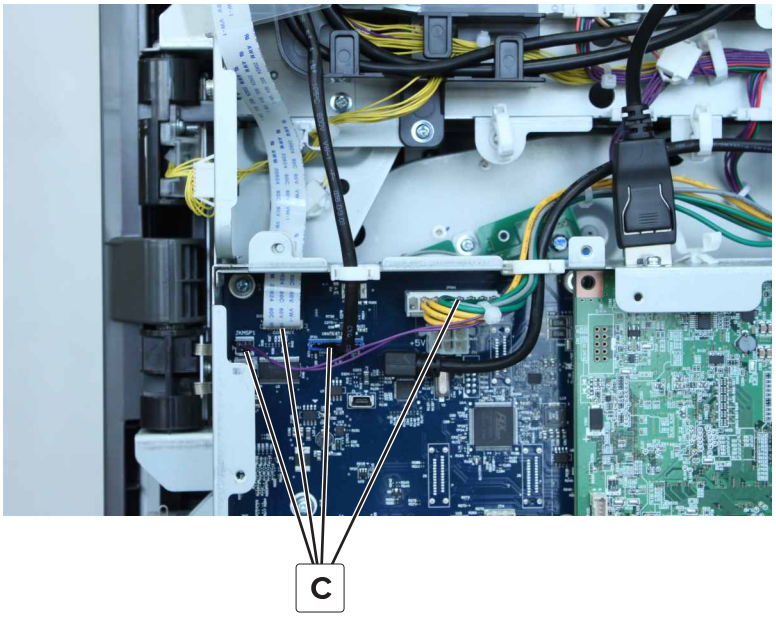
1. Remove the port access door. See **"Port access door removal" on page 278**.
2. Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.
3. Remove the engine board cover. See **"Engine board cover removal" on page 346**.
4. Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.
5. Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.
6. From the right, remove the five screws (A).



7 From the rear, remove the two screws (B).



8 Disconnect the four cables (C), and then open the frame.



Controller board fan removal

1 Remove the port access door. See "Port access door removal" on page 278.

2 Remove the controller board access cover. See "Controller board access cover removal" on page 345.

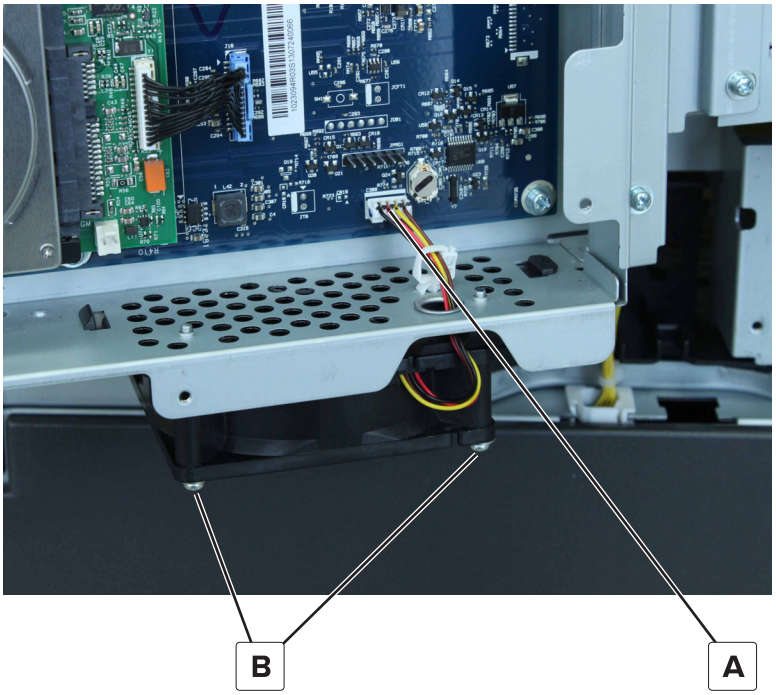
3 Remove the engine board cover. See "Engine board cover removal" on page 346.

4 Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.

5 Remove the upper rear cover. See "Upper rear cover removal" on page 346.

6 Open the controller board frame. See "Controller board frame removal" on page 365.

7 Disconnect the cable (A), and then remove the two screws (B).



8 Remove the fan.

Motor (transport) removal

1 Remove the port access door. See "Port access door removal" on page 278.

2 Remove the controller board access cover. See "Controller board access cover removal" on page 345.

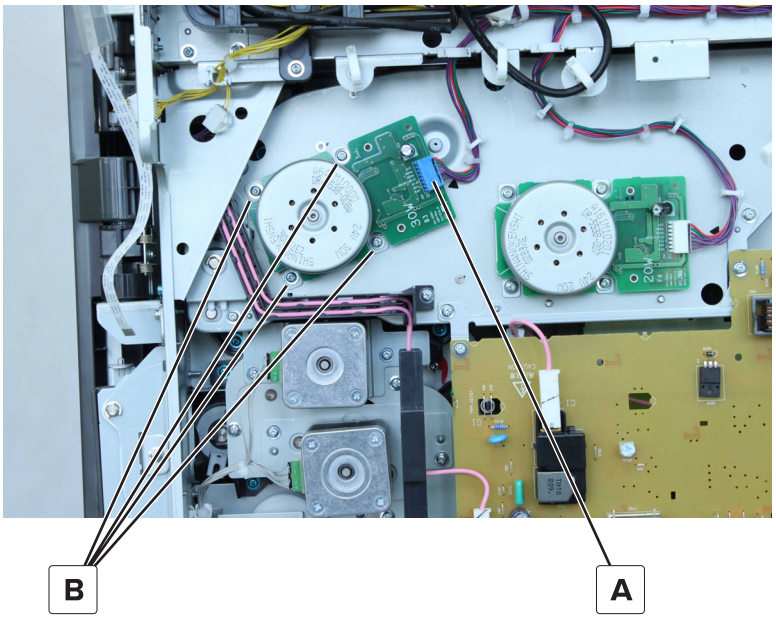
3 Remove the engine board cover. See "Engine board cover removal" on page 346.

4 Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.

5 Remove the upper rear cover. See "Upper rear cover removal" on page 346.

6 Open the controller board frame. See "Controller board frame removal" on page 365.

7 Disconnect the cable (A), and then remove the four screws (B).



Motor (developer) removal

1 Remove the port access door. See **“Port access door removal” on page 278**.

2 Remove the controller board access cover. See **“Controller board access cover removal” on page 345**.

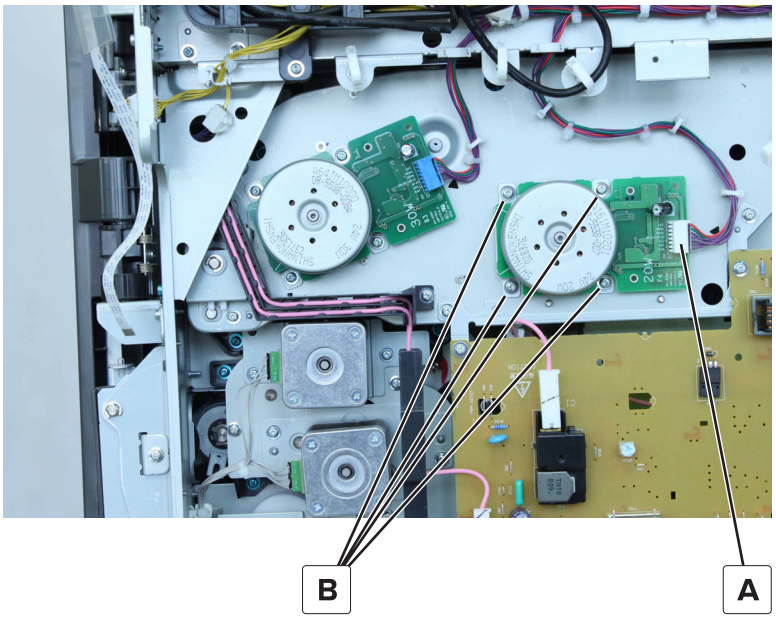
3 Remove the engine board cover. See **“Engine board cover removal” on page 346**.

4 Remove the scanner interface cable cover. See **“Scanner interface cable cover removal” on page 344**.

5 Remove the upper rear cover. See **“Upper rear cover removal” on page 346**.

6 Open the controller board frame. See **“Controller board frame removal” on page 365**.

7 Disconnect the cable (A), and then remove the four screws (B).



High voltage board removal

1 Remove the port access door. See **"Port access door removal" on page 278**.

2 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

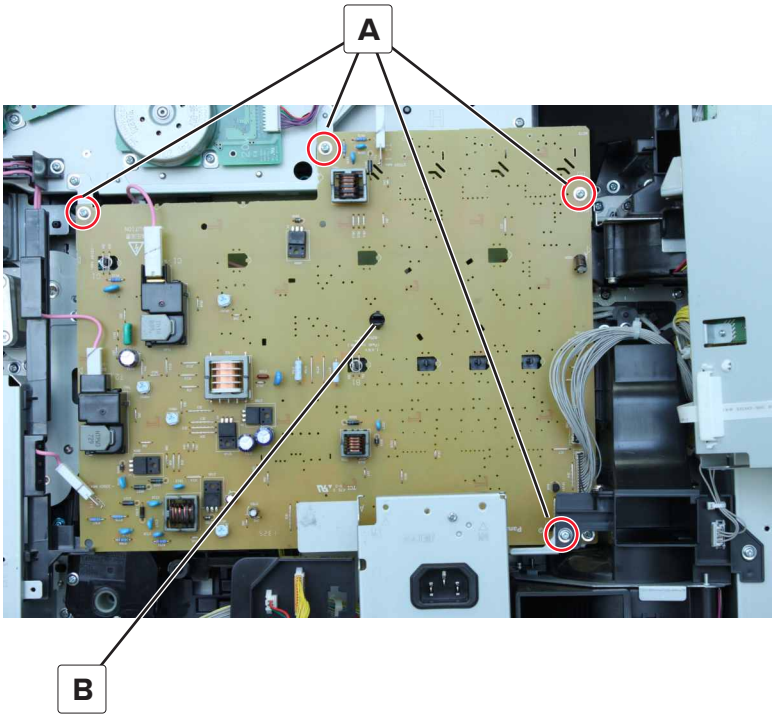
3 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

4 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

5 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

6 Open the controller board frame. See **"Controller board frame removal" on page 365**.

7 Disconnect the cables, remove the four screws (A), and then release the latch (B).



8 Remove the board.

Motor (registration) removal

1 Remove the port access door. See "Port access door removal" on page 278.

2 Remove the controller board access cover. See "Controller board access cover removal" on page 345.

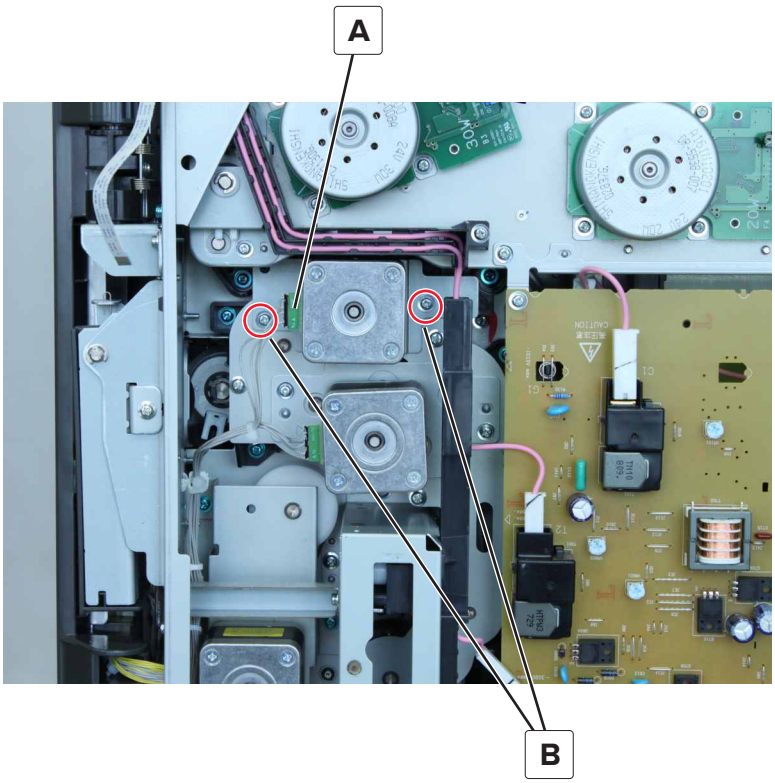
3 Remove the engine board cover. See "Engine board cover removal" on page 346.

4 Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.

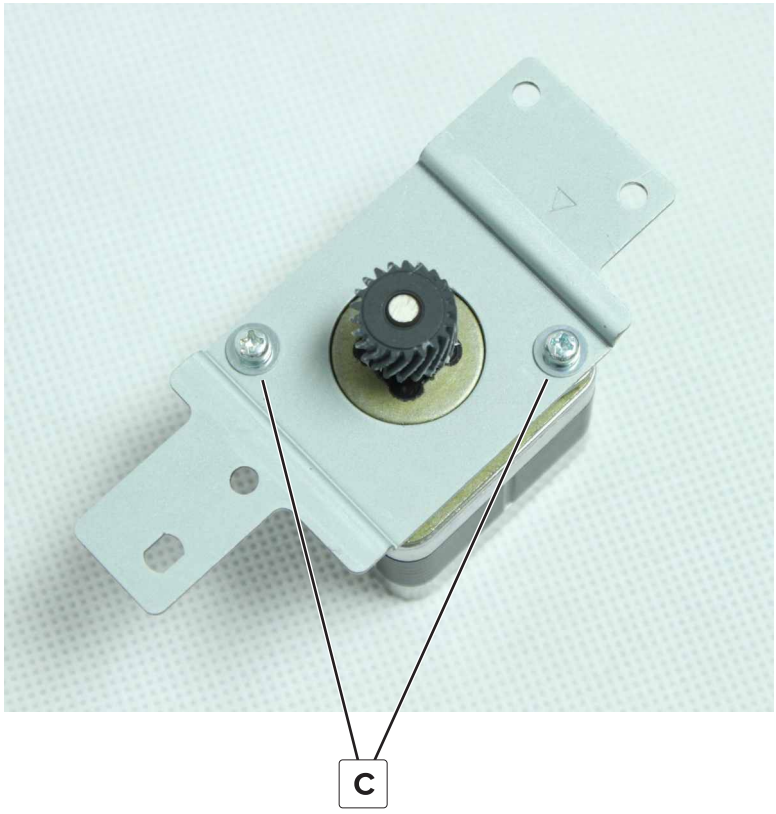
5 Remove the upper rear cover. See "Upper rear cover removal" on page 346.

6 Open the controller board frame. See "Controller board frame removal" on page 365.

7 Disconnect the cable (A), and then remove the two screws (B).

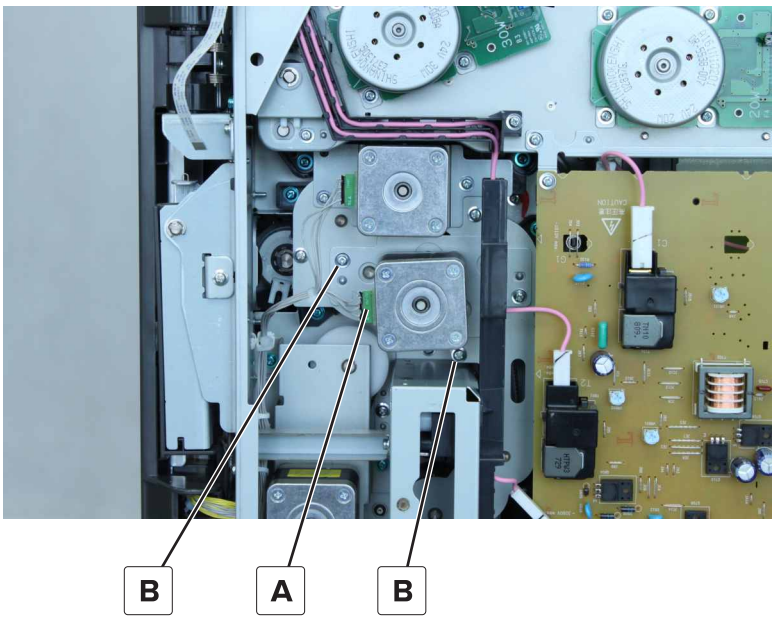


8 Remove the bracket, remove the two screws (C), and then remove the motor.

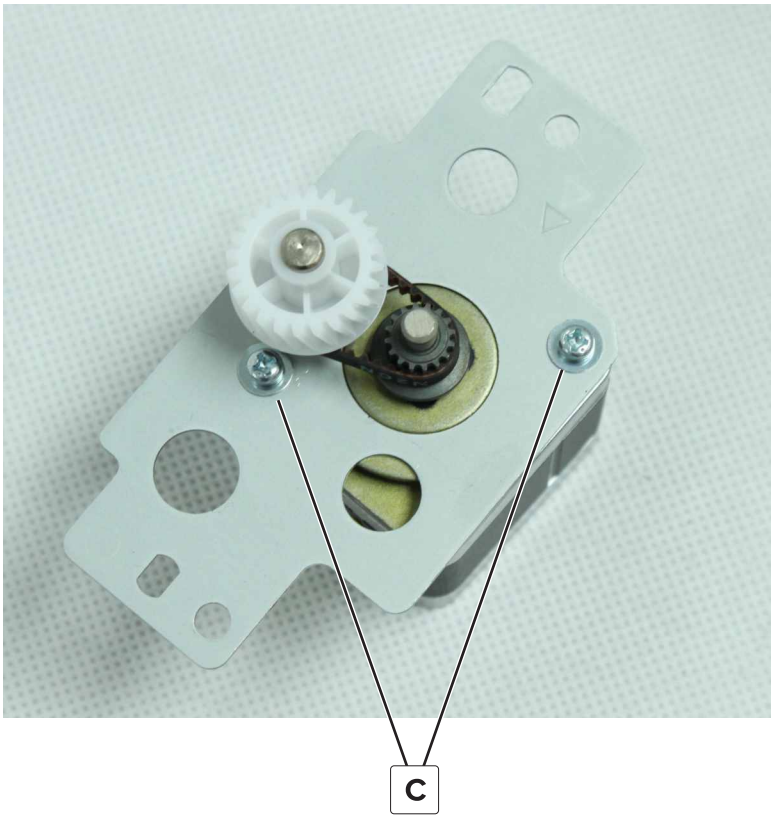


Motor (feed) removal

1. Remove the port access door. See **"Port access door removal" on page 278**.
2. Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.
3. Remove the engine board cover. See **"Engine board cover removal" on page 346**.
4. Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.
5. Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.
6. Open the controller board frame. See **"Controller board frame removal" on page 365**.
7. Disconnect the cable (A), remove the two screws (B), and then remove the bracket.



8 Remove the two screws (C), and then remove the motor.



Tray 2 transport drive removal

1 Remove the port access door. See **"Port access door removal" on page 278**.

2 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

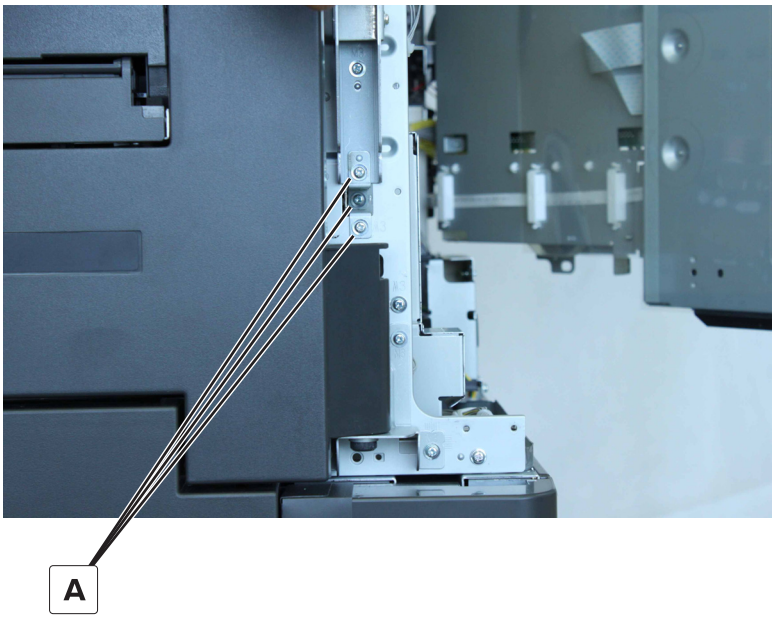
3 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

4 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

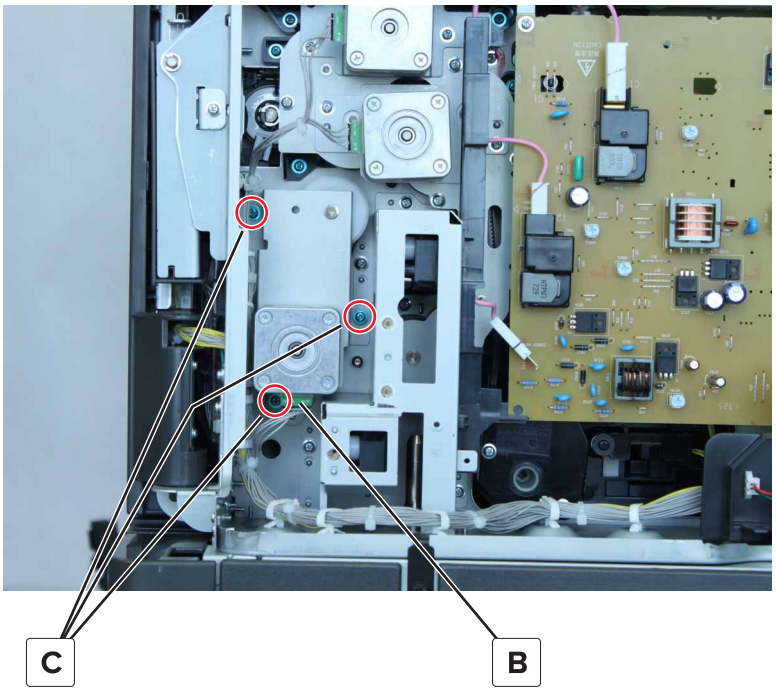
5 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

6 Open the controller board frame. See **"Controller board frame removal" on page 365**.

7 From the right, remove the three screws (A), and then remove the bracket.



8 From the rear, disconnect the cable (B), and then remove the three screws (C).



9 Remove the assembly.

Motor (tray 2 transport) removal

1 Remove the port access door. See "Port access door removal" on page 278.

2 Remove the controller board access cover. See "Controller board access cover removal" on page 345.

3 Remove the engine board cover. See "Engine board cover removal" on page 346.

4 Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.

5 Remove the upper rear cover. See "Upper rear cover removal" on page 346.

6 Open the controller board frame. See "Controller board frame removal" on page 365.

7 Remove the tray 2 transport drive. See "Tray 2 transport drive removal" on page 373.

8 Remove the two screws, and then remove the motor.

Feed drive assembly removal

1 Remove the port access door. See "Port access door removal" on page 278.

2 Remove the controller board access cover. See "Controller board access cover removal" on page 345.

3 Remove the engine board cover. See "Engine board cover removal" on page 346.

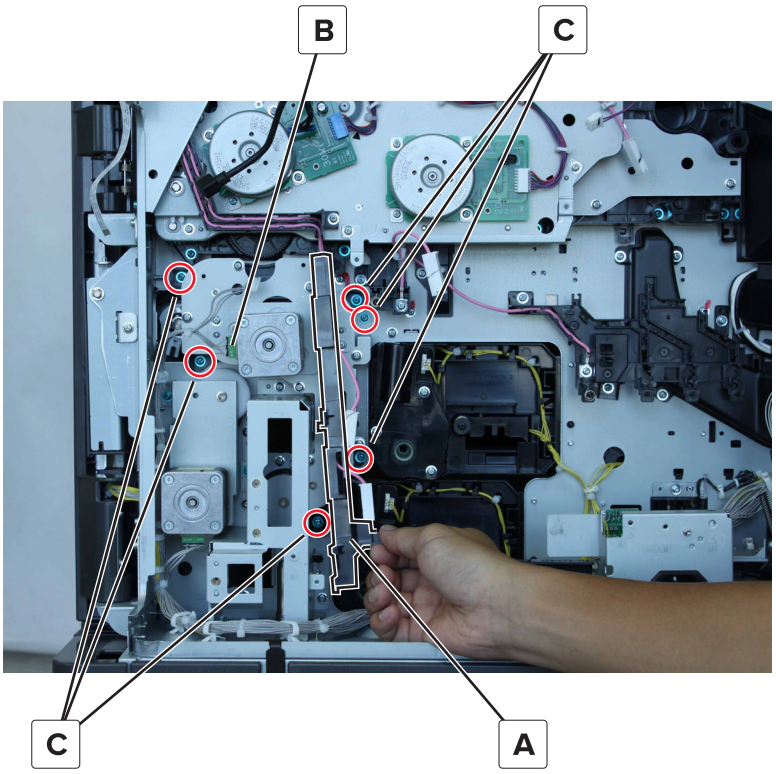
4 Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.

5 Remove the upper rear cover. See "Upper rear cover removal" on page 346.

6 Open the controller board frame. See "Controller board frame removal" on page 365.

7 Slightly lift the cable guide (A) to release. Move the guide to access the screw behind it.

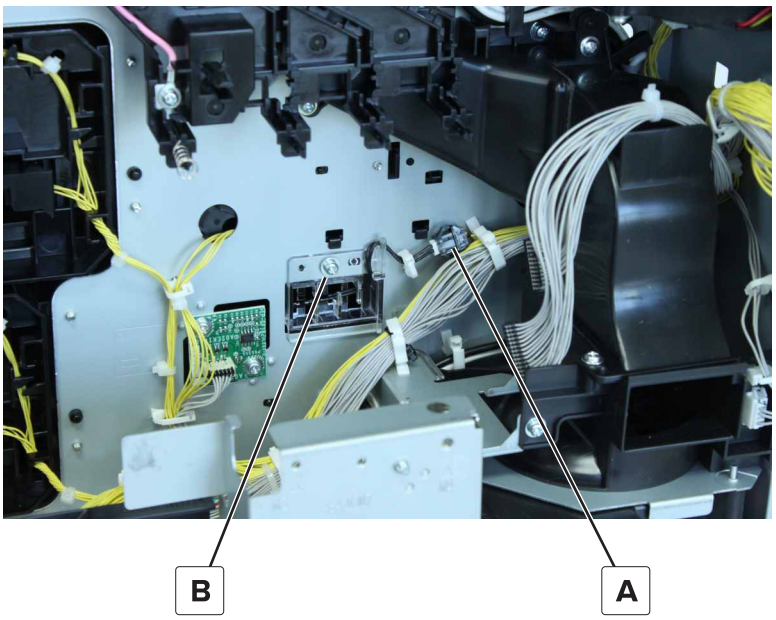
8 Disconnect the cable (B), and then remove the six screws (C).



9 Remove the assembly.

Sensor (tray 1 and 2 paper temperature) removal

1. Remove the port access door. See "Port access door removal" on page 278.
2. Remove the controller board access cover. See "Controller board access cover removal" on page 345.
3. Remove the engine board cover. See "Engine board cover removal" on page 346.
4. Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.
5. Remove the upper rear cover. See "Upper rear cover removal" on page 346.
6. Open the controller board frame. See "Controller board frame removal" on page 365.
7. Disconnect the cable (A), remove the screw (B), and then remove the cover.

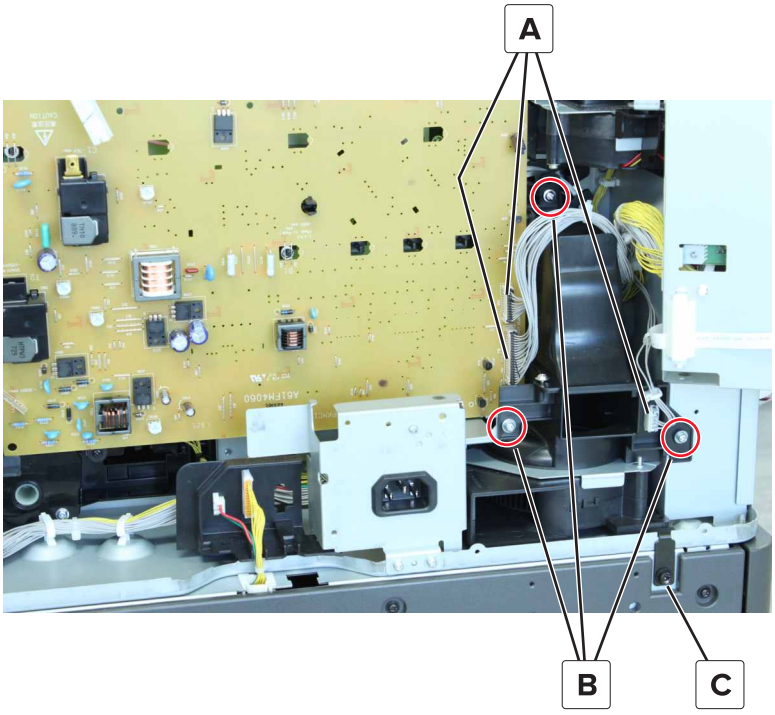


8. Remove the sensor.

Ozone fan removal

1. Remove the port access door. See "Port access door removal" on page 278.
2. Remove the controller board access cover. See "Controller board access cover removal" on page 345.
3. Remove the engine board cover. See "Engine board cover removal" on page 346.
4. Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.
5. Remove the upper rear cover. See "Upper rear cover removal" on page 346.
6. Open the controller board frame. See "Controller board frame removal" on page 365.
7. Disconnect the three cables (A), remove the three screws (B), and then remove the fan and duct.

   Note: If an optional tray is included, then remove the bottom screw (C).


A
B
C

8 Disconnect the cable (D), and then remove the two screws (E).

9 Remove the fan.

Ozone fan duct removal

1 Remove the port access door. See **"Port access door removal" on page 278**.

2 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

3 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

4 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

5 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

6 Open the controller board frame. See **"Controller board frame removal" on page 365**.

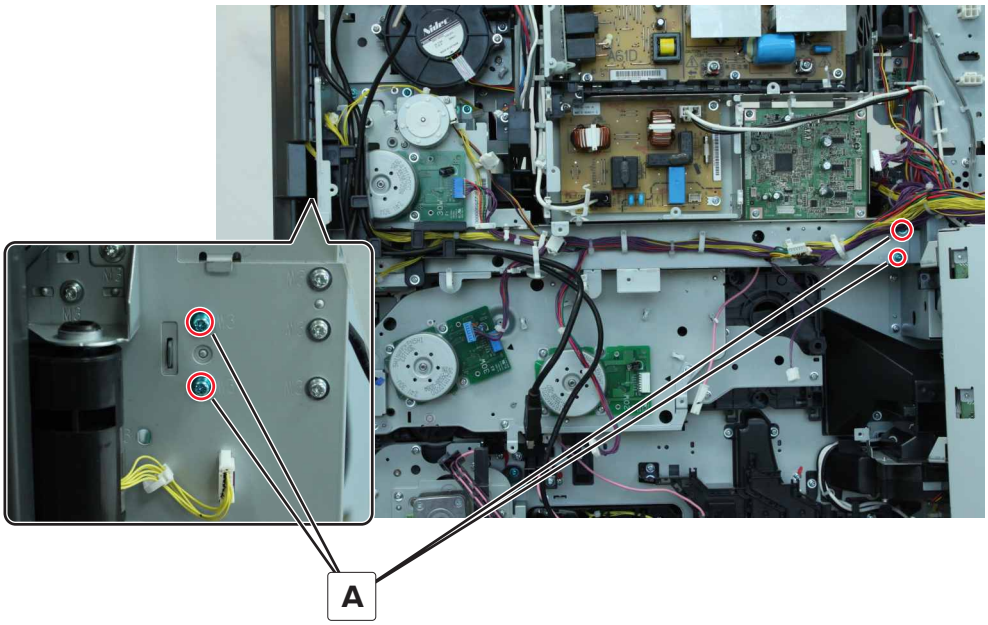
7 Remove the ozone fan. See **"Ozone fan removal" on page 376**.

The fan duct remains.

Center cable guide bracket removal

Note: This part is not a FRU.

1. Remove the port access door. See "Port access door removal" on page 278.
2. Remove the controller board access cover. See "Controller board access cover removal" on page 345.
3. Remove the engine board cover. See "Engine board cover removal" on page 346.
4. Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.
5. Remove the upper rear cover. See "Upper rear cover removal" on page 346.
6. Open the controller board frame. See "Controller board frame removal" on page 365.
7. Remove the four screws (A), and then release the cables from the bracket cable clips.

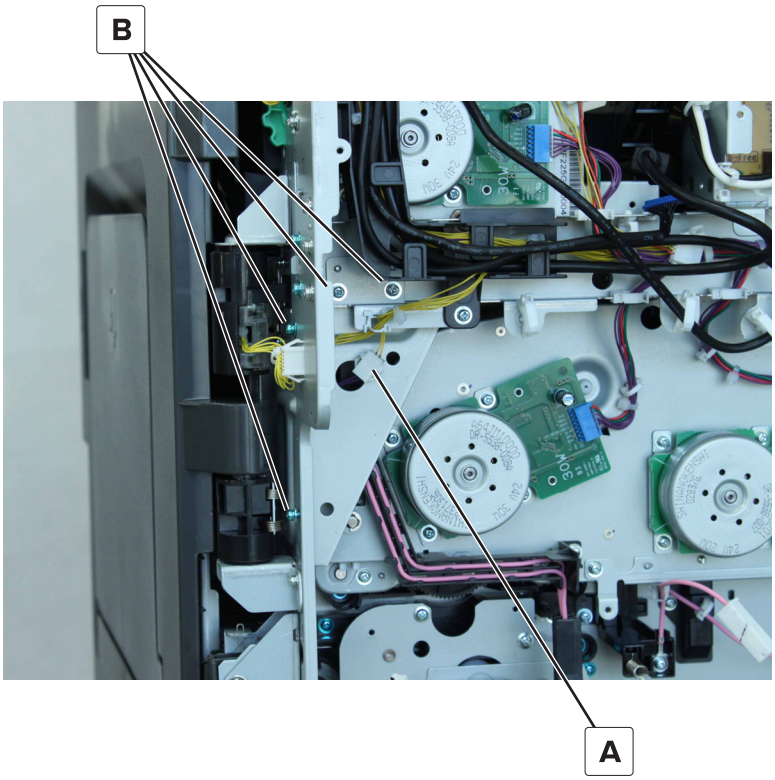


8. Remove the bracket.

Main drive assembly removal

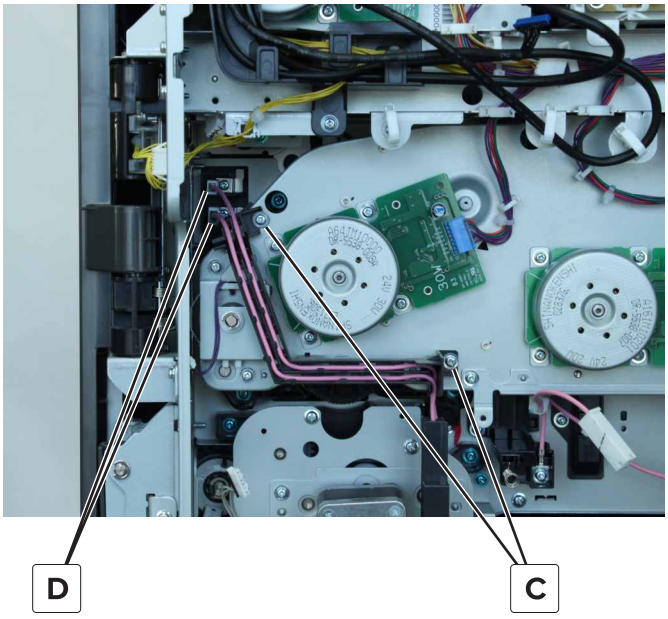
1. Remove the port access door. See "Port access door removal" on page 278.
2. Remove the controller board access cover. See "Controller board access cover removal" on page 345.
3. Remove the engine board cover. See "Engine board cover removal" on page 346.
4. Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.
5. Remove the upper rear cover. See "Upper rear cover removal" on page 346.
6. Open the controller board frame. See "Controller board frame removal" on page 365.
7. Remove the center cable guide bracket. See "Center cable guide bracket removal" on page 379.
8. Remove the high voltage board. See "High voltage board removal" on page 369.

9 Disconnect the cable (A), remove the four screws (B), and then remove the bracket.

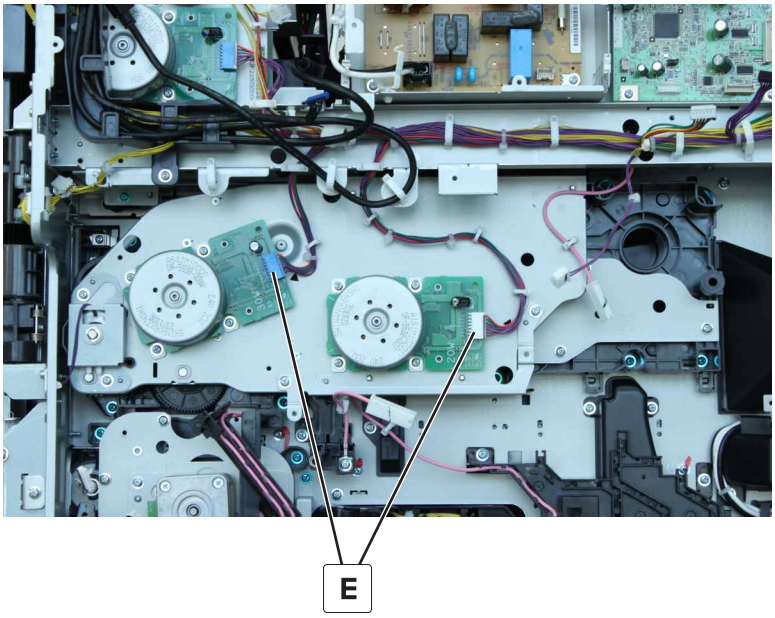


10 Remove the two screws (C), and then disconnect the two cables (D).

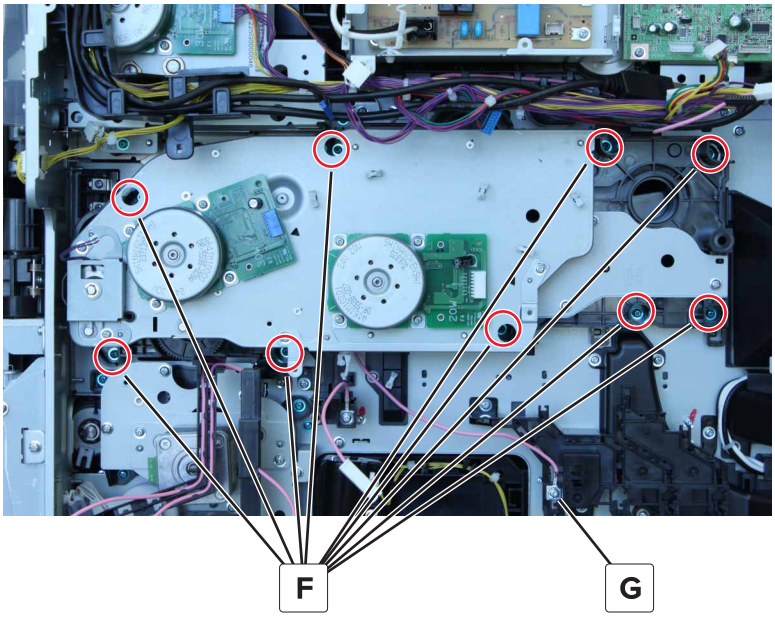
Note: We recommend using long nose pliers to disconnect the cables.



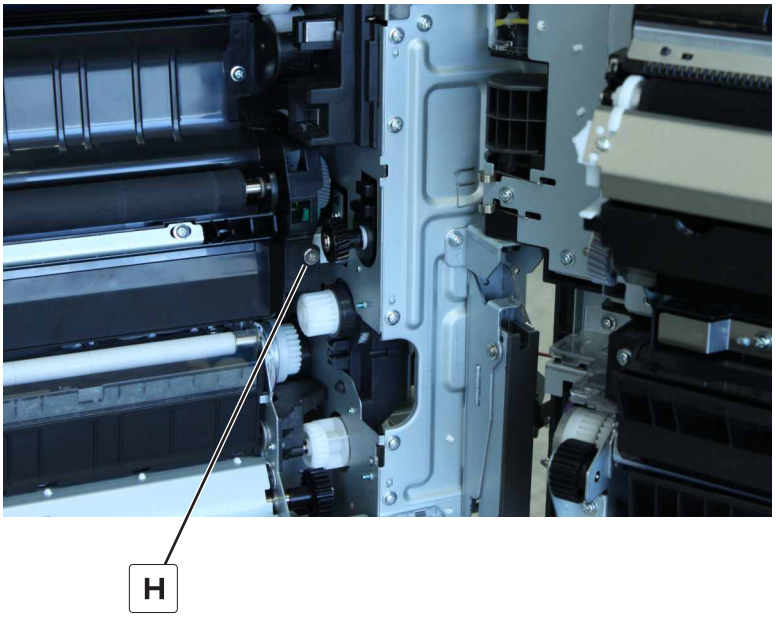
11 Disconnect the two cables (E), and then release the cables from the assembly cable clips.



12 Remove the nine screws (F), and then remove the ground screw (G).



13 Open the right door, and then remove the screw (H).



14 Remove the assembly.

Toner cartridge drive assembly removal

1 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

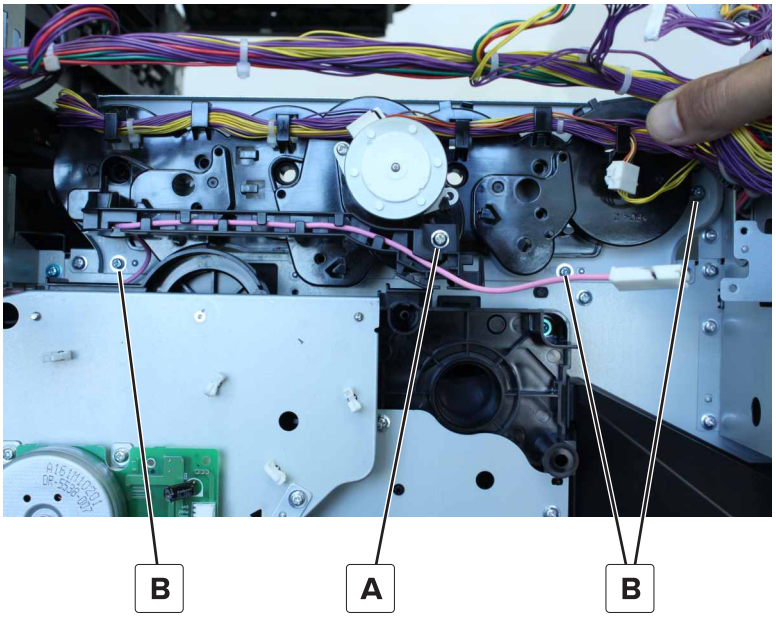
2 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

3 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

4 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

5 Remove the IHPS shield. See **"IHPS shield removal" on page 347**.

6 Remove the screw (A), and then remove the guide. Remove the three screws (B), and then release the cables from the guides.



7 Remove the assembly.

Duplex transport clutch removal

1 Remove the port access door. See “Port access door removal” on page 278.

2 Remove the controller board access cover. See “Controller board access cover removal” on page 345.

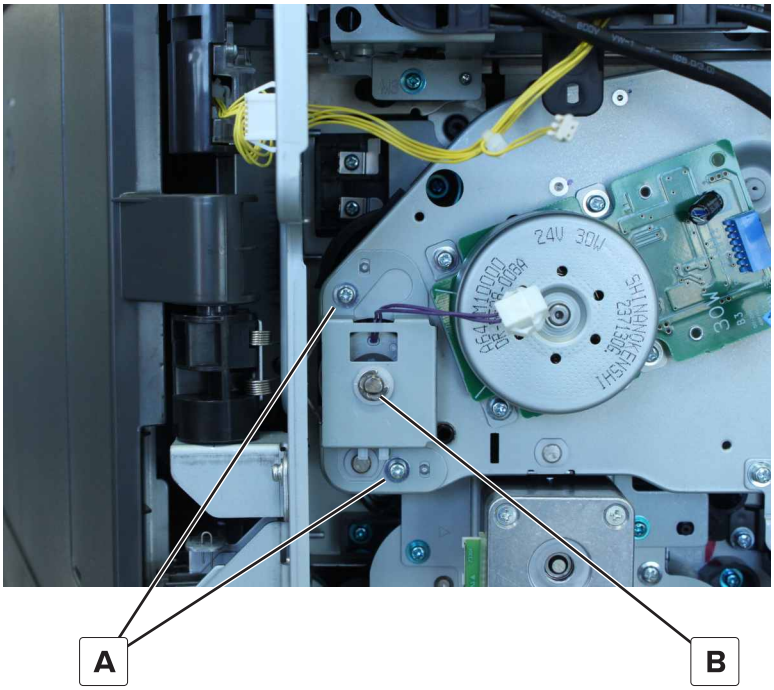
3 Remove the engine board cover. See “Engine board cover removal” on page 346.

4 Remove the scanner interface cable cover. See “Scanner interface cable cover removal” on page 344.

5 Remove the upper rear cover. See “Upper rear cover removal” on page 346.

6 Open the controller board frame. See “Controller board frame removal” on page 365.

7 Remove the two screws (A), remove the bracket, and then remove the clip (B).



8 Remove the clutch.

Motor (fuser) removal

1 Remove the port access door. See **"Port access door removal" on page 278**.

2 Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.

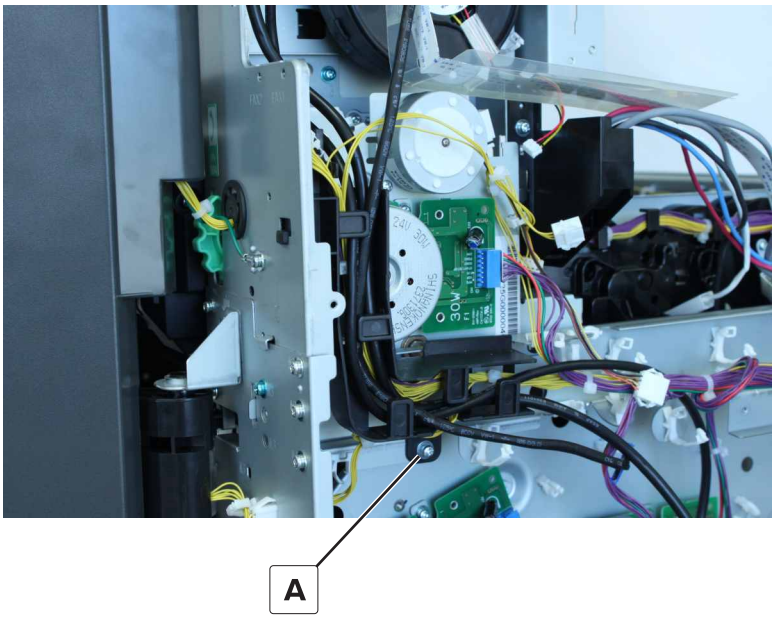
3 Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.

4 Remove the engine board cover. See **"Engine board cover removal" on page 346**.

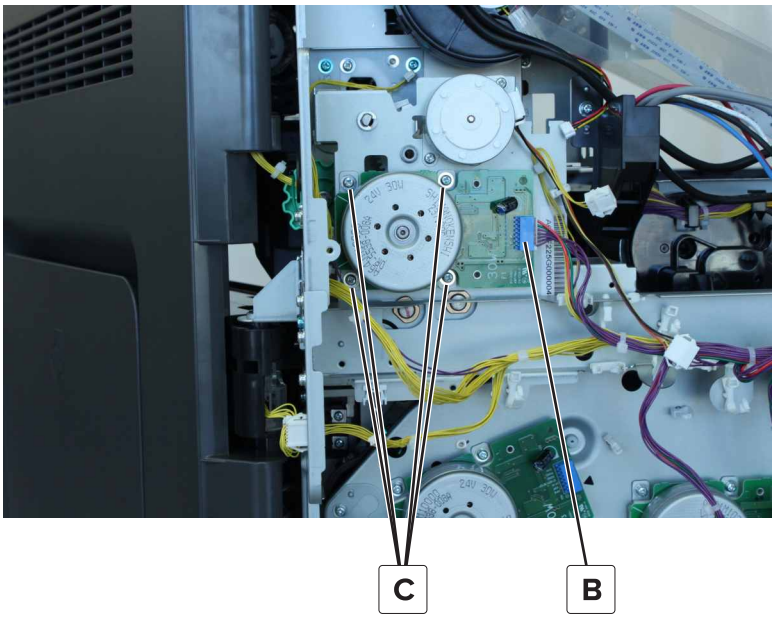
5 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

6 Remove the IHPS shield. See **"IHPS shield removal" on page 347**.

7 Remove the screw (A), and then remove the guide.



8 Disconnect the cable (B), and then remove the four screws (C).



9 Slightly lift the motor to release, and then remove it.

Fuser drive gearbox removal

1 Remove the port access door. See "Port access door removal" on page 278.

2 Remove the scanner interface cable cover. See "Scanner interface cable cover removal" on page 344.

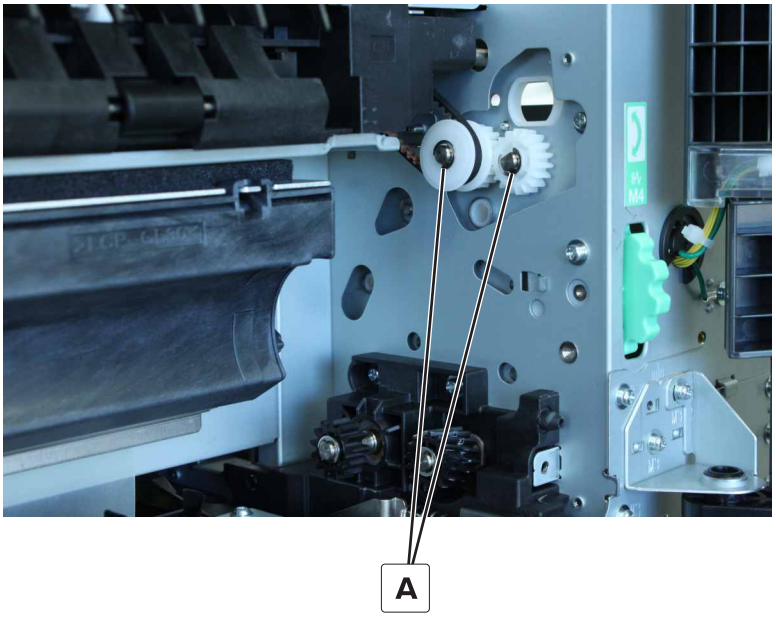
3 Remove the controller board access cover. See "Controller board access cover removal" on page 345.

4 Remove the engine board cover. See "Engine board cover removal" on page 346.

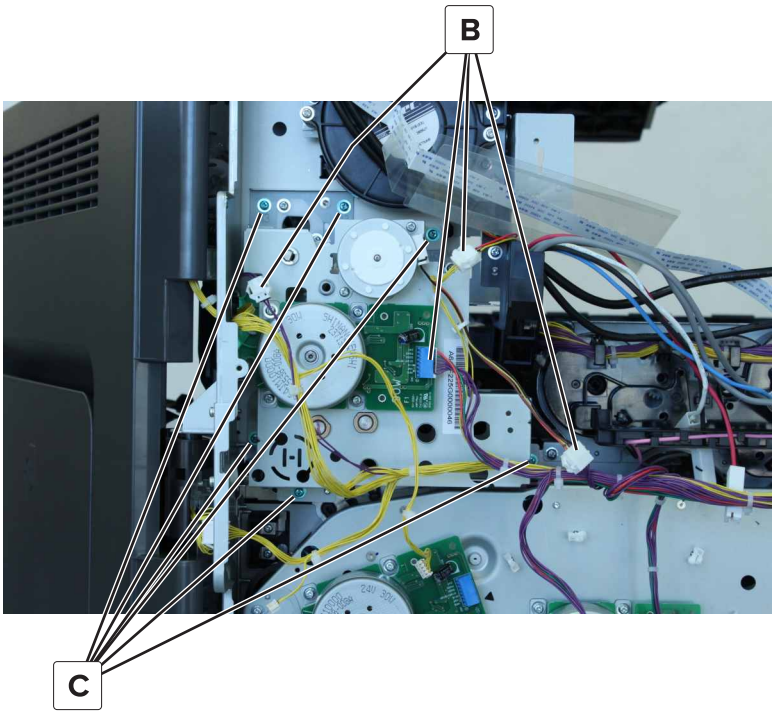
5 Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.

6 Remove the IHPS shield. See **"IHPS shield removal" on page 347**.

7 From the right, release the two clips (A), remove the two gears, and then release the belt.



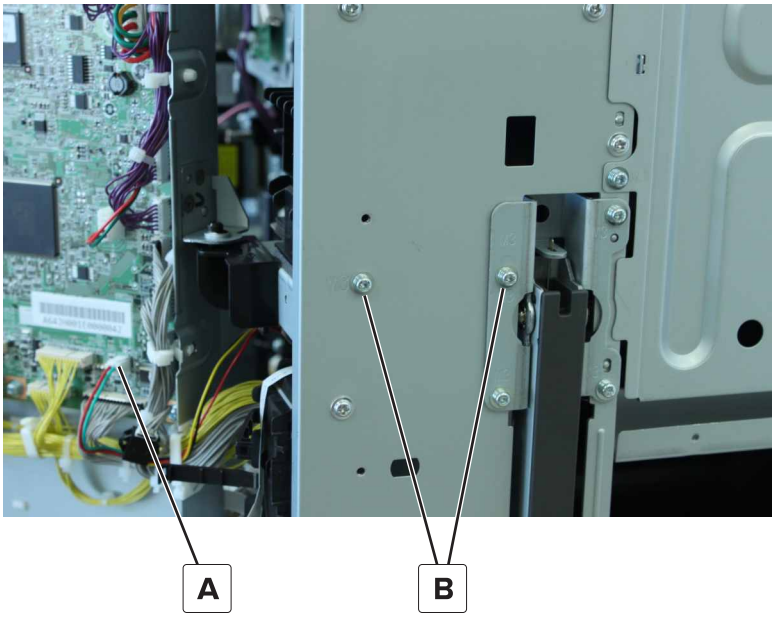
8 From the rear, disconnect the four cables (B), and then remove the six screws (C).



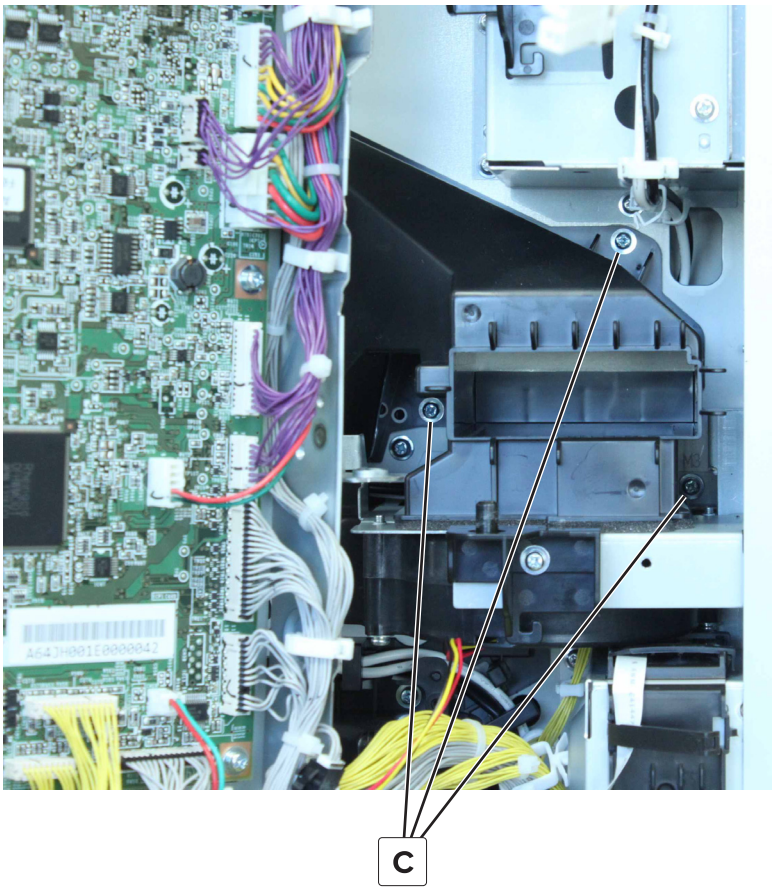
9 Remove the gearbox.

Toner suction fan removal

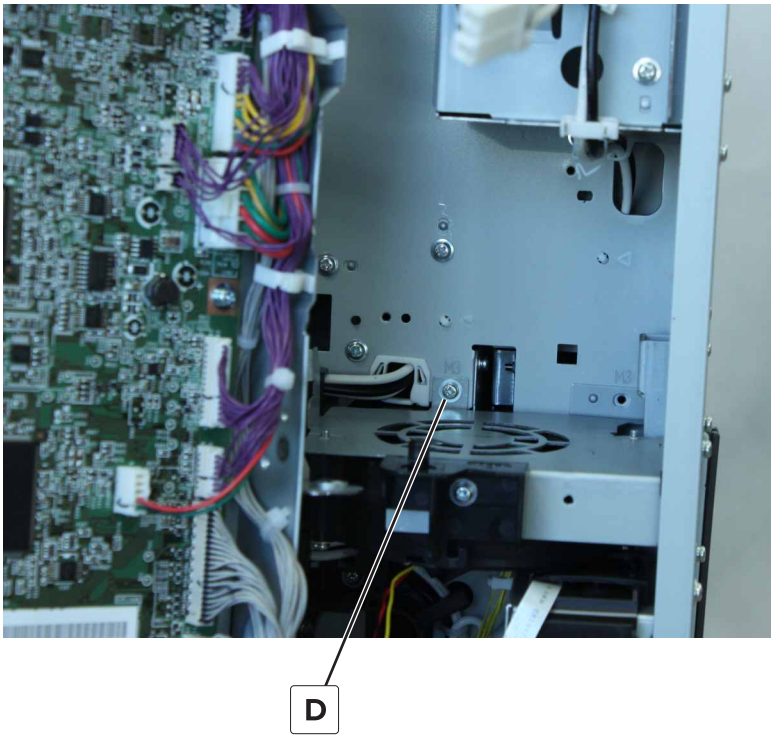
1. Remove the left cover. See **"Left cover removal" on page 272**.
2. Remove the rear left cover. See **"Rear left cover removal" on page 273**.
3. Remove the port access door. See **"Port access door removal" on page 278**.
4. Remove the controller board access cover. See **"Controller board access cover removal" on page 345**.
5. Remove the engine board cover. See **"Engine board cover removal" on page 346**.
6. Remove the scanner interface cable cover. See **"Scanner interface cable cover removal" on page 344**.
7. Remove the upper rear cover. See **"Upper rear cover removal" on page 346**.
8. Disconnect the cable (A), and then remove the two screws (B).



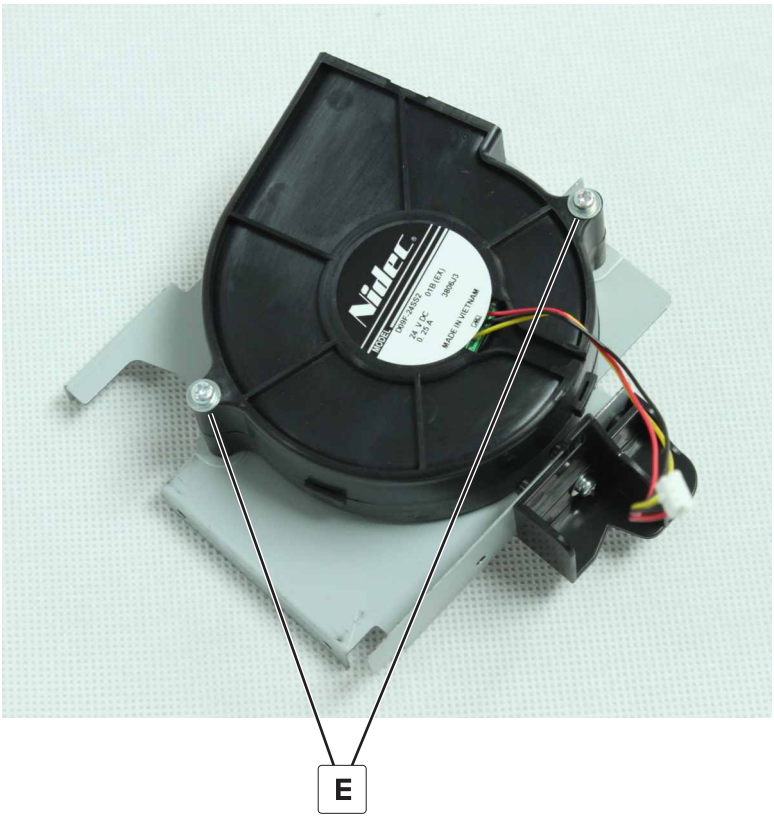
9 Remove the three screws (C), and then remove the fan duct.



10 Remove the screw (D), and then remove the bracket.



11 Remove the two screws (E), and then remove the fan.



Top side removals

Standard bin base removal

1 Remove the left cover. See **"Left cover removal" on page 272**.

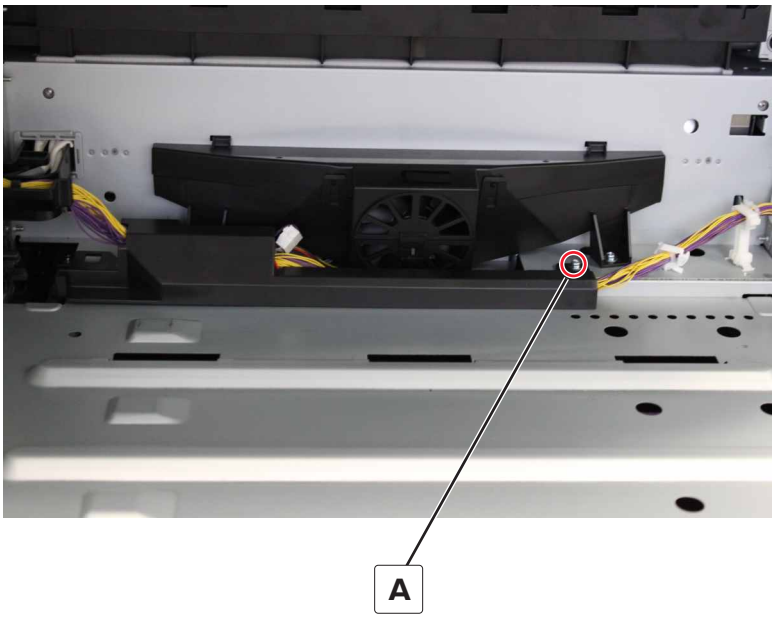
2 Remove the standard bin base.

Transfer belt fan removal

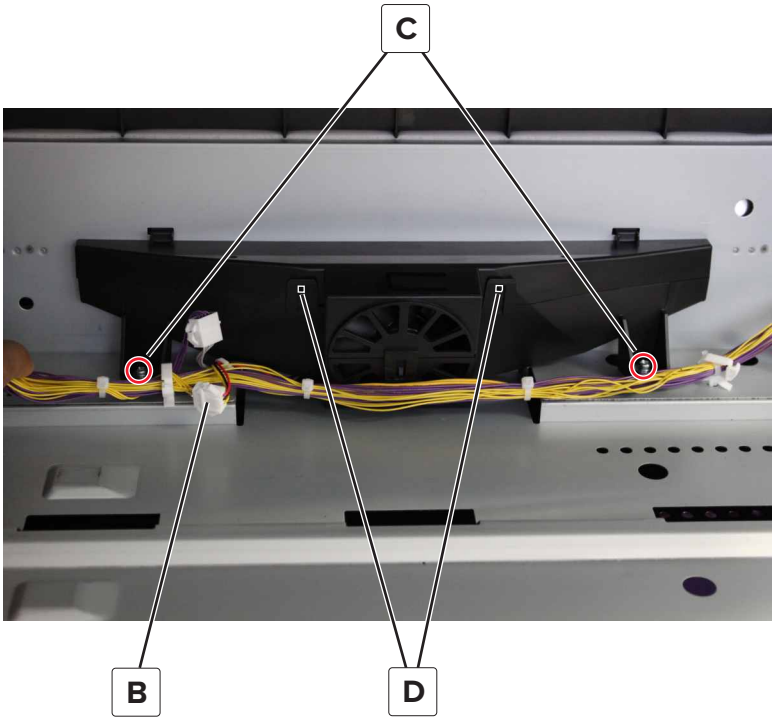
1 Remove the left cover. See **"Left cover removal" on page 272**.

2 Remove the standard bin base. See **"Standard bin base removal" on page 389**.

3 Remove the screw (A), and then remove the cover.



4 Disconnect the cable (B), and then remove the two screws (C). Release the latches (D), and then open the case.



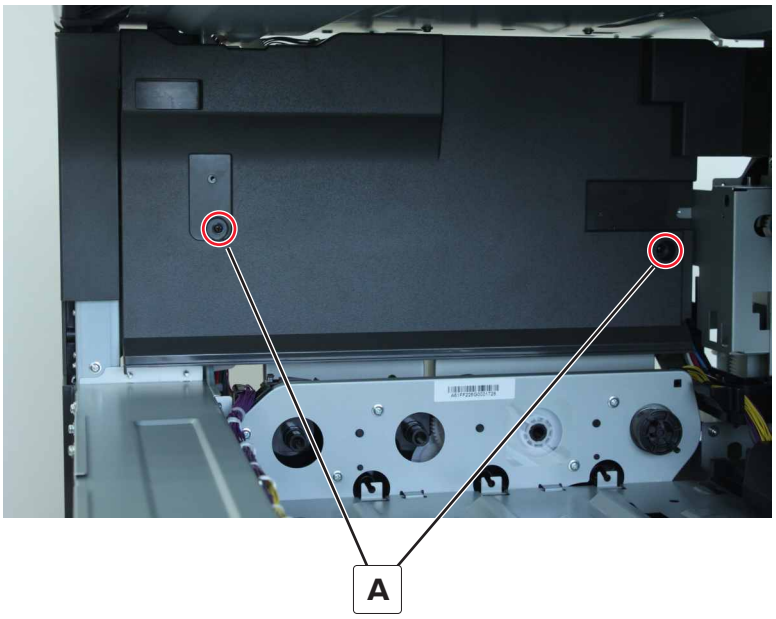
5 Remove the fan.

Bin side cover removal

1 Remove the left cover. See **"Left cover removal" on page 272**.

2 Remove the standard bin base. See **"Standard bin base removal" on page 389**.

3 Remove the two screws (A), and then remove the cover.

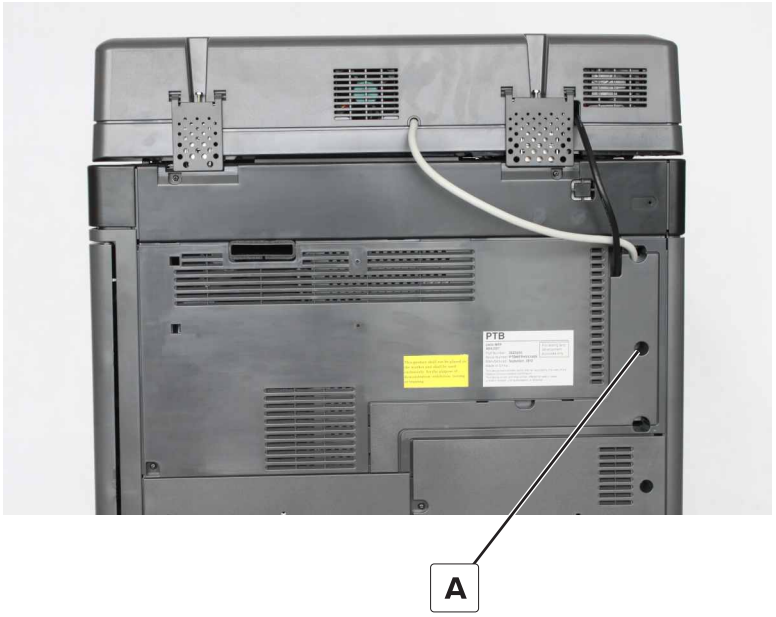


ADF and scanner removals

ADF assembly removal

Note: Make sure to perform ADF height adjustment after replacing the ADF assembly. See **"ADF height adjustment" on page 258**.

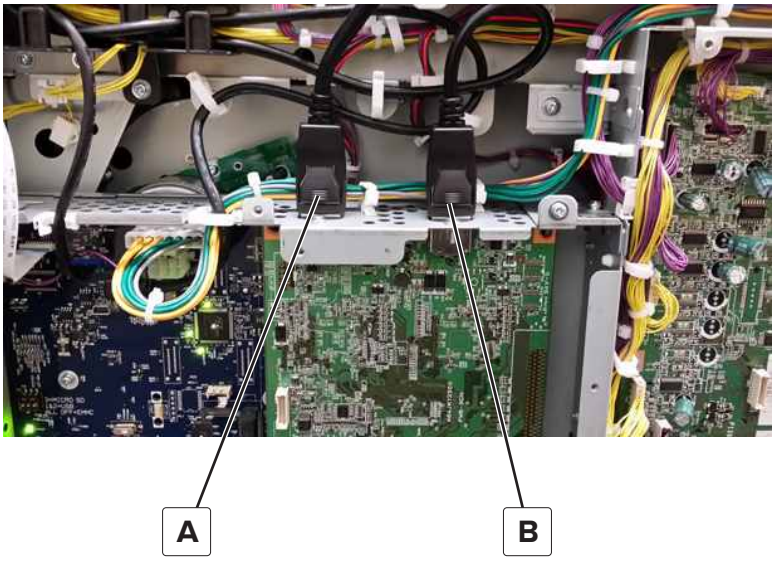
1 Remove the screw (A) securing the ADF rear cable access cover, and then remove the cover.



2 Remove the controller board cover. See **"Controller board access cover removal" on page 345**.

3 Disconnect the cable (B) from the controller board.

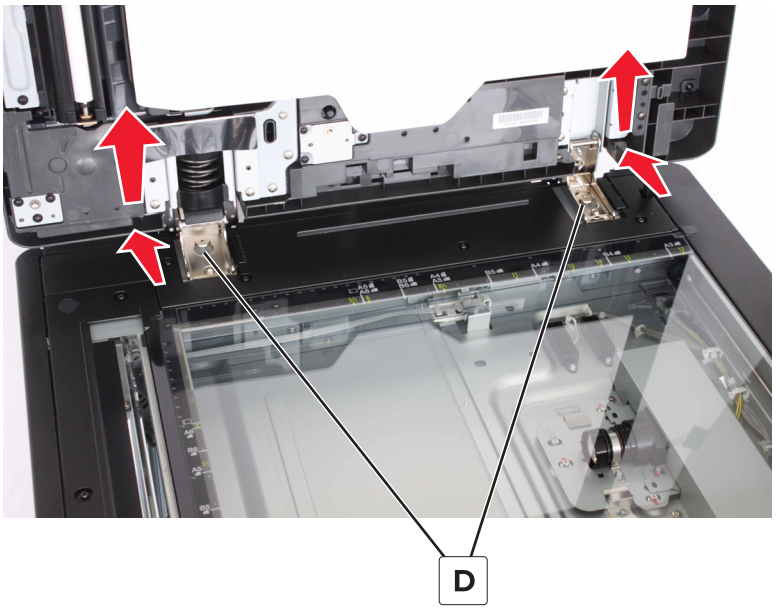
Installation note: Connect the scanner CCD cable (A) and ADF CIS data cable (B) as shown in the illustration. If the cables are connected to the wrong socket, then an invalid scanner code error occurs.



4 Disconnect the three cables (C), and then release them from the holder (D).

5 Open the ADF, and then remove the two screws (D).

6 Remove the ADF.



Warning—Potential Damage: Do not break the ADF angle open actuator.

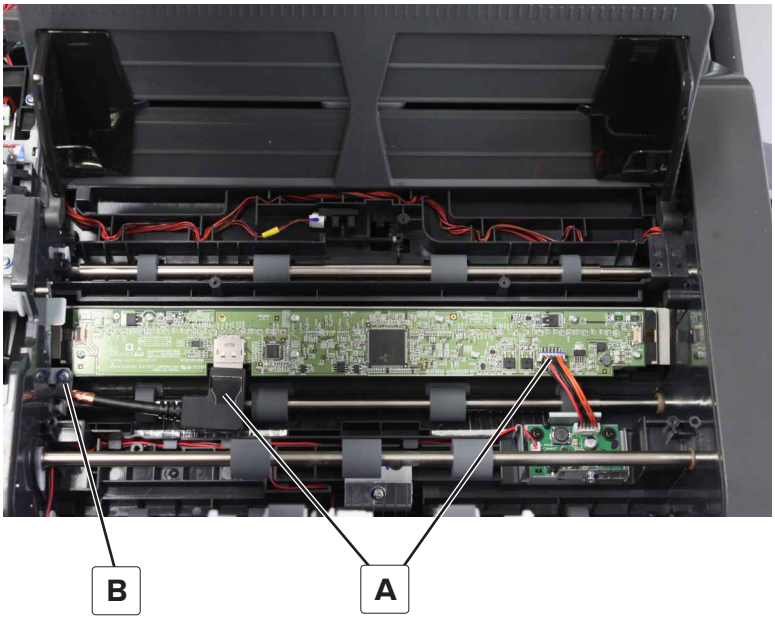
ADF CIS assembly removal

1 Remove the ADF front cover. See **"ADF front cover removal" on page 402**.

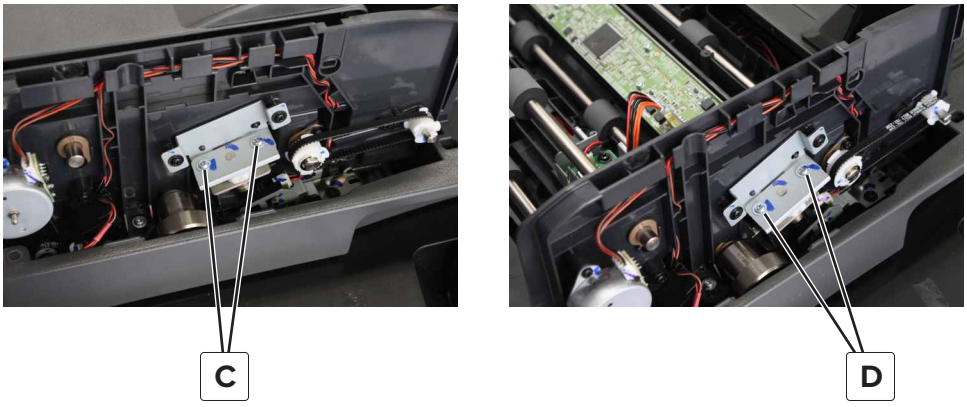
2 Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.

3 Remove the ADF registration guide. See **"ADF registration guide removal" on page 410**.

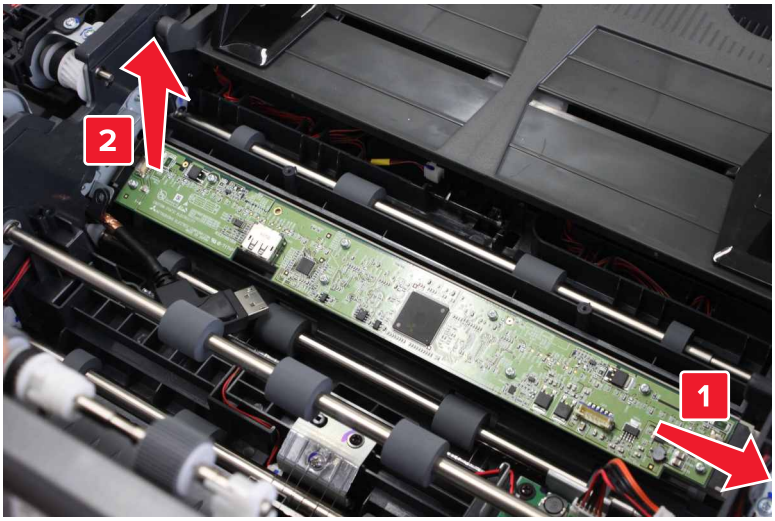
4 Disconnect the two cables (A), and then remove the screw (B).



5 Remove the two screws (C) from the front and two screws (D) from the rear of the ADF.



6 Slide the CIS assembly, and then lift the rear end to remove.

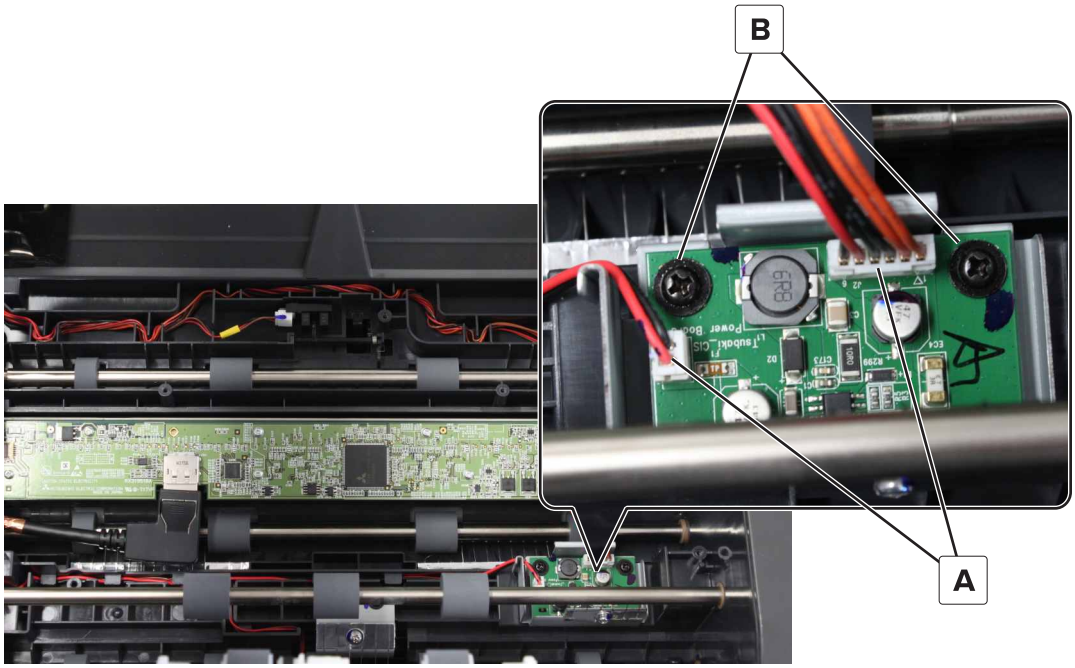


ADF CIS power supply board removal

1 Remove the ADF rear cover. See "ADF rear cover removal" on page 410.

2 Remove the ADF registration guide. See "ADF registration guide removal" on page 410.

3 Disconnect the two cables (A), and then remove the two screws (B).



4 Remove the ADF CIS power supply board.

ADF controller board removal

1 Remove the ADF rear cover. See "ADF rear cover removal" on page 410.

2 Disconnect all the cables on the ADF controller board.

3 Remove the four screws securing the ADF controller board, and then remove the board.

ADF cushion removal

1 Open the ADF.

2 Remove the ADF cushion.

ADF duplex scan glass removal

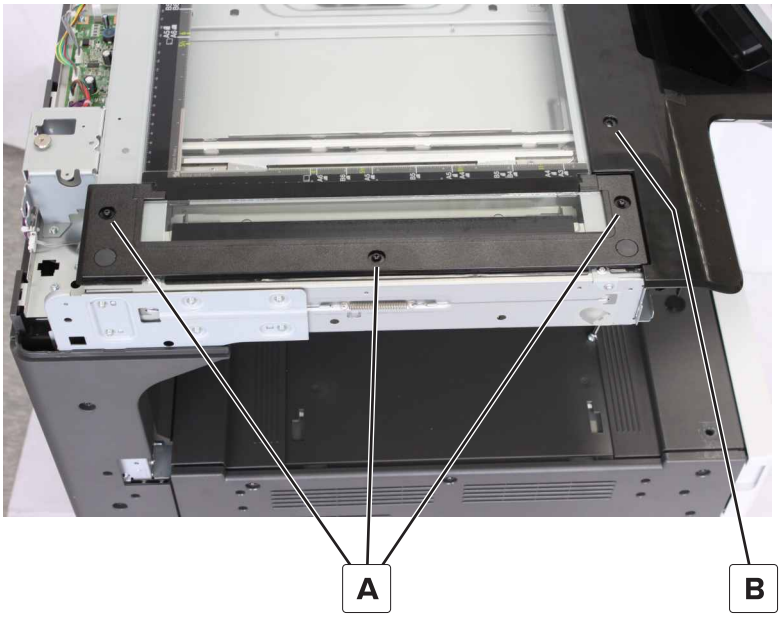
1 Remove the scanner left cover. See "Scanner left cover removal" on page 429.

2 Remove the control panel bottom cover. See "Control panel bottom cover removal" on page 442.

3 Remove the scanner rear cover. See "Scanner rear cover removal" on page 430.

4 Remove the scanner top cover. See "Scanner top cover removal" on page 430.

5 Remove the three screws (A), and then remove the screw (B).



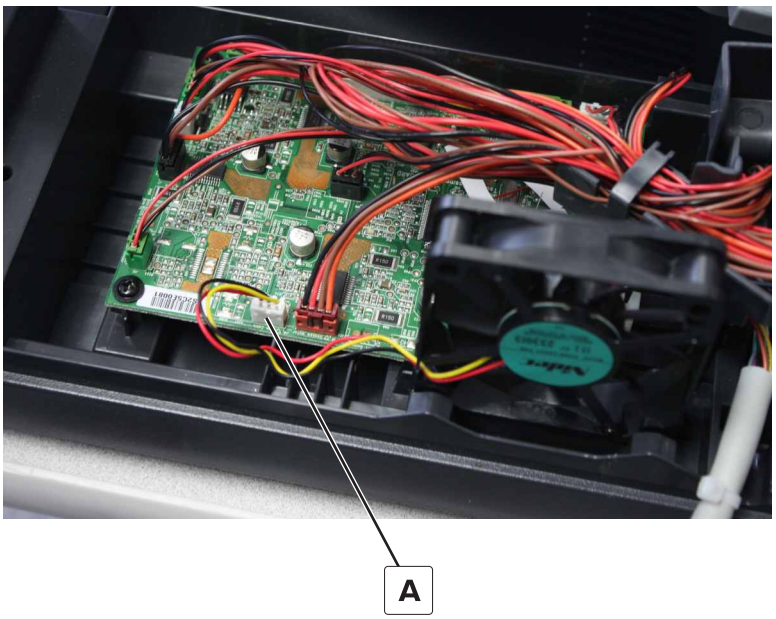
6 Slightly raise the scanner front cover, and then remove the ADF duplex scan glass.

Installation note: Make sure that the ADF duplex scan glass and scanner glass are properly aligned.

ADF fan removal

1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.

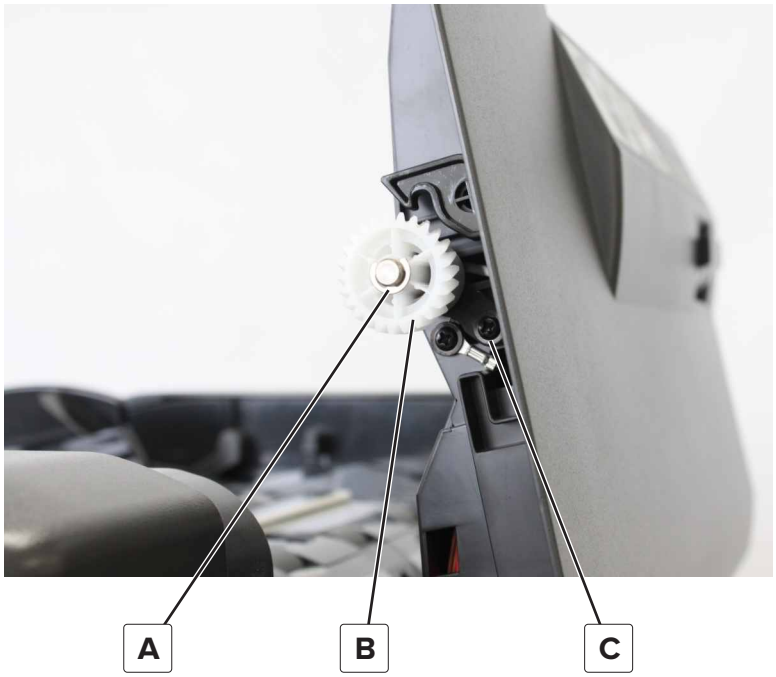
2 Disconnect the cable (A), and then remove the fan.



ADF feed and pick roller assembly removal

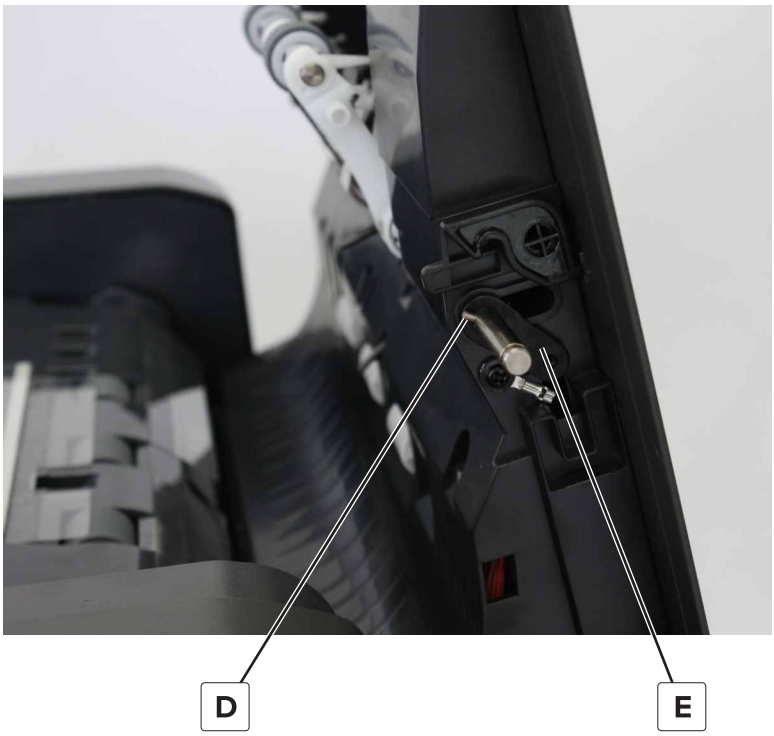
1 Open the ADF top cover.

2 Remove the clip (A), gear (B), and screw (C).

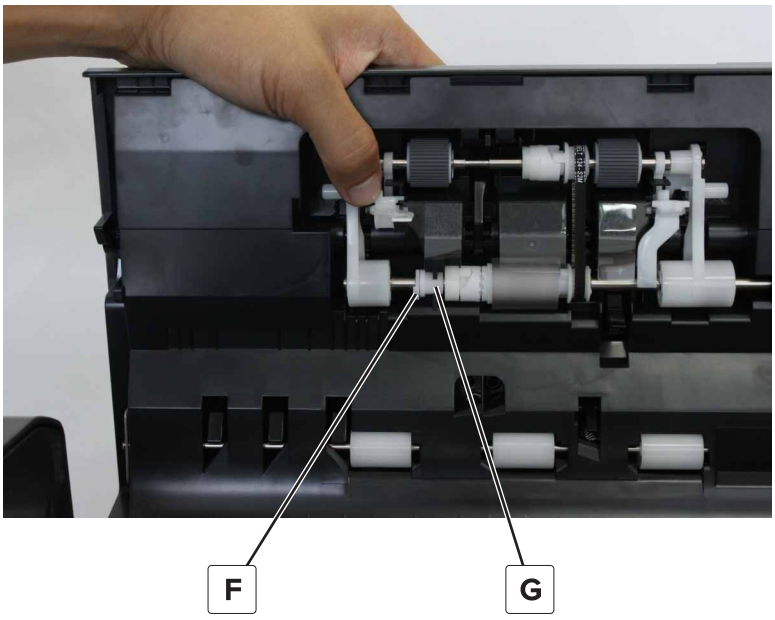


3 Remove the pin (D) and bushing (E).

Note: Do not lose the pin.



4 Remove the clip (F), and then slide the bushing (G) out of the bracket.

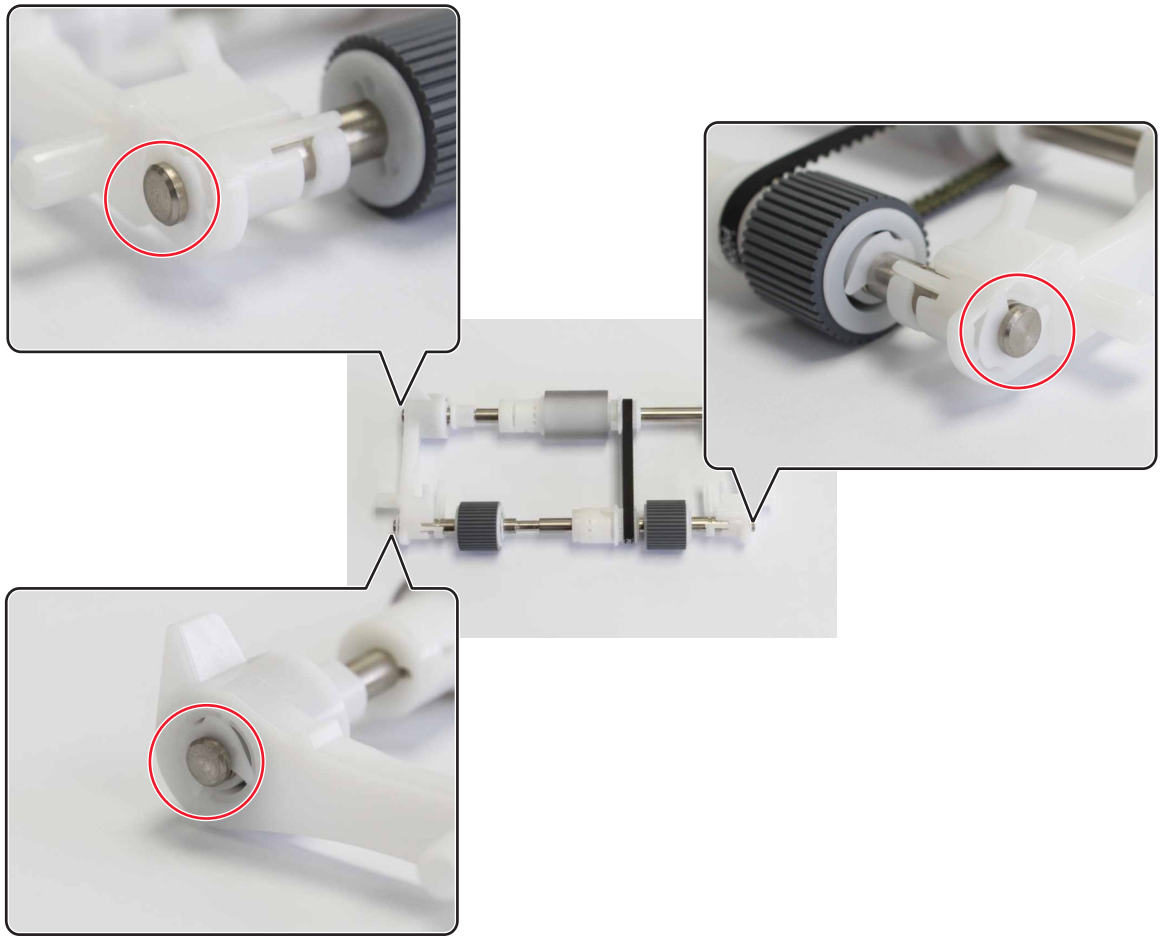


5 Slide out, and then remove the feed and pick roller assembly.

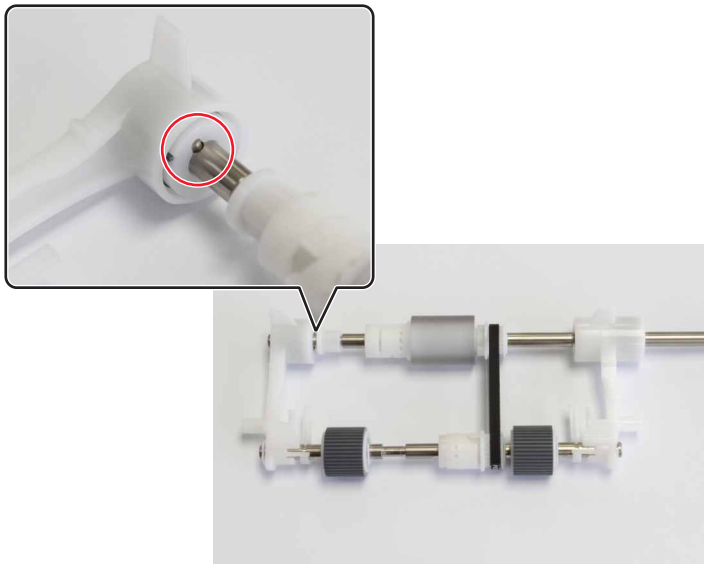
ADF feed roller removal

1 Remove the ADF feed and pick roller assembly. See **"ADF feed and pick roller assembly removal" on page 398**.

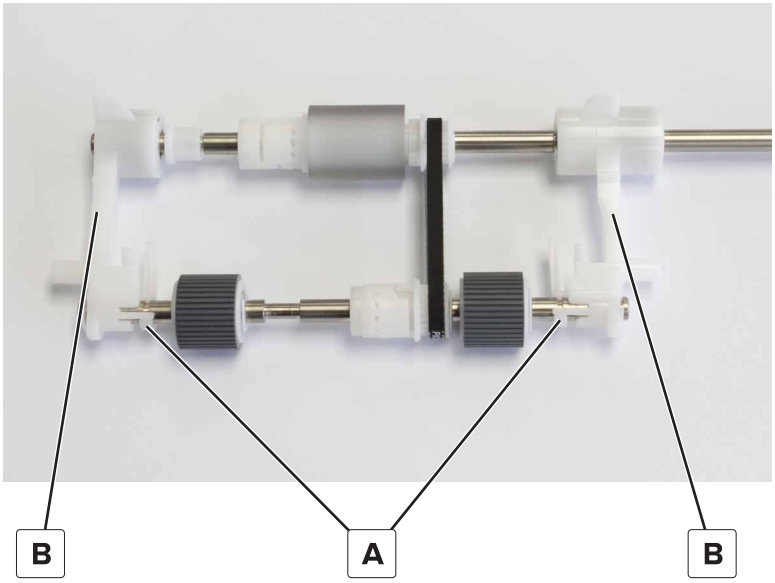
2 Remove the three clips from the roller arms.



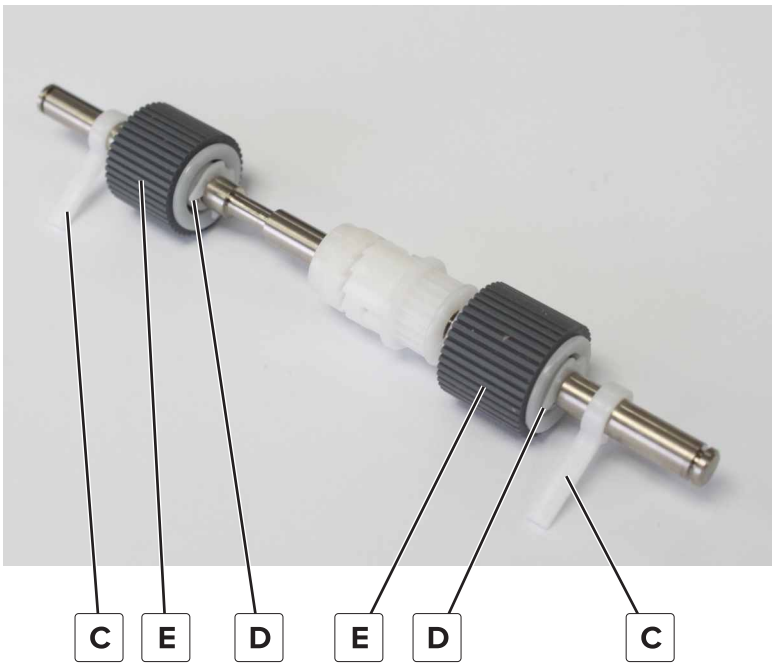
Note: Do not lose the pin on the pick roller.



3 Release the latches (A), and then remove the feed roller arms (B).



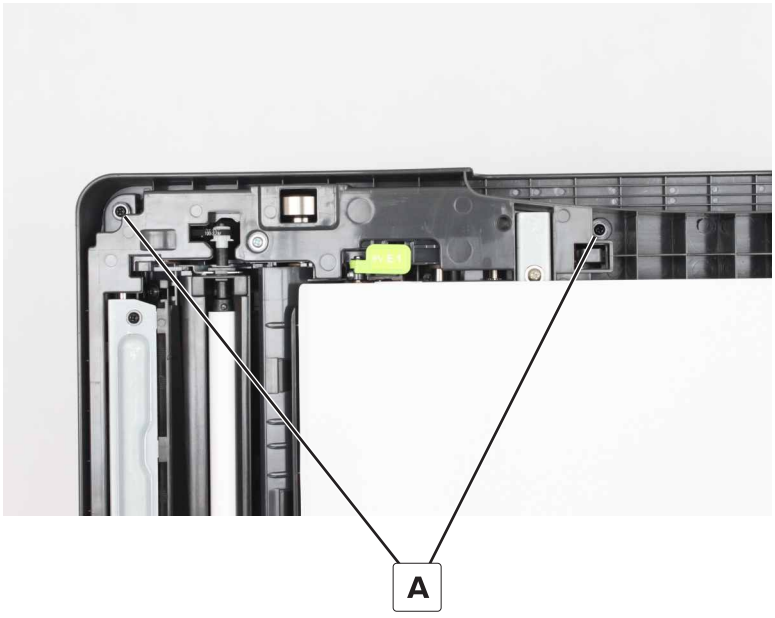
4 Remove the levers (C), clips (D), and feed rollers (E).



ADF front cover removal

1 Open the ADF.

2 Remove the two screws (A) from the ADF front cover.



3 Remove the cover.

ADF glass cleaning roller removal

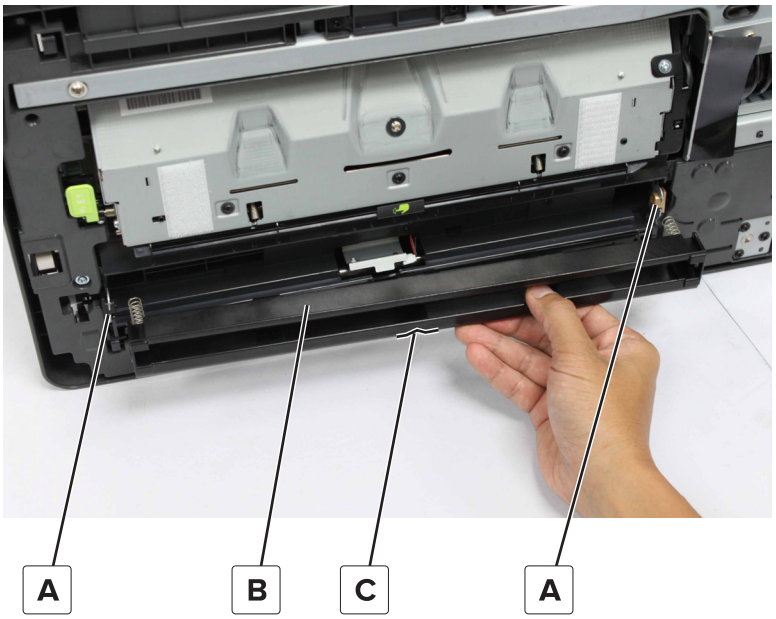
1 Remove the ADF assembly. See **"ADF assembly removal" on page 391**.

2 Remove the clips (A) from the ADF glass cleaning roller, and then remove the bushing (B) and belt (C).

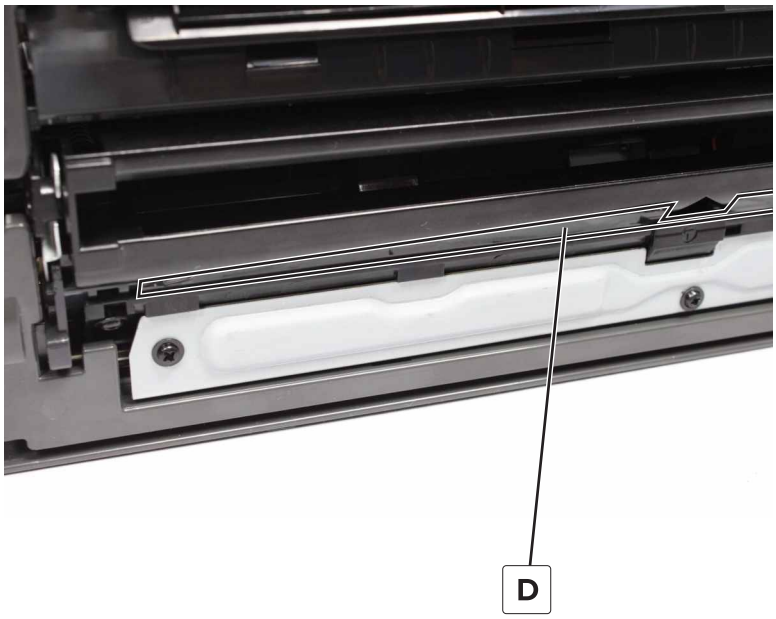
3 Remove the roller.

Installation notes:

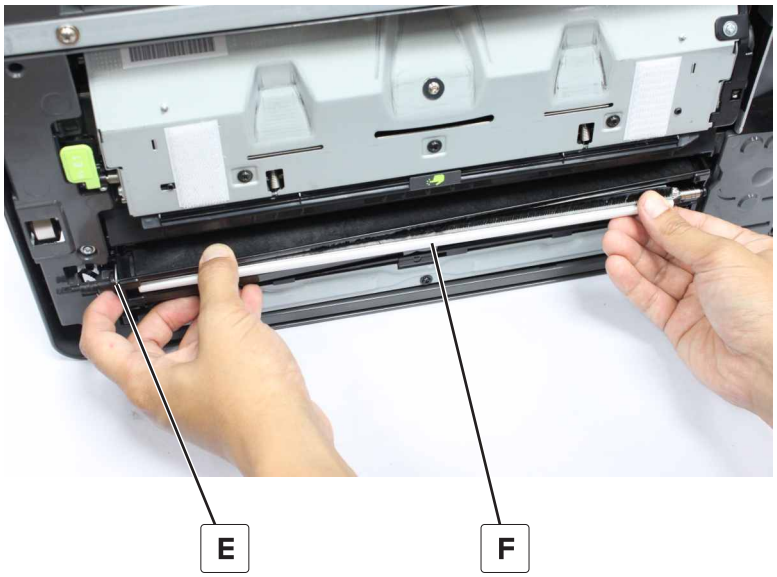
a Install the two bushings (A) on the brackets, and then install the housing (B) with its notch (C) on the underside of the housing.



b Make sure that the plastic strip (D) does not come into contact with the housing when fully inserted.



c Slightly pull out the left bracket (E), and then insert the roller (F) into the bushing.

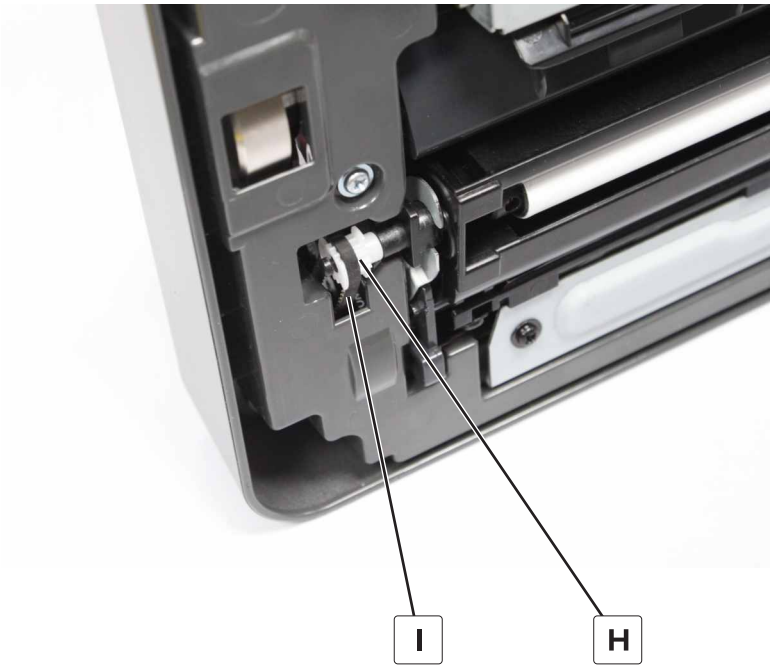


d Push the roller to the right to insert the right side of the roller.

Note: Make sure that the white side of the roller is facing up.

e Set the ADF glass cleaning actuator (G) to the home position.

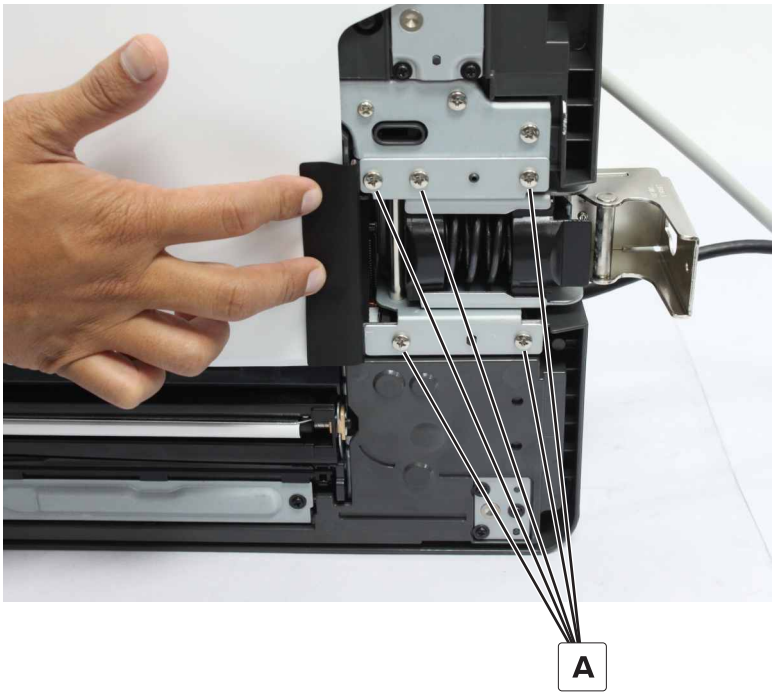
f Install the gear (H) and belt (I) on the left side of the roller.



ADF left hinge removal

1 Remove the ADF assembly. See **"ADF assembly removal" on page 391**.

2 Remove the five screws (A) securing the left hinge.

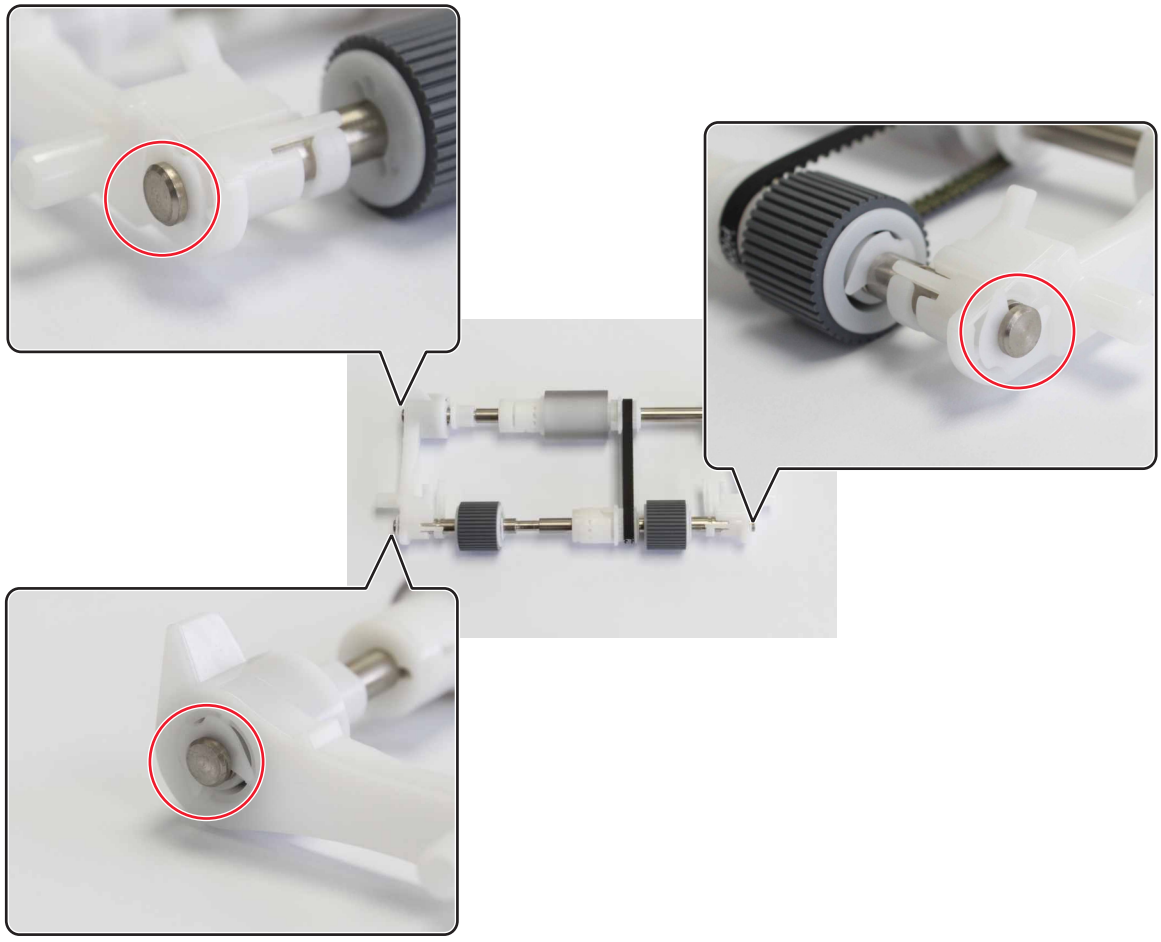


3 Remove the hinge.

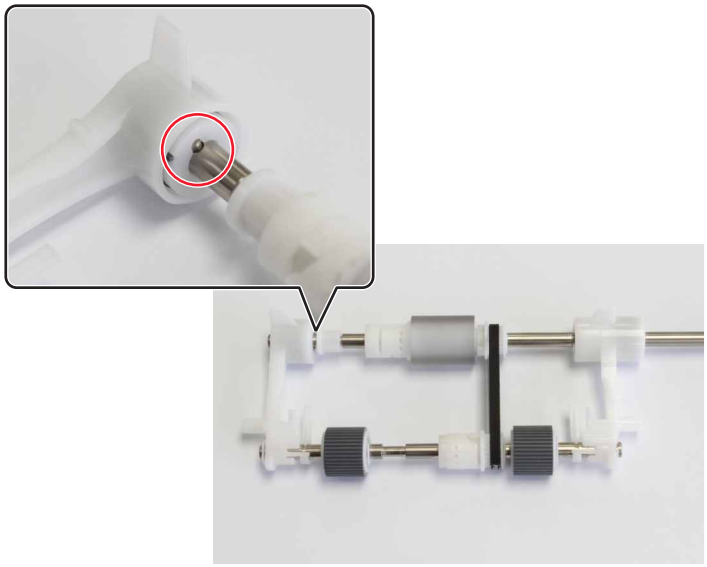
ADF pick roller removal

1 Remove the ADF feed and pick roller assembly. See **"ADF feed and pick roller assembly removal" on page 398**.

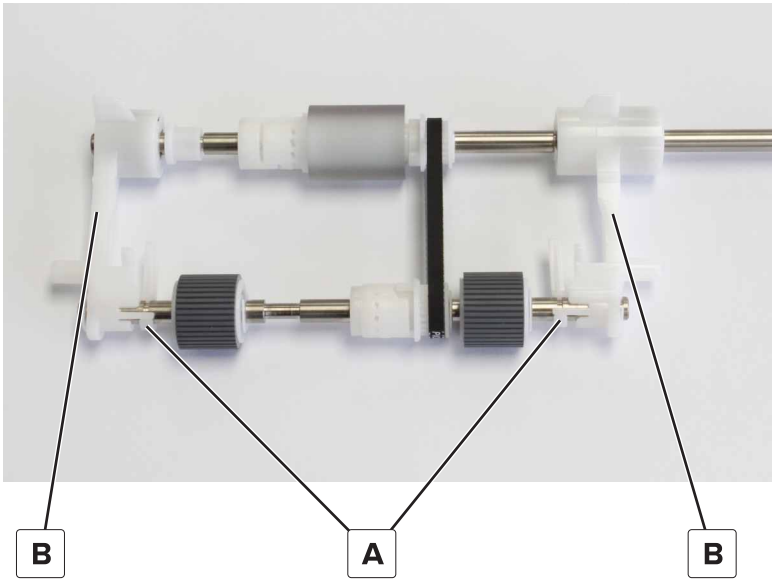
2 Remove the three clips from the roller arms.



Note: Do not lose the pin on the pick roller.

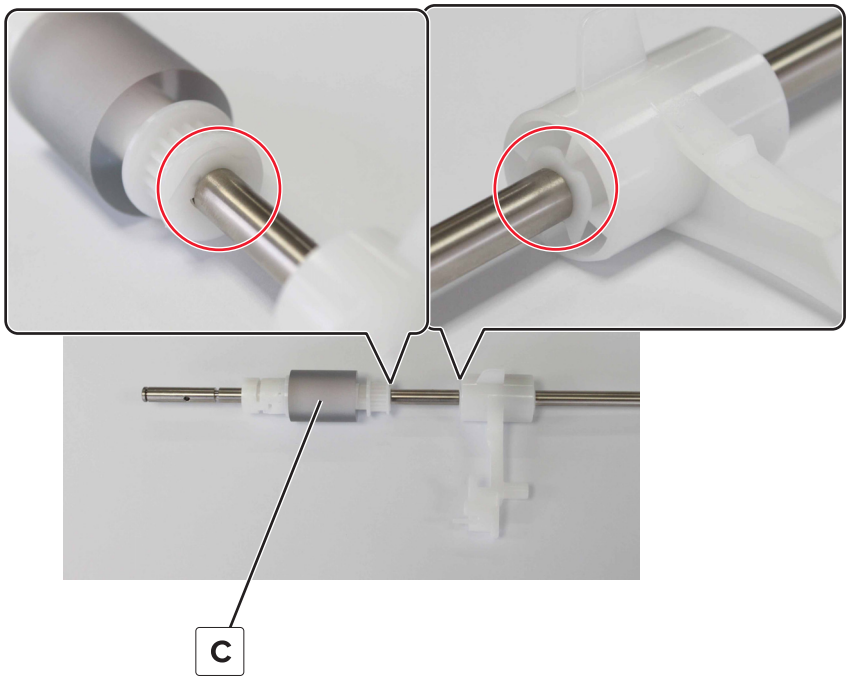


3 Release the two latches (A) from the two feed roller arms, and then remove the feed roller arms (B).



4 Remove the two clips from the pick roller, and then remove the pick roller (C).

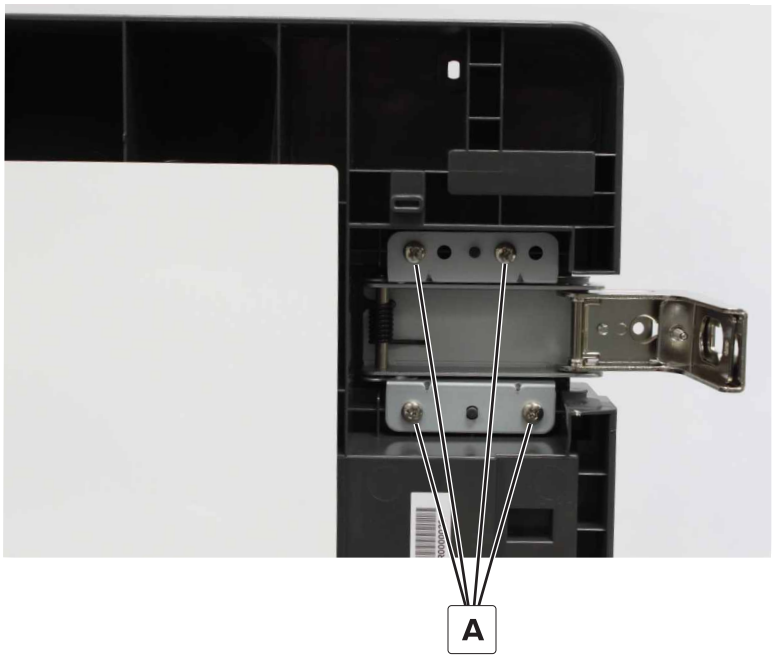
Note: Do not lose the pins on the pick roller.



ADF right hinge removal

1 Remove the ADF assembly. See **"ADF assembly removal" on page 391**.

2 Remove the four screws (A) securing the right hinge.

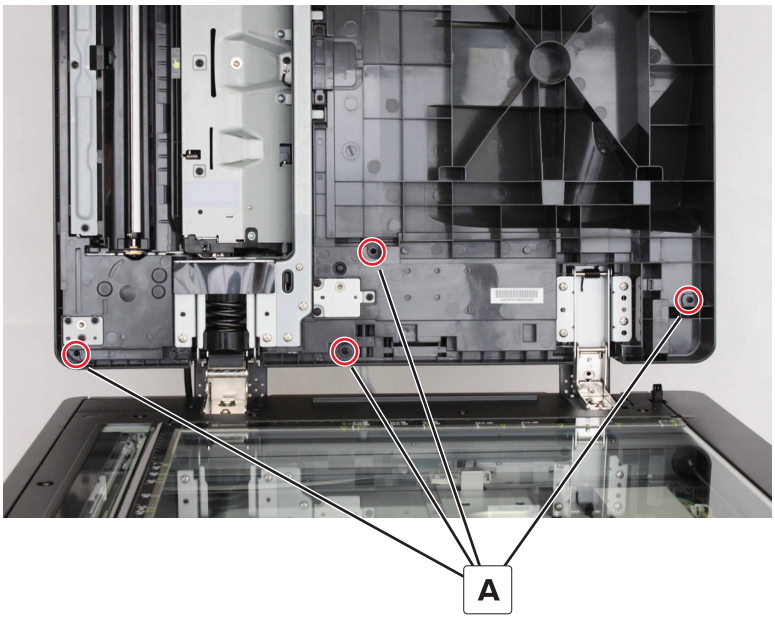


3 Remove the hinge.

ADF rear cover removal

1 Open the ADF.

2 Remove the four screws (A) securing the ADF rear cover.



3 Close the ADF.

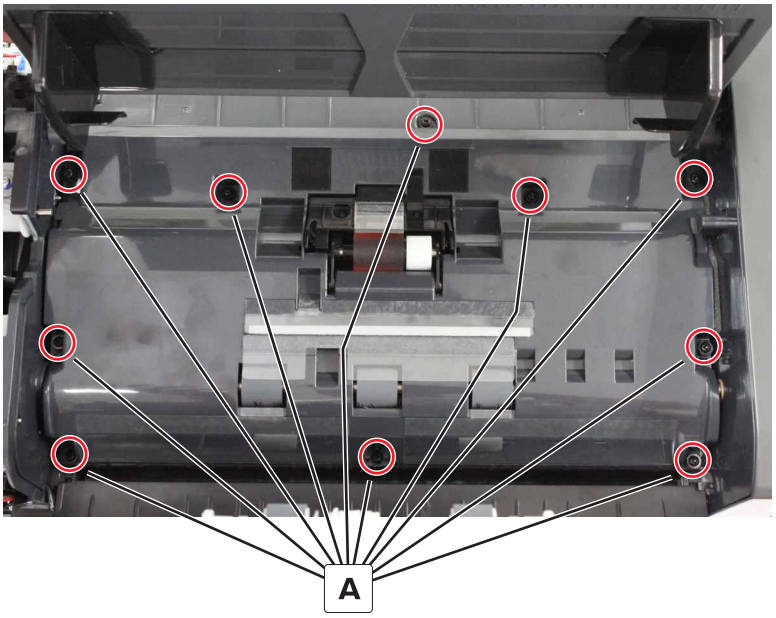
4 Open the ADF top cover, and then remove the ADF rear cover.

ADF registration guide removal

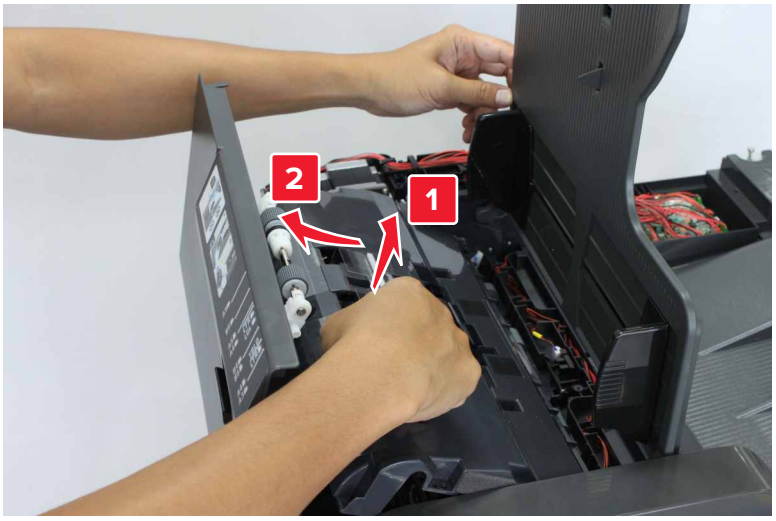
1 Remove the ADF front cover. See **"ADF front cover removal" on page 402**.

2 Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.

3 Remove the 10 screws (A).



4 Lift the part, and then slide it to remove.

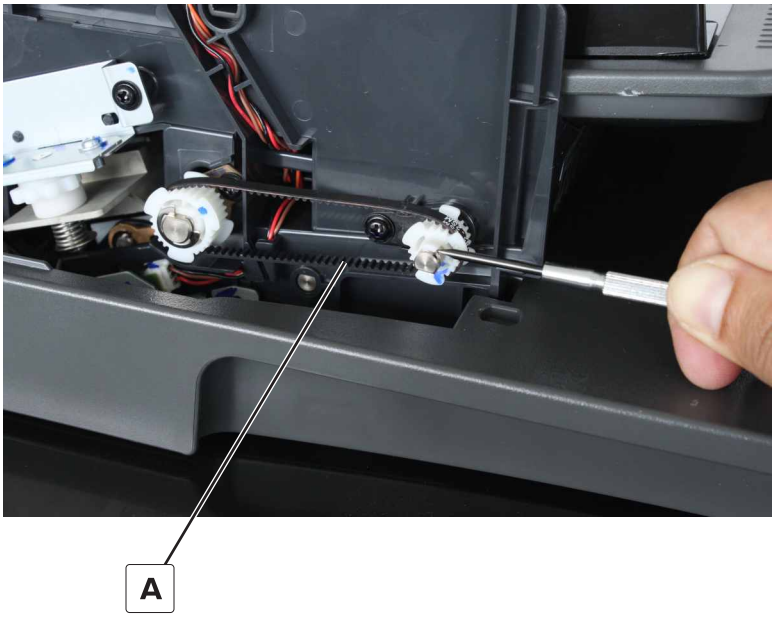


ADF scan/exit roller belt removal

1 Remove the ADF front cover. See **"ADF front cover removal" on page 402**.

2 Pry the latch to release the gear from the shaft.

3 Pull out the gear, and then remove the belt (A).



ADF separator pad removal

1 Open the ADF top cover.

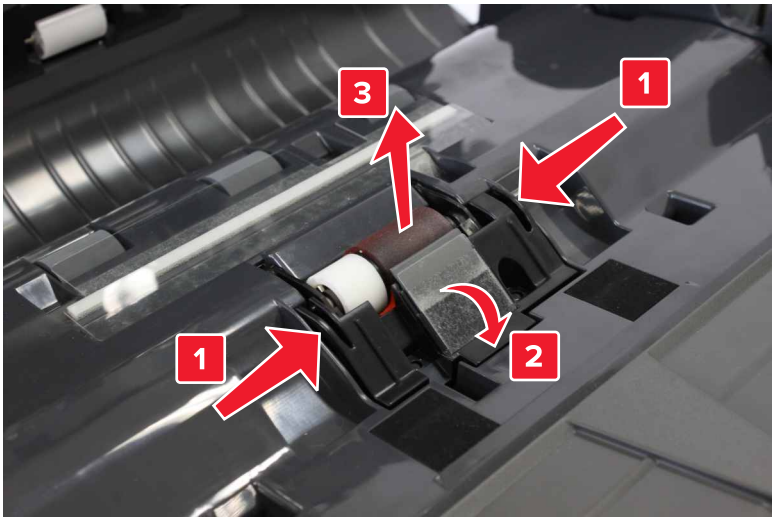
2 Remove the ADF separator pad.

ADF separator roller removal

1 Open the ADF top cover.

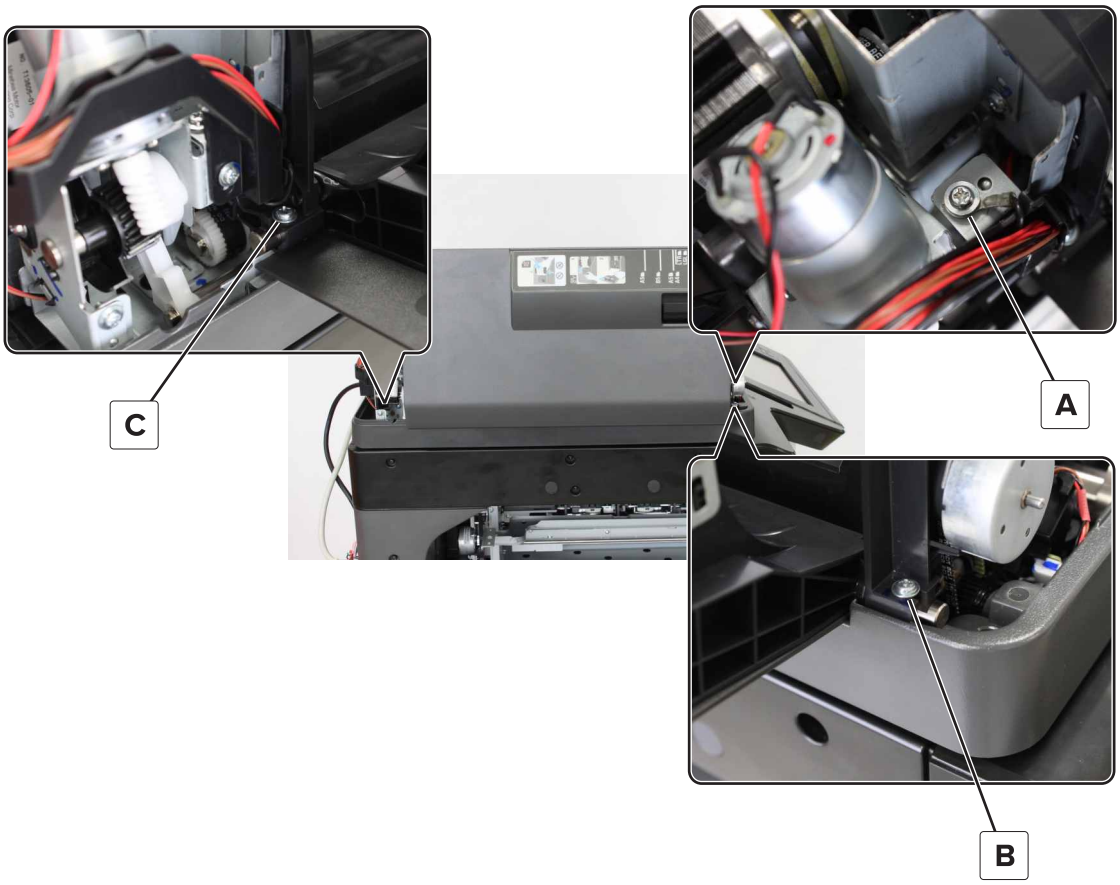
2 Press the sides of the ADF separator pad housing, and then pull to release it.

3 Remove the ADF separator roller.



ADF top cover assembly removal

1. Remove the ADF front cover. See **"ADF front cover removal" on page 402**.
2. Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.
3. Disconnect the J14 cable from the ADF controller board.
4. Remove the ground screw (A) from the rear of the ADF top cover assembly.
5. Remove the screws (B) (C) from the shafts on the front and rear of the ADF top cover assembly, and then remove the shaft.

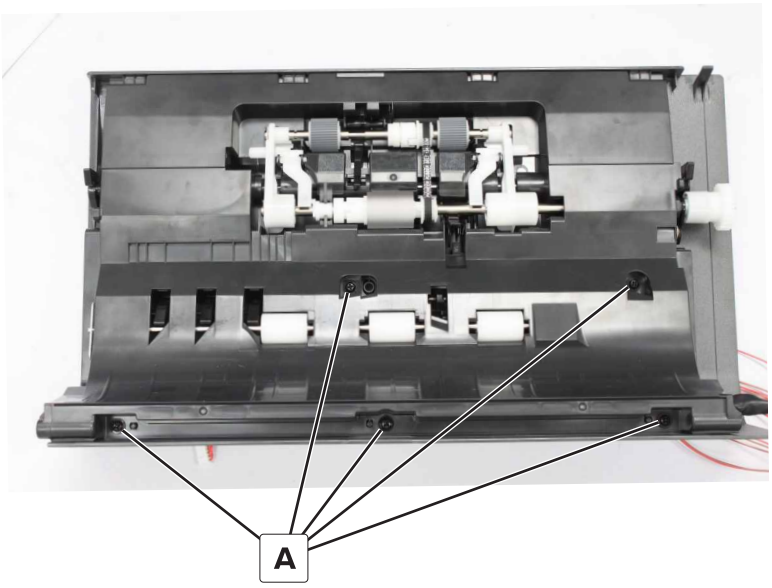


6. Remove the ADF top cover assembly.

ADF top cover removal

1. Remove the ADF front cover. See **"ADF front cover removal" on page 402**.
2. Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.
3. Remove the ADF top cover assembly. See **"ADF top cover assembly removal" on page 413**.

4 Remove the five screws (A), and then remove the ADF top cover.



ADF tray removal

1 Remove the ADF rear cover. See **“ADF rear cover removal” on page 410**.

2 Remove the ADF tray bottom cover. See **“ADF tray bottom cover removal” on page 415**.

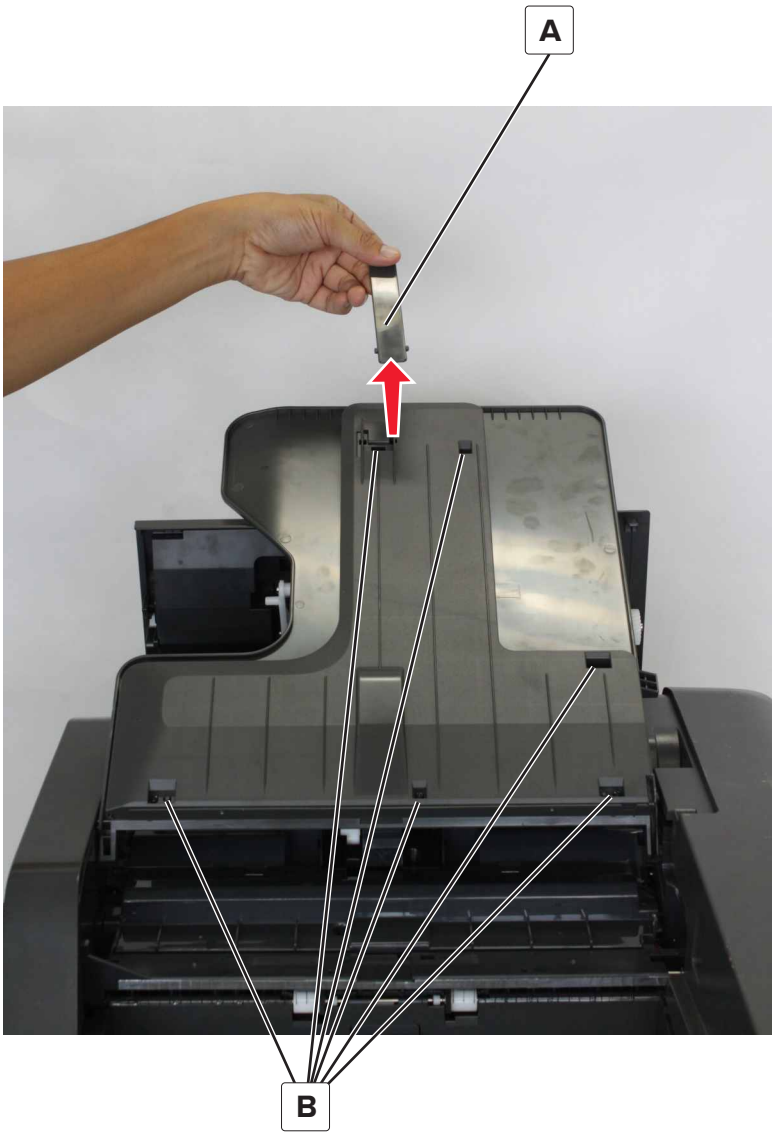
3 Disconnect the input tray cable from the ADF controller board.

