MB2650, MX622, & XM3250 MFPs

Service Manual

November 2026

www.lexmark.com

Product information

Product name:
Lexmark MB2650ade, Lexmark MB2650adwe; Lexmark MX622ade, MX622adhe, MX622adthe; Lexmark XM3250 MFPs
Machine type:
7018
Models:
676, 678, 679

Edition notice

April 2018

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.

All rights reserved.

Lexmark is a trademark of Lexmark International, Inc., in the United States and/or other countries.

PCL® is a registered trademark of the Hewlett-Packard Company. PCL is Hewlett-Packard Company’s designation of a set of printer commands (language) and functions included in its printer products. This printer is intended to be compatible with the PCL language. This means the printer recognizes PCL commands used in various application programs, and that the printer emulates the functions corresponding to the commands.

PostScript is a registered trademark of Adobe Systems Incorporated in the United States and/or other countries.

All other trademarks are the property of their respective owners.

Contents

Product information **2**

Edition notice **3**

Notices, conventions, and safety information **7**

Laser notice 7

Conventions 8

Safety information 8

Change history **13**

Change history 13

General information **22**

Printer model configurations 22

Finding the serial number 22

Setting the paper size and type 23

Supported paper sizes, types, and weights 23

Tools required for service 29

Diagnostics and troubleshooting **31**

Troubleshooting precautions 31

Troubleshooting overview 33

Securing the printer 35

Fixing print quality issues 41

Paper jams 98

User attendance messages (0–99.99) 176

Printer hardware errors 189

ADF/Scanner hardware errors 228

Other symptoms 231

Contacting customer support 252

Service menus **253**

Control panel 253

Diagnostics menu 256

Configuration menu 266

Entering Invalid engine mode 270

Entering Recovery mode 270

Service Engineer menu 272
Reset Device 275
Parts removal 276
Important removal information 276
Removal procedures 300
Importing a configuration file 301
Exporting a configuration file 301
Left side removals 302
Right side removals 312
Front removals 326
Bottom removals 346
Rear side removals 362
Top removals 366
ADF/scanner removals 372
Optional 550-sheet tray removals 385
Optional staple finisher removals 386
Replacing parts and supplies 420
Component locations 424
Printer configurations 424
Printer roller locations 425
Printer sensor locations 426
Controller board connectors 427
Maintenance 433
Inspection guide 433
Scheduled maintenance 433
Lubrication specification 434
Cleaning the printer 435
Parts catalog 440
Legend 440
Covers 441
Control panel 443
Electronics 1 445
Electronics 2 447
Electronics 3 449
Electronics 4 451
Paper transport 1 453

Paper transport 2 455
MPF and standard tray 457
Optional trays 458
Imaging 460
Fax card and hard disk 462
Staple finisher option 468
Staple finisher (right) 469
Staple finisher (top) 470
Staple finisher (rear) 473
Staple finisher exit assembly 475
Staple finisher tamper assembly 476
Staple finisher accumulator assembly 478
Maintenance kits 479
Power cords 481
Miscellaneous 483

Printer specifications 485

Power consumption 485
Applicability of Regulation (EU) 2019/2015 and (EU) 2019/2020 486
Selecting a location for the printer 486
Noise emission levels 487
Temperature information 488

Options and features 489

Available internal options 489
Input/output configurations and capacities 489

Theory of operation 491

POR sequence 491
Printer control 491
Print cycle operation 491
Printer operation 495
ADF and scanner operation 500

Acronyms 504

Acronyms 504

Index 506

Notices, conventions, and safety information

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: 2014.
Class I laser products are not considered to be hazardous. 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 conditions. The printer has a non-serviceable printhead assembly that contains a laser with the following specifications:
Class: IIIb (3b) AlGaInP
Nominal output power (milliwatts): 15
Wavelength (nanometers): 650–670

Avis relatif à l'utilisation du laser

Cette imprimante est certifiée conforme aux exigences de la réglementation des Etats-Unis relative aux produits laser de classe I (1) (DHHS 21 CFR, Chapitre I, Sous-chapitre J). Pour les autres pays, elle est certifiée conforme aux exigences des normes CEI 60825-1:2014 relatives aux produits laser de classe I.

Les produits laser de classe I ne sont pas considérés comme dangereux. Le système laser ainsi que l'imprimante ont été conçus de manière à ce que personne ne soit jamais exposé à des radiations laser dépassant le niveau de classe I dans le cadre d'un fonctionnement normal, de l'entretien par l'utilisateur ou de la maintenance. L'imprimante dispose d'un ensemble de têtes d'impression non réparable contenant un laser doté des caractéristiques suivantes :

Class: IIIb (3b) AlGaInP

Nominal output power (milliwatts): 15

Wavelength (nanometers): 650–670

Aviso de láser

Esta impresora se ha certificado en EE.UU. cumpliendo 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: 2014.

Los productos láser de Clase I no se consideran peligrosos. El sistema láser y la impresora se han diseñado para que el ser humano no 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. El conjunto de cabezal de impresión de la impresora no se puede reparar y contiene un láser con las siguientes especificaciones:

Class: IIIb (3b) AlGaInP

Nominal output power (milliwatts): 15

Wavelength (nanometers): 650–670

Laser-Hinweis

Der Drucker wurde in den USA zertifiziert und entspricht den Anforderungen der Vorschriften DHHS 21 CFR Kapitel I für Laserprodukte der Klasse I (1), andernorts ist er als Laserprodukt der Klasse I zertifiziert, das den Anforderungen von IEC 60825-1 entspricht: 2014.

Laserprodukte der Klasse I werden nicht als gefährlich betrachtet. 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. Der Drucker verfügt über eine Druckkopfeinheit, die nicht gewartet werden kann und mit einem Laser mit den folgenden Spezifikationen ausgestattet ist.

Class: IIIb (3b) AlGaInP

Nominal output power (milliwatts): 15

Wavelength (nanometers): 650–670

Conventions

Note: A *note* identifies information that could help you.
Warning: A *warning* identifies something that could damage the product hardware or software.
CAUTION: A *caution* indicates a potentially hazardous situation that could injure you.
Different types of caution statements include:

CAUTION—POTENTIAL INJURY
Indicates a risk of injury.

CAUTION—SHOCK HAZARD
Indicates a risk of electrical shock.

CAUTION—HOT SURFACE
Indicates a risk of burn if touched.

CAUTION—TIPPING HAZARD
Indicates a crush hazard.

CAUTION—PINCH HAZARD
Indicates a risk of being caught between moving parts.

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 electrical shock and personal injury during disassembly and servicing of this product. Professional service personnel should understand this risk and take necessary precautions.

CAUTION—SHOCK HAZARD
When you see this symbol on the product, there is a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you begin, or use caution if the product must receive power in order to perform the task.

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.

CAUTION—POTENTIAL INJURY
To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

CAUTION—POTENTIAL INJURY
To avoid the risk of fire or electrical shock, use only the power cord provided with this product or the manufacturer's authorized replacement.

CAUTION—POTENTIAL INJURY
Do not use this product with extension cords, multioutlet power strips, multioutlet extenders, or UPS devices. The power capacity of these types of accessories can be easily overloaded by a laser printer and may result in a risk of fire, property damage, or poor printer performance.

CAUTION—POTENTIAL INJURY
Only a Lexmark Inline Surge Protector that is properly connected between the printer and the power cord provided with the printer may be used with this product. The use of non-Lexmark surge protection devices may result in a risk of fire, property damage, or poor printer performance.

CAUTION—POTENTIAL INJURY
If the printer weight is greater than 20 kg (44 lb), then it may require two or more people to lift it safely.

CAUTION—POTENTIAL INJURY
Do not use aerosol cleaners. Aerosol cleaners can cause explosions or fires when used on electromechanical equipment.

Consignes de sécurité

- La sécurité de ce produit est basée sur des tests et certifications de sa conception d'origine et de ses composants spécifiques. Le fabricant décline toute responsabilité en cas d'utilisation de pièces de rechange non autorisées.
- Les informations de maintenance de ce produit sont destinées à des professionnels qualifiés et ne sont pas conçues pour être utilisées par d'autres personnes.
- Il existe un risque potentiel de choc électrique et de blessures lors du démontage et de la maintenance de ce produit. Le personnel professionnel de maintenance doit comprendre les risques et prendre les précautions nécessaires.

ATTENTION - RISQUE D'ELECTROCUTION
Ce symbole indique un danger lié à des niveaux de tension dangereux dans la zone du produit à manipuler. Débranchez le produit avant de commencer, ou agissez avec prudence si le produit doit être alimenté pour effectuer l'opération.

ATTENTION : RISQUE DE BLESSURE
La batterie lithium de ce produit n'est pas destinée à être remplacée. Si vous ne respectez pas les instructions de remplacement de la batterie, vous risquez de provoquer une explosion. Ne rechargez pas, ne désassemblez pas et ne brûlez pas la batterie au lithium. Mettez les batteries lithium usagées au rebut selon les instructions du fabricant et les réglementations locales.

ATTENTION : RISQUE DE BLESSURE
Pour éviter tout risque d'électrocution ou d'incendie, branchez le câble d'alimentation directement à une prise électrique répondant aux exigences requises et correctement mise à la terre, proche du produit et facile d'accès.

ATTENTION : RISQUE DE BLESSURE
Pour éviter tout risque d'incendie ou d'électrocution, utilisez uniquement le câble d'alimentation fourni avec ce produit ou un câble de remplacement autorisé par le fabricant.

ATTENTION : RISQUE DE BLESSURE
Ce produit ne doit pas être utilisé avec des rallonges, des barres multiprises, des rallonges multiprises ou des périphériques UPS. La capacité de ces types d'accessoires peut être facilement dépassée par une imprimante laser, d'où un risque de dégâts matériels, d'incendie ou de performances d'impression amoindries.

ATTENTION : RISQUE DE BLESSURE
Utilisez uniquement un parasurtenseur correctement raccordé à l'imprimante et au câble d'alimentation fourni avec la machine. L'utilisation de parasurtenseurs non fabriqués par Lexmark comporte un risque d'incendie et de dégâts matériels, et peut amoindrir les performances de l'imprimante.

ATTENTION : RISQUE DE BLESSURE
Si votre imprimante pèse plus de 20 kg (44 lb), l'intervention d'au moins deux personnes est nécessaire pour la soulever sans risque.

ATTENTION : RISQUE DE BLESSURE
N’utilisez pas de nettoyants aérosols. Les nettoyants aérosols peuvent provoquer des explosions ou des incendies lorsqu’ils sont utilisés sur des équipements électromécaniques.

Información de seguridad

- La seguridad de este producto se basa en las pruebas y comprobaciones del diseño original y los componentes específicos. El fabricante no se hace responsable de la seguridad en caso de uso de piezas de repuesto no autorizadas.
- La información de mantenimiento de este producto se ha preparado para su uso por parte de un profesional de asistencia técnica y no está diseñada para su uso por parte de otros usuarios.
- Es posible que haya un mayor riesgo de descarga eléctrica y daños personales durante el desmontaje y el mantenimiento de este producto. El personal de asistencia profesional debe conocer este riesgo y tomar las precauciones necesarias.

PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS
Cuando vea este símbolo en el producto, existe peligro de tensiones peligrosas en el área del producto en la que está trabajando. Desconecte el producto antes de empezar o tenga cuidado si el producto debe recibir alimentación a fin de realizar la tarea.

PRECAUCIÓN: POSIBLES DAÑOS
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 usadas según las instrucciones del fabricante y las normativas locales.

PRECAUCIÓN: POSIBLES DAÑOS
Para evitar el riesgo de incendio o descarga eléctrica, conecte el cable de alimentación a una toma de corriente debidamente conectada a tierra con la potencia adecuada que se encuentre cerca del dispositivo y resulte fácilmente accesible.

PRECAUCIÓN: POSIBLES DAÑOS
Para evitar el riesgo de incendio o descarga eléctrica, utilice exclusivamente el cable de alimentación que se suministra junto con este producto o el repuesto autorizado por el fabricante.

PRECAUCIÓN: POSIBLES DAÑOS
No utilice este producto con cables alargadores, regletas de varias tomas, cables alargadores de varias tomas o sistemas de alimentación ininterrumpida. La potencia de este tipo de accesorios puede sobrecargarse fácilmente si se utiliza una impresora láser, lo que puede dar lugar a que el rendimiento de la impresora sea bajo, a daños materiales o a posibles incendios.

PRECAUCIÓN: POSIBLES DAÑOS
Solo debe usarse con este producto un protector de sobretensión insertable Lexmark debidamente conectado entre la impresora y el cable de alimentación que con ella se suministra. El uso de protectores de sobretensión de marcas distintas a Lexmark puede dar lugar a que el rendimiento de la impresora sea bajo, a daños materiales o a posibles incendios.

PRECAUCIÓN: POSIBLES DAÑOS
Si el peso de la impresora es superior a 20 kg (44 lb), pueden ser necesarias dos o más personas para levantarla de forma segura.

PRECAUCIÓN: POSIBLES DAÑOS
No utilice limpiadores en aerosol. Los limpiadores en aerosol pueden provocar explosiones o incendios al utilizarse en equipos electromecánicos.

Sicherheitshinweise

- Die Sicherheit dieses Produkts basiert auf Tests und Zulassungen des Originaldesigns und der spezifischen Komponenten. Sofern nicht autorisierte Ersatzteile eingesetzt werden, übernimmt der Hersteller keinerlei Verantwortung in Bezug auf die Sicherheit dieses Produkts.
- Die Wartungsinformationen für dieses Produkt wurden für ausgebildete Servicemitarbeiter zusammengestellt und dürfen nicht von anderen verwendet werden.
- Möglicherweise besteht bei der Demontage und Wartung dieses Produkts eine erhöhte Stromschlag- und Verletzungsgefahr. Ausgebildete Servicemitarbeiter sollten sich dieser Gefahr bewusst sein und die notwendigen Vorsichtsmaßnahmen ergreifen.

VORSICHT – STROMSCHLAGGEFAHR
enn Sie dieses Symbol sehen, besteht eine Gefahr durch gefährliche Spannungen in dem Produktbereich, in dem Sie arbeiten. Trennen Sie das Produkt von seiner Stromverbindung, bevor Sie beginnen, oder gehen Sie vorsichtig vor, wenn das Produkt für die Durchführung der Aufgabe mit Strom versorgt werden muss.



VORSICHT – MÖGLICHE 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.



VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR
Um Feuer- und Stromschlaggefahr zu vermeiden, schließen Sie das Netzkabel direkt an eine ordnungsgemäß geerdete Steckdose an, die sich in der Nähe des Geräts befindet und leicht zugänglich ist.



VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR
Um das Risiko eines Feuers oder elektrischen Schlags zu vermeiden, verwenden Sie ausschließlich das diesem Produkt beiliegende Netzkabel bzw. ein durch den Hersteller zugelassenes Ersatzkabel.



VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR
Verwenden Sie das Produkt nicht mit Verlängerungskabeln, Mehrfachsteckdosen, Mehrfachverlängerungen oder Geräten für unterbrechungsfreie Stromversorgung. Die Belastbarkeit solcher Zubehörteile kann durch Laserdrucker schnell überschritten werden, was zu Brandgefahr, Beschädigung von Eigentum oder einer eingeschränkten Druckerleistung führen kann.



VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR
Mit diesem Produkt darf nur ein Lexmark Inline Surge Protector verwendet werden, der vorschriftsgemäß zwischen dem Drucker und dem mitgelieferten Netzkabel angeschlossen ist. Die Verwendung von nicht von Lexmark stammenden Überspannungsschutzgeräten kann zu Brandgefahr, Beschädigung von Eigentum oder einer eingeschränkten Druckerleistung führen.



VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR
Wenn der Drucker mehr als 20 kg wiegt, sind zum sicheren Anheben mindestens zwei Personen notwendig.



VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR
Verwenden Sie keine Aerosolreiniger. Aerosolreiniger können bei Verwendung an elektromechanischen Geräten Explosionen oder Brände verursachen.

Change history

Change history

November 9, 2026

- Updated the procedure for Resetting the Maintenance counter in the Maintenance Chapter. See Resetting the maintenance counter on page 434.

November 3, 2026

- Updated the "Indicator light is alternating between blue and blinking red" topic to "Blue and blinking red indicator light or printer stuck at startup" in the Diagnostics and troubleshooting chapter. See Blue and blinking red indicator light or printer stuck at startup on page 251.

October 5, 2026

- Added the Lost or forgotten printer security password topic to the Diagnostics and troubleshooting chapter. See Lost or forgotten printer security password on page 39.
- Added the Importing a configuration file topic to the Parts removal chapter. See Importing a configuration file on page 301.
- Added the Exported a configuration file topic to the Parts removal chapter. See Exporting a configuration file on page 301.

August 27, 2026

- Added the new topic Entering the Configuration menu in the Service menus chapter. See Entering the Configuration menu on page 266.

August 5, 2026

- Updated the Entering the Service Engineer (SE) menu topic of the Service menus chapter. See Entering the Service Engineer (SE) menu on page 272.
- Added the Collecting printer history and firmware logs topic of the Service menus chapter. See Collecting printer history and firmware logs on page 275.

April 15, 2026

- Added the following error messages in the Diagnostics and troubleshooting chapter:
  - 3.01, 8.01, 11.11, 11.12, 11.21, 11.22, 11.31, 11.32, 11.41, 11.42, 11.51, 11.52, 11.91, and 11.92 in the User attendance messages topic. See User attendance messages on page 176.
  - 230.13a in the 230 paper jam messages topic. See 230 paper jam messages on page 125.
  - 912.44 in the 900-912 error messages topic. See 900-912 error messages on page 220.
- Added the following topics in the Diagnostics and troubleshooting chapter:
  - Non-Lexmark supply. See Non-Lexmark supply on page 187.
  - Loading error in the multipurpose feeder. See Loading error in the multipurpose feeder on page 188.
  - Loading error in trays. See Loading error in trays on page 188.

    - Printhead firmware error. See Printhead firmware error on page 225.

- Added the Setting the paper size and type topic to the General information chapter. See Setting the paper size and type on page 23.
- Added the Loading in the multipurpose feeder topic to the Parts removal chapter. See Loading the multipurpose feeder on page 422.

November 14, 2025

- Added the Sensor (input) never- or late-arriving from the trays jam service check topic to the Diagnostics and troubleshooting chapter. See Sensor (input) never- or late-arriving from the trays jam service check on page 115.

September 15, 2025

- Added missing PN 41X6407 in the MPF and standard tray topic of the Parts catalog chapter. See MPF and standard tray.

August 18, 2025

- Added the Reset device topic in the Service menus chapter. See Reset Device on page 275.

August 13, 2025

- Added the "Alternating blue and blinking red" color in the Colors of the indicator light topic of the Service Menu chapter. See Colors of the indicator light on page 254.
- Added the Indicator light is alternating between blue and blinking red topic in the Diagnostics and troubleshooting chapter.

August 12, 2025

- Updated the MPF and standard tray topic in the Parts catalog chapter. See MPF and standard tray.

July 4, 2025

- Updated the Resetting the printer without admin credentials topic to Clearing the printer security password topic in the Diagnostics and troubleshooting chapter. See Clearing the printer security password on page 35.
- Updated the Using the security reset jumper topic in the Diagnostics and troubleshooting chapter. See Using the security reset jumper on page 36.

June 24, 2025

- Updated the Sensor (fuser exit) jam at leading edge service check topic of the Diagnostics and troubleshooting chapter. See Sensor (fuser exit) jam at leading edge service check on page 120.

June 18, 2025

- Updated the Main drive failure service check topic of the Diagnostics and troubleshooting chapter. See Main drive failure service check on page 202.

June 13, 2025

- Added PN 41X6407 to the Parts catalog. See MPF and standard tray on page 457.

March 14, 2025

- Updated the PN for Control panel display assembly from 41X0051 to 41X1150. See Control panel on page 443 in the Parts Catalog chapter.

August 16, 2024

- Added the 42.60–42.64K error codes in the User attendance messages topic of the Diagnostics and troubleshooting chapter. See User attendance messages on page 176.
- Added the Toner cartridge service check in the Diagnostics and troubleshooting chapter. See Toner cartridge service check on page 184.

August 1, 2024

- Updated the Unsupported or unresponsive toner cartridge service check topic of the Diagnostics and troubleshooting chapter. See Unsupported or unresponsive toner cartridge service check on page 179.

January 26, 2024

- Updated the PN for Control panel display assembly from 41X1150 to 41X0051. See Control panel on page 443 in the Parts Catalog chapter.

November 17, 2023

- Updated the MPF pick roller and separator pad removal topic in the Parts removal chapter. See MPF pick roller and separator pad removal on page 339.

July 12, 2023

- Added the duplex gear kit removal topic in the Parts removal chapter. See Duplex gear kit removal on page 311.
- Added the Sensor (redrive): Paper (duplex job) failed to arrive jam service check in the Diagnostics and troubleshooting chapter. See Sensor (redrive): Paper (duplex job) failed to arrive jam service check on page 128.
- Updated the 230 paper jam messages topic in the Diagnostics and troubleshooting chapter. See 230 paper jam messages on page 125.
- Updated the Unsupported or unresponsive imaging unit service check in the Diagnostics and troubleshooting chapter. See Unsupported or unresponsive imaging unit service check on page 181.

May 29, 2023

Updated the following topics in the Diagnostics and troubleshooting chapter:

- Added the Dead optional tray service check topic. See Dead optional tray service check on page 251.
- Updated the Fuser temperature error service check. See Fuser temperature error service check on page 192.

May 9, 2023

- Added a note in step 4 of the Hard disk failure service check topic in the Diagnostics and troubleshooting chapter. See Hard disk failure service check on page 186.

February 13, 2023

- Updated the Sensor (fuser exit) jam at leading edge service check topic in the Diagnostics and troubleshooting chapter. See Sensor (fuser exit) jam at leading edge service check on page 120.

February 5, 2023

- Updated the PN for Control panel display assembly from 41X0051 to 41X1150. See Control panel on page 443 in the Parts Catalog chapter.
- Updated the topic ADF paper path in the Theory of operation chapter. See ADF paper path on page 501.

January 31, 2023

- Added error codes 845.02 and 845.03. See 840-845 error messages on page 228 in the Diagnostics and troubleshooting chapter.

December 16, 2022

- Added the topic group Securing the printer in the Diagnostics and troubleshooting chapter. It includes these topics:
  - Resetting the printer without admin credentials. See Resetting the printer without admin credentials.
  - Using the security reset jumper. See Using the security reset jumper.

November 11, 2022

- Added a video demonstration link in the Isolation roller removal topic in the Parts removal chapter. See Isolation roller removal on page 344.

October 20, 2022

- Added the PN 41X4545 (Isolation roller) in the Paper transport 2 assembly in the Parts catalog chapter. See Paper transport 2 on page 455.
- Updated the Isolation roller sleeve removal topic in the Parts removal chapter.

October 7, 2022

- Added the PN 41X2300 (Access cover link) in the Covers assembly in the Parts catalog chapter. See Covers.

August 26, 2022

- Updated the graphic in the Paper transport 1 assembly in the Parts catalog chapter. See Paper transport 1 on page 453.

August 24, 2022

- Added a video link in the Sensor (toner density) and media present sensor flag removal topic in the Parts removal chapter. See Sensor (toner density) and media present sensor flag removal on page 358.

August 23, 2022

- Added the Isolation roller sleeve removal topic in the Parts removal chapter. See Isolation roller removal on page 344.
- Updated the Entering recovery mode topic in the Service menus chapter. See Entering Recovery mode on page 270.

August 18, 2022

- Updated the Sensor (toner density) and media present sensor flag removal topic in the Parts removal chapter. See Sensor (toner density) and media present sensor flag removal on page 358.

- Updated the graphic in the Electronics 4 assembly in the Parts catalog chapter. See Electronics 4 on page 451.

May 27, 2022

- Added the PN 40X8033 (Lockable tray key) in the Optional trays assembly in the Parts catalog chapter. See Optional trays on page 458.

March 30, 2022

- Updated a graphic in the Flatbed scanner assembly removal topic in the Parts removal chapter. See Flatbed scanner assembly removal on page 379
- Added the following parts in the Miscellaneous assembly in the Parts catalog chapter:
    - PN 41X0997 (Contact Authentication Device)
    - PN 41X0998 (Contactless Authentication Device)

  See Miscellaneous on page 483.
- Removed the following parts in the Power cords assembly in the Parts catalog chapter:
    - PN 40X0289 (Power cord, 2.5 m (straight)—USA)

  See Power cords on page 481.

March 9, 2022

- Added the following parts in the Paper transport 2 assembly in the Parts catalog chapter:
    - PN 41X4474 (Mounting bracket)

  See Paper transport 2 on page 455.
- Updated the graphic of the Paper transport 2 assembly to include the callout #6 in the Parts catalog chapter. See Paper transport 2 on page 455.
- Added the following parts in the Control panel assembly in the Parts catalog chapter:
    - PN 41X0207 (Control panel button kit)

  See Control panel on page 443.
- Updated the graphic of the Control panel assembly to include the callout #9 in the Parts catalog chapter. See Control panel on page 443.
- Added the following parts in the Power cords assembly in the Parts catalog chapter:
    - PN 40X0269 (Power cord, 2.5 m (straight)—USA, Canada)
    - PN 40X0289 (Power cord, 2.5 m (straight)—USA)
    - PN 40X3141 (Power cord, 2.5 m (straight)—Europe and others)
    - PN 40X0288 (Power cord, 2.5 m (straight)—Argentina)
    - PN 40X0271 (Power cord, 2.5 m (straight)—United Kingdom)
    - PN 40X0275 (Power cord, 2.5 m (straight)—Israel)
    - PN 40X1772 (Power cord, 2.5 m (straight)—Switzerland)
    - PN 40X1773 (Power cord, 2.5 m (straight)—South Africa)
    - PN 40X0273 (Power cord, 2.5 m (straight)—Traditional Italy)
    - PN 40X1774 (Power cord, 2.5 m (straight)—Denmark)
    - PN 40X4596 (Power cord, 2.5 m (straight)—Brazil)

- PN 40X0303 (Power cord, 2.5 m (straight)—China)
- PN 40X0270 (Power cord, 2.5 m (straight)—Japan)
- PN 40X1792 (Power cord, 2.5 m (straight)—Korea)
- PN 40X1791 (Power cord, 2.5 m (straight)—Taiwan)
- PN 40X0301 (Power cord, 2.5 m (straight)—Australia)

See Power cords on page 481.

March 3, 2022

- Updated the part number of the following parts in the Electronics 4 assembly in the Parts catalog chapter:
  - PN 40X8800 to PN 41X4453 (Paper present flag parts kit)
  - PN 40X8046 to PN 41X4456 (Toner density sensor kit)

  See Electronics 4 on page 451.
- Updated the description of the following parts in the Electronics 4 assembly in the Parts catalog chapter:
  - PN 41X4453 (Paper present flag parts kit)
  - PN 41X4456 (Toner density sensor kit)

  See Electronics 4 on page 451.

October 1, 2021

- Added the following parts in the Parts catalog chapter:
  - PN 41X4214 (Duplex gear kit) in the Paper transport 1 assembly. See Paper transport 1 on page 453.
- Updated the graphics to add callout #7 in the Paper transport 1 assembly in the Parts catalog chapter. See Paper transport 1 on page 453.
- Updated the Media present sensor flag removal in the Parts removal chapter. See Sensor (toner density) and media present sensor flag removal on page 358.
- Updated the ADF scanner failure service check topic in the Diagnostics and troubleshooting chapter. See ADF scanner failure service check on page 230.
- Added Applicability of Regulation (EU) 2019/2015 and (EU) 2019/2020 notice in the Printer specifications chapter.

June 14, 2021

- Updated the Hard disk failure service check topic in the Diagnostics and troubleshooting chapter. See Hard disk failure service check on page 186.
- Added the 900 error service check topic in the Diagnostics and troubleshooting chapter. See 900 error service check on page 221.
- Replaced the System software error service check with the 900 error service check topic in the Diagnostics and troubleshooting chapter.

March 22, 2021

- Added an installation note in the Fax card removal topic in the Parts removal chapter. See Fax card removal on page 319
- Replaced Fax card (41x1374) with Fax card kit (41X2936) in the Fax card and hard disk assembly in the Parts catalog chapter. See Fax card and hard disk on page 462

November 17, 2020

- Updated the graphic in the Electronics 4 topic in the Parts catalog chapter.

October 8, 2020

- Added the MB2650adwe model in the Printer model configurations topic in the General information chapter.
- Updated the descriptions of the following parts in the Electronics 4 topic in the Parts catalog chapter:
    - Integrated wireless card (MB2650adwe) (41X2894)
    - Wireless cable (MB2650adwe) (41X2270)

September 8, 2020

- Added the ADF separator roller (high torque) (41X2855) in the Imaging topic in the Parts catalog chapter.
- Added a note in the Jam access cover removal topic in the Parts removal chapter.

August 5, 2020

- A note has been added in the Restoring the printer configuration after replacing the controller board topic in the Parts removal chapter.
- An installation note has been removed from the Controller board removal topic in the Parts removal chapter.

July 14, 2020

- A note for obsoletion was added to the following parts in the Parts catalog chapter:
    - Font card, Traditional Chinese (41X1014)

July 9, 2020

- Authentication device, TWN4 USB front reader kit (41X2615) was removed from the Miscellaneous Parts catalog.
- Updated table in the Print engine layout topic in the Theory of operation chapter.

May 15, 2020

- The following parts were added to the Electronics 4 Parts catalog:
    - Wireless cable (41X2270)
    - Integrated wireless card (41X2894)
    - Front USB host cable (41X2630)
- Updated graphics in the Solid black pages check topic in the Diagnostics and troubleshooting chapter.
- Updated the following connectors in the Wiring diagram:
    - USB type A
    - Integrated wireless/ Internal solutions port
    - Sensor (index)
    - Staple finisher connector

March 13, 2020

- Updated the Supported paper sizes, types, and weights topics in the General information chapter.
- Added the Base printer symptoms topics and service checks in the Diagnostics and troubleshooting chapter.
- Added the Entering recovery mode topic in the Service menus chapter.
- Added links for video demonstration on the following topics in the Parts removal chapter:
    - ADF roller removal
    - ADF separator roller removal
    - Fuser removal
    - MPF pick roller and separator pad removal
    - Staple finisher option removal
    - Transfer roller removal

February 5, 2020

- Authentication device, TWN4 USB front reader kit (41X2615) was added to the Miscellaneous Parts catalog.

January 30, 2020

- Updated the Service Engineer menu topics in the Service menus chapter.
- Updated the Fax reception service check topic in the Diagnostics and troubleshooting chapter.
- Updated the Updating the printer firmware topic to include using a USB cable connection option.
- Added the Optional 550-sheet tray, lockable (41X2813) in the Parts catalog chapter.
- Added the Optional 550-sheet tray insert (lockable optional tray) (41X2814) in the Parts catalog chapter.
- Updated safety information on caution statements.

September 23, 2019

- Translations were added in the Notices, conventions, and safety information section.

July 1, 2019

- Staple finisher mounting bracket (41X1252) was added to the Staple finisher option parts catalog.

June 17, 2019

- Sensor (narrow media) (41X1241) was added to the Electronics 4 Parts catalog.
- Critical information for controller board or control panel replacement was added to the Parts removal section.

February 22, 2019

- Error codes were added to the 6yy errors section.
- An error code was added to the 200 paper jam messages.

January 18, 2019

- Control panel front cover (41X0543) was added to the Control panel Parts catalog.

October 23, 2018

- Bezel (41X2609) FRU was added to the Control panel parts catalog.
- Fax symptoms section was added.

September 14, 2018

- 41X1219 FRU PN was changed to 41X2605 on the MPF and standard tray Parts catalog.

August 17, 2018

- Model information was added to the 41X2439 FRU on the Control panel parts catalog.

August 2, 2018

- Date security notice was updated.
- Software CD and Smart card were added to the Miscellaneous Parts catalog.

July 6, 2018

- Covers parts catalog was revised.

May 21, 2018

- 4yy paper jams section was revised.

May 4, 2018

- Multifeed calibration was removed from the Scanner diagnostics menu.
- Controller calibration description was updated.
- An installation note for performing Controller calibration was added to the Flatbed scanner removal.
- For the right cover removal, an image was added showing how to open the controller board access cover.
- Printhead assembly adjustment was updated to include a note referring to the Registration adjust procedure.
- Scanner rear cover FRU (41X2501) was added to the Covers parts catalog.

April 27, 2018

- Reference to *print defects guide* on the Repeating defects check was removed.
- Reference to *second transfer roller* on the Enable edge-to-edge (printing) was removed.
- Image for Printhead removal was revised.

General information

Printer model configurations

The Lexmark™ MX622ade, MX622adhe, MB2650ade, MB2650adwe, and XM3250 printers are network-capable, multifunction laser printers. The printers support monochrome printing and are embedded with home screen solutions and applications. 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
MX622ade	Monochrome laser 4-in-1 MFP with 7.0" color touch screen and fax	7018-676
MX622adhe	Monochrome laser 4-in-1 MFP with 7.0" color touch screen, fax, and hard drive	7018-678
MB2650ade	Monochrome laser 4-in-1 MFP with 7.0" color touch screen and fax	7018-676
MB2650adwe	Monochrome Laser 4-in-1 MFP with 7.0" color touch screen, wireless, and fax	7018-686
XM3250	Monochrome laser 4-in-1 MFP with 7.0" color touch screen, fax, and hard drive	7018-679

Finding the serial number

Open door A, and then find the serial number at the right side of the printer.



Setting the paper size and type

1. From the control panel, navigate to **Settings › Paper › Tray Configuration › Paper Size/Type**.
2. Select a paper source.
3. Set the paper size and type.

Supported paper sizes, types, and weights

Supported paper sizes

Paper size	Standard 550-sheet tray	Optional 250- or 550-sheet tray	Multipurpose feeder	Two-sided printing	ADF	Scanner glass
A4 210 x 297 mm (8.3 x 11.7 in.)	✓	✓	✓	✓	✓	✓

Paper size	Standard 550-sheet tray	Optional 250- or 550-sheet tray	Multipurpose feeder	Two-sided printing	ADF	Scanner glass
A5 210 x 148 mm (8.3 x 5.8 in.)	✓	✓	✓	X	✓	✓
A5 LEF 148 x 210 mm (5.8 x 8.3 in.)	✓	X	✓	X	✓	✓
A6 105 x 148 mm (4.1 x 5.8 in.)	✓	X	✓	X	✓	✓
JIS B5 182 x 257 mm (7.2 x 10.1 in.)	✓	✓	✓	X	✓	✓
Oficio (Mexico) 216 x 340 mm (8.5 x 13.4 in.)	✓	✓	✓	✓	✓	✓
Hagaki 100 x 148 mm (3.9 x 5.8 in.)	X	X	✓	X	X	✓
Business card 50.8 x 88.9 mm (2 x 3.5 in.)	X	X	X	X	X	✓

Paper size	Standard 550-sheet tray	Optional 250- or 550-sheet tray	Multipurpose feeder	Two-sided printing	ADF	Scanner glass
Statement 140 x 216 mm (5.5 x 8.5 in.)	✓	✓	✓	X	✓	✓
Executive 184 x 267 mm (7.3 x 10.5 in.)	✓	✓	✓	X	✓	✓
Letter 216 x 279 mm (8.5 x 11 in.)	✓	✓	✓	✓	✓	✓
Legal 216 x 356 mm (8.5 x 14 in.)	✓	✓	✓	✓	✓	✓
Folio 216 x 330 mm (8.5 x 13 in.)	✓	✓	✓	✓	✓	✓
Universal 76.2 x 127 mm to 216 x 356 mm (3 x 5 in. to 8.5 x 14 in.)	X	X	✓	X	X	✓

Paper size	Standard 550-sheet tray	Optional 250- or 550-sheet tray	Multipurpose feeder	Two-sided printing	ADF	Scanner glass
Universal 105 x 148 mm to 216 x 356 mm (4.13 x 5.83 in. to 8.5 x 14 in.)	✓	X	X	X	✓	✓
Universal 148 x 210 mm to 216 x 356 mm (5.83 x 8.27 in. to 8.5 x 14 in.)	X	✓	X	X	X	✓
7 3/4 Envelope (Monarch) 98 x 191 mm (3.9 x 7.5 in.)	X	X	✓	X	X	✓
9 Envelope 98 x 225 mm (3.9 x 8.9 in.)	X	X	✓	X	X	✓
10 Envelope 105 x 241 mm (4.1 x 9.5 in.)	X	X	✓	X	X	✓

Paper size	Standard 550-sheet tray	Optional 250- or 550-sheet tray	Multipurpose feeder	Two-sided printing	ADF	Scanner glass
DL Envelope 110 x 220 mm (4.3 x 8.7 in.)	X	X	✓	X	X	✓
C5 Envelope 162 x 229 mm (6.4 x 9 in.)	X	X	✓	X	X	✓
B5 Envelope 176 x 250 mm (6.9 x 9.8 in.)	X	X	✓	X	X	✓
Other Envelope 76.2 x 127 mm to 216 x 356 mm (3 x 5 in. to 8.5 x 14 in.)	X	X	✓	X	X	✓

Supported paper types

Paper type	Standard 550-sheet tray	Optional 250- or 550-sheet tray	Multipurpose feeder	Two-sided printing	ADF	Scanner glass
Plain paper	✓	✓	✓	✓	✓	✓
Card stock	X	X	✓	X	X	✓

Paper type	Standard 550-sheet tray	Optional 250- or 550-sheet tray	Multipurpose feeder	Two-sided printing	ADF	Scanner glass
Transparency	✓	X	✓	X	X	✓
Recycled	✓	✓	✓	✓	✓	✓
Paper labels [1]	✓	✓	✓	X	X	✓
Bond [2]	✓	✓	✓	✓	✓	✓
Letterhead	✓	✓	✓	✓	✓	✓
Preprinted	✓	✓	✓	✓	✓	✓
Colored paper	✓	✓	✓	✓	✓	✓
Light paper	✓	✓	✓	✓	✓	✓
Heavy paper [2]	✓	✓	✓	✓	✓	✓
Rough/ Cotton	✓	✓	✓	✓	✓	✓
Envelope	X	X	✓	X	X	✓
Rough envelope	X	X	✓	X	X	✓

[1] One-sided paper labels designed for laser printers are supported for occasional use. It is recommended to print 20 or fewer pages of paper labels per month. Vinyl, pharmacy, and two-sided labels are not supported.

[2] Bond and Heavy paper are supported in two-sided printing up to 90-g/m^2 (24-lb) paper weight.

Supported paper weights

Paper type	Tray	Multipurpose feeder	ADF	Two-sided printing
Plain Paper	60–120 g/m^2 (16–32 lb)	60–216 g/m^2 (16–58 lb)	Standard-sized paper: 52–120 g/m^2 (14–32 lb) Universal-sized media: 60–90 g/m^2 (16–24 lb)	60–90 g/m^2 (16–24 lb)
Card Stock	N/A	60–216 g/m^2 (16–58 lb)	52–120 g/m^2 (14–32 lb)	N/A
Transparency	60–120 g/m^2 (16–32 lb)	60–216 g/m^2 (16–58 lb)	N/A	N/A
Labels*	60–120 g/m^2 (16–32 lb)	60–216 g/m^2 (16–58 lb)	N/A	N/A
Envelopes	N/A	N/A	60–216 g/m^2 (16–58 lb)	N/A

* One-sided paper labels designed for laser printers are supported for occasional use. It is recommended to print 20 or fewer pages of paper labels per month. Vinyl, pharmacy, and two-sided labels are not supported.

Tools required for service

- Flat-blade screwdrivers, various sizes
- #1 Phillips screwdriver, magnetic
- #2 Phillips screwdriver, magnetic
- #2 Phillips screwdriver, magnetic short-blade
- Torx screwdriver (T20 head)
- Needle-nose pliers
- Diagonal side cutters
- Spring hook
- Feeler gauges
- Analog or digital multimeter
- 3-mm ball hex wrench
- Toner vacuum

- Flashlight

Diagnostics and troubleshooting

Troubleshooting precautions

CAUTION—SHOCK HAZARD
When you see this symbol on the product, there is a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you begin, or use caution if the product must receive power in order to perform the task.

CAUTION—SHOCK HAZARD
This product uses an electronic power switch. It does not physically disconnect the input AC voltage. To avoid the risk of electrical shock, always remove the power cord from the printer when removal of the input AC voltage is required.

CAUTION—SHOCK HAZARD
To avoid the risk of electrical shock while troubleshooting with covers removed or doors open, do not touch the exposed wires or circuits while the printer is connected to an electrical outlet.

CAUTION—SHOCK HAZARD
To avoid the risk of electrical shock and to prevent damage to the printer, remove the power cord from the electrical outlet and disconnect all connections to any external devices before you connect or disconnect any cable, electronic board, or assembly.

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.

CAUTION—PINCH HAZARD
To avoid the risk of a pinch injury, use caution in areas marked with this label. Pinch injuries may occur around moving parts, such as gears, doors, trays, and covers.

Précautions de dépannage

CAUTION—SHOCK HAZARD
Ce symbole indique un danger lié à des niveaux de tension dangereux dans la zone du produit à manipuler. Débranchez le produit avant de commencer, ou agissez avec prudence si le produit doit être alimenté pour effectuer l'opération.

CAUTION—SHOCK HAZARD
Ce produit utilise un commutateur d'alimentation électronique. Il ne déconnecte pas physiquement la tension d'alimentation CA. Pour éviter tout risque d'électrocution, débranchez toujours le cordon d'alimentation de l'imprimante lorsque vous devez déconnecter la tension d'alimentation CA.

CAUTION—SHOCK HAZARD
Pour éviter tout risque d'électrocution lors du dépannage de l'imprimante avec les capots retirés ou les portes ouvertes, prenez garde de ne pas toucher les fils ou circuits dénudés si l'imprimante est connectée à une prise électrique.

CAUTION—SHOCK HAZARD
Pour éviter tout risque d'électrocution et éviter d'endommager l'imprimante, débranchez le cordon d'alimentation de la prise électrique et déconnectez toute connexion à tout périphérique externe avant de brancher ou débrancher des câbles ou circuits et assemblages électroniques.

CAUTION—HOT SURFACE
L'intérieur de l'imprimante risque d'être brûlant. pour réduire le risque de brûlure, laissez la surface ou le composant refroidir avant d'y toucher.

CAUTION—PINCH HAZARD
Pour éviter tout risque de blessure par pincement, agissez avec précaution au niveau des zones signalées par cette étiquette. Les blessures par pincement peuvent se produire autour des pièces mobiles telles que les engrenages, portes, tiroirs et capots.

Precauciones durante la solución de problemas

CAUTION—SHOCK HAZARD
Cuando vea este símbolo en el producto, existe peligro de tensiones peligrosas en el área del producto en la que está trabajando. Desconecte el producto antes de empezar o tenga cuidado si el producto debe recibir alimentación a fin de realizar la tarea.

CAUTION—SHOCK HAZARD
Este producto utiliza un interruptor de corriente electrónico. No desconecta físicamente la entrada de voltaje de CA. Para evitar el riesgo de descarga eléctrica, desenchufe siempre el cable de alimentación de la impresora cuando sea necesario retirar la entrada de voltaje de CA.

CAUTION—SHOCK HAZARD
Para evitar el riesgo de descarga eléctrica al solucionar problemas sin las cubiertas o con las puertas abiertas, no toque los cables ni los circuitos expuestos mientras la impresora está conectada a una toma de corriente.

CAUTION—SHOCK HAZARD
Para evitar el riesgo de descargas eléctricas y daños en la impresora, retire el cable de alimentación de la toma eléctrica y desconecte todas las conexiones a dispositivos externos antes de conectar o desconectar cualquier cable, placa electrónica o conjunto.

CAUTION—HOT SURFACE
El interior de la impresora podría estar caliente. Para evitar el riesgo de heridas producidas por el contacto con un componente caliente, deje que la superficie se enfríe antes de tocarlo.

CAUTION—PINCH HAZARD
Para evitar el riesgo de lesión por atrapamiento, preste atención en las áreas marcadas con esta etiqueta. Las lesiones por atrapamiento se pueden producir en torno a partes móviles, tales como engranajes, puertas, bandejas y cubiertas.

Vorsichtsmaßnahmen bei der Fehlerbehebung

CAUTION—SHOCK HAZARD
Wenn Sie dieses Symbol sehen, besteht eine Gefahr durch gefährliche Spannungen in dem Produktbereich, in dem Sie arbeiten. Trennen Sie das Produkt von seiner Stromverbindung, bevor Sie beginnen, oder gehen Sie vorsichtig vor, wenn das Produkt für die Durchführung der Aufgabe mit Strom versorgt werden muss.

CAUTION—SHOCK HAZARD
Dieses Produkt verwendet einen elektronischen Leistungsschalter. Er trennt die Eingangswechselspannung nicht physikalisch. Um das Risiko eines elektrischen Schlags zu vermeiden, ziehen Sie stets das Netzkabel vom Drucker ab, wenn eine Abtrennung der Eingangswechselspannung erforderlich ist.

CAUTION—SHOCK HAZARD
Um die Gefahr eines Stromschlags während der Fehlerbehebung bei entfernten Abdeckungen oder offenen Klappen zu vermeiden, berühren Sie die freiliegenden Drähte oder Stromkreise nicht, wenn der Drucker an eine Steckdose angeschlossen ist.

CAUTION—SHOCK HAZARD
Um das Risiko eines elektrischen Schlags und Schäden am Drucker zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose und trennen Sie alle Verbindungen zu jeglichen externen Geräten, bevor Sie Kabel, Elektronikplatinen oder Baugruppen einstecken oder abziehen.

CAUTION—HOT SURFACE
Das Innere des Druckers kann sehr heiß sein. Vermeiden Sie Verletzungen, indem Sie heiße Komponenten stets abkühlen lassen, bevor Sie ihre Oberfläche berühren.

CAUTION—PINCH HAZARD
Um das Risiko einer Quetschung zu vermeiden, gehen Sie in Bereichen, die mit diesem Etikett gekennzeichnet sind, mit Vorsicht vor. Quetschungen können im Bereich von beweglichen Komponenten auftreten, wie z. B. Zahnrädern, Klappen, Fächern und Abdeckungen.

Troubleshooting overview

Performing the initial troubleshooting check

Before you start the troubleshooting procedures, perform the following checks:

- Use genuine Lexmark supplies and parts for the best results. Third-party supplies or parts may affect the performance, reliability, or life of the printer and its imaging components.
- With the power cord unplugged from the electrical outlet, check that the cord is free from the breakage, short circuits, disconnected wires, or incorrect connections.
- Make sure the printer is properly grounded. Check the power cord ground terminal.
- Make sure the power supply line voltage is within 10% of the rated line voltage.
- Make sure the machine is securely installed on a level surface in a well-ventilated area.
- Make sure the room temperature is between 16 and 32°C (60 and 90°F) and that the relative humidity is between 20 and 80%.
- Avoid sites generating ammonia gas, high temperature, high humidity (near water faucets, kettles, humidifiers), cold spaces, near open flames, and dusty areas.
- Avoid sites exposed to direct sunlight.
- Make sure the paper is the recommended paper for this printer.
- Make a trial print with paper from a newly opened package, and check the result.

Power-on Reset (POR) sequence

When you turn on the printer, it performs a POR sequence.

Check for correct POR functioning of the base printer by observing the following:

1. The control panel indicator light turns on.
2. The control panel display turns on.
3. A splash screen appears on the display.
4. The cooling fan turns on.
5. The fuser heater turns on.

   > **Note:** The fuser takes longer to warm up from a cold start than from a warm start.

6. The main drive motor turns on.
7. The EP drive assembly drives the developer shaft located in the imaging unit.
8. The exit rollers turn.
9. The control panel indicator light blinks.
10. **Ready** appears on the display.

Using Safe Mode

Safe Mode lets the printer continue to operate in a special limited mode in which it attempts to continue offering as much functionality as possible despite known issues.

> **Warning—Potential Damage**
> Safe Mode is intended as a short-term workaround and should be used only in the case of a non-critical error when a print job must be completed before service can be arranged to repair the printer. The printer must be returned to standard operating mode before diagnostics can be run or full-function printing can continue.

You can enter Safe Mode in one of the following ways:

- Enable Safe Mode from the Configuration menu, and then POR the printer.
- Press the **Stop** and **Back** keys, and then POR the printer.

Return the printer to standard operating mode to service the printer and return to full-function printing.

Safe mode print behavior

The following table outlines the behavior for this printer model while in Safe Mode:

Safe Mode engine features	Engine behavior	Control panel behavior
Simplex printing only	Will report that no duplexer is installed.	Duplex print option will not be selectable.
Ignore duplex sensor		
Ignore bin full sensor	Bin full messages will not be reported.	Bin full messages will not occur.
Print at narrow media operating point	Pages will be printed slower.	N/A

Safe Mode engine features	Engine behavior	Control panel behavior
Ignore narrow media sensor	Narrow media will print without restrictions.	N/A
Ignore all input options	Will report that only Tray 1 is installed.	Only Tray 1 and the MPF will be selectable.
Ignore all output options	Will not report any installed finishing options.	Finishing options will not be selectable.
Use large interpage gaps	Pages will have large interpage gaps.	N/A

Securing the printer

Clearing the printer security password

Notes

- Resetting the printer deletes all security settings and all apps and licenses.
- Before changing the security settings, ask permission from your administrator.
- Deploy the files from the Service Restore Tool after completing the printer reset. For more information, see .

To reset the printer, follow any of the steps below according to their availability and in the order of recommended preference:

Using the Reset Device menu

Notes

- This menu appears only in FW 221.112 or later.
- To enable the menu, set **Reset Device Modes** to **Allow with FAC** or **Allow**. From the control panel, navigate to **Settings › Security › Miscellaneous › Reset Device Modes**.
- Some printer models may ask for admin credentials before you can access this menu. If a prompt appears, then perform **Out of Service Erase** from the **Diagnostics** menu.

Using the Settings menu

1. From the control panel, select **Settings › Device › Maintenance › Out of Service Erase › Sanitize all information on nonvolatile memory**.
2. Select **Sanitize all information on nonvolatile memory**, and then select **Start initial setup wizard** or **Leave printer offline**.

Note: If **Out of Service Erase** is not available from the **Settings** menu, enter the **Diagnostics** menu, select **Out of Service Erase**, and then select **Start**.

Notes

- If there are installed applications that are difficult to reinstall, then use the security reset jumper to reset the printer to its factory defaults. For more information, see .
- It takes approximately 30 seconds from the moment you perform the reset until the screen changes to indicate the printer is processing the request.

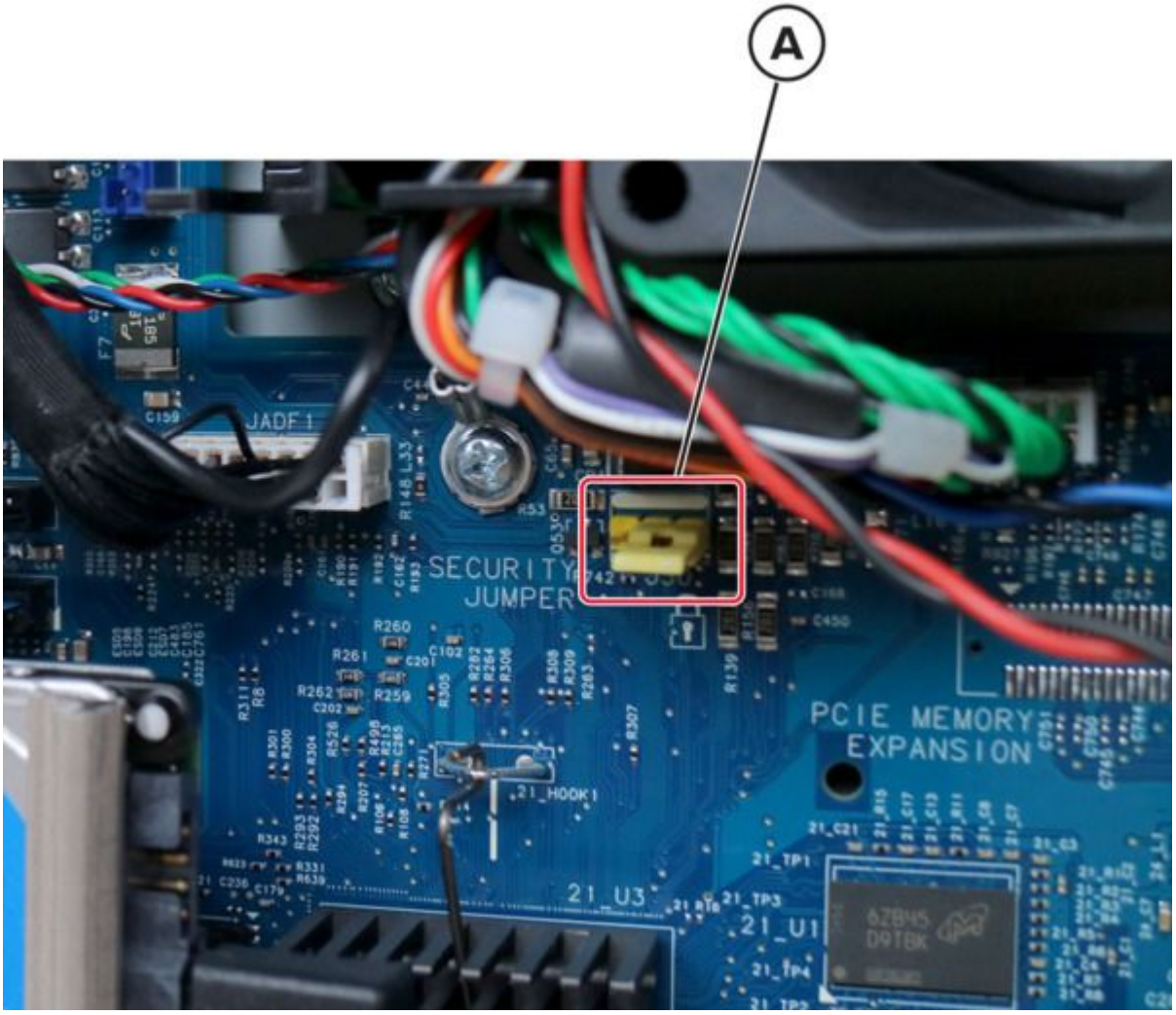
Using the security reset jumper

The security reset jumper is on the controller board. It can be used if the admin password is lost or forgotten, and **Out of Service Erase** is not available from the **Settings › Device › Maintenance** menu.

Notes

- To enable the effect of the security reset jumper, from the control panel navigate to: **Security › Miscellaneous › Security Reset Jumper › Enable “Guest” Access**.
- To disable the effect of the jumper, select **No Effect** from the Security Reset Jumper section in the Security menu. If the password is forgotten or lost, then perform an **Out of Service Erase** from the Diagnostics menu. For more information, see Restoring the printer configuration on page 279.

1. Turn off the printer.
2. Open the controller board access cover on the left side of the printer.
3. Locate the security jumper (A) on the controller board.



4. Move the jumper to cover the middle and exposed prongs.

   Note: The movement of the jumper triggers the reset, not the jumper position.

5. Close the controller board access cover.
6. Turn on the printer.

Notes

- The security framework remains in place after the reset. Public permissions are reset to default and now include Out of Service Erase as an option.
- If LDAP is used to authenticate the copy function in MFPs, then the LDAP configuration and copy function are no longer protected.
- If Enable Audit is activated in the Security Audit Log, then the printer logs a message each time the jumper is reset.
- Physical access to the printer is required to use the jumper, making it more secure against hacking. To prevent tampering of the jumper, secure the controller board cage with a Kensington lock.

Data security notice

Identifying printer memory

- **Volatile memory**—The printer uses standard random access memory (RAM) to buffer user data temporarily during simple print and copy jobs.
- **Nonvolatile memory**—The printer may use two forms of nonvolatile 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**—Some printers have a hard disk drive installed. The hard disk is designed for printer-specific functionality and cannot be used for long-term storage of data that is not print-related. The hard disk does not let users extract information, create folders, create disk or network file shares, or transfer FTP information directly from a client device. The hard disk can retain buffered user data from complex print jobs, form data, and font data.

The following parts can store memory:

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

Note: The printer control panel and controller board contain NVRAM.

Erasing printer memory

To erase volatile memory, turn off the printer.

To erase nonvolatile memory, do the following:

1. From the control panel, navigate to **Settings > Device > Maintenance > Out of Service Erase > Sanitize all information on nonvolatile memory**.
2. Select **Sanitize all information on nonvolatile memory**, and then select **ERASE**.
3. Follow the instructions on the screen.

To erase hard disk memory, do the following:

1. From the control panel, navigate to **Settings > Device > Maintenance > Out of Service Erase > Sanitize all information on hard disk**.
2. Select **Sanitize all information on hard disk**, and then select **ERASE**.
3. Follow the instructions on the screen.

Note: This process can take from several minutes to more than an hour, making the printer unavailable for other tasks.

If a hard disk is replaced, then do the following:

1. Remove the hard disk, and then return it to the customer.

2. Request the customer to sign the *Customer Retention* form.

   Note: You can get printed copies of the form from your Lexmark partner manager.

3. Take a photo of the signed form, and then upload it to the Service Request debrief tool.
4. Fax or e-mail the signed form to the number or e-mail address shown at the bottom of the form.

Lost or forgotten printer security password

Issue description

- The printer security password is lost or forgotten.
- Protected menus, security settings, and other administrative functions are unavailable.

Customer resolution

Note: Resetting the printer deletes all security settings, applications, and licenses.

1. Contact the printer administrator for assistance with resetting the printer security password.
2. Before resetting the printer, back up the current configuration if you have access to the Embedded Web Server and permission to export printer settings. For more information, see Exporting a configuration file on page 301.

Remote resolution

1. Make sure that the user performs all the steps in the **Customer resolution** section.

   Note: Before resetting the printer, try **Admin** as the login name and the device XSN (9 or 10 digits) as the password.

2. Reset the printer using the first available method, in the order of preference.
   a. Using the **Reset Device** menu

      Notes
      - This menu is available only in FW 221.112 or later.
      - To enable the menu, set **Reset Device Modes** to **Allow with FAC** or **Allow**. From the control panel, navigate to **Settings › Security › Miscellaneous › Reset Device Modes**.

   b. Using the **Settings** menu
      i. From the control panel, navigate to **Settings › Device › Maintenance › Out of Service Erase**.

         Note: This process deletes the encryption key used to protect user data, making the data unrecoverable.

ii. Select **Sanitize all information on nonvolatile memory**, and then select **Erase**.

iii. Select **Start initial setup wizard** or **Leave printer offline**, and then select **Next**.

> **Note:** If neither reset method is available or if administrator credentials are required, continue to **Detailed diagnostics**.

Initial parts replacement

No part replacement is needed. This issue can be resolved using the preceding steps. If the issue persists, then contact the next level of support.

Detailed diagnostics

1. If installed applications are difficult to reinstall, use the security reset jumper to restore the printer to factory defaults. For more information, see .
2. If **Out of Service Erase** is unavailable from the **Settings** menu or **Reset Device** menu, or if administrator credentials are required, perform **Out of Service Erase** from the **Diagnostics** menu.

   Depending on the printer model, use one of the following methods:
   - **4.3-inch display or larger**
     a. From the home screen, swipe right to open the **Control Center**.
     b. Enter ****73**, and then select **OK**.
     c. Select **Out of Service Erase**.
   - **2.8-inch display**
     a. Press **Back, Back, Home,** and **Start** in sequence.
     b. Select **Out of Service Erase**.
   - **2-line display**
     a. Press **Back, Right Arrow, Back,** and **Right Arrow** in sequence.
     b. Select **Out of Service Erase**.
3. Restore the printer configuration to complete the service procedure.
   a. Use the **Service Restore Tool** to download the software bundle. For more information, see Restoring the printer configuration on page 279.

      > **Note:** If the **Service Restore** tool is unavailable, contact the next level of support.

   b. Restore printer settings and embedded solutions. For more information, see Restoring solutions, licenses, and configuration settings on page 282.
   c. Import the exported configuration file back to the printer. For more information, see Importing a configuration file on page 301.

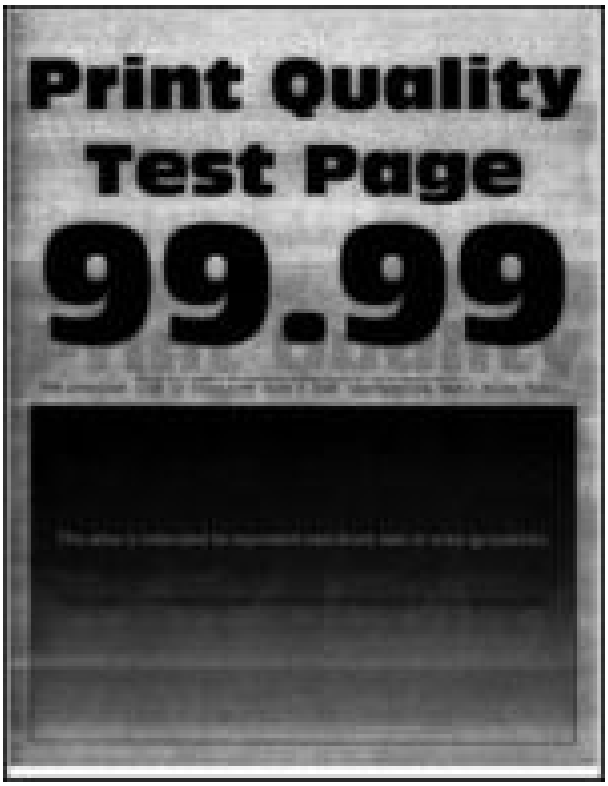
Fixing print quality issues

Initial print quality check

Before troubleshooting print problems, perform the following:

- 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 (75-80 g/m^2) 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.
- From the control panel, navigate to **Settings > Troubleshooting > Print Quality Test Pages**.
- Print and keep the Menu Settings Page. The original page is used to restore the custom settings if necessary. From the control panel, navigate to **Settings > Reports > Menu Settings Page**, and then press **OK**.
- On the Menu Settings page, check if the print resolution is set to 600 dpi and the toner darkness is set to Normal.
- Check the toner cartridges for damage, and replace if necessary.
- Make sure that the correct print driver is used to prevent print problems. If the wrong print driver is installed, then incorrect characters could print and the copy may not fit the page correctly.

Gray background or toner fog check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Perform the following tests:
   a. Turn off the printer, wait for 10 seconds, and then turn on the printer.
   b. From the control panel:
      i. Increase the toner darkness in the Quality menu.

         Note: 8 is the factory default setting.

      ii. Set the paper type, texture, and weight in the Paper menu to match the paper loaded.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

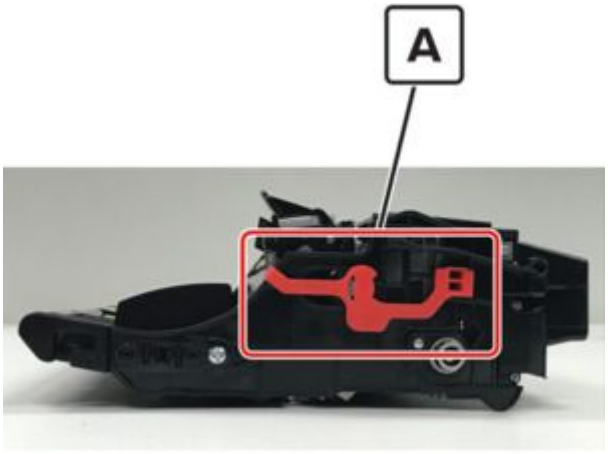
   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Install a genuine and supported toner cartridge.

   Does the problem remain?

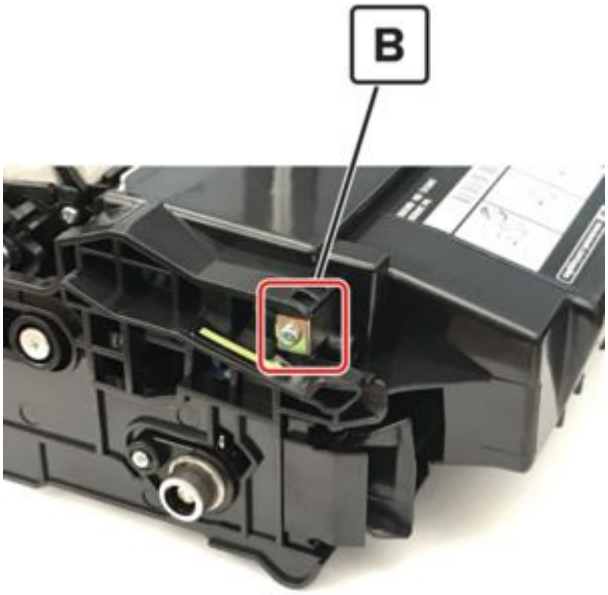
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Remove any packing material left on the imaging unit, including the red separator plastic (A).



Note: You may need a pair of pliers to remove a piece of broken plastic inside the imaging unit.

b. Check the charge roller contact (B) on the right side of the imaging unit for damage and contamination.



Is the charge roller contact damaged and contaminated?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 6.

5. Repair or replace the charge roller contact on the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

The problem is solved.

6. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Make sure that connection JPS1 on the controller board and the connections on the power supply are properly connected.

   Are the connections properly connected?

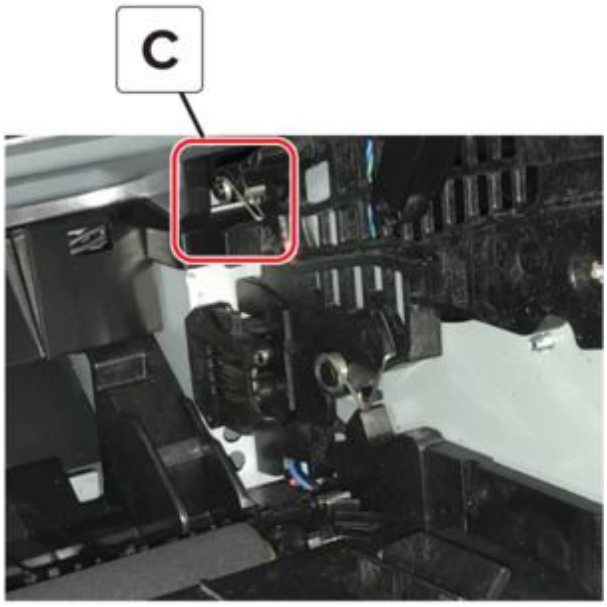
   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.

8. Reseat the connections.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Perform the following tests:
   a. Remove any contamination from the photoconductor charge contact (C) on the right side of the frame.



   b. Perform a print test.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

10. Check if the photoconductor charge contact is bent, damaged, or not in proper contact with the imaging unit.

    Is the contact free from damage and in proper contact with the imaging unit?

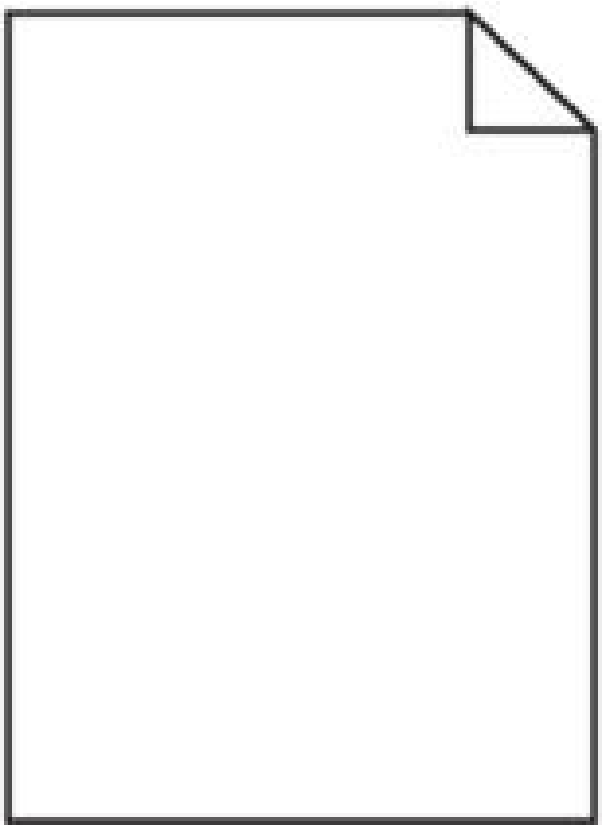
    - **Yes**:
      Go to the next step.
    - **No**:
      Contact the next level of support.

11. Replace the power supply. See .Power supply removal on page 346

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Blank pages check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Check and remove any packing material left on the imaging unit.
   b. Firmly shake the imaging unit to redistribute the toner, and then reinstall it.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the imaging unit for damage and proper installation, and replace if necessary.

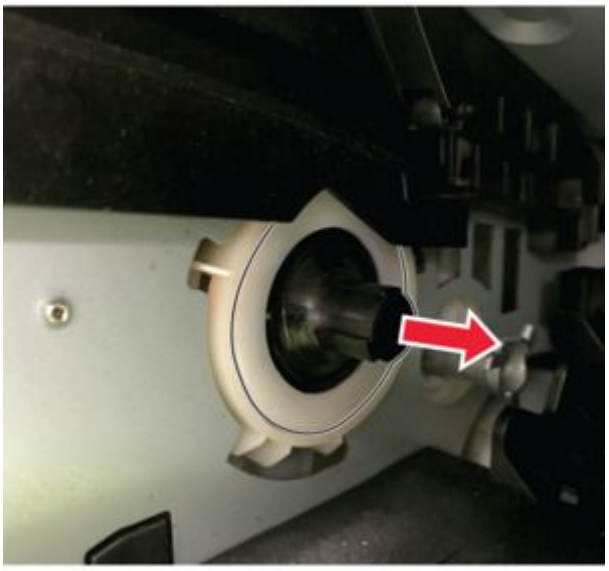
   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the coupler to make sure that it is not stuck in the retracted position. While slowly closing the door, observe the coupler to see if it moves inward.

   Note: With the imaging unit removed, the coupler should retract with the door open and move inward when the front door is closed.