4 Raise the ADF tray and hold it upright in a 90-degree angle, and then lift to remove the ADF tray assembly.

ADF tray bottom cover removal

Note: This part is not a FRU.

1 Remove the ADF paper stop (A), and then remove the six screws (B).



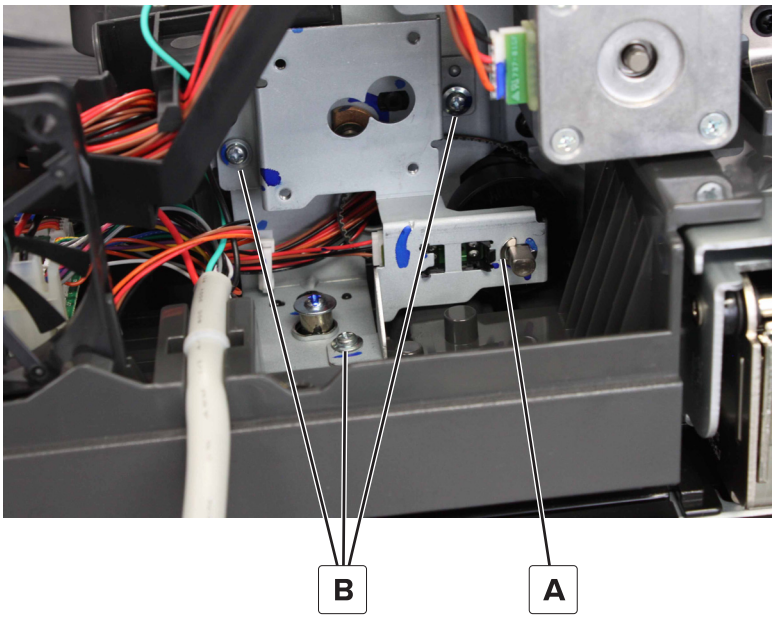
2 Remove the ADF tray bottom cover.

Sensor (ADF CIS clean) removal

1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.

2 Remove the ADF CIS cleaning motor. See **"Motor (ADF CIS clean) removal" on page 431**.

3 Remove the clip (A), and then remove the three screws (B).



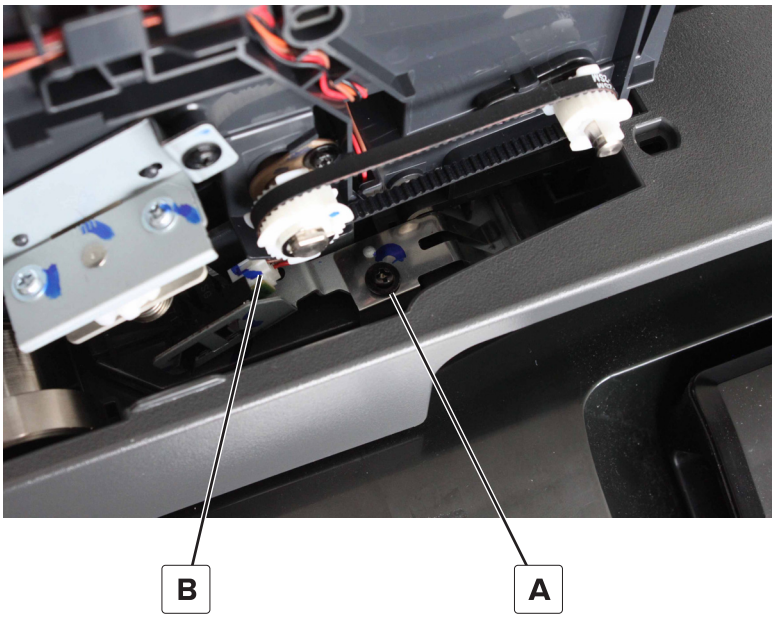
4 Remove the bracket, and then disconnect the cable.

5 Remove the sensor.

Sensor (ADF jam access cover) removal

1 Remove the ADF front cover. See **"ADF front cover removal" on page 402**.

2 Remove the screw (A), and then disconnect the cable (B).

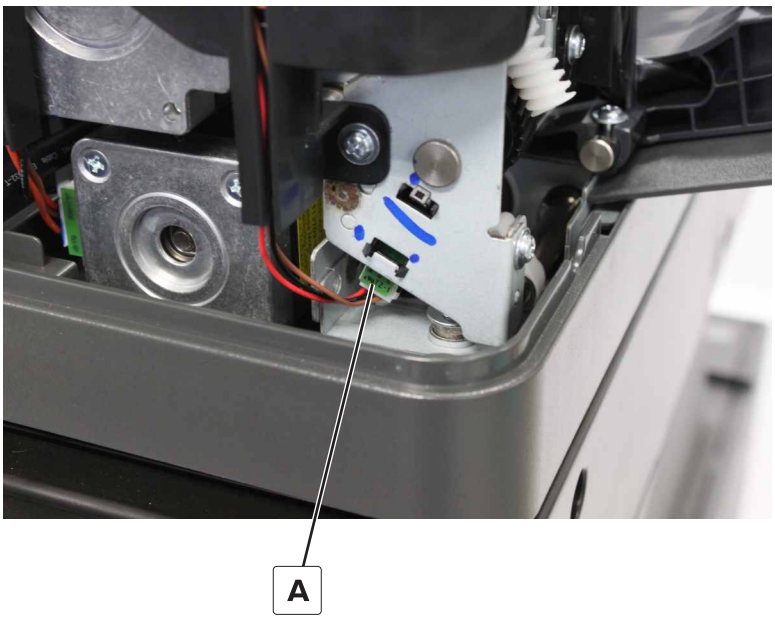


3 Remove the sensor.

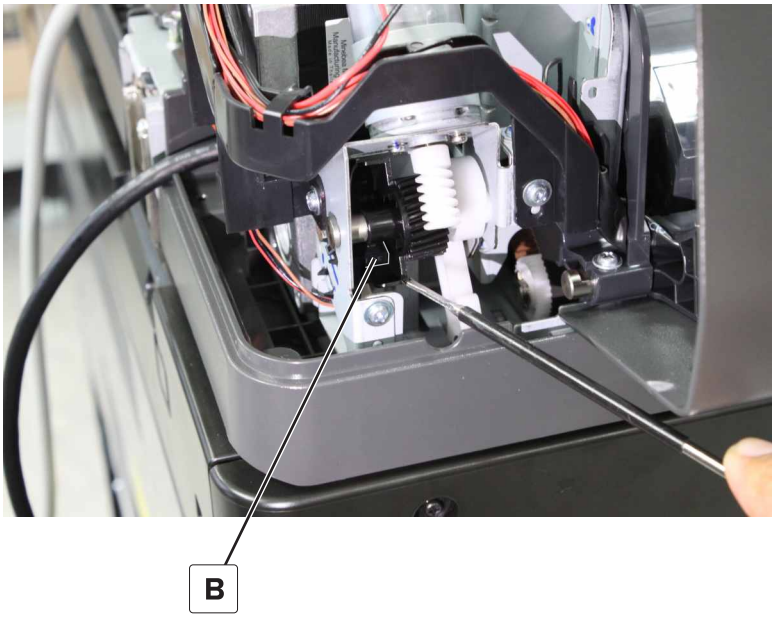
Sensor (ADF scan shaft home) removal

1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.

2 Disconnect the cable (A).



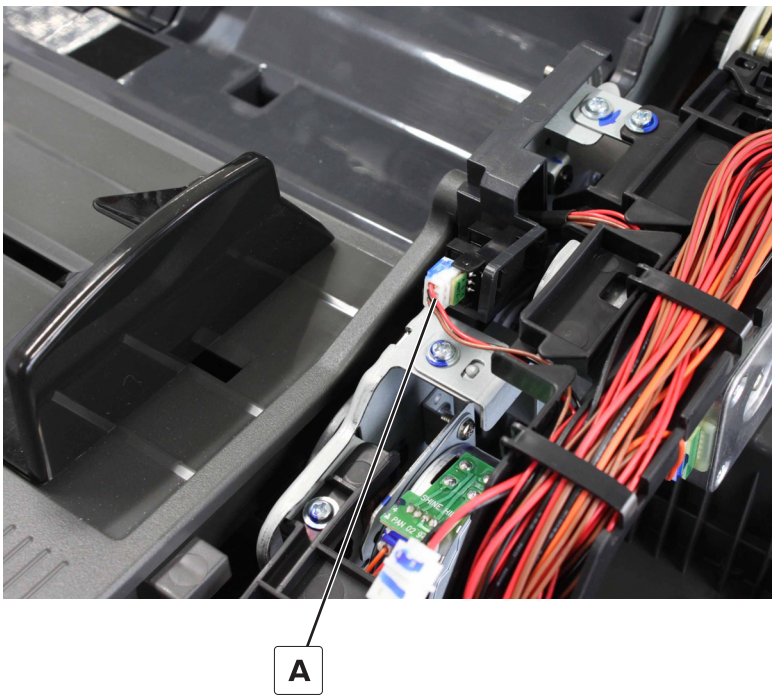
3 Rotate the gear until the sensor (B) is unblocked, and then remove the sensor.



Sensor (ADF top cover open) removal

1 Remove the ADF rear cover. See **“ADF rear cover removal” on page 410**.

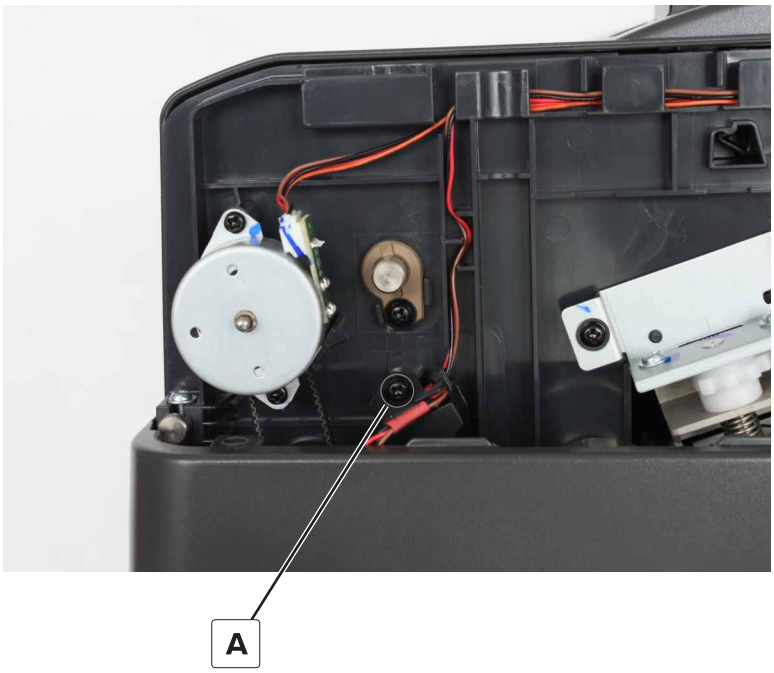
2 Disconnect the cable (A), and then remove the sensor.



Sensor (scan glass clean) removal

1 Remove the ADF front cover. See **“ADF front cover removal” on page 402**.

2 Remove the screw (A).



3 Disconnect the cable, and then remove the sensor.

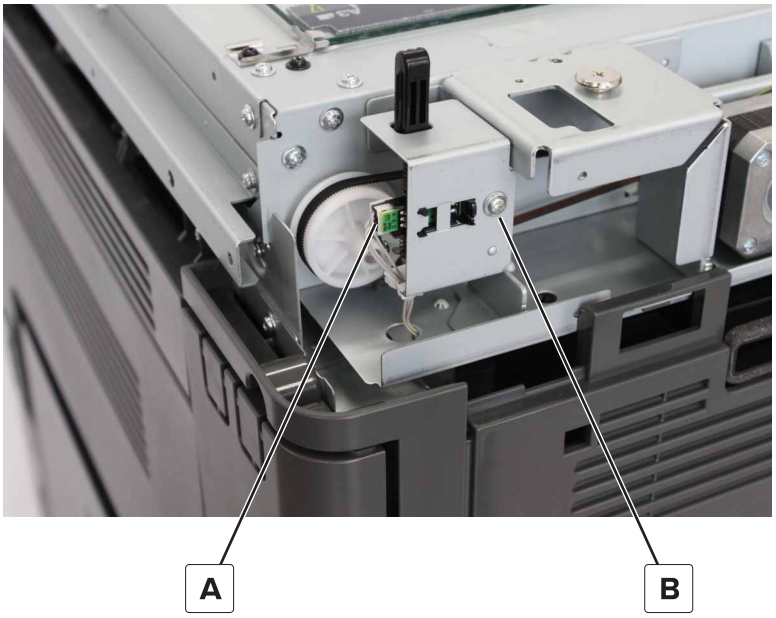
Sensor (scanner cover open) removal

1 Remove the ADF assembly. See **“ADF assembly removal” on page 391**.

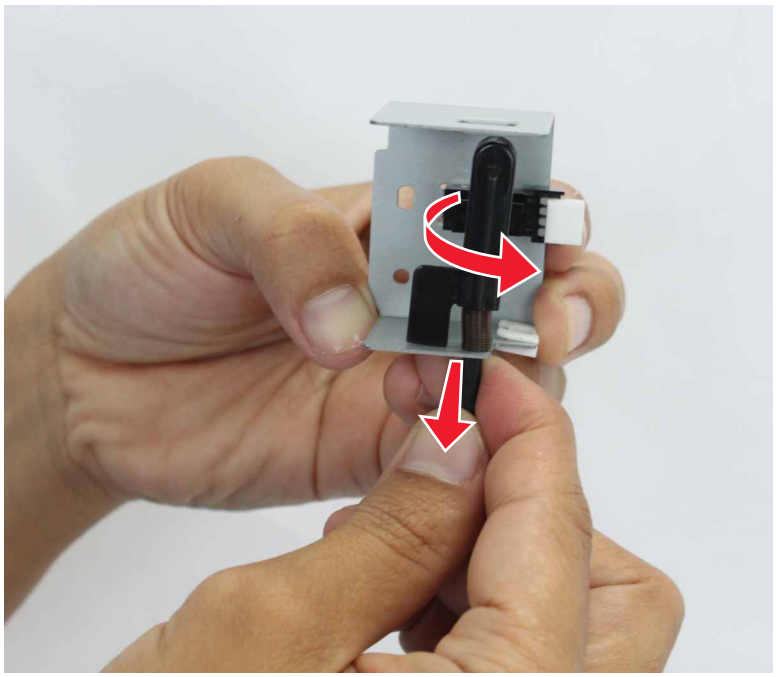
2 Remove the scanner rear cover. See **“Scanner rear cover removal” on page 430**.

3 Remove the scanner top cover. See **“Scanner top cover removal” on page 430**.

4 Disconnect the cable (A), and then remove the screw (B).



5 Remove the actuator.



6 Remove the sensor.

Sensor (scanner cover switch) removal

1 Remove the scanner left cover. See **"Scanner left cover removal" on page 429**.

2 Remove the control panel bottom cover. See **"Control panel bottom cover removal" on page 442**.

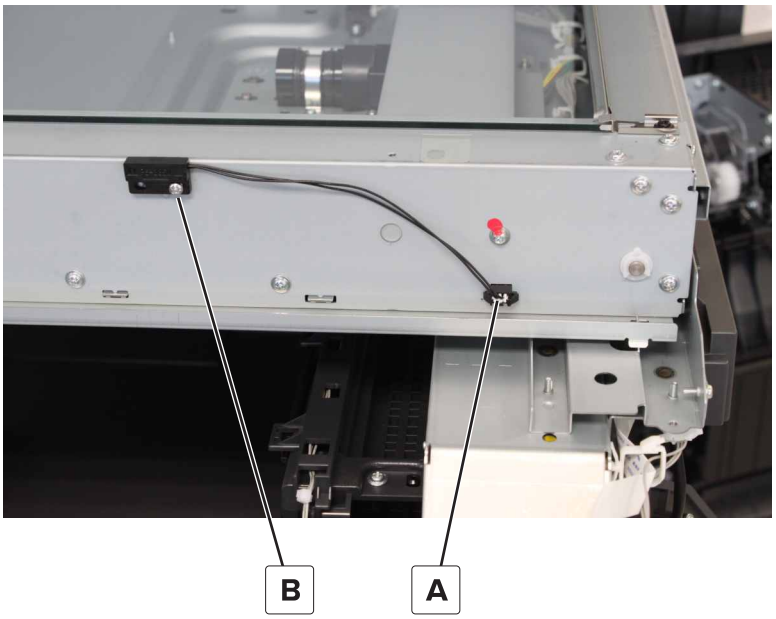
3 Remove the speaker cover. See **"Speaker cover removal" on page 338**.

4 Remove the speaker frame.

5 Remove the control panel. See **"Control panel removal" on page 341**.

6 Remove the control panel base. See **"Control panel base removal" on page 440**.

7 Disconnect the sensor cable (A), and then remove the screw (B) to remove the sensor.

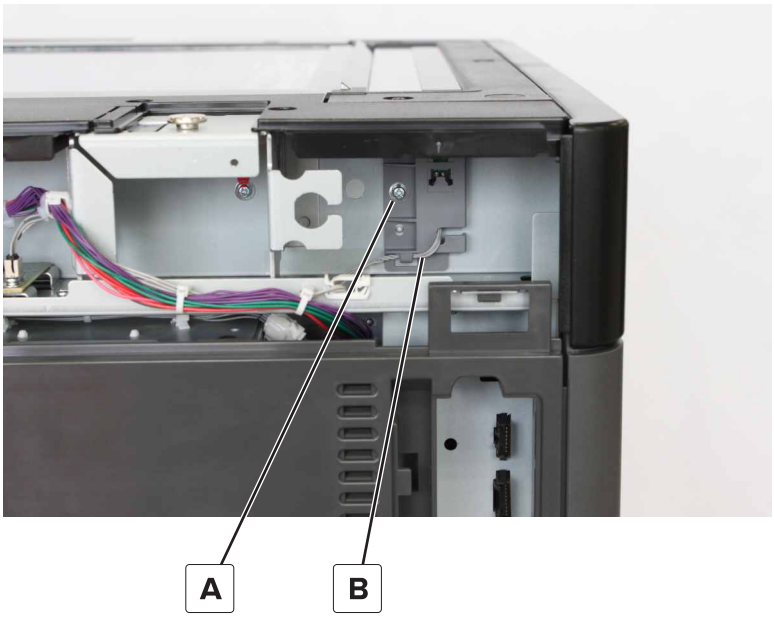


Sensor (scanner lamp home) removal

1 Remove the ADF assembly. See **"ADF assembly removal" on page 391**.

2 Remove the scanner rear cover. See **"Scanner rear cover removal" on page 430**.

3 Remove the screw (A), and then remove the cable (B) from the sensor housing.



4 Disconnect the cable from the sensor.

Sensor (scanner paper length 1) removal

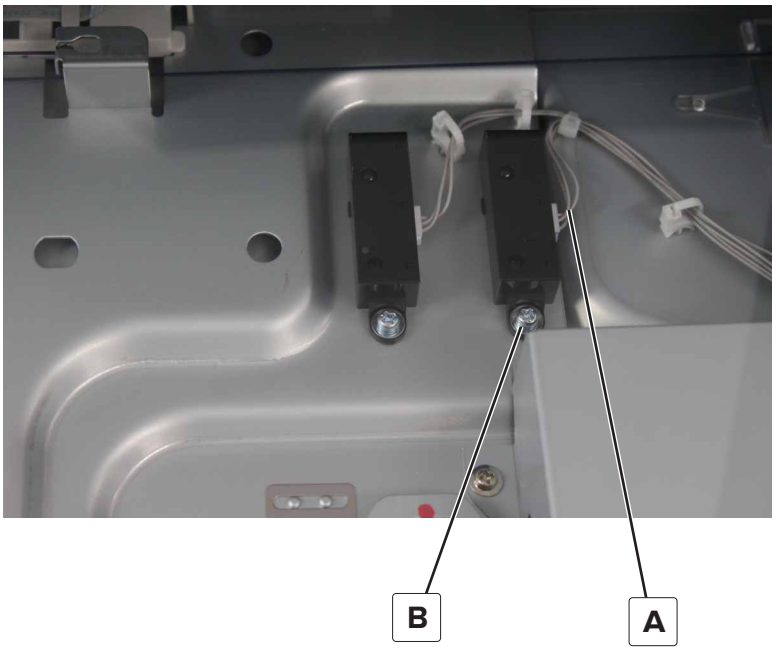
1 Remove the scanner rear cover. See **"Scanner rear cover removal" on page 430**.

2 Remove the scanner top cover. See **"Scanner top cover removal" on page 430**.

3 Remove the scanner right cover. See **"Scanner right cover removal" on page 430**.

4 Remove the scanner glass. See **"Scanner glass removal" on page 428**.

5 Disconnect the cable (A), and then remove the screw (B).



6 Remove the sensor.

Sensor (scanner paper length 2) removal

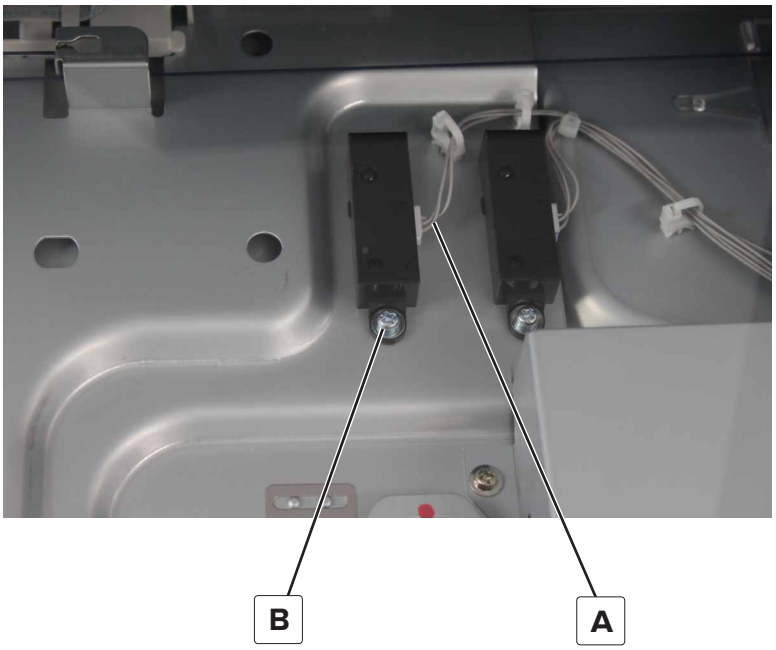
1 Remove the scanner rear cover. See **"Scanner rear cover removal" on page 430**.

2 Remove the scanner top cover. See **"Scanner top cover removal" on page 430**.

3 Remove the scanner right cover. See **"Scanner right cover removal" on page 430**.

4 Remove the scanner glass. See **"Scanner glass removal" on page 428**.

5 Disconnect the cable (A), and then remove the screw (B).



6 Remove the sensor.

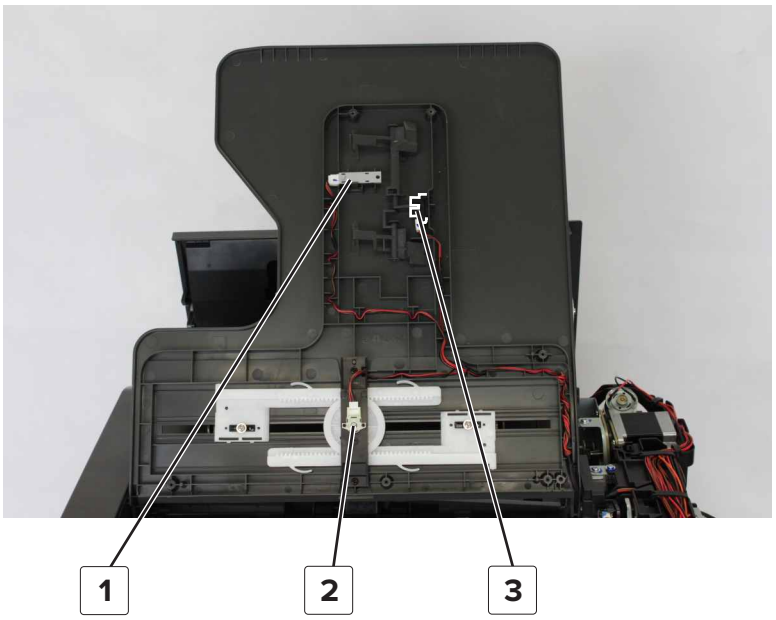
Sensors (ADF tray section) removal

1 Remove the ADF front cover. See **"ADF front cover removal" on page 402**.

2 Remove the ADF tray bottom cover. See **"ADF tray bottom cover removal" on page 415**.

3 Disconnect the cable from the appropriate sensor.

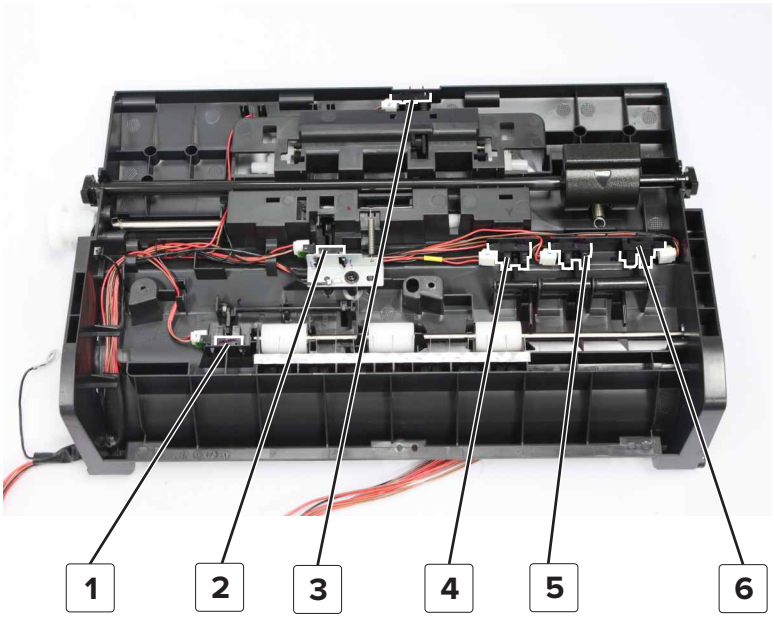
4 Remove the appropriate sensor.



#	Description
1	Sensor (ADF paper length 1)
2	Sensor (ADF paper width)
3	Sensor (ADF paper length 2)

Sensors (ADF top open cover section) removal

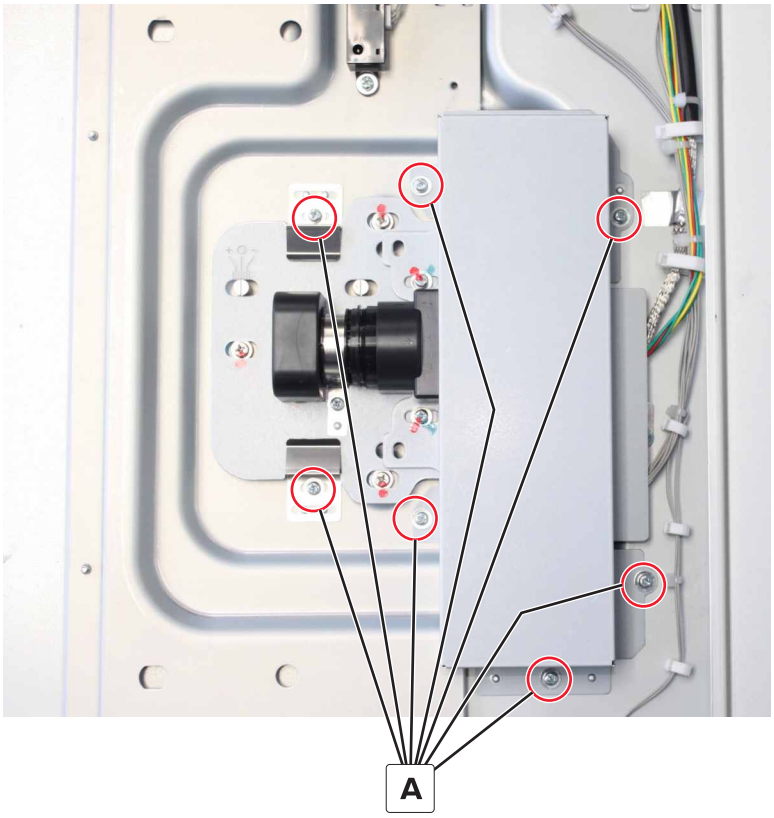
1. Remove the ADF front cover. See **"ADF front cover removal" on page 402**.
2. Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.
3. Remove the ADF top cover assembly. See **"ADF top cover assembly removal" on page 413**.
4. Remove the ADF top cover. See **"ADF top cover removal" on page 413**.
5. Disconnect the cable from the appropriate sensor.
6. Remove the appropriate sensor.



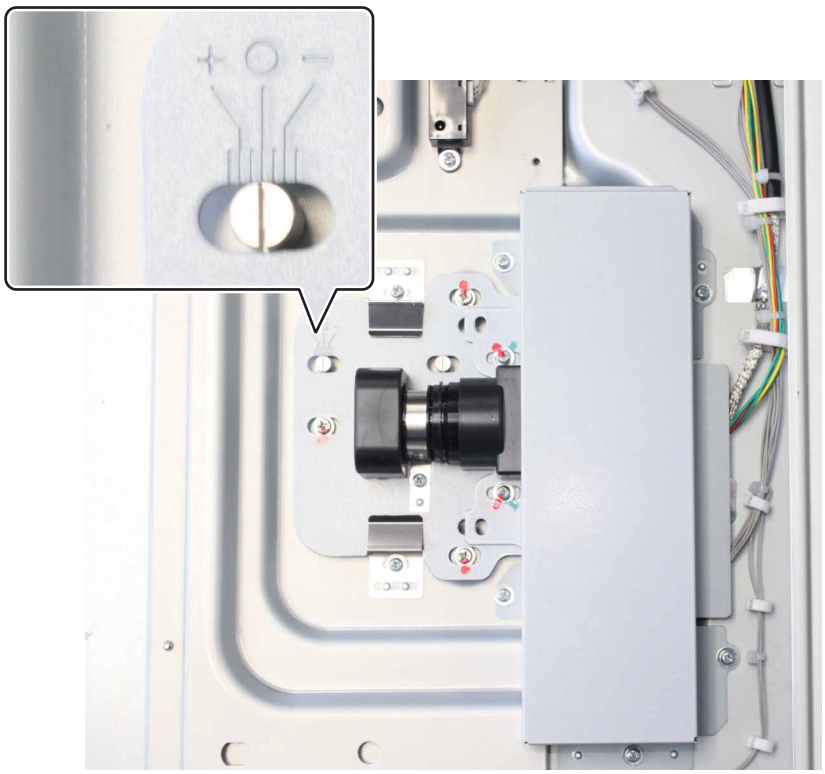
#	Description
1	Sensor (ADF registration)
2	Sensor (ADF document separation)
3	Sensor (ADF tray empty)
4	Sensor (ADF mixed paper width 1)
5	Sensor (ADF mixed paper width 2)
6	Sensor (ADF mixed paper width 3)

Scanner CCD lens assembly removal

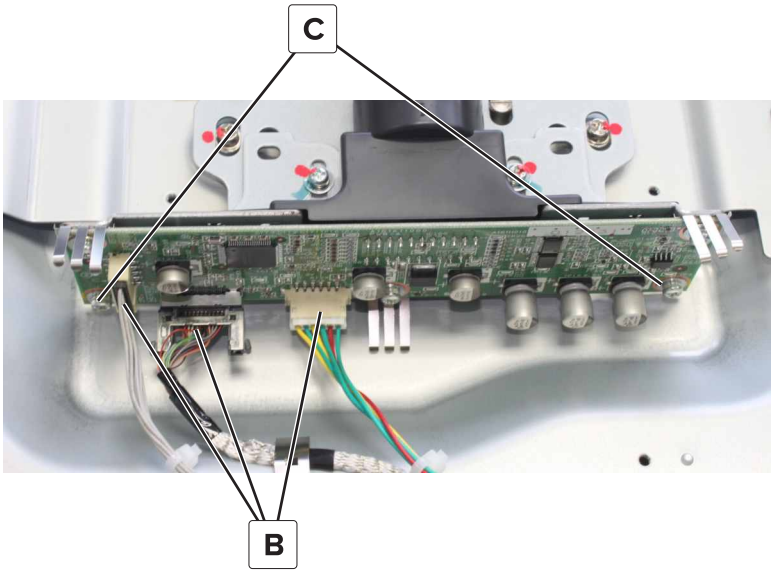
1. Remove the scanner rear cover. See **"Scanner rear cover removal" on page 430**.
2. Remove the scanner top cover. See **"Scanner top cover removal" on page 430**.
3. Remove the scanner right cover. See **"Scanner right cover removal" on page 430**.
4. Remove the scanner glass. See **"Scanner glass removal" on page 428**.
5. Remove the seven screws (A).



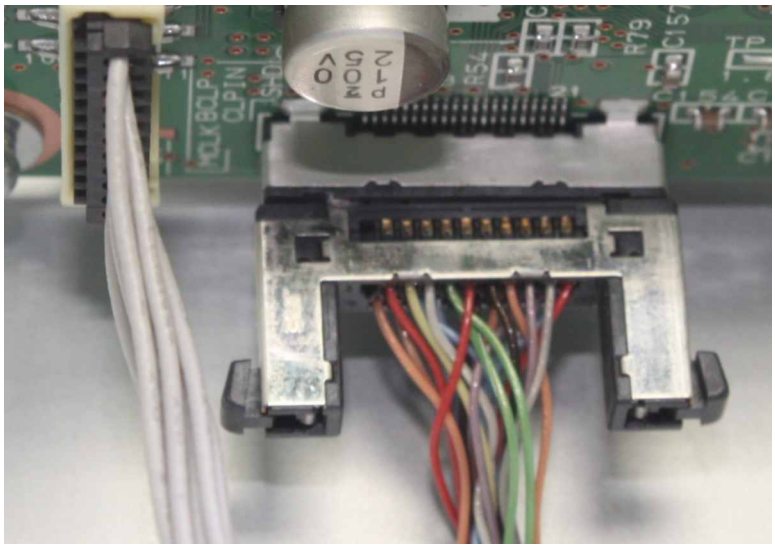
Note: Pay attention to the alignment setting.



6 Disconnect the three cables (B), and then remove the two screws (C).



Installation note: Make sure to reinstall the scanner CCD cable with its metal component facing up.



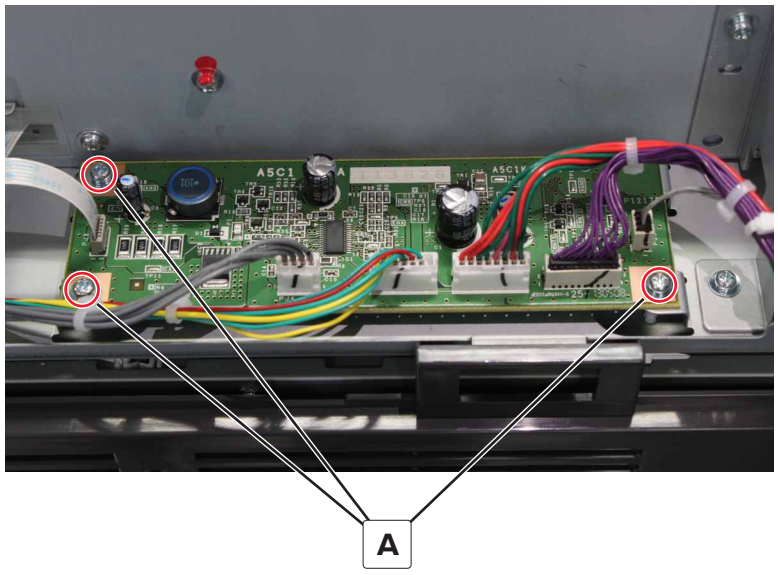
7 Remove the scanner CCD lens assembly.

Scanner controller board removal

1 Remove the ADF assembly. See "ADF assembly removal" on page 391.

2 Remove the scanner rear cover. See "Scanner rear cover removal" on page 430.

3 Disconnect the connectors, and then remove the three screws (A).



4 Remove the board.

Scanner glass removal

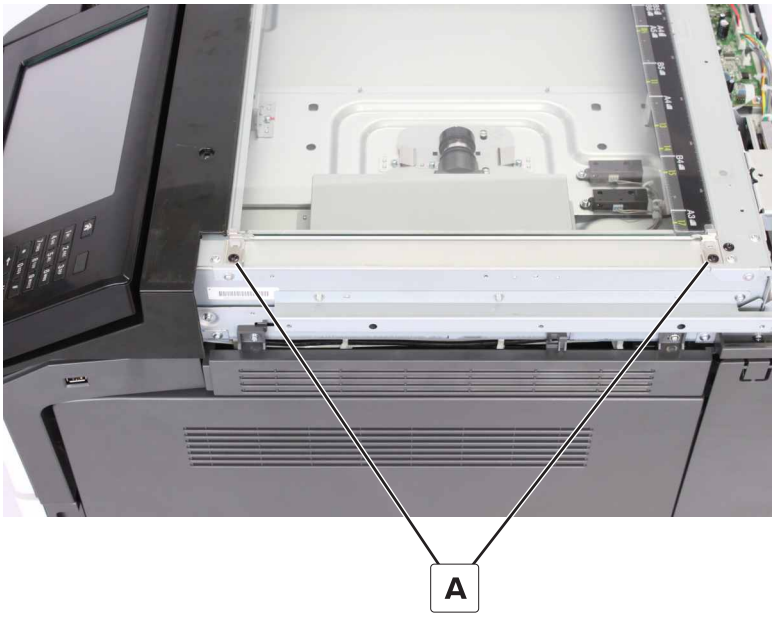
1 Remove the ADF assembly. See "ADF assembly removal" on page 391.

2 Remove the scanner rear cover. See "Scanner rear cover removal" on page 430.

3 Remove the scanner top cover. See **"Scanner top cover removal" on page 430**.

4 Remove the scanner right cover. See **"Scanner right cover removal" on page 430**.

5 Remove the two screws (A), and then remove the scanner glass retainers.

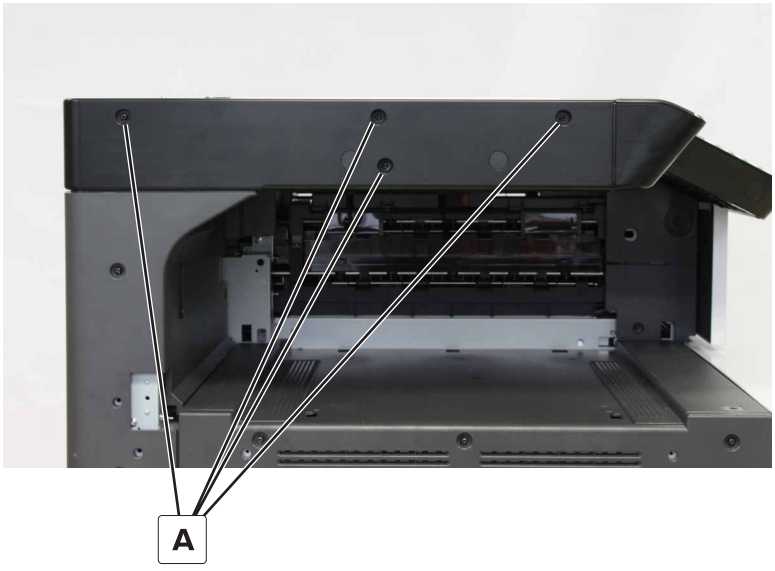


6 Gently slide out the scanner glass.

Scanner left cover removal

1 Open the ADF.

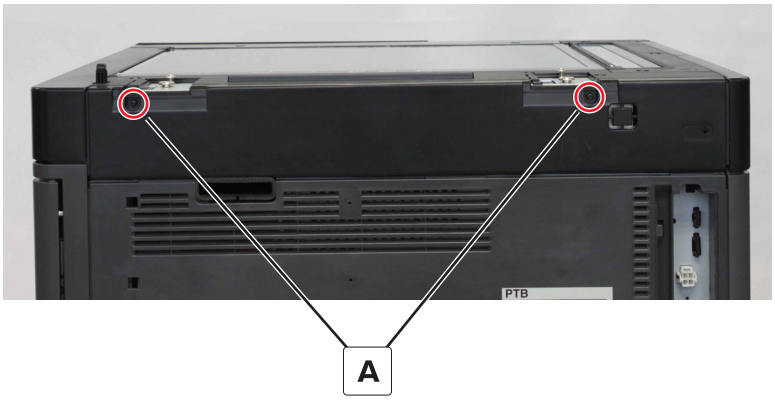
2 Remove the four screws (A).



3 Slide back the cover to remove.

Scanner rear cover removal

1 Remove the two screws (A).

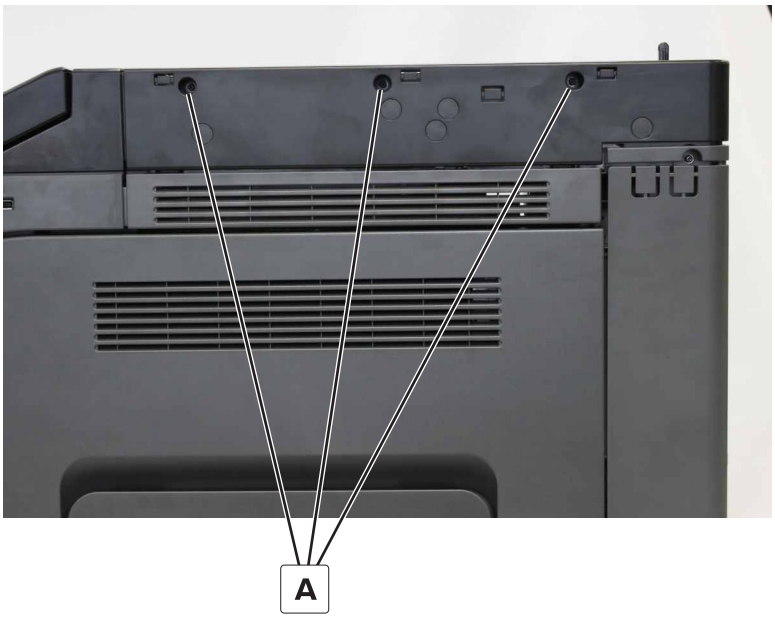


2 Remove the cover.

Scanner right cover removal

1 Open the ADF.

2 Remove the three screws (A), and then remove the scanner right cover.

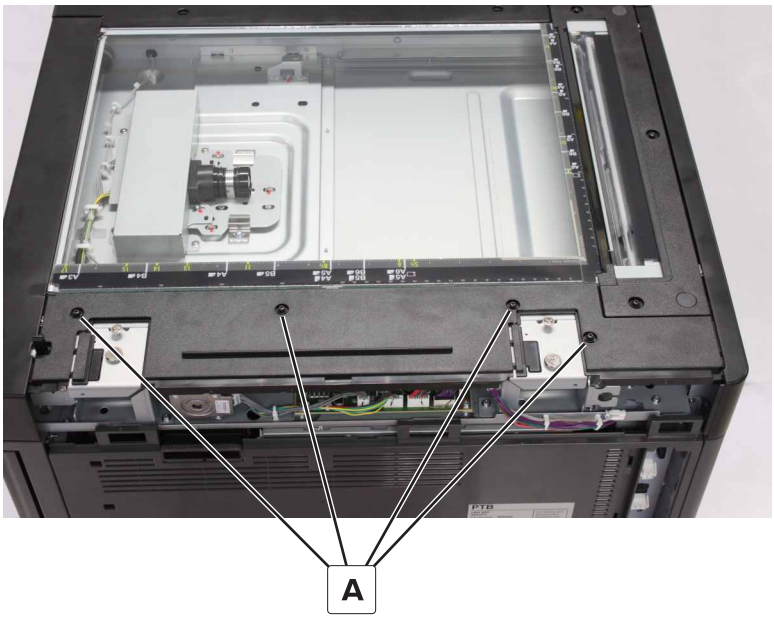


Scanner top cover removal

1 Remove the ADF assembly. See **"ADF assembly removal" on page 391**.

2 Remove the scanner rear cover. See **"Scanner rear cover removal" on page 430**.

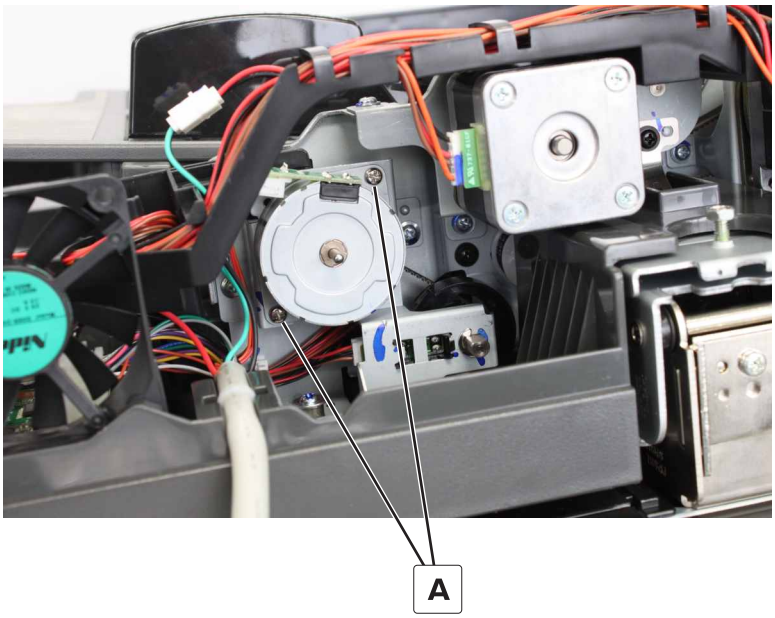
3 Remove the four screws (A), and then remove the scanner top cover.



Motor (ADF CIS clean) removal

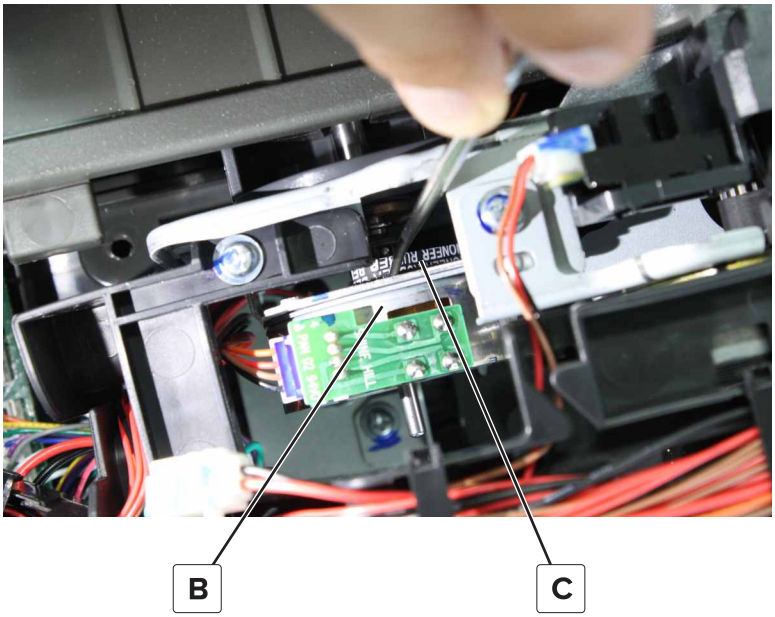
1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.

2 Remove the two screws (A).



3 Release the motor (B) from the motor belt (C).

Note: Use a spring hook.

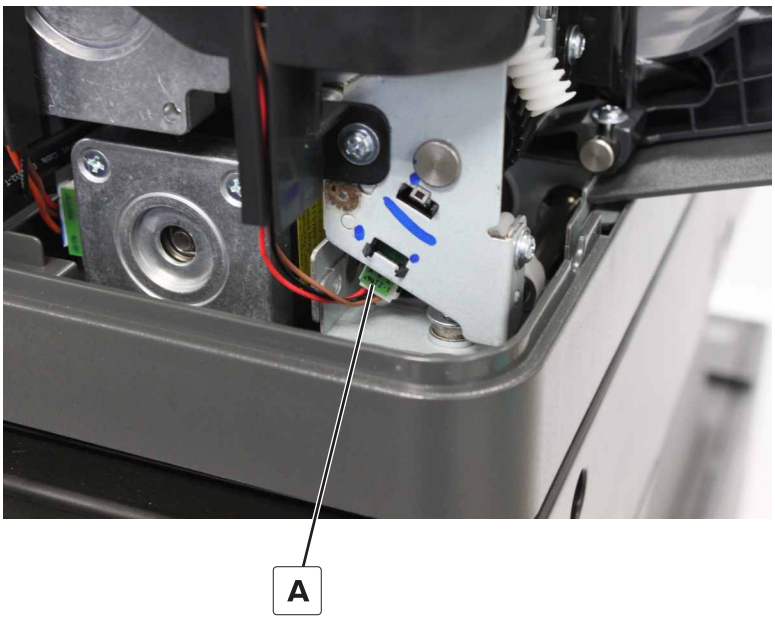


4 Disconnect the cable from the motor, and then remove the motor.

Motor (ADF scan shaft release) removal

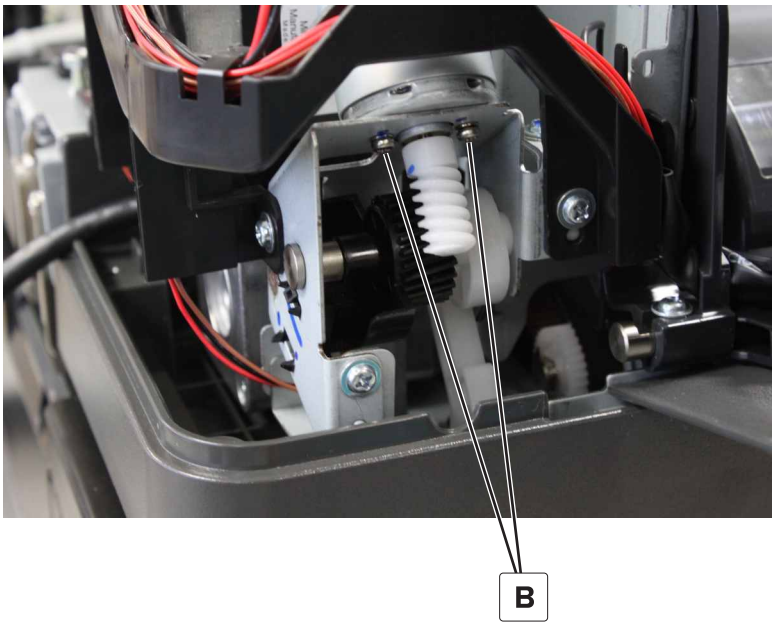
1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.

2 Disconnect the cable (A) from the ADF scan shaft home sensor.

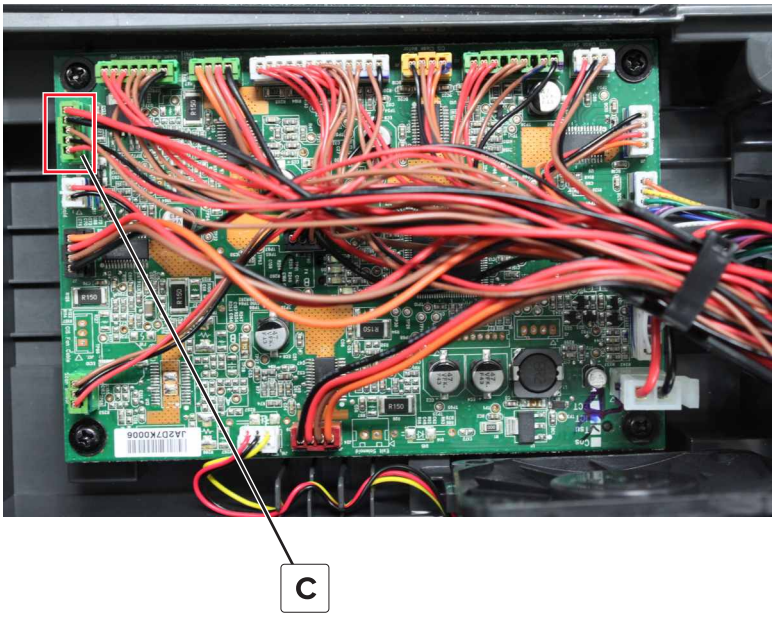


3 Remove the two screws (B).

Note: Use a #1 Phillips screwdriver.



4 Disconnect the J18 cable (C).



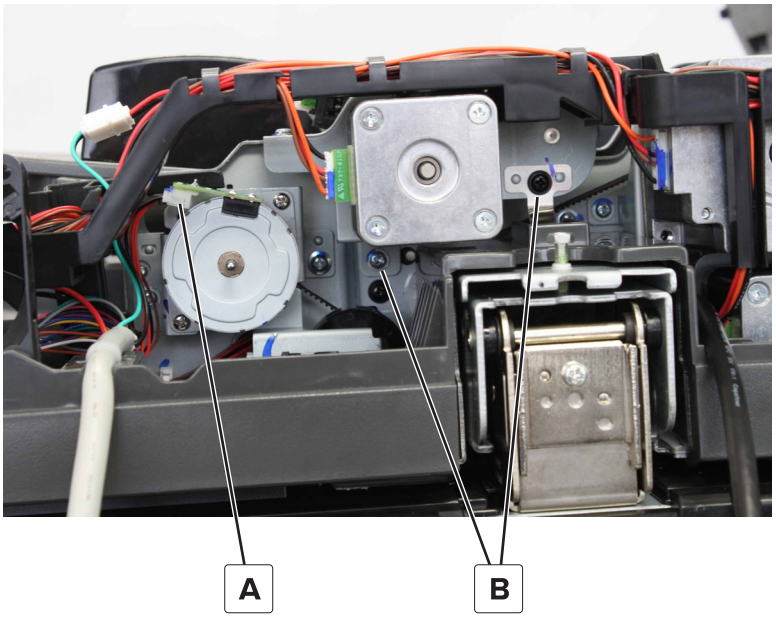
5 Remove the J18 cable (C) from the cable harness, and then remove the motor.

Motor (ADF feed) removal

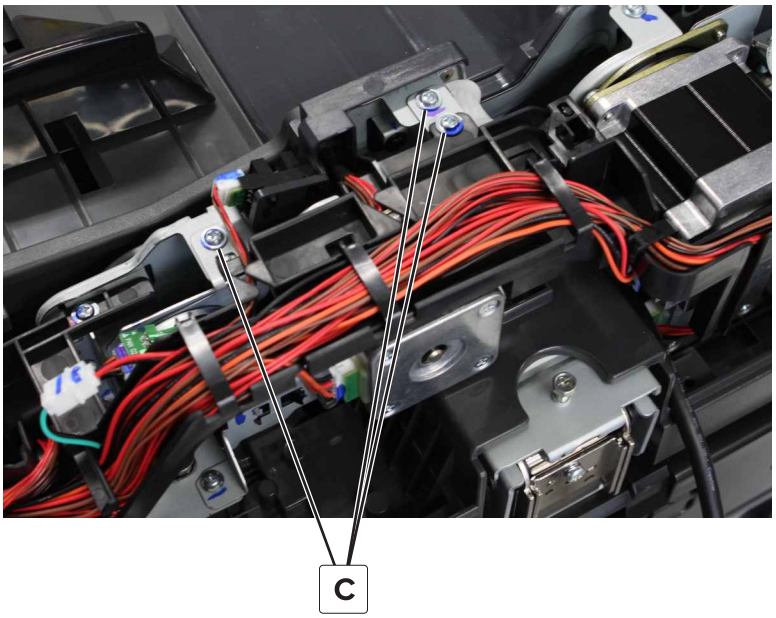
1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.

2 Disconnect the feed motor cable (A), and then remove the two screws (B).

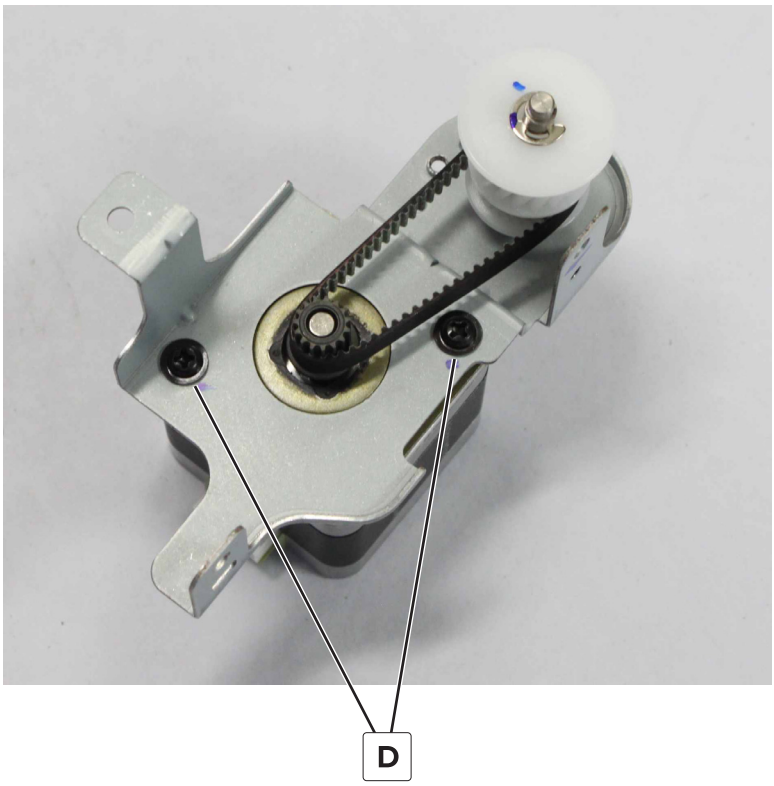
Note: Do not to lose the ground plate.



3 Remove the three screws (C), and then remove the motor.



4 Remove the two screws (D), and then remove the motor from the bracket.



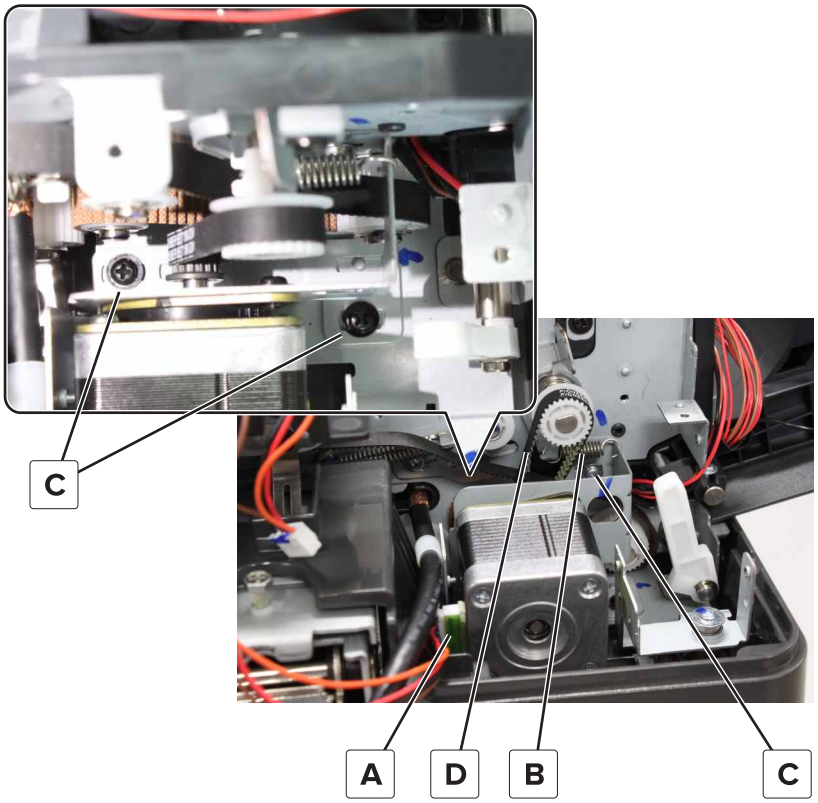
Motor (ADF scan) removal

1 Remove the ADF rear cover. See **“ADF rear cover removal” on page 410**.

2 Remove the motor (ADF registration). See **“Motor (ADF registration) removal” on page 436**.

3 Disconnect the cable (A), and then remove the spring (B).

4 Remove the three screws (C), and then remove the belt (D).



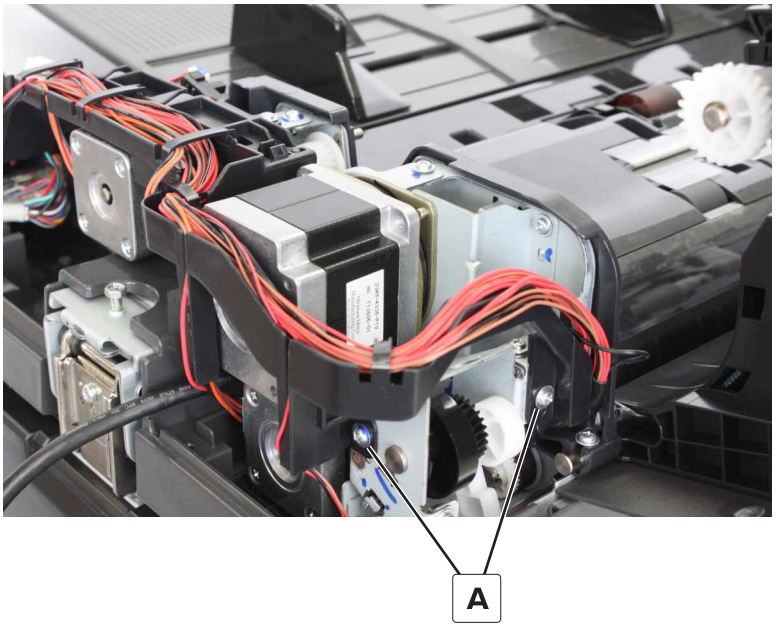
5 Remove the motor from the ADF, and then remove the motor from the bracket.

Motor (ADF registration) removal

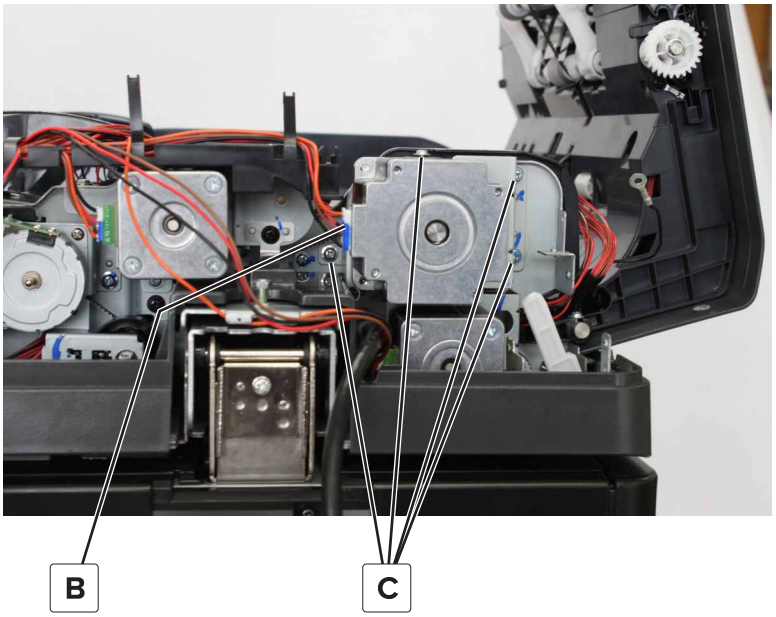
1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 410**.

2 Remove the motor (ADF scan shaft release). See **"Motor (ADF scan shaft release) removal" on page 432**.

3 Remove the two screws (A), and then remove the cable harness.



4 Disconnect the cable (B), and then remove the four screws (C).

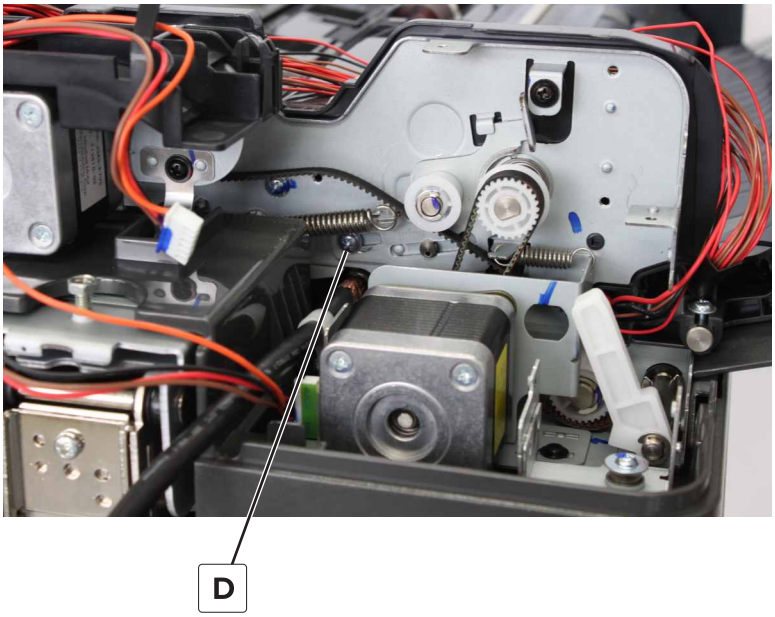


5 Remove the motor from the ADF.

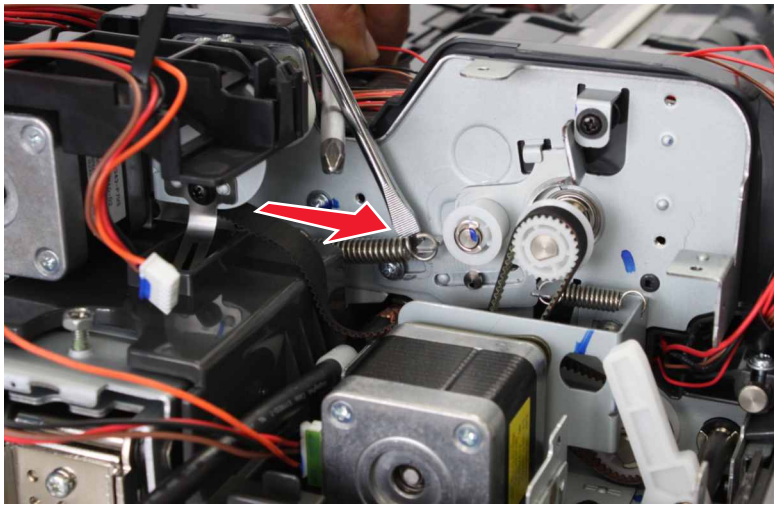
6 Remove the motor from its bracket.

Installation notes:

a Loosen the screw (D).

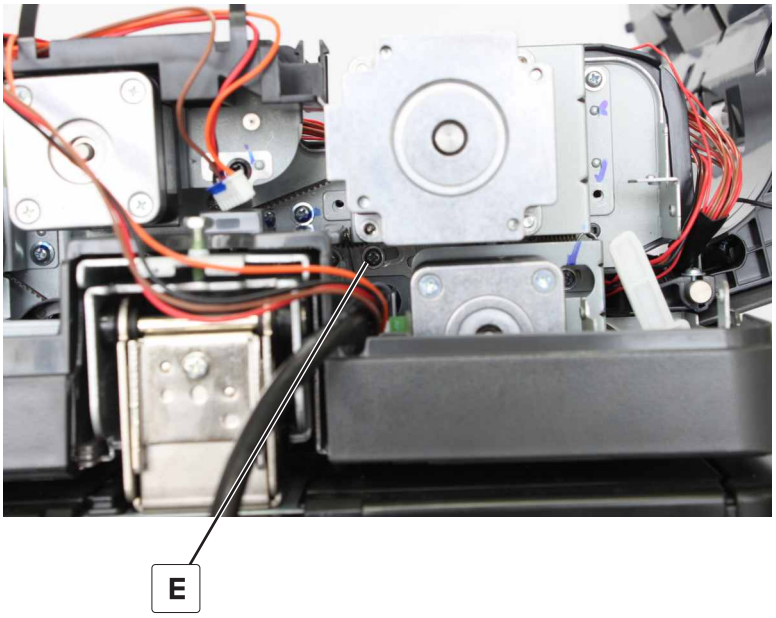


b Use a flat-head screw driver to push the spring towards the left of the ADF, and then retighten the screw.



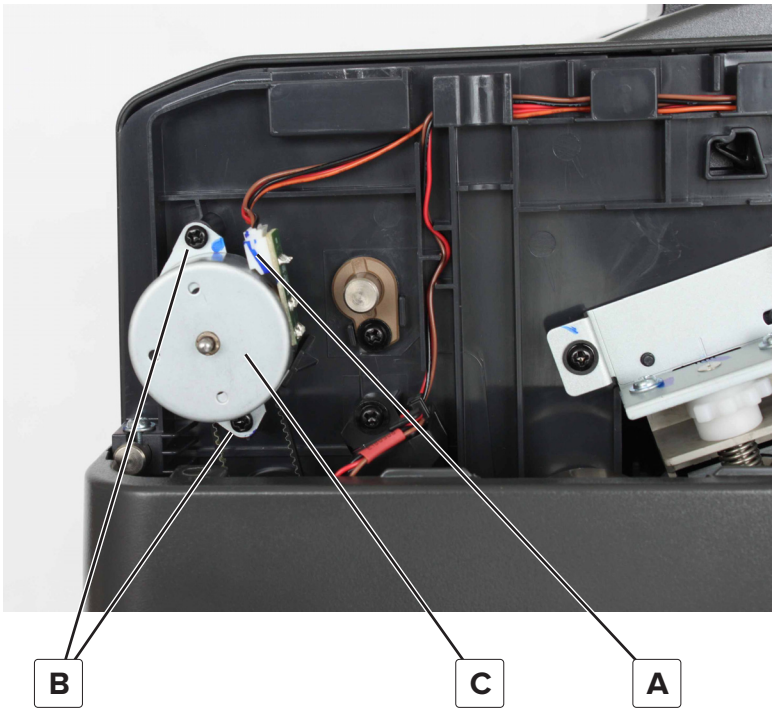
c Replace the motor, and then loosen the screw to engage the belt onto the motor.

d Tighten the screw (E) to secure the belt onto the motor.



Motor (CIS glass clean) removal

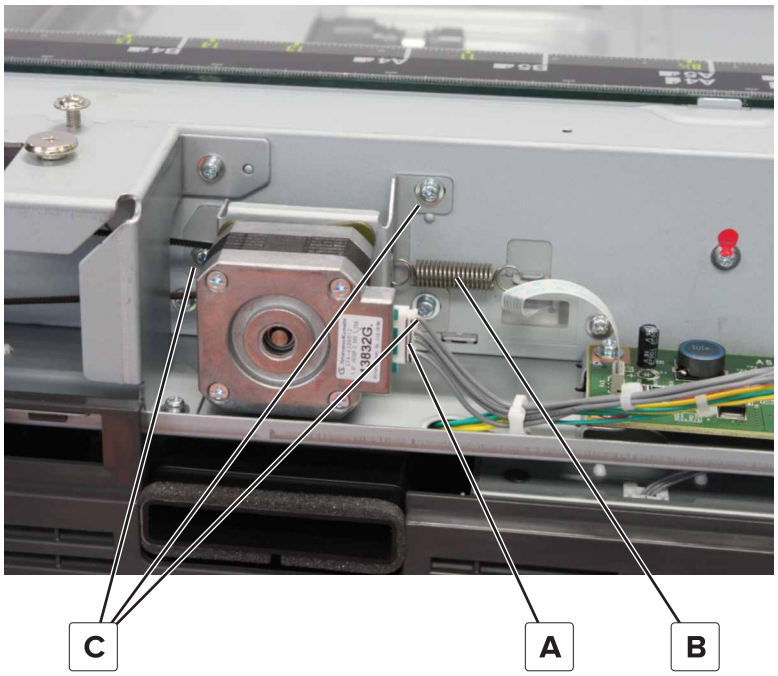
1. Remove the ADF front cover. See **"ADF front cover removal" on page 402**.
2. Disconnect the cable (A), and then remove the two screws (B).
3. Remove the motor (C).



Motor (scanner drive) removal

Note: Make sure to perform scanner carriage belt adjustment after replacing the motor (scanner drive). See **"Scanner carriage belt adjustment" on page 267**.

1. Remove the ADF assembly. See **"ADF assembly removal" on page 391**.
2. Remove the scanner rear cover. See **"Scanner rear cover removal" on page 430**.
3. Disconnect the cable (A), remove the spring (B), and then remove the three screws (C).

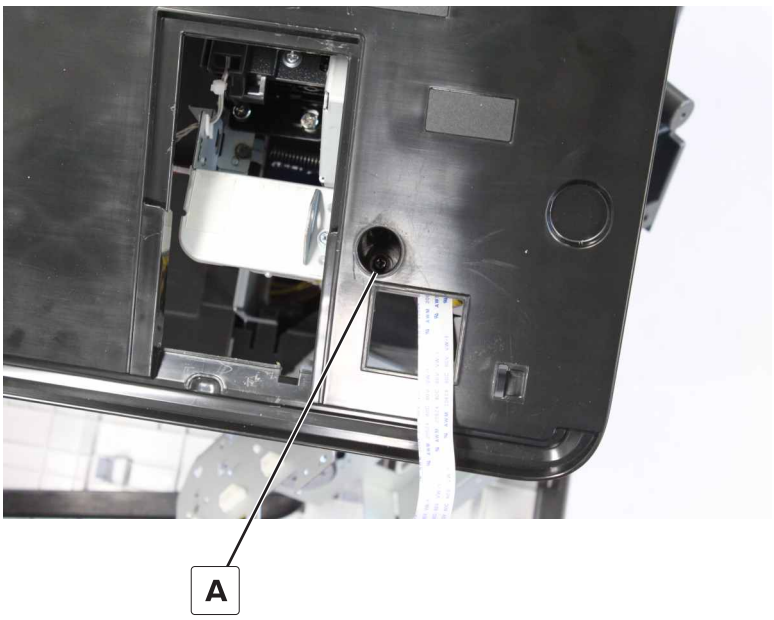


4. Remove the motor.

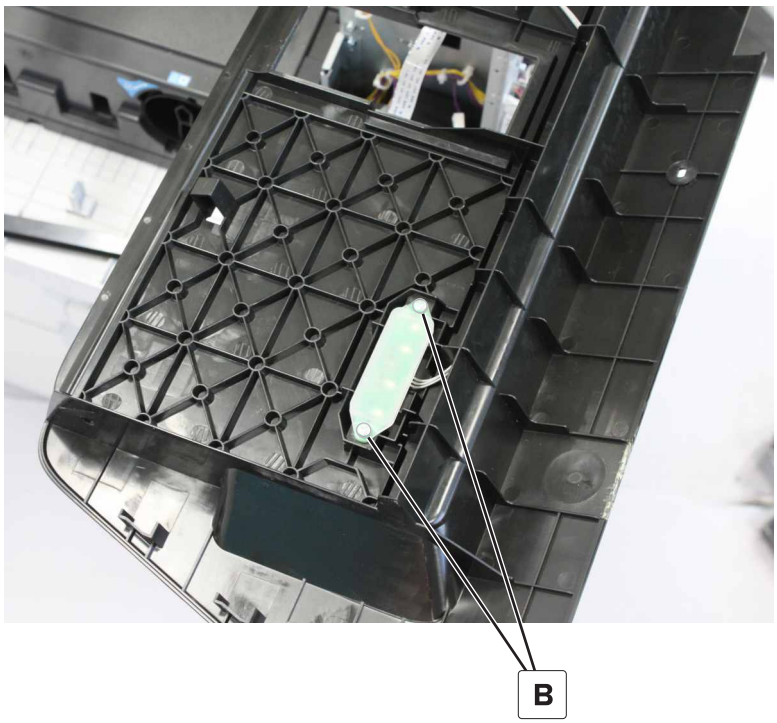
Control panel base removal

1. Remove the control panel bottom cover. See **"Control panel bottom cover removal" on page 442**.
2. Remove the speaker cover. See **"Speaker cover removal" on page 338**.
3. Remove the speaker frame.
4. Remove the control panel. See **"Control panel removal" on page 341**.

5 Remove the screw (A), and then detach the scanner front cover.



6 Remove the two screws (B), and then disconnect the cable from the cave light PCB.

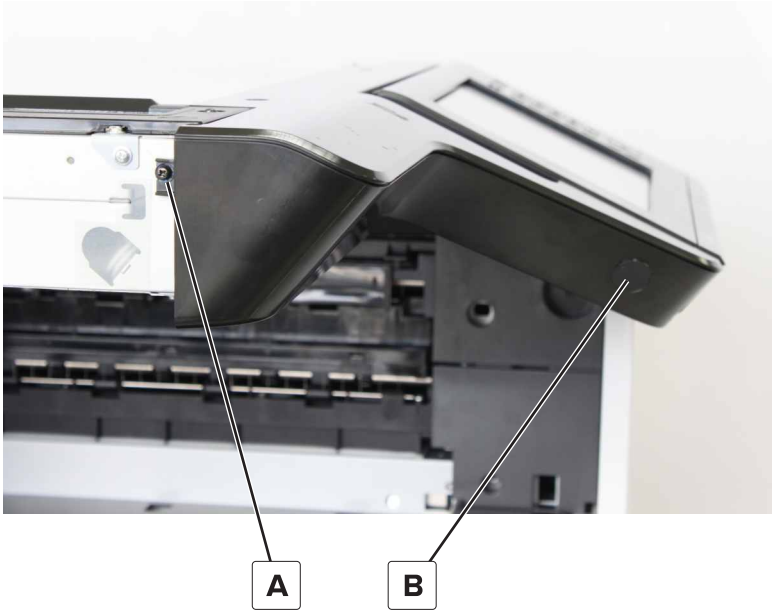


7 Remove the cave light, and then remove the cable from the control panel base.

Control panel bottom cover removal

1 Remove the scanner left cover. See **"Scanner left cover removal" on page 429**.

2 Remove the screw (A), peel off the screw cover (B), and then remove the second screw.



3 Slide the cover left to remove.

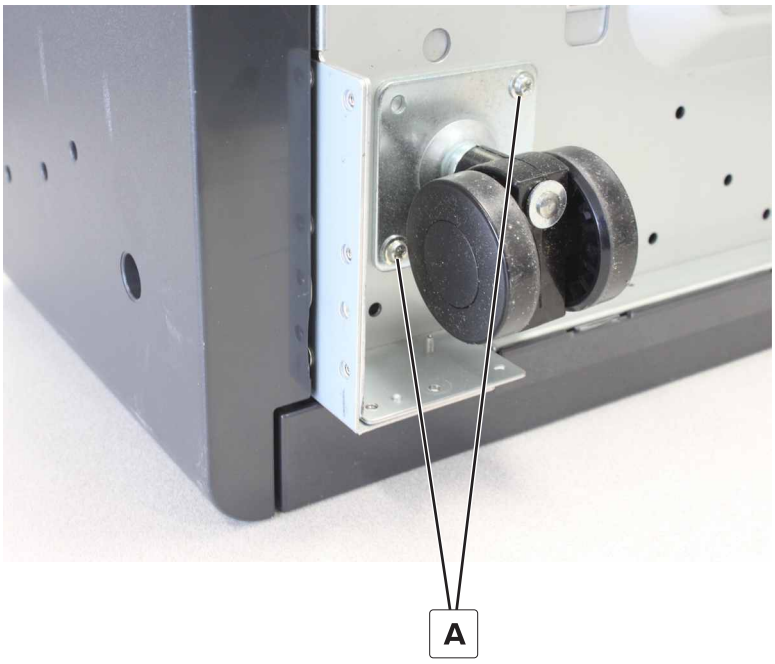
2500-sheet tray removals

2500-sheet tray caster wheel removal

1 Position the tray on its side.

2 Select a caster.

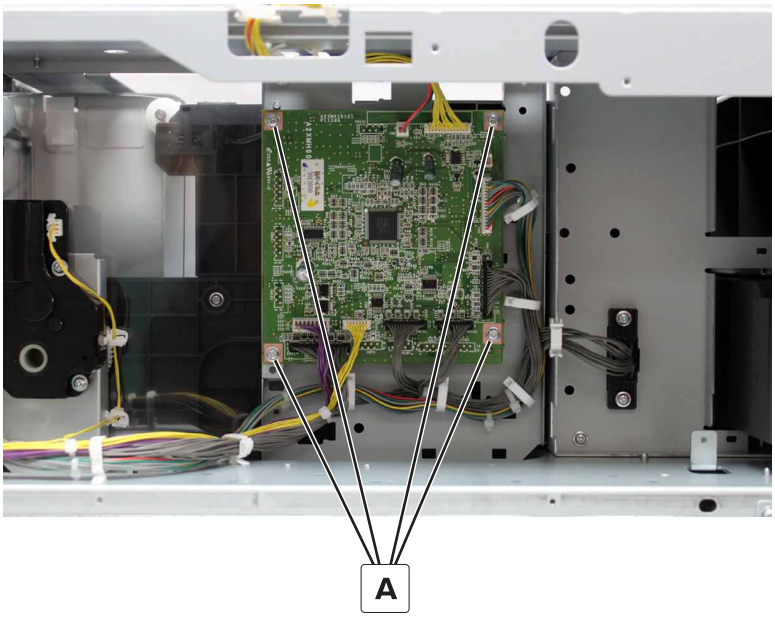
3 Remove the two screws (A), and then remove the caster.



2500-sheet tray controller board removal

1 Remove the tray rear cover. See **"2500-sheet tray rear cover removal" on page 446**.

2 Disconnect the cables, and then remove the four screws (A).

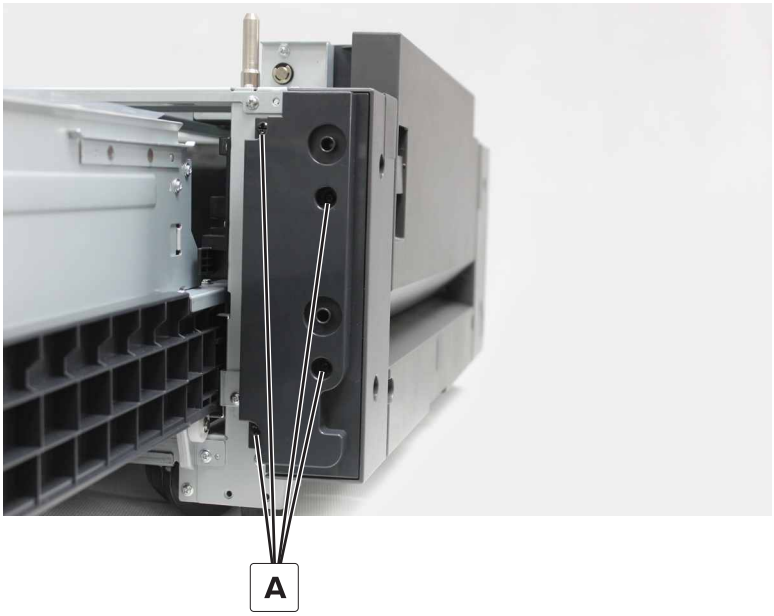


3 Remove the controller board.

2500-sheet tray LED cover removal

1 Open the tray.

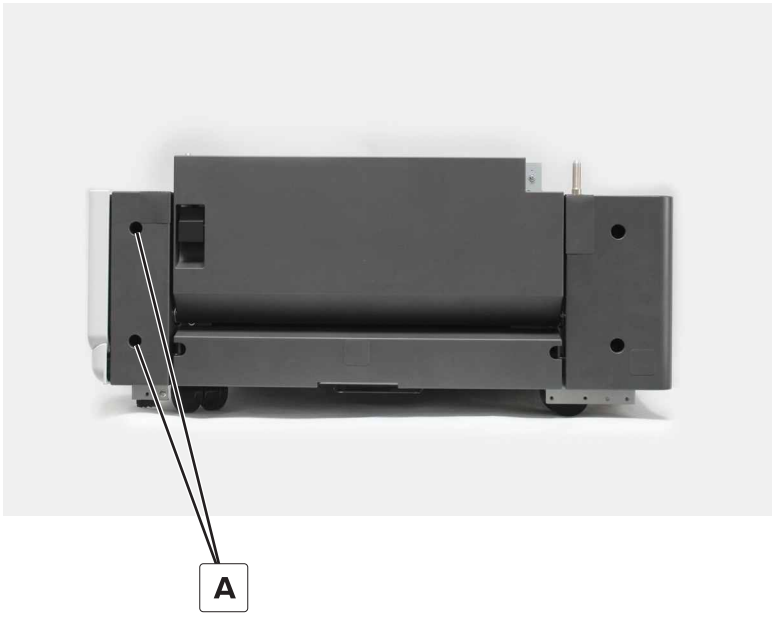
2 Remove the four screws (A), and then remove the cover.



2500-sheet tray front right cover removal

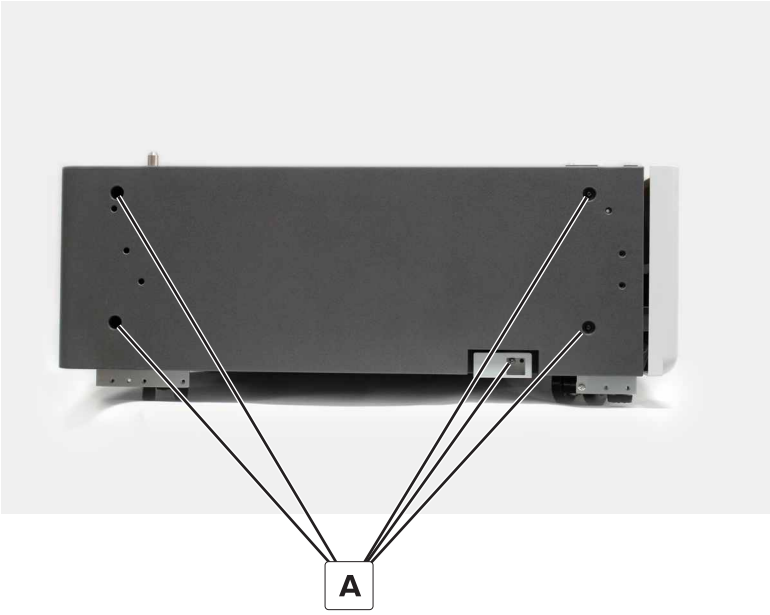
1 Remove the 2500-sheet tray LED cover. See **"2500-sheet tray LED cover removal" on page 444**.

2 Remove the two screws (A), and then remove the cover.



2500-sheet tray left cover removal

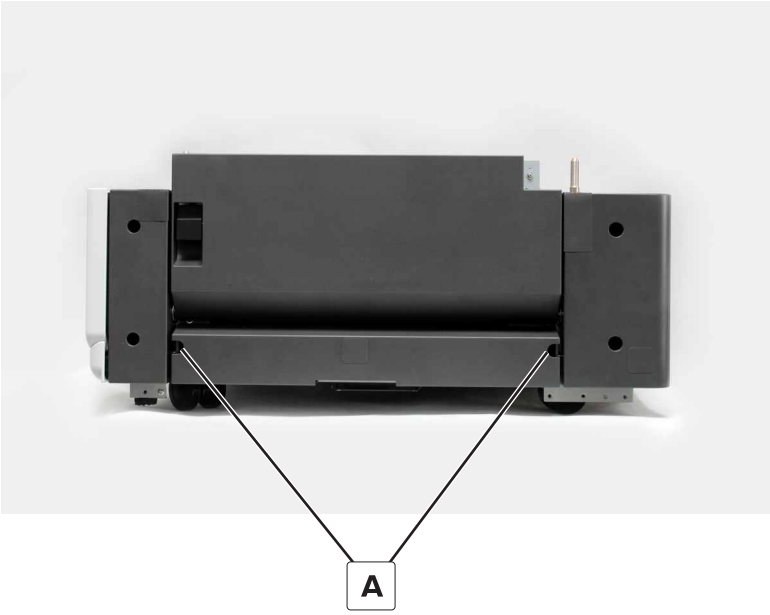
1 Remove the five screws (A).



2 Remove the cover.

2500-sheet tray lower right cover removal

1 Remove the two screws (A).

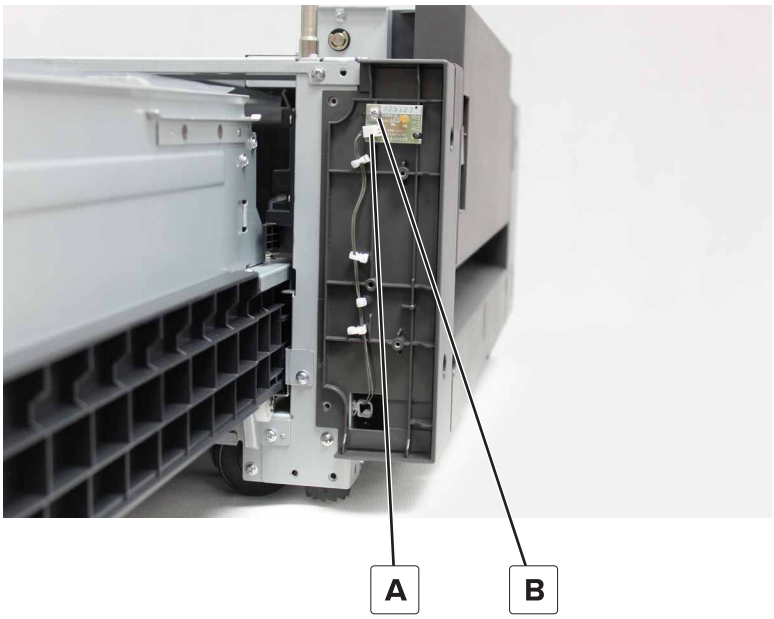


2 Remove the cover.

2500-sheet tray empty LED removal

1 Remove the 2500-sheet tray LED cover. See **"2500-sheet tray LED cover removal" on page 444**.

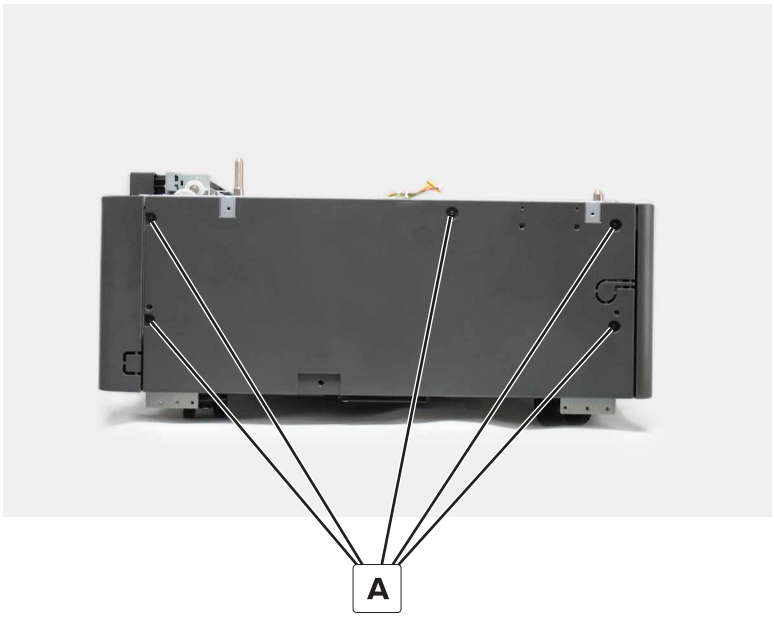
2 Disconnect the cable (A), and then remove the screw (B).



3 Remove the LED.

2500-sheet tray rear cover removal

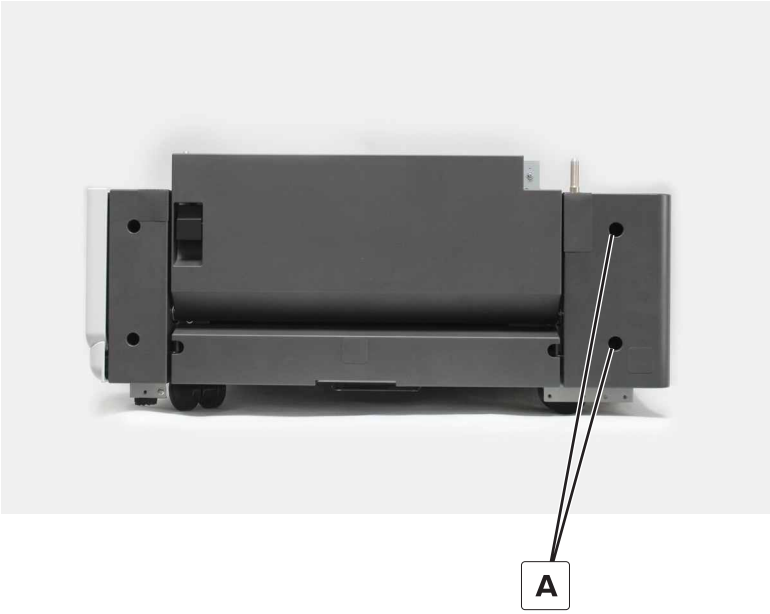
1 Remove the five screws (A).



2 Remove the cover.

2500-sheet tray rear right cover removal

1 Remove the two screws (A).

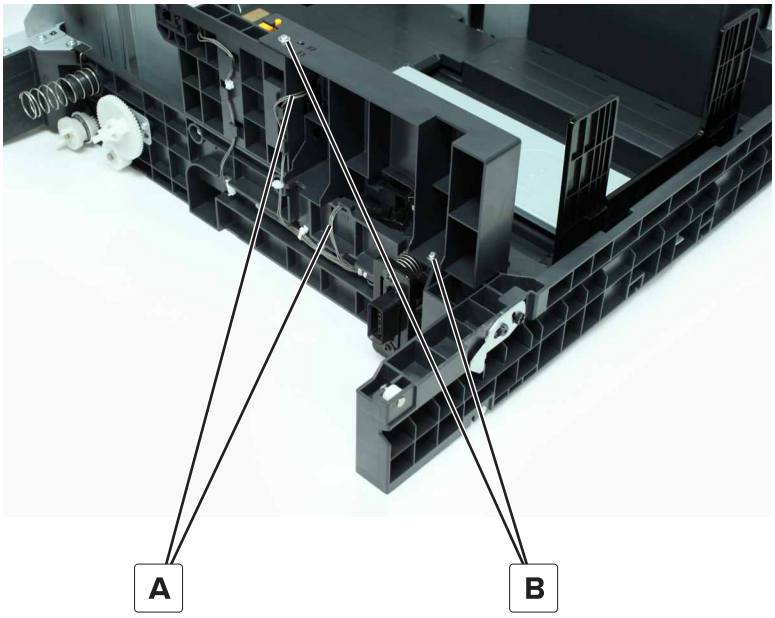


2 Remove the cover.

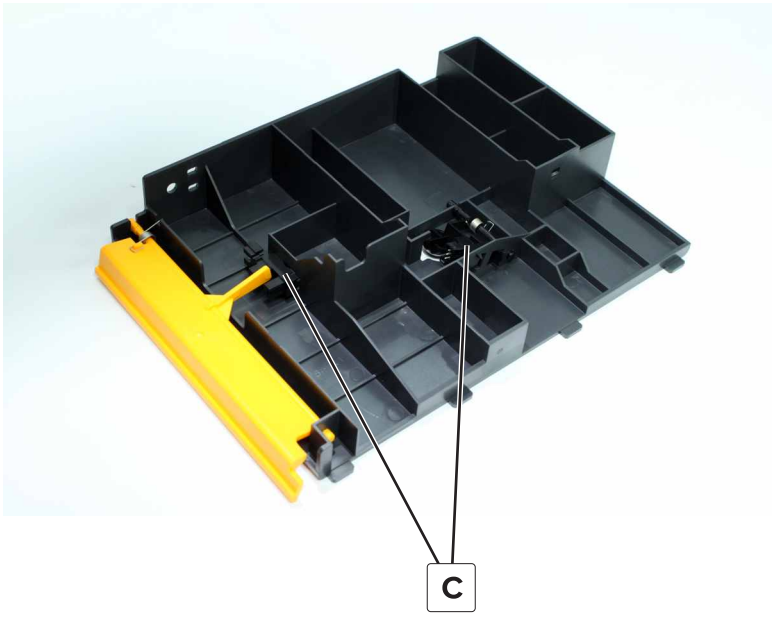
2500-sheet tray division board removal

1 Remove the tray insert.

2 Disconnect the two cables (A), and then remove the two screws (B).



3 Remove the division board, and then remove the sensors (C).



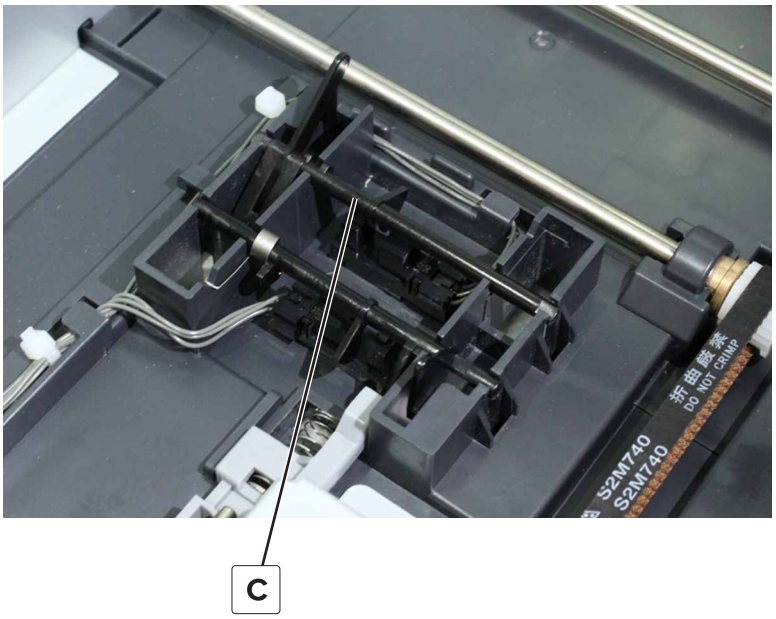
Installation note: Install the sensors on the new division board.

2500-sheet tray main tray empty sensor bottom actuator removal

1 Remove the tray insert.

2 Slightly raise the main tray.

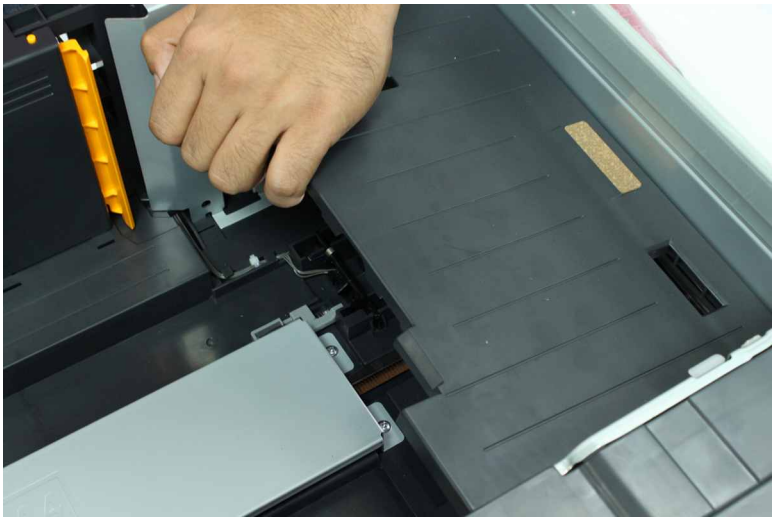
3 Remove the actuator (C).



2500-sheet tray elevator home sensor actuator removal

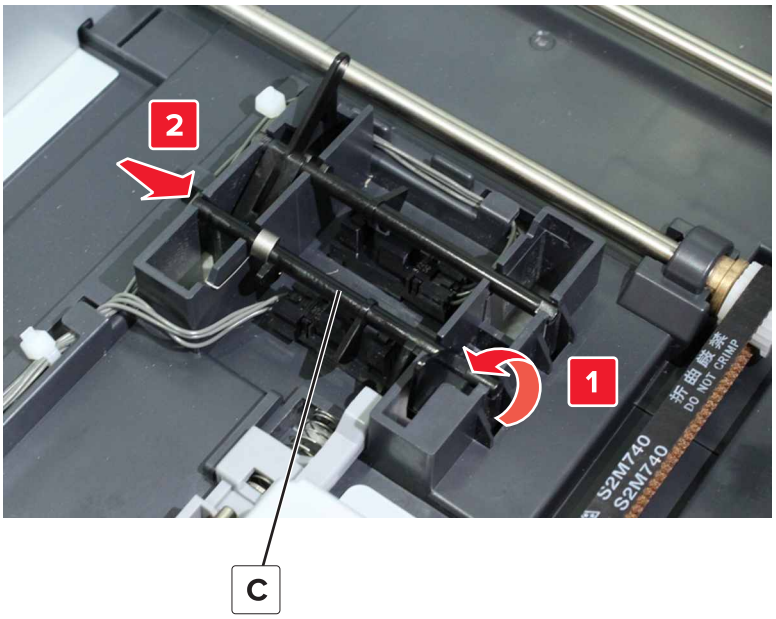
1 Remove the tray insert.

2 Slightly raise the main tray.



3 Rotate the actuator (C) until it is in the upright position, and then slide out to remove.

Note: Take note of the position of the spring on the actuator.



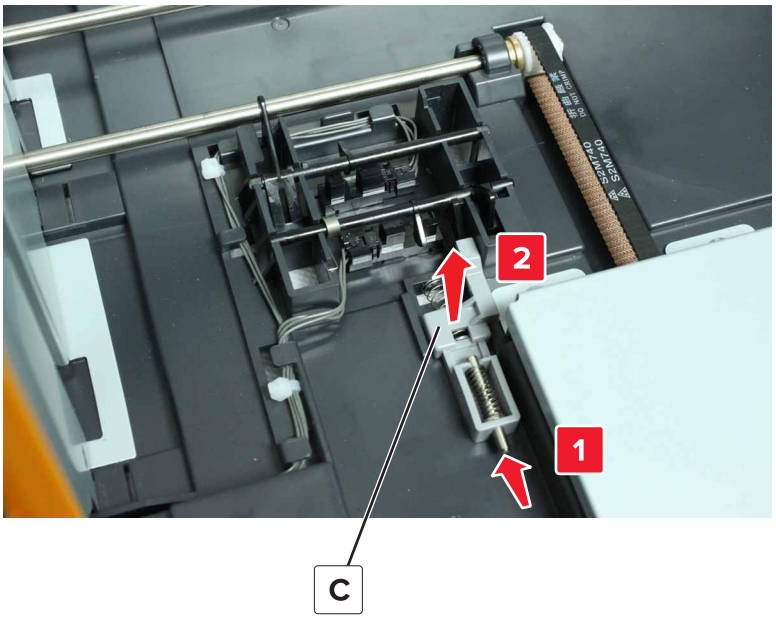
2500-sheet tray transfer guide stop removal

1 Remove the tray insert.

2 Slightly raise the main tray.

3 Remove the actuator (C).

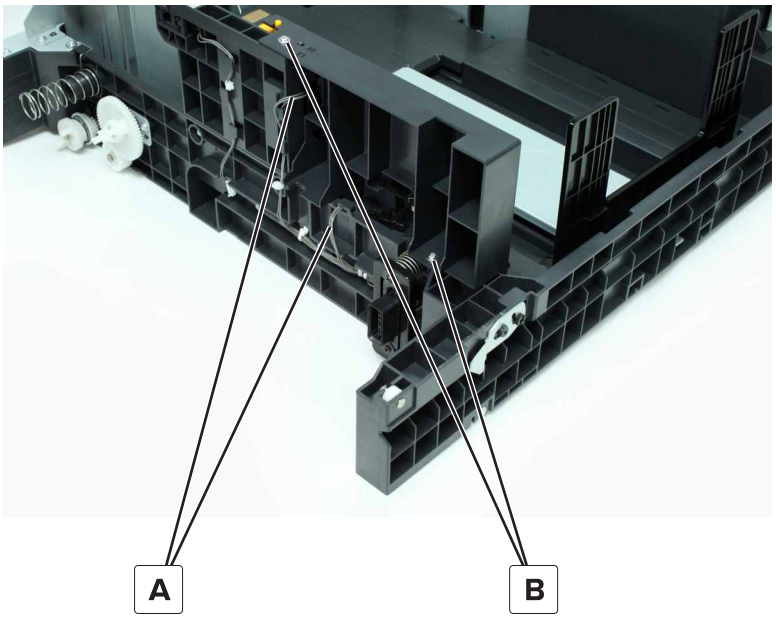
Note: Do not lose the spring on the actuator.



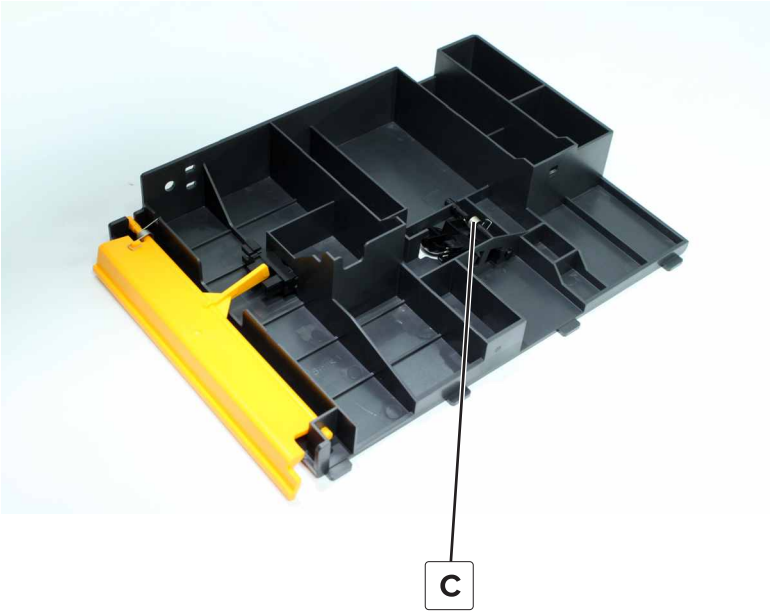
2500-sheet reserve tray paper limit sensor actuator removal

1 Remove the tray insert.

2 Disconnect the two cables (A), and then remove the two screws (B).



3 Remove the division board, and then remove the actuator (C).

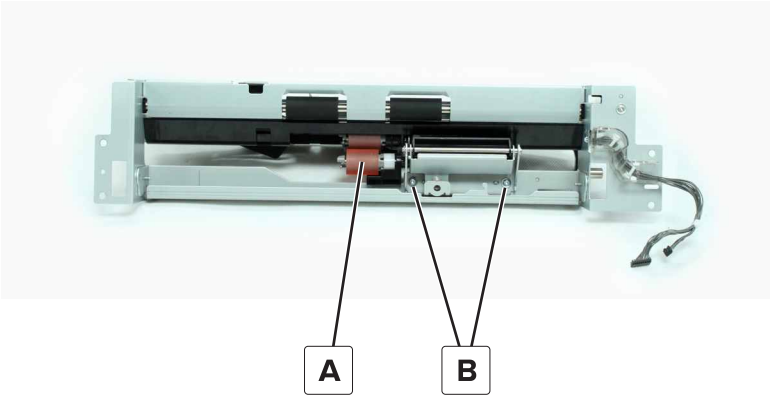


2500-sheet tray vertical media transport guide assembly removal

1 Remove the rear right cover. See **"2500-sheet tray rear right cover removal" on page 447**.

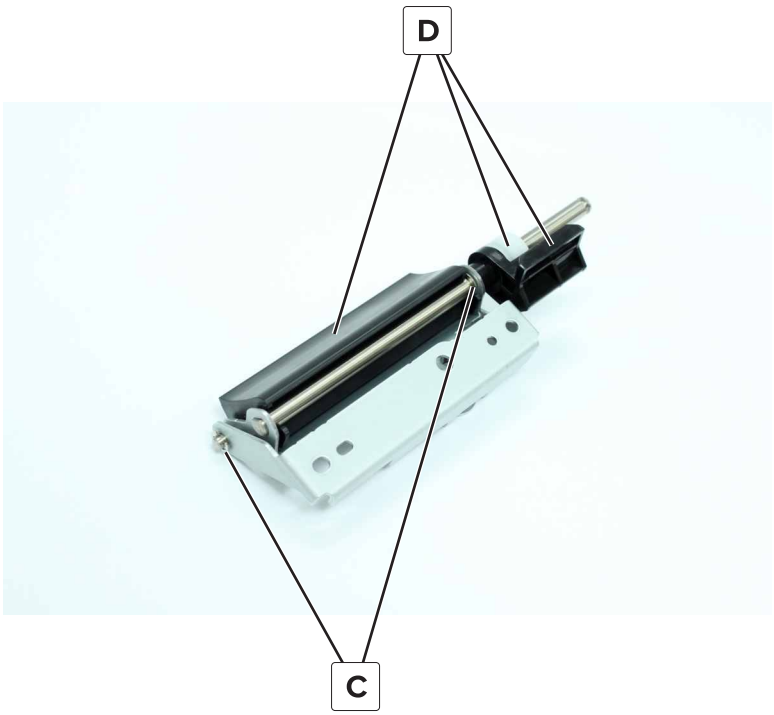
2 Remove the paper feed assembly. See **"2500-sheet tray paper feed assembly removal" on page 456**.

3 Remove the roller (A), and then remove the two screws (B).



4 Remove the two clips (C), and then remove the two shafts from the bracket.

5 Remove the vertical media transport guide assembly (D) from the shafts.

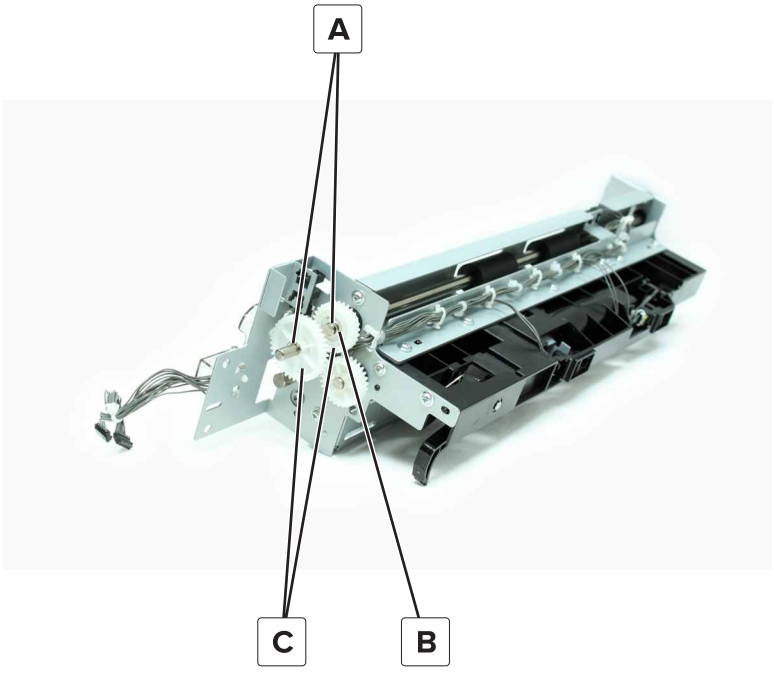


2500-sheet tray transport roller removal

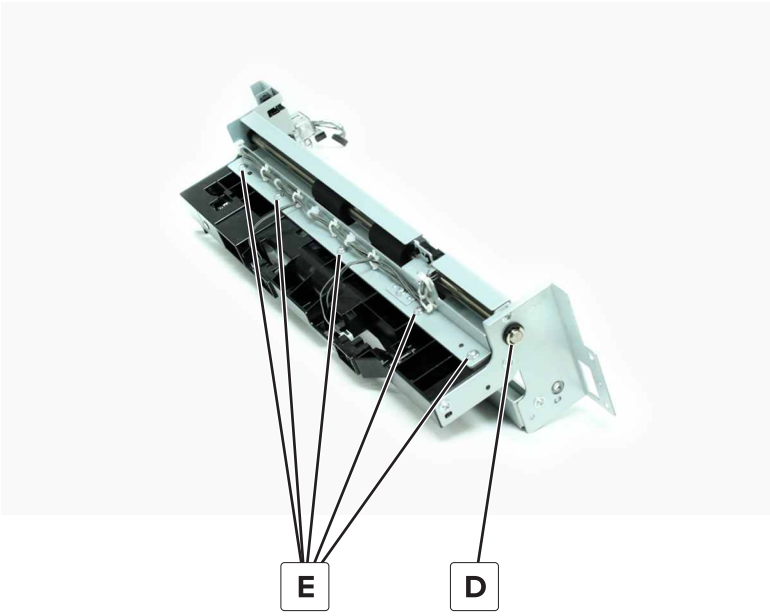
1 Remove the rear right cover. See **"2500-sheet tray rear right cover removal" on page 447**.

2 Remove the paper feed assembly. See **"2500-sheet tray paper feed assembly removal" on page 456**.

3 Remove the two clips (A), washer (B), and two gears (C) on the right side of the paper feed assembly.



4 Remove the clip on the left side (D), and then remove the five screws (E).

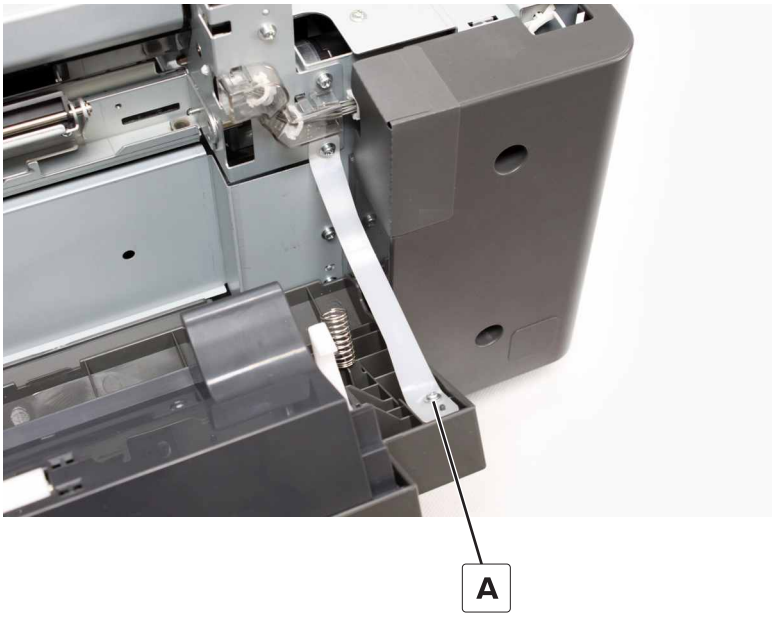


5 Remove the roller.

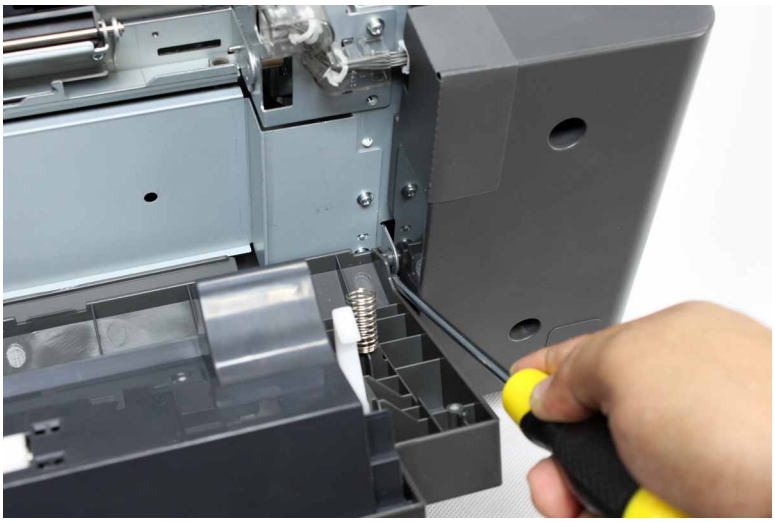
2500-sheet tray jam access cover removal

1 Open the jam access cover.

2 Remove the screw (A).



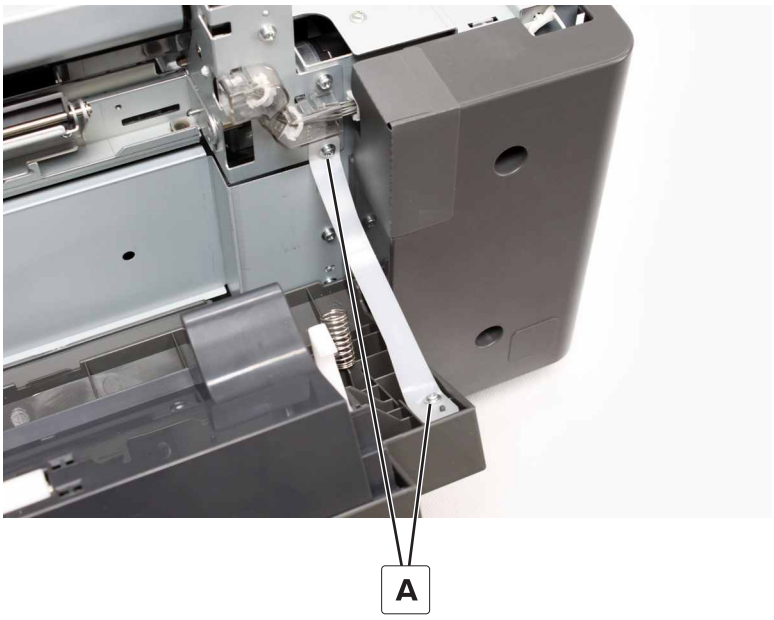
3 Pry the right hinge to release, and then remove the cover.



2500-sheet tray jam access door strap removal

1 Open the jam access cover.

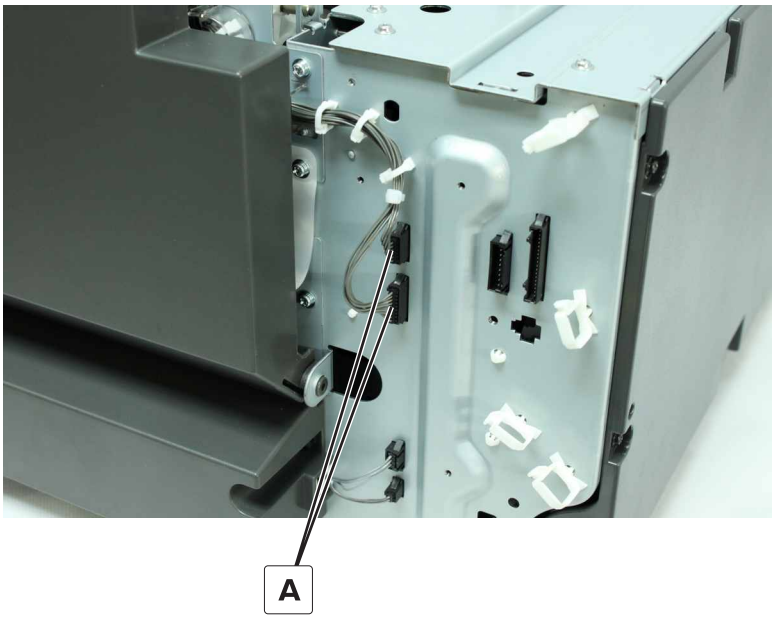
2 Remove the two screws (A), and then remove the strap.



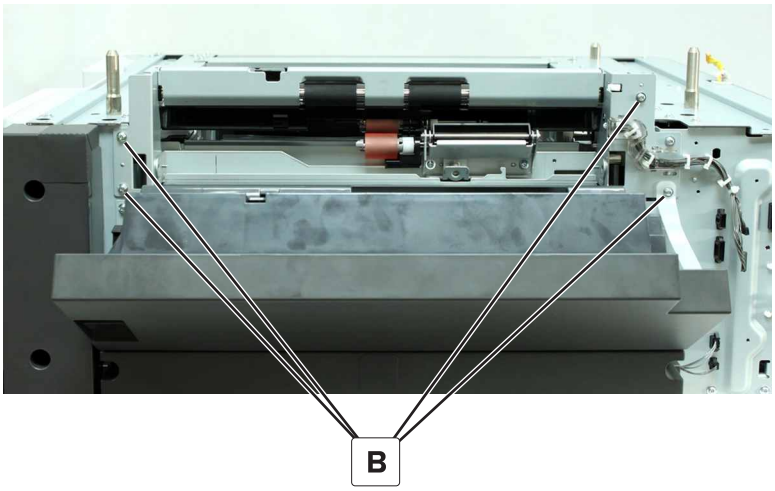
2500-sheet tray paper feed assembly removal

1 Open the rear right cover. See **"2500-sheet tray rear right cover removal" on page 447**.

2 Disconnect the two cables (A).



3 Remove the four screws (B), and then remove the paper feed assembly.



2500-sheet tray pick assembly removal

1 Remove the 2500-Sheet Tray rear right cover. See **"2500-sheet tray rear right cover removal" on page 447**.

2 Remove the 2500-Sheet Tray paper feed assembly. See **"2500-sheet tray paper feed assembly removal" on page 456**.

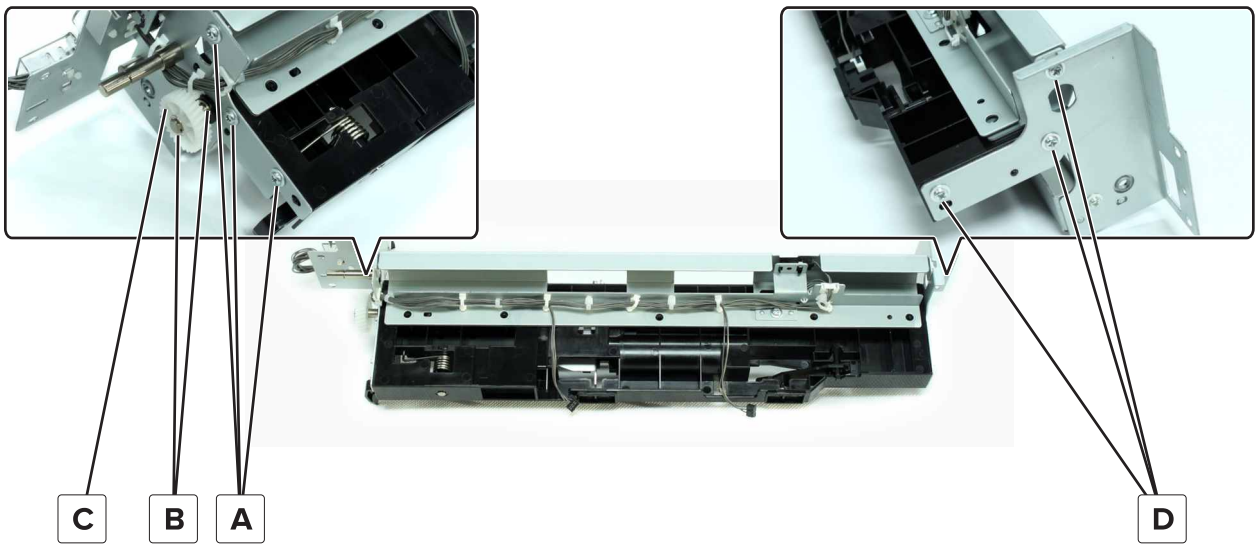
3 Remove the sensor (2500-sheet tray main tray elevator limit). See **"Sensor (2500-sheet tray main tray elevator limit) removal" on page 467**.

4 Remove the sensor (2500-sheet tray main tray empty, top). See **"Sensor (2500-sheet tray main tray empty, top) removal" on page 467**.

5 Remove the 2500-sheet tray transport roller. See **"2500-sheet tray transport roller removal" on page 453**.

6 Remove the three screws (A), two clips (B), and gear (C).

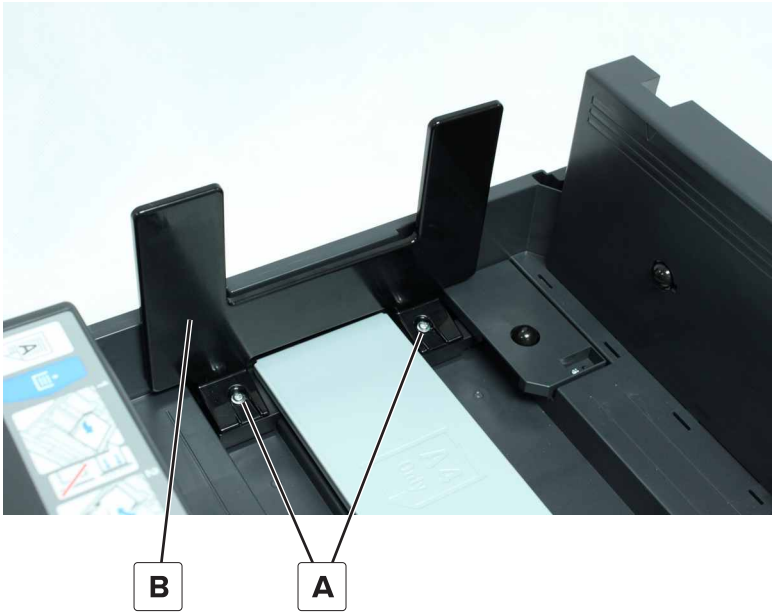
7 Remove the three screws (D), and then remove the pick assembly.



2500-sheet tray paper stack transfer guide removal

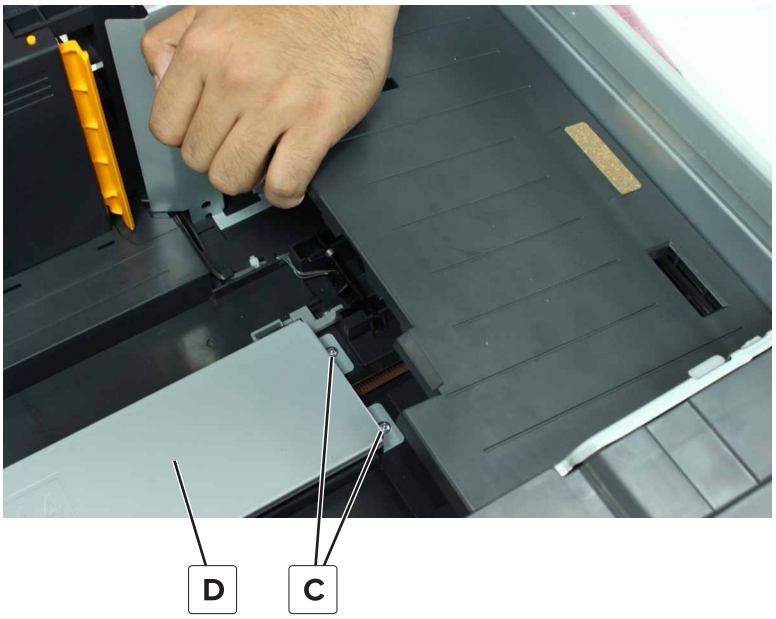
1 Remove the tray insert.

2 Remove the two screws (A), and then remove the paper stack transfer guide (B).

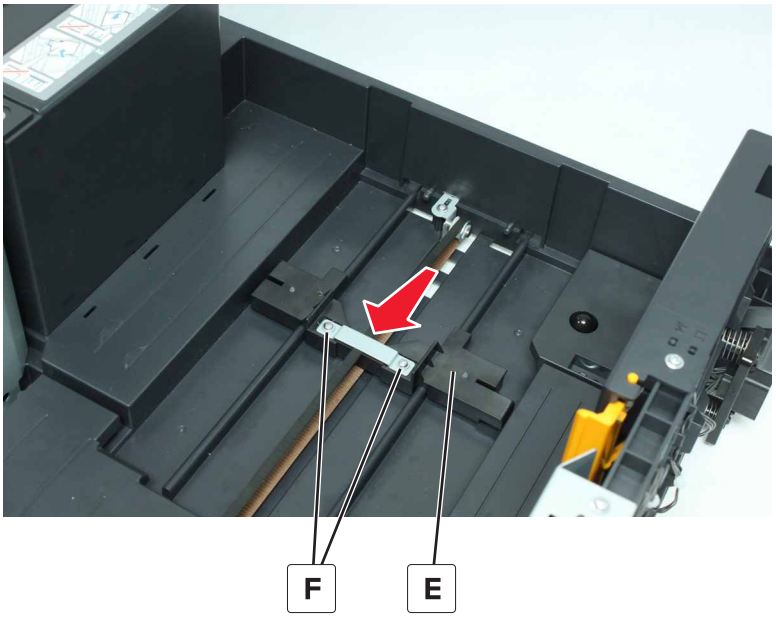


3 Raise the main tray, and then remove the two screws (C).

4 Remove the sub-tray plate (D).



5 Move the paper stack transfer guide base (E), and then remove the two screws (F).

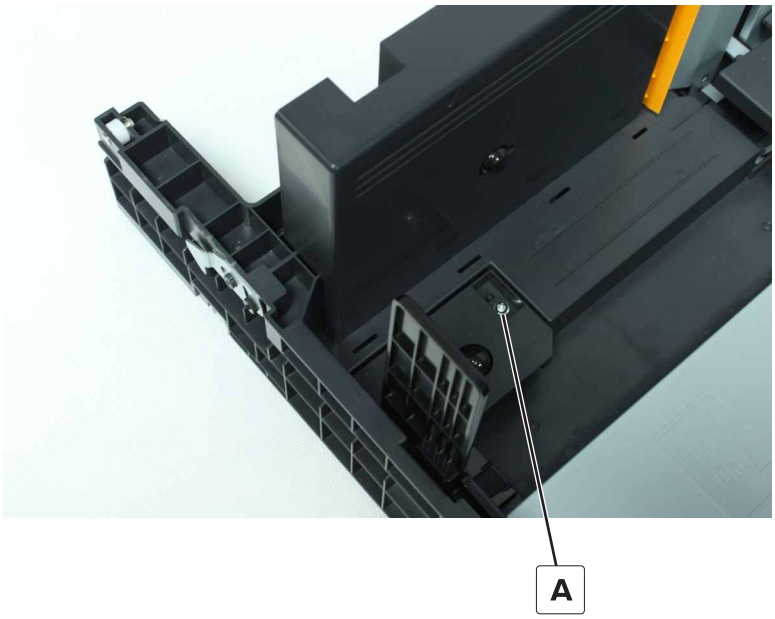


6 Remove the bracket, and then remove the guide base.

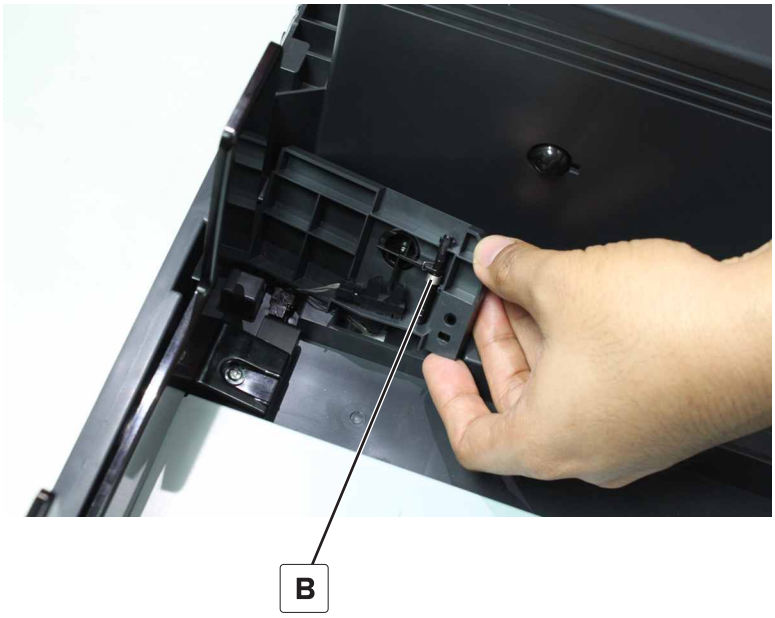
2500-sheet reserve tray empty sensor actuator removal

1 Remove the tray insert.

2 Remove the screw (A).



3 Swing open the sensor cover, and then remove the actuator (B).

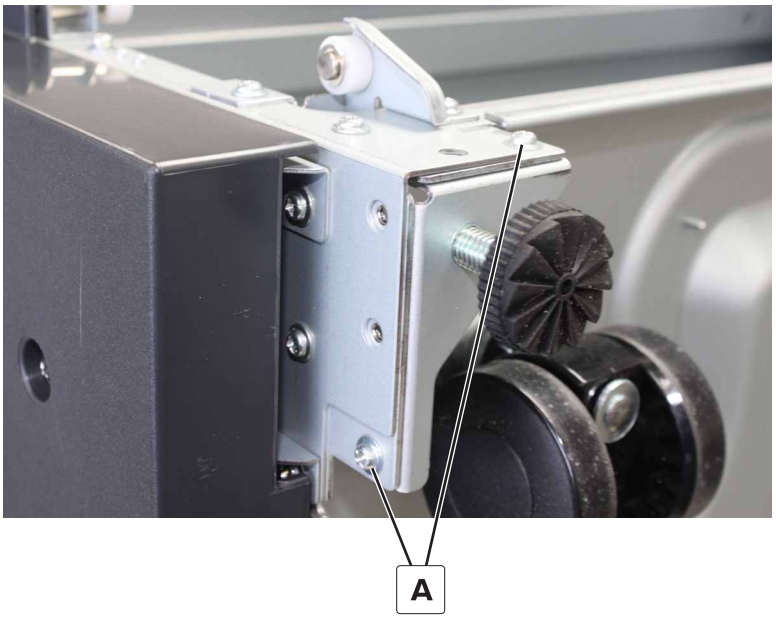


2500-sheet tray stopper removal

1 Position the tray on its side.

2 Select a stopper.

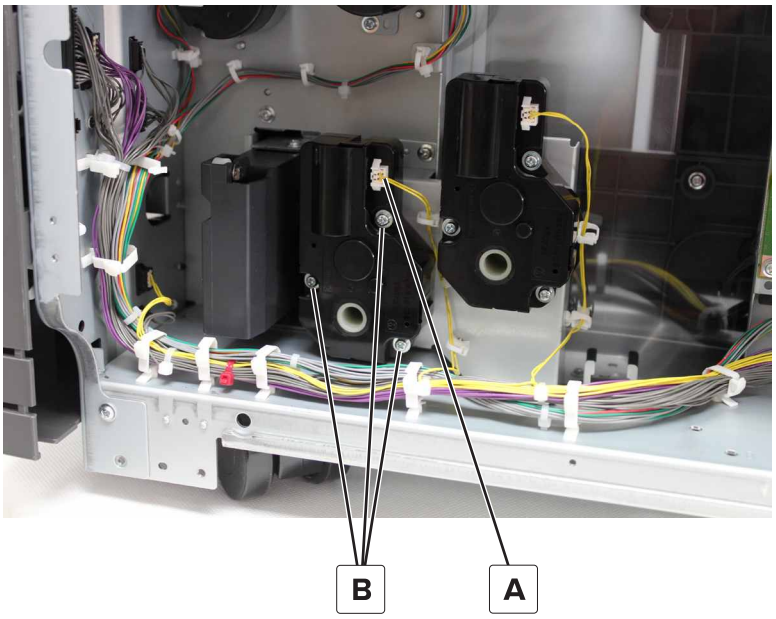
3 Remove the two screws (A), and then remove the stopper.



Motor (2500-sheet tray elevator) removal

1 Remove the rear cover. See **"2500-sheet tray rear cover removal" on page 446**.

2 Disconnect the cable (A), and then remove the three screws (B).

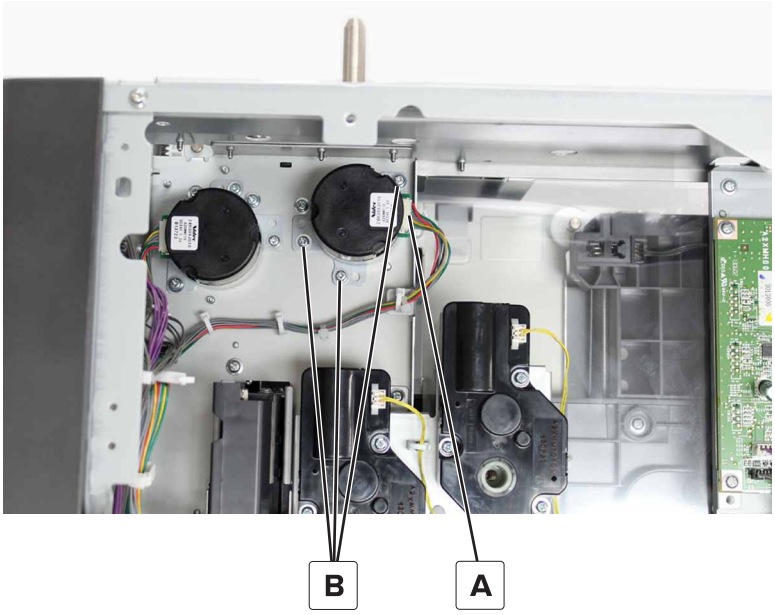


3 Remove the motor.

Motor (2500-sheet tray feed) removal

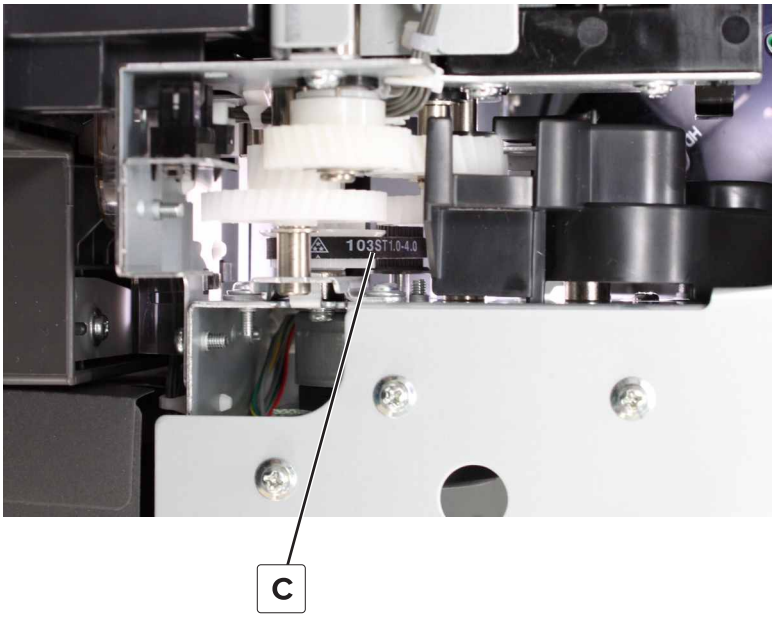
1 Remove the rear cover. See **"2500-sheet tray rear cover removal" on page 446**.

2 Disconnect the cable (A), and then remove the three screws (B).



3 Remove the motor.

Note: Make sure that the feed motor belt (C) remains attached to the gear.

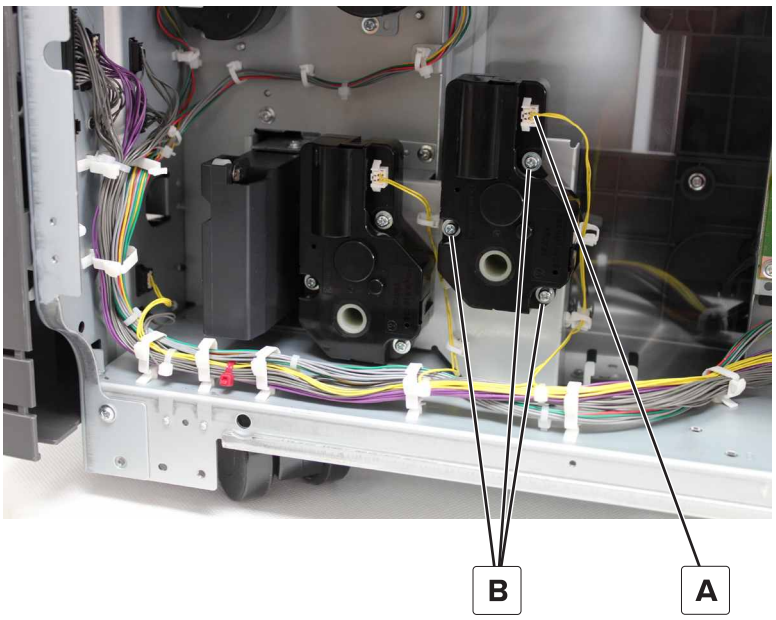


Installation note: Make sure that the feed motor belt is installed properly before installing the feed motor.

Motor (2500-sheet tray transfer guide) removal

1 Remove the rear cover. See **"2500-sheet tray rear cover removal" on page 446**.

2 Disconnect the cable (A), and then remove the three screws (B).

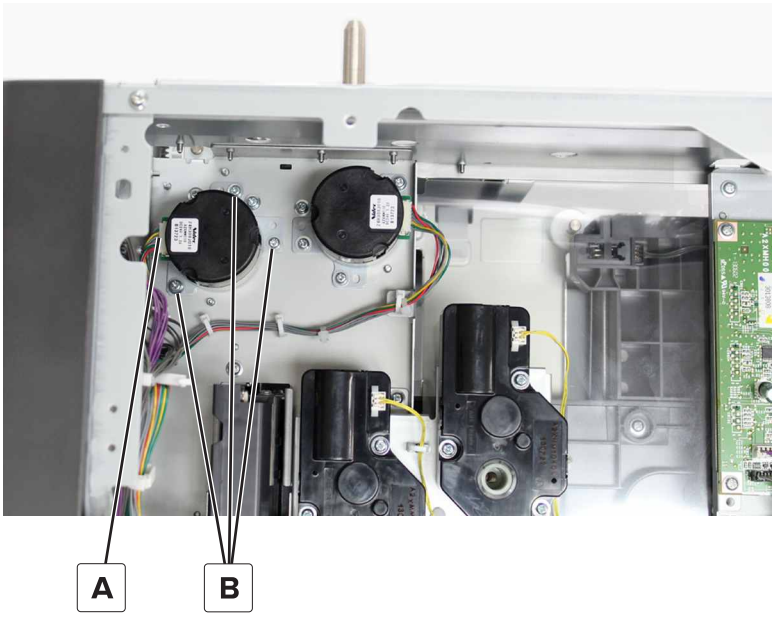


3 Remove the motor.

Motor (2500-sheet tray transport) removal

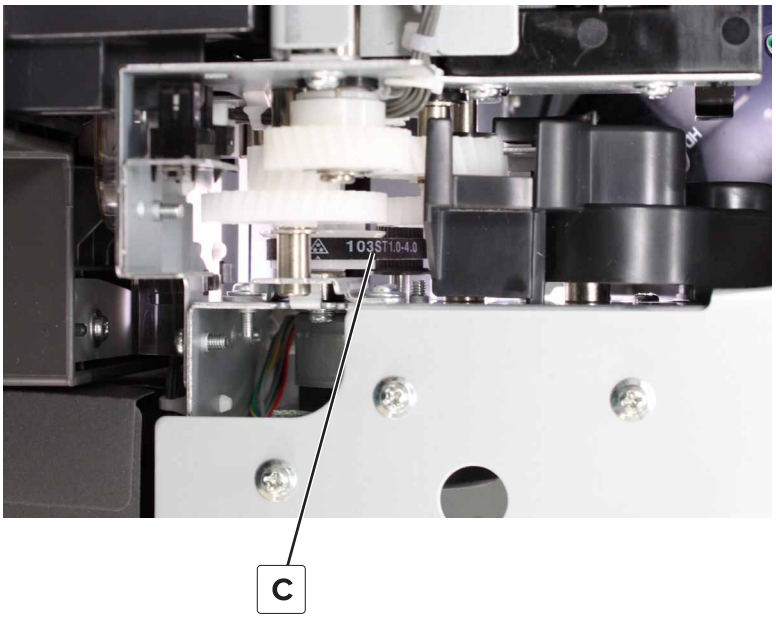
1 Remove the 2500-sheet tray rear cover. See **"2500-sheet tray rear cover removal" on page 446**.

2 Disconnect the cable (A), and then remove the three screws (B).



3 Remove the motor.

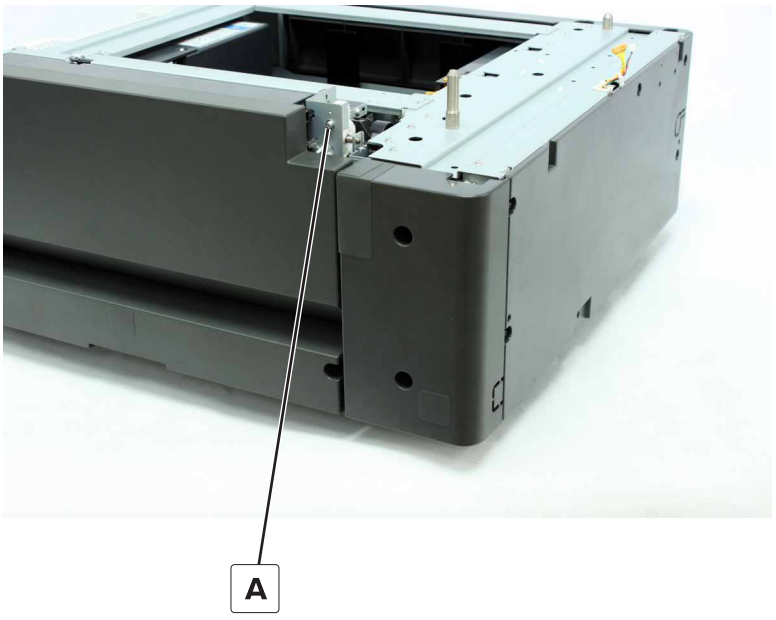
Note: Make sure that the belt (C) remains on the gear.



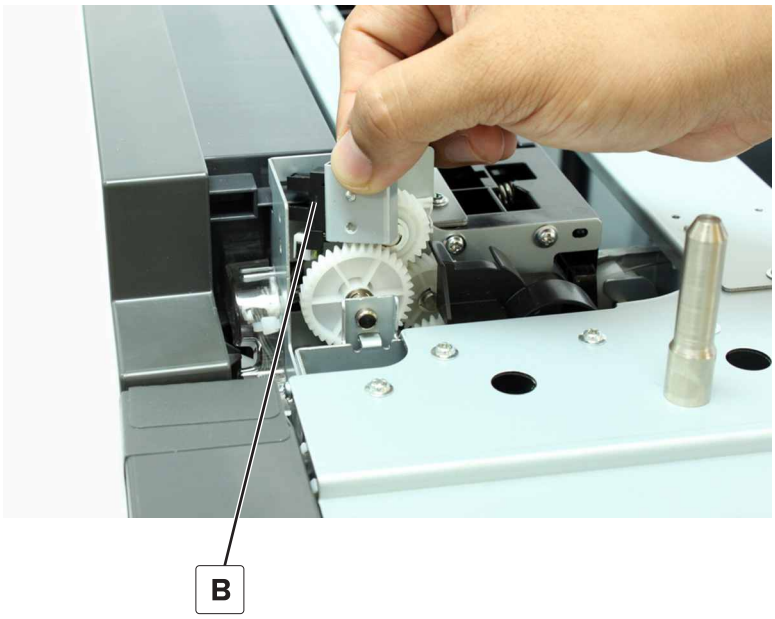
Installation note: Make sure that the belt is installed properly before reinstalling the transport motor.

Sensor (2500-sheet tray jam access door) removal

1 Remove the screw (A), and then remove the sensor mount.



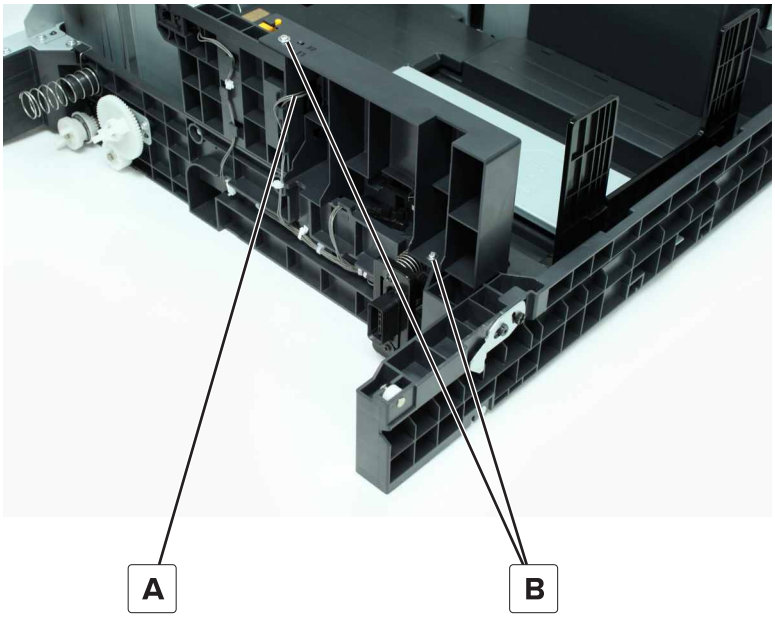
2 Disconnect the sensor (B) from the cable.



Sensor (2500-sheet paper stack transfer) removal

1 Remove the tray insert.

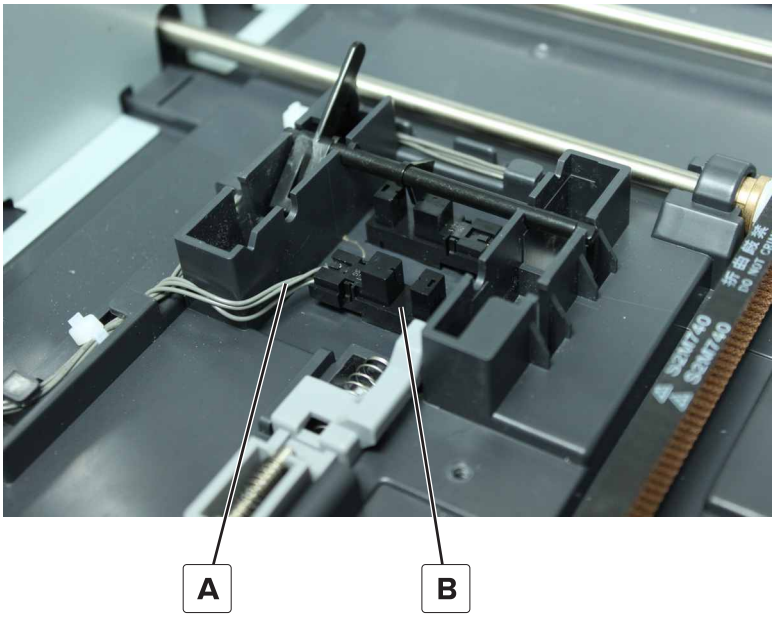
2 Disconnect the cable (A), and then remove the two screws (B).



3 Remove the sensor from its housing on the division board.

Sensor (2500-sheet tray elevator home) removal

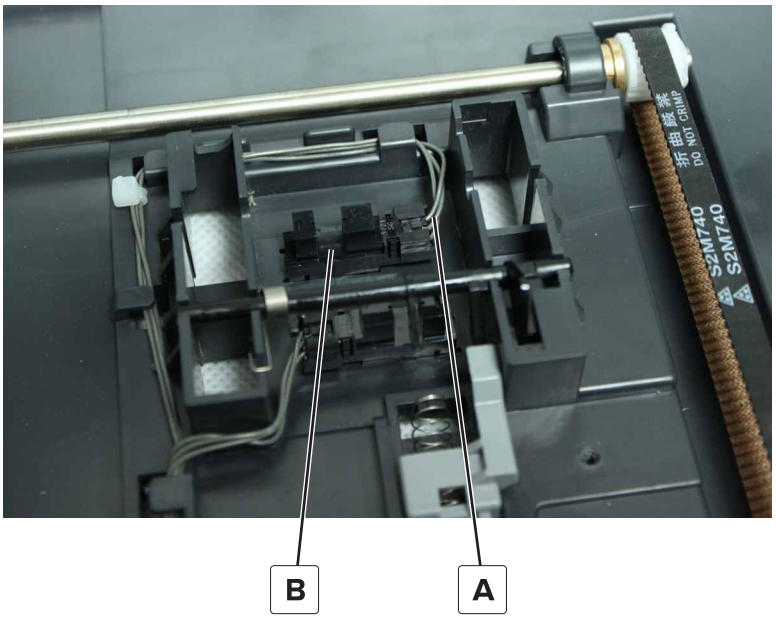
1. Remove the tray insert.
2. Remove the 2500-sheet tray elevator home sensor actuator. See **"2500-sheet tray elevator home sensor actuator removal" on page 449**.
3. Disconnect the cable (A), and then remove the sensor (B).



Sensor (2500-sheet tray main tray empty, bottom) removal

1. Remove the tray insert.
2. Remove the 2500-sheet tray empty sensor bottom actuator. See **"2500-sheet tray main tray empty sensor bottom actuator removal" on page 448**.

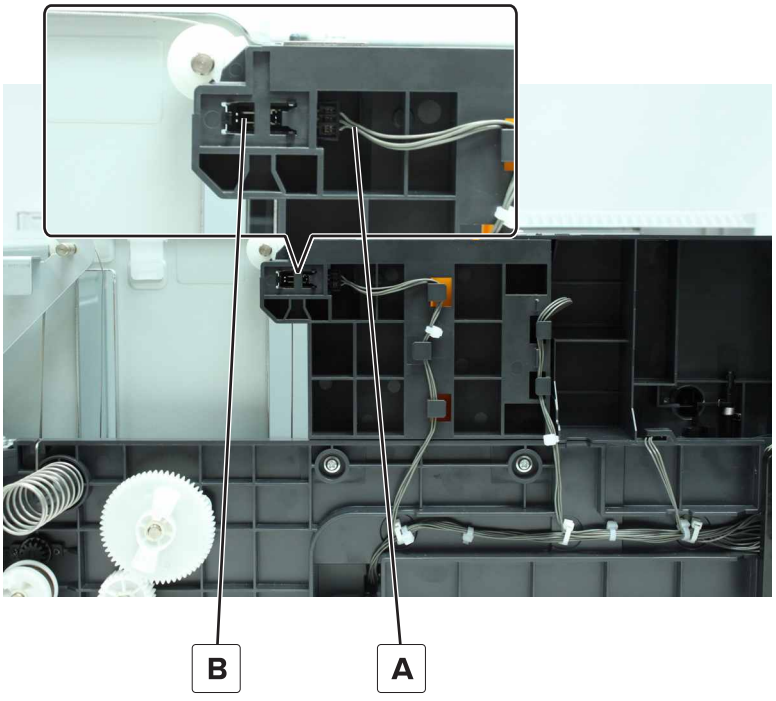
3 Disconnect the cable (A), and then remove the sensor (B).



Sensor (2500-sheet tray main tray near empty) removal

1 Remove the tray insert.

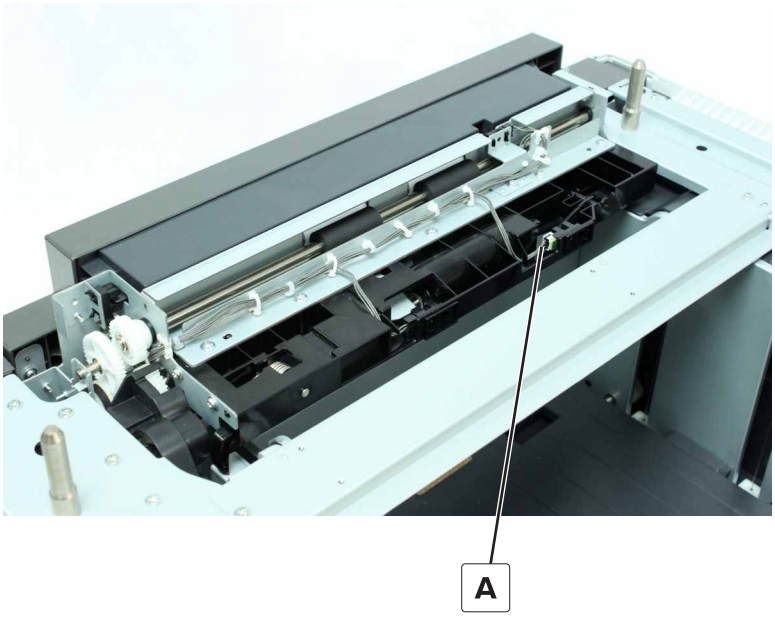
2 Disconnect the cable (A), and then remove the sensor (B).



Sensor (2500-sheet tray main tray empty, top) removal

1 Disconnect the cable (A).

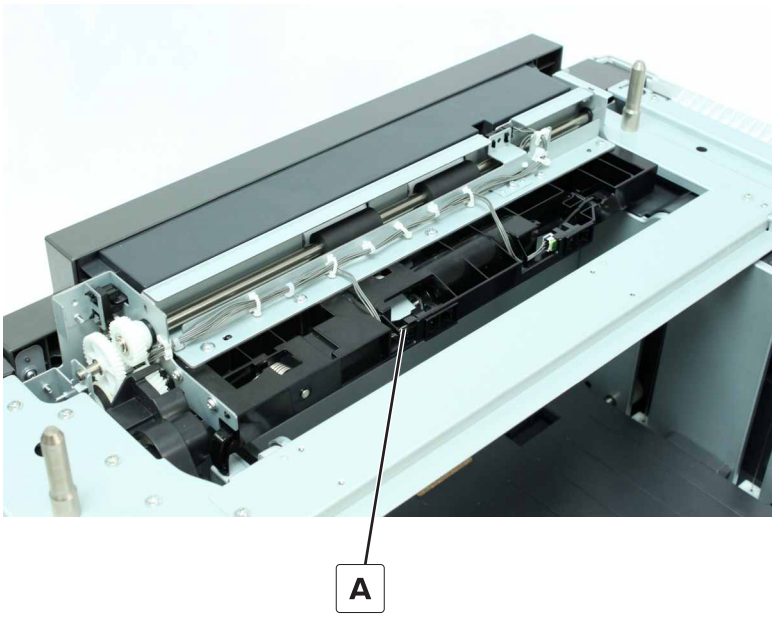
2 Remove the sensor.



Sensor (2500-sheet tray main tray elevator limit) removal

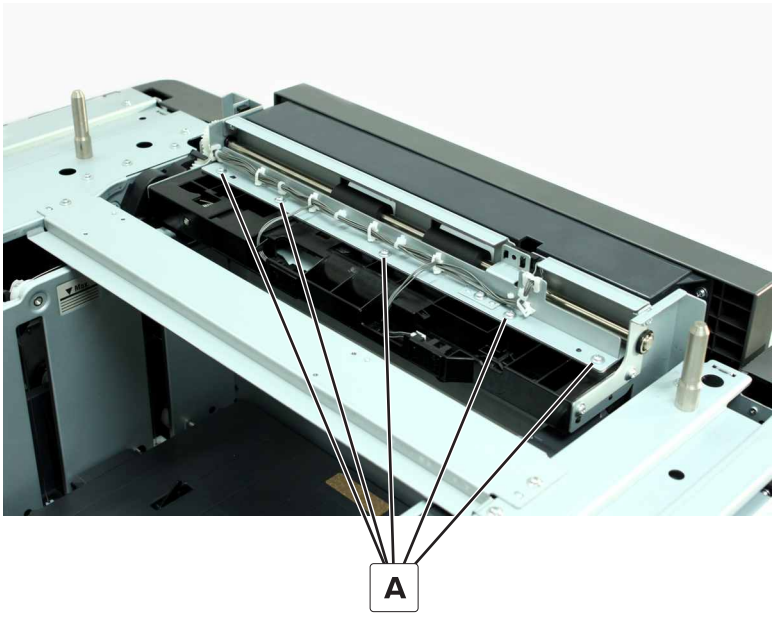
1 Disconnect the cable (A).

2 Remove the sensor.

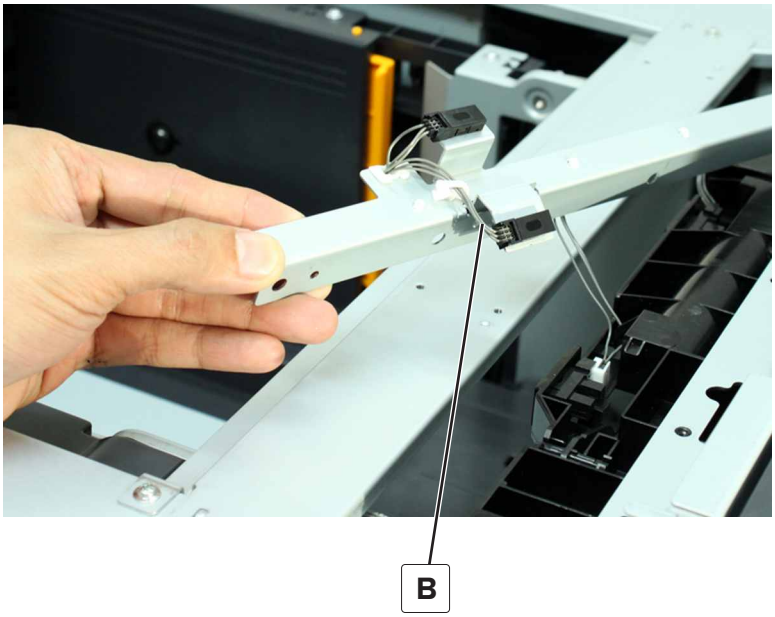


Sensor (2500-sheet tray feed) removal

1 Remove the five screws (A).



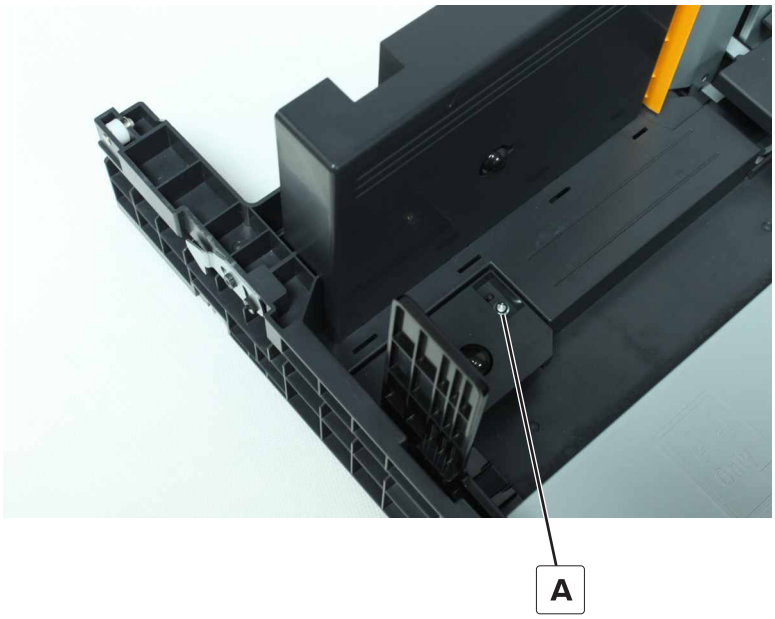
2 Disconnect the cable (B), and then remove the sensor.



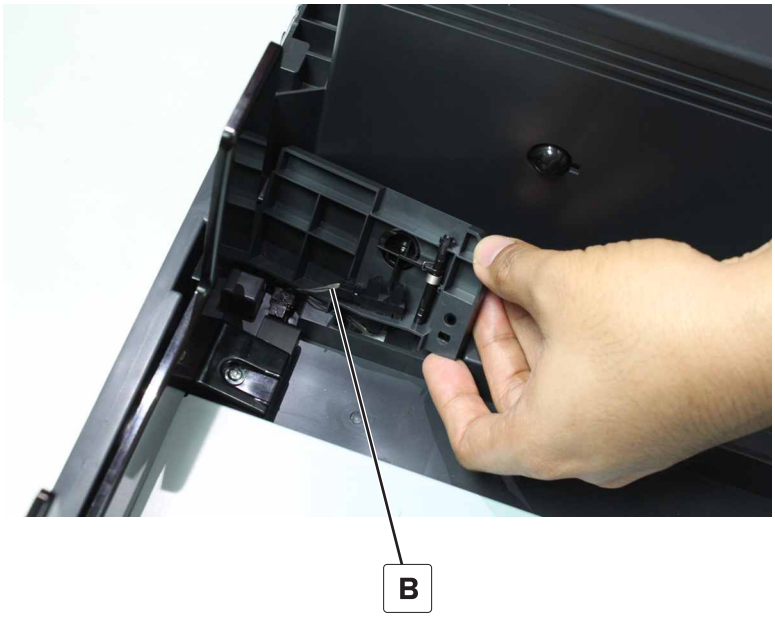
Sensor (2500-sheet tray reserve tray empty) removal

1 Remove the tray insert.

2 Remove the screw (A).



3 Swing open the cover, and then disconnect the cable (B).

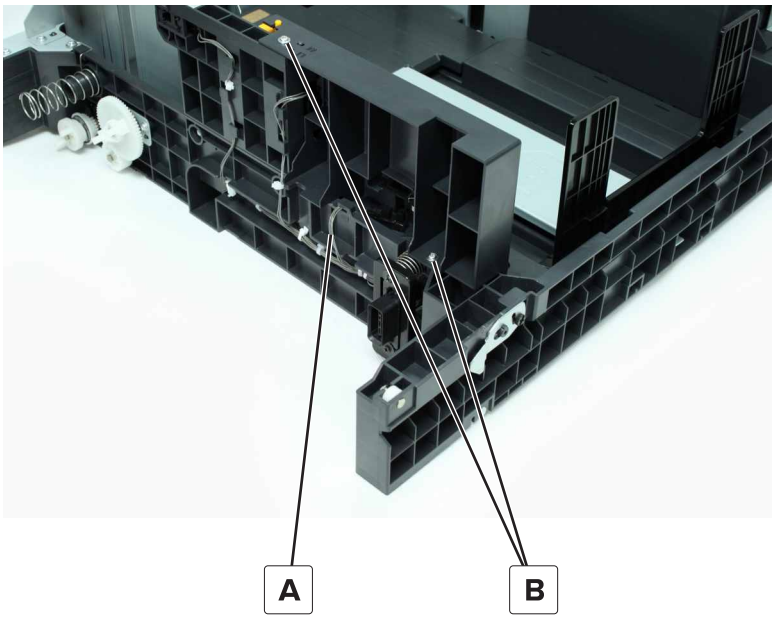


4 Remove the sensor.

Sensor (2500-sheet tray reserve tray paper limit) removal

1 Remove the tray insert.

2 Disconnect the cable (A), and then remove the two screws (B).

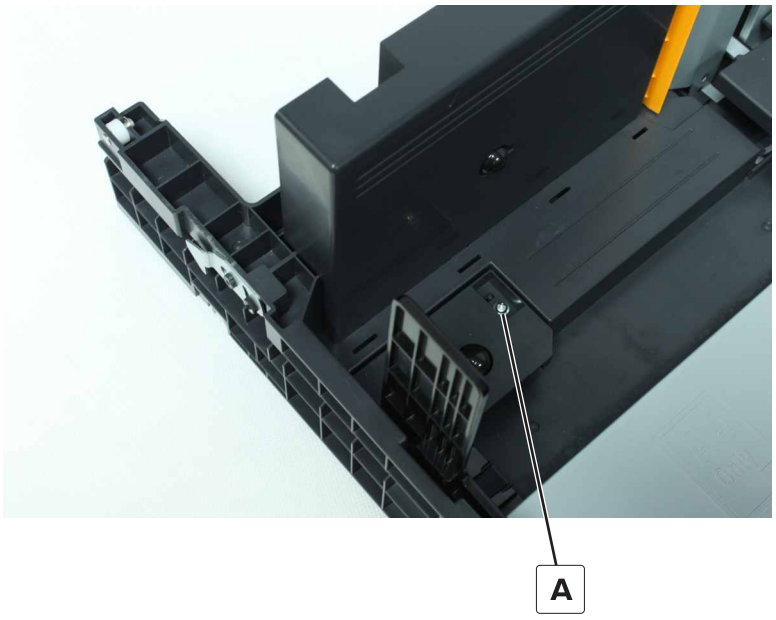


3 Remove the sensor.

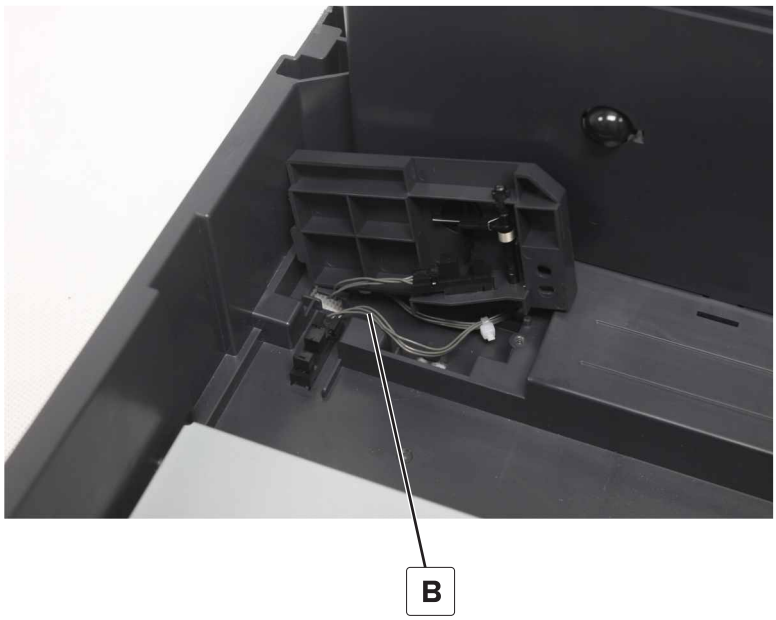
Sensor (2500-sheet tray transfer guide home) removal

1 Remove the tray insert.

2 Remove the screw (A).



3 Swing open the cover, and then disconnect the cable (B).

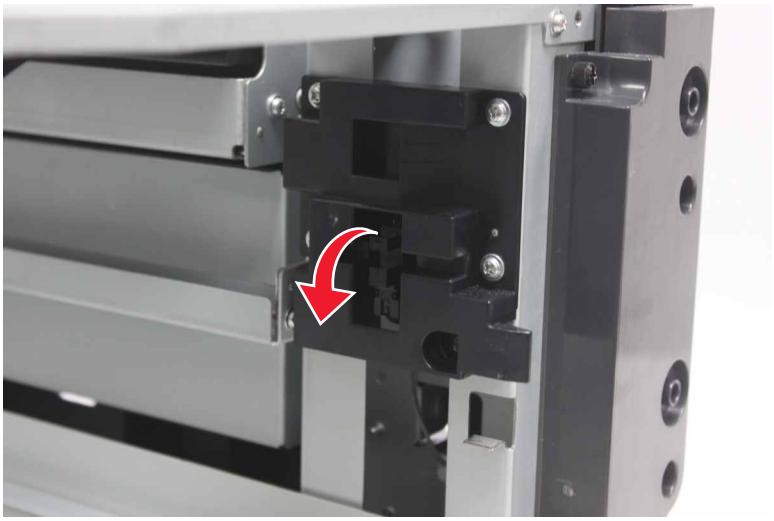


4 Remove the sensor.

Sensor (2500-sheet tray set) removal

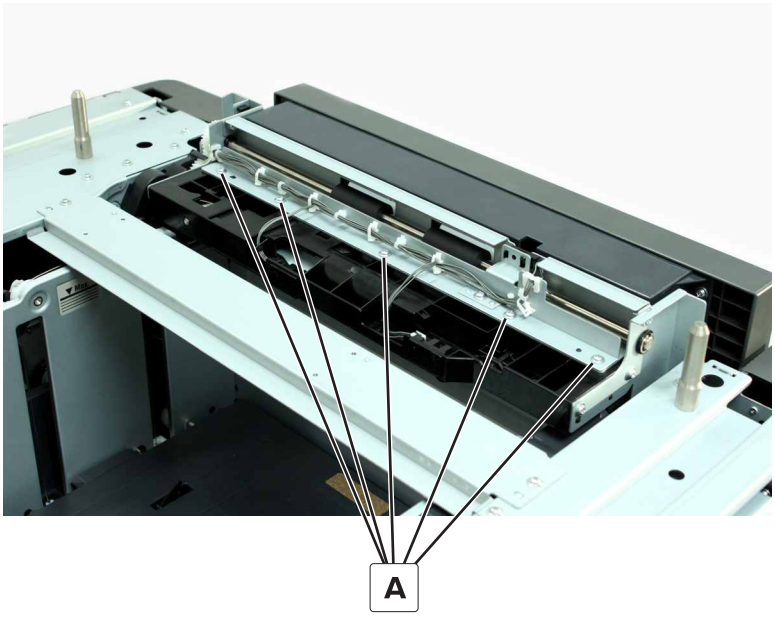
1 Remove the tray insert.

2 Remove the sensor, and then disconnect the sensor cable.

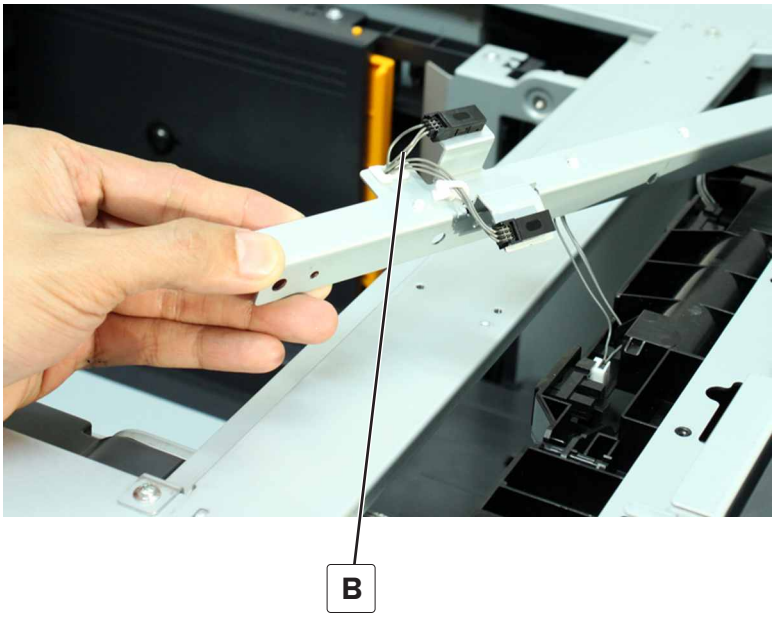


Sensor (2500-sheet tray transport) removal

1 Remove the five screws (A).



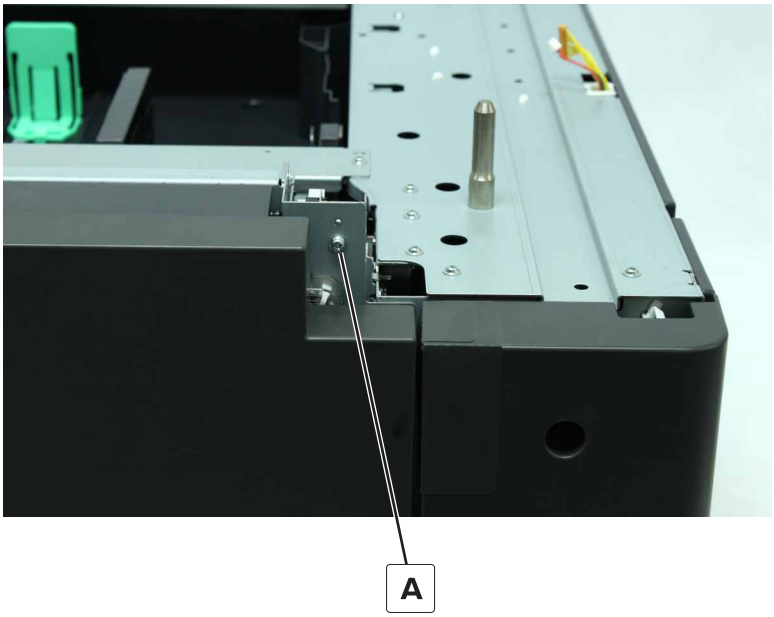
2 Disconnect the cable (B), and then remove the sensor.



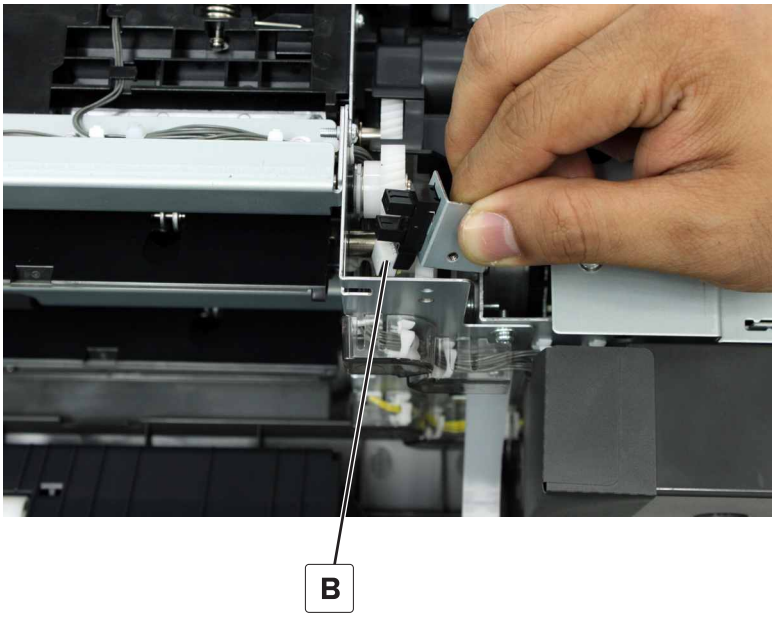
2 x 500-sheet tray removals

Sensor (2 x 500-sheet tray jam access door) removal

1 Remove the screw (A), and then remove the sensor bracket.



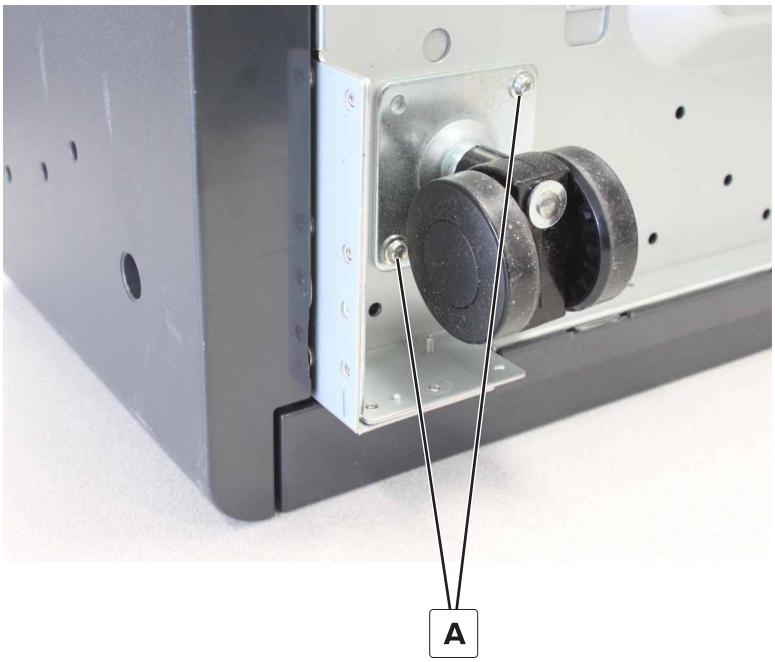
2 Disconnect the cable (B), and then remove the sensor.



3 Remove the sensor from the bracket.

2 x 500-sheet tray caster wheel removal

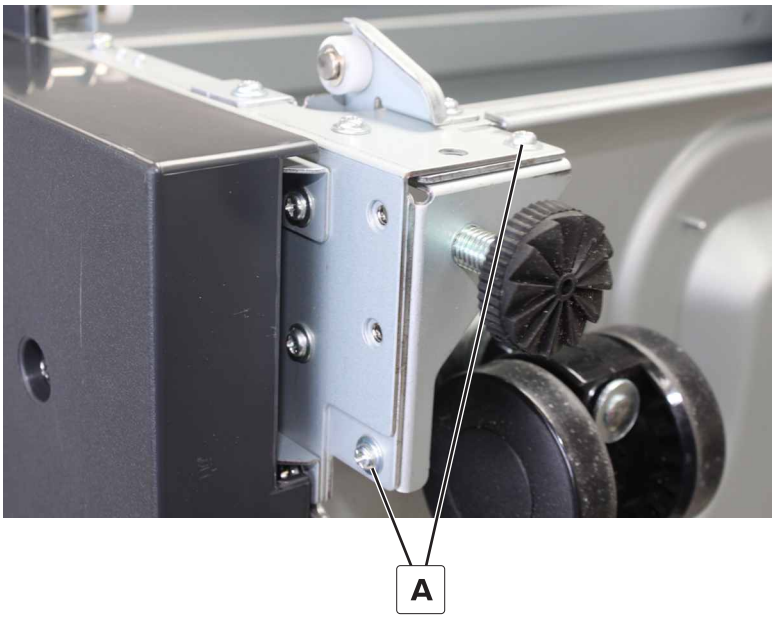
1. Position the tray on its side.
2. Select a caster.
3. Remove the two screws (A), and then remove the caster.



Printer rubber stopper removal

1. Position the tray on its side.
2. Select a stopper.

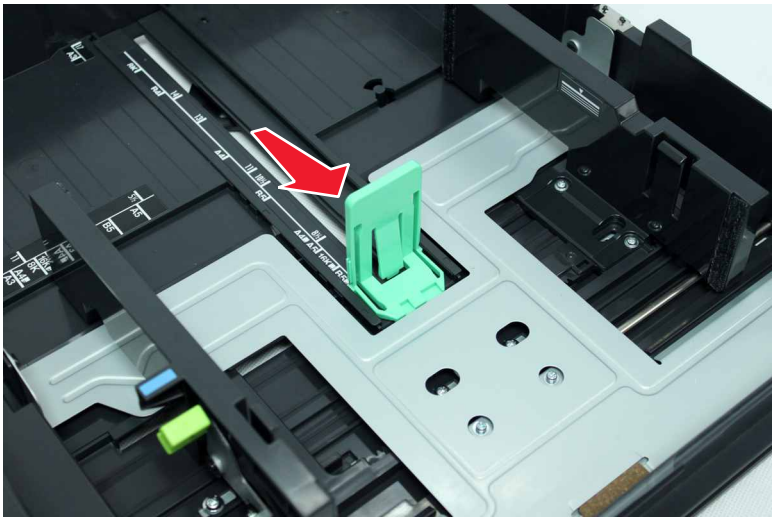
3 Remove the two screws (A), and then remove the stopper.



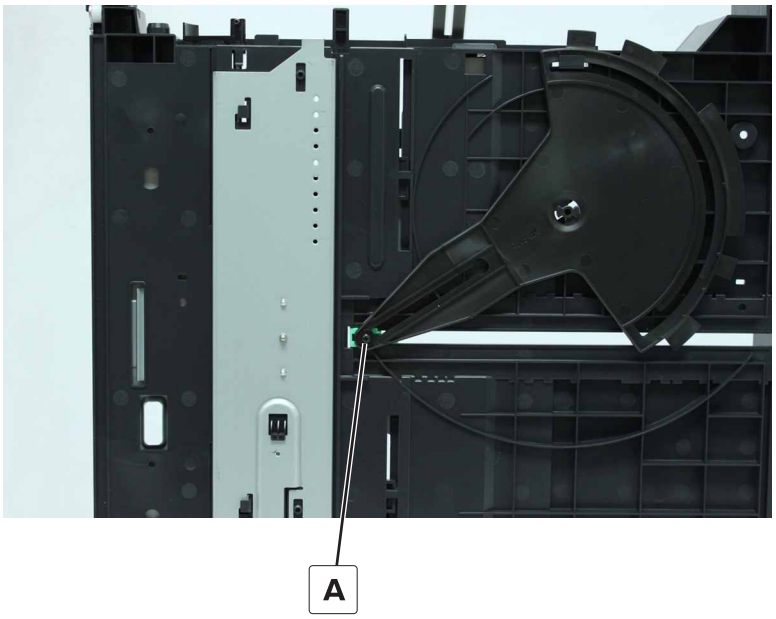
Tray insert paper length guide removal

1 Remove the tray insert.

2 Move the guide to the shortest paper length setting.



3 Remove the screw (A).

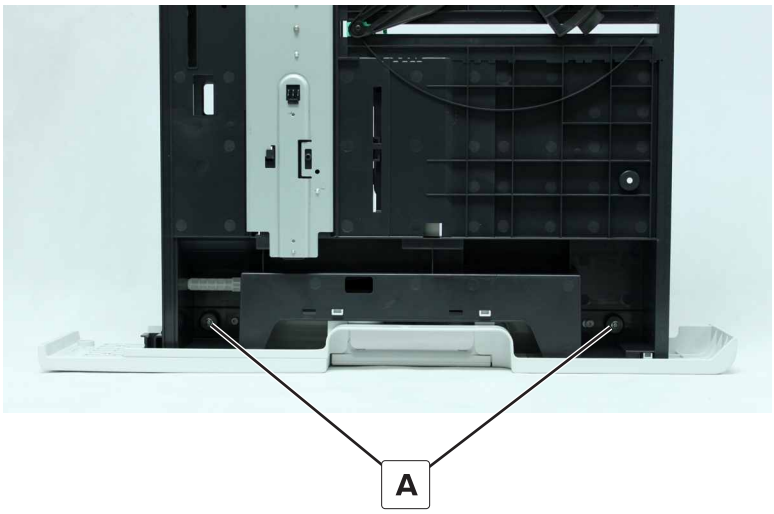


4 Raise the lift plate, move the length guide slightly under the lift plate, and then remove the guide.

Tray lock removal

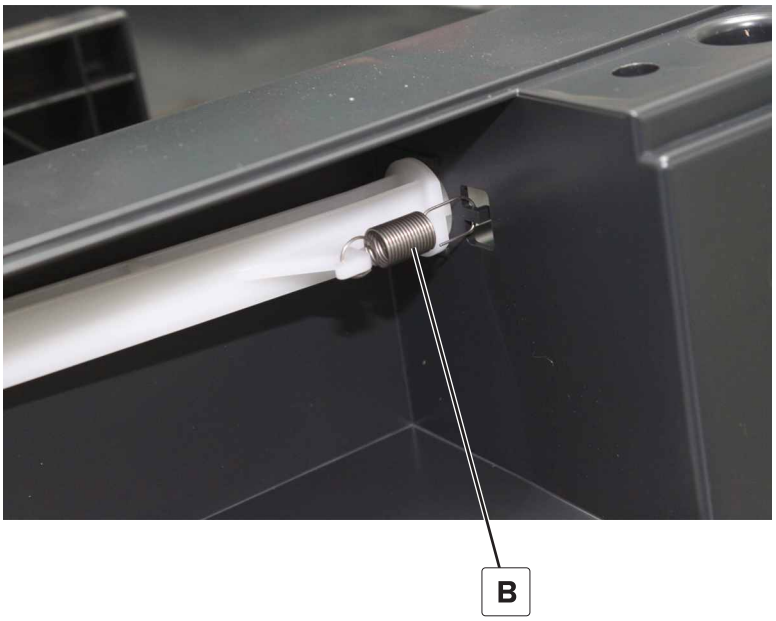
1 Remove the tray insert.

2 Remove the two screws (A).

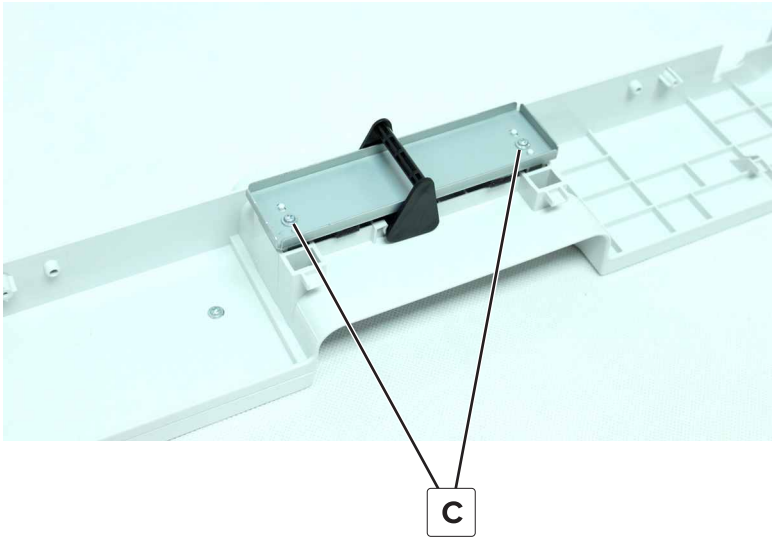


3 Remove the tray cover.

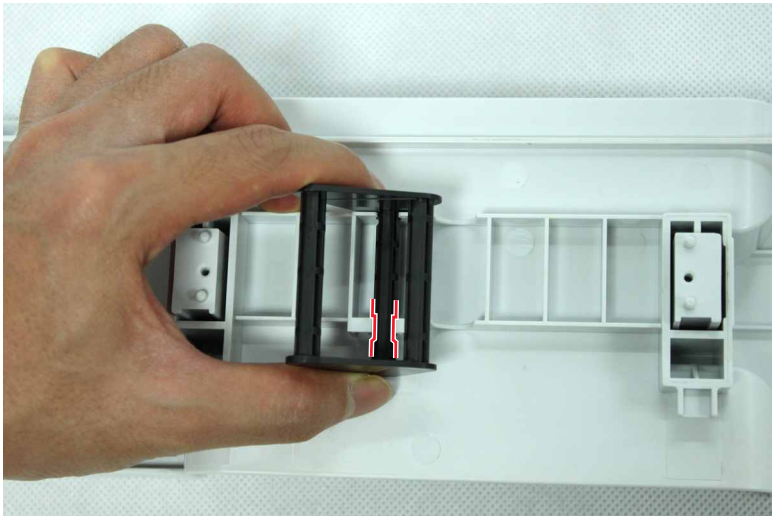
4 Disconnect the spring (B) from the tray, and then remove the shaft.



5 Remove the two screws (C), and then remove the plate.



6 Align the notches on the link and cover, and then remove the link.

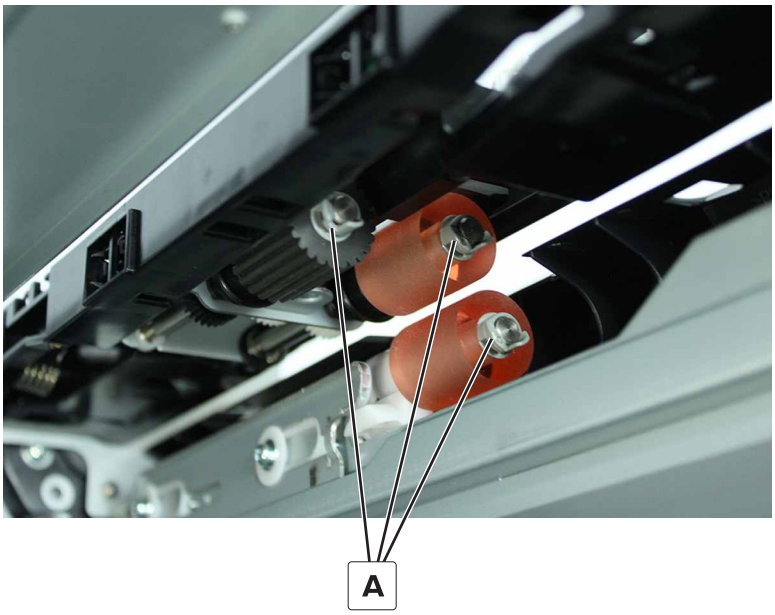


2 x 500-sheet tray rollers removal

1 Remove the tray inserts.

2 Open the jam access door.

3 Release the three clips (A), and then remove the rollers.

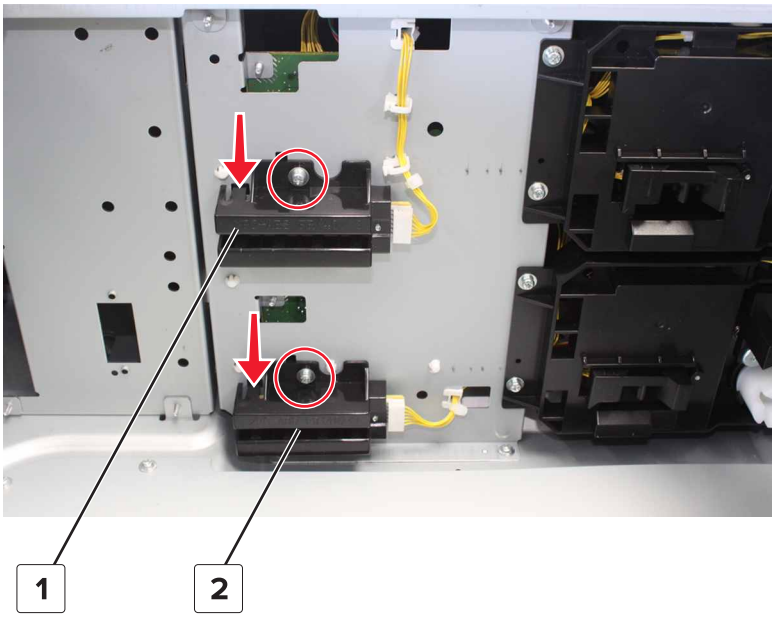


Sensor (2 x 500-sheet tray paper length) removal

1 Remove the tray inserts.

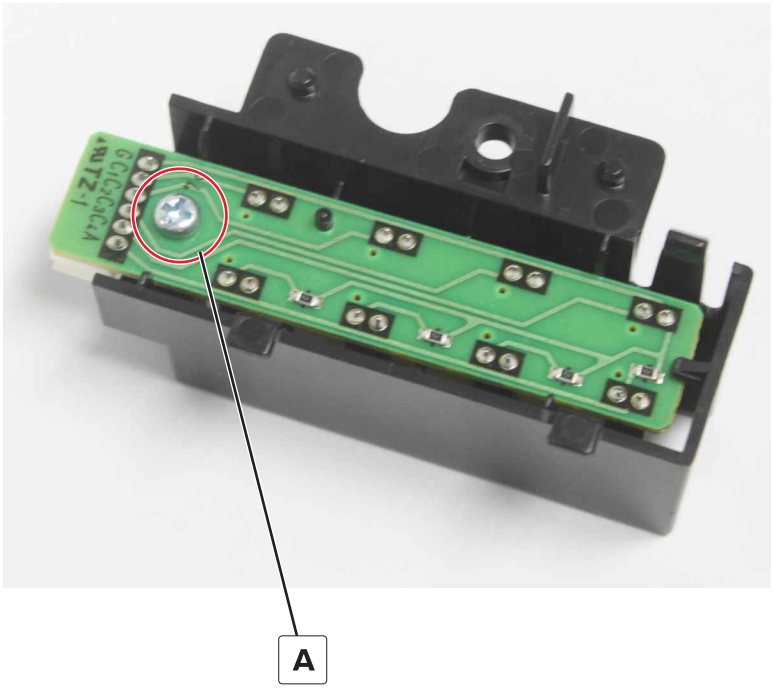
2 Disconnect the cable from the sensor.

3 Remove the screw, press the latch, and then remove the sensor holder.



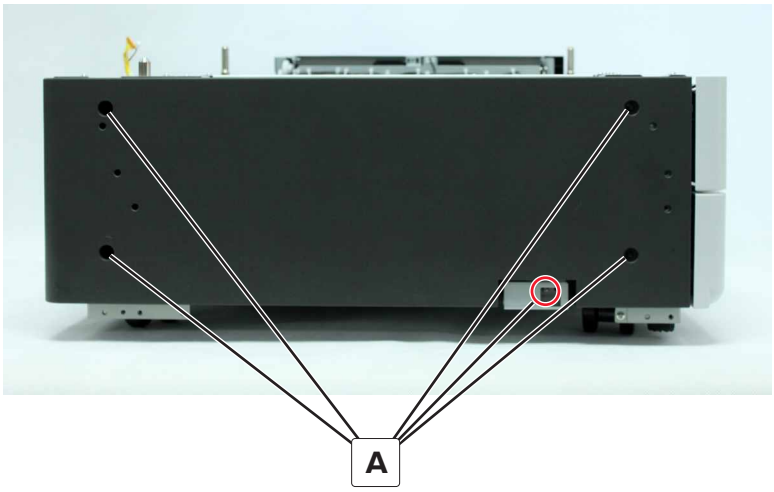
#	Part
1	Sensor (2 x 500 sheet tray 3 paper length)
2	Sensor (2 x 500 sheet tray 4 paper length)

4 Remove the screw (A), and then remove the sensor.



2 x 500-sheet tray left cover removal

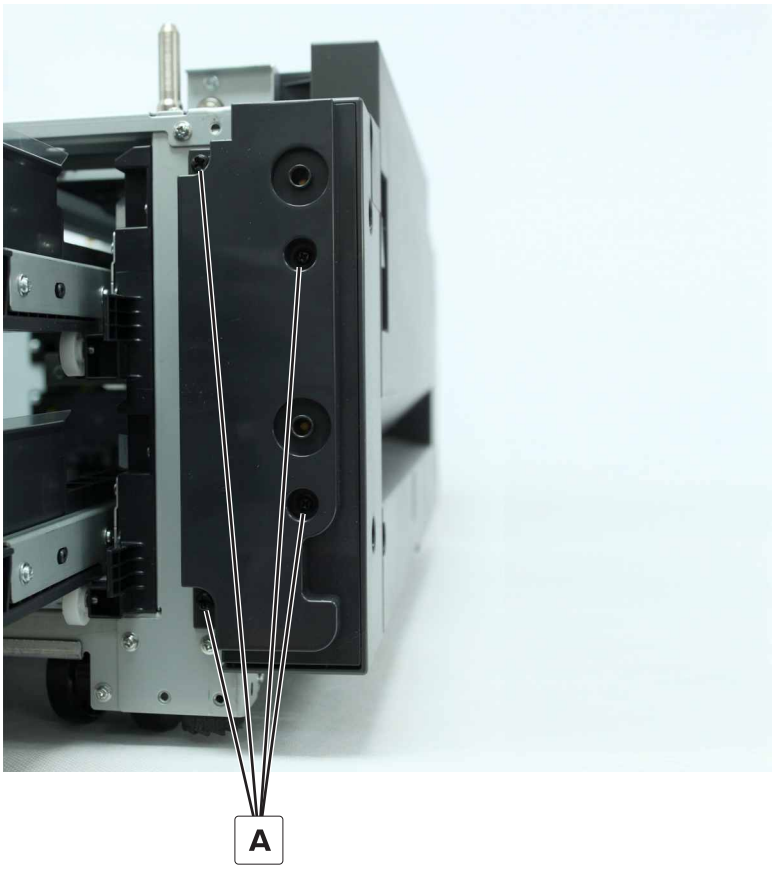
1 Remove the five screws (A).



2 Remove the cover.

2 x 500-sheet tray empty LED cover removal

1 Remove the four screws (A).



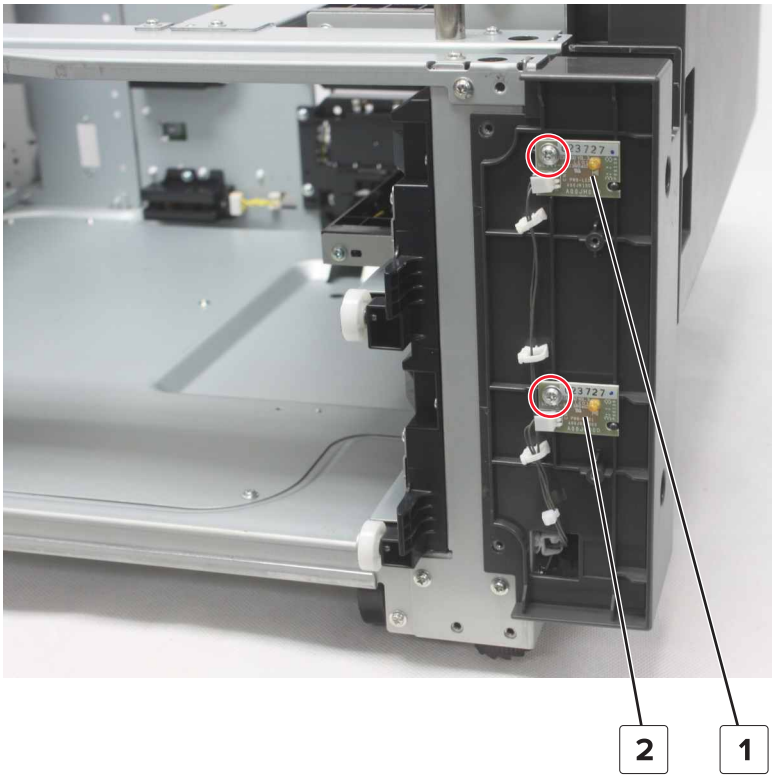
2 Remove the cover.

2 x 500-sheet tray empty LED removal

1 Remove the tray empty LED cover. See "2 x 500-sheet tray empty LED cover removal" on page 481.

2 Disconnect the cable.

3 Remove the screw, and then remove the LED.



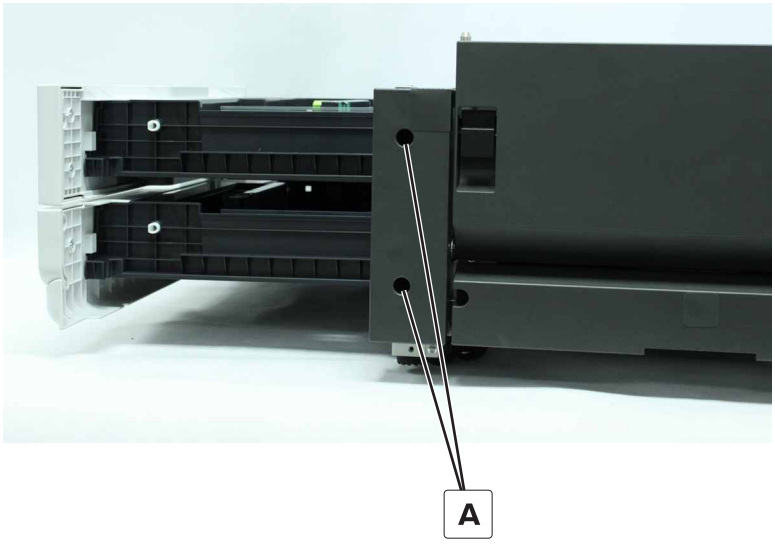
#	Part
1	Tray 3 tray empty LED
2	Tray 4 tray empty LED

2 x 500-sheet tray empty LED mount removal

1 Remove the tray empty LED cover. See "2 x 500-sheet tray empty LED cover removal" on page 481.

2 Remove the tray 3 and tray 4 empty LEDs. See "2 x 500-sheet tray empty LED removal" on page 482.

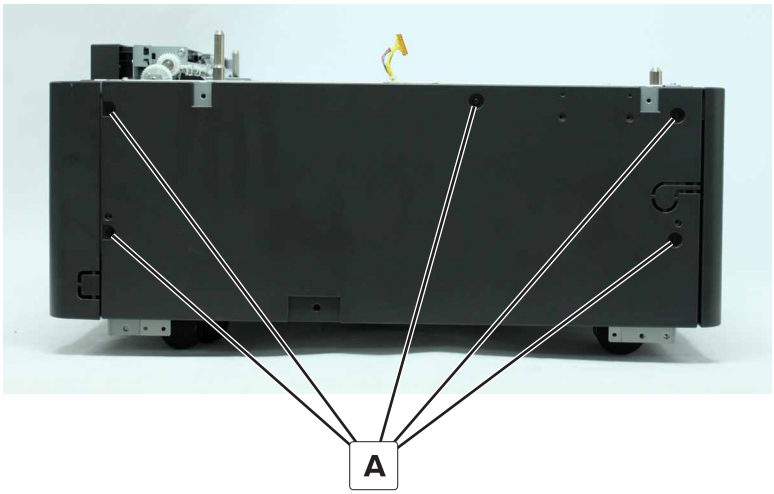
3 Remove the two screws (A), and then remove the cover.



4 Remove all of the cable holders from the cover.

2 x 500-sheet tray rear cover removal

1 Remove the five screws (A).



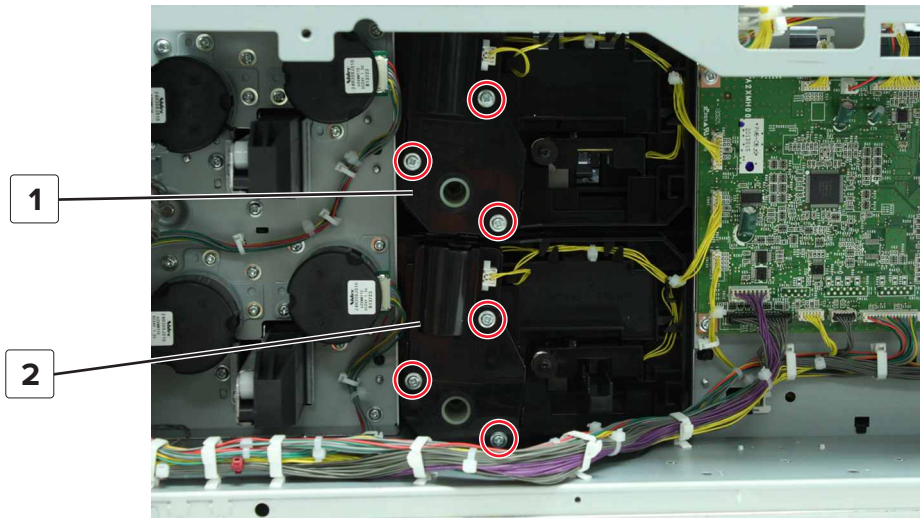
2 Remove the cover.

Motor (2 x 500-sheet tray lift) removal

1 Remove the rear cover. See **"2 x 500-sheet tray rear cover removal" on page 483**.

2 Disconnect the cable from the motor.

3 Remove the three screws, and then remove the motor.

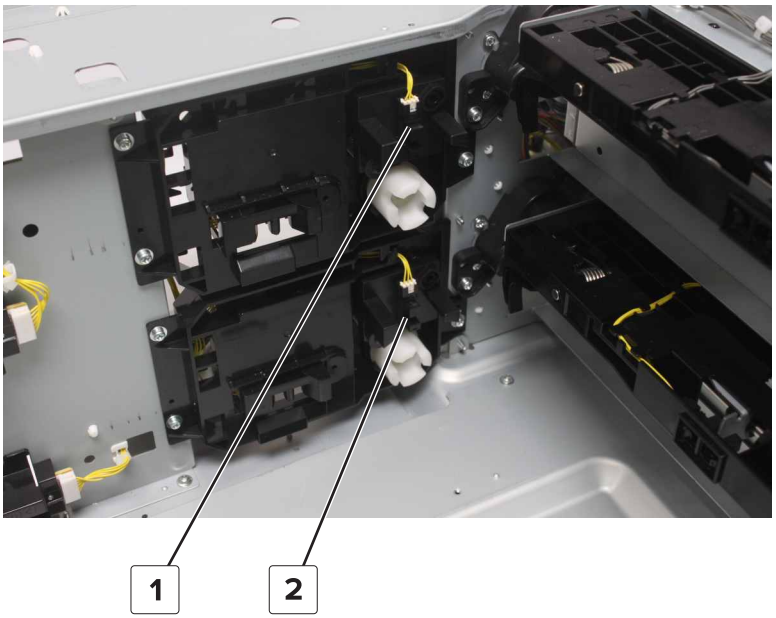


#	Part
1	Motor (2 x 500-sheet tray 3 lift)
2	Motor (2 x 500-sheet tray 4 lift)

Sensor (2 x 500-sheet tray near empty) removal

1 Remove the tray inserts.

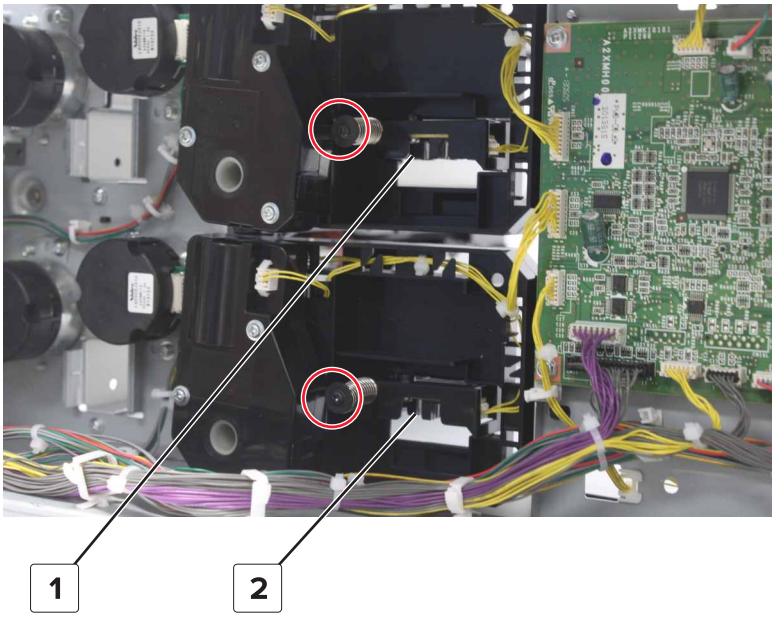
2 Disconnect the cable from the sensor, and then remove the sensor.



#	Part
1	Sensor (2 x 500-sheet tray 3 near empty)
2	Sensor (2 x 500-sheet tray 4 near empty)

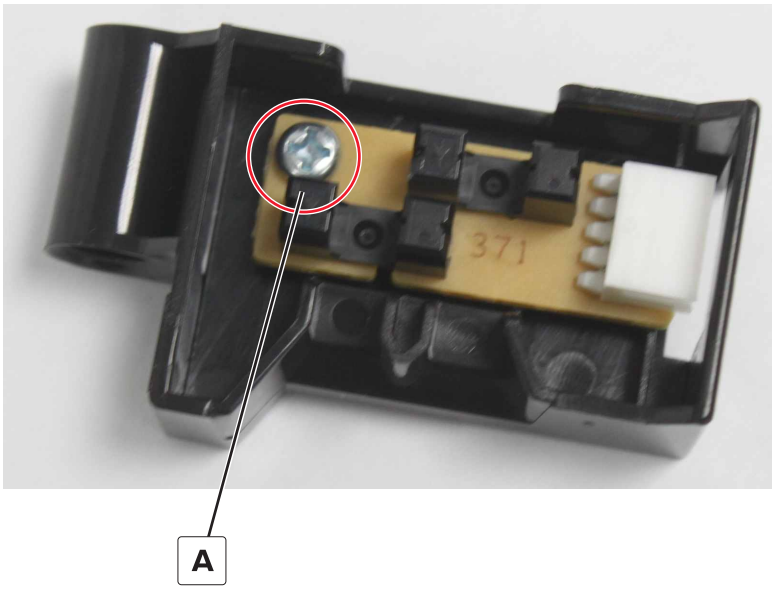
Sensor (2 x 500-sheet tray paper width) removal

1. Remove the rear cover. See **"2 x 500-sheet tray rear cover removal" on page 483**.
2. Remove the screw.
3. Disconnect the cable from the sensor, and then remove the sensor holder.



#	Part
1	Sensor (2 x 500-sheet tray 3 paper width)
2	Sensor (2 x 500-sheet tray 4 paper width)

4 Remove the screw (A), and then remove the sensor.



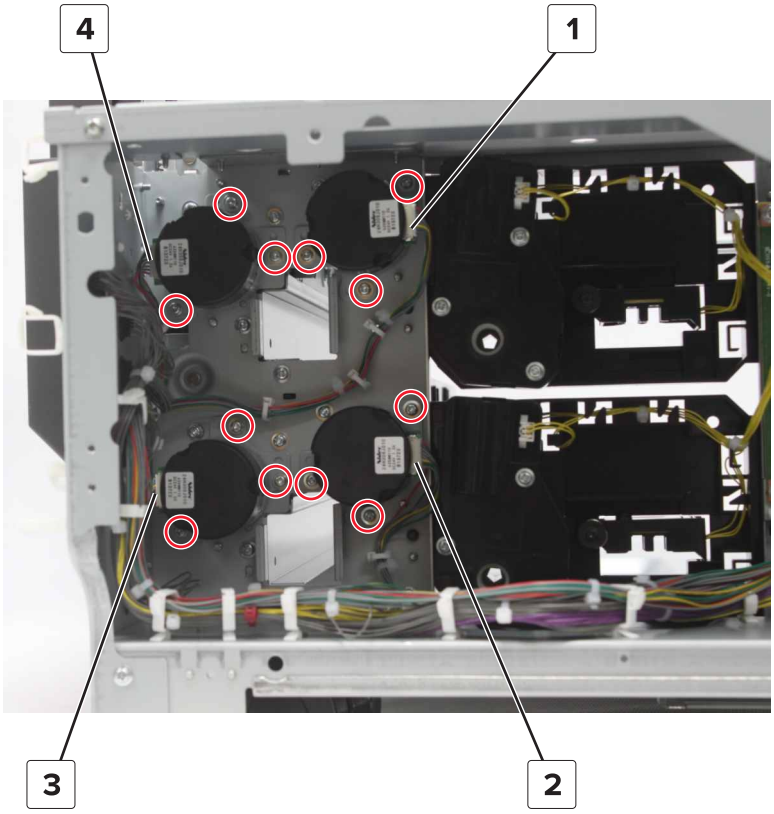
Installation note: Toggle the sensor to make sure that it bounces back.

2 x 500-sheet tray feed and transport motors removal

1 Remove the rear cover. See **"2 x 500-sheet tray rear cover removal" on page 483**.

2 Disconnect the cable from the motor.

3 Remove the three screws, and then remove the motor.



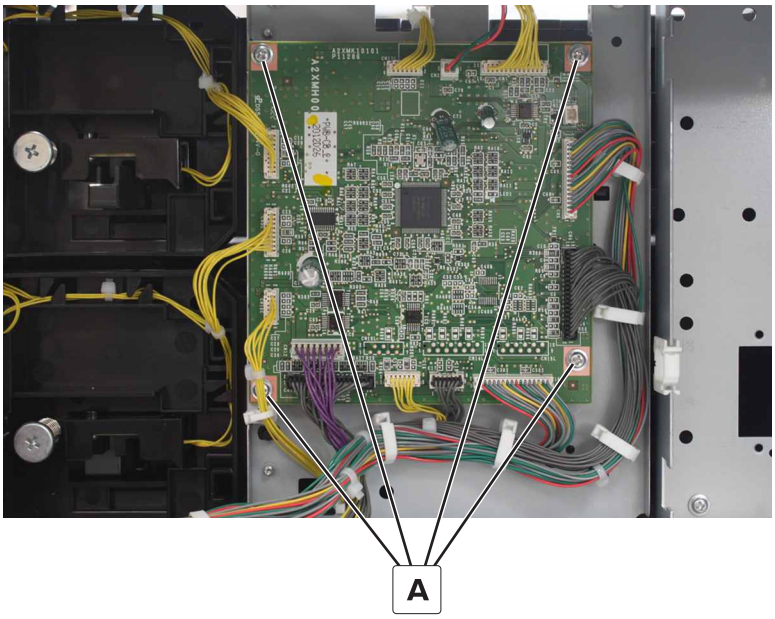
#	Part
1	Motor (2 x 500-sheet tray 3 feed)
2	Motor (2 x 500-sheet tray 4 feed)
3	Motor (2 x 500-sheet tray 4 transport)
4	Motor (2 x 500-sheet tray 3 transport)

2 x 500-sheet tray controller board removal

1 Remove the rear cover. See **"2 x 500-sheet tray rear cover removal" on page 483**.

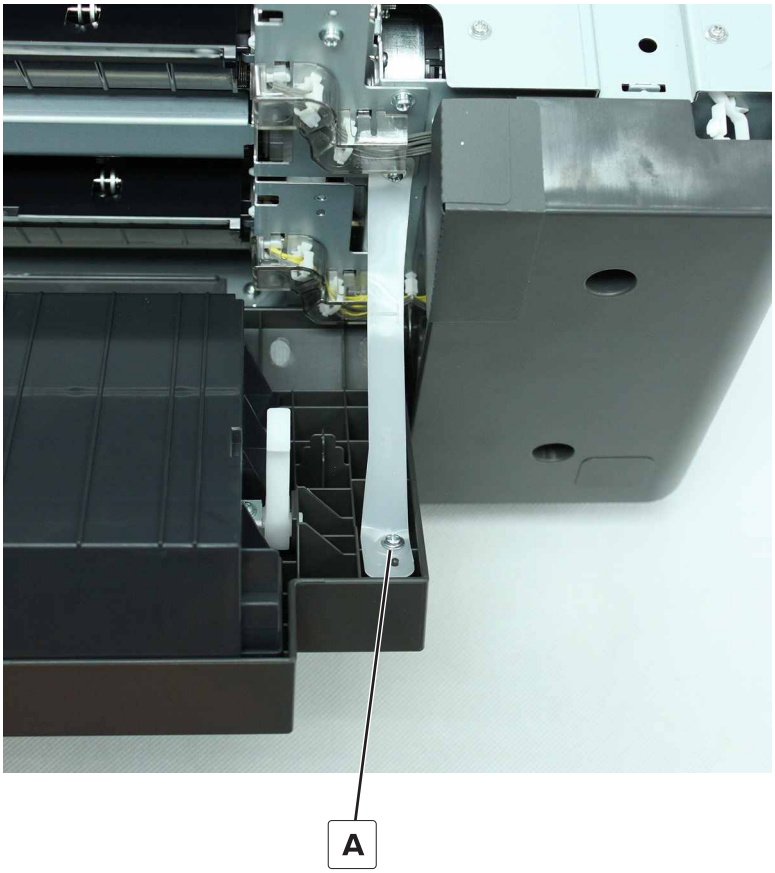
2 Disconnect all the cables from the board.

3 Remove the four screws (A), and then remove the board.

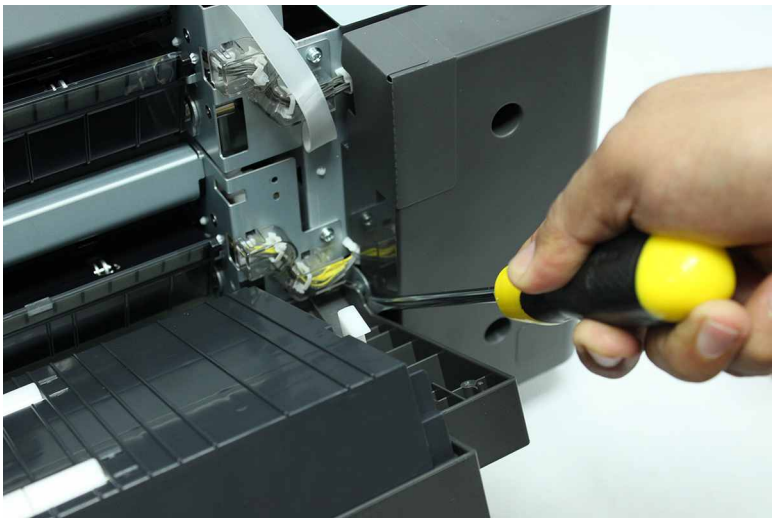


2 x 500-sheet tray jam access door removal

1 Open the door, and then remove the screw (A).

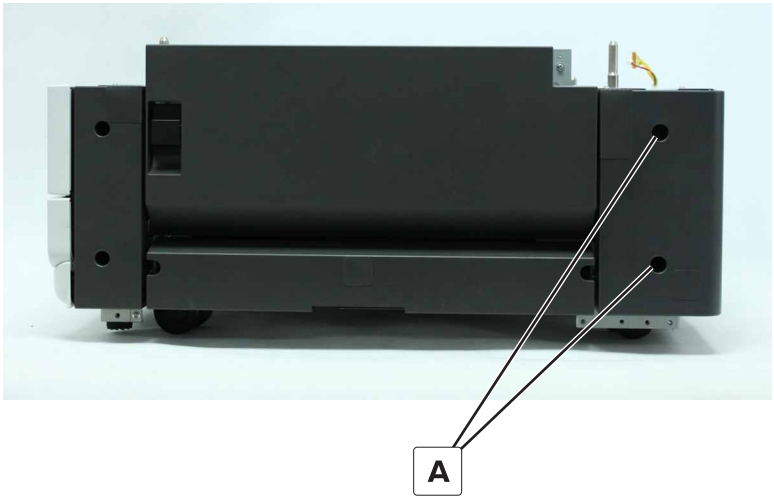


2 Pry to release the hinge, and then remove the cover.



2 x 500-sheet tray rear right cover removal

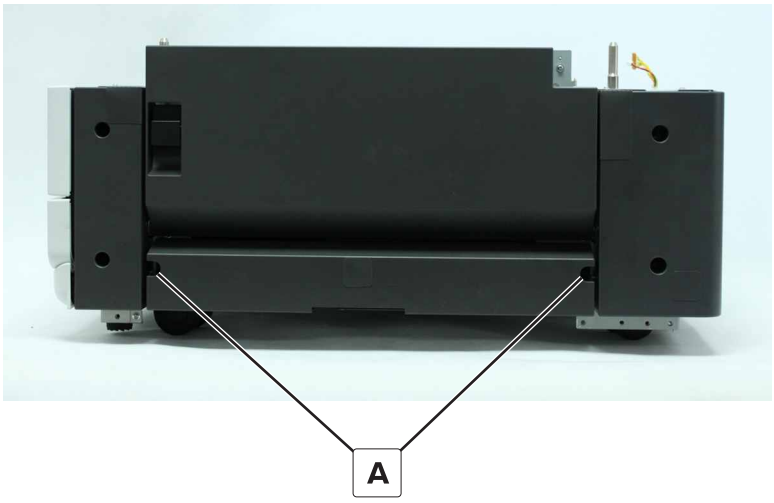
1 Remove the two screws (A).



2 Remove the cover.

2 x 500-sheet tray bottom right cover removal

1 Remove the two screws (A).



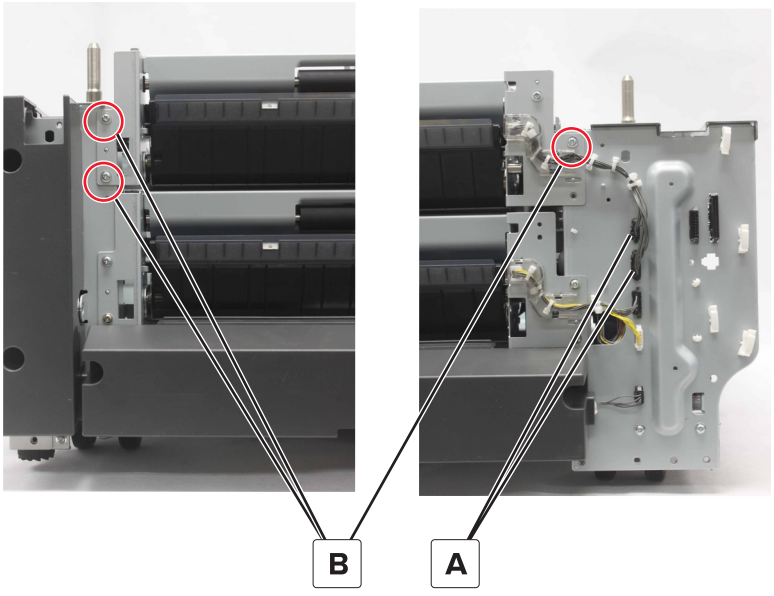
2 Remove the cover.

2 x 500-sheet tray 3 transport assembly removal

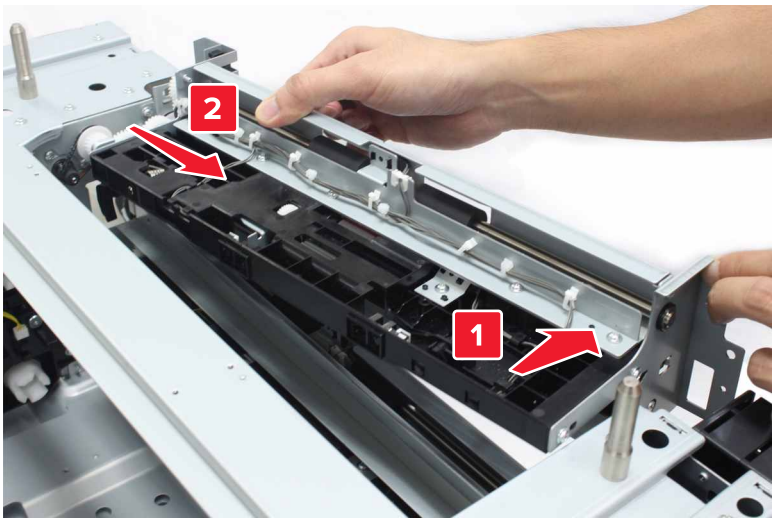
1 Remove the rear right cover. See **"2 x 500-sheet tray rear right cover removal" on page 489**.

2 Remove the jam access door. See **"2 x 500-sheet tray jam access door removal" on page 488**.

3 Disconnect the two cables (A), and then remove the three screws (B).



4 Remove the assembly.



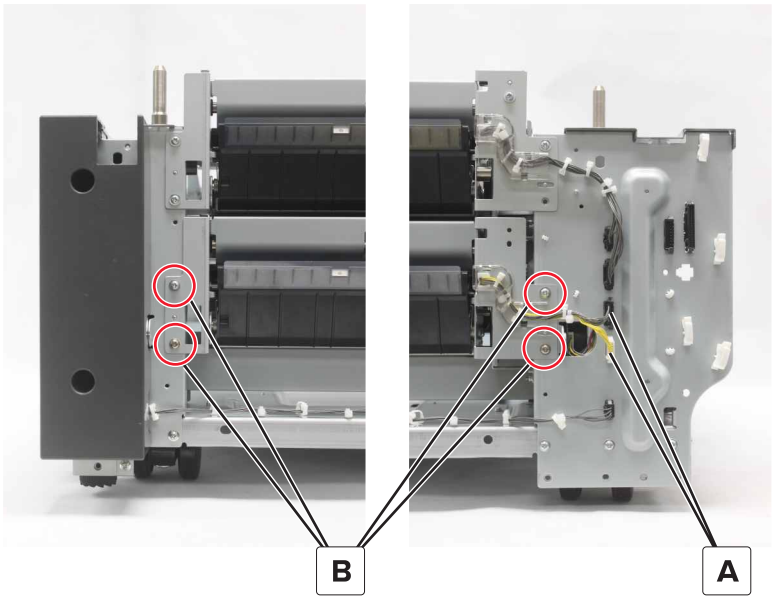
2 x 500-sheet tray 4 transport assembly removal

1 Remove the rear right cover. See "2 x 500-sheet tray rear right cover removal" on page 489.

2 Remove the jam access door. See "2 x 500-sheet tray jam access door removal" on page 488.

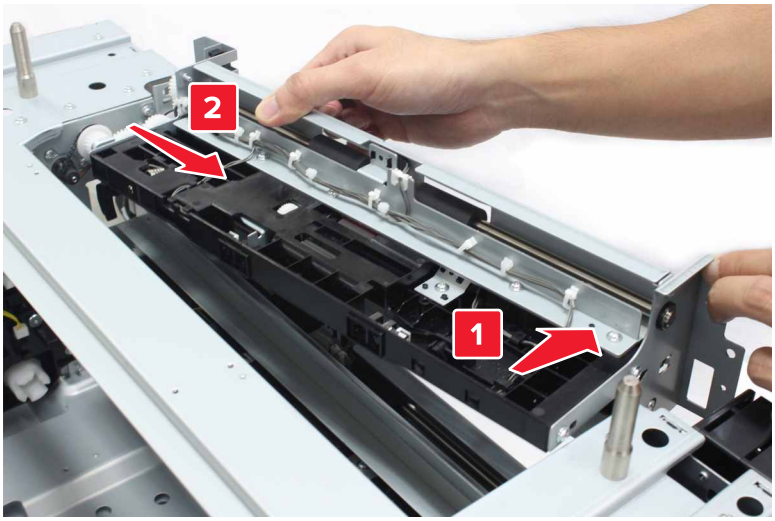
3 Remove the bottom right cover. See "2 x 500-sheet tray bottom right cover removal" on page 490.

4 Disconnect the two cables (A), and then remove the four screws (B).



5 Remove the assembly.

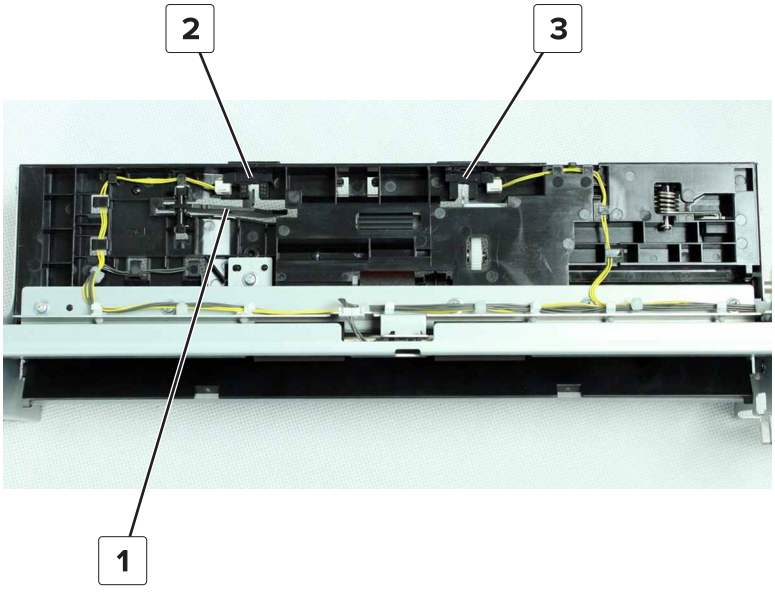
Note: The following illustration shows the tray 3 transport assembly. The same movements apply when removing the tray 4 transport assembly.

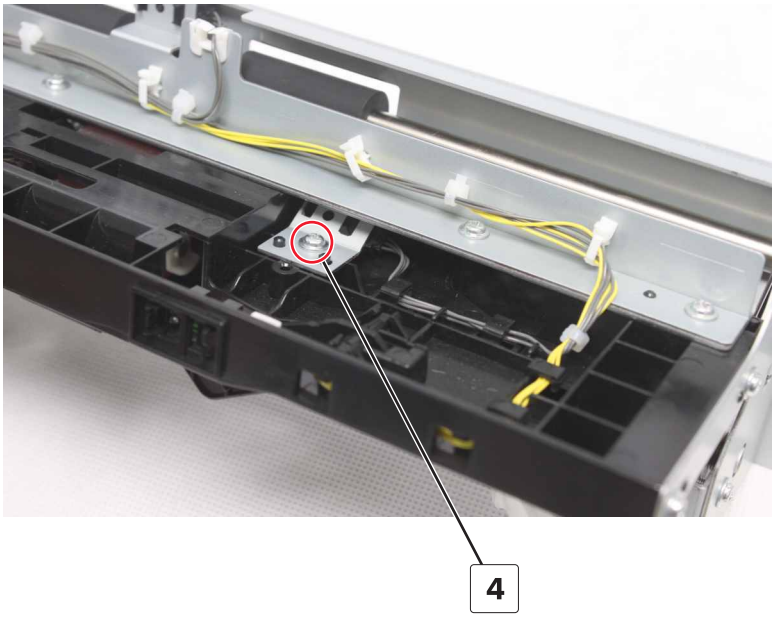


2 x 500-sheet tray transport assembly sensors removal

Note: The following procedure begins with the tray 4 transport assembly sensors. If you are removing the tray 3 transport assembly sensors, then go directly to step 5.

1. Remove the rear right cover. See **"2 x 500-sheet tray rear right cover removal" on page 489**.
2. Remove the jam access door. See **"2 x 500-sheet tray jam access door removal" on page 488**.
3. Remove the bottom right cover. See **"2 x 500-sheet tray bottom right cover removal" on page 490**.
4. Remove the tray 4 transport assembly. See **"2 x 500-sheet tray 4 transport assembly removal" on page 491**.
5. Remove the appropriate FRU.



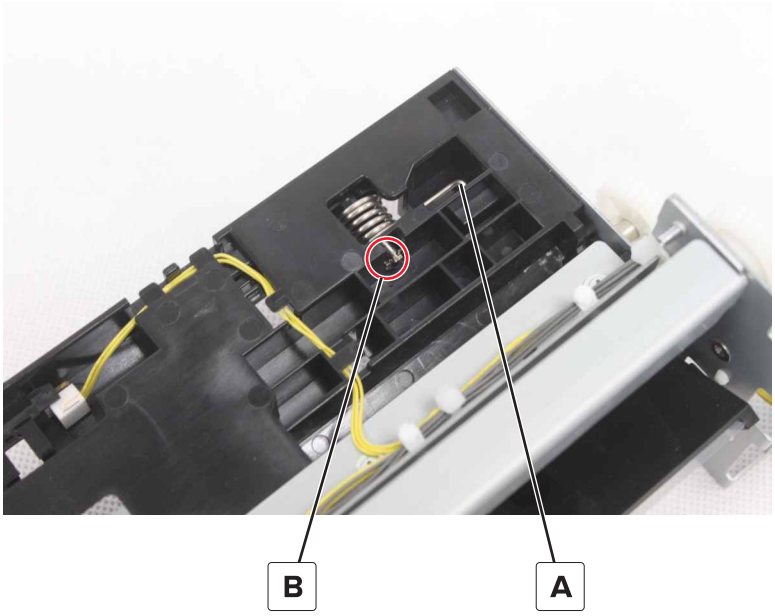


#	Part
1	2 x 500-sheet tray empty sensor actuator
2	Sensor (2 x 500-sheet tray empty)
3	Sensor (2 x 500-sheet tray lift plate level)
4	Sensor (2 x 500-sheet tray feed) **Note:** Remove the screw, remove the sensor bracket, and then remove the sensor.

2 x 500-sheet tray tray set actuator removal

1. Remove the rear right cover. See **"2 x 500-sheet tray rear right cover removal" on page 489**.
2. Remove the jam access door. See **"2 x 500-sheet tray jam access door removal" on page 488**.
3. Remove the bottom right cover. See **"2 x 500-sheet tray bottom right cover removal" on page 490**.
4. Remove the tray 3 or tray 4 transport assembly. See **"2 x 500-sheet tray 3 transport assembly removal" on page 490** or **"2 x 500-sheet tray 4 transport assembly removal" on page 491**.
5. Release the spring (A).

6 Remove the clip (B).



7 Remove the shaft, and then remove the actuator.

Sensor (2 x 500-sheet tray transport) removal

Note: The following procedure begins with the tray 4 sensor. If you are removing the tray 3 sensor, then go directly to step 5.

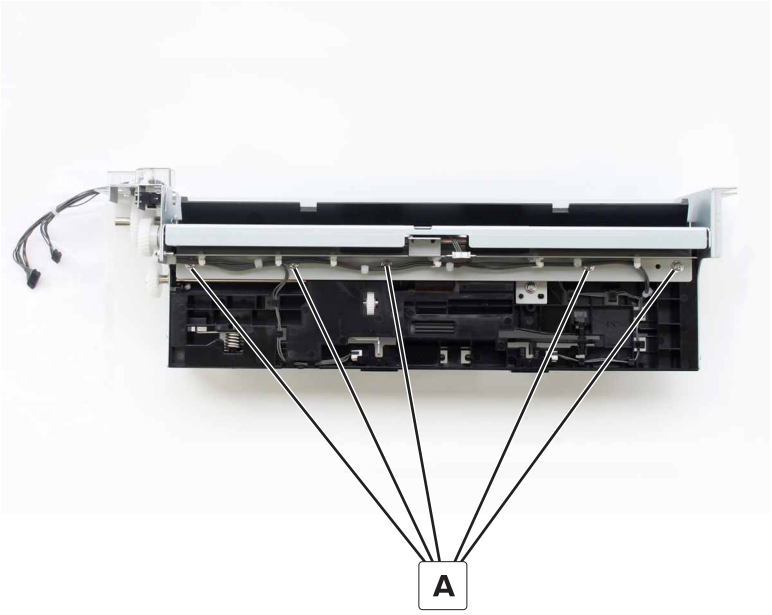
1 Remove the rear right cover. See **"2 x 500-sheet tray rear right cover removal" on page 489**.

2 Remove the jam access door. See **"2 x 500-sheet tray jam access door removal" on page 488**.

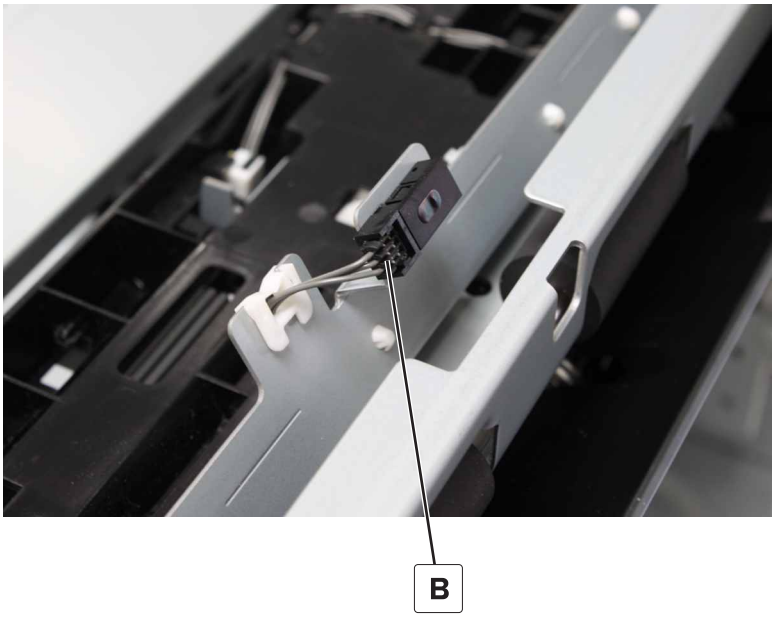
3 Remove the bottom right cover. See **"2 x 500-sheet tray bottom right cover removal" on page 490**.

4 Remove the tray 4 transport assembly. See **"2 x 500-sheet tray 4 transport assembly removal" on page 491**.

5 Remove the five screws (A).



6 Disconnect the cable (B), and then remove the sensor.



2 x 500-sheet tray 3 transport belts and gears removal

1 Remove the rear right cover. See “2 x 500-sheet tray rear right cover removal” on page 489.

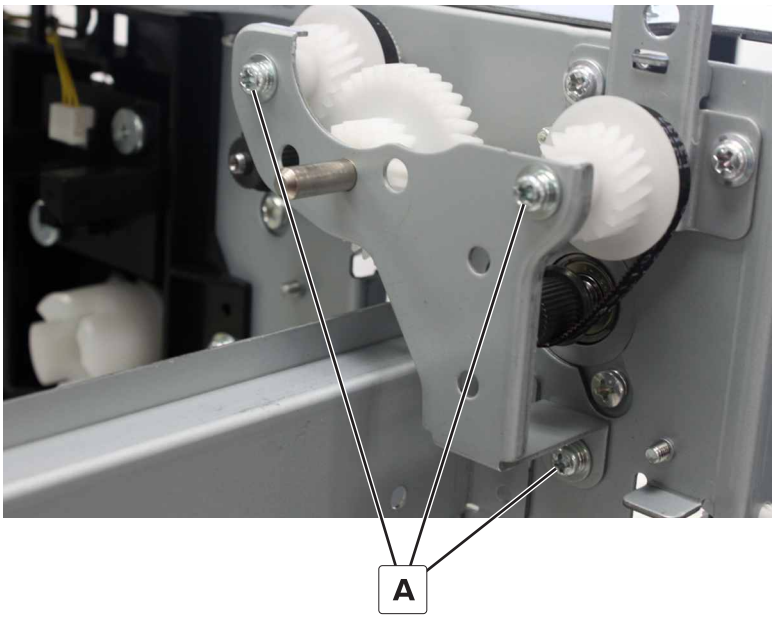
2 Remove the jam access door. See “2 x 500-sheet tray jam access door removal” on page 488.

3 Remove the bottom right cover. See “2 x 500-sheet tray bottom right cover removal” on page 490.

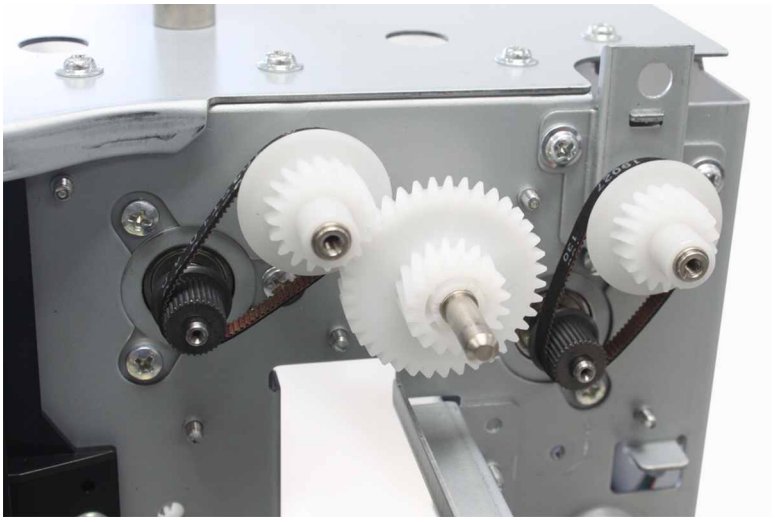
4 Remove the tray 3 transport assembly. See “2 x 500-sheet tray 3 transport assembly removal” on page 490.

5 Remove the tray 4 transport assembly. See “2 x 500-sheet tray 4 transport assembly removal” on page 491.

6 Remove the three screws (A), and then remove the bracket.



7 Remove the three gears and two belts.



2 x 500-sheet tray 4 transport belts and gears removal

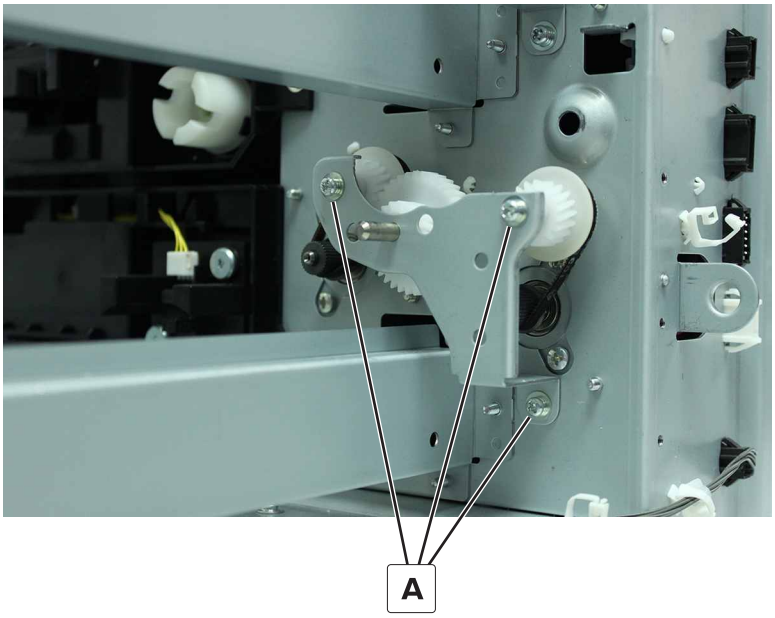
1 Remove the rear right cover. See **"2 x 500-sheet tray rear right cover removal" on page 489**.

2 Remove the jam access door. See **"2 x 500-sheet tray jam access door removal" on page 488**.

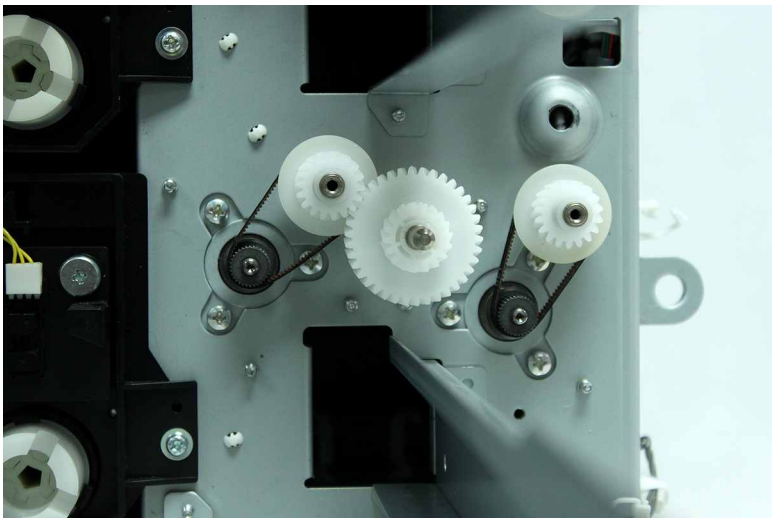
3 Remove the bottom right cover. See **"2 x 500-sheet tray bottom right cover removal" on page 490**.

4 Remove the tray 4 transport assembly. See **"2 x 500-sheet tray 4 transport assembly removal" on page 491**.

5 Remove the three screws (A), and then remove the bracket.



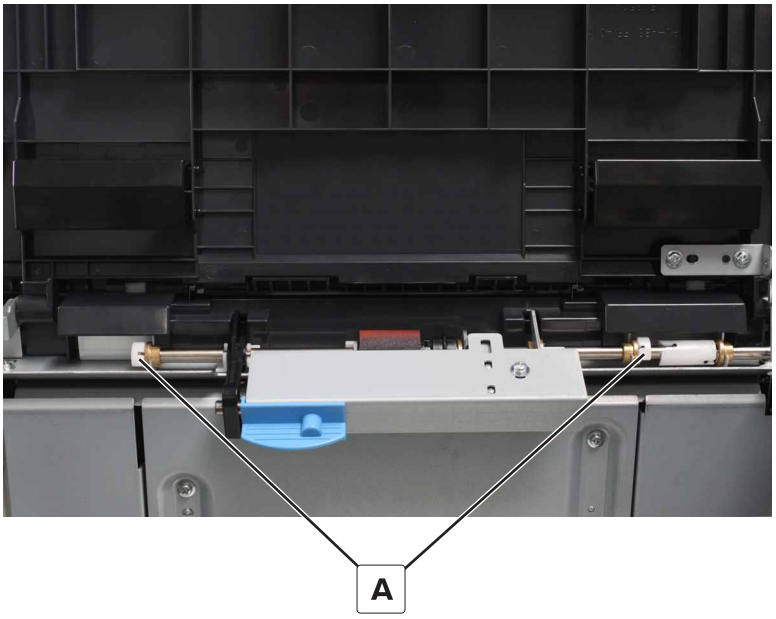
6 Remove the three gears and two belts.



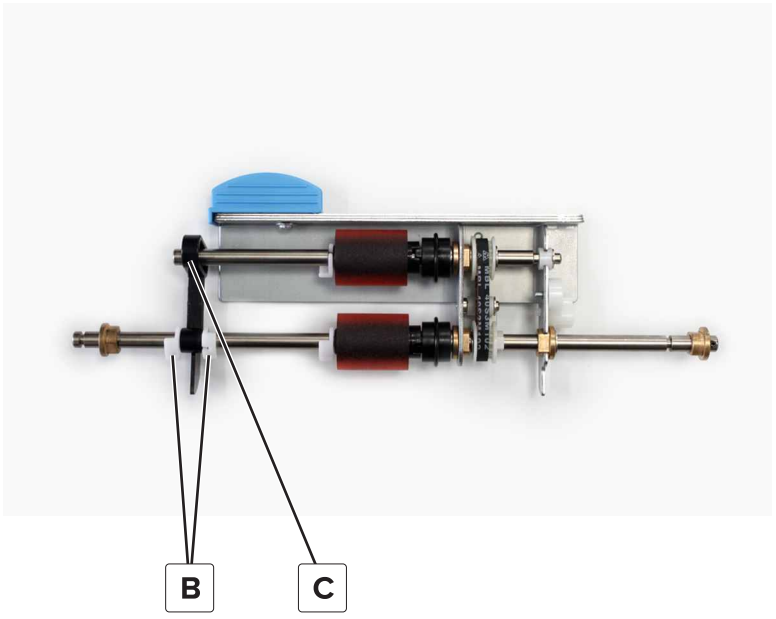
3000-sheet tray removals

3000-sheet tray rollers removal

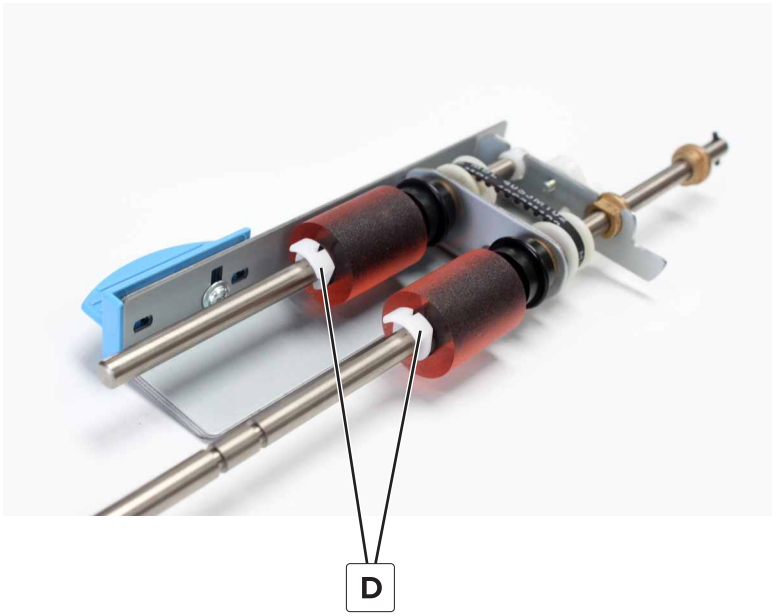
1 Remove the two clips (A), and then remove the bushings.



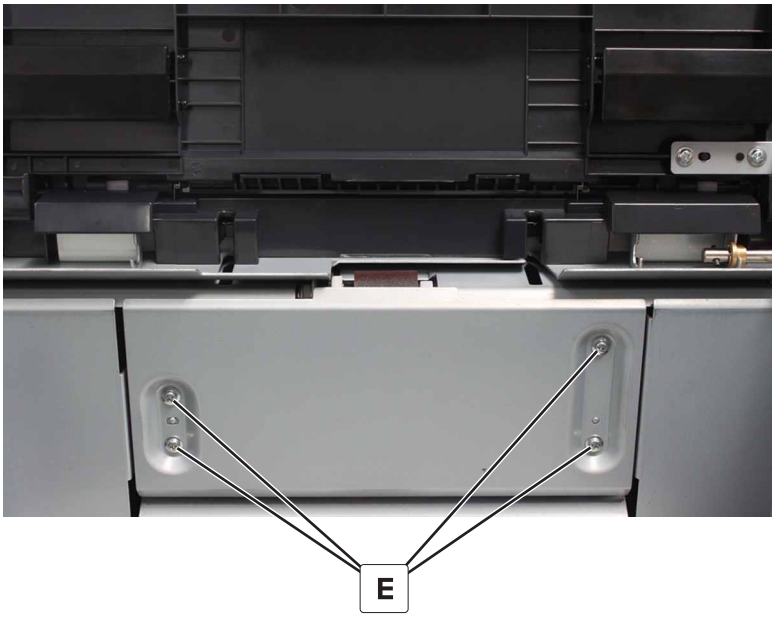
2 Remove the two clips (B), and then remove the actuator (C).



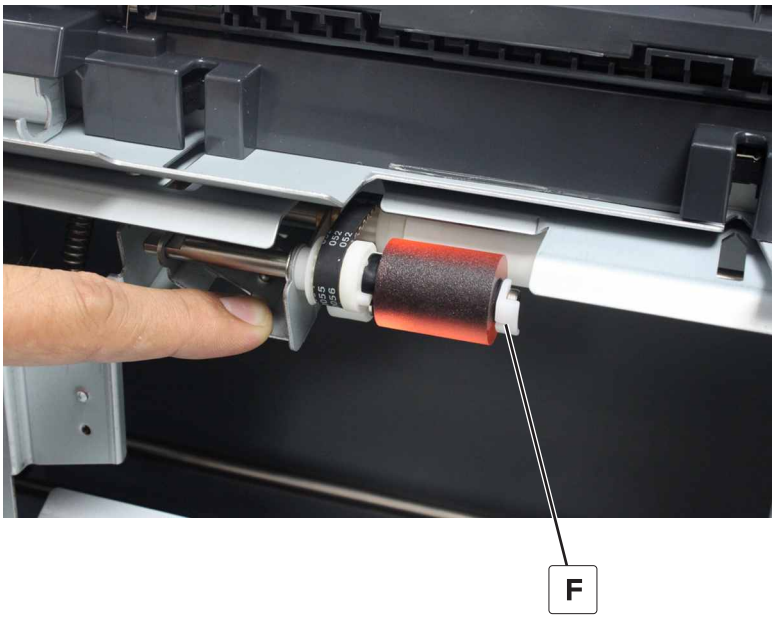
3 Remove the two clips (D), and then remove the feed and pick rollers.



4 Remove the four screws (E), and then remove the cover.



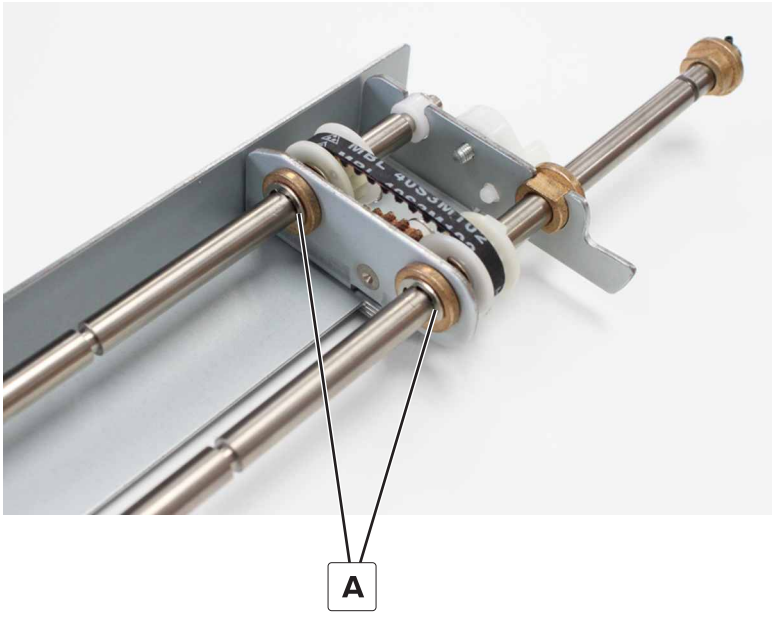
5 Remove the clip (F), and then remove the roller.



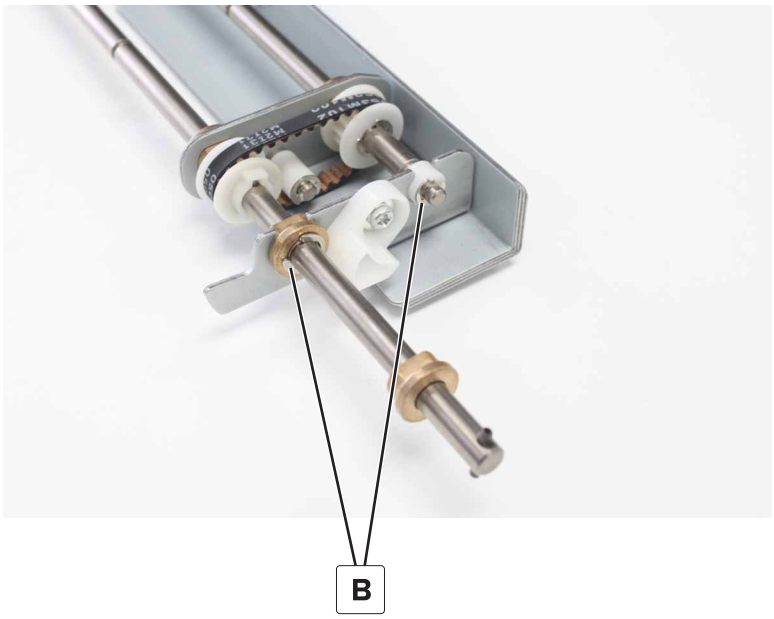
3000-sheet tray feed and pick belt removal

1 Remove the feed and pick rollers. See **"3000-sheet tray rollers removal" on page 498**.

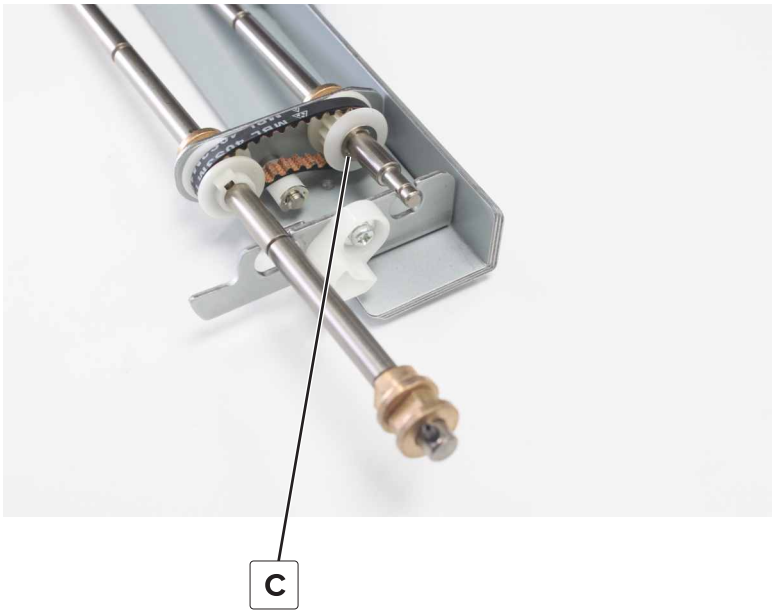
2 Remove the two clips (A), and then remove the bushings.



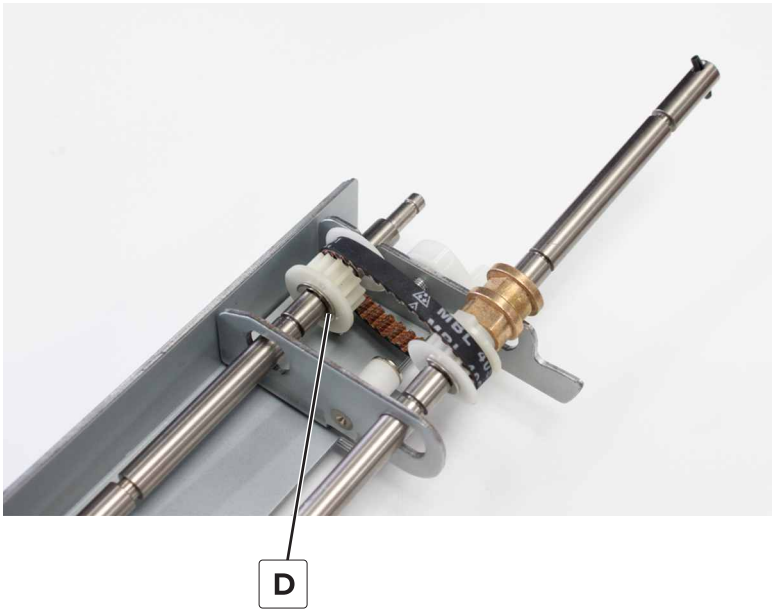
3 Remove the two clips (B), and then remove the two bushings.



4 Remove the clip (C).

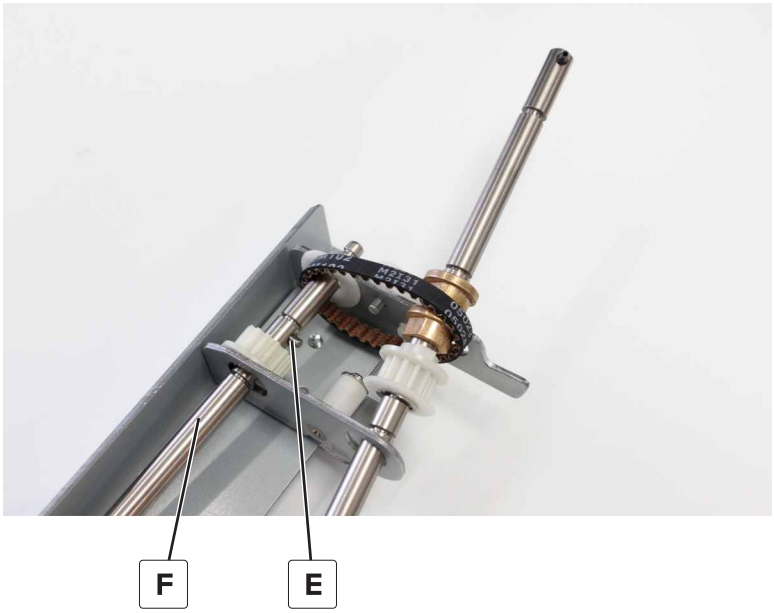


5 Remove the clip (D).



6 Remove the pin (E).

7 Pull out the shaft (F), and then remove the belt.

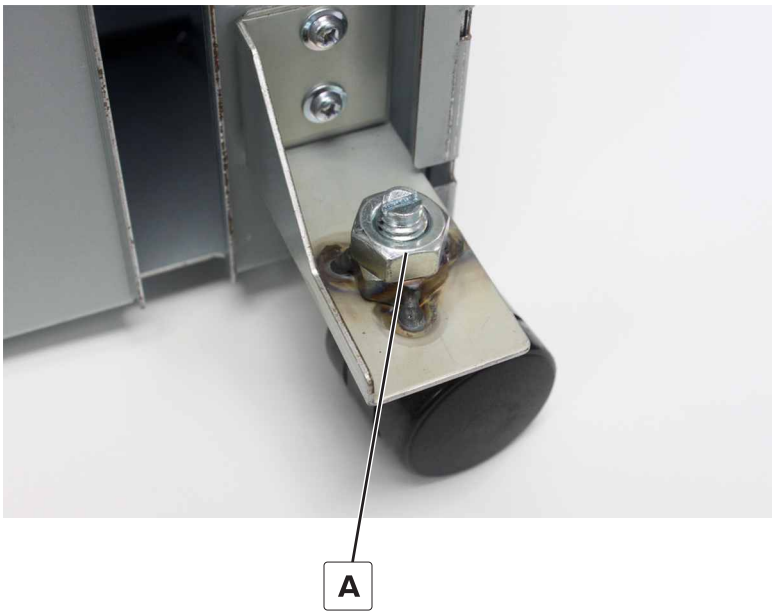


3000-sheet tray caster wheel removal

1 Remove the right cover. See **“3000-sheet tray right cover removal” on page 505**.

2 Depending on the caster to remove, remove the front cover or the rear cover. See **“3000-sheet tray front cover removal” on page 505** or **“3000-sheet tray rear cover removal” on page 506**.