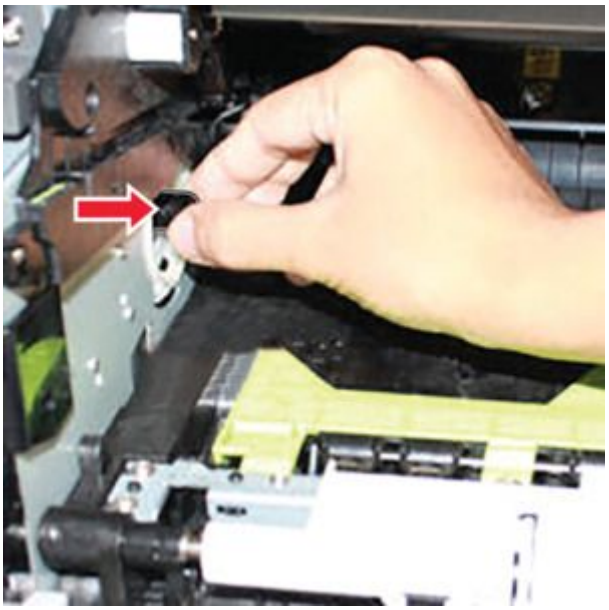




Is the coupler stuck, and not moving inward, while closing the front door?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 7.

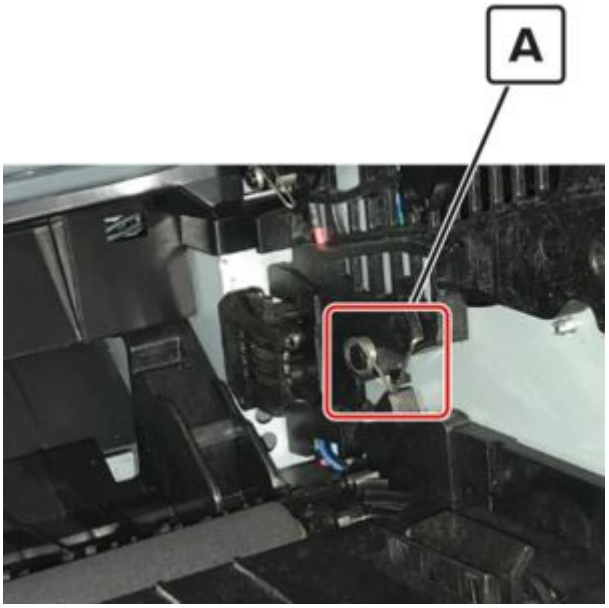
6. Reach inside the printer and manually reposition the coupler in the direction of the red arrow as shown.



Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

7. Check if the imaging unit contact (A) is bent, damaged, or not in proper contact with the imaging unit.



Are the contacts free from damage, not bent and in proper contact with the imaging unit?

- **Yes**:
  Go to the next step.
- **No**:
  Contact the next level of support.

8. Check all connections in the power supply. If necessary, replace the power supply.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

9. Reseat cable JPS1 on the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Replace the cable.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Perform the following tests:
    a. Check the transfer roller for proper installation. If necessary, remove and then reinstall the transfer roller.
    b. Check the transfer roller for contamination and damage.

    Is the transfer roller free of contamination and damage?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Replace the transfer roller. See Transfer roller removal on page 336.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Check the transfer roller left contact spring on the transfer roller left arm for damage.

    Is the contact spring free of damage?

    - **Yes**:
      Go to step 15.
    - **No**:
      Go to the next step.

14. Replace the transfer roller left arm with cable.

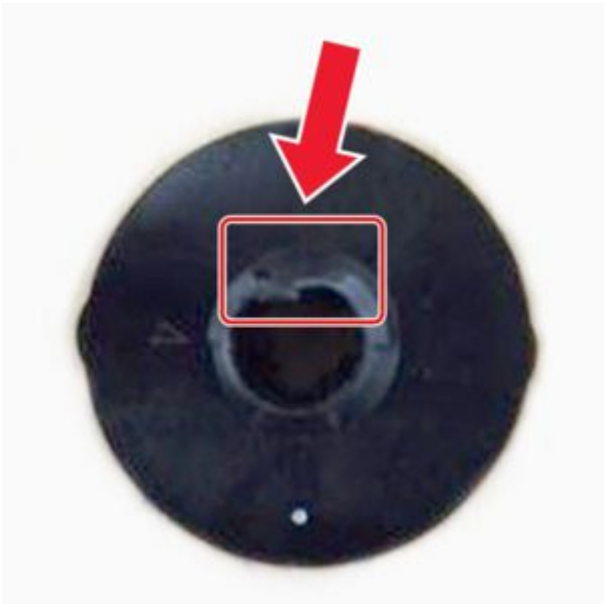
    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

15. Perform the following tests:
    a. Check the coupler for signs of damage. The coupler is located on the main drive motor.
       - Good condition



       - Bad condition



    b. If the coupler is damaged, then replace the main drive motor.

    Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

16. Reseat the printhead cables on the controller board.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

17. Replace the laser printhead. See Printhead removal on page 370.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Print is too dark check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

> **Note:** If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

Is the printer using a genuine and supported toner cartridge?

- **Yes**:
  Go to step 3.
- **No**:
  Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Turn off the printer, wait for 10 seconds, and then turn on the printer.
   b. From the control panel, reduce the toner darkness in the Quality menu.

      > **Note:** 8 is the factory default setting.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. From the control panel, set the paper type, texture, and weight in the Paper menu to match the paper loaded.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Depending on the operating system, specify the paper type, texture, and weight from Printing Preferences or Print dialog.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Perform the following tests:
   a. Check if the paper loaded has texture or rough finishes.
   b. From the control panel, set the paper texture in the Paper menu to match the texture of the paper loaded.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Make sure that the paper loaded is from a fresh package.

   Note: Paper absorbs moisture due to high humidity. Store paper in its original wrapper until you use it.

   Does the problem remain?

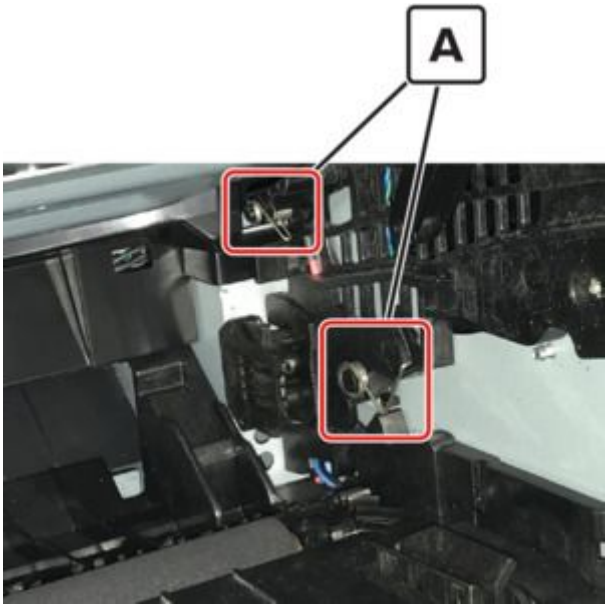
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Check if the imaging unit contacts (A) are bent, damaged, or not in proper contact with the imaging unit.



   Are the contacts free from damage, not bent and in proper contact with the imaging unit?

- **Yes**:
  Go to step 10.
- **No**:
  Contact the next level of support.

10. Check all connections on the power supply for proper connection.

    Is the power supply properly connected?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.

11. Replace the connections.

    Does the problem remain?

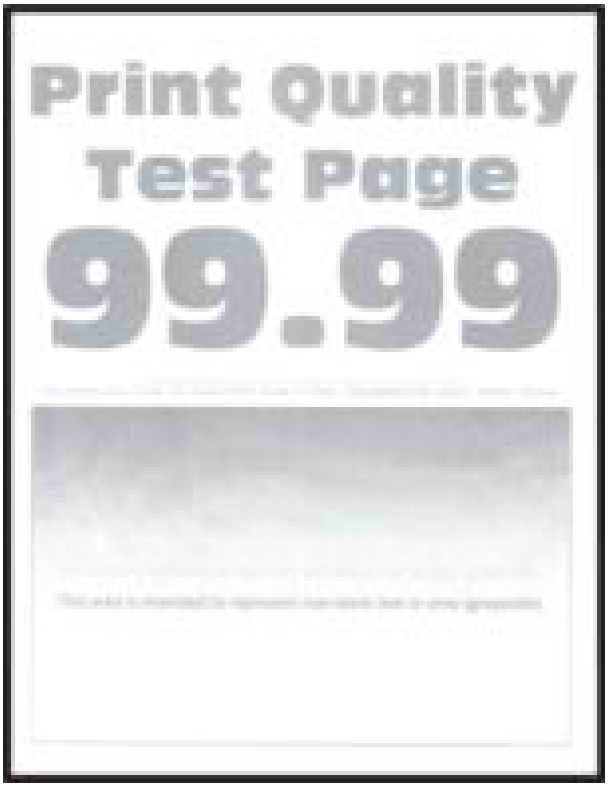
    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

12. Replace the power supply. See .Power supply removal on page 346

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Print is too light check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Turn off the printer, wait for 10 seconds, and then turn on the printer.
   b. From the control panel:

i. Increase the toner darkness in the Quality menu.

> **Note:** 8 is the factory default setting.

ii. Set the paper type, texture, and weight in the Paper menu to match the paper loaded.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

4. Perform the following tests:
   a. Remove the toner cartridge and imaging unit.
   b. Push either side of the transfer roller , located below the imaging unit, to check if it depresses and bounces back into place.
   c. If the transfer roller does not depress and bounce back into place, then reinstall it by pulling up the blue gear and pulling it out from the right side to the left.
   d. Firmly shake the imaging unit to redistribute the toner, and then reinstall it.
   e. Reinstall the toner cartridge.
   f. Turn off the printer, wait for 10 seconds, and then turn on the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the shutter on the imaging unit for signs of damage.

   > **Note:** The shutter opens to receive toner from the toner cartridge.

   Is the shutter on the imaging unit working properly?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Perform the following tests:
   a. Check the status of the imaging unit.
      i. From the home screen, select **Status/supplies**.
      ii. Select **View Supplies**.

   b. Check the condition of the imaging unit.

Is the imaging unit near end of life and/or showing signs toner leakage?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 8.

7. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Replace the transfer roller. See Transfer roller removal on page 336.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Clean the printhead lens. See Cleaning the printhead lenses on page 438.

   > **Note:** This is applicable only to models installed with a galvo LSU. To determine whether the LSU is galvo, check the serial number of the printer. The sixth digit character assigned should be in the 0–9 or B–N range (Example: 4514 20HH 007CR).

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Replace the power supply. See .Power supply removal on page 346

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Check the cartridge gearbox for damage.

    Is the cartridge gearbox free from damage?

    - **Yes**:
      Go to step 13.
    - **No**:

Go to the next step.

12. Replace the cartridge gearbox. See Cartridge gearbox removal on page 310.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Check connection JCART1 on the controller board and the connection on the cartridge gearbox.

    Are the connections properly connected?

    - **Yes**:
      Go to step 15.
    - **No**:
      Go to the next step.

14. Replace the connections.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

15. Replace the cartridge gearbox. See Cartridge gearbox removal on page 310.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

16. Replace the controller board. See .Controller board removal on page 318

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Paper curl check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Adjust the guides in the tray to the correct position for the paper loaded.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. From the control panel, set the paper size, type, and weight in the Paper menu to match the paper loaded.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Depending on the operating system, specify the paper size from Printing Preferences or Print dialog.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Remove paper from the tray, and then turn it over.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Make sure that the paper loaded is from a fresh package.

   > **Note:** Paper absorbs moisture due to high humidity. Store paper in its original wrapper until you use it.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Make sure that the printer supports the paper loaded.

   Is the paper supported?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

9. Load a supported paper.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Folded or wrinkled paper check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Perform the following tests:
   a. Check if the printer is using a non-Lexmark toner cartridge.

      Note: If the printer is using a third-party cartridge, then do not replace the imaging unit. Refer the users to their cartridge supplier.

   b. Make sure that the toner cartridge is compatible with the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Check if the paper loaded is from a fresh package.

      Note: The amount of moisture in paper affects both print quality and printer ability to feed paper correctly.

b. Make sure that the printer supports the paper loaded. For a complete list of supported paper, see the printer *User's Guide*.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

3. Make sure that the fuser entry guide is free of waste toner and dust.

> **Warning—Potential Damage**
> Clean the fuser entry guide with a toner vacuum and cloth. Do not use compressed air.

Does the problem remain?

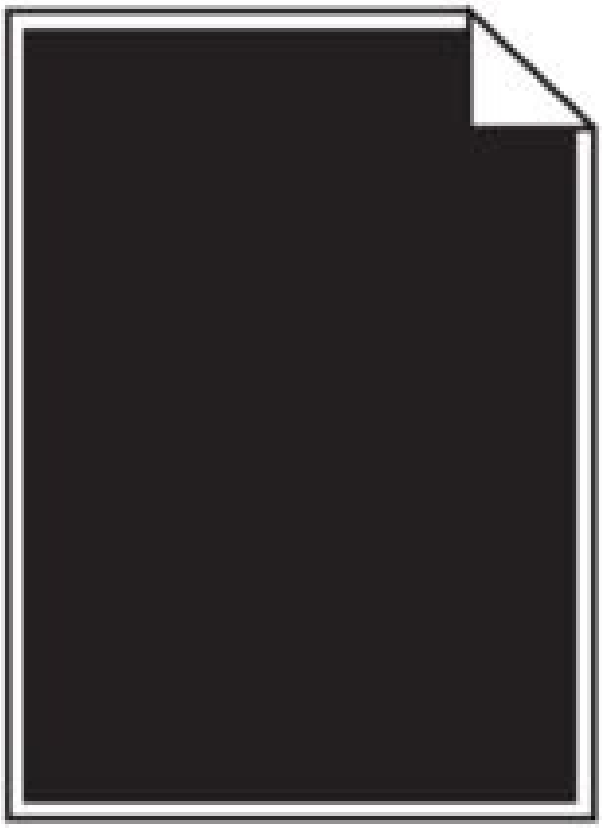
- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

4. If the fuser has reached end of life, then replace the maintenance kit.

Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Solid black pages check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

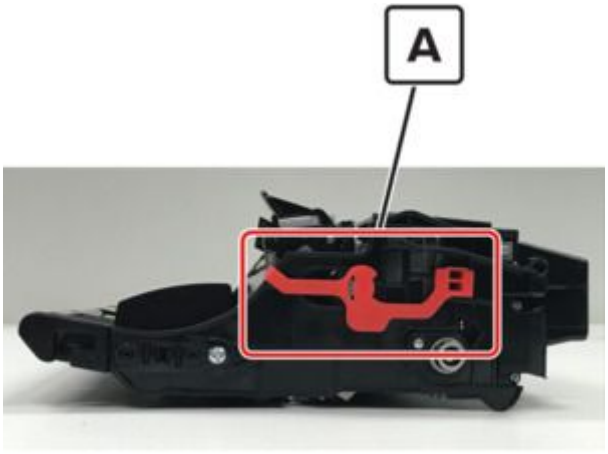
   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

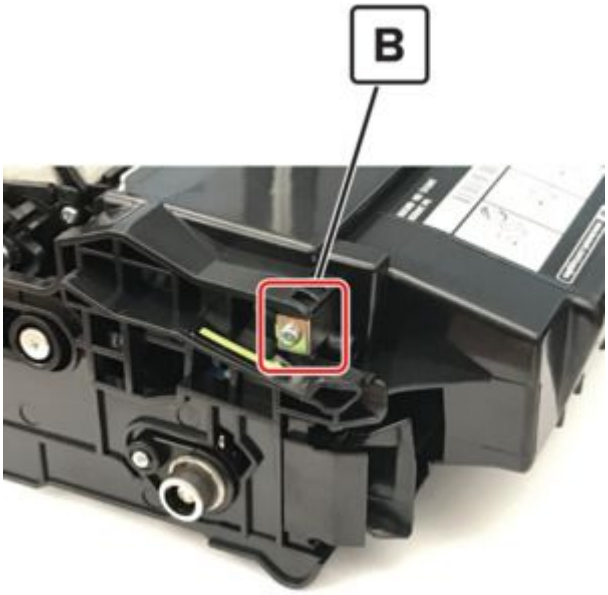
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Remove any packing material left on the imaging unit, including the red separator plastic (A).



Note: You may need a pair of pliers to remove a piece of broken plastic inside the imaging unit.

b. Check the charge roller contact (B) on the right side of the imaging unit for damage and contamination.



Is the charge roller contact damaged and contaminated?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 5.

4. Repair or replace the charge roller contact on the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

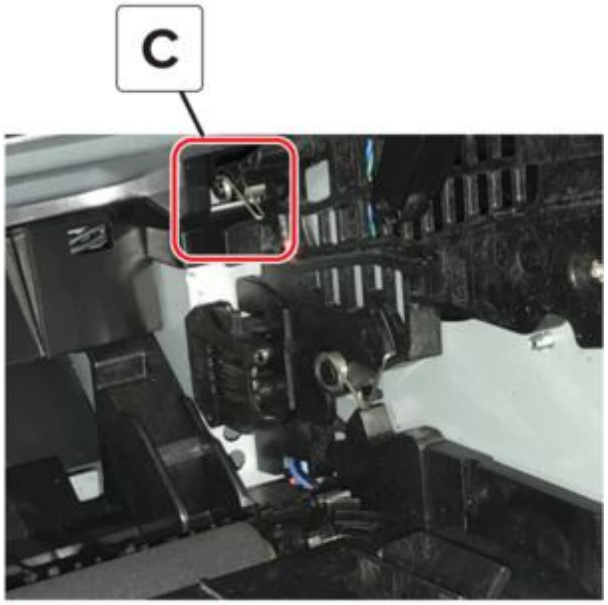
The problem is solved.

5. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check if the imaging unit contact (C) is contaminated, broken, or bent out of proper position.



   Is the contact contaminated, broken, or bent out of proper position?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 8.

7. Clean or repair the imaging unit contacts.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

8. Check the high voltage metal contacts on the imaging unit for damage. If necessary, replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

The problem is solved.

9. Check cable JPS1 from the controller board to the power supply for proper connection.

   Is the cable properly connected?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Reseat the cable.

    Does the problem remain?

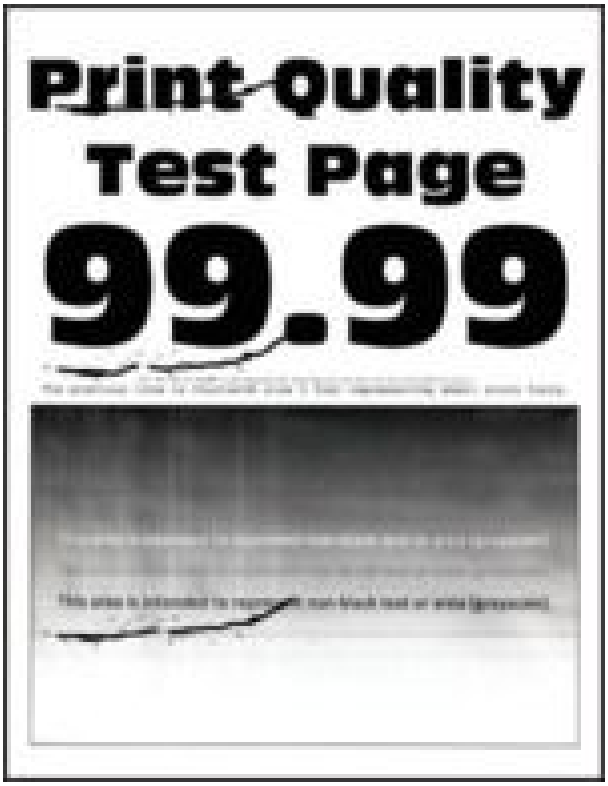
    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Replace the cable.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Repeating defects check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Perform the following tests:

   Using the Print Quality Test Pages, check if the distance between the repeating defects is equal to any of the following:

   - 97 mm (3.82 in.)
   - 47 mm (1.85 in.)
   - 38 mm (1.5 in.)

   Does the distance between the repeating defects match any of the measurements?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.

2. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the distance between repeating defects is equal to 3.15 inches (85 mm).

   Does the distance between repeating defects equal to 3.15 inches (85 mm)?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

4. Replace the fuser. See .Fuser removal on page 364

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the transfer roller. See Transfer roller removal on page 336.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:

The problem is solved.

Skewed print check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check the guides in the tray where the skewed prints are sourced from.

   Note: If paper is sourced from the MPF, then proceed to **.conkeyref: keys/skewed-print-check**

   Does the position of the guides match the paper loaded?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Adjust the guides to match the paper loaded.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the printer supports the paper loaded.

   Note: For a complete list of supported paper, see the printer *User's Guide*.

   Is the paper supported?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Remove the paper, and then load a supported one.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the tray pick roller for excess wear and contamination.

   Is the pick roller free from excess wear and contamination?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Replace the pick roller. See .Pick roller assembly removal on page 351

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Perform a print test.

   From the Diagnostics menu, select **PRINT TESTS > Tray[x]**.

   Note: [x] refers to the tray where the skewed prints are sourced from.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Adjust the margins.

From the Diagnostic menu, select **REGISTRATION**.

Does the problem remain?

- **Yes**:
  Go to step 15.
- **No**:
  The problem is solved.

9. Check the guides in the MPF tray.

   Does the position of the guides match the paper loaded?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Adjust the guides to match the paper loaded.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Check if the printer supports the paper loaded.

    > **Note:** For a complete list of supported paper, see the printer *User's Guide*.

    Is the paper supported?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Remove the paper, and then load a supported one.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Check the MPF pick roller for excess wear and contamination.

    Is the MPF pick roller free from excess wear and contamination?

    - **Yes**:
      Go to step 15.
    - **No**:

Go to the next step.

14. Replace the MPF pick roller. See MPF pick roller and separator pad removal on page 339.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

15. Perform the paper skew adjustment. See Printhead assembly adjustment on page 299.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Streaked vertical lines appear on prints check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

Is the printer using a genuine and supported toner cartridge?

- **Yes**:
  Go to step 3.
- **No**:
  Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Remove, and then reinstall the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Remove the fuser, and check for damage or debris on the rollers and belts.

   Are the rollers and belts free of damage or debris?

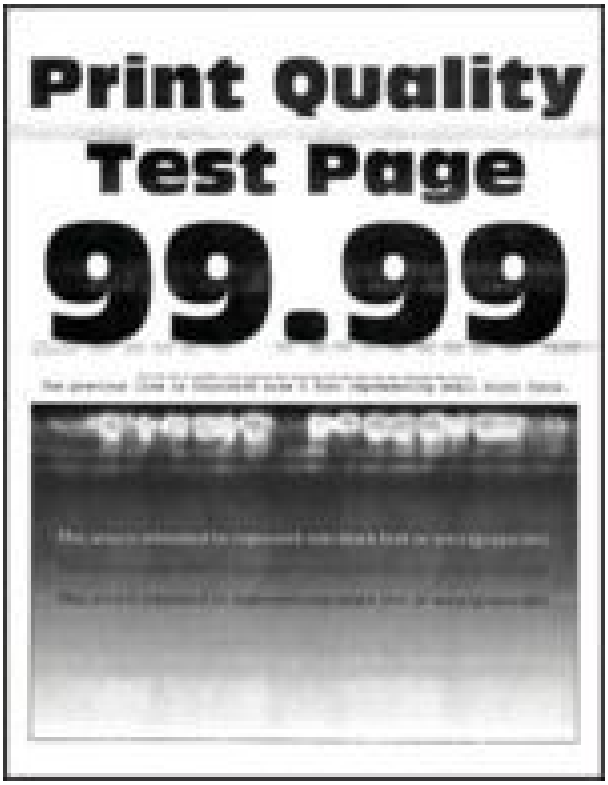
   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

6. Replace the fuser.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Horizontal light bands check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

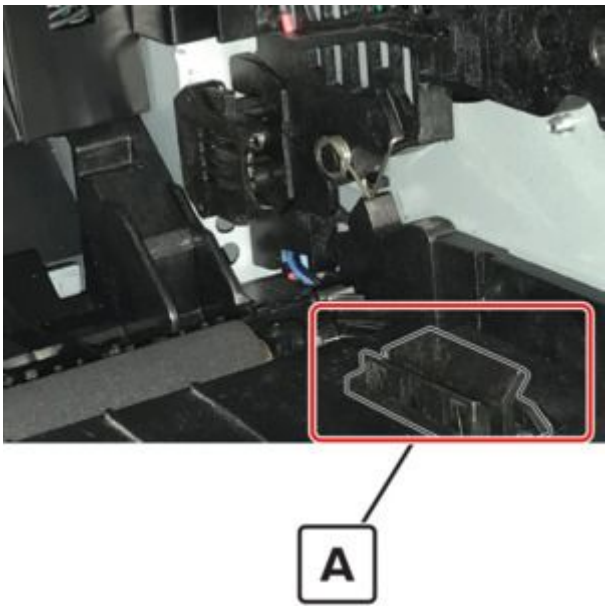
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Turn off the printer, wait for 10 seconds, and then turn on the printer.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

4. Check the imaging unit contact block (A), including the white and red wires, for damage or improper installation.



   Is the imaging unit contact block free of damage and properly installed?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

5. Replace the power supply. See .Power supply removal on page 346

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Vertical light bands check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Clean the printhead lens. See Cleaning the printhead lenses on page 438.

Note: This is applicable only to models installed with a galvo LSU. To determine whether the LSU is galvo, check the serial number of the printer. The sixth digit character assigned should be in the 0–9 or B–N range (Example: 4514 20HH 007CR).

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

4. Replace the printhead. See Printhead removal on page 370.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Vertical dark bands check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Remove, and then reinstall the toner cartridge and imaging unit.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

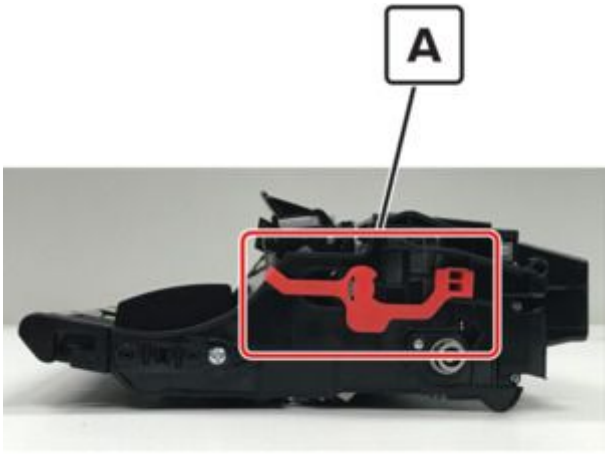
4. If a bright light enters the right side of the printer, then move the printer to avoid the bright light.

   Note: In cases where the printer cannot be moved or relocated, add a cover to the fan inlet vent to block the light from entering the printer, or contact the next level of support.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

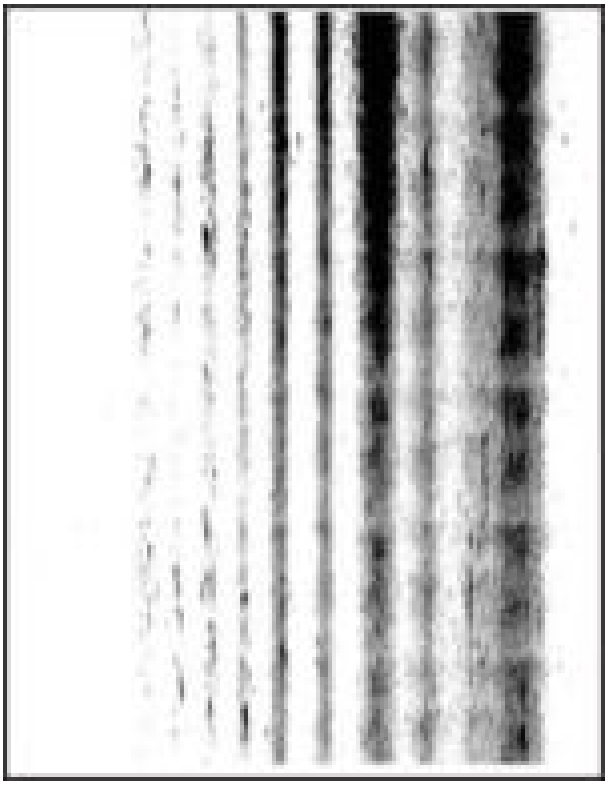
5. If a separator plastic (A) is stuck inside the imaging unit or if there are other obstructions between the charge roller and photoconductor drum, then remove them.



   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Vertical dark streaks with print missing check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

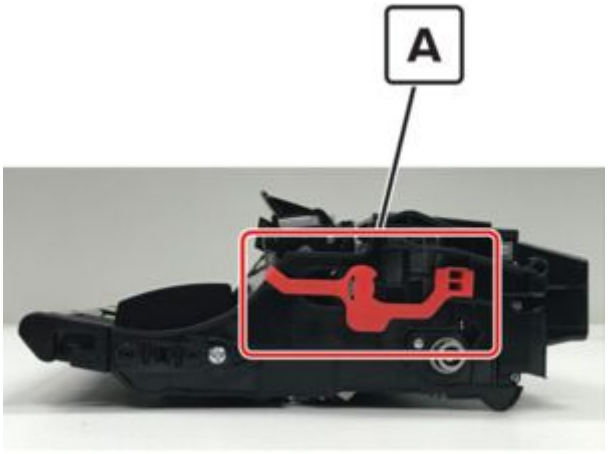
   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

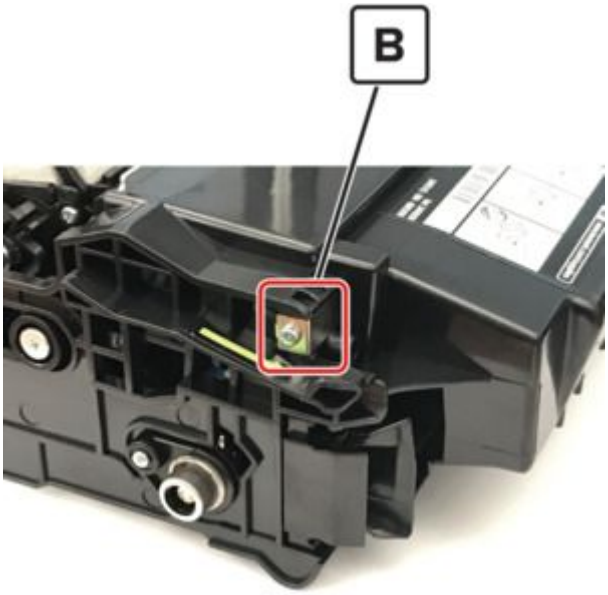
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Remove any packing material left on the imaging unit, including the red separator plastic (A).



Note: You may need a pair of pliers to remove a piece of broken plastic inside the imaging unit.

b. Check the charge roller contact (B) on the right side of the imaging unit for damage and proper installation.



Is the charge roller contact damaged and contaminated?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 5.

4. Repair or replace the charge roller contact on the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

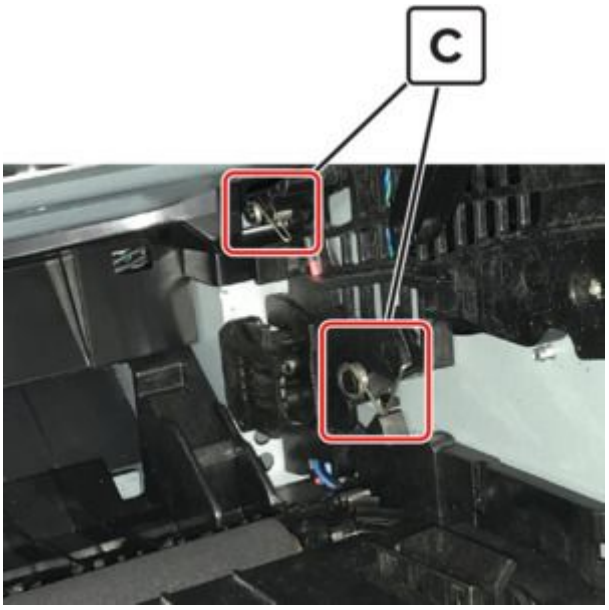
The problem is solved.

5. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check if the imaging unit contacts (C) are contaminated or bent out of proper position.



   Are the contacts contaminated and bent out of proper position?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 8.

7. Clean or repair the imaging unit contacts.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check connection JPS1 on the controller board and the connections on the power supply.

   Are the connections properly connected?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Reconnect the cables.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Replace the power supply. See .Power supply removal on page 346

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

White streaks and voided areas check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, do not replace the imaging unit. Refer the users to their cartridge supplier.

Is the printer using a genuine and supported toner cartridge?

- **Yes**:
  Go to step 3.
- **No**:
  Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Set the paper type and weight settings in the Paper menu to match the paper loaded.

   > **Note:** Make sure that the printer supports the paper loaded. For a complete list of supported paper, see the printer *User's Guide*.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Update the firmware to the latest version available.
   b. Enter the Diagnostics menu, and then change the EngSetting 14 value to 48.

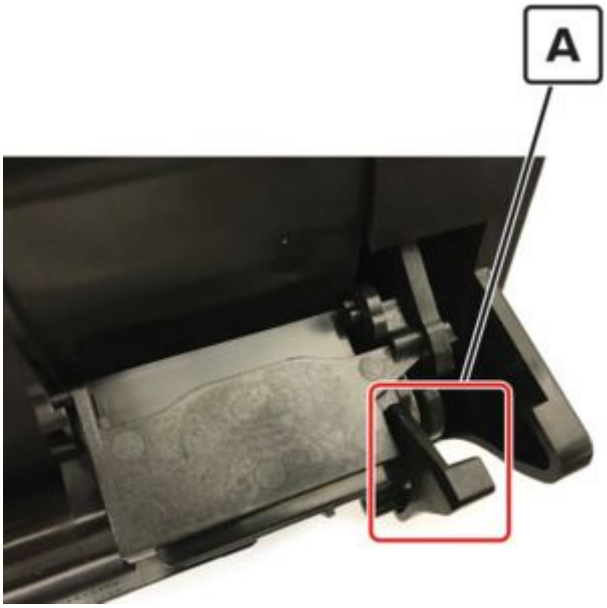
      > **Note:** You can also change the setting through a bundle file or NPA command.

   c. Set Quiet mode to Off.
   d. Review the Event Log Summary sheets and check if either error code 31.46 or 31.66 events occurred for the imaging unit. If they did, check if they are occurring with the current toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the shutter tab (A) on the toner cartridge for signs of damage.



Is the shutter tab damaged?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 7.

6. Replace the imaging unit and the toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

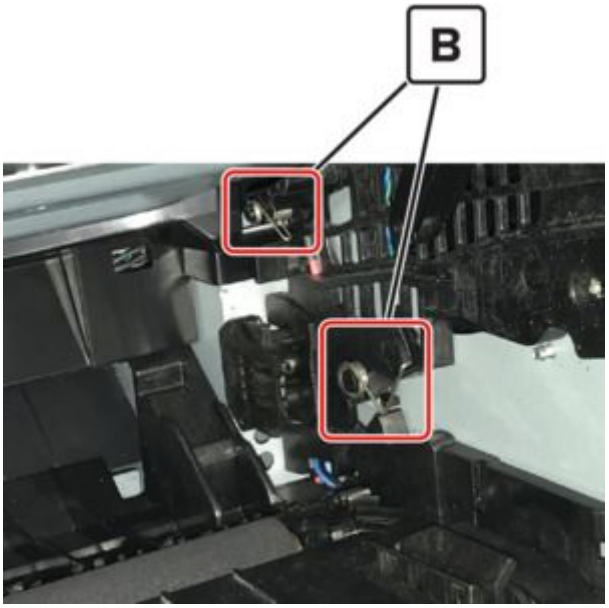
7. Clean the printhead lens. See Cleaning the printhead lenses on page 438.

   Note: This is applicable only to models installed with a galvo LSU. To determine whether the LSU is galvo, check the serial number of the printer. The sixth digit character assigned should be in the 0–9 or B–N range (Example: 4514 20HH 007CR).

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check if the imaging unit contacts (B) are contaminated or bent out of proper position.



Are the contacts contaminated or bent out of proper position?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 10.

9. Clean or repair the imaging unit contacts.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

10. Check connection JPS1 on the controller board and all the connections on the power supply.

    Are the connections properly connected?

    - **Yes**:
      Go to step 12.
    - **No**:
      Go to the next step.

11. Replace the connections.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

12. Replace the power supply. See .Power supply removal on page 346

    Does the problem remain?

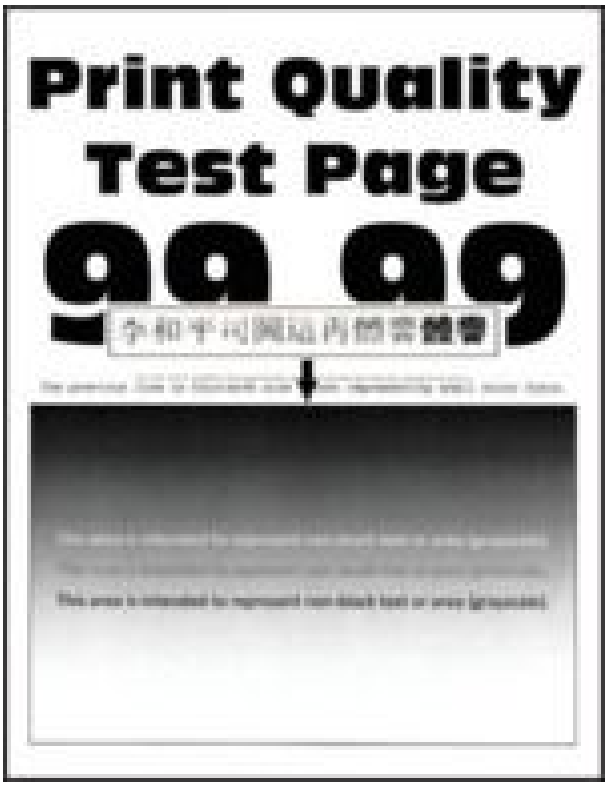
- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

13. Replace the printhead. See Printhead removal on page 370.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Fine lines are not printed correctly (specifically Chinese characters) check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

- **Yes**:
  Go to step 3.
- **No**:
  Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. From the Settings menu, navigate to:

      Print Settings > Quality menu > Pixel Boost > Fonts > Submit

   b. From the Quality menu, select **Toner Darkness**, and then adjust the setting to 7.
   c. Submit the changes.

   Note: Adjusting the Toner Darkness setting to 7 results in a slightly lighter print. You may leave the Toner Darkness value at 8 in order to maintain the darkness that you have grown accustomed to, but this will result in reduced toner yield.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Clipped pages or images check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

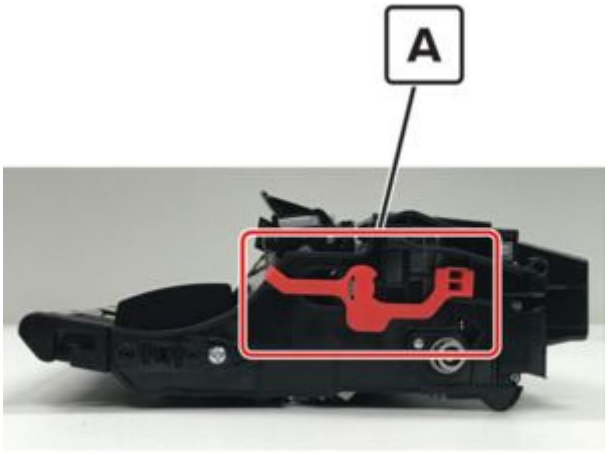
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Remove, and then reinstall the imaging unit.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

4. Check if a separator plastic (A), or a piece of it, is stuck inside the imaging unit or if there are any other obstructions between the charge roller and photoconductor drum.



   Is the imaging unit free from any separator plastic fragments or other obstructions?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Using a pair of pliers, remove the separator plastic fragments and other obstructions.

   Does the problem remain?

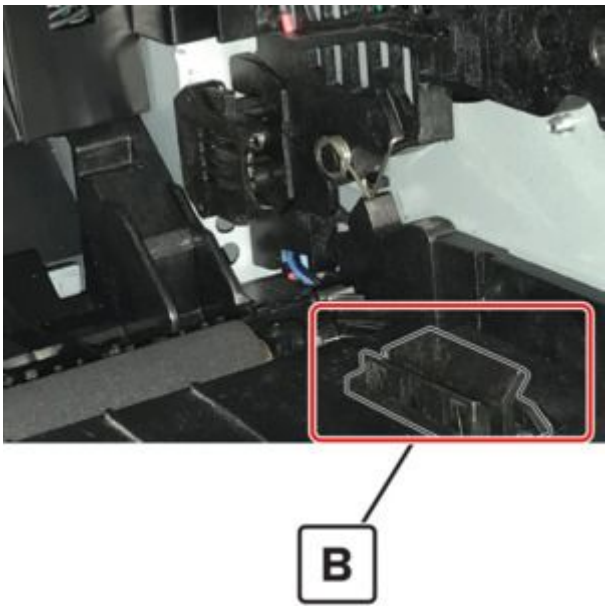
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the imaging unit contact block (B) for damage or improper installation.



Is the imaging unit contact block damaged or improperly installed?

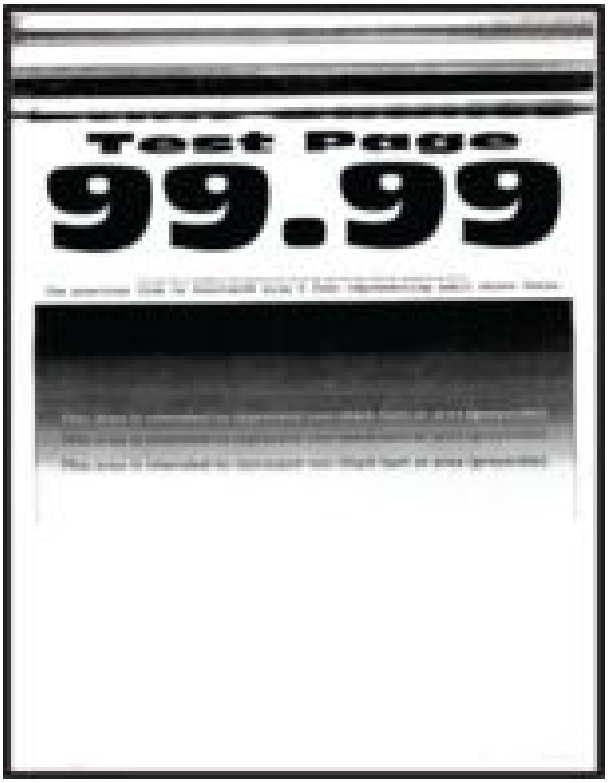
- **Yes**:
  Go to the next step.
- **No**:
  Contact the next level of support.

8. Reinstall or replace the imaging unit contact block.

   Does the problem remain?

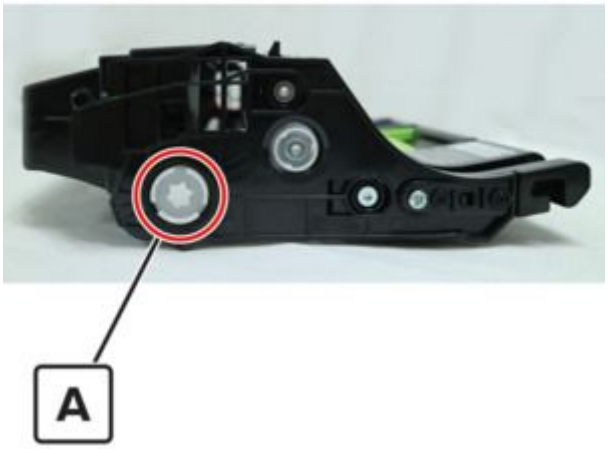
   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Compressed images appear on prints check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Remove the imaging unit, and then inspect the white photoconductor coupler (A). The coupler should be firmly connected to the imaging unit and should not freely rotate.



Does the coupler move freely or appear damaged?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 3.

2. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Replace the main drive gearbox. See Main drive gearbox removal on page 303.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Incorrect margins on prints check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Adjust the guides in the tray according to the size of the paper loaded.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:

   Do one of the following:

   - From the printer control panel, set the paper size in the Paper menu to match the paper loaded in the tray.
   - Change the paper loaded in the tray to match the paper size specified in the tray settings.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Depending on your operating system, specify the paper size from Printing Preferences or from the Print dialog.

   Does the problem remain?

   - **Yes**:
     Go to step 4 or contact the next level of support.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Enter the Diagnostics menu, and then select **Registration**.
   b. Adjust the margins as necessary.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Toner rubs off check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. From the control panel, set the paper type, texture, and weight in the Paper menu to match the paper loaded.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

The problem is solved.

4. Remove, and then reinstall the fuser.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the fuser. See .Fuser removal on page 364

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Reseat the connections on the power supply.

   Does the problem remain?

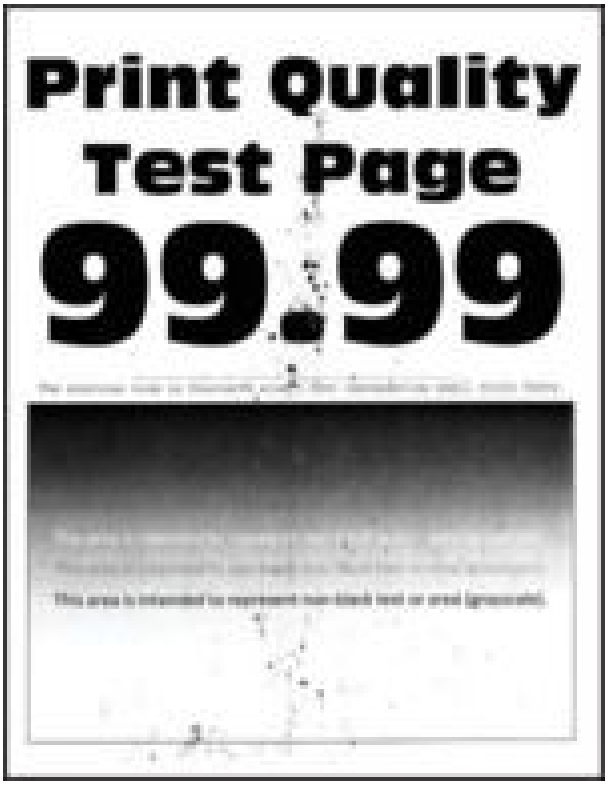
   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Replace the power supply. See .Power supply removal on page 346

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Toner specks appear on prints check



Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings > Troubleshooting > Print Quality Test Pages**, and then perform the Initial print quality check. See Initial print quality check on page 41.

1. Check if the printer is using a genuine and supported Lexmark toner cartridge.

   Note: If the printer is using a third-party cartridge, then refer the users to their cartridge supplier.

   Is the printer using a genuine and supported toner cartridge?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install a genuine and supported toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Check the status of the imaging unit.

i. From the home screen, select **Status/supplies**.

ii. Select **View Supplies** .

b. Check the condition of the imaging unit.

Is the imaging unit near end of life and/or showing signs of toner leakage?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 5.

4. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check if toner specks appear only on the edges or back side of the pages.

   Do toner specks appear only on the edges or back side of the pages?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Replace the transfer roller. See Transfer roller removal on page 336.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the printer for stray toner contamination.

   Is the printer contaminated with stray toner?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

8. Using an approved toner vaccum cleaner, completely clean the printer, toner cartridge, and imaging unit of toner contamination.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.

- **No**:
  The problem is solved.

Paper jams

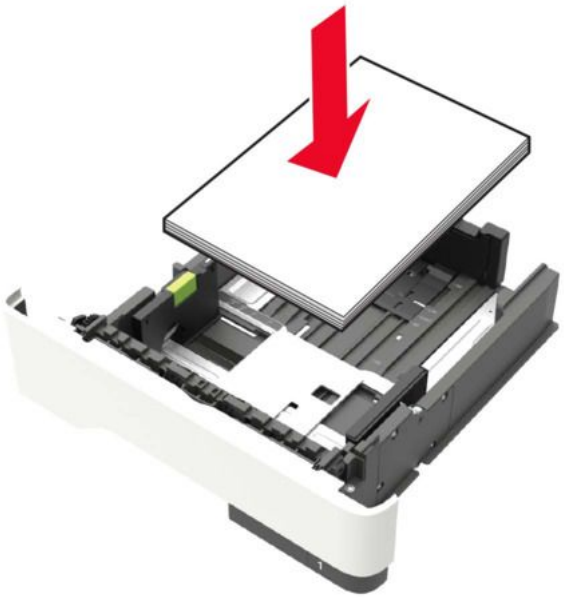
Avoiding jams

Load paper properly

- Make sure that the paper lies flat in the tray.

Correct loading of paper	Incorrect loading of paper
	

- Do not load or remove a tray while the printer is printing.
- 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 positioned correctly and are not pressing tightly against the paper or envelopes.
- Push the tray firmly into the printer after loading paper.

Use recommended paper

- Use only recommended paper or specialty media.
- Do not load paper that is wrinkled, creased, damp, bent, or curled.
- Flex, fan, and align the paper edges before loading.



- 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 computer or printer control panel.
- Store paper according to manufacturer recommendations.

Identifying jam locations

Note:

- When Jam Assist is set to On, the printer automatically flushes blank pages or partially printed pages with after a jammed page is cleared. Check your printed output for blank pages.
- When Jam Recovery is set to On or Auto, the printer reprints jammed pages.



	Jam location
1	Automatic document feeder
2	Standard bin
3	Door A
4	Multipurpose feeder
5	Duplex unit
6	Trays
7	Door B
8	Optional staple finisher
9	Finisher bin

200 paper jams

200 paper jam messages

Error code	Description	Action
200.02	Paper fed from the MPF was detected earlier than expected at the sensor (input).	See MPF to sensor (input) jam at leading edge service check on page 102.
200.03	Paper fed from the MPF was detected later than expected or was never detected at the sensor (input).	
200.04	Paper fed from the MPF cleared the sensor (input) earlier than expected.	See MPF to sensor (input) jam at trailing edge service check on page 105.
200.05	Paper fed from the MPF never cleared the sensor (input).	

Error code	Description	Action
200.12	Paper fed from tray 1 was detected earlier than expected at the sensor (input).	See Tray 1 to sensor (input) jam at leading edge service check on page 117.
200.13	Paper fed from tray 1 was detected later than expected or was never detected at the sensor (input).	
200.14	Paper fed from tray 1 cleared the sensor (input) earlier than expected.	See Sensor (input) never- or late-arriving from the trays jam service check.
200.15	Paper fed from tray 1 never cleared the sensor (input).	
200.22	Paper fed from tray 2 was detected earlier than expected at the sensor (input).	See Optional tray to sensor (input) jam at leading edge service check on page 110.
200.23	Paper fed from tray 2 was detected later than expected or was never detected at the sensor (input).	
200.24	Paper fed from tray 2 cleared the sensor (input) earlier than expected.	See Optional tray to sensor (input) jam at trailing edge service check on page 112.
200.25	Paper fed from tray 2 never cleared the sensor (input).	
200.32	Paper fed from tray 3 was detected earlier than expected at the sensor (input).	See Optional tray to sensor (input) jam at leading edge service check on page 110.
200.33	Paper fed from tray 3 was detected later than expected or was never detected at the sensor (input).	
200.34	Paper fed from tray 3 cleared the sensor (input) earlier than expected.	See Optional tray to sensor (input) jam at trailing edge service check on page 112.
200.35	Paper fed from tray 3 never cleared the sensor (input).	
200.42	Paper fed from tray 4 was detected earlier than expected at the sensor (input).	See Optional tray to sensor (input) jam at leading edge service check on page 110.
200.43	Paper fed from tray 4 was detected later than expected or was never detected at the sensor (input).	

Error code	Description	Action
200.44	Paper fed from tray 4 cleared the sensor (input) earlier than expected.	See Optional tray to sensor (input) jam at trailing edge service check on page 112.
200.45	Paper fed from tray 4 never cleared the sensor (input).	
200.91	Paper remains detected at the sensor (input) after the printer is turned on.	See Sensor (input) static jam service check on page 114.

MPF to sensor (input) jam at leading edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   b. Check if the same error occurs.

   Does the same problem remain?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

3. Check the MPF pick roller and separator pad for wear and damage.

   Are the MPF roller and separator pad free of wear and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the MPF pick roller and separator pad. See MPF pick roller and separator pad removal on page 339.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

5. Check the MPF gearbox for wear and damage.

   Is the MPF gearbox free of wear and damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Replace the MPF gearbox. See .MPF gearbox removal on page 304

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Motor tests

   b. Select the solenoid (MPF pick), and then touch **Start**.

   Does the solenoid run?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

8. Check the solenoid for wear and damage.

   Is the solenoid free of wear and damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Replace the MPF solenoid. See MPF solenoid removal on page 309.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

Printer diagnostics and adjustments > Sensor tests

b. Find the sensor (Input).

Does the sensor status change while toggling the sensor?

- **Yes**:
  Go to step 13.
- **No**:
  Go to the next step.

11. Perform the following tests:
    a. Reseat the sensor cable from the controller board.
    b. Check the sensor and its actuator for improper installation and damage.

    Is the sensor properly installed and free of damage?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Replace the sensor. See Sensors (duplex and input) removal on page 349.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Perform the following tests:
    a. Check the jam access cover for obstructions along the paper path.
    b. Check if the jam access cover components are functional and free of damage.

    Are the jam access cover and its components functional and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

14. Replace the jam access cover. See Jam access cover removal on page 337.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

MPF to sensor (input) jam at trailing edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   b. Check if the same error occurs.

   Does the same problem remain?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

3. Check the MPF gearbox for wear and damage.

   Is the MPF gearbox free of wear and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the MPF gearbox. See .MPF gearbox removal on page 304

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Motor tests

   b. Select the solenoid (MPF pick), and then touch **Start**.

   Does the solenoid run?

   - **Yes**:
     Go to step 8.
   - **No**:

Go to the next step.

6. Check the solenoid for wear and damage.

   Is the solenoid free of wear and damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Replace the MPF solenoid. See MPF solenoid removal on page 309.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check the transfer roller and its spring for improper installation and damage.

   Is the transfer roller properly installed and free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Reinstall or replace the transfer roller. See Transfer roller removal on page 336.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 11.

10. Check if the fuser cam is functional and free of damage.

    Is the fuser cam functional and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.

11. Replace the fuser cam. See Fuser actuator removal on page 306.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Tray 1 to sensor (input) jam at leading edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > MPF Tray > Single

   b. Check if the same error occurs.

   Does the same problem remain?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

3. Check the tray 1 pick roller for wear and damage.

   Is the pick roller free of wear and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the pick roller. See Pick roller assembly removal on page 351 .

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the tray 1 separator roller assembly for wear and damage.

   Is the separator roller assembly free of wear and damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Replace the separator roller assembly.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

7. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Motor tests

   b. Select the motor (Pick Motor (tray 1)), and then touch **Start**.

   Does the motor run?

   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.

8. Perform the following tests:
   a. Reseat the pick motor cable.
   b. Check if the motor is functional and free of damage.

   Is the motor functional and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

9. Replace the motor. See Lift cam removal on page 356.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Tray 1 to sensor (input) jam at trailing edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:

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

Input tray quick print > MPF tray > Single

b. Check if the same error occurs.

Does the same problem remain?

- **Yes**:
  Go to step 5.
- **No**:
  Go to the next step.

3. Check the tray 1 separator roller assembly for wear and damage.

   Is the separator roller assembly free of wear and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the separator assembly.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the transfer roller and its spring for improper installation and damage.

   Is the transfer roller properly installed and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Reinstall or replace the transfer roller. See Transfer roller removal on page 336.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check if the fuser cam is functional and free of damage.

   Is the fuser cam functional and free of damage?

   - **Yes**:
     Go to step 9.
   - **No**:

Go to the next step.

8. Replace the fuser cam. See Fuser actuator removal on page 306.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Sensor tests

   b. Find the sensor (Input).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

10. Perform the following tests:
    a. Reseat the sensor cable from the controller board.
    b. Check the sensor and its actuator for improper installation and damage.

    Is the sensor properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.

11. Replace the sensor. See Sensors (duplex and input) removal on page 349.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Optional tray to sensor (input) jam at leading edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > MPF Tray > Single

   b. Check if the same error occurs.

   Does the same problem remain?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

3. Check the optional tray pick roller for wear and damage.

   Is the pick roller free of wear and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the pick roller.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the optional tray separator roller assembly for wear and damage.

   Is the separator roller assembly free of wear and damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Replace the separator roller assembly. See Separator roller assembly removal on page 385.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Perform the following tests:

a. Remove the tray insert from the affected optional tray.

b. Check if the lift plate moves properly.

c. Check the lift plate gears for damage.

Is the tray insert functional and free of damage?

- **Yes**:
  Go to step 9.
- **No**:
  Go to the next step.

8. Replace the tray insert.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Perform the following tests:
   a. Reseat the optional tray motor (pick/lift) cable.

   b. Check if the motor is functional and free of damage.

   Is the motor (pick/lift) functional and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

10. Replace the optional tray.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Optional tray to sensor (input) jam at trailing edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > MPF tray > Single

   b. Check if the same error occurs.

   Does the same problem remain?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

3. Check the optional tray separator roller assembly for wear and damage.

   Is the separator roller assembly free of wear and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the separator roller assembly. See Separator roller assembly removal on page 385.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the transfer roller and its spring for improper installation and damage.

   Is the transfer roller properly installed and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Reinstall or replace the transfer roller. See Transfer roller removal on page 336.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check if the fuser cam is functional and free of damage.

   Is the fuser cam functional and free of damage?

   - **Yes**:

Go to step 9.

- **No**:
  Go to the next step.

8. Replace the fuser cam. See Fuser actuator removal on page 306.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Sensor tests

   b. Find the sensor (Input).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

10. Perform the following tests:
    a. Reseat the sensor cable from the controller board.
    b. Check the sensor and its actuator for improper installation and damage.

    Is the sensor properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.

11. Replace the sensor. See Sensors (duplex and input) removal on page 349.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensor (input) static jam service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Sensor tests

   b. Find the sensor (Input).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

3. Perform the following tests:
   a. Reseat the sensor cable from the controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

4. Replace the sensor. See Sensors (duplex and input) removal on page 349.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Sensor (input) never- or late-arriving from the trays jam service check

Issue description

Applicable error codes:

- 200.14
- 200.15

Customer resolution

1. Make sure that the paper path and sensor (input) are clear of debris and free from obstructions. For more information, see Clearing paper jam in the front door.
2. Make sure that the paper is loaded properly in the tray and the guides are adjusted to match the size of the paper loaded. Make sure that the stack height is below the maximum fill line. For more information, see Loading trays.
3. Make sure that the tray is installed properly and free from obstructions and damage. Verify that the side guides can move freely and are not broken. If there are signs of damage, then contact customer support.
4. Check the paper loaded for the following:
   - The paper matches the paper size and type set in the printer. For more information, see Setting the paper size and type.
   - The paper size, paper type, and paper weight loaded are supported. For more information, see Supported paper sizes on page 23, Supported paper types, and .
5. Remove paper from the tray or feeder and inspect for damage or defects. Fan the paper, flip it, and then reload. If the paper is damp, damaged, wavy, or curled, then replace it.

Remote resolution

Make sure that the user performs all the steps in the **Customer resolution** section.

Initial parts replacement

Send the following field replaceable units to the field technician:

- Pick roller assembly—For the part number, see Paper transport 2 on page 455.
- Separator roller assembly—For the part number, see MPF and standard tray on page 457.

  Note: This part is also used in the optional trays. Instruct the customer to replace the part from the tray that is associated with the paper jam.

- Sensor (duplex and input)—For the part number, see Electronics 4 on page 451.

Detailed diagnostics

1. Check the tray for contamination and damage. Do the following:
   - Check for paper dust and toner contamination.
   - Check the tray closed latches and support rollers.
   - Check the lift plate and lift drive gears.
2. Make sure that the pick roller motor drive is functional. Do the following:
   a. Inspect the gears, motor, and other miscellaneous components for damage, wear, or misalignment.
   b. Manually turn the motor and gears to verify that they rotate smoothly without obstructions.

3. Make sure that the sensor (input) is functional. Do the following:
   a. Enter the **Diagnostics** menu, and then navigate to **Printer diagnostics and adjustments › Sensor tests**.
   b. Select **Input**.
   c. Toggle the sensor manually and observe the printer display. The state state should change between **0** and **1**.
   d. Verify that the sensor is not damaged, contaminated, or obstructed.

   If the test fails, then do the following:
   a. Make sure that the cable and connector between the sensor (input) and the controller board are properly connected and not damaged. For more information, see Wiring Diagram.
   b. Check the sensor (input) for wear, damage, and improper connection. For more information, see Sensors (duplex and input) removal on page 349.

4. Make sure that the motor (imaging unit) is functional. Do the following:
   a. Enter the **Diagnostics** menu, and then navigate to **Printer diagnostics and adjustments › Motor tests**.
   b. Select **Imaging unit**.

   Note: To avoid damaging the motor (imaging unit), follow the instructions on the control panel. Some tests require specific actions such as removing the supplies.

   If the test fails, then do the following:
   a. Make sure that the cable and connector between the motor (K imaging unit/fuser) drive and the controller board are properly connected and not damaged. For more information, see Wiring Diagram.
   b. Check the motor (K imaging unit/fuser) drive for wear, damage, and improper mesh connection. For more information, see Main drive gearbox removal on page 303.

   Note: The motor (imaging unit) is part of the main motor drive assembly.

Tray 1 to sensor (input) jam at leading edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > MPF Tray > Single

   b. Check if the same error occurs.

   Does the same problem remain?

- **Yes**:
  Go to step 7.
- **No**:
  Go to the next step.

3. Check the tray 1 pick roller for wear and damage.

   Is the pick roller free of wear and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the pick roller. See Pick roller assembly removal on page 351.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the tray 1 separator pad for wear and damage.

   Is the separator pad free of wear and damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Replace tray 1.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Reseat the pick roller clutch cable, and then check if the pick roller clutch is functional and free of damage.

   Is the pick roller clutch functional and free of damage?

   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.

8. Perform the following tests:
   a. Reseat the pick roller clutch cable.
   b. Check if the pick roller clutch is functional and free of damage.

   Is the pick roller clutch functional and free of damage?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

9. Replace the pick roller clutch. See Pick roller clutch removal.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

202–221 paper jams

202 paper jam messages

Error code	Description	Action
202.03	Paper fed from the MPF never reached the sensor (fuser exit).	See Sensor (fuser exit) jam at leading edge service check on page 120.
202.05	Paper fed from the MPF never cleared the sensor (fuser exit).	See Sensor (fuser exit) jam at trailing edge service check on page 122.
202.13	Paper fed from tray 1 never reached the sensor (fuser exit).	See Sensor (fuser exit) jam at leading edge service check on page 120.
202.15	Paper fed from tray 1 never cleared the sensor (fuser exit).	See Sensor (fuser exit) jam at trailing edge service check on page 122.
202.23	Paper fed from tray 2 never reached the sensor (fuser exit).	See Sensor (fuser exit) jam at leading edge service check on page 120.
202.25	Paper fed from tray 2 never cleared the sensor (fuser exit).	See Sensor (fuser exit) jam at trailing edge service check on page 122.
202.33	Paper fed from tray 3 never reached the sensor (fuser exit).	See Sensor (fuser exit) jam at leading edge service check on page 120.
202.35	Paper fed from tray 3 never cleared the sensor (fuser exit).	See Sensor (fuser exit) jam at trailing edge service check on page 122.
202.43	Paper fed from tray 4 never reached the sensor (fuser exit).	See Sensor (fuser exit) jam at leading edge service check on page 120.

Error code	Description	Action
202.45	Paper fed from tray 4 never cleared the sensor (fuser exit).	See Sensor (fuser exit) jam at trailing edge service check on page 122.
202.91	Paper remains detected at the sensor (fuser exit) after the printer is turned on.	See Sensor (fuser exit) static jam service check on page 123.
202.93	The sensor (fuser exit) detected a jam during or after a flush action.	

221 paper jam messages

Error code	Description	Action
221.91	Paper remains detected at the sensor (narrow media) after the printer is turned on.	See Sensor (narrow media) static jam service check on page 124.

Sensor (fuser exit) jam at leading edge service check

Issue description

Applicable error codes:

- 202.13
- 202.23
- 202.33
- 202.43
- 202.53

Customer resolution

1. Make sure that the paper path and fuser are clear of debris and free from obstructions. For more information, see Clearing paper jam in the front door and Clearing paper jam in the rear door.
2. Make sure that the paper is loaded properly in the tray and the guides are adjusted to match the size of the paper loaded. Make sure that the stack height is below the maximum fill line. For more information, see Loading trays.
3. Make sure that the tray is installed properly and free from obstructions and damage. Verify that the side guides can move freely and are not broken. If there are signs of damage, then contact customer support.
4. Check the paper loaded for the following:
    - The paper matches the paper size and type set in the printer. For more information, see Setting the paper size and type.

- The paper size, paper type, and paper weight loaded are supported. For more information, see Supported paper sizes on page 23, Supported paper types, and .

5. Remove paper from the tray or feeder and inspect for damage or defects. Fan the paper, flip it, and then reload. If the paper is damp, damaged, wavy, or curled, then replace it.

Remote resolution

Make sure that the user performs all the steps in the **Customer resolution** section.

Initial parts replacement

Send the following customer replaceable units to the customer:

- Pick roller — For the part number, see Paper transport 2 on page 455.
- Transfer roller — For the part number, see Paper transport 2 on page 455.
- Fuser — For the part number, see Electronics 1 on page 445.

Detailed diagnostics

1. Make sure that the sensor (fuser exit) is functional. Do the following:
   a. Enter the **Diagnostics** menu, and then navigate to **Printer diagnostics and adjustments › Sensor tests**.
   b. Select **Fuser exit**.
   c. Toggle the sensor manually and observe the printer display. The state state should change between **0** and **1**.
   d. Verify that the sensor is not damaged, contaminated, or obstructed.

   If the test fails, then do the following:
   a. Make sure that the cable and connector between the fuser and the controller board are properly connected and not damaged. For more information, see Wiring Diagram.
   b. Check the fuser for wear, damage, and improper installation. For more information, see Fuser removal on page 364.

   Note: The fuser exit sensor is part of the fuser assembly. Check if a new fuser has been installed since the issue was first reported. If the issue persists, then check the controller board for damaged pins.

2. Make sure that the motor (main) is functional. Do the following:
   a. Enter the **Diagnostics** menu, and then navigate to **Printer diagnostics and adjustments › Motor tests**.
   b. Select **Main**.

   Note: To avoid damaging the motor (main), follow the instructions on the control panel. Some tests require specific actions such as removing the supplies.

   If the test fails, then do the following:

a. Make sure that the cable and connector between the motor (main) and the controller board are properly connected and not damaged. For more information, see Wiring Diagram.

b. Check the main motor drive for wear, damage, and improper mesh connection. For more information, see Main drive gearbox removal on page 303.

3. Check the following parts for wear, damage, contamination, and improper installation:
   - Imaging unit
   - Transfer roller
   - Paper path guides leading to the fuser

4. Make sure that the controller board is not damaged. Check for the following:
   - Foreign debris
   - Expansion from heat and humidity
   - Damaged pins, burnt components, overheating, and bulging
   - Missing components and solder joint issues
   - Contamination (corrosion, degradation, metallization)

   For more information, see Controller board removal on page 318.

Sensor (fuser exit) jam at trailing edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Remove all obstructions along the rear door paper path.
   b. Check the rear door and its components for damage.

   Are the rear door and its components free of damage?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Replace the rear door and cover or rear access door. See .Rear door and cover removal on page 363

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the redrive assembly and its components for wear and damage.

Are the redrive assembly and its components free of wear and damage?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

5. Replace the redrive assembly. See .Redrive assembly removal

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Sensor (fuser exit) static jam service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Reseat the fuser cables from the controller board.
   b. Reseat the fuser cable from the LVPS.
   c. Reseat the fuser cable from the extension cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the fuser cam is functional and free of damage.

   Is the fuser cam functional and free of damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the fuser cam. See Fuser actuator removal on page 306.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Sensor tests

   b. Find the sensor (Fuser exit).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Replace the fuser. See .Fuser removal on page 364

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

7. Check the fuser for problems. See Fuser error service check.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Sensor (narrow media) static jam service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Sensor tests

b. Find the sensor (Narrow media).

Does the sensor status change while toggling the sensor?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

3. Perform the following tests:
   a. Reseat the sensor cable on the controller board.
   b. Check the sensor and its actuator for damage.

   Are the sensor and its actuator free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

4. Replace the sensor.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

230 paper jams

230 paper jam messages

Error code	Description	Action
230.03	Paper fed from the MPF never reached the sensor (duplex).	See Sensor (duplex) jam at leading edge service check on page 126.
230.05	Paper fed from the MPF never cleared the sensor (duplex).	See Sensor (duplex) jam at trailing edge service check on page 129.
230.13	Paper fed from tray 1 never reached the sensor (duplex).	See Sensor (redrive): Paper (duplex job) failed to arrive jam service check on page 128.
230.13a		
230.15	Paper fed from tray 1 never cleared the sensor (duplex).	See Sensor (duplex) jam at trailing edge service check on page 129.

Error code	Description	Action
230.23	Paper fed from tray 2 never reached the sensor (duplex).	See Sensor (duplex) jam at leading edge service check on page 126.
230.25	Paper fed from tray 2 never cleared the sensor (duplex).	See Sensor (duplex) jam at trailing edge service check on page 129.
230.33	Paper fed from tray 3 never reached the sensor (duplex).	See Sensor (duplex) jam at leading edge service check on page 126.
230.35	Paper fed from tray 3 never cleared the sensor (duplex).	See Sensor (duplex) jam at trailing edge service check on page 129.
230.43	Paper fed from tray 4 never reached the sensor (duplex).	See Sensor (duplex) jam at leading edge service check on page 126.
230.45	Paper fed from tray 4 never cleared the sensor (duplex).	See Sensor (duplex) jam at trailing edge service check on page 129.
230.91	Paper remains detected at the sensor (duplex) after the printer is turned on.	See Sensor (duplex) static jam service check on page 130.