3 Remove the nut (A), and then remove the caster.



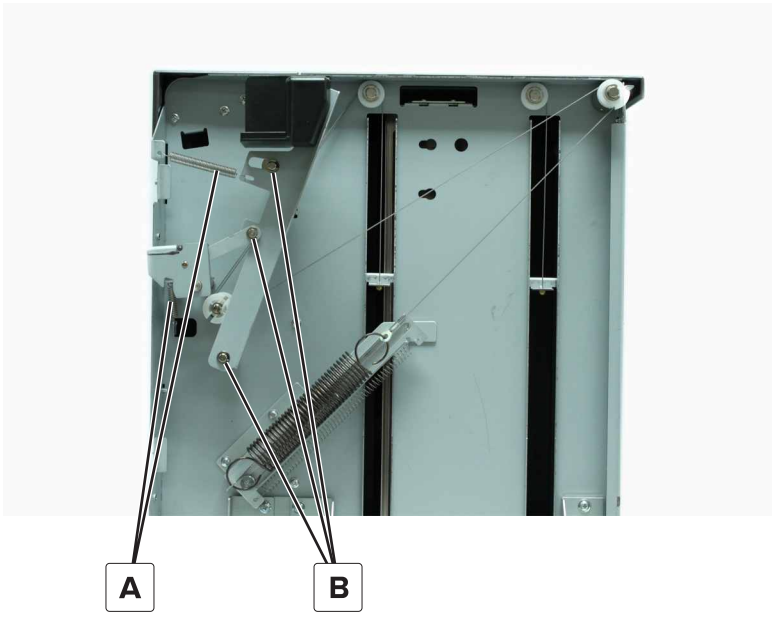
3000-sheet tray release handle removal

1 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

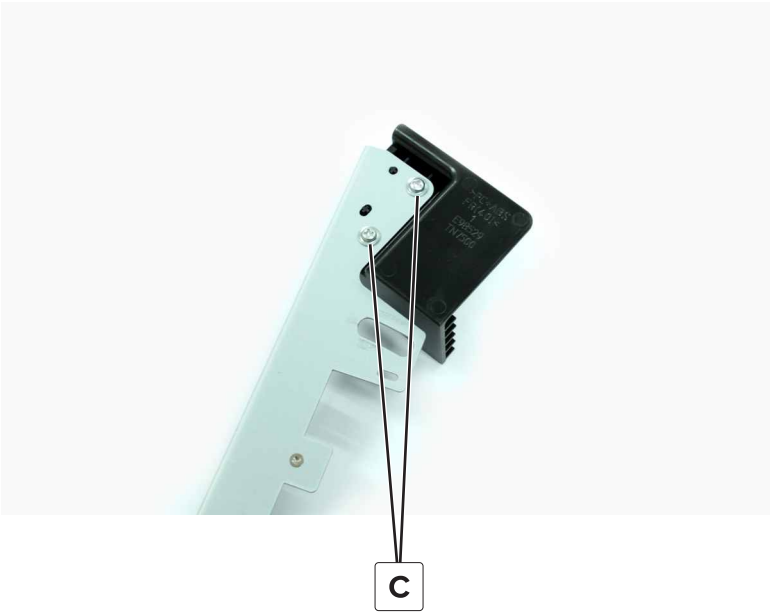
2 Remove the front cover. See **"3000-sheet tray front cover removal" on page 505**.

3 Disconnect the two springs (A).

4 Remove the three clips (B), and then remove the link.

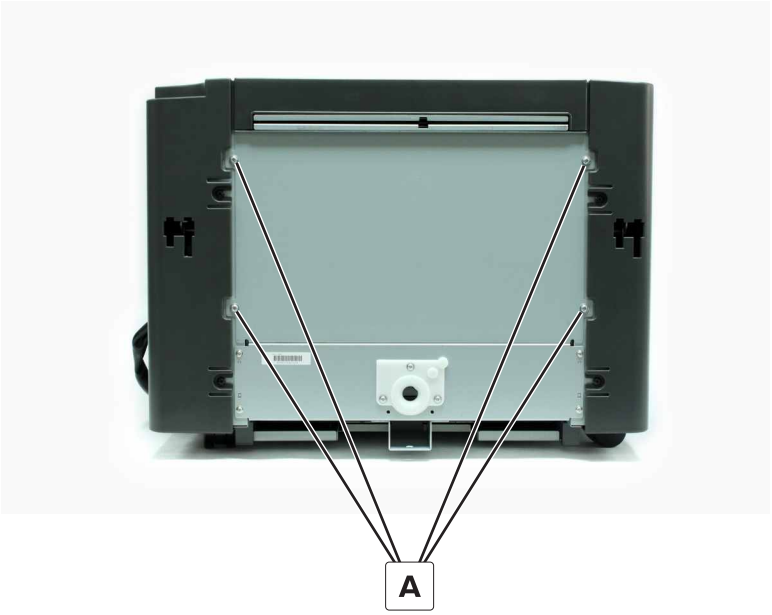


5 Remove the two screws (C), and then remove the handle.



3000-sheet tray left cover removal

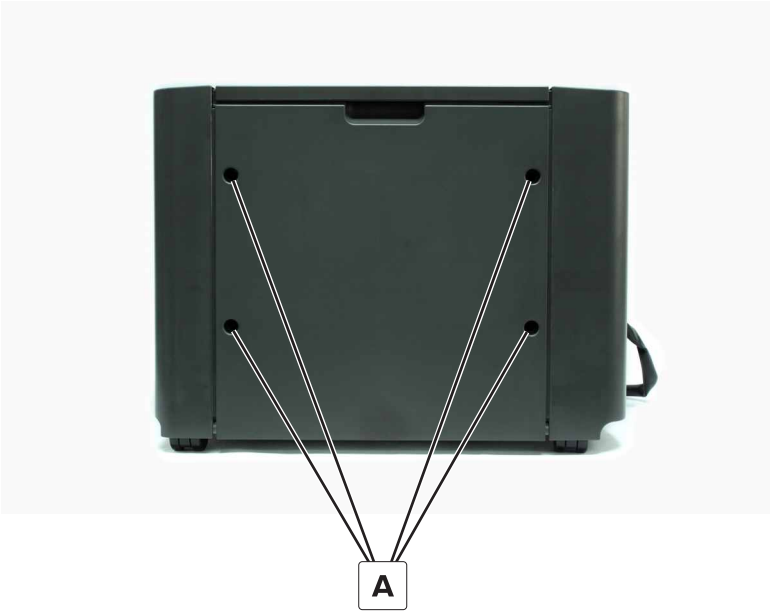
1 Remove the four screws (A).



2 Remove the cover.

3000-sheet tray right cover removal

1 Remove the four screws (A).



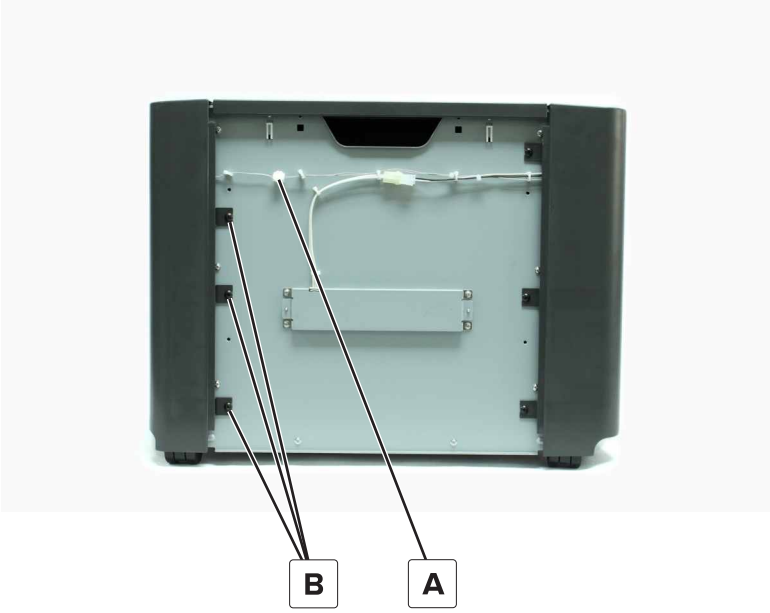
2 Remove the cover.

3000-sheet tray front cover removal

1 Remove the right cover. See **“3000-sheet tray right cover removal” on page 505**.

2 Disconnect the cable (A), and then remove it from the cable clips.

3 Remove the three screws (B).

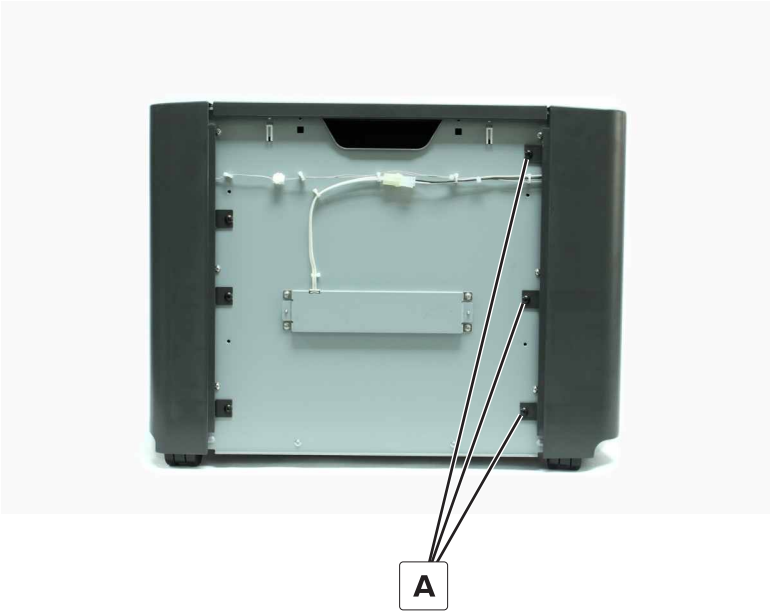


4 Remove the two screws (C), and then remove the cover.

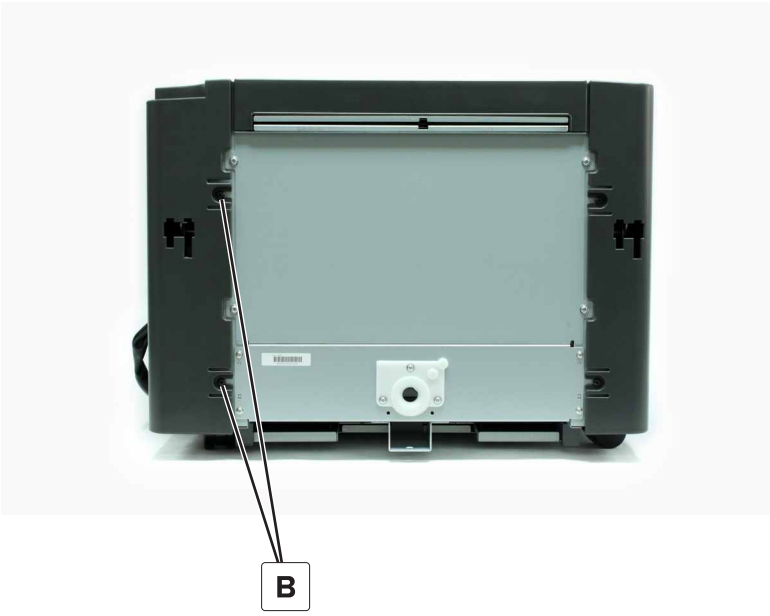
3000-sheet tray rear cover removal

1 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

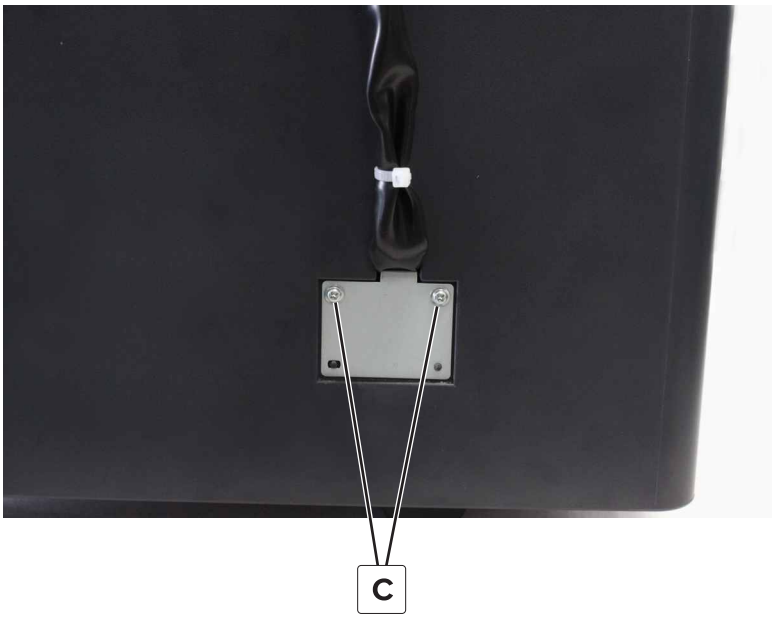
2 Remove the three screws (A).



3 Remove the two screws (B).



4 Remove the two screws (C).



5 Remove the plate, and then remove the cover.

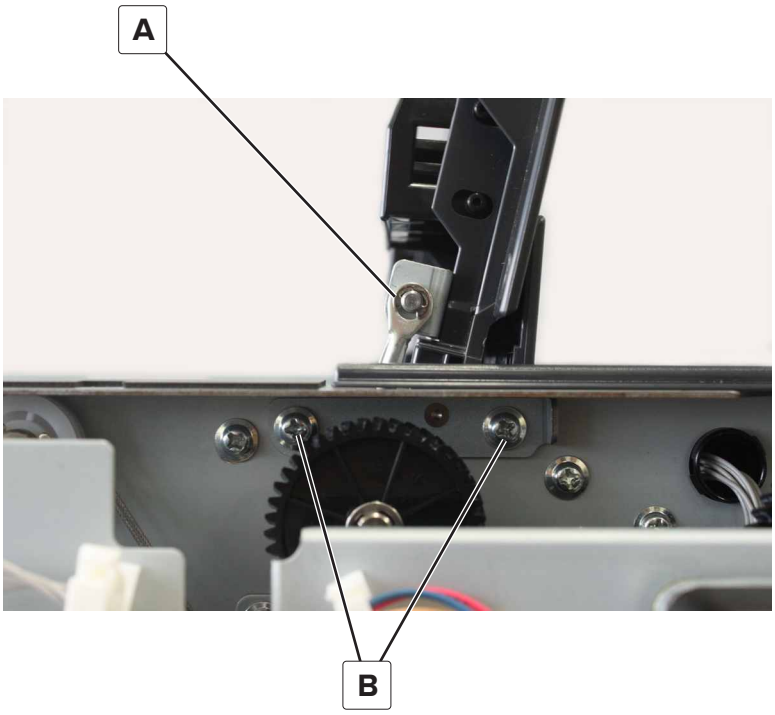
3000-sheet tray door removal

1 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

2 Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.

3 Remove the clip (A), and then disconnect the cable.

4 Remove the two screws (B), and then remove the bracket.



5 Remove the door.

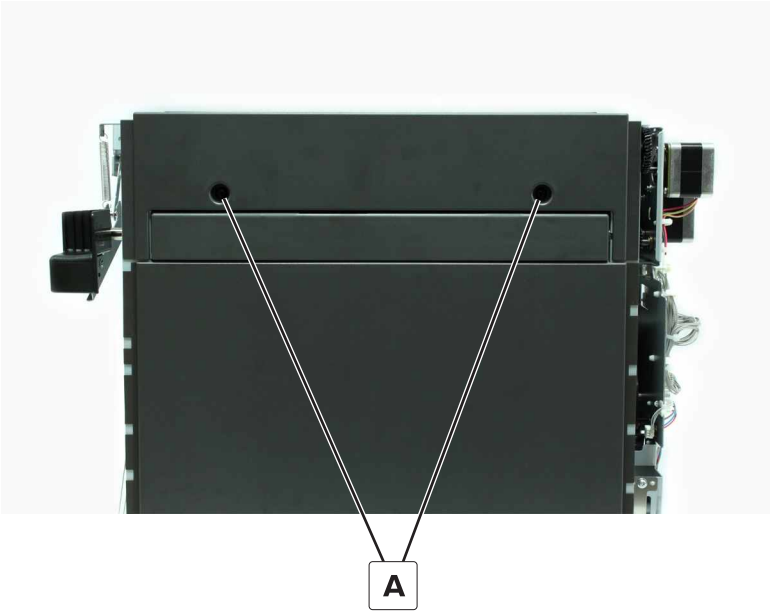
3000-sheet tray left top cover removal

1 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

2 Remove the front cover. See **"3000-sheet tray front cover removal" on page 505**.

3 Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.

4 Remove the two screws (A), and then remove the cover.

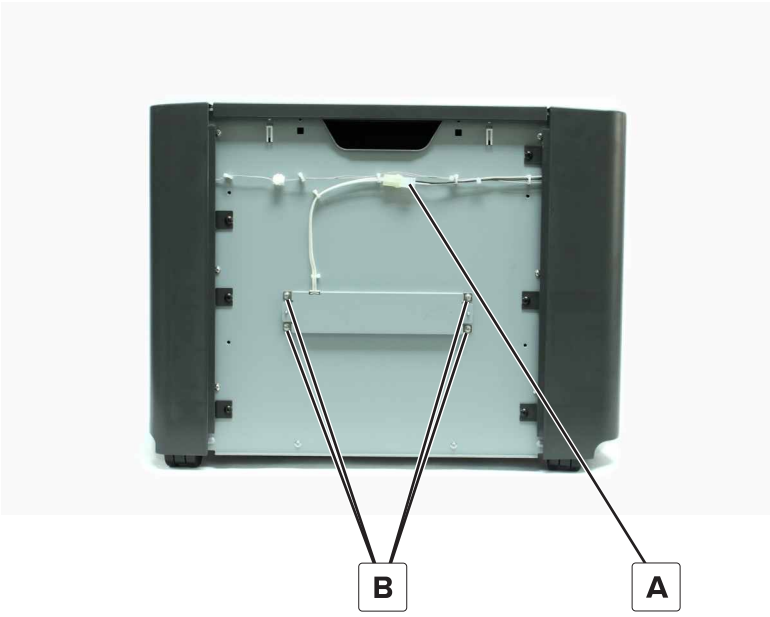


Dehumidifier removal

1 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

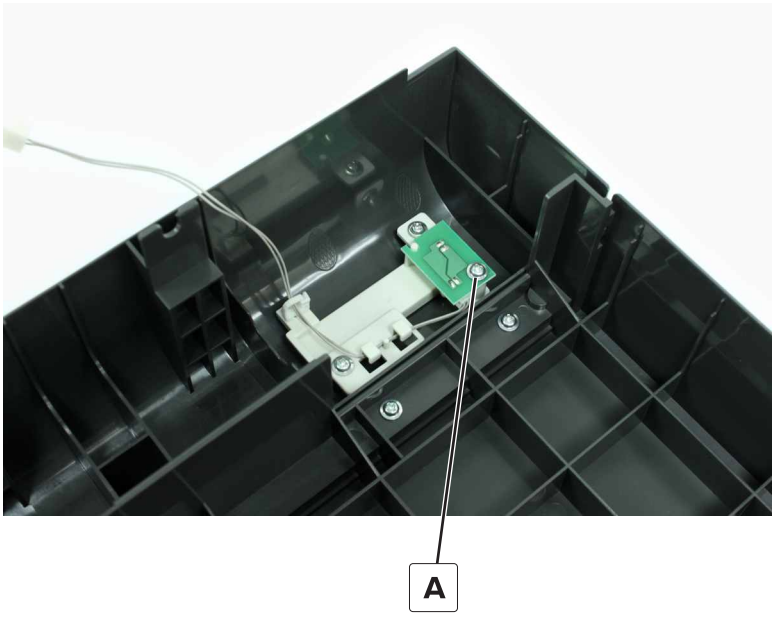
2 Disconnect the cable (A).

3 Remove the four screws (B), and then remove the dehumidifier.



3000-sheet tray empty LED removal

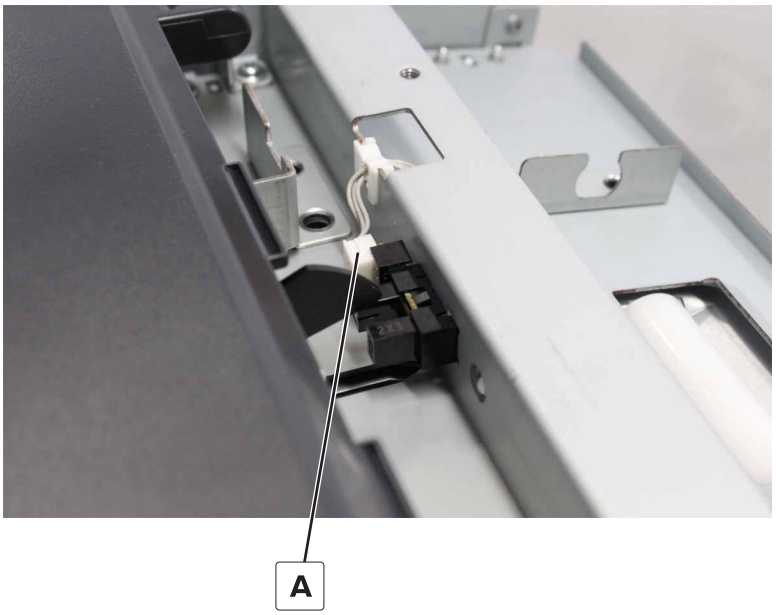
1. Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.
2. Remove the front cover. See **"3000-sheet tray front cover removal" on page 505**.
3. Remove the screw (A), and then remove the LED.



Sensor (3000-sheet tray empty) removal

1. Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.
2. Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.
3. Remove the left top cover. See **"3000-sheet tray left top cover removal" on page 508**.

4 Disconnect the cable (A), and then remove the sensor.



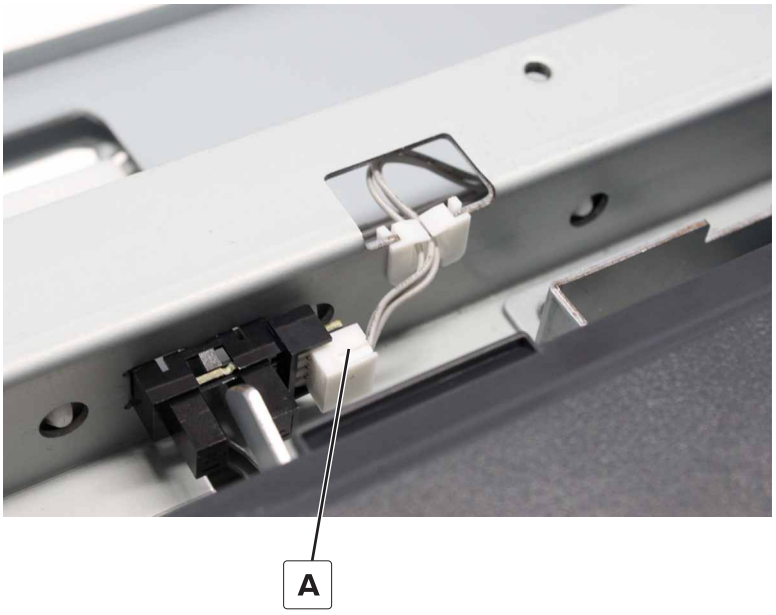
Sensor (3000-sheet tray elevator level) removal

1 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

2 Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.

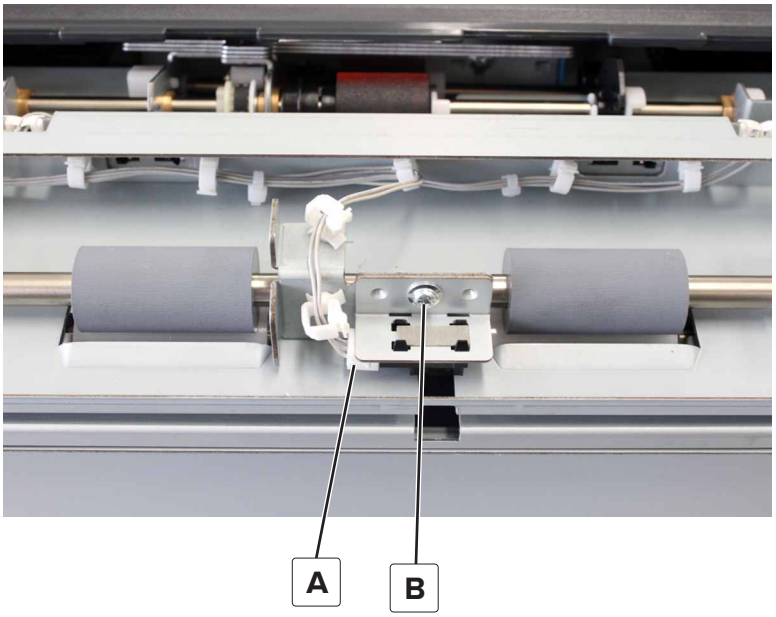
3 Remove the left top cover. See **"3000-sheet tray left top cover removal" on page 508**.

4 Disconnect the cable (A), and then remove the sensor.

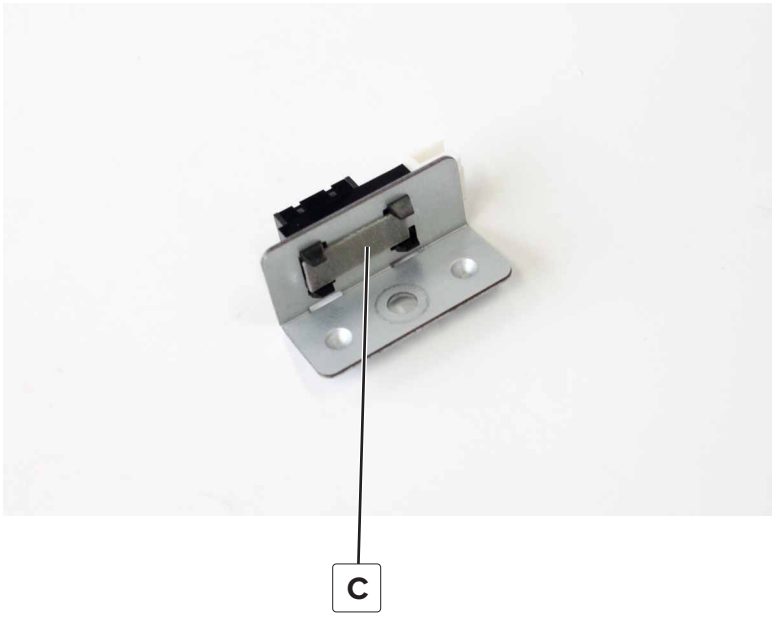


Sensor (3000-sheet tray feed) removal

1. Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.
2. Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.
3. Remove the front cover. See **"3000-sheet tray front cover removal" on page 505**.
4. Remove the left top cover. See **"3000-sheet tray left top cover removal" on page 508**.
5. Disconnect the cable (A).
6. Remove the screw (B), and then remove the bracket.



7. Remove the adhesive (C), and then remove the sensor.

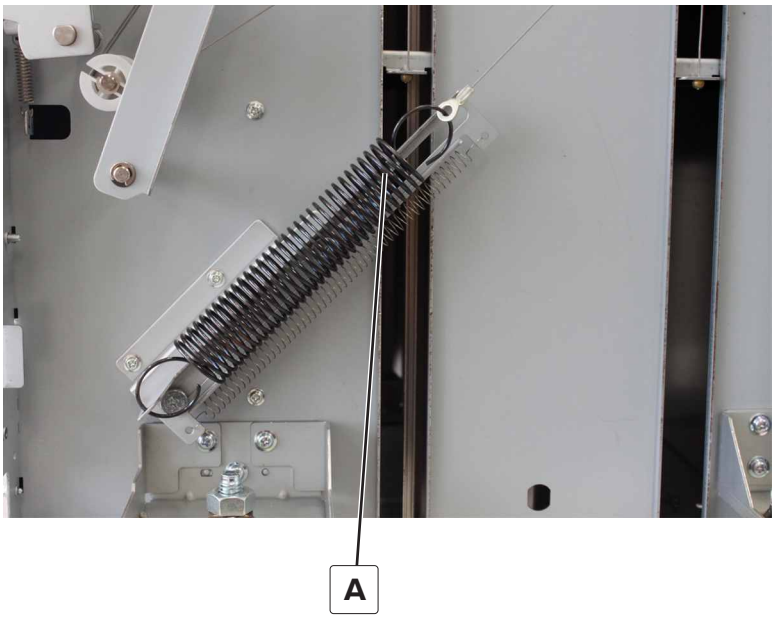


3000-sheet tray elevator spring removal

1 Remove the right cover. See **“3000-sheet tray right cover removal” on page 505**.

2 Remove the front cover. See **“3000-sheet tray front cover removal” on page 505**.

3 Remove the spring (A).



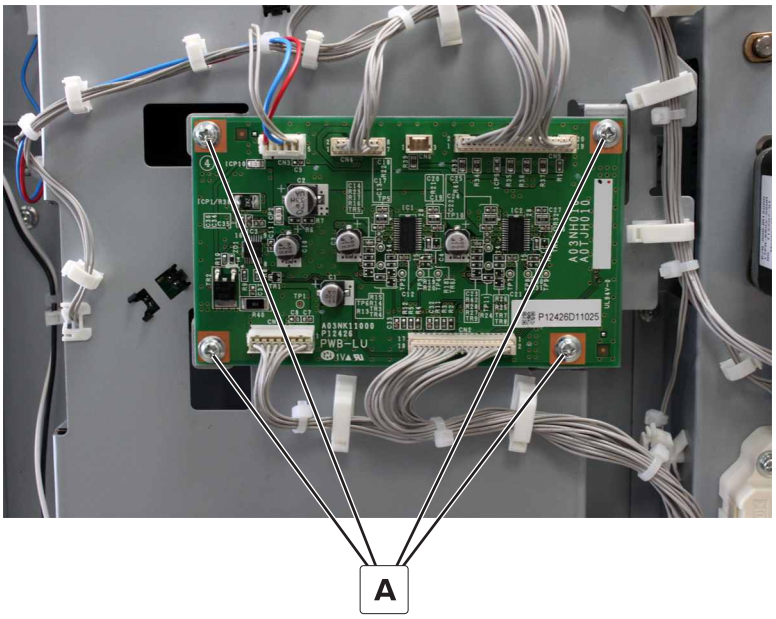
3000-sheet tray controller board removal

1 Remove the right cover. See **“3000-sheet tray right cover removal” on page 505**.

2 Remove the rear cover. See **“3000-sheet tray rear cover removal” on page 506**.

3 Disconnect all the cables from the board.

4 Remove the four screws (A), and then remove the board.



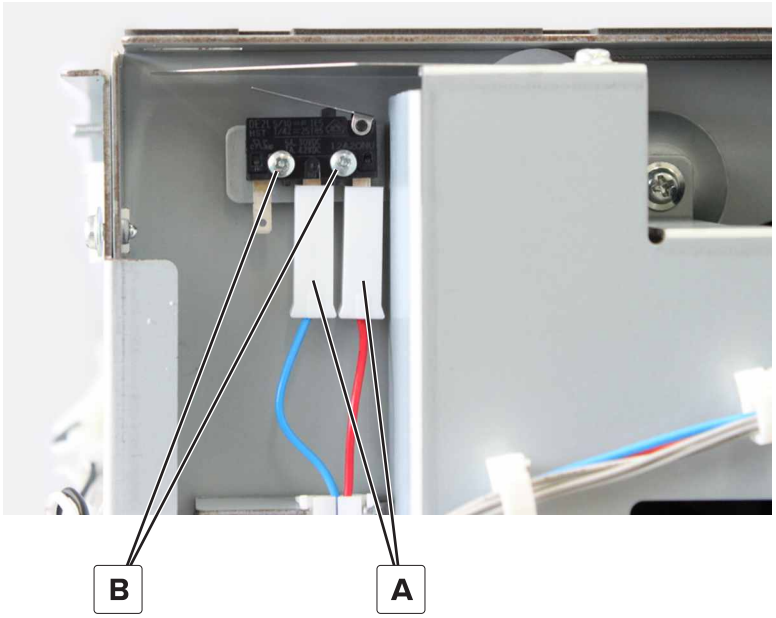
3000-sheet tray door switch removal

1 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

2 Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.

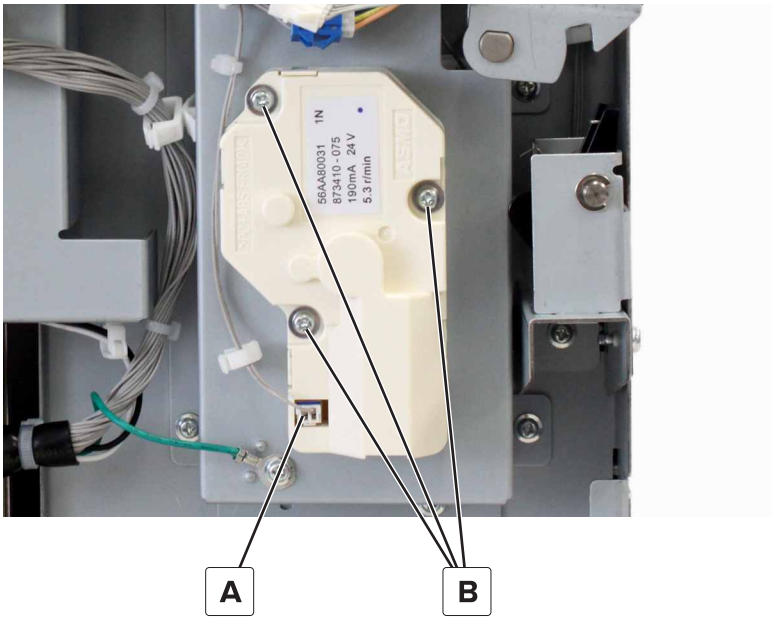
3 Disconnect the two cables (A).

4 Remove the two screws (B), and then remove the switch.



Motor (3000-sheet tray elevator) removal

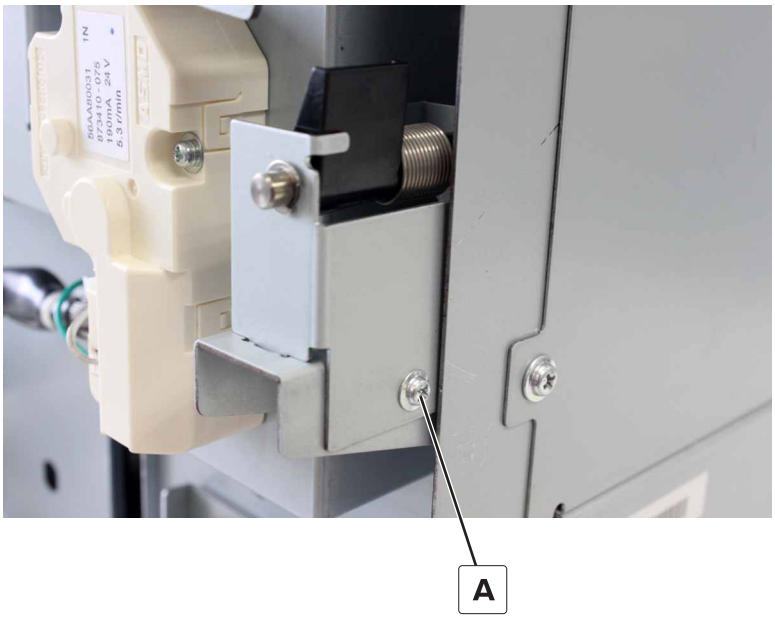
1. Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.
2. Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.
3. Disconnect the cable (A).
4. Remove the three screws (B), and then remove the motor.



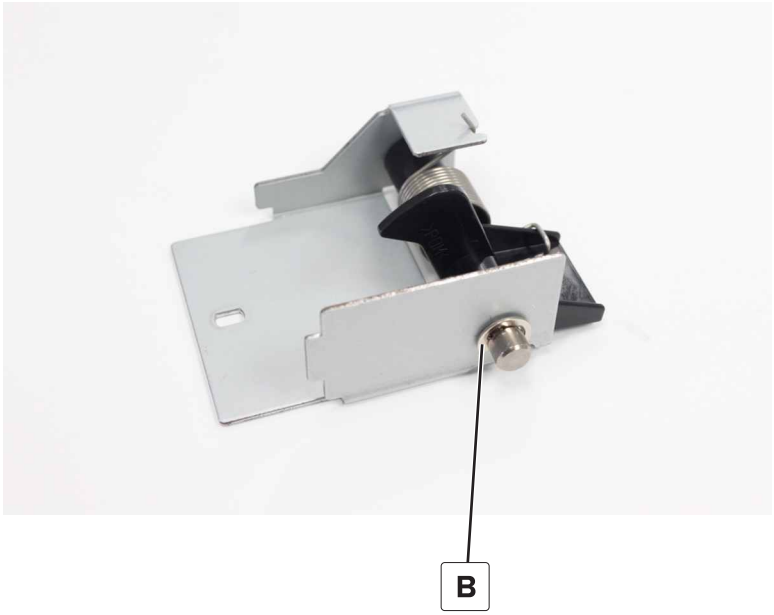
3000-sheet tray set sensor actuator removal

1. Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.
2. Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.

3 Remove the screw (A), and then remove the bracket.



4 Remove the clip (B).



5 Remove the shaft, and then remove the actuator.

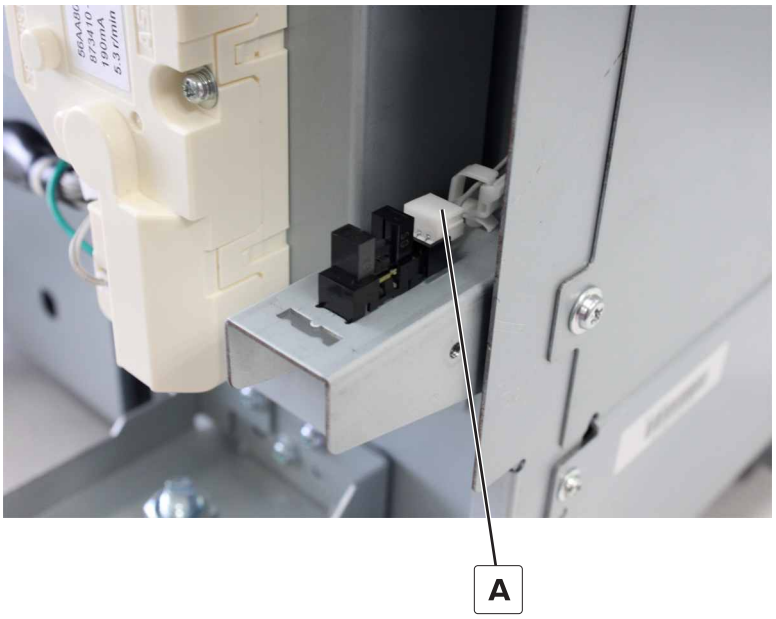
Sensor (3000-sheet tray set) removal

1 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

2 Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.

3 Remove the tray set sensor actuator. See **"3000-sheet tray set sensor actuator removal" on page 515**.

4 Disconnect the cable (A), and then remove the sensor.



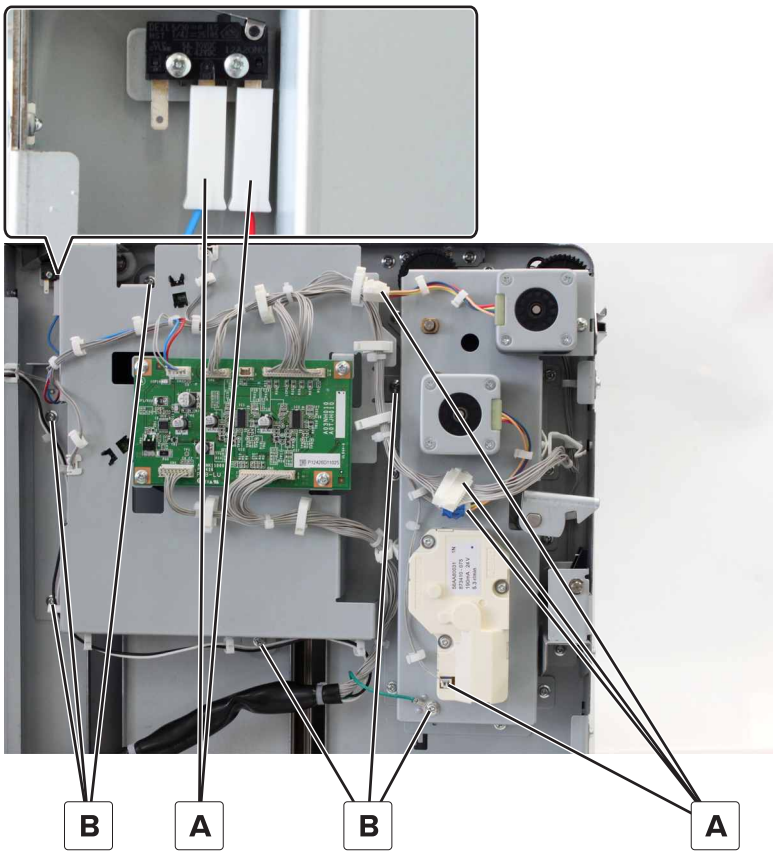
Sensor (3000-sheet tray near empty) removal

1 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

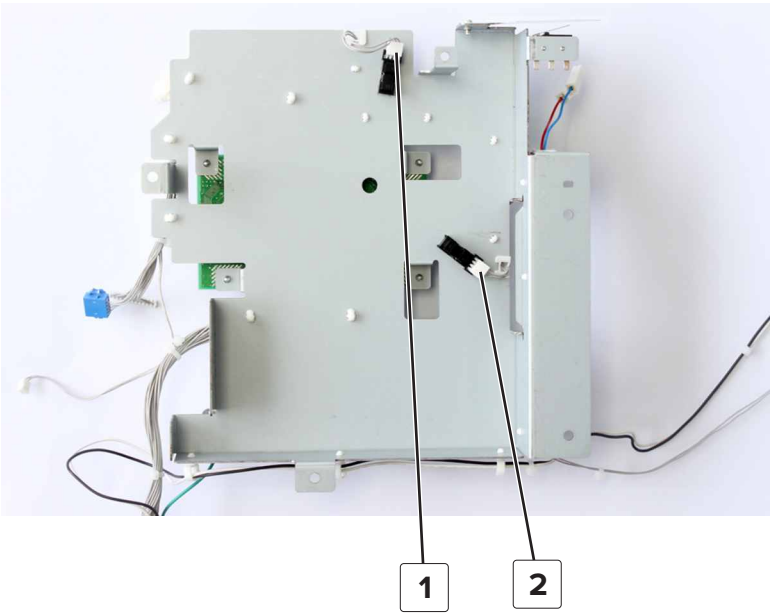
2 Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.

3 Disconnect the six cables (A).

4 Remove the six screws (B), and then remove the bracket.



5 Disconnect the cable, and then remove the sensor.

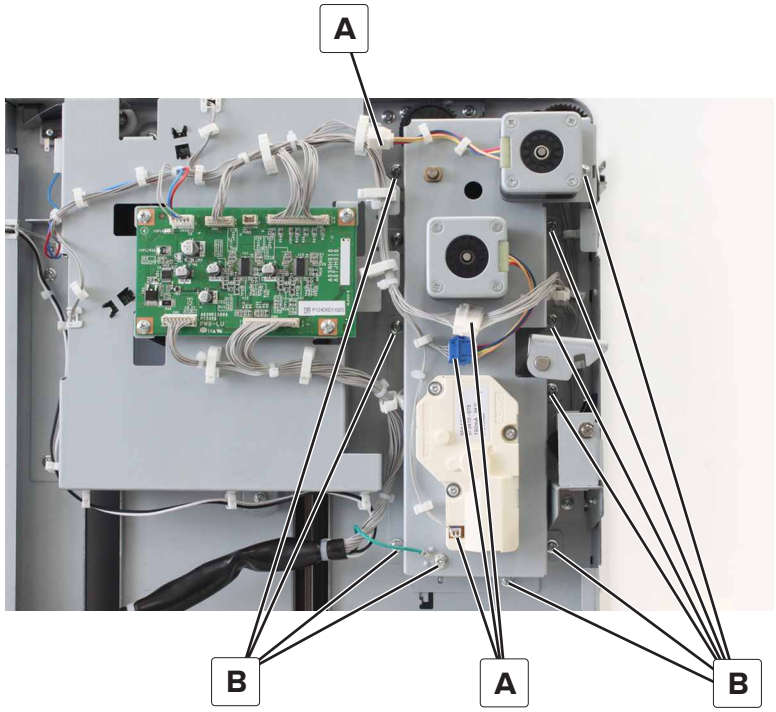


#	Part
1	Sensor (3000-sheet tray near empty 1)
2	Sensor (3000-sheet tray near empty 2)

Motor bracket removal

Note: This part is not a FRU.

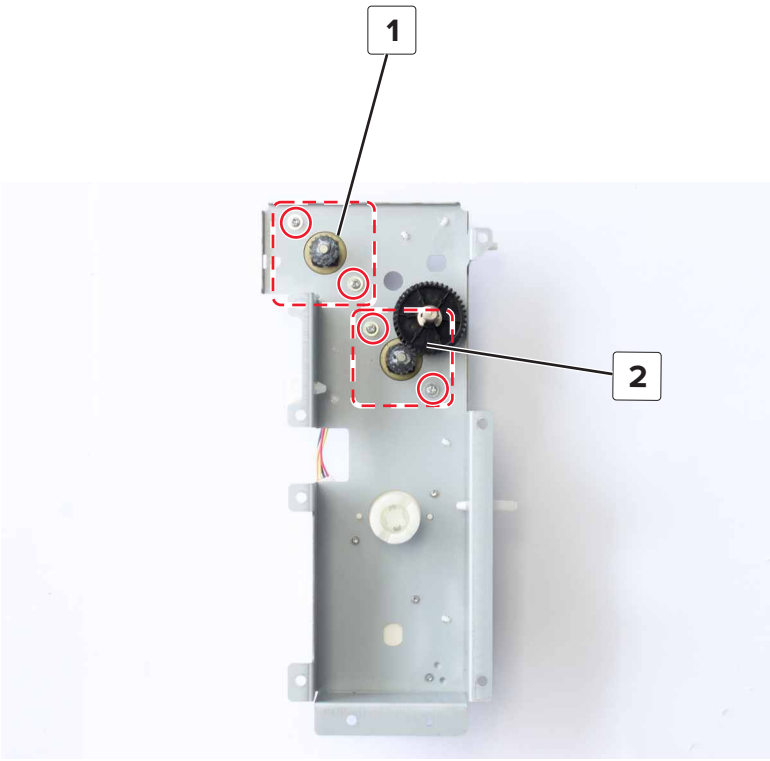
1. Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.
2. Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.
3. Disconnect the four cables (A).
4. Remove the ten screws (B), and then remove the bracket.



3000-sheet tray feed and transport motors removal

1. Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.
2. Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.
3. Remove the motor bracket. See **"Motor bracket removal" on page 519**.

4 Remove the two screws, and then remove the motor.



#	Part
1	Motor (3000-sheet tray transport)
2	Motor (3000-sheet tray feed)

3000-sheet tray feed roller assembly removal

1 Remove the left cover. See **"3000-sheet tray left cover removal" on page 504**.

2 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

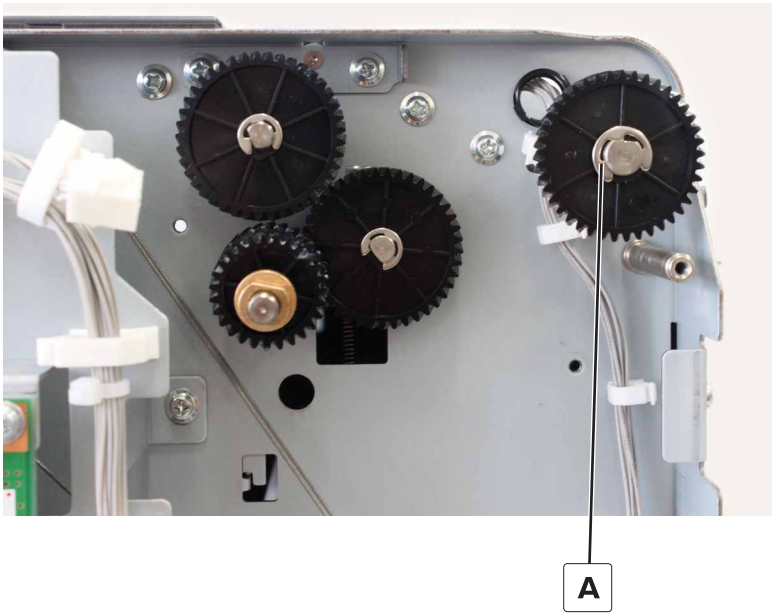
3 Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.

4 Remove the front cover. See **"3000-sheet tray front cover removal" on page 505**.

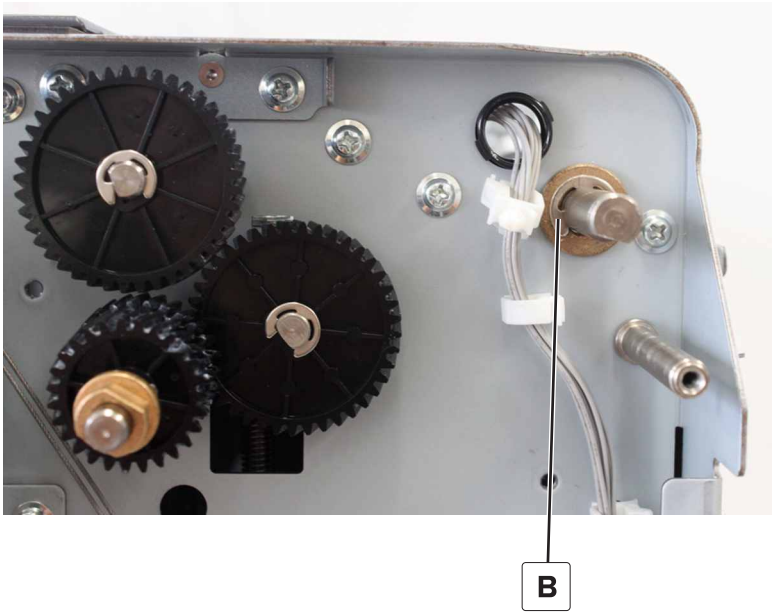
5 Remove the left top cover. See **"3000-sheet tray left top cover removal" on page 508**.

6 Remove the motor bracket. See **"Motor bracket removal" on page 519**.

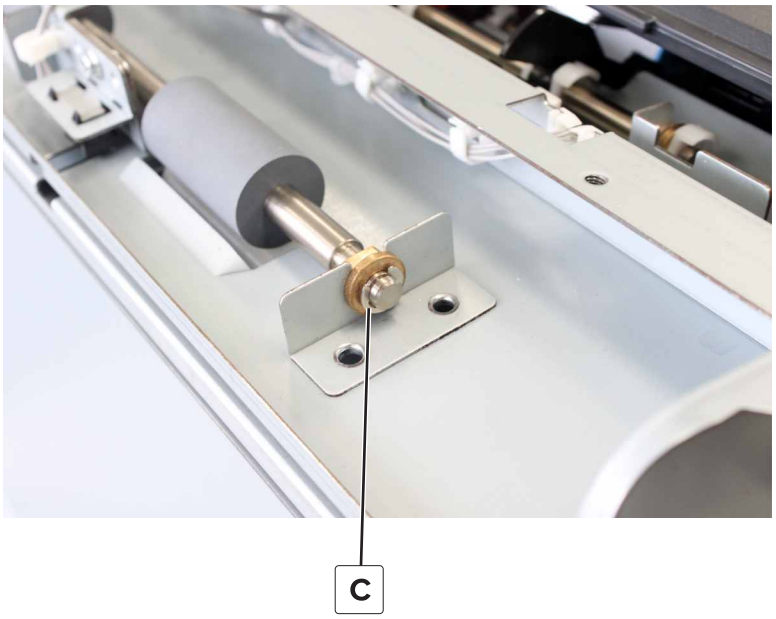
7 Remove the clip (A), and then remove the gear.



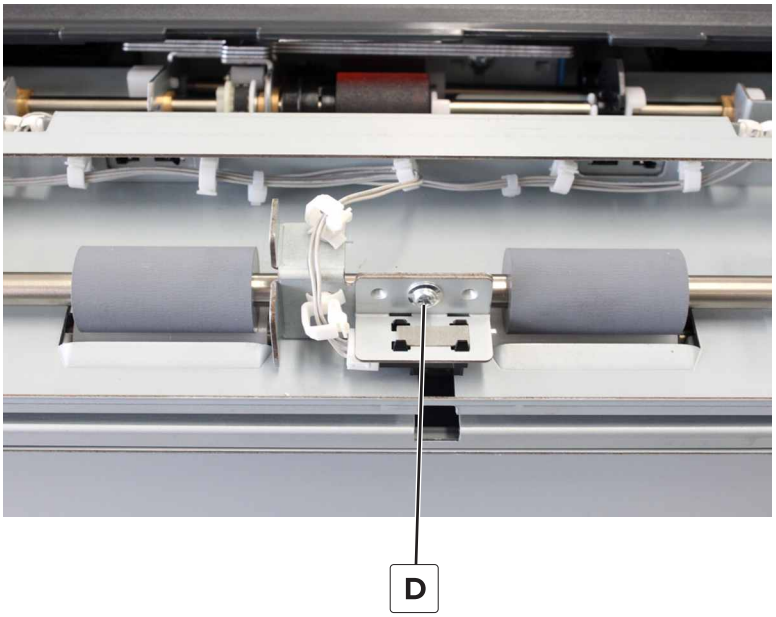
8 Remove the clip (B), and then remove the bushing.



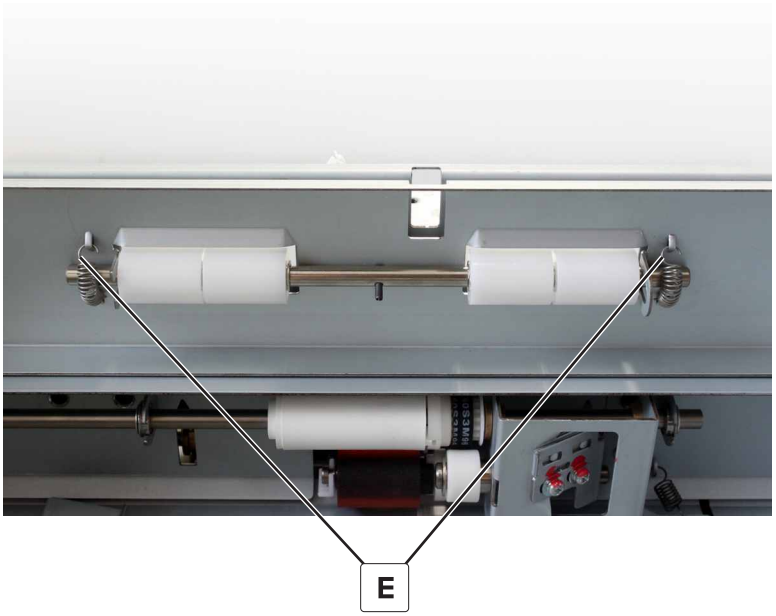
9 From the other end of the shaft, remove the clip (C), and then remove the bushing.



10 Remove the screw (D), remove the sensor bracket, and then remove the roller.



11 From under the assembly, remove the two springs (E), and then remove the roller.



3000-sheet tray pick roller assembly removal

1 Remove the left cover. See **"3000-sheet tray left cover removal" on page 504**.

2 Remove the right cover. See **"3000-sheet tray right cover removal" on page 505**.

3 Remove the rear cover. See **"3000-sheet tray rear cover removal" on page 506**.

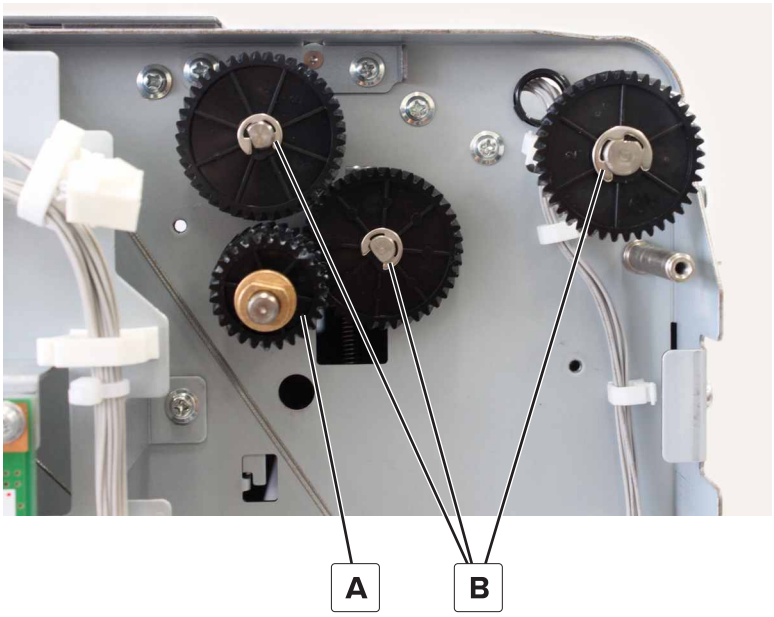
4 Remove the top door. See **"3000-sheet tray door removal" on page 507**.

5 Remove the left top cover. See **"3000-sheet tray left top cover removal" on page 508**.

6 Remove the motor bracket. See **"Motor bracket removal" on page 519**.

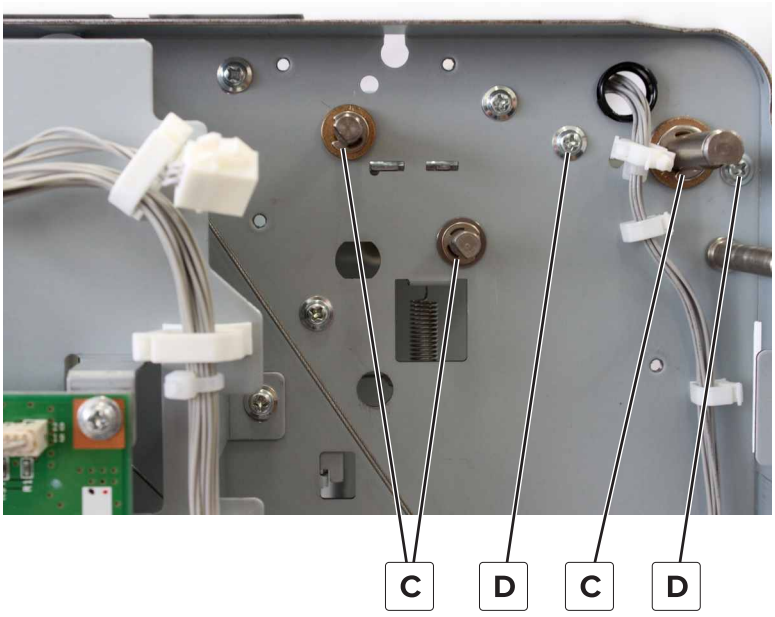
7 Remove the gear shaft (A).

8 Remove the three clips (B), and then remove the three gears.

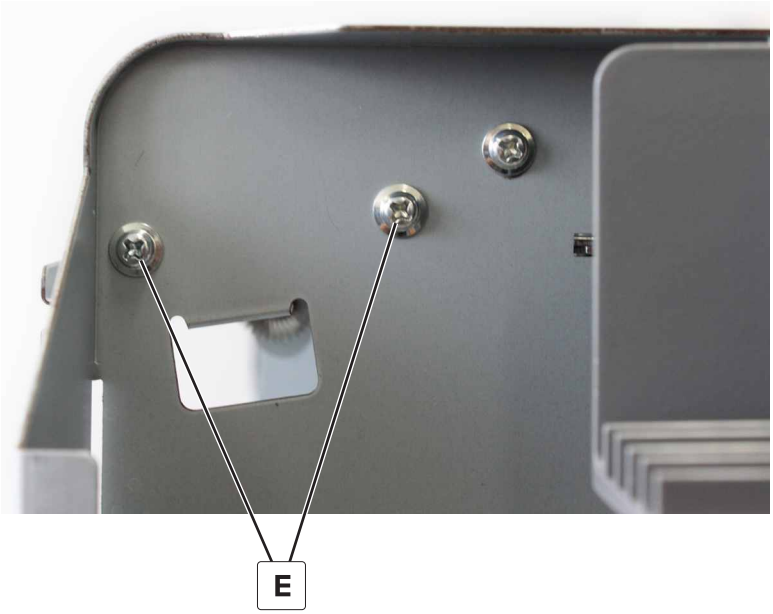


9 Remove the three clips (C), and then remove the three bushings.

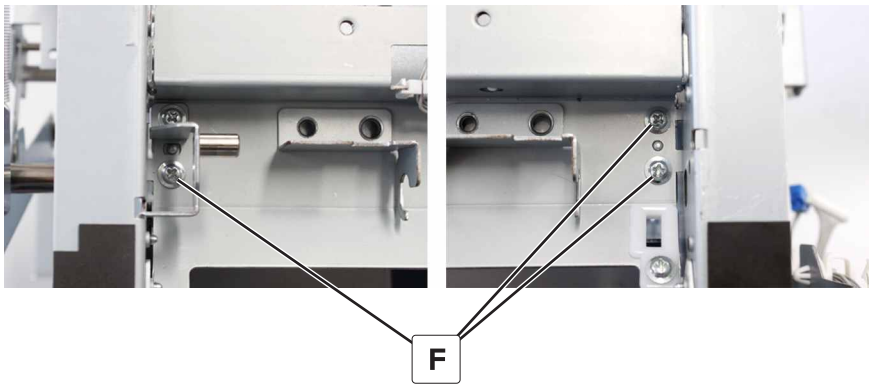
10 Remove the two screws (D).



11 Remove the two screws (E), and then dislodge the bracket.

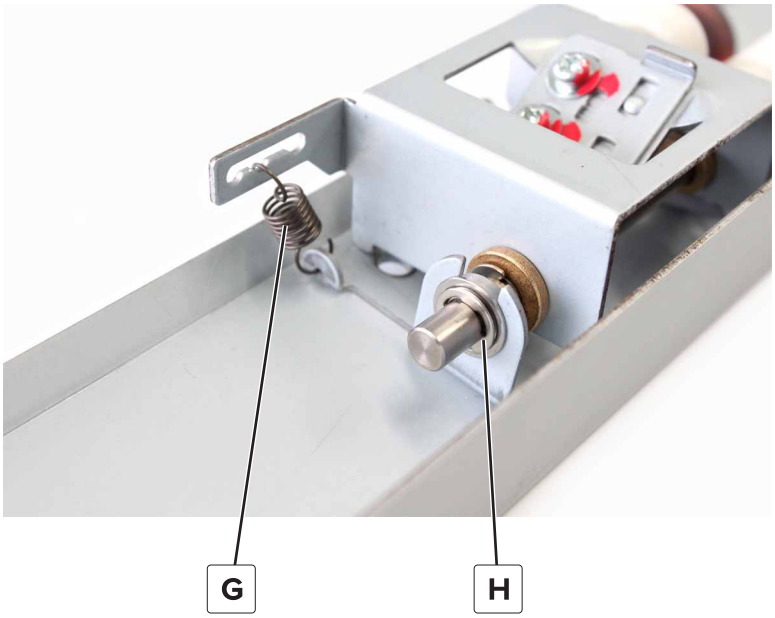


12 Remove the three screws (F), and then remove the assembly.



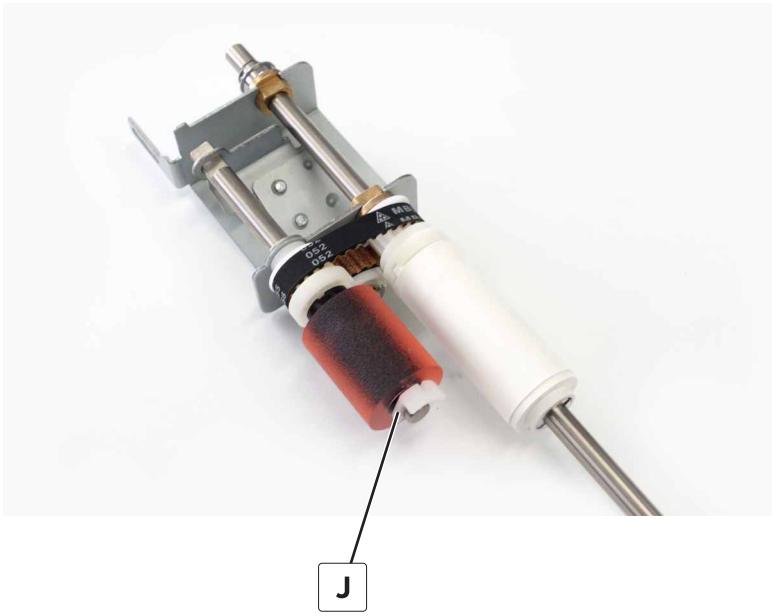
13 Disconnect the spring (G).

14 Remove the clip (H), and then remove the bushing.



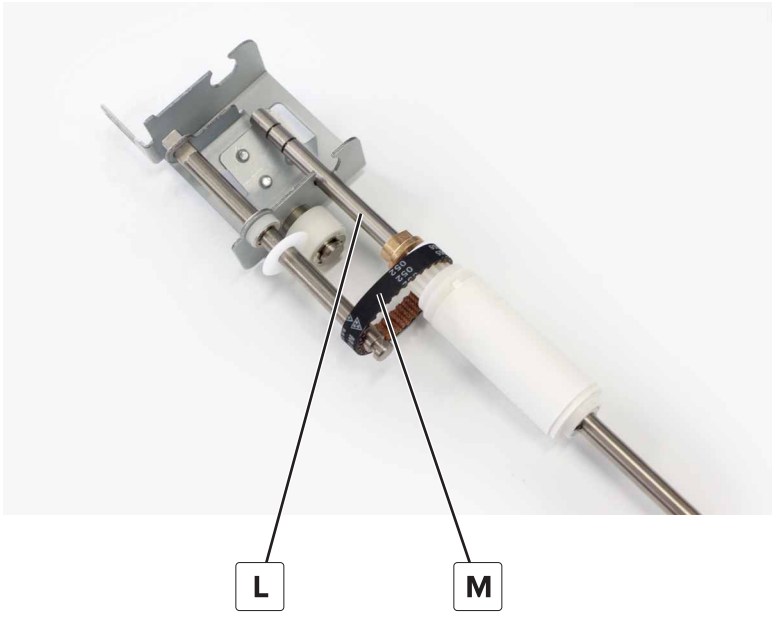
15 Remove the pick roller assembly from the bracket.

16 Remove the clip (J), and then remove the roller and the gear.



17 Remove the clip (K), and then remove the bushing.

18 Remove the shaft (L), and then remove the separator belt (M).

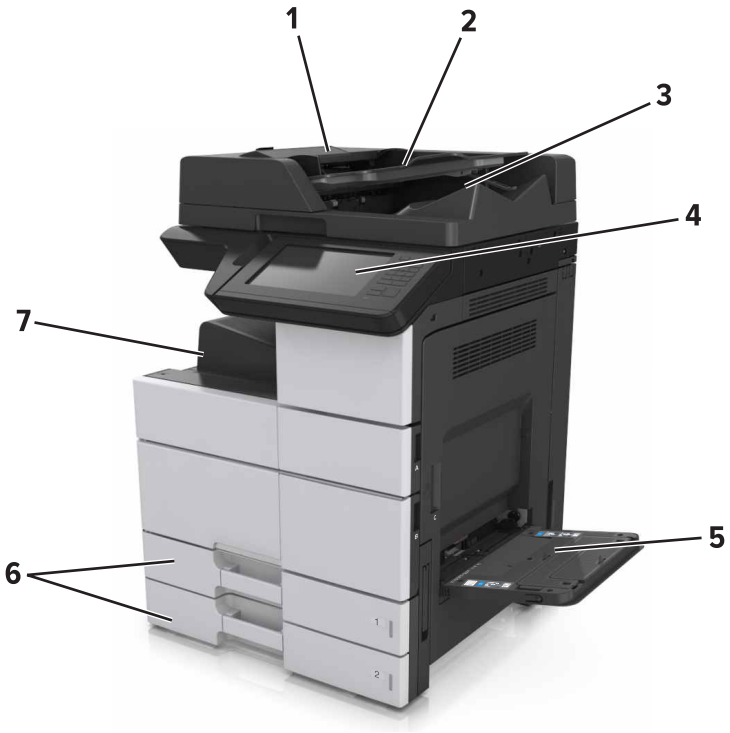


Component locations

Exterior locations

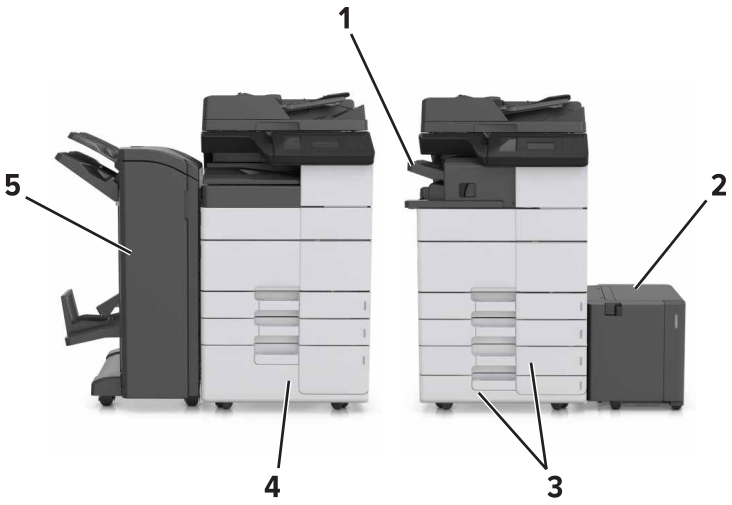
Front view

Basic model



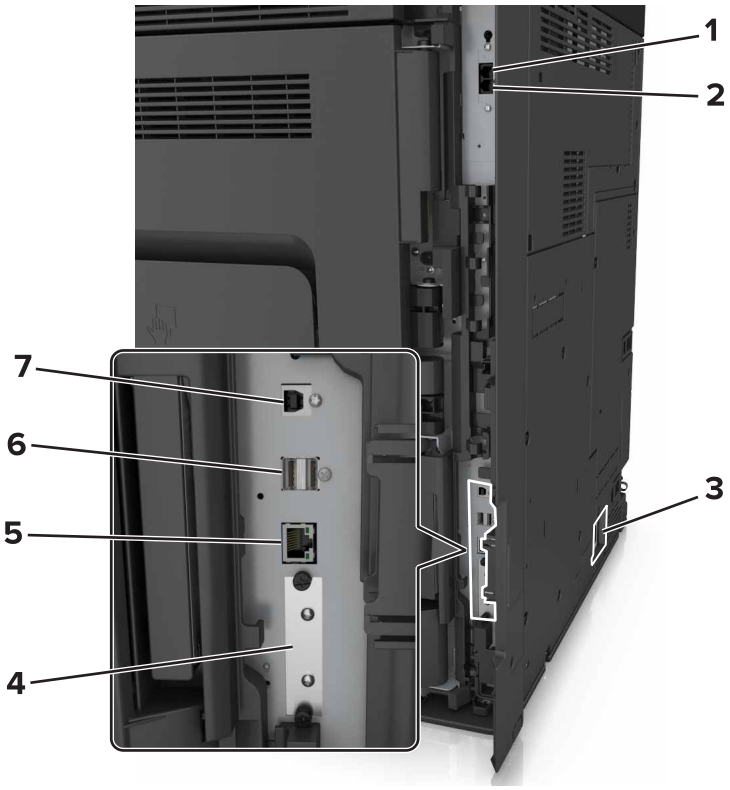
1	Automatic document feeder (ADF)
2	ADF tray
3	ADF bin
4	Control panel
5	Multipurpose feeder
6	Standard 2 x 500-sheet tray
7	Standard bin

Configured model



1	Staple finisher **Note:** The staple finisher is not supported if another finisher is installed.
2	3000-sheet tray **Note:** The 3000-sheet tray is supported only if the optional 2 x 500- or 2500-sheet tray is installed.
3	2 x 500-sheet tray
4	2500-sheet tray
5	Finisher • Staple, hole punch finisher • Booklet finisher

Rear view



	Part name
1	EXT port
2	LINE port
3	Printer power cord socket
4	Internal Solutions Port (ISP) or printer hard disk slot
5	Ethernet port
6	USB ports
7	USB printer port

Maintenance

Inspection guide

Use this guide in identifying the parts that must be inspected, cleaned, or replaced based on the page count.

If any unsafe condition exists, find out how serious the hazard is and if you can continue before you correct the hazard.

As you service the printer, check for the following:

- Damaged, missing, or altered parts, especially in the area of the power switch and the power supply
- Damaged, missing, or altered covers, especially in the area of the top and power supply covers
- Possible safety exposure from any non-Lexmark attachments

Use the following table to determine when to inspect the following parts:

PART	EVERY 50K	EVERY 300K	EVERY 600K	EVERY 720K
MEDIA FEEDERS/TRAYS—ALL				
Feed, separator, and pick rollers[1]	Clean	Replace[4]	Replace[5]	--
Transport rollers	Clean[2]	--	--	--
Sensors (photo reflective)	Clean[3]	--	--	--
REGISTRATION				
Registration roller	Clean[2]	--	--	--
IMAGE TRANSFER				
Transfer belt paper guide	Clean[2]	--	--	--
Sensor (toner density)	--	Clean[3]	--	--
Transfer belt maintenance kit: • Transfer belt • Exhaust filter • Ozone filter • Printhead cleaner	--	Replace[4]	Replace[5]	--
DEVELOPER				
Developer unit	--	--	Replace[5]	--

[1] For 500-sheet trays, if jams still occur after 80K, then replace using the spare rollers in the tray compartment.

[2] Use damp cloth.

[3] Use brush.

[4] Reset 300K Maintenance kit.

[5] Reset 600K Maintenance kit.

[6] Reset Fuser kit.

[7] Clean when fuser is replaced.

[8] Use dry cloth.

PART	EVERY 50K	EVERY 300K	EVERY 600K	EVERY 720K
FUSER				
Fuser	--	--	--	Replace[6]
Induction heater[7]	--	--	--	Clean[8]
DUPLEX TRANSPORT				
Transport rollers	Clean[2]	--	--	--

[1] For 500-sheet trays, if jams still occur after 80K, then replace using the spare rollers in the tray compartment.

[2] Use damp cloth.

[3] Use brush.

[4] Reset 300K Maintenance kit.

[5] Reset 600K Maintenance kit.

[6] Reset Fuser kit.

[7] Clean when fuser is replaced.

[8] Use dry cloth.

PART	EVERY 50K	EVERY 200K
ADF ASSEMBLY		
Feed, separator, and pick rollers	Clean[1]	Replace[3]
Glass clean rollers	Clean[1]	--
Sensors (photo reflective)	Clean[2]	--

[1] Use damp cloth.

[2] Use brush.

[3] Reset separator roll and pick assembly counter.

Scheduled maintenance

The control panel displays an 80.xx error when the printer reaches a preset number of page counts. It is necessary to install the appropriate maintenance kit to maintain the print quality and reliability of the printer. Reset the maintenance counter after replacing the maintenance kit.

Maintenance kits

Part number and kit	Contents
40X9672—200K ADF Maintenance kit	• ADF pick roller • ADF feed roller • ADF separator roller
40X9673—200K MPF Maintenance kit	• MPF feed roller • MPF separator roller

Part number and kit	Contents
40X9669—300K Maintenance kit	• Pick roller (2 units) • Feed/separator roller (4 units) • Transfer belt maintenance kit – Transfer belt – Transfer roller – Exhaust filter – Ozone filter – Printhead cleaner
40X9936—600K	Developer unit
40X9046—720K	Fuser

Resetting the maintenance counter

Always reset the maintenance counter after installing the maintenance kit.

Note: You cannot cancel the operation after it has started.

Page count	Enter the	Navigate to
200K	Diagnostics menu	**Reset Separator Roll and Pick Assembly Counter** > **Reset Separator Roll and Pick Assembly Counter**
200K	Diagnostics menu	**Reset Maintenance Counter** > **Reset 200K Maintenance Kit**
300K	Configuration menu	**Reset Maintenance Counter** > **Reset 300K Maintenance Kit**
600K	Diagnostics menu	**Reset Maintenance Counter** > **Reset 600K Maintenance Kit**
720K	Diagnostics menu	**Reset Fuser Counter** > **Reset Fuser Kit**

Lubrication specification

Lubricate only when the parts are replaced or if necessary, not on a scheduled basis. The use of lubricants other than those specified in this service manual may cause premature failure. Some unauthorized lubricants may chemically attack polycarbonate parts. Use Grease P/N 99A0394 Nyogel 744.

Cleaning the printer parts

Cleaning the printer

Note: You may need to perform this task after every few months.

Warning—Potential Damage: Damage to the printer caused by improper handling is not covered by the printer warranty.

1. Make sure that the printer is turned off and unplugged from the electrical outlet.

   CAUTION—SHOCK HAZARD: To avoid the risk of electrical shock when cleaning the exterior of the printer, unplug the power cord from the electrical outlet and disconnect all cables from the printer before proceeding.

2. Remove paper from the standard bin and multipurpose feeder.
3. Remove any dust, lint, and pieces of paper around the printer using a soft brush or vacuum.
4. Dampen a clean, lint-free cloth with water, and use it to wipe the outside of the printer.

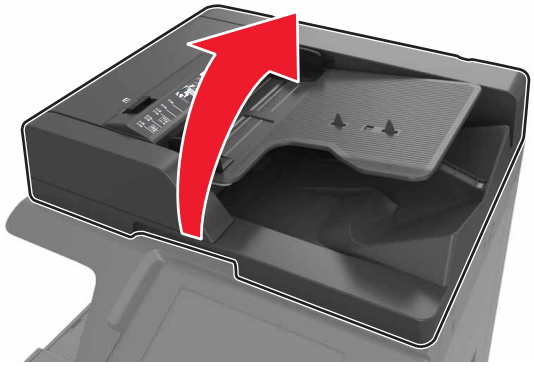
   Warning—Potential Damage: Do not use household cleaners or detergents to prevent damage to the exterior of the printer.

5. Make sure all areas of the printer are dry before sending a new print job.

Cleaning the scanner glass

Clean the scanner glass if you encounter print quality problems, such as streaks on copied or scanned images.

1. Open the scanner cover.



2 Wipe the areas shown with a soft or lint-free cloth.

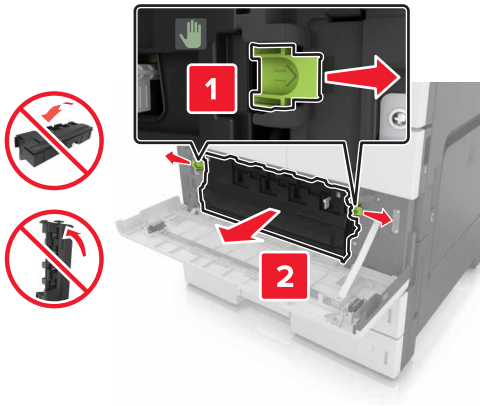
1	White underside of the scanner cover
2	Scanner glass
3	ADF glass
4	White underside of the ADF cover

3 Close the scanner cover.

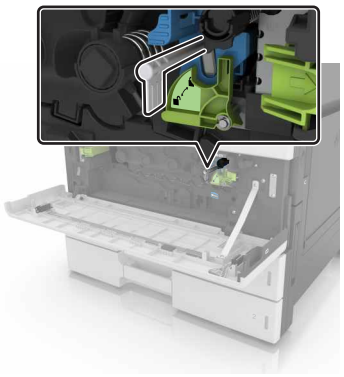
Cleaning the charger and the printhead lens

1 Open the bottom front door.

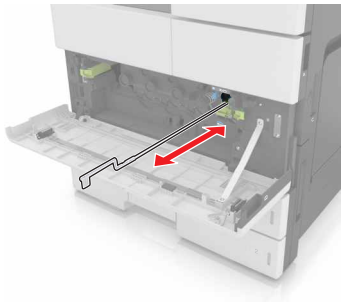
2 Remove the waste toner bottle.



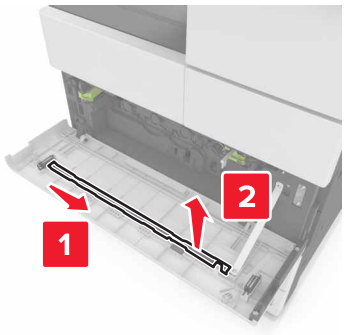
3 Locate the white tab.



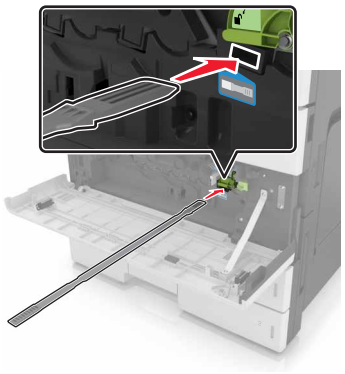
4 Gently pull the tab until it stops, and then slowly slide it back into place. Repeat three times.



5 Remove the printhead wiper.

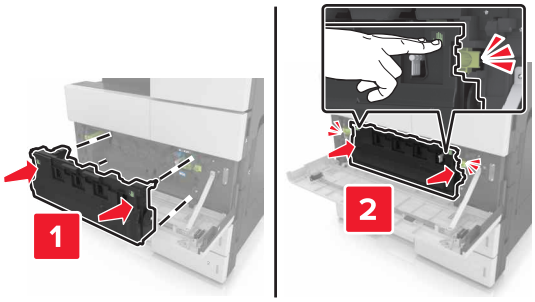


6 Insert the wiper into the hole until it stops, and then slide it out. Repeat three times.



7 Put the wiper back to its holder.

8 Reinstall the waste toner bottle.

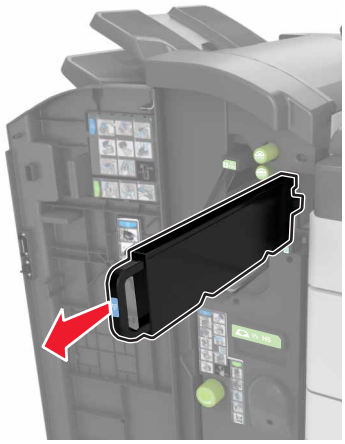


9 Close the bottom front door.

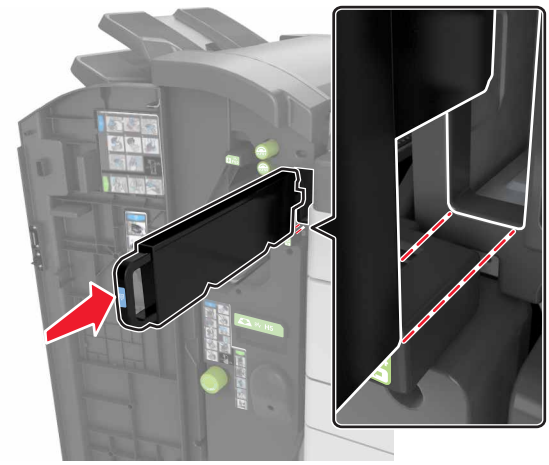
Emptying the hole punch box

1 Open door H.

2 Remove and empty the hole punch box.



3 Reinstall the hole punch box.



4 Close door H.

Parts catalog

Legend

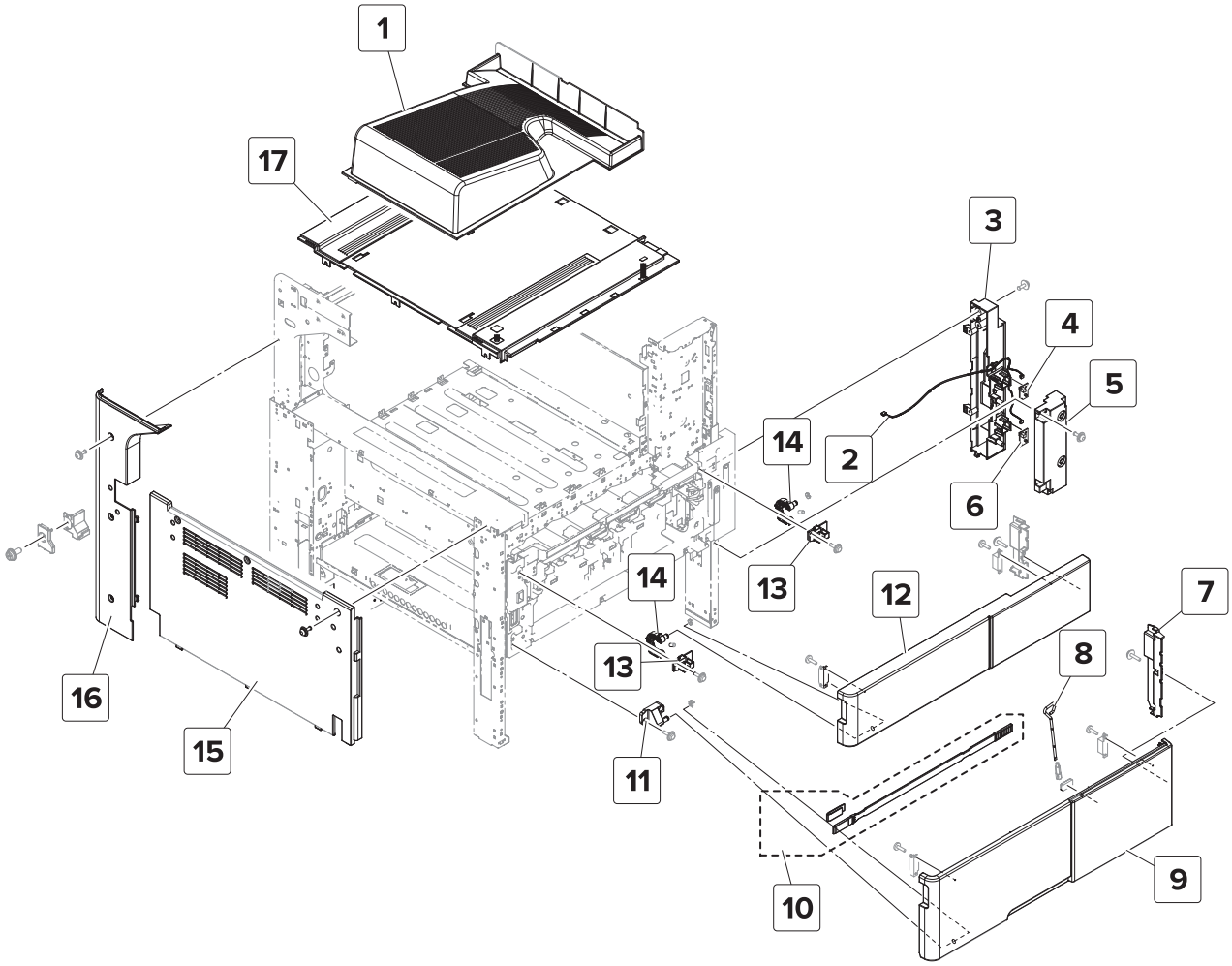
The following column headings are used in the parts catalog:

- **Asm-index**—Identifies the item in the illustration
- **P/N**—Identifies the part number of a FRU
- **Units/mach**—Refers to the number of units in a printer
- **Units/opt**—Refers to the number of units in an option
- **Units/FRU**—Refers to the number of units in a FRU
- **Description**—A brief description of the part

The following abbreviations are used in the parts catalog:

- **NS** (not shown) in the Asm-index column indicates that the part is procurable but is not shown in the illustration.
- **PP** (parts packet) in the Description column indicates that the part is contained in a parts packet.

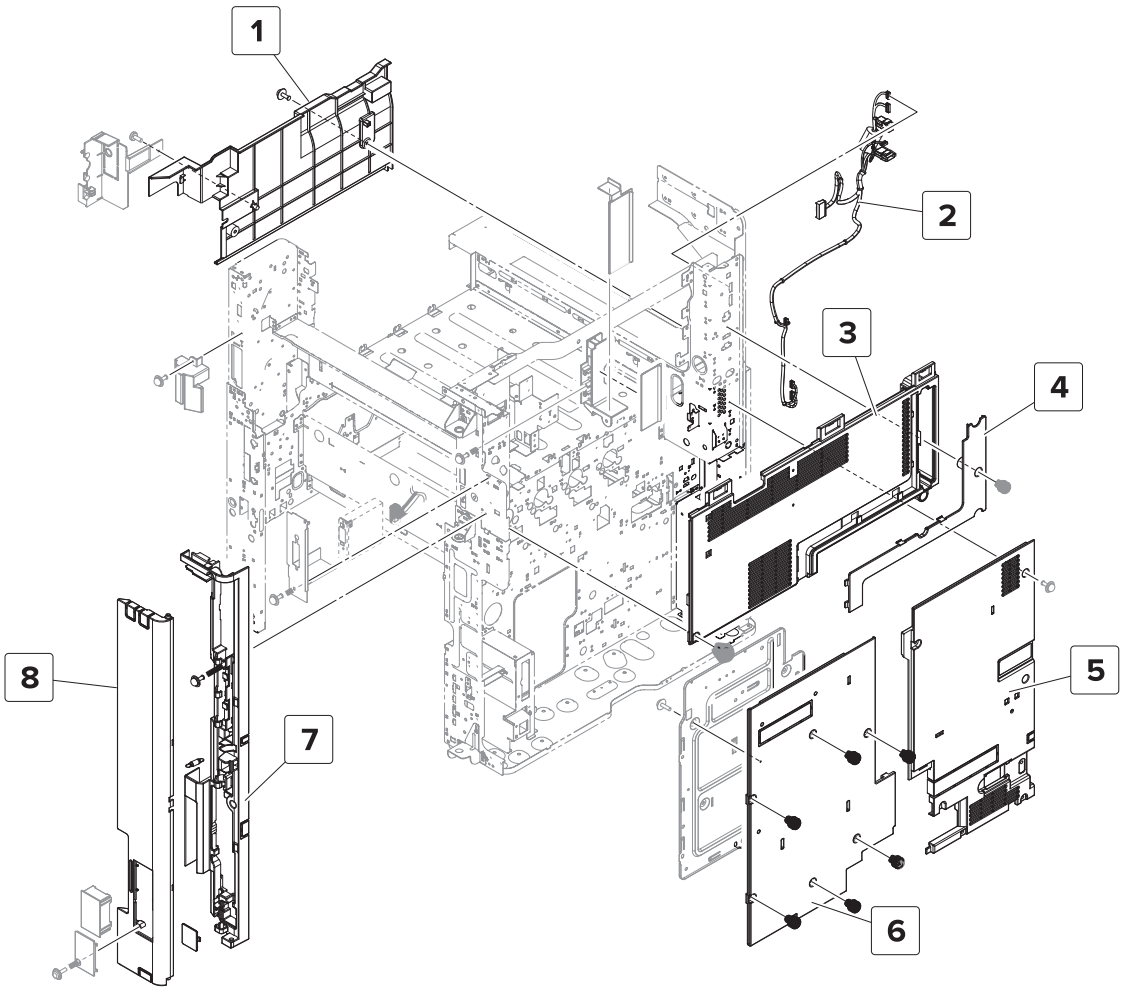
Assembly 1: Covers 1



Assembly 1: Covers 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9924	1	1	Standard bin	--
2	40X8901	1	1	Tray empty board cable	--
3	40X9758	1	1	Tray empty board mount	--
4	40X8903	2	1	Tray 1 empty indicator	--
5	40X8902	1	1	Tray empty board cover	--
6	40X8903	2	1	Tray 2 empty indicator	--
7	40X8904	1	1	Front lower cover	--
8	40X9962	1	1	Screwdriver	--
9	40X9760	1	1	Bottom front door	“Bottom front door removal” on page 327
10	40X8905	1	1	Printhead cleaner	--
11	40X9761	1	1	Bottom front door hinge	--
12	40X8900	1	1	Top front door	“Top front door removal” on page 327
13	40X8906	2	1	Top front door outer hinge	--
14	40X9917	2	1	Top front door inner hinge	--
15	40X8898	1	1	Left cover	“Left cover removal” on page 272
16	40X8899	1	1	Rear left cover	“Rear left cover removal” on page 273
17	40X8897	1	1	Standard bin base	“Standard bin base removal” on page 389

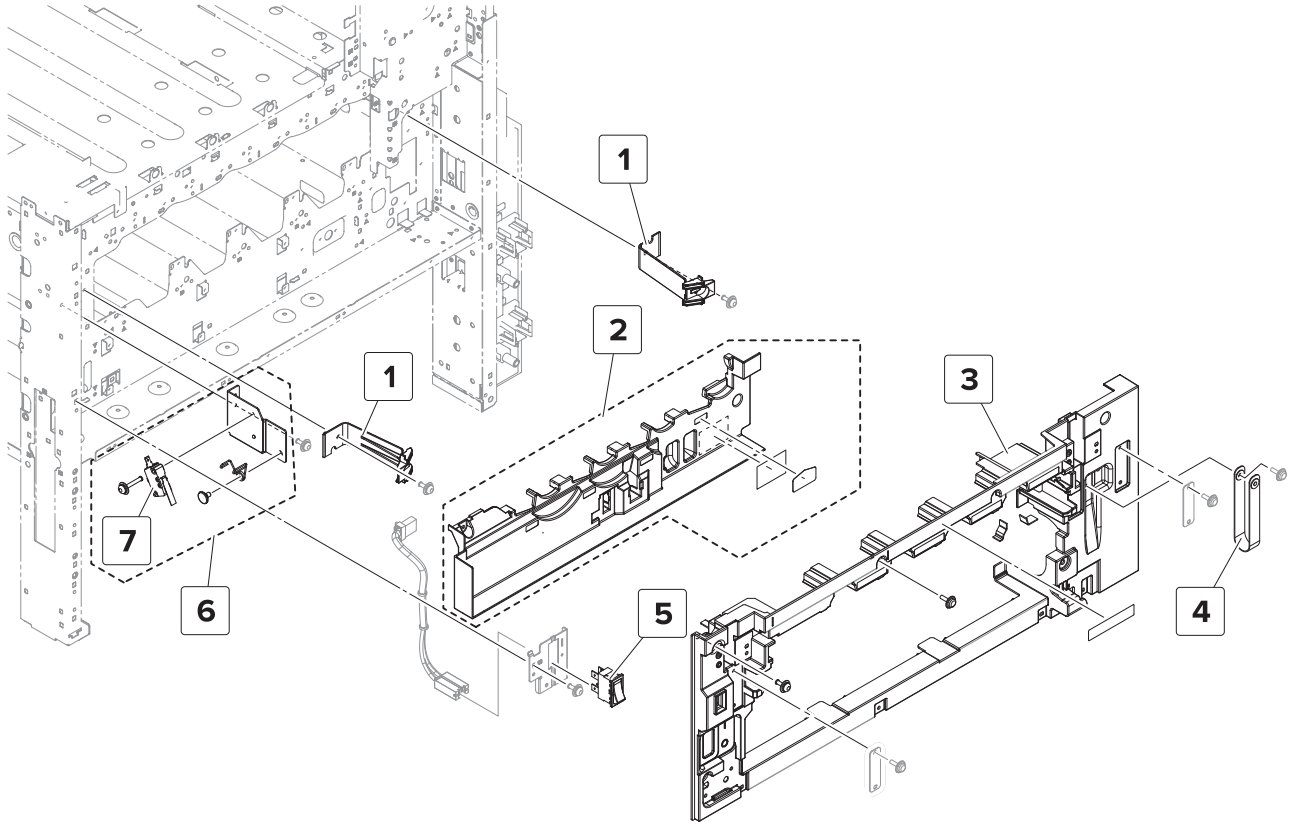
Assembly 2: Covers 2



Assembly 2: Covers 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8914	1	1	Bin side cover	“Bin side cover removal” on page 390
2	40X8907	1	1	Finisher interface cable	--
3	40X8908	1	1	Upper rear cover	“Upper rear cover removal” on page 346
4	40X9762	1	1	Scanner interface cable cover	“Scanner interface cable cover removal” on page 344
5	40X8909	1	1	Engine board cover	“Engine board cover removal” on page 346
6	40X8910	1	1	Controller board access cover	“Controller board access cover removal” on page 345
7	40X8912	1	1	Port mount	“Port access door removal” on page 278
8	40X9763	1	1	Port access door	“Port access door removal” on page 278

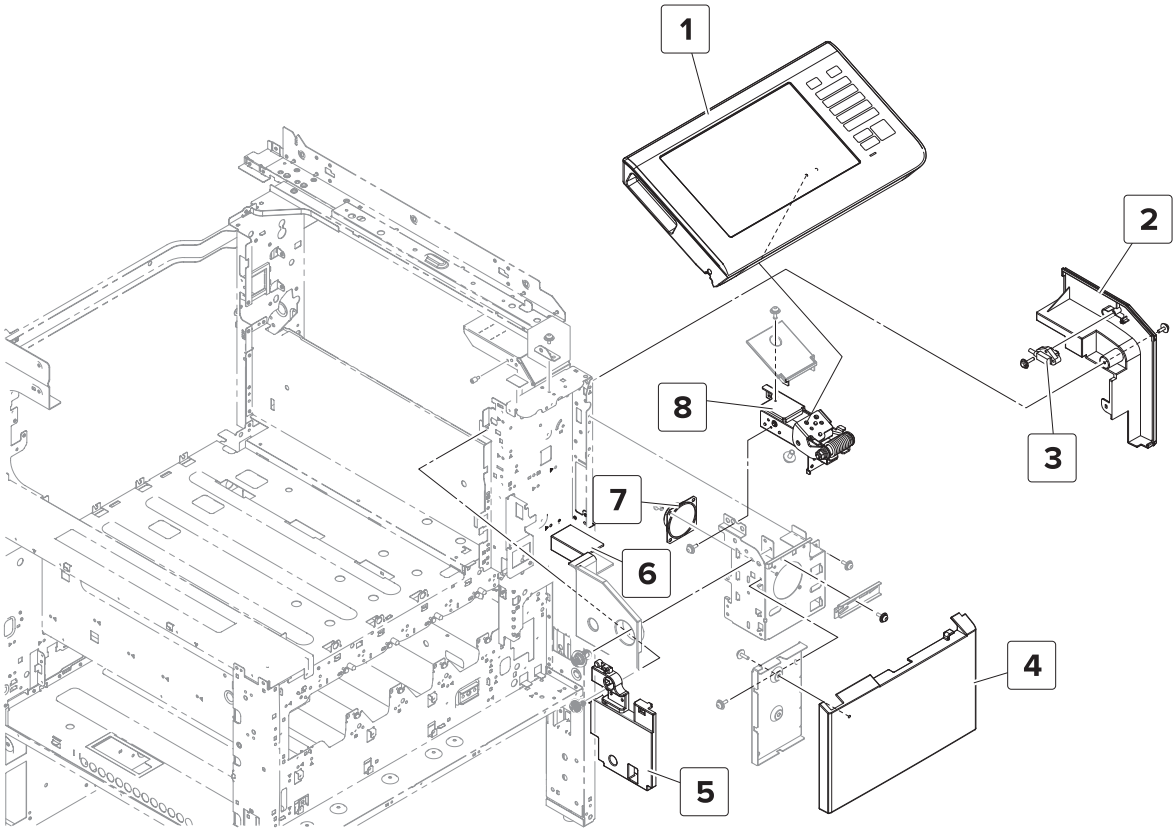
Assembly 3: Inner covers



Assembly 3: Inner covers

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8915	2	1	Waste toner bottle latch	--
2	40X8916	1	1	Front inner cover	“Front inner cover removal” on page 328
3	40X9764	1	1	Waste toner door mount	“Waste toner door mount removal” on page 328
4	40X8919	1	1	Lower front door strap	--
5	40X8917	1	1	Main power switch	“Main power switch removal” on page 330
6	40X9963	1	1	Waste toner door switch	“Door switch removal” on page 329
7	40X9527	1	1	Door switch	“Door switch removal” on page 329

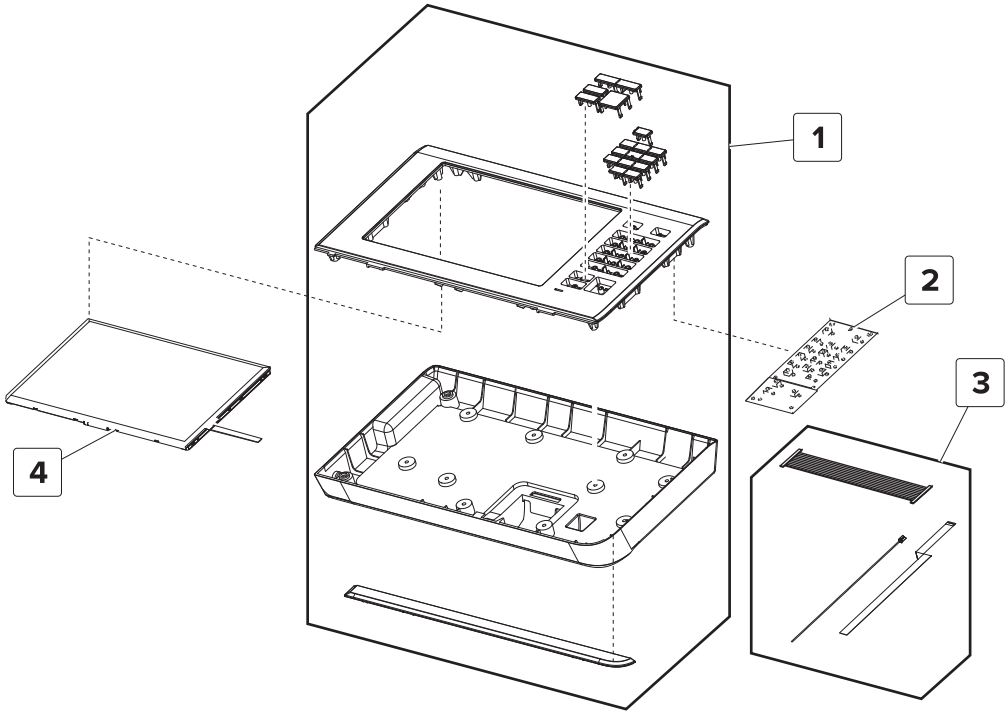
Assembly 4: Control panel 1



Assembly 4: Control panel 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9661	1	1	Control panel	“Control panel removal” on page 341
2	40X9965	1	1	USB port cover	--
3	40X9970	1	1	USB extension cable	--
4	40X9966	1	1	Speaker cover	“Speaker cover removal” on page 338
5	40X9967	1	1	Control panel cable guide lower cover	--
6	40X9969	1	1	Control panel cable guide upper cover	--
7	40X9968	1	1	Speaker	“Speaker removal” on page 340
8	40X9964	1	1	Control panel hinge	--

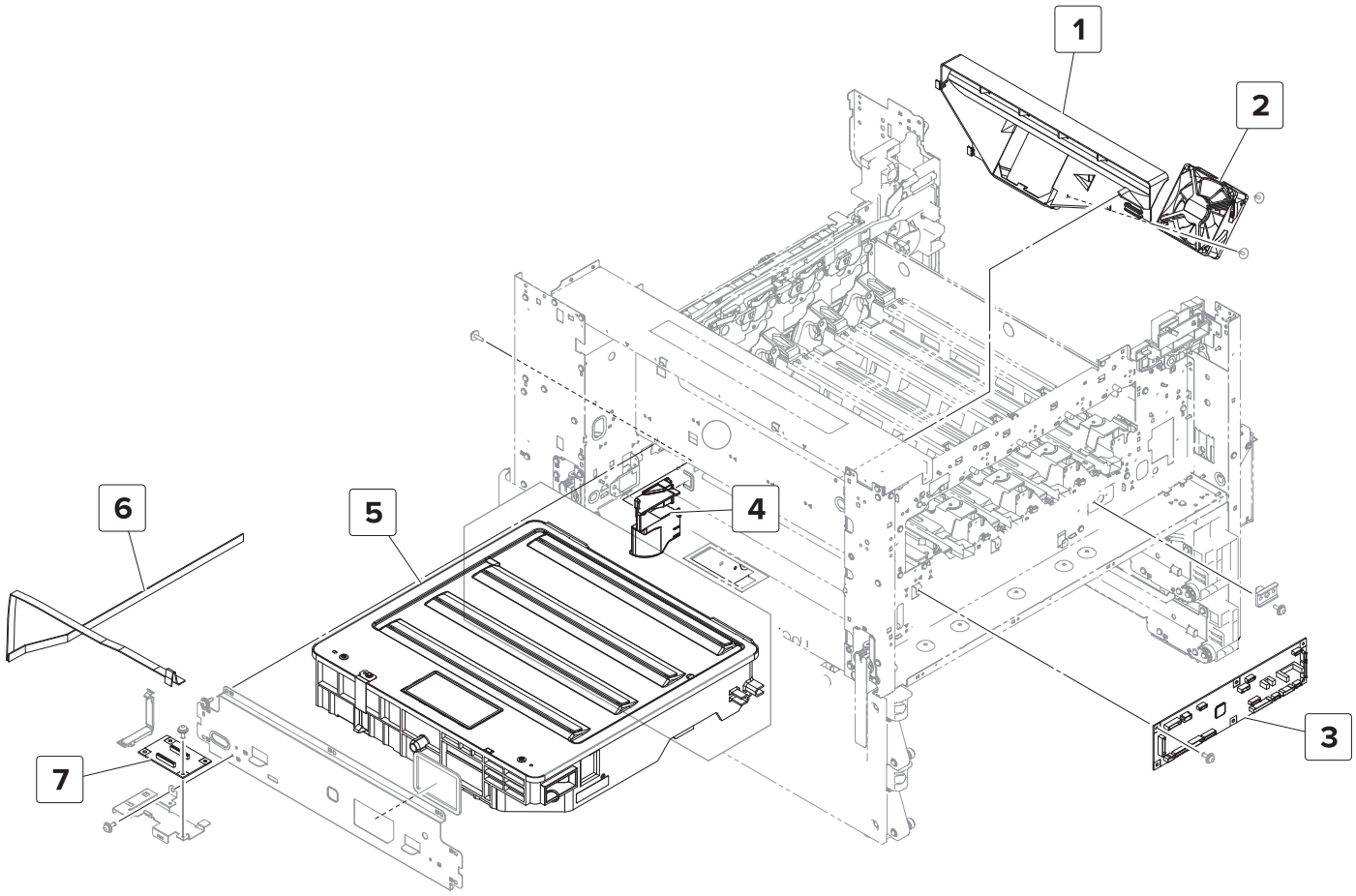
Assembly 5: Control panel 2



Assembly 5: Control panel 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X0452	1	1	Control panel cover assembly	--
2	41X0455	1	1	Control panel UICC	--
3	41X0453	1	1	Control panel cable kit	--
4	41X0454	1	1	Control panel touch screen display (10 in.)	--

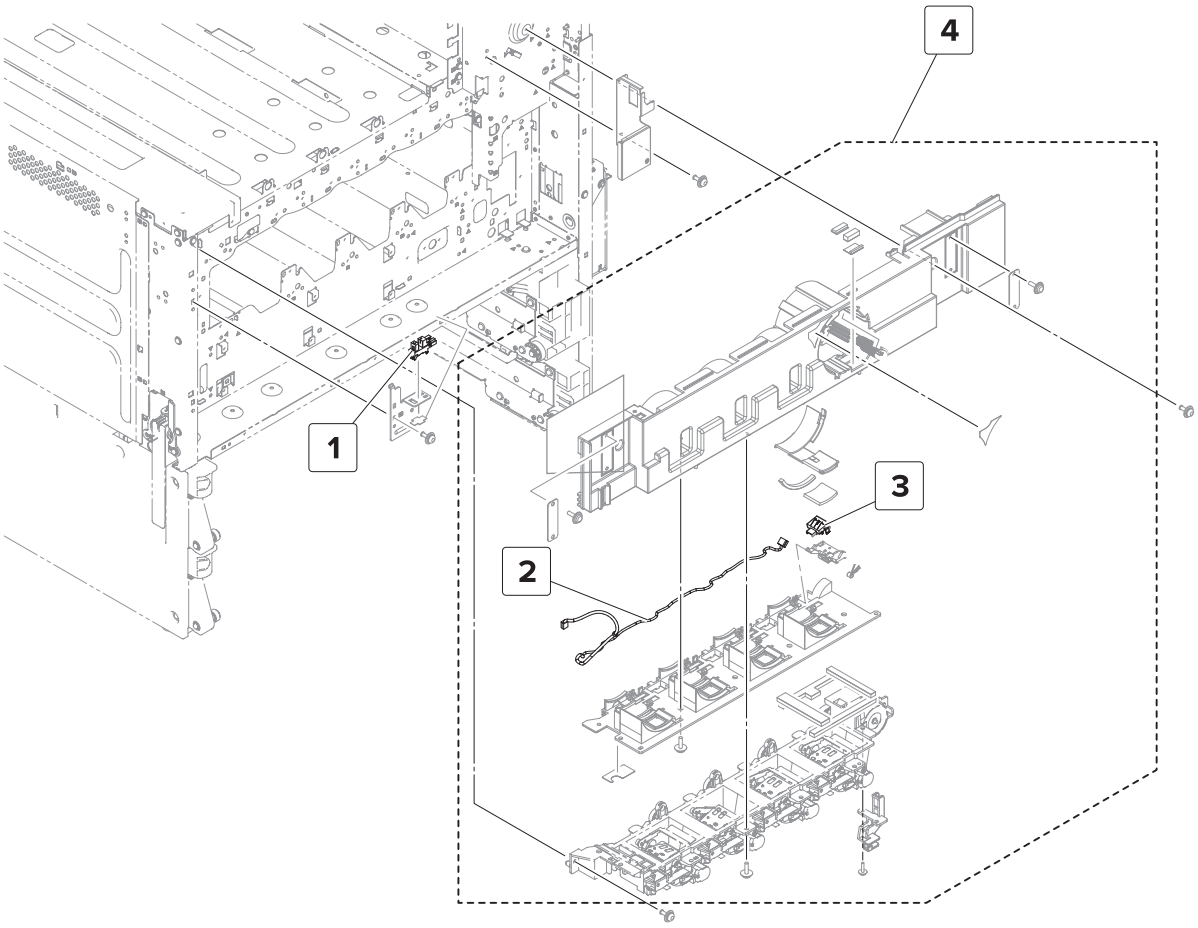
Assembly 6: Printhead



Assembly 6: Printhead

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8944	1	1	Transfer belt fan duct	--
2	40X8945	1	1	Transfer belt fan	"Transfer belt fan removal" on page 389
3	40X8946	1	1	Image controller board	"Image controller board removal" on page 329
4	40X9188	1	1	Ozone filter duct	--
5	40X8949	1	1	Printhead (MFP)	"Printhead removal" on page 275
6	40X8948	1	1	Printhead FFC	--
7	40X8947	1	1	Printhead relay board	--

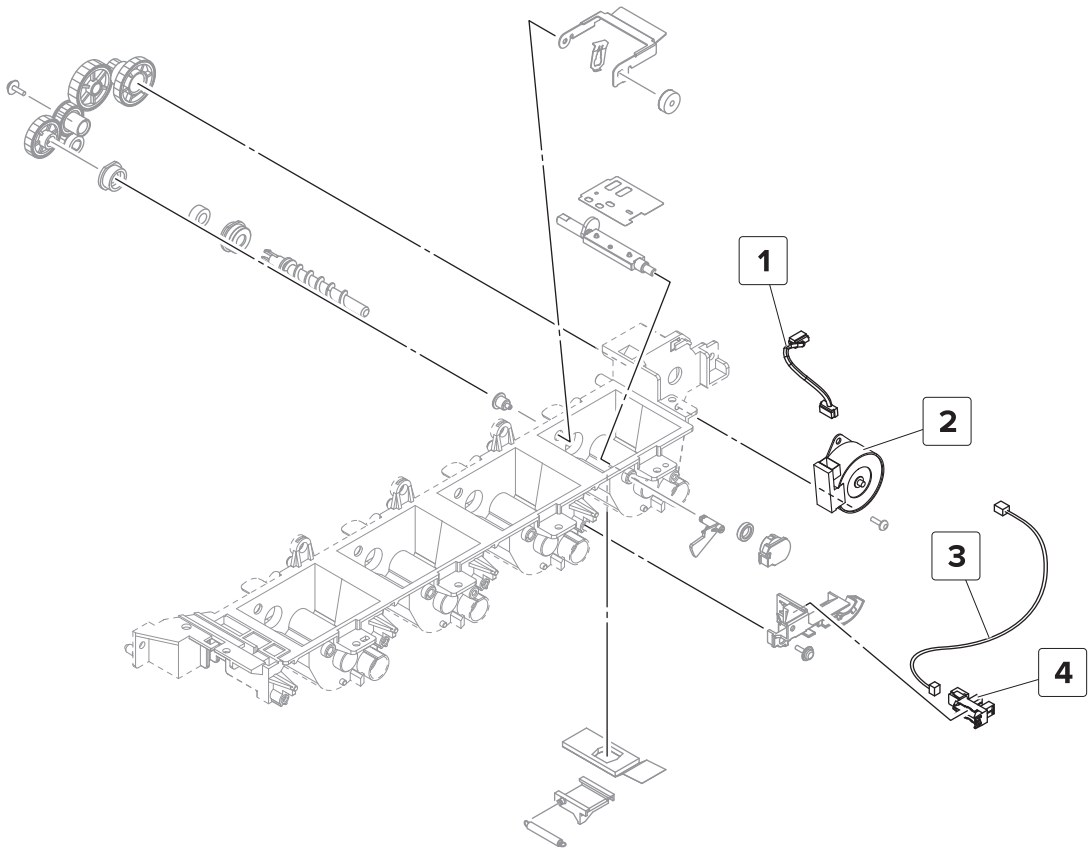
Assembly 7: Toner supply 1



Assembly 7: Toner supply 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9313	1	1	Sensor (top front door)	“Sensor (top front door) removal” on page 331
2	40X9750	1	1	Toner cartridge relay contact cable	“Toner agitator removal” on page 335
3	40X8962	1	1	Toner cartridge contact	“Toner agitator removal” on page 335
4	40X8951	1	1	Toner agitator	“Toner agitator removal” on page 335

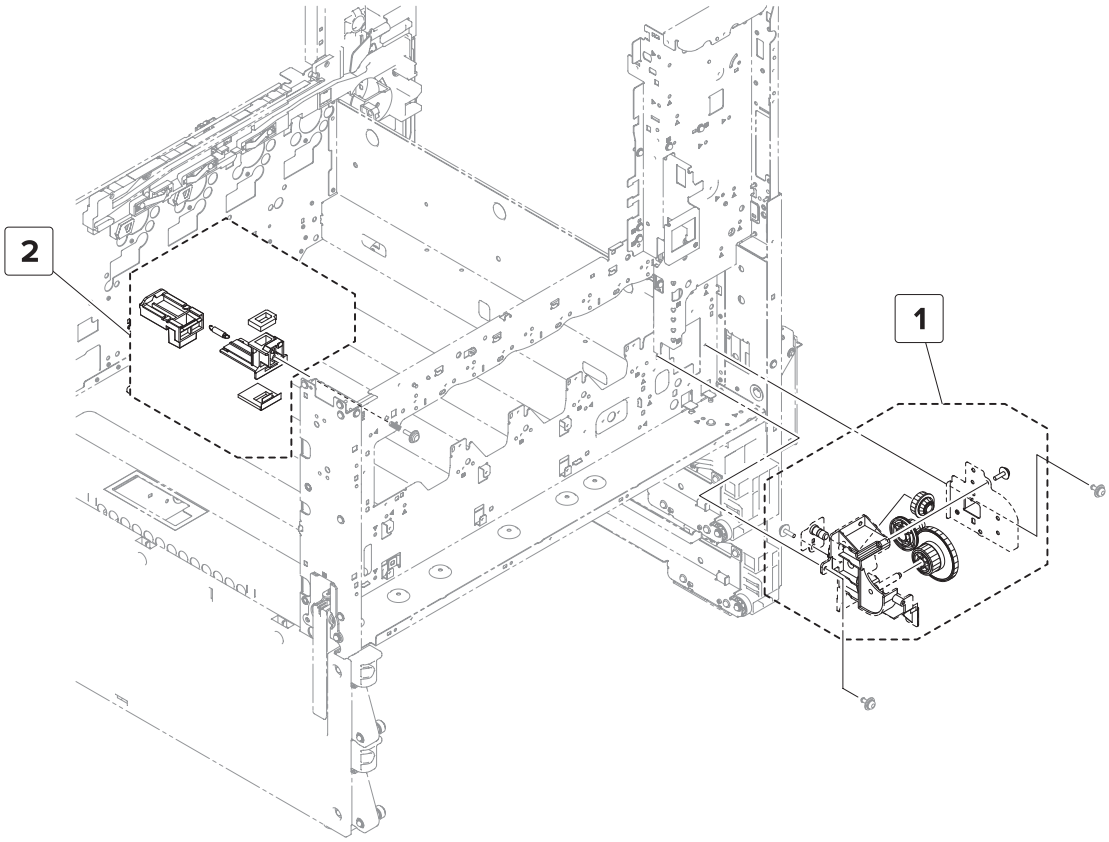
Assembly 8: Toner supply 2



Assembly 8: Toner supply 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8957	1	1	Toner supply motor cable	--
2	40X8956	1	1	Motor (toner supply)	“Motor (toner supply) removal” on page 332
3	40X9751	1	1	Toner cartridge present sensor cable	--
4	40X8869	1	1	Sensor (toner cartridge present)	“Sensor (toner cartridge present) removal” on page 334

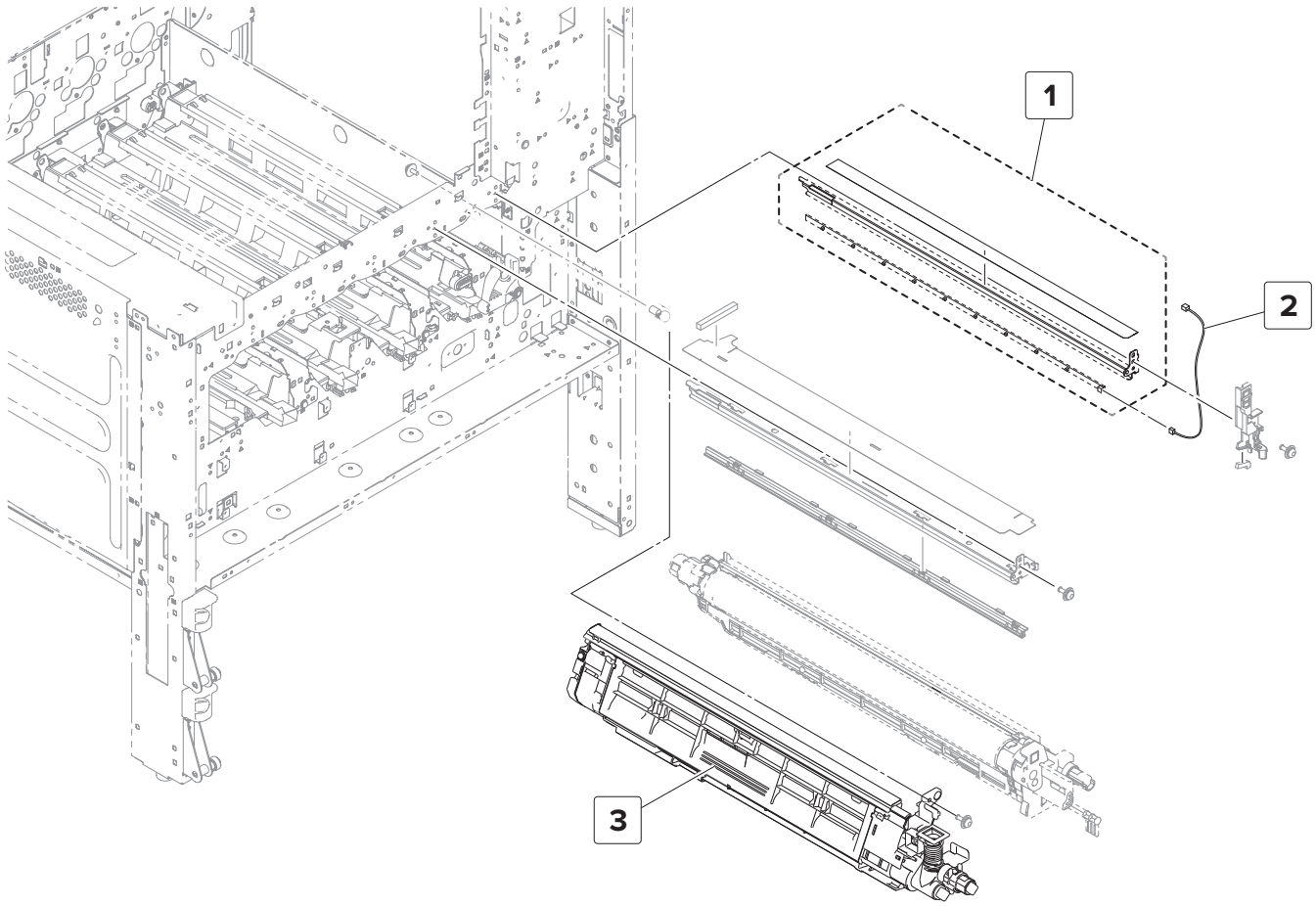
Assembly 9: Waste toner



Assembly 9: Waste toner

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8958	1	1	Waste toner drive	“Waste toner drive removal” on page 333
2	40X8959	1	1	Waste toner duct	--

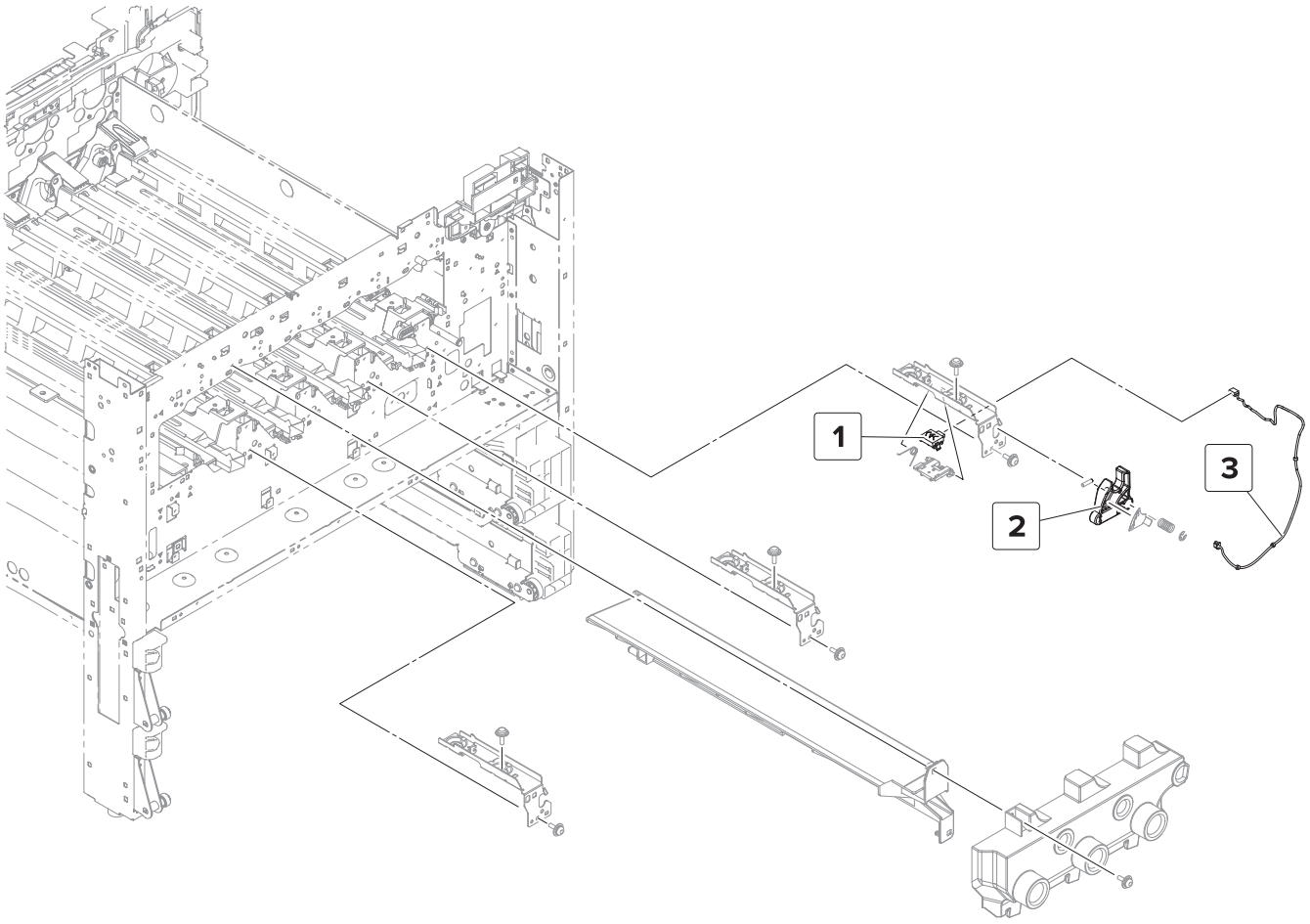
Assembly 10: Developer



Assembly 10: Developer

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8960	1	1	Erase LED	--
2	40X9977	1	1	Erase LED cable	--
3	40X9936	1	1	Developer unit	**“Developer unit removal” on page 336**

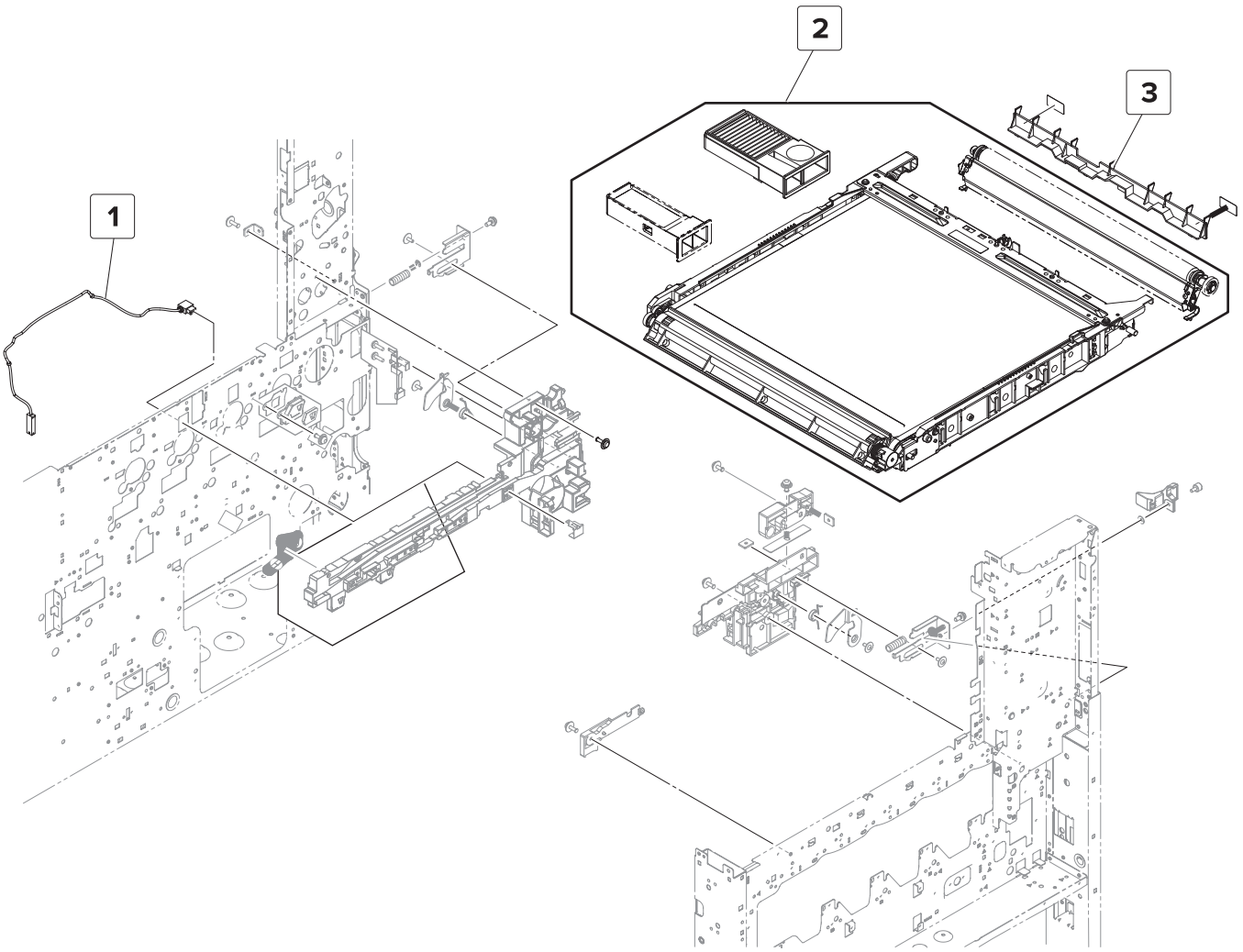
Assembly 11: Photoconductor lock



Assembly 11: Photoconductor lock

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8962	1	1	Photoconductor relay contact	--
2	40X9978	1	1	Photoconductor release lever	--
3	40X8961	1	1	Photoconductor cable	--

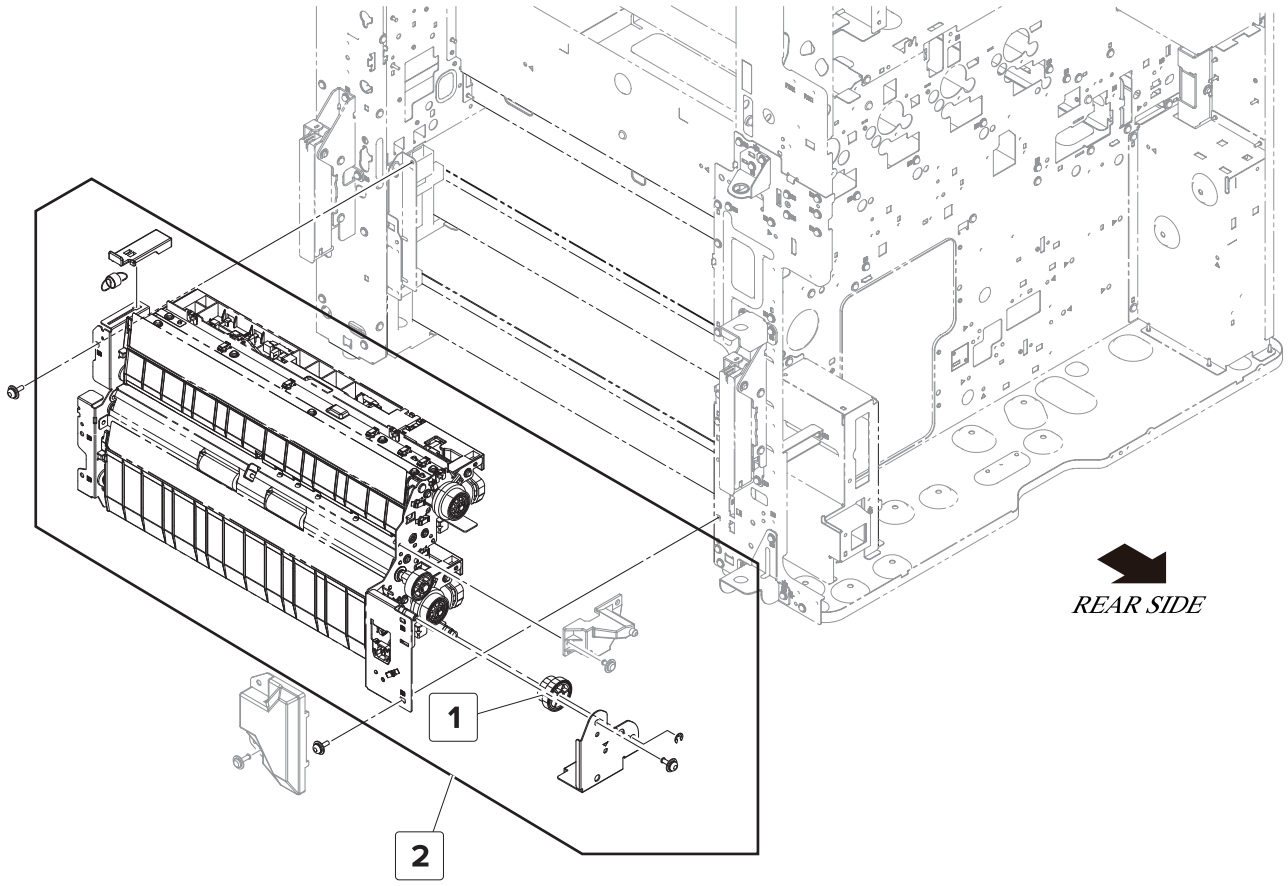
Assembly 12: Transfer belt



Assembly 12: Transfer belt

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8963	1	1	Transfer belt cable	--
2	40X9704	1	1	Transfer belt maintenance kit	--
3	40X9979	1	1	Transfer belt paper guide	--

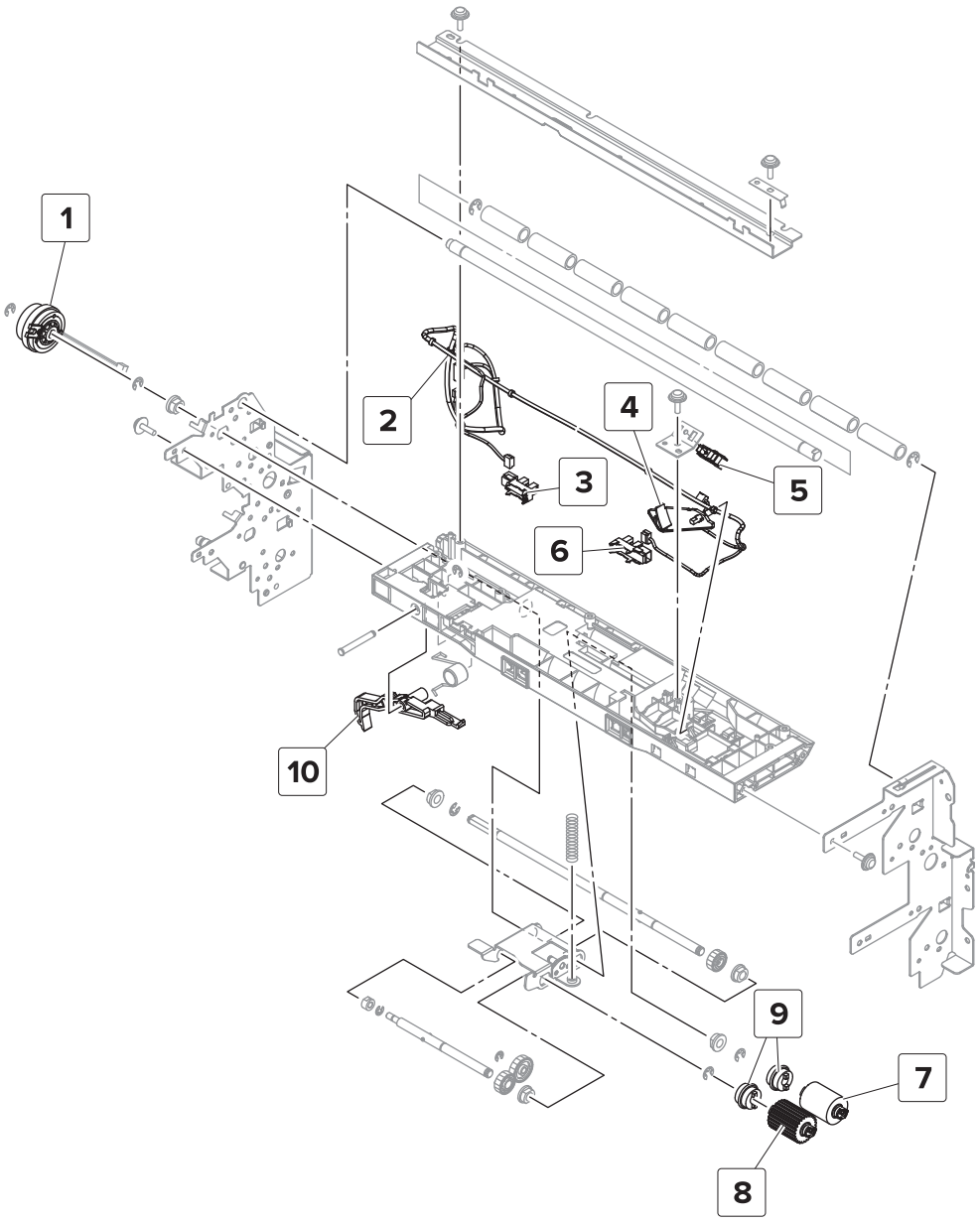
Assembly 13: Tray 1 and 2 transport



Assembly 13: Tray 1 and 2 transport

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9980	1	1	Tray 2 transport drive gear	--
2	40X8966	1	1	Tray 1 and 2 paper feed unit	--

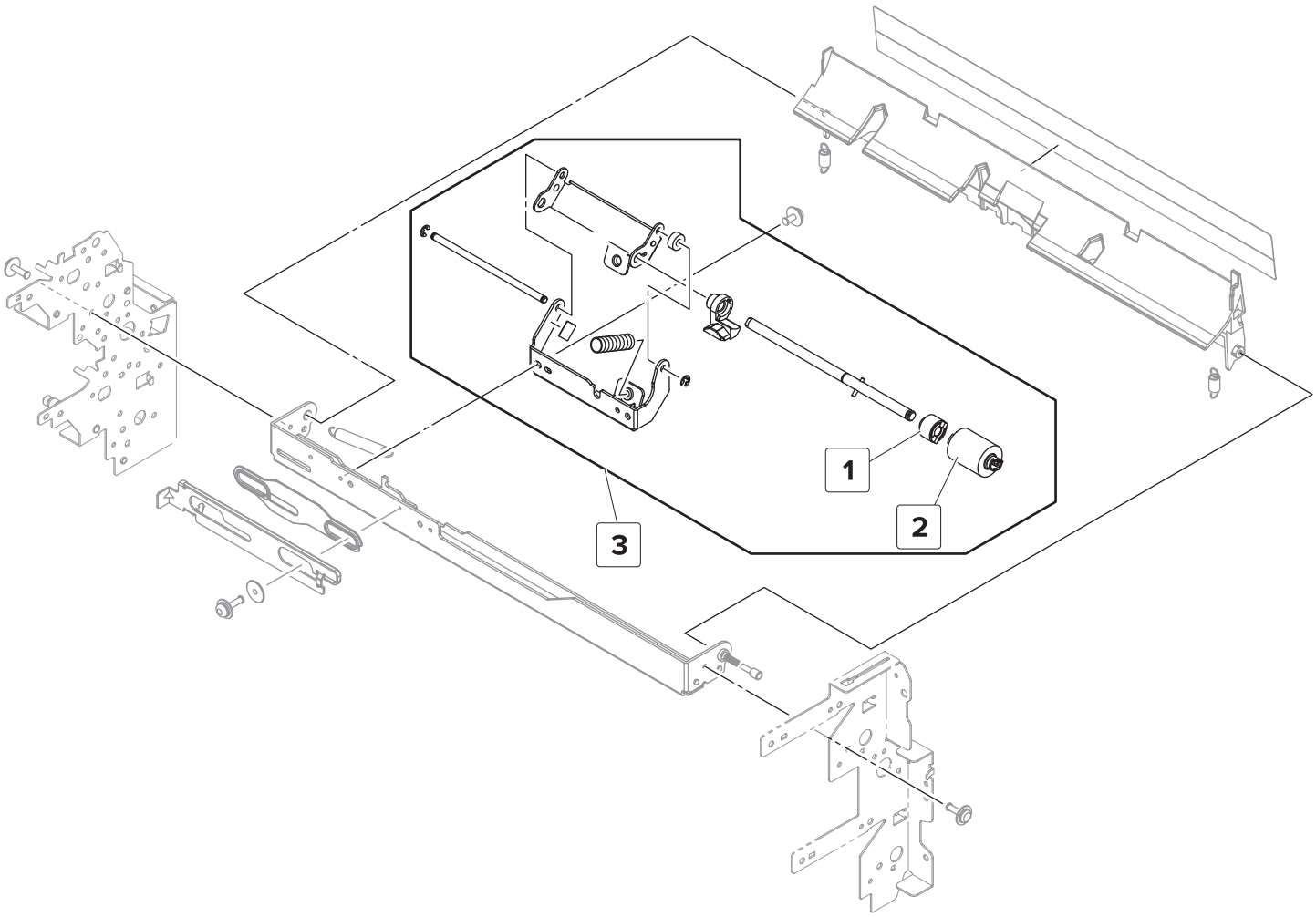
Assembly 14: Tray 1 feed



Assembly 14: Tray 1 feed

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8971	1	1	Tray 1 paper feed clutch	--
2	40X8972	1	1	Tray 1 sensor cables	--
3	40X8869	1	1	Sensor (tray 1 lift plate level)	--
4	40X9899	1	1	Tray empty sensor actuator	--
5	40X8968	1	1	Sensor (tray 1 paper feed)	--
6	40X8869	1	1	Sensor (tray 1 empty)	--
7	40X8970	1	1	Tray feed roller	--
8	40X9925	1	1	Tray pick roller	--
9	40X9981	2	1	Roller clutch	--
10	40X9982	1	1	Tray set actuator	--

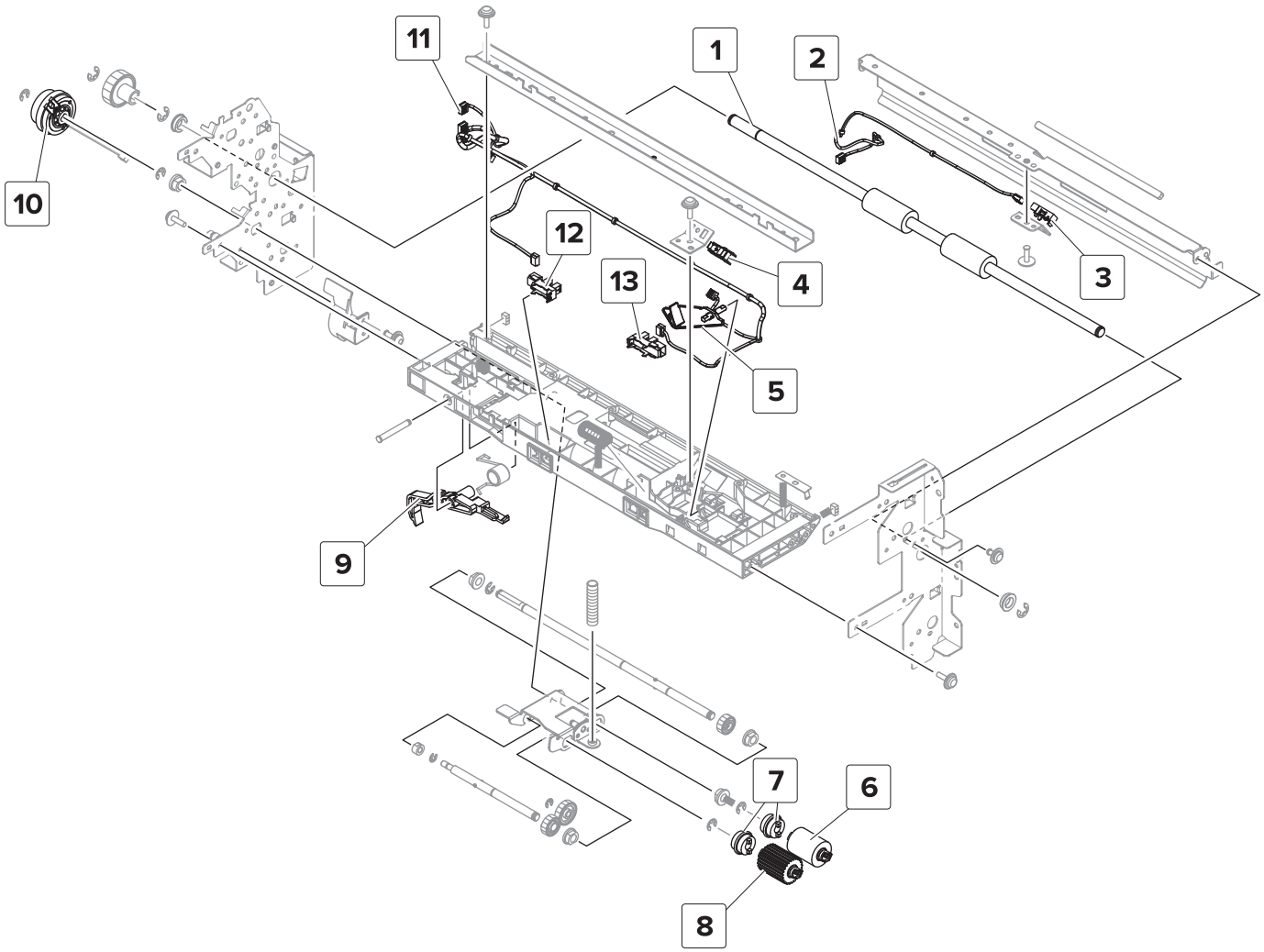
Assembly 15: Tray 1 separator



Assembly 15: Tray 1 separator

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9455	1	1	Roller clutch	--
2	40X8970	1	1	Separator roller	--
3	40X9927	1	1	Separator roller assembly	--

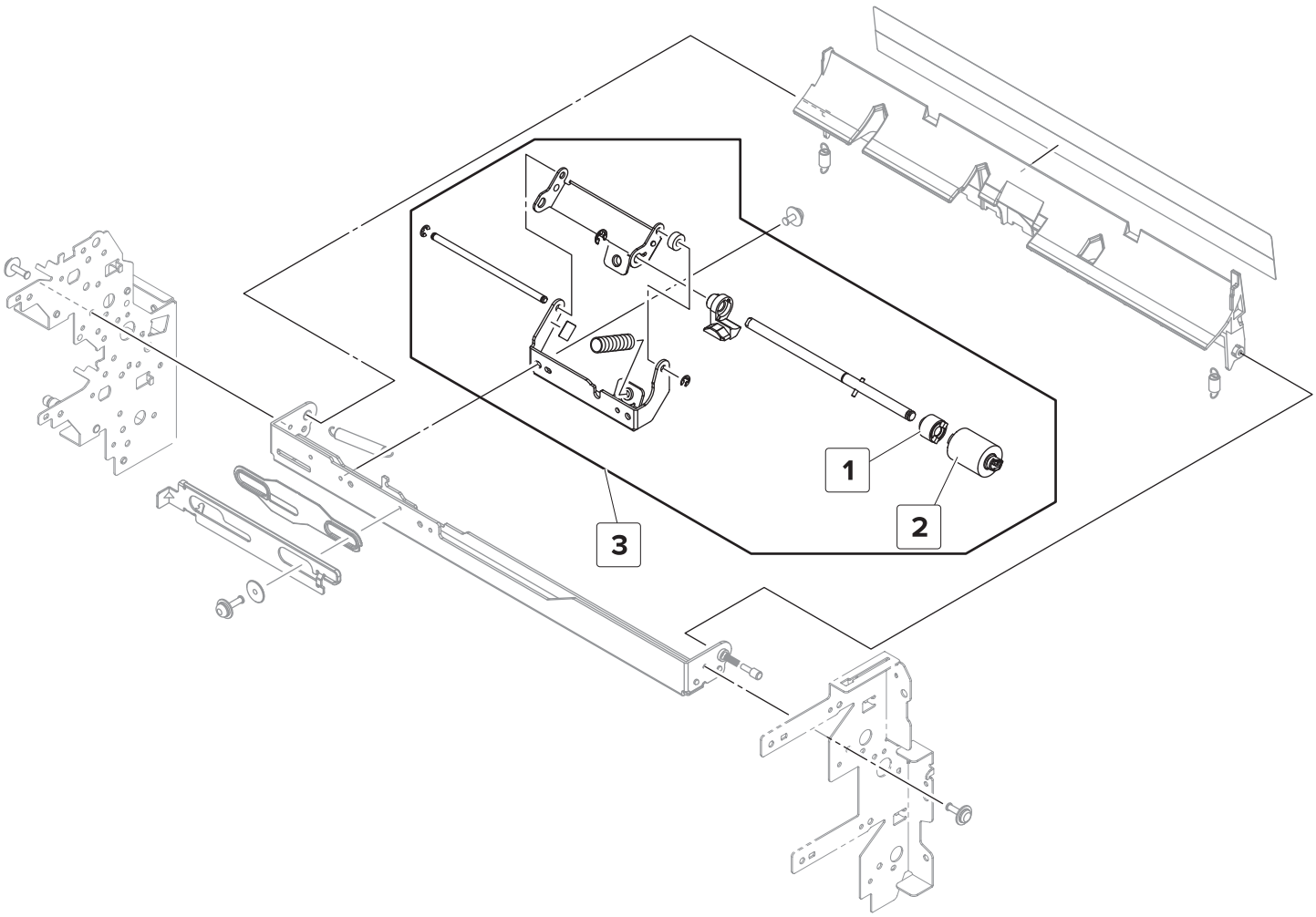
Assembly 16: Tray 2 feed



Assembly 16: Tray 2 feed

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9983	1	1	Tray 2 transport roller	--
2	40X9984	1	1	Tray 2 transport sensor cable	--
3	40X8968	1	1	Sensor (tray 2 transport)	--
4	40X8968	1	1	Sensor (tray 2 paper feed)	--
5	40X9899	1	1	Tray 2 empty sensor actuator	--
6	40X8970	1	1	Feed roller	--
7	40X9981	2	1	Roller clutch	--
8	40X9925	1	1	Pick roller	--
9	40X9982	1	1	Tray set actuator	--
10	40X8971	1	1	Tray 2 paper feed clutch	--
11	40X9987	1	1	Paper feed sensor cable	--
12	40X8869	1	1	Sensor (tray 2 lift plate level)	--
13	40X8869	1	1	Sensor (tray 2 empty)	--

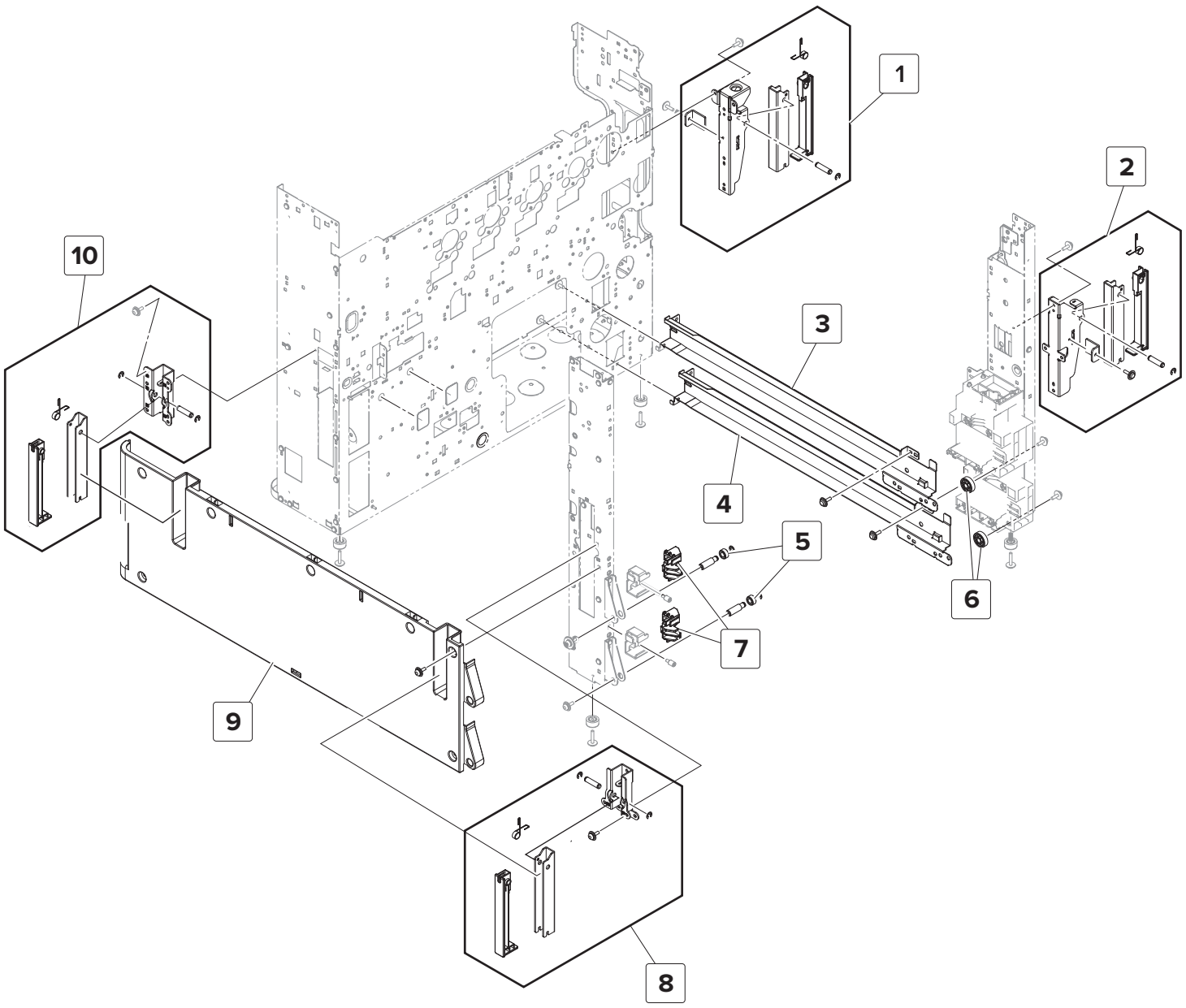
Assembly 17: Tray 2 separator



Assembly 17: Tray 2 separator

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9455	1	1	Roller clutch	--
2	40X8970	1	1	Separator roller	--
3	40X9927	1	1	Separator roller assembly	--

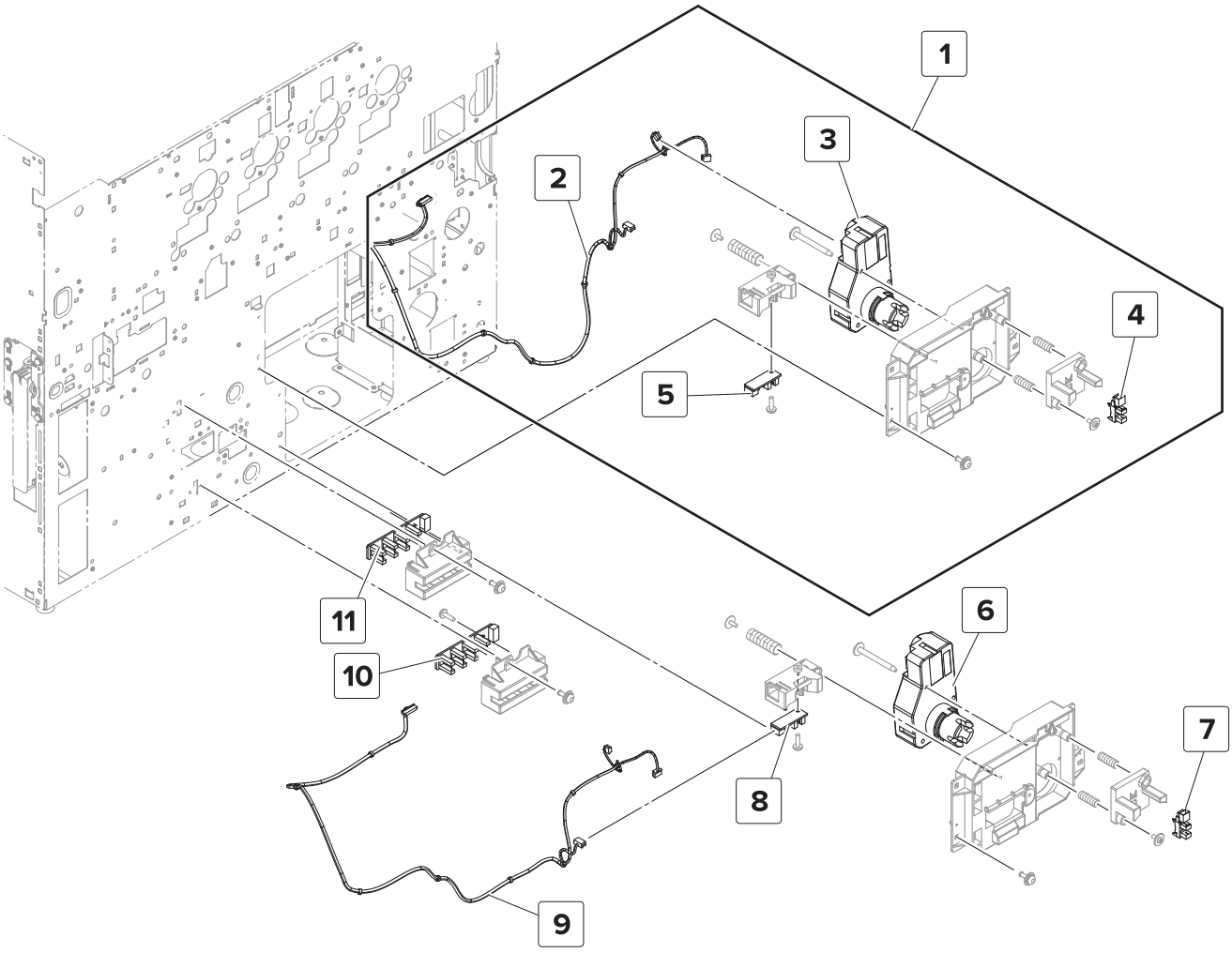
Assembly 18: Tray rail



Assembly 18: Tray rail

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8978	1	1	Rear right lift handle	--
2	40X8977	1	1	Front right lift handle	--
3	40X8982	1	1	Tray 1 insert rail	--
4	40X8982	1	1	Tray 2 insert rail	--
5	40X9305	2	1	Tray left rail guide wheel	--
6	40X8981	2	1	Tray right rail guide wheel	--
7	40X9989	1	1	Tray stopper	--
8	40X8979	1	1	Front left lift handle	--
9	40X9988	1	1	Tray base left cover	--
10	40X8980	1	1	Rear left lift handle	--

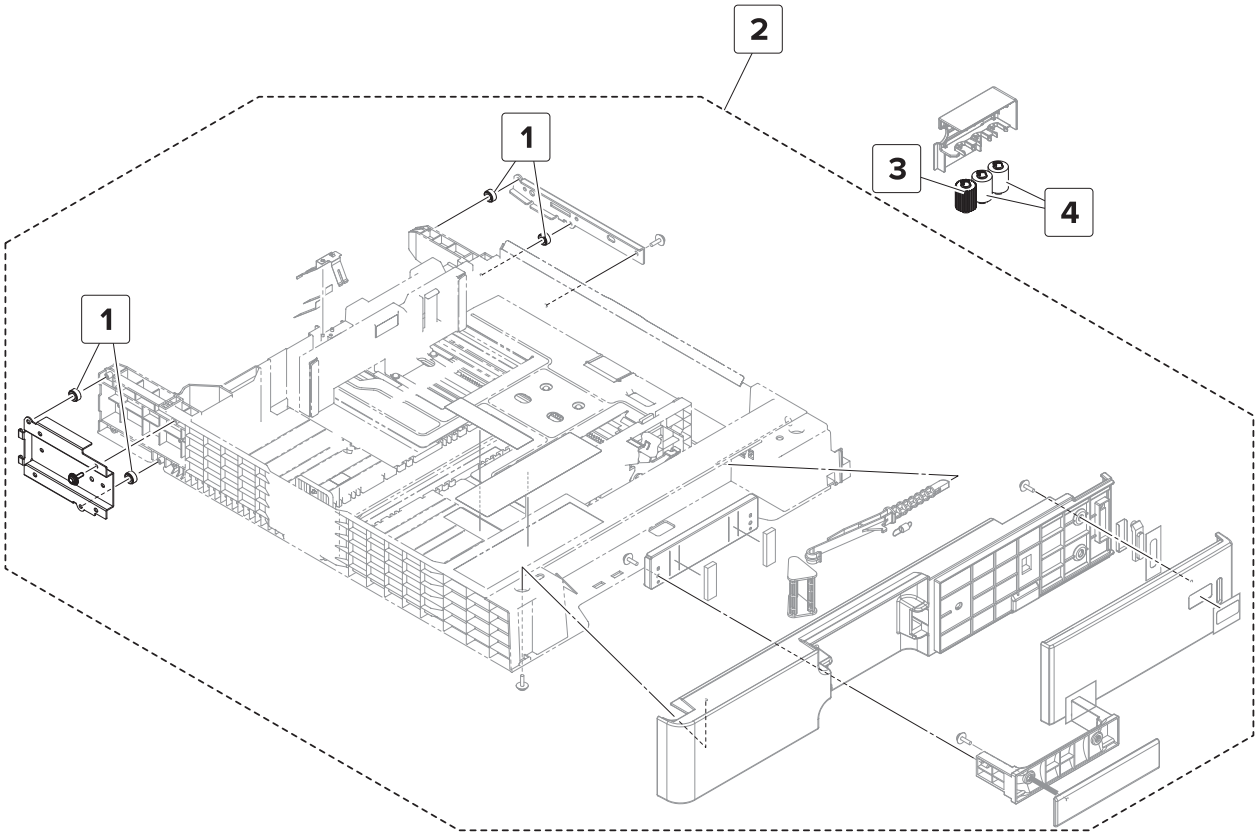
Assembly 19: Tray paper detection



Assembly 19: Tray paper detection

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8988	1	1	Tray size sensing assembly	--
2	40X8984	2	1	Tray 1 feed cable	--
3	40X8987	1	1	Motor (tray 1 lift)	--
4	40X8869	1	1	Sensor (tray 1 near empty)	--
5	40X8989	1	1	Sensor (tray 1 paper width)	--
6	40X8987	1	1	Motor (tray 2 lift)	--
7	40X8869	1	1	Sensor (tray 2 near empty)	--
8	40X8989	1	1	Sensor (tray 2 paper width)	--
9	40X8984	2	1	Tray 2 feed cable	--
10	40X8985	1	1	Sensor (tray 2 paper length)	--
11	40X8985	1	1	Sensor (tray 1 paper length)	--

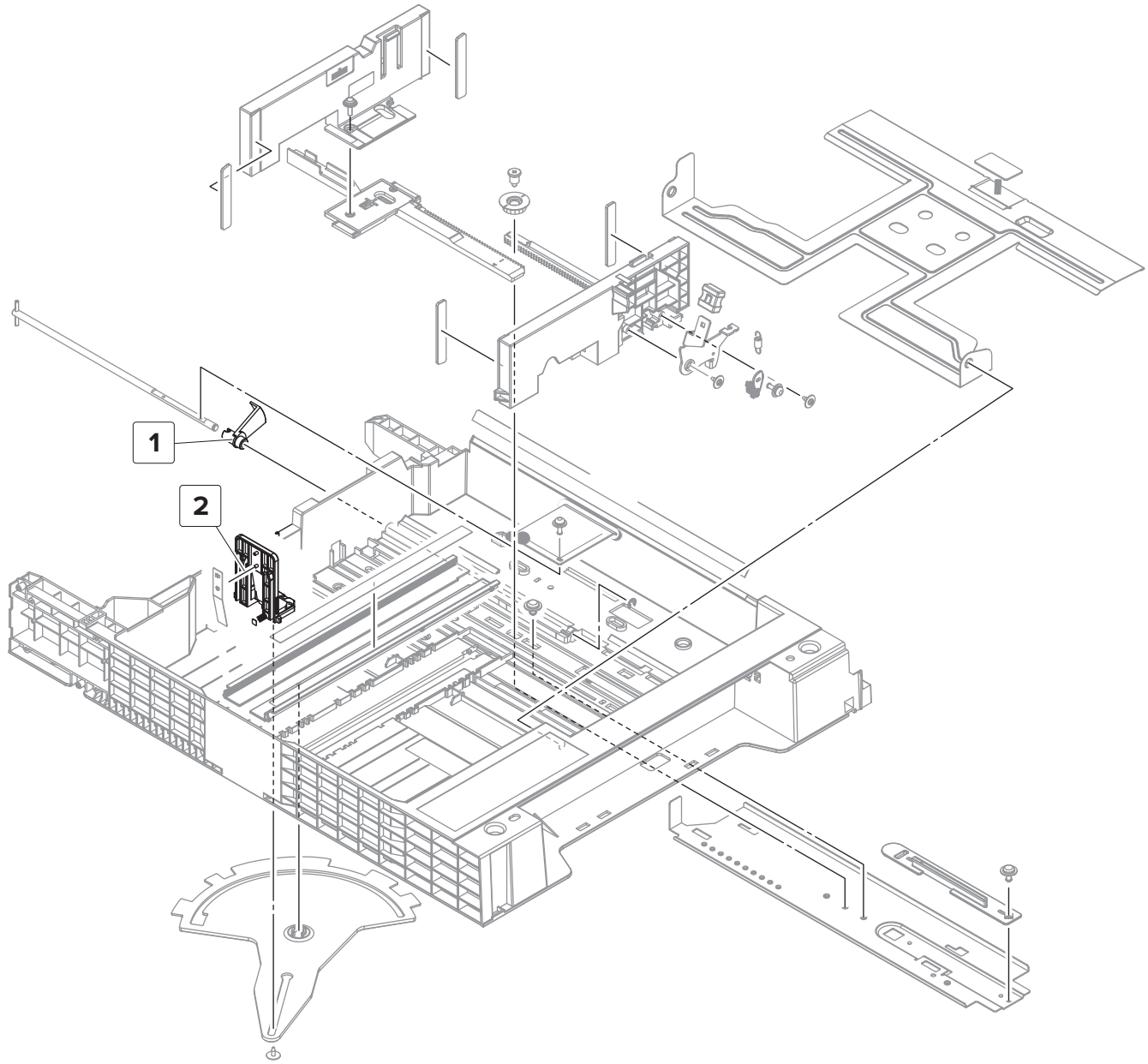
Assembly 20: 500-sheet tray—Tray 1



Assembly 20: 500-sheet tray—Tray 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9305	4	1	Tray insert guide wheel	--
2	40X8990	1	1	Tray 1 insert	--
3	40X9925	1	1	Pick roller	--
4	40X8970	2	1	Feed/separator roller	--

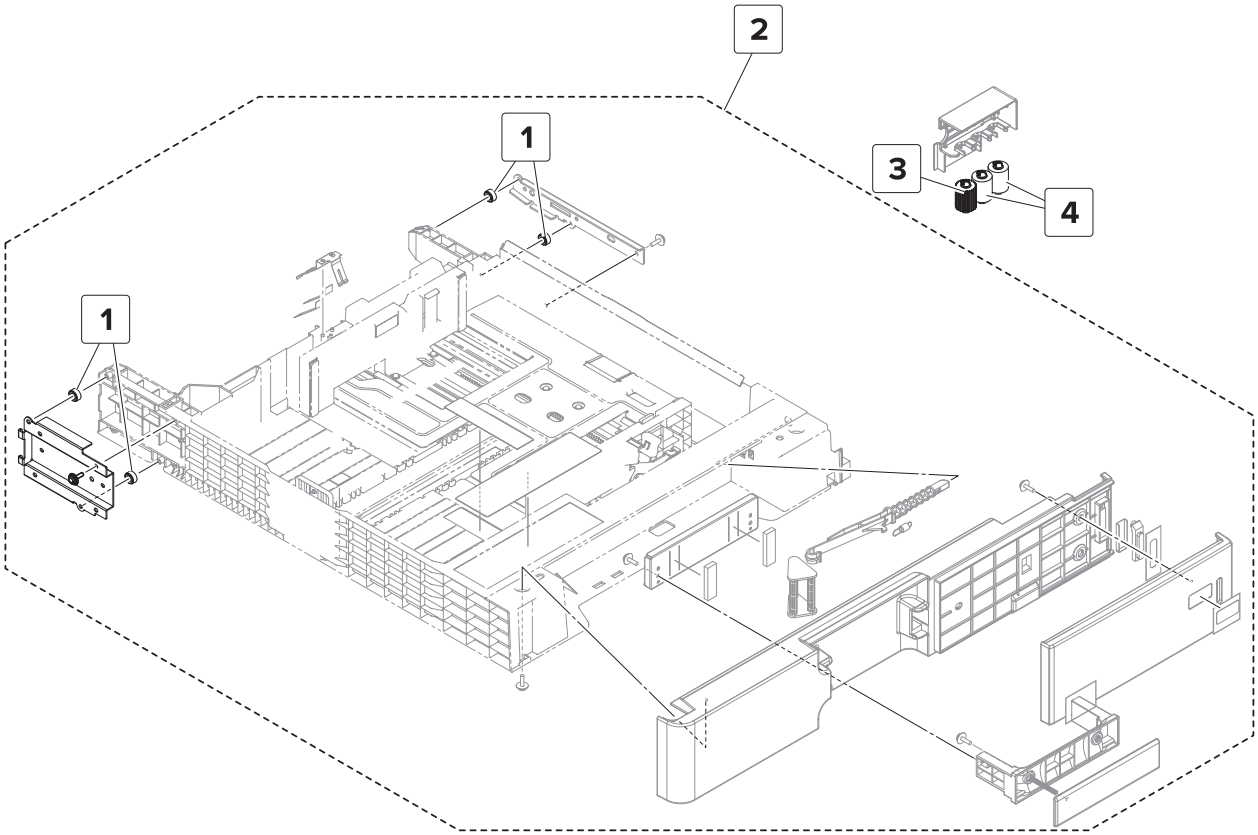
Assembly 21: 500-sheet tray—Tray 1 or Tray 2



Assembly 21: 500-sheet tray—Tray 1 or Tray 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9308	1	1	Tray near empty sensor actuator	--
2	40X9306	1	1	Tray paper length guide	--

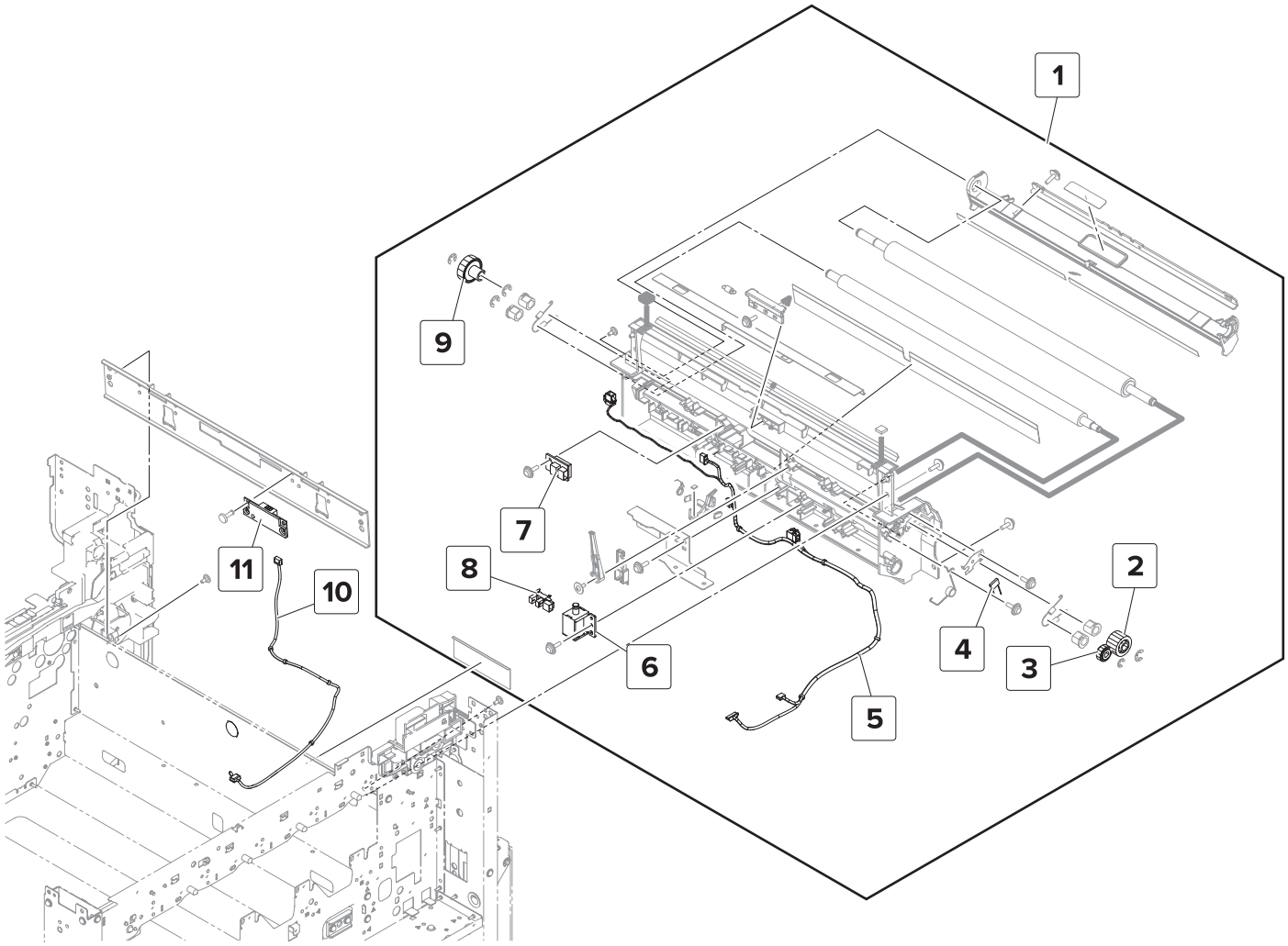
Assembly 22: 500-sheet tray—Tray 2



Assembly 22: 500-sheet tray—Tray 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9305	4	1	Tray insert guide wheel	--
2	40X8992	1	1	Tray 2 insert	--
3	40X9925	1	1	Pick roller	--
4	40X8970	2	1	Feed/separator roller	--

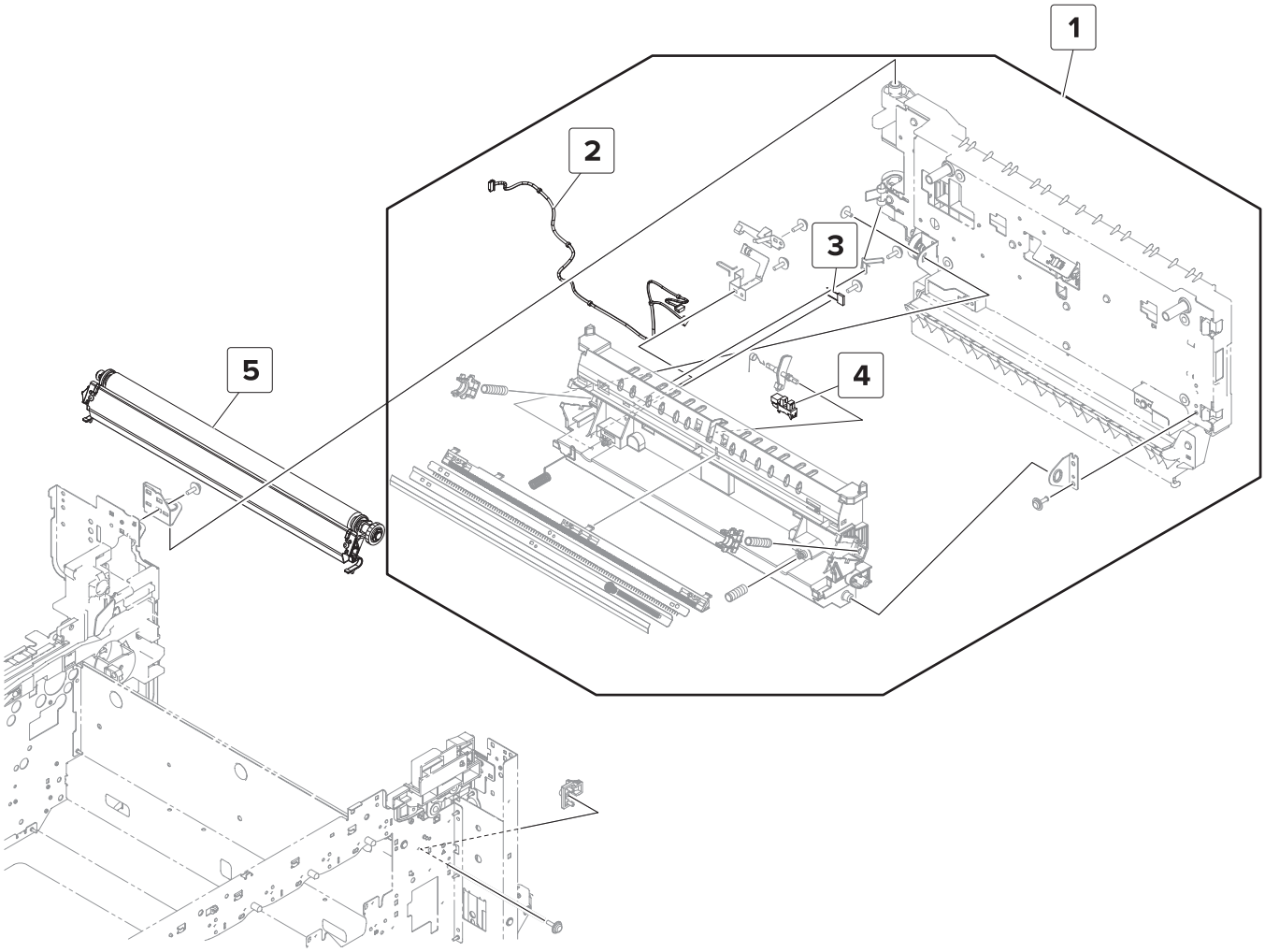
Assembly 23: Registration transport



Assembly 23: Registration transport

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8994	1	1	Registration transport assembly	"Registration transport assembly" on page 282
2	40X9706	1	1	Registration primary gear	--
3	40X9707	1	1	Registration secondary gear	--
4	40X9009	1	1	Registration roller fixed power resistor	--
5	40X9007	1	1	Registration cable	--
6	40X8998	1	1	Toner density solenoid	--
7	40X8997	1	1	Sensor (registration humidity)	--
8	40X8869	1	1	Sensor (registration)	--
9	40X8995	1	1	Registration motor gear	--
10	40X9708	1	1	Toner density sensor cable	--
11	40X8999	1	1	Sensor (toner density)	--

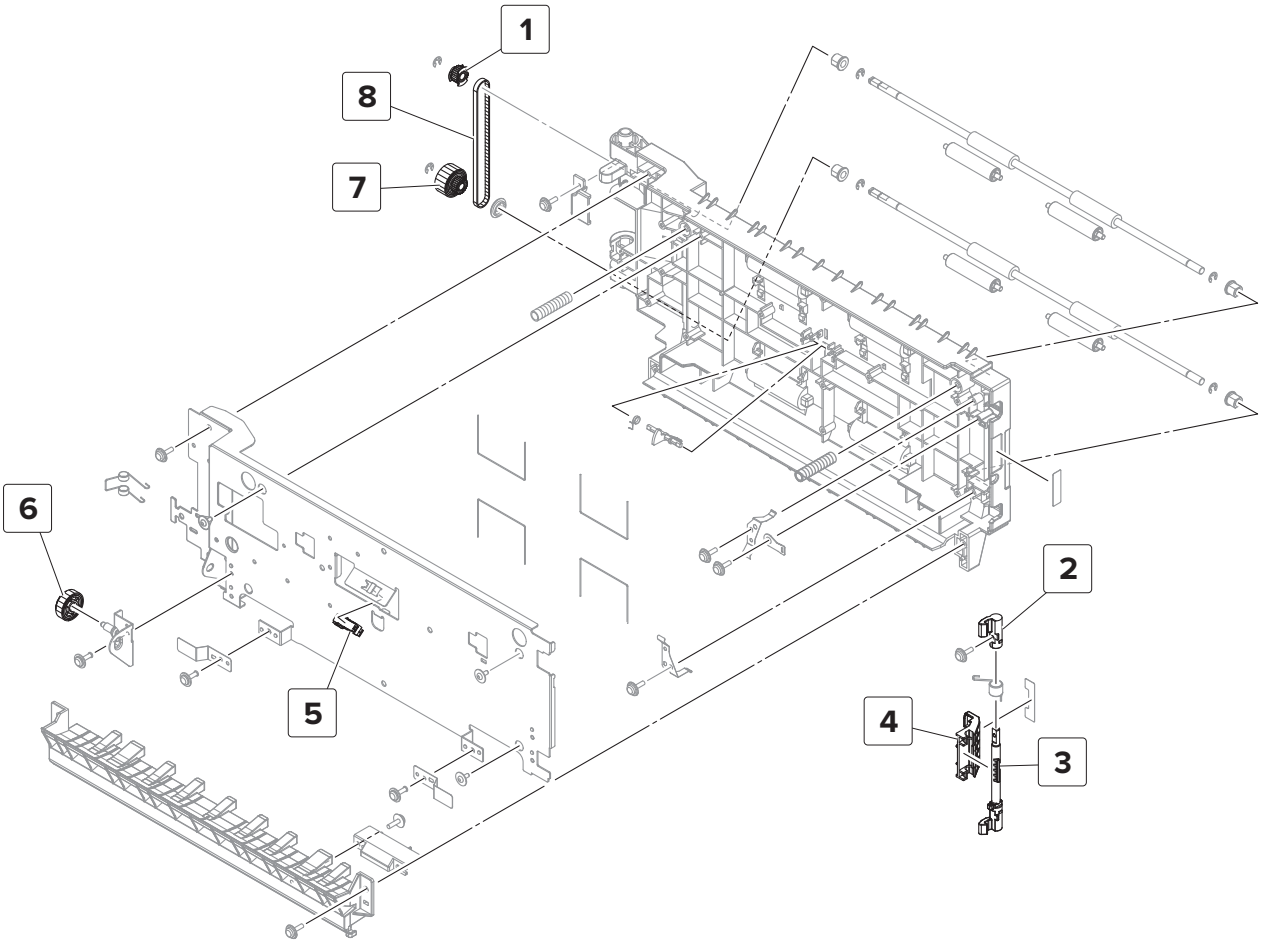
Assembly 24: Transfer



Assembly 24: Transfer

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9011	1	1	Registration unit assembly	"Registration unit assembly removal" on page 314
2	40X9990	1	1	Fusing speed sensor cable	--
3	40X9009	1	1	Fuser fixed power resistor	--
4	40X8869	1	1	Sensor (fusing speed)	"Sensor (fusing speed) removal" on page 317
5	40X9010	1	1	Transfer roller	"Transfer roller removal" on page 284

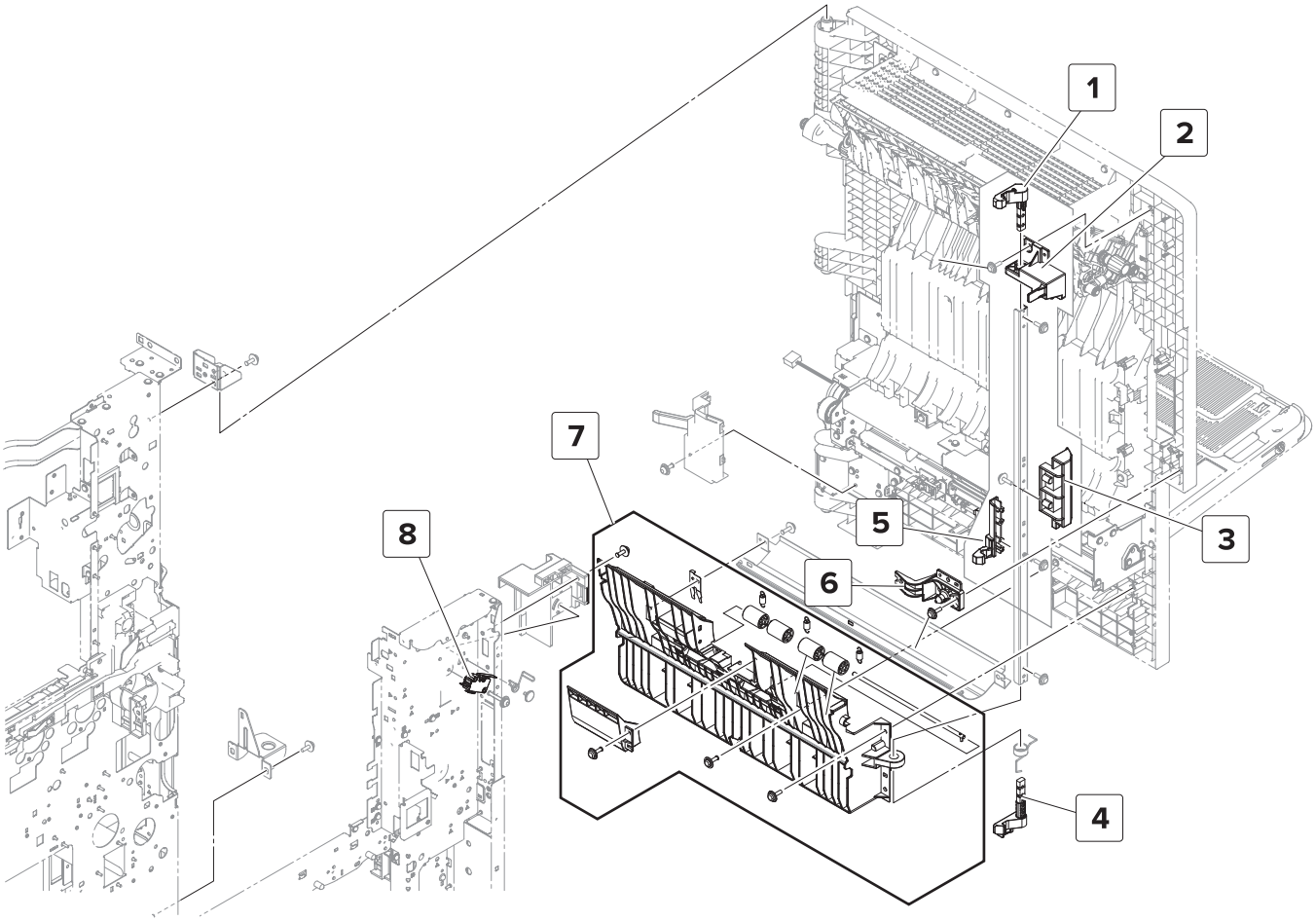
Assembly 25: Registration unit



Assembly 25: Registration unit

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9012	1	1	Registration unit gear	“Registration unit gears removal” on page 320
2	40X9992	1	1	Registration unit lock	“Registration unit lock removal” on page 321
3	40X9993	1	1	Registration unit lock shaft	“Registration unit lock removal” on page 321
4	40X9994	1	1	Registration unit handle	“Registration unit lock removal” on page 321
5	40X8869	1	1	Sensor (duplex pass through 2)	“Sensor (duplex pass through 2) removal” on page 318
6	40X9710	1	1	Lower registration gear	“Registration unit gears removal” on page 320
7	40X9991	1	1	Registration drive gear	“Registration unit gears removal” on page 320
8	40X9013	1	1	Registration unit belt	“Registration unit belt removal” on page 319

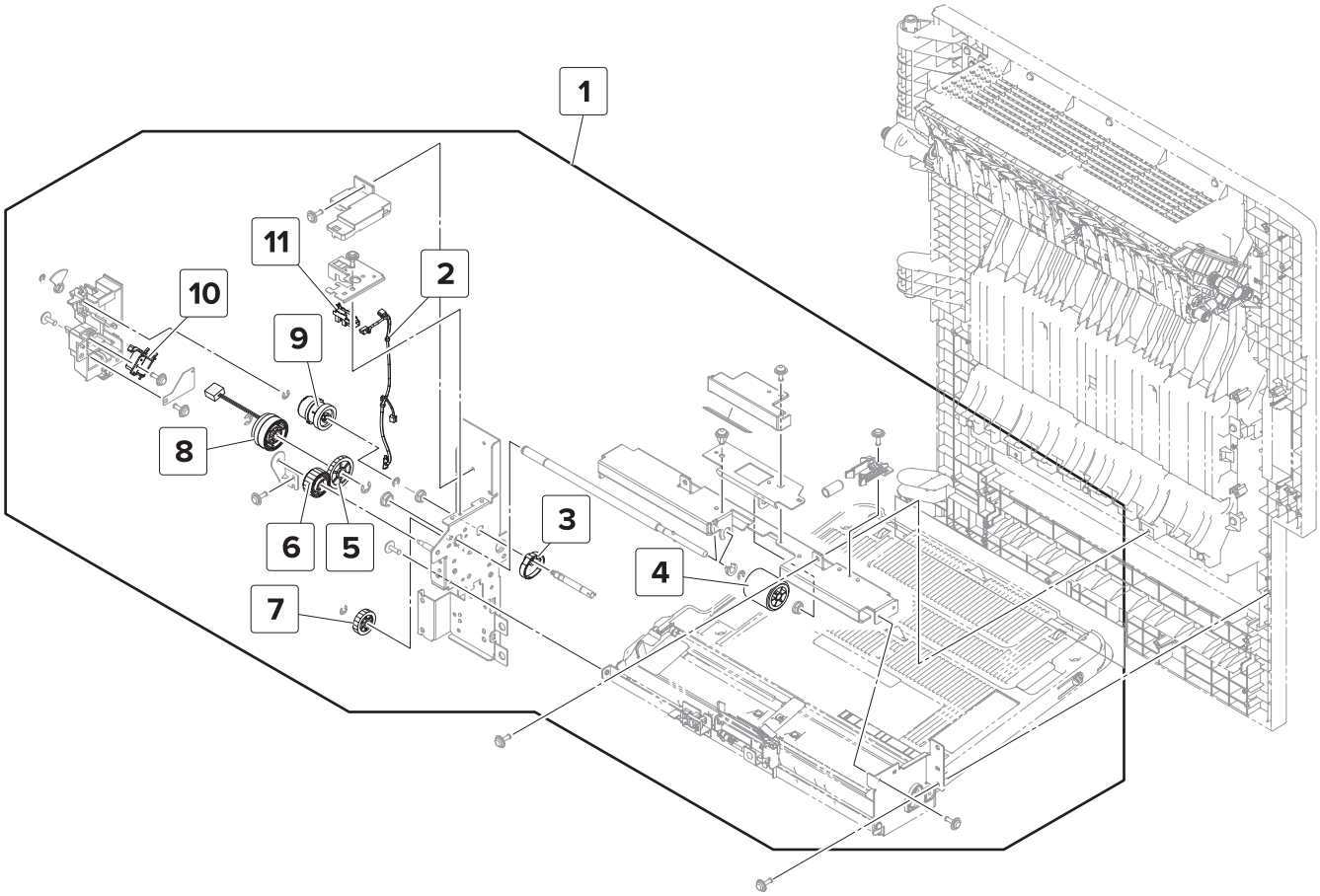
Assembly 26: Right door transport



Assembly 26: Right door transport

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9019	1	1	Right door upper lock	“Right door lock removal” on page 295
2	40X9020	1	1	Right door switch actuator	“Right door switch actuator removal” on page 312
3	40X9711	1	1	Right door handle	--
4	40X9713	1	1	Right door lower lock	“Right door lock removal” on page 295
5	40X9712	1	1	Right door middle lock	“Right door lock removal” on page 295
6	40X9715	1	1	Right door lock support	“Right door lock removal” on page 295
7	40X8920	1	1	Tray 2 transport guide	“Tray 2 transport guide” on page 296
8	40X9527	1	1	Right door switch	“Right door switch removal” on page 338

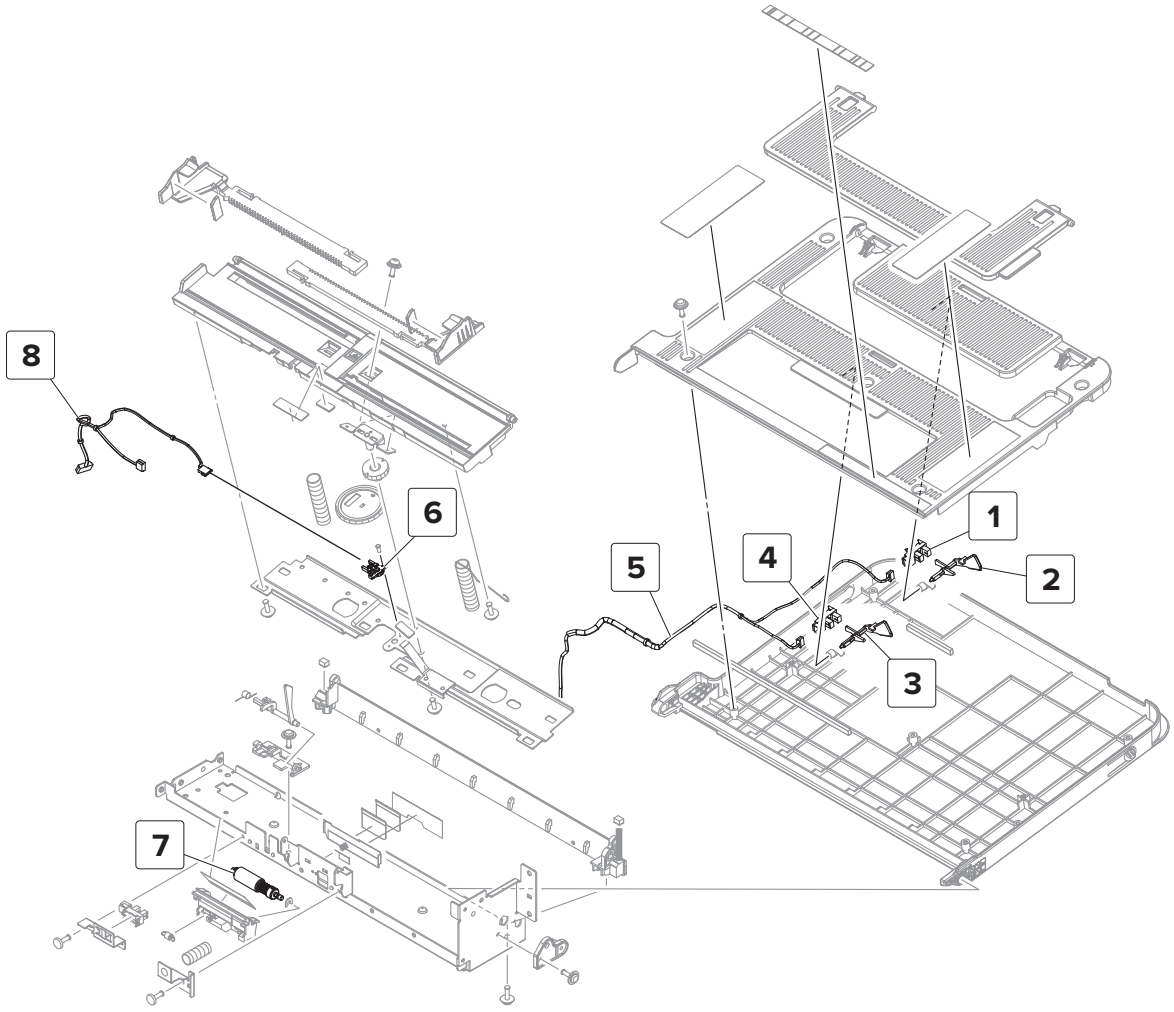
Assembly 27: MPF 1



Assembly 27: MPF 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9027	1	1	MPF	“MPF removal” on page 297
2	40X9716	1	1	MPF lift plate sensor cable	--
3	40X9996	1	1	MPF lift plate cam	--
4	40X9995	1	1	MPF feed roller	“MPF feed/separator assembly” on page 306
5	40X9719	1	1	MPF feed clutch gear	“MPF gears removal” on page 302
6	40X9718	1	1	MPF separator idler gear	“MPF gears removal” on page 302
7	40X9022	1	1	MPF separator gear	“MPF gears removal” on page 302
8	40X9023	1	1	MPF feed clutch	“MPF feed clutch removal” on page 300
9	40X9720	1	1	MPF lift plate clutch	--
10	40X9024	1	1	MPF lift plate solenoid	“MPF lift plate solenoid removal” on page 301
11	40X8869	1	1	Sensor (MPF lift plate)	“Sensor (MPF lift plate) removal” on page 303

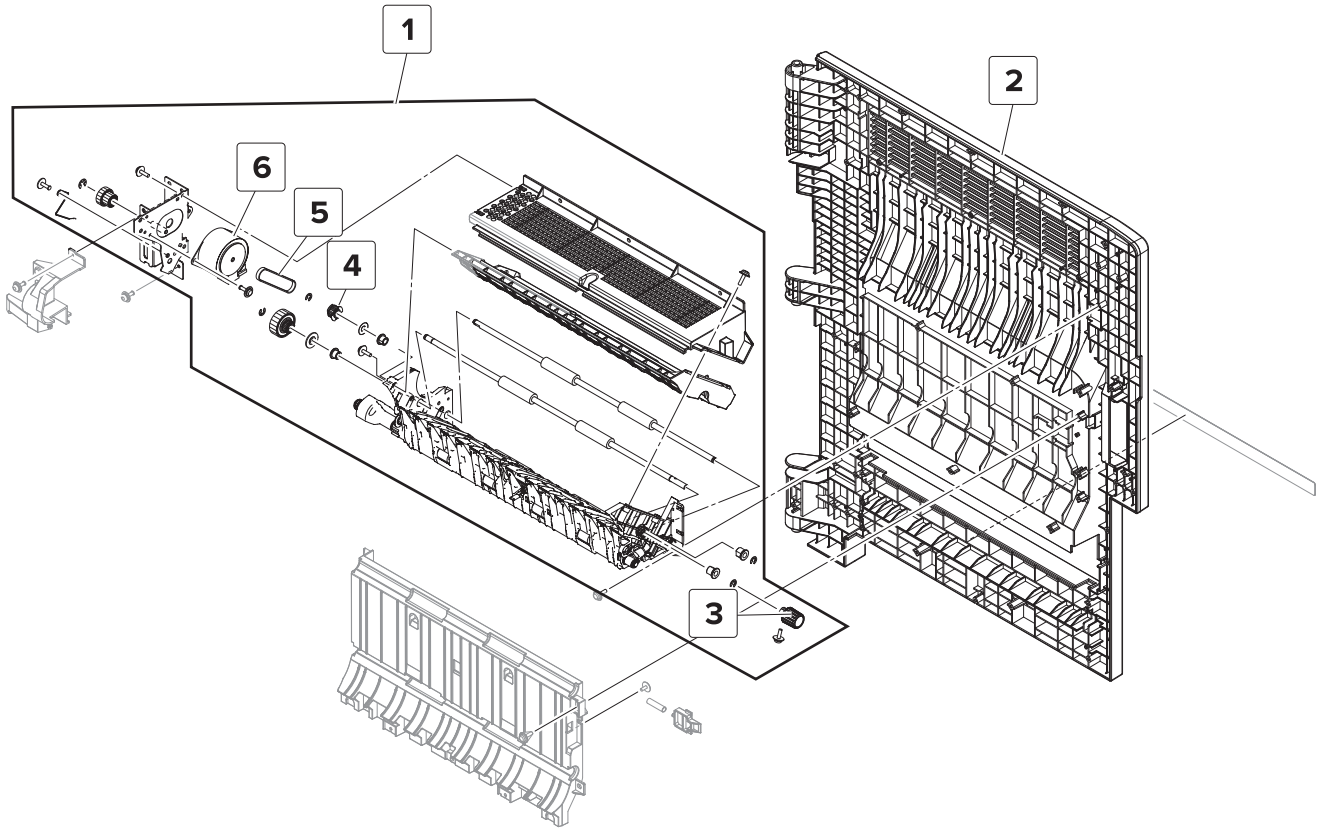
Assembly 28: MPF 2



Assembly 28: MPF 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8869	1	1	Sensor (MPF paper length 1)	"Sensor (MPF paper length) removal" on page 299
2	40X9026	2	1	MPF paper length 1 sensor actuator	--
3	40X9026	2	1	MPF paper length 2 sensor actuator	--
4	40X8869	1	1	Sensor (MPF paper length 2)	"Sensor (MPF paper length) removal" on page 299
5	40X9721	1	1	MPF paper length sensor cable	--
6	40X9030	1	1	Sensor (MPF paper width)	--
7	40X9615	1	1	MPF separator roller	"MPF feed/separator assembly" on page 306
8	40X9722	1	1	MPF paper width sensor cable	--

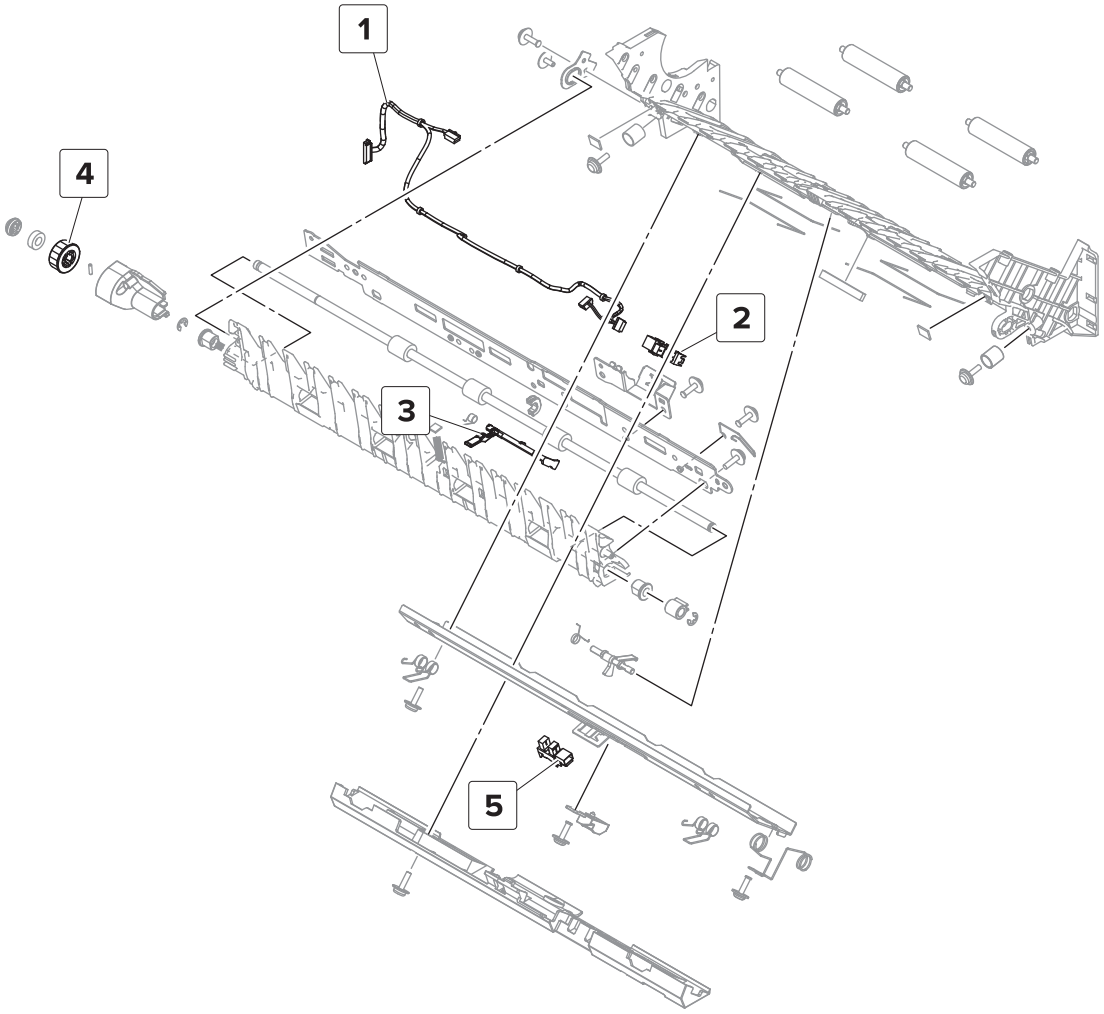
Assembly 29: Duplex 1



Assembly 29: Duplex 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9031	1	1	Duplex transport assembly	"Duplex transport assembly removal" on page 285
2	40X9997	1	1	Right door cover	--
3	40X9998	1	1	Duplex transport jam removal knob	"Duplex transport jam removal knob removal" on page 286
4	40X9012	1	1	Duplex transport gear	"Duplex transport gears removal" on page 292
5	40X9036	1	1	Duplex transport belt	"Duplex transport belt removal" on page 292
6	40X9037	1	1	Motor (duplex transport)	"Motor (duplex transport) removal" on page 293

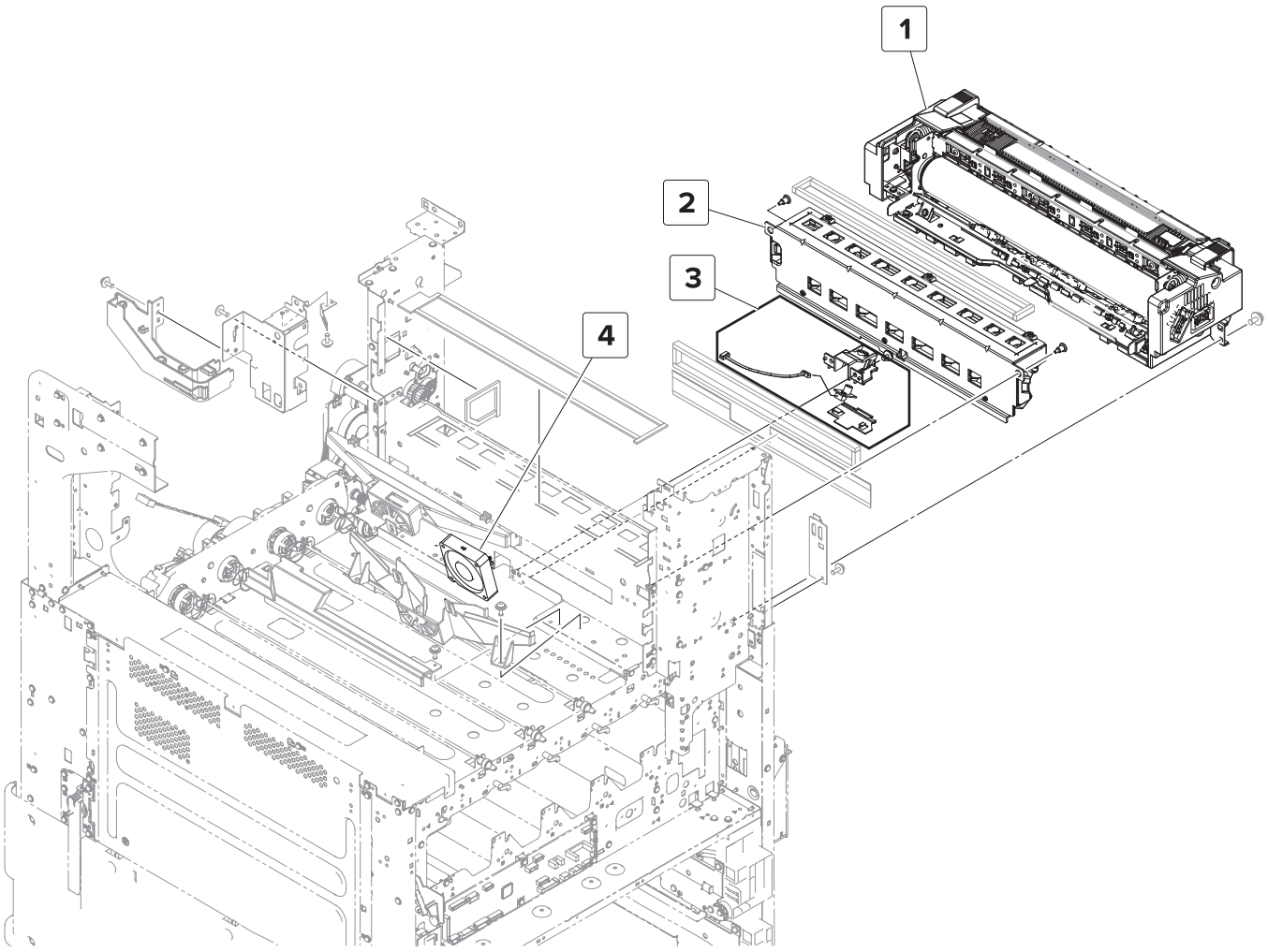
Assembly 30: Duplex 2



Assembly 30: Duplex 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9723	1	1	Fuser exit sensor cable	--
2	40X8869	1	1	Sensor (fuser exit)	“Sensor (fuser exit) removal” on page 288
3	40X9039	1	1	Fuser exit sensor actuator	“Fuser exit sensor actuator removal” on page 288
4	40X9215	1	1	Redrive diverter gear	--
5	40X8869	1	1	Sensor (duplex pass through 1)	“Sensor (duplex pass through 1) removal” on page 289

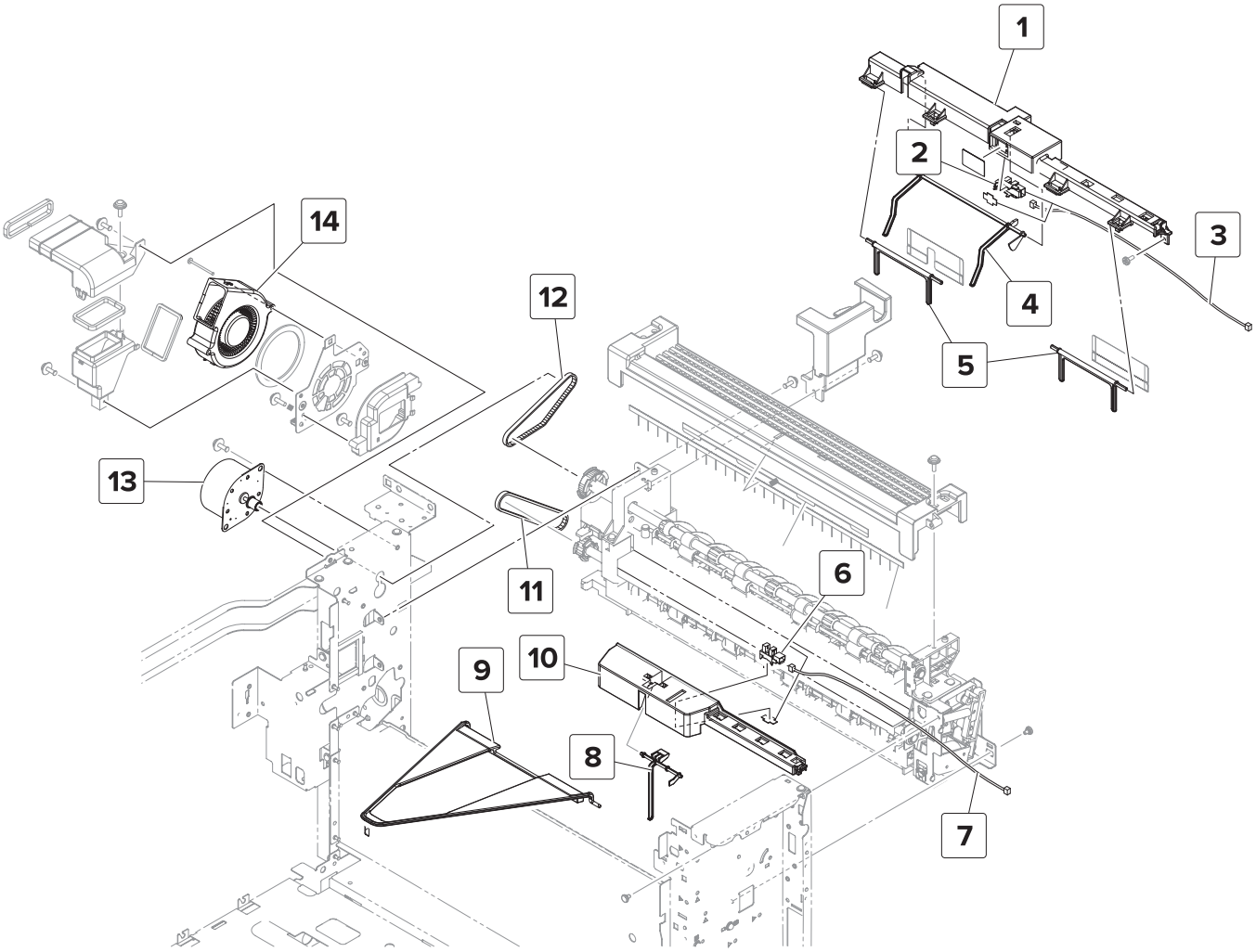
Assembly 31: Fuser



Assembly 31: Fuser

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9046	1	1	Fuser	“Fuser removal” on page 279
2	40X9044	1	1	Induction heater, 100 V	“Induction heater removal” on page 279
2	40X9045	1	1	Induction heater, 230 V	“Induction heater removal” on page 279
3	40X9047	1	1	Sensor (fuser temperature) with cable	--
4	40X9041	1	1	Fuser fan	--

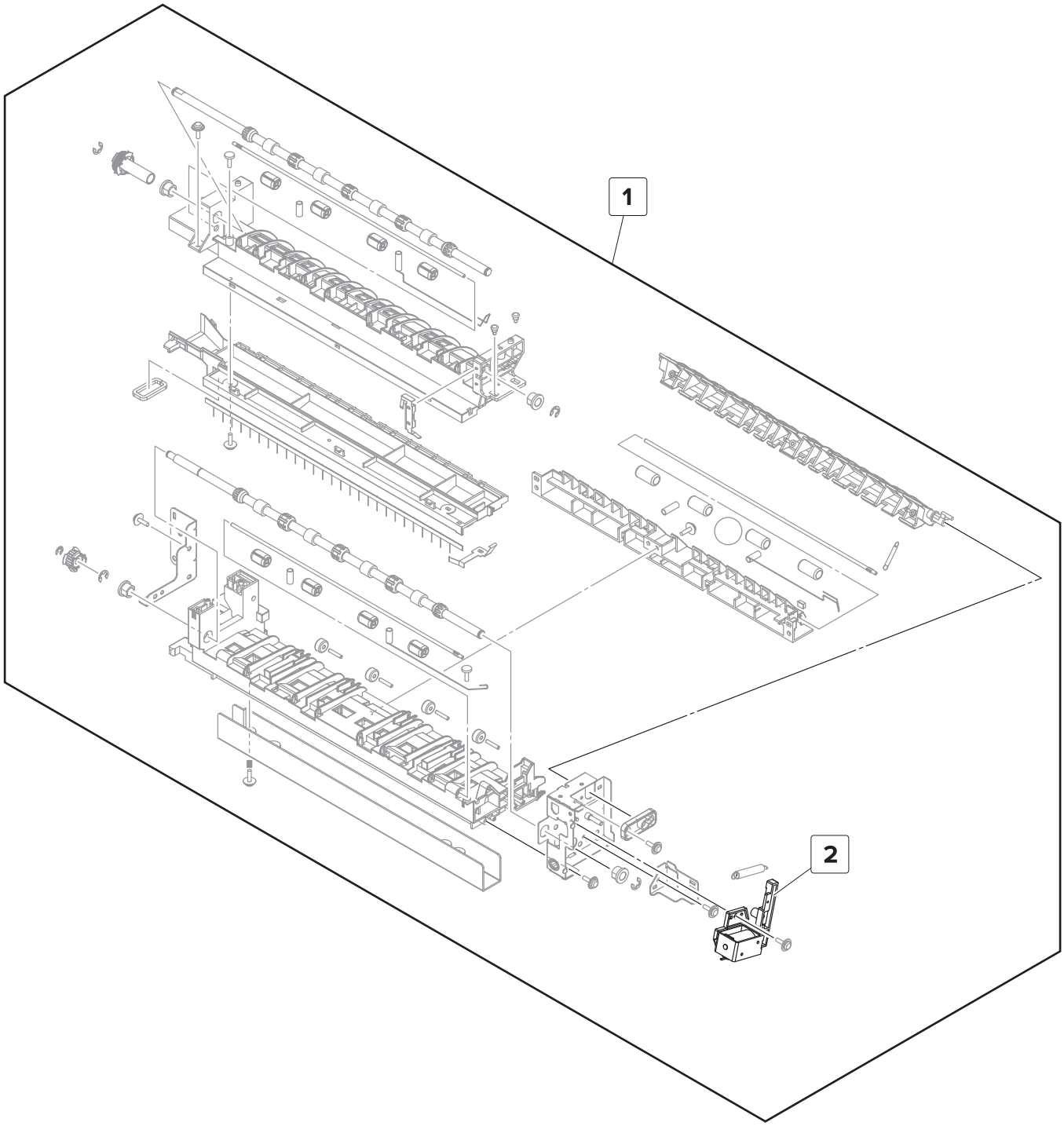
Assembly 32: Exit 1



Assembly 32: Exit 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9167	1	1	Redrive exit guide	--
2	40X9313	1	1	Sensor (redrive exit)	--
3	40X9644	1	1	Redrive exit sensor cable	--
4	40X9714	1	1	Redrive exit sensor actuator	--
5	40X9042	1	1	HPT bin paper bail	--
6	40X9313	1	1	Sensor (exit)	--
7	40X9599	1	1	Exit sensor cable	--
8	40X9484	1	1	Exit sensor actuator	--
9	40X8974	1	1	Standard bin paper bail	--
10	40X8895	1	1	Exit sensor housing	--
11	40X9156	1	1	Exit clutch belt	--
12	40X9724	1	1	Redrive belt	--
13	40X9155	1	1	Motor (redrive)	“Motor (redrive) removal” on page 364
14	40X8859	1	1	Paper exit fan	“Paper exit fan removal” on page 360

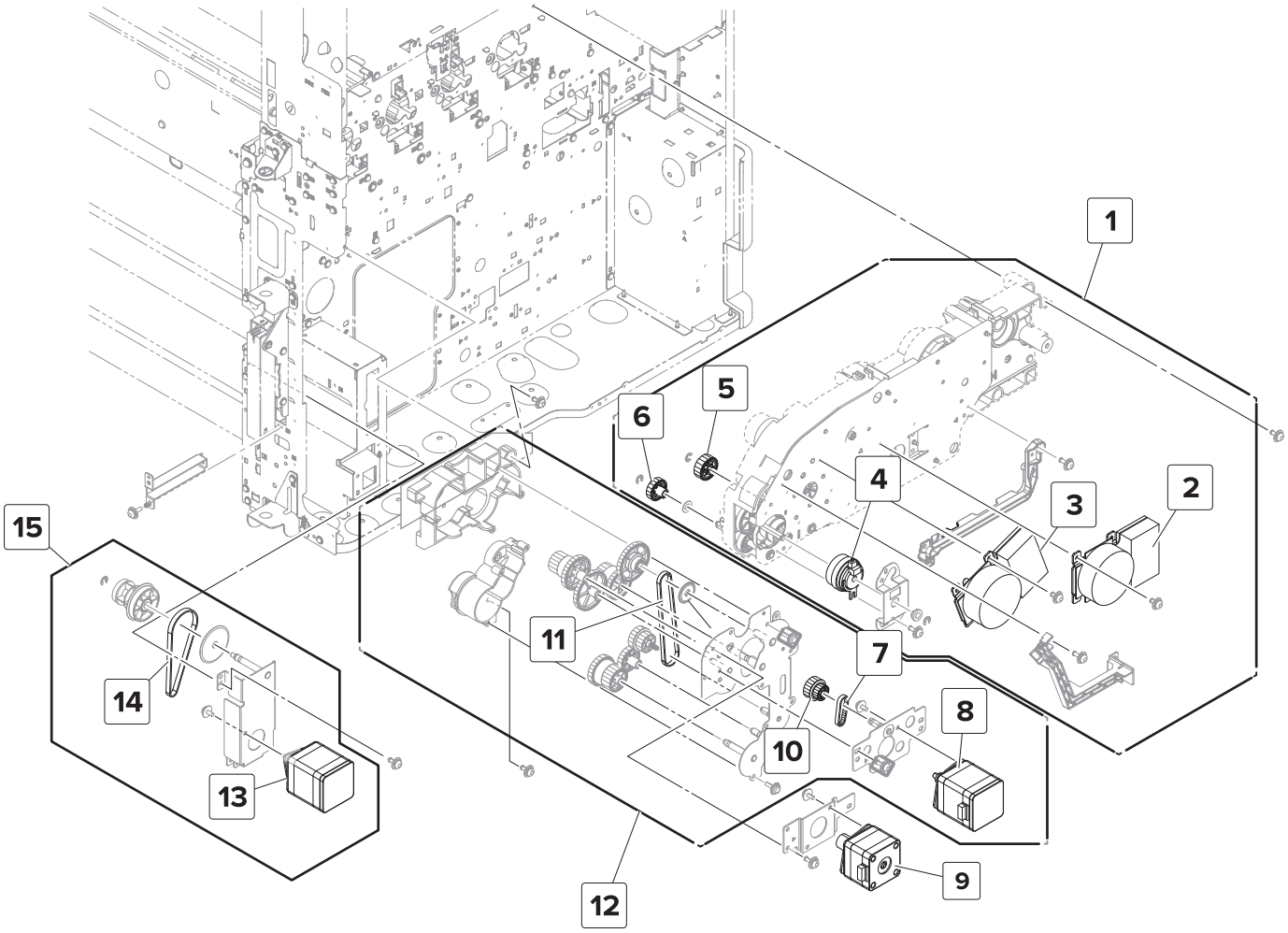
Assembly 33: Exit 2



Assembly 33: Exit 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9159	1	1	Exit guide assembly	--
2	40X9161	1	1	Diverter solenoid	--

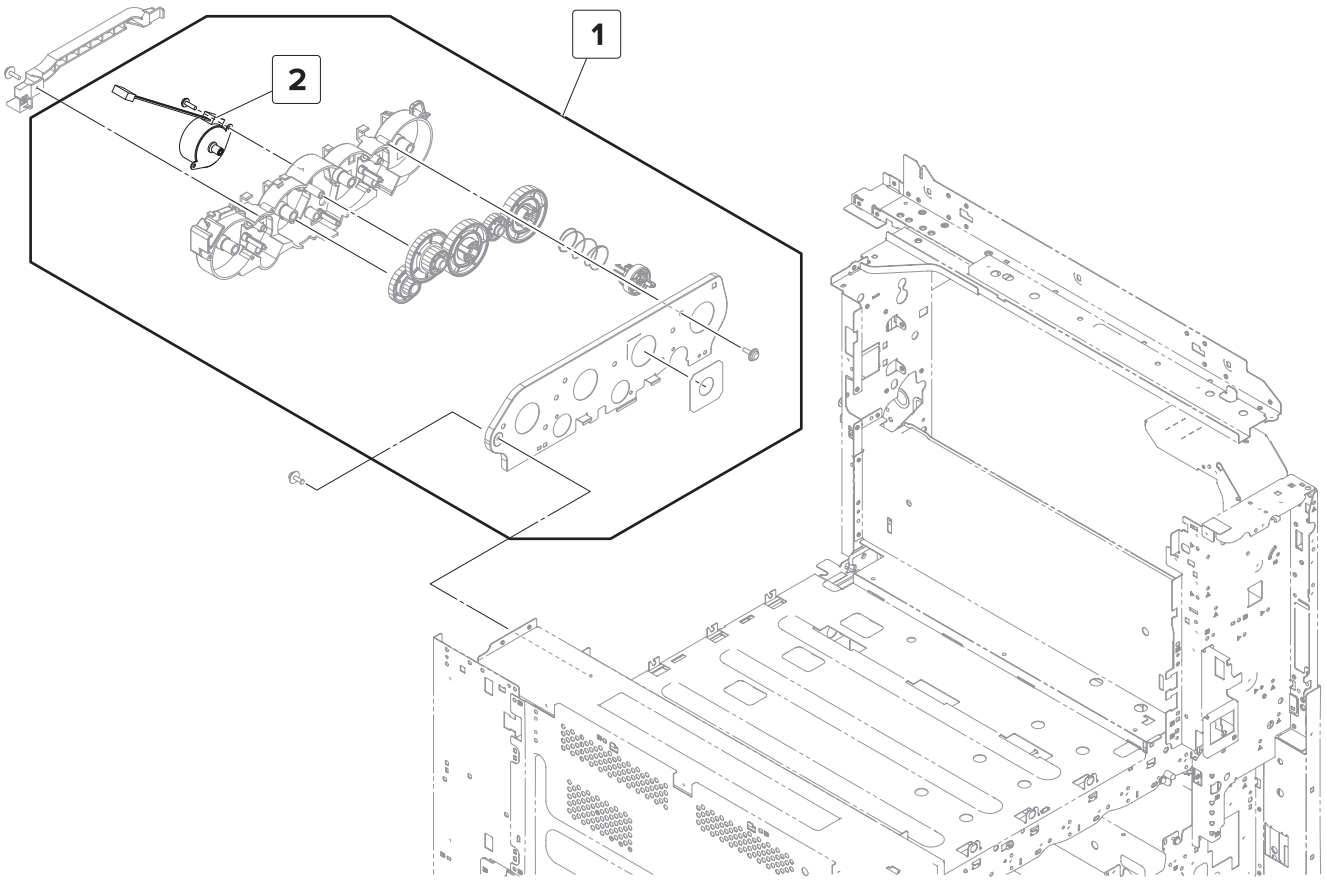
Assembly 34: Main and feed drive



Assembly 34: Main and feed drive

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9164	1	1	Main drive assembly	“Main drive assembly removal” on page 379
2	40X9564	1	1	Motor (developer)	“Motor (developer) removal” on page 368
3	40X9163	1	1	Motor (transport)	“Motor (transport) removal” on page 367
4	40X9166	1	1	Duplex transport clutch	“Duplex transport clutch removal” on page 383
5	40X9165	1	1	Transport motor gear	--
6	40X9725	1	1	Duplex transport clutch gear	“Duplex transport gears removal” on page 292
7	40X9173	1	1	Feed motor belt	--
8	40X9170	1	1	Motor (feed)	“Motor (feed) removal” on page 372
9	40X9171	1	1	Motor (registration)	“Motor (registration) removal” on page 370
10	40X9726	1	1	Feed motor gear	--
11	40X9174	1	1	Feed drive belt	--
12	40X9727	1	1	Feed drive assembly	“Feed drive assembly removal” on page 375
13	40X9170	1	1	Motor (tray 2 transport)	“Motor (tray 2 transport) removal” on page 374
14	40X9639	1	1	Tray 2 transport drive belt	--
15	40X9728	1	1	Tray 2 transport drive assembly	“Tray 2 transport drive removal” on page 373

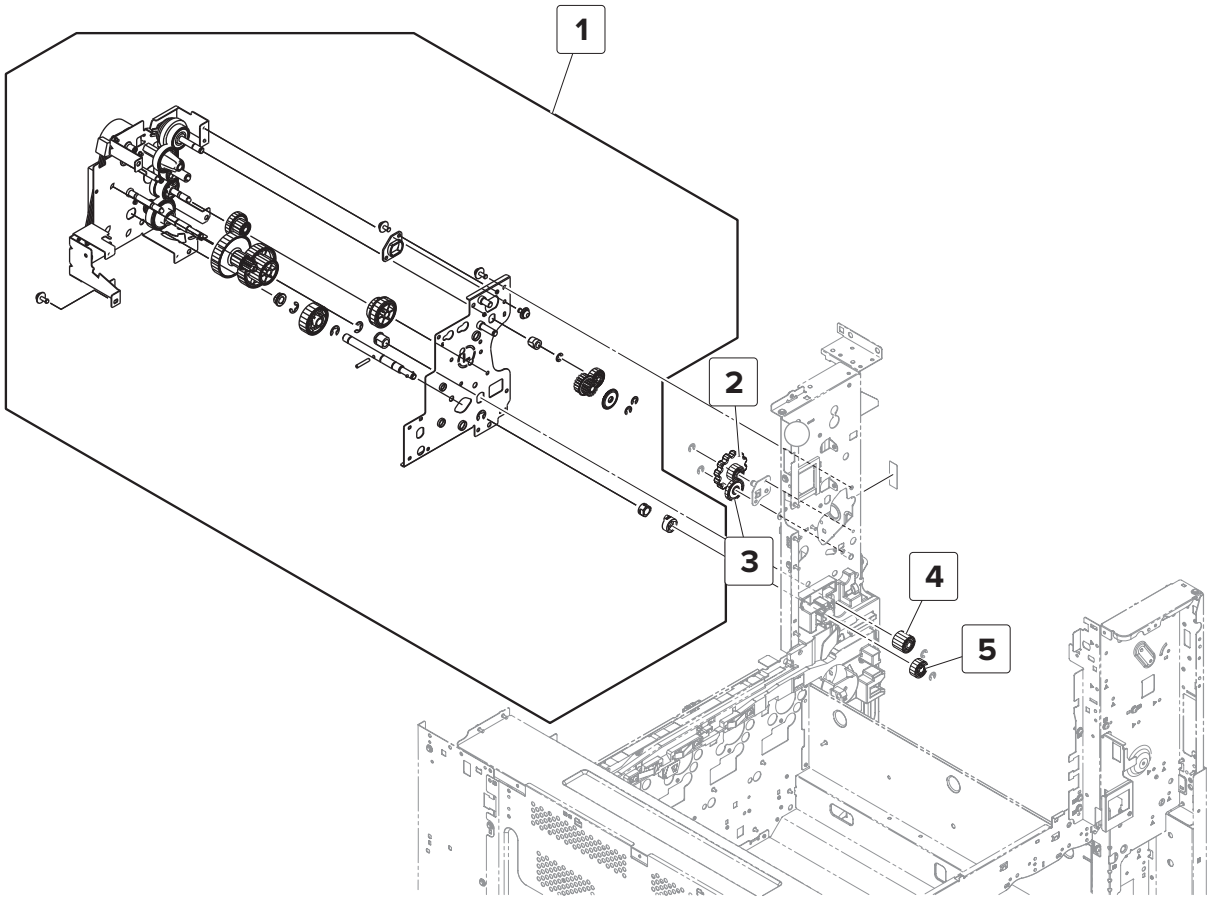
Assembly 35: Toner cartridge drive



Assembly 35: Toner cartridge drive

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9223	1	1	Toner cartridge drive assembly	"Toner cartridge drive assembly removal" on page 382
2	40X9179	1	1	Motor (toner cartridge)	"Motor (toner cartridge) removal" on page 362

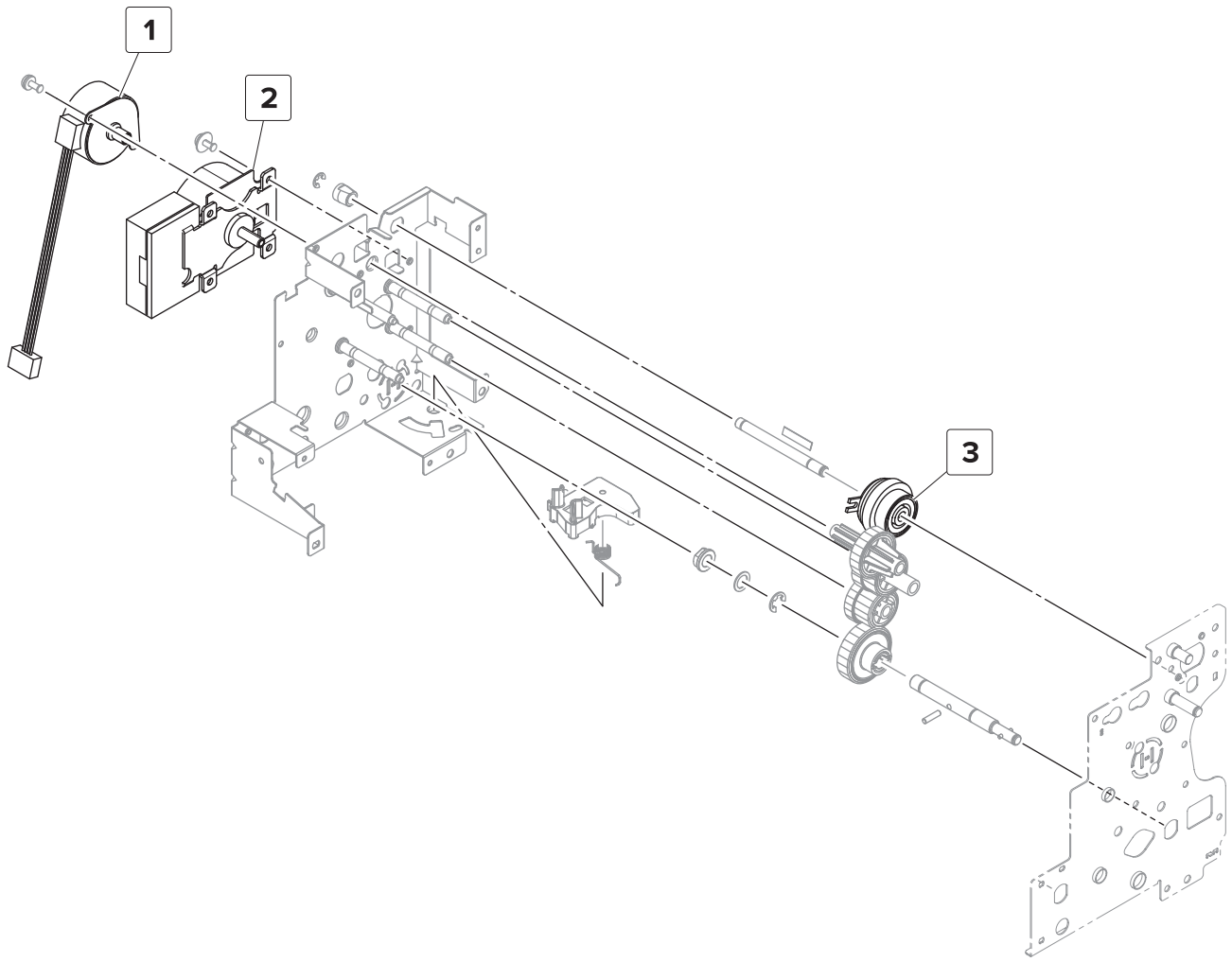
Assembly 36: Fuser drive 1



Assembly 36: Fuser drive 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9177	1	1	Fuser drive gearbox	"Fuser drive gearbox removal" on page 385
2	40X9729	1	1	Fuser pressure primary gear	--
3	40X9730	1	1	Fuser pressure secondary gear	--
4	40X9731	1	1	Fuser transport primary gear	--
5	40X9732	1	1	Fuser transport secondary gear	--

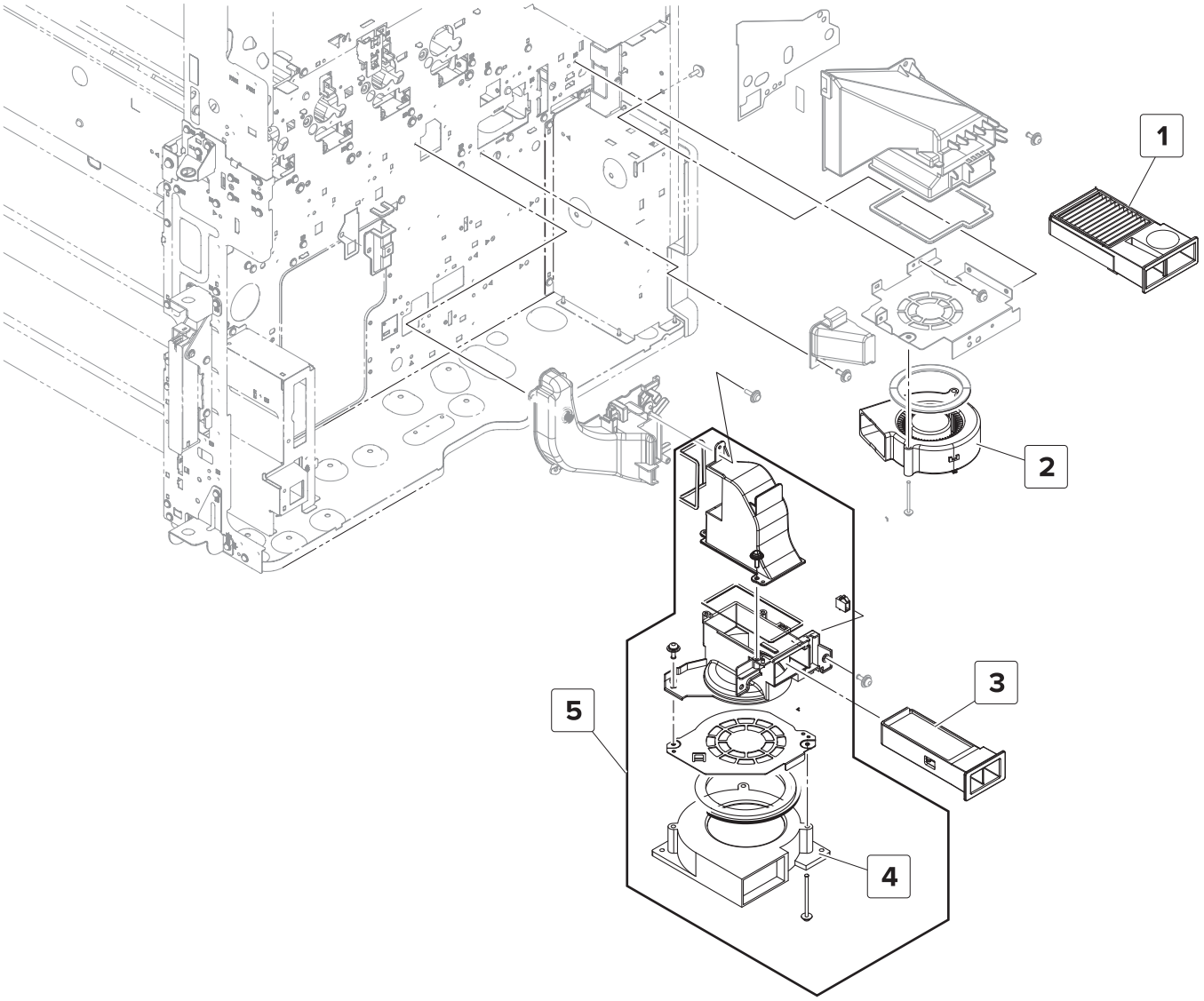
Assembly 37: Fuser drive 2



Assembly 37: Fuser drive 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9179	1	1	Motor (fuser pressure)	“Motor (fuser pressure) removal” on page 358
2	40X9163	1	1	Motor (fuser)	“Motor (fuser) removal” on page 384
3	40X9178	1	1	Fuser exit clutch	--

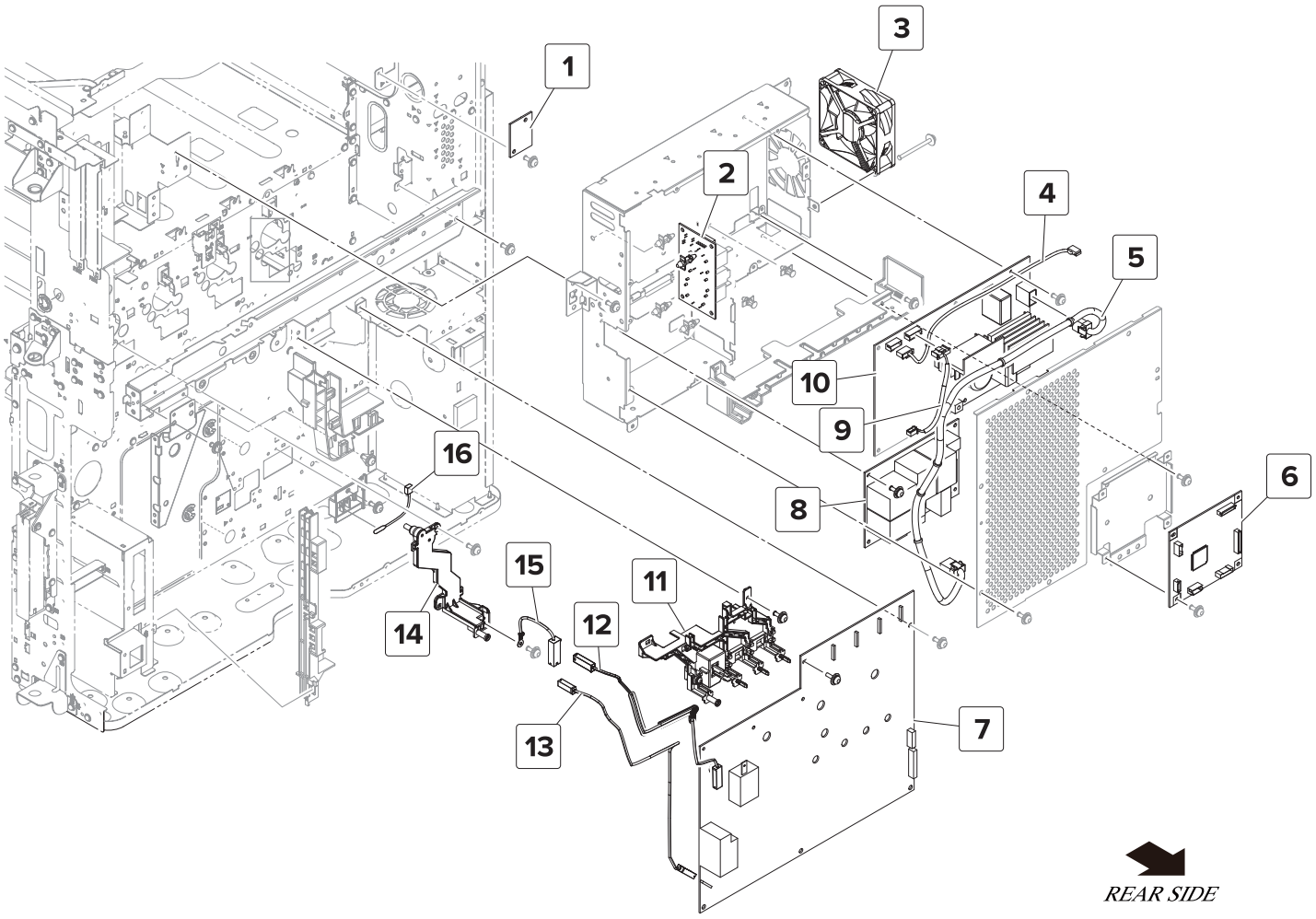
Assembly 38: Ozone duct



Assembly 38: Ozone duct

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9184	1	1	Exhaust filter	--
2	40X8859	1	1	Toner suction fan	“Toner suction fan removal” on page 387
3	40X9183	1	1	Ozone filter	--
4	40X9185	1	1	Ozone fan	“Ozone fan removal” on page 376
5	40X9182	1	1	Ozone fan with duct	“Ozone fan removal” on page 376

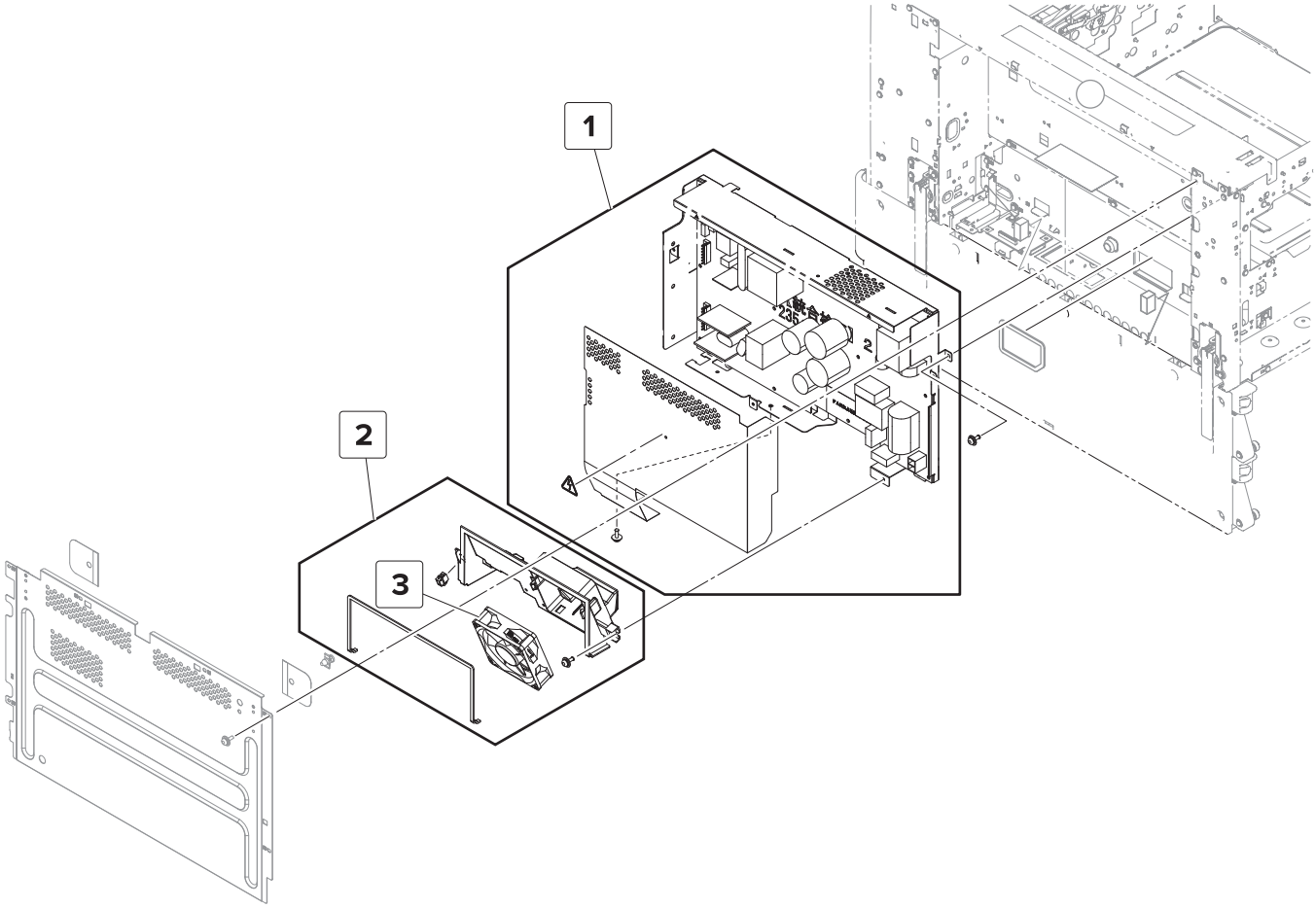
Assembly 39: High voltage



Assembly 39: High voltage

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9189	1	1	Power-saving board	"Power-saving board removal" on page 352
2	40X9198	1	1	Induction heater magnetic erase board	"Induction heater magnetic erase board (IHMEB) removal" on page 348
3	40X8945	1	1	Fuser power supply fan	"Fuser power supply fan removal" on page 361
4	40X9736	1	1	Induction heater power supply cable	--
5	40X9737	1	1	Noise filter board cable	--
6	40X9199	1	1	Expansion controller board	"Expansion controller board removal" on page 351
7	40X9193	1	1	High voltage board	"High voltage board removal" on page 369
8	40X9200	1	1	Noise filter board, 100 V	"Noise filter board removal" on page 350
8	40X9201	1	1	Noise filter board, 230 V	"Noise filter board removal" on page 350
9	40X9735	1	1	Induction heater magnetic erase board cable	--
10	40X9196	1	1	Induction heater power supply, 100 V	"Induction heater power supply (IHPS) removal" on page 350
10	40X9197	1	1	Induction heater power supply , 230 V	"Induction heater power supply (IHPS) removal" on page 350
11	40X9192	1	1	High voltage developer contact	--
12	40X9733	1	1	High voltage transfer cable	--
13	40X9194	1	1	High voltage charge cable	--
14	40X9191	1	1	High voltage charge contact	--
15	40X9734	1	1	High voltage toner charge cable	--
16	40X9190	1	1	Sensor (tray 1 and 2 paper temperature)	"Sensor (tray 1 and 2 paper temperature) removal" on page 376

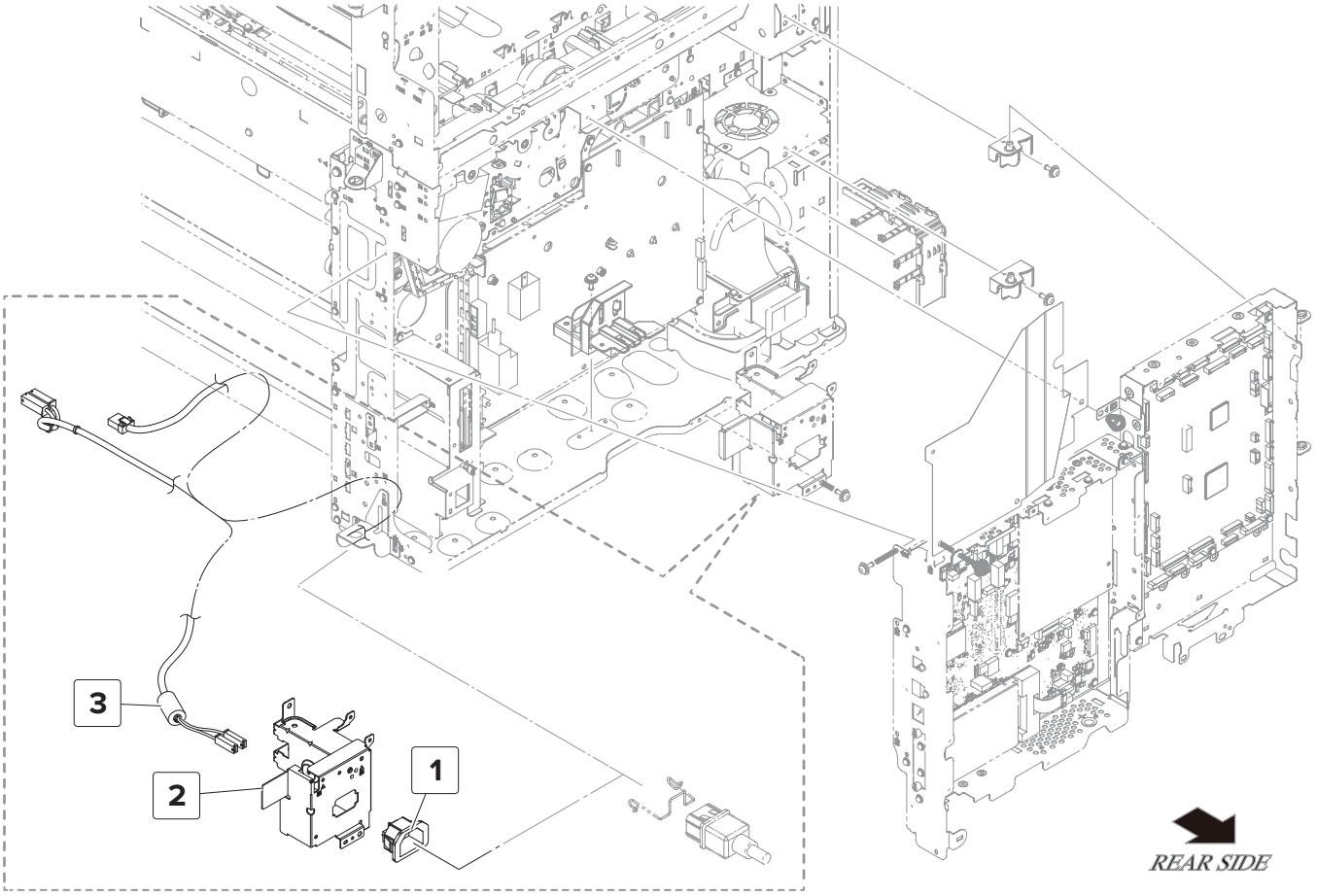
Assembly 40: Main power supply



Assembly 40: Main power supply

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9203	1	1	Main power supply, 100 V	“Main power supply removal” on page 275
1	40X9204	1	1	Main power supply, 230 V	“Main power supply removal” on page 275
2	40X9205	1	1	Main power supply fan with duct	“Main power supply fan removal” on page 274
3	40X8945	1	1	Main power supply fan	“Main power supply fan removal” on page 274

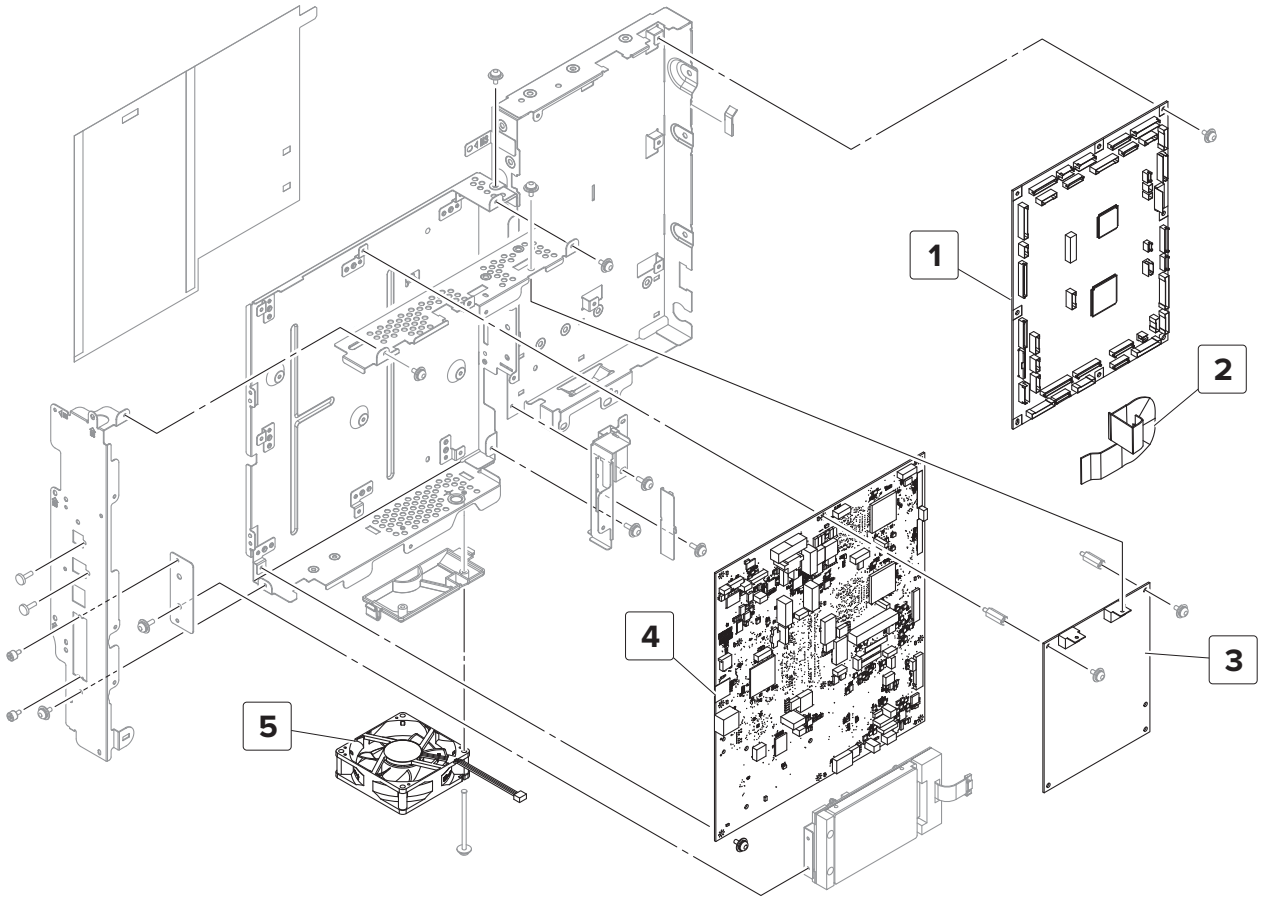
Assembly 41: Electrical 1



Assembly 41: Electrical 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9741	1	1	Power socket	--
2	40X9402	1	1	Power socket mount	--
3	40X9740	1	1	Power socket cable	--

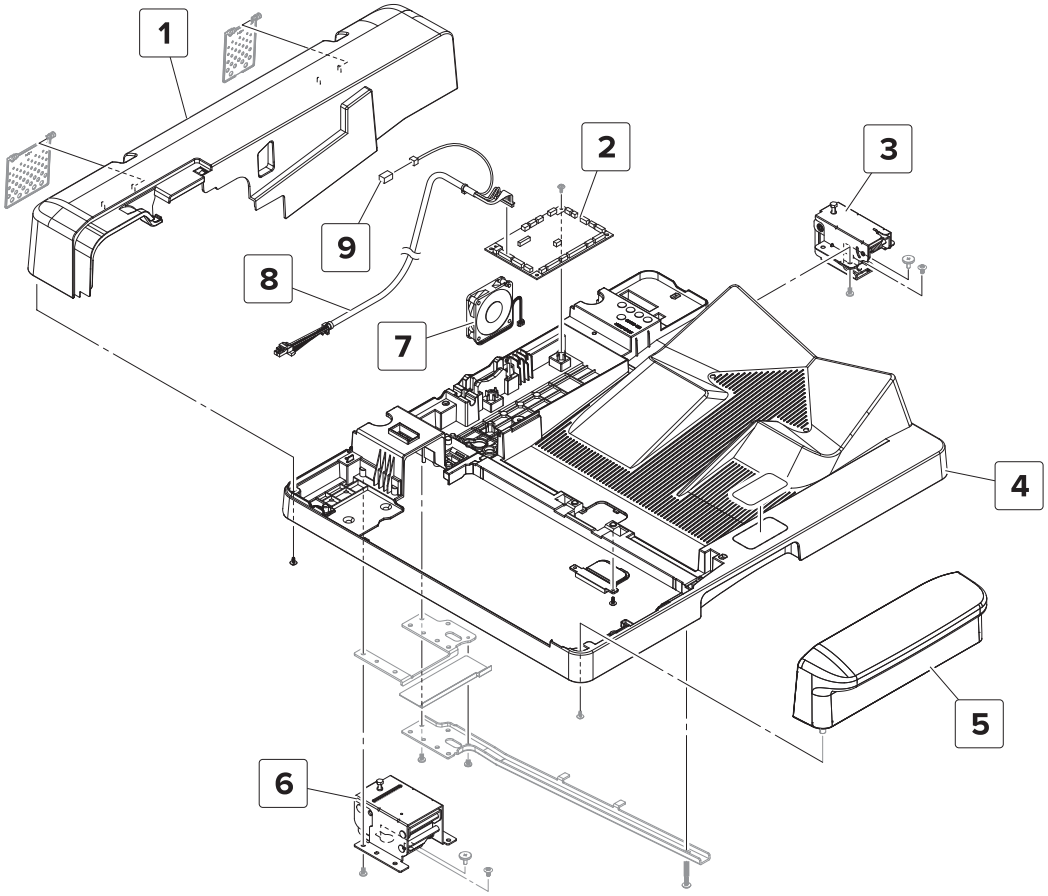
Assembly 42: Electrical 2



Assembly 42: Electrical 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9207	1	1	Engine controller board	“Engine controller board removal” on page 353
2	40X9744	1	1	Engine controller board FFC	--
3	40X9210	1	1	ADF/scanner image controller board	“ADF/scanner image controller board removal” on page 354
4	40X9663	1	1	Controller board (MFP)	“Controller board removal” on page 356
5	40X9209	1	1	Controller board fan	“Controller board fan removal” on page 366

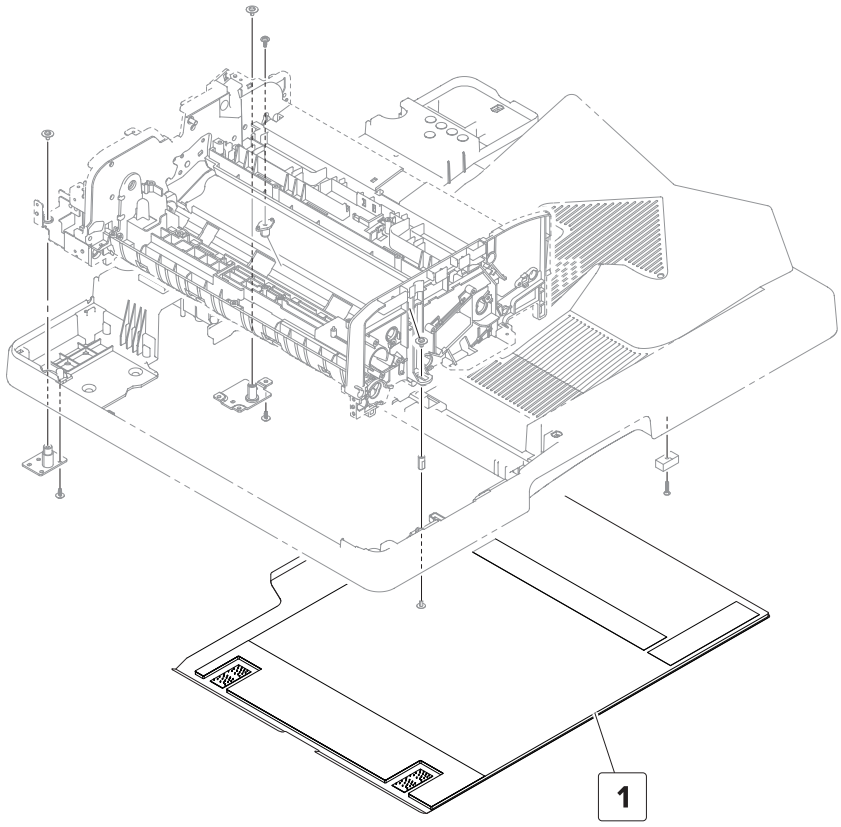
Assembly 43: ADF covers 1



Assembly 43: ADF covers 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8858	1	1	ADF rear cover	“ADF rear cover removal” on page 410
2	40X8860	1	1	ADF controller board	“ADF controller board removal” on page 396
3	40X8861	1	1	ADF right hinge	“ADF right hinge removal” on page 409
4	40X8862	1	1	ADF frame	--
5	40X8863	1	1	ADF front Cover	“ADF front cover removal” on page 402
6	40X8864	1	1	ADF left hinge	“ADF left hinge removal” on page 406
7	40X9041	1	1	ADF fan	“ADF fan removal” on page 398
8	40X9678	1	1	ADF CIS cable	--
9	40X9679	1	1	ADF sensor cable	--

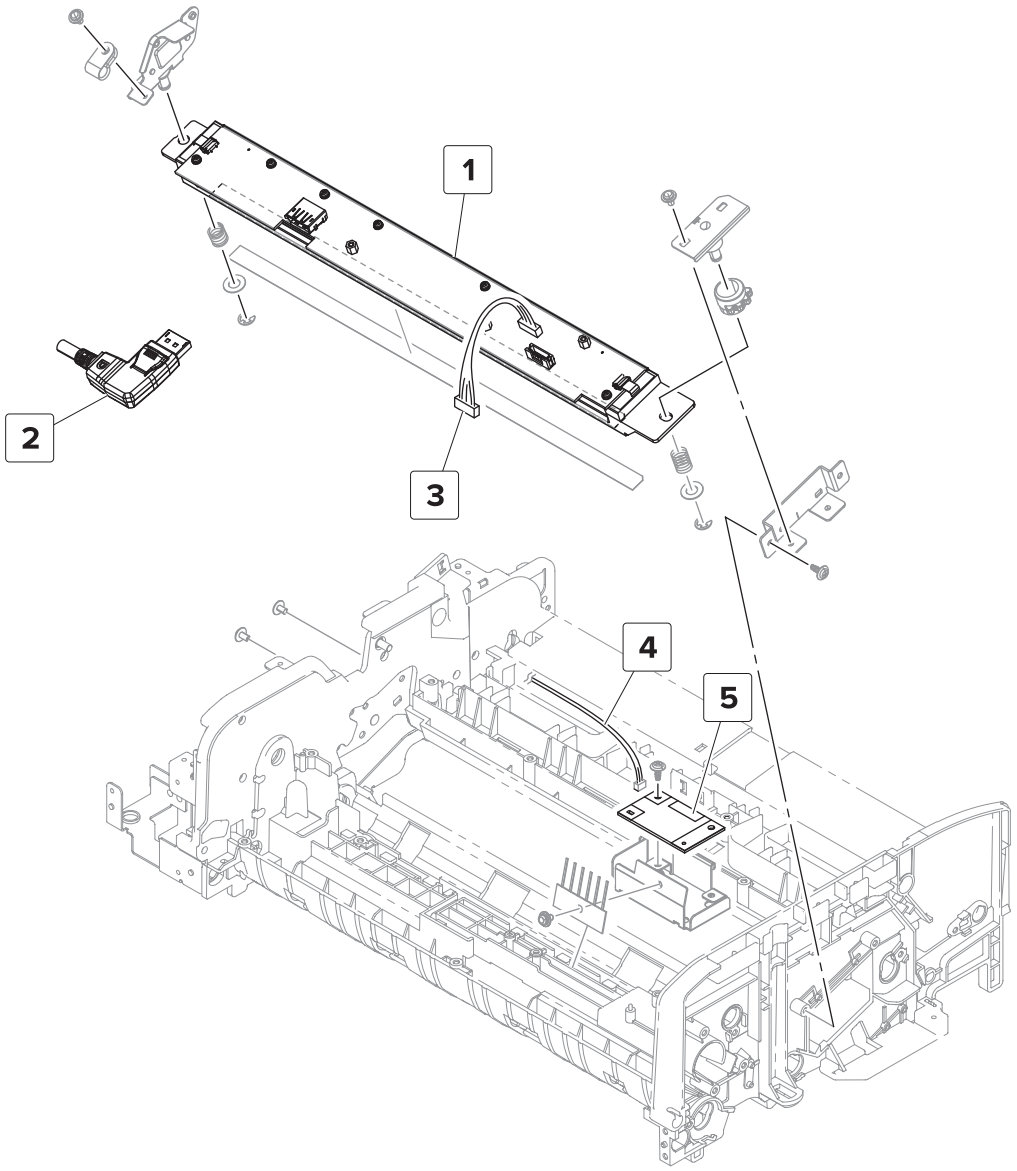
Assembly 44: ADF covers 2



Assembly 44: ADF covers 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8866	1	1	ADF cushion	“ADF cushion removal” on page 396