Sensor (duplex) jam at leading edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print

   b. Do feed tests from different trays. Check if the same error occurs.

   Does the same problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     Perform the appropriate service check for the specific error.

3. Perform the following tests:

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

Printer diagnostics and adjustments > Motor tests

b. Select the solenoid (Redrive Solenoid), and then touch **Start**.

Does the solenoid run?

- **Yes**:
  Go to step 6.
- **No**:
  Go to the next step.

4. Check the solenoid for wear and damage.

   Is the solenoid free of wear and damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Replace the reverse solenoid. See .Reverse solenoid removal

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics and adjustments > Sensor tests

   b. Find the sensor (Duplex path 1).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.

7. Perform the following tests:
   a. Reseat the sensor cable from the controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.

8. Replace the sensor. See Sensors (duplex and input) removal on page 349.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Perform the following tests:
   a. Remove tray 1 to access the parts under the printer.
   b. Check the duplex assembly and its gears, belt, and gear links for wear and damage.

   Are the duplex assembly and its components free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

10. Replace the duplex assembly. See .

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensor (redrive): Paper (duplex job) failed to arrive jam service check

1. Make sure that paper is supported and loaded properly. See Avoiding jams.
2. Make sure that the paper is free of debris and obstructions.
3. Perform a POR.
4. Check if the paper jam error occurs when using other trays.
5. Make sure that the reverse solenoid is functional. Do the following:
   a. Enter the Diagnostics menu, and then touch **Printer diagnostics & adjustments › Motors tests**.
   b. Select **Redrive solenoid**.
6. Check the reverse solenoid and its actuator for wear, damage, and improper operation. For more information, see Reverse solenoid removal.
7. Check the redrive for wear, damage, and improper mesh. For more information, see Redrive assembly removal.
8. Check the printed page count.
   a. Enter the Diagnostics menu, and then touch **Printer Setup**.

b. If the page count is near 400K, then replace the duplex. For more information, see Duplex removal on page 347.

9. Check the duplex paper path for jammed paper, debris, and obstructions.
10. Check the duplex rollers for debris, wear, damage, contamination, and improper installation. For more information, see Duplex gear kit removal on page 311.
11. Check the duplex linkage and belt for damage and improper installation. For more information, see Duplex removal on page 347.

Sensor (duplex) jam at trailing edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Sensor tests

   b. Find the sensor (Duplex path 1).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

3. Perform the following tests:
   a. Reseat the sensor cable from the controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the sensor. See Sensors (duplex and input) removal on page 349.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

The problem is solved.

5. Perform the following tests:
   a. Remove tray 1 to access the parts under the printer.
   b. Check the duplex assembly and its gears, belt, and gear links for wear and damage.

   Are the duplex assembly and its components free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

6. Replace the duplex assembly. See .

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Sensor (duplex) static jam service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Sensor tests

   b. Find the sensor (Duplex path 1).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

3. Perform the following tests:
   a. Reseat the sensor cable from the controller board.
   b. Check the sensor and its actuator for improper installation and damage.

Is the sensor properly installed and free of damage?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

4. Replace the sensor. See Sensors (duplex and input) removal on page 349.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Sensor (input) never- or late-arriving from the trays jam service check

Issue description

Applicable error codes:

- 200.14
- 200.15

Customer resolution

1. Make sure that the paper path and sensor (input) are clear of debris and free from obstructions. For more information, see Clearing paper jam in the front door.
2. Make sure that the paper is loaded properly in the tray and the guides are adjusted to match the size of the paper loaded. Make sure that the stack height is below the maximum fill line. For more information, see Loading trays.
3. Make sure that the tray is installed properly and free from obstructions and damage. Verify that the side guides can move freely and are not broken. If there are signs of damage, then contact customer support.
4. Check the paper loaded for the following:
   - The paper matches the paper size and type set in the printer. For more information, see Setting the paper size and type.
   - The paper size, paper type, and paper weight loaded are supported. For more information, see Supported paper sizes on page 23, Supported paper types, and .
5. Remove paper from the tray or feeder and inspect for damage or defects. Fan the paper, flip it, and then reload. If the paper is damp, damaged, wavy, or curled, then replace it.

Remote resolution

Make sure that the user performs all the steps in the **Customer resolution** section.

Initial parts replacement

Send the following field replaceable units to the field technician:

- Pick roller assembly—For the part number, see Paper transport 2 on page 455.
- Separator roller assembly—For the part number, see MPF and standard tray on page 457.

  Note: This part is also used in the optional trays. Instruct the customer to replace the part from the tray that is associated with the paper jam.

- Sensor (duplex and input)—For the part number, see Electronics 4 on page 451.

Detailed diagnostics

1. Check the tray for contamination and damage. Do the following:
   - Check for paper dust and toner contamination.
   - Check the tray closed latches and support rollers.
   - Check the lift plate and lift drive gears.
2. Make sure that the pick roller motor drive is functional. Do the following:
   a. Inspect the gears, motor, and other miscellaneous components for damage, wear, or misalignment.
   b. Manually turn the motor and gears to verify that they rotate smoothly without obstructions.
3. Make sure that the sensor (input) is functional. Do the following:
   a. Enter the **Diagnostics** menu, and then navigate to **Printer diagnostics and adjustments › Sensor tests**.
   b. Select **Input**.
   c. Toggle the sensor manually and observe the printer display. The state state should change between **0** and **1**.
   d. Verify that the sensor is not damaged, contaminated, or obstructed.

   If the test fails, then do the following:
   a. Make sure that the cable and connector between the sensor (input) and the controller board are properly connected and not damaged. For more information, see Wiring Diagram.
   b. Check the sensor (input) for wear, damage, and improper connection. For more information, see Sensors (duplex and input) removal on page 349.
4. Make sure that the motor (imaging unit) is functional. Do the following:
   a. Enter the **Diagnostics** menu, and then navigate to **Printer diagnostics and adjustments › Motor tests**.
   b. Select **Imaging unit**.

Note: To avoid damaging the motor (imaging unit), follow the instructions on the control panel. Some tests require specific actions such as removing the supplies.

If the test fails, then do the following:

a. Make sure that the cable and connector between the motor (K imaging unit/fuser) drive and the controller board are properly connected and not damaged. For more information, see Wiring Diagram.

b. Check the motor (K imaging unit/fuser) drive for wear, damage, and improper mesh connection. For more information, see Main drive gearbox removal on page 303.

Note: The motor (imaging unit) is part of the main motor drive assembly.

240–241 paper jams

240-241 paper jam messages

Error code	Description	Action
240.06	Paper fed from the MPF was picked but it never reached the sensor (input).	See MPF pick failure service check on page 133.
240.91	Paper remains detected at the sensor (MPF paper present) after the printer is turned on.	See Sensor (MPF paper present) static jam service check on page 136.
241.16	Paper fed from tray 1 was picked but it never reached the sensor (input).	See .Tray 1 to sensor (input) jam at trailing edge service check
241.82	The motor (tray 1 pick) has stalled.	See Tray 1 pick failure service check on page 137.
241.83	The motor (tray 1 pick) has stalled.	
241.84	The motor (tray 1 pick) has stalled.	

MPF pick failure service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   b. Check if the same error occurs.

   Does the same problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     Perform the appropriate service check for the specific error.

3. Perform the following tests:
   a. Check the jam access cover for obstructions along the paper path. Check if the cover interferes with the MPF pick roller movement.
   b. Check if the jam access cover components are functional and free of damage.

   Are the jam access cover and its components functional and free of obstructions and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Reinstall or replace the jam access cover. See Jam access cover removal on page 337.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the MPF pick roller and separator pad for wear and damage.

   Are the MPF roller and separator pad free of wear and damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Replace the MPF pick roller and separator pad. See MPF pick roller and separator pad removal on page 339.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Perform the following tests:

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

Printer diagnostics and adjustments > Sensor tests

b. Find the sensor (MPF media present).

Does the sensor status change while toggling the sensor?

- **Yes**:
  Go to step 10.
- **No**:
  Go to the next step.

8. Perform the following tests:
   a. Reseat the sensor cable from the controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Replace the sensor (MPF paper present). See Sensor (MPF paper present) removal on page 342.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

    Printer diagnostics and adjustments > Motor tests

    b. Select the solenoid (MPF pick), and then touch **Start**.

    Does the solenoid run?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to step 12.

11. Check the solenoid for wear and damage.

    Is the solenoid free of wear and damage?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Replace the MPF solenoid. See MPF solenoid removal on page 309.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Check the MPF gearbox for wear and damage.

    Is the MPF gearbox free of wear and damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.

14. Replace the MPF gearbox. See .MPF gearbox removal on page 304

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensor (MPF paper present) static jam service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Sensor tests

   b. Find the sensor (MPF media present).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

3. Perform the following tests:

a. Reseat the sensor cable from the controller board.

b. Check the sensor and its actuator for improper installation and damage.

Is the sensor properly installed and free of damage?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

4. Replace the sensor (MPF paper present). See Sensor (MPF paper present) removal on page 342.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Tray 1 pick failure service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Motor tests

   b. Select the motor (Pick Motor (tray 1)), and then touch **Start**.

   Does the motor run?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

3. Reseat the motor cable, and then check the motor for wear and damage.

   Is the motor free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

4. Replace the motor. See Pick/lift motor gearbox removal on page 355.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

242–244 paper jams

242 paper jam messages

Error code	Description	Action
242.26	Paper fed from tray 2 was picked but it never reached the sensor (input).	See Optional tray sensor (tray x pass-through) jam at leading edge service check on page 142.
242.31	Paper remains detected at the sensor (tray 2 pass-through) although the printer is idle. Tray 3 is the paper source.	See Optional tray sensor (tray x pass-through) static jam service check on page 141.
242.33	Paper fed from tray 3 never reached the sensor (tray 2 pass-through).	See Optional tray sensor (tray x pass-through) jam at leading edge service check on page 142.
242.35	Paper fed from tray 3 cleared the sensor (tray 2 pass-through) later than expected.	See Optional tray sensor (tray x pass-through) jam at trailing edge service check on page 143.
242.37	Paper fed from tray 3 never cleared the sensor (tray 2 pass-through).	
242.41	Paper remains detected at the sensor (tray 2 pass-through) although the printer is idle. Tray 4 is the paper source.	See Optional tray sensor (tray x pass-through) static jam service check on page 141.
242.43	Paper fed from tray 4 never reached the sensor (tray 2 pass-through).	See Optional tray sensor (tray x pass-through) jam at leading edge service check on page 142.
242.45	Paper fed from tray 4 cleared the sensor (tray 2 pass-through) later than expected.	See Optional tray sensor (tray x pass-through) jam at trailing edge service check on page 143.
242.47	Paper fed from tray 4 never cleared the sensor (tray 2 pass-through).	

Error code	Description	Action
242.82	The motor (tray 2 pick) has stalled.	See Optional tray pick failure service check on page 144.
242.83	The motor (tray 2 pick) has stalled.	
242.84	The motor (tray 2 pick) has stalled.	
242.91	Paper remains detected at the sensor (tray 2 pass-through) after the printer is turned on.	See Optional tray sensor (tray x pass-through) static jam service check on page 141.
242.93	Paper never reached the sensor (tray 2 pass-through). Paper source is undetermined.	See Optional tray sensor (tray x pass-through) jam at leading edge service check on page 142.
242.95	Paper cleared the sensor (tray 2 pass-through) later than expected. Paper source is undetermined.	See Optional tray sensor (tray x pass-through) jam at trailing edge service check on page 143.
242.96	Paper was picked but it never reached the sensor (input). Paper source is undetermined.	See Optional tray sensor (tray x pass-through) jam at leading edge service check on page 142.
242.97	Paper never cleared the sensor (tray 2 pass-through). Paper source is undetermined.	See Optional tray sensor (tray x pass-through) jam at trailing edge service check on page 143.

243 paper jam messages

Error code	Description	Action
243.36	Paper fed from tray 3 was picked but it never reached the sensor (tray 2 pass-through).	See Optional tray sensor (tray x pass-through) jam at leading edge service check on page 142.
243.41	Paper remains detected at the sensor (tray 3 pass-through) although the printer is idle. Tray 4 is the paper source.	See Optional tray sensor (tray x pass-through) static jam service check on page 141.
243.43	Paper fed from tray 4 never reached the sensor (tray 3 pass-through).	See Optional tray sensor (tray x pass-through) jam at leading edge service check on page 142.
243.45	Paper fed from tray 4 cleared the sensor (tray 3 pass-through) later than expected.	See Optional tray sensor (tray x pass-through) jam at trailing edge service check on page 143.

Error code	Description	Action
243.47	Paper fed from tray 4 never cleared the sensor (tray 3 pass-through).	
243.82	The motor (tray 3 pick) has stalled.	See Optional tray pick failure service check on page 144.
243.83	The motor (tray 3 pick) has stalled.	
243.84	The motor (tray 3 pick) has stalled.	
243.91	Paper remains detected at the sensor (tray 3 pass-through) after the printer is turned on.	See Optional tray sensor (tray x pass-through) static jam service check on page 141.
243.92	Paper was detected earlier than expected at the sensor (tray 3 pass-through). Paper source is undetermined.	See Optional tray sensor (tray x pass-through) jam at leading edge service check on page 142.
243.93	Paper never reached the sensor (tray 2 pass-through). Paper source is undetermined.	
243.95	Paper cleared the sensor (tray 3 pass-through) later than expected. Paper source is undetermined.	See Optional tray sensor (tray x pass-through) jam at trailing edge service check on page 143.
243.96	Paper was picked but it never reached the sensor (tray 3 pass-through). Paper source is undetermined.	See Optional tray sensor (tray x pass-through) jam at leading edge service check on page 142.
243.97	Paper never cleared the sensor (tray 3 pass-through). Paper source is undetermined.	See Optional tray sensor (tray x pass-through) jam at trailing edge service check on page 143.

244 paper jam messages

Error code	Description	Action
244.46	Paper fed from tray 4 was picked but it never reached the sensor (tray 3 pass-through).	See Optional tray sensor (tray x pass-through) jam at leading edge service check on page 142.
244.82	The motor (tray 4 pick) has stalled.	See Optional tray pick failure service check on page 144.
244.83	The motor (tray 4 pick) has stalled.	

Error code	Description	Action
244.84	The motor (tray 4 pick) has stalled.	
244.91	Paper remains detected at the sensor (tray 4 pass-through) after the printer is turned on.	See Optional tray sensor (tray x pass-through) static jam service check on page 141.

Optional tray sensor (tray x pass-through) static jam service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Additional input tray diagnostics > Option Sensor tests

   b. Find the sensor (Pass-through (tray x)) of the affected optional tray.

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

3. Perform the following tests:
   a. Reseat the sensor cable from the optional tray controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

4. Replace the affected optional tray.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.

- **No**:
  The problem is solved.

Optional tray sensor (tray x pass-through) jam at leading edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print

   b. Do feed tests from tray 3 and tray 4. Check if the same error occurs.

   Does the same problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     Perform the appropriate service check for the specific error.

3. Perform the following tests:
   a. Identify the separator rollers and pass-through rollers involved in the paper path.
   b. Check these separator rollers and pass-through rollers for improper installation, wear, and damage.

   Are the rollers properly installed and free of wear and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Reinstall or replace the affected separator roller assembly or tray insert.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

Additional input tray diagnostics > Option Sensor tests

b. Find the sensor (Pass-through (tray x)) of the affected optional tray.

Does the sensor status change while toggling the sensor?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

6. Perform the following tests:
   a. Reseat the sensor cable from the optional tray controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

7. Replace the affected optional tray.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Optional tray sensor (tray x pass-through) jam at trailing edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check if the paper size matches the size set on the source tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Identify the separator rollers and pass-through rollers involved in the paper path.
   b. Check these separator rollers and pass-through rollers for improper installation, wear, and damage.

   Are the rollers properly installed and free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

5. Reinstall or replace the affected separator roller assembly or tray insert.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Optional tray pick failure service check

1. Make sure that the paper is loaded properly. Use the recommended paper. See .Avoiding jams on page 98

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Reseat the source tray pick motor cable from the optional tray controller board.
   b. Check if the motor (pick) of the source tray is functional and free of damage.

Is the motor functional and free of damage?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 7.

4. Check the source tray pick motor gears for damage.

   Are the gears free of damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Check the tray insert and its lift plate gears for wear and damage.

   Are the tray insert and its gears free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

6. Replace the affected tray insert.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Replace the optional tray.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

280 paper jams

280 paper jam messages

Error code	Description	Action
280.11	Paper remains detected at the sensor (ADF 1st scan) after the printer is turned on.	See Sensor (ADF 1st scan) static jam service check on page 146.

Error code	Description	Action
280.13	Paper was detected later than expected or was never detected at the sensor (ADF 1st scan).	See Sensor (ADF 1st scan) jam at leading edge service check on page 147.
280.15	Paper never cleared the sensor (ADF 1st scan).	See Sensor (ADF 1st scan) jam at trailing edge service check on page 149.

Sensor (ADF 1st scan) static jam service check

1. Make sure that the paper is loaded properly. Use the recommended paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the sensor (ADF 1st scan) paper path area for debris and obstructions.

   Is the sensor free of debris and obstructions?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Remove obstructions along the sensor paper path.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Sensor tests

   b. Find the sensor (ADF 1st scan).

Does the sensor status change while toggling the sensor?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

6. Perform the following tests:
   a. Reseat the sensor cable from the ADF controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

7. Reinstall the sensor.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Sensor (ADF 1st scan) jam at leading edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Remove obstructions along the sensor paper path.

   Does the problem remain?

   - **Yes**:
     Go to step 5.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Feed Test

b. Check the position of the leading edge.

Does the leading edge of the paper reach the sensor (ADF 1st scan)?

- **Yes**:
  Go to step 6.
- **No**:
  Go to the next step.

4. Check the ADF separator roller for improper installation, wear, and damage.

   Is the ADF roller properly installed and free of wear and damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Reinstall or replace the separator roller.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Sensor tests

   b. Find the sensor (ADF 1st scan).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

7. Perform the following tests:
   a. Reseat the sensor cable from the ADF controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

8. Reinstall the sensor.

   Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

Sensor (ADF 1st scan) jam at trailing edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check if the paper size matches the size set on the ADF tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Feed Test

   b. Check the position of the leading edge.

   Does the leading edge of the paper reach the sensor (ADF 1st scan)?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Does the leading edge of the paper reach the ADF exit roller?
   - **Yes**:
     Go to step 8.
   - **No**:

Go to the next step.

6. Check the sensor (ADF 1st scan) paper path area for debris and obstructions.

   Is the sensor free of debris and obstructions?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Remove the obstructions along the sensor paper path.

   Note: Make sure that no fragments are stuck on the gaps on the ADF glass pad.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check the ADF exit roller for wear and damage.

   Is the exit roller free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

9. Remove debris and obstructions from the exit roller.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

281 paper jams

281 paper jam messages

Error code	Description	Action
281.11	Paper remains detected at the sensor (ADF pick) after the printer is turned on.	See Sensor (ADF pick) static jam service check on page 151.

Error code	Description	Action
281.15	Paper never cleared the sensor (ADF pick).	See Sensor (ADF pick) jam at trailing edge service check on page 154.
281.16	Paper fed was picked but it never reached the sensor (ADF pick).	See .Sensor (ADF pick) jam at leading edge service check on page 152

Sensor (ADF pick) static jam service check

1. Make sure that the paper is loaded properly. Use the recommended paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the sensor (ADF scan) paper path area for debris and obstructions.

   Is the sensor free of debris and obstructions?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Remove obstructions along the sensor paper path.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Sensor tests

   b. Find the sensor (ADF pick).

Does the sensor status change while toggling the sensor?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

6. Perform the following tests:
   a. Reseat the sensor cable from the ADF controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

7. Reinstall the sensor.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Sensor (ADF pick) jam at leading edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Remove obstructions along the sensor paper path.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Feed Test

b. Check the position of the leading edge.

Does the leading edge of the paper reach the sensor (ADF pick)?

- **Yes**:
  Go to step 8.
- **No**:
  Go to the next step.

4. Check the ADF rollers for improper installation, wear, and damage.

   Are the ADF rollers properly installed and free of wear and damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Reinstall or replace the ADF roller. See ADF roller removal on page 372.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the ADF separator roller for improper installation, wear, and damage.

   Is the ADF roller properly installed and free of wear and damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Reinstall or replace the separator roller.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Sensor tests

   b. Find the sensor (ADF pick).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.

- **No**:
  Go to the next step.

9. Perform the following tests:
   a. Reseat the sensor cable from the ADF controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

10. Reinstall the sensor.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Sensor (ADF pick) jam at trailing edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check if the paper size matches the size set on the ADF tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:

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

   Scanner diagnostics > Feed Test

b. Check the position of the leading edge.

Does the leading edge of the paper reach the sensor (ADF scan)?

- **Yes**:
  Go to step 6.
- **No**:
  Go to the next step.

5. Does the leading edge of the paper reach the ADF exit roller?
   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.
6. Check the sensor (ADF scan) paper path area for debris and obstructions.

   Is the sensor free of debris and obstructions?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.
7. Remove the obstructions along the sensor paper path.

   > **Note:** Make sure that no fragments are stuck on the gaps on the ADF glass pad.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
8. Check the ADF exit roller for wear and damage.

   Is the exit roller free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.
9. Remove debris and obstructions from the exit roller.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.

- **No**:
  The problem is solved.

284 paper jams

284 paper jam messages

Error code	Description	Action
284.11	Paper remains detected at the sensor (ADF 2nd scan) after the printer is turned on.	See Sensor (ADF 2nd scan) static jam service check on page 156.
284.13	Paper was detected later than expected or was never detected at the sensor (ADF 2nd scan).	See .Sensor (ADF 2nd scan) jam at leading edge service check on page 157
284.15	Paper never cleared the sensor (ADF 2nd scan).	See Sensor (ADF 2nd scan) jam at trailing edge service check on page 159.

Sensor (ADF 2nd scan) static jam service check

1. Make sure that the paper is loaded properly. Use the recommended paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check the sensor (ADF 2nd scan) paper path area for debris and obstructions.

   Is the sensor free of debris and obstructions?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Remove obstructions along the sensor paper path.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Sensor tests

   b. Find the sensor (ADF 2nd scan).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

6. Perform the following tests:
   a. Reseat the sensor cable from the ADF controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

7. Reinstall the sensor.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Sensor (ADF 2nd scan) jam at leading edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Remove the obstructions along the sensor paper path.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Do a duplex scan job, and then check the position of the leading edge.

   Does the leading edge of the paper reach the sensor (ADF 2nd scan)?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

4. Check the ADF rollers for improper installation, wear, and damage.

   Are the ADF rollers properly installed and free of wear and damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Reinstall or replace the ADF roller. See ADF roller removal on page 372.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Sensor tests

   b. Find the sensor (ADF 2nd scan).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

7. Perform the following tests:
   a. Reseat the sensor cable from the ADF controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

8. Reinstall the sensor.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Sensor (ADF 2nd scan) jam at trailing edge service check

1. Make sure that the paper is loaded properly. Use the recommended paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check if the paper size matches the size set on the ADF tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Do a duplex scan job, and then check the position of the leading edge.

   Does the leading edge of the paper reach the sensor (ADF 2nd scan)?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

5. Check the ADF exit roller for wear and damage.

Is the exit roller free of wear and damage?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

6. Remove debris and obstructions from the exit roller.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

29y paper jams

291-295 paper jam messages

Error code	Description	Action
291.06	The scanner cover was open before an ADF job.	See ADF scanner cover jam service check on page 160.
295.01	An imagepipe error occurred. Gap between scanned pages is too small.	See .ADF page gap jam service check on page 161

ADF scanner cover jam service check

1. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Sensor tests

   b. Find the sensor (ADF closed).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

2. Perform the following tests:
   a. Reseat the sensor cable from the ADF controller board.
   b. Check the sensor and its actuator for improper installation and damage.

Is the sensor properly installed and free of damage?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

3. Reinstall the sensor.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

ADF page gap jam service check

1. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Make sure that the paper is loaded properly. Use the recommended paper.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the paper size matches the size set on the ADF tray guides.

   Does the paper size match the size set on the tray?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Change the paper size or adjust the size setting in the tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the ADF separator roller for improper installation, wear, and damage.

   Is the ADF roller properly installed and free of wear and damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Reinstall or replace the separator roller.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the ADF rollers for improper installation, wear, and damage.

   Are the ADF rollers properly installed and free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

8. Reinstall or replace the ADF roller. See ADF roller removal on page 372.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

4yy paper jams

420–430 paper jam messages

Error code	Description	Action
420.11	Paper remains detected at the sensor (stapler pass-through) after the printer is turned on.	See Finisher jam service check on page 164.
420.12	Paper was detected earlier than expected at the sensor (stapler pass-through).	

Error code	Description	Action
420.13	Paper was detected later than expected or was never detected at the sensor (stapler pass-through).	
420.15	Paper never cleared the sensor (stapler pass-through).	
421.13	The staple finisher left tamper failed to reach its home position.	See Stapler left tamper jam service check on page 165.
421.15	The staple finisher left tamper failed to leave its home position.	
422.13	The staple finisher right tamper failed to reach its home position.	See Stapler right tamper jam service check on page 168.
422.15	The staple finisher right tamper failed to leave its home position.	
423.13	The staple finisher ejector failed to reach its home position.	See Ejector jam service check on page 170.
423.15	The staple finisher ejector failed to leave its home position.	
424.13	The stapler paddle failed to reach its home position.	
424.15	The stapler paddle failed to leave its home position.	
428.13	The stapler head failed to reach its home position.	See Stapler priming jam service check on page 172.
428.15	The stapler head failed to leave its home position.	
428.19	A staple jam occurred at the stapler head.	
429.11	Paper remains detected at the sensor (stapler paper present) after the printer is turned on.	See Stapler carriage jam service check on page 174.
429.13	Paper was detected later than expected or was never detected at the sensor (stapler paper present).	
429.14	Paper cleared the sensor (stapler paper present) earlier than expected.	
429.15	Paper never cleared the sensor (stapler paper present).	
430.19	The stapler head failed to prime.	See Stapler priming jam service check on page 172.

Finisher jam service check

1. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Output device diagnostics > Output sensor tests

   b. Find the sensor (Pass-through).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

2. Perform the following tests:
   a. Remove the stapler service cover. See Stapler service cover removal on page 398.
   b. Reseat the sensor cable from the stapler controller board.
   c. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Open the rear door, and then check the sensor (stapler pass-through) and its actuator for damage.

   Are the sensor and its actuator free of damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the sensor. See Sensor (stapler pass through) removal on page 411.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Reseat all the cables on the stapler controller board, and then restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

The problem is solved.

6. Replace the stapler controller board. See Stapler controller board removal on page 399.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Remove the obstructions along the finisher paper path.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check the finisher paper path for damage.

   Is the paper path free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

9. Replace the staple finisher option. See Staple finisher option removal on page 386.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Stapler left tamper jam service check

1. Perform the following tests:
   a. Remove the stapler service cover. See Stapler service cover removal on page 398.
   b. Reseat the stapler left tamper HP sensor cable from the stapler controller board.
   c. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Swap the sensor (stapler left tamper HP) and sensor (stapler right tamper HP).

   Does the same error occur?

   - **Yes**:
     Go to the next step.
   - **No**:
     If a 422.xx error occurs, then replace the affected sensor. See Sensor (stapler right tamper HP) removal on page 418.

3. Perform the following tests:
   a. Reseat the cables from the motor (stapler left tamper) and motor (stapler right tamper).
   b. Reseat the motor cables from the stapler controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Swap the motor (stapler left tamper) and motor (stapler right tamper).

   Does the same error occur?

   - **Yes**:
     Go to the next step.
   - **No**:
     If a 422.xx error occurs, then replace the affected motor. See Motor (stapler right tamper) removal on page 400.

5. Reseat the stapler interface cable from the stapler controller board, and then restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the interface cable for damage.

   Is the interface cable free of damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Replace the interface cable. See Stapler interface cable removal on page 404.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

8. Perform the following tests:
   a. Remove the tamper sub-assembly. See Tamper sub-assembly removal on page 414.
   b. Check the belts for wear and damage.
   c. Check the belt tension spring for improper installation and misalignment.

   Are the components properly installed and free of misalignment and damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Reinstall or replace the tamper drive belts. See Tamper drive belt removal on page 415.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Perform the following tests:
    a. Manually move the left and right tampers and check if they can move freely.
    b. Check the tamper home position actuators for damage.

    Are the components functional and free of damage?

    - **Yes**:
      Go to step 12.
    - **No**:
      Go to the next step.

11. Perform the following tests:
    a. Replace the tamper sub-assembly. See Tamper sub-assembly removal on page 414.
    b. Restart the printer.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

12. Reseat all the cables on the stapler controller board, and then restart the printer.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:

The problem is solved.

13. Replace the stapler controller board. See Stapler controller board removal on page 399.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Stapler right tamper jam service check

1. Perform the following tests:
   a. Remove the stapler service cover. See Stapler service cover removal on page 398.
   b. Reseat the stapler left tamper HP sensor cable from the stapler controller board.
   c. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Swap the sensor (stapler left tamper HP) and sensor (stapler right tamper HP).

   Does the same error occur?

   - **Yes**:
     Go to the next step.
   - **No**:
     If a 421.xx error occurs, then replace the affected sensor. See Sensor (stapler left tamper HP) removal on page 419.

3. Perform the following tests:
   a. Reseat the cables from the motor (stapler left tamper) and motor (stapler right tamper).
   b. Reseat the motor cables from the stapler controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Swap the motor (stapler left tamper) and motor (stapler right tamper).

   Does the same error occur?

   - **Yes**:

Go to the next step.

- **No**:
  If a 421.xx error occurs, then replace the affected motor. See Motor (stapler left tamper) removal on page 399.

5. Reseat the stapler interface cable from the stapler controller board, and then restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the interface cable for damage.

   Is the interface cable free of damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Replace the interface cable. See Stapler interface cable removal on page 404.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Perform the following tests:
   a. Remove the tamper sub-assembly. See Tamper sub-assembly removal on page 414.
   b. Check the belts for wear and damage.
   c. Check the belt tension spring for improper installation and misalignment.

   Are the components properly installed and free of misalignment and damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Reinstall or replace the tamper drive belts. See Tamper drive belt removal on page 415.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Perform the following tests:

a. Manually move the left and right tampers and check if they can move freely.

b. Check the tamper home position actuators for damage.

Are the components functional and free of damage?

- **Yes**:
  Go to step 12.
- **No**:
  Go to the next step.

11. Perform the following tests:
    a. Replace the tamper sub-assembly. See Tamper sub-assembly removal on page 414.
    b. Restart the printer.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

12. Reseat all the cables on the stapler controller board, and then restart the printer.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Replace the stapler controller board. See Stapler controller board removal on page 399.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Ejector jam service check

1. Perform the following tests:
    a. Remove the stapler service cover. See Stapler service cover removal on page 398.
    b. Reseat the stapler paddle HP sensor cable from the stapler controller board.
    c. Restart the printer.

    Does the problem remain?

    - **Yes**:
      Go to the next step.

- **No**:
  The problem is solved.

2. Swap the sensor (stapler paddle HP) and sensor (stapler right tamper HP).

   Does the same error occur?

   - **Yes**:
     Go to the next step.
   - **No**:
     If a 424.xx error occurs, then replace the affected sensor. See Sensor (stapler right tamper HP) removal on page 418.

3. Perform the following tests:
   a. Reseat the cable from the motor (stapler paddle).
   b. Reseat the motor cable from the stapler controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Replace the motor. See Motor (stapler paddle) removal on page 396.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Reseat the stapler interface cable from the stapler controller board, and then restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check the interface cable for damage.

   Is the interface cable free of damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Replace the interface cable. See Stapler interface cable removal on page 404.

   Does the problem remain?

   - **Yes**:

Go to the next step.

- **No**:
  The problem is solved.

8. Perform the following tests:

   Check the tamper main assembly and its components:

   - Check the paddle mechanism for damage.
   - Check for worn-out and lost parts. Make sure that all parts within the assembly are properly installed.

   Are the tamper main assembly and its components properly installed and free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

9. Replace the tamper main assembly. See Tamper main assembly removal on page 413.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Reseat all the cables on the stapler controller board, and then restart the printer.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Replace the stapler controller board. See Stapler controller board removal on page 399.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Stapler priming jam service check

1. Perform the following tests:
   a. Remove the stapler right cover. See Stapler right cover removal on page 391.
   b. Reseat the stapler carriage assembly cables.

c. Remove the stapler service cover. See Stapler service cover removal on page 398.

d. Reseat the stapler carriage assembly cables from the stapler controller board.

e. Restart the printer.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

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

   Output device diagnostics > Staple test

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Replace the stapler carriage assembly. See Stapler carriage assembly removal on page 394.

   b. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Reseat the stapler interface cable from the stapler controller board, and then restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the interface cable for damage.

   Is the interface cable free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Replace the interface cable. See Stapler interface cable removal on page 404.

   Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

7. Reseat all the cables on the stapler controller board, and then restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Replace the stapler controller board. See Stapler controller board removal on page 399.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Stapler carriage jam service check

1. Perform the following tests:
   a. Remove the stapler service cover. See Stapler service cover removal on page 398.
   b. Reseat the cable from the sensor (stapler paper present).
   c. Reseat the sensor cable from the stapler controller board.
   d. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Replace the stapler accumulator assembly. See Stapler accumulator assembly removal on page 417.
   b. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Remove the stapler right cover. See Stapler right cover removal on page 391.
   b. Reseat the stapler carriage assembly cables.
   c. Remove the stapler service cover. See Stapler service cover removal on page 398.
   d. Reseat the stapler carriage assembly cables from the stapler controller board.
   e. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

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

   Output device diagnostics > Staple test

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Replace the stapler carriage assembly. See Stapler carriage assembly removal on page 394.
   b. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Reseat the stapler interface cable from the stapler controller board, and then restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the interface cable for damage.

   Is the interface cable free of damage?

   - **Yes**:
     Go to step 9.
   - **No**:

Go to the next step.

8. Replace the interface cable. See Stapler interface cable removal on page 404.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Reseat all the cables on the stapler controller board, and then restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

10. Replace the stapler controller board. See Stapler controller board removal on page 399.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

User attendance messages (0–99.99)

User attendance messages

Error code	Description	Action
3.01	The standard bin is full.	Remove the paper from the bin, and then select **Continue job**.
8.01	Close the front door.	Keep the indicated door closed unless performing maintenance.
11.11	A wrong paper type or size was detected on tray 1	See Loading error in trays on page 188.
11.12	A wrong paper type, size, or orientation was detected on tray 1	
11.21	A wrong paper type or size was detected on tray 1	
11.22	A wrong paper type, size, or orientation was detected on tray 1	

Error code	Description	Action
11.31	A wrong paper type or size was detected on tray 1	
11.32	A wrong paper type, size, or orientation was detected on tray 1	
11.41	A wrong paper type or size was detected on tray 1	
11.42	A wrong paper type, size, or orientation was detected on tray 1	
11.51	A wrong paper type or size was detected on tray 1	
11.52	A wrong paper type, size, or orientation was detected on tray 1	
11.91	A wrong paper type or size was detected on the multipurpose feeder	See Loading error in the multipurpose feeder on page 188.
11.92	A wrong paper type, size, or orientation was detected on the multipurpose feeder	
31.40	The toner cartridge is missing or unresponsive.	See Unsupported or unresponsive toner cartridge service check on page 179.
31.60	The imaging unit is missing or unresponsive.	See Unsupported or unresponsive imaging unit service check on page 181.
32.40	The toner cartridge is unsupported.	See Unsupported or unresponsive toner cartridge service check on page 179.
32.60	The imaging unit is unsupported.	See Unsupported or unresponsive imaging unit service check on page 181.
33.60	A non-genuine imaging unit was detected.	See Non-Lexmark supply on page 187.
33.60A	A non-genuine imaging unit was detected.	See Non-Lexmark supply on page 187.
33.60AN	A non-genuine imaging unit was detected.	See Non-Lexmark supply on page 187.
33.60B	A non-genuine imaging unit was detected.	See Non-Lexmark supply on page 187.
33.60BN	A non-genuine imaging unit was detected.	See Non-Lexmark supply on page 187.

Error code	Description	Action
33.60C	A non-genuine imaging unit was detected.	See Non-Lexmark supply on page 187.
41.40	The imaging unit and toner cartridge are mismatched or incompatible.	See Mismatched supplies error service check on page 183.
42.60	Toner cartridge region does not match the printer region.	See Toner cartridge service check on page 184.
42.60K		
42.61		
42.61K		
42.62		
42.62K		
42.63		
42.63K		
42.64		
42.64K		
43.40	A toner cartridge shutter error was detected.	See Mismatched supplies error service check on page 183.
44.40	The toner cartridge and printer are mismatched.	
44.60	The imaging unit and printer are mismatched.	
61.xx	The hard disk is defective.	See Hard disk failure service check on page 186
62.xx	The hard disk is full.	
80.0x	The remaining life of the fuser is nearly low.	See Maintenance kit low service check on page 185.
80.1x	The remaining life of the fuser is low.	
80.2x	The remaining life of the fuser is very low.	
80.3x	The fuser life has ended.	
80.4x	The fuser life has ended. The printer forces a hard stop on the fuser.	
84.0x	The remaining life of the imaging unit is nearly low.	
84.1x	The remaining life of the imaging unit is low.	

Error code	Description	Action
84.2x	The remaining life of the imaging unit is very low.	
84.3x	The imaging unit life has ended.	
84.4x	The imaging unit life has ended. The printer forces a hard stop on the imaging unit.	
88.0x	The remaining life of the toner cartridge is nearly low.	
88.1x	The remaining life of the toner cartridge is low.	
88.2x	The remaining life of the toner cartridge is very low.	
88.3x	The toner cartridge life has ended.	
88.4x	The toner cartridge life has ended. The printer forces a hard stop on the toner cartridge.	

Unsupported or unresponsive toner cartridge service check

1. Check whether the toner cartridge installed is genuine.

   Is the cartridge a genuine and supported Lexmark unit?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

2. Make sure that the printer model matches with the settings. Do the following:
   a. From the home screen, navigate to **Settings › Reports › Menu Settings Page**
   b. Compare the printer model with the model indicated in the Menu Settings Page.

   Does the printer model match with the settings?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

3. Install a genuine and supported Lexmark toner cartridge.

   Does the problem remain?

   - **Yes**:

Go to the next step.

- **No**:
  The problem is solved.

4. Perform the following tests:
   a. Check the toner cartridge contacts for contamination.
   b. Check the toner cartridge for leaks and damage.

   Are the toner cartridge and its contacts free of contamination and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

5. Clean or replace the toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Perform the following tests:
   a. Check the toner cartridge smart chip contacts for contamination.
   b. Check if the contacts are bent or damaged.

   Are the contacts free of contamination and damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

7. Clean, repair, or replace the smart chip contact. See .Toner cartridge smart chip contact removal on page 321

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Reseat the smart chip contact cable on the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Check the sensor (cartridge barrel) and its actuator for damage and misalignment.

   Are the sensor and its actuator properly installed and free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.

10. Replace the sensor. See Cartridge barrel shutter sensor kit removal on page 323.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

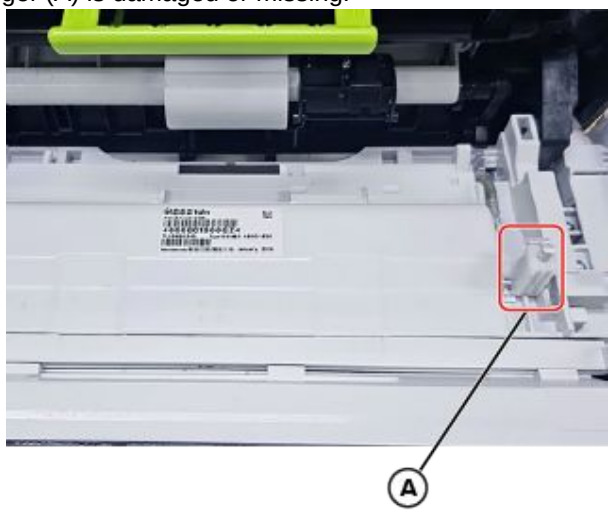
11. Reseat sensor cable from the controller board.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Unsupported or unresponsive imaging unit service check

1. Check if the cartridge plunger (A) is damaged or missing.



   Is the cartridge plunger (A) damaged or missing?

   - **Yes**:
     Replace the MPF with front access cover. See MPF with front access cover removal
   - **No**:
     Go to step 2.

2. Check whether the imaging unit installed is genuine.

   Is the imaging unit a genuine and supported Lexmark unit?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to step 3.

3. Install a genuine and supported Lexmark imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to step 4.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Check the imaging unit contacts for contamination.
   b. Check the imaging unit for leaks and damage.

   Are the imaging unit and its contacts free of contamination and damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to step 5.

5. Clean or replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to step 6.
   - **No**:
     The problem is solved.

6. Perform the following tests:
   a. Check the imaging unit smart chip contacts for contamination.
   b. Check if the contacts are bent or damaged.

   Are the contacts free of contamination and damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to step 7.

7. Clean or repair the smart chip contact.

   Does the problem remain?

   - **Yes**:
     Go to step 8.

- **No**:
  The problem is solved.

8. Reseat the smart chip contact cable on the controller board.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Mismatched supplies error service check

1. Check whether the supplies installed are genuine.

   Are the supplies genuine and supported Lexmark units?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Install genuine and supported Lexmark units.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:

   Check the following:

   - Check if the supplies have matching types. Do not install MICR supplies together with non-MICR supplies.
   - Check if the supply is supported by the region.
   - Check if the supply is supported by the specific printer model.

   Is the affected supply the correct or matching unit?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

4. Replace the affected supply with the correct unit.

   Does the problem remain?

   - **Yes**:

Contact the next level of support.

- **No**:
  The problem is solved.

Toner cartridge service check

1. Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Shake the toner cartridge.
   b. Clean the toner cartridge smart chip contacts, and then check the contacts for damage.
   c. Clean the toner cartridge spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Make sure that the toner cartridge is changed from shipped with equipment (SWE) toner to a compatible toner.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Reset the printer configuration. See Restoring the printer configuration on page 279.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Maintenance kit low service check

1. Print a test page using paper from a newly opened package, and then check the result.

   Are there print quality defects on the test page?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.

2. Identify, and then resolve the print quality defect. See the “Fixing print quality issues” section.

   > **Note:** If a supply was replaced, then make sure that the maintenance kit count is reset.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the printer has feed problems by doing a feed test.

   Does the printer have a problem feeding during the test?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 5.

4. Resolve the feed problem.

   > **Note:** If a transfer roller was replaced, then make sure that the maintenance kit count is reset.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Replace the affected maintenance kit with a new supply unit.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Hard disk failure service check

1. Perform the following tests:
   a. From the home screen, navigate to **Settings › Device › Maintenance › Out-of-Service Erase › Erase Hard Disk › Sanitize all information on hard disk**.
   b. Select **Erase downloads (Erase all macros, fonts, PFOs, etc)**, **Erase buffered jobs**, and **Erase held jobs > All held jobs**.
   c. Touch **Erase**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Make sure that the printer is using the latest firmware version.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   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?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Make sure that the hard disk is properly installed.
   b. Check the hard disk for damage, and replace if necessary.

   > **Note:** Without the hard disk drive, the printer functions are limited. To continue using the printer, remove the old hard disk drive.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Check the controller board pins for damage.

Are the pins free of damage?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

6. Replace the controller board. See .Controller board removal on page 318

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Non-Lexmark supply

The printer has detected a non-Lexmark supply or part installed in the printer.

The Lexmark printer is designed to function best with genuine Lexmark supplies and parts. Use of third-party supplies or parts may affect the performance, reliability, or life of the printer and its imaging components.

All life indicators are designed to function with Lexmark supplies and parts and may deliver unpredictable results if third-party supplies or parts are used. Imaging component usage beyond the intended life may damage the Lexmark printer or associated components.

Warning—Potential Damage
Use of third-party supplies or parts can affect warranty coverage. Damage caused by the use of third-party supplies or parts may not be covered by the warranty.

To accept any and all of these risks and to proceed with the use of non-genuine supplies or parts in your printer, instruct the customer to touch and hold the error message on the display using two fingers for 15 seconds. When a confirmation dialog box appears, ask the customer to select **Continue**.

If the customer does not want to accept these risks, then remove the third-party supply or part from the printer and install a genuine Lexmark supply or part.

If the printer does not print after clearing the error message, then instruct the customer to reset the supply usage counter.

Resetting the supply usage counter

1. From the control panel, select **Settings > Device > Maintenance > Configuration Menu > Supply Usage And Counters > Reset Maintenance Counter**.
2. Select **Start**.

Notes
If resetting the supply usage counter fails, then the customer must return the supply item to the place of purchase.

Loading error in the multipurpose feeder

Customer resolution

1. Check the paper loaded for the following:
   - The paper matches the paper size and type set in the printer. For more information, see Setting the paper size and type.
   - The paper size, paper type, and paper weight loaded are supported. For more information, see Supported paper sizes on page 23, Supported paper types, and .
2. Make sure that the paper is loaded properly in the multipurpose feeder. Feed the paper until its leading edge gets pulled in. For more information, see Loading the multipurpose feeder on page 422.
3. Make sure that the multipurpose feeder is not damaged. Inspect for physical damage, misalignment, or broken guides. Make sure that all locking mechanisms are intact. If there are signs of damage, then contact customer support.

Remote resolution

Make sure that the user performs all the steps in the **Customer resolution** section.

Initial parts replacement

No part replacement is needed. This issue can be resolved using the preceding steps. If the issue persists, then contact the next level of support.

Detailed diagnostics

No additional diagnosis is available. The issue can be resolved using the preceding steps. If the issue persists, then contact the next level of support.

Loading error in trays

Customer resolution

1. Check the paper loaded for the following:
   - The paper matches the paper size and type set in the printer. For more information, see Setting the paper size and type.
   - The paper size, paper type, and paper weight loaded are supported. For more information, see Supported paper sizes on page 23, Supported paper types, and .
2. Make sure that the paper is loaded properly in the tray and the guides are adjusted to match the size of the paper loaded. Make sure that the stack height is below the maximum fill line. For more information, see Loading trays.

3. Make sure that the tray is installed properly and free from obstructions and damage. Verify that the side guides can move freely and are not broken. If there are signs of damage, then contact customer support.

Remote resolution

Make sure that the user performs all the steps in the **Customer resolution** section.

Initial parts replacement

No part replacement is needed. This issue can be resolved using the preceding steps. If the issue persists, then contact the next level of support.

Detailed diagnostics

No additional diagnosis is available. The issue can be resolved using the preceding steps. If the issue persists, then contact the next level of support.

Printer hardware errors

111 errors

111 error messages

Error code	Description	Action
111.20	Printhead error (mirror motor lock) was detected before the motor was turned on.	See Printhead error service check on page 190.
111.21	No printhead power (+5V) when the laser servo started.	
111.30	The printhead failed during power on tests.	
111.31	Printhead error (no first HSYNC) was detected.	
111.32	Printhead error (lost first HSYNC) was detected.	
111.33	Printhead error (lost first HSYNC) was detected during servo.	
111.34	Printhead error (mirror motor lost lock) was detected.	

Error code	Description	Action
111.35	Printhead error (mirror motor no first lock) was detected.	
111.36	Printhead error (mirror motor never stabilized) was detected.	
111.41	Printhead NVRAM read failure occurred.	

Printhead error service check

1. Perform the following tests:
   a. Remove the top cover. See .Top cover removal
   b. Remove the right cover. See .Right cover removal on page 312
   c. Reseat the printhead cable from the printhead and the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check the printhead and its cables for damage and improper installation.

   Is the printhead free of damage and properly installed?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

3. Reinstall or replace the printhead. See Printhead removal on page 370.

   > **Installation Note**
   > Perform all the mechanical and electronic adjustments to the printhead after replacing it. See Printhead assembly adjustment on page 299.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

121 errors

121 error messages

Error code	Description	Action
121.00	Fuser did not reach the required temperature.	See Fuser temperature error service check on page 192
121.01	During an attempt to heat up, the fuser was not detected.	
121.02	Fuser went over the required temperature (during EWC/line voltage detection).	
121.03	Fuser hardware and driver are mismatched.	
121.04	During an attempt to heat up, the fuser relay was open and the microcontroller was not reporting an error.	
121.05	During an attempt to heat up, the fuser relay was open and the microcontroller was reporting an error.	
121.09	Fuser did not reach the required temperature for motors. **Note:** Error is not applicable to standby mode.	
121.10	Fuser did not reach the required temperature (during start of EWC/line voltage detection).	
121.11	Fuser reached the required temperature (during final EWC/line voltage detection) too late.	
121.12	Fuser did not reach the required temperature (during final EWC/line voltage detection).	
121.13	Fuser reached the required temperature (during final EWC/line voltage detection) too fast.	
121.19	Fuser high power trace reached the required temperature (during final EWC/line voltage detection) too fast.	

Error code	Description	Action
121.20	Fuser high power trace heating rate went over the limit.	
121.21	Fuser low power trace heating rate (from 165°C to 180°C) went over the limit.	
121.22	Open fuser relay was detected.	See Fuser temperature error service check on page 192
121.28	Fuser did not reach the required temperature (during EP warm-up).	
121.32	Fuser did not reach the required temperature (on 100% power).	
121.33	Fuser did not reach the required temperature (while page is in the fuser).	
121.34	Fuser did not reach the required temperature (during steady state control).	
121.36	Open fuser relay was detected with very cold or unknown ambient temperature.	
121.41	Fuser mechanism failed to detect the expected cam sensor transition.	
121.50	Fuser went over the required temperature (during global overtemp check).	
121.52	Main thermistor temperature is out of range.	
121.53	Main thermistor temperature change rate is out of range.	
121.71	Open fuser main heater thermistor was detected.	

Fuser temperature error service check

1. Make sure that the printer is placed in a location with the following temperature and humidity:
    - 60°F to 90°F temperature range
    - 8% to 80% relative humidity
2. If the printer must be placed in a below freezing environment, then do the following:
    a. Remove the fuser, and then allow it to slowly warm above freezing temperature.

b. Reinstall the fuser, and then turn on the printer.

c. Increase the timeout value for sleep mode to 114. From the home screen, touch **Settings › Device › Power Management › Timeouts › Sleep Mode**.

> **Note:** 114 minutes is the maximum acceptable timeout value.

3. Make sure the wall outlet where the printer is connected provides >95% of rated voltage when printer is in "Ready State" (>109 VAC U.S., >218 VAC for HV Geos, >95 VAC for Japan).

> **Note:**
> - Do not use this product with extension cords, multioutlet power strips, multioutlet extenders, or UPS devices. The power capacity of these types of accessories can be easily overloaded by a laser printer. This can result in a risk of fire, property damage, or poor printer performance.
> - Power strips and uninterrupted power supplies can cause a low amperage condition to occur within the printer, which in turn may trigger a false fuser error.
> - Make sure that the printer is plugged into an appropriate rate and properly grounded electrical out let or supported Inline Surge Protector.

4. Perform a POR.
5. Make sure that the correct voltage is supplied to the fuser from the power supply. For more information, see the Wiring diagram and Power supply removal on page 346.
6. Make sure that the connections between the controller board and the fuser are properly connected.
7. Check the fuser for damage, contamination, and improper installation. For more information, see Fuser removal on page 364.

Most likely parts to replace

- Fuser
  - For the part number, go to Electronics 1 on page 445.
  - For the removal procedure, go to Fuser removal on page 364.
- Power supply
  - For the part number, go to Electronics 1 on page 445.
  - For the removal procedure, go to Power supply removal on page 346.

126 errors

126 error messages

Error code	Description	Action
126.05	The LVPS power dropped but the printer was not in sleep mode.	See LVPS service check on page 194.

Error code	Description	Action
126.06	LVPS 25V line error was detected.	
126.07	LVPS 5V rail was down during power-on.	
126.10	No line frequency was detected.	
126.11	Line frequency has gone outside the operating range.	
126.12	LVPS mismatch was detected.	See LVPS mismatch service check on page 195.
126.13	LVPS mismatch was detected.	

LVPS service check

Note: Make sure that the voltage output of the electrical outlet matches the voltage rating of the printer.

1. Perform the following tests:
   a. Turn off the printer, and then unplug the power cord.
   b. Remove the rear door and cover. See .Rear door and cover removal on page 363
   c. Remove the right cover. See .Right cover removal on page 312
   d. Reseat all the cables from the controller board.
   e.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Turn off the printer, and then remove the power cord.
   b. Check if the resistance (between terminals A and D) of the power supply socket is close to 30 ohms.

   Does the socket have a normal resistance value?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 5.

3. Perform the following tests:
   a. Disconnect the fuser cable from the power supply, and then turn on the printer.
   b.

   Does the power supply provide the fuser with the normal voltage value?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 5.

4. Perform the following tests:
   a. Turn off the printer, and then remove the power cord.
   b. Remove the power supply. See .Power supply removal on page 346
   c.

   Is the power supply free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

5. Replace the power supply. See .Power supply removal on page 346

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the controller board. See .Controller board removal on page 318

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

LVPS mismatch service check

Note: Make sure that the voltage output of the electrical outlet matches the voltage rating of the printer.

1. Perform the following tests:
   a. Turn off the printer, and then unplug the power cord.
   b. Remove the rear door and cover. See .Rear door and cover removal on page 363
   c. Remove the right cover. See .Right cover removal on page 312
   d. Reseat all the cables from the controller board.
   e.

   Does the problem remain?

   - **Yes**:
     Go to the next step.

- **No**:
  The problem is solved.

2. Perform the following tests:
   a. Check the power rating label of the printer.
   b. Check the LVPS part number. Check if the power rating of this specific LVPS matches with the printer power rating.

   Do the printer and LVPS have matching power ratings?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

3. Replace the power supply. See .Power supply removal on page 346

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

128 errors

128 error messages

Error code	Description	Action
128.01	TDS baseline is too low.	See Toner density error service check.
128.02	TDS baseline is too high.	
128.03	TDS baseline range is excessive.	
128.16	TDS calibration is at maximum.	
128.17	TDS calibration is too low.	
128.18	TDS calibration is too close to baseline.	
128.32	Photoconductor drum measurement is too high.	See Photoconductor measurement error service check on page 198.
128.33	Photoconductor drum measurement is too different from calibration.	

Error code	Description	Action
128.34	Photoconductor drum measurement is too close to baseline.	
128.35	Photoconductor drum measurement data is not enough.	

Toner density error service check

1. Reseat the toner density sensor cable. See Sensor (toner density) and media present sensor flag removal on page 358.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Remove the toner cartridge and imaging unit.
   b. Clean and check both units for toner leaks.

   Are the toner cartridge and imaging unit free of leaks?

   - **Yes**:
     Go to the next step.
   - **No**:
     Replace the affected toner cartridge and imaging unit, and then go to step 3.

3. Perform the following tests:
   a. Remove the transfer roller to access the area underneath it. See Transfer roller removal on page 336.
   b. Clear the area of dust and toner contamination.
   c. Remove tray 1, and then manually actuate the toner density sensor wiper by moving the pick roller up and down.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Remove the sensor (toner density). See Sensor (toner density) and media present sensor flag removal on page 358.
   b. Check the sensor and its wiper bracket for damage.

Are the sensor and its wiper bracket free of damage?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 6.

5. Perform the following tests:
   a. Clean, and then reinstall the sensor and its wiper bracket. Add lubrication to the wiper bracket if necessary. See Sensor (toner density) and media present sensor flag removal on page 358.
   b. Check the pick roller cam for damage.

   > **Note:** The rotation of the pick roller cam triggers the movement of the wiper bracket.

   Is the pick roller cam free of damage?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Replace the sensor (toner density). See Sensor (toner density) and media present sensor flag removal on page 358.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Replace the pick roller cam. See .Pick roller assembly removal on page 351

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Photoconductor measurement error service check

1. Perform the following tests:
   a. Check the imaging unit contacts for contamination.
   b. Check the imaging unit for leaks and damage.

   Are the imaging unit and its contacts free of contamination and damage?

   - **Yes**:

Go to step 3.

- **No**:
  Go to the next step.

2. Clean or replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Check the imaging unit smart chip contacts for contamination.
   b. Check if the contacts are bent or damaged.

   Are the contacts free of contamination and damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Clean or repair the smart chip contact.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Remove the right cover. See .Right cover removal on page 312
   b. Reseat the smart chip contact cable on the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Check whether the imaging unit installed is genuine.

   Is the imaging unit a genuine and supported Lexmark unit?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Install a genuine and supported Lexmark imaging unit.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

8. Perform the following tests:
   a. Check the imaging unit contacts for contamination.
   b. Check the toner delivery mechanism for damage.
   c. Check the photoconductor drum for scratches and damage.

   Are the imaging unit and its contacts free of contamination and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

9. Clean or replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

133 errors

133 error messages

Error code	Description	Action
133.04	CTLS timeout was detected at the imaging unit.	See Imaging unit CTLS error service check on page 201.
133.05	CTLS reading at the imaging unit is above the maximum expected value.	
133.06	CTLS reading at the imaging unit is below the minimum expected value.	
133.08	Excessive CTLS noise was detected at the imaging unit.	

Imaging unit CTLS error service check

1. Perform the following tests:
   a. Check the imaging unit CTLS contacts for contamination.
   b. Check if the contacts are bent or damaged.

   Are the contacts free of contamination and damage?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Clean or repair the smart chip contact.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Remove the right cover. See .Right cover removal on page 312
   b. Reseat the CTLS contact cable on the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the imaging unit for problems. See Unsupported or unresponsive imaging unit service check on page 181.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

140 errors

140 error messages

Error code	Description	Action
140.80	Motor (main) does not turn on.	See Main drive failure service check on page 202.
140.81	Motor (main) does not turn off.	
140.82	Motor (main) speed did not ramp up to the required level.	
140.83	Motor (main) stalled.	
140.84	Motor (main) ran too slow.	
140.85	Motor (main) ran too fast.	
140.86	Motor (main) ran too long.	

Main drive failure service check

1. Check the status of supplies and replace supplies that are low or empty. Check the imaging unit contacts for contamination and check the imaging unit for leaks and damage.
   a. If a spare imaging unit is available, then swap it with the existing imaging unit. Send a print job to confirm if it resolves the issue.
   b. Install the existing imaging unit into a different printer, and then send a print job. If the error message reappears, then replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Update the printer firmware to the latest version.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Do the following:
   a. Remove the left cover. See Left cover removal on page 302.
   b. Remove the right cover. See Right cover removal on page 312.
   c. Reseat the cable from the main drive gearbox and the controller board.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

4. Perform a motor test.
   a. Enter the **Diagnostics** menu, and then navigate to **Printer diagnostics and adjustments > Motor tests > Transport**.
   b. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

5. Check the motor and its gears for misalignment, wear, and damage.

   Is the main drive gearbox properly installed and free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

6. Reinstall or replace the main drive gearbox. See Main drive gearbox removal on page 303.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

155 errors

155 error messages

Error code	Description	Action
155.80	Motor (cartridge) does not turn on.	See Cartridge drive failure service check on page 204.
155.81	Motor (cartridge) does not turn off.	
155.82	Motor (cartridge) speed did not ramp up to the required level.	

Error code	Description	Action
155.83	Motor (cartridge) has stalled.	
155.84	Motor (cartridge) ran too slow.	
155.85	Motor (cartridge) ran too fast.	
155.86	Motor (cartridge) ran too long.	

Cartridge drive failure service check

1. Perform the following tests:
   a. Open, and then close the front door to check if the door plunger properly presses the cartridge button.
   b. Check the door and the plunger for damage.

   Is the plunger functional and free of damage?

   - **Yes**:
     Go to step 3.
   - **No**:
     The problem is solved.

2. Replace the MPF with front access cover.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Check if the cartridge button is stuck.
   b. Check the cartridge gear for contamination and damage.

   Is the cartridge functional, clean, and free of damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Clean or replace the cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Perform the following tests:
   a. Remove the left cover. See .Left cover removal on page 302
   b. Remove the right cover. See .Right cover removal on page 312
   c. Reseat the cable from the motor (cartridge) and the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Motor tests > K toner add

   b. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

7. Check the motor (cartridge) and its gears for misalignment, wear, and damage.

   Is the cartridge gearbox properly installed and free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

8. Reinstall or replace the cartridge gearbox. See Cartridge gearbox removal on page 310.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

16y errors

161 error messages

Error code	Description	Action
161.80	The motor (tray 1 pick/lift) does not turn on.	See Tray 1 pick/lift drive failure service check on page 209.
161.81	The motor (tray 1 pick/lift) does not turn off.	
161.82	The motor (tray 1 pick/lift) speed did not ramp up to the required level.	
161.83	The motor (tray 1 pick/lift) stalled.	
161.84	The motor (tray 1 pick/lift) ran too slow.	
161.85	The motor (tray 1 pick/lift) ran too fast.	
161.86	The motor (tray 1 pick/lift) ran too long.	

162-164 error messages

Error code	Description	Action
162.80	The motor (tray 2 pick) does not turn on.	See Optional tray pick drive failure service check on page 209.
162.81	The motor (tray 2 pick) does not turn off.	
162.82	The motor (tray 2 pick) speed did not ramp up to the required level.	
162.83	The motor (tray 2 pick) stalled.	
162.84	The motor (tray 2 pick) ran too slow.	
162.85	The motor (tray 2 pick) ran too fast.	
162.86	The motor (tray 2 pick) ran too long.	

Error code	Description	Action
163.80	The motor (tray 3 pick) does not turn on.	See Optional tray pick drive failure service check on page 209.
163.81	The motor (tray 3 pick) does not turn off.	
163.82	The motor (tray 3 pick) speed did not ramp up to the required level.	
163.83	The motor (tray 3 pick) stalled.	
163.84	The motor (tray 3 pick) ran too slow.	
163.85	The motor (tray 3 pick) ran too fast.	
163.86	The motor (tray 3 pick) ran too long.	
164.80	The motor (tray 4 pick) does not turn on.	See Optional tray pick drive failure service check on page 209.
164.81	The motor (tray 4 pick) does not turn off.	
164.82	The motor (tray 4 pick) speed did not ramp up to the required level.	
164.83	The motor (tray 4 pick) stalled.	
164.84	The motor (tray 4 pick) ran too slow.	
164.85	The motor (tray 4 pick) ran too fast.	
164.86	The motor (tray 4 pick) ran too long.	

166-168 error messages

Error code	Description	Action
166.80	The motor (tray 2 transport) does not turn on.	See Optional tray pass-through drive failure service check on page 211.
166.81	The motor (tray 2 transport) does not turn off.	
166.82	The motor (tray 2 transport) speed did not ramp up to the required level.	

Error code	Description	Action
166.83	The motor (tray 2 transport) stalled.	
166.84	The motor (tray 2 transport) ran too slow.	
166.85	The motor (tray 2 transport) ran too fast.	
166.86	The motor (tray 2 transport) ran too long.	
167.80	The motor (tray 3 transport) does not turn on.	See Optional tray pass-through drive failure service check on page 211.
167.81	The motor (tray 3 transport) does not turn off.	
167.82	The motor (tray 3 transport) speed did not ramp up to the required level.	
167.83	The motor (tray 3 transport) stalled.	
167.84	The motor (tray 3 transport) ran too slow.	
167.85	The motor (tray 3 transport) ran too fast.	
167.86	The motor (tray 3 transport) ran too long.	
168.80	The motor (tray 4 transport) does not turn on.	See Optional tray pass-through drive failure service check on page 211.
168.81	The motor (tray 4 transport) does not turn off.	
168.82	The motor (tray 4 transport) speed did not ramp up to the required level.	
168.83	The motor (tray 4 transport) stalled.	
168.84	The motor (tray 4 transport) ran too slow.	
168.85	The motor (tray 4 transport) ran too fast.	
168.86	The motor (tray 4 transport) ran too long.	

Tray 1 pick/lift drive failure service check

1. Perform the following tests:
   a. Remove tray 1.
   b. Remove the right cover. See .Right cover removal on page 312
   c. Reseat the cable from the pick/lift motor gearbox and the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Motor tests > Pick Motor (tray 1)

   b. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

3. Check the motor and its gears for misalignment, wear, and damage.

   Is the pick/lift motor gearbox properly installed and free of wear and damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

4. Reinstall or replace the pick/lift motor gearbox. See Pick/lift motor gearbox removal on page 355.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Optional tray pick drive failure service check

1. Check if the optional tray motor (pick) runs.

   Does the motor run?

- **Yes**:
  Go to step 3.
- **No**:
  Go to the next step.

2. Reseat the motor cable, and then reseat the cable on the optional tray controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Remove the optional tray.
   b. Under the printer, check the interconnect cable for damage.

   Is the cable free of damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the interconnect cable. See .Interconnect cable removal

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Reinstall or replace the optional tray.

   > **Note:** Make sure that the interconnect cable properly fits with the socket on the optional tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Perform the following tests:
   a. Remove the tray insert from the affected optional tray.
   b. Check if the lift plate moves properly.
   c. Check the lift plate gears for damage.

   Is the tray insert functional and free of damage?

- **Yes**:
  Contact the next level of support.
- **No**:
  Go to the next step.

7. Replace the tray insert.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Optional tray pass-through drive failure service check

1. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Motor tests > Pass-through (tray [x])

   b. Touch **Start**.

   Does the motor run?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.

2. Reseat the motor cable, and then reseat the cable on the optional tray controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Perform the following tests:
   a. Remove the optional tray.
   b. Under the printer, check the interconnect cable for damage.

   Is the cable free of damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Replace the interconnect cable. See .Interconnect cable removal

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

5. Reinstall or replace the optional tray.

   Note: Make sure that the interconnect cable properly fits with the socket on the optional tray.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Remove the tray insert from the source tray, and then check it for damage.

   Is the tray insert from the source tray free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

7. Replace the tray insert.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

171 errors

171 error messages

Error code	Description	Action
171.82	Cooling fan error.	See Cooling fan failure service check on page 213.
171.83	Cooling fan error.	
171.84	Cooling fan error.	
171.85	Cooling fan error.	

Cooling fan failure service check

1. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics and adjustments > Motor tests > Fan (main)

   b. Touch **Start**.

   Does the fan spin?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

2. Perform the following tests:
   a. Remove the right cover. See .Right cover removal on page 312
   b. Reseat the fan cable from the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Replace the fan. See .Cooling fan removal

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

6yy errors

600-680 error messages

Error code	Description	Action
600.01	Toner tally from the RIP was not received.	See Engine error service check on page 216.
600.02	Video did not start.	
600.04	Duplex page was not picked.	
600.05	Invalid PH NVRAM Type error was detected.	

Error code	Description	Action
600.06	Paperport driver is unresponsive.	
600.07	Page is at image point before EP is ready.	
600.09	EP update error was detected.	
600.10	EP late run-in error was detected.	
600.95	RIP intentionally declared a jam error, usually to prevent a kiosk user from printing free pages.	
602.19	Tray 1 was unable to be ready for picking.	
602.29	Tray 2 was unable to be ready for picking.	
602.39	Tray 3 was unable to be ready for picking.	
602.49	Tray 4 was unable to be ready for picking.	
611.02	An Input ISR error occurred and the printhead was not ready.	See Printhead communication error service check on page 216.
611.32	Lost Hsync errors were detected. Laser safety interlock system may be the cause.	
611.33	Lost Hsync errors were detected during servo.	See Printhead error service check on page 190.
611.34	A mirror motor lock error was detected.	See Printhead communication error service check on page 216.
655.80	Motor (cartridge) does not turn on.	See Cartridge drive failure service check on page 204.
655.81	Motor (cartridge) does not turn off.	
655.82	Motor (cartridge) speed did not ramp up to the required level.	
655.83	Motor (cartridge) has stalled.	
655.84	Motor (cartridge) ran too slow.	
655.85	Motor (cartridge) ran too fast.	
655.86	Motor (cartridge) ran too long.	
661.80	Motor (tray 1 pick/lift) does not turn on.	See Tray 1 pick/lift drive failure service check on page 209.

Error code	Description	Action
661.81	Motor (tray 1 pick/lift) does not turn off.	
661.82	Motor (tray 1 pick/lift) speed did not ramp up to the required level.	
661.83	Motor (tray 1 pick/lift) has stalled.	
661.84	Motor (tray 1 pick/lift) ran too slow.	
661.85	Motor (tray 1 pick/lift) ran too fast.	
661.86	Motor (tray 1 pick/lift) ran too long.	
662.80	Motor (tray 2 pick) does not turn on.	See Optional tray pick drive failure service check on page 209.
662.81	Motor (tray 2 pick) does not turn off.	
662.82	Motor (tray 2 pick) speed did not ramp up to the required level.	
662.83	Motor (tray 2 pick) has stalled.	
662.84	Motor (tray 2 pick) ran too slow.	
662.85	Motor (tray 2 pick) ran too fast.	
662.86	Motor (tray 2 pick) ran too long.	
663.80	Motor (tray 3 pick) does not turn on.	See Optional tray pick drive failure service check on page 209.
663.81	Motor (tray 3 pick) does not turn off.	
663.82	Motor (tray 3 pick) speed did not ramp up to the required level.	
663.83	Motor (tray 3 pick) has stalled.	
663.84	Motor (tray 3 pick) ran too slow.	
663.85	Motor (tray 3 pick) ran too fast.	
663.86	Motor (tray 3 pick) ran too long.	
664.80	Motor (tray 4 pick) does not turn on.	See Optional tray pick drive failure service check on page 209.
664.81	Motor (tray 4 pick) does not turn off.	

Error code	Description	Action
664.82	Motor (tray 4 pick) speed did not ramp up to the required level.	
664.83	Motor (tray 4 pick) has stalled.	
664.84	Motor (tray 4 pick) ran too slow.	
664.85	Motor (tray 4 pick) ran too fast.	
664.86	Motor (tray 4 pick) ran too long.	
680.10	ADF cover was open during an ADF job.	See ADF cover error service check on page 218.

Engine error service check

1. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Remove the right cover. See .Right cover removal on page 312
   b. Reseat all the cables on the controller board.
   c. Check the controller board contacts and pins for damage.

   Is the controller board free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

3. Replace the controller board. See .Controller board removal on page 318

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Printhead communication error service check

1. Restart the printer.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

2. Perform the following tests:
   a. Remove the top cover. See .Top cover removal
   b. Remove the right cover. See .Right cover removal on page 312
   c. Reseat the printhead cable from the printhead and the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Update the firmware to the latest version.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the printhead and its cables for damage and improper installation.

   Is the printhead free of damage and properly installed?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

5. Reinstall or replace the printhead. See Printhead removal on page 370.

   Installation Note
   Perform all the mechanical and electronic adjustments to the printhead after replacing it. See Printhead assembly adjustment on page 299.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

ADF cover error service check

1. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Scanner diagnostics > Sensor tests

   b. Find the sensor (ADF top door interlock).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

2. Perform the following tests:
   a. Reseat the sensor cable from the ADF controller board.
   b. Check the sensor and its actuator for improper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.

3. Reinstall the sensor.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Procedure before starting the 9yy service checks

Retrieve certain information that helps your next level of support in diagnosing the problem before replacing the controller board.

> **Warning—Potential Damage**
> Do not replace the controller board unless instructed 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 are retrievable from the printer that you are working on.

A. Collecting the history information from the SE menu

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

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

   Note:
   - **`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

Note:

- Make sure that 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.

1. Open a web browser, type **`http://printer_IP_address/se`**, and then press **Enter**.
2. Click **Logs Gzip Compressed**.

   Note: A logs.tar.gz file is saved to the Downloads folder. The file may take several minutes to save. You may rename the file if a logs.tar.gz already exists in the Downloads folder.

3. E-mail the logs to your next level of support.

   Note: To download the FWdebug log to a flash drive, see General SE Menu on page 272.

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 that your printer is connected to a network or to a print server.

1. Open a web browser, type **`http://printer_IP_address`**, and then press **Enter**.
2. Click Settings, and then select one of the settings pages from the links shown on the page.
3. Copy all the 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 being used
- Print driver being used
- Other information on what was happening when the 9yy error occurred

900-912 errors

900-912 error messages

Error code	Description	Action
900.xx	RIP firmware errors	For more information, see 900 error service check.
912.44	An engine error occurred.	For more information, see Printhead firmware error on page 225.

900 error service check

1. Perform the following tests:
   a. Perform a POR.
   b. Check if a 900.xx error code appears on the display.

   Does a 900.xx error code appear?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

2. Check if another type of error code appears instead of the 900.xx error code.

   Does a different error code appear?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 4.

3. See the error code and its service instructions in the printer *Service Manual*.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Perform the following tests:
   a. Turn off the printer.
   b. At the rear of the printer, disconnect the network cable, USB cable, and fax line.
   c. Turn on the printer.

   Does the problem remain?

   - **Yes**:
     Go to step 12.
   - **No**:
     Go to the next step.

5. Perform the following tests:
   a. From the control panel, navigate to the **Reports** menu.
   b. Select **Device Statistics** and **Device Settings**.

   Does the problem remain?

   - **Yes**:
     Go to step 12.

- **No**:
  Go to the next step.

6. Check if the printer has a scanner.

   Does the printer have a scanner?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 8.

7. Using the scanner, perform a one-page copy job in color.

   Does the problem remain?

   - **Yes**:
     Go to step 12.
   - **No**:
     Go to the next step.

8. Perform the following tests:
   a. Turn off the printer.
   b. At the rear of the printer, connect the network cable, USB cable, and fax line.
   c. Turn on the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 10.

9. Perform the following tests:
   a. Start the printer in **Invalid engine mode**. See .
   b. Check if an **`Invalid Engine Code`** message appears.

   Does an **`Invalid Engine Code`** message appear?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

10. Using the Device Settings report that is printed in step 5, check if the firmware level is older than the latest available version.

    Is the firmware version older, and does the customer agree to update the firmware?

    - **Yes**:
      Go to the next step.
    - **No**:
      Contact the next level of support.

11. Update the firmware to the latest version.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

12. Perform the following tests:
    a. Turn off the printer.
    b. Make sure that all the cables on the controller board and scanner are properly connected.
    c. Turn on the printer.
    d. From the control panel, navigate to the **Reports** menu, and then select **Device Statistics** and **Device Settings**.
    e. For MFPs, perform a one-page copy and scan job in color.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

13. Check if a hard disk installed.

    Is a hard disk installed?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 17.

14. Perform the following tests:
    a. Check for buffered print jobs, and then delete them. See Hard disk failure service check on page 186.
    b. Perform a POR.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

15. Perform the following tests:
    a. Turn off the printer.
    b. Uninstall the hard disk drive.
    c. Perform a POR.

    Does the problem remain?

- **Yes**:
  Go to step 17.
- **No**:
  Go to the next step.

16. Replace the hard disk.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

17. Check if the printer has any of the following components installed:

    - Memory options
    - Fax card
    - Modem
    - Wireless and network option cards

    Is any of the components installed?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 21.

18. Perform the following tests:
    a. Turn off the printer.
    b. Remove all the installed components.
    c. Turn on the printer.

    Does the problem remain?

    - **Yes**:
      Go to step 21.
    - **No**:
      Go to the next step.

19. Perform the following tests:
    a. Turn off the printer.
    b. Install the following components one at a time:
       - Memory options
       - Fax card
       - Modem
       - Wireless and network option cards

> **Note:** Make sure to perform a POR after installing each component.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

20. Perform the following tests:
    a. Turn off the printer.
    b. Replace the components that caused the error.
    c. Turn on the printer.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

21. Replace the controller board. See .Controller board removal on page 318

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Printhead firmware error

Customer resolution

1. Perform a Power-On-Reset on the printer. Do the following:
   a. Turn off the printer, and then unplug the power cord.
   b. Wait 30 seconds to discharge electrical energy and clear buffered data.
   c. Connect the power cord, and then turn on the printer.
   d. Wait for the printer to fully initialize before sending a job.
2. Make sure that the printer firmware is updated. For more information, see Updating the firmware using the control panel on page 284.

Remote resolution

Make sure that the user performs all the steps in the **Customer resolution** section.

Initial parts replacement

Send the following field replaceable unit to the field technician:

- Printhead—For the part number, see Electronics 1 on page 445.

Detailed diagnostics

1. Make sure that the cable and connector between the printhead and the controller board are properly connected and not damaged. Do the following:
    a. Check for kinks, cuts, burn marks, or bent pins.
    b. Make sure that the flat flex cable LIF connector is fully latched.

    For more information, see Wiring Diagram.
2. Check the printhead for contamination and damage. Do the following:
    a. Check for dust and contamination.
    b. Check for damage or improper installation.
    c. Check the cables and cable connections for damage or improper installation.
3. Verify that all ports and cable connections to the controller board are securely seated and free from damage. For more information, see Wiring Diagram. Inspect the controller board assembly for the following:
    - Bent components
    - Discoloration from overheating
    - Dust buildup
    - Other physical abnormalities

95y errors

950–953 error messages

Error code	Description	Action
950.10	An NVRAM mismatch error occurred.	See .NVRAM mismatch failure service check on page 227
953.99	A control panel NVRAM error occurred.	

NVRAM mismatch failure service check

Warning—Potential Damage
To avoid NVRAM mismatch issues, replace only one of the following components at a time:

- Control panel
- Controller board

To replace a component and to test whether the problem is resolved:

1. Replace the affected component.

   Warning—Potential Damage
   Do not perform a Power-On Reset (POR) until the problem is resolved. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

2. Enter the Diagnostics menu. The Diagnostics menu allows you to use temporarily the replacement part.

   Warning—Potential Damage
   Some printers perform automatically a POR if the Diagnostics menu is not opened within five seconds. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

3. Use the Diagnostics menu to test the replacement part. Perform a feed test to check if the problem is resolved.
   - If the problem is not resolved—Turn off the printer, and then install the old part.
   - If the problem is resolved—Perform a POR.

1. Check if the control panel was recently replaced.

   Was the control panel recently replaced?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 4.

2. Replace the current control panel with the original control panel. See Control panel display assembly removal on page 329.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Replace the original control panel with a new control panel.

   Note: Make sure that the new control panel is not previously installed from another printer.

Does the problem remain?

- **Yes**:
  Contact the next level of support.
- **No**:
  The problem is solved.

4. Check if the controller board was recently replaced.

   Was the controller board recently replaced?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

5. Replace the current controller board with the original controller board. See Controller board removal.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the original controller board with a new controller board.

   > **Note:** Make sure that the new controller board is not previously installed from another printer.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

ADF/Scanner hardware errors

84y errors

840-845 error messages

Error code	Description	Action
840.01	The scanner was manually disabled by the Admin or user.	See Scanner disabled error service check on page 229.

Error code	Description	Action
840.02	The scanner was automatically disabled by the printer due to too many errors.	
842.00	There was a scanner communication failure (No Response) error detected.	See Flatbed scanner failure service check on page 230.
842.01	There was a scanner communication failure (HW protocol) error detected.	
842.02	There was a scanner communication failure (Logical protocol) error detected.	
843.00	The flatbed scanner failed to reach its home position.	
843.01	A scanner mechanical failure was detected at the ADF.	See ADF scanner failure service check on page 230.
845.02	Front side scanning communication failure.	See Flatbed scanner failure service check on page 230.
845.03	Back side scanning communication failure.	See ADF scanner failure service check on page 230.

Scanner disabled error service check

1. From the control panel, navigate to **Settings > Maintenance > Configuration menu > Scanner Configuration**.

   Set Disable Scanner to Enabled.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Remove the right cover. See .Right cover removal on page 312
   b. Check the ADF and scanner cables for damage.

   Are the cables free of damage?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

3. Reseat the ADF and scanner cables from the controller board.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Flatbed scanner failure service check

1. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Perform the following tests:
   a. Remove the right cover. See .Right cover removal on page 312
   b. Check the scanner cables for damage.

   Are the cables free of damage?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

3. Reseat the scanner cables from the controller board.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

ADF scanner failure service check

1. Restart the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:

The problem is solved.

2. Perform the following tests:
   a. Remove the right cover. See .Right cover removal on page 312
   b. Check the ADF cables for damage.

   Are the cables free of damage?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.

3. Reseat the ADF cables from the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Replace the ADF assembly.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Other symptoms

Fax symptoms

Fax symptoms

Symptom	Action
No dial tone.	See Modem/fax card service check on page 232.
The printer does not connect to a fax machine.	The fax machine is turned off. Ask the fax recipient to check the machine.
Incoming fax has blank spaces or poor quality.	See Blank spaces on incoming fax service check on page 233.
Incoming fax has stretched words.	See Stretched words on incoming fax service check on page 234.
The printer does not transmit faxes.	See Fax transmission service check on page 234.

Symptom	Action
The printer does not receive faxes.	See Fax reception service check on page 238.

Modem/fax card service check

1. Check if the telephone cable is properly connected to the modem card and electrical outlet.

   Is the cable properly connected to the modem card and electrical outlet?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.

2. Connect the telephone cable to the modem card and electrical outlet.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

3. Check if the telephone cable can make and receive calls.

   Is the phone line properly working?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Connect the printer to a properly functioning telephone jack.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Make sure that the modem cable is properly connected to the modem card and to the JFAX2 connector on the controller board.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Replace the fax card.

Does the problem remain?

- **Yes**:
  Go to the next step.
- **No**:
  The problem is solved.

7. Check the voltages values of the following pins on the JFAX2 connector on the controller board:
   - Pin 2: +3.3 V dc
   - Pin 3: +3.3 V dc
   - Pin 5: +5 V dc
   - Pin 7: Ground
   - Pin 9: Ground
   - Pin 11: Ground
   - Pin 13: Ground

   Are the voltage values approximately the same?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.
8. Replace the controller board. See .Controller board removal on page 318

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Blank spaces on incoming fax service check

1. Receive fax from another machine.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Attach the printer to a different telephone line.

   Does the problem remain?

   - **Yes**:

Go to the next step.

- **No**:
  The problem is solved.

3. Print a test page.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Install a new toner cartridge.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Stretched words on incoming fax service check

1. Receive fax from another machine.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Fax transmission service check

1. Reseat the telephone cable on the LINE port of the printer and on the wall jack.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check for a dial tone.

   Is there a dial tone?

   - **Yes**:
     Go to the next step.

- **No**:
  Go to step 5.

3. Check if the telephone line can send and receives calls.

   Is the phone line properly working?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

4. Check if the telephone line is free of static or external noise.

   Is the line free of static or external noise?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Connect the telephone cable to a working wall jack.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Perform the following tests:
   a. From the home screen, navigate to **Settings > Fax > Analog Fax Setup > Fax Receive Settings > Admin Controls > Enable Fax Receive**.
   b. Select **On**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Perform the following tests:
   a. From the home screen, navigate to **Settings > Fax > Analog Fax Setup > Fax Receive Settings > Admin Controls > Answer on**.
   b. Select a ring pattern.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Check if the telephone line is analog.

Is the line analog?

- **Yes**:
  Go to step 11.
- **No**:
  Go to the next step.

9. Check if the telephone line is a VOIP line.

   Is the line VOIP?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Ask the system administrator to check if the VOIP server is configured to receive faxes.

    Is the server configured to receive faxes?

    - **Yes**:
      Go to the next step.
    - **No**:
      Contact the next level of support.

11. Check if the printer receives a fax from one specific remote device.

    Does the printer receive a fax from one specific remote device?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Check if a different device can send a fax.

    Can the device send a fax?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.

13. Perform the following tests:
    a. From the home screen, navigate to **Settings > Fax > Analog Fax Setup > Fax Receive Settings > Admin Controls > Block No Name Fax**.
    b. Select **Off**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

14. Perform the following tests:
    a. From the home screen, navigate to **Settings > Fax > Analog Fax Setup > Fax Receive Settings > Admin Controls > Banned Fax List**.
    b. Check if the remote device number is on the list.

    Is the number on the list?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 16.

15. Remove the remote device number from the list.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

16. Perform the following tests:
    a. Enter the Service Engineer menu, and then navigate to:

       Fax SE > Modem Settings > Receive Thresh

    b. Adjust the setting in steps of 2 dB.

       Note: The recommended adjustment range is between -33 dB and -48 dB.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

17. Perform the following tests:
    a. Enter the Service Engineer menu, and then navigate to:

       Fax SE > Fax Settings > AutoPrint T30 Logs

    b. Check the reported error code. See Fax error log codes on page 241.
    c. Perform the action suggested for the error.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Fax reception service check

Note: Before performing this service check, make sure that the correct country code is selected.

1. Reseat the telephone cable on the LINE port of the printer and on the wall jack.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check if the telephone line can send and receive calls.

   Is the phone line properly working?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Connect the telephone cable to a working wall jack.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check if the telephone line is analog.

   Is the telephone line analog?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

5. Check if the telephone line is a VOIP line.

   Is the line VOIP?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 7.

6. Ask the system administrator to verify if the VOIP server is configured to receive faxes.

   Is the server configured to receive faxes?

   - **Yes**:
     Go to the next step.

- **No**:
  Contact the next level of support.

7. Check if the printer is on a PABX.

   Is the printer on a PABX?

   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.

8. Perform the following tests:
   a. From the home screen, navigate to **Settings > Fax > Analog Fax Setup > Fax Send Settings > Behind a PABX**.
   b. Select **Yes**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Perform the following tests:
   a. From the home screen, navigate to **Settings > Fax > Analog Fax Setup > Fax Send Settings > Behind a PABX**.
   b. Select **No**.
   c. Check if access to an outside line needs a dial prefix.

   Does access to an outside line need a dial prefix?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 11.

10. Send a fax using a dial prefix.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Check if the printer sends a fax to one specific destination.

    Does the printer send a fax to one specific destination?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.

12. Check if the device that does not receive a fax can send a fax.

    Can the device send a fax?

    - **Yes**:
      Go to the next step.
    - **No**:
      Contact the next level of support.

13. Perform the following tests:
    a. Enter the Service Engineer menu, and then navigate to:

       Fax SE > Fax Settings > AutoPrint T30 Logs

    b. Check the reported error code. See Fax error log codes on page 241.

    c. Perform the action suggested for the error.

    Does the problem remain?

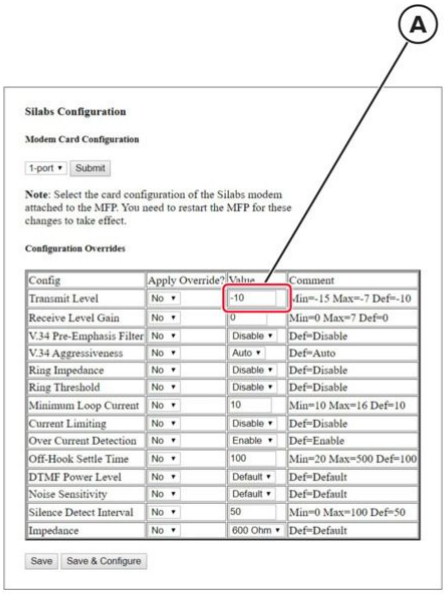
    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

14. Perform the following tests:
    a. Open a web browser and then type **`https://<IP address>/se`**.

    b. Navigate to:

       Fax > Settings > Silabs Configuration

    c. Adjust the Transmit Level setting (A) in steps of ±1 dB.



Does the problem remain?

- **Yes**:
  Contact the next level of support.

- **No**:
  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.
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.

Error code	Description	Action
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.

Error code	Description	Action
80C	Remote device failed to respond to the CTC command.	• Select a lower ‘Max Speed’ value under Fax Send settings. • Adjust ‘Transmit Level’.
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.	• Verify 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. See Modem/fax card service check on page 232.
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.

Error code	Description	Action
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.
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.

Error code	Description	Action
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.

Error code	Description	Action
901	No fax tones detected from remote end.	• Verify destination phone number. • Verify 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.	See Modem/fax card service check on page 232.
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.	Verify the MFP is connected to an analog line. See Fax transmission service check on page 234.
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.

Base printer symptoms

Base printer symptoms

Symptom	Action
The printer does not turn on even when powered on from a proper electrical outlet.	See Dead printer service check on page 247.
The display does not respond when touching the icons.	See Unresponsive control panel or display service check on page 248.
The display shows a blank screen.	

Dead printer service check

A dead printer is a printer that when powered on from a well-grounded electrical outlet, does not show any light indication in the display or any movement of the fans or motors.

Warning—Potential Damage
Observe all necessary ESD precautions when removing and handling the controller board or any installed optional cards or assemblies.

Note: Before performing the check, remove any input or output option from the printer.

1. Turn on the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. Check the power voltage.

   Is the proper line voltage used?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.

3. Plug the power cord into the correct line voltage socket.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

4. Check the power cord for damage.

   Is the power cord free of damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.

5. Replace the power cord.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

6. Turn off the printer. Check the power supply connector on the controller board for damage and improper connection.

   Is the power supply connector free of damage and properly connected?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.

7. Reseat or replace the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

8. Perform the power supply service check. See LVPS service check on page 194.

   Does the problem remain?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     The problem is solved.

Unresponsive control panel or display service check

Warning—Potential Damage
Observe all necessary ESD precautions when removing and handling the controller board or any installed optional cards or assemblies.

Note: Before performing the check, make sure that the printer is not in Sleep Mode..

1. Wake the printer from Sleep Mode.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

2. If the control has a LED indicator, check the LED indicator.

   Is the LED indicator blinking red or blue?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to LVPS service check on page 194

3. Turn off the printer. Check the control panel cable for proper connection to the controller board.

   Is the control panel cable properly connected?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.

4. Reseat the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

5. Remove the control panel without removing the cable. Check the cable for improper connection to the control panel.

   Is the cable properly connected?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.

6. Reseat the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

7. Check the control panel cable for damage.

Is the control panel cable free of damage?

- **Yes**:
  Go to step 9.
- **No**:
  Go to the next step.

8. Replace the cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.

9. Check the display card (UICC) cable for proper connection to the control panel board.

   Is the display card cable properly connected?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.

10. Reseat the cable.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.

11. Check the display card cable for damage.

    Is the display card cable free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.

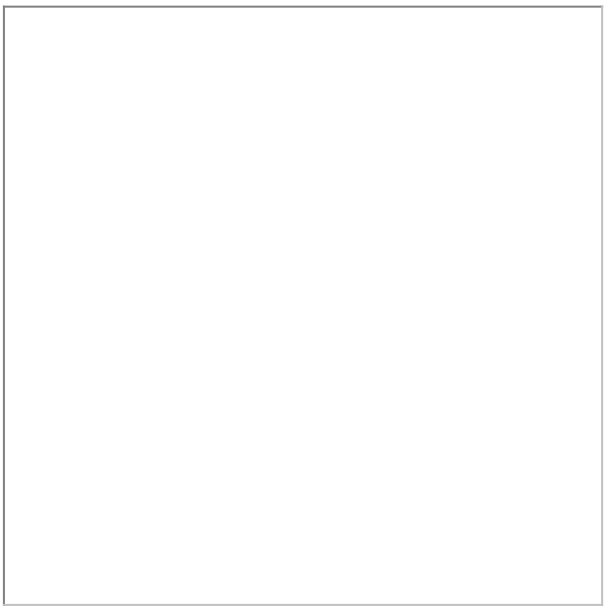
12. Replace the control panel.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Dead optional tray service check

1. Check the compatibility of the optional tray. Do the following:
   a. Make sure that the optional tray is supported by the printer model. For more information, see Optional trays on page 458.
   b. Remove the tray insert, and then check if the label is present.



   If the part number of the optional tray does not start with 36S or the label is not present, then the optional tray is incompatible.
2. If the error persists after installing a compatible tray, then check the interconnect cable for damage and improper installation. For more information, see Interconnect cable removal.

Blue and blinking red indicator light or printer stuck at startup

Issue description

The indicator light alternates between blue and blinking red, or the printer is stuck on a startup screen.

Customer resolution

1. Perform a Power-On-Reset on the printer. Do the following:
   a. Turn off the printer, and then unplug the power cord.
   b. Wait 30 seconds to discharge electrical energy and clear buffered data.
   c. Connect the power cord, and then turn on the printer.
   d. Wait for the printer to fully initialize before sending a job.
2. Make sure that the printer firmware is updated. For more information, see Updating the firmware using the control panel on page 284.

Remote resolution

Make sure that the user performs all the steps in the **Customer resolution** section.

Initial parts replacement

No part replacement is needed. This issue can be resolved using the preceding steps. If the issue persists, then contact the next level of support.

Detailed diagnostics

1. Turn off the printer.
2. Unplug the power cord from the electrical outlet, and then from the printer.
3. Verify that the cable between the controller board and the control panel card is properly connected and not damaged.
4. Connect the power cord to the printer, and then to the electrical outlet.

   CAUTION—SHOCK HAZARD
   To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

5. Enter **Recovery Mode** and update the printer firmware. For more information, see Entering Recovery mode.

   Note: Do not turn off the printer during the firmware update process.

6. If the issue persists after the firmware update, replace the controller board. For more information, see Controller board removal on page 318.

Contacting customer support

Contacting customer support

To accurately diagnose your issue, our support agents must perform diagnostic troubleshooting with you during your call. Make sure you are near your device so you can follow the on-screen or spoken instructions.

If you are not near your device, you can call us back when you are ready.

Have the following information ready when you contact support:

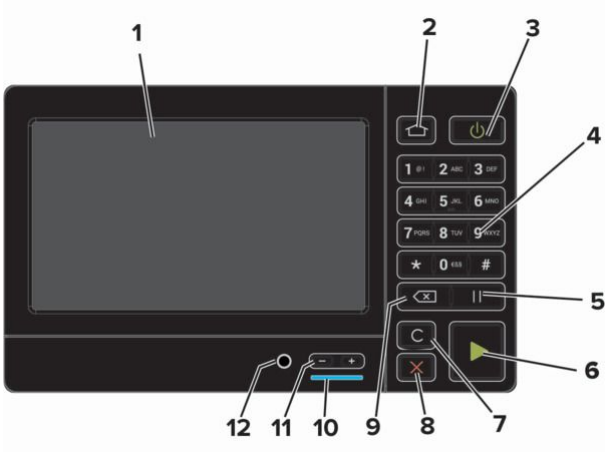
- Printer model and serial number
- A brief description of the issue
- Any error messages (if applicable)

Technical support via telephone is also available. In the U.S. or Canada, call **1-800-539-6257**. For other countries or regions, go to www.lexmark.com/supportdirectory.

Service menus

Control panel

Using the control panel



	Use the	To
1	Display	• View printer messages and supply status. • Set up and operate the printer.
2	Home button	Go to the home screen.
3	Power button	Turn on or turn off the printer. **Note:** To turn off the printer, press and hold the power button for five seconds.
4	Numeric keypad	Enter numbers or symbols in an input field.
5	Pause button	Place a dial pause in a fax number.
6	Start button	Start a job, depending on which mode is selected.
7	Clear all or Reset button	Reset the default settings of a function such as copying, faxing, or scanning.

	Use the	To
8	Stop or Cancel button	Stop the current printer task.
9	Backspace button	Move the cursor backward and delete a character in an input field.
10	Indicator light	Check the status of the printer.
11	Volume buttons	Adjust the speaker volume.
12	Speaker port	Attach a speaker.

Colors of the indicator light

Color of the indicator light	Printer status
Off	The printer is off.
Solid blue	The printer is ready.
Blinking blue	The printer is printing or processing data.
Blinking red	The printer requires user intervention.
Solid amber	The printer is in sleep mode.
Blinking amber	The printer is in deep sleep or hibernate mode.
Alternating between blue and blinking red	The printer is not responding or showing anything on the display. For more information, see Indicator light is alternating between blue and blinking red.

Using the home screen

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



Touch	To	
1	Copy	Make copies.
2	E-mail	Send e-mails.
3	Settings	Access the printer menus.
4	Fax	Send fax.
5	Address Book	Manage a contact list that other applications on the printer can access.
6	Status/Supplies	• Show a printer warning or error message whenever the printer requires intervention to continue processing. • View more information on the printer warning or message, and on how to clear it. **Note:** You can also access this setting by touching the top section of the home screen.
7	USB Drive	• Print photos and documents from a flash drive. • Scan photos and documents to a flash drive
8	Job Queue	Show all the current print jobs. **Note:** You can also access this setting by touching the top section of the home screen.
9	Held Jobs	Show the print jobs that are held in the printer memory.
10	Shortcut Center	Organize all shortcuts.
11	App Profiles	Access application profiles.
12	Scan Profiles	Scan and save documents directly to the computer.

Touch	To	
13	FTP	Scan and save documents directly to an FTP server.
14	Bookmarks	Organize all bookmarks.
15	Change Language	Change the language on the display.

Diagnostics menu

Entering the Diagnostics menu

The Diagnostics menu contains tests that are used to help isolate issues with the printer. To access some of these tests, avoid POST tests that run at POR. Some POST tests can generate errors that prevent a diagnostic test from running.
To access the Diagnostics menu from the home screen, press *** * 3 6** on the control panel.
For 2-line control panels, press the left arrow button twice, press **OK**, and then press the right arrow button.

Reports

Device Settings

This report lists all the current printer settings.
Enter the Diagnostics menu, and then navigate to:
Reports > Device Settings

Installed Licenses

This setting lists all the installed licenses and their feature data.
Enter the Diagnostics menu, and then navigate to:
Reports > Installed Licenses

Advanced Print Quality Samples

This setting prints a list of the printer settings and sample pages to check print quality.
Enter the Diagnostics menu, and then navigate to:
Advanced Print Quality Samples > Advanced Print Quality Test Pages

For non-touch-screen printer models, press 

to navigate through the settings.

Format Fax Storage

This setting deletes stored fax jobs.

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

   Format Fax Storage > Format Fax Storage

   For non-touch-screen printer models, press 

 to navigate through the settings.
2. Press 

 or touch **Start**.

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 lists an extended version of the various printer events.

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

   Event Log > Print Log
2. Touch **Start**.

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

Print Log Summary

This setting lists a brief summary of the various printer events.

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

   Event Log > Print Log Summary
2. Touch **Start**.

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

Mark Log

This setting allows you to create a service, maintenance, or custom log entry. Each log entry is added in the printer event log.

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

   Event Log > Mark Log
2. Select a log that you want to create, and then touch **Start**.

Input tray quick print

This setting lets you print a single or continuous Quick Test page in either duplex or simplex mode.

1. Enter the Diagnostics menu, and then touch **Input tray quick print**.
2. Select where you want to print the pages from.
3. Select whether to print a single or continuous test page, and then touch **Start**.

Output bin quick feed

This setting allows you to send a single or continuous test page to a bin.

For non-touch-screen printer models, press 

to navigate through the settings.

1. Enter the Diagnostics menu, and then touch **Output bin quick feed**.
2. Select where you want to send the test page.
3. Select whether to send a single or continuous test page, and then touch **Start**.

Printer Setup

Printed page count (mono)

This setting displays the amount of pages printed in mono.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the printed page count for mono.

Printed page count (color)

This setting displays the amount of pages printed in color.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the printed page count for color.

Permanent page count

This setting displays the total number of pages printed in mono and color. After all the print tests are completed, this value resets to zero.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the permanent page count.

Enable edge-to-edge (printing)

This setting shifts all four margins to the physical edges of the page.

Note: Contamination of the second transfer roller may result from printing up to the physical edges of the page.

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

   Printer Setup > Enable edge-to-edge (printing)
2. Select a setting to adjust.

Note: This feature does not work in PPDS emulation.

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.

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

   Printer Setup > Enable edge-to-edge (copy)
2. Select a setting to adjust.

Processor ID

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

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the processor ID.

Serial number

This setting displays a read-only value of the serial number.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the serial number.

Model name

This setting displays the model name of the printer.

1. Enter the Diagnostics menu, and then touch **Printer Setup**.
2. View the model name.

Engine setting [x]

> **Warning—Potential Damage**
> Do not change this setting without specific instructions from the next level of support.

This setting allows you to select a printer engine setting. Possible values are 0–255. 0 is the default.

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

   Printer Setup > Engine setting [x]
2. Select a setting, enter a value, and then touch **OK**.

EP setup

> **Warning—Potential Damage**
> Do not change this setting without specific instructions from the next level of support.

This setting allows you to adjust the EP setup of the printer.

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

   Printer Setup > EP setup
2. Select a setting.

Printer diagnostics and adjustments

Sensor tests

1. Enter the Diagnostics menu, and then touch **Printer diagnostics & adjustments**.
2. From the Sensor tests section, touch **Start**.

   A dialog listing the sensor tests appears.
3. Find, and then manually toggle the sensor.

   > **Note:**
   > - The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
   > - If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.

Motor tests

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

   Printer diagnostics & adjustments > Motor tests
2. Select a motor, and then touch **Start**.

Note:

- If the motor is activated, then it is properly working.
- Some motors require automatic deactivation in order to avoid secondary issues such as possible damage and contamination.
- Some tests require a special action to activate a motor such as removing a major component.
- If the motor fails, the test failure may not indicate a failed motor. Further troubleshooting may be required. Check the boards and cables for possible issues.

Memory tests

For non-touch-screen printer models, press 

to navigate through the settings.

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

   Printer diagnostics & adjustments > Memory tests
2. Select a test, and then press 

or touch **Start**.

Registration adjust

This setting lets you adjust the skew, margins, or perform a Quick Test.

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

   Printer diagnostics & adjustments > Registration adjust
2. Select a setting to adjust.

Add-on cards tests

This setting allows you to test the add-on cards installed on the printer.

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

   Printer diagnostics & adjustments > Add-on cards tests
2. Select a card.

Margin Offset

This setting allows you to adjust the margin offset and to print or reset the default settings.

For non-touch-screen printer models, press 

to navigate through the settings.

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

   Printer diagnostics & adjustments > Margin Offset
2. Select a setting.

Universal Override

This setting allows the user to feed custom media sizes to a Custom Media Tray.

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

   Printer diagnostics & adjustments > Universal Override
2. Select a setting to adjust.

Scanner diagnostics

Motor tests

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

   Scanner diagnostics > Motor tests
2. Select a motor, and then touch **Start**.

Note:

- If the motor is activated, then it is properly working.
- Some motors require automatic deactivation in order to avoid secondary issues such as possible damage and contamination.
- Some tests require a special action to activate a motor such as removing a major component.
- If the motor fails, the test failure may not indicate a failed motor. Further troubleshooting may be required. Check the boards and cables for possible issues.
- To stop a running motor in non-touch-screen printer models, press 

.

List of motor tests

Test	Procedure to perform before the test	What to check if the motor is properly working
FB Scanner	Open the top cover.	The CCD moves to the selected paper size.
Run ADF transport Forward	Open the ADF top cover.	The ADF transport roller turns.
Stop ADF transport		The ADF transport roller stops turning.
ADF pick		The ADF pick roller turns.

Sensor tests

This test verifies the status of the scanner sensors.

1. Enter the Diagnostics menu, and then touch **Scanner diagnostics**.
2. From the Sensor tests section, touch **Start**.

   A dialog listing the sensor tests appears.
3. Find, and then manually toggle the sensor.

> **Note:**
> - The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
> - If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.

List of sensor tests

Test	Procedure to perform before the test
FB CCD home	--
ADF closed	Open the ADF.
ADF media present	Open the ADF top cover.
ADF pick	
ADF deskew	
ADF 1st scan	
ADF 2nd scan	--
ADF top door interlock	Open the ADF top cover.
ADF calibration strip home	--

Feed Test

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

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

   Scanner diagnostics > Feed Test

2. Select a paper size.
3. From the Feed Test section, touch **Start**.

Scanner Calibration Reset

Before starting the test, make sure that the scanner glass and backing material are clean. For more information, go to .Cleaning the scanner on page 435

1. Enter the Diagnostics menu, and then touch **Scanner diagnostics**.
2. From the Sensor Calibration Test section, touch **Start**.

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.

> **Note:**
> - If the back side of the copy has vertical streaks, then 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.

Controller Calibration

This test must be done when the scanner controller or flatbed scanner is changed.

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

   Scanner Diagnostics > Controller Calibration

2. Touch **Start**.

Additional input tray diagnostics

Sensor tests

1. Enter the Diagnostics menu, and then touch **Additional input tray diagnostics**.
2. From the Sensor tests section, touch **Start**.

   A dialog listing the sensor tests appears.
3. Find, and then manually toggle the sensor.

   Note:
   - The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
   - If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.

Motor tests

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

   Additional input tray diagnostics > Motor tests
2. Select a motor, and then touch **Start**.

   Note:
   - If the motor is activated, then it is properly working.
   - Some motors require automatic deactivation in order to avoid secondary issues such as possible damage and contamination.
   - Some tests require a special action to activate a motor such as removing a major component.
   - If the motor fails, the test failure may not indicate a failed motor. Further troubleshooting may be required. Check the boards and cables for possible issues.

Output device diagnostics

Staple test

Note: This menu appears only when a finisher is installed.

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

   Output device diagnostics > Staple test
2. Select a staple job, and then check the output for any issues.

Sensor tests

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

   Output device diagnostics > Sensor tests
2. Select the output device where the sensor is located.
3. Find, and then manually toggle the sensor.

Note:
- The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
- If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.

Configuration menu

Entering the Configuration menu

1. Turn off the printer.
2. Press and hold **2** and **6** while turning on the printer.
3. Release the buttons after 10 seconds.

Configuration Menu

Menu item	Description
USB Configuration USB PnP 1* 2	Change the USB driver mode of the printer to improve its compatibility with a personal computer.
USB Configuration USB Scan to Local On* Off	Set whether the USB device driver enumerates as a USB Simple device (single interface) or as a USB Composite device (multiple interfaces).
USB Configuration USB Speed Full Auto*	Set the USB port to run at full speed and disable its high-speed capabilities.

Menu item	Description
Tray Configuration Tray Linking Automatic* Off	Set the printer to link the trays that have the same paper type and paper size settings.
Tray Configuration Show Tray Insert Message Off Only for unknown sizes* Always	Show the **`Tray Insert`** message.
Tray Configuration A5 Loading Short Edge* Long Edge	Specify the page orientation when loading A5-size paper.
Tray Configuration Paper Prompts Auto* Multipurpose Feeder Manual Paper Envelope Prompts Auto* Multipurpose Feeder Manual Envelope	Set the paper source that the user fills when a prompt to load paper or envelope appears. **Note:** For Multipurpose Feeder to appear, set Configure MP to Cassette from the Paper menu.
Tray Configuration Action for Prompts Prompt user* Continue Use current	Set the printer to resolve paper- or envelope-related change prompts.
Reports Menu Settings Page Event Log Event Log Summary	Print reports about printer menu settings, status, and event logs.
Supply Usage And Counters Clear Supply Usage History Reset Black Cartridge Counter Reset Black Imaging Unit Counter Reset Maintenance Counter	Reset the supply page counter or view the total printed pages.

Menu item	Description
Printer Emulations PPDS Emulation Off* On	Set the printer to recognize and use the PPDS data stream.
Fax Configuration Fax Low Power Support Disable Sleep Permit Sleep Auto*	Set the fax chip to enter low-power mode whenever the printer determines that it should.
Print Configuration Font Sharpening 0–150(24*)	Set a text point-size value below which the high-frequency screens are used when printing font data. For example, if the value is 24, then all fonts sized 24 points or less use the high-frequency screens.
Print Configuration Print Density 1–5 (3*) Copy Density 1–5 (3*)	Adjust the toner density when printing or copying documents.
Device Operations Quiet Mode Off* On	Set the printer to operate in Quiet Mode.
Device Operations Panel Menus Enable* Disable	Enable access to the control panel menus.
Device Operations Safe Mode Off* On	Set the printer to operate in a special mode, in which it attempts to continue offering as much functionality as possible, despite known issues. For example, when set to On and the duplex motor is nonfunctional, the printer performs one-sided printing for a two-sided print job.

Menu item	Description
Device Operations Minimum Copy Memory 20MB* 30MB 50MB 80MB 100MB	Set the memory allocation for storing copy jobs. **Note:** The values appear only if the amount of installed DRAM is at least twice the amount of the value.
Device Operations Clear Custom Status	Erase user-defined strings for the Default or Alternate custom messages.
Device Operations Clear all remotely-installed messages	Erase messages that were remotely installed.
Device Operations Automatically Display Error Screens On* Off	Show existing error messages on the display after the printer remains inactive on the home screen for a length of time equal to the Screen Timeout setting.
Device Operations Honor orientation on fast path copy Off* On	Enable the printer to use the Orientation setting under the Copy menu when sending quick copy jobs.
Scanner Configuration Scanner Manual Registration Front ADF Registration Rear ADF Registration Flatbed Registration	Manually register the flatbed and ADF after replacing the ADF, scanner glass, or controller board.
Scanner Configuration Edge Erase ADF Edge Erase 0–6 (3*) Flatbed Edge Erase 0–6 (3*)	Set the size, in millimeters, of the no-print area around an ADF or flatbed scan job.
Scanner Configuration Disable Scanner Enabled* Disabled ADF Disabled	Disable the scanner if it is not working properly.

Menu item	Description
Scanner Configuration Scanner Manual Registration Print Quick Test	Print a test page that shows the scanner margin settings.
Scanner Configuration Tiff Byte Order CPU Endianness* Little Endian Big Endian	Determine the byte order of a TIFF-formatted scan output.
Scanner Configuration Exact Tiff Rows Per Strip On* Off	Set the RowsPerStrip tag value of a TIFF-formatted scan output.

Note: An asterisk (*) next to a value indicates the factory default setting.

Entering Invalid engine mode

This mode allows the printer to load the correct firmware code.

1. Turn off the printer.
2. From the control panel, press and hold the **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 boot from a secondary set of instructions and flash firmware code. While in this mode, you can only flash firmware code through a USB cable directly connected to a PC.
Depending on your printer model, do any of the following:

For LED display

1. Turn off the printer.
2. Open the front door.
3. Press and hold the **Stop** button.
4. Turn on the printer.
5. When all the icons flash, release the button.

For 2-line display

1. Turn off the printer.
2. Press and hold the **OK** and **Back** buttons.
3. Turn on the printer.
4. When the display shows the following icon, release the buttons.



For 2.4-, 4.3-, 7-, and 10-inch displays with number pads

1. Turn off the printer.
2. Press and hold the **2**, **7**, and **8** buttons.
3. Turn on the printer.
4. When the display shows the following icon, release the buttons.



For 2.8-, 4.3-, 7-, and 10-inch displays without number pads

1. Turn off the printer.
2. Open tray 1.

   > **Note:** Make sure that paper is loaded in the tray.

3. Turn on the printer.
4. When an ellipses appears on the upper-left corner of the display, close tray 1.

Note: If tray 1 is not closed, then the printer boots normally.

Service Engineer menu

Entering the Service Engineer (SE) menu

Using the control panel

1. Turn on the printer.
2. When the home screen appears, press *** * 411** on the control panel.

Using the Embedded Web Server

1. Obtain the printer IP address. Do either of the following:
   a. Locate the IP address at the top of the printer display.
   b. From the control panel, navigate to **Settings › Network/Ports › Network Overview › IPv4**.
2. Open a web browser, type **`http://printer_IP_address/se`**, and then press **Enter**.

General SE Menu

- Capture Logs to USB Drive

  Note: This setting allows you to save a log file to a USB drive.

- Code Versions
- Debug Level

Network SE Menu

Enter the SE menu, and then select **Network SE Menu**.

Note: Use these settings as directed by the next level of support.

Top-level menu	Intermediate menu
HISTORY	• Print History • Mark History

Top-level menu	Intermediate menu
MAC	• Set Card Speed • LAA • Keep Alive
NPAP	Print Alerts
TCP/IP	• DHCP Request Options • netstat • arp • Allow SNMP Set • MTU • Meditech Mode • RAW LPR Mode • Garp Interval
Wireless Settings	• Wireless Performance Enhancement • Unset Wireless Region
Ping Test	• Ping Address • Attempts • Packet Size • Ping
Other Actions	• ifconfig • IPtables [Firewall Dump] • IP6tables [Firewall Dump] • IPsec Dump
Enable DHCPCD Debugging	N/A
Enable wpa-supplicant Debugging	N/A
Enable Ethernet Gigabit	N/A

Fax SE Menu

Use this menu to help resolve fax transmission and reception issues.
Enter the SE menu, and then touch **Fax SE Menu**.

Note: Use these settings as directed by the next level of support.

Top-level menu	Intermediate menu
Agency Test Menu	• Go Off Hook • Ring Detect • Generate Tones • Modulations
Fax Settings	• Fax Modulations • FOIP Settings • Miscellaneous Settings • Reset Fax Settings
Modem Settings	• Caller ID Pattern **Note:** Changing the value of this setting also changes the value of the Caller ID setting in the Fax Settings. • Pulse Dial Type • Disable Sending CRP
Fax logs	• Print all T30 Logs • Print CallerID Log • Print Call Log • Print Fax Settings • Print Job Log • Print All T30 Log Errors • Print All Auto Captured Logs On • Print T38 Trace Log • Clear T38 Trace Log
Reboot System	N/A

Scanner SE Menu

Enter this setting to view the calibration data.

Collecting printer history and firmware logs

Retrieve a comprehensive list of logs required for escalation purposes and more in-depth troubleshooting.

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

   Note: Find the printer IP address in either of the following locations:
   - At the top of the printer display
   - On the printer control panel, under **Settings › Network/Ports › Network Overview › IPv4**

2. Collect the printer information.
   - To collect printer history, click **History Information**, copy all information, and then save it as a text file.
   - To collect firmware logs, click **Logs Gzip Compressed**.

     Note: A **logs.tar.gz** file is saved in the Downloads folder. Saving the file may take several minutes. If a **logs.tar.gz** file already exists in the Downloads folder, rename the new file.

Reset Device

Erase nonvolatile memory, device and network settings, security settings, and embedded solutions.

Notes

- This menu is available only in FW 221.112 or later.
- To enable the menu, set **Reset Device Modes** to **Allow with FAC** or **Allow**. From the control panel, navigate to **Settings › Security › Miscellaneous › Reset Device Modes**.

Depending on your printer model, do any of the following to enter the menu and reset the printer.

- For 2.4-, 4.3-, 7-, or 10-inch display, select *** * 7 3**, select **OK**, and then select **Out of Service Erase**.
- For 2.8-inch display, select the **Back, Back, Home, Start** buttons in sequence, and then select **Out of Service Erase**.
- For 2-line display, select the **Back, Left, Back, Right** buttons in sequence, and then select **Out of Service Erase**.

Parts removal

Important removal information

Removal precautions

CAUTION—SHOCK HAZARD
The low-voltage power supply (LVPS) and the high-voltage power supply (HVPS) may have residual voltage present. To avoid the risk of electrical shock, do not touch their circuit components or the solder side of the board. Only handle them by their outer edges or metal housing.

CAUTION—SHOCK HAZARD
This product uses an electronic power switch. It does not physically disconnect the input AC voltage. To avoid the risk of electrical shock, always remove the power cord from the printer when removal of the input AC voltage is required.

CAUTION—SHOCK HAZARD
To avoid the risk of electrical shock and to prevent damage to the printer, remove the power cord from the electrical outlet and disconnect all connections to any external devices before you connect or disconnect any cable, electronic board, or assembly.

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.

CAUTION—PINCH HAZARD
To avoid the risk of a pinch injury, use caution in areas marked with this label. Pinch injuries may occur around moving parts, such as gears, doors, trays, and covers.

Précautions de retrait

CAUTION—SHOCK HAZARD
Une tension résiduelle peut être présente dans le bloc d'alimentation basse tension (LVPS) et le bloc d'alimentation haute tension (HVPS). Pour éviter tout risque d'électrocution, ne touchez pas les composants du circuit ou le côté soudure de la carte. Tenez-les uniquement par leurs extrémités ou le boîtier en métal.

CAUTION—SHOCK HAZARD
Ce produit utilise un commutateur d'alimentation électronique. Il ne déconnecte pas physiquement la tension d'alimentation CA. Pour éviter tout risque d'électrocution, débranchez toujours le cordon d'alimentation de l'imprimante lorsque vous devez déconnecter la tension d'alimentation CA.

CAUTION—SHOCK HAZARD
Pour éviter tout risque d'électrocution et éviter d'endommager l'imprimante, débranchez le cordon d'alimentation de la prise électrique et déconnectez toute connexion à tout périphérique externe avant de brancher ou débrancher des câbles ou circuits et assemblages électroniques.

CAUTION—HOT SURFACE
L'intérieur de l'imprimante risque d'être brûlant. pour réduire le risque de brûlure, laissez la surface ou le composant refroidir avant d'y toucher.

CAUTION—PINCH HAZARD
Pour éviter tout risque de blessure par pincement, agissez avec précaution au niveau des zones signalées par cette étiquette. Les blessures par pincement peuvent se produire autour des pièces mobiles telles que les engrenages, portes, tiroirs et capots.

Precauciones durante la extracción

CAUTION—SHOCK HAZARD
La fuente de alimentación de bajo voltaje (LVPS) y la fuente de alimentación de alto voltaje (HVPS) pueden presentar voltaje residual. Para evitar el riesgo de descarga eléctrica, no toque los componentes del circuito ni el lateral soldado de la placa. Manipule solo los bordes exteriores o la carcasa metálica.

CAUTION—SHOCK HAZARD
Este producto utiliza un interruptor de corriente electrónico. No desconecta físicamente la entrada de voltaje de CA. Para evitar el riesgo de descarga eléctrica, desenchufe siempre el cable de alimentación de la impresora cuando sea necesario retirar la entrada de voltaje de CA.

CAUTION—SHOCK HAZARD
Para evitar el riesgo de descargas eléctricas y daños en la impresora, retire el cable de alimentación de la toma eléctrica y desconecte todas las conexiones a dispositivos externos antes de conectar o desconectar cualquier cable, placa electrónica o conjunto.

CAUTION—HOT SURFACE
El interior de la impresora podría estar caliente. Para evitar el riesgo de heridas producidas por el contacto con un componente caliente, deje que la superficie se enfríe antes de tocarlo.

CAUTION—PINCH HAZARD
Para evitar el riesgo de lesión por atrapamiento, preste atención en las áreas marcadas con esta etiqueta. Las lesiones por atrapamiento se pueden producir en torno a partes móviles, tales como engranajes, puertas, bandejas y cubiertas.

Vorsichtsmaßnahmen bei der Demontage

CAUTION—SHOCK HAZARD
Im Niederspannungsnetzteil (LVPS) und Hochspannungsnetzteil (HVPS) liegt unter Umständen Restspannung vor. Um das Risiko eines elektrischen Schlags zu vermeiden, berühren Sie keine umliegenden Bauteile oder die Lötseite der Platine. Fassen Sie sie nur an den Außenkanten oder am Metallgehäuse an.

CAUTION—SHOCK HAZARD
Dieses Produkt verwendet einen elektronischen Leistungsschalter. Er trennt die Eingangswechselspannung nicht physikalisch. Um das Risiko eines elektrischen Schlags zu vermeiden, ziehen Sie stets das Netzkabel vom Drucker ab, wenn eine Abtrennung der Eingangswechselspannung erforderlich ist.

CAUTION—SHOCK HAZARD
Um das Risiko eines elektrischen Schlags und Schäden am Drucker zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose und trennen Sie alle Verbindungen zu jeglichen externen Geräten, bevor Sie Kabel, Elektronikplatinen oder Baugruppen einstecken oder abziehen.

CAUTION—HOT SURFACE
Das Innere des Druckers kann sehr heiß sein. Vermeiden Sie Verletzungen, indem Sie heiße Komponenten stets abkühlen lassen, bevor Sie ihre Oberfläche berühren.

CAUTION—PINCH HAZARD
Um das Risiko einer Quetschung zu vermeiden, gehen Sie in Bereichen, die mit diesem Etikett gekennzeichnet sind, mit Vorsicht vor. Quetschungen können im Bereich von beweglichen Komponenten auftreten, wie z. B. Zahnrädern, Klappen, Fächern und Abdeckungen.

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.

Critical information for controller board or control panel replacement

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.

CAUTION—POTENTIAL INJURY
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.

CAUTION—POTENTIAL INJURY
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.

CAUTION—POTENTIAL INJURY
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.

Warning—Potential Damage
Observe all precautions when handling ESD sensitive parts. See Handling ESD-sensitive parts on page 278.

Warning—Potential Damage
Carefully remove cables and connectors. Make sure they are not damaged.

Note: Some models have eSF solutions, it is recommended to back up the eSF solutions and settings before replacing the controller board. See Backing up eSF solutions and settings on page 289.

Warning—Potential Damage
To avoid damaging the part or experience NVRAM mismatch issues, replace only one of the following components at a time:

- Control panel
- Controller board

To replace a component and to test whether the problem is resolved:

1. Replace the affected component.

   Warning—Potential Damage
   Do not perform a Power-On Reset (POR) until the problem is resolved. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

2. Enter the Diagnostics Menu. The Diagnostics Menu allows you to temporarily use the replacement part.

   Warning—Potential Damage
   Some printers will perform a POR automatically if the Diagnostics Menu is not opened within five seconds. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

3. Use the Diagnostics Menu to test the replacement part. Do a feed test to check if the problem is resolved.
   - If the problem is not resolved—Turn off the printer, and then reinstall the old part.
   - If the problem is resolved—Perform a POR.
   - If NVRAM error occurs during the replacement, go to NVRAM mismatch failure service check on page 227

Restoring the printer configuration

Restore the printer to its correct configuration to complete the replacement service. Use the Service Restore Tool utility to download the software bundle, and then flash the printer settings and embedded solutions.

Notes

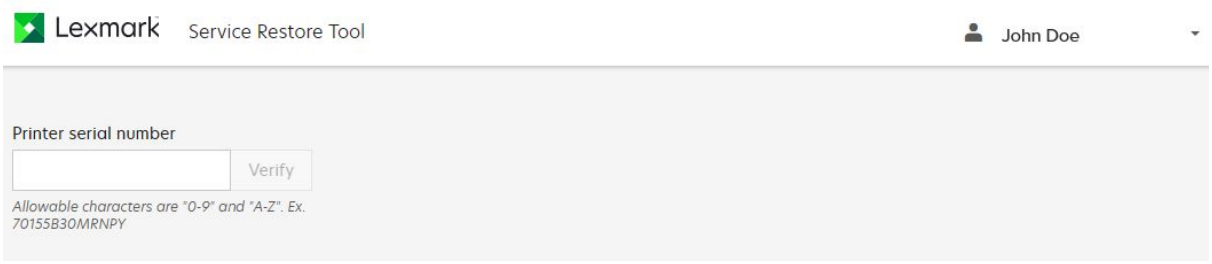
- If you do not have access to the Service Restore Tool, then contact your next level of support.
- The software bundle contains the latest version of the firmware, applications, and software licenses from the Lexmark CFM and Package Builder. The printer firmware may be at a different level from what is used before replacement of the part.

Using the Service Restore Tool

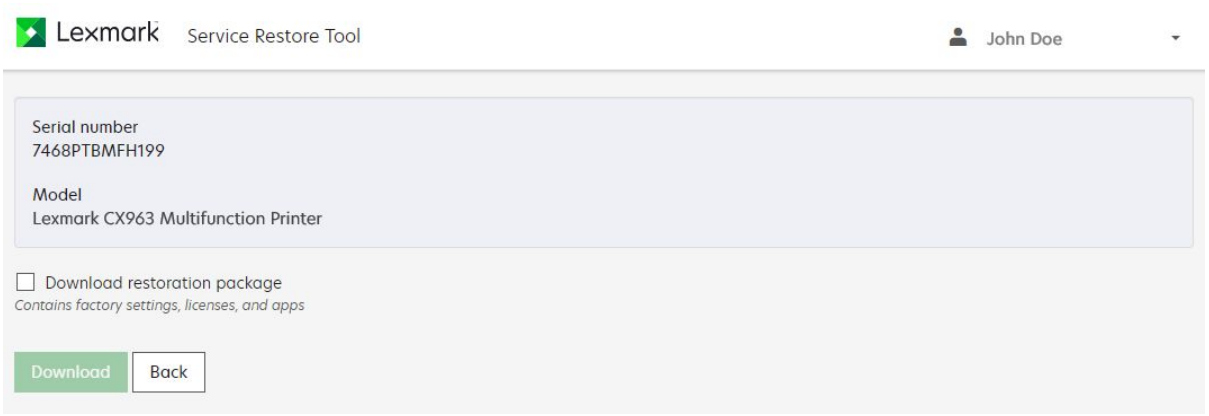
1. Go to https://iss.lexmark.com/cdp/service-restore-tool/.
2. Log in using your Lexmark or partner login.

   If your login fails, then contact your next level of support.

3. Enter the printer serial number, and then submit the information.

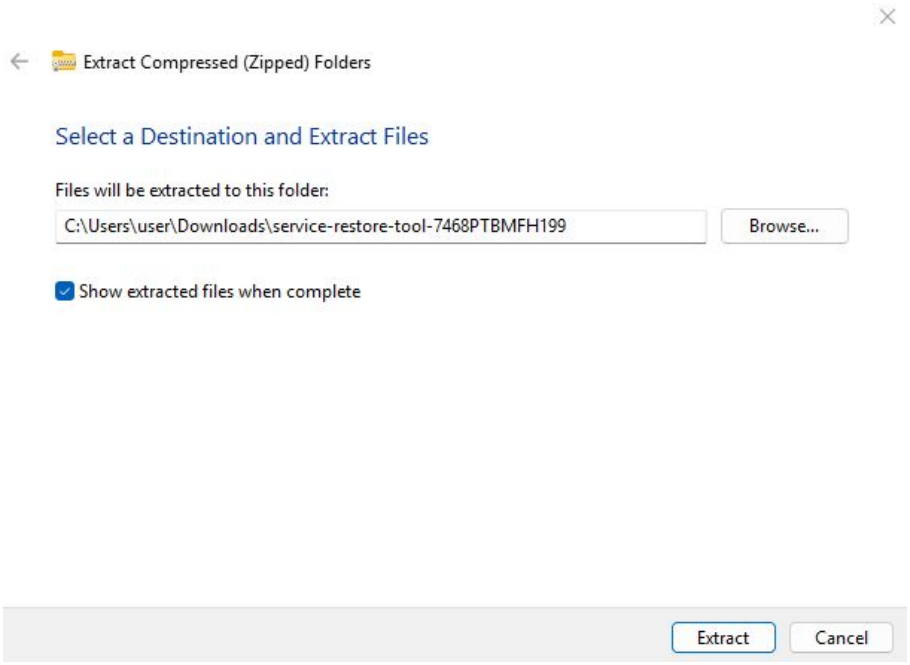


Note: Make sure that the model name and serial number that appear on the verification screen is correct.



4. Click **Download restoration package**, and then click **Download**.
5. Save the zip file.

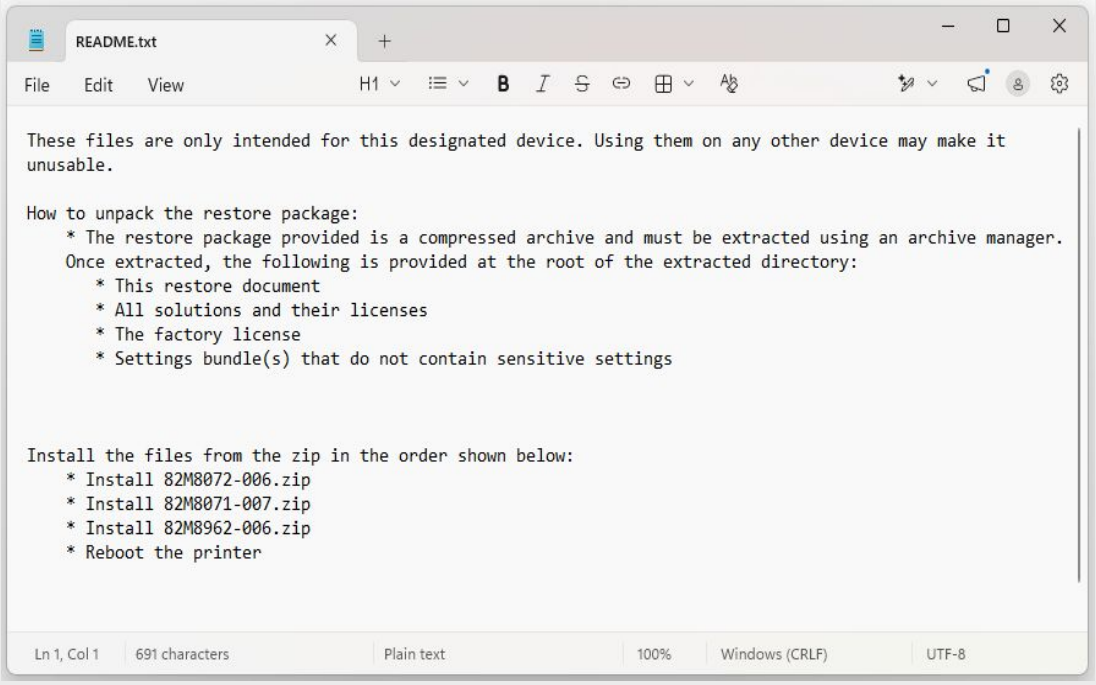
Note: Make sure that the serial number in the zip file matches the serial number of the printer being restored.



6. Extract the contents of the service restore tool, 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. Restart the printer only if the file says so.



- To load the zip files that are extracted from Service Restore Tool, see Restoring solutions, licenses, and configuration settings on page 282.

7. If the printer had Lexmark eSF apps previously installed, then confirm from the customer if all the eSF apps have been installed after performing the installation instructions in the *Readme* file.

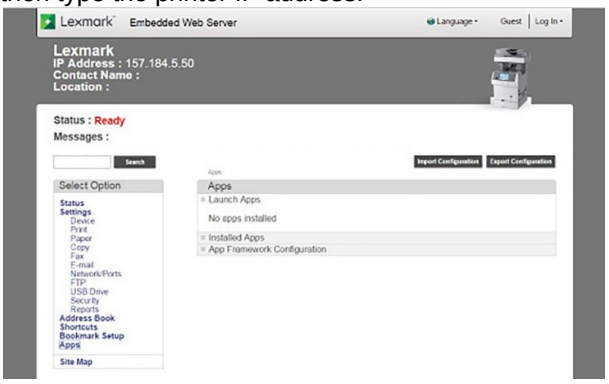
Notes

- 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 appears after you restart the printer, then contact the next level of support.

Restoring solutions, licenses, and configuration settings

To load extracted files from the Service Restore Tool, do the following:

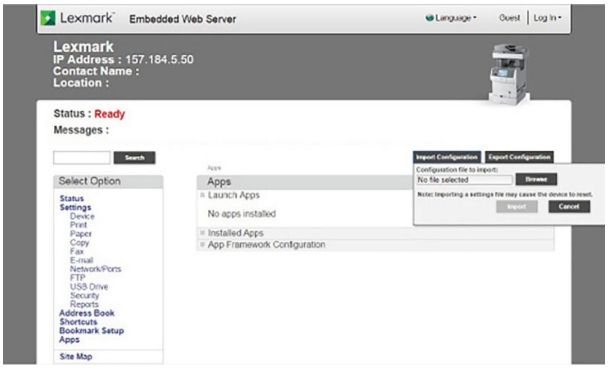
1. Open a web browser, and then type the printer IP address.



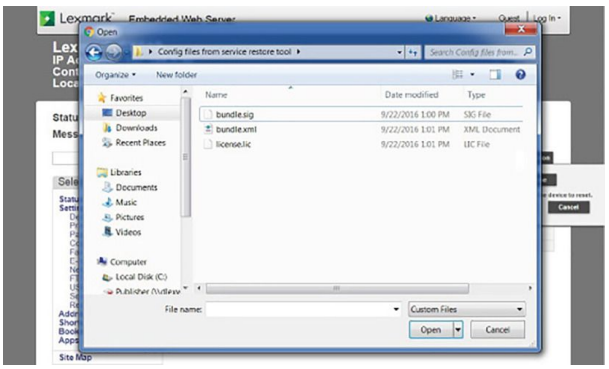
Notes

- You can find the IP address at the top of the printer display.
- Make sure that the printer and computer are connected to the same network.

2. Click **Import Configuration**, and then click **Browse**.



3. Navigate to the folder that contains the extracted files from the Service Restore Tool.



4. Select a file, and then click **Import**.
5. Repeat step 2 through step 4 for the remaining files.

Printer firmware instructions

Checking the printer firmware version

Using the Embedded Web Server

1. Open a web browser, and then type the printer IP address in the address field.

   Notes
   - You can find the IP address at the top of the printer display.
   - Make sure that the printer and computer are connected to the same network.

2. Click **Reports › Device › Device Information**.
3. Look for **Base**.

   Note: The firmware version appears as sets of letters and numbers separated by periods. For example, ABCDE.123.123.

Using the control panel

1. From the control panel, navigate to **Settings › Device › About this Printer**.
2. Look for **Firmware Version**.

   Note: The firmware version appears as sets of letters and numbers separated by periods. For example, ABCDE.123.123.

Downloading the printer firmware

Note: Download the firmware only if you plan to update it using the Embedded Web Server with a firmware flash file or a flash drive.

1. Go to www.lexmark.com/downloads, and then click **Drivers & downloads**.
2. In the **Search by Device Model** field, type the printer model, and then click **Find Drivers & Downloads**.
3. In the **Recommended Firmware** section, **Download Firmware Package**.
4. Accept the End-User License Agreement, and then click **Start Download**.

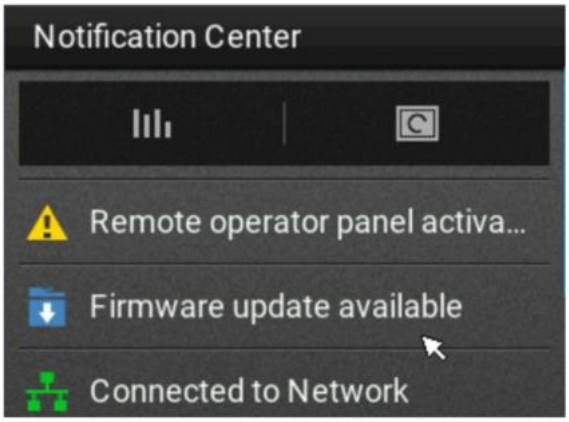
Updating firmware

Updating the firmware using the control panel

Keeping your printer firmware updated helps it run efficiently and securely. Firmware updates can improve performance, add new features, fix firmware or hardware issues, and enhance the security of your printer and network.

Using Notification Center

1. From the home screen, select the notification icon to go to the Notification Center screen.
2. Select **Firmware update available**.



3. Select **Install now**.



The printer restarts automatically after the update.

Using the Settings menu

1. From the control panel, navigate to **Settings › Device**.
2. Depending on your printer model, do either of the following:
   - Select **Firmware Update › Check for updates**.
   - Select **Update firmware › Check for updates now**.
3. If an update is available, then select **Install now**.

The printer restarts automatically after the update.

Updating the firmware using the Embedded Web Server

Keeping your printer firmware up-to-date helps it runs efficiently and securely. Firmware updates can improve performance, add new features, fix firmware or hardware issues, and enhance the security of your printer and network.

Using the update button

1. Open a web browser, and then type the printer IP address in the address field.

   Notes
   - You can find the IP address at the top of the printer display.
   - Make sure that the printer and computer are connected to the same network.

2. Click **Device**.
3. Depending on your printer model, do either of the following:
   - Select **Firmware Update › Check for updates**.

- Select **Update firmware › Check for updates now**.

> **Note:** If **Firmware Update** or **Update firmware** does not appear, make sure that you are logged in to the printer as an administrator.

4. If an update is available, then select **Install now**.

The printer restarts automatically after the update.

Using the firmware flash file (.fls)

Before you begin, make sure that:

- The printer and computer are connected to the same network.
- You have downloaded the firmware file (.fls). For more information, see Downloading the printer firmware on page 284.

1. Open a web browser, and then type the printer IP address in the address field.

> **Notes**
> - You can find the IP address at the top of the printer display.
> - Make sure that the printer and computer are connected to the same network.

2. Click **Device**.
3. Click **Firmware Update**.

> **Note:** If **Firmware Update** or **Update firmware** does not appear, make sure that you are logged in to the printer as an administrator.

4. In the **Update Firmware from File** section, click **Browse**.
5. Search, and then select the **.fls** file.
6. Click **Upload**.

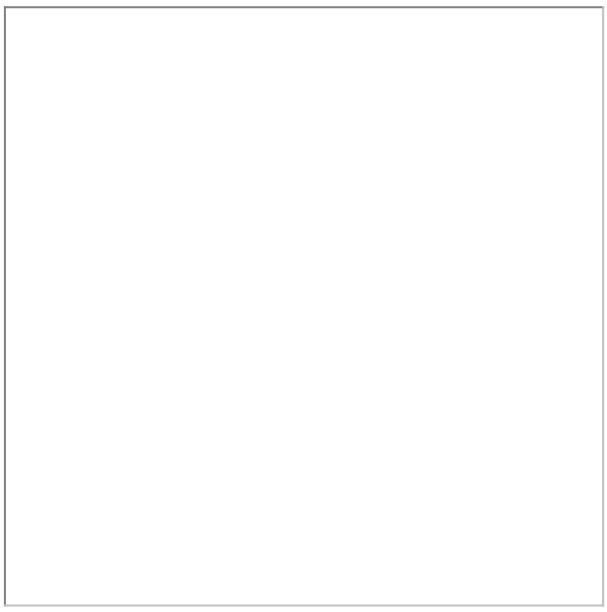
The printer restarts automatically after the update.

Updating the firmware using a flash drive

Before you begin, make sure that:

- You have downloaded the firmware to the flash drive. For more information, see Downloading the printer firmware on page 284.
- The flash drive is formatted to FAT32.

1. Insert the flash drive into the front USB port of the printer.



The flash drive contents appear automatically on the display. If they do not, select **USB Drive** on the control panel.

2. Locate and select the **.fls** file.
3. Select **Update Code**.

The printer restarts automatically after the update.

Flashing the printer firmware

Warning—Potential Damage
Download the correct firmware file for the printer model. Flashing an incorrect file in **Recovery** or **Invalid Engine** mode can damage the printer and prevent it from starting.

Note: To download the firmware, see **conkeyref: xref/downloading-the-printer-firmware**.

For a Windows computer and a network-connected printer

The printer must be connected to the network using an Ethernet cable.

1. Restart the printer in **Recovery Mode**. For more information, see Entering Recovery mode.

   Note: These instructions also apply to printers in **Invalid Engine** mode.

2. Obtain the printer IP address.

   Notes
   - The printer may take time to obtain an IP address.
   - The IP address may differ from the previously assigned address.

3. Download winbidi.exe and save it to the same location as the firmware file.
4. Open the command prompt on the computer.

5. Change to the directory that contains the firmware file, and then type **`winbidi.exe <printer_ip_address:9400> <firmware_file>`**.

   Note: This command uses **winbidi.exe** to send the firmware file through port **9400**.

   For example, **`winbidi.exe 192.168.100.100:9400 CSTZJ.223.308.fls`**, where:
   - ***`192.168.100.100`*** is the printer IP address.
   - ***`CSTZJ.223.308.fls`*** is the firmware file.

The printer display shows that the printer is reading the firmware file. The printer restarts automatically after receiving the complete file.

For a Windows computer and a USB-connected printer

The printer must be connected to the computer using a USB cable.

1. Restart the printer in **Recovery Mode**. For more information, see Entering Recovery mode.

   Note: These instructions also apply to printers in **Invalid Engine** mode.

2. Download winbidi.exe and save it to the same location as the firmware file.
3. From the computer, open the command prompt.
4. Change to the directory that contains the firmware file, and then type **`winbidi.exe <printer_port> <firmware_file>`**.

   Note: This command uses **winbidi.exe** to send the firmware file through the printer port, usually **USB1**.

   For example, **`winbidi.exe USB1 CSTZJ.223.308.fls`**, where:
   - ***`USB1`*** is the printer port.
   - ***`CSTZJ.223.308.fls`*** is the firmware file.

The printer display shows that the printer is reading the firmware file. The printer restarts automatically after receiving the complete file.

For a Mac or Linux computer and a network-connected printer

The printer must be connected to the network using an Ethernet cable.

1. Restart the printer in **Recovery Mode**. For more information, see Entering Recovery mode.

   Note: These instructions also apply to printers in **Invalid Engine** mode.