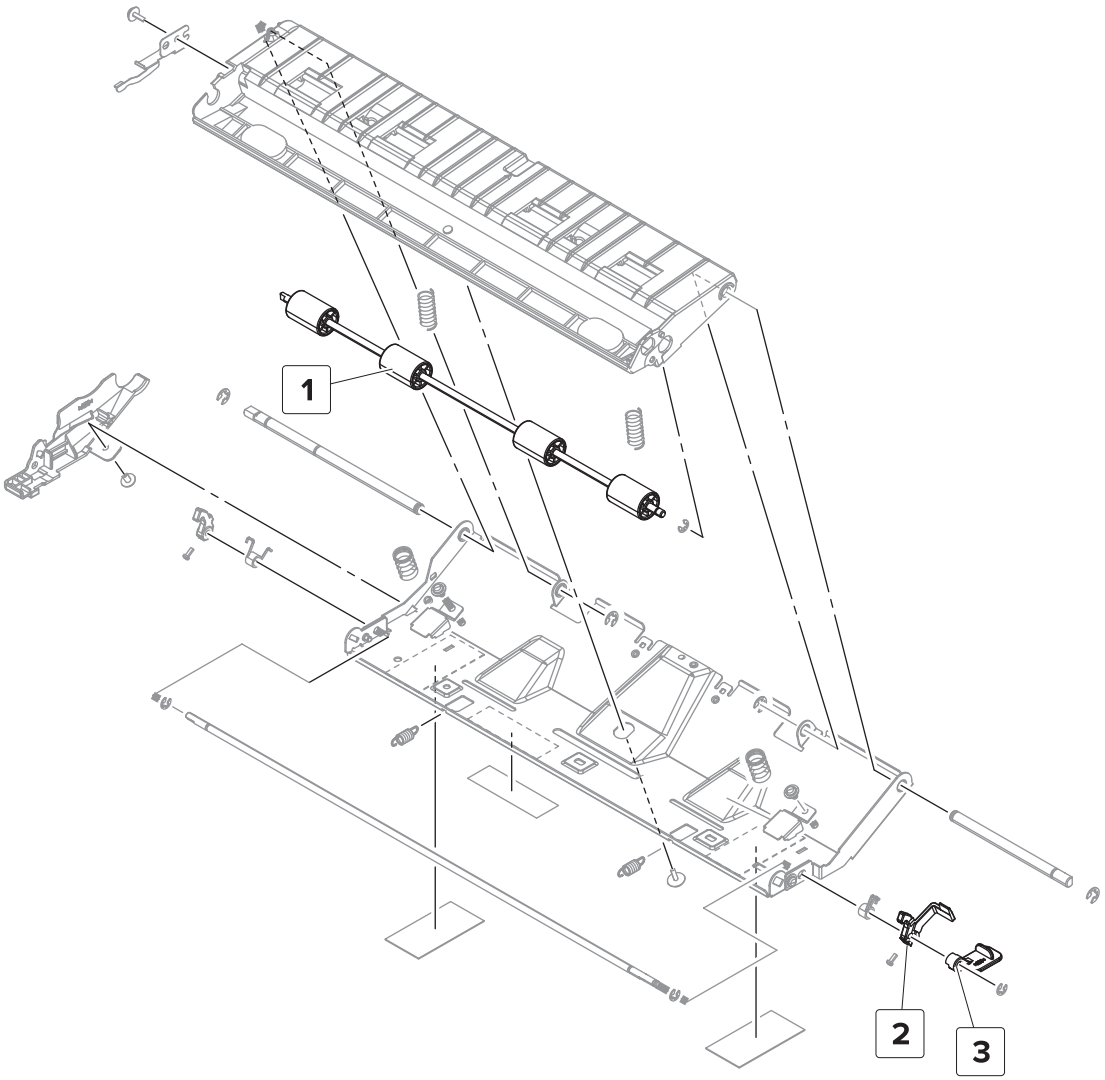
Assembly 45: ADF CIS 1



Assembly 45: ADF CIS 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9216	1	1	ADF CIS assembly	"ADF CIS assembly removal" on page 394
2	40X8865	1	1	ADF CIS data cable	--
3	40X9218	1	1	ADF CIS power supply cable	--
4	40X9696	1	1	ADF CIS power supply board cable	--
5	40X9217	1	1	ADF CIS power supply board	"ADF CIS power supply board removal" on page 396

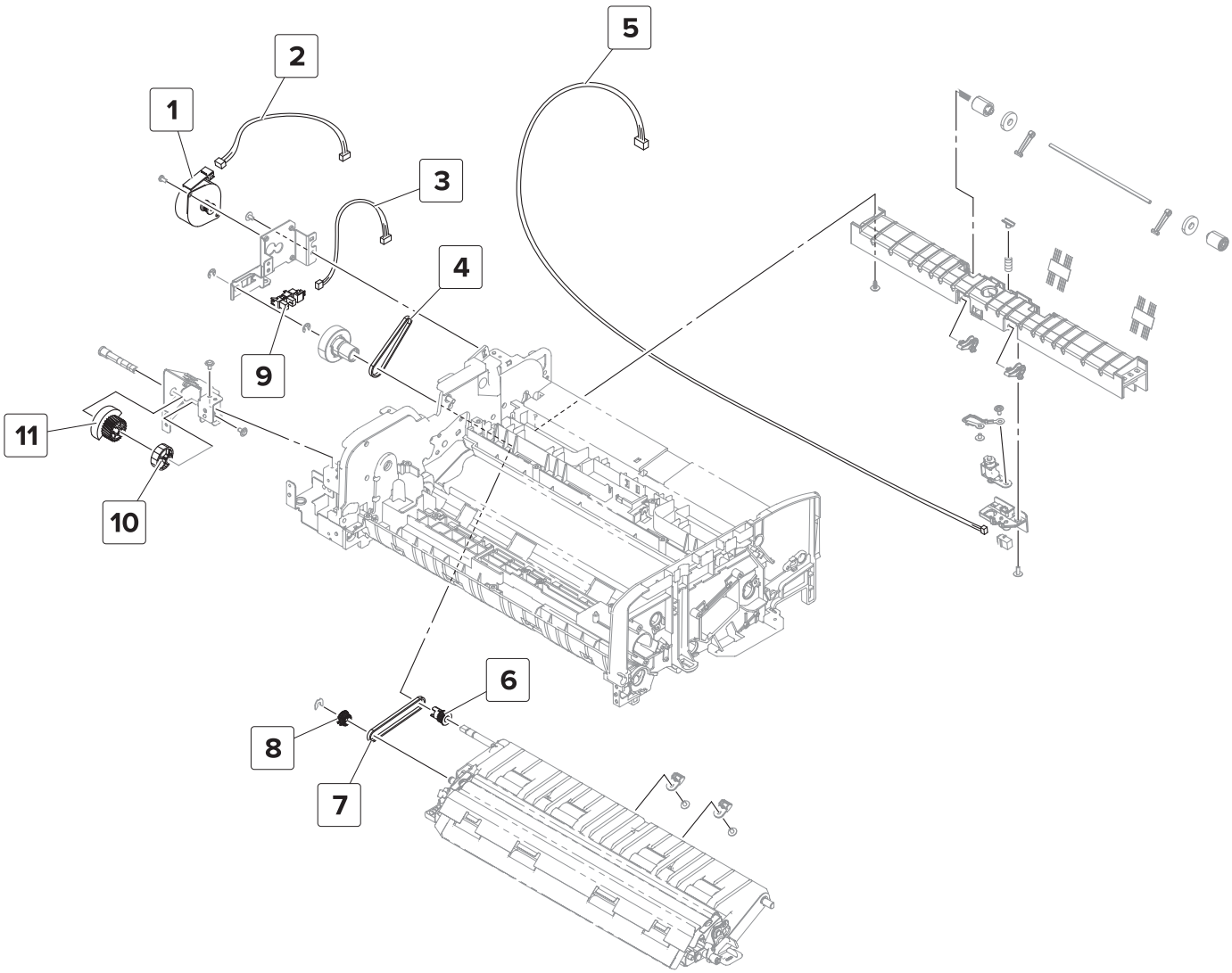
Assembly 46: ADF CIS 2



Assembly 46: ADF CIS 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9948	1	1	ADF CIS idler roller	--
2	40X9956	1	1	ADF CIS jam access latch	--
3	40X9955	1	1	ADF CIS jam access handle	--

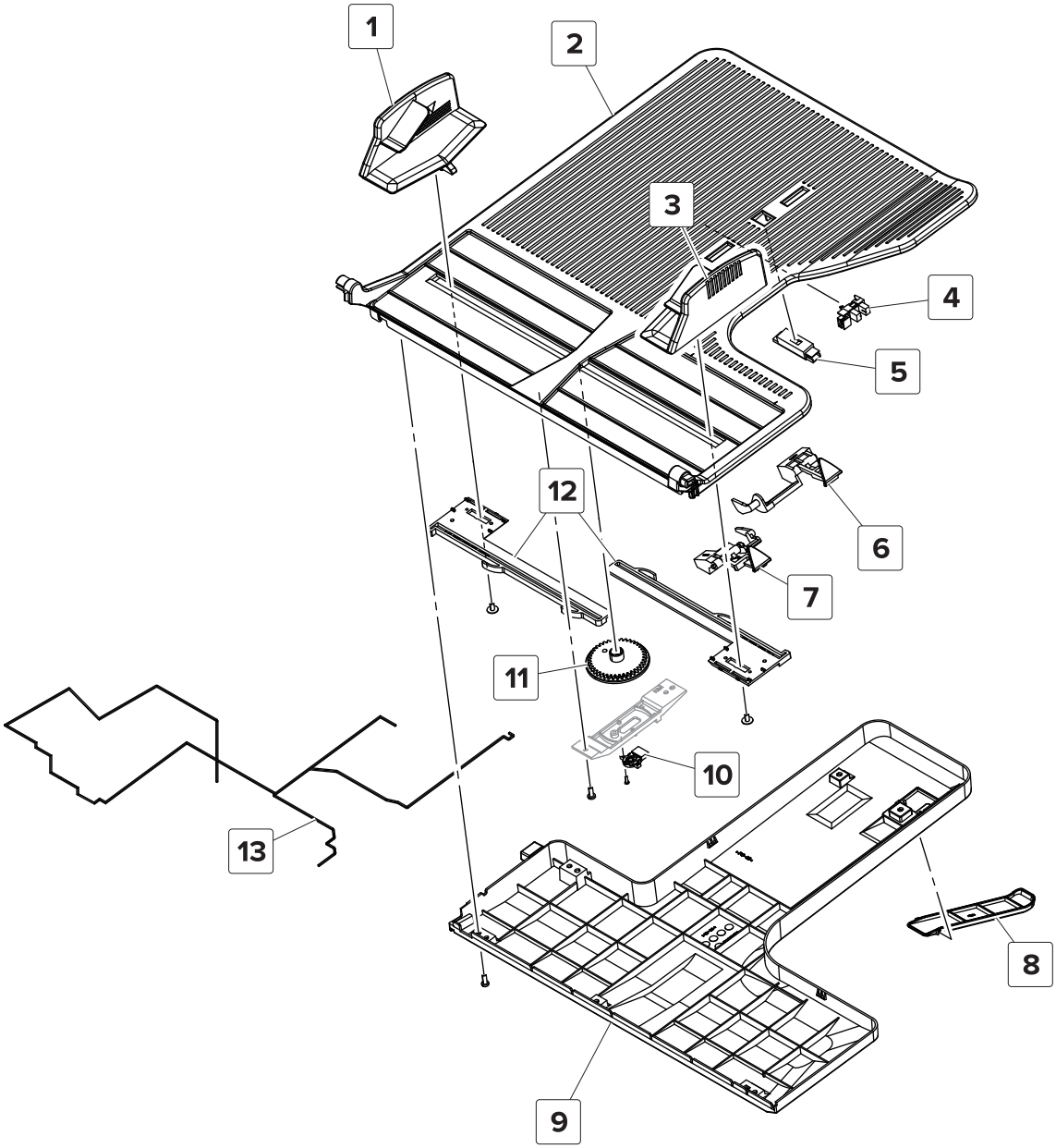
Assembly 47: ADF CIS 3



Assembly 47: ADF CIS 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9220	1	1	Motor (ADF CIS clean)	"Motor (ADF CIS clean) removal" on page 431
2	40X9699	1	1	ADF CIS clean motor cable	--
3	40X9700	1	1	ADF CIS clean sensor cable	--
4	40X9691	1	1	ADF CIS clean belt	--
5	40X9701	1	1	ADF exit sensor cable	--
6	40X9959	1	1	ADF CIS clean roller primary gear	--
7	40X9960	1	1	ADF CIS clean roller belt	--
8	40X9961	1	1	ADF CIS clean roller secondary gear	--
9	40X8869	1	1	Sensor (ADF CIS clean)	"Sensor (ADF CIS clean) removal" on page 415
10	40X9958	1	1	ADF CIS clean cam	--
11	40X9957	1	1	ADF CIS clean gear	--

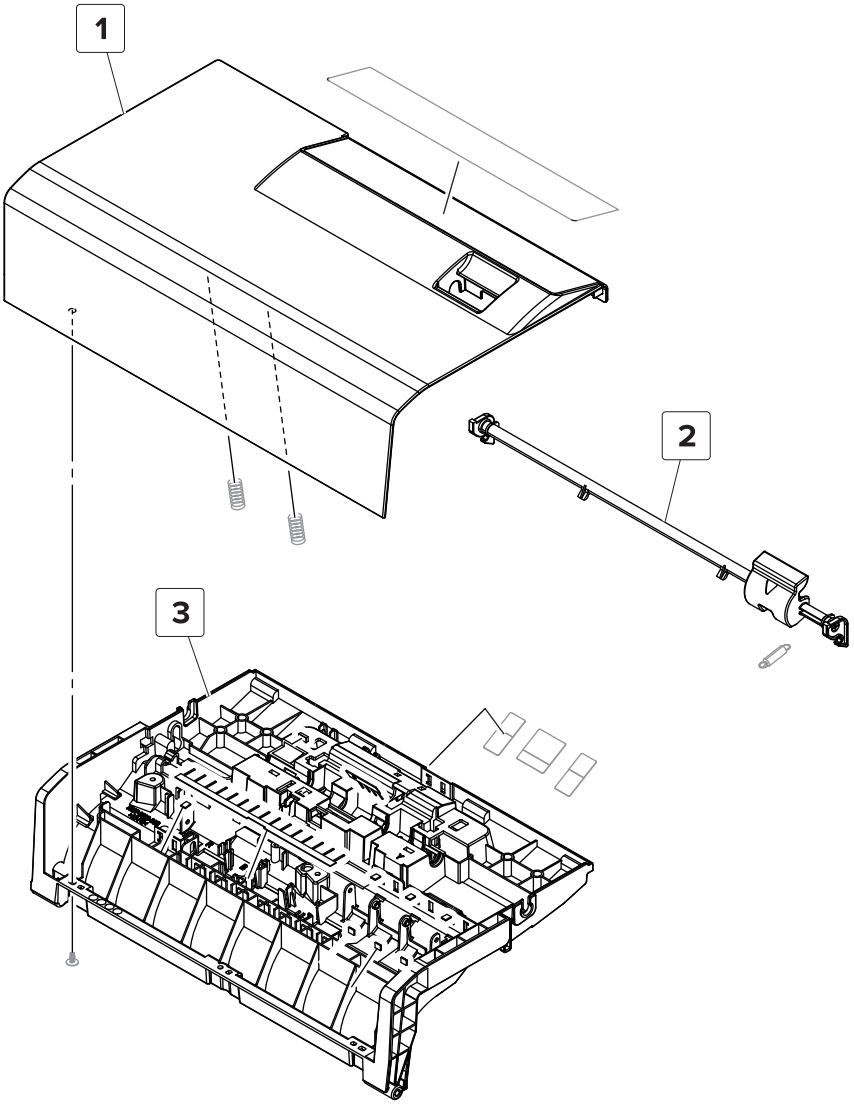
Assembly 48: ADF paper feed



Assembly 48: ADF paper feed

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9940	1	1	ADF rear paper guide	--
2	40X9941	1	1	ADF tray	"ADF tray removal" on page 414
3	40X9942	1	1	ADF front paper guide	--
4	40X8869	1	1	Sensor (ADF paper length 2)	"Sensors (ADF tray section) removal" on page 424
5	40X8868	1	1	Sensor (ADF paper length 1)	"Sensors (ADF tray section) removal" on page 424
6	40X8872	1	1	ADF paper length 2 sensor actuator (Legal)	--
7	40X9748	1	1	ADF paper length 2 sensor actuator (A4)	--
8	40X9943	1	1	ADF bin paper stopper	--
9	40X9944	1	1	ADF tray bottom cover	"ADF tray bottom cover removal" on page 415
10	40X8870	1	1	Sensor (ADF paper width)	"Sensors (ADF tray section) removal" on page 424
11	40X9747	1	1	ADF paper guide gear	--
12	40X9945	2	1	ADF paper guide rack	--
13	40X8873	1	1	ADF tray cable	--

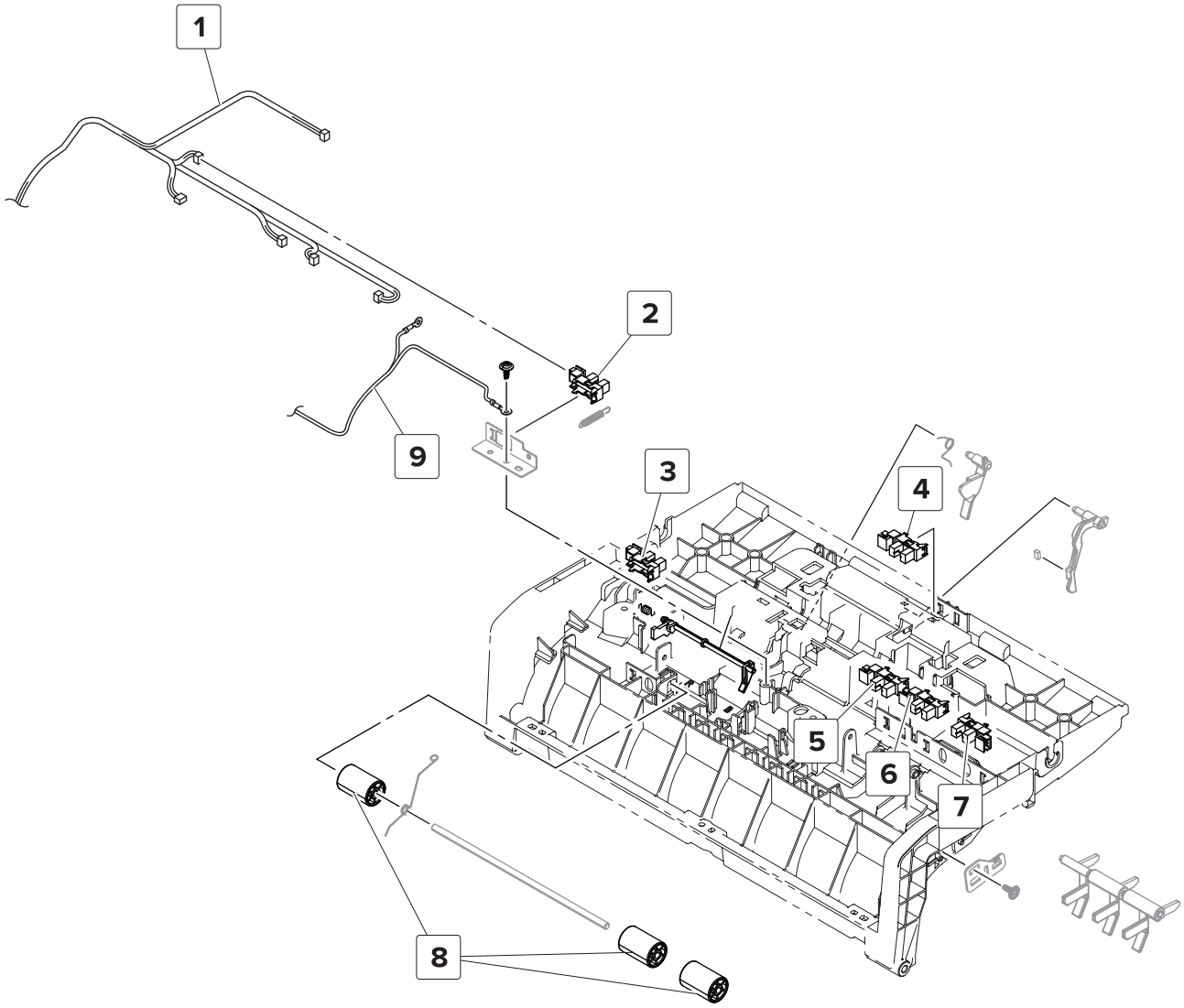
Assembly 49: ADF paper pick 1



Assembly 49: ADF paper pick 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9946	1	1	ADF top cover	“ADF top cover removal” on page 413
2	40X8875	1	1	ADF door latch	--
3	40X9947	1	1	ADF door frame	--

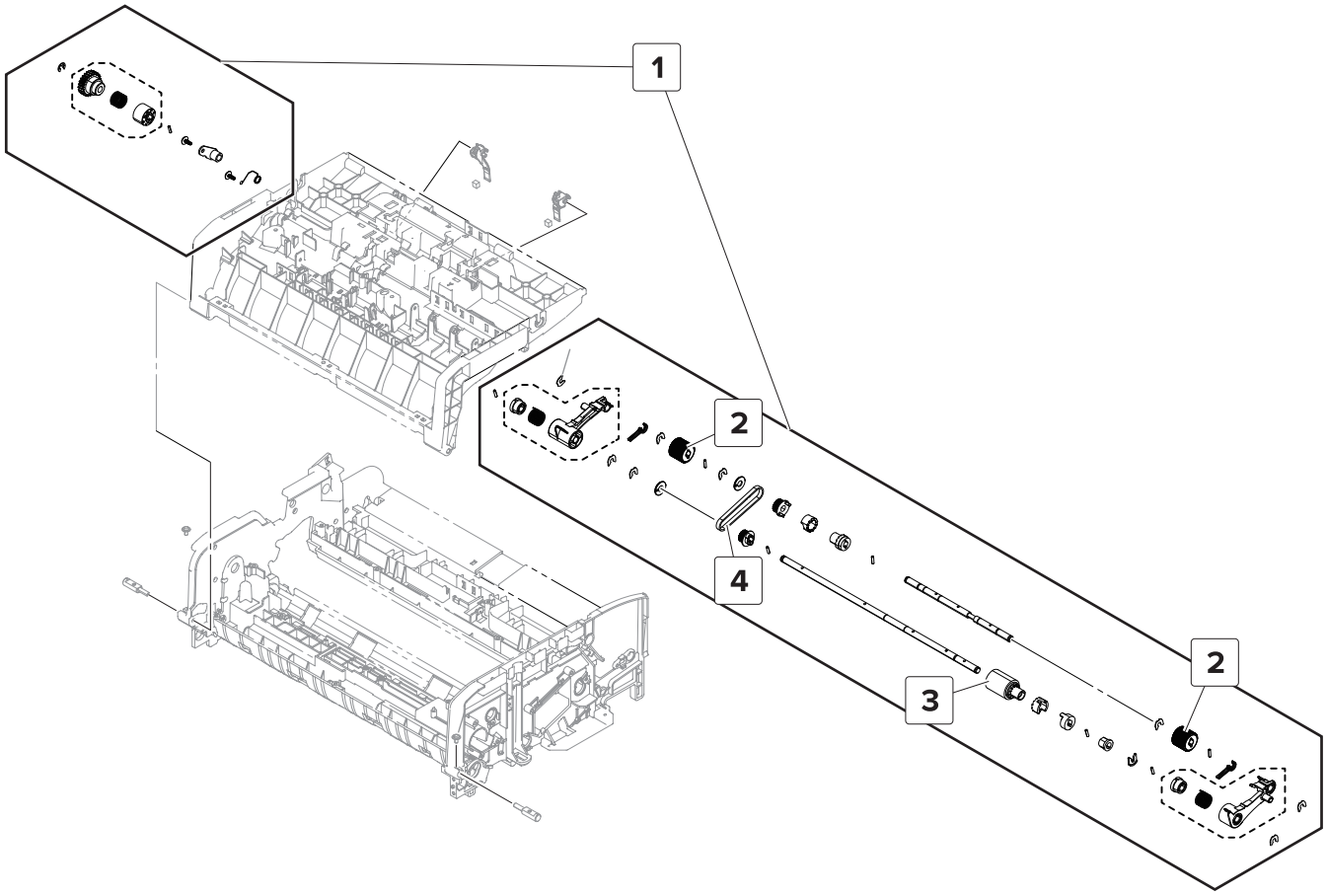
Assembly 50: ADF paper pick 2



Assembly 50: ADF paper pick 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9680	1	1	ADF top cover sensor cable	--
2	40X8869	1	1	Sensor (ADF document separation)	"Sensors (ADF top open cover section) removal" on page 425
3	40X8869	1	1	Sensor (ADF registration)	"Sensors (ADF top open cover section) removal" on page 425
4	40X8869	1	1	Sensor (ADF tray empty)	"Sensors (ADF top open cover section) removal" on page 425
5	40X8869	1	1	Sensor (ADF mixed paper width 1)	"Sensors (ADF top open cover section) removal" on page 425
6	40X8869	1	1	Sensor (ADF mixed paper width 2)	"Sensors (ADF top open cover section) removal" on page 425
7	40X8869	1	1	Sensor (ADF mixed paper width 3)	"Sensors (ADF top open cover section) removal" on page 425
8	40X9948	3	1	ADF registration idler roller	--
9	40X8877	1	1	ADF ground cable	--

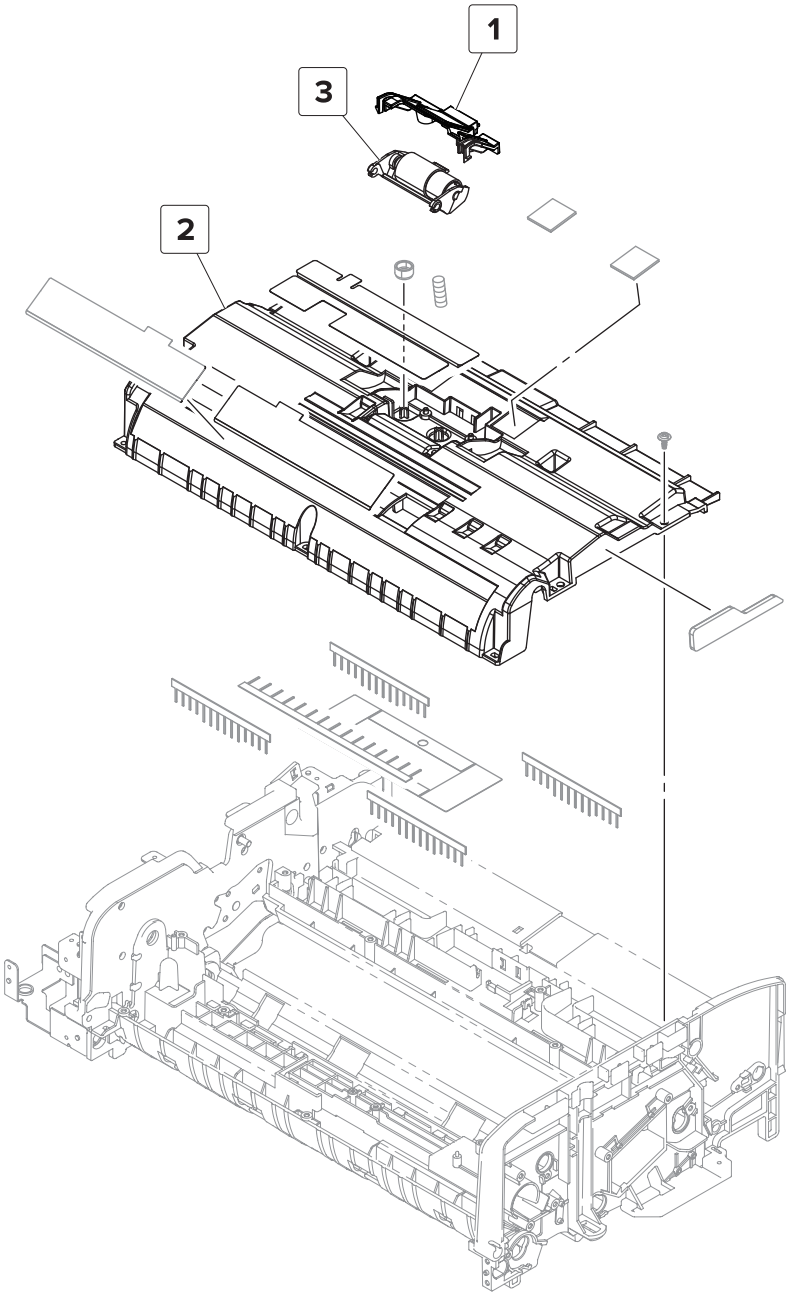
Assembly 51: ADF paper pick 3



Assembly 51: ADF paper pick 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8878	1	1	ADF feed and pick roller assembly	“ADF feed and pick roller assembly removal” on page 398
2	40X8879	2	1	ADF pick roller	“ADF pick roller removal” on page 407
3	40X9681	1	1	ADF feed roller	“ADF feed roller removal” on page 400
4	40X8880	1	1	ADF pick belt	--

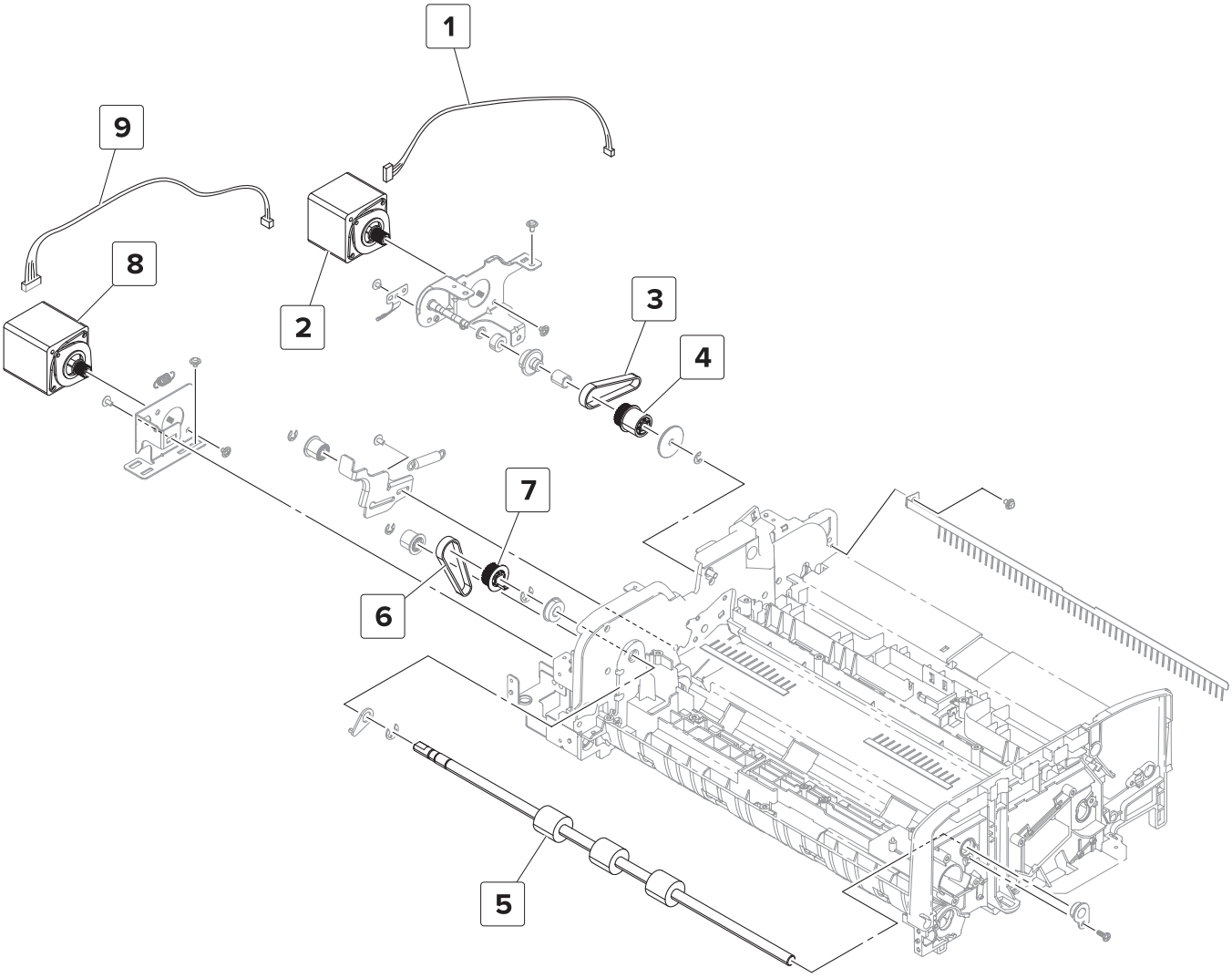
Assembly 52: ADF paper transport 1



Assembly 52: ADF paper transport 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8882	1	1	ADF separator pad	“ADF separator pad removal” on page 412
2	40X9949	1	1	ADF registration guide	“ADF registration guide removal” on page 410
3	40X9682	1	1	ADF separator roller	“ADF separator roller removal” on page 412

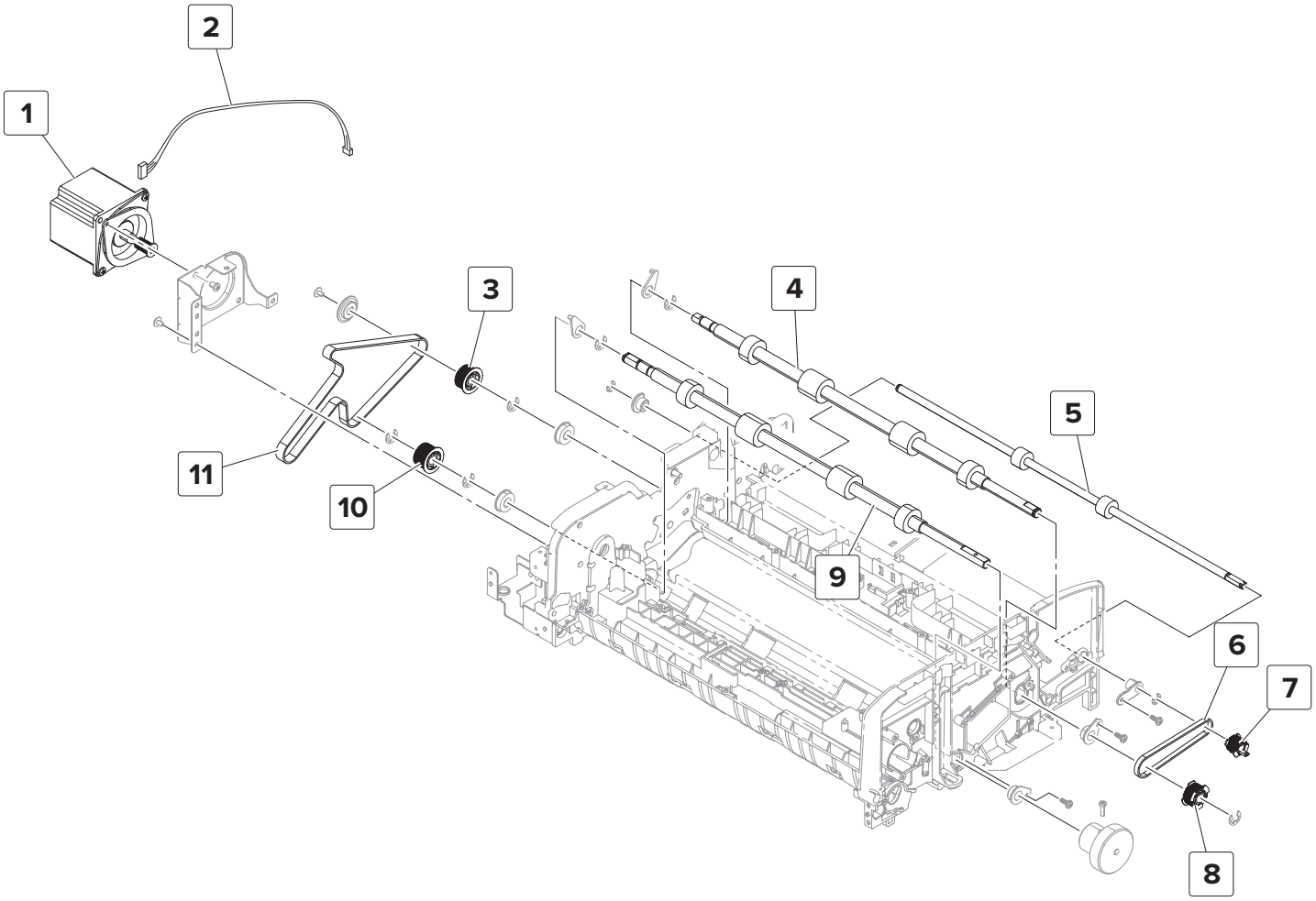
Assembly 53: ADF paper transport 2



Assembly 53: ADF paper transport 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9683	1	1	ADF feed motor cable	--
2	40X8884	1	1	Motor (ADF feed)	“Motor (ADF feed) removal” on page 433
3	40X8885	1	1	ADF feed belt	--
4	40X9950	1	1	ADF feed gear	--
5	40X9951	1	1	ADF registration roller	--
6	40X8885	1	1	ADF registration belt	--
7	40X9952	1	1	ADF registration gear	--
8	40X8887	1	1	Motor (ADF scan)	“Motor (ADF scan) removal” on page 435
9	40X8888	1	1	ADF registration motor cable	--

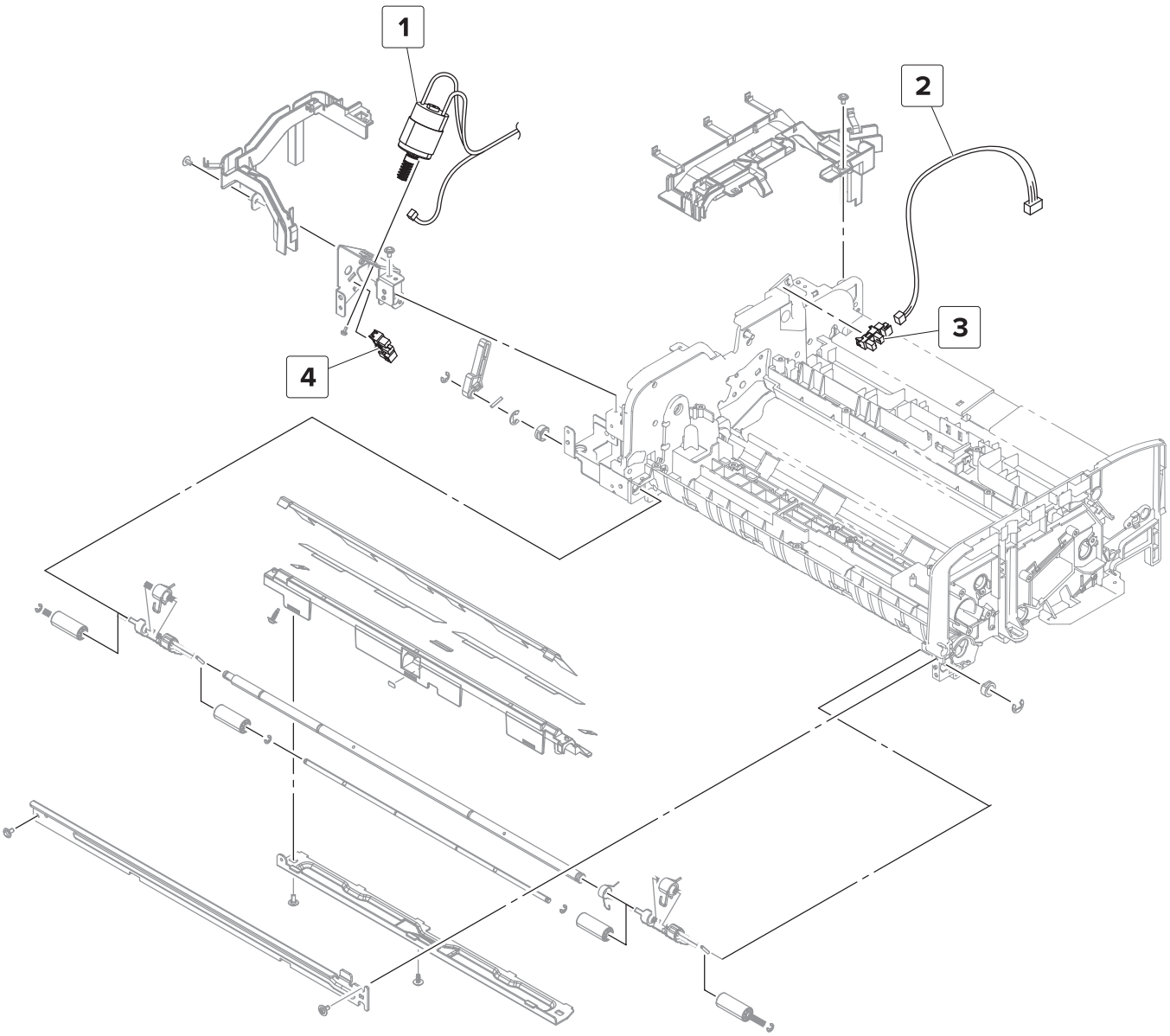
Assembly 54: ADF paper transport 3



Assembly 54: ADF paper transport 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8889	1	1	Motor (ADF registration)	"Motor (ADF registration) removal" on page 436
2	40X9684	1	1	ADF scan motor cable	--
3	40X9686	1	1	ADF scan roller 2 gear	--
4	40X8893	1	1	ADF scan roller 2	--
5	40X8891	1	1	ADF document exit roller	--
6	40X8892	1	1	ADF scan/exit roller belt	"ADF scan/exit roller belt removal" on page 411
7	40X9687	1	1	ADF exit roller gear	--
8	40X9688	1	1	ADF scan roller 3 gear	--
9	40X8894	1	1	ADF scan roller 1	--
10	40X9685	1	1	ADF scan motor gear	--
11	40X8890	1	1	ADF scan motor belt	--

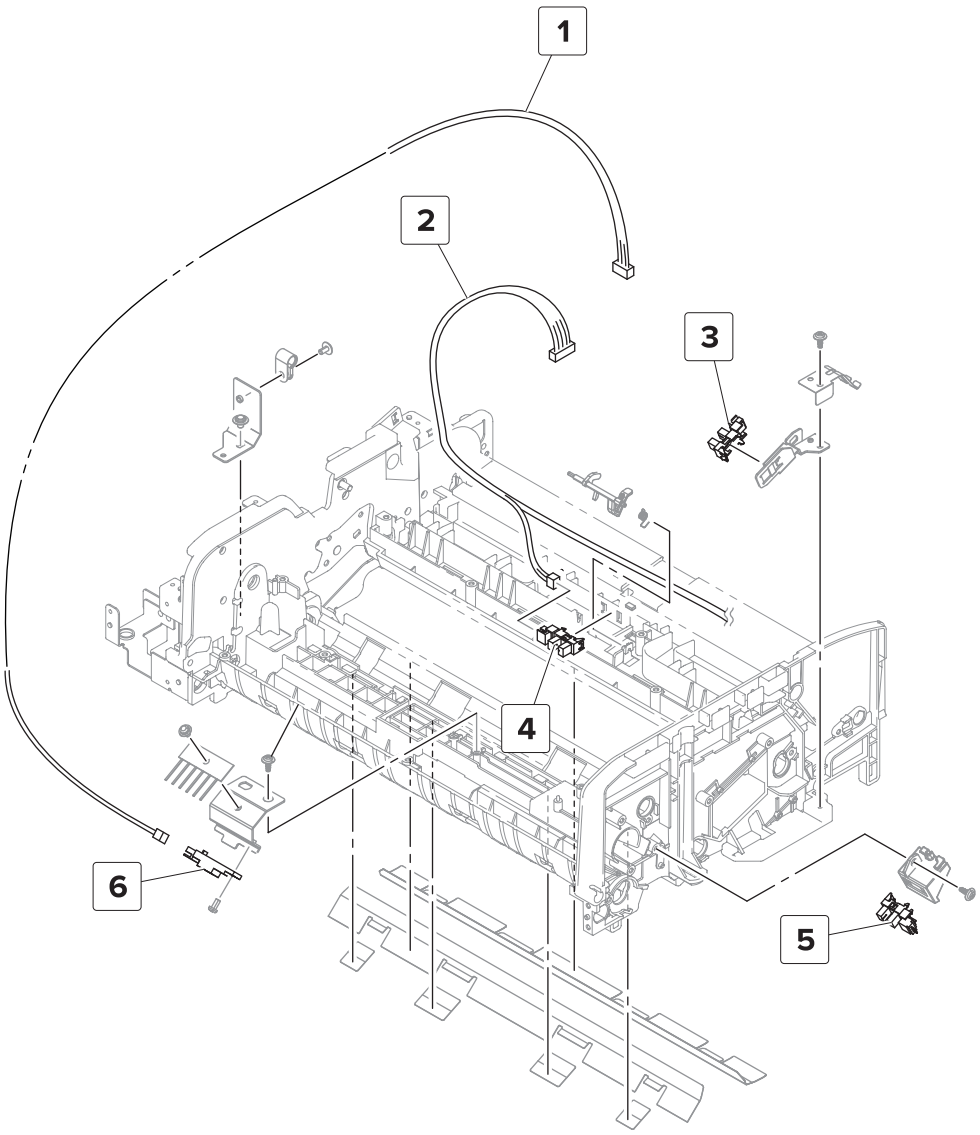
Assembly 55: ADF paper transport 4



Assembly 55: ADF paper transport 4

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8896	1	1	Motor (ADF scan shaft release)	"Motor (ADF scan shaft release) removal" on page 432
2	40X9689	1	1	ADF door open sensor cable	--
3	40X8869	1	1	Sensor (ADF top cover open)	"Sensor (ADF top cover open) removal" on page 418
4	40X8869	1	1	Sensor (ADF scan shaft home)	"Sensor (ADF scan shaft home) removal" on page 417

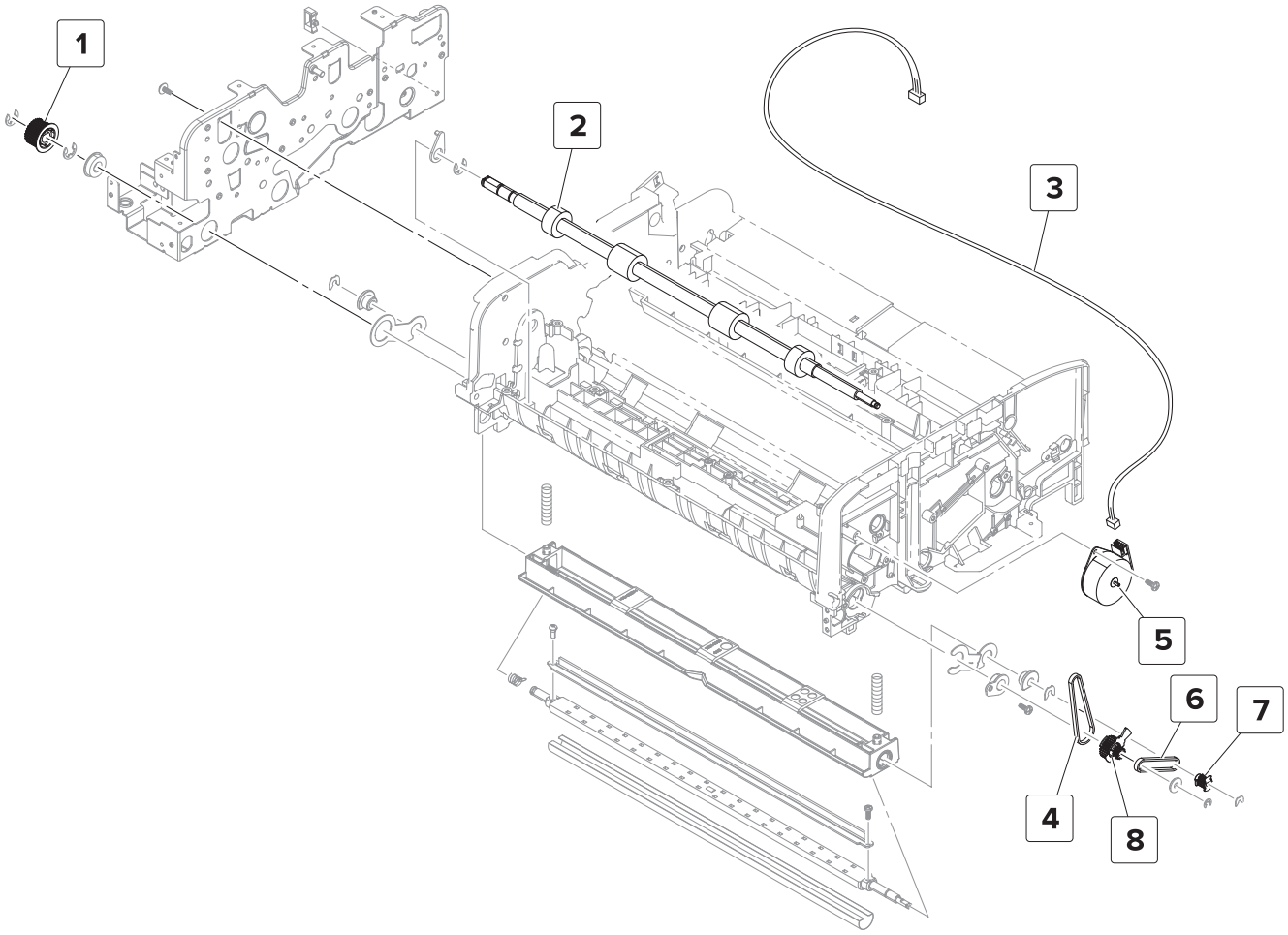
Assembly 56: ADF paper transport 5



Assembly 56: ADF paper transport 5

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9690	1	1	ADF scan sensor cable	--
2	40X9212	1	1	ADF exit sensor cable	--
3	40X8869	1	1	Sensor (ADF jam access cover)	"Sensor (ADF jam access cover) removal" on page 416
4	40X8869	1	1	Sensor (ADF exit)	--
5	40X8869	1	1	Sensor (scan glass clean)	"Sensor (scan glass clean) removal" on page 419
6	40X9211	1	1	Sensor (ADF scan)	--

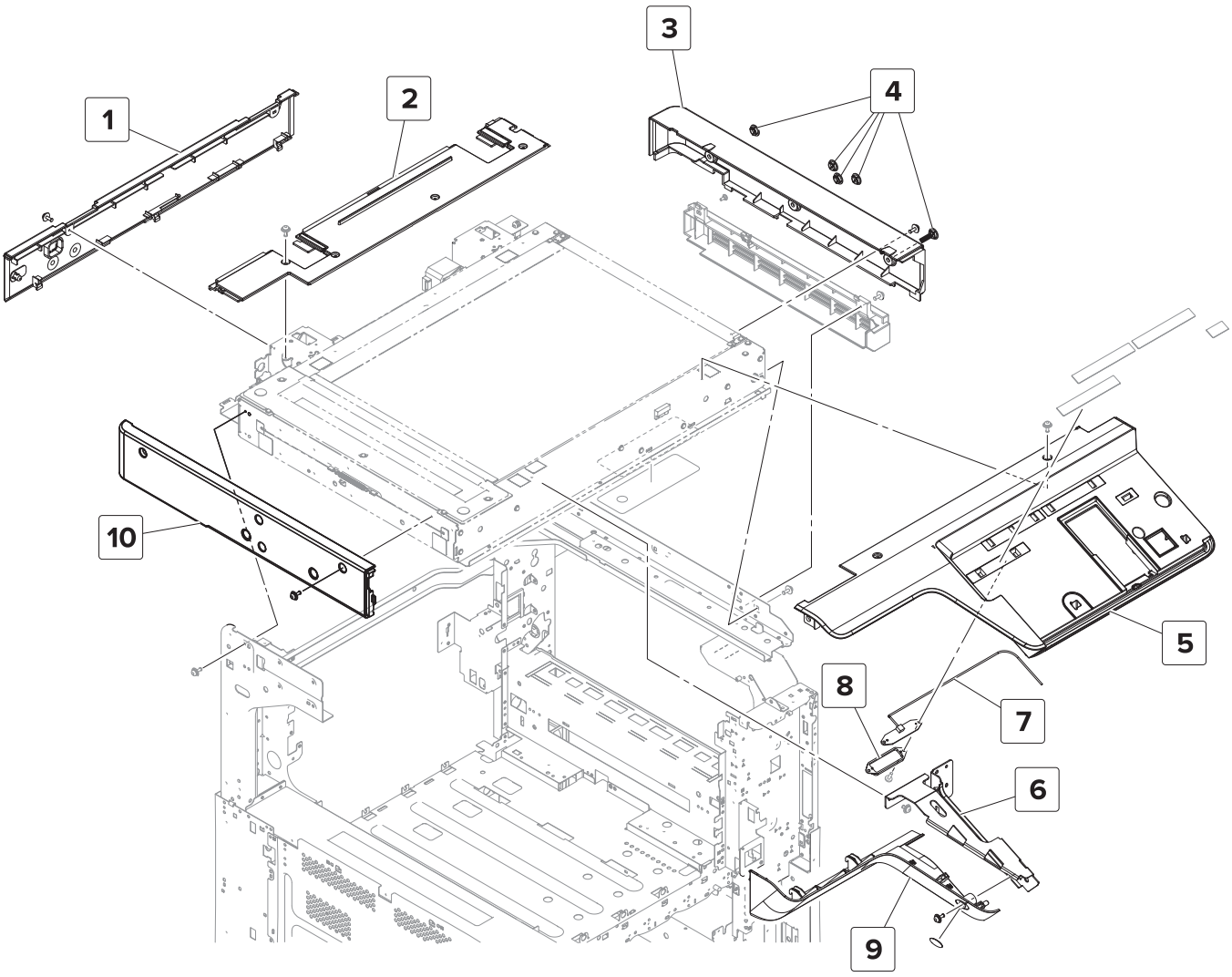
Assembly 57: ADF paper transport 6



Assembly 57: ADF paper transport 6

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9685	1	1	ADF transport gear	--
2	40X9953	1	1	ADF exit roller	--
3	40X9695	1	1	CIS glass clean motor cable	--
4	40X9691	1	1	ADF glass clean encoder belt	--
5	40X9213	1	1	Motor (CIS glass clean)	**“Motor (CIS glass clean) removal” on page 439**
6	40X9214	1	1	CIS glass clean belt	--
7	40X9693	1	1	CIS glass clean gear	--
8	40X9694	1	1	ADF glass clean encoder	--

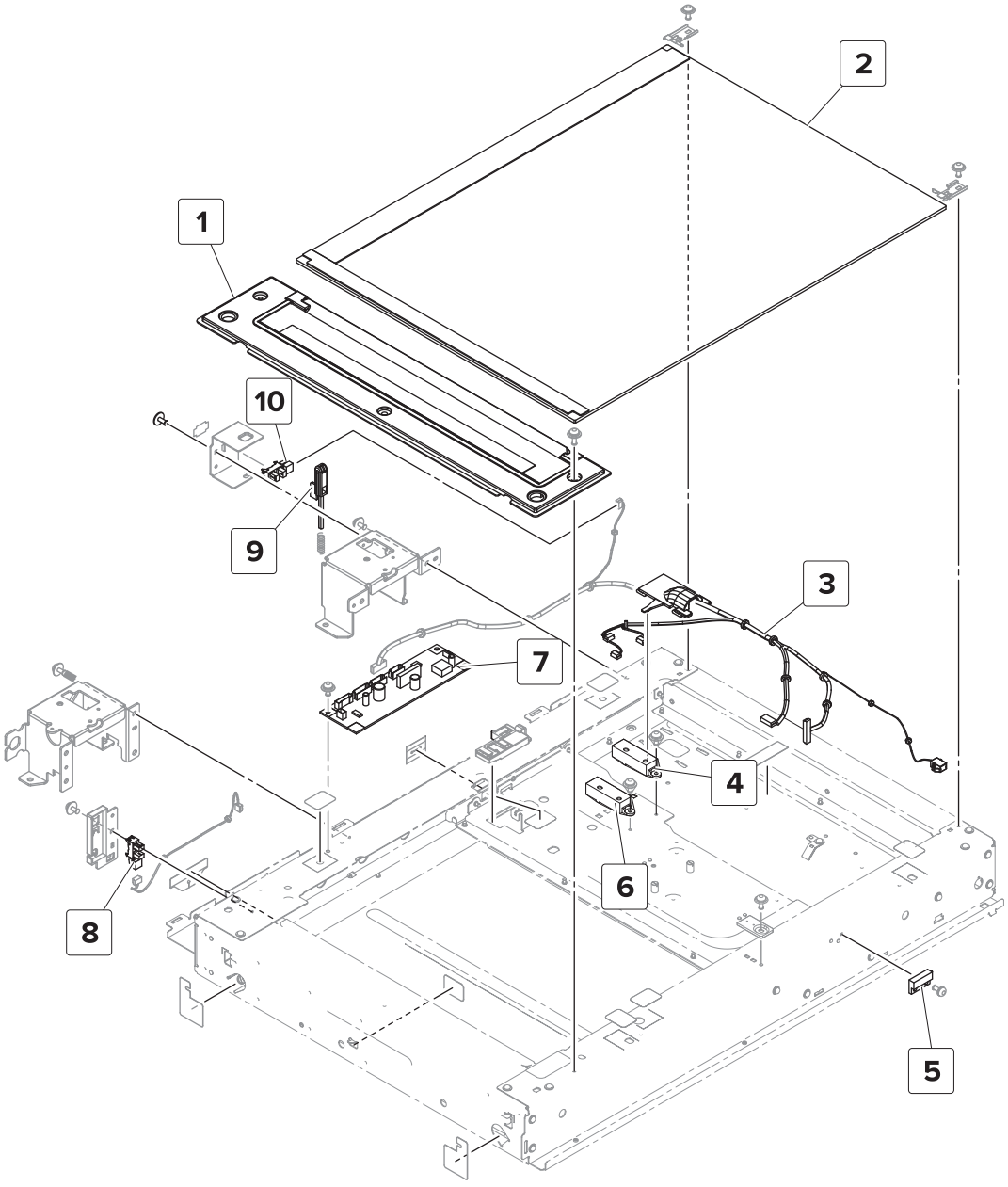
Assembly 58: Flatbed scanner covers



Assembly 58: Flatbed scanner covers

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8921	1	1	Scanner rear cover	“Scanner rear cover removal” on page 430
2	40X8922	1	1	Scanner top cover	“Scanner top cover removal” on page 430
3	40X8923	1	1	Scanner right cover	“Scanner right cover removal” on page 430
4	40X8924	5	1	Screw hole cover	--
5	40X8925	1	1	Control panel base	“Control panel base removal” on page 440
6	40X9972	1	1	Control panel mount	--
7	40X9974	1	1	Cave light LED cable	--
8	40X9971	1	1	Cave light lens	--
9	40X9973	1	1	Control panel bottom cover	“Control panel bottom cover removal” on page 442
10	40X8926	1	1	Scanner Left cover	“Scanner left cover removal” on page 429

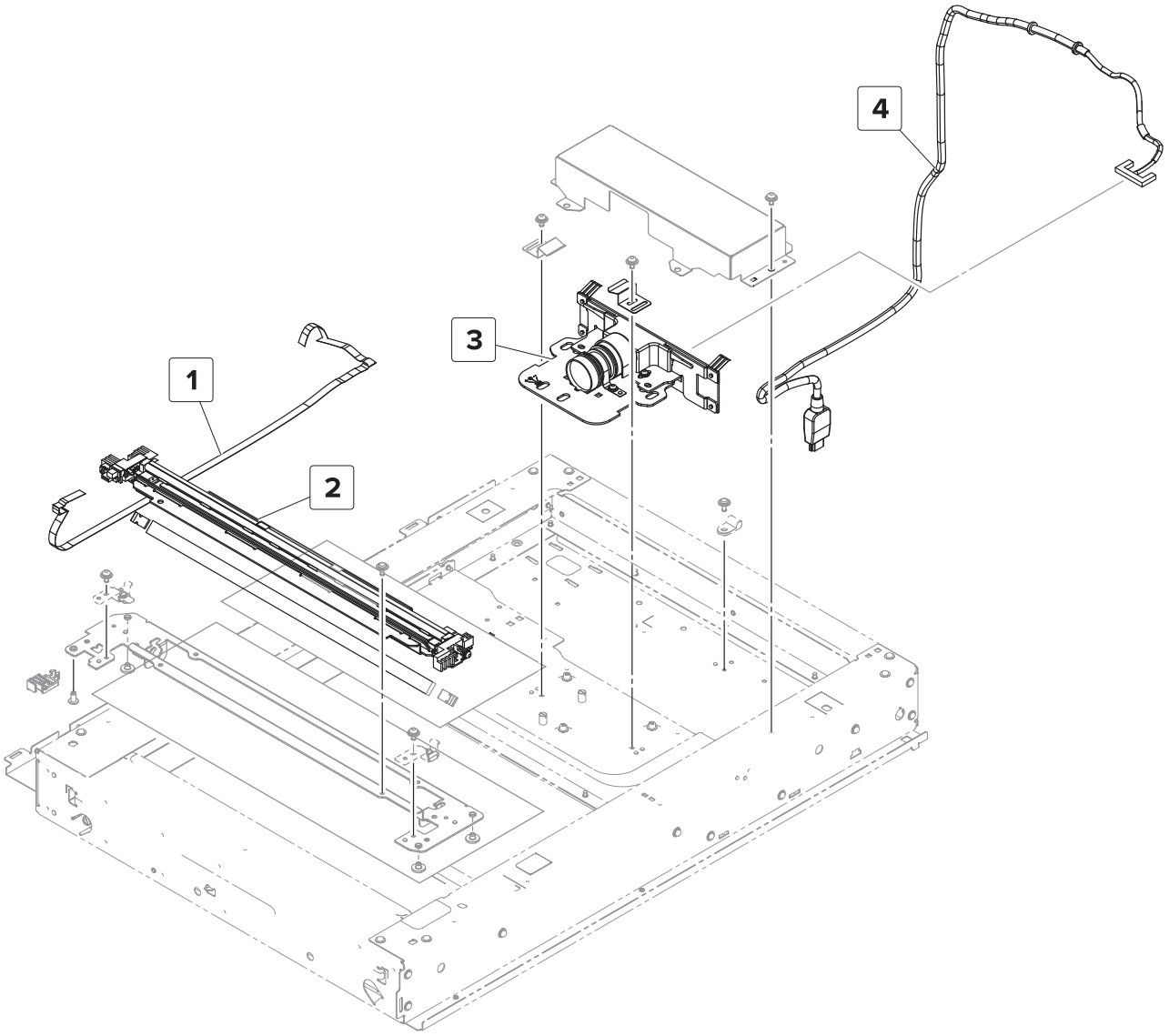
Assembly 59: Flatbed scanner 1



Assembly 59: Flatbed scanner 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8933	1	1	ADF duplex scan glass	“ADF duplex scan glass removal” on page 396
2	40X8928	1	1	Scanner glass	“Scanner glass removal” on page 428
3	40X9702	1	1	Scanner sensor cable	--
4	40X8932	1	1	Sensor (scanner paper length 1)	“Sensor (scanner paper length 1) removal” on page 422
5	40X8930	1	1	Sensor (scanner cover switch)	“Sensor (scanner cover switch) removal” on page 420
6	40X8932	1	1	Sensor (scanner paper length 2)	“Sensor (scanner paper length 2) removal” on page 423
7	40X8934	1	1	Scanner controller board	“Scanner controller board removal” on page 428
8	40X8869	1	1	Sensor (scanner lamp home)	“Sensor (scanner lamp home) removal” on page 421
9	40X8931	1	1	Scanner cover open sensor actuator	“Sensor (scanner cover open) removal” on page 419
10	40X9313	1	1	Sensor (scanner cover open)	“Sensor (scanner cover open) removal” on page 419

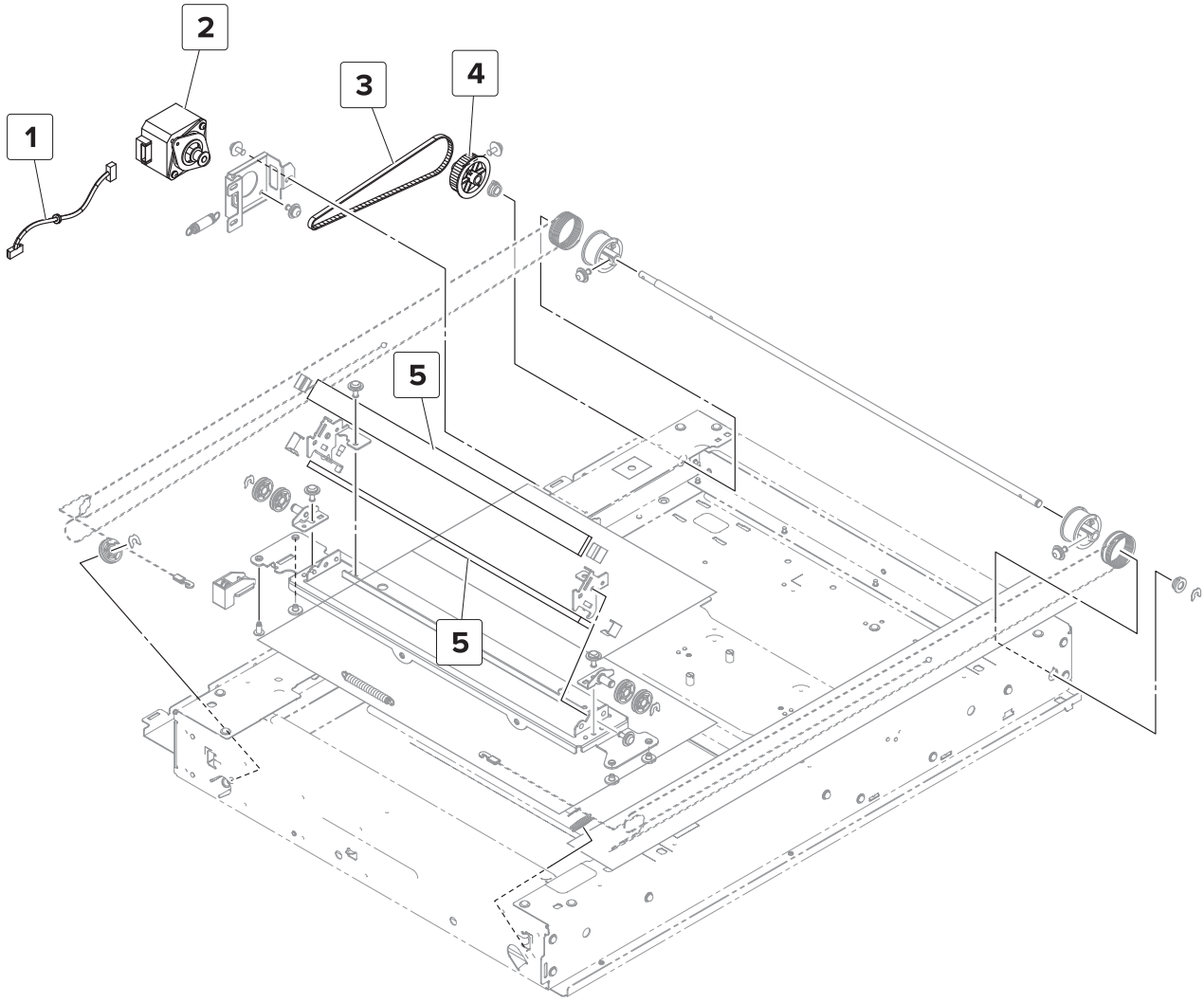
Assembly 60: Flatbed scanner 2



Assembly 60: Flatbed scanner 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8939	1	1	Scanner lamp cable	--
2	40X8938	1	1	Scanner lamp	--
3	40X8937	1	1	Scanner CCD lens assembly	**"Scanner CCD lens assembly removal" on page 426**
4	40X8935	1	1	Scanner CCD cable	--

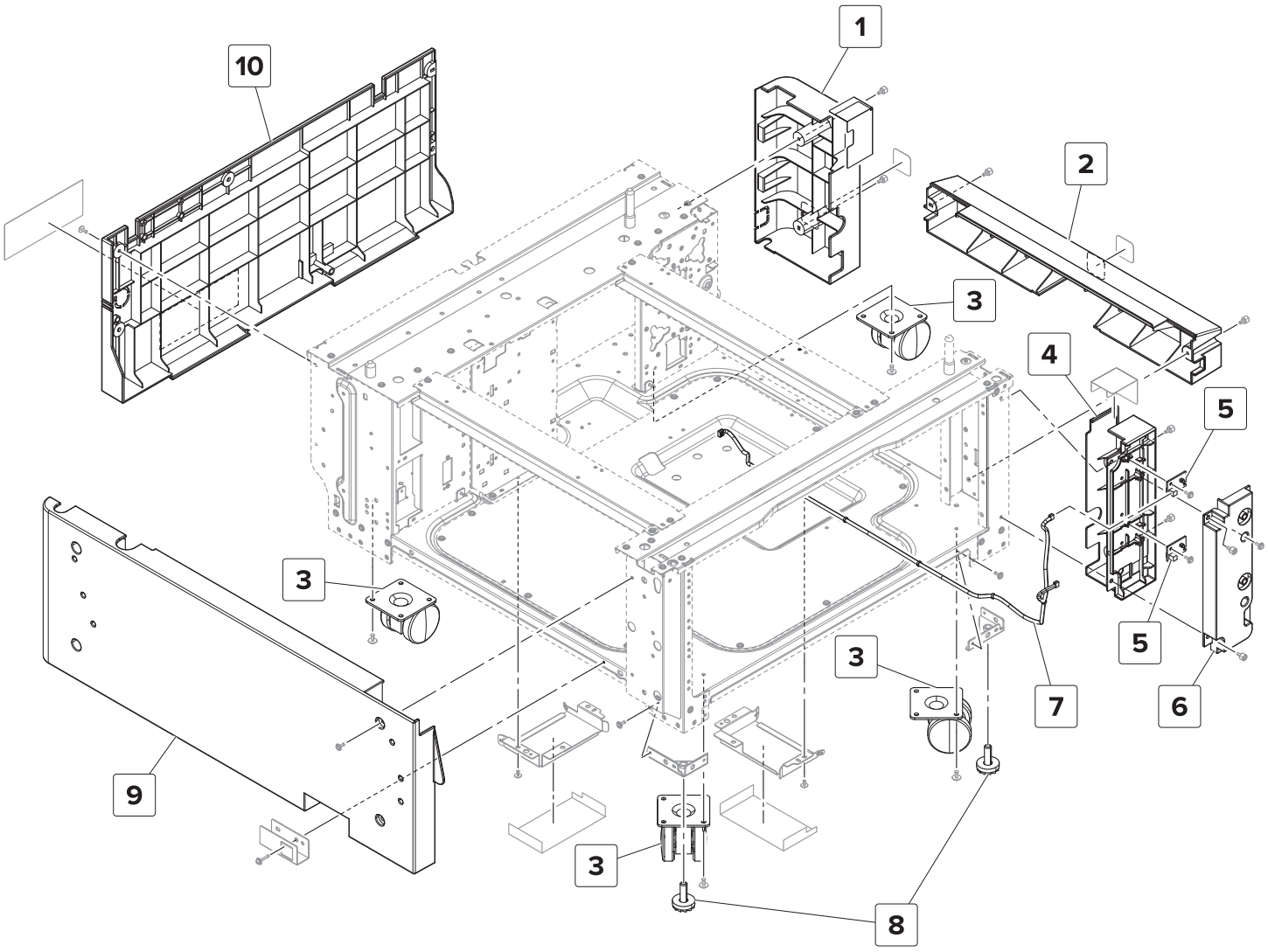
Assembly 61: Flatbed scanner 3



Assembly 61: Flatbed scanner 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X9975	1	1	Scanner drive motor cable	--
2	40X8940	1	1	Motor (scanner drive)	**“Motor (scanner drive) removal” on page 440**
3	40X8941	1	1	Scanner carriage belt	--
4	40X8942	1	1	Scanner carriage gear	--
5	40X9976	2	1	Scanner mirror	--

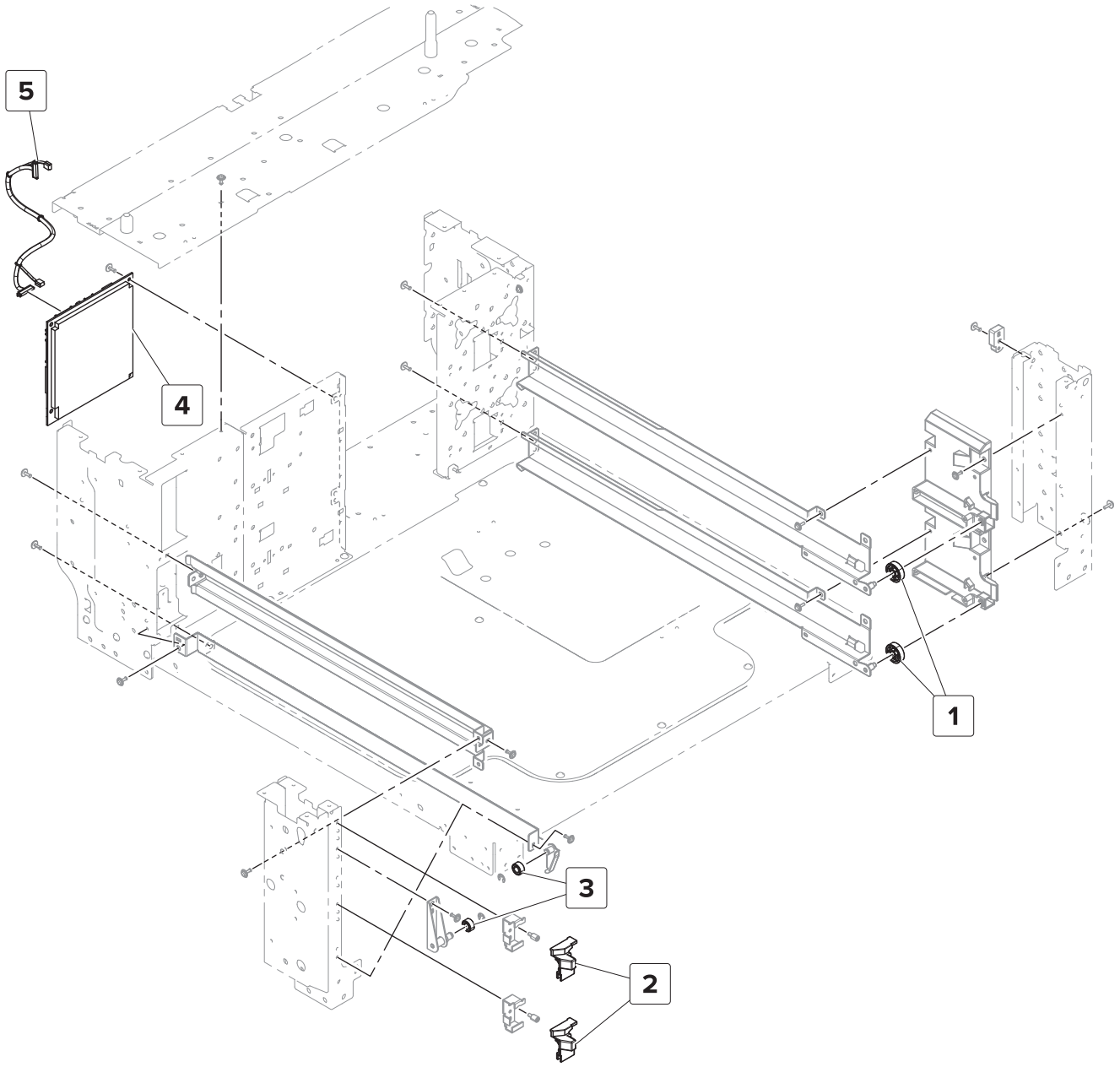
Assembly 62: 2 x 500-sheet tray—Covers



Assembly 62: 2 x 500-sheet tray—Covers

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9779	1	1	2 x 500-sheet tray rear right cover	“2 x 500-sheet tray rear right cover removal” on page 489
2	40X9285	1	1	2 x 500-sheet tray bottom right cover	“2 x 500-sheet tray bottom right cover removal” on page 490
3	40X9282	4	1	2 x 500-sheet tray caster wheel	“2 x 500-sheet tray caster wheel removal” on page 474
4	40X9286	1	1	2 x 500-sheet tray empty LED mount	“2 x 500-sheet tray empty LED mount removal” on page 482
5	40X8903	2	1	2 x 500-sheet tray empty LED	“2 x 500-sheet tray empty LED removal” on page 482
6	40X9287	1	1	2 x 500-sheet tray empty LED cover	“2 x 500-sheet tray empty LED cover removal” on page 481
7	40X9289	1	1	2 x 500-sheet tray empty LED cable	--
8	40X9283	2	1	Printer rubber stopper	“Printer rubber stopper removal” on page 474
9	40X9281	1	1	2 x 500-sheet tray left cover	“2 x 500-sheet tray left cover removal” on page 481
10	40X9280	1	1	2 x 500-sheet tray rear cover	“2 x 500-sheet tray rear cover removal” on page 483

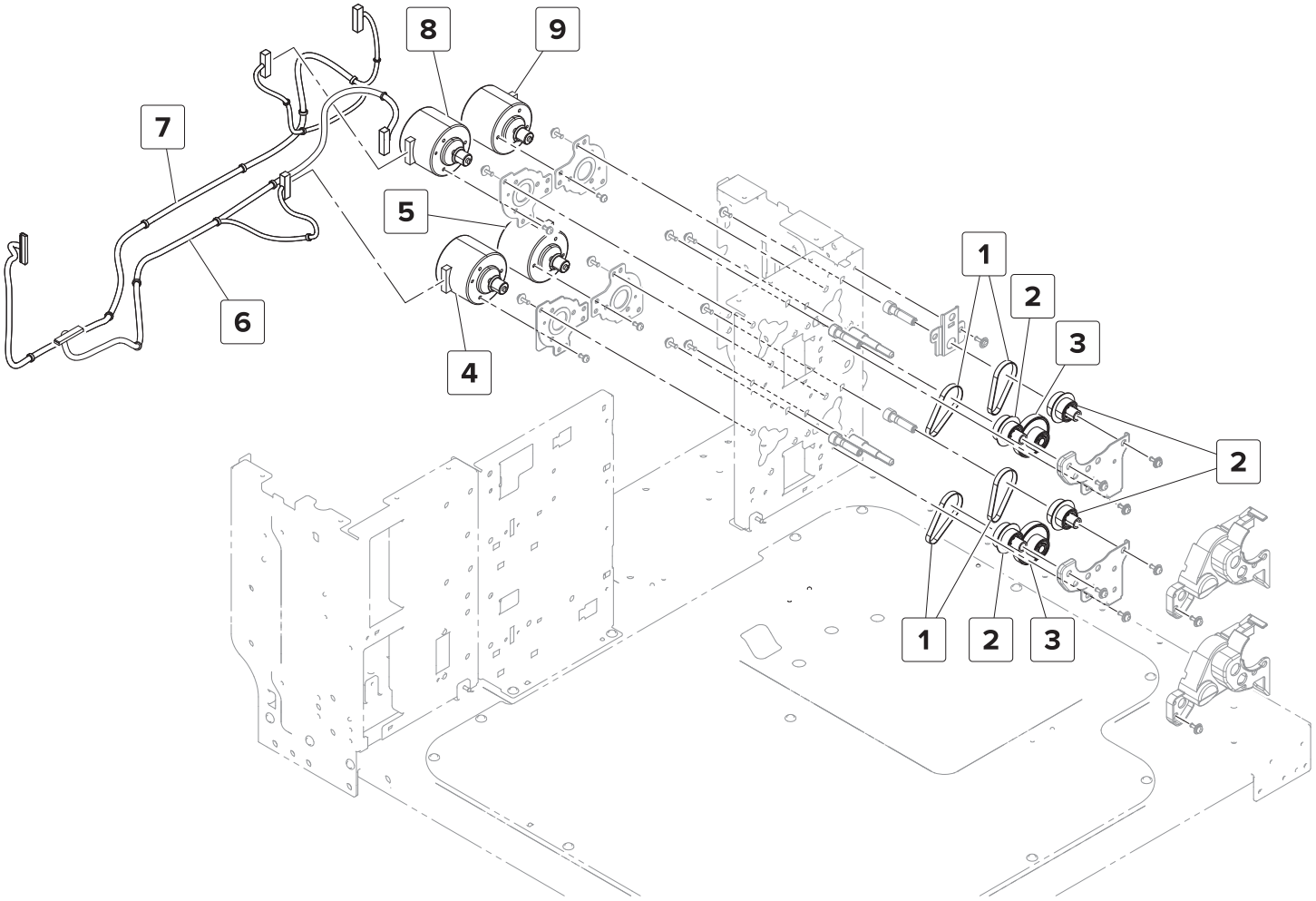
Assembly 63: 2 x 500-sheet tray—Frame



Assembly 63: 2 x 500-sheet tray—Frame

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X8981	2	1	2 x 500-sheet tray right rail guide wheel	--
2	40X9014	2	1	2 x 500-sheet tray insert stopper	--
3	40X9305	2	1	2 x 500-sheet tray left rail guide wheel	--
4	40X9290	1	1	2 x 500-sheet tray controller board	“2 x 500-sheet tray controller board removal” on page 487
5	40X9783	1	1	2 x 500-sheet tray interface cable	--

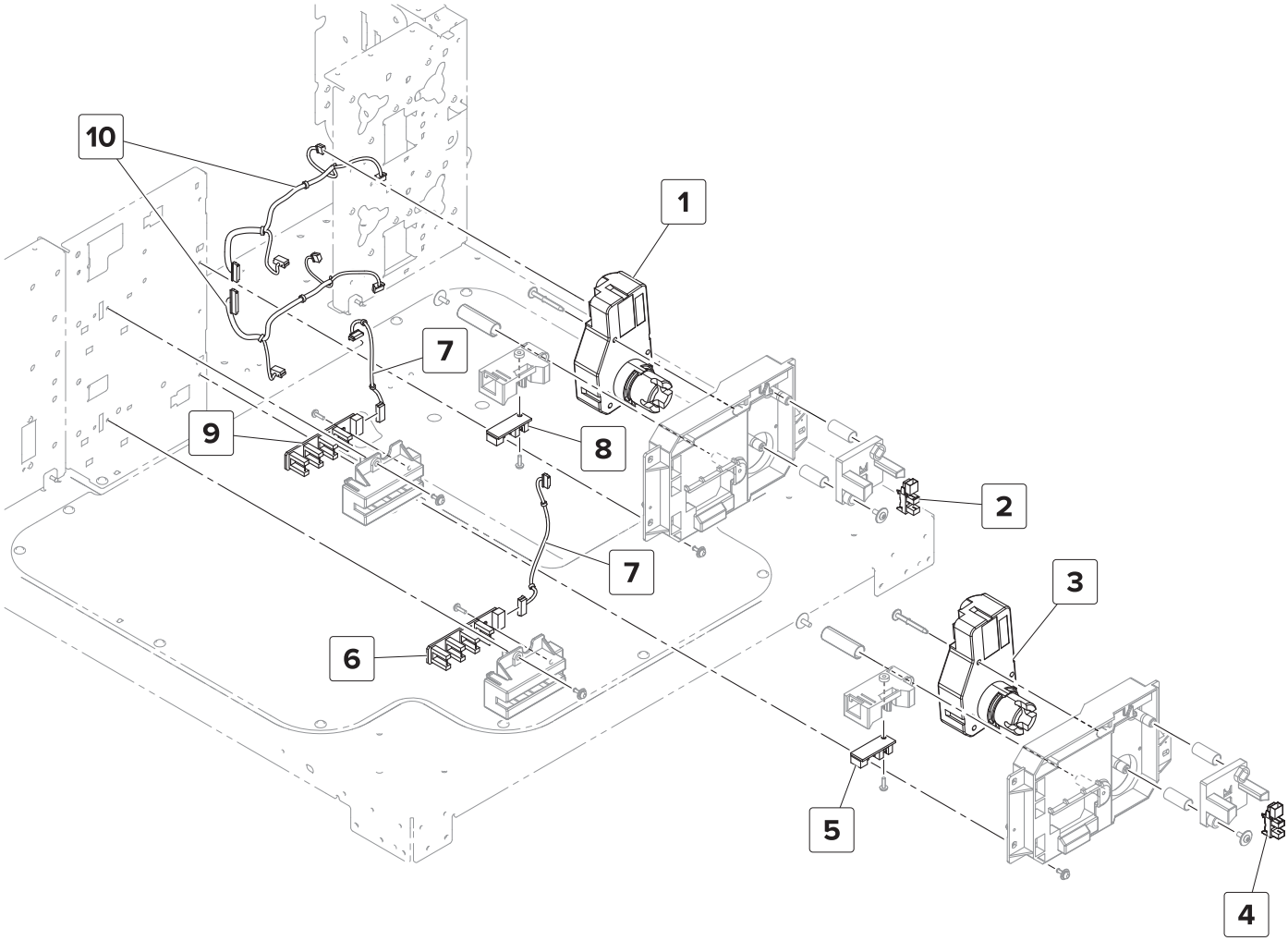
Assembly 64: 2 x 500-sheet tray—Paper feed



Assembly 64: 2 x 500-sheet tray—Paper feed

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9294	4	1	2 x 500-sheet tray feed and transport motor belt	"2 x 500-sheet tray 3 transport belts and gears removal" on page 495 "2 x 500-sheet tray 4 transport belts and gears removal" on page 496
2	40X9891	4	1	2 x 500-sheet tray feed and transport primary gear	"2 x 500-sheet tray 3 transport belts and gears removal" on page 495 "2 x 500-sheet tray 4 transport belts and gears removal" on page 496
3	40X9295	2	1	2 x 500-sheet tray feed and transport secondary gear	"2 x 500-sheet tray 3 transport belts and gears removal" on page 495 "2 x 500-sheet tray 4 transport belts and gears removal" on page 496
4	40X9293	1	1	Motor (2 x 500-sheet tray 4 feed)	"2 x 500-sheet tray feed and transport motors removal" on page 486
5	40X9293	1	1	Motor (2 x 500-sheet tray 4 transport)	"2 x 500-sheet tray feed and transport motors removal" on page 486
6	40X9774	1	1	2 x 500-sheet tray 4 feed and transport motor cable	--
7	40X9882	1	1	2 x 500-sheet tray 3 feed and transport motor cable	--
8	40X9293	1	1	Motor (2 x 500-sheet tray 3 feed)	"2 x 500-sheet tray feed and transport motors removal" on page 486
9	40X9293	1	1	Motor (2 x 500-sheet tray 3 transport)	"2 x 500-sheet tray feed and transport motors removal" on page 486

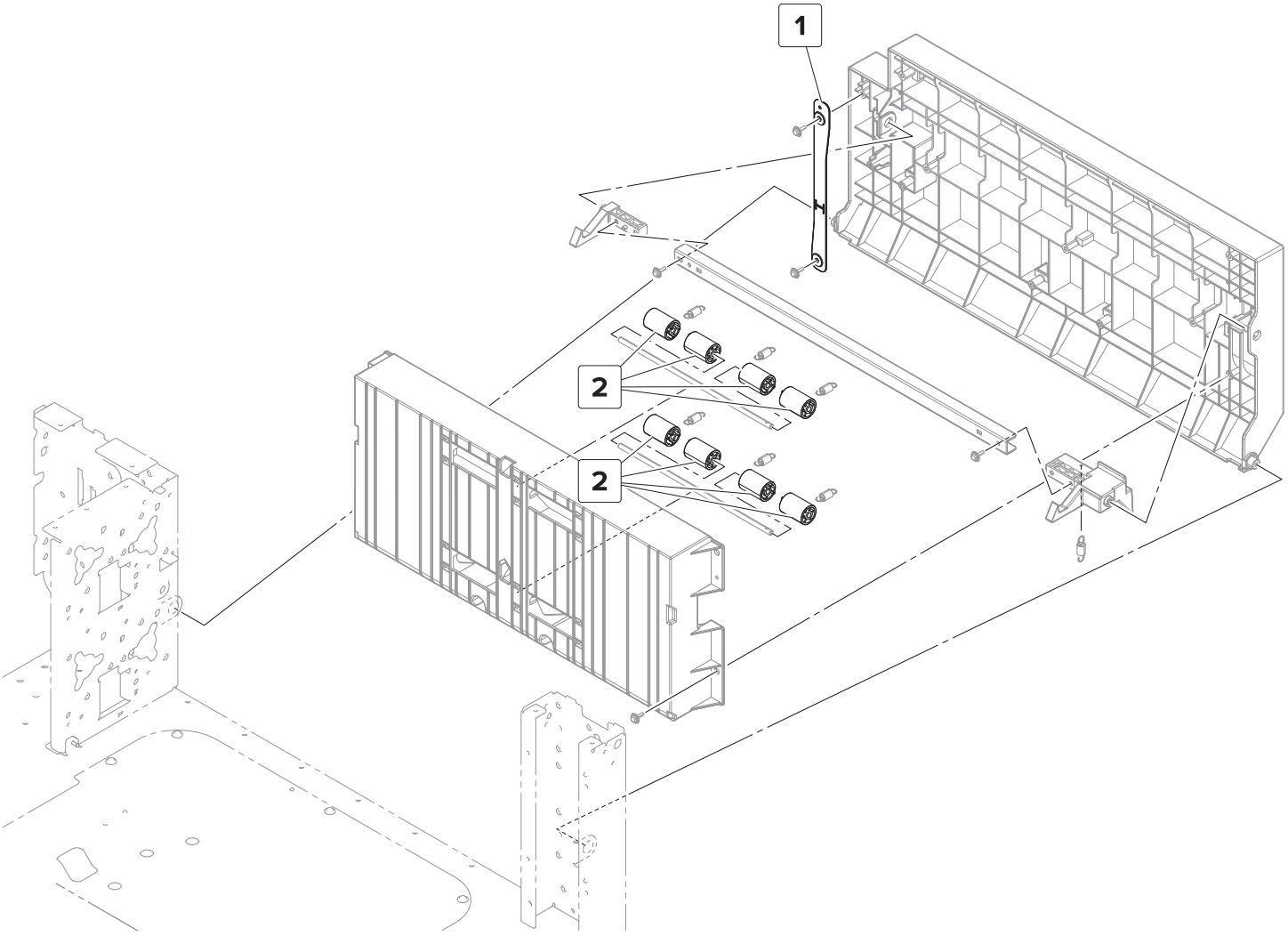
Assembly 65: 2 x 500-sheet tray—Paper size detection



Assembly 65: 2 x 500-sheet tray—Paper size detection

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X8987	1	1	Motor (2 x 500-sheet tray 3 lift)	"Motor (2 x 500-sheet tray lift) removal" on page 483
2	40X8869	1	1	Sensor (2 x 500-sheet tray 3 near empty)	"Sensor (2 x 500-sheet tray near empty) removal" on page 484
3	40X8987	1	1	Motor (2 x 500-sheet tray 4 lift)	"Motor (2 x 500-sheet tray lift) removal" on page 483
4	40X8869	1	1	Sensor (2 x 500-sheet tray 4 near empty)	"Sensor (2 x 500-sheet tray near empty) removal" on page 484
5	40X8989	1	1	Sensor (2 x 500-sheet tray 4 paper width)	"Sensor (2 x 500-sheet tray paper width) removal" on page 485
6	40X8985	1	1	Sensor (2 x 500-sheet tray 4 paper length)	"Sensor (2 x 500-sheet tray paper length) removal" on page 479
7	40X9775	2	1	2 x 500 sheet tray paper length sensor cable	--
8	40X8989	1	1	Sensor (2 x 500-sheet tray 3 paper width)	"Sensor (2 x 500-sheet tray paper width) removal" on page 485
9	40X8985	1	1	Sensor (2 x 500-sheet tray 3 paper length)	"Sensor (2 x 500-sheet tray paper length) removal" on page 479
10	40X9889	2	1	2 x 500 sheet tray lift motor cable	--

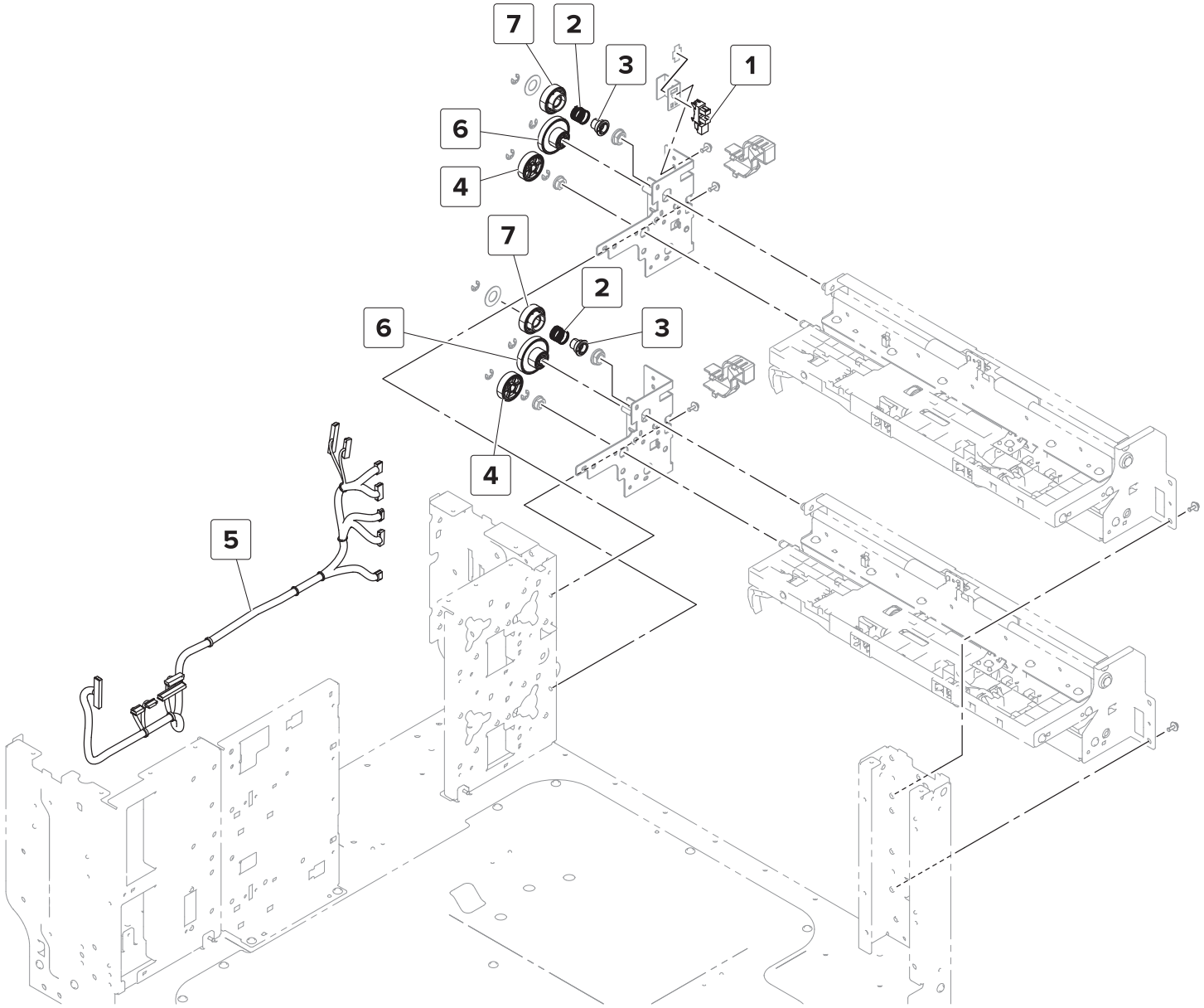
Assembly 66: 2 x 500-sheet tray—Paper transport



Assembly 66: 2 x 500-sheet tray—Paper transport

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9908	1	1	2 x 500-sheet tray jam access door strap	--
2	40X8973	8	1	Transport idler roller	--

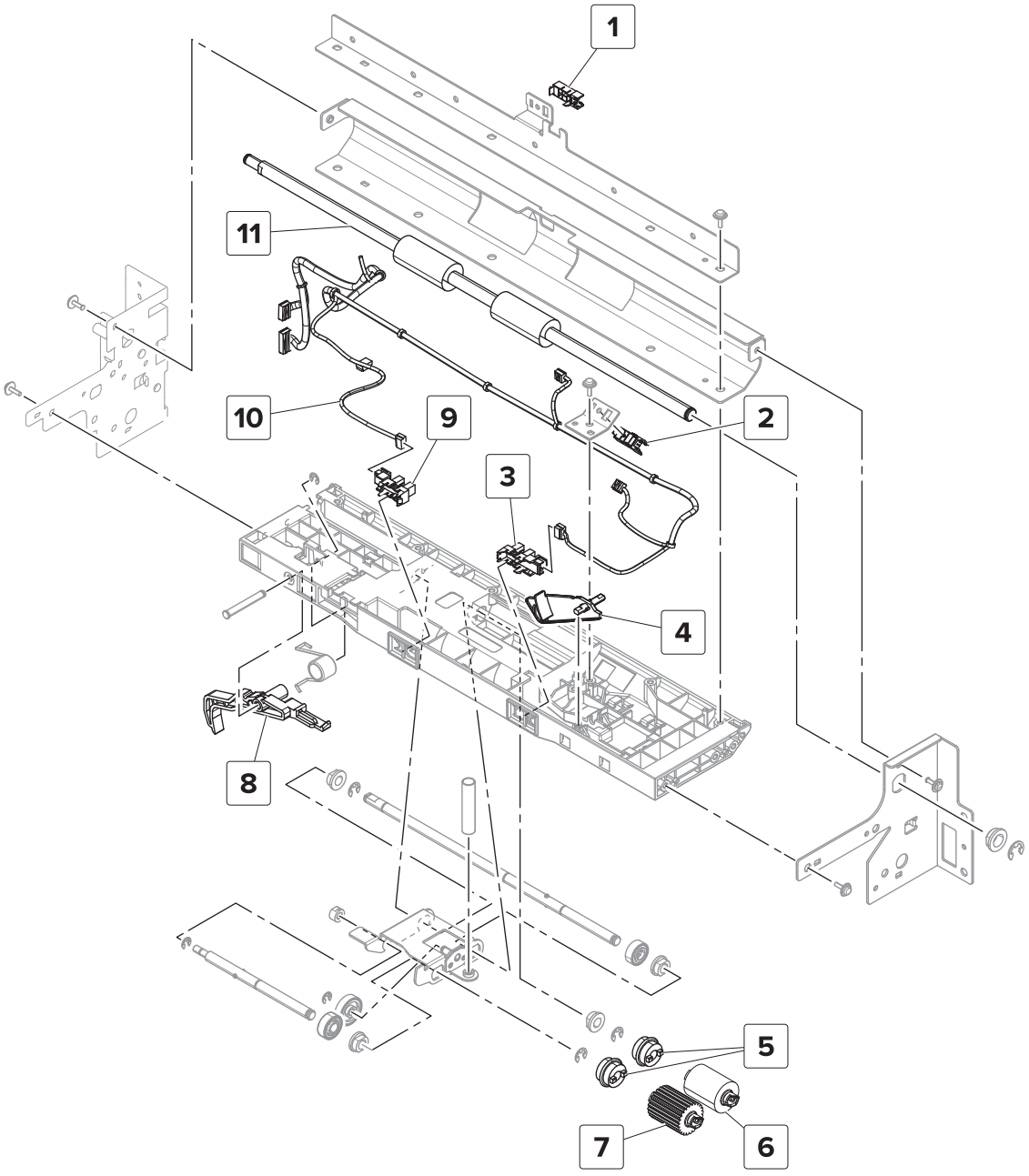
Assembly 67: 2 x 500-sheet tray—Paper pick 1



Assembly 67: 2 x 500-sheet tray—Paper pick 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9313	1	1	Sensor (2 x 500-sheet tray jam access door)	"Sensor (2 x 500-sheet tray jam access door) removal" on page 473
2	40X9892	2	1	2 x 500-sheet tray transport gear spring	--
3	40X9893	2	1	2 x 500-sheet tray transport gear bushing	--
4	40X9894	2	1	2 x 500-sheet tray feed primary gear	--
5	40X9890	1	1	2 x 500-sheet tray cable harness	--
6	40X9295	2	1	2 x 500-sheet tray feed secondary gear	--
7	40X9298	2	1	2 x 500-sheet tray transport gear	--

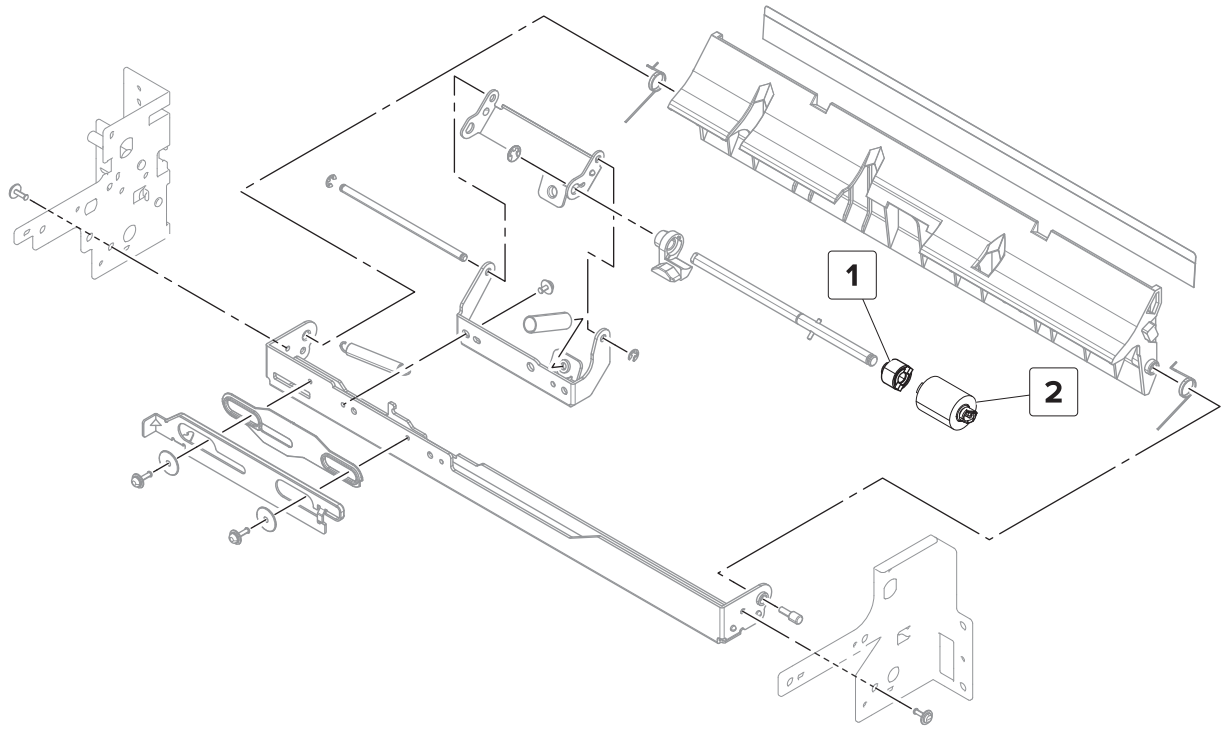
Assembly 68: 2 x 500-sheet tray—Paper pick 2



Assembly 68: 2 x 500-sheet tray—Paper pick 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X8968	2	1	Sensor (2 x 500-sheet tray transport)	"Sensor (2 x 500-sheet tray transport) removal" on page 494
2	40X8968	2	1	Sensor (2 x 500-sheet tray feed)	"2 x 500-sheet tray transport assembly sensors removal" on page 492
3	40X8869	2	1	Sensor (2 x 500-sheet tray empty)	"2 x 500-sheet tray transport assembly sensors removal" on page 492
4	40X9899	2	1	2 x 500-sheet tray empty sensor actuator	"2 x 500-sheet tray transport assembly sensors removal" on page 492
5	40X9981	4	1	Roller clutch	--
6	40X8970	2	1	Feed roller	"2 x 500-sheet tray rollers removal" on page 479
7	40X9925	2	1	Pick roller	"2 x 500-sheet tray rollers removal" on page 479
8	40X9982	2	1	2 x 500-sheet tray set actuator	--
9	40X8869	2	1	Sensor (2 x 500-sheet tray lift plate level)	"2 x 500-sheet tray transport assembly sensors removal" on page 492
10	40X9316	1	1	2 x 500-sheet tray 3 pick assembly sensor cable	--
10	40X9300	1	1	2 x 500-sheet tray 4 pick assembly sensor cable	--
11	40X9299	2	1	2 x 500-sheet tray transport roller	--

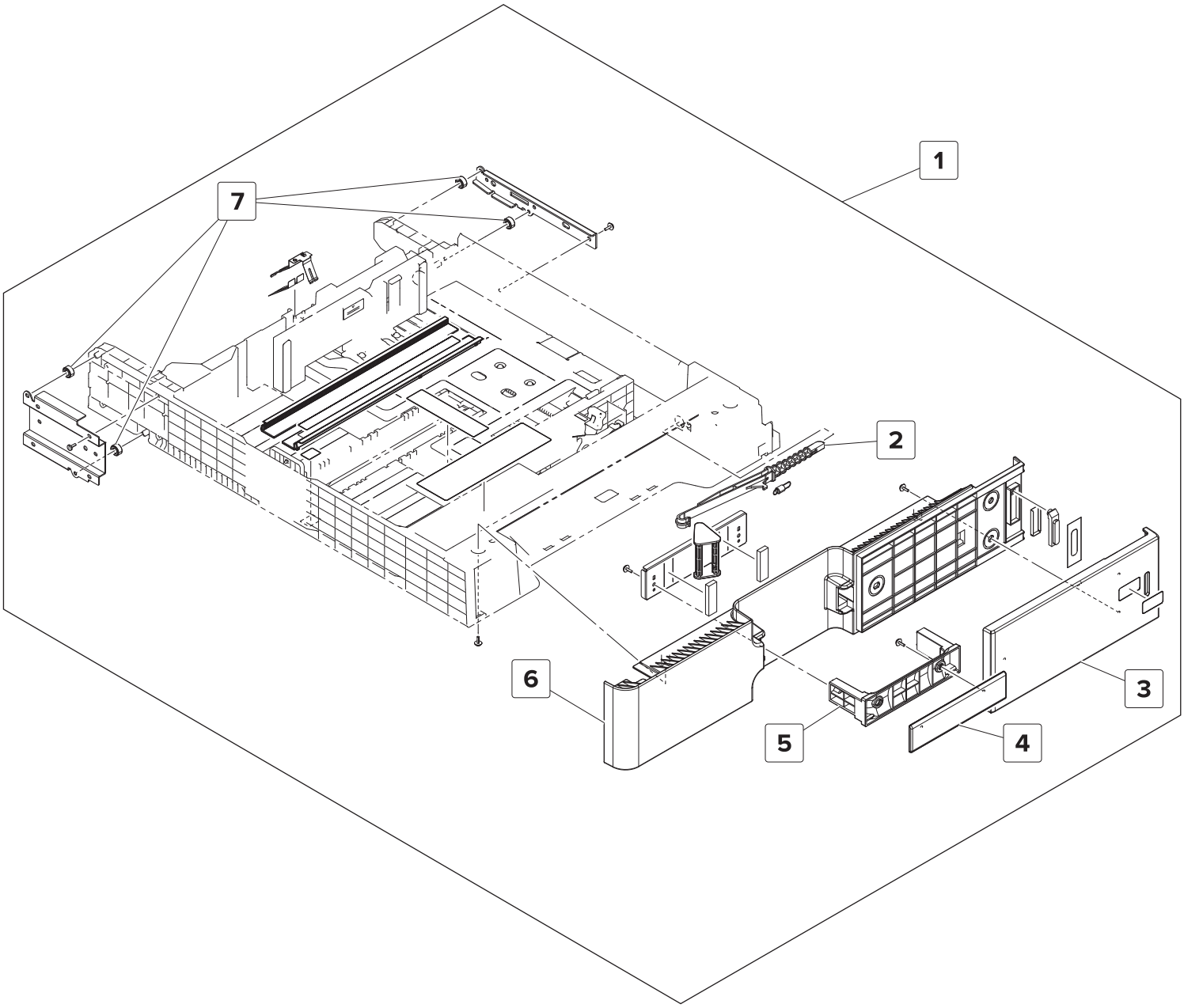
Assembly 69: 2 x 500-sheet tray—Paper pick 3



Assembly 69: 2 x 500-sheet tray—Paper pick 3

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9455	2	1	Separator clutch	--
2	40X8970	2	1	Separator roller	“2 x 500-sheet tray rollers removal” on page 479

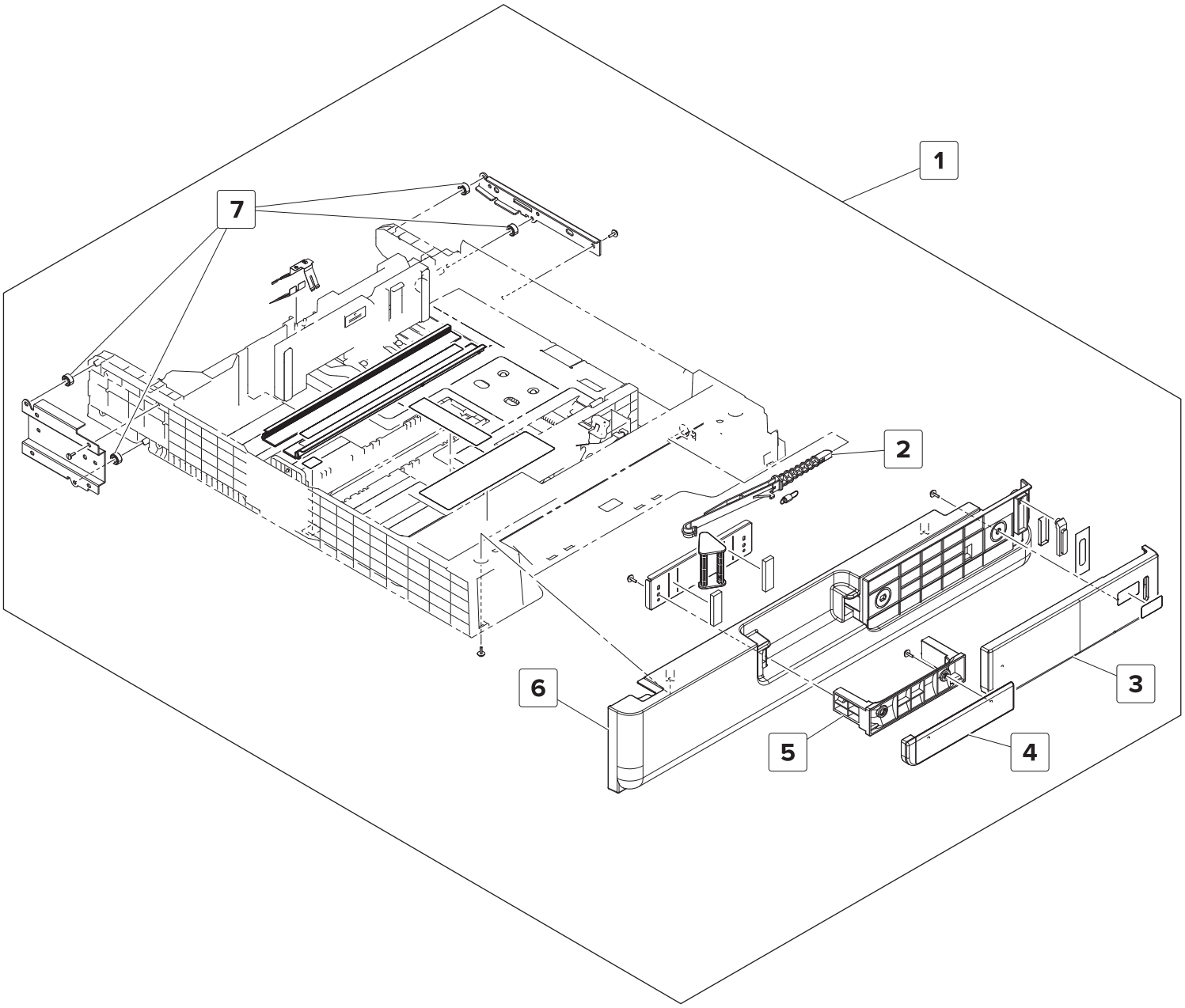
Assembly 70: 2 x 500-sheet tray—Tray 3



Assembly 70: 2 x 500-sheet tray—Tray 3

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9635	1	1	Tray 3 insert	--
2	40X9304	1	1	Tray lock lever	"Tray lock removal" on page 477
3	40X9017	1	1	Tray 3 right front cover	--
4	40X9034	1	1	Tray 3 handle cover	--
5	40X9186	1	1	Tray handle	--
6	40X8871	1	1	Tray 3 front cover	"Tray lock removal" on page 477
7	40X9305	4	1	Tray insert guide wheel	--

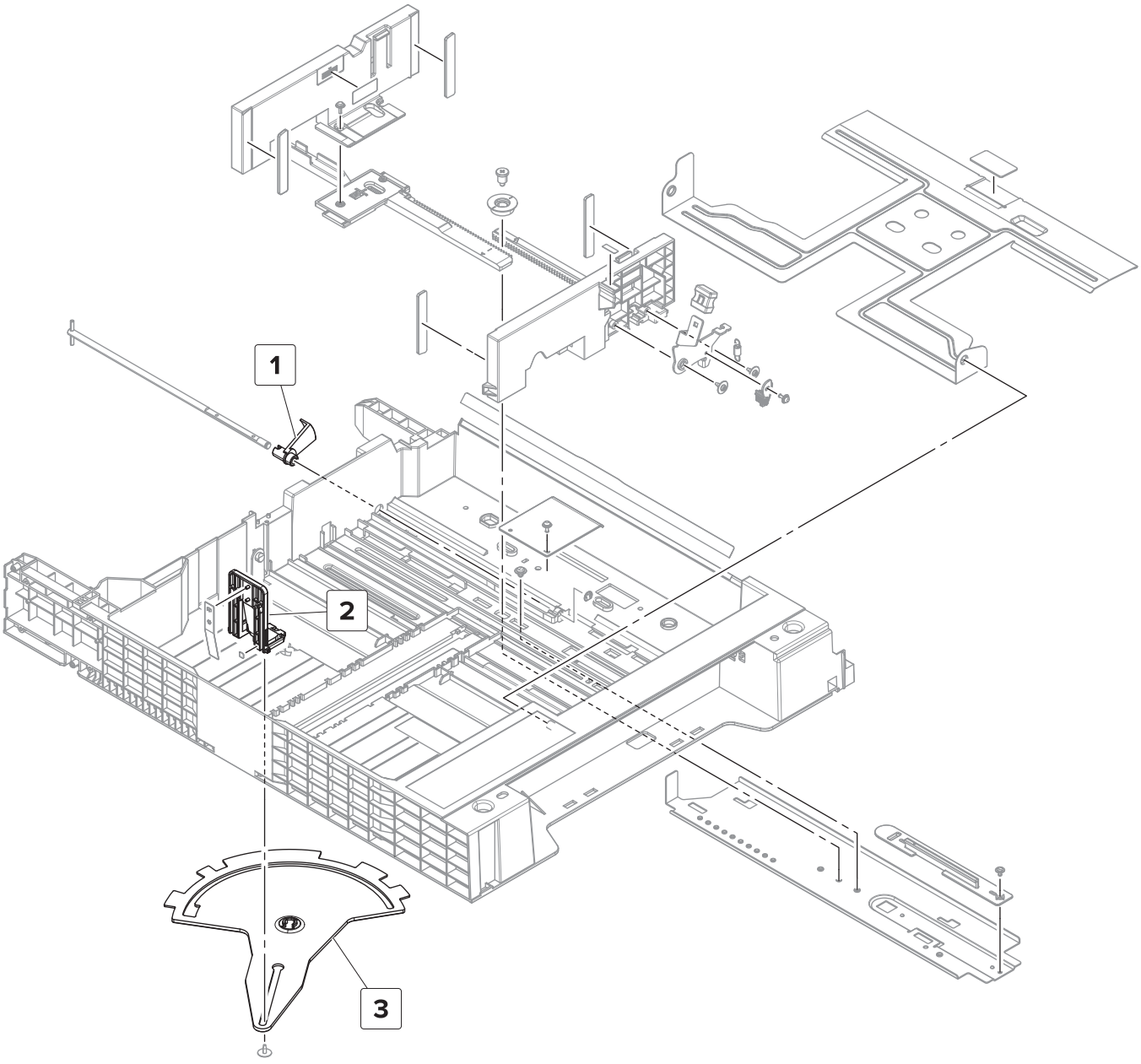
Assembly 71: 2 x 500-sheet tray—Tray 4



Assembly 71: 2 x 500-sheet tray—Tray 4

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9697	1	1	Tray 4 insert	--
2	40X9304	1	1	Tray lock lever	"Tray lock removal" on page 477
3	40X9033	1	1	Tray 4 right front cover	--
4	40X9320	1	1	Tray 4 handle cover	--
5	40X9186	1	1	Tray handle	--
6	40X9028	1	1	Tray 4 front cover	"Tray lock removal" on page 477
7	40X9305	4	1	Tray insert guide wheel	--

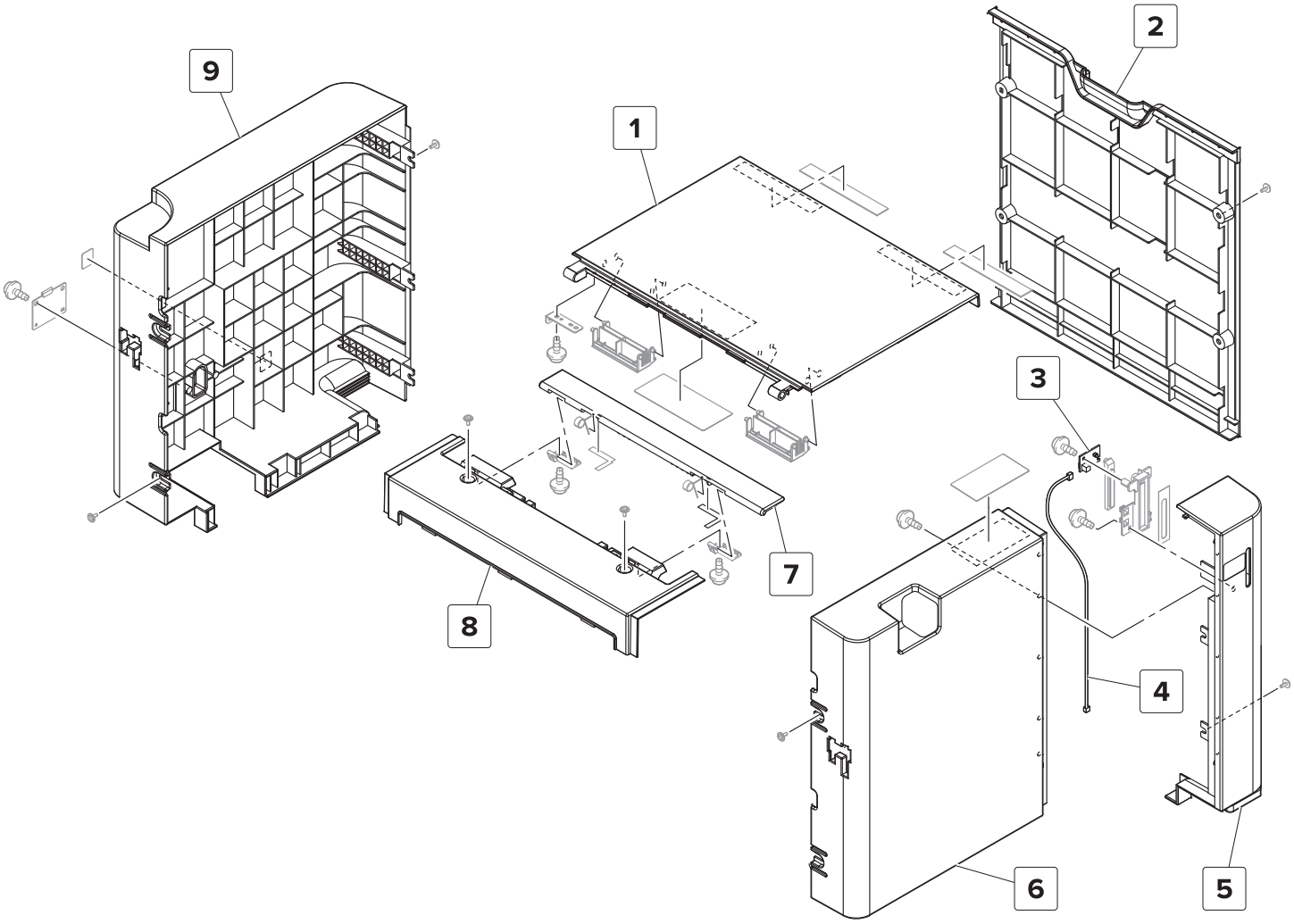
Assembly 72: 2 x 500-sheet tray—Tray 3 or Tray 4 frame



Assembly 72: 2 x 500-sheet tray—Tray 3 or Tray 4 frame

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9308	2	1	2 x 500-sheet tray near empty sensor actuator	--
2	40X9306	2	1	Tray insert paper length guide	"Tray insert paper length guide removal" on page 475
3	40X9309	2	1	2 x 500-tray insert paper length sensor actuator	--

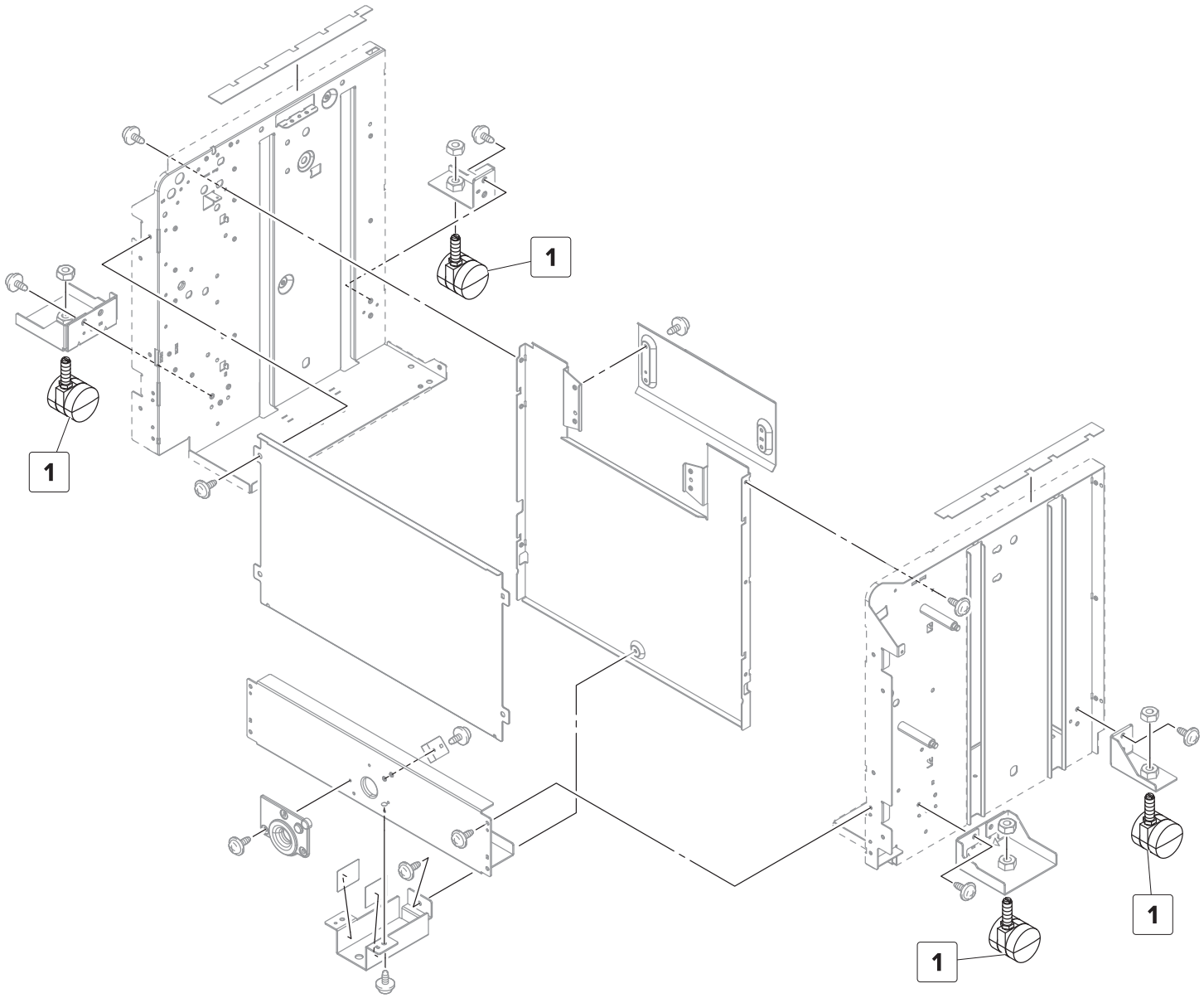
Assembly 73: 3000-sheet tray—Covers



Assembly 73: 3000-sheet tray—Covers

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9260	1	1	3000-sheet tray top door	"3000-sheet tray door removal" on page 507
2	40X9255	1	1	3000-sheet tray right cover	"3000-sheet tray right cover removal" on page 505
3	40X8903	1	1	3000-sheet tray empty LED	"3000-sheet tray empty LED removal" on page 510
4	40X9257	1	1	3000-sheet tray empty LED cable	--
5	40X9884	1	1	3000-sheet tray empty LED cover	"3000-sheet tray front cover removal" on page 505
6	40X9256	1	1	3000-sheet tray front cover	"3000-sheet tray front cover removal" on page 505
7	40X9259	1	1	3000-sheet tray slit cover	--
8	40X9765	1	1	3000-sheet tray left top cover	"3000-sheet tray left top cover removal" on page 508
9	40X9258	1	1	3000-sheet tray rear cover	"3000-sheet tray rear cover removal" on page 506

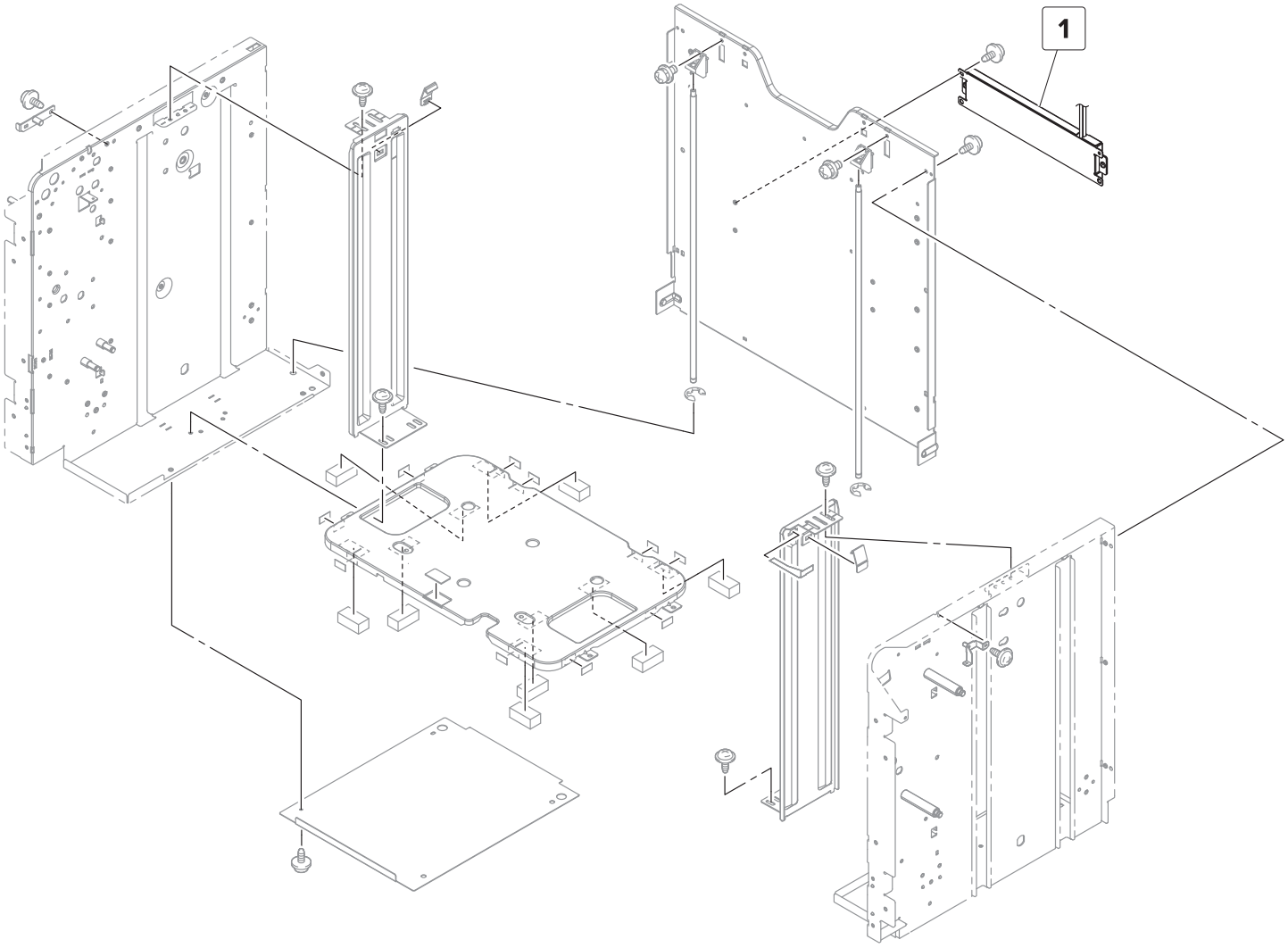
Assembly 74: 3000-sheet tray—Frame 1



Assembly 74: 3000-sheet tray—Frame 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9279	4	1	3000-sheet tray caster wheel	"3000-sheet tray caster wheel removal" on page 502

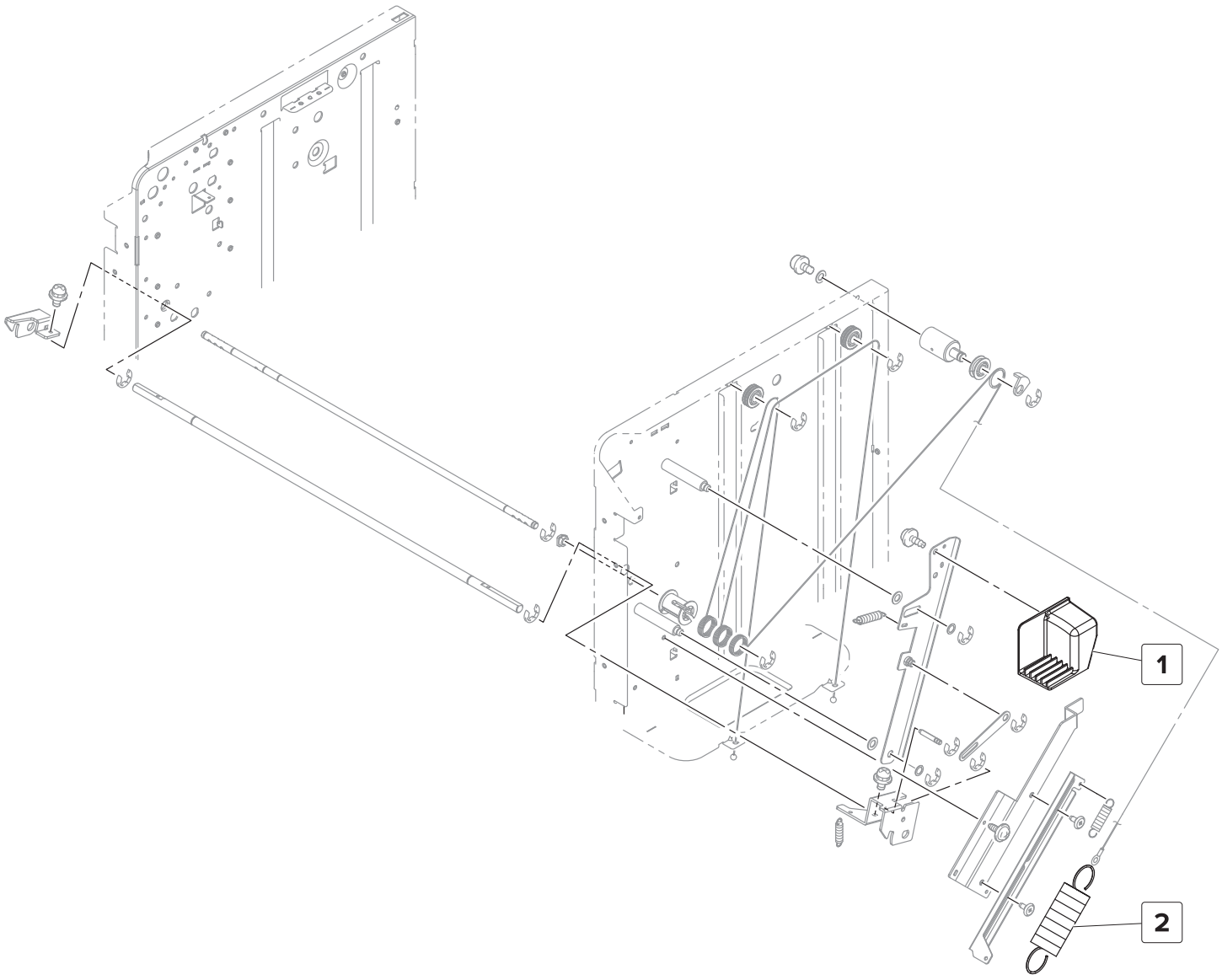
Assembly 75: 3000-sheet tray—Frame 2



Assembly 75: 3000-sheet tray—Frame 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9261	1	1	Dehumidifier	“Dehumidifier removal” on page 509

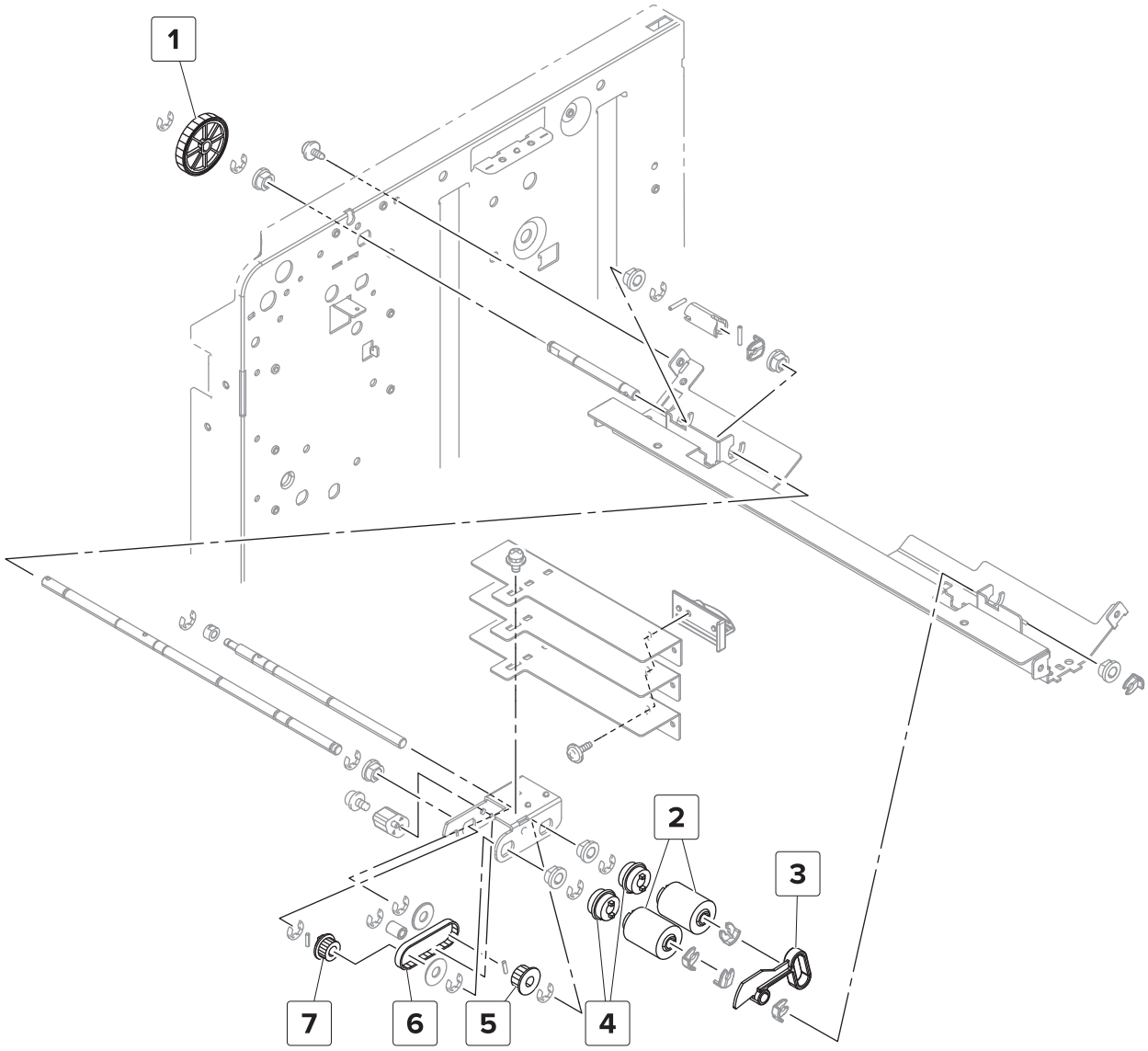
Assembly 76: 3000-sheet tray—Elevator front section



Assembly 76: 3000-sheet tray—Elevator front section

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9275	1	1	3000-sheet tray release handle	"3000-sheet tray release handle removal" on page 503
2	40X9276	1	1	3000-sheet tray elevator spring	"3000-sheet tray elevator spring removal" on page 513

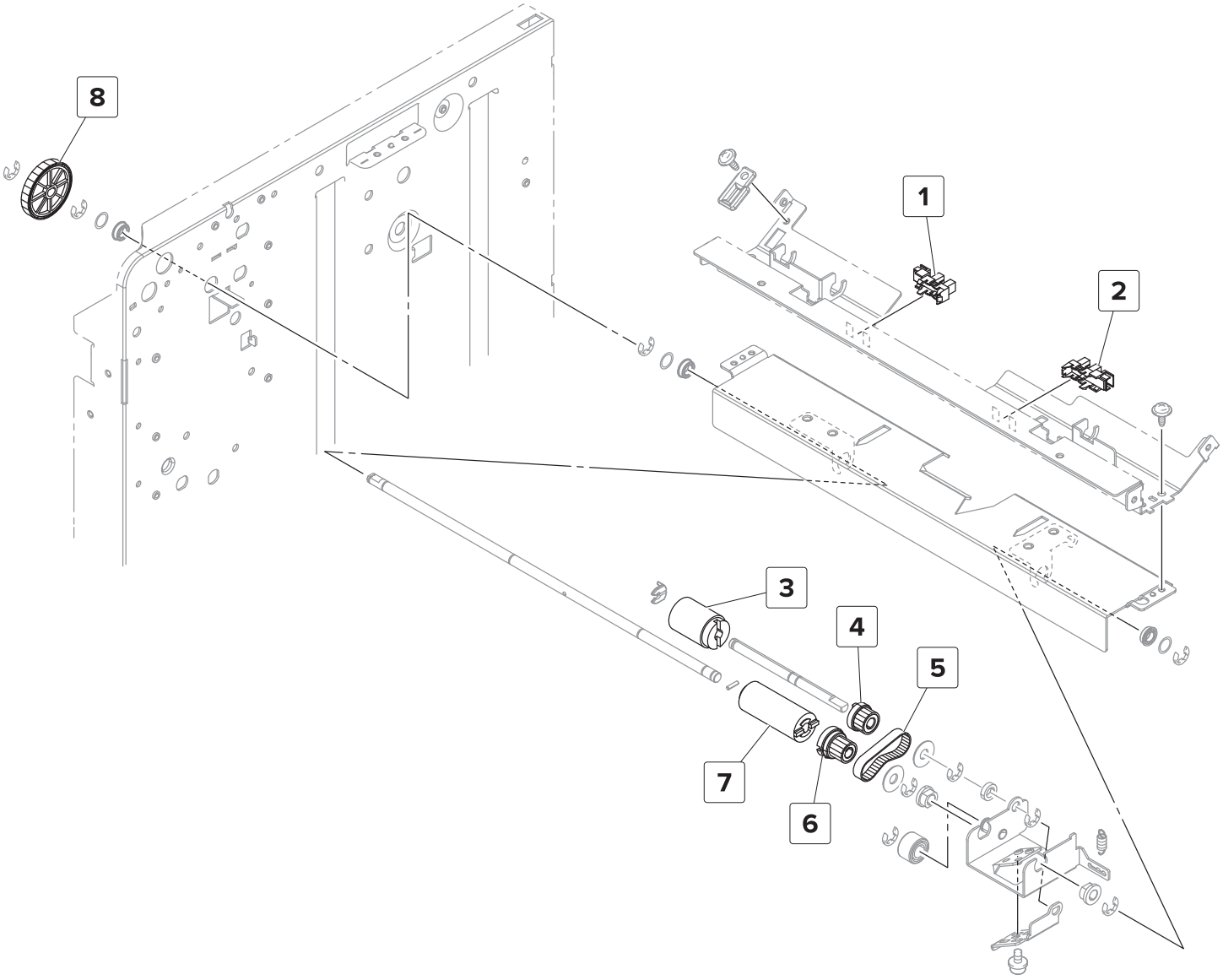
Assembly 77: 3000-sheet tray—Paper feed 1



Assembly 77: 3000-sheet tray—Paper feed 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9886	1	1	3000-sheet tray feed and pick drive gear	“3000-sheet tray pick roller assembly removal” on page 523
2	40X9267	2	1	Feed and pick roller	“3000-sheet tray rollers removal” on page 498
3	40X9881	1	1	3000-sheet tray empty sensor actuator	“3000-sheet tray rollers removal” on page 498
4	40X9297	2	1	3000-sheet tray roller clutch	“3000-sheet tray rollers removal” on page 498
5	40X9048	1	1	3000-sheet tray pick gear	“3000-sheet tray feed and pick belt removal” on page 500
6	40X9268	1	1	3000-sheet tray feed and pick belt	“3000-sheet tray feed and pick belt removal” on page 500
7	40X9772	1	1	3000-sheet tray feed gear	“3000-sheet tray feed and pick belt removal” on page 500

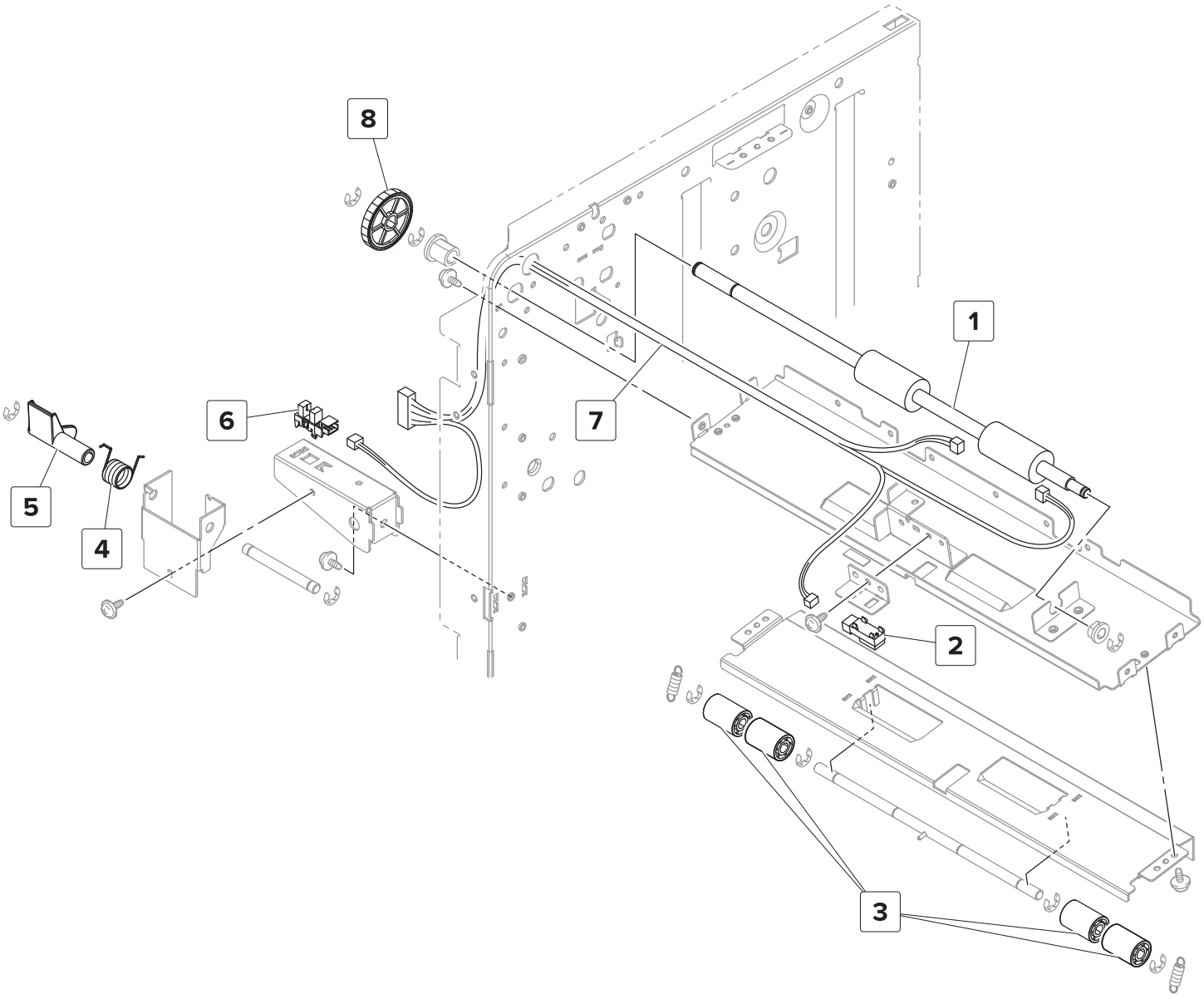
Assembly 78: 3000-sheet tray—Paper feed 2



Assembly 78: 3000-sheet tray—Paper feed 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9880	1	1	Sensor (3000-sheet tray elevator level)	"Sensor (3000-sheet tray elevator level) removal" on page 511
2	40X9880	1	1	Sensor (3000-sheet tray empty)	"Sensor (3000-sheet tray empty) removal" on page 510
3	40X9267	1	1	3000-sheet tray separator roller	"3000-sheet tray feed roller assembly removal" on page 520
4	40X9887	1	1	3000-sheet tray separator roller secondary gear	"3000-sheet tray feed roller assembly removal" on page 520
5	40X9271	1	1	3000-sheet tray separator belt	"3000-sheet tray feed roller assembly removal" on page 520
6	40X9773	1	1	3000-sheet tray separator roller primary gear	"3000-sheet tray feed roller assembly removal" on page 520
7	40X9888	1	1	3000-sheet tray separator roller clutch	"3000-sheet tray feed roller assembly removal" on page 520
8	40X9886	1	1	3000-sheet tray separator roller drive gear	"3000-sheet tray feed roller assembly removal" on page 520

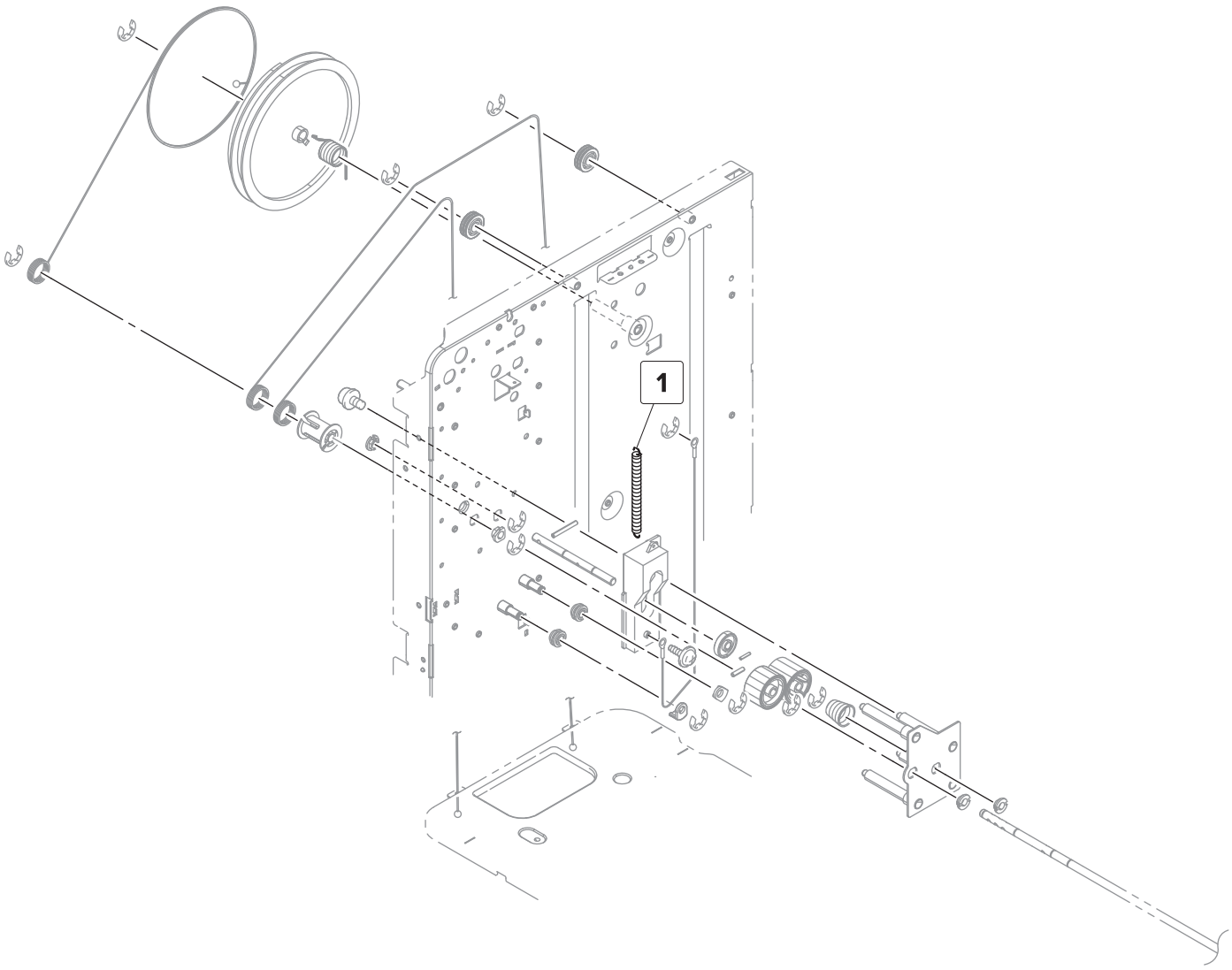
Assembly 79: 3000-sheet tray—Paper transport



Assembly 79: 3000-sheet tray—Paper transport

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9273	1	1	3000-sheet tray transport roller	“3000-sheet tray feed roller assembly removal” on page 520
2	40X9885	1	1	Sensor (3000-sheet tray feed)	“Sensor (3000-sheet tray feed) removal” on page 512
3	40X9771	4	1	3000-sheet tray transport idler roller	“3000-sheet tray feed roller assembly removal” on page 520
4	40X9373	1	1	3000-sheet tray set sensor actuator spring	“3000-sheet tray set sensor actuator removal” on page 515
5	40X9040	1	1	3000-sheet tray set sensor actuator	“3000-sheet tray set sensor actuator removal” on page 515
6	40X9880	1	1	Sensor (3000-sheet tray set)	“Sensor (3000-sheet tray set) removal” on page 516
7	40X8929	1	1	3000-sheet tray feed sensor cable	--
8	40X9769	1	1	3000-sheet tray transport roller drive gear	“3000-sheet tray feed roller assembly removal” on page 520

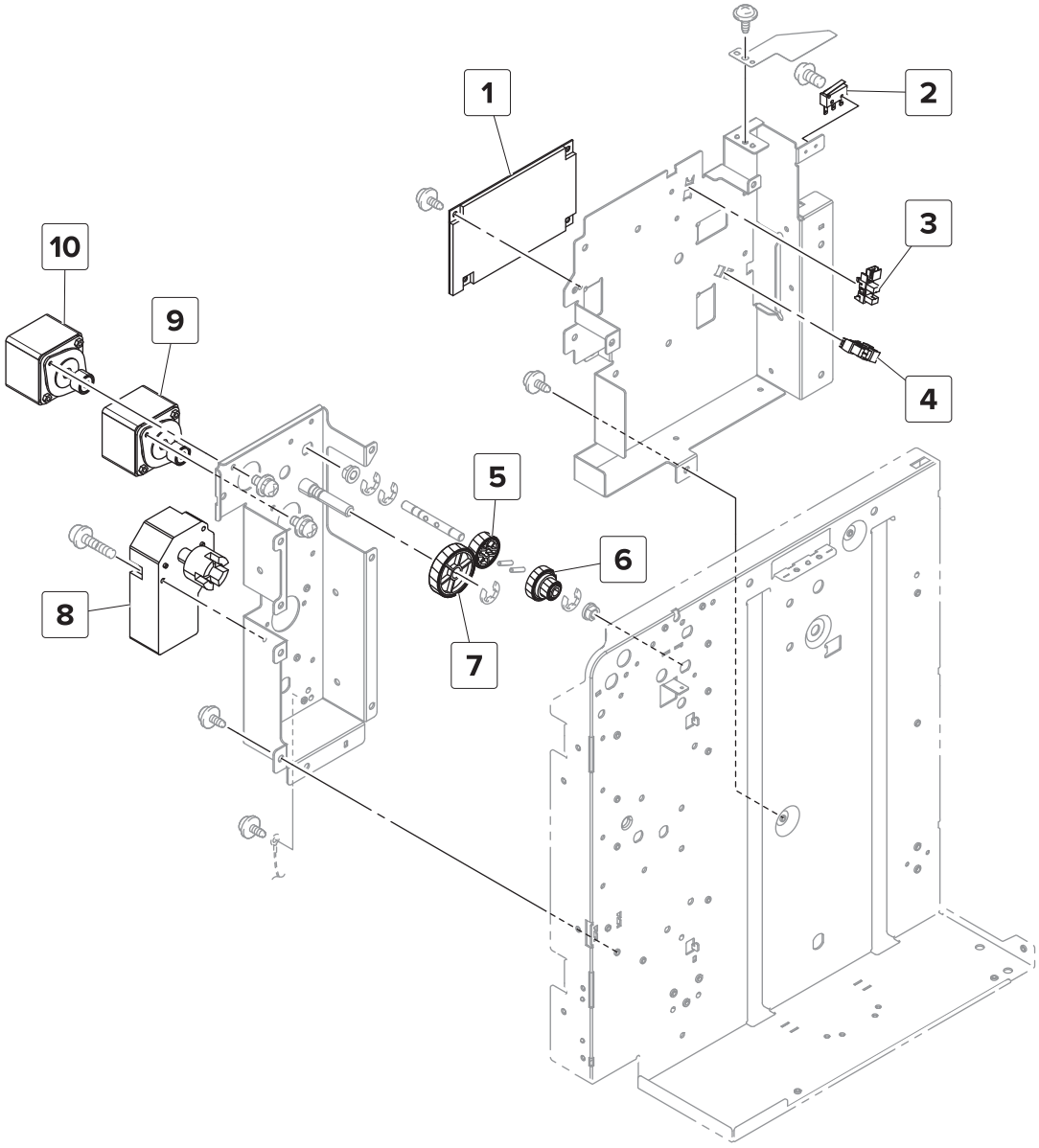
Assembly 80: 3000-sheet tray—Elevator rear section



Assembly 80: 3000-sheet tray—Elevator rear section

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9277	1	1	3000-sheet tray elevator release spring	--

Assembly 81: 3000-sheet tray—Drive section



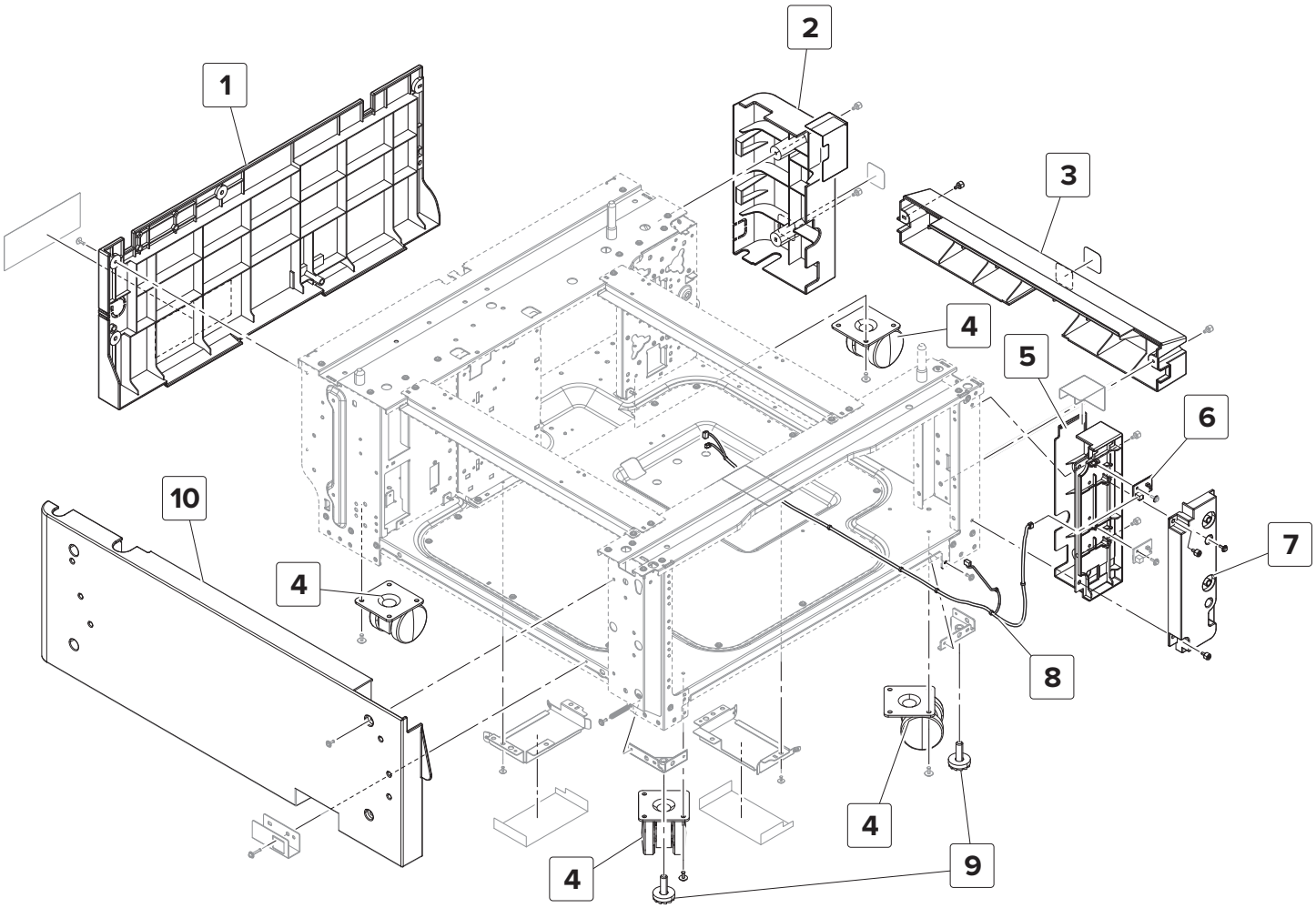
Assembly 81: 3000-sheet tray—Drive section

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9262	1	1	3000-sheet tray controller board	"3000-sheet tray controller board removal" on page 513
2	40X9266	1	1	3000-sheet tray door switch	"3000-sheet tray door switch removal" on page 514
3	40X9880	1	1	Sensor (3000-sheet tray near empty 1)	"Sensor (3000-sheet tray near empty) removal" on page 517
4	40X9880	1	1	Sensor (3000-sheet tray near empty 2)	"Sensor (3000-sheet tray near empty) removal" on page 517
5	40X9767	1	1	3000-sheet tray feed motor idler gear	"3000-sheet tray feed roller assembly removal" on page 520
6	40X9766	1	1	3000-sheet tray feed and pick idler gear	"3000-sheet tray feed roller assembly removal" on page 520
7	40X9768	1	1	3000-sheet tray feed motor gear	"Motor (3000-sheet tray elevator) removal" on page 515
8	40X9264	1	1	Motor (3000-sheet tray elevator)	"Motor (3000-sheet tray elevator) removal" on page 515
9	40X9269	1	1	Motor (3000-sheet tray feed)	"3000-sheet tray feed and transport motors removal" on page 519
10	40X9269	1	1	Motor (3000-sheet tray transport)	"3000-sheet tray feed and transport motors removal" on page 519

Assembly 82: 3000-sheet tray—Wiring

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
NS	40X9202	1	1	3000-sheet tray controller board cable	--
NS	40X9698	1	1	3000-sheet tray interface cable	--

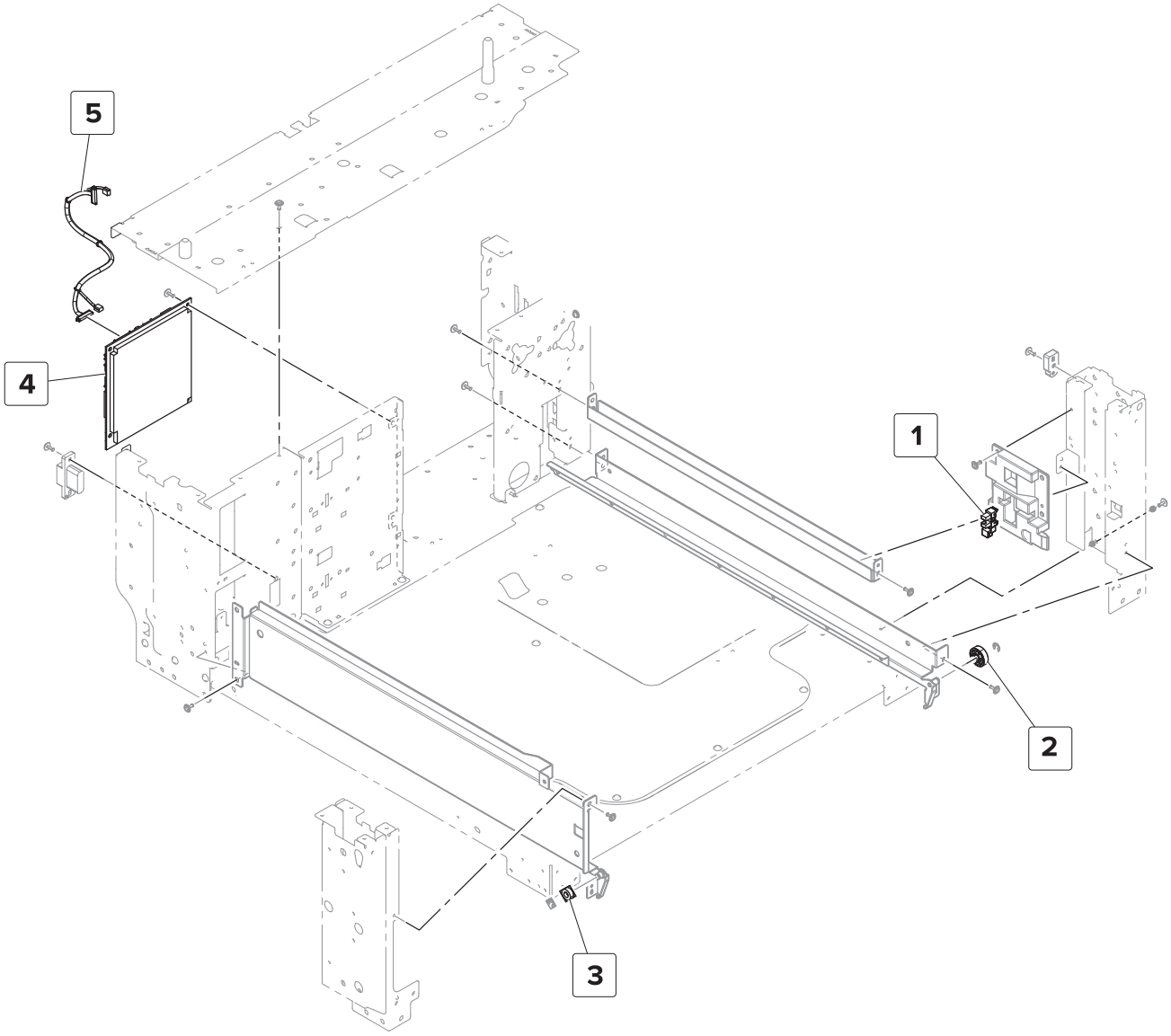
Assembly 83: 2500-sheet tray covers



Assembly 83: 2500-sheet tray covers

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9280	1	1	2500-sheet tray rear cover	"2500-sheet tray rear cover removal" on page 446
2	40X9779	1	1	2500-sheet tray rear right cover	"2500-sheet tray rear right cover removal" on page 447
3	40X9285	1	1	2500-sheet tray bottom right cover	"2500-sheet tray lower right cover removal" on page 445
4	40X9282	4	1	Caster wheel	"2500-sheet tray caster wheel removal" on page 442
5	40X9286	1	1	2500-sheet tray LED mount	--
6	40X8903	1	1	Tray empty LED	"2500-sheet tray empty LED removal" on page 446
7	40X9287	1	1	2500-sheet tray LED cover	"2500-sheet tray LED cover removal" on page 444
8	40X9782	1	1	Tray empty LED cable	--
9	40X9283	2	1	Tray stopper	"2500-sheet tray stopper removal" on page 459
10	40X9281	1	1	2500-sheet tray left cover	"2500-sheet tray left cover removal" on page 445

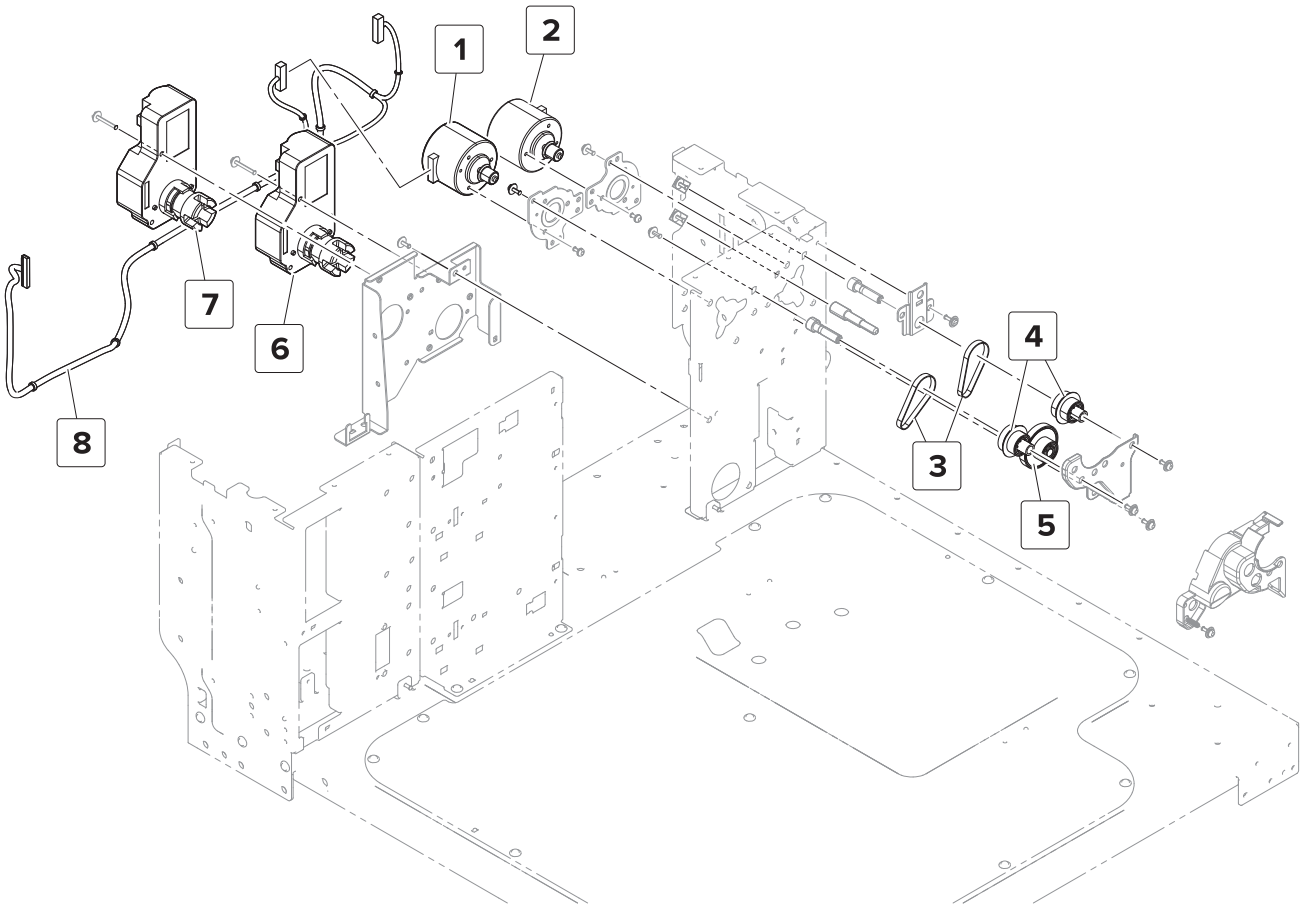
Assembly 84: 2500-sheet tray frame



Assembly 84: 2500-sheet tray frame

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X8869	1	1	Sensor (2500-sheet tray set)	"Sensor (2500-sheet tray set) removal" on page 471
2	40X8981	1	1	Tray rail guide wheel	--
3	40X9784	1	1	Tray insert guide wheel	--
4	40X9785	1	1	2500-sheet tray controller board	"2500-sheet tray controller board removal" on page 443
5	40X9783	1	1	2500-sheet tray interface cable	--

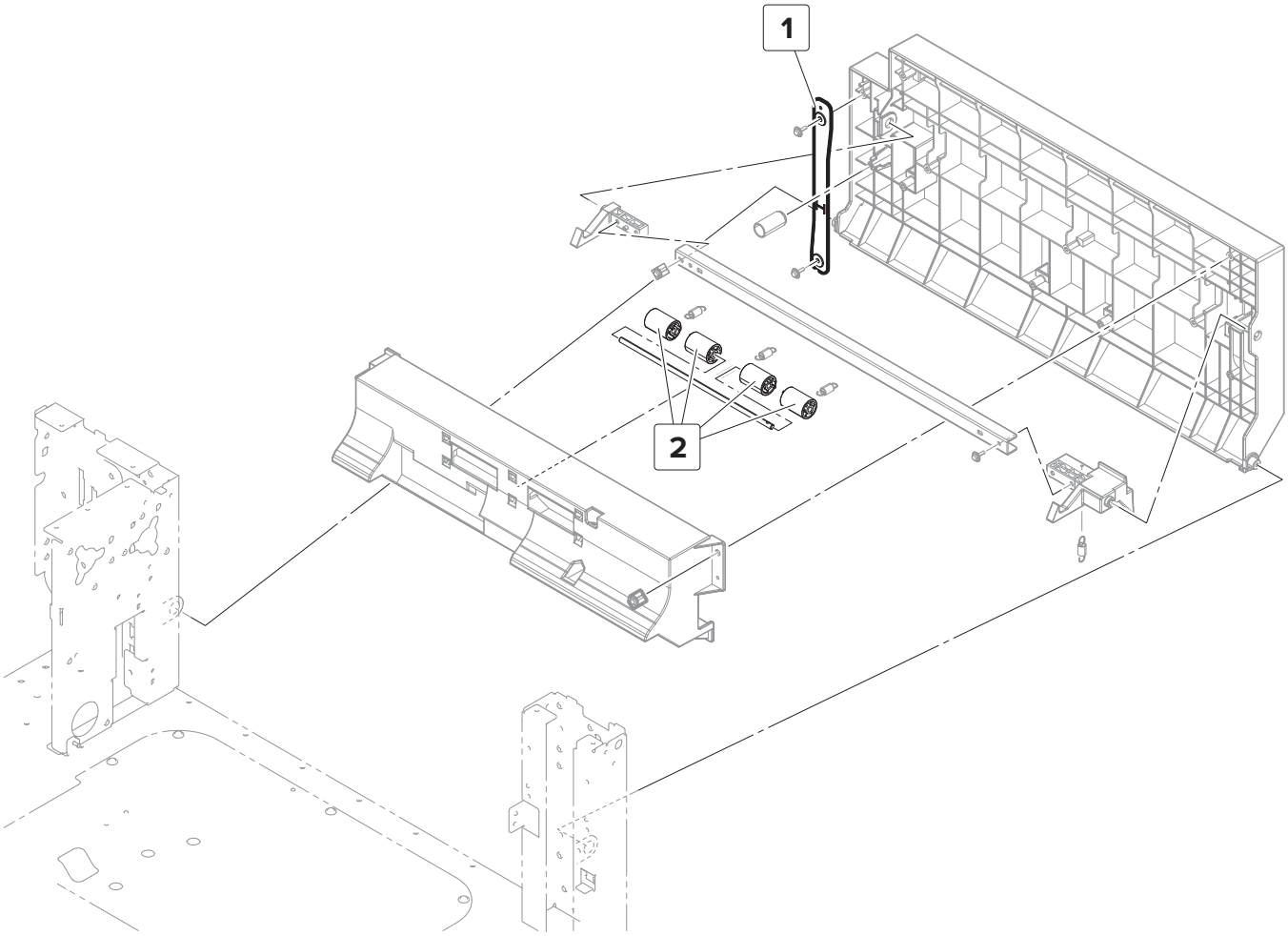
Assembly 85: 2500-sheet tray paper feed



Assembly 85: 2500-sheet tray paper feed

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9293	1	1	Motor (2500-sheet tray feed)	“Motor (2500-sheet tray feed) removal” on page 461
2	40X9293	1	1	Motor (2500-sheet tray transport)	“Motor (2500-sheet tray transport) removal” on page 462
3	40X9294	2	1	2500-sheet tray feed and transport motor belt	--
4	40X9891	2	1	2500-sheet tray feed and transport primary gear	--
5	40X9295	1	1	2500-sheet tray feed and transport secondary gear	--
6	40X9896	1	1	Motor (2500-sheet tray elevator)	“Motor (2500-sheet tray elevator) removal” on page 460
7	40X9896	1	1	Motor (2500-sheet tray transfer guide)	“Motor (2500-sheet tray transfer guide) removal” on page 462
8	40X9882	1	1	2500-sheet tray feed and transport motor cable	--

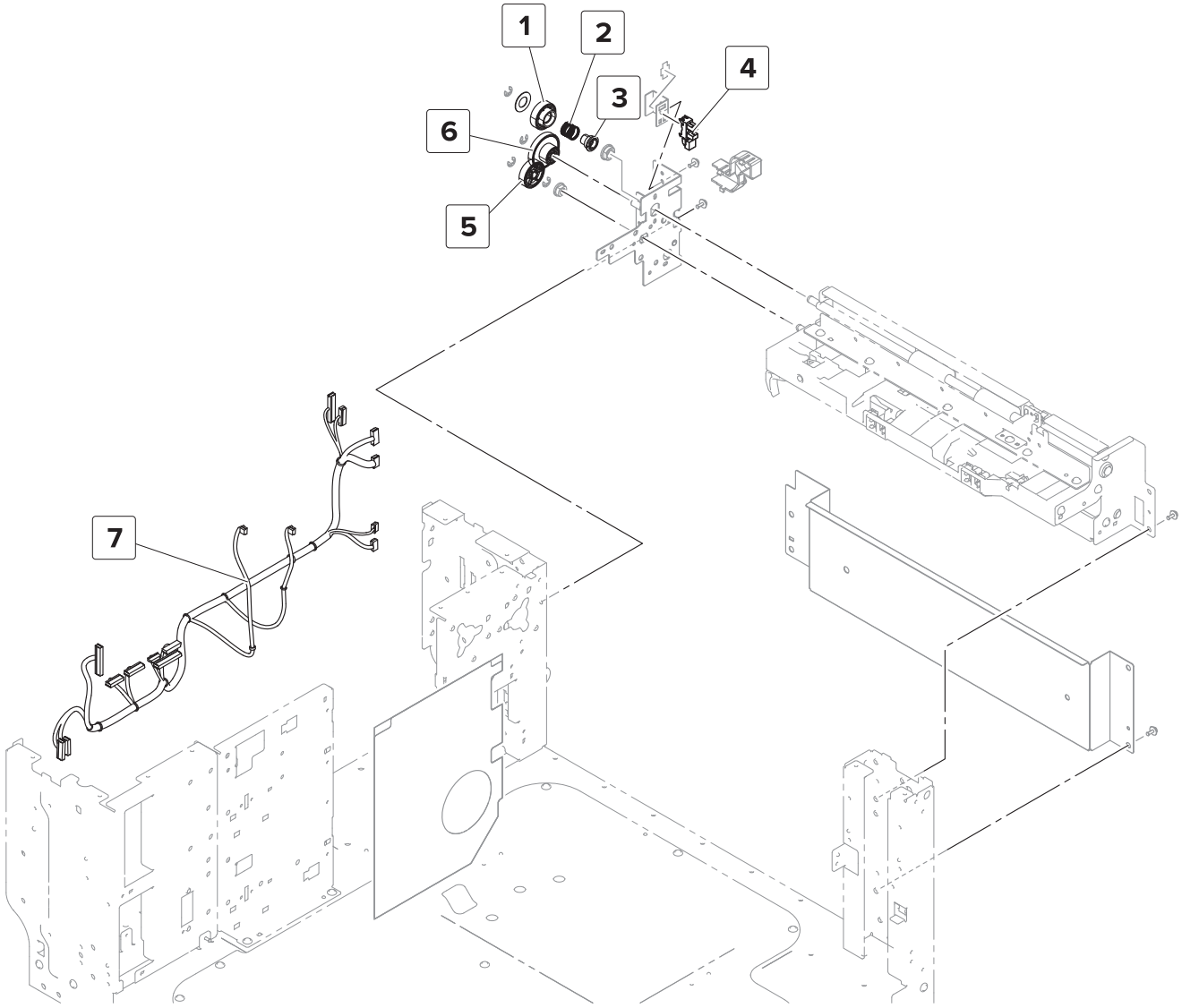
Assembly 86: 2500-sheet tray paper transport



Assembly 86: 2500-sheet tray paper transport

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9908	1	1	2500-sheet tray jam access door strap	“2500-sheet tray jam access door strap removal” on page 455
2	40X8973	4	1	Transport idler roller	--

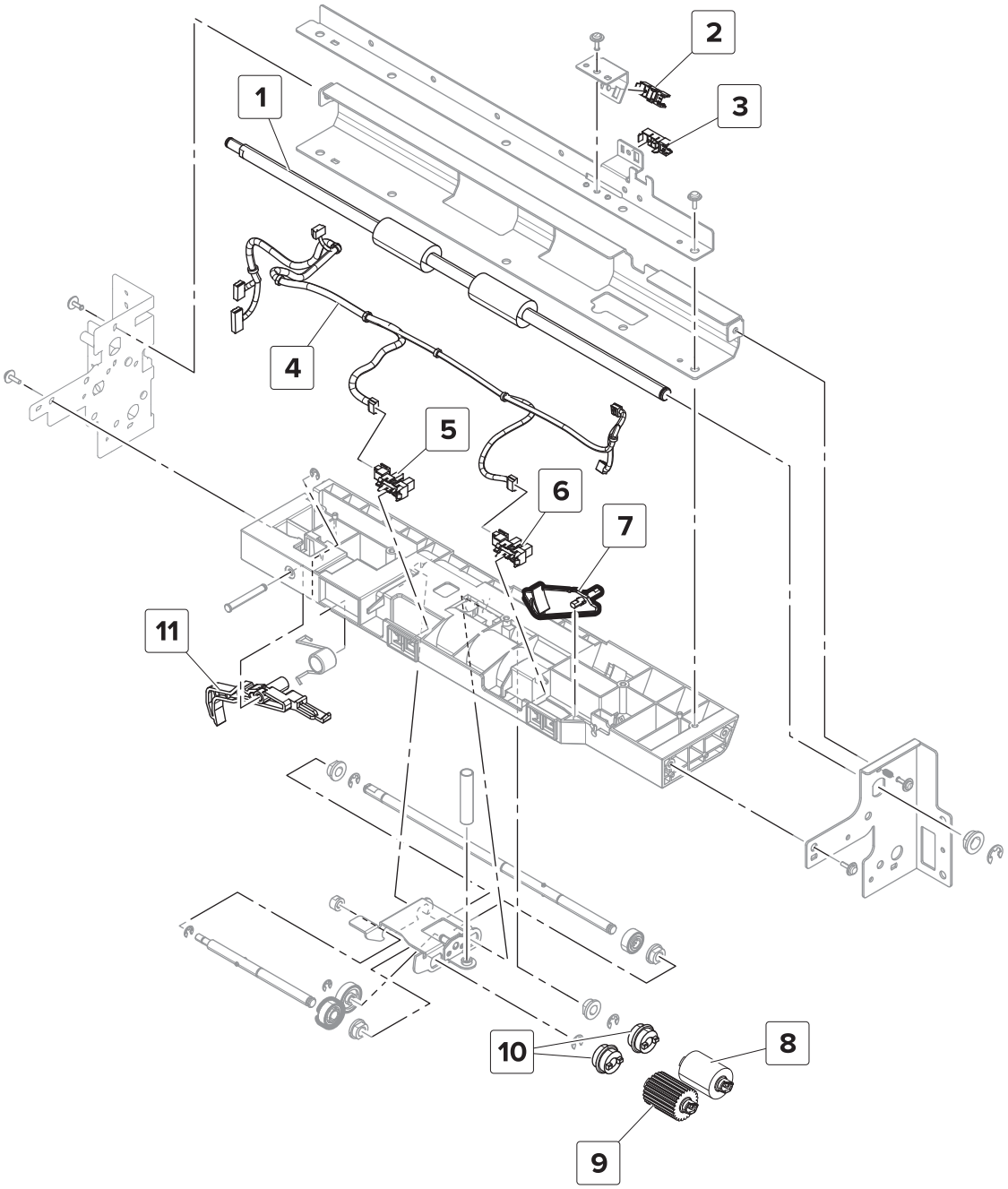
Assembly 87: 2500-sheet tray paper pick 1



Assembly 87: 2500-sheet tray paper pick 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9298	1	1	2500-sheet tray transport gear	--
2	40X9892	1	1	2500-sheet tray transport gear spring	--
3	40X9893	1	1	2500-sheet tray transport gear bushing	--
4	40X9313	1	1	Sensor (2500-sheet tray jam access door)	**“Sensor (2500-sheet tray jam access door) removal” on page 463**
5	40X9894	1	1	2500-sheet tray feed primary gear	--
6	40X9295	1	1	2500-sheet tray feed secondary gear	--
7	40X9786	1	1	2500-sheet tray cable harness	--

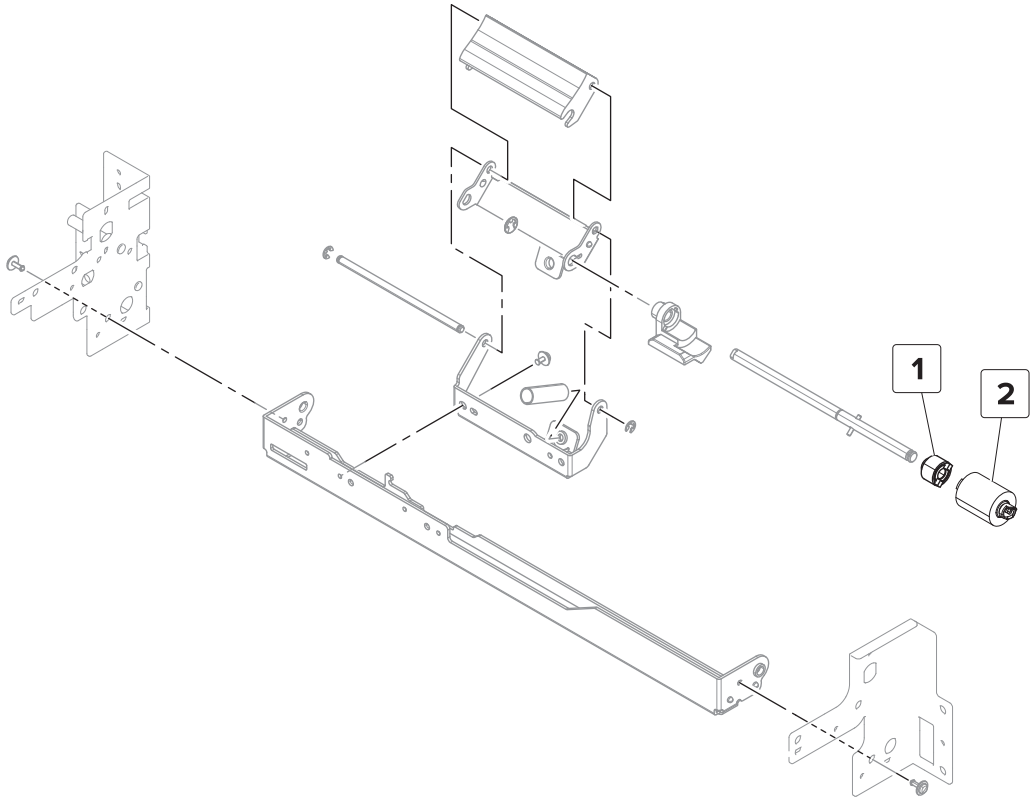
Assembly 88: 2500-sheet tray paper pick 2



Assembly 88: 2500-sheet tray paper pick 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9299	1	1	2500-sheet tray transport roller	"2500-sheet tray transport roller removal" on page 453
2	40X8968	1	1	Sensor (2500-sheet tray feed)	"Sensor (2500-sheet tray feed) removal" on page 468
3	40X8968	1	1	Sensor (2500-sheet tray transport)	"Sensor (2500-sheet tray transport) removal" on page 472
4	40X9787	1	1	2500-sheet tray pick assembly sensor cable	--
5	40X8869	1	1	Sensor (2500-sheet tray main tray elevator limit)	"Sensor (2500-sheet tray main tray elevator limit) removal" on page 467
6	40X8869	1	1	Sensor (2500-sheet tray main tray empty, top)	"Sensor (2500-sheet tray main tray empty, top) removal" on page 467
7	40X9899	1	1	2500-sheet tray main tray top empty actuator	--
8	40X8970	1	1	Feed roller	--
9	40X9925	1	1	Pick roller	--
10	40X9981	2	1	Roller clutch	--
11	40X9982	1	1	2500-sheet tray tray set actuator	--

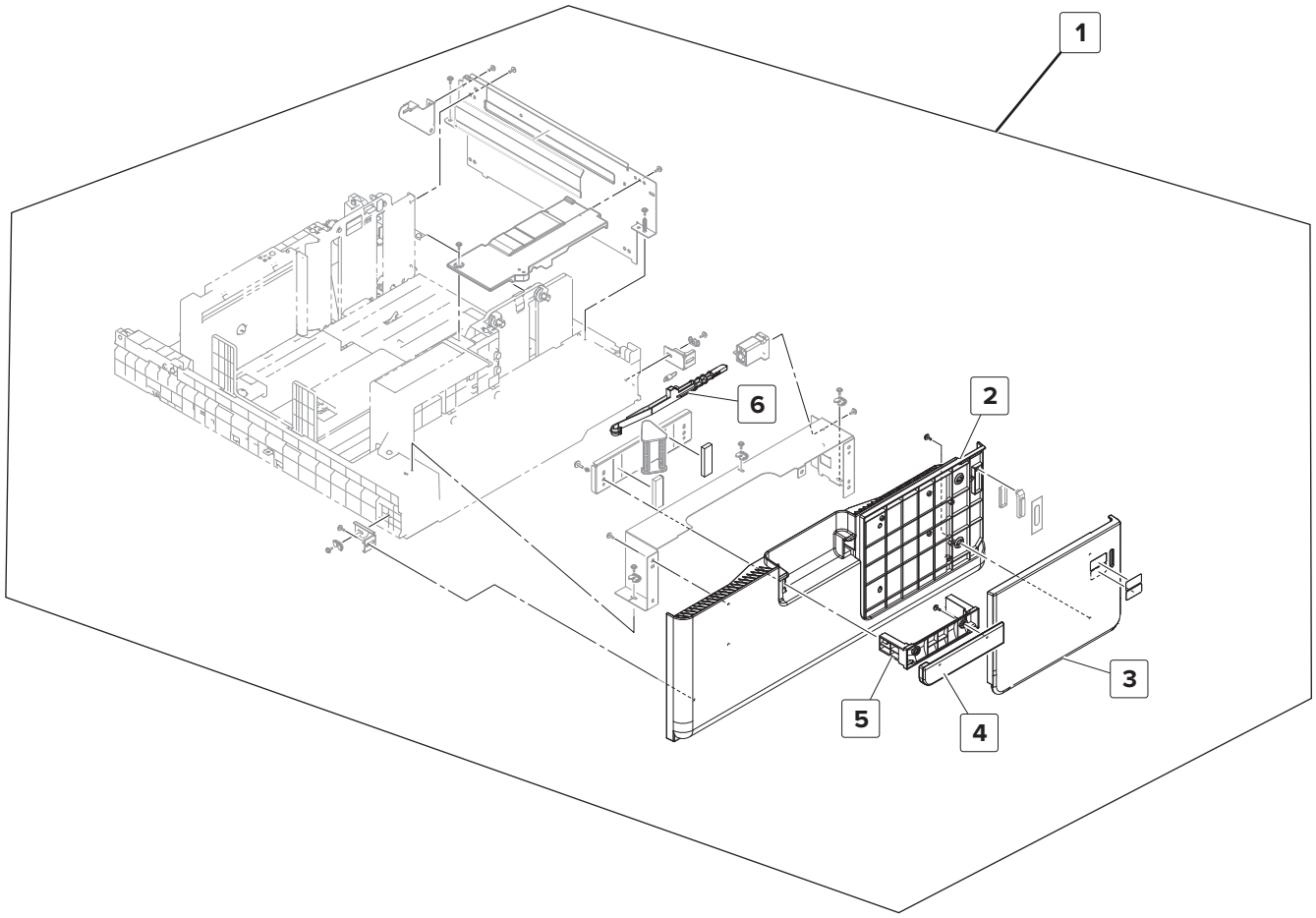
Assembly 89: 2500-sheet tray paper pick 3



Assembly 89: 2500-sheet tray paper pick 3

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9455	1	1	Separator clutch	--
2	40X8970	1	1	Separator roller	--

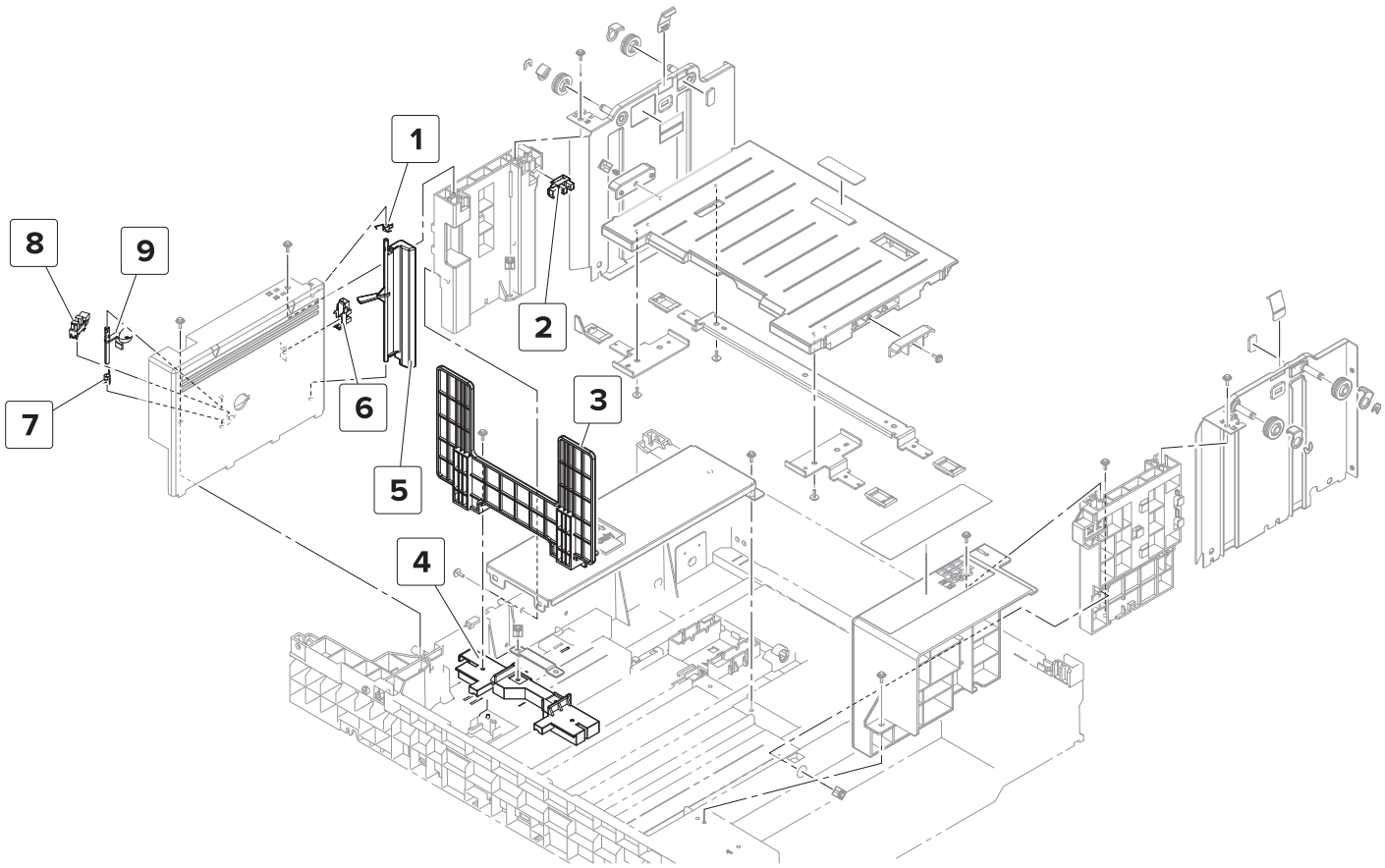
Assembly 90: 2500-sheet tray insert 1



Assembly 90: 2500-sheet tray insert 1

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9602	1	1	2500-sheet tray insert (LTR)	--
1	40X9576	1	1	2500-sheet tray insert (A4)	--
2	40X9789	1	1	2500-sheet tray front cover	--
3	40X9339	1	1	2500-sheet tray right front cover	--
4	40X9320	1	1	2500-sheet tray handle cover	--
5	40X9186	1	1	2500-sheet tray handle	--
6	40X9788	1	1	2500-sheet tray lock lever	--

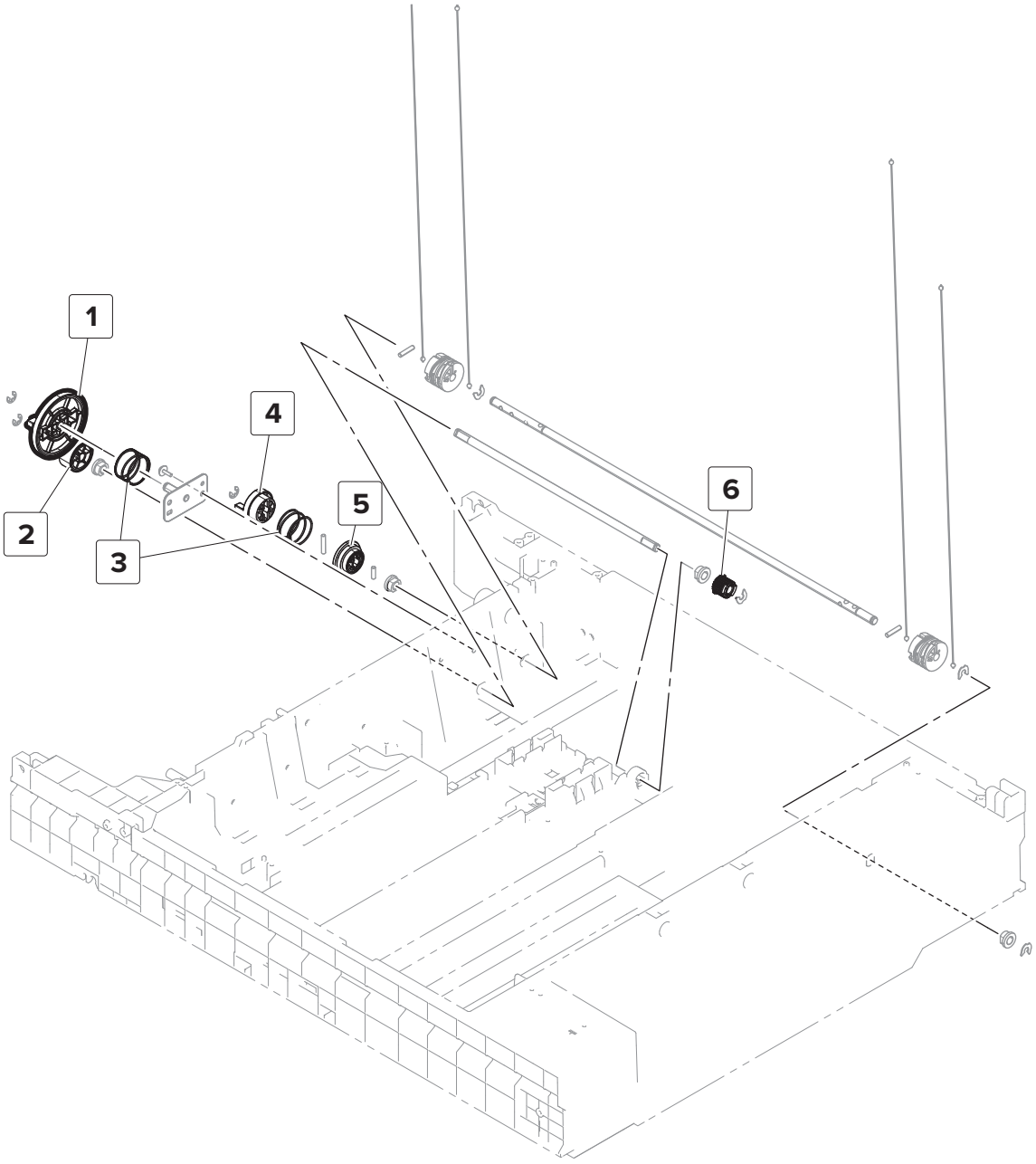
Assembly 91: 2500-sheet tray insert 2



Assembly 91: 2500-sheet tray insert 2

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9794	1	1	Paper stack transfer sensor actuator spring	--
2	40X8869	1	1	Sensor (main tray near empty)	"Sensor (2500-sheet tray main tray near empty) removal" on page 466
3	40X9792	1	1	Paper stack transfer guide	"2500-sheet tray paper stack transfer guide removal" on page 457
4	40X9791	1	1	Paper stack transfer guide base	"2500-sheet tray paper stack transfer guide removal" on page 457
5	40X9793	1	1	Paper stack transfer sensor actuator (A4)	--
5	40X9263	1	1	Paper stack transfer sensor actuator (LTR)	--
6	40X8869	1	1	Sensor (paper stack transfer)	"Sensor (2500-sheet paper stack transfer) removal" on page 464
7	40X9883	1	1	Reserve tray paper limit sensor actuator spring	--
8	40X8869	1	1	Sensor (reserve tray paper limit)	"Sensor (2500-sheet tray reserve tray paper limit) removal" on page 470
9	40X9900	1	1	Reserve tray paper limit sensor actuator	"2500-sheet reserve tray paper limit sensor actuator removal" on page 451

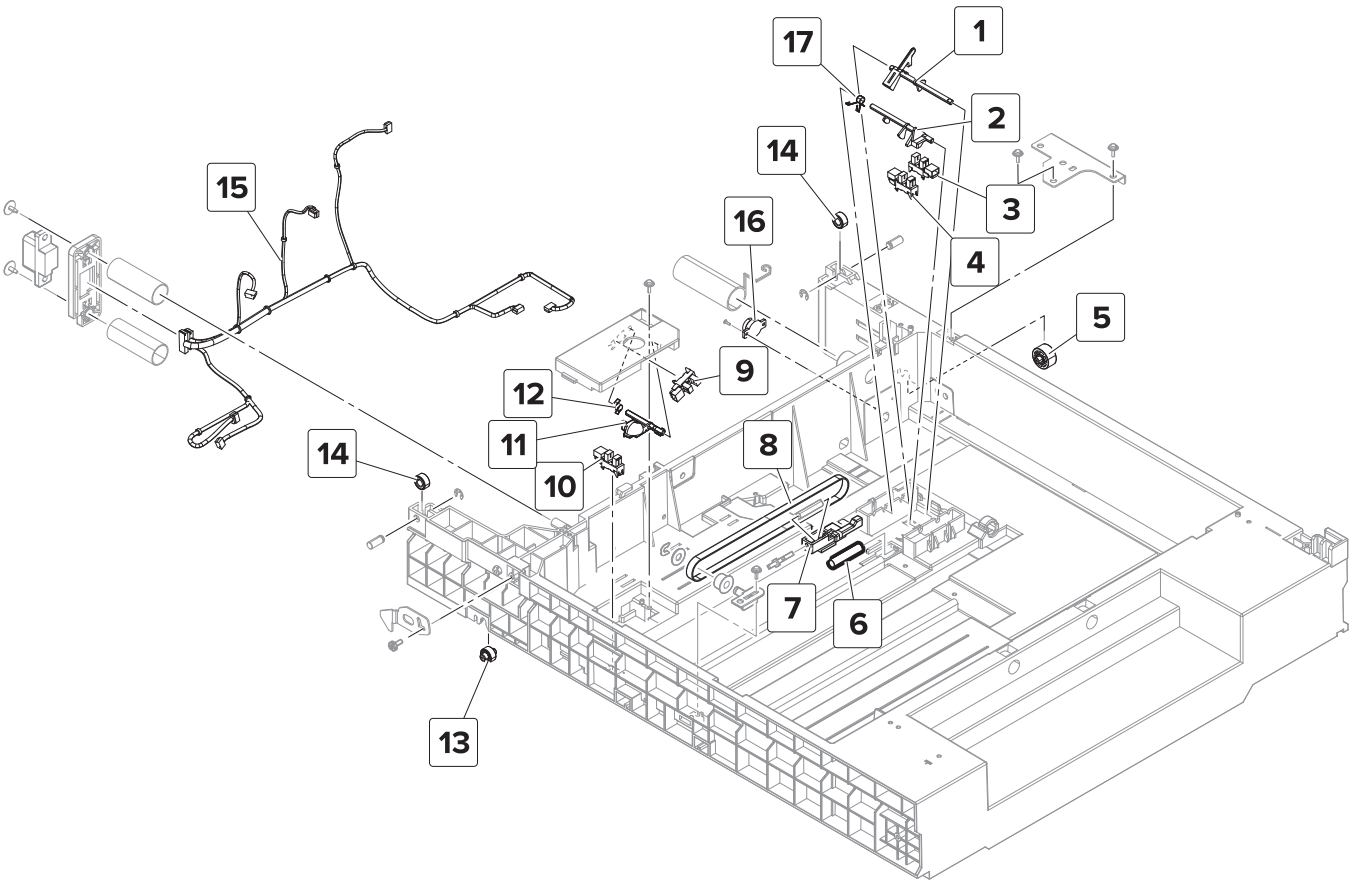
Assembly 92: 2500-sheet tray insert 3



Assembly 92: 2500-sheet tray insert 3

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9796	1	1	Transfer guide primary gear	--
2	40X9798	1	1	Main tray elevator coupling	--
3	40X9901	2	1	Main tray elevator gear spring	--
4	40X9902	1	1	Main tray elevator gear	--
5	40X9797	1	1	Transfer guide primary gear spring	--
6	40X9795	1	1	Transfer guide secondary gear	--

Assembly 93: 2500-sheet tray insert 4



Assembly 93: 2500-sheet tray insert 4

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
1	40X9802	1	1	2500-sheet tray main tray empty sensor bottom actuator	"2500-sheet tray main tray empty sensor bottom actuator removal" on page 448
2	40X9801	1	1	2500-sheet tray elevator home sensor actuator	"2500-sheet tray elevator home sensor actuator removal" on page 449
3	40X8869	1	1	Sensor (main tray empty, bottom)	"Sensor (2500-sheet tray main tray empty, bottom) removal" on page 465
4	40X8869	1	1	Sensor (2500-sheet tray elevator home)	"Sensor (2500-sheet tray elevator home) removal" on page 465
5	40X9799	1	1	Tray insert bottom right guide wheel	--
6	40X9804	1	1	2500-sheet tray transfer guide stop spring	--
7	40X9803	1	1	2500-sheet tray transfer guide stop	"2500-sheet tray transfer guide stop removal" on page 450
8	40X9808	1	1	Transfer guide belt	--
9	40X8869	1	1	Sensor (reserve tray empty)	"Sensor (2500-sheet tray reserve tray empty) removal" on page 469
10	40X8869	1	1	Sensor (2500-sheet tray transfer guide home)	"Sensor (2500-sheet tray transfer guide home) removal" on page 470
11	40X9900	1	1	Reserve tray empty sensor actuator	"2500-sheet reserve tray empty sensor actuator removal" on page 459
12	40X9883	1	1	Reserve tray empty sensor actuator spring	"2500-sheet reserve tray empty sensor actuator removal" on page 459
13	40X9805	1	1	Tray insert bottom left guide wheel	--
14	40X9305	2	1	Tray insert guide wheel	--
15	40X9809	1	1	2500-sheet tray tray insert sensor cable	--
16	40X9806	1	1	2500-sheet tray elevator damper	--
17	40X9800	1	1	2500-sheet tray elevator home sensor actuator spring	--

Assembly 94: Maintenance kits

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	40X9669	1	1	Maintenance kit, 300K includes: • Pick roller • Feed/separator roller • Transfer belt maintenance kit	--
NS	40X9672	1	1	Maintenance kit, 200K (ADF) includes: • ADF pick roller • ADF feed roller • ADF separator roller	--
NS	40X9673	1	1	Maintenance kit, 200K (MPF) includes: • MPF feed roller • MPF separator roller	--

Assembly 95: Power cords

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	40X7104	1	1	Power cord, 2.5 m (right-angled)—USA, Canada, Latin America	--
NS	40X0288	1	1	Power cord, 2.5 m (straight)—Argentina	--
NS	40X1766	1	1	Power cord, 2.5 m (straight)—Bolivia, Peru	--
NS	40X0273	1	1	Power cord, 2.5 m (straight)—Italy, Chile, Uruguay	--
NS	40X3141	1	1	Power cord, 2.5 m (straight)—Europe, Middle East, Indonesia, Africa (HV)	--
NS	40X4596	1	1	Power cord, 2.5 m (straight)—Brazil	--
NS	40X0271	1	1	Power cord, 2.5 m (straight)—UK, Ireland, Hong Kong, Italy	--
NS	40X0301	1	1	Power cord, 2.5 m (straight)—Australia, New Zealand	--
NS	40X0270	1	1	Power cord, 2.5 m (straight)—Japan	--
NS	40X1792	1	1	Power cord, 2.5 m (straight)—Korea	--
NS	40X0303	1	1	Power cord, 2.5 m (straight)—PRC	--
NS	40X1791	1	1	Power cord, 2.5 m (straight)—Taiwan	--
NS	40X1774	1	1	Power cord, 2.5 m (straight)—Denmark, Finland, Norway, Sweden	--
NS	40X0275	1	1	Power cord, 1.8 m (straight)—Israel	--
NS	40X1773	1	1	Power cord, 2.5 m (straight)—South Africa, Hong Kong, Singapore, Thailand, Malaysia	--
NS	40X1772	1	1	Power cord, 2.5 m (straight)—Liechtenstein, Switzerland	--
NS	40X7229	1	1	Power cord, 2.5 m (straight)—India	--

Assembly 96: Miscellaneous

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	41X0010	1	1	Forms and Bar Code Card	--
NS	41X0012	1	1	IPDS card	--
NS	41X0011	1	1	PRESCRIBE card	--
NS	41X0030	1	1	Keyboard kit, English	--
NS	41X0031	1	1	Keyboard kit, French	--
NS	41X0032	1	1	Keyboard kit, Italian	--
NS	41X0033	1	1	Keyboard kit, German	--
NS	41X0034	1	1	Keyboard kit, Spanish	--
NS	40X1368	1	1	USB cable, packaged (2 meters)	--
NS	40X4819	1	1	Serial interface card, RS-232C	--
NS	40X4823	1	1	Parallel interface card, 1284-B	--
NS	40X7445	1	1	DDR3 RAM, 2 GB x32	--
NS	40X7567	1	1	DDR3 RAM, 1 GB x32	--
NS	40X8555	1	1	Flash memory, 256 MB	--
NS	40X8556	1	1	Font card, Traditional Chinese	--
NS	40X8557	1	1	Font card, Simplified Chinese	--
NS	40X8568	1	1	Font card, Korean	--
NS	40X8569	1	1	Font card, Japanese	--
NS	40X8570	1	1	Font card, Arabic	--
NS	40X8571	1	1	Font card, Hebrew	--
NS	40X8311	1	1	Card reader, small stick-on case	--
NS	40X8312	1	1	Card reader, large stick-on case	--
NS	40X8313	1	1	Card reader, small snap-on case	--
NS	40X8314	1	1	Card reader, large snap-on case	--
NS	40X7858	1	1	Wireless print server kit, MarkNet N8350 802.11b/g/n	--
NS	40X7854	1	1	Fax card	--

Appendix A: Printer specifications

Power consumption

Product power consumption

The following table documents the power consumption characteristics of the product.

Note: Some models may not apply to your product.

Mode	Description	Power consumption (Watts)
Printing	The product is generating hard-copy output from electronic inputs.	One-sided: 865 (MX910de), 925 (MX911de, MX911dte),985 (MX912de, MX912dxe); Two-sided: 790 (MX910de), 850 (MX911de, MX911dte), 890 (MX912de, MX912dxe)
Copy	The product is generating hard-copy output from hard-copy original documents.	880 (MX910de); 950 (MX911de, MX911dte); 1000 (MX912de, MX912dxe)
Scan	The product is scanning hard-copy documents.	230
Ready	The product is waiting for a print job.	220
Sleep Mode	The product is in a high-level energy-saving mode.	3.5
Hibernate	The product is in a low-level energy-saving mode.	0.6
Off	The product is plugged into an electrical outlet, but the power switch is turned off.	0

The power consumption levels listed in the previous table represent time-averaged measurements. Instantaneous power draws may be substantially higher than the average.

Values are subject to change. See **www.lexmark.com** for current values.

Sleep Mode

This product is designed with an energy-saving mode called *Sleep Mode*. The Sleep Mode saves energy by lowering power consumption during extended periods of inactivity. The Sleep Mode is automatically engaged after this product is not used for a specified period of time, called the *Sleep Mode Timeout*.

Factory default Sleep Mode Timeout for this product—20 minutes

By using the configuration menus, the Sleep Mode Timeout can be modified between 1 minute and 120 minutes. setting the Sleep Mode Timeout to a low value reduces energy consumption, but may increase the response time of the product. Setting the Sleep Mode Timeout to a high value maintains a fast response, but uses more energy.

Hibernate Mode

This product is designed with an ultra-low power operating mode called *Hibernate Mode*. When operating in Hibernate Mode, all other systems and devices are powered down safely.

The Hibernate mode can be entered in any of the following methods:

- Using the Hibernate Timeout
- Using the Schedule Power modes
- Using the Sleep/Hibernate button

Factory default Hibernate Timeout for this product in all countries or regions—3 days

The amount of time the printer waits after a job is printed before it enters Hibernate mode can be modified between one hour and one month.

Off mode

If this product has an off mode which still consumes a small amount of power, then to completely stop product power consumption, disconnect the power supply cord from the electrical outlet.

Total energy usage

It is sometimes helpful to calculate the total product energy usage. Since power consumption claims are provided in power units of Watts, the power consumption should be multiplied by the time the product spends in each mode in order to calculate energy usage. The total product energy usage is the sum of each mode's energy usage.

Operating clearances

1	Rear	12 cm (4.8 in.)
2	Right side	40 cm (15.7 in.)
3	Front	44 cm (17.5 in.)
4	Left side	12 cm (4.8 in.)

5	Top	40 cm (15.7 in.)
Allow additional clearance around the printer for the optional input trays.		

Noise emission levels

The following measurements were made in accordance with ISO 7779 and reported in conformance with ISO 9296.

Note: Some models may not apply to your product.

Mode	1-meter average sound pressure, dBA
Printing	One-sided: 52 (MX910de), 53 (MX911de, MX911dte), 55 (MX912de, MX912dxe); Two-sided: 55 (MX910de, MX911de, MX911dte), 56 (MX912de, MX912dxe)
Scanning	57 (MX910de); 56 (MX911de, MX911dte, MX912de, MX912dxe)
Copying	53 (MX910de); 54 (MX911de, MX911dte); 55 (MX911de, MX911dte)
Ready	29 (MX910de); 31 (MX911de, MX911dte, MX912de, MX912dxe)

Values are subject to change. See **www.lexmark.com** for current values.

Temperature information

Ambient operating temperature	10 to 30°C (50 to 86°F)
Shipping temperature	-10 to 40°C (14 to 104°F)
Storage temperature and relative humidity	-10 to 40°C (14 to 104°F) 15 to 85% RH

Appendix B: Options and features

Some of the options may not be available in every country or region.

Available internal options

- Memory card
  - DDR2 DIMM
  - Flash memory
    - Fonts
    - Firmware cards
      - Forms and Bar Code
      - PRESCRIBE
      - IPDS
- Lexmark Internal Solutions Ports (ISP)
  - Standard 10/100/1000 Ethernet
  - MarkNet™ N8350 802.11 b/g/n wireless print server
  - MarkNet N8352 802.11 b/g/n wireless print server

Media handling options

Some options may not be available for all models.

1	Standard 2 x 500-sheet tray
2	Optional 2 x 500-sheet tray
3	Optional 2500-sheet tray
4	Optional 3000-sheet tray
5	Multipurpose feeder
6	Staple finisher
7	Staple, hole punch finisher
8	Hole punch booklet finisher

Appendix C: Theory of operation

POR sequence

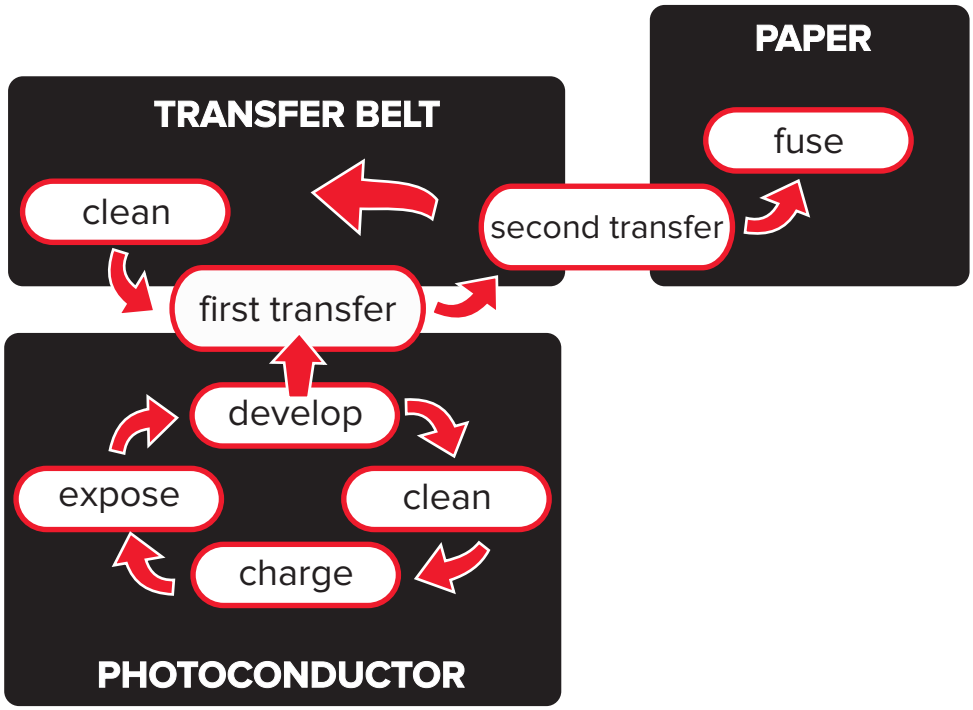
At power on, the engine code goes through a series of tests to verify hardware integrity. If a hardware failure is detected, then it is reported to the printer. If the POR sequence cannot be completed successfully, then the printer may post an error message identifying that service may be needed.

Printer control

The printer uses a single processor for both RIP and engine functions. The raster image processor (RIP) code performs system responsibilities such as computer connection, LAN, ISP attachments, and bitmap generation. The engine code performs tasks related to the operation of the electrical and mechanical device systems such as motors, lasers, power supplies, and fusers. The NVRAMs are located on the controller board and control panel, replacement of either the controller board or control panel will pull or mirror NVRAM data from each other.

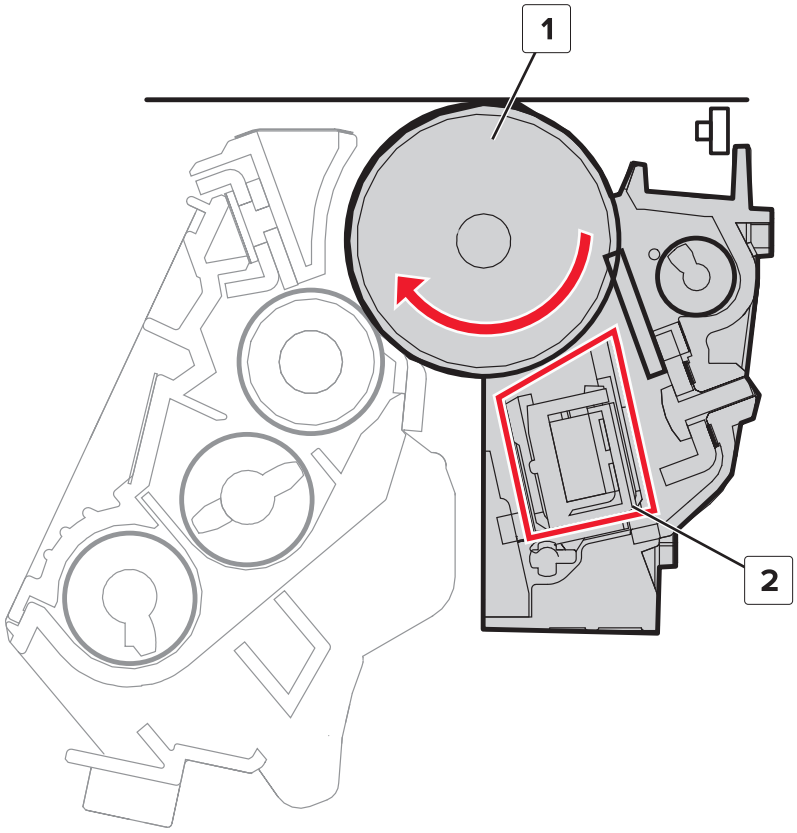
Print cycle operation

Flowchart



Charge

A uniform negative electrical charge is applied to the surface of the photoconductor roller. The photoconductive properties of the surface material allow it to hold the charge as long as it is not exposed to light.



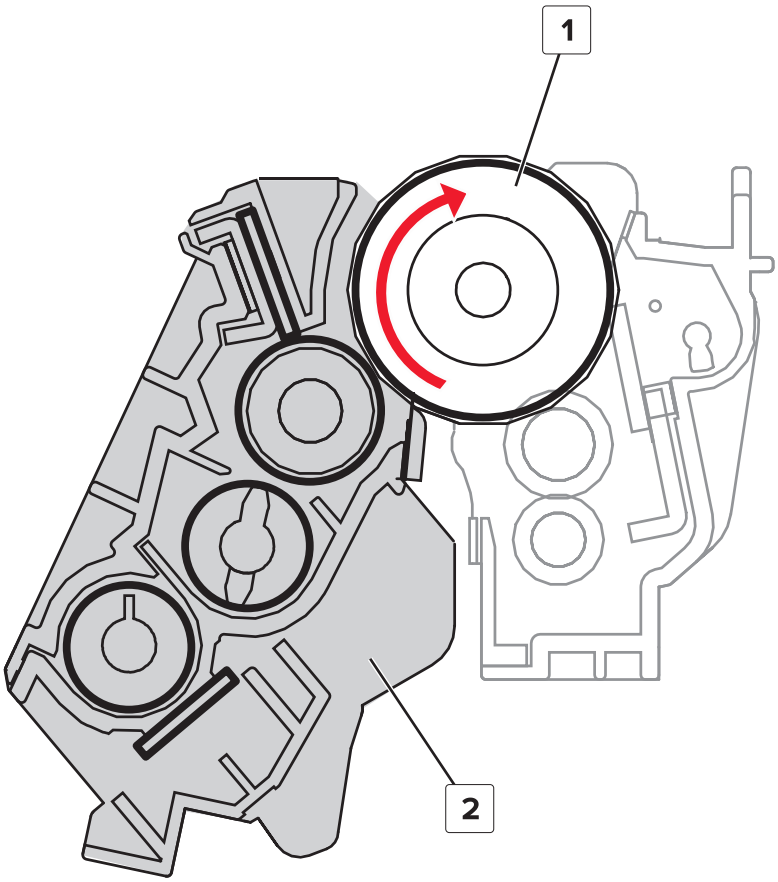
#	Part
1	Photoconductor roller
2	Charge source

Expose

The printhead emits the light that hits the surface of the photoconductor. The light turns on or off coinciding with the digital image that is printed. The light causes areas of the photoconductor surface to lose its charge resulting in a relative opposite polarity.

Develop

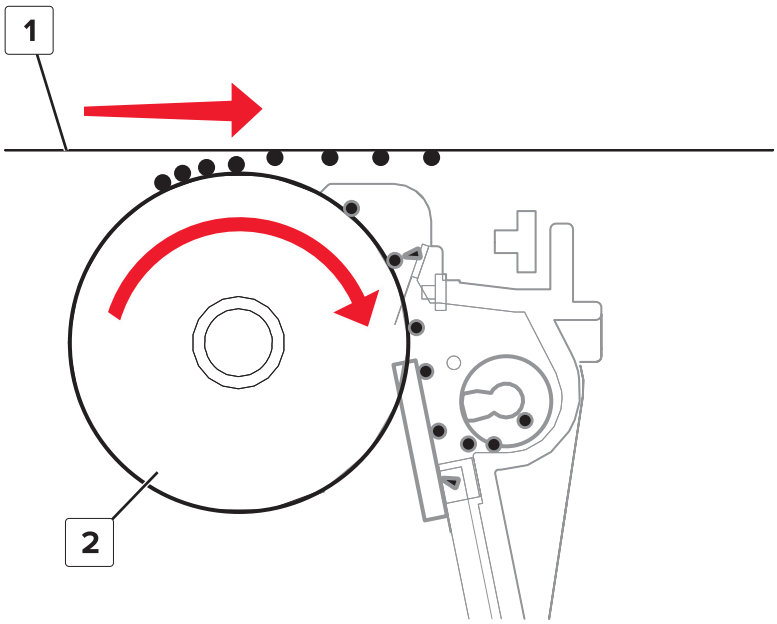
The developer feeds the toner from the toner cartridge to the photoconductor. The difference in charge causes the toner particles to attract to the areas of the photoconductor exposed to light.



#	Part
1	Photoconductor roller
2	Developer

First transfer

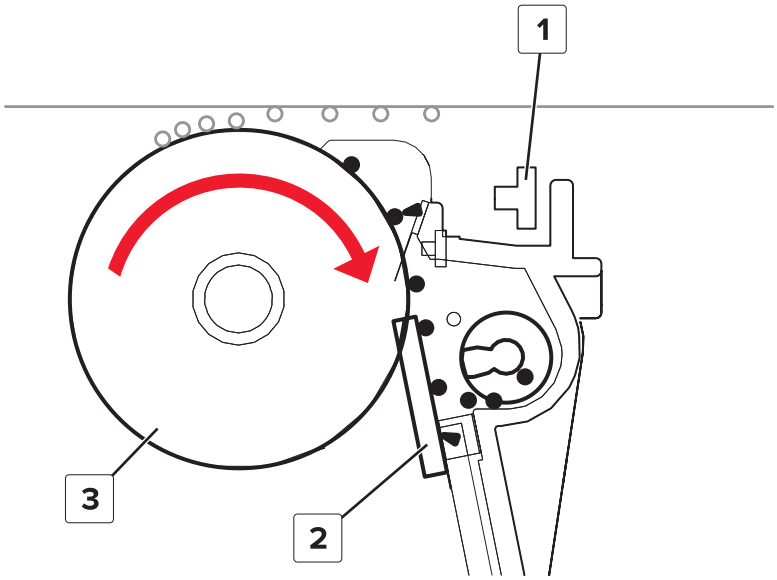
The image transfers from the photoconductor roller to the transfer belt. Due to relative opposite polarities, the transfer belt pressed against the photoconductor roller attracts the toner onto its surface.



#	Part
1	Transfer belt
2	Photoconductor roller

Clean (photoconductor)

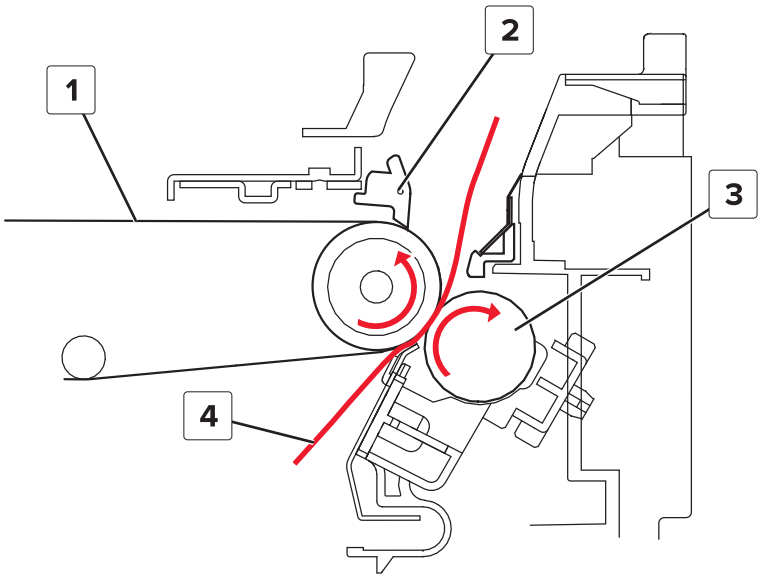
The erase LED emits light that neutralizes the remaining charge on the photoconductor surface. As a result, the toner loosens or separates from the photoconductor. Then, a cleaning blade scrapes off the remaining toner. The cycle (charge, expose, develop, first transfer, clean) repeats until the whole image is transferred to the transfer belt.



#	Part
1	Erase LED
2	Cleaning blade
3	Photoconductor roller

Second transfer

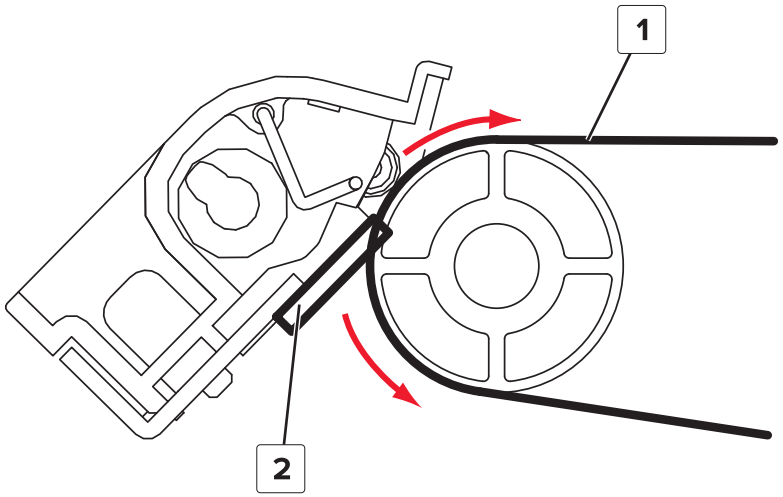
The whole image from the transfer belt is transferred again, this time onto the paper. The paper, which is pressed between the transfer belt and transfer roller, attracts the toner to its surface. As the paper moves up, a separator guide prevents it from entering the top side of the transfer belt.



#	Part
1	Transfer belt
2	Separator guide
3	Transfer roller
4	Paper

Clean (transfer belt)

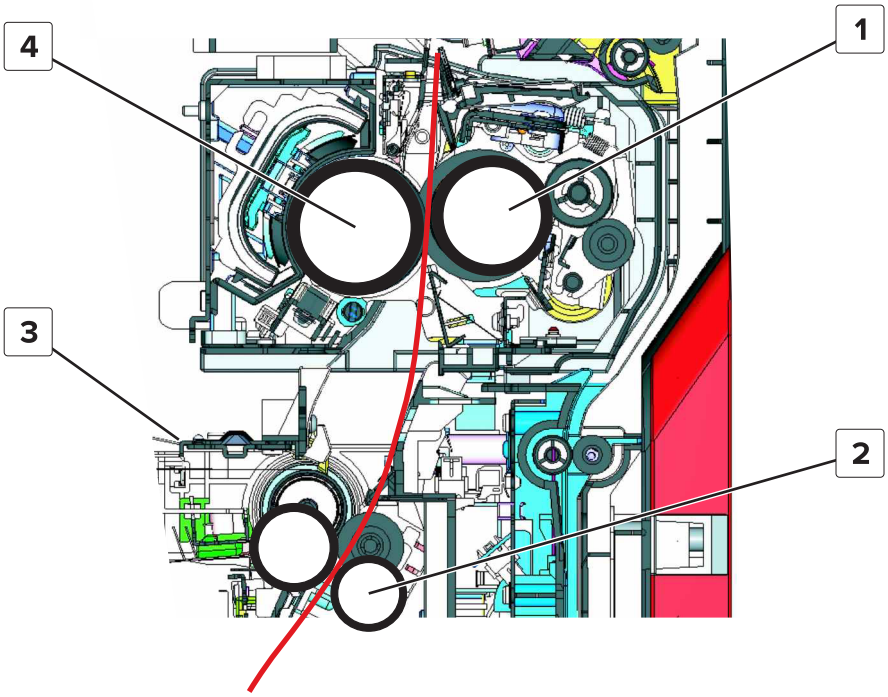
Some residual toner stick to the surface of the transfer belt. To prevent contamination on the next image, a cleaning blade scrapes off the toner from the transfer belt surface. Waste toner from the transfer belt and photoconductor is transported to the waste toner bottle. The cycle (first transfer, second transfer, clean) repeats for the succeeding print jobs.



#	Part
1	Transfer belt
2	Cleaning blade

Fuse

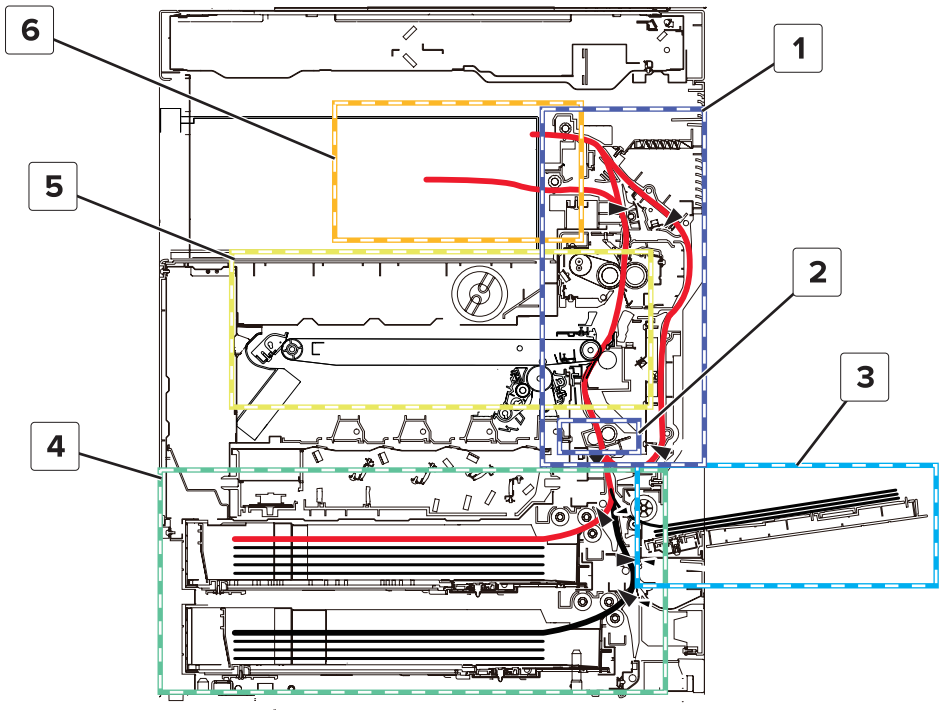
Even if the toner image is already on the paper, the toner particles are not yet permanently bonded to the surface. For the final part of printing, the paper is transported to the fuser where heat and pressure are applied to it. As a result, the toner particles melt and permanently fuse with the paper, completing the print process. The print cycle repeats for the succeeding pages.



#	Part
1	Pressure roller
2	Transfer roller
3	Transfer belt
4	Heat roller

Printer operation

Printer paper path

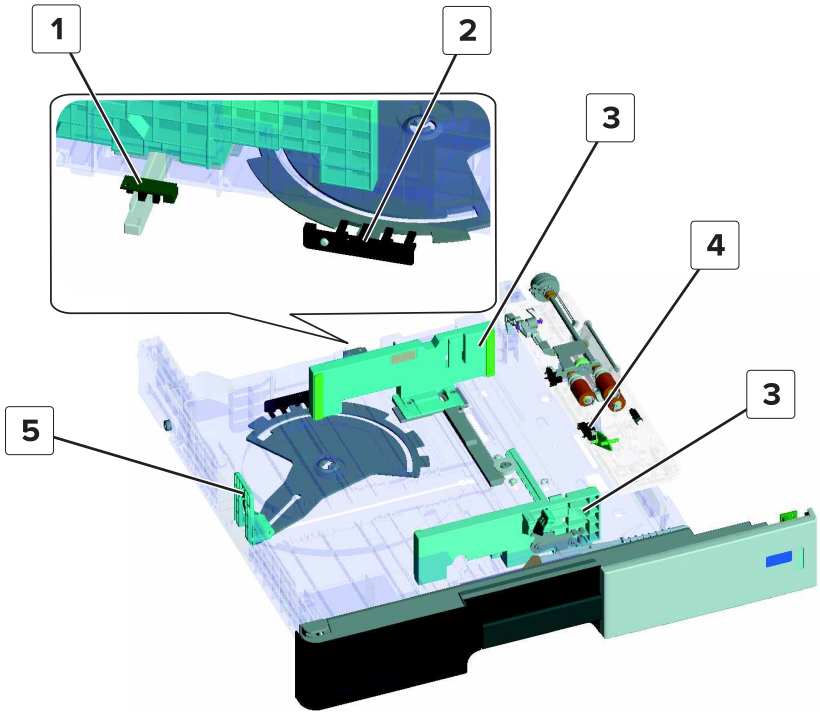


#	Part
1	Duplex section
2	Registration section
3	MPF section
4	Tray section
5	Print section
6	Exit section

Tray section

Paper presence and size detection

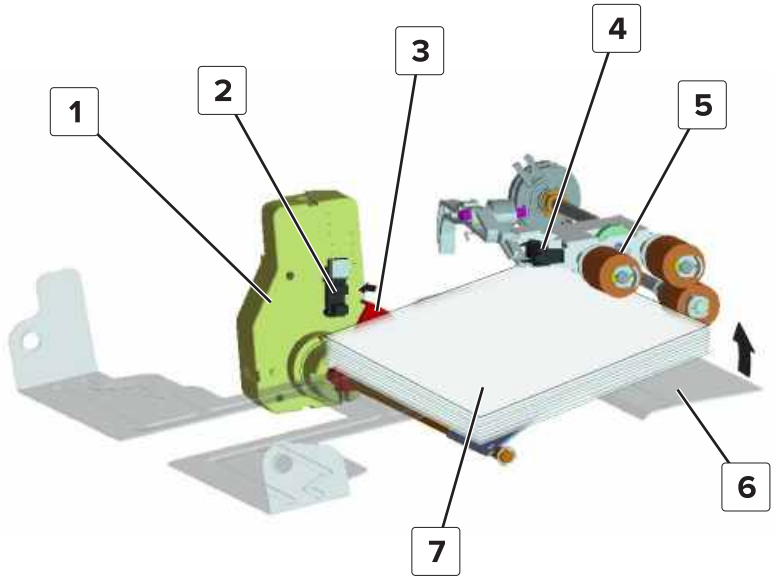
The sensor (tray empty) detects if there is no paper in the tray. The positions of the guides determine the dimensions of the paper. The sensor (paper width) and sensor (paper length) detect the position of the guides.



#	Part
1	Sensor (tray paper width)
2	Sensor (tray paper length)
3	Tray insert paper width guides
4	Sensor (tray empty)
5	Tray insert paper length guide

Paper lift

During feed, the lift plate raises the paper until the paper comes into contact with the pick roller. The sensor (lift plate level) detects if the pick roller is sufficiently engaged with the paper. The motor (lift) controls the movement of the lift plate. As the amount of paper lessens, the lift plate also continues to move up. When the tray is almost empty, the actuator triggers the sensor (near empty).



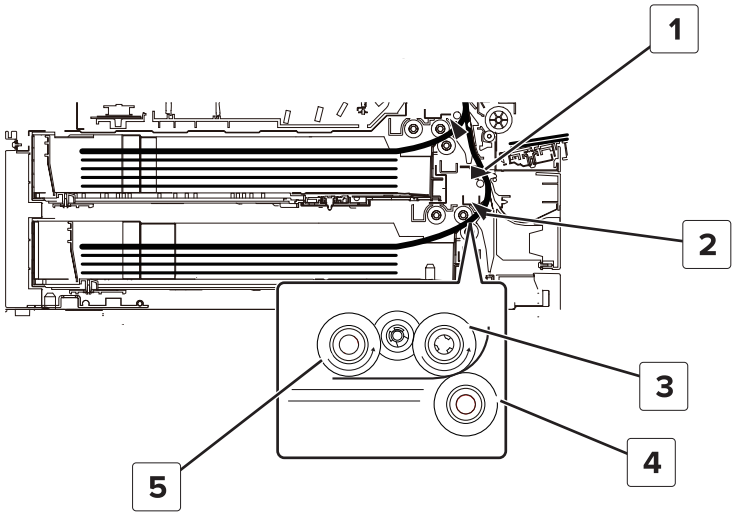
#	Part
1	Motor (lift)
2	Sensor (near empty)
3	Actuator
4	Sensor (lift plate level)
5	Pick roller
6	Lift plate
7	Paper

Paper feed

The pick roller pushes the topmost sheet to the feed roller. The separator roller makes sure that only one sheet is fed at a time.

For tray 1, the feed roller moves the paper directly to the registration section. For trays 2 to 4, the paper is fed from the feed roller to the transport rollers before going into the registration section.

The motor (paper feed) controls the pick, feed, and separator rollers. The motor (transport) drives the roller that moves the paper upward to the registration section. The sensor (paper feed) and sensor (pass through) detect the position of the paper.



#	Part
1	Sensor (pass through)
2	Sensor (paper feed)
3	Feed roller
4	Separator roller
5	Pick roller

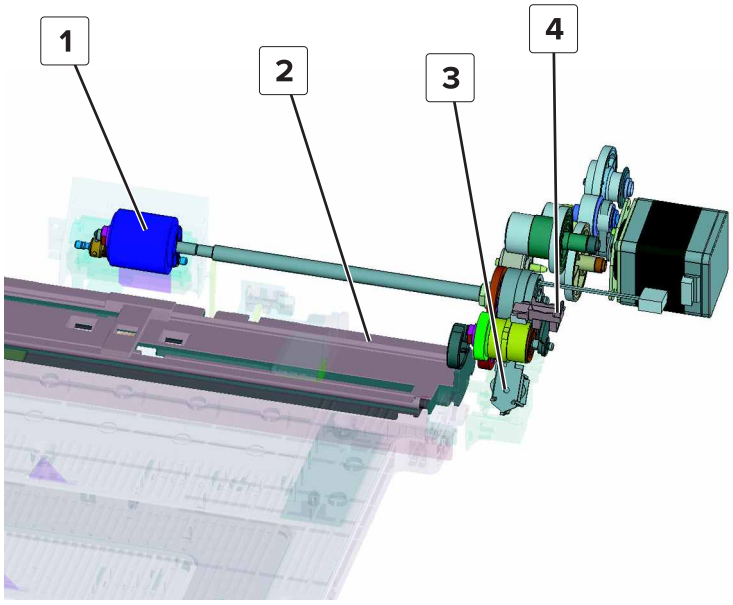
MPF section

Paper presence detection

The sensor (MPF empty) detects if there is no paper in the tray.

Paper lift

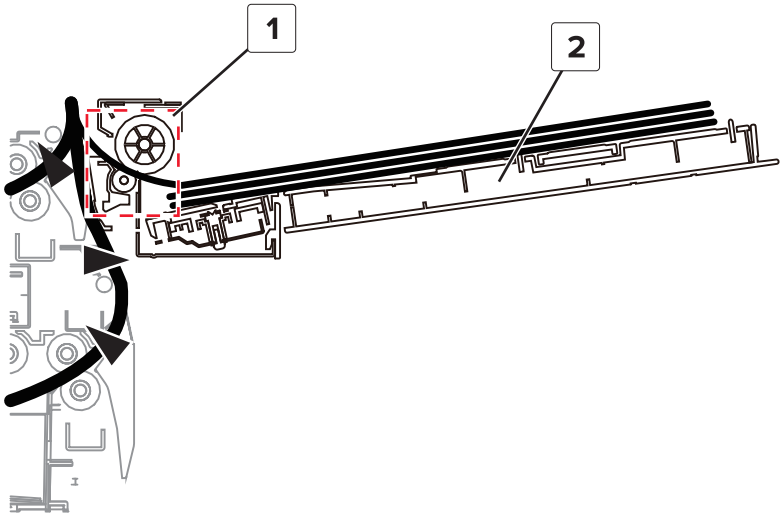
During feed, the lift plate pushes up to engage the paper with the pick roller. The movement of the lift plate is controlled by the MPF pick solenoid and is detected by the sensor (MPF lift plate position).



#	Part
1	MPF pick roller
2	Lift plate
3	MPF pick solenoid
4	Sensor (MPF lift plate position)

Paper feed

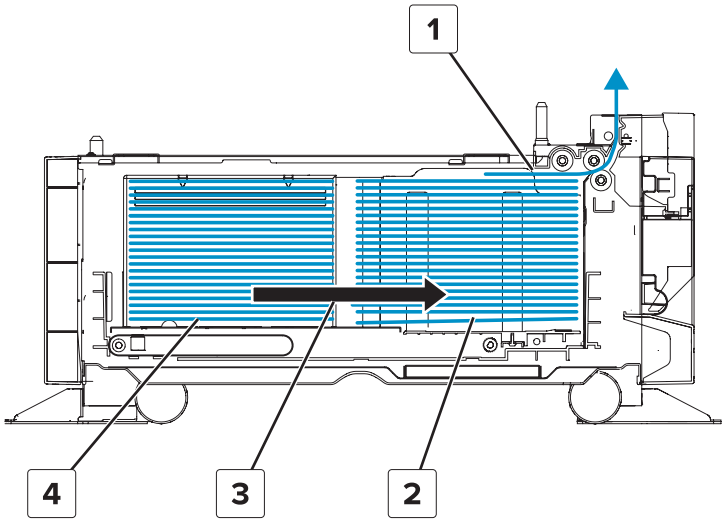
The MPF pick assembly moves the paper from the MPF tray to the registration section.



#	Part
1	MPF pick assembly
2	MPF tray

2500-sheet tray section

Paper path

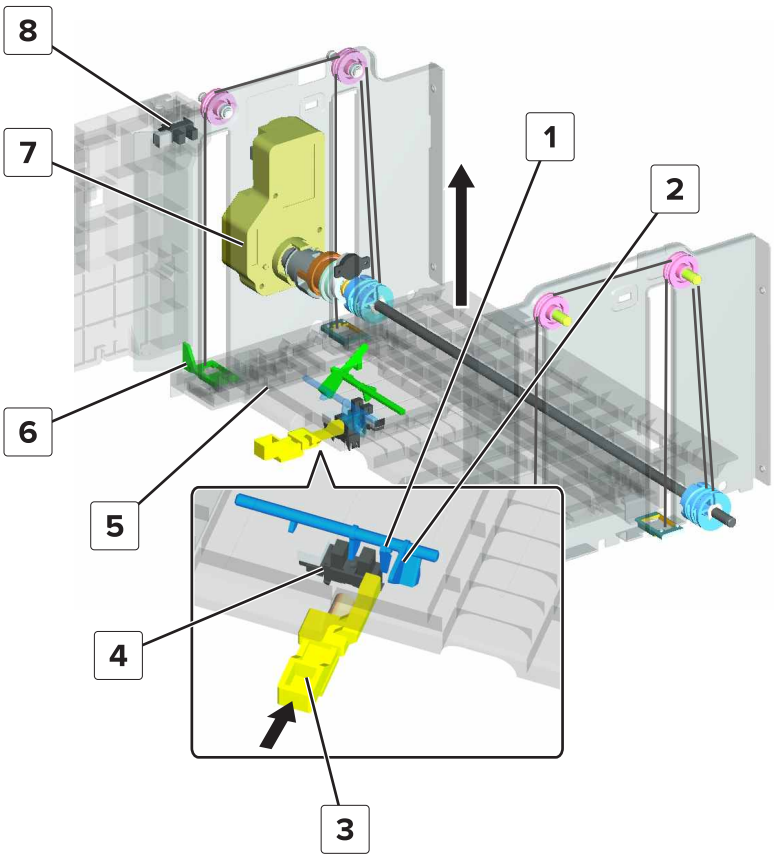


#	Part
1	Paper feed from main tray
2	Main tray
3	Paper transfer movement from reserve tray to main tray
4	Reserve tray

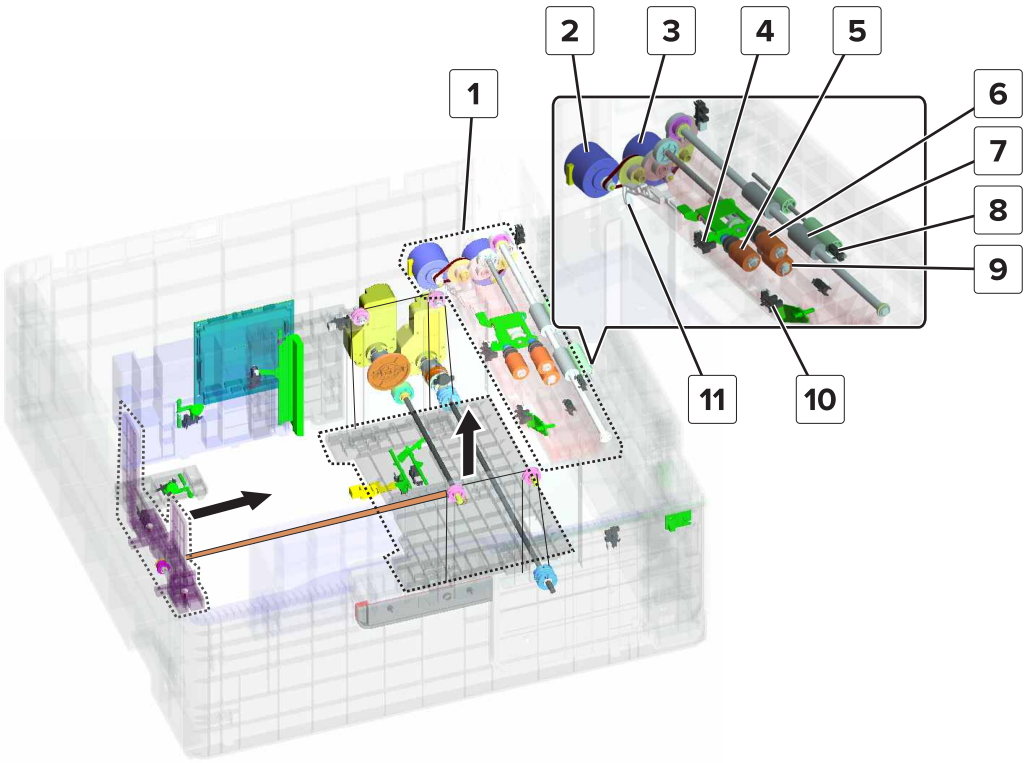
Paper feed mechanism

When the drawer is inserted, the lever is triggered to lower the pick roller. The motor (2500-sheet tray elevator) drives and raises the main tray until the paper is engaged with the pick roller. When the pick roller is engaged with the paper, the sensor (2500-sheet tray main tray elevator limit) detects the uppermost sheet.

The motor (2500-sheet tray feed) drives the pick, feed, and separator rollers to pick up and feed a sheet of paper into the vertical transport roller. The pick roller pushes the sheet to the feed roller and the separator roller makes sure that only one sheet is fed at a time. As the paper passes though the transport roller, the sensor (2500-sheet tray transport) detects it. The motor (2500-sheet tray transport) then drives the transport roller to transport the paper into the printer.



#	Part
1	Shifter stop detection actuator
2	Lower limit detection actuator
3	Transfer guide stop lever
4	Sensor (2500-sheet tray elevator home)
5	Main tray
6	Near empty detection actuator
7	Motor (2500-sheet tray elevator)
8	Sensor (2500-sheet tray main tray near empty)

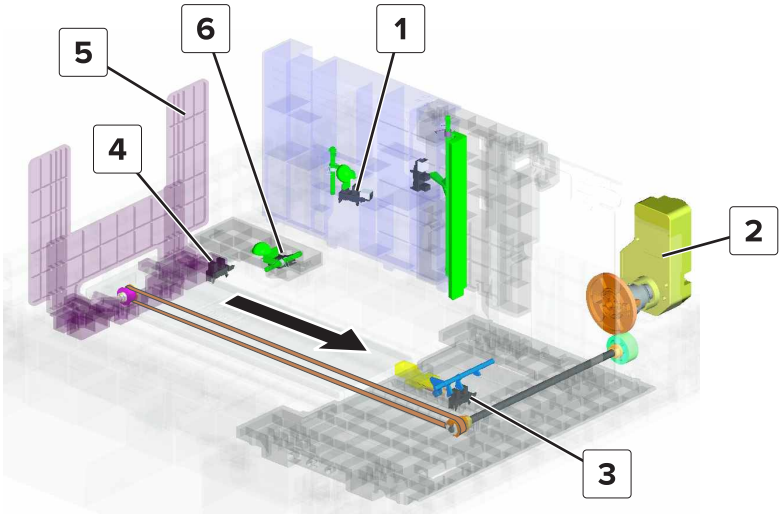


#	Part
1	Paper feed section
2	Motor (2500-sheet tray feed)
3	Motor (2500-sheet tray transport)
4	Sensor (2500-sheet tray main tray elevator limit)
5	Pick roller
6	Feed roller
7	Transport roller
8	Sensor (2500-sheet tray transport)
9	Separator roller
10	Sensor (2500-sheet tray main tray paper empty, top)
11	Lever

The main tray continues to move up as the amount of paper decreases. The near empty detection actuator triggers the sensor (2500-sheet tray main tray near empty) when the main tray is almost empty. When the sensor (2500-sheet tray main tray empty, top) detects an empty main tray, the motor (2500-sheet tray elevator) lowers the main tray. The sensor (2500-sheet tray elevator home) detects when the main tray is at its lowest position.

The sensor (2500-sheet tray reserve tray paper limit) and sensor (2500-sheet tray reserve tray paper empty) detect the amount of paper left on the reserve tray. If the main tray is empty while the reserve tray is loaded with paper, then the paper stack on the reserve tray is moved to the main tray. The motor (2500-sheet tray transfer guide) moves the transfer guide, pushing the paper stack into the main tray until the sensor (2500-sheet tray elevator home) is triggered. The motor (2500-sheet tray transfer guide) then drives the transfer guide to return to its home position.

If the reserve tray is empty when paper on the main tray runs out, then the main tray is not lowered. The main tray lowers only when the drawer is removed.

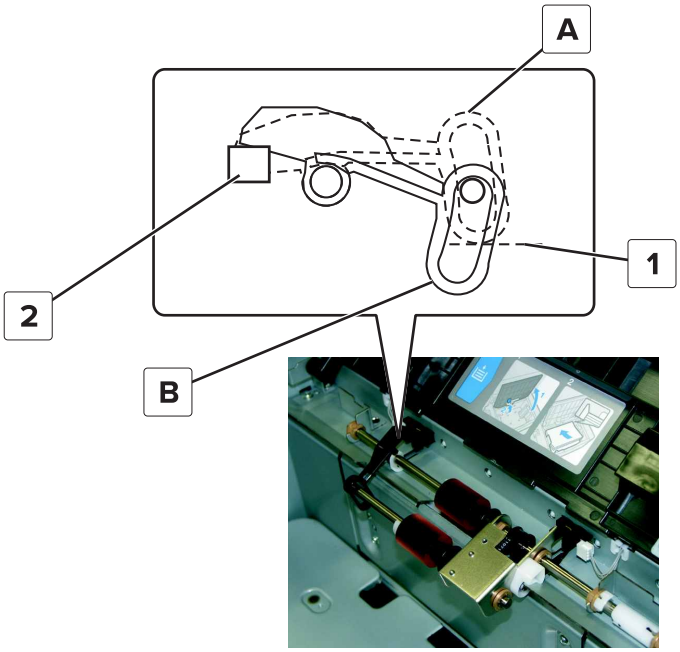


#	Part
1	Sensor (2500-sheet tray reserve tray paper limit)
2	Motor (2500-sheet tray transfer guide)
3	Sensor (2500-sheet tray elevator home)
4	Sensor (2500-sheet tray transfer guide home)
5	Transfer guide
6	Sensor (2500-sheet tray reserve tray paper empty)

3000-sheet tray section

Paper presence detection

The sensor (tray empty) detects if there is no paper on the tray. The sensor remains covered when paper is on the tray. When the tray is empty, the actuator lowers to unblock the sensor.

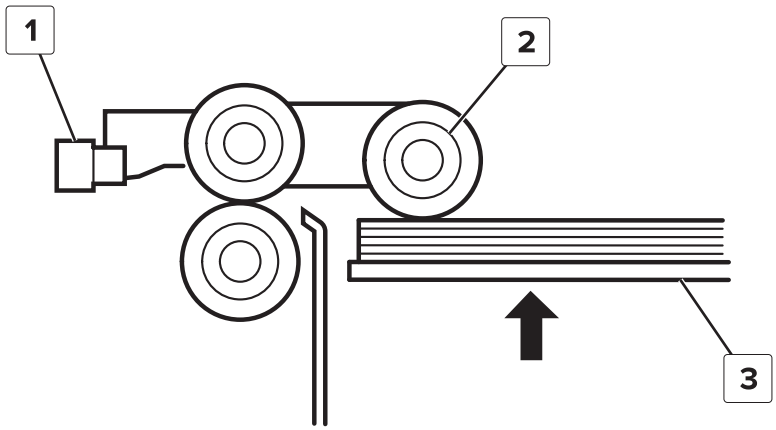


#	Part
1	Paper
2	Sensor (tray empty)
A	Actuator position (with paper)
B	Actuator position (without paper)

Paper lift

During feed, the elevator plate raises the paper until the paper comes into contact with the pick roller. The sensor (elevator level) detects if the pick roller is sufficiently engaged with the paper. The motor (elevator) controls the movement of the elevator plate.

As the amount of paper lessens, the elevator plate continues to move up. When the tray is almost empty, the sensors (paper low 1 and 2) are unblocked. If the tray is full, then the sensor (paper low 1) is blocked and the sensor (paper low 2) is unblocked.



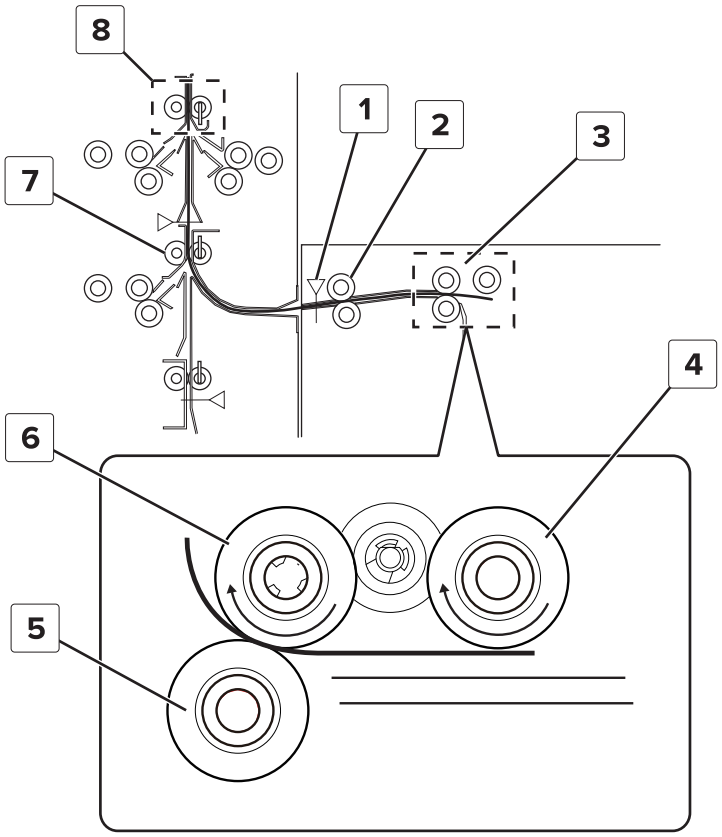
#	Part
1	Sensor (elevator level)
2	Pick roller
3	Elevator plate

Paper feed and transport

The pick roller pushes the topmost sheet to the feed roller. The separator roller makes sure that only one sheet is fed at a time.

The paper is fed from the pick assembly to the transport rollers before going to the registration section. For more information, see **"Registration section" on page 759**.

The motor (feed) controls the pick, feed, and separator rollers. The motor (transport) drives the transport roller to pass the paper to the tray 2 transport roller. The sensor (feed) detects when paper passes through the transport roller.



#	Part
1	Sensor (feed)
2	Transport roller
3	Pick assembly
4	Pick roller
5	Separator roller
6	Feed roller

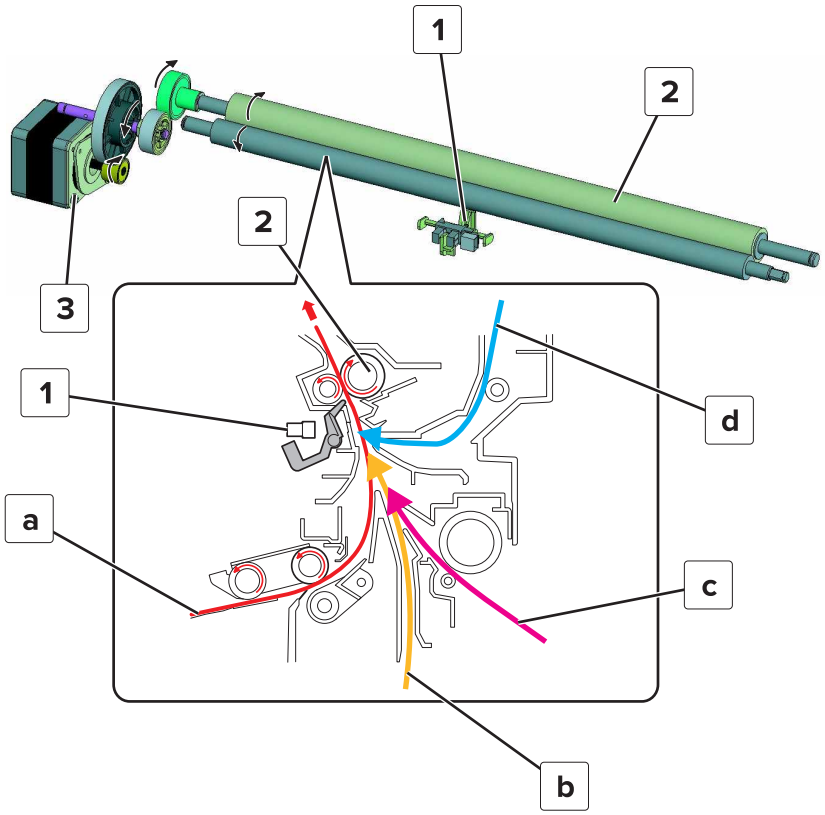
#	Part
7	Tray 2 transport roller
8	Registration section

Registration section

Depending on the print job, the registration section receives paper from the tray, MPF, or duplex section.

As paper enters the registration roller, the sensor (registration) detects its presence. Skew adjustments are made on the registration roller to align the leading edge of the paper.

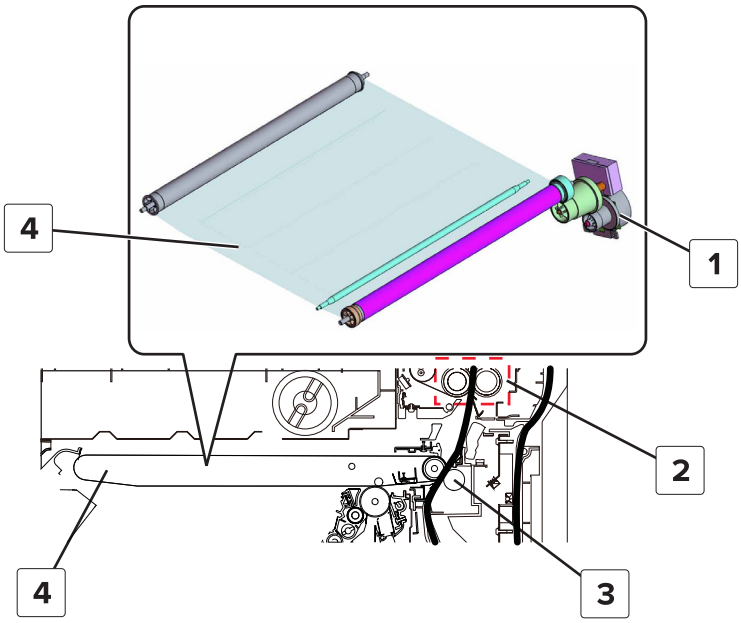
The motor (registration) drives the registration roller, passing the paper to the print section.



#	Part
1	Sensor (registration)
2	Registration roller
3	Motor (registration)
a	Paper path from tray 1
b	Paper path from trays 2–4 and 3000-sheet tray
c	Paper path from MPF section
d	Paper path from Duplex section

Print section

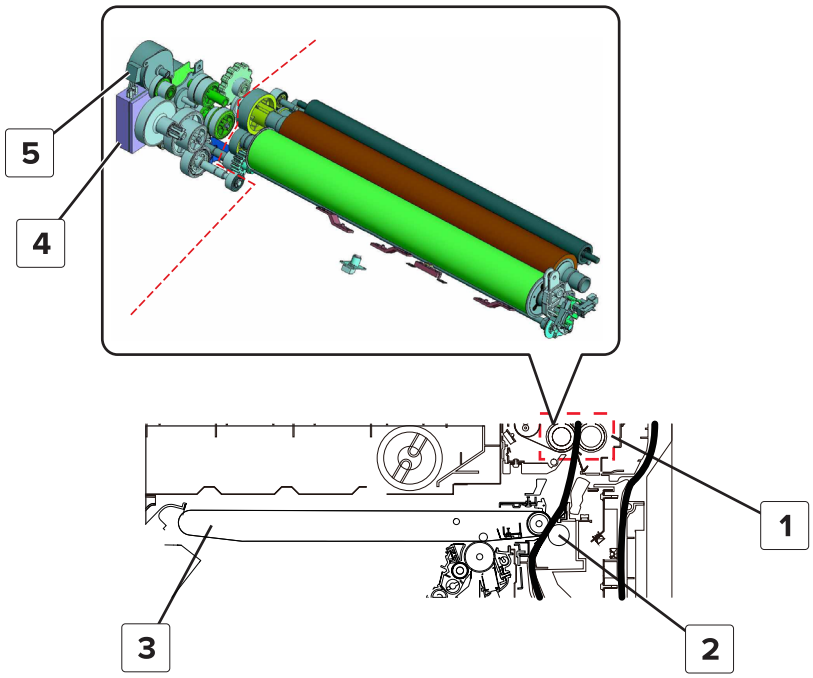
Toner from the transfer belt is transferred to the paper. For more information, see **"Second transfer" on page 745**. The rotation of the transfer belt and transfer roller is controlled by the motor (developer).



#	Part
1	Motor (developer)
2	Fuser
3	Transfer roller
4	Transfer belt

After the second transfer, the paper is passed to the fuser. For more information, see **"Fuse" on page 746**.

The motor (fuser pressure) controls the pressure that is exerted on the paper. The motor (fuser) controls the movement of the paper from the fuser to the exit section.