2. Obtain the printer IP address.

   Notes
   - The printer may take time to obtain an IP address.
   - The IP address may differ from the previously assigned address.

3. Open the command prompt on the computer.

4. Change to the directory that contains the firmware file, and then type **nc <printer_ip> 9400 < <firmware_file>**.

   Note: This command uses Netcat, which is installed on Linux and Mac by default, to send the firmware file through port **9400**.

   For example, **nc *192.168.100.100* 9400 < *CSTZJ.076.308.fls***, where:
   - ***192.168.100.100*** is the printer IP address.
   - ***CSTZJ.076.308.fls*** is the firmware file.

The printer display shows that the printer is reading the firmware file. The printer restarts automatically after receiving the complete file.

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. Reset the printer into Invalid engine mode. See .
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: The size limit of the export file is 128 KB.

Importing eSF solutions and settings file

After replacing the controller board, import back to the printer the eSF solutions and settings that were exported.

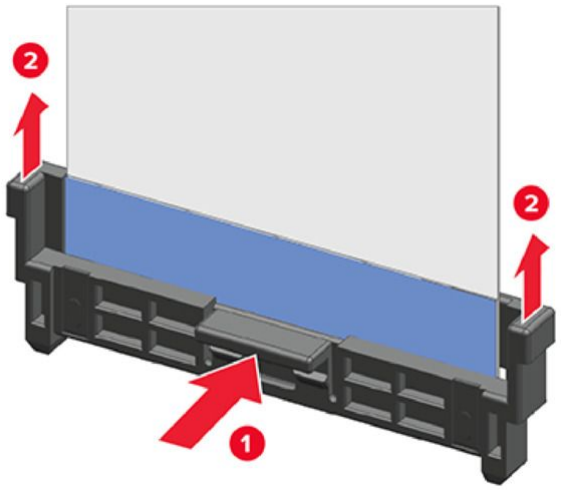
1. Reset the printer into Invalid engine mode. See .
2. Open a web browser, and then type the printer IP address.

   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**.

Disconnecting ribbon cables

Warning—Potential Damage
The ribbon cable and its socket may get damaged if it is not properly disconnected. When disconnecting the cable, hold its connector and press its tab before unplugging it.



Ribbon cable connectors

Zero Insertion Force (ZIF) connectors

Zero Insertion Force (ZIF) connectors are used on the boards and cards used in this printer. Before inserting or removing a cable from these connectors, read this entire section. Great care must be taken to avoid damaging the connector or cable when inserting or removing the cable.

Warning—Potential Damage
Do not insert the cable so that the contacts are facing the locking actuator. The contacts always face away from the actuator.

Warning—Potential Damage
Do not insert the cable diagonally into the ZIF socket. This can cause damage to the contacts on the cable.

Warning—Potential Damage
Avoid using a fingernail, or sharp object to open the locking mechanism. This could damage the cable.

Warning—Potential Damage
Avoid pressing against the cable when opening the locking mechanism. This can also damage the cable.

These are the types of ZIF connectors used in this printer:

- Horizontal top contact connector
- Horizontal bottom contact connector
- Vertical mount contact connector
- Horizontal sliding connector

Horizontal top contact connector

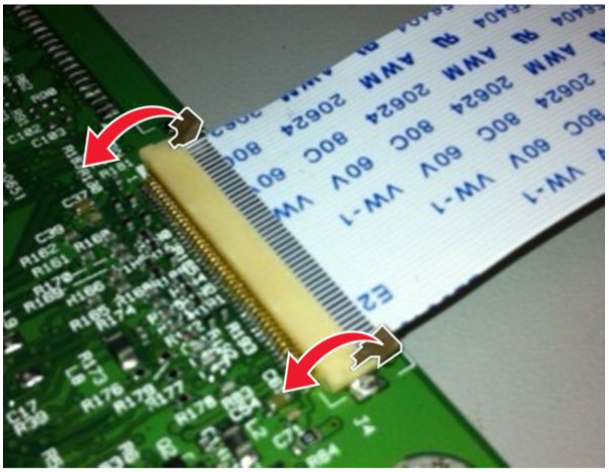
This FRU contains a horizontal top contact cable connector. Read the instructions before proceeding.

The horizontal top contact connector uses a back flip locking actuator to lock the ribbon cable into the Zero Insertion Force (ZIF) connector. The cable is inserted horizontally into the connector.

> **Warning—Potential Damage**
> When opening or closing this type of actuator, gently 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 of the actuator.

Removing a cable from the horizontal top contact connector

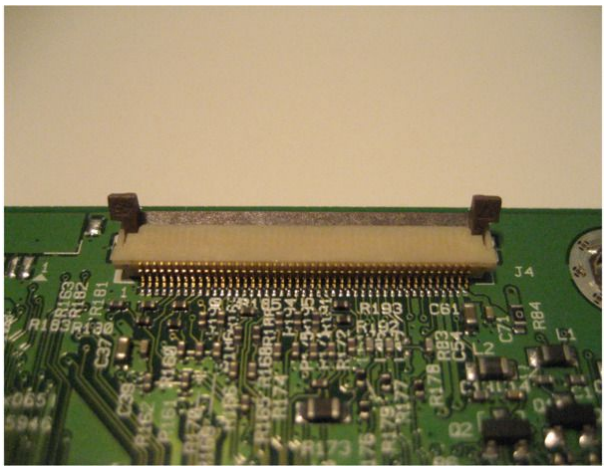
1. Place a finger at each end of the locking actuator, and then gently lift the actuator to the unlocked position.



2. Slide the cable out of the connector.

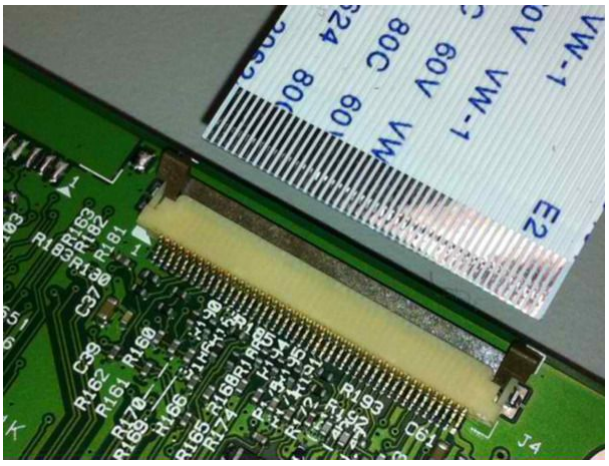
Inserting a cable into the horizontal top contact connector

1. When installing the cable, check the locking actuator to ensure it is in the unlocked position. The tabs on the ends of the actuator are vertical when the actuator is unlocked.

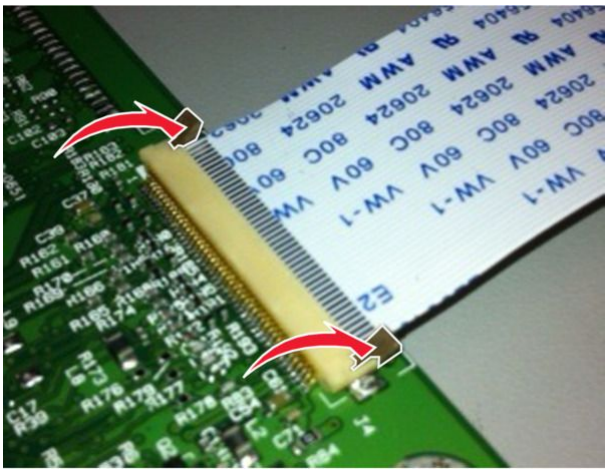


2. Insert the cable with the contacts on the cable facing up. Insert the cable on top of the actuator.

Note: Verify that the cable is installed squarely into the connector. If the cable is not squarely installed, then intermittent failures could occur.



3. Rotate the locking actuator to the locked position. The cable should not move while this step is performed. If the cable moves, open the actuator, reposition the cable, and then close the actuator to the down position.



Horizontal bottom contact connector

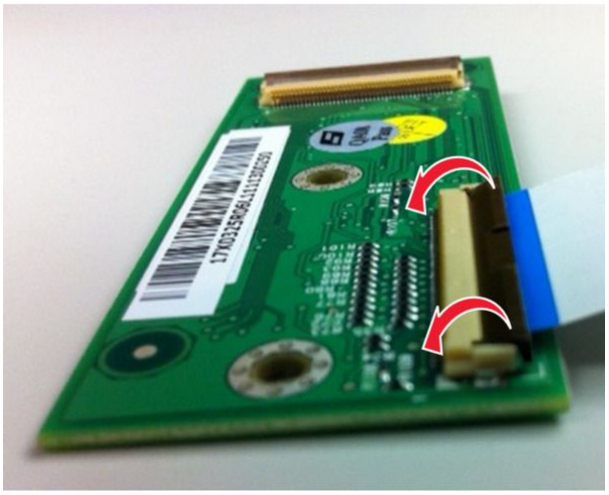
This FRU contains a horizontal bottom contact cable connector. Read the instructions before proceeding.

The horizontal bottom contact connector uses a flip locking actuator to lock the ribbon cable into the Zero Insertion Force (ZIF) connector. The cable is inserted horizontally into the 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. This could damage the ribbon cable. Do not close the actuator from the ends of the actuator.

Removing a cable from the horizontal bottom contact connector

1. Place two fingers towards each end of the locking actuator, and then gently lift the actuator to the unlocked position.



2. Slide the cable out of the connector.

Inserting a cable into the horizontal bottom contact connector

1. Check the actuator to verify it is in the open position.

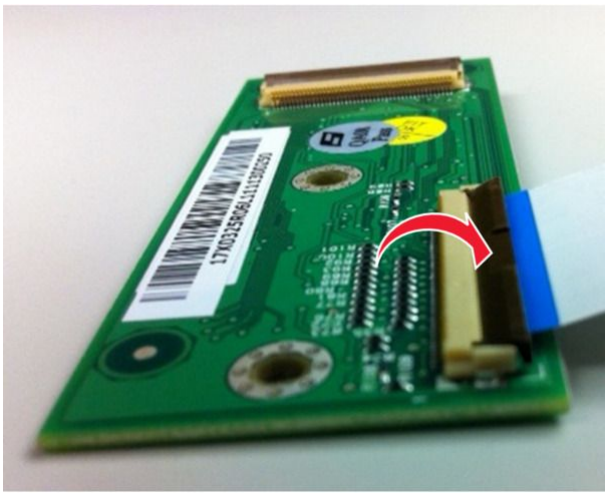


2. Insert the cable into the ZIF connector with the contacts facing downward and away from the locking actuator. The cable needs to be inserted below the actuator.

> **Note:** Verify that the cable is installed squarely into the connector. If the cable is not squarely installed, then intermittent failures could occur.



3. Place your finger in the middle of the actuator, and then rotate the locking actuator to the locked position.



Vertical mount contact connector

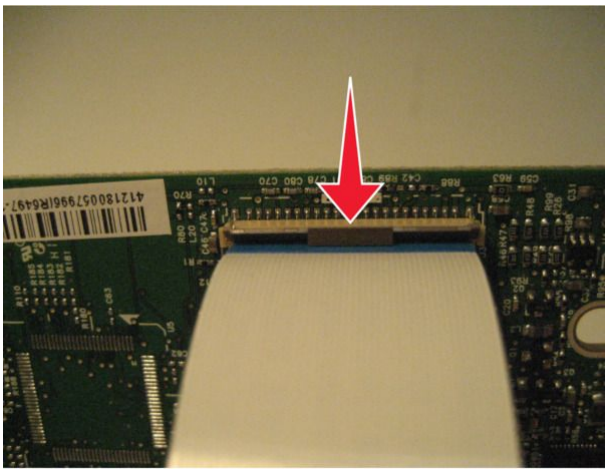
This FRU contains a vertical mount contact connector. Read the instructions before proceeding.

The vertical mount contact connector uses a back flip locking actuator to lock the ribbon cable into the Zero Insertion Force (ZIF) connector. The cable is inserted vertically into the 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. This could damage the ribbon cable. Do not close the actuator from the ends of the actuator.

Removing a cable from the vertical mount contact connector

1. Gently rotate the locking actuator from the center of the actuator to the unlocked position.



2. Slide the cable out of the connector.

Inserting a cable into the vertical mount contact connector

1. When installing the cable, check the locking actuator to verify it is in the open position.

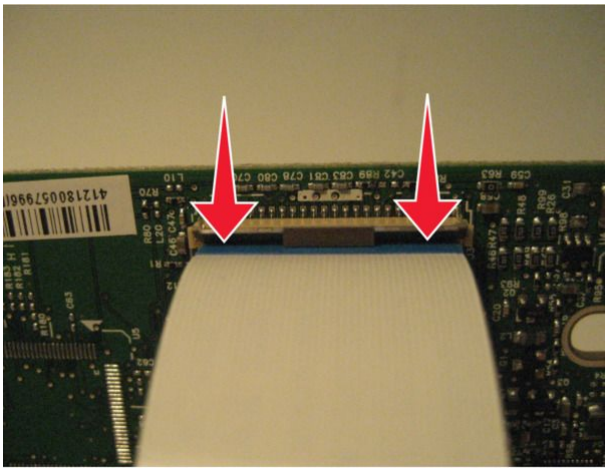


2. Insert the cable with the contacts on the cable away from the locking actuator. Insert the cable on top of the actuator.

> **Note:** Verify that the cable is installed squarely into the connector. If the cable is not squarely installed, then intermittent failures could occur.



3. Rotate the locking actuator to the locked position by pressing down on both ends of the actuator. The cable should not move when this step is performed. If the cable moves, open the actuator, reposition the cable, and then close the actuator to the down position.



Horizontal sliding contact connector

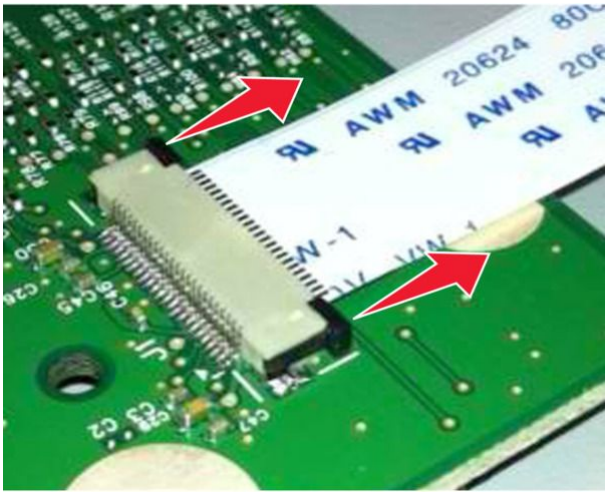
This FRU contains a horizontal sliding contact connector. Read the instructions before proceeding.

The horizontal sliding contact connector uses a slide locking actuator to lock the ribbon cable into the Zero Insertion Force (ZIF) connector. The cable is inserted horizontally into the 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. Damage to the cable or connector could occur.

Removing a cable from the horizontal sliding contact connector

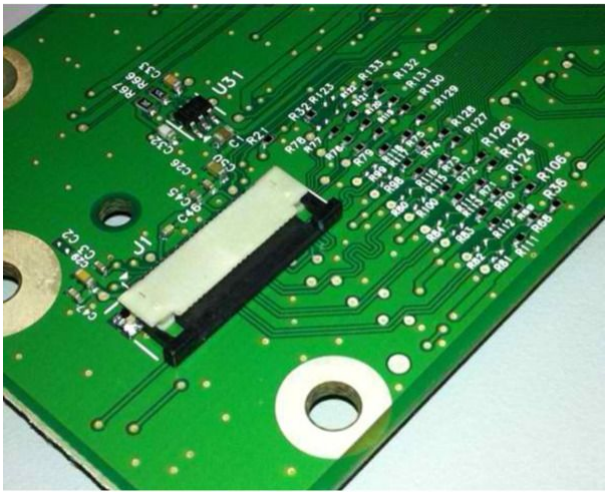
1. Simultaneously slide the two tabs located on the ends of the locking actuator away from the connector.



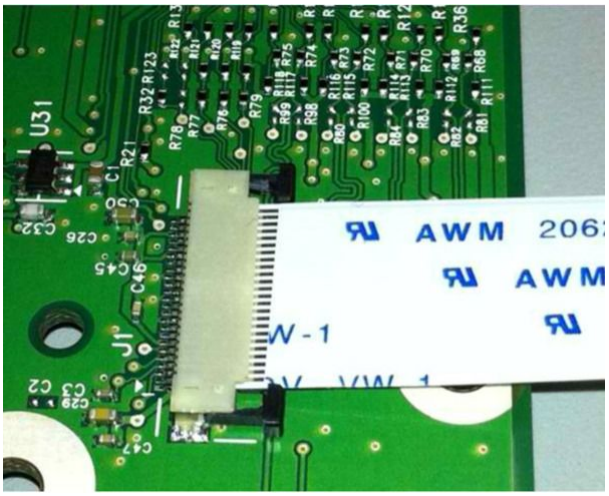
2. Slide the cable out of the connector.

Inserting a cable into the horizontal sliding contact connector

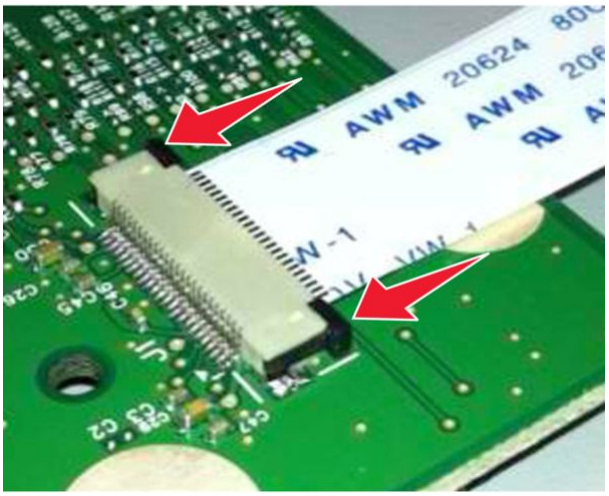
1. When installing the cable, check the locking actuator to verify it is in the open position. If you are opening the connector, pull back on both end tabs using equal force to avoid breaking the connector.



2. Insert the cable with the contacts on the cable facing away from the locking actuator. Insert the cable on top of the actuator.



3. Slide the locking actuator towards the connector, locking the cable into place. The cable should not move when this step is performed. If the cable moves, open the actuator, reposition the cable, and then close the actuator to the down position.



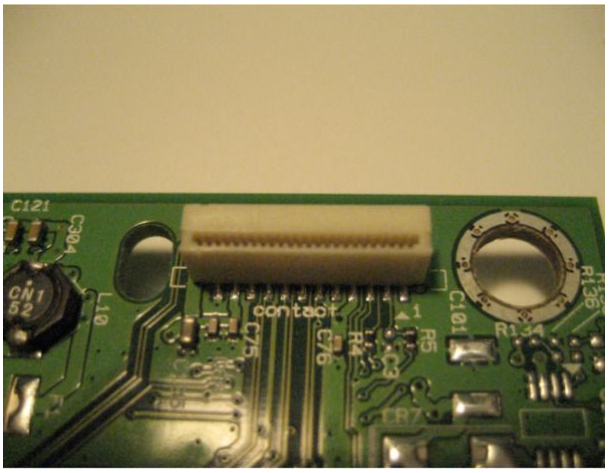
Low Insertion Force (LIF) connector

This FRU contains a Low Insertion Force (LIF) connector. Read the instructions before proceeding.

> **Warning—Potential Damage**
> When installing a cable into an LIF connector, care must be taken to avoid bending the edges of the cables and damaging the contacts on the cables.

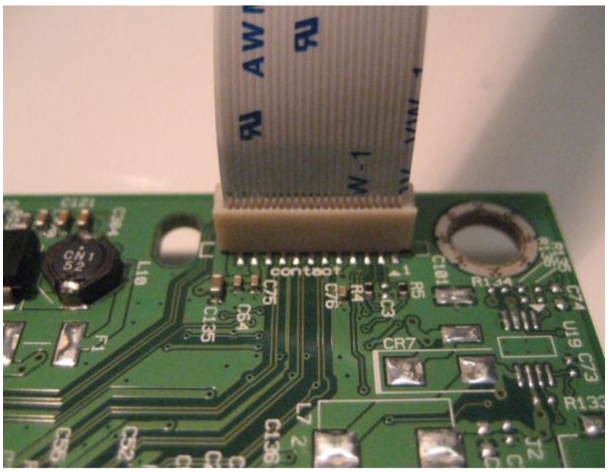
Inserting a cable into the LIF connector

1. Looking at the connector, take note on which side the contacts are located. Many boards will have the word “contacts” stamped on them to indicate which side of the LIF has the contacts. When looking at the board, take note that the contacts from the board to the connector are located on the side of the connector with the contacts.



2. Insert the cable squarely into the connector.

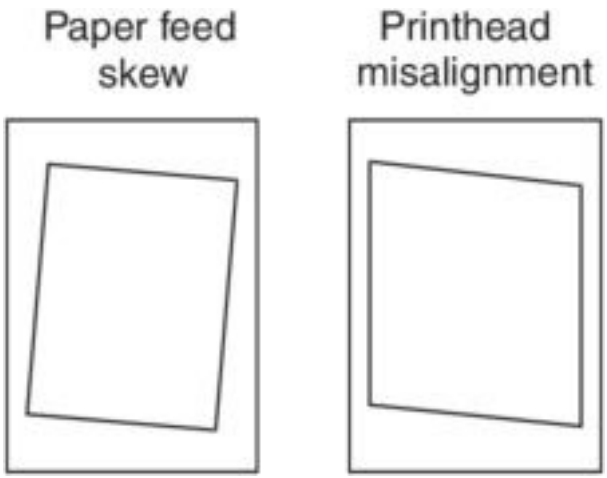
Note: Verify that the cable is installed straight into the connector. If the cable is not installed properly, then intermittent failures could occur.



Printhead assembly adjustment

A printhead must be correctly positioned after it has been removed. Use a sharp pencil or a small, flat-blade screwdriver to mark the location of the old printhead on the printer frame. Align the new printhead relative to the location of the old printhead.

Note: Skew is caused by a sheet being fed through the printer while misaligned. The entire image is rotated relative to the sheet edges. However, a mechanically misaligned printhead causes the horizontal lines to appear skewed, while the vertical lines remain parallel to the vertical edges. The skew cannot be adjusted. Check the pick tires for wear, the paper path for obstructions, the fuser for proper setting, and the tray paper guides for proper setting.

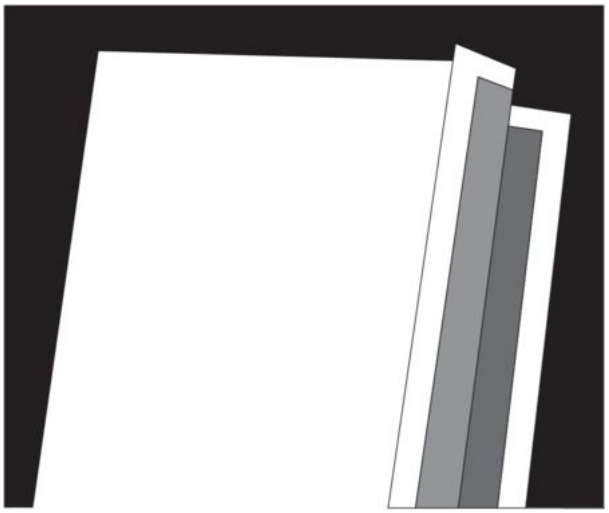


To adjust the printhead:

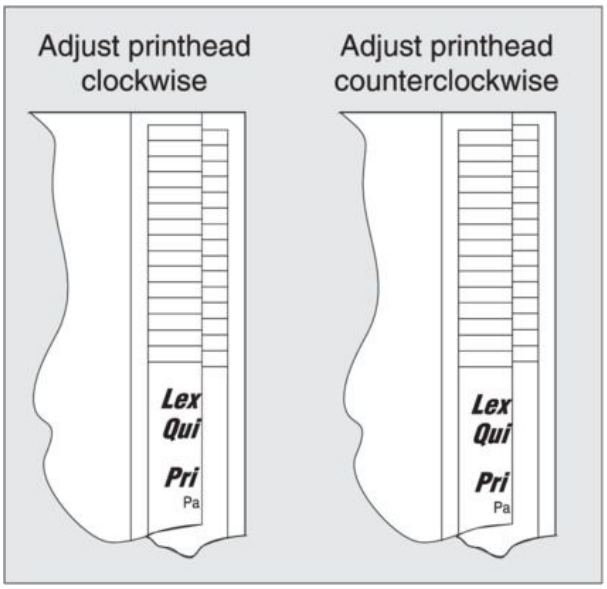
1. Perform a POR.
2. Enter the Diagnostics menu, and then print a Quick test page:

   Diagnostics Menu > Print Tests > Tray 1 > Single
3. Fold the printed test page on the left side so that a few millimeters of grid lines wrap around the outside of the fold.

4. Make a second vertical fold near the center so that the left side top edge aligns with the right side top edge.



5. If the grid lines of the right flap align below the corresponding lines on the left side, then adjust the printhead clockwise relative to the printer, and recheck. If the grid lines of the left flap align below the corresponding lines of the right side, then adjust the printhead counterclockwise.



6. Print another Quick test page, and check if adjustments are still needed.
7. After obtaining a properly adjusted image on the paper, tighten all the screws.

Note: If necessary, print a Quick test page again and perform the Registration adjust procedure to correct the skew and misalignments. See .**conkeyref: keys/registration-adjust**

Removal procedures

Keep the following tips in mind as you replace parts:

- Some removal procedures require removing cable ties. You must replace cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.

- Remove the toner cartridges, imaging kit, and trays before removing other printer parts. The imaging kit must be carefully set on a clean, smooth, and flat surface. It must also be protected from light while out of the printer.
- 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 with several screws, start all screws before the final tightening.
- For printers that have a soft power switch, make sure to unplug the power cord after powering off.

Importing a configuration file

Importing a configuration file lets you apply previously saved settings to your printer. This is useful when restoring a backup or setting up another printer with the same configuration.

1. Open a web browser, and then type the printer IP address in the address field.

   Notes
   - You can find the IP address at the top of the printer display.
   - Make sure that the printer and computer are connected to the same network.

2. In the Embedded Web Server, click **Import Configuration**.
3. Browse to the location where the file is saved.

   Note: Depending on the configuration that you selected, the files are saved in either ZIP or CSV format.

4. Click **Import**.

Exporting a configuration file

Exporting a configuration file lets you save the current settings of your printer to a file, which you can use as a backup or apply to another printer.

1. Open a web browser, and then type the printer IP address in the address field.

   Notes
   - You can find the IP address at the top of the printer display.
   - Make sure that the printer and computer are connected to the same network.

2. In the Embedded Web Server, click **Export Configuration**.
3. Select a configuration to export.

   Note: Depending on the configuration that you selected, the files are exported in either ZIP or CSV format.

Left side removals

Left cover removal

1. Remove the screw (A).



2. Open the front door.
3. Release the two latches (B), and then disengage the middle front part (C) of the cover from the front door.

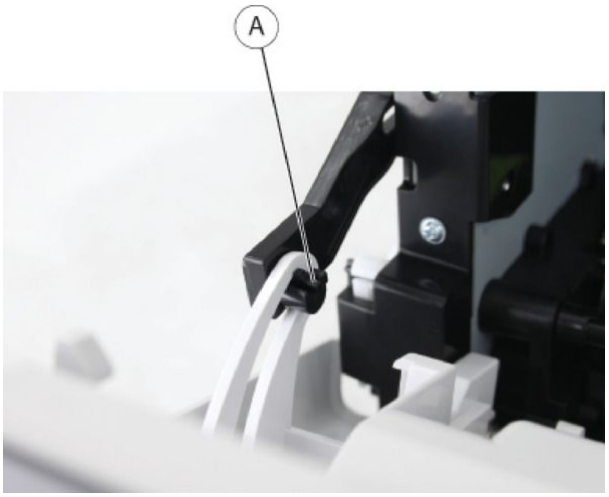
> **Warning—Potential Damage**
> The ADF might swing open while you position the printer on its side.



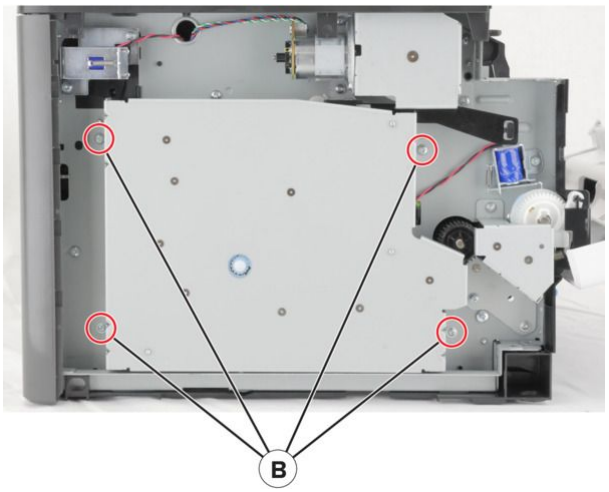
4. Remove the cover.

Main drive gearbox removal

1. Remove the left cover. See .Left cover removal on page 302
2. Release the latch (A), and then detach the link.



3. Remove the four screws (B).



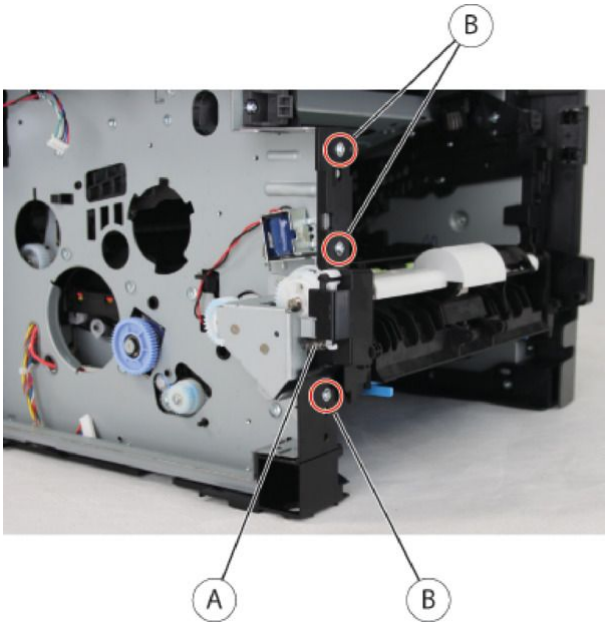
4. Disconnect the cable from the main drive gearbox.
5. Remove the gearbox.

> **Warning—Potential Damage**
> Do not lose the fuser gear (C) and spring (D).

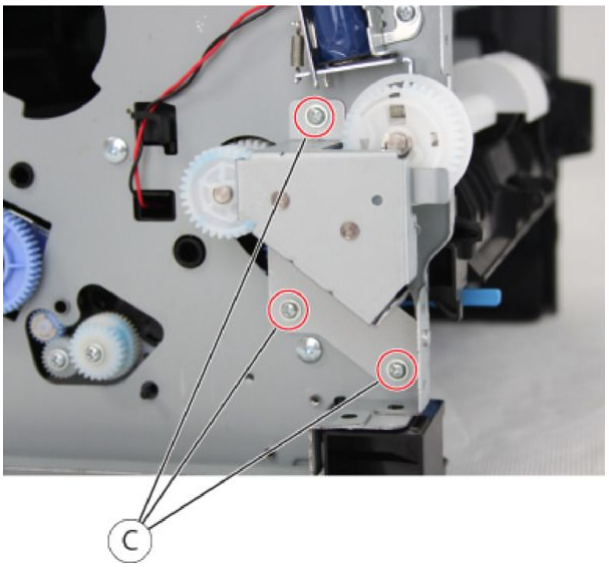


MPF gearbox removal

1. Remove the front door. See MPF with front access cover removal.
2. Remove the left cover. See Left cover removal on page 302.
3. Remove the main drive gearbox. See Main drive gearbox removal on page 303.
4. Disconnect the spring (A).
5. Remove the three screws (B) to loosen the mount.

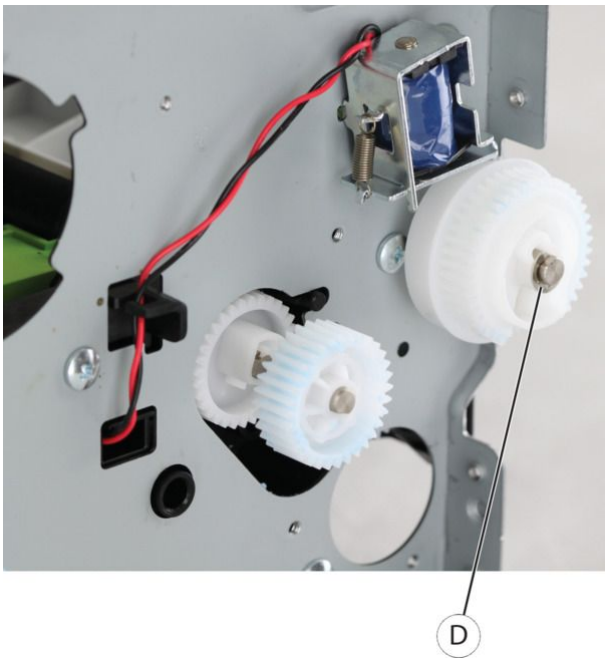


6. Remove the three screws (C) and the bracket.

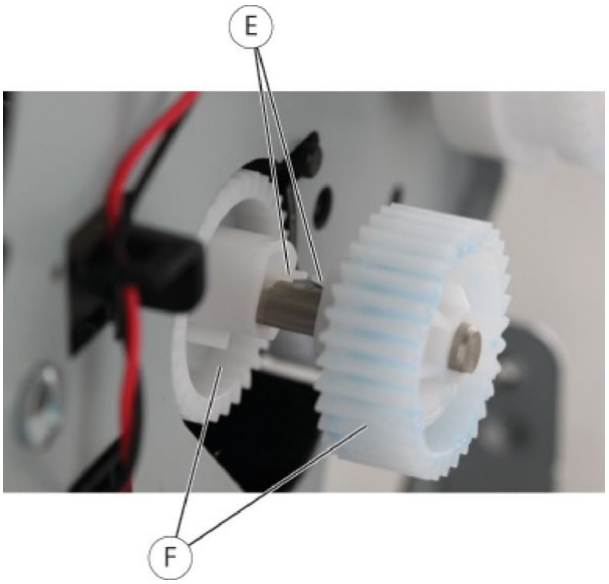


7. Remove the E-clip (D), and then remove the gear.

> **Note:** The solenoid may hinder removing the gear.

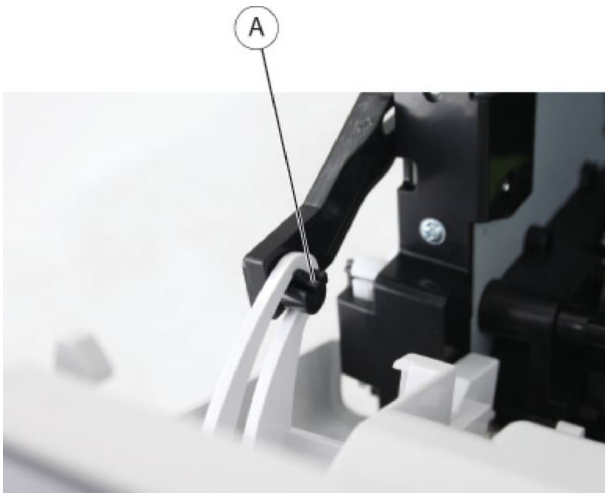


8. Release the two latches (E), and then remove the gears (F).

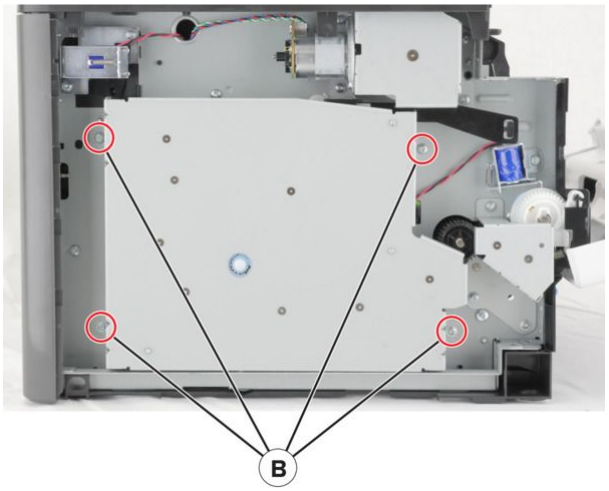


Fuser actuator removal

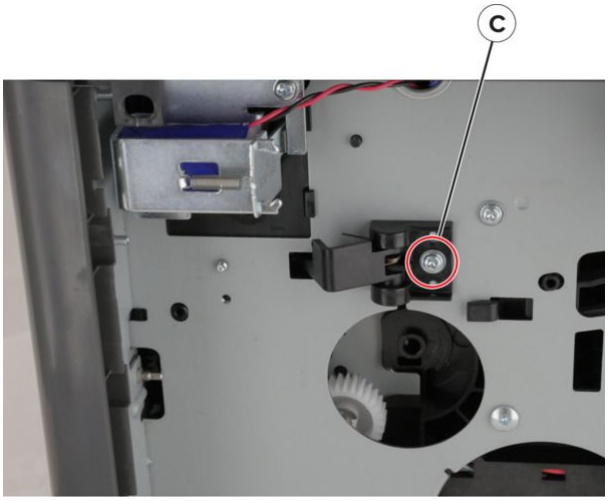
1. Remove the left cover. See .Left cover removal on page 302
2. Release the latch (A), and then detach the link.



3. Remove the four screws (B).

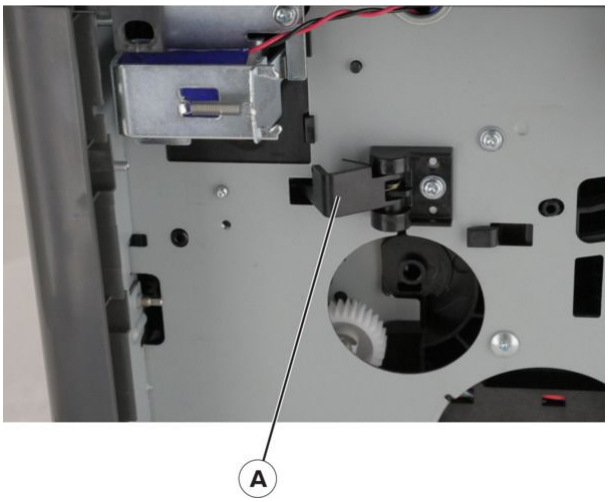


4. Remove the screw (C).



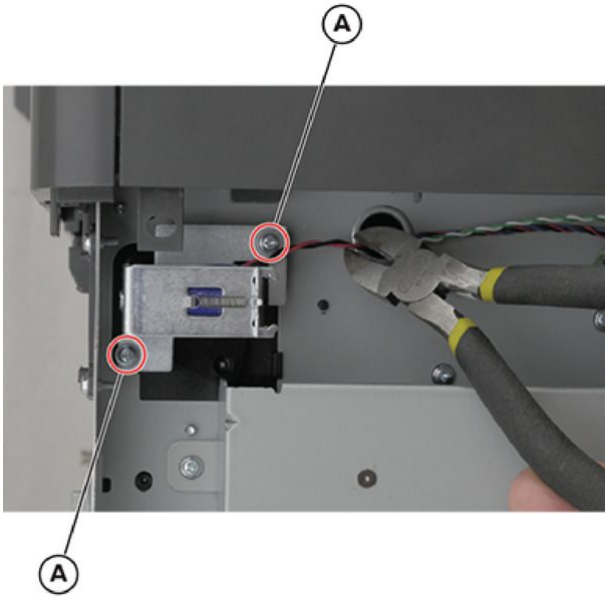
5. Remove the fuser actuator.

> **Installation Note**
> To test if the actuator is properly installed, push, and then release the actuator (A). The actuator should bounce back.



Reverse solenoid removal

1. Remove the left cover. See Left cover removal on page 302.
2. Remove the right cover. See Right cover removal on page 312.
3. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
4. Remove the rear cover. See Rear door and cover removal on page 363.
5. Remove the redrive assembly. See Redrive assembly removal.
6. Remove the two screws (A), and then cut the cable.

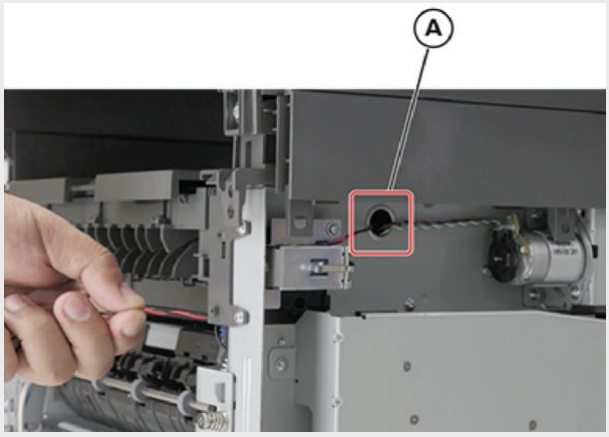


7. Disconnect connector JDUPSOL1 from the controller board, and then pull the cable out of the printer.

Installation Note

1. Screw in place the replacement solenoid.
2. Route the solenoid cable to the hole (A) exiting the rear side of the printer.

   > Fully stretch the cable, but do it carefully to avoid cuts as it rubs into the edges of the hole.

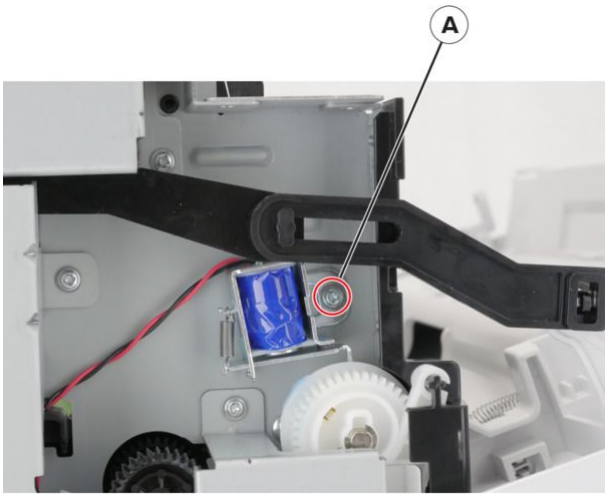


3. Install the redrive assembly.
4. Route the cable onto the redrive assembly. Make sure that the cable properly sits on the clamps.



MPF solenoid removal

1. Remove the left cover. See .Left cover removal on page 302
2. Remove the screw (A).



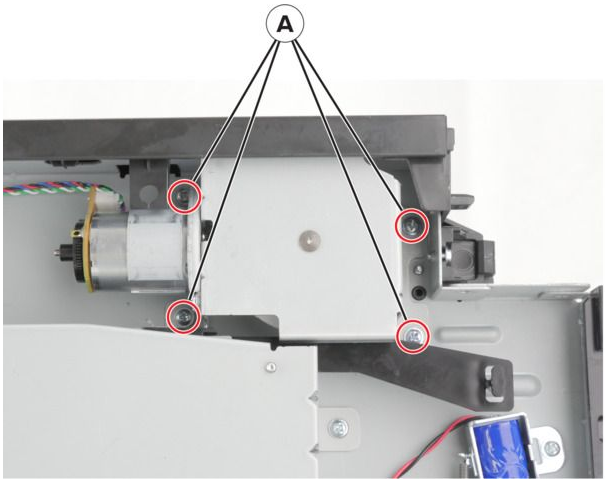
3. Cut the cable, and then remove the solenoid.
4. Remove the rear cover. See .Rear door and cover removal on page 363
5. Remove the power supply. See .Power supply removal on page 346
6. Remove the duplex assembly. See .
7. Release the cut cable.

> **Note:** Pay attention to the cable route.

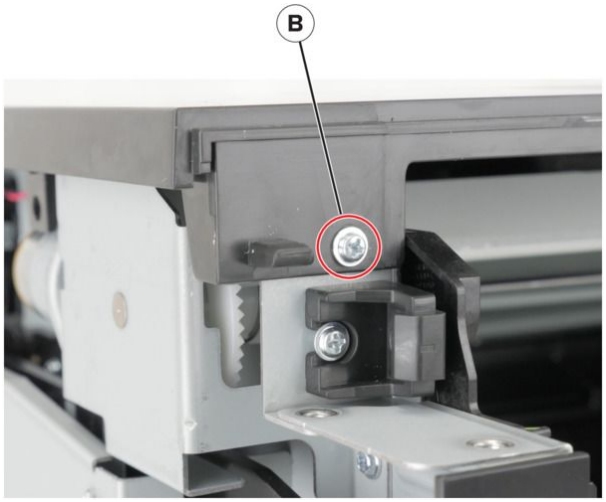
8. Open the controller board access cover, and then disconnect the cable.

Cartridge gearbox removal

1. Remove the left cover. See .Left cover removal on page 302
2. Remove the four screws (A).



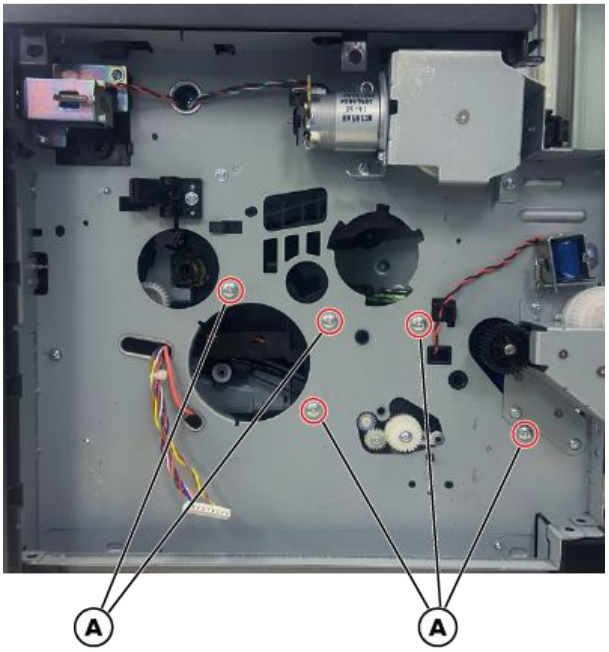
3. Remove the screw (B).



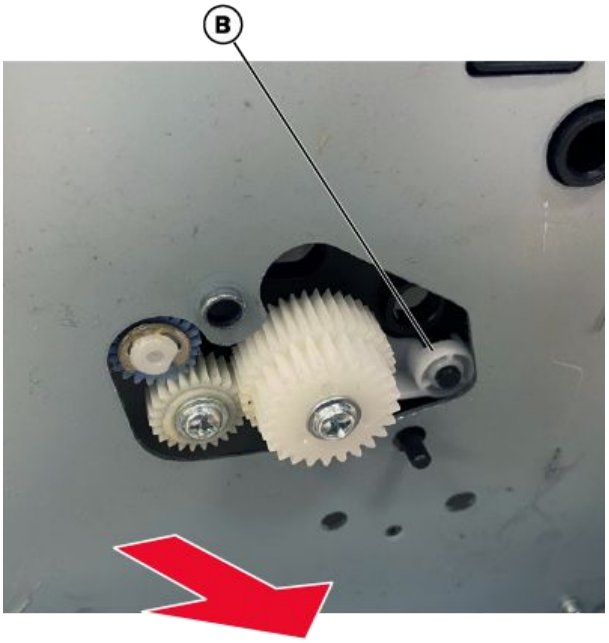
4. Lift the top cover enough to remove the cartridge gearbox.
5. While lifting the cover, disconnect the cable from the gearbox, and then remove the gearbox.

Duplex gear kit removal

1. Remove the left cover. See Left cover removal on page 302.
2. Remove the main drive gearbox. See Main drive gearbox removal on page 303.
3. Remove the duplex. See Duplex removal on page 347.
4. Remove the five screws (A).



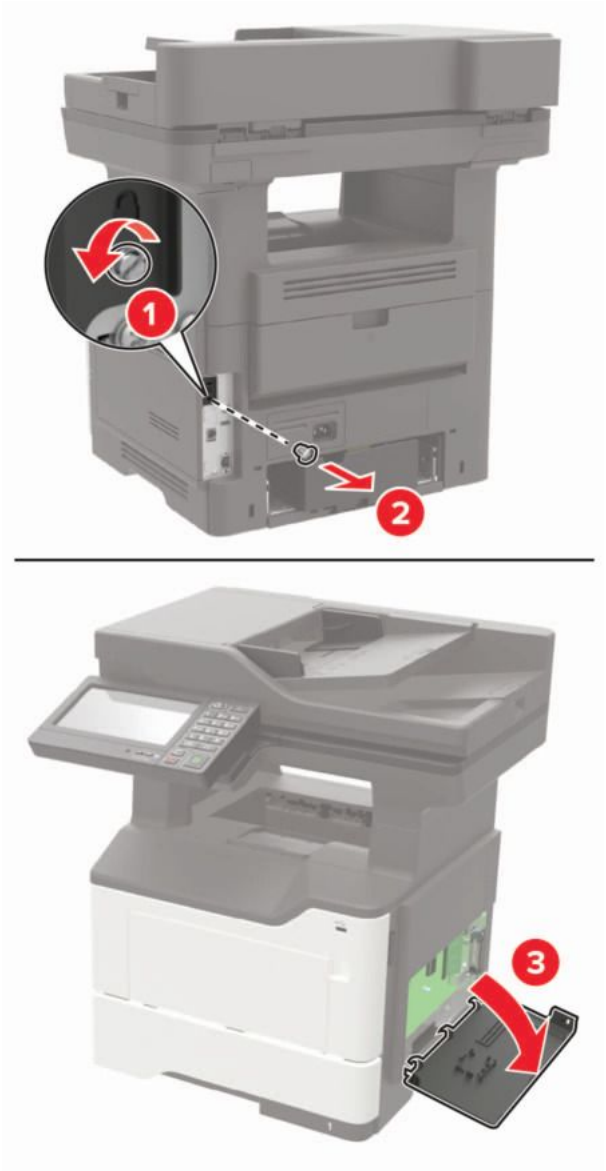
5. Pull the left frame to release it from the main frame.
6. Remove the duplex drive bushing (B).



Right side removals

Right cover removal

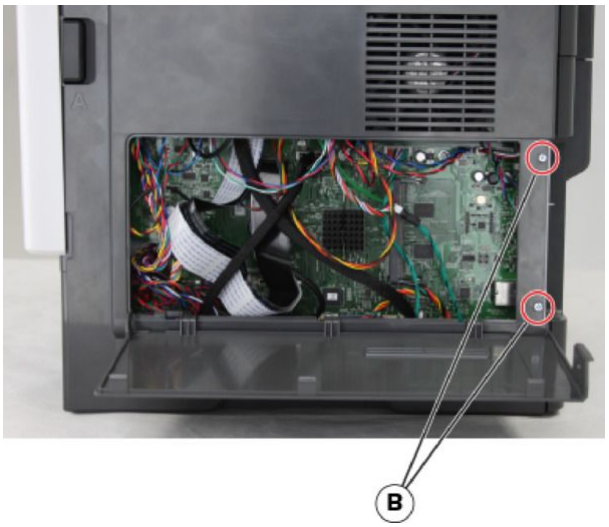
1. Using a flat-head screwdriver, open the controller board access cover.



2. Remove the screw (A).

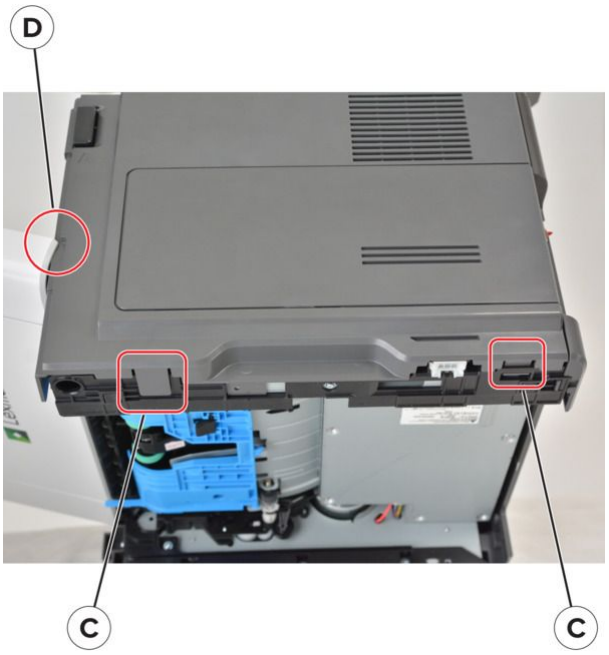


3. Remove the two screws (B).



4. Close the access cover, and then open the front door.
5. Release the two latches (C), and then disengage the middle front part (D) of the cover from the front door.

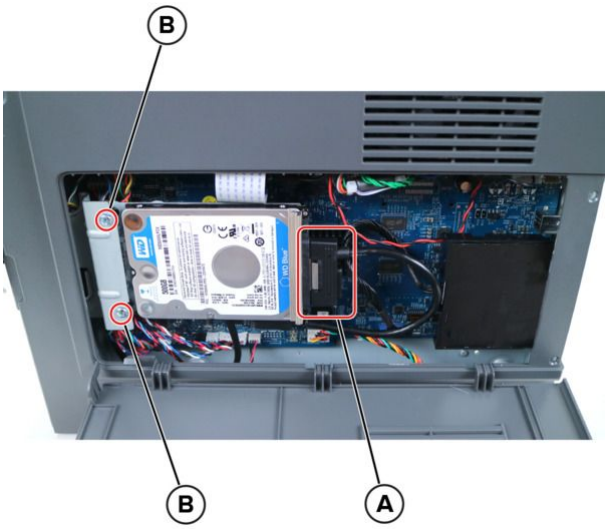
> **Warning—Potential Damage**
> The ADF might swing open while you position the printer on its side.



6. Remove the cover.

Hard drive removal

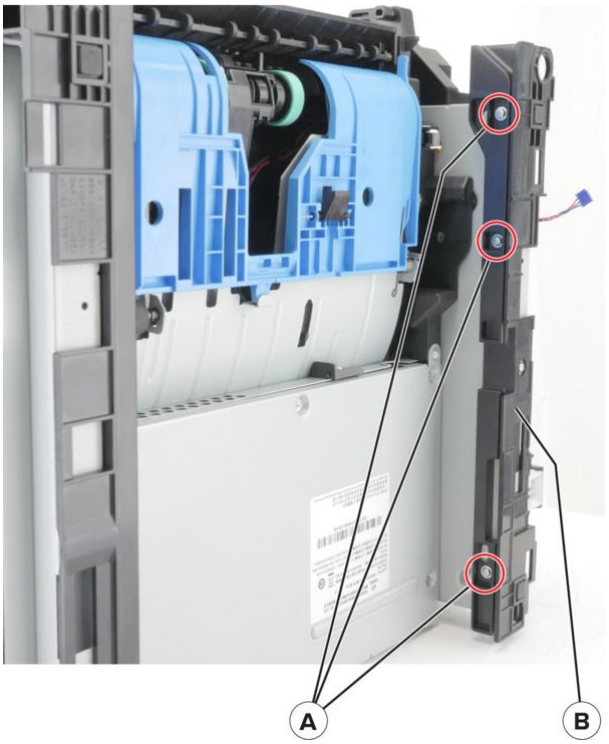
1. Open the right access cover.
2. Disconnect the cable (A), and then remove the two screws (B).



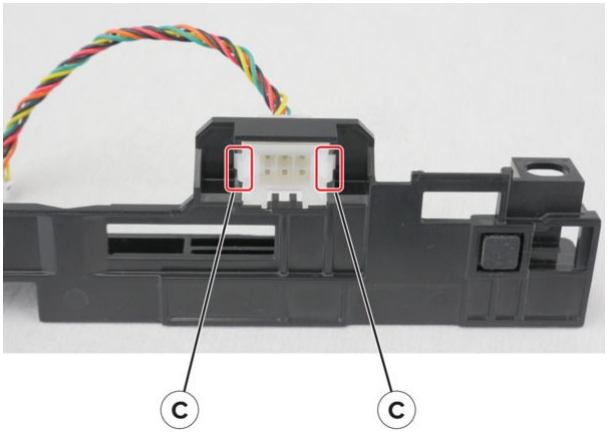
3. Remove the hard drive.

Interconnect cable removal

1. Remove the right cover. See .Right cover removal on page 312
2. Position the printer on its rear side.
3. Disconnect the cable JOPT1 from the controller board.
4. Remove the three screws (A).
5. Detach the right foot (B).



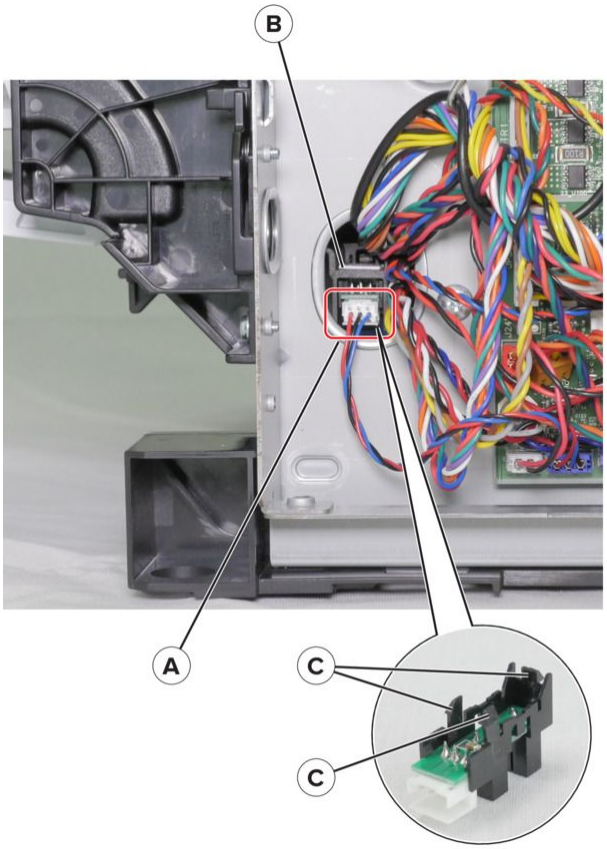
6. Release the two latches (C).



7. Remove the cable.

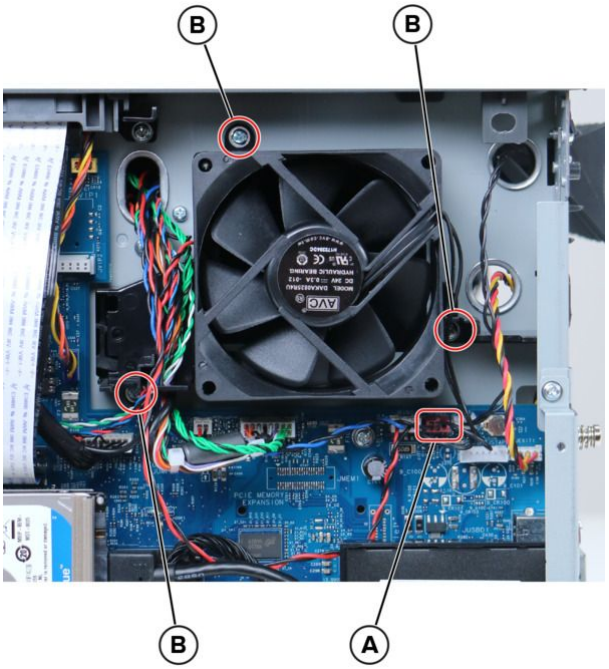
Sensor (tray present) removal

1. Remove the right cover. See .Right cover removal on page 312
2. Disconnect the cable (A).
3. Release the three latches (B), and then pry to remove the sensor.

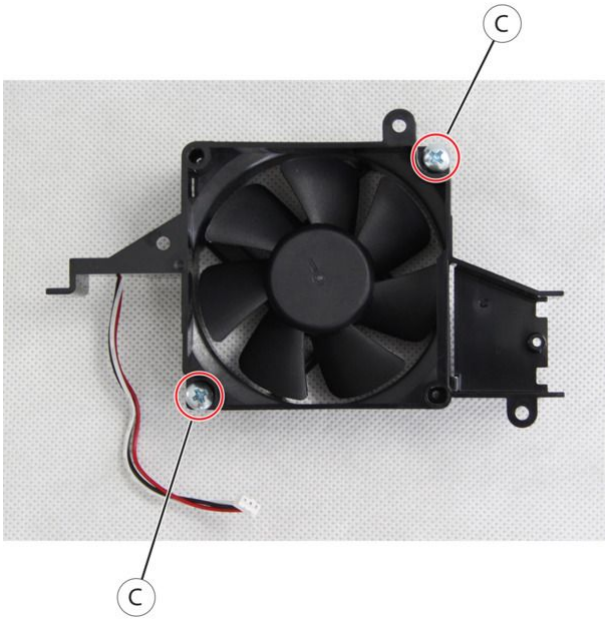


Cooling fan removal

1. Remove the right cover. See Right cover removal on page 312.
2. Disconnect the cable (A), remove the three screws (B), and then remove the fan bracket.



3. Remove the two screws (C), and then remove the fan.



Controller board removal

Critical information for controller board or control panel replacement

Warning—Potential Damage
Replace only one of the following components at a time:

- Control panel
- Controller board

To replace a component, and to test whether the problem is resolved:

1. Replace the affected component.

   Warning—Potential Damage
   Do not perform a POR (Power-On Reset) until the problem is resolved. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

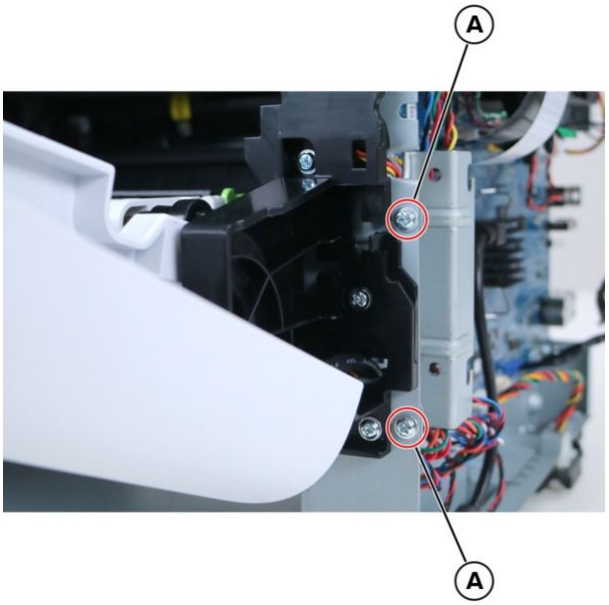
2. Enter the Diagnostics Menu. The Diagnostics Menu allows you to temporarily use the replacement part.

   Warning—Potential Damage
   Some printers will automatically perform a POR if the Diagnostics Menu is not opened within five seconds. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

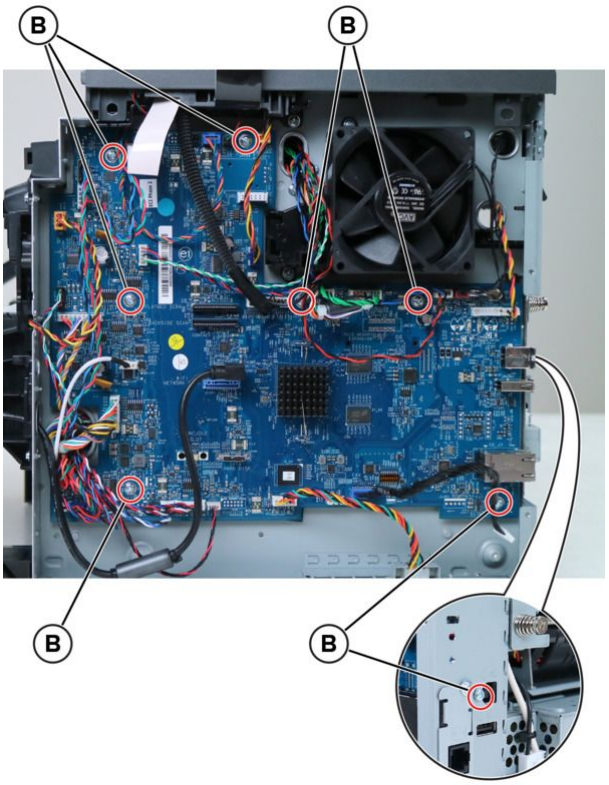
3. Use the Diagnostics Menu to test the replacement part. Do a feed test to check if the problem is resolved.
   - If the problem is not resolved—Turn off the printer, and then reinstall the old part.
   - If the problem is resolved—Perform a POR.

Removal procedure

1. Remove the right cover. See Right cover removal on page 312.
2. Remove the two screws (A), and then remove the bracket.



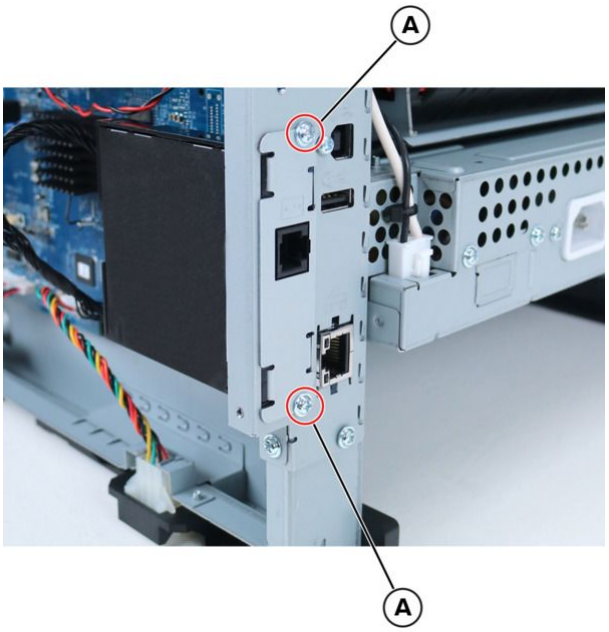
3. Disconnect all the cables from the controller board.
4. Remove the eight screws (B).



5. Remove the controller board.

Fax card removal

1. Remove the right cover. See Right cover removal on page 312.
2. Disconnect the fax card cable from the controller board, and then remove the two screws (A).



3. Remove the fax card.

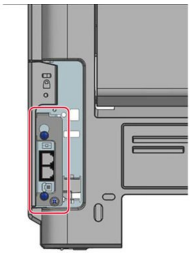
Installation Note
To select the correct part for your printer, see the following:

Part	Applicable models
Fax card (41X1374)	• MX622, MB2650, XM3250 (8th digit printer serial number is less than or equal to 3)
Fax card kit (41X2936)	• MX622, MB2650, XM3250(8th digit of printer serial number is greater than or equal to 4) **Note:** ◦ The printer already has an adapter installed. ◦ Do not cover up the telecom label. • MX622, MB2650, XM3250(8th digit of printer serial number is less than or equal to 3) **Note:** Install the adapter plate and telecom label.

Installation Note
To install the fax card kit (41X2936), see the following instructions:

1. Secure the two screws to the adapter plate.

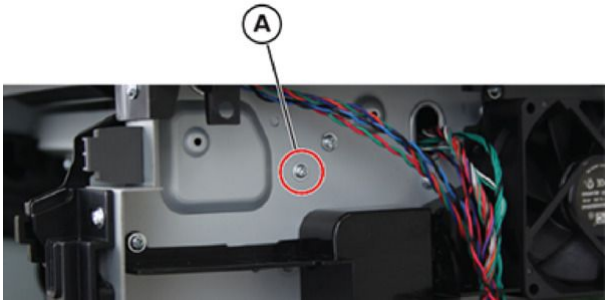
   To select the correct adapter plate and screws for your printer, refer to the following:

Printer models	Part	Part number	Graphic
MB2650, MX622, XM3250	Fax card	37X6145	
	Adapter plate	36S6355	
	Plate affixed with one screw	88B1020	

2. Insert the new fax card with the adapter plate into the fax card slot.
3. Connect the cable to the fax connector (JFAX2) on the controller board.
4. Attach the screw(s) to secure the fax card in the fax card slot.
5. Close the controller board access cover.

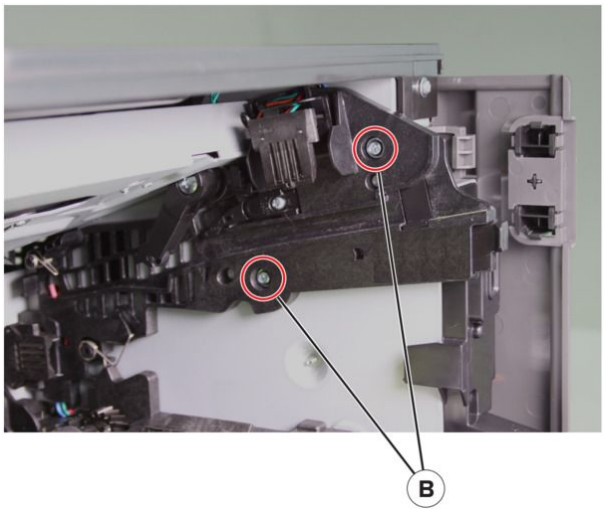
Toner cartridge smart chip contact removal

1. Remove the right cover. See .Right cover removal on page 312
2. Remove the controller board. See .Controller board removal on page 318
3. Remove the screw (A).

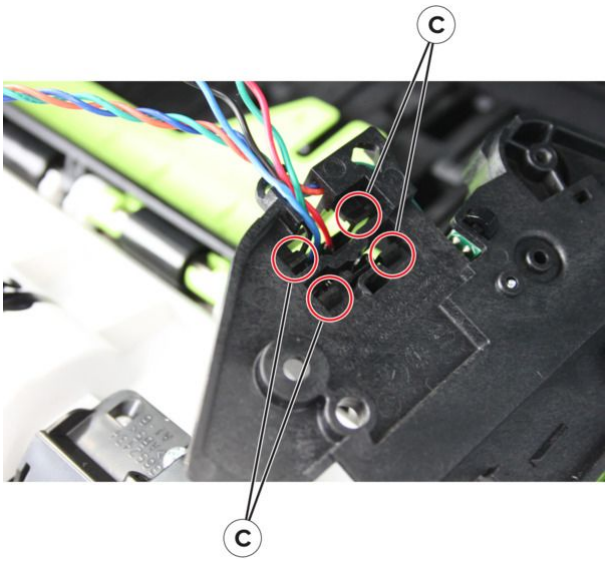


4. Remove the two screws (B), and then lower the right cartridge guide.
5. Slightly pull the right cartridge guide to detach it.