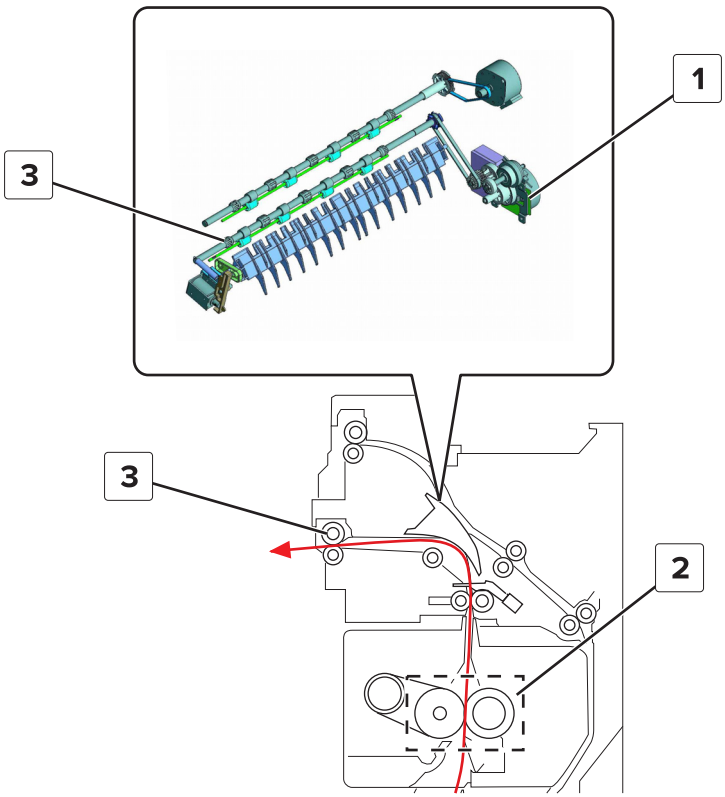
#	Part
1	Fuser
2	Transfer roller
3	Transfer belt
4	Motor (fuser)
5	Motor (fuser pressure)

Exit section

Exit roller path

Paper moves from the fuser to the exit roller. The motor (fuser) drives the exit roller to push out the printed paper to the standard bin.

Note: For finishing and folding jobs, the printed paper also moves along the path of the exit roller.

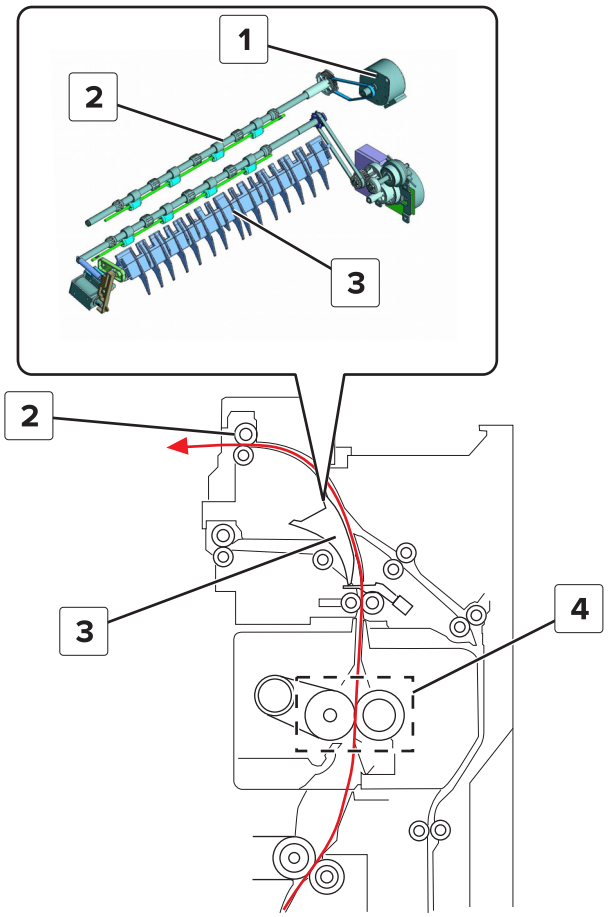


#	Part
1	Motor (fuser)
2	Fuser
3	Exit roller

Redrive roller path

If a paper transport is on the printer during a standard print job, then paper exits on top of the paper transport.

As paper moves up from the fuser, the diverter closes the path to the exit roller and opens the path to the redrive roller. The motor (redrive) controls the redrive roller, which exits the printed paper.



#	Part
1	Motor (redrive)
2	Redrive roller
3	Diverter
4	Fuser

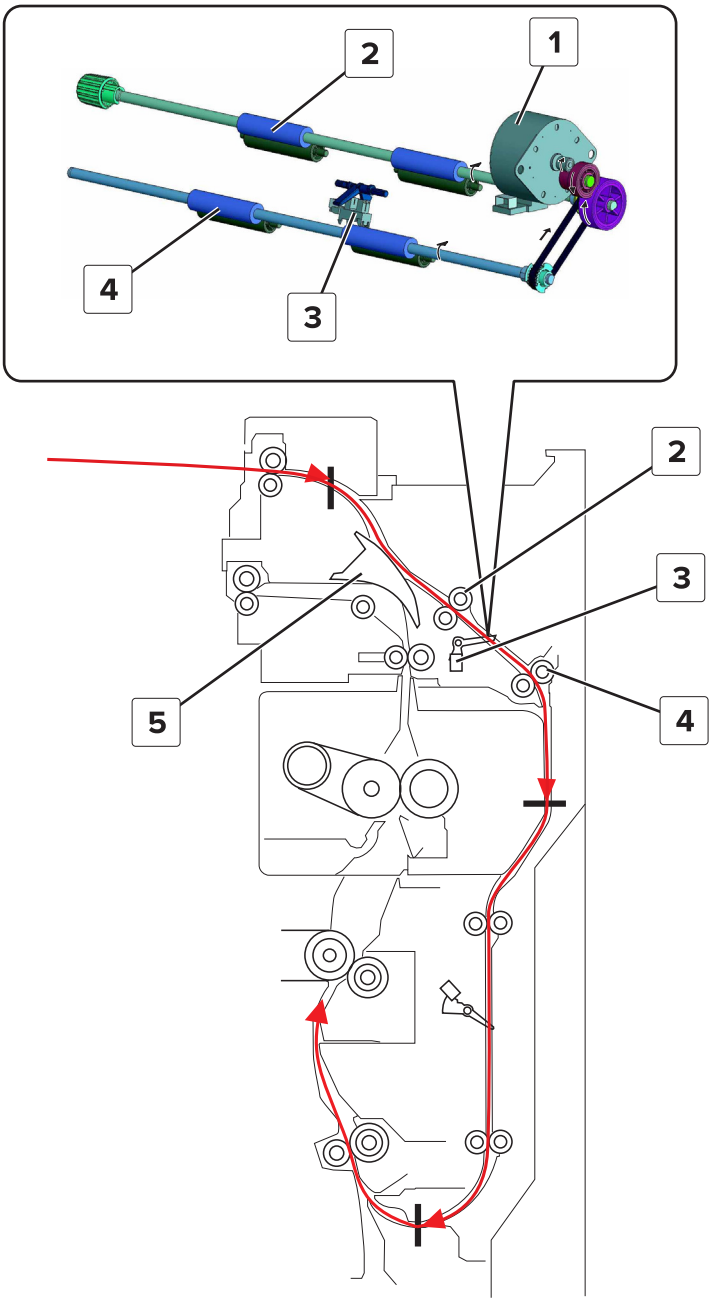
Duplex section

Upper duplex transport

For a duplex print job, the paper is fed back to print on the other side.

The redrive roller, which is driven by the motor (redrive), reverses rotation to feed the paper back to the printer. The path to the fuser section is closed by the diverter so that the paper moves along the duplex path.

As paper moves down passing the duplex entrance roller and the upper duplex transport roller, the sensor (duplex pass through 1) detects the position of the paper. The motor (duplex transport) drives the duplex entrance roller and upper duplex transport roller.



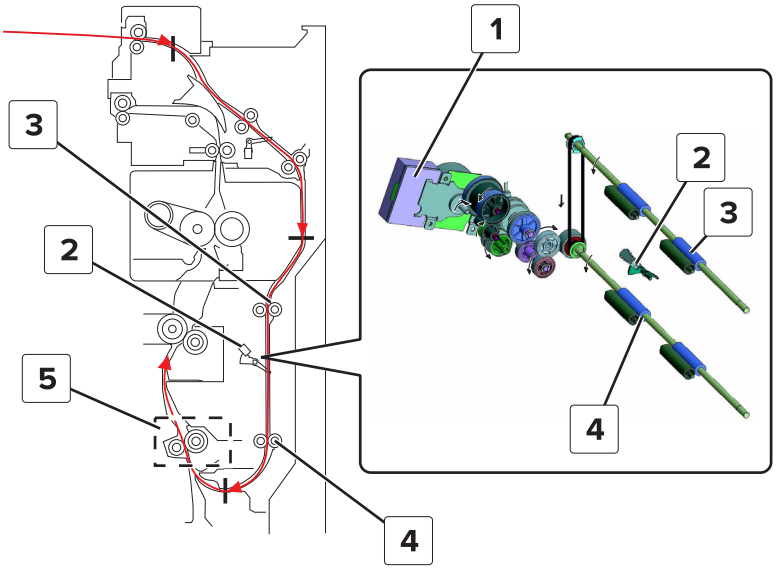
#	Part
1	Motor (redrive)
2	Duplex entrance roller
3	Sensor (duplex pass through 1)
4	Upper duplex transport roller
5	Diverter

Lower duplex transport

The paper continues to move down to the lower duplex transport roller and duplex exit roller.

The sensor (duplex pass through 2) detects the position of the paper. The motor (transport) drives the lower duplex transport roller and duplex exit roller.

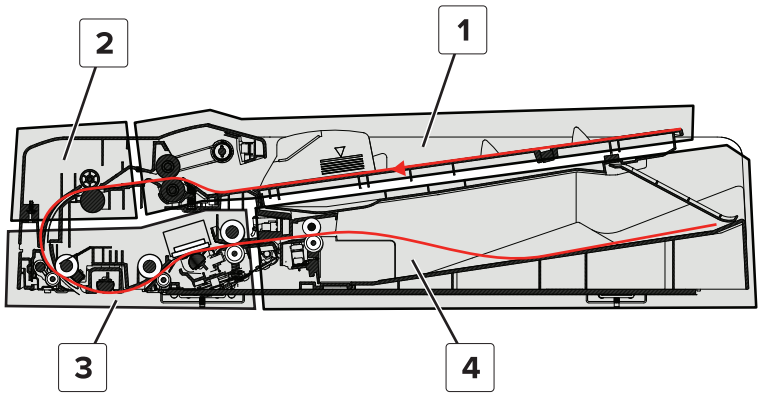
The paper then travels to the registration section to print on the other side. For more information, see **"Registration section" on page 759**.



#	Part
1	Motor (transport)
2	Sensor (duplex pass through 2)
3	Lower duplex transport roller
4	Duplex exit roller
5	Registration section

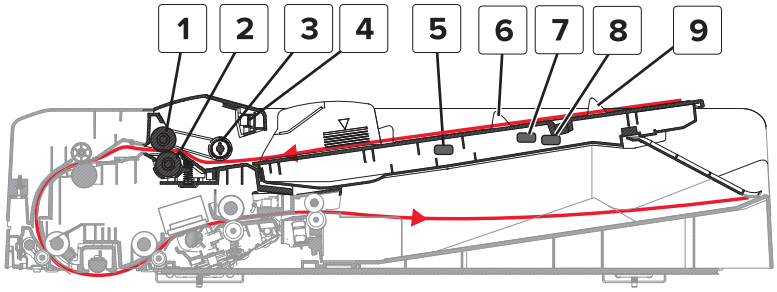
ADF operation

ADF tray section configuration and paper path



#	Section
1	ADF document registration section
2	ADF document feed section
3	ADF document exit section
4	ADF document reading section

ADF document feed section



#	Part
1	ADF feed roller
2	ADF separator roller
3	ADF pick roller
4	Sensor (ADF paper empty)
5	Sensor (ADF paper length 2)
6	ADF paper length actuator 1
7	Sensor (ADF paper length 1)
8	Sensor (ADF paper width)
9	ADF paper length actuator 2

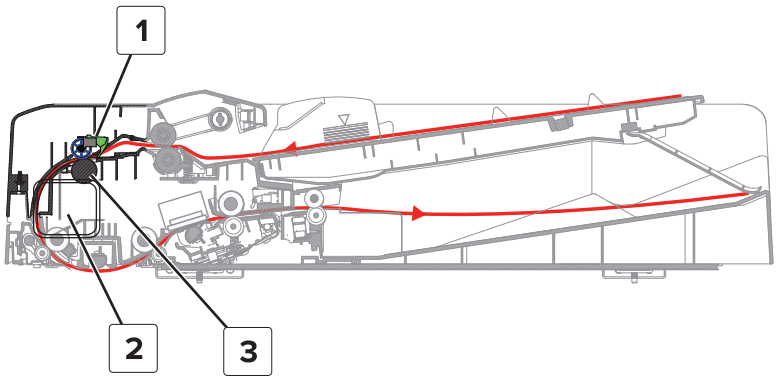
The sensor (ADF paper empty) detects the document when the leading edge pushes the actuator and unblocks the sensor. The sensor (ADF paper width) detects the width of the document. A variable resistor is incorporated to the sensor and the resistance value varies when adjusting the paper guide. The two sensors (ADF paper length 1 and 2) detect the length of the document. If no document is loaded on the ADF tray, the sensor (ADF paper length 1) is blocked. If a document is loaded and only the ADF paper length actuator 1 is triggered, the sensor (ADF paper length 1) is unblocked. If ADF paper length actuators 1 and 2 are triggered, then ADF paper length actuator 2 blocks the sensor (ADF paper length 1). The sensor (ADF paper length 2) detects that the ADF paper length actuator 1 is triggered. The results made by the width and length sensors determine the document size.

When a copy job is initiated, the motor (ADF feed) rotates forward to lower the ADF pick roller to the feed position. The document stopper is unlocked when the swing arm lowers and the document is fed in. When all pages are fed in, the sensor (ADF paper empty) detects that the ADF tray is empty.

After a document feed is completed, the motor (ADF feed) rotates backward to raise the pick roller to its home position. The ADF pick roller is fixed at the raised position by a torque limiter of the paper drive section. The document stopper lowers when the swing arm is raised to the standby position.

The document is transported into the document registration section by the ADF pick roller and ADF feed roller after the feeding sequence.

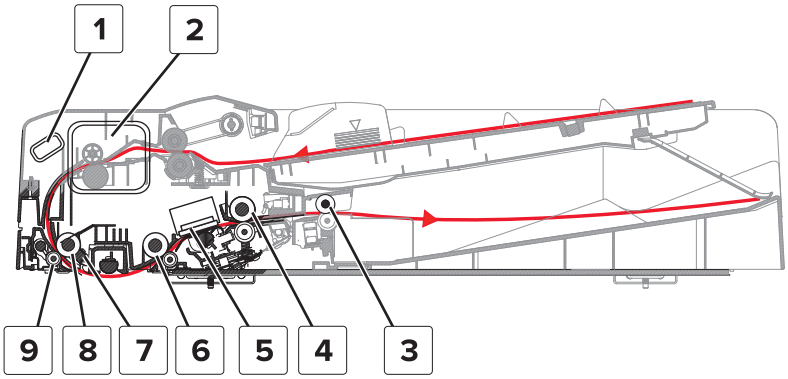
ADF document registration section



#	Part
1	Sensor (ADF registration)
2	Motor (ADF registration)
3	ADF registration roller

When the document exits the document feed section, the motor (ADF registration) drives the ADF registration roller to receive the document. A skew adjustment is made when the document passes between the ADF feed roller and ADF registration roller. The sensor (ADF registration) detects the leading edge of the document while the ADF feed roller continues to rotate to feed the document. The motor (ADF registration) continues to drive the ADF registration roller to transport the document to the scanning section.

ADF document scanning section

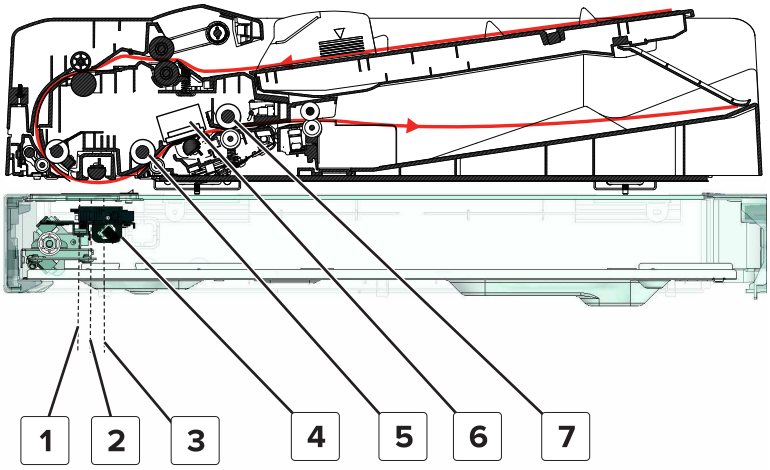


#	Part
1	Motor (ADF scan shaft release)
2	Motor (ADF scan)
3	ADF exit roller
4	ADF scan roller 3

#	Part
5	CIS assembly
6	ADF scan roller 2
7	Sensor (ADF scan)
8	ADF scan roller 1
9	ADF scan idle roll

The motor (ADF scan) drives the ADF scan rollers 1, 2, and 3 to transport the document into the document scanning section. The sensor (ADF scan) detects the document after the leading edge passes through the ADF scan roller 1.

The ADF scan roller 1 pushes the document until the trailing edge passes through it. This action increases the transport speed and causes an uneven reading of the image. The motor (ADF scan shaft release) releases the ADF scan idle roll to reduce the transport speed as the ADF scan rollers transport the document to a scanning position.

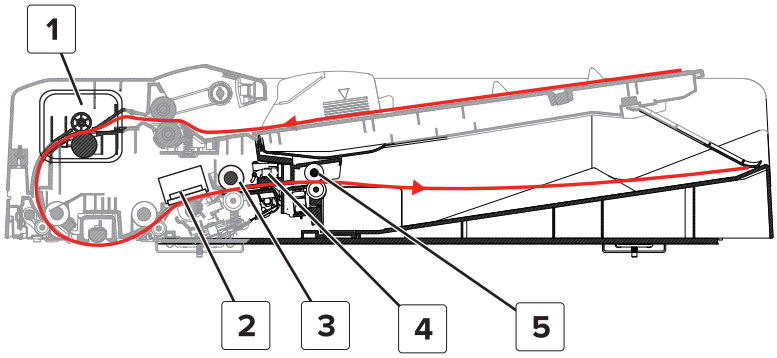


#	Part
1	Document reading position
2	Document home position
3	Document shading position
4	Scanner lamp
5	ADF scan roller 2
6	CIS assembly
7	ADF scan roller 3

The scanner lamp moves to the document reading position and scans the document through the ADF duplex scan glass on the scanner flatbed. The front side of the document is scanned as it passes over the scanner lamp. The ADF scan roller 2 receives and transports the document through the CIS assembly where the other side of the document is scanned.

After the scan job, the ADF scan roller 3 transports the document to the ADF exit roller. The ADF exit roller transports the document into the document exit section.

ADF document exit section

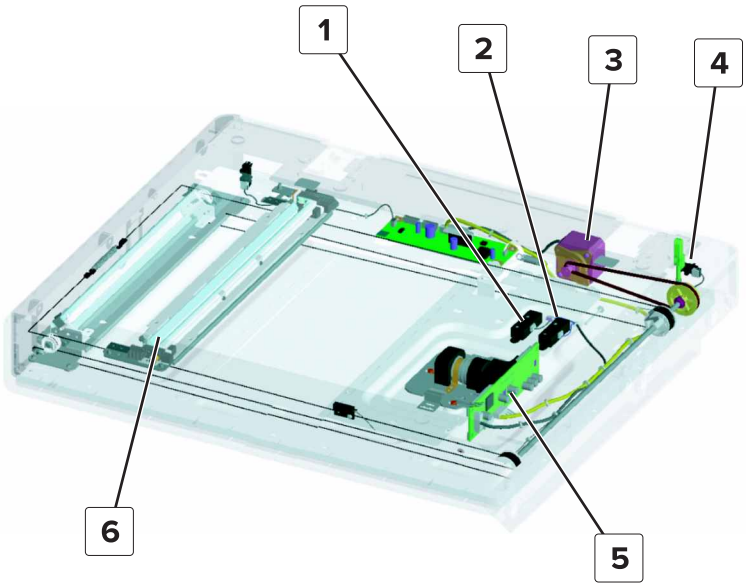


#	Part
1	Motor (ADF scan)
2	CIS assembly
3	ADF scan roller 3
4	Sensor (ADF exit)
5	ADF exit roller

The motor (ADF scan) drives the ADF scan roller 3 and ADF exit roller to feed the document out of the document reading section and into the bin. The motor (ADF scan) is turned off after a few seconds when the trailing edge of the document has deactivated the sensor (ADF exit).

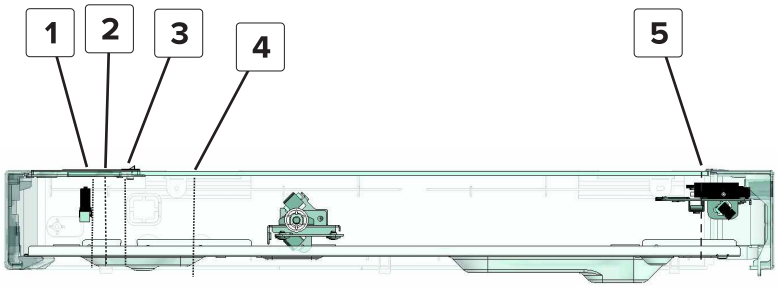
Flatbed scanner operation

Flatbed scanner section configuration



#	Part
1	Sensor (scanner media length 1)
2	Sensor (scanner media length 2)
3	Motor (scanner drive)
4	Sensor (ADF open)
5	Scanner CCD lens assembly
6	Scanner lamp

Flatbed scanning



#	Part
1	Scanner home position
2	Document size detection position
3	Scan start position
4	Scanner lamp
5	Trailing edge of the image

The motor (scanner drive) drives the scanner lamp to move to the home position when the printer is turned on.

When the ADF is opened and a document is placed on the scanner flatbed, the sensor (ADF open) detects that the ADF is open. The scanner lamp moves to the original size detection position. The sensor (scanner media length 1 and 2) detects the length of the document and the scanner CCD lens assembly detects the width of the document. The scanner lamp then moves and stops at the scan start position.

When the start key is pressed, the scanner lamp moves from the scan start position to the leading edge of the document. The scanner lamp starts scanning the document from the leading edge and finishes scanning at the trailing edge.

The LED turns off when scanning is complete. The scanner lamp moves from the position on the trailing edge of the document to the home position, and then to the document size detection position.

Appendix D: Acronyms

Acronyms

ASIC	Application-specific integrated circuit
BLDC	Brushless DC motor
BOR	Black only retract
C	Cyan
CCD	Charge coupled device
CCP	Carbonless copy paper
CRC	Cyclic redundancy check
CSU	Customer setup
CTLS	Capacitance toner level sensing
DIMM	Dual inline memory module
DRAM	Dynamic random access memory
EDO	Enhanced data out
EP	Electrophotography
EPROM	Erasable programmable read-only memory
ESD	Electrostatic discharge
FFC	Flat flexible cable
FRU	Field replaceable unit
GB	Gigabyte
HCF	High-capacity feeder
HCIT	High-capacity input tray
HCOF	High-capacity output finisher
HVPS	High voltage power supply
ITU	Image transfer unit
K	Black
LCD	Liquid crystal display
LDAP	Lightweight directory access protocol
LED	Light-emitting diode
LVPS	Low voltage power supply
M	Magenta
MB	Megabyte
MFP	Multi-function product
MPF	Multipurpose feeder

MROM	Masked read only memory
MS	Microswitch
NVM	Nonvolatile memory
NVRAM	Nonvolatile random access memory
OEM	Original equipment manufacturer
OPT	Optical sensor
PC	Photoconductor
pel, pixel	Picture element
POR	Power-on reset
POST	Power-on self test
PSD	Position sensing device
PWM	Pulse width modulation
RIP	Raster imaging processor
ROM	Read only memory
SDRAM	Synchronous dual random access memory
SIMM	Single inline memory module
SRAM	Static random access memory
TPS	Toner patch sensing
UPR	Used parts return
V ac	Volts alternating current
V dc	Volts direct current
VTB	Vacuum transport belt
Y	Yellow

Index

Numerics

163.04 error
  2500-sheet tray paper feed failure service check 158
167.04 error
  2500-sheet tray transport failure service check 159
189.xx errors
  2500-sheet tray communication error service check 166
196.xx errors
  2500-sheet tray lift plate failure service check 177
  2500-sheet tray transfer guide motor failure service check 179
243 paper jams
  2500-sheet tray jam service check 95
2500-sheet tray theory 753
28y paper jams
  ADF exit jam service check 115
  ADF feed jam service check 112
  ADF registration jam service check 110
  ADF scan jam service check 116
2x500-sheet tray sensor test 218
890.xx errors
  ADF controller board service check 194
  ADF/scanner image controller board service check 195
  scanner controller board service check 197
8yy errors
  ADF CIS service check 196
  scanner CCD service check 198
  scanner lamp service check 199

Symbols

[x] maintenance kit very low [80.xy] 126
[x]-page jam, clear manual feeder. [200.xx] 64
[x]-page jam, open door C and clear all jammed media. [2yy.xx] 71
[x]-page jam, open door D and clear all jammed media. [24y.xx] 82
[x]-page jam, press latch at area E to open ADF's top cover. [28y.xx]
  printer messages 107
[x]-page jam, slide the 3000-sheet tray and open door C. [2yy.xx] 73
[x]-page jam, slide the 3000-sheet tray and open door D. [24y.xx] 93

A

acronyms 771
ADF scanner theory
  ADF document exit section 769
  ADF document feed section 766
  ADF document registration section 767
  ADF document scanning section 767
ADF tray configuration and paper path 765
adjustment
  2500-sheet tray transfer guide belt 270
  3000-sheet tray pick roller 268
  ADF height 258
  ADF registration 259
  ADF separator roller pressure 260
  flatbed registration 261
  fuser 262
  MPF separator roller 263
  pick roller 265
  scanner carriage belt 267
attaching cables 531
available internal options 739
avoiding jams 36
avoiding paper jams 62

B

black pages 50
blank pages 49
buttons, control panel 207
buttons, touch screen
  using 210

C

cables
  Ethernet 531
  USB 531
card stock
  tips 31
Cartridge low [88.xy] 119
Cartridge nearly low [88.xy] 119
Cartridge very low [88.xy] 119
Change [paper source] to [custom string] load [orientation] 119
Change [paper source] to [custom type name] load [orientation] 119
Change [paper source] to [paper size] load [orientation] 119

Change [paper source] to [paper type] [paper size] load [orientation] 120
change history 27
charge 742
charger
  cleaning 537
clean, photoconductor 744
clean, transfer belt 745
cleaning
  exterior of the printer 536
  scanner glass 536
cleaning the charger 537
cleaning the printer 536
cleaning the printhead lens 537
Close door [x] 120
Complex page, some data may not have printed [39] 120
Configuration change, some held jobs were not restored [57] 120
configuration menu
  accessing 229
  action for prompts 234
  ADF edge erase 232
  automatically display error screens 236
  clear custom status 235
  clear supply usage history 235
  disable scanner 233
  disk encryption 234
  download emuls 231
  energy conserve 231
  envelope prompts 233
  erase hard disk 236
  erase printer memory 236
  event log 230
  exit configuration 237
  fax low power support 231
  fax storage location 232
  flatbed edge erase 233
  font sharpening 234
  format fax storage 232
  hole punch configuration 229
  jobs on disk 234
  key repeat initial delay 235
  key repeat rate 235
  LES applications 235
  menu settings page 230
  min copy memory 232
  numpad job assist 232
  out of service erase 237
  panel menus 230
  paper prompts 233
  PPDS emulation 231
  print quality pages 229
  require standby 234
  reset maintenance counter 229
  restore settings 236
  safe mode 231
  scanner manual registration 233
  size sensing 230
  tray linking 230
  UI automation 235
  USB scan to local 229
  USB speed 236
control panel 207
control panel, printer
  indicator light 207
  Sleep button light 207
controller board, restoring configuration 242

D

data security notice 42, 241
Defective flash detected [51] 120
develop 742
device tests
  disk test/clean 223
  flash test 223
  quick disk test 223
diagnostics menu
  2500-sheet tray motor tests 221
  2500-sheet tray sensor tests 218
  2x500-sheet tray motor tests 220
  3000-sheet tray motor tests 222
  3000-sheet tray sensor tests 218
  accessing 212
  ADF back magnification 227
  ADF front magnification 227
  ASIC test 228
  booklet maker motor tests 223
  button test 215
  clear log 227
  defaults 224
  disk test/clean 223
  display log 226
  DRAM test 215
  duplex top margin 217
  edge to edge 225
  enable edge to edge copy 225
  exit diagnostics 228
  feed test 228
  flash test 223
  flatbed magnification 227
  hole punch booklet finisher sensor tests 219
  input tray feed test 217
  installed licenses 226

menu settings page 226
output bin feed tests 217
panel test 215
parallel strobe adjustment 225
permanent page count 224
print log 226
print log summary 227
print quality pages 214
print tests 214
printed page count 224
printer motor tests 219
printer sensor tests 218
processor ID 224
quick disk test 223
quick test 216
registration 213
reset engine service error 225
reset fuser counter 212, 226
reset maintenance counter 212
reset separator roll and pick assembly counter 212
restore backup data 225
scanner calibration reset 228
scanner sensor tests 228
serial 1 wrap 216
staple and hole punch finisher motor tests 222
staple and hole punch finisher sensor tests 219
staple finisher motor tests 222
staple finisher sensor tests 219
USB HS test mode 216
Disk full [62] 120
Disk full, scan job canceled 121
Disk must be formatted for use in this device 121
display, control panel 207
door C
paper jams, clearing 71, 73
door D
paper jams, clearing 82, 93
duplex tests
quick test 216
top margin 217

E

electrostatic-sensitive parts 241
embedded solutions 247
Empty the hole punch box 121
emptying the hole punch box 540
envelopes
tips on using 32
error codes
0-99 134
111 error messages 147
120 error messages 148
121 error messages 148
133 error messages 153
136 error messages 153
153 error messages 156
163 error messages 157
164 error messages 157
167 error messages 157
168 error messages 157
171 error messages 163
172 error messages 163
178 error messages 163
179 error messages 163
180 error messages 163
182 error messages 163
189 error messages 164
190 error messages 166
191 error messages 166
192 error messages 166
193 error messages 166
194 error messages 166
196 error messages 167
197 error messages 167
200 paper jam messages 65
202 paper jam messages 76
230 paper jam messages 79
232 paper jam messages 79
241 paper jam messages 83
242 paper jam messages 83
243 paper jam messages 94
244 paper jam messages 95
245 paper jam messages 95
600 error messages 180
685 error messages 181
900 error messages 185
911 error messages 190
916 error messages 190
919 error messages 190
Error reading USB drive. Remove USB. 121
Error reading USB hub. Remove hub. 121
ESD-sensitive parts 241
eSF solutions 247
Ethernet port 531
event log
clear log 227
display log 226
print log 226
print log summary 227
expose 742
exterior of the printer
cleaning 536

F

fax error log codes 199
fax issue, escalating 203
Fax memory full 121
Fax partition inoperative. Contact system administrator. 122
fax ports 531
Fax server 'To Format' not set up. Contact system administrator. 122
fax service engineer (SE) menu 239
Fax Station Name not set up. Contact system administrator. 122
Fax Station Number not set up. Contact system administrator. 122
finisher
  supported paper sizes 40
  supported paper types 40
  supported paper weights 40
firmware card 739
first transfer 743
flatbed scanner theory 769
fuse 746

G

gray background 46

H

hardware tests
  button test 215
  DRAM test 215
  panel test 215
  serial 1 wrap 216
  USB HS test mode 216
hibernate mode 735
hole punch box
  emptying 540
home screen buttons and icons
  description 208
horizontal bottom contact connector 251
horizontal sliding contact connector 255
horizontal top contact connector 249

I

image quality
  initial check 46
image quality troubleshooting
  scanner image quality problems 60
Incorrect paper size, open [paper source] [34] 122
indicator light 207
input tray tests
  feed tests 217
Insert hole punch box 122
Insert Tray [x] 123
inspection guide 533
Insufficient memory for Flash Memory Defragment operation [37] 123
Insufficient memory to collate job [37] 123
Insufficient memory to support Resource Save feature [35] 123
Insufficient memory, some Held Jobs were deleted [37] 123
Insufficient memory, some held jobs will not be restored [37] 123
Insufficient space between paper stacks in Tray 3 123
internal options 739
invalid code, fixing 237
invalid engine mode
  accessing 237

J

jams
  avoiding 62
  locating jam areas 62
  locations 62
  numbers 62
jams, clearing
  in multipurpose feeder 64
  in top ADF door 107

L

labels, paper
  tips 32
laser notices 21
letterhead
  loading, multipurpose feeder 32
  loading, trays 32
Load [paper source] with [custom string] [paper orientation] 124
Load [paper source] with [custom type name] [paper orientation] 124
Load [paper source] with [paper size] [paper orientation] 124
Load [paper source] with [paper type] [paper size] [paper orientation] 124
Load Multipurpose Feeder with [custom string] [paper orientation] 124
Load Multipurpose Feeder with [custom type name] [paper orientation] 125
Load Multipurpose Feeder with [paper size] [paper orientation] 125

Load Multipurpose Feeder with [paper type] [paper size] [paper orientation] 125
Load staples 125
Load staples [G11, G12] 126
loading letterhead
  paper orientation 32
low insertion force (LIF) connector 257
lubrication
  guidelines 535

M

maintenance counter 535
maintenance kit
  resetting the counter 535
maintenance kits 534
memory card 739
Memory full [38] 126
Memory full, cannot print faxes 126
Memory full, cannot send faxes 126
menus
  diagram of 211
menus diagram 211
motor tests
  2500-sheet tray motor tests 221
  2x500-sheet tray motor tests 220
  3000-sheet tray motor tests 222
  booklet maker motor tests 223
  printer motor tests 219
  staple and hole punch finisher motor tests 222
  staple finisher motor tests 222

N

Network [x] software error [54] 126
network SE menu
  accessing 238
No analog phone line connected to modem, fax is disabled. 126
noise emission levels 737
Not enough free space in flash memory for resources [52] 127
notices 736

O

Open door H and remove paper from beneath area H10 127
operating clearances 736
options
  firmware cards 739
  media handling options 739
  memory card 739
output bin tests
  feed tests 217

P

paper
  characteristics 33
  letterhead 34
  preprinted forms 34
  recycled 35
  selecting 34
  storing 33, 36
  unacceptable 35
Paper changes needed 127
paper characteristics 33
paper jams
  280 109
  281 109
  282 109
  283 109
  avoiding 62
paper jams, clearing
  door C 71, 73
  door D 82, 93
  in bottom ADF door 107
  in multipurpose feeder 64
paper path, printer 748
paper sizes
  supported 37
paper types
  supported by printer 40
paper weights
  supported by printer 40
Parallel port [x] disabled [56] 127
parts catalog legend 542
Photoconductor low [84.xy] 127
Photoconductor very low [84.xy] 127
print cycle 741
  charge 742
  clean (photoconductor) 744
  clean (transfer belt) 745
  develop 742
  expose 742
  first transfer 743
  flowchart 741
  fuse 746
  second transfer 745
print quality
  cleaning the scanner glass 536
  initial check 46
print quality troubleshooting
  blank pages 49
  gray background 46

shadow images 52
skewed print 54
solid black pages 50
streaked vertical lines appear on prints 55
toner smear 57
toner specks 58
print quality, troubleshooting
cleaning the charger 537
cleaning the printhead lens 537
printer
basic model 529
fully configured 529
printer configurations 529
printer control panel
indicator light 207
Sleep button light 207
Printer had to restart. Last job may be incomplete. 127
printer messages
[x] maintenance kit very low [80.xy] 126
[x]-page jam, clear manual feeder. [200.xx] 64
[x]-page jam, open door C and clear all jammed media. [2yy.xx] 71
[x]-page jam, open door D and clear all jammed media. [24y.xx] 82
[x]-page jam, press latch at area E to open ADF's top cover. [28y.xx] 107
[x]-page jam, slide the 3000-sheet tray and open door C. [2yy.xx] 73
[x]-page jam, slide the 3000-sheet tray and open door D. [24y.xx] 93
Cartridge low [88.xy] 119
Cartridge nearly low [88.xy] 119
Cartridge very low [88.xy] 119
Change [paper source] to [custom string] load [orientation] 119
Change [paper source] to [custom type name] load [orientation] 119
Change [paper source] to [paper size] load [orientation] 119
Change [paper source] to [paper type] [paper size] load [orientation] 120
Close door [x] 120
Complex page, some data may not have printed [39] 120
Configuration change, some held jobs were not restored [57] 120
Defective flash detected [51] 120
Disk full [62] 120
Disk full, scan job canceled 121
Disk must be formatted for use in this device 121
Disk near full. Securely clearing disk space. 121
Empty the hole punch box 121
Error reading USB drive. Remove USB. 121
Error reading USB hub. Remove hub. 121
Fax memory full 121
Fax partition inoperative. Contact system administrator. 122
Fax server 'To Format' not set up. Contact system administrator. 122
Fax Station Name not set up. Contact system administrator. 122
Fax Station Number not set up. Contact system administrator. 122
Incorrect paper size, open [paper source] [34] 122
Insert hole punch box 122
Insert Tray [x] 123
Insufficient memory for Flash Memory Defragment operation [37] 123
Insufficient memory to collate job [37] 123
Insufficient memory to support Resource Save feature [35] 123
Insufficient memory, some Held Jobs were deleted [37] 123
Insufficient memory, some held jobs will not be restored [37] 123
Insufficient space between paper stacks in Tray 3 123
Load [paper source] with [custom string] [paper orientation] 124
Load [paper source] with [custom type name [paper orientation] 124
Load [paper source] with [paper size] [paper orientation] 124
Load [paper source] with [paper type] [paper size] [paper orientation] 124
Load Multipurpose Feeder with [custom string] [paper orientation] 124
Load Multipurpose Feeder with [custom type name] [paper orientation] 125
Load Multipurpose Feeder with [paper size] [paper orientation] 125
Load Multipurpose Feeder with [paper type] [paper size] [paper orientation] 125
Load staples 125
Load staples [G11, G12] 126
Memory full [38] 126
Memory full, cannot print faxes 126
Memory full, cannot send faxes 126
Network [x] software error [54] 126
No analog phone line connected to modem, fax is disabled. 126
Not enough free space in flash memory for resources [52] 127
Open door H and remove paper from beneath area H10 127

Paper changes needed 127
Parallel port [x] disabled [56] 127
Photoconductor low [84.xy] 127
Photoconductor very low [84.xy] 127
Printer had to restart. Last job may be incomplete. 127
Reinstall missing or unresponsive cartridge [31.xy] 128
Reinstall missing or unresponsive photoconductor [31.xy] 128
Remove defective disk [61] 128
Remove packaging material, [area name] 128
Remove packaging material, open door C, remove metal clips, remove all screws from scanner carriage 128
Remove paper from [linked set bin name] 129
Remove paper from all bins 128
Remove paper from bin [x] 128
Remove paper from standard output bin 129
Replace [x] maintenance kit, 0 estimated pages remain [80.xy] 130
Replace all originals if restarting job. 129
Replace cartridge, 0 estimated pages remain [88.xy] 129
Replace cartridge, printer region mismatch [42.xy] 129
Replace jammed originals if restarting job. 130
Replace missing cartridge [31.xy] 130
Replace missing photoconductor [31.xy] 130
Replace missing waste toner bottle [82.xy] 130
Replace paper pick rollers in [paper source], use parts and instructions in tray 1 or tray 2 compartment [80] 130
Replace photoconductor, 0 pages remain [84.xy] 130
Replace unsupported cartridge [32.xy] 131
Replace unsupported photoconductor [32.xy] 131
Replace waste toner bottle [82.xy] 131
Restore held jobs? 131
Scanner disabled by admin [840.01] 131
Scanner disabled. Contact system administrator if problem persists. [840.02] 131
Scanner jam, remove jammed originals from the scanner [2yy.xx] 131
Scanner maintenance required soon, use ADF Kit [80] 131
Scanner maintenance required, use ADF Kit [80] 131
Serial port [x] disabled [56] 132
SMTP server not set up. Contact system administrator. 132
Some held jobs were not restored 132
Standard network software error [54] 132
Standard USB port disabled [56] 132
Supply needed to complete job 132
The device is operating in safe mode. Some print options may be disabled or provide unexpected results. 133
Too many flash options installed [58] 133
Too many trays attached [58] 133
Tray [x] paper size unsupported 133
Unformatted flash detected [53] 133
Unsupported disk 133
Unsupported option in slot [x] [55] 134
Unsupported USB hub, please remove 121
Waste toner bottle nearly full [82.xy] 134
Weblink server not set up. Contact system administrator. 134
printer setup
defaults 224
edge to edge 225
enable edge to edge copy 225
parallel strobe adjustment 225
permanent page count 224
printed page count 224
processor ID 224
reset engine service error 225
reset fuser counter 226
restore backup data 225
printer theory
3000-sheet tray 756
duplex section 763
exit section 761
MPF section 751
print section 760
registration section 759
tray section 748
printhead lens
cleaning 537
product power consumption 735

R

recovery mode
accessing 237
recycled paper
using 35
registration 213
Reinstall missing or unresponsive cartridge [31.xy] 128
Reinstall missing or unresponsive photoconductor [31.xy] 128
removal
2 x 500-sheet tray 3 transport assembly 490
2 x 500-sheet tray 4 transport assembly 491
2 x 500-sheet tray 4 transport belts and gears 496
2 x 500-sheet tray bottom right cover 490
2 x 500-sheet tray caster wheel 474

2 x 500-sheet tray controller board 487
2 x 500-sheet tray empty LED 482
2 x 500-sheet tray empty LED cover 481
2 x 500-sheet tray empty LED mount 482
2 x 500-sheet tray empty sensor actuator 492
2 x 500-sheet tray jam access door 488
2 x 500-sheet tray left cover 481
2 x 500-sheet tray rear cover 483
2 x 500-sheet tray rear right cover 489
2 x 500-sheet tray rollers 479
2 x 500-sheet tray tray 3 transport belts and gears 495
2 x 500-sheet tray tray set actuator 493
2500-sheet reserve tray empty sensor actuator 459
2500-sheet tray caster wheel 442
2500-sheet tray controller board 443
2500-sheet tray empty LED 446
2500-sheet tray front right cover 444
2500-sheet tray jam access cover 454
2500-sheet tray jam access door strap 455
2500-sheet tray LED cover 444
2500-sheet tray left cover 445
2500-sheet tray lower right cover 445
2500-sheet tray paper feed assembly 456
2500-sheet tray paper stack transfer guide 457
2500-sheet tray pick assembly 456
2500-sheet tray rear cover 446
2500-sheet tray rear right cover 447
2500-sheet reserve tray paper limit sensor actuator removal 451
2500-sheet tray division board 447
2500-sheet tray elevator home sensor actuator 449
2500-sheet tray empty sensor actuator 448
2500-sheet tray transfer guide stop 450
2500-sheet tray transport roller 453
2500-sheet tray vertical media transport guide assembly 452
3000-sheet tray caster wheel 502
3000-sheet tray controller board 513
3000-sheet tray door 507
3000-sheet tray door switch 514
3000-sheet tray elevator spring 513
3000-sheet tray empty LED 510
3000-sheet tray feed and pick belt 500
3000-sheet tray feed roller assembly 520
3000-sheet tray front cover 505
3000-sheet tray left cover 504
3000-sheet tray left top cover 508
3000-sheet tray pick roller assembly 523
3000-sheet tray rear cover 506
3000-sheet tray release handle 503
3000-sheet tray right cover 505
3000-sheet tray rollers 498
3000-sheet tray set sensor actuator 515
ADF assembly 391
ADF CIS assembly 394
ADF CIS power supply board 396
ADF controller board 396
ADF cushion 396
ADF duplex scan glass 396
ADF fan 398
ADF feed and pick roller assembly 398
ADF feed roller 400
ADF front cover 402
ADF glass cleaning roller 403
ADF left hinge 406
ADF pick roller 407
ADF rear cover 410
ADF registration guide 410
ADF right hinge 409
ADF scan/exit roller belt 411
ADF separator pad 412
ADF separator roller 412
ADF top cover 413
ADF top cover assembly 413
ADF tray 414
ADF tray bottom cover 415
ADF/scanner image controller board 354
bin side cover 390
bottom front door 327
center cable guide bracket 379
control panel base 440
control panel board 325
control panel bottom cover 442
control panel frame 323
control panel removal 341
controller board 356
controller board access cover 345
controller board fan 366
controller board frame 365
dehumidifier 509
developer unit 336
door switch 329
duplex pass through 1 actuator 290
duplex transport assembly 285
duplex transport belt 292
duplex transport clutch 383
duplex transport diverter assembly 287
duplex transport gears 292
duplex transport guide 310
duplex transport jam knob 286
engine board cover 346
engine controller board 353
expansion controller board 351

fax card 357
feed drive assembly 375
front inner cover 328
fuser 279
fuser drive gearbox 385
fuser exit sensor actuator 288
Fuser power supply fan 361
fusing speed actuator 317
hard drive 356
high voltage board 369
IHMEB 348
IHPS frame 360
IHPS shield 347
image controller board 329
induction heater 279
induction heater magnetic erase board 348
induction heater power supply 350
left cover 272
main drive assembly 379
main power supply 275
main power supply fan 274
main power supply shield 273
main power switch 330
motor (2 x 500-sheet tray 3 feed) 486
motor (2 x 500-sheet tray 3 lift) 483
motor (2 x 500-sheet tray 3 transport) 486
motor (2 x 500-sheet tray 4 feed) 486
motor (2 x 500-sheet tray 4 lift) 483
motor (2 x 500-sheet tray 4 transport) 486
motor (2500-sheet tray elevator) 460
motor (2500-sheet tray feed) 461
motor (2500-sheet tray transfer guide) 462
motor (2500-sheet tray transport) 462
motor (3000-sheet tray elevator) 515
motor (3000-sheet tray feed) 519
motor (3000-sheet tray transport) 519
motor (ADF CIS clean) 431
motor (ADF feed) 433
motor (ADF registration) 436
motor (ADF scan shaft release) 432
motor (ADF scan) 435
motor (CIS glass clean) 439
motor (developer) 368
motor (duplex transport) 293
motor (feed) 372
motor (fuser pressure) 358
motor (fuser) 384
motor (redrive) 364
motor (registration) 370
motor (scanner drive) 440
motor (toner cartridge) 362
motor (toner supply) 332
motor (transport) 367
motor (tray 2 transport) 374
motor bracket 519
MPF 297
MPF empty actuator 309
MPF feed clutch 300
MPF feed/separator assembly 306
MPF gears 302
MPF lift plate assembly 308
MPF lift plate solenoid 301
MPF tray 298
noise filter board 350
ozone fan 376
ozone fan duct 378
paper exit fan 360
paper exit fan duct 359
port access door 278
power-saving board 352
printer rubber stopper 474
printhead 275
printhead relay board 276
rear left cover 273
redrive belt 284
redrive belt cover 283
registration transport assembly 282
registration unit assembly 314
registration unit belt 319
registration unit gears 320
registration unit latch assembly 310
registration unit lock 321
registration unit sub-assembly 315
right door 312
right door lock 295
right door switch 338
right door switch actuator 312
scanner CCD lens assembly 426
scanner controller board 428
scanner cover open sensor actuator 419
scanner glass 428
scanner interface cable cover 344
scanner left cover 429
scanner rear cover 430
scanner right cover 430
scanner top cover 430
sensor (2 x 500-sheet tray 3 near empty) 484
sensor (2 x 500-sheet tray 3 paper length) 479
sensor (2 x 500-sheet tray 3 paper width) 485
sensor (2 x 500-sheet tray 3 transport) 494
sensor (2 x 500-sheet tray 4 near empty) 484
sensor (2 x 500-sheet tray 4 paper length) 479
sensor (2 x 500-sheet tray 4 paper width) 485
sensor (2 x 500-sheet tray 4 transport) 494

sensor (2 x 500-sheet tray empty) 492
sensor (2 x 500-sheet tray feed) 492
sensor (2 x 500-sheet tray jam access door) 473
sensor (2 x 500-sheet tray lift plate level) 492
sensor (2500-sheet tray set) 471
sensor (2500-sheet tray elevator home) 465
sensor (2500-sheet tray feed) 468
sensor (2500-sheet tray jam access door) 463
sensor (2500-sheet tray main tray elevator limit) 467
sensor (2500-sheet tray main tray empty, bottom) 465
sensor (2500-sheet tray main tray near empty) 466
sensor (2500-sheet tray main tray paper empty, top) 467
sensor (2500-sheet tray paper stack transfer) 464
sensor (2500-sheet tray reserve tray empty) 469
sensor (2500-sheet tray reserve tray paper limit) 470
sensor (2500-sheet tray transport) 472
sensor (3000-sheet tray elevator level) 511
sensor (3000-sheet tray empty) 510
sensor (3000-sheet tray feed) 512
sensor (3000-sheet tray near empty 1) 517
sensor (3000-sheet tray near empty 2) 517
sensor (3000-sheet tray set) 516
sensor (ADF CIS clean) 415
sensor (ADF feed) 425
sensor (ADF jam access cover) 416
sensor (ADF mixed paper width 1) 425
sensor (ADF mixed paper width 2) 425
sensor (ADF mixed paper width 3) 425
sensor (ADF paper empty) 425
sensor (ADF paper length 1) 424
sensor (ADF paper length 2) 424
sensor (ADF paper width) 424
sensor (ADF registration) 425
sensor (ADF scan shaft home) 417
sensor (ADF top cover open) 418
sensor (duplex pass through 1) 289
sensor (duplex pass through 2) 318
sensor (fuser exit) 288
sensor (fusing speed) 317
sensor (MPF empty) 305
sensor (MPF lift plate position) 303
sensor (MPF paper length) 299
sensor (scan glass clean) 419
sensor (scanner cover open) 419
sensor (scanner cover switch) 420
sensor (scanner lamp home) 421
sensor (scanner paper length 1) 422
sensor (scanner paper length 2) 423
sensor (toner cartridge present) 334
sensor (top front door open) 331
sensor (transfer guide home) 470
sensor (tray 1 and 2 paper temperature) 376
speaker cover 338
speaker removal 340
standard bin base 389
toner agitator 335
toner cartridge drive assembly 382
toner suction fan 387
top front door 327
touch screen 326
transfer belt fan 389
transfer roller 284
tray 2 transport drive 373
tray 2 transport guide 296
tray insert paper length guide 475
tray lock 477
tray stopper 459
upper rear cover 346
upper right cover 283
waste toner door mount 328
waste toner drive 333
removal procedures
tips 271
Remove defective disk [61] 128
Remove packaging material, [area name] 128
Remove packaging material, open door C, remove metal clips, remove all screws from scanner carriage 128
Remove paper from [linked set bin name] 129
Remove paper from all bins 128
Remove paper from bin [x] 128
Remove paper from standard output bin 129
Replace [x] maintenance kit, 0 estimated pages remain [80.xy] 130
Replace all originals if restarting job. 129
Replace cartridge, 0 estimated pages remain [88.xy] 129
Replace cartridge, printer region mismatch [42.xy] 129
Replace jammed originals if restarting job. 130
Replace missing cartridge [31.xy] 130
Replace missing photoconductor [31.xy] 130
Replace missing waste toner bottle [82.xy] 130
Replace paper pick rollers in [paper source], use parts and instructions in tray 1 or tray 2 compartment [80] 130
Replace photoconductor, 0 pages remain [84.xy] 130
Replace unsupported cartridge [32.xy] 131
Replace unsupported photoconductor [32.xy] 131
Replace waste toner bottle [82.xy] 131
reports
event log 230
installed licenses 226

menu settings page 226, 230
reset maintenance counter 212
reset separator roll and pick assembly counter 212
Restore held jobs? 131
restoring
configuration file 245
license file 245

S

safe mode (everready mode)
accessing 238
safety information 24
scanner calibration 213
reset flatbed and ADF calibration values 213
Scanner disabled by admin [840.01] 131
Scanner disabled. Contact system administrator if problem persists. [840.02] 131
scanner glass
cleaning 536
Scanner jam, remove jammed originals from the scanner [2yy.xx] 131
Scanner maintenance required soon, use ADF Kit [80] 131
Scanner maintenance required, use ADF Kit [80] 131
scanner manual registration 233
scanner tests
ADF back magnification 227
ADF front magnification 227
ASIC test 228
feed test 228
flatbed magnification 227
scanner calibration reset 228
sensor tests 228
scheduled maintenance 534
screw
blue 248
green 248
red 248
second transfer 745
security slot 531
selecting paper 34
sensor tests
2500-sheet tray sensor tests 218
2x500-sheet tray sensor test 218
3000-sheet tray sensor tests 218
hole punch booklet finisher sensor tests 219
printer sensor tests 218
staple and hole punch finisher sensor tests 219
staple finisher sensor tests 219
Serial port [x] disabled [56] 132
service checks troubleshooting
800 service error messages 192
809 service error messages 192
816–824 service error messages 193
850–891 service error messages 193
network service check 140
service engineer (SE) menu 238
accessing 238
service manual conventions 27
shadow images 52
sleep mode 735
SMTP server not set up. Contact system administrator. 132
Some held jobs were not restored 132
specifications
noise 737
operating clearances 736
power 735
temperature 737
Standard network software error 54] 132
Standard USB port disabled [56] 132
storing
paper 36
Supply needed to complete job 132
supported paper sizes 37
finisher 40
supported paper types 40
finisher 40
supported paper weights 40
finisher 40

T

temperature information 737
The device is operating in safe mode. Some print options may be disabled or provide unexpected results. 133
theory
printer paper path 748
theory of operation
POR sequence 741
printer control 741
theory, 3000-sheet tray 756
theory, duplex section 763
theory, exit section 761
theory, MPF section 751
theory, print section 760
theory, registration section 759
theory, tray section 748
tips
card stock 31
labels, paper 32
on using envelopes 32
transparencies 33
tips on using envelopes 32

tips on using letterhead 32
Too many flash options installed [58] 133
Too many trays attached [58] 133
tools, required 43
touch screen
  buttons 210
transparencies
  tips 33
Tray [x] paper size unsupported 133
troubleshooting
  initial check 45
troubleshooting, image quality
  scanner image quality problems 60
troubleshooting, print quality
  blank pages 49
  gray background 46
  shadow images 52
  skewed print 54
  solid black pages 50
  streaked vertical lines appear on prints 55
  toner smear 57
  toner specks 58
troubleshooting, service checks
  800 service error messages 192
  809 service error messages 192
  816–824 service error messages 193
  850–891 service error messages 193
  network service check 140

U

understanding the home screen buttons and icons 208
Unformatted flash detected [53] 133
Unsupported option in slot [x] [55] 134
Unsupported USB hub, please remove 121
updating the printer firmware
  using a flash drive 246
  using a network computer 246
USB port 531
using the touch-screen buttons 210

V

vertical mount contact connector 253

W

Waste toner bottle nearly full [82.xy] 134
Weblink server not set up. Contact system administrator. 134

Z

zero insertion force (ZIF) connectors 248

Part number index

P/N	Part name	Page
40X0270	Power cord, 2.5 m (straight)—Japan	731
40X0271	Power cord, 2.5 m (straight)—UK, Ireland, Hong Kong, Italy	731
40X0273	Power cord, 2.5 m (straight)—Italy, Chile, Uruguay	731
40X0275	Power cord, 1.8 m (straight)—Israel	731
40X0288	Power cord, 2.5 m (straight)—Argentina	731
40X0301	Power cord, 2.5 m (straight)—Australia, New Zealand	731
40X0303	Power cord, 2.5 m (straight)—PRC	731
40X1368	USB cable, packaged (2 meters)	733
40X1766	Power cord, 2.5 m (straight)—Bolivia, Peru	731
40X1772	Power cord, 2.5 m (straight)—Liechtenstein, Switzerland	731
40X1773	Power cord, 2.5 m (straight)—South Africa, Hong Kong, Singapore, Thailand, Malaysia	731
40X1774	Power cord, 2.5 m (straight)—Denmark, Finland, Norway, Sweden	731
40X1791	Power cord, 2.5 m (straight)—Taiwan	731
40X1792	Power cord, 2.5 m (straight)—Korea	731
40X3141	Power cord, 2.5 m (straight)—Europe, Middle East, Indonesia, Africa (HV)	731
40X4596	Power cord, 2.5 m (straight)—Brazil	731
40X4819	Serial interface card, RS-232C	733
40X4823	Parallel interface card, 1284-B	733
40X7104	Power cord, 2.5 m (right-angled)—USA, Canada, Latin America	731
40X7229	Power cord, 2.5 m (straight)—India	731
40X7445	DDR3 RAM, 2 GB x32	733
40X7567	DDR3 RAM, 1 GB x32	733
40X7854	Fax card	733
40X7858	Wireless print server kit, MarkNet N8350 802.11b/g/n	733
40X8311	Card reader, small stick-on case	733
40X8312	Card reader, large stick-on case	733
40X8313	Card reader, small snap-on case	733
40X8314	Card reader, large snap-on case	733
40X8555	Flash memory, 256 MB	733
40X8556	Font card, Traditional Chinese	733
40X8557	Font card, Simplified Chinese	733
40X8568	Font card, Korean	733

P/N	Part name	Page
40X8569	Font card, Japanese	733
40X8570	Font card, Arabic	733
40X8571	Font card, Hebrew	733
40X8858	ADF rear cover	628
40X8859	Paper exit fan	606
40X8859	Toner suction fan	618
40X8860	ADF controller board	628
40X8861	ADF right hinge	628
40X8862	ADF frame	628
40X8863	ADF front Cover	628
40X8864	ADF left hinge	628
40X8865	ADF CIS data cable	632
40X8866	ADF cushion	630
40X8868	Sensor (ADF paper length 1)	638
40X8869	Sensor (2 x 500-sheet tray 3 near empty)	672
40X8869	Sensor (2 x 500-sheet tray 4 near empty)	672
40X8869	Sensor (2 x 500-sheet tray empty)	678
40X8869	Sensor (2 x 500-sheet tray lift plate level)	678
40X8869	Sensor (2500-sheet tray elevator home)	728
40X8869	Sensor (2500-sheet tray main tray elevator limit)	718
40X8869	Sensor (2500-sheet tray main tray empty, top)	718
40X8869	Sensor (2500-sheet tray set)	710
40X8869	Sensor (2500-sheet tray transfer guide home)	728
40X8869	Sensor (ADF CIS clean)	636
40X8869	Sensor (ADF document separation)	642
40X8869	Sensor (ADF exit)	654
40X8869	Sensor (ADF jam access cover)	654
40X8869	Sensor (ADF mixed paper width 1)	642
40X8869	Sensor (ADF mixed paper width 2)	642
40X8869	Sensor (ADF mixed paper width 3)	642
40X8869	Sensor (ADF paper length 2)	638
40X8869	Sensor (ADF registration)	642
40X8869	Sensor (ADF scan shaft home)	652
40X8869	Sensor (ADF top cover open)	652

P/N	Part name	Page
40X8869	Sensor (ADF tray empty)	642
40X8869	Sensor (duplex pass through 1)	602
40X8869	Sensor (duplex pass through 2)	592
40X8869	Sensor (fuser exit)	602
40X8869	Sensor (fusing speed)	590
40X8869	Sensor (main tray empty, bottom)	728
40X8869	Sensor (main tray near empty)	724
40X8869	Sensor (MPF lift plate)	596
40X8869	Sensor (MPF paper length 1)	598
40X8869	Sensor (MPF paper length 2)	598
40X8869	Sensor (paper stack transfer)	724
40X8869	Sensor (registration)	588
40X8869	Sensor (reserve tray empty)	728
40X8869	Sensor (reserve tray paper limit)	724
40X8869	Sensor (scan glass clean)	654
40X8869	Sensor (scanner lamp home)	660
40X8869	Sensor (toner cartridge present)	558
40X8869	Sensor (tray 1 empty)	570
40X8869	Sensor (tray 1 lift plate level)	570
40X8869	Sensor (tray 1 near empty)	580
40X8869	Sensor (tray 2 empty)	574
40X8869	Sensor (tray 2 lift plate level)	574
40X8869	Sensor (tray 2 near empty)	580
40X8870	Sensor (ADF paper width)	638
40X8871	Tray 3 front cover	682
40X8872	ADF paper length 2 sensor actuator (Legal)	638
40X8873	ADF tray cable	638
40X8875	ADF door latch	640
40X8877	ADF ground cable	642
40X8878	ADF feed and pick roller assembly	644
40X8879	ADF pick roller	644
40X8880	ADF pick belt	644
40X8882	ADF separator pad	646
40X8884	Motor (ADF feed)	648

P/N	Part name	Page
40X8885	ADF feed belt	648
40X8885	ADF registration belt	648
40X8887	Motor (ADF scan)	648
40X8888	ADF registration motor cable	648
40X8889	Motor (ADF registration)	650
40X8890	ADF scan motor belt	650
40X8891	ADF document exit roller	650
40X8892	ADF scan/exit roller belt	650
40X8893	ADF scan roller 2	650
40X8894	ADF scan roller 1	650
40X8895	Exit sensor housing	606
40X8896	Motor (ADF scan shaft release)	652
40X8897	Standard bin base	544
40X8898	Left cover	544
40X8899	Rear left cover	544
40X8900	Top front door	544
40X8901	Tray empty board cable	544
40X8902	Tray empty board cover	544
40X8903	2 x 500-sheet tray empty LED	666
40X8903	3000-sheet tray empty LED	688
40X8903	Tray 1 empty indicator	544
40X8903	Tray 2 empty indicator	544
40X8903	Tray empty LED	708
40X8904	Front lower cover	544
40X8905	Printhead cleaner	544
40X8906	Top front door outer hinge	544
40X8907	Finisher interface cable	546
40X8908	Upper rear cover	546
40X8909	Engine board cover	546
40X8910	Controller board access cover	546
40X8912	Port mount	546
40X8914	Bin side cover	546
40X8915	Waste toner bottle latch	548
40X8916	Front inner cover	548

P/N	Part name	Page
40X8917	Main power switch	548
40X8919	Lower front door strap	548
40X8920	Tray 2 transport guide	594
40X8921	Scanner rear cover	658
40X8922	Scanner top cover	658
40X8923	Scanner right cover	658
40X8924	Screw hole cover	658
40X8925	Control panel base	658
40X8926	Scanner Left cover	658
40X8928	Scanner glass	660
40X8929	3000-sheet tray feed sensor cable	700
40X8930	Sensor (scanner cover switch)	660
40X8931	Scanner cover open sensor actuator	660
40X8932	Sensor (scanner paper length 1)	660
40X8932	Sensor (scanner paper length 2)	660
40X8933	ADF duplex scan glass	660
40X8934	Scanner controller board	660
40X8935	Scanner CCD cable	662
40X8937	Scanner CCD lens assembly	662
40X8938	Scanner lamp	662
40X8939	Scanner lamp cable	662
40X8940	Motor (scanner drive)	664
40X8941	Scanner carriage belt	664
40X8942	Scanner carriage gear	664
40X8944	Transfer belt fan duct	554
40X8945	Fuser power supply fan	620
40X8945	Main power supply fan	622
40X8945	Transfer belt fan	554
40X8946	Image controller board	554
40X8947	Printhead relay board	554
40X8948	Printhead FFC	554
40X8949	Printhead (MFP)	554
40X8951	Toner agitator	556
40X8956	Motor (toner supply)	558

P/N	Part name	Page
40X8957	Toner supply motor cable	558
40X8958	Waste toner drive	560
40X8959	Waste toner duct	560
40X8960	Erase LED	562
40X8961	Photoconductor cable	564
40X8962	Photoconductor relay contact	564
40X8962	Toner cartridge contact	556
40X8963	Transfer belt cable	566
40X8966	Tray 1 and 2 paper feed unit	568
40X8968	Sensor (2 x 500-sheet tray feed)	678
40X8968	Sensor (2 x 500-sheet tray transport)	678
40X8968	Sensor (2500-sheet tray feed)	718
40X8968	Sensor (2500-sheet tray transport)	718
40X8968	Sensor (tray 1 paper feed)	570
40X8968	Sensor (tray 2 paper feed)	574
40X8968	Sensor (tray 2 transport)	574
40X8970	Feed roller	574
40X8970	Feed roller	678
40X8970	Feed roller	718
40X8970	Feed/separator roller	582
40X8970	Feed/separator roller	586
40X8970	Separator roller	572
40X8970	Separator roller	576
40X8970	Separator roller	680
40X8970	Separator roller	720
40X8970	Tray feed roller	570
40X8971	Tray 1 paper feed clutch	570
40X8971	Tray 2 paper feed clutch	574
40X8972	Tray 1 sensor cables	570
40X8973	Transport idler roller	674, 714
40X8974	Standard bin paper bail	606
40X8977	Front right lift handle	578
40X8978	Rear right lift handle	578
40X8979	Front left lift handle	578

P/N	Part name	Page
40X8980	Rear left lift handle	578
40X8981	2 x 500-sheet tray right rail guide wheel	668
40X8981	Tray rail guide wheel	710
40X8981	Tray right rail guide wheel	578
40X8982	Tray 1 insert rail	578
40X8982	Tray 2 insert rail	578
40X8984	Tray 1 feed cable	580
40X8984	Tray 2 feed cable	580
40X8985	Sensor (2 x 500-sheet tray 3 paper length)	672
40X8985	Sensor (2 x 500-sheet tray 4 paper length)	672
40X8985	Sensor (tray 1 paper length)	580
40X8985	Sensor (tray 2 paper length)	580
40X8987	Motor (2 x 500-sheet tray 3 lift)	672
40X8987	Motor (2 x 500-sheet tray 4 lift)	672
40X8987	Motor (tray 1 lift)	580
40X8987	Motor (tray 2 lift)	580
40X8988	Tray size sensing assembly	580
40X8989	Sensor (2 x 500-sheet tray 3 paper width)	672
40X8989	Sensor (2 x 500-sheet tray 4 paper width)	672
40X8989	Sensor (tray 1 paper width)	580
40X8989	Sensor (tray 2 paper width)	580
40X8990	Tray 1 insert	582
40X8992	Tray 2 insert	586
40X8994	Registration transport assembly	588
40X8995	Registration motor gear	588
40X8997	Sensor (registration humidity)	588
40X8998	Toner density solenoid	588
40X8999	Sensor (toner density)	588
40X9007	Registration cable	588
40X9009	Fuser fixed power resistor	590
40X9009	Registration roller fixed power resistor	588
40X9010	Transfer roller	590
40X9011	Registration unit assembly	590
40X9012	Duplex transport gear	600

P/N	Part name	Page
40X9012	Registration unit gear	592
40X9013	Registration unit belt	592
40X9014	2 x 500-sheet tray insert stopper	668
40X9017	Tray 3 right front cover	682
40X9019	Right door upper lock	594
40X9020	Right door switch actuator	594
40X9022	MPF separator gear	596
40X9023	MPF feed clutch	596
40X9024	MPF lift plate solenoid	596
40X9026	MPF paper length 1 sensor actuator	598
40X9026	MPF paper length 2 sensor actuator	598
40X9027	MPF	596
40X9028	Tray 4 front cover	684
40X9030	Sensor (MPF paper width)	598
40X9031	Duplex transport assembly	600
40X9033	Tray 4 right front cover	684
40X9034	Tray 3 handle cover	682
40X9036	Duplex transport belt	600
40X9037	Motor (duplex transport)	600
40X9039	Fuser exit sensor actuator	602
40X9040	3000-sheet tray set sensor actuator	700
40X9041	ADF fan	628
40X9041	Fuser fan	604
40X9042	HPT bin paper bail	606
40X9044	Induction heater, 100 V	604
40X9045	Induction heater, 230 V	604
40X9046	Fuser	604
40X9047	Sensor (fuser temperature) with cable	604
40X9048	3000-sheet tray pick gear	696
40X9155	Motor (redrive)	606
40X9156	Exit clutch belt	606
40X9159	Exit guide assembly	608
40X9161	Diverter solenoid	608
40X9163	Motor (fuser)	616

P/N	Part name	Page
40X9163	Motor (transport)	610
40X9164	Main drive assembly	610
40X9165	Transport motor gear	610
40X9166	Duplex transport clutch	610
40X9167	Redrive exit guide	606
40X9170	Motor (feed)	610
40X9170	Motor (tray 2 transport)	610
40X9171	Motor (registration)	610
40X9173	Feed motor belt	610
40X9174	Feed drive belt	610
40X9177	Fuser drive gearbox	614
40X9178	Fuser exit clutch	616
40X9179	Motor (fuser pressure)	616
40X9179	Motor (toner cartridge)	612
40X9182	Ozone fan with duct	618
40X9183	Ozone filter	618
40X9184	Exhaust filter	618
40X9185	Ozone fan	618
40X9186	2500-sheet tray handle	722
40X9186	Tray handle	682, 684
40X9188	Ozone filter duct	554
40X9189	Power-saving board	620
40X9190	Sensor (tray 1 and 2 paper temperature)	620
40X9191	High voltage charge contact	620
40X9192	High voltage developer contact	620
40X9193	High voltage board	620
40X9194	High voltage charge cable	620
40X9196	Induction heater power supply, 100 V	620
40X9197	Induction heater power supply ,230 V	620
40X9198	Induction heater magnetic erase board	620
40X9199	Expansion controller board	620
40X9200	Noise filter board, 100 V	620
40X9201	Noise filter board, 230 V	620
40X9202	3000-sheet tray controller board cable	705

P/N	Part name	Page
40X9203	Main power supply, 100 V	622
40X9204	Main power supply, 230 V	622
40X9205	Main power supply fan with duct	622
40X9207	Engine controller board	626
40X9209	Controller board fan	626
40X9210	ADF/scanner image controller board	626
40X9211	Sensor (ADF scan)	654
40X9212	ADF exit sensor cable	654
40X9213	Motor (CIS glass clean)	656
40X9214	CIS glass clean belt	656
40X9215	Redrive diverter gear	602
40X9216	ADF CIS assembly	632
40X9217	ADF CIS power supply board	632
40X9218	ADF CIS power supply cable	632
40X9220	Motor (ADF CIS clean)	636
40X9223	Toner cartridge drive assembly	612
40X9255	3000-sheet tray right cover	688
40X9256	3000-sheet tray front cover	688
40X9257	3000-sheet tray empty LED cable	688
40X9258	3000-sheet tray rear cover	688
40X9259	3000-sheet tray slit cover	688
40X9260	3000-sheet tray top door	688
40X9261	Dehumidifier	692
40X9262	3000-sheet tray controller board	704
40X9263	Paper stack transfer sensor actuator (LTR)	724
40X9264	Motor (3000-sheet tray elevator)	704
40X9266	3000-sheet tray door switch	704
40X9267	3000-sheet tray separator roller	698
40X9267	Feed and pick roller	696
40X9268	3000-sheet tray feed and pick belt	696
40X9269	Motor (3000-sheet tray feed)	704
40X9269	Motor (3000-sheet tray transport)	704
40X9271	3000-sheet tray separator belt	698
40X9273	3000-sheet tray transport roller	700

P/N	Part name	Page
40X9275	3000-sheet tray release handle	694
40X9276	3000-sheet tray elevator spring	694
40X9277	3000-sheet tray elevator release spring	702
40X9279	3000-sheet tray caster wheel	690
40X9280	2 x 500-sheet tray rear cover	666
40X9280	2500-sheet tray rear cover	708
40X9281	2 x 500-sheet tray left cover	666
40X9281	2500-sheet tray left cover	708
40X9282	2 x 500-sheet tray caster wheel	666
40X9282	Caster wheel	708
40X9283	Printer rubber stopper	666
40X9283	Tray stopper	708
40X9285	2 x 500-sheet tray bottom right cover	666
40X9285	2500-sheet tray bottom right cover	708
40X9286	2 x 500-sheet tray empty LED mount	666
40X9286	2500-sheet tray LED mount	708
40X9287	2 x 500-sheet tray empty LED cover	666
40X9287	2500-sheet tray LED cover	708
40X9289	2 x 500-sheet tray empty LED cable	666
40X9290	2 x 500-sheet tray controller board	668
40X9293	Motor (2 x 500-sheet tray 3 feed)	670
40X9293	Motor (2 x 500-sheet tray 3 transport)	670
40X9293	Motor (2 x 500-sheet tray 4 feed)	670
40X9293	Motor (2 x 500-sheet tray 4 transport)	670
40X9293	Motor (2500-sheet tray feed)	712
40X9293	Motor (2500-sheet tray transport)	712
40X9294	2 x 500-sheet tray feed and transport motor belt	670
40X9294	2500-sheet tray feed and transport motor belt	712
40X9295	2 x 500-sheet tray feed and transport secondary gear	670
40X9295	2 x 500-sheet tray feed secondary gear	676
40X9295	2500-sheet tray feed and transport secondary gear	712
40X9295	2500-sheet tray feed secondary gear	716
40X9297	3000-sheet tray roller clutch	696
40X9298	2 x 500-sheet tray transport gear	676

P/N	Part name	Page
40X9298	2500-sheet tray transport gear	716
40X9299	2 x 500-sheet tray transport roller	678
40X9299	2500-sheet tray transport roller	718
40X9300	2 x 500-sheet tray 4 pick assembly sensor cable	678
40X9304	Tray lock lever	682, 684
40X9305	2 x 500-sheet tray left rail guide wheel	668
40X9305	Tray insert guide wheel	582
40X9305	Tray insert guide wheel	586
40X9305	Tray insert guide wheel	682
40X9305	Tray insert guide wheel	684
40X9305	Tray insert guide wheel	728
40X9305	Tray left rail guide wheel	578
40X9306	Tray insert paper length guide	686
40X9306	Tray paper length guide	584
40X9308	2 x 500-sheet tray near empty sensor actuator	686
40X9308	Tray near empty sensor actuator	584
40X9309	2 x 500-tray insert paper length sensor actuator	686
40X9313	Sensor (2 x 500-sheet tray jam access door)	676
40X9313	Sensor (2500-sheet tray jam access door)	716
40X9313	Sensor (exit)	606
40X9313	Sensor (redrive exit)	606
40X9313	Sensor (scanner cover open)	660
40X9313	Sensor (top front door)	556
40X9316	2 x 500-sheet tray 3 pick assembly sensor cable	678
40X9320	2500-sheet tray handle cover	722
40X9320	Tray 4 handle cover	684
40X9339	2500-sheet tray right front cover	722
40X9373	3000-sheet tray set sensor actuator spring	700
40X9402	Power socket mount	624
40X9455	Roller clutch	572, 576
40X9455	Separator clutch	680
40X9455	Separator clutch	720
40X9484	Exit sensor actuator	606
40X9527	Door switch	548

P/N	Part name	Page
40X9527	Right door switch	594
40X9564	Motor (developer)	610
40X9576	2500-sheet tray insert (A4)	722
40X9599	Exit sensor cable	606
40X9602	2500-sheet tray insert (LTR)	722
40X9615	MPF separator roller	598
40X9635	Tray 3 insert	682
40X9639	Tray 2 transport drive belt	610
40X9644	Redrive exit sensor cable	606
40X9661	Control panel	550
40X9663	Controller board (MFP)	626
40X9669	Maintenance kit, 300K	729
40X9672	Maintenance kit, 200K (ADF)	729
40X9673	Maintenance kit, 200K (MPF)	729
40X9678	ADF CIS cable	628
40X9679	ADF sensor cable	628
40X9680	ADF top cover sensor cable	642
40X9681	ADF feed roller	644
40X9682	ADF separator roller	646
40X9683	ADF feed motor cable	648
40X9684	ADF scan motor cable	650
40X9685	ADF scan motor gear	650
40X9685	ADF transport gear	656
40X9686	ADF scan roller 2 gear	650
40X9687	ADF exit roller gear	650
40X9688	ADF scan roller 3 gear	650
40X9689	ADF door open sensor cable	652
40X9690	ADF scan sensor cable	654
40X9691	ADF CIS clean belt	636
40X9691	ADF glass clean encoder belt	656
40X9693	CIS glass clean gear	656
40X9694	ADF glass clean encoder	656
40X9695	CIS glass clean motor cable	656
40X9696	ADF CIS power supply board cable	632

P/N	Part name	Page
40X9697	Tray 4 insert	684
40X9698	3000-sheet tray interface cable	705
40X9699	ADF CIS clean motor cable	636
40X9700	ADF CIS clean sensor cable	636
40X9701	ADF exit sensor cable	636
40X9702	Scanner sensor cable	660
40X9704	Transfer belt maintenance kit	566
40X9706	Registration primary gear	588
40X9707	Registration secondary gear	588
40X9708	Toner density sensor cable	588
40X9710	Lower registration gear	592
40X9711	Right door handle	594
40X9712	Right door middle lock	594
40X9713	Right door lower lock	594
40X9714	Redrive exit sensor actuator	606
40X9715	Right door lock support	594
40X9716	MPF lift plate sensor cable	596
40X9718	MPF separator idler gear	596
40X9719	MPF feed clutch gear	596
40X9720	MPF lift plate clutch	596
40X9721	MPF paper length sensor cable	598
40X9722	MPF paper width sensor cable	598
40X9723	Fuser exit sensor cable	602
40X9724	Redrive belt	606
40X9725	Duplex transport clutch gear	610
40X9726	Feed motor gear	610
40X9727	Feed drive assembly	610
40X9728	Tray 2 transport drive assembly	610
40X9729	Fuser pressure primary gear	614
40X9730	Fuser pressure secondary gear	614
40X9731	Fuser transport primary gear	614
40X9732	Fuser transport secondary gear	614
40X9733	High voltage transfer cable	620
40X9734	High voltage toner charge cable	620

P/N	Part name	Page
40X9735	Induction heater magnetic erase board cable	620
40X9736	Induction heater power supply cable	620
40X9737	Noise filter board cable	620
40X9740	Power socket cable	624
40X9741	Power socket	624
40X9744	Engine controller board FFC	626
40X9747	ADF paper guide gear	638
40X9748	ADF paper length 2 sensor actuator (A4)	638
40X9750	Toner cartridge relay contact cable	556
40X9751	Toner cartridge present sensor cable	558
40X9758	Tray empty board mount	544
40X9760	Bottom front door	544
40X9761	Bottom front door hinge	544
40X9762	Scanner interface cable cover	546
40X9763	Port access door	546
40X9764	Waste toner door mount	548
40X9765	3000-sheet tray left top cover	688
40X9766	3000-sheet tray feed and pick idler gear	704
40X9767	3000-sheet tray feed motor idler gear	704
40X9768	3000-sheet tray feed motor gear	704
40X9769	3000-sheet tray transport roller drive gear	700
40X9771	3000-sheet tray transport idler roller	700
40X9772	3000-sheet tray feed gear	696
40X9773	3000-sheet tray separator roller primary gear	698
40X9774	2 x 500-sheet tray 4 feed and transport motor cable	670
40X9775	2 x 500 sheet tray paper length sensor cable	672
40X9779	2 x 500-sheet tray rear right cover	666
40X9779	2500-sheet tray rear right cover	708
40X9782	Tray empty LED cable	708
40X9783	2 x 500-sheet tray interface cable	668
40X9783	2500-sheet tray interface cable	710
40X9784	Tray insert guide wheel	710
40X9785	2500-sheet tray controller board	710
40X9786	2500-sheet tray cable harness	716

P/N	Part name	Page
40X9787	2500-sheet tray pick assembly sensor cable	718
40X9788	2500-sheet tray lock lever	722
40X9789	2500-sheet tray front cover	722
40X9791	Paper stack transfer guide base	724
40X9792	Paper stack transfer guide	724
40X9793	Paper stack transfer sensor actuator (A4)	724
40X9794	Paper stack transfer sensor actuator spring	724
40X9795	Transfer guide secondary gear	726
40X9796	Transfer guide primary gear	726
40X9797	Transfer guide primary gear spring	726
40X9798	Main tray elevator coupling	726
40X9799	Tray insert bottom right guide wheel	728
40X9800	2500-sheet tray elevator home sensor actuator spring	728
40X9801	2500-sheet tray elevator home sensor actuator	728
40X9802	2500-sheet tray main tray empty sensor bottom actuator	728
40X9803	2500-sheet tray transfer guide stop	728
40X9804	2500-sheet tray transfer guide stop spring	728
40X9805	Tray insert bottom left guide wheel	728
40X9806	2500-sheet tray elevator damper	728
40X9808	Transfer guide belt	728
40X9809	2500-sheet tray tray insert sensor cable	728
40X9880	Sensor (3000-sheet tray elevator level)	698
40X9880	Sensor (3000-sheet tray empty)	698
40X9880	Sensor (3000-sheet tray near empty 1)	704
40X9880	Sensor (3000-sheet tray near empty 2)	704
40X9880	Sensor (3000-sheet tray set)	700
40X9881	3000-sheet tray empty sensor actuator	696
40X9882	2 x 500-sheet tray 3 feed and transport motor cable	670
40X9882	2500-sheet tray feed and transport motor cable	712
40X9883	Reserve tray empty sensor actuator spring	728
40X9883	Reserve tray paper limit sensor actuator spring	724
40X9884	3000-sheet tray empty LED cover	688
40X9885	Sensor (3000-sheet tray feed)	700
40X9886	3000-sheet tray feed and pick drive gear	696

P/N	Part name	Page
40X9886	3000-sheet tray separator roller drive gear	698
40X9887	3000-sheet tray separator roller secondary gear	698
40X9888	3000-sheet tray separator roller clutch	698
40X9889	2 x 500 sheet tray lift motor cable	672
40X9890	2 x 500-sheet tray cable harness	676
40X9891	2 x 500-sheet tray feed and transport primary gear	670
40X9891	2500-sheet tray feed and transport primary gear	712
40X9892	2 x 500-sheet tray transport gear spring	676
40X9892	2500-sheet tray transport gear spring	716
40X9893	2 x 500-sheet tray transport gear bushing	676
40X9893	2500-sheet tray transport gear bushing	716
40X9894	2 x 500-sheet tray feed primary gear	676
40X9894	2500-sheet tray feed primary gear	716
40X9896	Motor (2500-sheet tray elevator)	712
40X9896	Motor (2500-sheet tray transfer guide)	712
40X9899	2 x 500-sheet tray empty sensor actuator	678
40X9899	2500-sheet tray main tray top empty actuator	718
40X9899	Tray 2 empty sensor actuator	574
40X9899	Tray empty sensor actuator	570
40X9900	Reserve tray empty sensor actuator	728
40X9900	Reserve tray paper limit sensor actuator	724
40X9901	Main tray elevator gear spring	726
40X9902	Main tray elevator gear	726
40X9908	2 x 500-sheet tray jam access door strap	674
40X9908	2500-sheet tray jam access door strap	714
40X9917	Top front door inner hinge	544
40X9924	Standard bin	544
40X9925	Pick roller	574
40X9925	Pick roller	582
40X9925	Pick roller	586
40X9925	Pick roller	678
40X9925	Pick roller	718
40X9925	Tray pick roller	570
40X9927	Separator roller assembly	572, 576

P/N	Part name	Page
40X9936	Developer unit	562
40X9940	ADF rear paper guide	638
40X9941	ADF tray	638
40X9942	ADF front paper guide	638
40X9943	ADF bin paper stopper	638
40X9944	ADF tray bottom cover	638
40X9945	ADF paper guide rack	638
40X9946	ADF top cover	640
40X9947	ADF door frame	640
40X9948	ADF CIS idler roller	634
40X9948	ADF registration idler roller	642
40X9949	ADF registration guide	646
40X9950	ADF feed gear	648
40X9951	ADF registration roller	648
40X9952	ADF registration gear	648
40X9953	ADF exit roller	656
40X9955	ADF CIS jam access handle	634
40X9956	ADF CIS jam access latch	634
40X9957	ADF CIS clean gear	636
40X9958	ADF CIS clean cam	636
40X9959	ADF CIS clean roller primary gear	636
40X9960	ADF CIS clean roller belt	636
40X9961	ADF CIS clean roller secondary gear	636
40X9962	Screwdriver	544
40X9963	Waste toner door switch	548
40X9964	Control panel hinge	550
40X9965	USB port cover	550
40X9966	Speaker cover	550
40X9967	Control panel cable guide lower cover	550
40X9968	Speaker	550
40X9969	Control panel cable guide upper cover	550
40X9970	USB extension cable	550
40X9971	Cave light lens	658
40X9972	Control panel mount	658

P/N	Part name	Page
40X9973	Control panel bottom cover	658
40X9974	Cave light LED cable	658
40X9975	Scanner drive motor cable	664
40X9976	Scanner mirror	664
40X9977	Erase LED cable	562
40X9978	Photoconductor release lever	564
40X9979	Transfer belt paper guide	566
40X9980	Tray 2 transport drive gear	568
40X9981	Roller clutch	570, 574, 678, 718
40X9982	2 x 500-sheet tray set actuator	678
40X9982	2500-sheet tray tray set actuator	718
40X9982	Tray set actuator	570, 574
40X9983	Tray 2 transport roller	574
40X9984	Tray 2 transport sensor cable	574
40X9987	Paper feed sensor cable	574
40X9988	Tray base left cover	578
40X9989	Tray stopper	578
40X9990	Fusing speed sensor cable	590
40X9991	Registration drive gear	592
40X9992	Registration unit lock	592
40X9993	Registration unit lock shaft	592
40X9994	Registration unit handle	592
40X9995	MPF feed roller	596
40X9996	MPF lift plate cam	596
40X9997	Right door cover	600
40X9998	Duplex transport jam removal knob	600
41X0010	Forms and Bar Code Card	733
41X0011	PRESCRIBE card	733
41X0012	IPDS card	733
41X0030	Keyboard kit, English	733
41X0031	Keyboard kit, French	733
41X0032	Keyboard kit, Italian	733
41X0033	Keyboard kit, German	733
41X0034	Keyboard kit, Spanish	733

P/N	Part name	Page
41X0452	Control panel cover assembly	552
41X0453	Control panel cable kit	552
41X0454	Control panel touch screen display (10 in.)	552
41X0455	Control panel UICC	552

Part name index

P/N	Part name	Page
40X9889	2 x 500 sheet tray lift motor cable	672
40X9775	2 x 500 sheet tray paper length sensor cable	672
40X9882	2 x 500-sheet tray 3 feed and transport motor cable	670
40X9316	2 x 500-sheet tray 3 pick assembly sensor cable	678
40X9774	2 x 500-sheet tray 4 feed and transport motor cable	670
40X9300	2 x 500-sheet tray 4 pick assembly sensor cable	678
40X9285	2 x 500-sheet tray bottom right cover	666
40X9890	2 x 500-sheet tray cable harness	676
40X9282	2 x 500-sheet tray caster wheel	666
40X9290	2 x 500-sheet tray controller board	668
40X8903	2 x 500-sheet tray empty LED	666
40X9289	2 x 500-sheet tray empty LED cable	666
40X9287	2 x 500-sheet tray empty LED cover	666
40X9286	2 x 500-sheet tray empty LED mount	666
40X9899	2 x 500-sheet tray empty sensor actuator	678
40X9294	2 x 500-sheet tray feed and transport motor belt	670
40X9891	2 x 500-sheet tray feed and transport primary gear	670
40X9295	2 x 500-sheet tray feed and transport secondary gear	670
40X9894	2 x 500-sheet tray feed primary gear	676
40X9295	2 x 500-sheet tray feed secondary gear	676
40X9014	2 x 500-sheet tray insert stopper	668
40X9783	2 x 500-sheet tray interface cable	668
40X9908	2 x 500-sheet tray jam access door strap	674
40X9281	2 x 500-sheet tray left cover	666
40X9305	2 x 500-sheet tray left rail guide wheel	668
40X9308	2 x 500-sheet tray near empty sensor actuator	686
40X9280	2 x 500-sheet tray rear cover	666
40X9779	2 x 500-sheet tray rear right cover	666
40X8981	2 x 500-sheet tray right rail guide wheel	668
40X9982	2 x 500-sheet tray set actuator	678
40X9298	2 x 500-sheet tray transport gear	676
40X9893	2 x 500-sheet tray transport gear bushing	676

P/N	Part name	Page
40X9892	2 x 500-sheet tray transport gear spring	676
40X9299	2 x 500-sheet tray transport roller	678
40X9309	2 x 500-tray insert paper length sensor actuator	686
40X9285	2500-sheet tray bottom right cover	708
40X9786	2500-sheet tray cable harness	716
40X9785	2500-sheet tray controller board	710
40X9806	2500-sheet tray elevator damper	728
40X9801	2500-sheet tray elevator home sensor actuator	728
40X9800	2500-sheet tray elevator home sensor actuator spring	728
40X9294	2500-sheet tray feed and transport motor belt	712
40X9882	2500-sheet tray feed and transport motor cable	712
40X9891	2500-sheet tray feed and transport primary gear	712
40X9295	2500-sheet tray feed and transport secondary gear	712
40X9894	2500-sheet tray feed primary gear	716
40X9295	2500-sheet tray feed secondary gear	716
40X9789	2500-sheet tray front cover	722
40X9186	2500-sheet tray handle	722
40X9320	2500-sheet tray handle cover	722
40X9576	2500-sheet tray insert (A4)	722
40X9602	2500-sheet tray insert (LTR)	722
40X9783	2500-sheet tray interface cable	710
40X9908	2500-sheet tray jam access door strap	714
40X9287	2500-sheet tray LED cover	708
40X9286	2500-sheet tray LED mount	708
40X9281	2500-sheet tray left cover	708
40X9788	2500-sheet tray lock lever	722
40X9802	2500-sheet tray main tray empty sensor bottom actuator	728
40X9899	2500-sheet tray main tray top empty actuator	718
40X9787	2500-sheet tray pick assembly sensor cable	718
40X9280	2500-sheet tray rear cover	708
40X9779	2500-sheet tray rear right cover	708
40X9339	2500-sheet tray right front cover	722
40X9803	2500-sheet tray transfer guide stop	728
40X9804	2500-sheet tray transfer guide stop spring	728

P/N	Part name	Page
40X9298	2500-sheet tray transport gear	716
40X9893	2500-sheet tray transport gear bushing	716
40X9892	2500-sheet tray transport gear spring	716
40X9299	2500-sheet tray transport roller	718
40X9809	2500-sheet tray tray insert sensor cable	728
40X9982	2500-sheet tray tray set actuator	718
40X9279	3000-sheet tray caster wheel	690
40X9262	3000-sheet tray controller board	704
40X9202	3000-sheet tray controller board cable	705
40X9277	3000-sheet tray elevator release spring	702
40X9276	3000-sheet tray elevator spring	694
40X8903	3000-sheet tray empty LED	688
40X9257	3000-sheet tray empty LED cable	688
40X9884	3000-sheet tray empty LED cover	688
40X9881	3000-sheet tray empty sensor actuator	696
40X9268	3000-sheet tray feed and pick belt	696
40X9886	3000-sheet tray feed and pick drive gear	696
40X9766	3000-sheet tray feed and pick idler gear	704
40X9772	3000-sheet tray feed gear	696
40X9768	3000-sheet tray feed motor gear	704
40X9767	3000-sheet tray feed motor idler gear	704
40X8929	3000-sheet tray feed sensor cable	700
40X9256	3000-sheet tray front cover	688
40X9698	3000-sheet tray interface cable	705
40X9765	3000-sheet tray left top cover	688
40X9048	3000-sheet tray pick gear	696
40X9258	3000-sheet tray rear cover	688
40X9275	3000-sheet tray release handle	694
40X9255	3000-sheet tray right cover	688
40X9297	3000-sheet tray roller clutch	696
40X9271	3000-sheet tray separator belt	698
40X9267	3000-sheet tray separator roller	698
40X9888	3000-sheet tray separator roller clutch	698
40X9886	3000-sheet tray separator roller drive gear	698

P/N	Part name	Page
40X9773	3000-sheet tray separator roller primary gear	698
40X9887	3000-sheet tray separator roller secondary gear	698
40X9040	3000-sheet tray set sensor actuator	700
40X9373	3000-sheet tray set sensor actuator spring	700
40X9259	3000-sheet tray slit cover	688
40X9260	3000-sheet tray top door	688
40X9771	3000-sheet tray transport idler roller	700
40X9273	3000-sheet tray transport roller	700
40X9769	3000-sheet tray transport roller drive gear	700
40X9266	3000-sheet tray door switch	704
40X9943	ADF bin paper stopper	638
40X9216	ADF CIS assembly	632
40X9678	ADF CIS cable	628
40X9691	ADF CIS clean belt	636
40X9958	ADF CIS clean cam	636
40X9957	ADF CIS clean gear	636
40X9699	ADF CIS clean motor cable	636
40X9960	ADF CIS clean roller belt	636
40X9959	ADF CIS clean roller primary gear	636
40X9961	ADF CIS clean roller secondary gear	636
40X9700	ADF CIS clean sensor cable	636
40X8865	ADF CIS data cable	632
40X9948	ADF CIS idler roller	634
40X9955	ADF CIS jam access handle	634
40X9956	ADF CIS jam access latch	634
40X9217	ADF CIS power supply board	632
40X9696	ADF CIS power supply board cable	632
40X9218	ADF CIS power supply cable	632
40X8860	ADF controller board	628
40X8866	ADF cushion	630
40X8891	ADF document exit roller	650
40X9947	ADF door frame	640
40X8875	ADF door latch	640
40X9689	ADF door open sensor cable	652

P/N	Part name	Page
40X8933	ADF duplex scan glass	660
40X9953	ADF exit roller	656
40X9687	ADF exit roller gear	650
40X9701	ADF exit sensor cable	636
40X9212	ADF exit sensor cable	654
40X9041	ADF fan	628
40X8878	ADF feed and pick roller assembly	644
40X8885	ADF feed belt	648
40X9950	ADF feed gear	648
40X9683	ADF feed motor cable	648
40X9681	ADF feed roller	644
40X8862	ADF frame	628
40X8863	ADF front Cover	628
40X9942	ADF front paper guide	638
40X9694	ADF glass clean encoder	656
40X9691	ADF glass clean encoder belt	656
40X8877	ADF ground cable	642
40X8864	ADF left hinge	628
40X9747	ADF paper guide gear	638
40X9945	ADF paper guide rack	638
40X9748	ADF paper length 2 sensor actuator (A4)	638
40X8872	ADF paper length 2 sensor actuator (Legal)	638
40X8880	ADF pick belt	644
40X8879	ADF pick roller	644
40X8858	ADF rear cover	628
40X9940	ADF rear paper guide	638
40X8885	ADF registration belt	648
40X9952	ADF registration gear	648
40X9949	ADF registration guide	646
40X9948	ADF registration idler roller	642
40X8888	ADF registration motor cable	648
40X9951	ADF registration roller	648
40X8861	ADF right hinge	628
40X8890	ADF scan motor belt	650

P/N	Part name	Page
40X9684	ADF scan motor cable	650
40X9685	ADF scan motor gear	650
40X8894	ADF scan roller 1	650
40X8893	ADF scan roller 2	650
40X9686	ADF scan roller 2 gear	650
40X9688	ADF scan roller 3 gear	650
40X9690	ADF scan sensor cable	654
40X8892	ADF scan/exit roller belt	650
40X9679	ADF sensor cable	628
40X8882	ADF separator pad	646
40X9682	ADF separator roller	646
40X9946	ADF top cover	640
40X9680	ADF top cover sensor cable	642
40X9685	ADF transport gear	656
40X9941	ADF tray	638
40X9944	ADF tray bottom cover	638
40X8873	ADF tray cable	638
40X9210	ADF/scanner image controller board	626
40X8914	Bin side cover	546
40X9760	Bottom front door	544
40X9761	Bottom front door hinge	544
40X8314	Card reader, large snap-on case	733
40X8312	Card reader, large stick-on case	733
40X8313	Card reader, small snap-on case	733
40X8311	Card reader, small stick-on case	733
40X9282	Caster wheel	708
40X9974	Cave light LED cable	658
40X9971	Cave light lens	658
40X9214	CIS glass clean belt	656
40X9693	CIS glass clean gear	656
40X9695	CIS glass clean motor cable	656
40X9661	Control panel	550
40X8925	Control panel base	658
40X9973	Control panel bottom cover	658

P/N	Part name	Page
40X9967	Control panel cable guide lower cover	550
40X9969	Control panel cable guide upper cover	550
41X0453	Control panel cable kit	552
41X0452	Control panel cover assembly	552
40X9964	Control panel hinge	550
40X9972	Control panel mount	658
41X0454	Control panel touch screen display (10 in.)	552
41X0455	Control panel UICC	552
40X9663	Controller board (MFP)	626
40X8910	Controller board access cover	546
40X9209	Controller board fan	626
40X7567	DDR3 RAM, 1 GB x32	733
40X7445	DDR3 RAM, 2 GB x32	733
40X9261	Dehumidifier	692
40X9936	Developer unit	562
40X9161	Diverter solenoid	608
40X9527	Door switch	548
40X9031	Duplex transport assembly	600
40X9036	Duplex transport belt	600
40X9166	Duplex transport clutch	610
40X9725	Duplex transport clutch gear	610
40X9012	Duplex transport gear	600
40X9998	Duplex transport jam removal knob	600
40X8909	Engine board cover	546
40X9207	Engine controller board	626
40X9744	Engine controller board FFC	626
40X8960	Erase LED	562
40X9977	Erase LED cable	562
40X9184	Exhaust filter	618
40X9156	Exit clutch belt	606
40X9159	Exit guide assembly	608
40X9484	Exit sensor actuator	606
40X9599	Exit sensor cable	606
40X8895	Exit sensor housing	606

P/N	Part name	Page
40X9199	Expansion controller board	620
40X7854	Fax card	733
40X9267	Feed and pick roller	696
40X9727	Feed drive assembly	610
40X9174	Feed drive belt	610
40X9173	Feed motor belt	610
40X9726	Feed motor gear	610
40X8970	Feed roller	574, 678, 718
40X8970	Feed/separator roller	582, 586
40X8907	Finisher interface cable	546
40X8555	Flash memory, 256 MB	733
40X8570	Font card, Arabic	733
40X8571	Font card, Hebrew	733
40X8569	Font card, Japanese	733
40X8568	Font card, Korean	733
40X8557	Font card, Simplified Chinese	733
40X8556	Font card, Traditional Chinese	733
41X0010	Forms and Bar Code Card	733
40X8916	Front inner cover	548
40X8979	Front left lift handle	578
40X8904	Front lower cover	544
40X8977	Front right lift handle	578
40X9046	Fuser	604
40X9177	Fuser drive gearbox	614
40X9178	Fuser exit clutch	616
40X9039	Fuser exit sensor actuator	602
40X9723	Fuser exit sensor cable	602
40X9041	Fuser fan	604
40X9009	Fuser fixed power resistor	590
40X8945	Fuser power supply fan	620
40X9729	Fuser pressure primary gear	614
40X9730	Fuser pressure secondary gear	614
40X9731	Fuser transport primary gear	614
40X9732	Fuser transport secondary gear	614

P/N	Part name	Page
40X9990	Fusing speed sensor cable	590
40X9193	High voltage board	620
40X9194	High voltage charge cable	620
40X9191	High voltage charge contact	620
40X9192	High voltage developer contact	620
40X9734	High voltage toner charge cable	620
40X9733	High voltage transfer cable	620
40X9042	HPT bin paper bail	606
40X8946	Image controller board	554
40X9198	Induction heater magnetic erase board	620
40X9735	Induction heater magnetic erase board cable	620
40X9197	Induction heater power supply ,230 V	620
40X9736	Induction heater power supply cable	620
40X9196	Induction heater power supply, 100 V	620
40X9044	Induction heater, 100 V	604
40X9045	Induction heater, 230 V	604
41X0012	IPDS card	733
41X0030	Keyboard kit, English	733
41X0031	Keyboard kit, French	733
41X0033	Keyboard kit, German	733
41X0032	Keyboard kit, Italian	733
41X0034	Keyboard kit, Spanish	733
40X8898	Left cover	544
40X8919	Lower front door strap	548
40X9710	Lower registration gear	592
40X9164	Main drive assembly	610
40X8945	Main power supply fan	622
40X9205	Main power supply fan with duct	622
40X9203	Main power supply, 100 V	622
40X9204	Main power supply, 230 V	622
40X8917	Main power switch	548
40X9798	Main tray elevator coupling	726
40X9902	Main tray elevator gear	726
40X9901	Main tray elevator gear spring	726

P/N	Part name	Page
40X9672	Maintenance kit, 200K (ADF)	729
40X9673	Maintenance kit, 200K (MPF)	729
40X9669	Maintenance kit, 300K	729
40X9293	Motor (2 x 500-sheet tray 3 feed)	670
40X8987	Motor (2 x 500-sheet tray 3 lift)	672
40X9293	Motor (2 x 500-sheet tray 3 transport)	670
40X9293	Motor (2 x 500-sheet tray 4 feed)	670
40X8987	Motor (2 x 500-sheet tray 4 lift)	672
40X9293	Motor (2 x 500-sheet tray 4 transport)	670
40X9896	Motor (2500-sheet tray elevator)	712
40X9293	Motor (2500-sheet tray feed)	712
40X9896	Motor (2500-sheet tray transfer guide)	712
40X9293	Motor (2500-sheet tray transport)	712
40X9264	Motor (3000-sheet tray elevator)	704
40X9269	Motor (3000-sheet tray feed)	704
40X9269	Motor (3000-sheet tray transport)	704
40X9220	Motor (ADF CIS clean)	636
40X8884	Motor (ADF feed)	648
40X8889	Motor (ADF registration)	650
40X8896	Motor (ADF scan shaft release)	652
40X8887	Motor (ADF scan)	648
40X9213	Motor (CIS glass clean)	656
40X9564	Motor (developer)	610
40X9037	Motor (duplex transport)	600
40X9170	Motor (feed)	610
40X9179	Motor (fuser pressure)	616
40X9163	Motor (fuser)	616
40X9155	Motor (redrive)	606
40X9171	Motor (registration)	610
40X8940	Motor (scanner drive)	664
40X9179	Motor (toner cartridge)	612
40X8956	Motor (toner supply)	558
40X9163	Motor (transport)	610
40X8987	Motor (tray 1 lift)	580

P/N	Part name	Page
40X8987	Motor (tray 2 lift)	580
40X9170	Motor (tray 2 transport)	610
40X9027	MPF	596
40X9023	MPF feed clutch	596
40X9719	MPF feed clutch gear	596
40X9995	MPF feed roller	596
40X9996	MPF lift plate cam	596
40X9720	MPF lift plate clutch	596
40X9716	MPF lift plate sensor cable	596
40X9024	MPF lift plate solenoid	596
40X9026	MPF paper length 1 sensor actuator	598
40X9026	MPF paper length 2 sensor actuator	598
40X9721	MPF paper length sensor cable	598
40X9722	MPF paper width sensor cable	598
40X9022	MPF separator gear	596
40X9718	MPF separator idler gear	596
40X9615	MPF separator roller	598
40X9737	Noise filter board cable	620
40X9200	Noise filter board, 100 V	620
40X9201	Noise filter board, 230 V	620
40X9185	Ozone fan	618
40X9182	Ozone fan with duct	618
40X9183	Ozone filter	618
40X9188	Ozone filter duct	554
40X8859	Paper exit fan	606
40X9987	Paper feed sensor cable	574
40X9792	Paper stack transfer guide	724
40X9791	Paper stack transfer guide base	724
40X9793	Paper stack transfer sensor actuator (A4)	724
40X9263	Paper stack transfer sensor actuator (LTR)	724
40X9794	Paper stack transfer sensor actuator spring	724
40X4823	Parallel interface card, 1284-B	733
40X8961	Photoconductor cable	564
40X8962	Photoconductor relay contact	564

P/N	Part name	Page
40X9978	Photoconductor release lever	564
40X9925	Pick roller	574, 582, 586, 678, 718
40X9763	Port access door	546
40X8912	Port mount	546
40X0275	Power cord, 1.8 m (straight)—Israel	731
40X7104	Power cord, 2.5 m (right-angled)—USA, Canada, Latin America	731
40X0288	Power cord, 2.5 m (straight)—Argentina	731
40X0301	Power cord, 2.5 m (straight)—Australia, New Zealand	731
40X1766	Power cord, 2.5 m (straight)—Bolivia, Peru	731
40X4596	Power cord, 2.5 m (straight)—Brazil	731
40X1774	Power cord, 2.5 m (straight)—Denmark, Finland, Norway, Sweden	731
40X3141	Power cord, 2.5 m (straight)—Europe, Middle East, Indonesia, Africa (HV)	731
40X7229	Power cord, 2.5 m (straight)—India	731
40X0273	Power cord, 2.5 m (straight)—Italy, Chile, Uruguay	731
40X0270	Power cord, 2.5 m (straight)—Japan	731
40X1792	Power cord, 2.5 m (straight)—Korea	731
40X1772	Power cord, 2.5 m (straight)—Liechtenstein, Switzerland	731
40X0303	Power cord, 2.5 m (straight)—PRC	731
40X1773	Power cord, 2.5 m (straight)—South Africa, Hong Kong, Singapore, Thailand, Malaysia	731
40X1791	Power cord, 2.5 m (straight)—Taiwan	731
40X0271	Power cord, 2.5 m (straight)—UK, Ireland, Hong Kong, Italy	731
40X9741	Power socket	624
40X9740	Power socket cable	624
40X9402	Power socket mount	624
40X9189	Power-saving board	620
41X0011	PRESCRIBE card	733
40X9283	Printer rubber stopper	666
40X8949	Printhead (MFP)	554
40X8905	Printhead cleaner	544
40X8948	Printhead FFC	554
40X8947	Printhead relay board	554
40X8899	Rear left cover	544
40X8980	Rear left lift handle	578
40X8978	Rear right lift handle	578

P/N	Part name	Page
40X9724	Redrive belt	606
40X9215	Redrive diverter gear	602
40X9167	Redrive exit guide	606
40X9714	Redrive exit sensor actuator	606
40X9644	Redrive exit sensor cable	606
40X9007	Registration cable	588
40X9991	Registration drive gear	592
40X8995	Registration motor gear	588
40X9706	Registration primary gear	588
40X9009	Registration roller fixed power resistor	588
40X9707	Registration secondary gear	588
40X8994	Registration transport assembly	588
40X9011	Registration unit assembly	590
40X9013	Registration unit belt	592
40X9012	Registration unit gear	592
40X9994	Registration unit handle	592
40X9992	Registration unit lock	592
40X9993	Registration unit lock shaft	592
40X9900	Reserve tray empty sensor actuator	728
40X9883	Reserve tray empty sensor actuator spring	728
40X9900	Reserve tray paper limit sensor actuator	724
40X9883	Reserve tray paper limit sensor actuator spring	724
40X9997	Right door cover	600
40X9711	Right door handle	594
40X9715	Right door lock support	594
40X9713	Right door lower lock	594
40X9712	Right door middle lock	594
40X9527	Right door switch	594
40X9020	Right door switch actuator	594
40X9019	Right door upper lock	594
40X9981	Roller clutch	570, 574, 678, 718
40X9455	Roller clutch	572, 574, 678, 718
40X9455	Roller clutch	576, 678, 718
40X8941	Scanner carriage belt	664

P/N	Part name	Page
40X8942	Scanner carriage gear	664
40X8935	Scanner CCD cable	662
40X8937	Scanner CCD lens assembly	662
40X8934	Scanner controller board	660
40X8931	Scanner cover open sensor actuator	660
40X9975	Scanner drive motor cable	664
40X8928	Scanner glass	660
40X9762	Scanner interface cable cover	546
40X8938	Scanner lamp	662
40X8939	Scanner lamp cable	662
40X8926	Scanner Left cover	658
40X9976	Scanner mirror	664
40X8921	Scanner rear cover	658
40X8923	Scanner right cover	658
40X9702	Scanner sensor cable	660
40X8922	Scanner top cover	658
40X8924	Screw hole cover	658
40X9962	Screwdriver	544
40X8869	Sensor (2 x 500-sheet tray 3 near empty)	672
40X8985	Sensor (2 x 500-sheet tray 3 paper length)	672
40X8989	Sensor (2 x 500-sheet tray 3 paper width)	672
40X8869	Sensor (2 x 500-sheet tray 4 near empty)	672
40X8985	Sensor (2 x 500-sheet tray 4 paper length)	672
40X8989	Sensor (2 x 500-sheet tray 4 paper width)	672
40X8869	Sensor (2 x 500-sheet tray empty)	678
40X8968	Sensor (2 x 500-sheet tray feed)	678
40X9313	Sensor (2 x 500-sheet tray jam access door)	676
40X8869	Sensor (2 x 500-sheet tray lift plate level)	678
40X8968	Sensor (2 x 500-sheet tray transport)	678
40X8869	Sensor (2500-sheet tray elevator home)	728
40X8968	Sensor (2500-sheet tray feed)	718
40X9313	Sensor (2500-sheet tray jam access door)	716
40X8869	Sensor (2500-sheet tray main tray elevator limit)	718
40X8869	Sensor (2500-sheet tray main tray empty, top)	718

P/N	Part name	Page
40X8869	Sensor (2500-sheet tray set)	710
40X8968	Sensor (2500-sheet tray transport)	718
40X8869	Sensor (2500-sheet tray transfer guide home)	728
40X9880	Sensor (3000-sheet tray elevator level)	698
40X9880	Sensor (3000-sheet tray empty)	698
40X9885	Sensor (3000-sheet tray feed)	700
40X9880	Sensor (3000-sheet tray near empty 1)	704
40X9880	Sensor (3000-sheet tray near empty 2)	704
40X9880	Sensor (3000-sheet tray set)	700
40X8869	Sensor (ADF CIS clean)	636
40X8869	Sensor (ADF document separation)	642
40X8869	Sensor (ADF exit)	654
40X8869	Sensor (ADF jam access cover)	654
40X8869	Sensor (ADF mixed paper width 1)	642
40X8869	Sensor (ADF mixed paper width 2)	642
40X8869	Sensor (ADF mixed paper width 3)	642
40X8868	Sensor (ADF paper length 1)	638
40X8869	Sensor (ADF paper length 2)	638
40X8870	Sensor (ADF paper width)	638
40X8869	Sensor (ADF registration)	642
40X8869	Sensor (ADF scan shaft home)	652
40X9211	Sensor (ADF scan)	654
40X8869	Sensor (ADF top cover open)	652
40X8869	Sensor (ADF tray empty)	642
40X8869	Sensor (duplex pass through 1)	602
40X8869	Sensor (duplex pass through 2)	592
40X9313	Sensor (exit)	606
40X8869	Sensor (fuser exit)	602
40X9047	Sensor (fuser temperature) with cable	604
40X8869	Sensor (fusing speed)	590
40X8869	Sensor (main tray empty, bottom)	728
40X8869	Sensor (main tray near empty)	724
40X8869	Sensor (MPF lift plate)	596
40X8869	Sensor (MPF paper length 1)	598

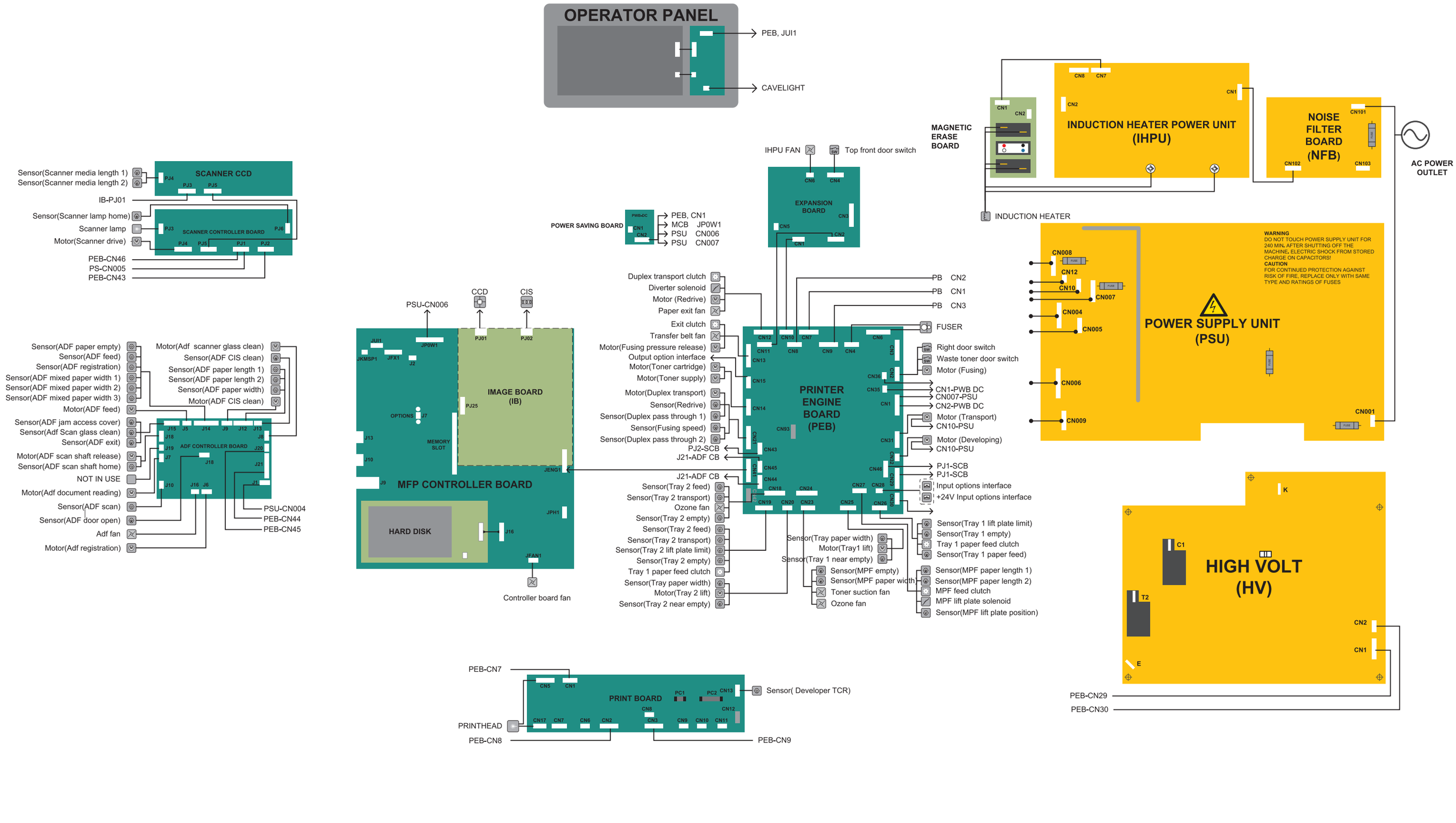
P/N	Part name	Page
40X8869	Sensor (MPF paper length 2)	598
40X9030	Sensor (MPF paper width)	598
40X8869	Sensor (paper stack transfer)	724
40X9313	Sensor (redrive exit)	606
40X8997	Sensor (registration humidity)	588
40X8869	Sensor (registration)	588
40X8869	Sensor (reserve tray empty)	728
40X8869	Sensor (reserve tray paper limit)	724
40X8869	Sensor (scan glass clean)	654
40X9313	Sensor (scanner cover open)	660
40X8930	Sensor (scanner cover switch)	660
40X8869	Sensor (scanner lamp home)	660
40X8932	Sensor (scanner paper length 1)	660
40X8932	Sensor (scanner paper length 2)	660
40X8869	Sensor (toner cartridge present)	558
40X8999	Sensor (toner density)	588
40X9313	Sensor (top front door)	556
40X9190	Sensor (tray 1 and 2 paper temperature)	620
40X8869	Sensor (tray 1 empty)	570
40X8869	Sensor (tray 1 lift plate level)	570
40X8869	Sensor (tray 1 near empty)	580
40X8968	Sensor (tray 1 paper feed)	570
40X8985	Sensor (tray 1 paper length)	580
40X8989	Sensor (tray 1 paper width)	580
40X8869	Sensor (tray 2 empty)	574
40X8869	Sensor (tray 2 lift plate level)	574
40X8869	Sensor (tray 2 near empty)	580
40X8968	Sensor (tray 2 paper feed)	574
40X8985	Sensor (tray 2 paper length)	580
40X8989	Sensor (tray 2 paper width)	580
40X8968	Sensor (tray 2 transport)	574
40X9455	Separator clutch	680, 720
40X8970	Separator roller	572, 576, 680, 720
40X9927	Separator roller assembly	572, 576

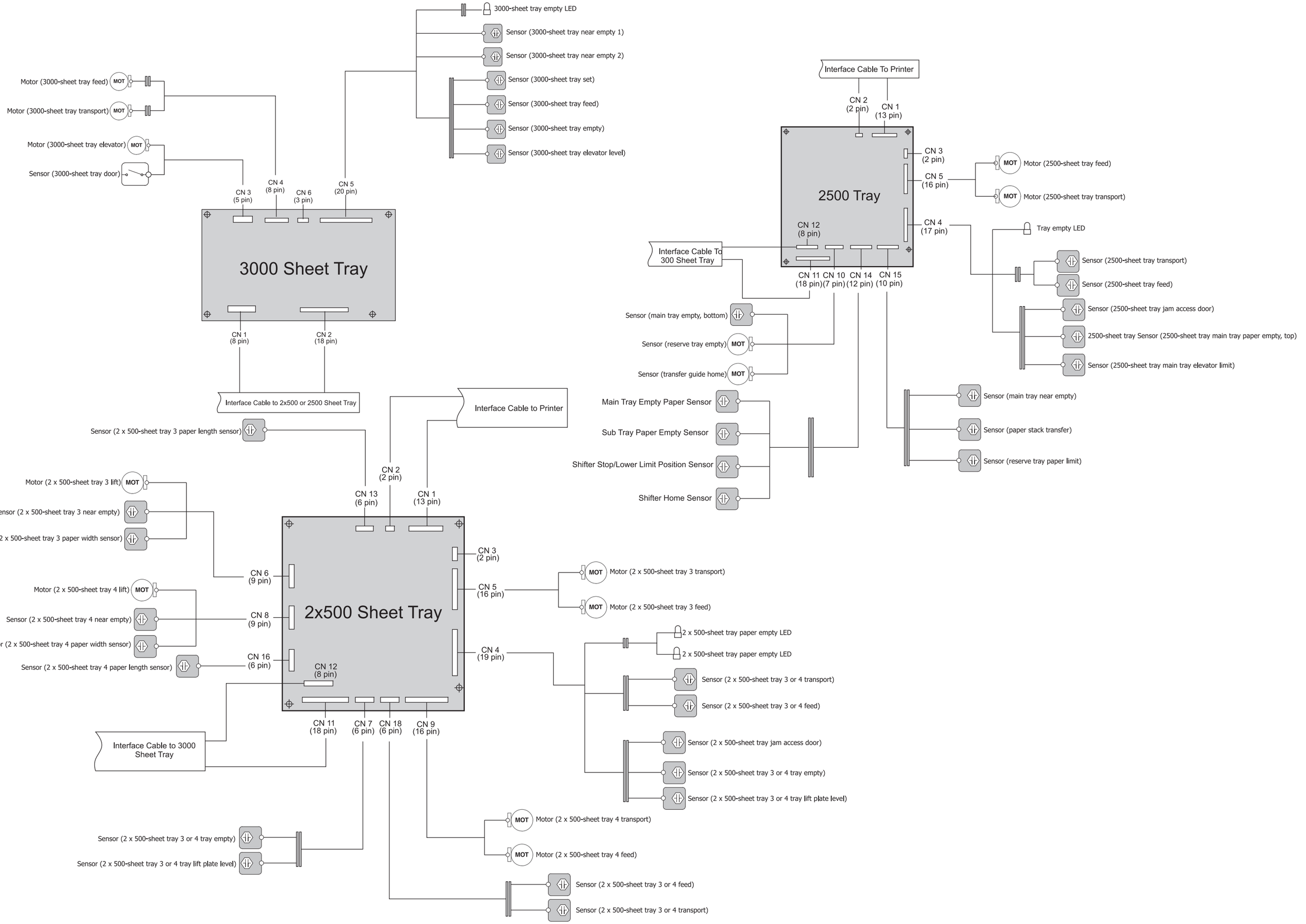
P/N	Part name	Page
40X4819	Serial interface card, RS-232C	733
40X9968	Speaker	550
40X9966	Speaker cover	550
40X9924	Standard bin	544
40X8897	Standard bin base	544
40X8974	Standard bin paper bail	606
40X8951	Toner agitator	556
40X8962	Toner cartridge contact	556
40X9223	Toner cartridge drive assembly	612
40X9751	Toner cartridge present sensor cable	558
40X9750	Toner cartridge relay contact cable	556
40X9708	Toner density sensor cable	588
40X8998	Toner density solenoid	588
40X8859	Toner suction fan	618
40X8957	Toner supply motor cable	558
40X8900	Top front door	544
40X9917	Top front door inner hinge	544
40X8906	Top front door outer hinge	544
40X8963	Transfer belt cable	566
40X8945	Transfer belt fan	554
40X8944	Transfer belt fan duct	554
40X9704	Transfer belt maintenance kit	566
40X9979	Transfer belt paper guide	566
40X9808	Transfer guide belt	728
40X9796	Transfer guide primary gear	726
40X9797	Transfer guide primary gear spring	726
40X9795	Transfer guide secondary gear	726
40X9010	Transfer roller	590
40X8973	Transport idler roller	674, 714
40X9165	Transport motor gear	610
40X8966	Tray 1 and 2 paper feed unit	568
40X8903	Tray 1 empty indicator	544
40X8984	Tray 1 feed cable	580
40X8990	Tray 1 insert	582

P/N	Part name	Page
40X8982	Tray 1 insert rail	578
40X8971	Tray 1 paper feed clutch	570
40X8972	Tray 1 sensor cables	570
40X8903	Tray 2 empty indicator	544
40X9899	Tray 2 empty sensor actuator	574
40X8984	Tray 2 feed cable	580
40X8992	Tray 2 insert	586
40X8982	Tray 2 insert rail	578
40X8971	Tray 2 paper feed clutch	574
40X9728	Tray 2 transport drive assembly	610
40X9639	Tray 2 transport drive belt	610
40X9980	Tray 2 transport drive gear	568
40X8920	Tray 2 transport guide	594
40X9983	Tray 2 transport roller	574
40X9984	Tray 2 transport sensor cable	574
40X8871	Tray 3 front cover	682
40X9034	Tray 3 handle cover	682
40X9635	Tray 3 insert	682
40X9017	Tray 3 right front cover	682
40X9028	Tray 4 front cover	684
40X9320	Tray 4 handle cover	684
40X9697	Tray 4 insert	684
40X9033	Tray 4 right front cover	684
40X9988	Tray base left cover	578
40X8901	Tray empty board cable	544
40X8902	Tray empty board cover	544
40X9758	Tray empty board mount	544
40X8903	Tray empty LED	708
40X9782	Tray empty LED cable	708
40X9899	Tray empty sensor actuator	570
40X8970	Tray feed roller	570
40X9186	Tray handle	682, 684
40X9805	Tray insert bottom left guide wheel	728
40X9799	Tray insert bottom right guide wheel	728

P/N	Part name	Page
40X9305	Tray insert guide wheel	582, 586, 682, 684, 728
40X9784	Tray insert guide wheel	710, 728
40X9306	Tray insert paper length guide	686
40X9305	Tray left rail guide wheel	578
40X9304	Tray lock lever	682, 684
40X9308	Tray near empty sensor actuator	584
40X9306	Tray paper length guide	584
40X9925	Tray pick roller	570
40X8981	Tray rail guide wheel	710
40X8981	Tray right rail guide wheel	578
40X9982	Tray set actuator	570, 574
40X8988	Tray size sensing assembly	580
40X9989	Tray stopper	578
40X9283	Tray stopper	708
40X8908	Upper rear cover	546
40X1368	USB cable, packaged (2 meters)	733
40X9970	USB extension cable	550
40X9965	USB port cover	550
40X8915	Waste toner bottle latch	548
40X9764	Waste toner door mount	548
40X9963	Waste toner door switch	548
40X8958	Waste toner drive	560
40X8959	Waste toner duct	560
40X7858	Wireless print server kit, MarkNet N8350 802.11b/g/n	733

MX 91X WIRING DIAGRAM




3000-sheet tray empty LED
Sensor (3000-sheet tray near empty 1)
Sensor (3000-sheet tray near empty 2)
Sensor (3000-sheet tray set)
Sensor (3000-sheet tray feed)
Sensor (3000-sheet tray empty)
Sensor (3000-sheet tray elevator level)
Motor (3000-sheet tray feed)
Motor (3000-sheet tray transport)
Motor (3000-sheet tray elevator)
Sensor (3000-sheet tray door)
MOT
CN 3 (5 pin)
CN 4 (8 pin)
CN 6 (3 pin)
CN 5 (20 pin)
3000 Sheet Tray
CN 1 (8 pin)
CN 2 (18 pin)
Interface Cable to 2x500 or 2500 Sheet Tray
Interface Cable To Printer
CN 2 (2 pin)
CN 1 (13 pin)
CN 3 (2 pin)
CN 5 (16 pin)
CN 4 (17 pin)
2500 Tray
CN 12 (8 pin)
Interface Cable To 300 Sheet Tray
CN 11 (18 pin)
CN 10 (7 pin)
CN 14 (12 pin)
CN 15 (10 pin)
Motor (2500-sheet tray feed)
Motor (2500-sheet tray transport)
Tray empty LED
Sensor (2500-sheet tray transport)
Sensor (2500-sheet tray feed)
Sensor (2500-sheet tray jam access door)
2500-sheet tray Sensor (2500-sheet tray main tray paper empty, top)
Sensor (2500-sheet tray main tray elevator limit)
Sensor (main tray empty, bottom)
Sensor (reserve tray empty)
Sensor (transfer guide home)
Main Tray Empty Paper Sensor
Sub Tray Paper Empty Sensor
Shifter Stop/Lower Limit Position Sensor
Shifter Home Sensor
Sensor (main tray near empty)
Sensor (paper stack transfer)
Sensor (reserve tray paper limit)
Interface Cable to Printer
Sensor (2 x 500-sheet tray 3 paper length sensor)
CN 2 (2 pin)
CN 13 (6 pin)
CN 1 (13 pin)
Motor (2 x 500-sheet tray 3 lift)
Sensor (2 x 500-sheet tray 3 near empty)
Sensor (2 x 500-sheet tray 3 paper width sensor)
CN 6 (9 pin)
CN 3 (2 pin)
CN 5 (16 pin)
2x500 Sheet Tray
Motor (2 x 500-sheet tray 3 transport)
Motor (2 x 500-sheet tray 3 feed)
Motor (2 x 500-sheet tray 4 lift)
Sensor (2 x 500-sheet tray 4 near empty)
Sensor (2 x 500-sheet tray 4 paper width sensor)
Sensor (2 x 500-sheet tray 4 paper length sensor)
CN 8 (9 pin)
CN 16 (6 pin)
CN 12 (8 pin)
CN 4 (19 pin)
2 x 500-sheet tray paper empty LED
2 x 500-sheet tray paper empty LED
Sensor (2 x 500-sheet tray 3 or 4 transport)
Sensor (2 x 500-sheet tray 3 or 4 feed)
Sensor (2 x 500-sheet tray jam access door)
Sensor (2 x 500-sheet tray 3 or 4 tray empty)
Sensor (2 x 500-sheet tray 3 or 4 tray lift plate level)
Interface Cable to 3000 Sheet Tray
CN 11 (18 pin)
CN 7 (6 pin)
CN 18 (6 pin)
CN 9 (16 pin)
Sensor (2 x 500-sheet tray 3 or 4 tray empty)
Sensor (2 x 500-sheet tray 3 or 4 tray lift plate level)
Motor (2 x 500-sheet tray 4 transport)
Motor (2 x 500-sheet tray 4 feed)
Sensor (2 x 500-sheet tray 3 or 4 feed)
Sensor (2 x 500-sheet tray 3 or 4 transport)

Sensor (staple finisher staple unit carriage home)
Sensor (staple finisher upper exit roller)
Sensor (Staple finisher elevator home)
Sensor (staple finisher paper feed)
Staple finisher lock switch
CN 999 (7 pin)
CN 111 (4 pin)
CN 110 (12 pin)
CN 106 (3 pin)
CN 112 (15 pin)
CN 119 (2 pin)
CN 120 (17 pin)
Staple Finisher
CN 104 (3 pin)
CN 105 (6 pin)
CN 109 (14 pin)
CN 108 (6 pin)
Staple finisher interface cable
Motor (staple finisher exit)
Motor (staple finisher upper exit)
Motor (staple finisher aligner)
Staple finisher exit roller solenoid
Motor (staple finisher elevator)
Staple finisher stack clamp solenoid
CN 101 (4 pin)
CN 102 (17 pin)
CN 103 (8 pin)
CN 121 (17 pin)
Stapler Interface Board
CN 122 (17 pin)
CN 123 (17 pin)
Staple finisher staple unit
Motor (staple finisher staple unit carriage)
Motor (staple finisher transport)
CN 101
Sensor (staple finisher tamper paper present)
Sensor (staple finisher front tamper home)
Sensor (staple finisher rear tamper home)
Motor (staple finisher front tamper)
Motor (staple finisher rear tamper)
CN 102
Sensor (staple finisher bin level)
Sensor (staple finisher bin stack height)
Staple finisher bin stack height solenoid

Puncher
Sensor (HPT feed)
Sensor (HPT door)
Motor (HPT transport)
J6
Motor (SHPF aligner)
Sensor (SHPF booklet gate)
Sensor (SHPF top door)
J5
Sensor (SHPF compiler feed roller release)
Sensor (SHPF entrance)
Sensor (SHPF paddle home)
Sensor (SHPF front tamper home)
Sensor (SHPF top bin full, receive)
Sensor (SHPF diverter cam)
Motor (SHPF paddle)
Motor (SHPF front tamper)
Motor (SHPF compiler feed roller release)
J4 (32pin)
J5 (16 pin)
J6 (10 pin)
J7 (17 pin)
Staple Hole Punch Finisher
SW 2 (8pin)
SW 1 (10 pin)
J3 (2pin)
J2 (3pin)
J1 (6pin)
J16 (4pin)
J15 (10 pin)
Booklet Finisher
Sensor (SHPF front door)
Printer

Sensor (SHPF elevator position)
Sensor (SHPF rear tamper home)
Sensor (SHPF top bin exit)
Sensor (SHPF compiler feed)
J9
Motor (SHPF elevator)
Motor (SHPF transport)
Motor (SHPF feed)
Motor (SHPF elevator bin stack limit switch)
Motor (SHPF staple unit carriage)
Sensor (SHPF staple unit carriage home)
Sensor (SHPF staple unit carriage center)
SHPF staple unit
J9 (24 pin)
J10 (2 pin)
J11 (24 pin)
J12 (16 pin)
J13 (13 pin)
J14 (24 pin)
Motor (SHPF rear tamper)
Ejector
Sensor (SHPF eject clamp position)
Motor (SHPF compiler eject)
Motor (SHPF compiler pre-eject)
Sensor (SHPF compiler eject)
Sensor (SHPF compiler pre-eject)
Sensor (SHPF eject clamp home)
J14
Sensor (SHPF elevator bin stack height, transmit)
Sensor (SHPF elevator bin stack height, receive)
Sensor (SHPF elevator bin rear stack height)
Sensor (SHPF elevator bin front stack height)
Sensor (SHPF elevator bin stack height actuator arm control)
Motor (SHPF elevator bin stack height)
Sensor (SHPF elevator bin full)
Sensor (HPBF bin empty, receive)
Sensor (HPBF bin empty, transmit)

Sensor (booklet maker decurl)
Motor (booklet maker decurl)
Motor (booklet maker transport)
J5
Booklet maker staple unit
Sensor (booklet maker transport)
J4 (13 pin)
J6 (4 pin)
Booklet Maker
J5 (11pin)
J7 (13pin)
J2 (6 pin)
J10 (9 pin)
J11 (20 pin)
J1 (4 pin)
J3 (4 pin)
J8 (14 pin)
J9 (10 pin)
Sensor (booklet maker tamper paper present)
Motor (booklet maker tamper)
Sensor (booklet maker tamper home)
Sensor (bifold knife home)
Motor (booklet maker aligner)
Sensor (booklet maker aligner home)
Booklet maker aligner solenoid
Motor (bifold knife)
Motor (bifold roller)
Sensor (booklet maker fold exit)
Sensor (trifold guide home)
Motor (trifold guide)
SHPF controller board
Sensor (booklet maker paddle home)
Motor (booklet maker paddle)
Sensor (bifold guide home)
Motor (bifold guide)