> **Warning—Potential Damage**
> To avoid damaging the right cartridge guide, do not cut or disconnect the cable at the rear of the cartridge guide. Leave the cartridge guide dangling.

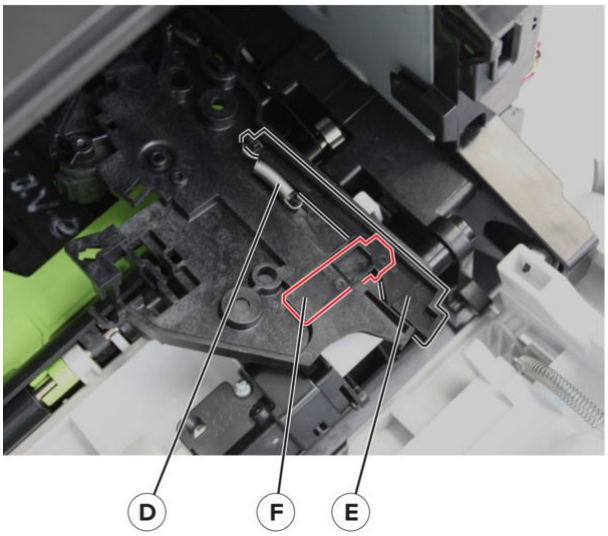


6. Release the four latches (C).

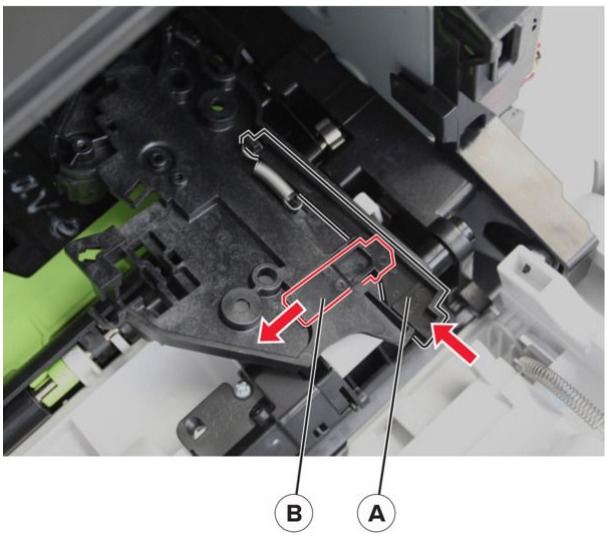


7. Remove the toner cartridge smart chip contact.

> **Note:** Note the original position of the spring (D), actuator (E), and lock (F).

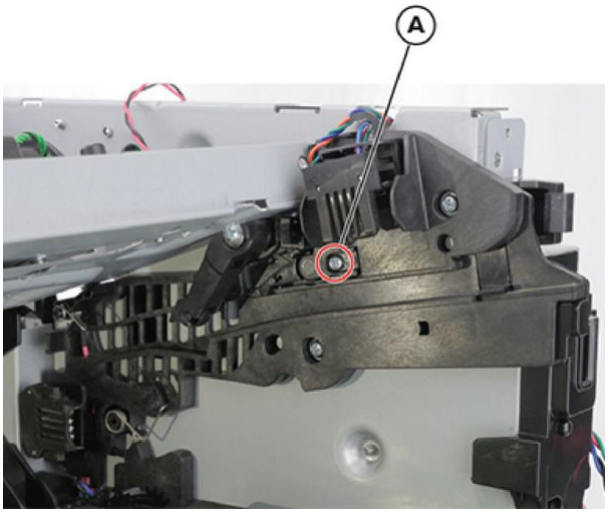


Installation Note
To test if the spring and actuator are properly installed, press the actuator (A). The lock (B) should move up.



Cartridge barrel shutter sensor kit removal

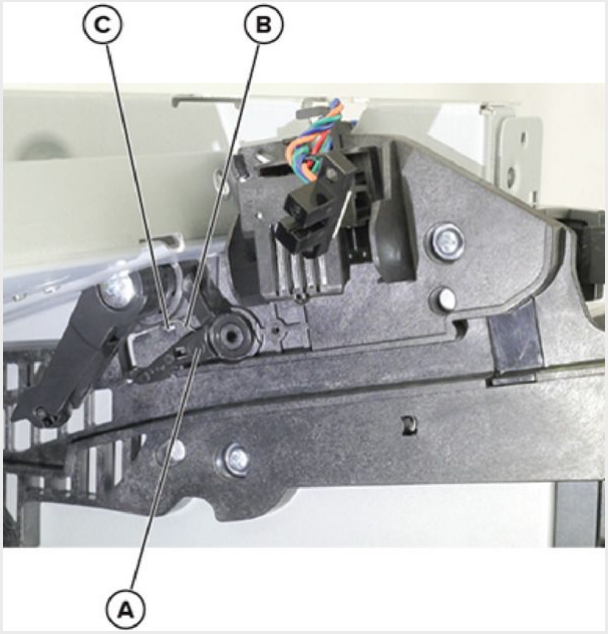
1. Remove the top cover. See .Top cover removal
2. Remove the right cover. See .Right cover removal on page 312
3. Disconnect the cable JCVR1 from the controller board.
4. Remove the screw (A), and then remove the bracket, actuator, spring, and sensor.


A

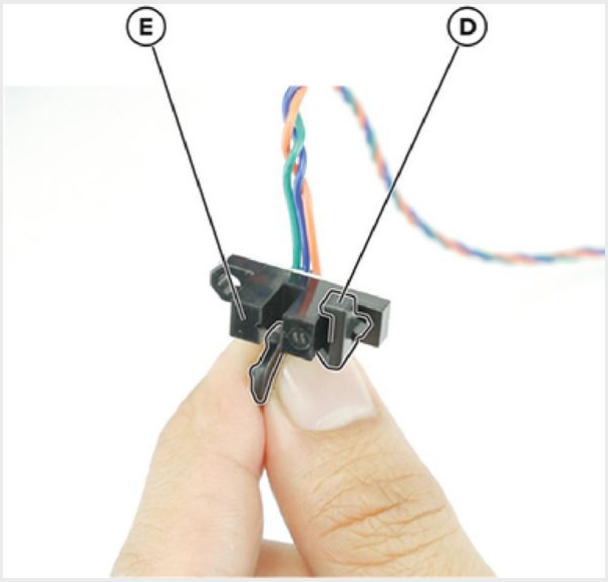
Installation Note

a. Install the sensor (cartridge barrel shutter) actuator (A) as shown.

> Make sure that the spring (B) is behind the boss (C).

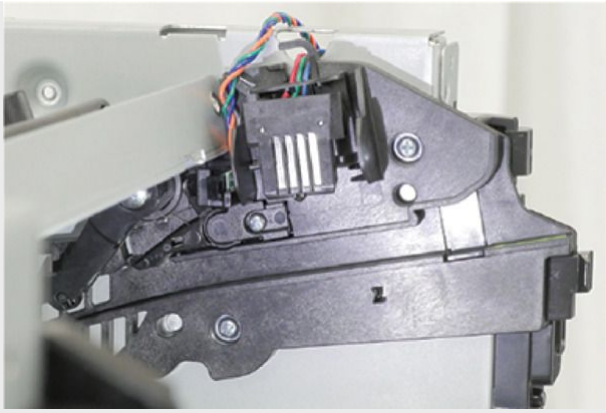


b. Install the bracket (D) to the sensor (E) as shown.



c. Install the sensor and bracket as shown.

> Make sure that sensor is aligned with the actuator.



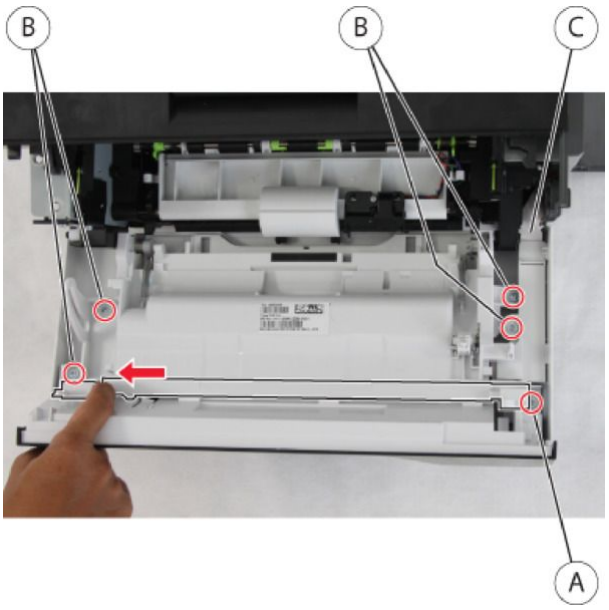
Front removals

Nameplate removal

1. Open the front door.
2. Push the latch to the left, and then remove the screw (A).
3. Remove the four screws (B).
4. Remove the nameplate.

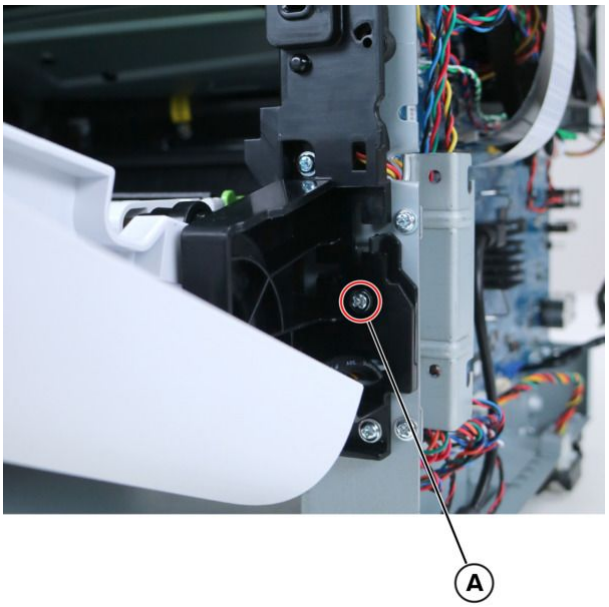
Note: The MPF hinders the removal.

Warning—Potential Damage
Avoid damaging the cable (C) when removing the nameplate.

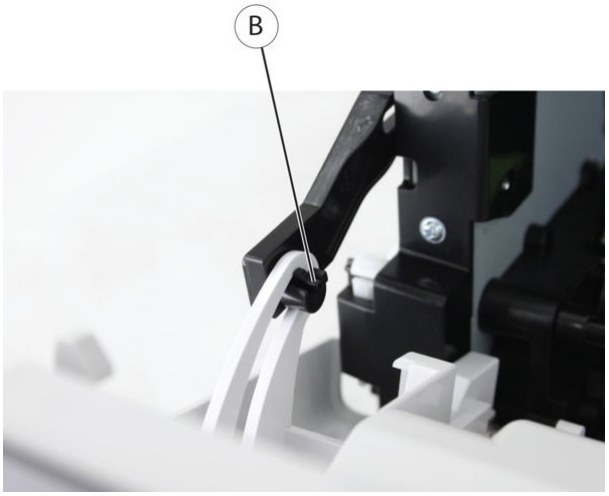


MPF with front access cover removal

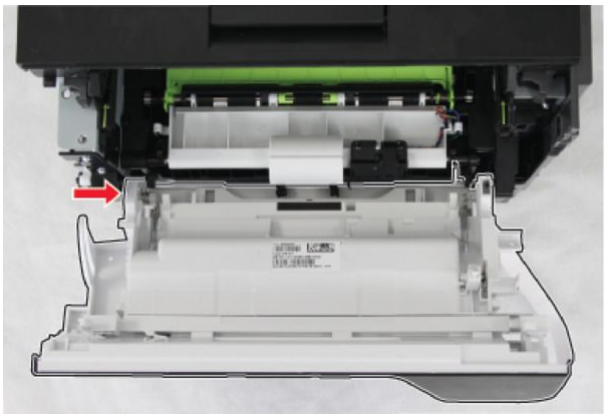
1. Remove the nameplate. See Nameplate removal on page 326.
2. Remove the right cover. See Right cover removal on page 312.
3. Remove the screw (A).



4. Release the latch (B), and then detach the link.

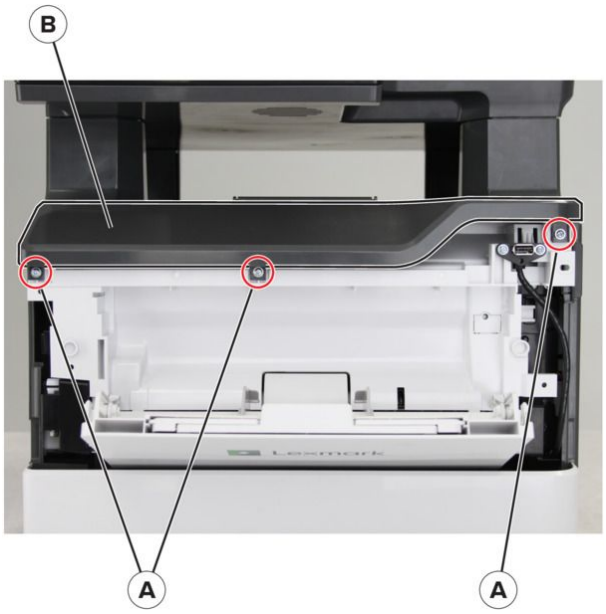


5. Disconnect JFUSB1 cable on the controller board.
6. Push the MPF with front access cover to the right, and then remove it.



Top access cover removal

1. Remove the nameplate. See Nameplate removal on page 326.
2. Remove the three screws (A), and then remove the cover (B).



Bezel removal

1. Release the bezel.



2. Remove the bezel.

Control panel display assembly removal

Critical information for controller board or control panel replacement

Warning—Potential Damage
Replace only one of the following components at a time:

- Control panel
- Controller board

To replace a component, and to test whether the problem is resolved:

1. Replace the affected component.

   Warning—Potential Damage
   Do not perform a POR (Power-On Reset) until the problem is resolved. If a POR is performed at this point, the replacement part can no longer be used in another printer and must be returned to the manufacturer.

2. Enter the Diagnostics Menu. The Diagnostics Menu allows you to temporarily use the replacement part.

   Warning—Potential Damage
   Some printers will automatically perform a POR if the Diagnostics Menu is not opened within five seconds. If a POR is performed at this point, the replacement part can no longer be used in another printer and must be returned to the manufacturer.

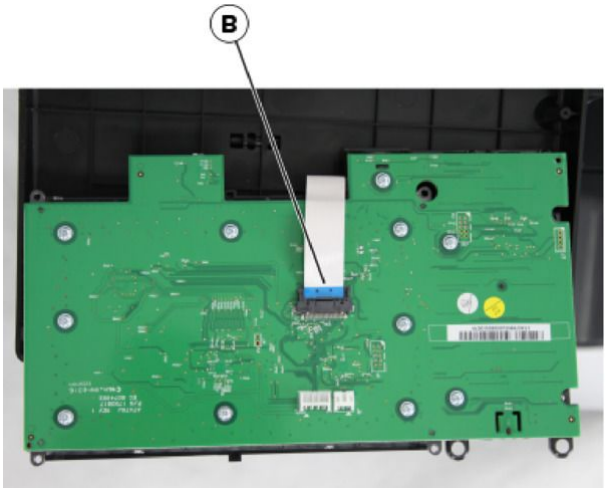
3. Use the Diagnostics Menu to test the replacement part. Do a feed test to check if the problem is resolved.
   - If the problem is not resolved—Turn off the printer, and then reinstall the old part.
   - If the problem is resolved—Perform a POR.

Removal procedure

1. Remove the control panel front cover. See Control panel covers and buttons removal on page 330.
2. Remove the six screws (A).



3. Disconnect the control panel cable (B).



Control panel covers and buttons removal

Control panel front cover removal

1. Remove the front cover.

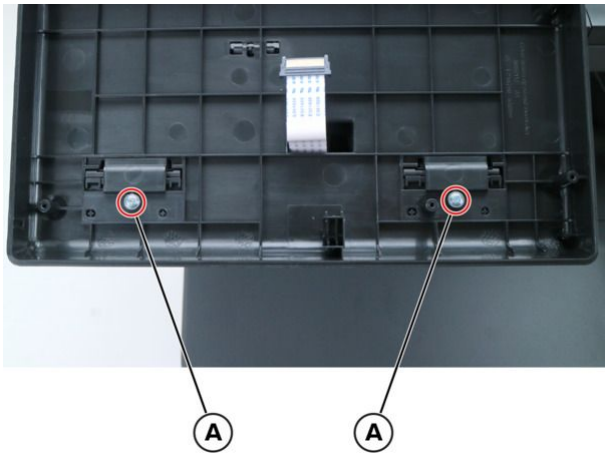


2. Remove the bezel from the cover.

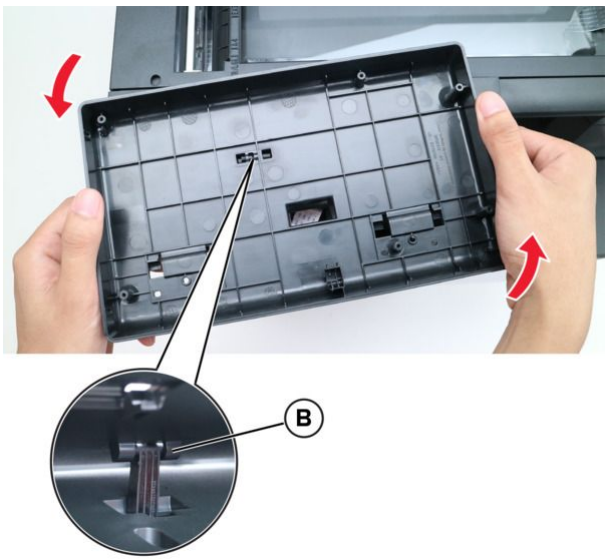


Control panel rear cover removal

1. Remove the control panel display assembly. See Control panel display assembly removal on page 329.
2. Remove the two screws (A), and then release the cover from the hinges.

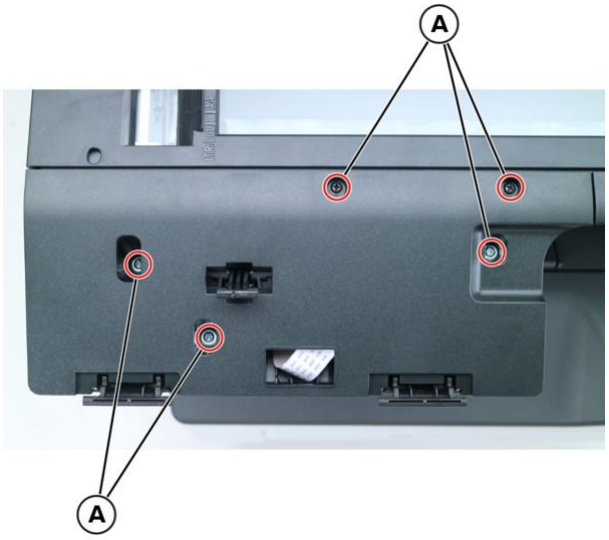


Note: Twist the cover to release the hinge (B) underneath it.



Control panel support cover removal

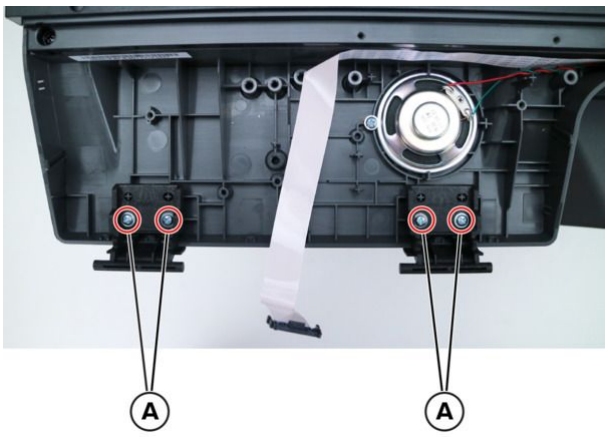
1. Remove the five screws (A).



2. Remove the cover.

Control panel hinges removal

1. Remove the four screws (A).



2. Remove the hinges.

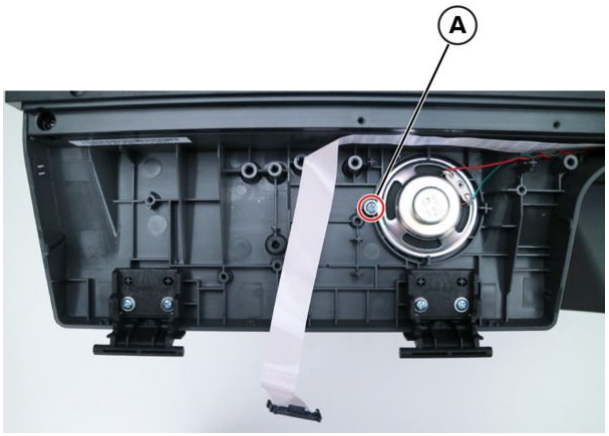
Scanner front cover removal

1. Open the ADF.
2. Remove the control panel support cover. See Control panel covers and buttons removal on page 330.
3. Remove the cover.

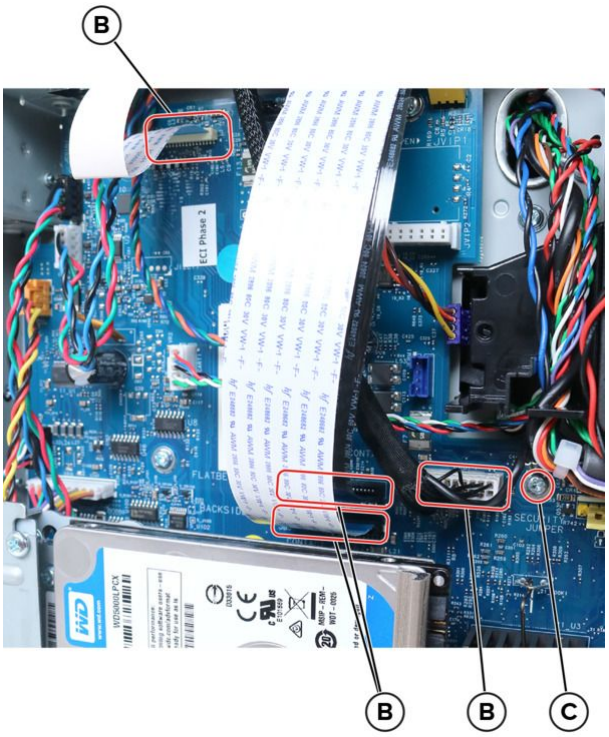


Speaker removal

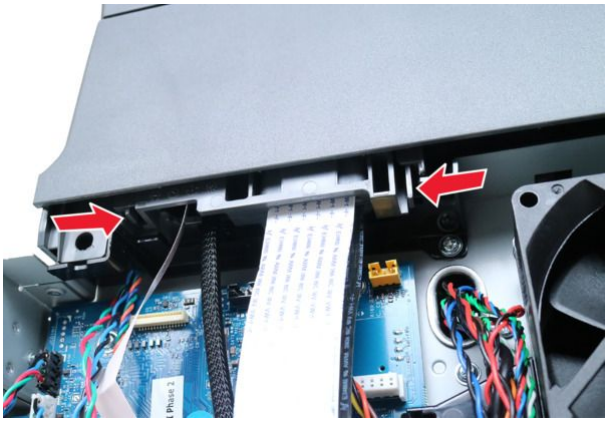
1. Remove the control panel front cover and control panel support cover. See Control panel covers and buttons removal on page 330.
2. Remove the control panel display assembly. See Control panel display assembly removal on page 329.
3. Remove the right cover. See Right cover removal on page 312.
4. Remove the screw (A).



5. Disconnect the four cables (B), and then remove the ground screw (C).



6. Release the latches, and then remove the toroid holder to release the flat cables.



7. Pry the toroid holder to release, and then remove it.



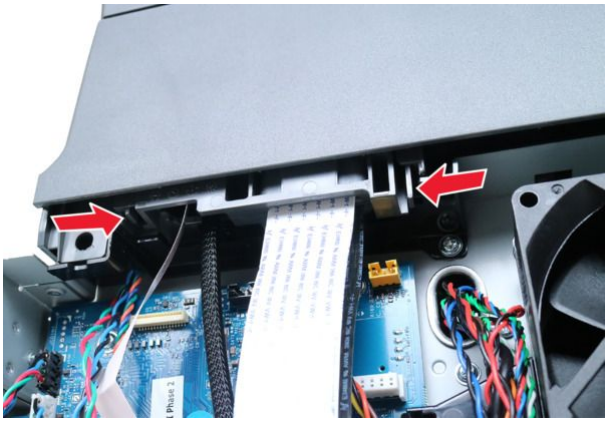
8. Release the speaker cable, and then remove the speaker.

> **Installation Note**
> Make sure that the flat cable is inserted as shown.



Control panel flat cable removal

1. Remove the control panel display assembly. See Control panel display assembly removal on page 329.
2. Remove the right cover. See Right cover removal on page 312.
3. Remove the control panel support cover. See Control panel covers and buttons removal on page 330.
4. Release the latches, and then remove the toroid holder to release the flat cables.



5. Pry the toroid holder to release, and then remove it.



Installation Note
Make sure that the flat cable is inserted as shown.

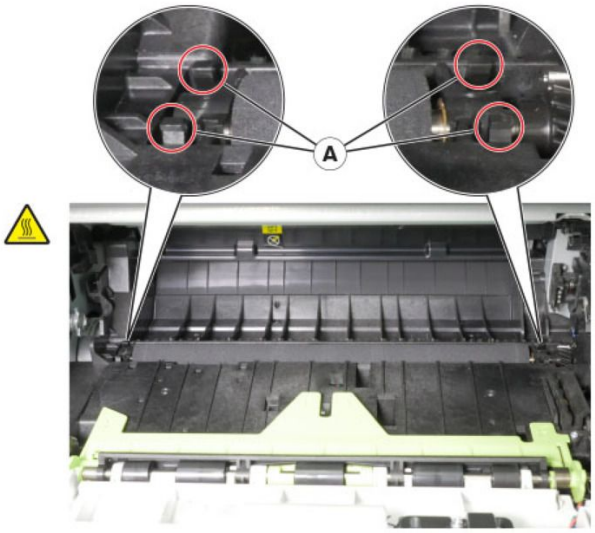


6. Release the flat cable, and then remove it.

Transfer roller removal

For a video demonstration, see Transfer roller removal.

1. Open the front door.
2. Release the two latches (A) on each end of the transfer roller.



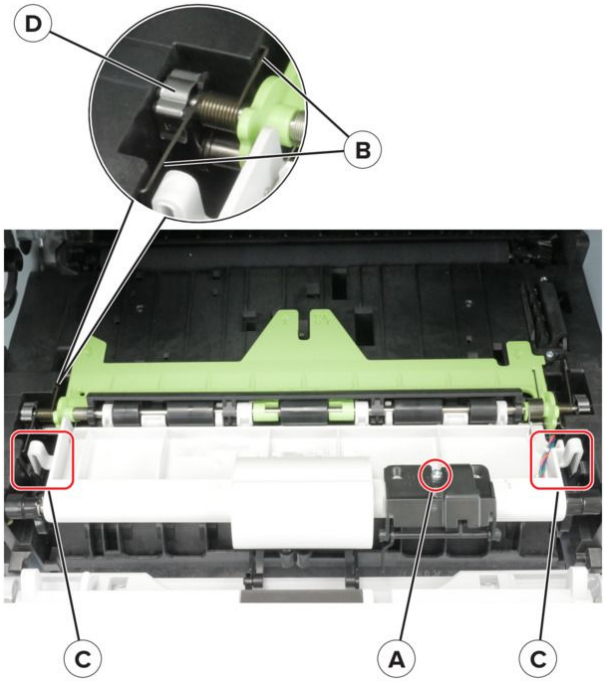
3. Remove the roller.

Note: For a video demonstration, see Transfer roller removal at infoserve.lexmark.com/ids/sma.

Jam access cover removal

1. Open the front door.
2. Remove the screw (A), and then release the cable from the jam access cover.
3. Push down, and then pull the two ends (B) of the springs to remove them.
4. Repeat step 3 for the other side.
5. Release the two latches (C).
6. Remove the clip (D).

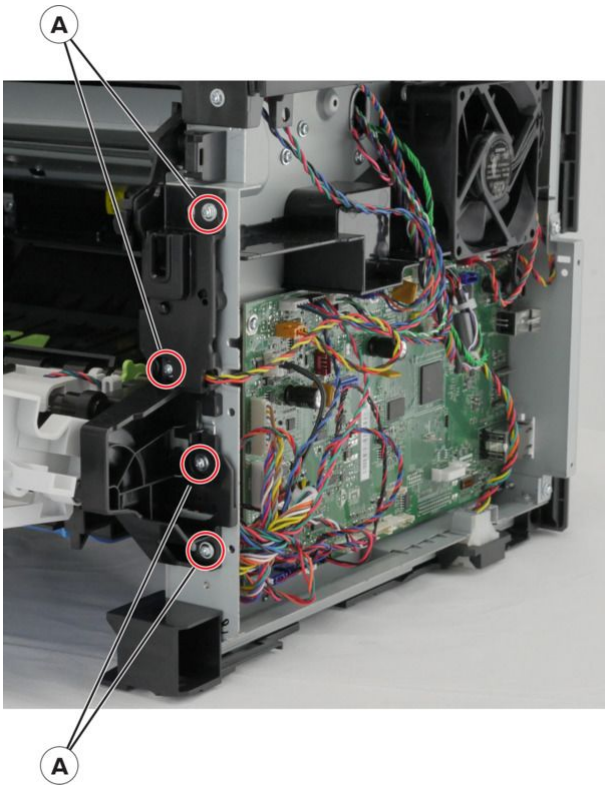
Note: Some models do not have the clip (D) installed.



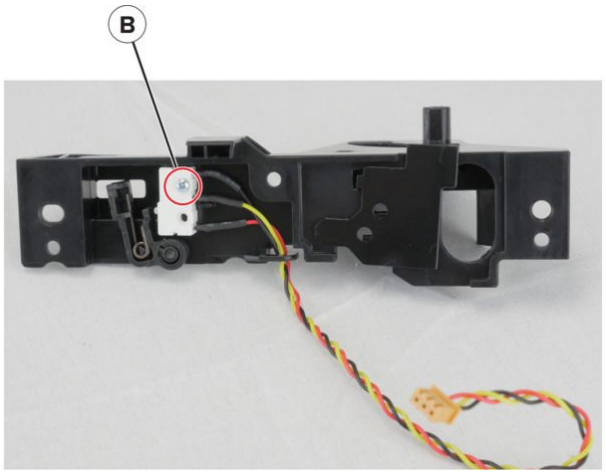
7. Remove the cover.

Sensor (front door) removal

1. Remove the nameplate. See Nameplate removal on page 326.
2. Remove the right cover. See .Right cover removal on page 312
3. Disconnect the JCVR1 and control panel cables from the controller board.
4. Remove the four screws (A).



5. Using a #1 Phillips screwdriver, remove the screw (B).



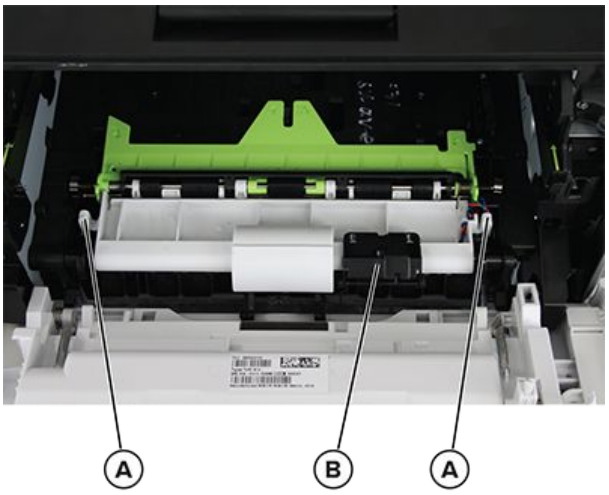
6. Remove the sensor.

MPF pick roller and separator pad removal

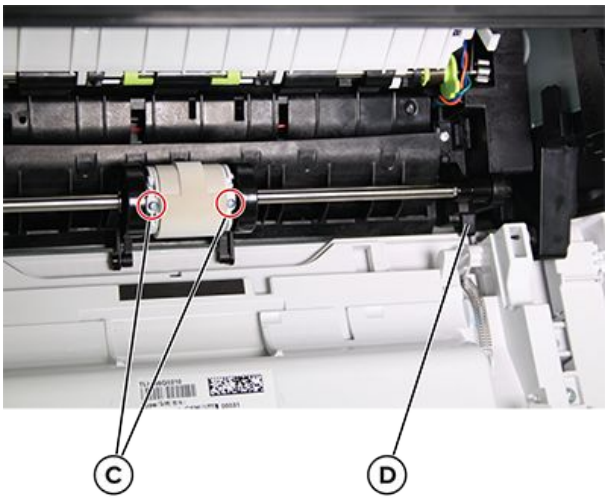
For a video demonstration, see MPF pick roller and separator pad removal.

1. Open the front door.
2. Press the latches (A), and then open the cover.

> **Warning—Potential Damage**
> Avoid damaging the MPF sensor flag (B) when removing the cover.



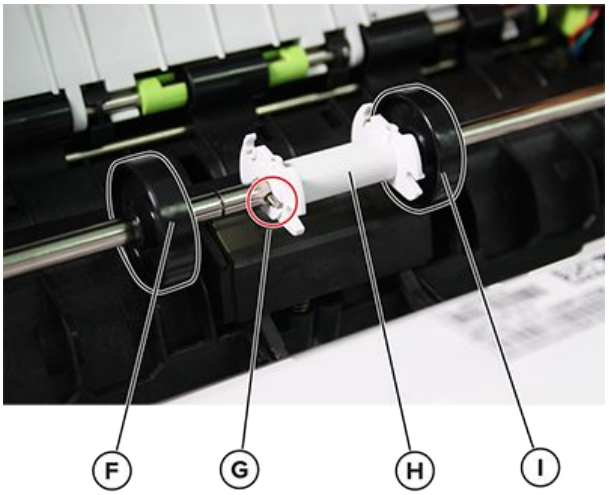
3. Using a #1 Phillips screwdriver, remove the two screws (C).
4. Hold the end of the shaft (D), and then pull out the roller to remove it.



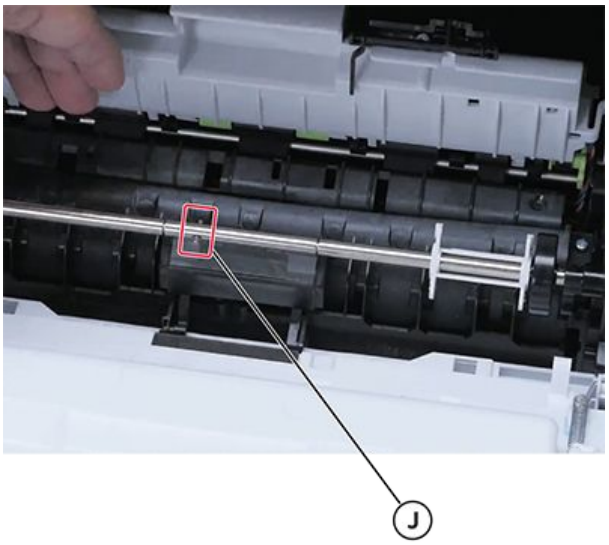
5. Remove the two E-clips (E).



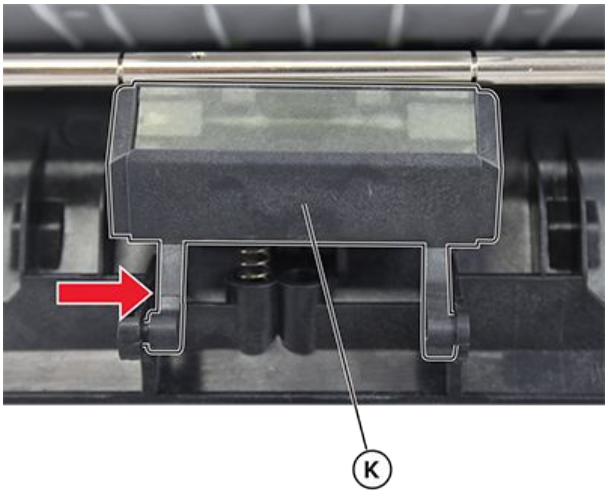
6. Move the roller (F) to the left, and then remove the pin (G).
7. Move the hub (H) and roller (I) to the right.



8. Remove the pin (J).

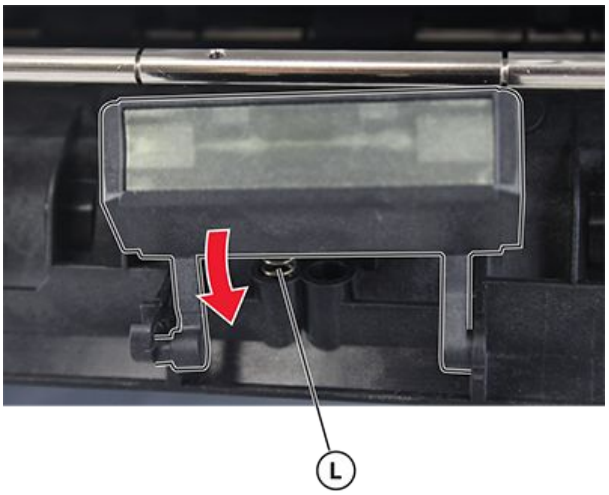


9. Push the separator pad (K) to the right.



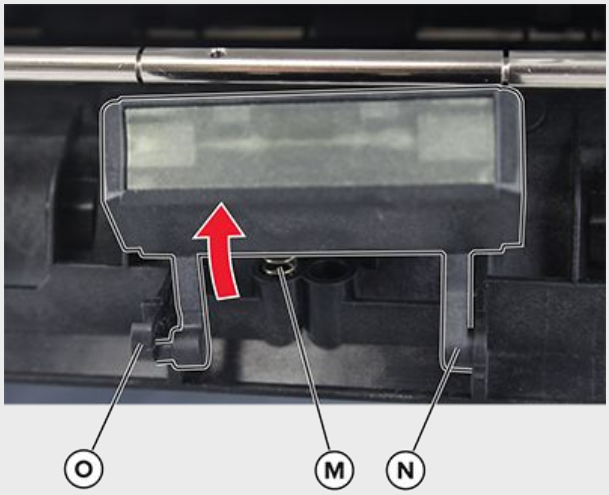
10. Push down the pad to remove it.

Warning—Potential Damage
Do not lose the spring (L).



Installation Note

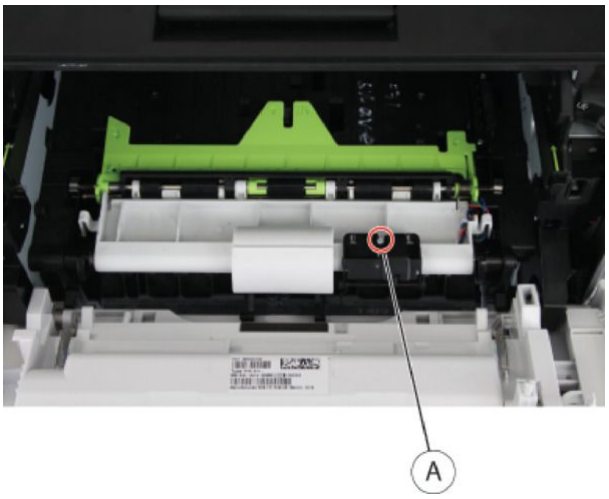
1. Insert the spring (M) as shown.
2. Insert the right arm (N), and then the other arm from under the left finger (O) to avoid damaging the pad and fingers.



Note: For a video demonstration, see MPF pick roller and separator pad removal .

Sensor (MPF paper present) removal

1. Open the front door.
2. Remove the screw (A).

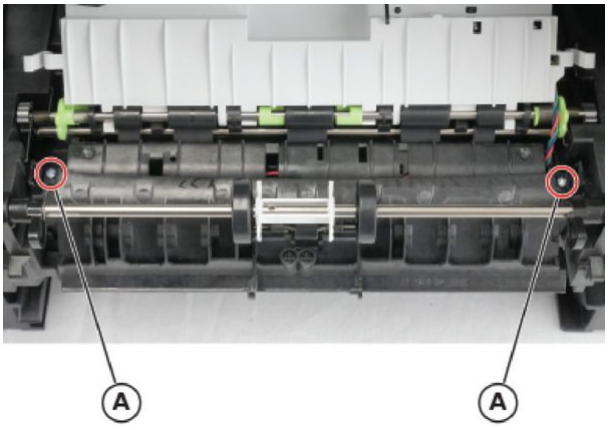


3. Open the controller board access cover, disconnect the cable JMPFPP1, and then release the cable.
4. Remove the sensor.

> **Installation Note**
> Pay attention to the position of the MPF sensor flag when installing the sensor.

Front input guide removal

1. Remove the MPF with front access cover. See .MPF with front access cover removal
2. Remove the MPF pick roller and separator pad. See MPF pick roller and separator pad removal on page 339.
3. Remove the two screws (A).

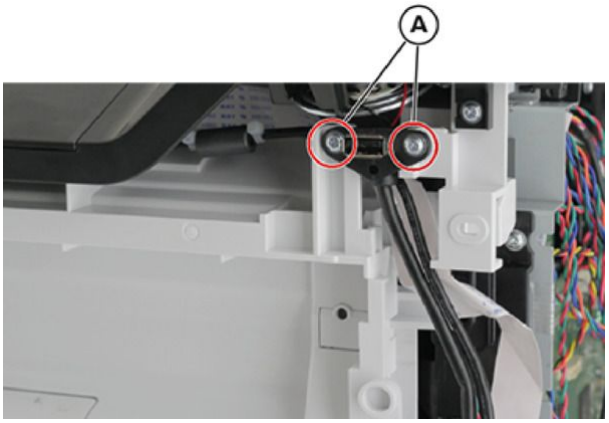


4. Remove the input guide.

Front USB host cable removal

1. Remove the right cover. See .Right cover removal on page 312
2. Remove the nameplate. See Nameplate removal on page 326.

3. Remove the two screws (A).



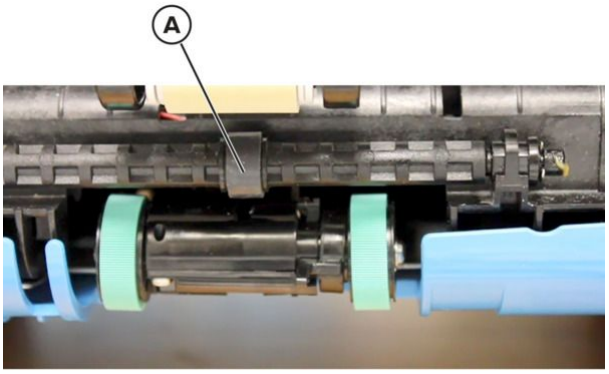
4. Open the front door.
5. Remove the screw (B).
6. Disconnect the cable JPHONE2 from the controller board.
7. Lift the stopper (C), and then remove the cable.



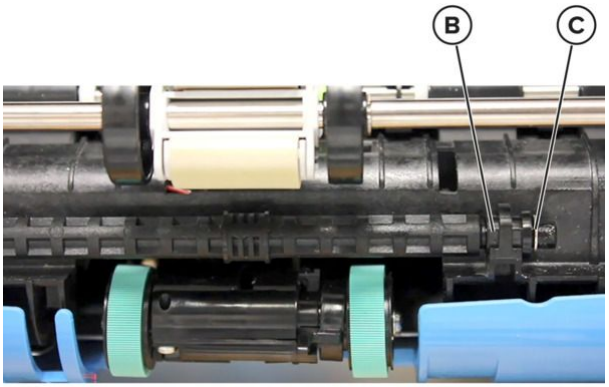
Isolation roller removal

For a video demonstration, see Isolation roller removal.

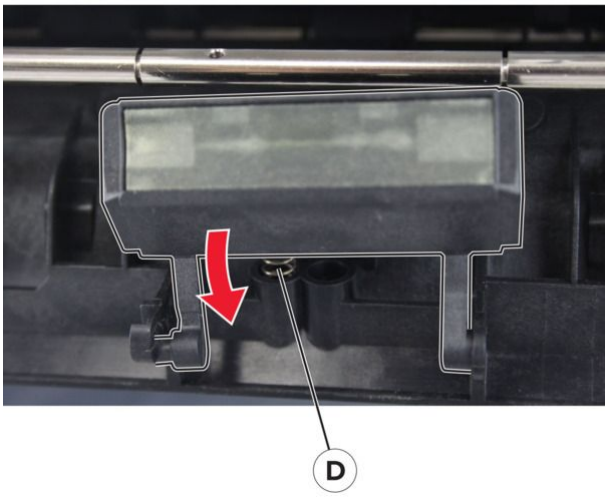
1. Remove the front door. See .MPF with front access cover removal
2. Remove the jam access cover. See Jam access cover removal on page 337.
3. Remove front input guide. See Front input guide removal on page 343.
4. Remove the roller (A) by cutting it off the shaft.



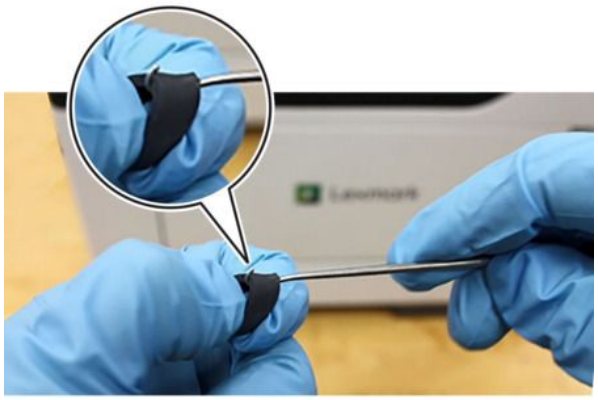
5. Remove the e-clip (C), and then remove the right bearing (B).



Warning—Potential Damage
Do not lose the spring (D).



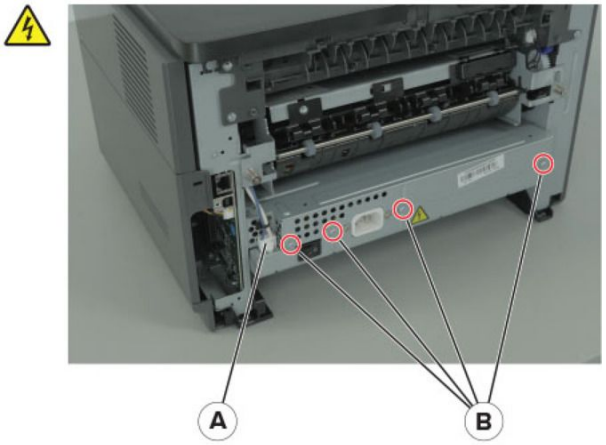
Installation Note
When looping the isolation roller with the spring hook, make sure not to pierce the sleeve. Refer to the following illustrations:

Correct	Incorrect
	

Bottom removals

Power supply removal

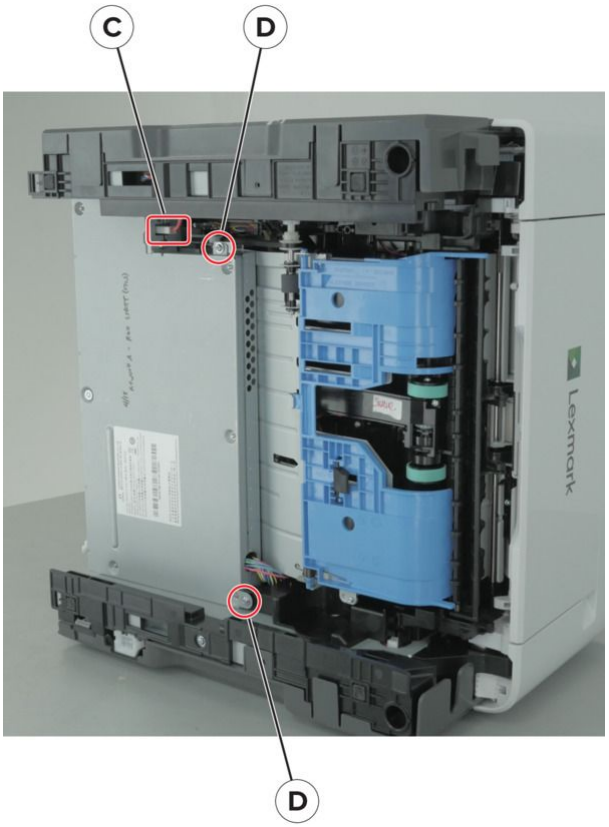
1. Remove the rear cover. See Rear door and cover removal on page 363.
2. Disconnect the cable (A), and then remove the screws (B).



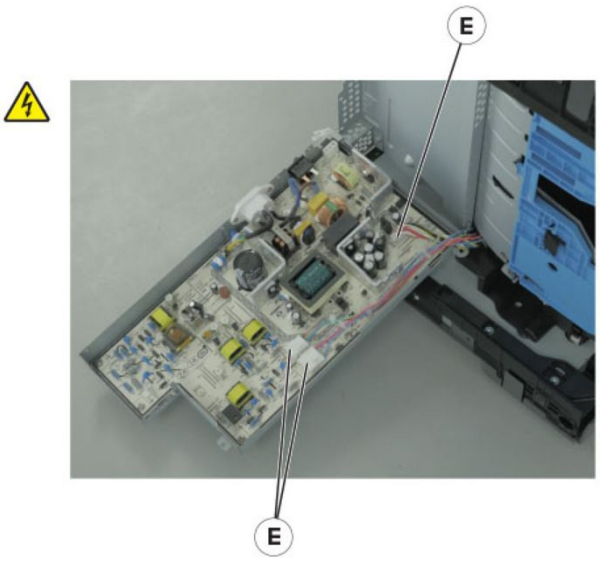
3. Position the printer on its right side.

> **Warning—Potential Damage**
> The ADF might swing open while you position the printer on its side.

4. Disconnect the cable (C), and then remove the two screws (D).



5. Disconnect the three cables (E).



6. Remove the power supply.

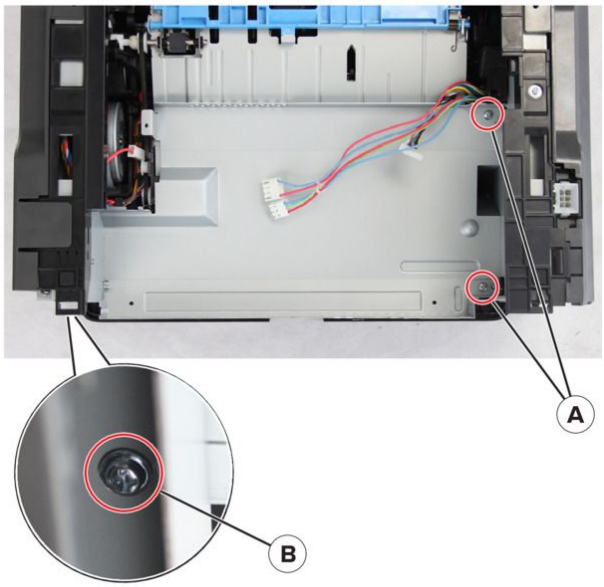
Duplex removal

1. Remove the rear cover. See Rear door and cover removal on page 363.
2. Remove the power supply. See Power supply removal on page 346.
3. Position the printer on its side.

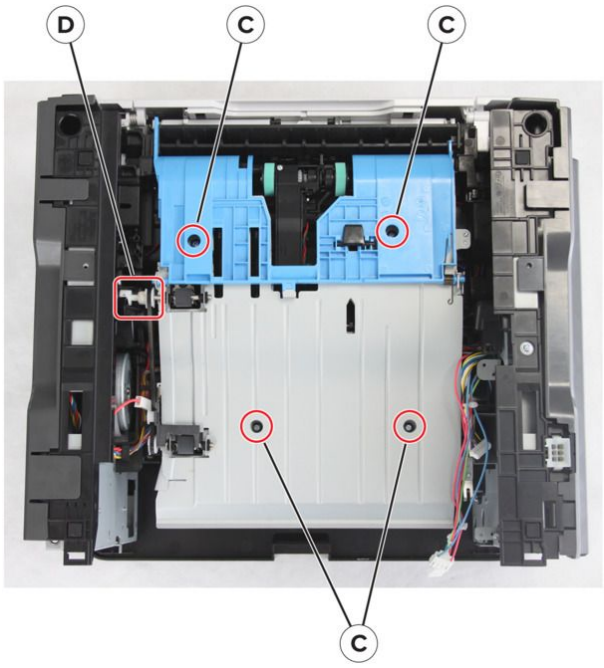
Warning—Potential Damage
The ADF might swing open while you position the printer on its side.

Warning—Potential Damage
To avoid damaging the paper stop, close it after positioning the printer.

4. Remove the three screws (A).

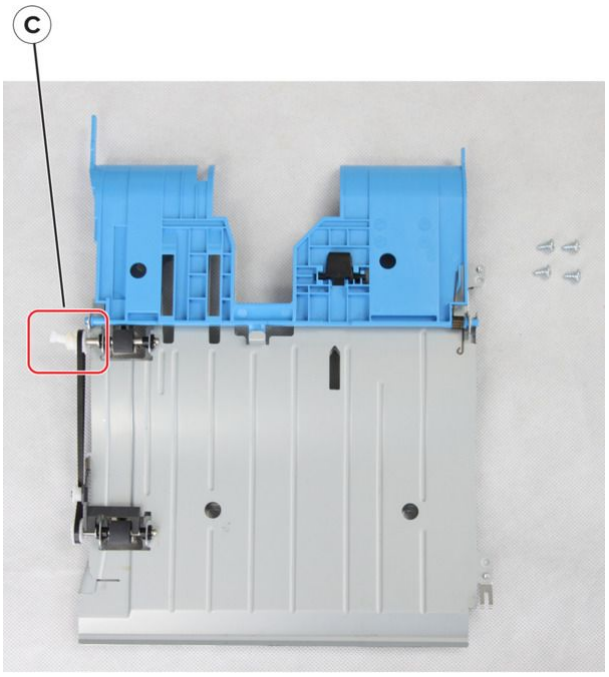


5. Remove the power supply shield.
6. Remove the four screws (B).



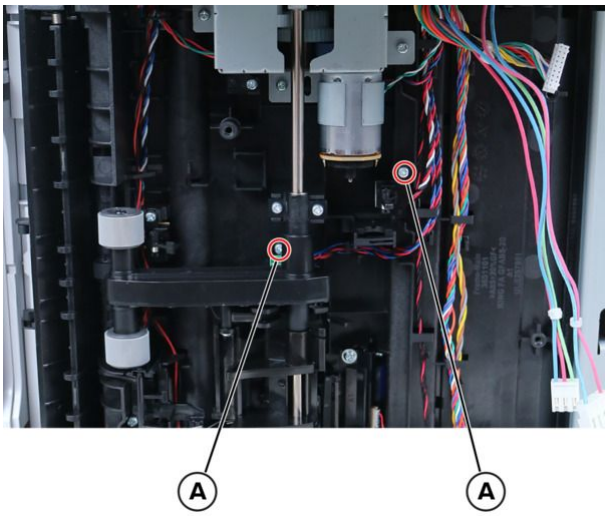
7. Remove the duplex.

Note: Make sure that the duplex link (C) stays attached.



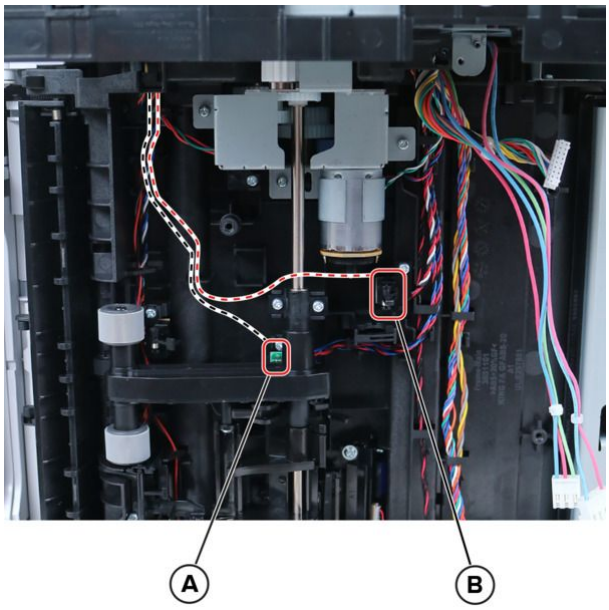
Sensors (duplex and input) removal

1. Remove the rear cover. See .Rear door and cover removal on page 363
2. Remove the power supply. See .Power supply removal on page 346
3. Remove the duplex. See .
4. Remove the two screws (A), cut the cable near the frame, and then remove the sensors.



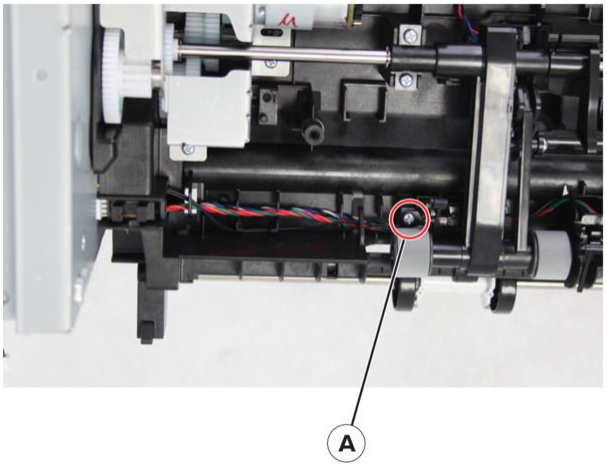
5. Open the controller board access cover, and then disconnect the cable JDUPPI1.
6. Remove the cables.

Installation Note
Route the sensor (input) cable (A) and sensor (duplex) cable (B) as shown.



Sensor (index) removal

1. Remove the rear cover. See .Rear door and cover removal on page 363
2. Remove the power supply. See .Power supply removal on page 346
3. Remove the duplex. See Duplex assembly removal.
4. Remove the right cover. See .Right cover removal on page 312
5. Disconnect the cable JINDEX1.
6. Remove the screw (A).



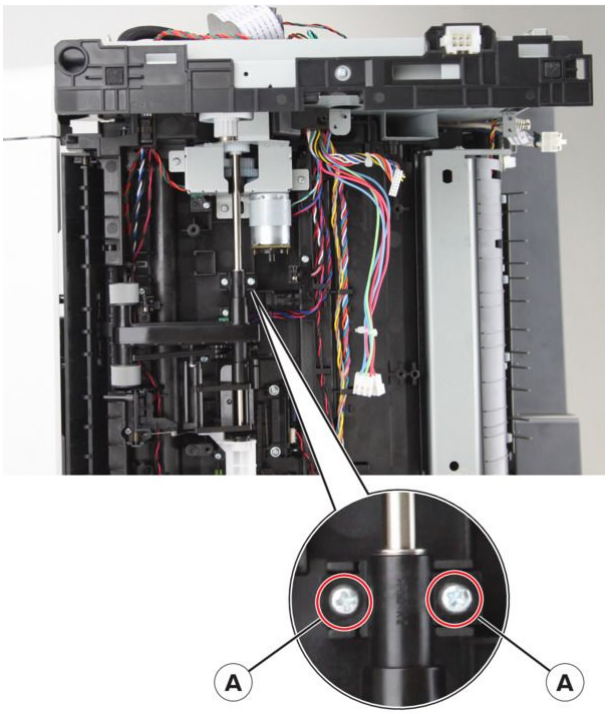
7. Remove the sensor.

Pick roller assembly removal

1. Remove the left cover. See Left cover removal on page 302.
2. Remove the right cover. See Right cover removal on page 312.
3. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
4. Remove the rear cover. See Rear door and cover removal on page 363.
5. Position the printer on its left side.

> **Warning—Potential Damage**
> The ADF might swing open while you position the printer on its side.

6. Remove the power supply. See Power supply removal on page 346.
7. Remove the duplex assembly. See Duplex removal on page 347.
8. Remove the two screws (A).



9. Remove the assembly.

> **Installation Note**
> Pay attention to the correct position of the arm (A) when installing the assembly.

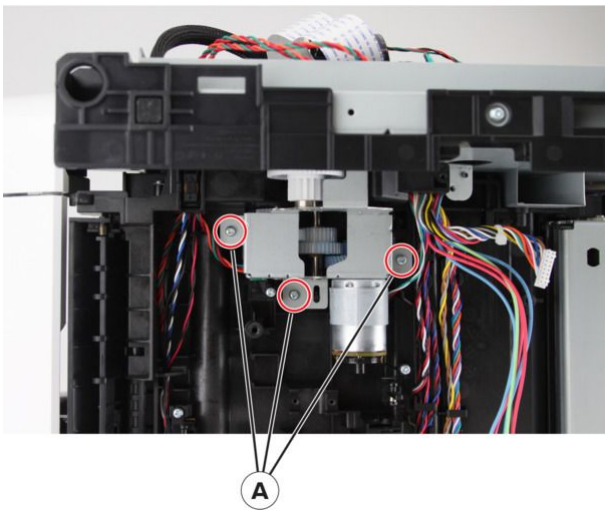


Motor (pick) assembly removal

1. Remove the left cover. See Left cover removal on page 302.
2. Remove the right cover. See Right cover removal on page 312.
3. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
4. Remove the rear cover. See Rear door and cover removal on page 363.
5. Disconnect the cable (pick motor) from the controller board.
6. Position the printer on its left side.

> **Warning—Potential Damage**
> The ADF might swing open while you position the printer on its side.

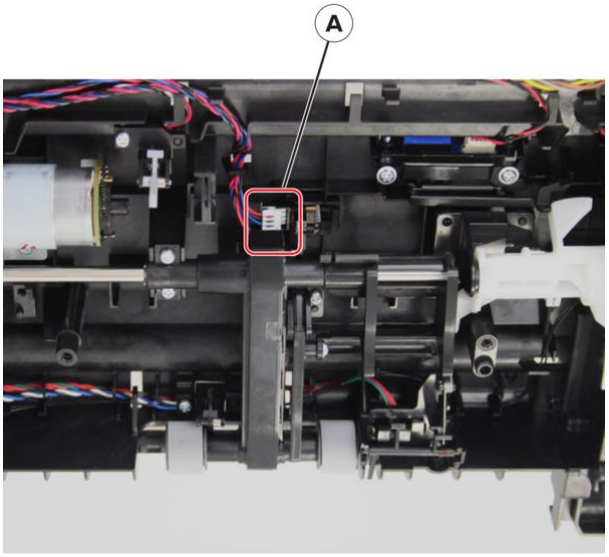
7. Remove the power supply. See Power supply removal on page 346.
8. Remove the duplex assembly. See Duplex removal on page 347.
9. Remove the pick roller assembly. See Pick roller assembly removal on page 351.
10. Remove the three screws (A).



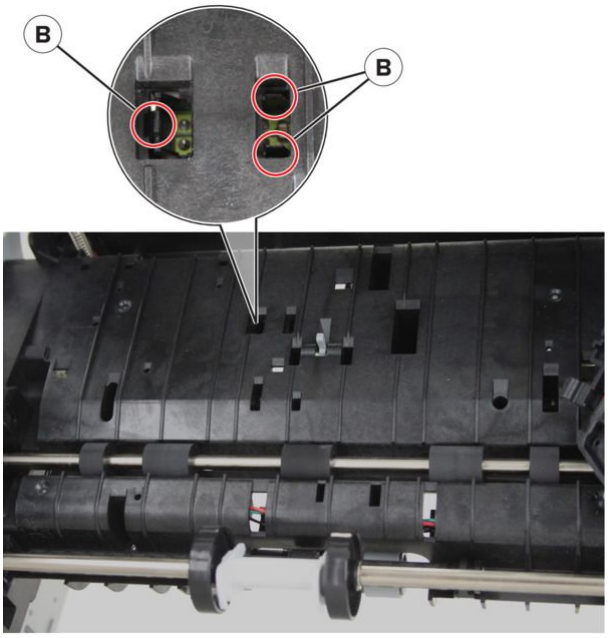
11. Disconnect the cable (pick motor) from the assembly.
12. Remove the assembly.

Sensor (paper present) removal

1. Remove the rear cover. See .Rear door and cover removal on page 363
2. Remove the power supply. See .Power supply removal on page 346
3. Remove the duplex. See Duplex assembly removal.
4. Disconnect the cable from the sensor (A).

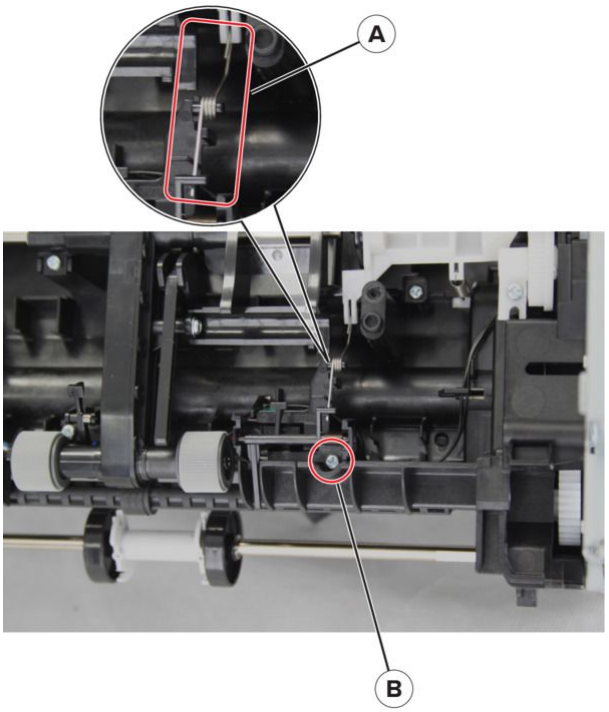


5. Release the three latches (B).

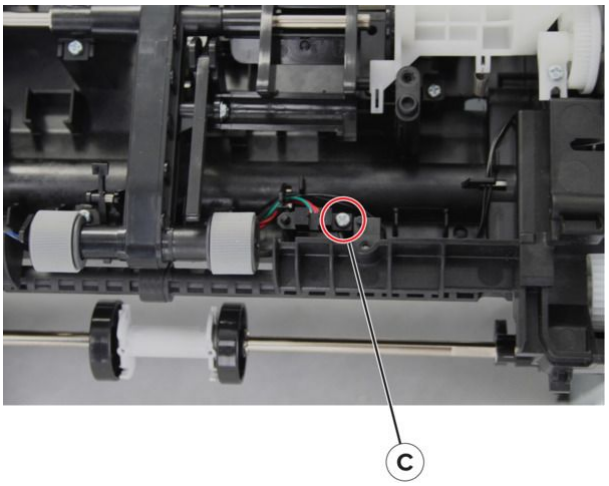


Sensor (trailing edge) removal

1. Remove the rear cover. See .Rear door and cover removal on page 363
2. Remove the power supply. See .Power supply removal on page 346
3. Remove the duplex. See Duplex removal on page 347.
4. Open the controller board access cover, and then disconnect the cable JACM1.
5. Detach the spring (A), and then remove the screw (B) and sensor flag.

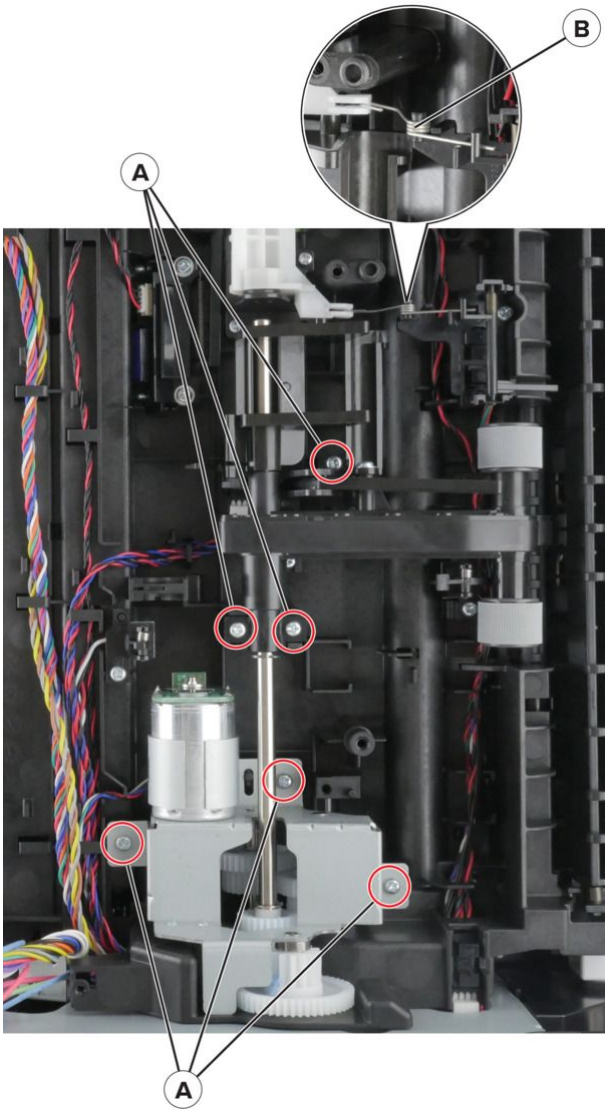


6. Remove the screw (C) and sensor.



Pick/lift motor gearbox removal

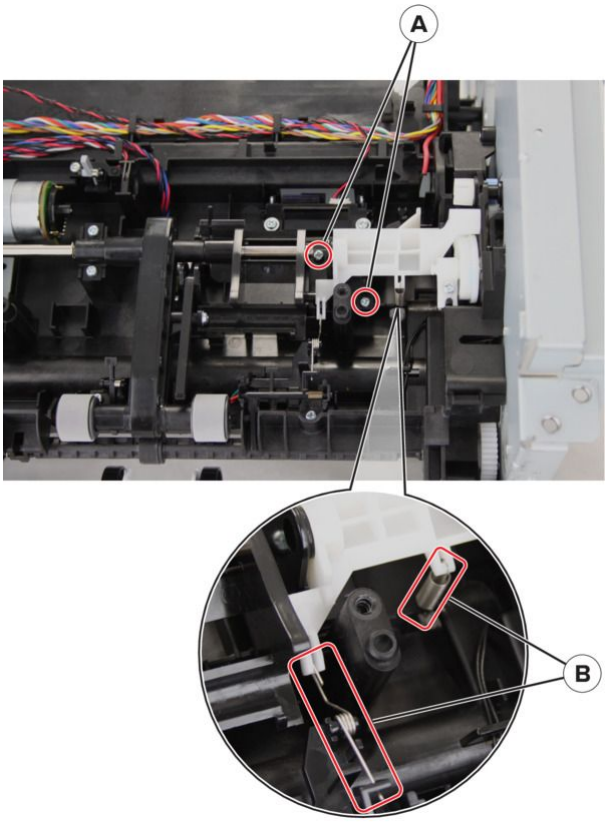
1. Remove the rear cover. See .Rear door and cover removal on page 363
2. Remove the power supply. See .Power supply removal on page 346
3. Remove the duplex. See Duplex assembly removal.
4. Remove the six screws (A).
5. Detach the spring (B).



6. Lift the pick roller assembly.
7. Disconnect the cable from the gearbox.
8. Remove the gearbox.

Lift cam removal

1. Remove the left cover. See Left cover removal on page 302.
2. Remove the main drive gearbox. See Main drive gearbox removal on page 303.
3. Remove the rear cover. See Rear door and cover removal on page 363.
4. Remove the power supply. See Power supply removal on page 346.
5. Remove the duplex. See Duplex removal on page 347.
6. Remove the two screws (A).
7. Release the two springs (B).



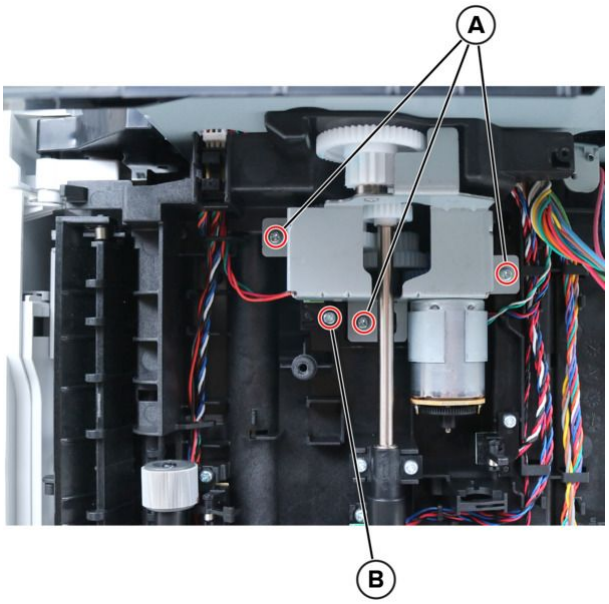
8. Remove the cam.

Sensor (narrow media) removal

1. Remove the left cover. See Left cover removal on page 302.
2. Remove the right cover. See Right cover removal on page 312.
3. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
4. Remove the rear cover. See Rear door and cover removal on page 363.
5. Position the printer on its left side.

> **Warning—Potential Damage**
> The ADF might swing open while you position the printer on its side.

6. Remove the power supply. See Power supply removal on page 346.
7. Remove the duplex assembly. See Duplex removal on page 347.
8. Remove the screws (A) to access the sensor under the motor bracket.
9. Remove the screw (B), and then release the sensor.

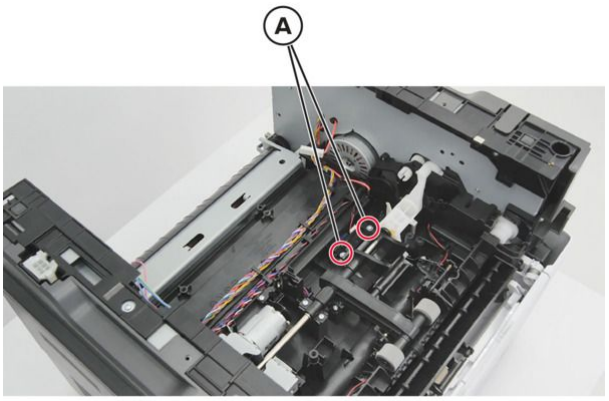


10. Disconnect the sensor cable from the controller board.
11. Remove the sensor.

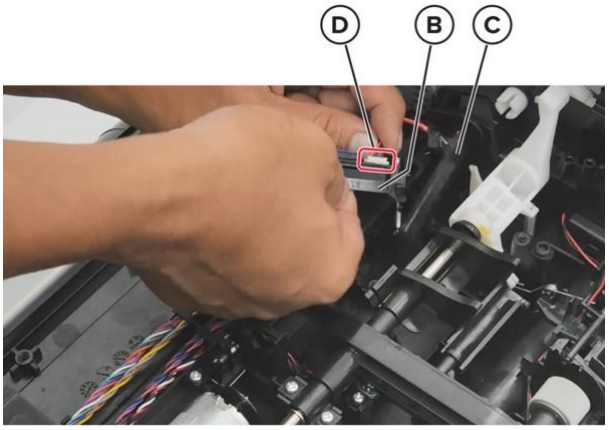
Sensor (toner density) and media present sensor flag removal

Note: For a video demonstration, see Sensor (toner density) and media present sensor flag removal.

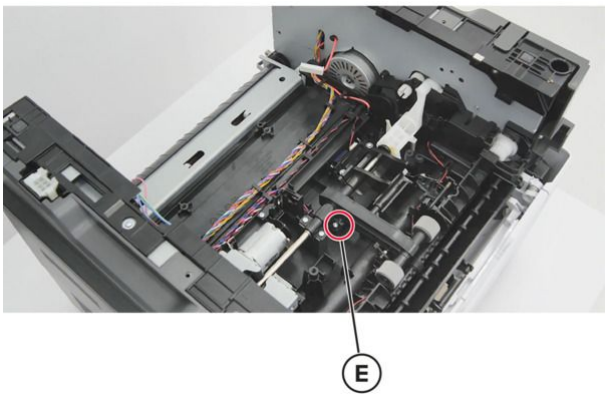
1. Remove the toner cartridge, and then remove the imaging unit.
2. Remove the tray insert.
3. Remove the rear door and cover. See .Rear door and cover removal on page 363
4. Remove the power supply. See .Power supply removal on page 346
5. Remove the duplex. See .
6. Remove the screws (A).



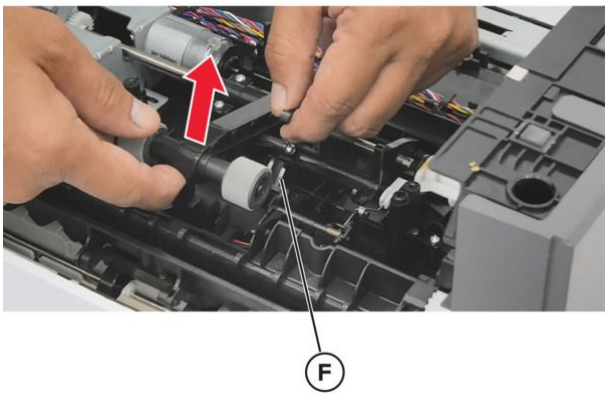
7. Remove the sensor (B), and then remove the wiper (C).
8. Disconnect the connector (D).



9. Remove the screw (E).

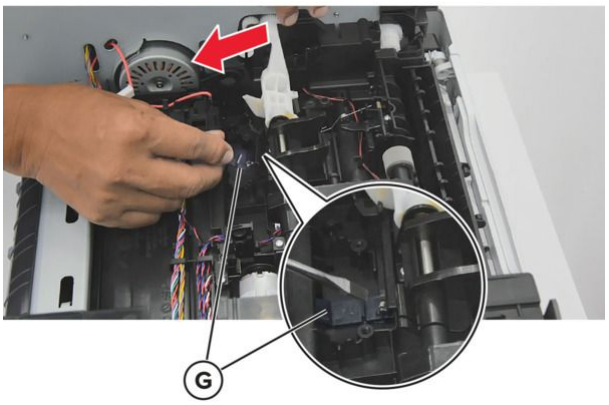


10. Lift the pick roller assembly and then remove the sensor flag and bracket (F).

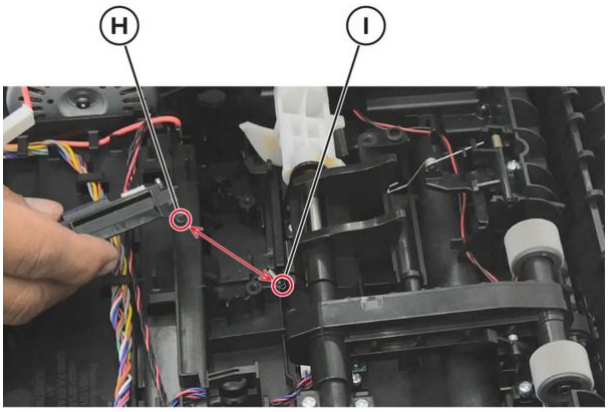


Installation Note
Refer to the following procedures when installing the toner density sensor and media present sensor flag:

1. Pull down the actuator, and then place the wiper (G) in position.



2. Attach the sensor bracket (H) and the spring (I).



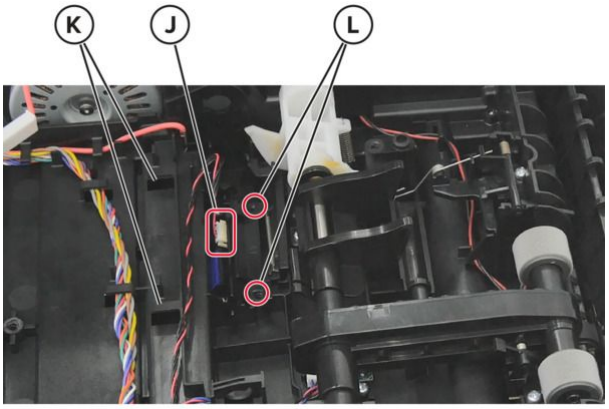
3. Connect the connector (J) to the sensor, and then route the cable on the harness (K).

> **Note:** Before securing the sensor bracket using screws, do the following:

   a. Lift the actuator.

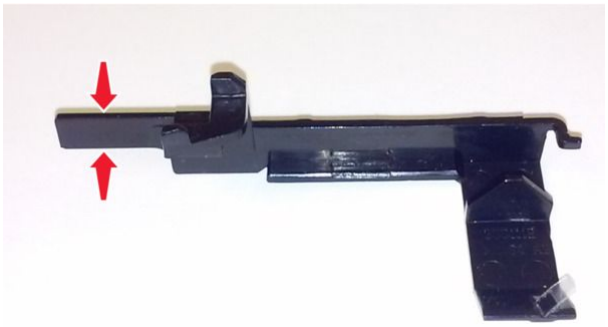
   b. If the wiper goes along with the actuator, then the sensor bracket is properly engaged with the wiper.

4. Secure the sensor bracket using screws (L).



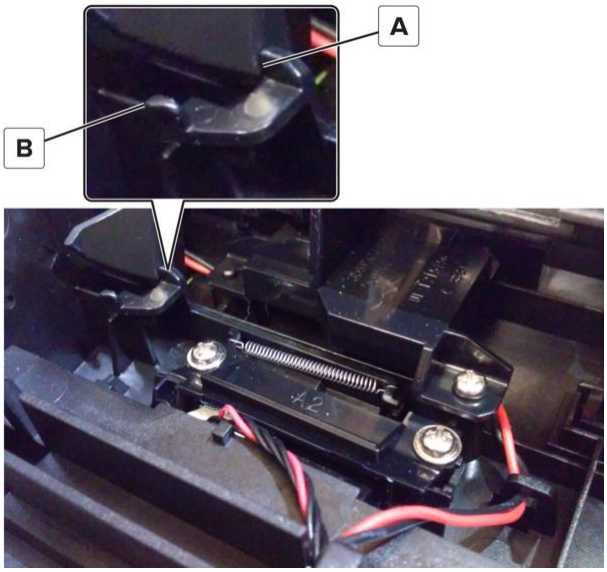
Note: After securing the sensor bracket using screws, do the following:

a. Apply RheoGel 793 to the top and bottom of the shutter blade extension.

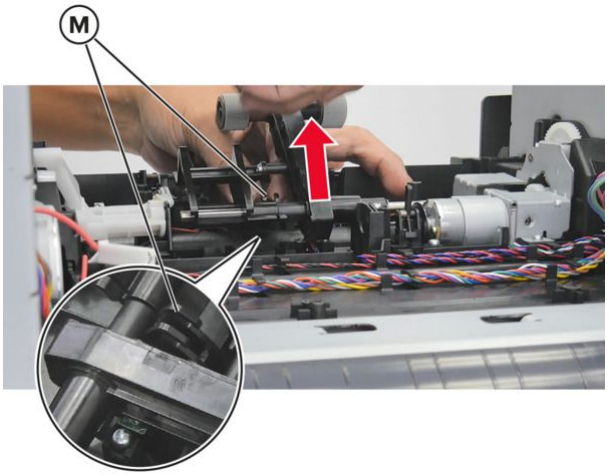


b. Apply RheoGel 793 to the point of contact between the bracket (A) and cam.

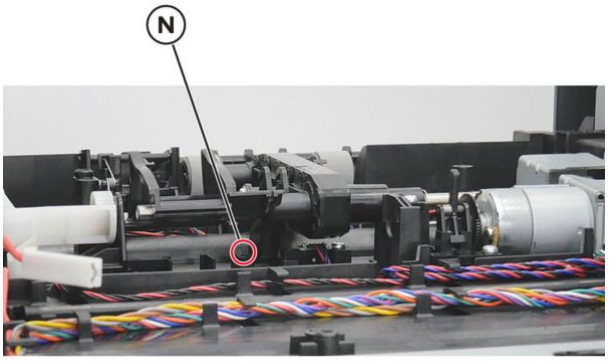
c. Apply RheoGel 793 to the point of contact to the lower edge (B) where the wiper bracket glides.



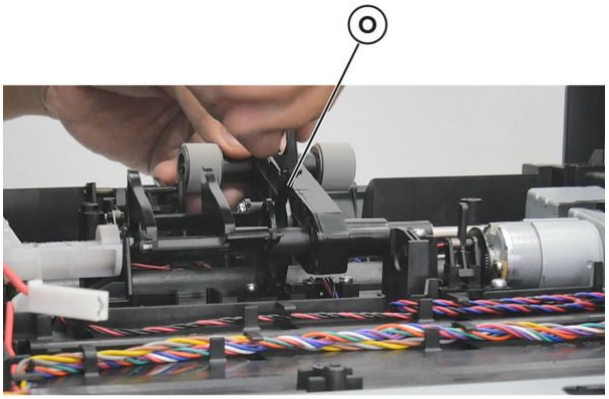
5. Lift the pick roller assembly, and then place the bracket (M) in position.



6. Secure the bracket in place using screws (N).



7. Install the sensor flag (O) into the bracket.



Note: To check if the sensor flag is properly installed, do the following:

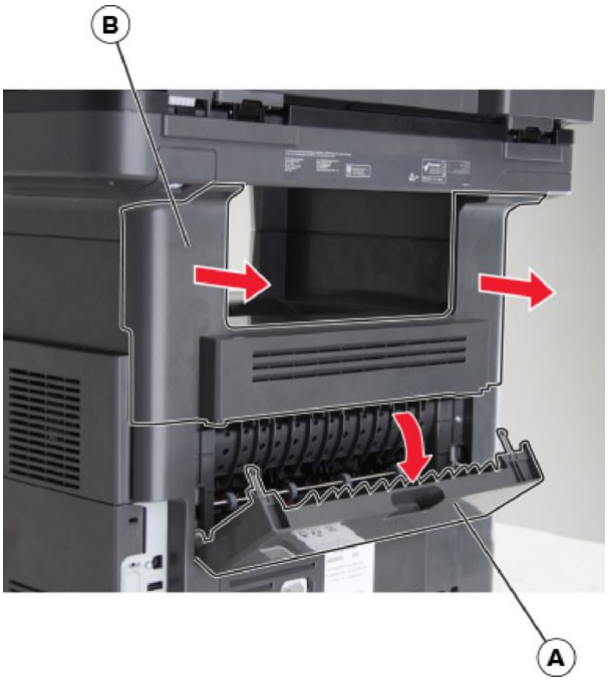
a. Lift the pick roller assembly.

b. If the sensor flag goes along with the pick roller assembly when lifted, then the sensor flag is properly installed.

Rear side removals

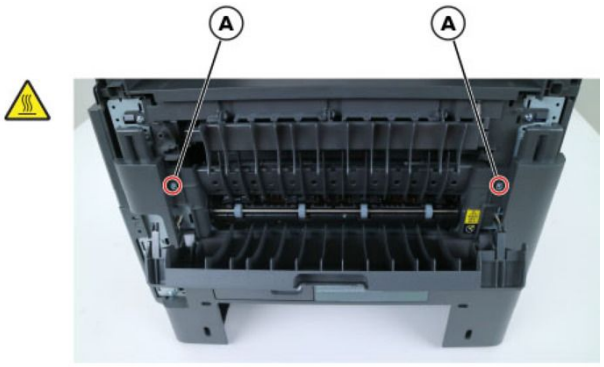
Scanner rear cover removal

1. Open the rear door (A).
2. Remove the cover (B).



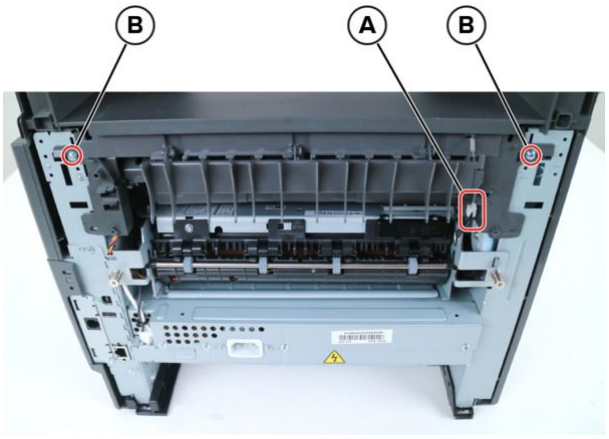
Rear door and cover removal

1. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
2. Remove the two screws (A), and then remove the door and cover.



Redrive assembly removal

1. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
2. Remove the rear cover. See Rear door and cover removal on page 363.
3. Disconnect the cable (A), and then remove the two screws (B).



4. Remove the right cover. See Right cover removal on page 312.
5. Disconnect the redrive cable from the controller board.
6. Remove the redrive assembly.

Fuser removal

Note: For a video demonstration, see Fuser removal.

1. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
2. Remove the rear cover. See Rear door and cover removal on page 363.
3. Disconnect the two cables (A), and then remove the two screws (B).



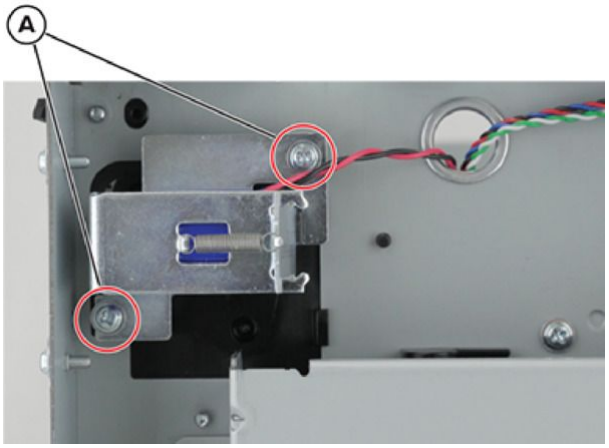
4. Remove the right cover. See Right cover removal on page 312.
5. Disconnect the fuser cable from the controller board.
6. Remove the fuser.

Note: For a video demonstration, see Fuser removal at infoserve.lexmark.com/ids/sma.

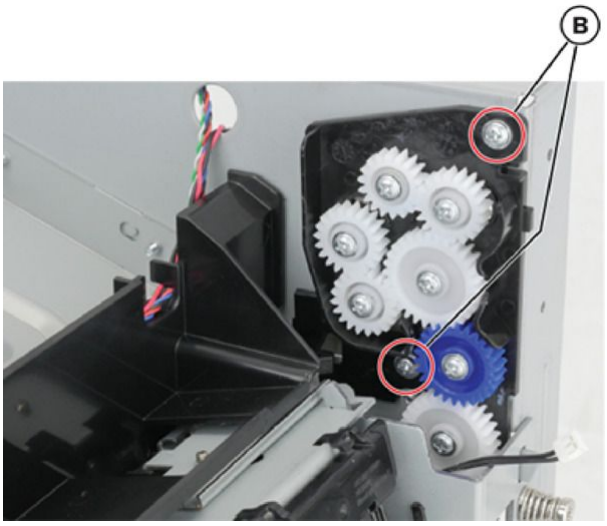
Redrive gear assembly removal

1. Remove the top cover. See Stapler top cover removal on page 406.
2. Remove the left cover. See .Left cover removal on page 302
3. Remove the redrive assembly. See .Redrive assembly removal
4. Remove the two screws (A), and then detach the reverse solenoid.

   Note: Do not disconnect the reverse solenoid cable from the controller board.



5. Remove the fuser. See .Fuser removal on page 364
6. Remove the two screws (B).

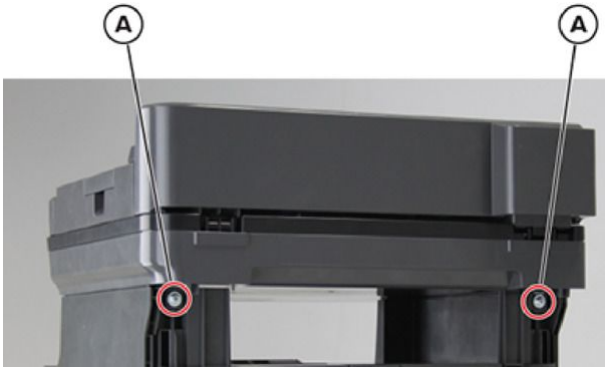


7. Remove the redrive gear assembly.

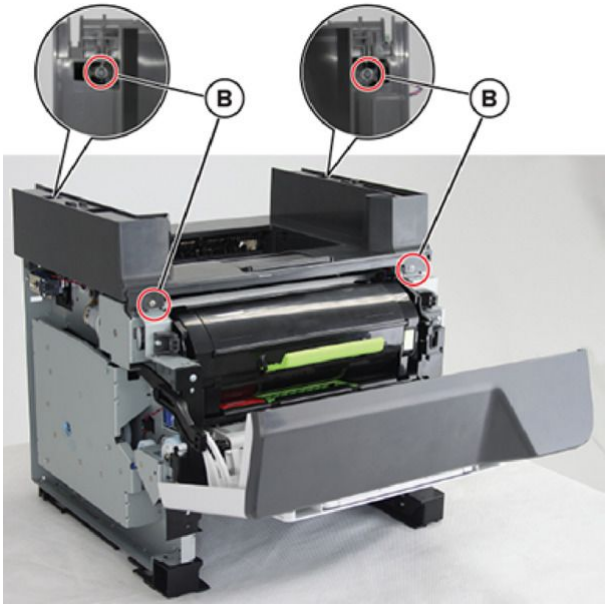
Top removals

Top cover removal

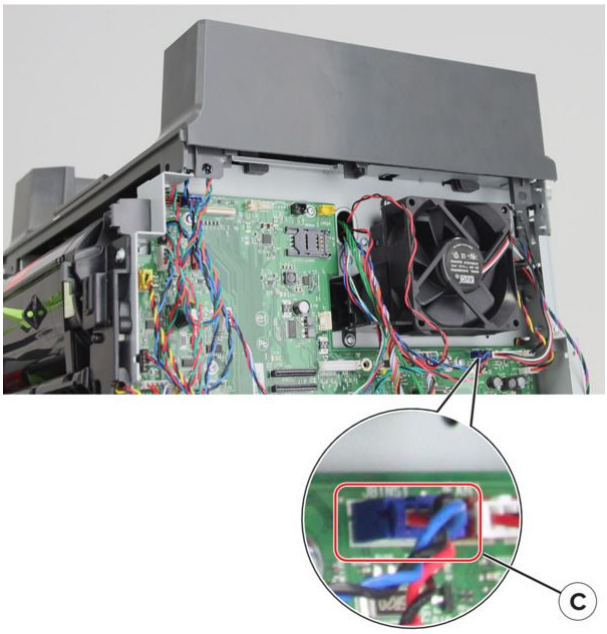
1. Remove the left cover. See Left cover removal on page 302.
2. Remove the right cover. See Right cover removal on page 312.
3. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
4. Remove the two screws (A).



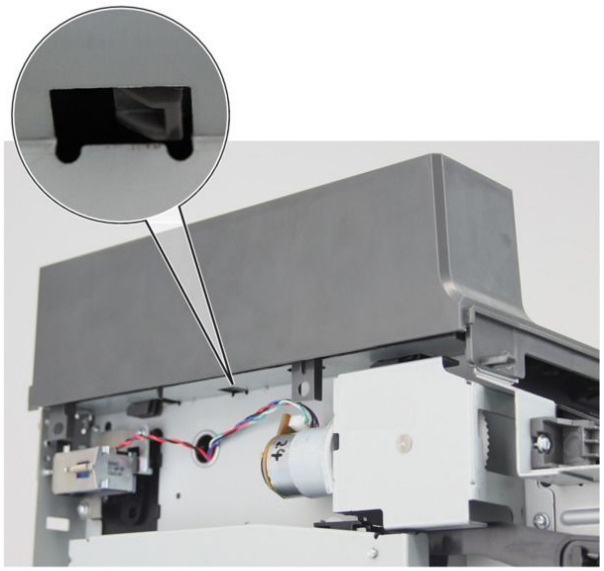
5. Remove the scanner assembly. See Flatbed scanner assembly removal on page 379.
6. Remove the four screws (B).

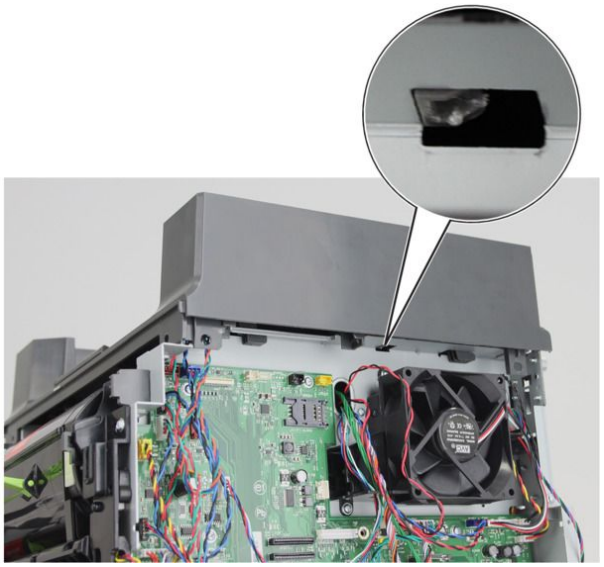


7. Disconnect the cable (C).

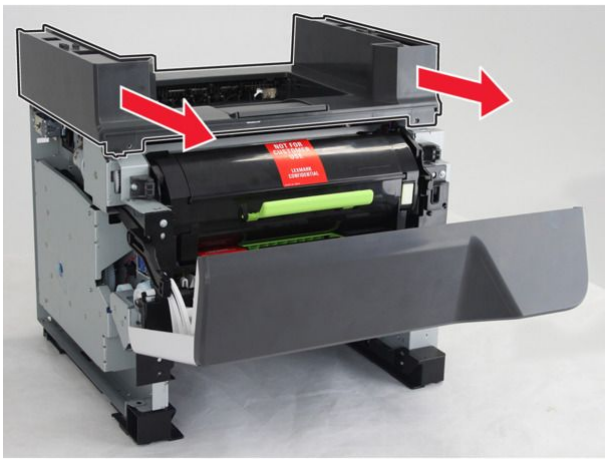


8. Release the latch on the left and right sides of the cover.





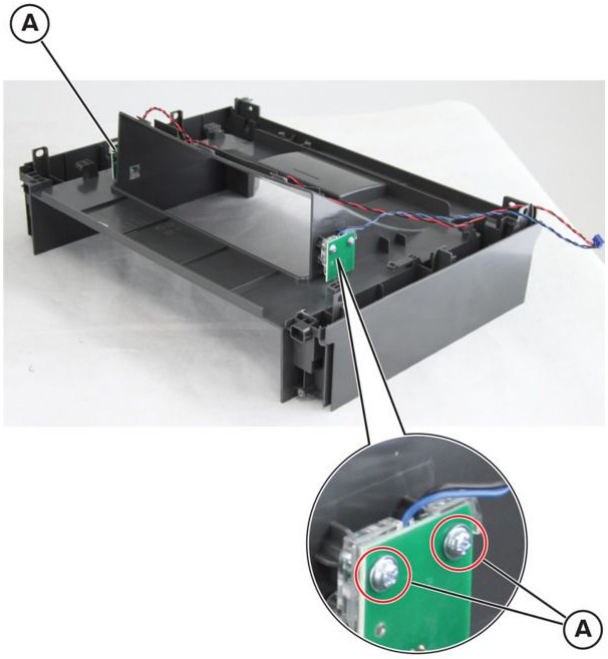
9. Slide the cover to the front, and then pull up to remove.



10. Remove the sensors (bin full). See Sensor (bin full) removal on page 369.

Sensor (bin full) removal

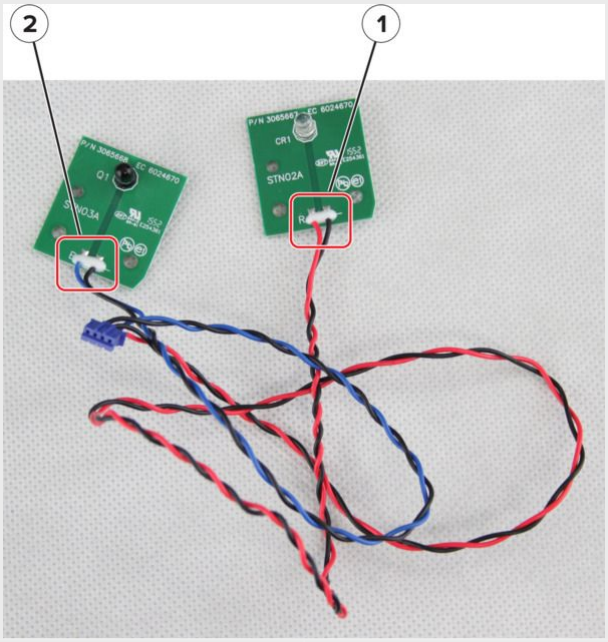
1. Remove the scanner assembly. See Flatbed scanner assembly removal on page 379.
2. Remove the left cover. See Left cover removal on page 302.
3. Remove the top cover. See Stapler top cover removal on page 406.
4. Remove the two screws (A). Do the same for the sensor on the opposite side.



5. Release the cables, and then remove the sensor transmitter and receiver.

Installation Note

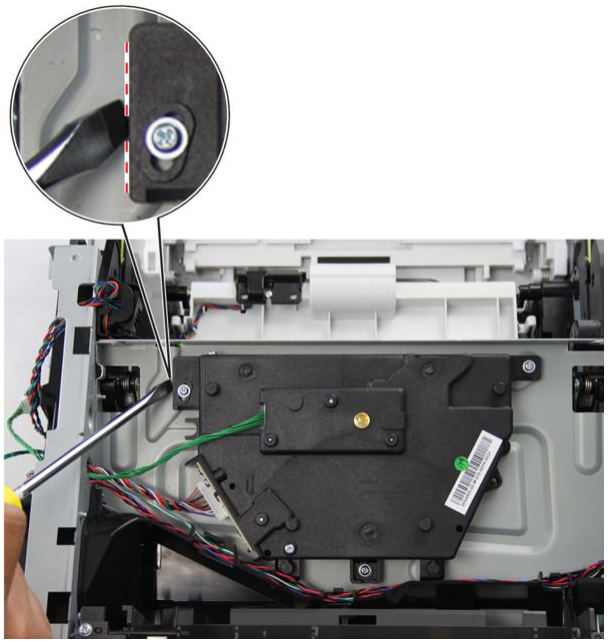
- Pay attention to the route of the cables.
- The color of the cable helps you identify if the part is the receiver or the transmitter.



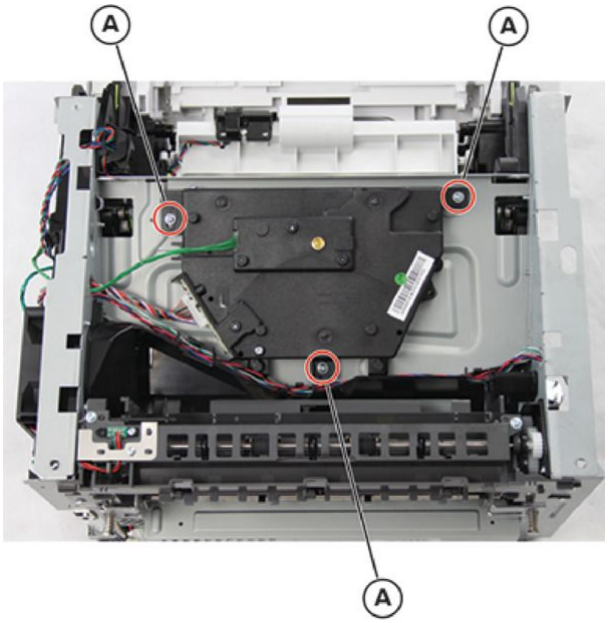
1	Sensor (bin full—transmitter)
2	Sensor (bin full—receiver)

Printhead removal

1. Remove the right cover. See Right cover removal on page 312.
2. Remove the left cover. See Left cover removal on page 302.
3. Remove the rear cover. See Rear door and cover removal on page 363.
4. Remove the top cover. See Top cover removal.
5. Using a small, flat-blade screwdriver or a sharp pencil, mark the location of the printhead on the printer frame.



6. Disconnect the printhead cable from the controller board.
7. Remove the three screws (A).



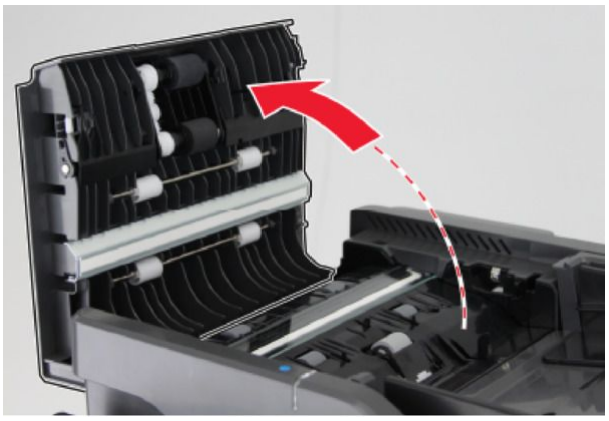
8. Remove the printhead.

Installation Note
Perform all the mechanical and electronic adjustments to the printhead after replacing it. See Printhead assembly adjustment on page 299.

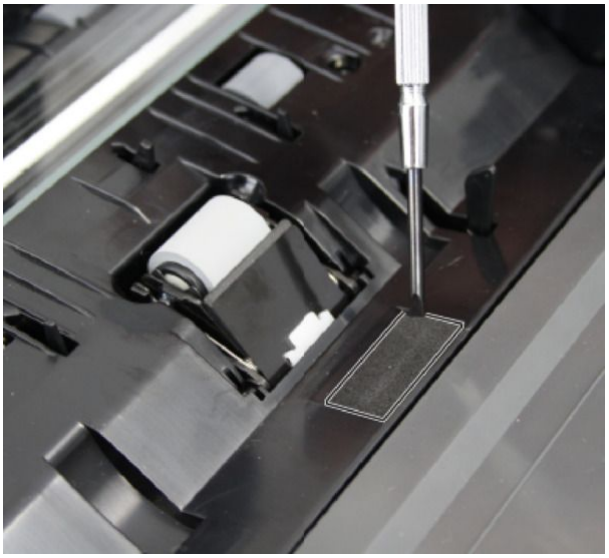
ADF/scanner removals

ADF restraint pad removal

1. Open the ADF top cover.



2. Remove the restraint pad.



ADF roller removal

Note: For a video demonstration, see ADF roller removal.

1. Open the ADF door.
2. Release, and then rotate the retainers as shown.



3. Remove the ADF roller.

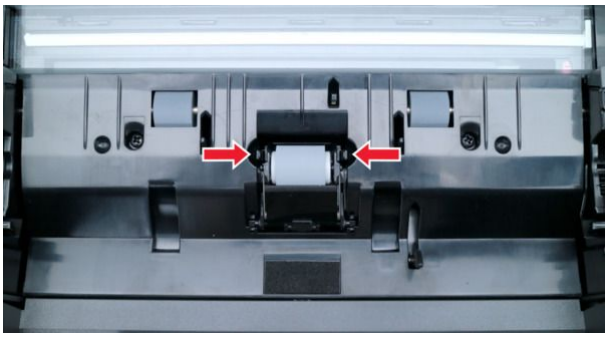
Note: For a video demonstration, see ADF roller removal at infoserve.lexmark.com/ids/sma.

ADF separator roller removal

Note: For a video demonstration, see ADF separator roller removal.

1. Open the ADF door.
2. Release the latches, and then remove the roller.

   Installation Note
   Make sure that the spring is properly installed.



ADF tray removal

1. Open the ADF top cover.

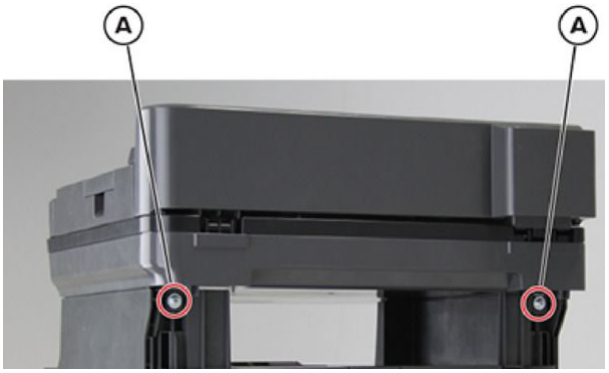
2. Release the left latch, and then remove the tray.



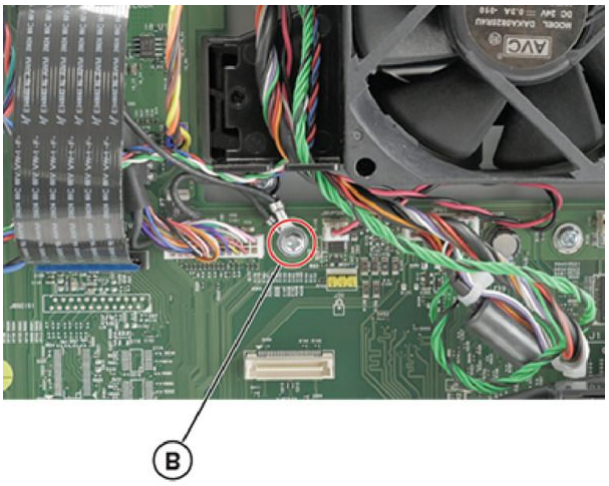
Scanner assembly removal

Note: Not a FRU.

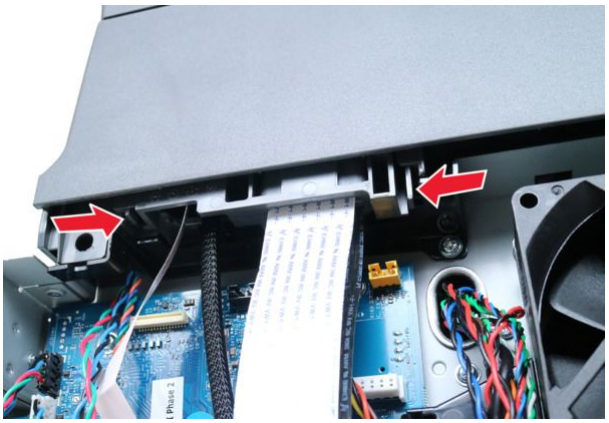
1. Remove the right cover. See Right cover removal on page 312.
2. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
3. Remove the two screws (A).



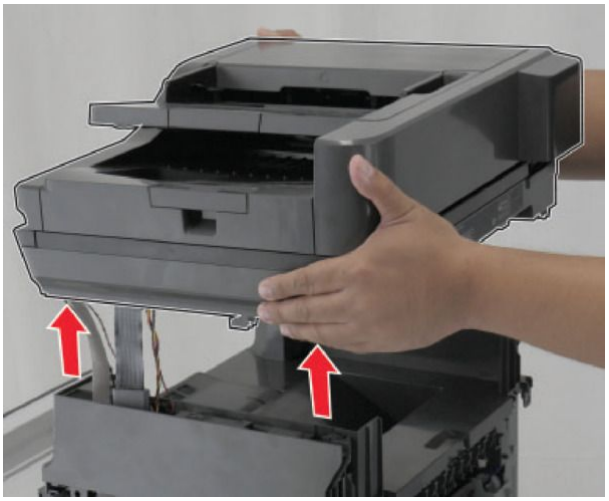
4. From the controller board, remove the screw (B), and then disconnect the following cables:
    - Control panel cable
    - Speaker cable
    - ADF cable
    - ADF scanner cable
    - CIS cable



5. Release the latches, and then remove the toroid holder to release the flat cables.



6. Remove the scanner assembly.

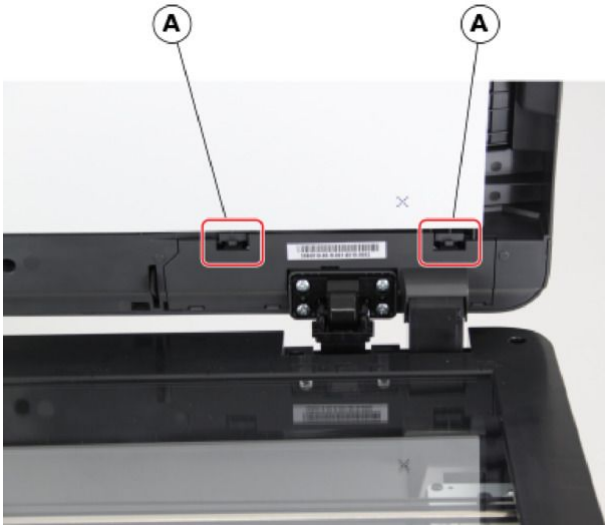


ADF assembly removal

1. Open the ADF.

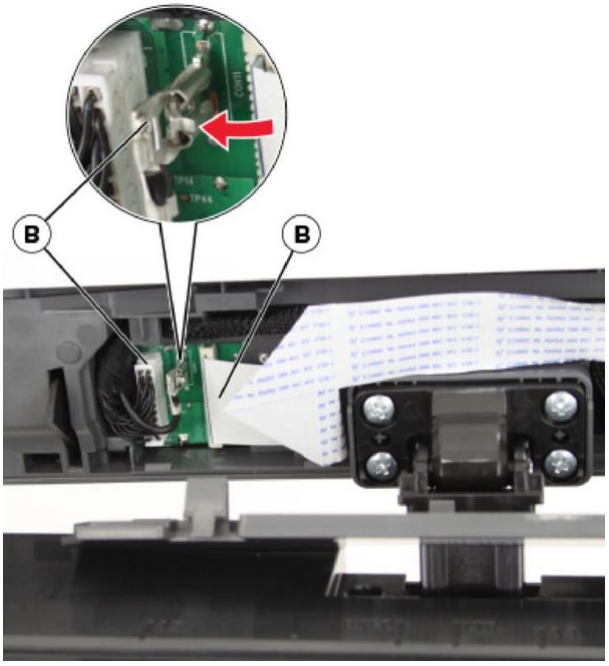


2. Release the two latches (A) to open the ADF controller board access cover.



3. Disconnect the three cables (B).

> **Note:** To disconnect the grounding cable, press the tab first and then pull.

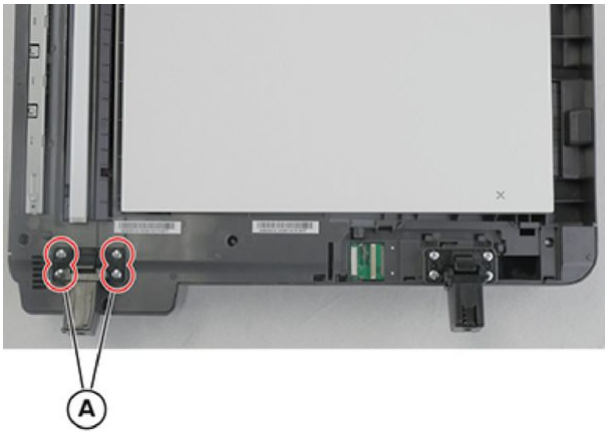


4. Release the cables off the assembly, and then remove the ADF.

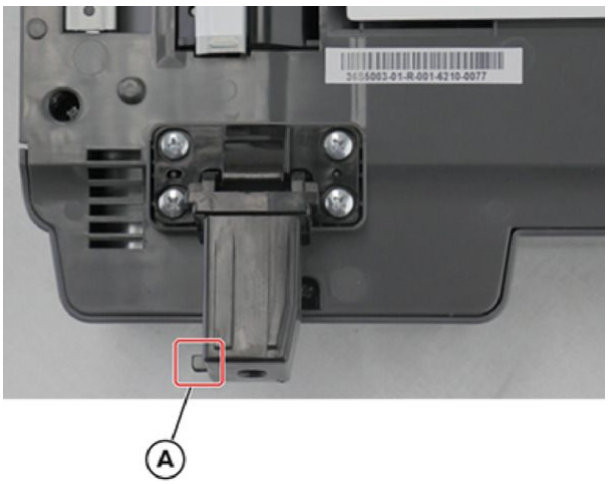
> **Installation Note**
> Pay attention to the routing of the cables.

ADF left hinge removal

1. Remove the ADF assembly. See ADF assembly removal on page 375.
2. Remove the four screws (A), and then remove the left hinge.

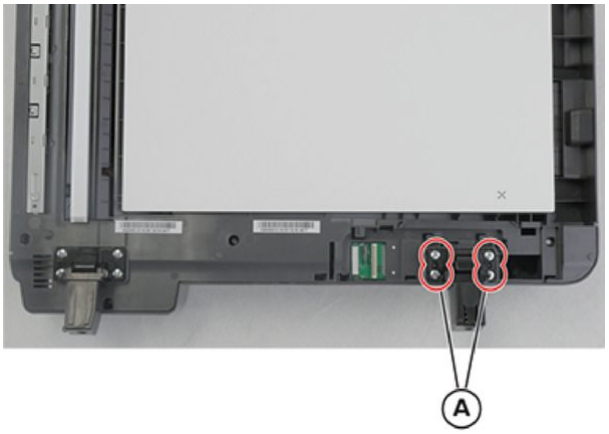


> **Installation Note**
> When installing the left hinge, make sure that the extension (A) is facing to the left.

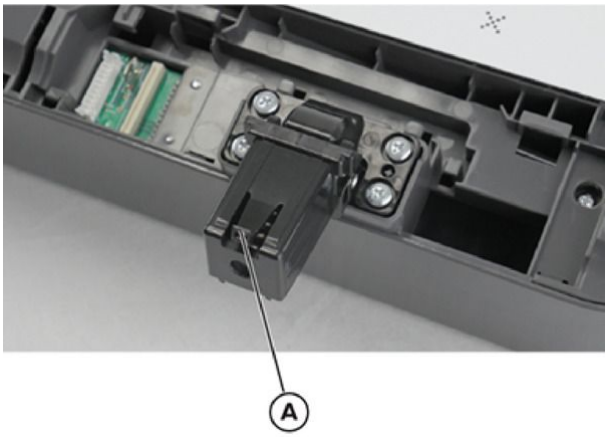


ADF right hinge removal

1. Remove the ADF assembly. See ADF assembly removal on page 375.
2. Remove the four screws (A), and then remove the right hinge.

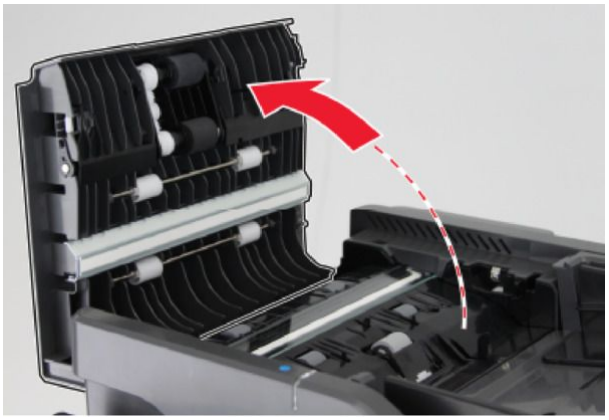


Installation Note
When installing the right hinge, make sure that the latch (A) is positioned as shown.

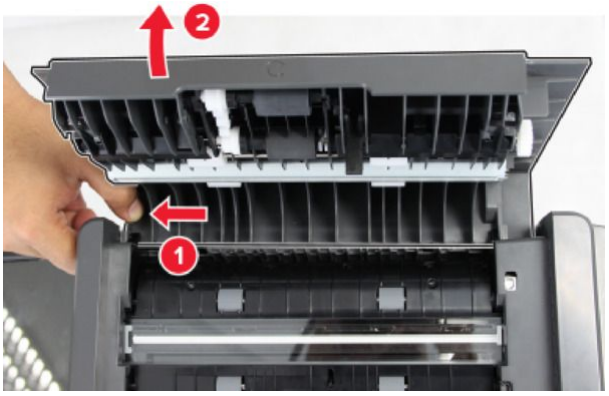


ADF access door removal

1. Open the ADF access door.



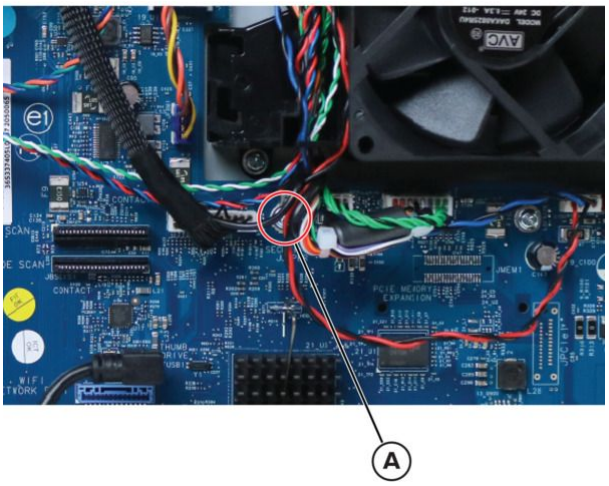
2. Pull and then release the latch on the right side of the door. Do the same to release the latch on the other side.



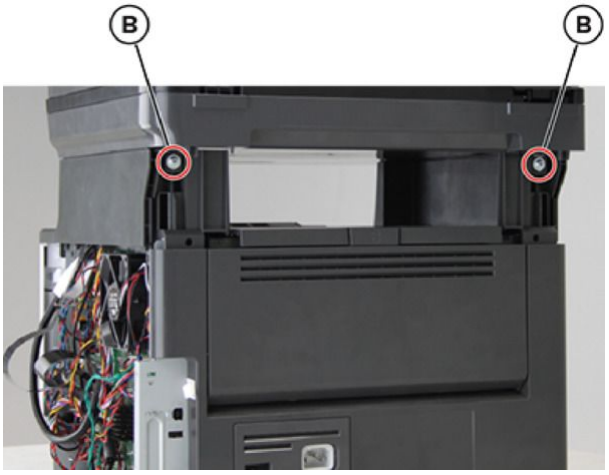
3. Remove the door.

Flatbed scanner assembly removal

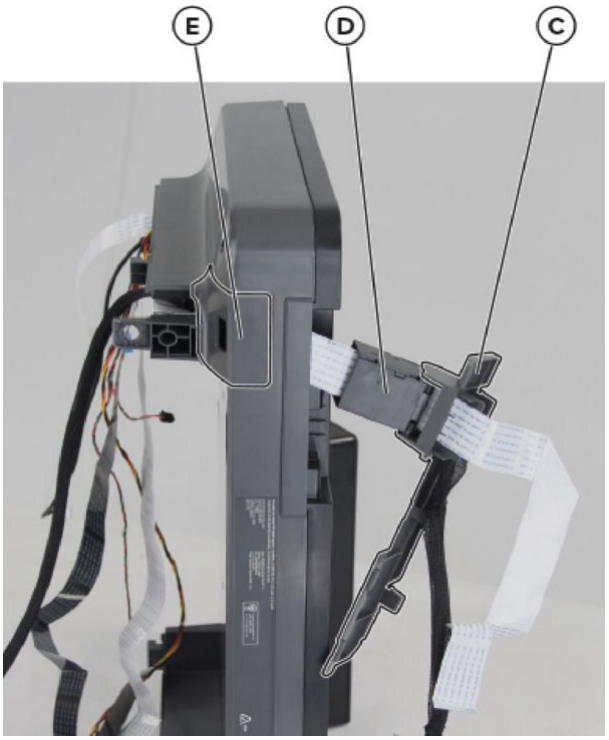
1. Remove the ADF assembly. See ADF assembly removal on page 375.
2. Remove the right cover. See Right cover removal on page 312.
3. From the controller board, remove the screw (A), and then disconnect the following cables:
    - Control panel cable
    - Speaker cable
    - ADF cable
    - CIS cable
    - ADF scanner cable



4. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
5. Remove the two screws (B).



6. Remove the flatbed scanner assembly.
7. Remove the ADF controller board cover (C) and the holder (D), and then remove the scanner cable cover (E).



8. Route the cables through the flatbed assembly, and then remove them.

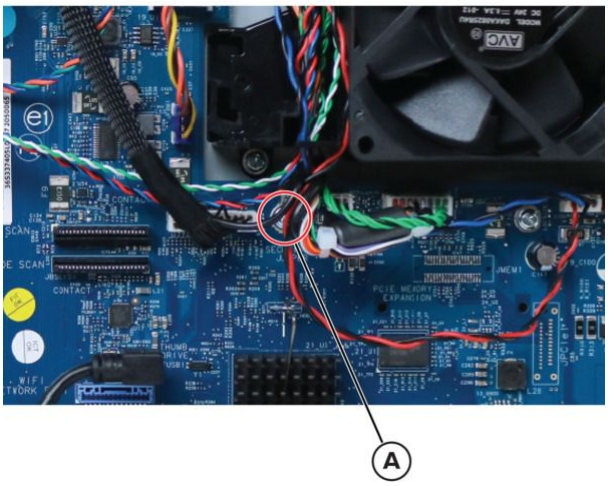
   Note: Pay attention to the routing of the flatbed scanner cable and of double-sided part of the cable.

9. Remove the control panel. See Control panel display assembly removal on page 329.

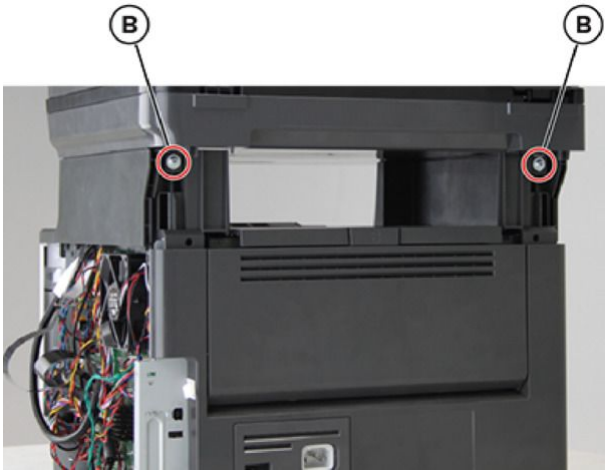
Installation Note
Make sure that the Controller calibration procedure is performed. See Controller Calibration on page 264.

ADF flat cable removal

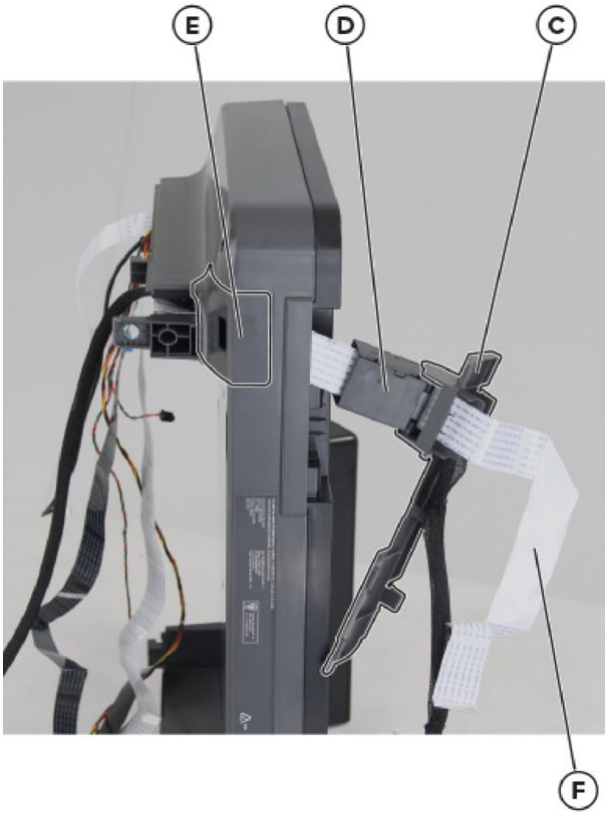
1. Remove the ADF assembly. See ADF assembly removal on page 375.
2. Remove the right cover. See Right cover removal on page 312.
3. From the controller board, remove the screw (A), and then disconnect the following cables:
   - Control panel cable
   - Speaker cable
   - ADF cable
   - ADF flat cable
   - CIS cable



4. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
5. Remove the two screws (B).



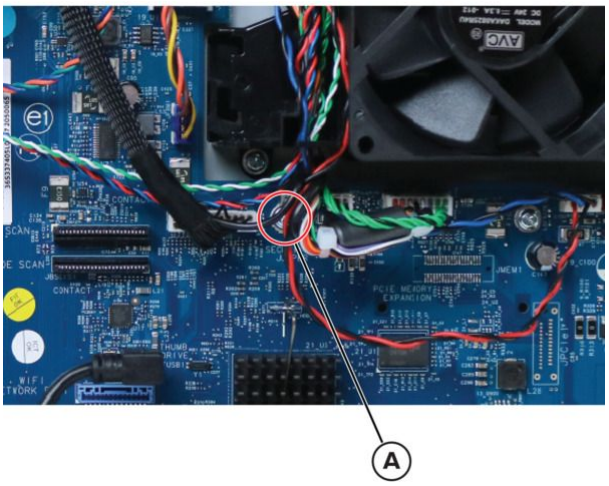
6. Remove the flatbed scanner.
7. Remove the ADF controller board cover (C) and the holder (D), and then remove the flat cable cover (E).
8. Route the flat cable (F) off the flatbed assembly, and then remove.



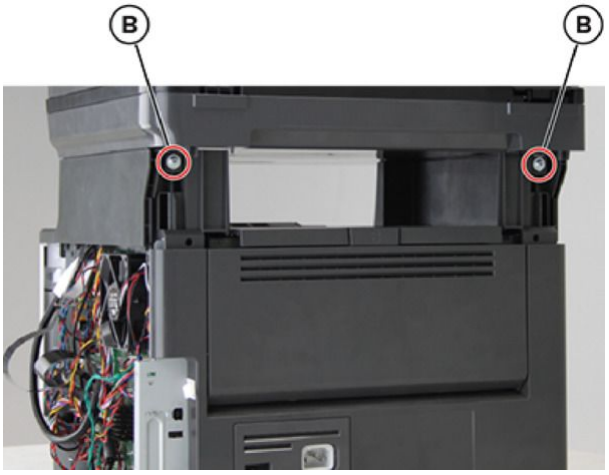
Note: Pay attention to the routing of the ADF flat cable and of the double-sided part of the cable.

ADF cable removal

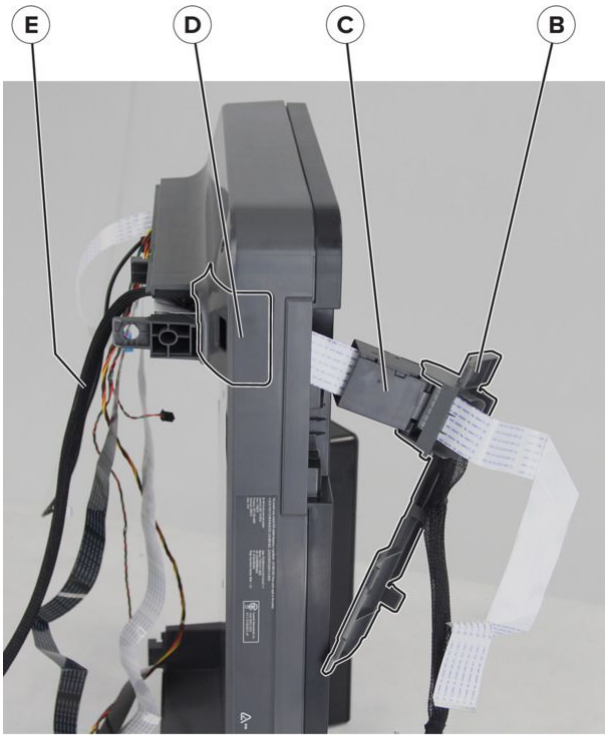
1. Remove the ADF assembly. See ADF assembly removal on page 375.
2. Remove the right cover. See Right cover removal on page 312.
3. Remove the screw (A), and then disconnect the following cables from the controller board:
    - Control panel cable
    - Speaker cable
    - ADF cable
    - ADF scanner cable
    - CIS cable



4. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
5. Remove the two screws (B).



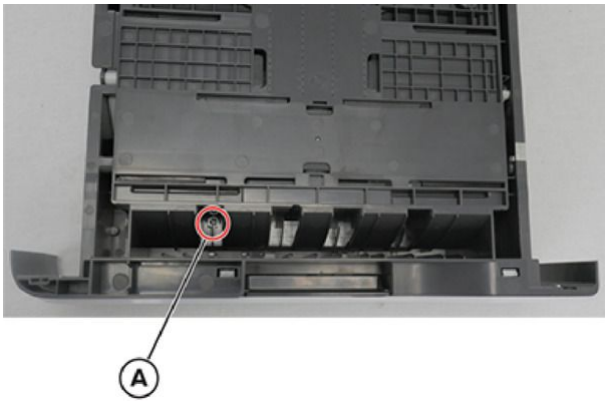
6. Remove the flatbed scanner assembly.
7. Remove the ADF controller board cover (B) and the holder (C), and then remove the scanner cable cover (D).
8. Route the ADF cable (E) off the flatbed assembly, and then remove.



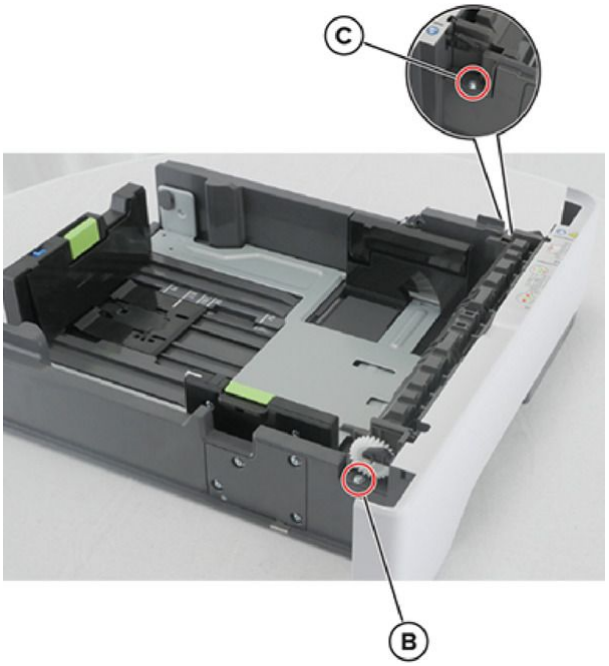
Optional 550-sheet tray removals

Separator roller assembly removal

1. Remove the tray insert.
2. Under the tray, remove the screw (A).



3. Remove the screw (B) on the left side. Do the same for the screw (C) on the opposite side.



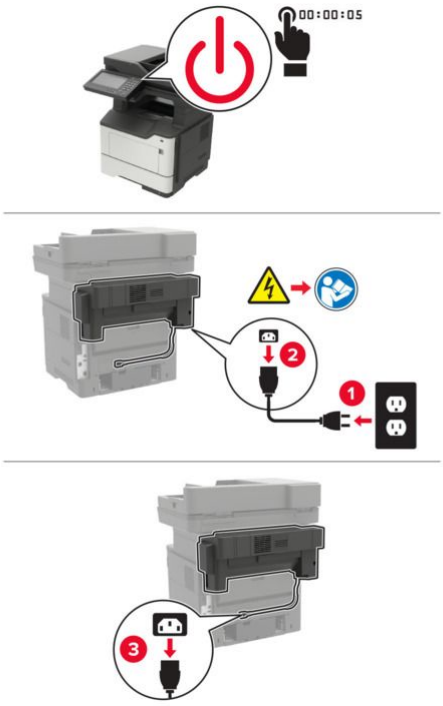
4. Remove the roller assembly.

Optional staple finisher removals

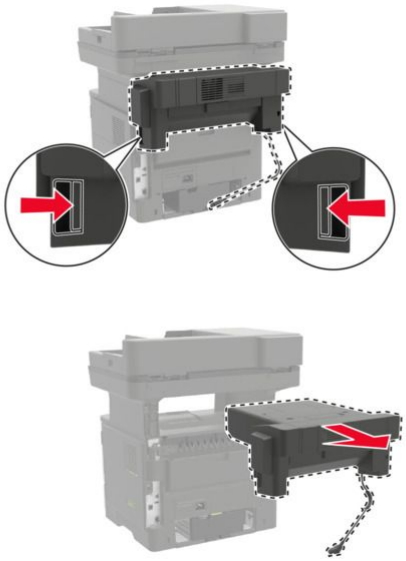
Staple finisher option removal

Note: For a video demonstration, see Staple finisher installation.

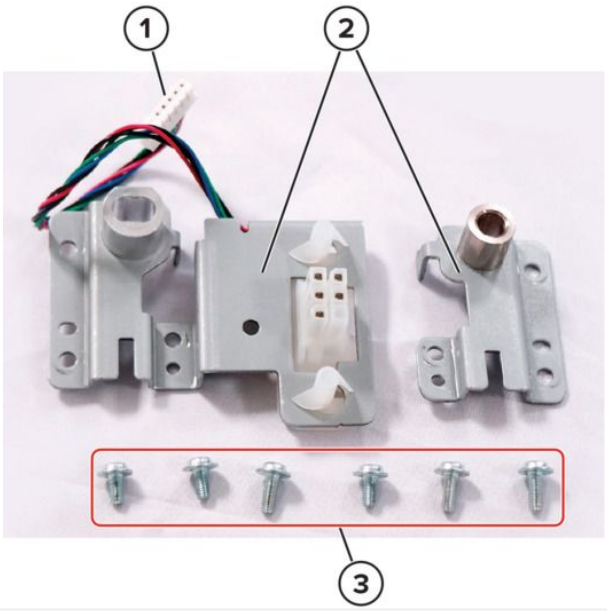
1. Turn off the machine, unplug it from its power source, and then disconnect the staple finisher power cable from the printer.



2. Press the latches to release, then pull the staple finisher off the printer.

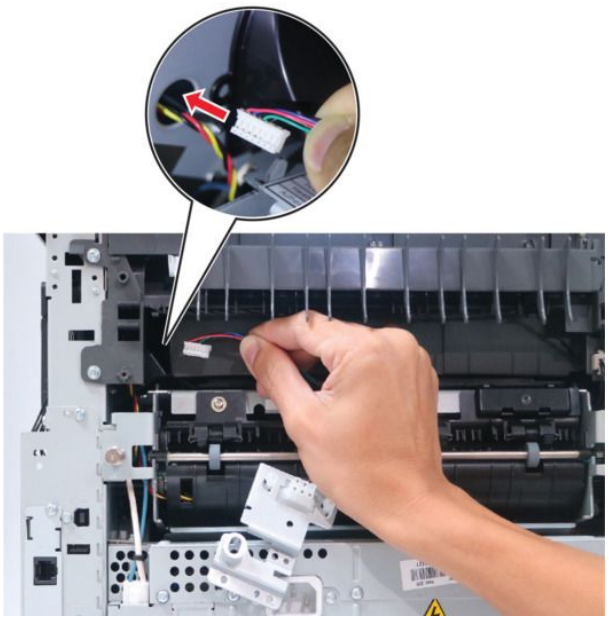


Installing the mounting bracket kit

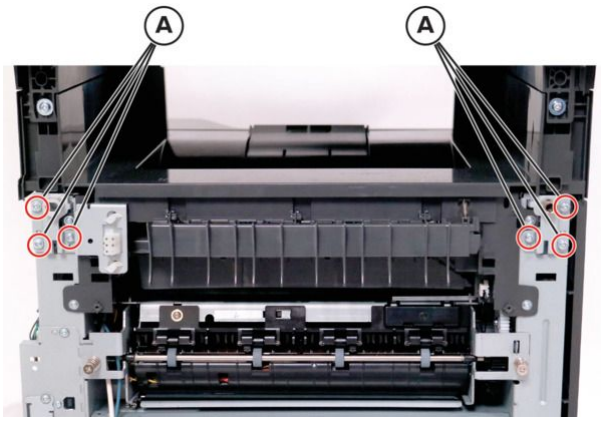


1	Stapler cable
2	Mounting brackets
3	Screws

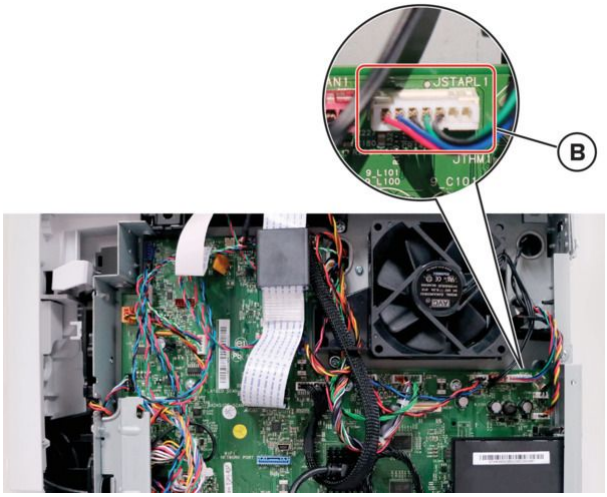
1. Remove the scanner rear cover. See Scanner rear cover removal on page 362.
2. Remove the rear cover. See Rear door and cover removal on page 363.
3. Remove the right cover. See Right cover removal on page 312.
4. Route the stapler cable through the redrive assembly and into the hole towards the controller board.



5. Install the mounting brackets securing each with three screws (A).



6. Insert the stapler cable into connector JSTAPL1 (B) on the controller board.



7. Reinstall the right and rear covers, and then install the staple finisher.

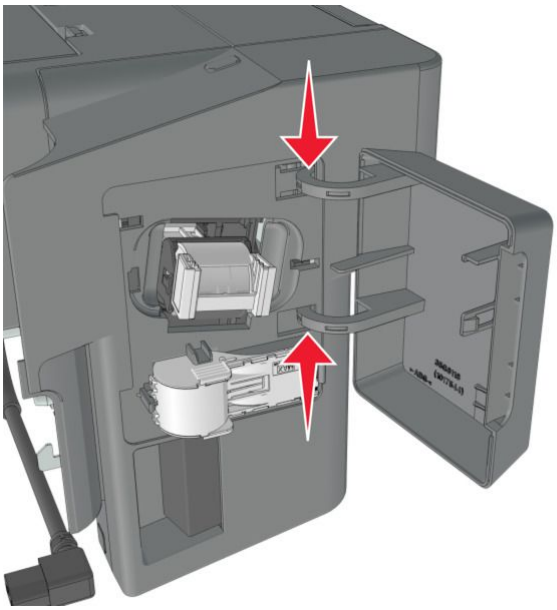
> **Note:** You do not need to reinstall the scanner rear cover.

Stapler cartridge access door removal

1. Open the access door.



2. Press the hinge inwards to release.



3. Pull the door, and remove.

Staple roll holder removal

1. Open the access door.

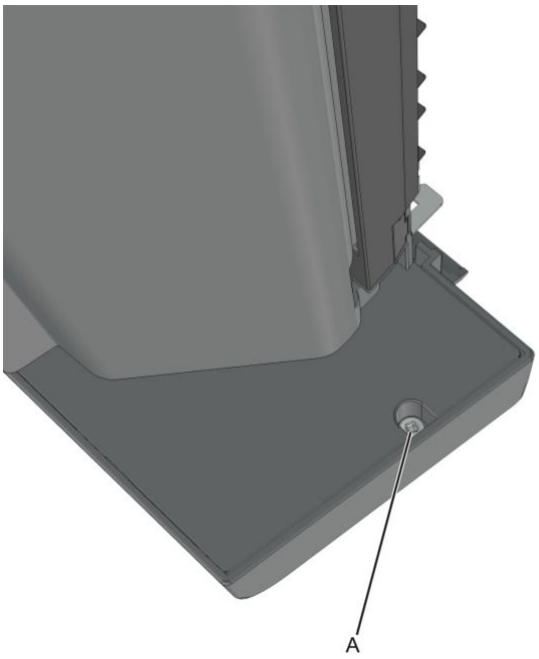


2. Squeeze the handles (1), and pull the stapler roll holder (2) off the cartridge.



Stapler right cover removal

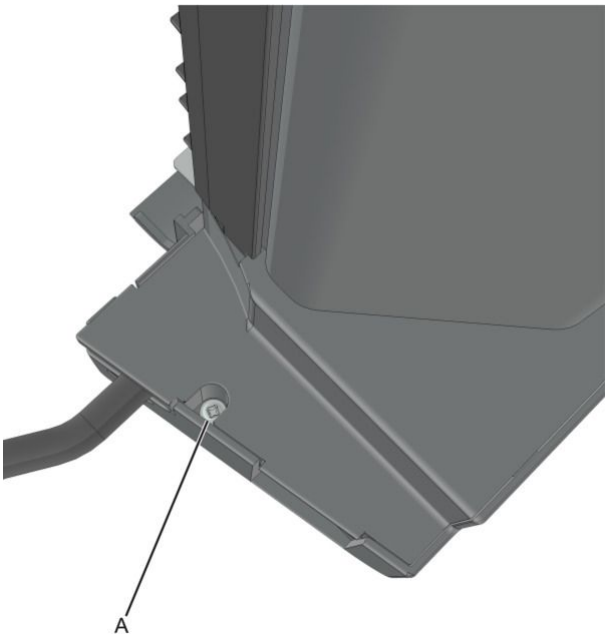
1. Remove the stapler cartridge access door. See Stapler cartridge access door removal on page 389.
2. Remove the screw (A), then remove the cover.



Stapler left cover removal

Note: This is not a FRU.

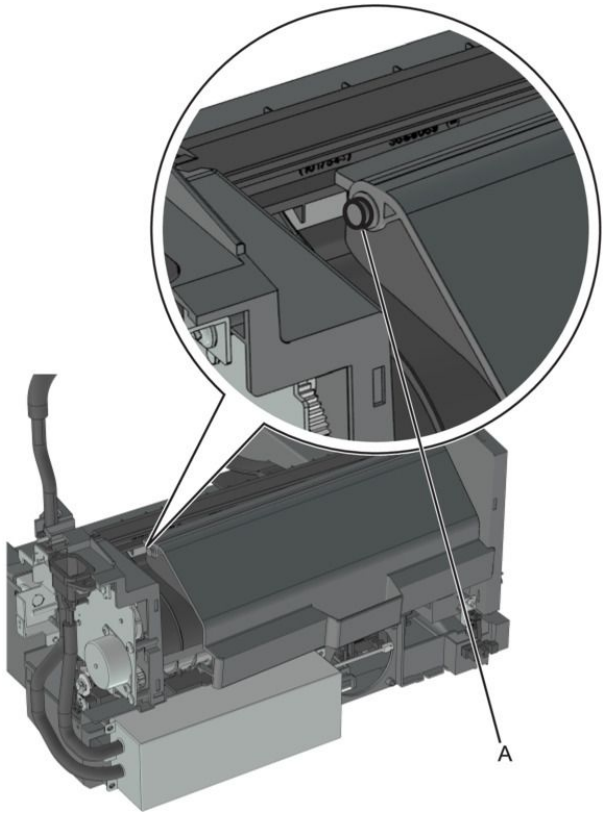
1. Remove the screw (A).



2. Remove the cover.

Stapler rear door removal

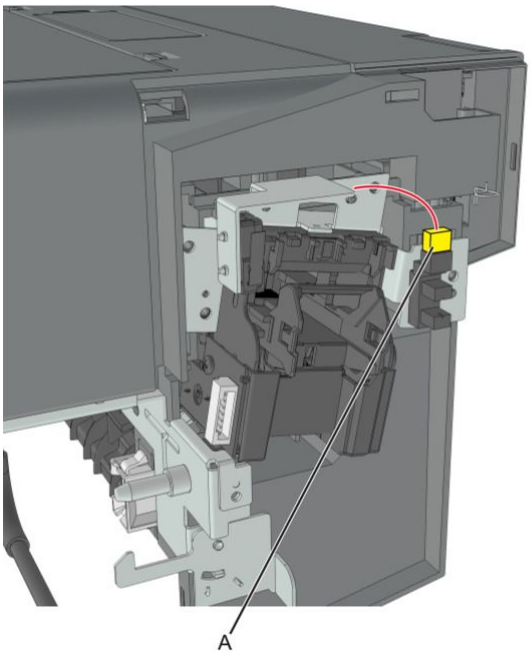
1. On the bottom of the staple finisher, flex the stapler rear door to release the pin (A).



2. Remove the stapler rear door.

Sensor (stapler access door) removal

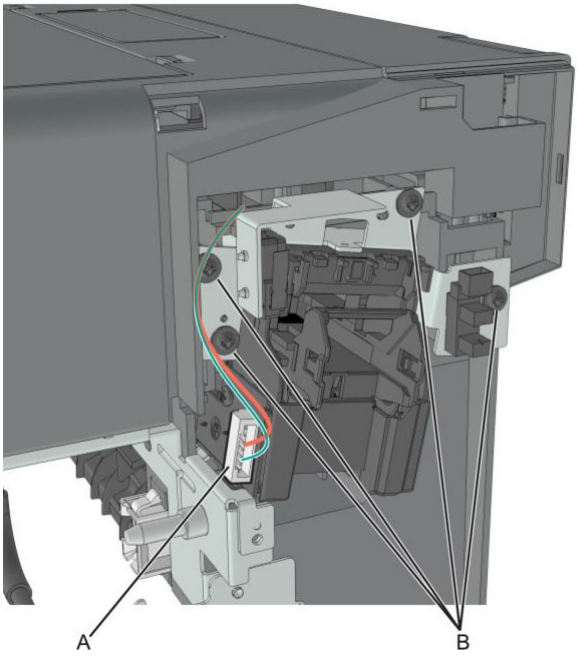
1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Disconnect the sensor cable (A).



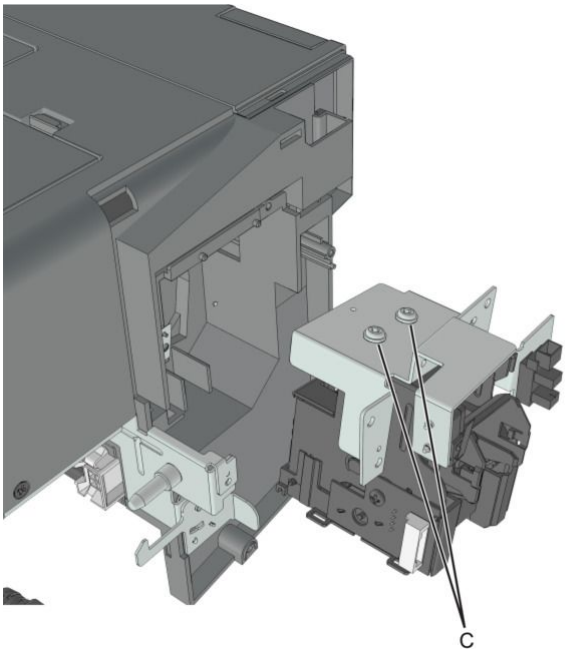
3. Release the latches, and pull the sensor off the frame.

Stapler carriage assembly removal

1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Disconnect the cable (A) from the carriage.
3. Remove the four screws (B) securing the carriage frame to the stapler.



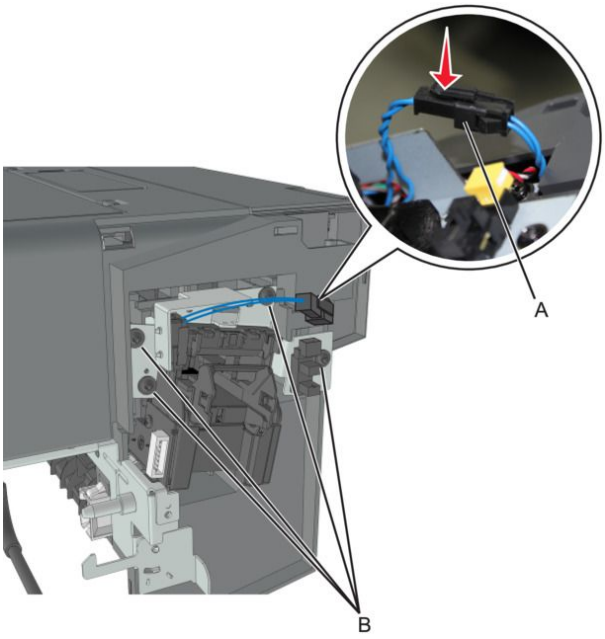
4. Remove the two screws (C), and remove the stapler carriage assembly.



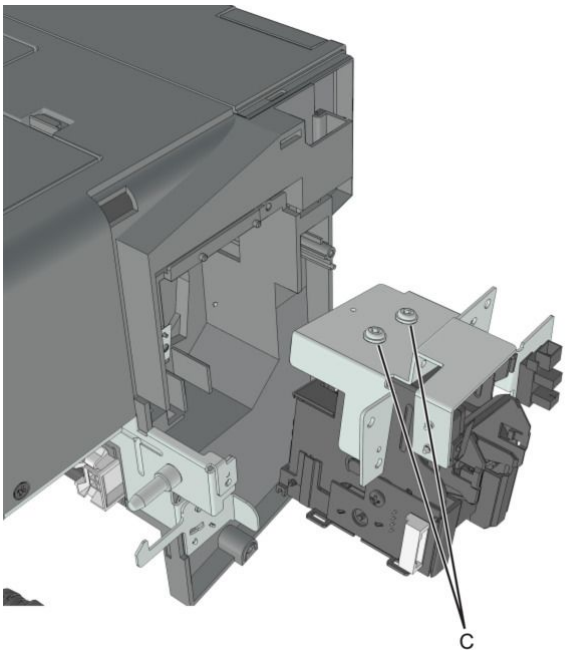
Stapler door close limit switch removal

1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Push down to release, then disconnect the switch cable (A).

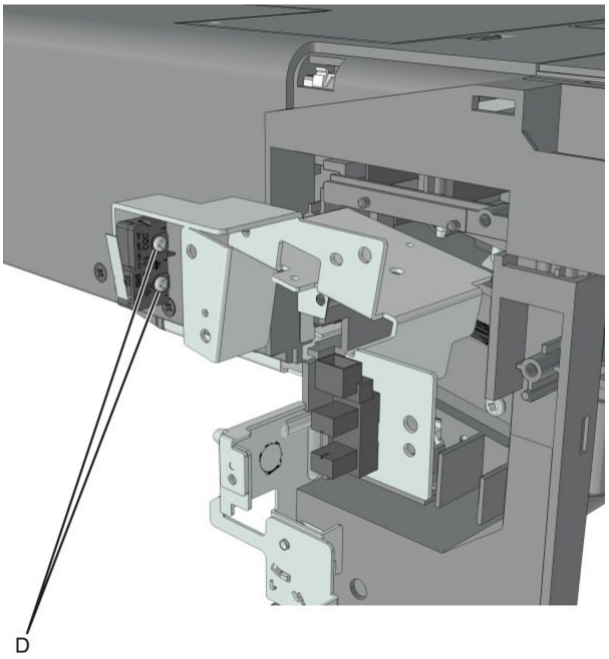
3. Remove the four screws (B) securing the carriage frame to the stapler.



4. To access the switch, remove the two screws (C), and set aside the carriage.

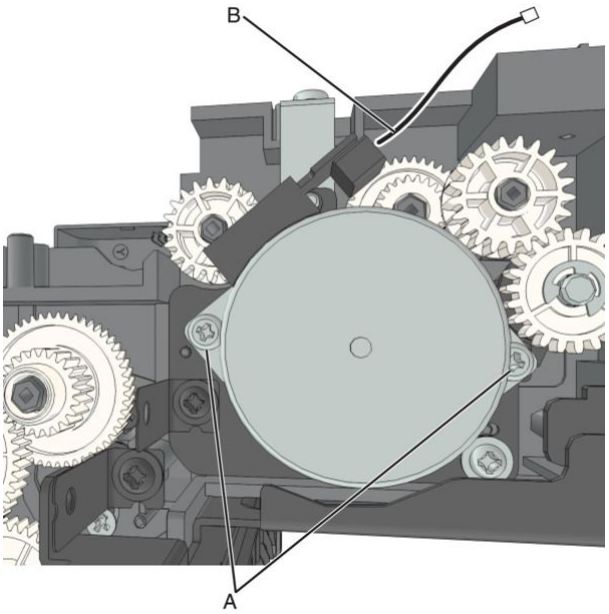


5. Remove the two screws (D) using a #1 Phillips screwdriver, then remove the limit switch.



Motor (stapler paddle) removal

1. Remove the stapler left cover. See Stapler left cover removal on page 392.
2. Remove the two screws (A), and then disconnect the cable (B).

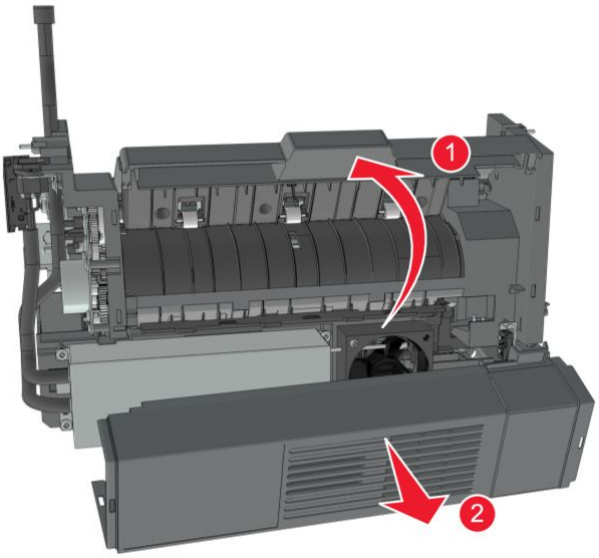


3. Remove the motor.

Stapler rear cover removal

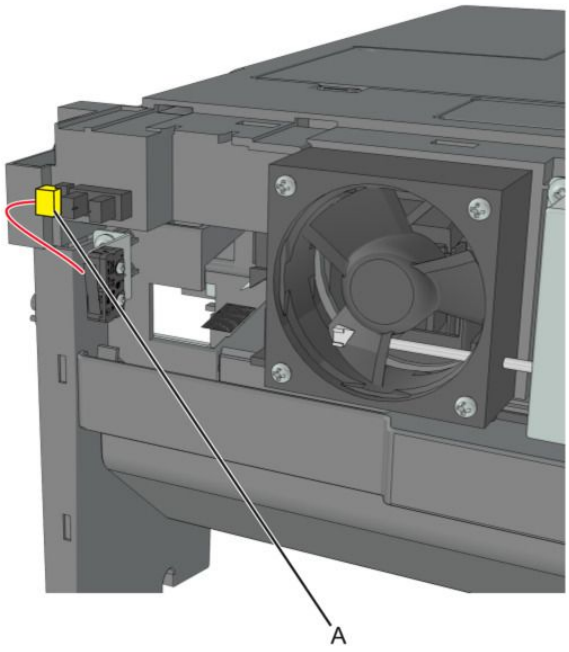
1. Remove the left cover. See Stapler left cover removal on page 392.

2. Remove the right cover. See Stapler right cover removal on page 391.
3. Lift the media access door (1), then pull the rear cover (2), and remove.



Sensor (stapler rear cover) removal

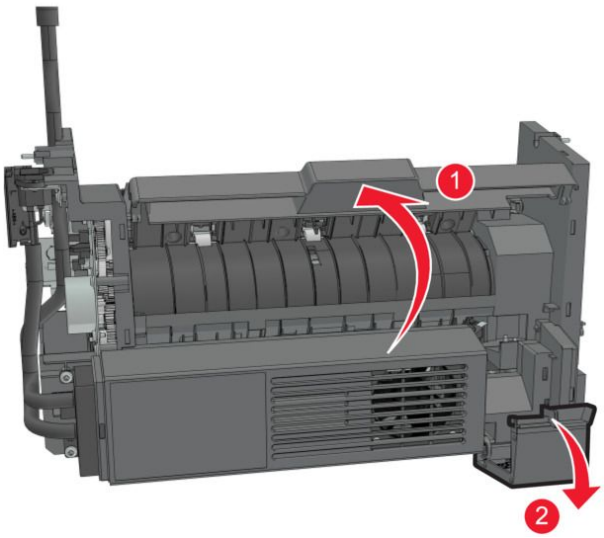
1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler left cover. See Stapler left cover removal on page 392.
3. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Disconnect the sensor cable (A).



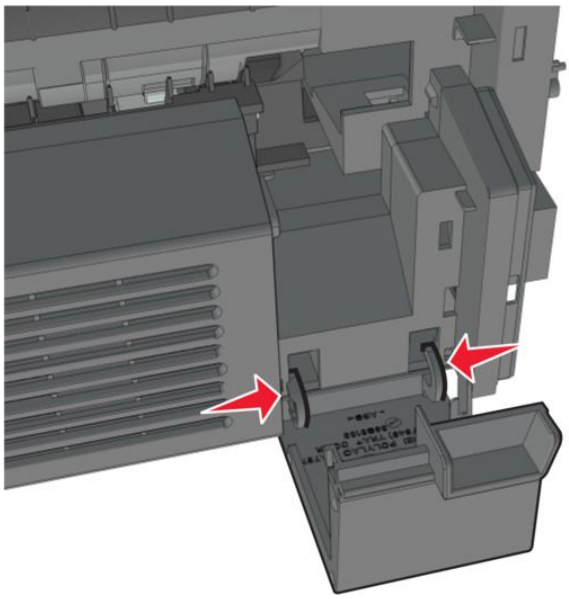
5. Release the latches, and pull the sensor off the stapler.

Trapped staple access door removal

1. Lift the media access door (1), then open the staple access door (2).

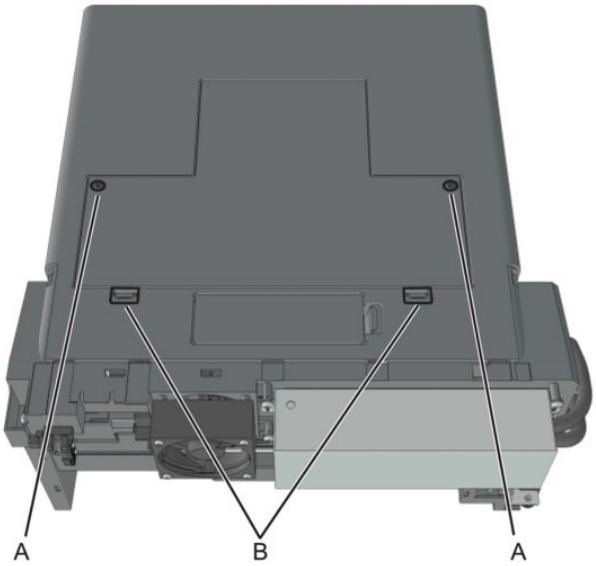


2. Push inwards to release the hinges, then remove the staple access door.



Stapler service cover removal

1. Remove the two screws (A) from the cover.
2. Press the latches (B) to release, and pull the service cover off the stapler.

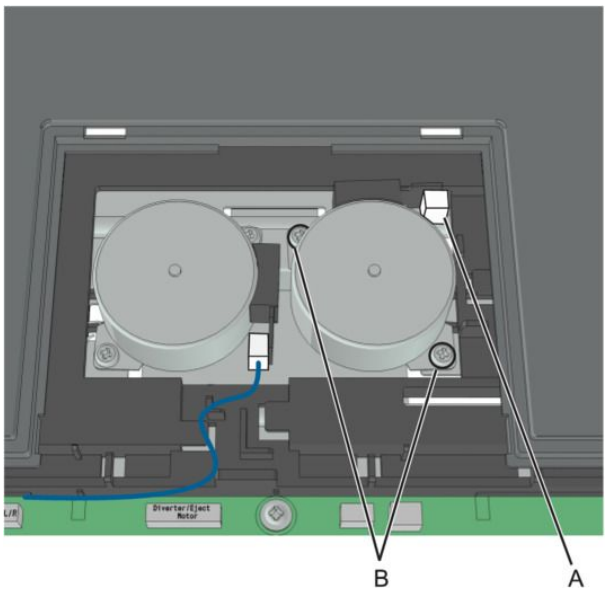


Stapler controller board removal

1. Remove the stapler service cover. See Stapler service cover removal on page 398.
2. Disconnect all the cables from the stapler controller board.
3. Remove the five screws (A), and then remove the board.

Motor (stapler left tamper) removal

1. Remove the stapler service cover. See Stapler service cover removal on page 398.
2. Disconnect the cable (A).
3. Remove the two screws (B), and then remove the motor.

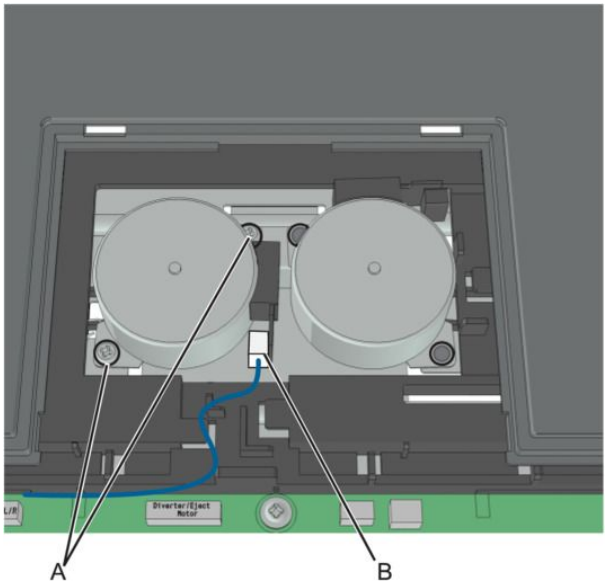


Warning—Potential Damage
Be careful not to lose the tamper belt when removing the motor.

Installation Note
Make sure to engage the motor gears with the tamper belt.

Motor (stapler right tamper) removal

1. Remove the stapler service cover. See Stapler service cover removal on page 398.
2. Remove the two screws (A).
3. Disconnect the cable (B), and then remove the motor.



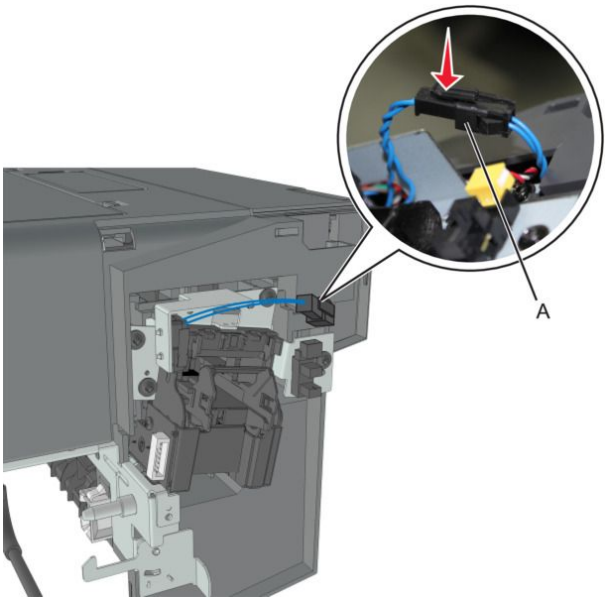
Warning—Potential Damage
Be careful not to lose the tamper belt when removing the motor.

Installation Note
Make sure to engage the motor gears with the tamper belt.

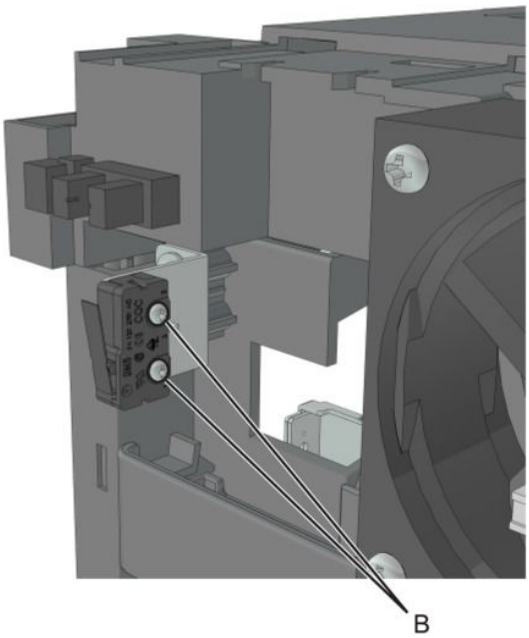
Stapler rear cover close limit switch removal

1. Remove the stapler service cover. See Stapler service cover removal on page 398.
2. Disconnect the limit switch cable from the stapler controller board.

3. Remove the stapler right cover. See Stapler right cover removal on page 391.
4. Disconnect the cable (A).



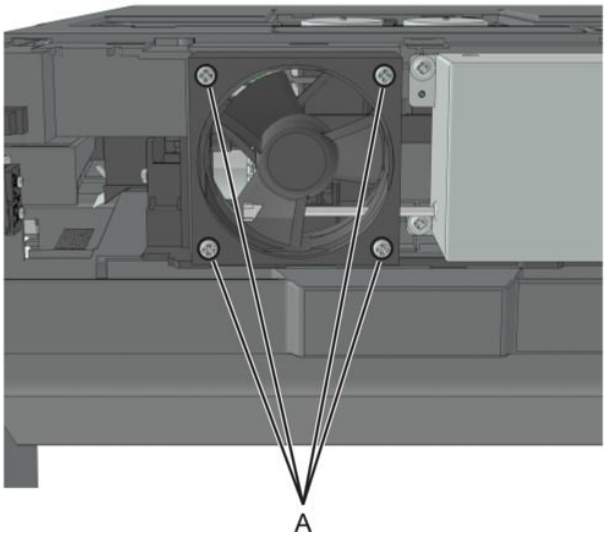
5. Remove the stapler left cover. See Stapler left cover removal on page 392.
6. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
7. Remove the two screws (B) using a #1 Phillips screwdriver, and then remove the limit switch.



Stapler cooling fan removal

1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler left cover. See Stapler left cover removal on page 392.
3. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler service cover. See Stapler service cover removal on page 398.

5. Disconnect the cooling fan cable CN8 from the stapler controller board.
6. Remove the four screws (A).

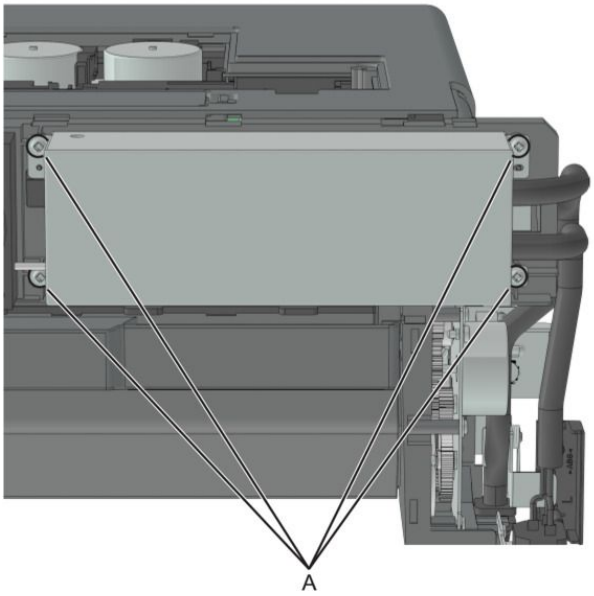


7. Release the fan cable, and then remove the fan.

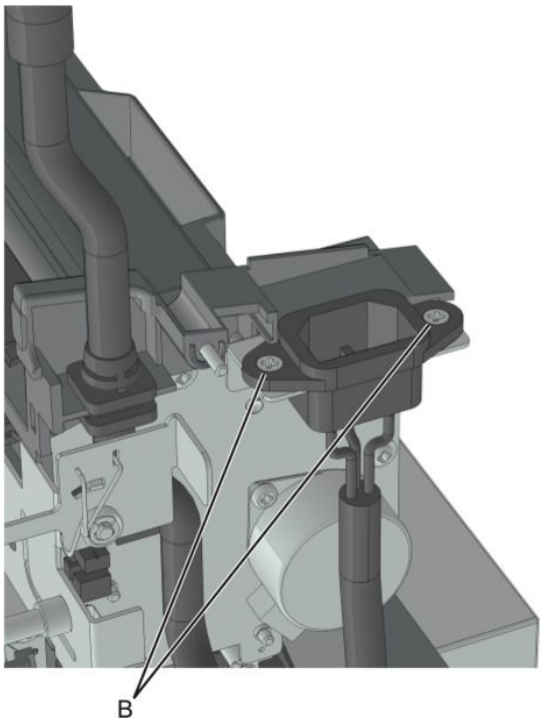
> **Note:** Pay attention to the original route of the cable.

Stapler power supply unit removal

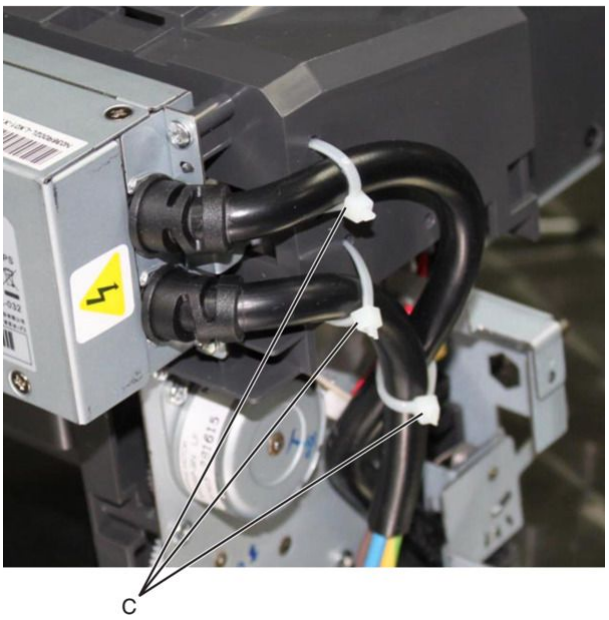
1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler left cover. See Stapler left cover removal on page 392.
3. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler cooling fan. See Stapler cooling fan removal on page 401.
5. Remove the stapler service cover. See Stapler service cover removal on page 398.
6. Disconnect the power supply cable CN5 from the stapler controller board.
7. Remove the four screws (A).



8. Remove the two screws (B).



9. Cut the cable ties (C).

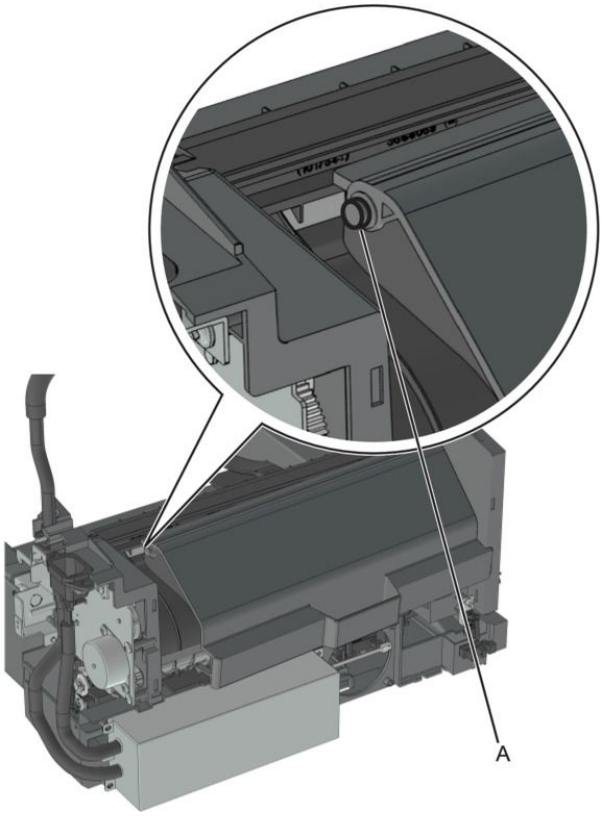


10. Release the cable from its route, and then remove the power supply unit.

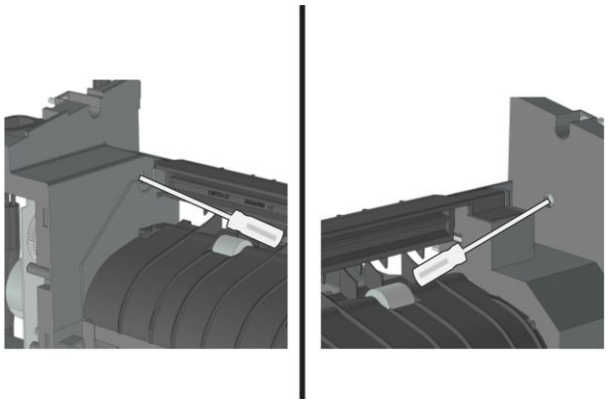
> **Note:** Pay attention to the original route of the cable.

Stapler interface cable removal

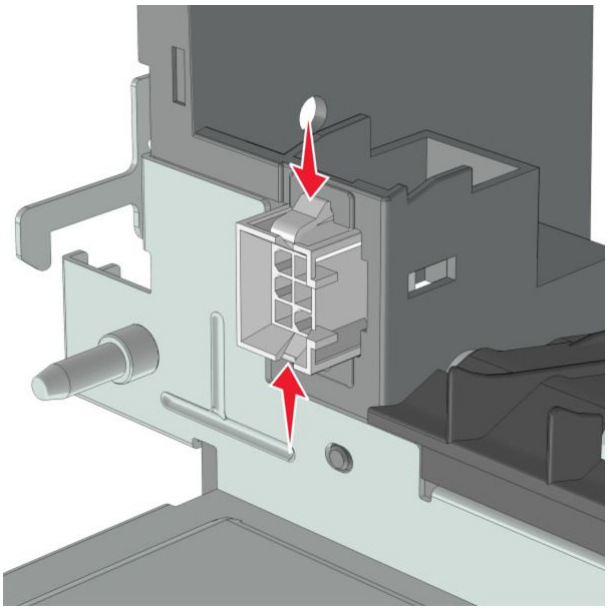
1. Remove the stapler service cover. See Stapler service cover removal on page 398.
2. Disconnect the interface cable CN15 from the stapler controller board.
3. Flex the media access door to release the tab (A), and then remove it.



4. Release the latches using a flat-blade screwdriver, and then remove the input cover.



5. Release the latches, and then dislodge the interface cable.

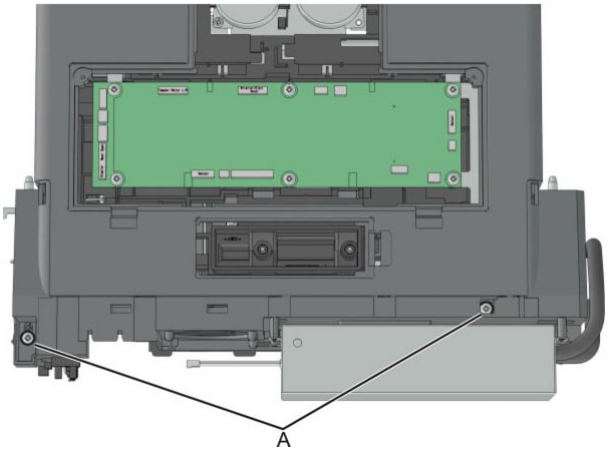


6. Release the cable from its route, and then remove it.

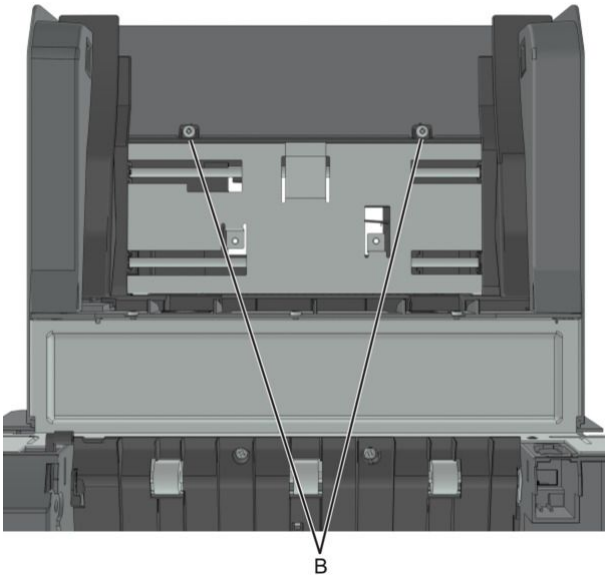
> **Note:** Pay attention to the original route of the cable.

Stapler top cover removal

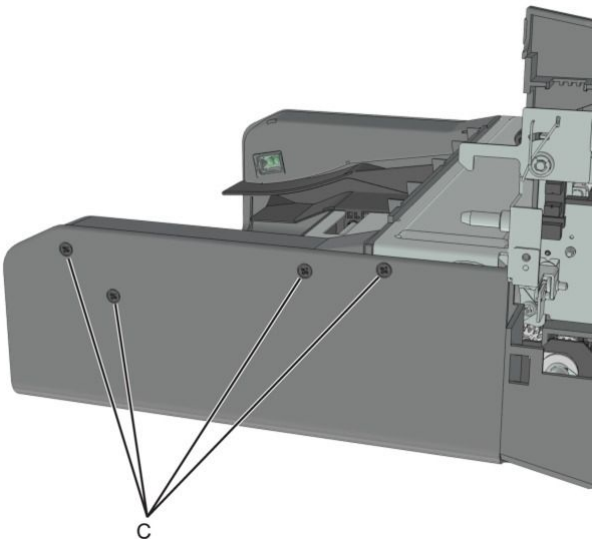
1. Remove the right cover. See Stapler right cover removal on page 391.
2. Remove the left cover. See Stapler left cover removal on page 392.
3. Remove the rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler cooling fan. See Stapler cooling fan removal on page 401.
5. Remove the stapler power supply unit. See Stapler power supply unit removal on page 402.
6. Remove the two screws (A) from the top of the cover.



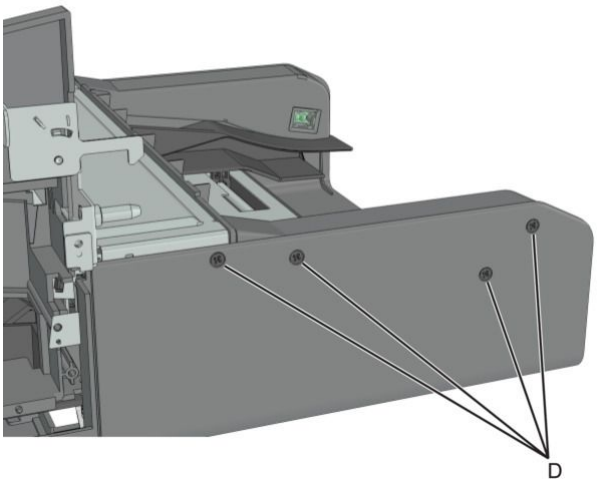
7. Remove the two screws (B) under the cover.



8. Remove the four screws (C) from the left side of the cover.



9. Remove the four screws (D) from the right side of the cover.



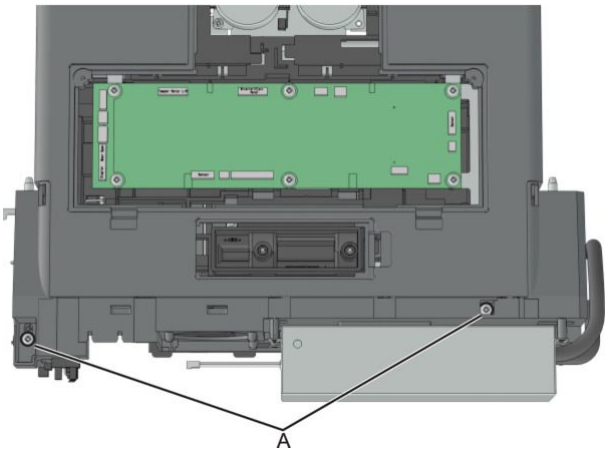
10. Lift the cover, then release the cables routed through the top cover.

    Note: Pay attention to the original routing of the cables.

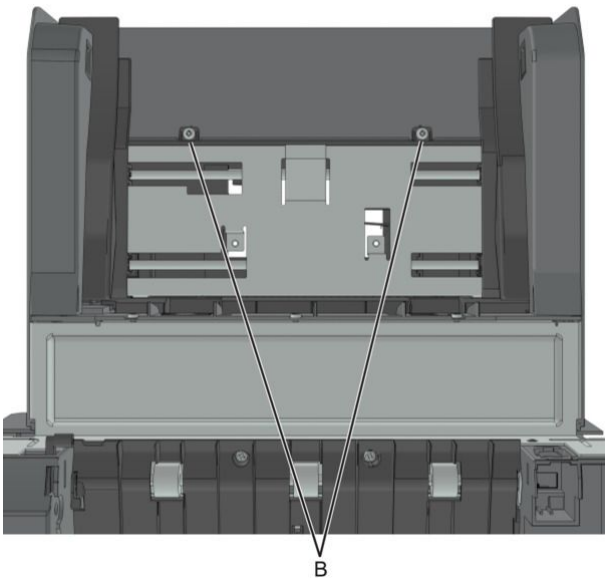
11. Remove the top cover.

Sensor (stapler bin full receive) removal

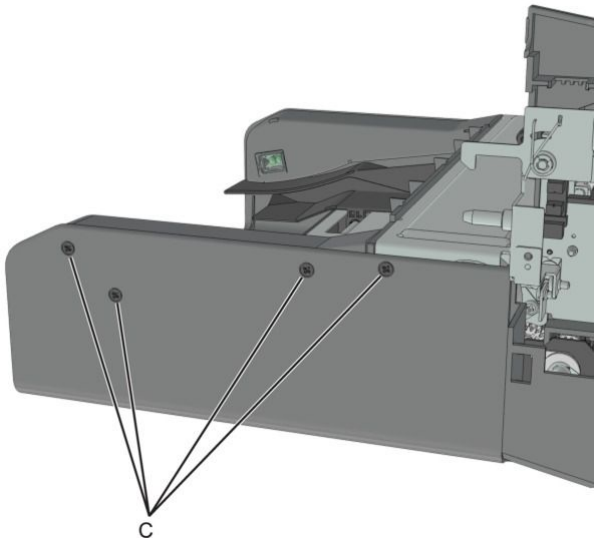
1. Remove the right cover. See Stapler right cover removal on page 391.
2. Remove the left cover. See Stapler left cover removal on page 392.
3. Remove the rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler service cover. See Stapler service cover removal on page 398.
5. Disconnect the sensor cable CN18 from the stapler controller board.
6. Remove the two screws (A) from the top cover.



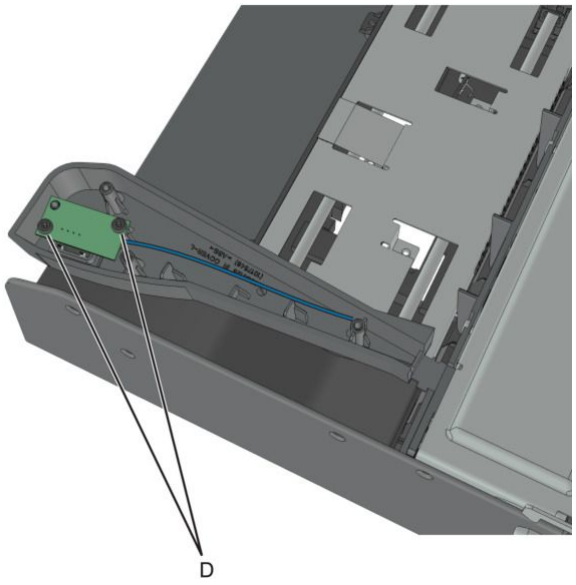
7. Remove the two screws (B) under the cover.



8. Remove the four screws (C) from the left side of the cover.



9. To access the sensor, release the sensor cover from the left side of the top cover.
10. Remove the two screws (D) securing the sensor.



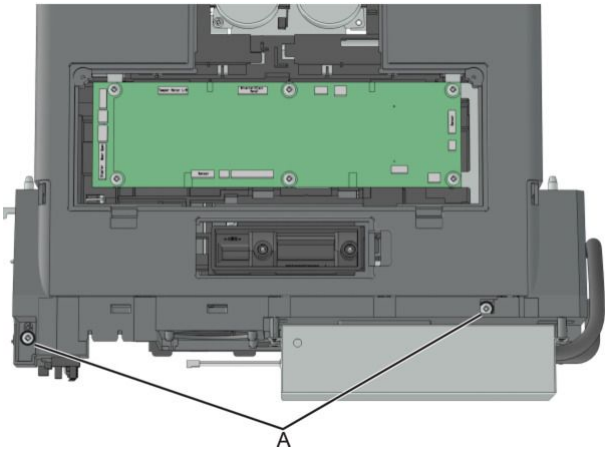
11. Release the sensor cable from its route, and then remove the sensor.

> **Note:** Pay attention to the original route of the cables.

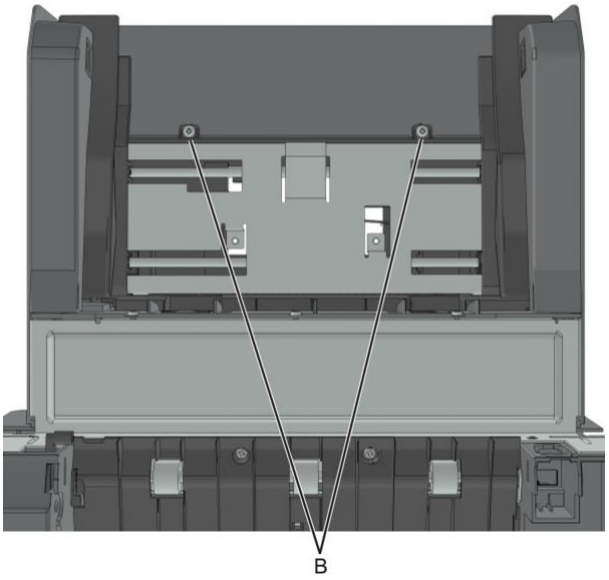
Sensor (stapler bin full send) removal

1. Remove the right cover. See Stapler right cover removal on page 391.
2. Remove the left cover. See Stapler left cover removal on page 392.
3. Remove the rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler service cover. See Stapler service cover removal on page 398.

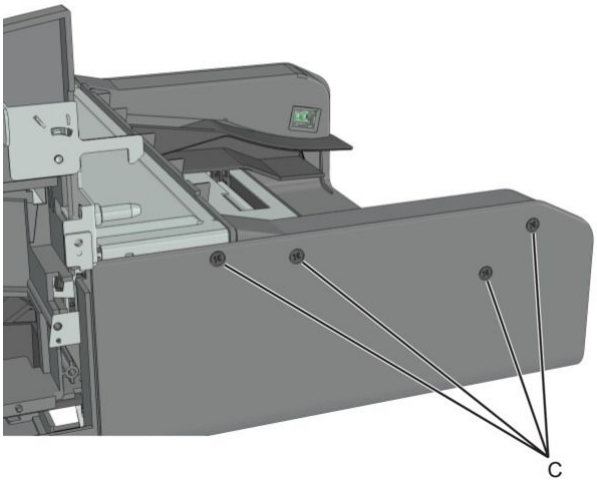
5. Disconnect the sensor cable CN12 from the stapler controller board.
6. Remove the two screws (A) from the top cover.



7. Remove the two screws (B) under the cover.

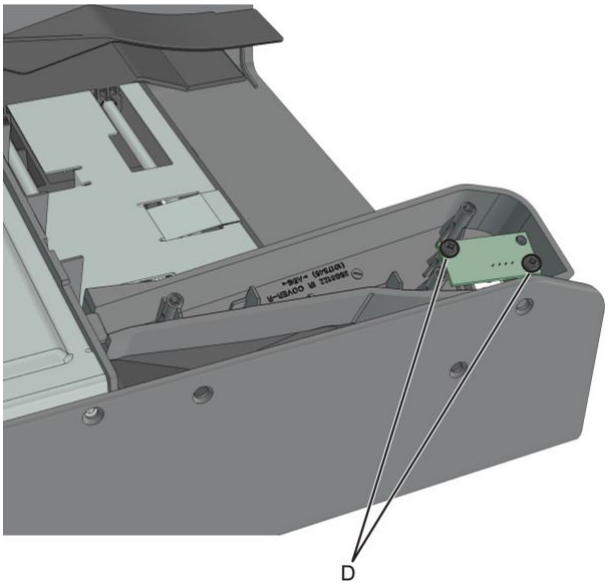


8. Remove the four screws (C) from the right side of the cover.



9. To access the sensor, release the sensor cover from the right side of the top cover.

10. Remove the two screws (D) securing the sensor.

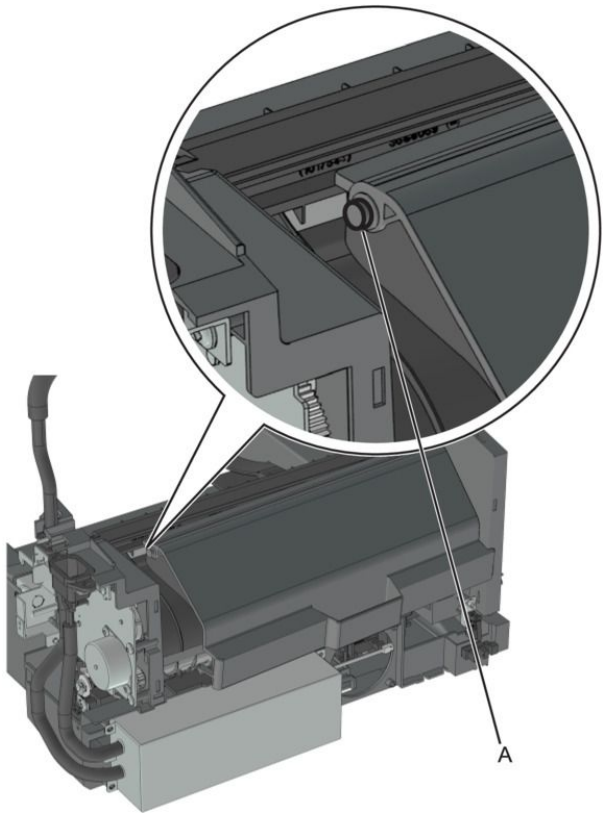


11. Release the sensor cable, and then remove the sensor.

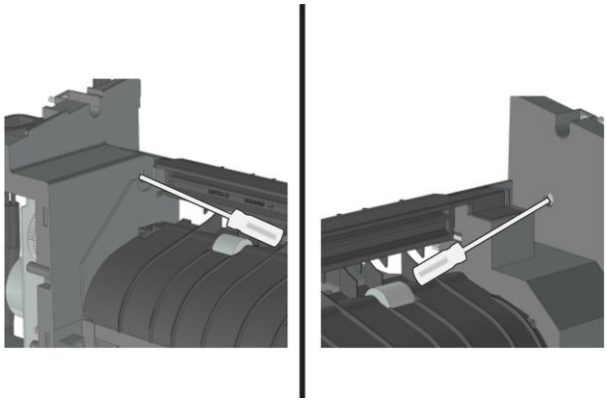
> **Note:** Pay attention to the original route of the cable.

Sensor (stapler pass through) removal

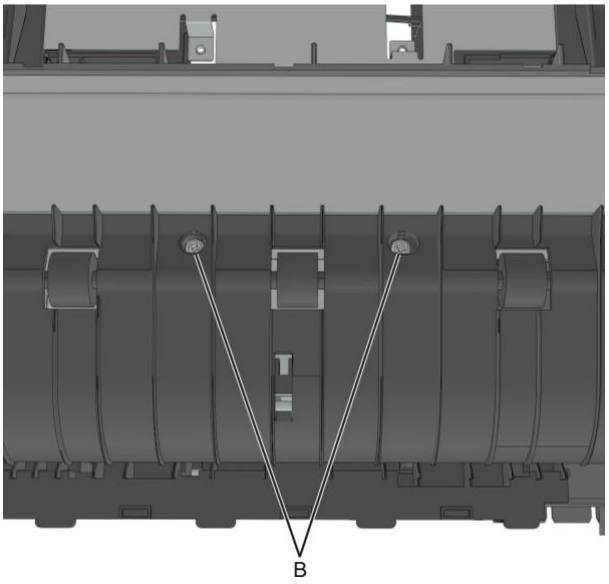
1. Flex the media access door to release the tab (A), then remove.



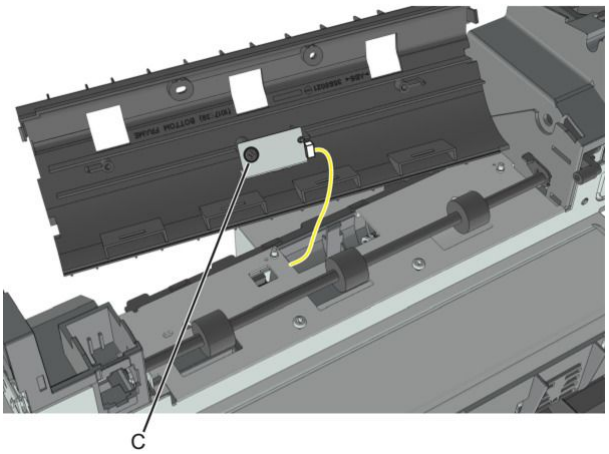
2. Using a flat-blade screwdriver, release the latches, then remove the input cover.



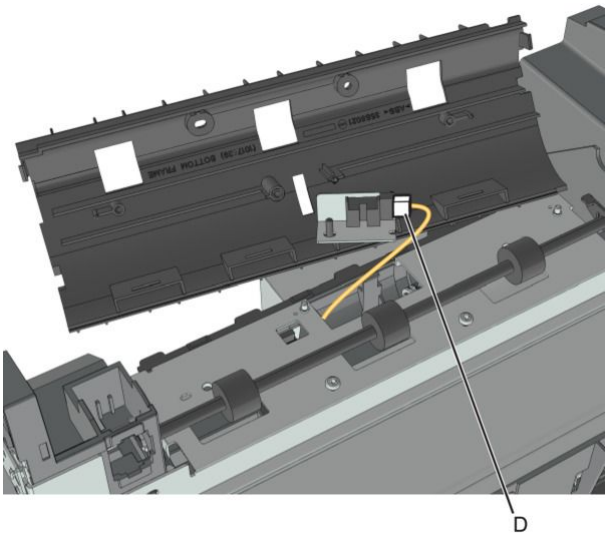
3. Remove the two screws (B) from the media input frame.



4. Remove the screw (C) securing the sensor.



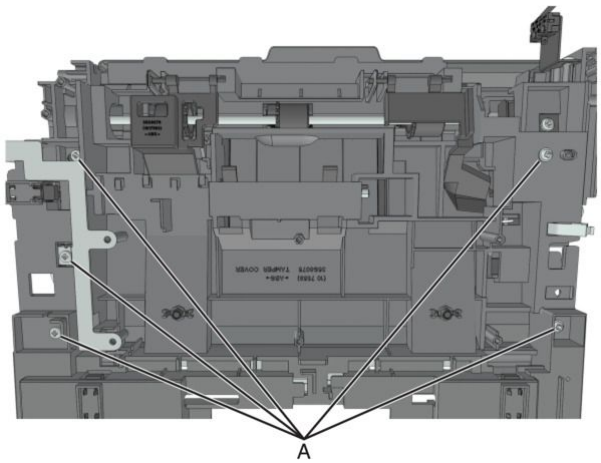
5. Disconnect the cable (D) from the sensor.



6. Release the latches, and then remove the sensor.

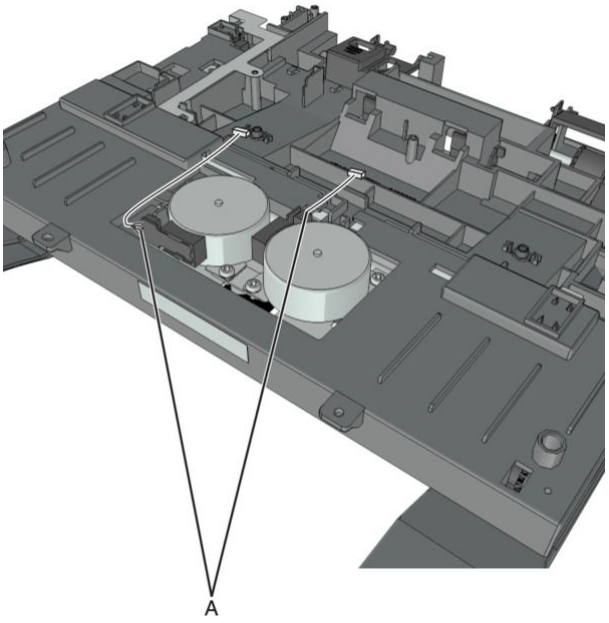
Tamper main assembly removal

1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler left cover. See Stapler left cover removal on page 392.
3. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler service cover. See Stapler service cover removal on page 398.
5. Remove the stapler controller board. See Stapler controller board removal on page 399.
6. Remove the stapler cooling fan. See Stapler cooling fan removal on page 401.
7. Remove the stapler power supply unit. See Stapler power supply unit removal on page 402.
8. Remove the stapler top cover. See Stapler top cover removal on page 406.
9. Remove the five screws (A), and then remove the tamper main assembly.

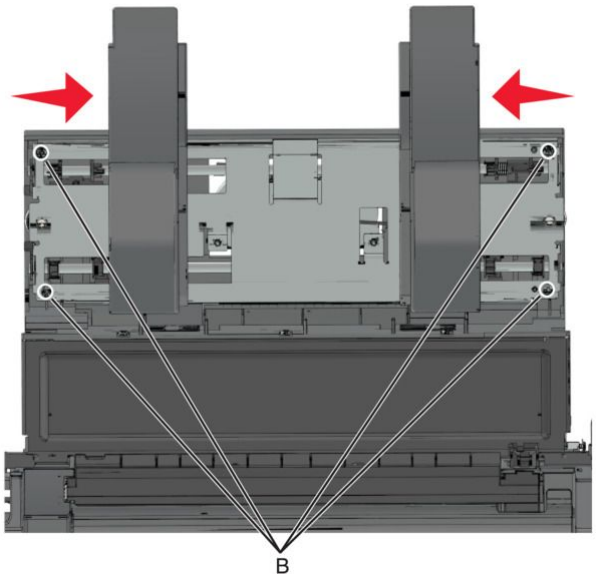


Tamper sub-assembly removal

1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler left cover. See Stapler left cover removal on page 392.
3. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler service cover. See Stapler service cover removal on page 398.
5. Remove the stapler controller board. See Stapler controller board removal on page 399.
6. Remove the stapler cooling fan. See Stapler cooling fan removal on page 401.
7. Remove the stapler power supply unit. See Stapler power supply unit removal on page 402.
8. Remove the stapler top cover. See Stapler top cover removal on page 406.
9. Remove the tamper main assembly. See Tamper main assembly removal on page 413.
10. Disconnect the tamper motor cables (A).

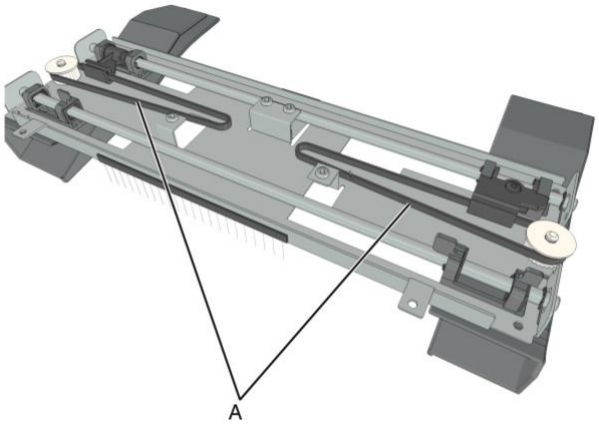


11. Move the tampers to access the screws (B) at the bottom.
12. Remove the four screws (B), and then remove the sub-assembly.



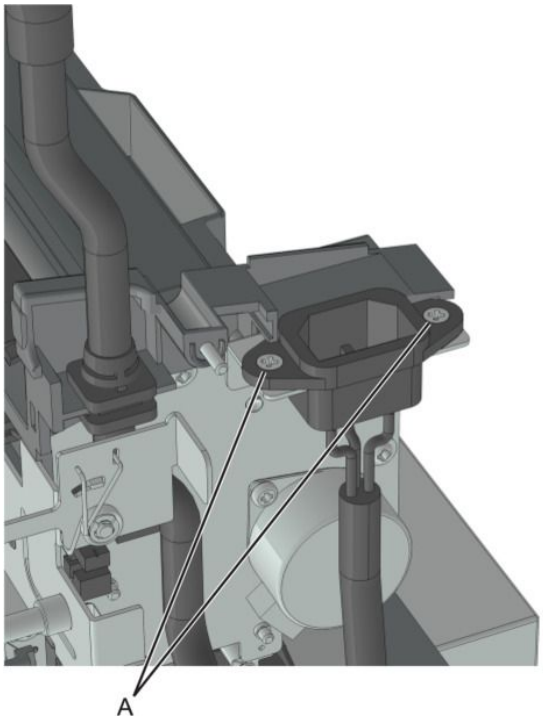
Tamper drive belt removal

1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler left cover. See Stapler left cover removal on page 392.
3. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler service cover. See Stapler service cover removal on page 398.
5. Remove the stapler controller board. See Stapler controller board removal on page 399.
6. Remove the stapler cooling fan. See Stapler cooling fan removal on page 401.
7. Remove the stapler power supply unit. See Stapler power supply unit removal on page 402.
8. Remove the stapler top cover. See Stapler top cover removal on page 406.
9. Remove the tamper main assembly. See Tamper main assembly removal on page 413.
10. Remove the tamper sub-assembly. See Tamper sub-assembly removal on page 414.
11. Remove the tamper motors. See Motor (stapler left tamper) removal on page 399 and Motor (stapler right tamper) removal on page 400.
12. Remove the tamper drive belts (A).

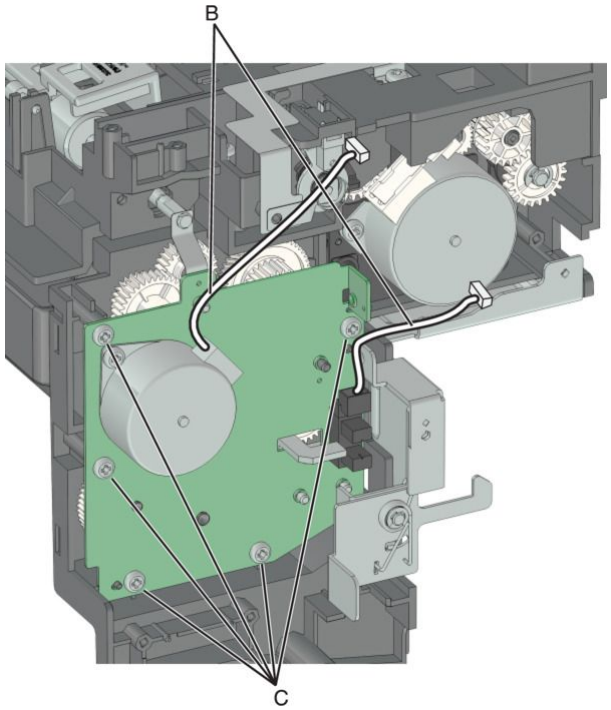


Diverter gearbox removal

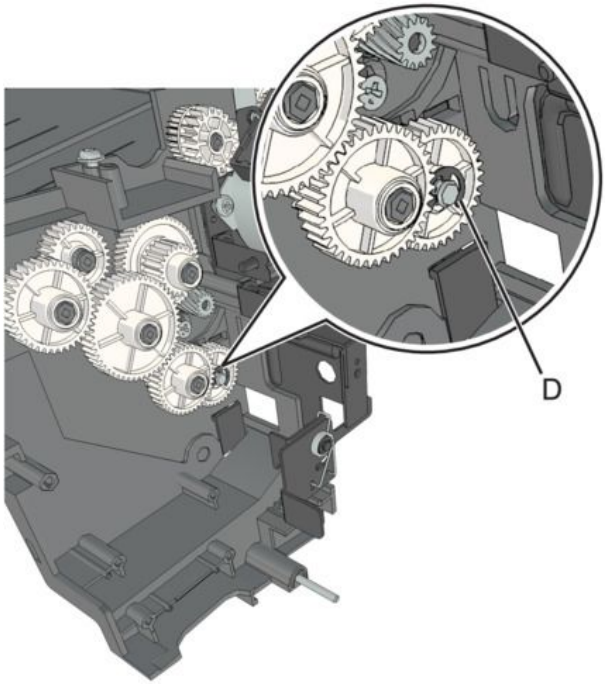
1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler carriage assembly. See Stapler carriage assembly removal on page 394.
3. Remove the stapler left cover. See Stapler left cover removal on page 392.
4. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
5. Remove the two screws (A), and cut the cable ties securing the power supply cable.



6. Move the power supply cable out of the way, and then disconnect the sensor and motor cables (B).
7. Remove the five screws (C) from the diverter motor assembly.



8. Release the E-clip (D) securing the lowermost gear. Pull the gears off their shafts to remove them.



Stapler accumulator assembly removal

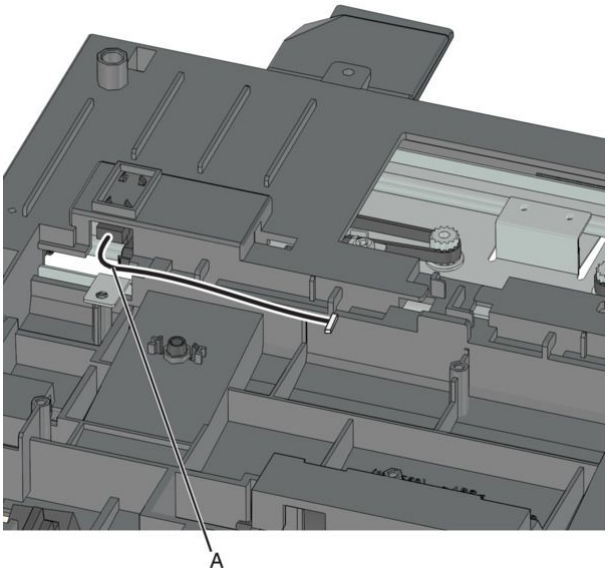
1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler left cover. See Stapler left cover removal on page 392.
3. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler rear door. See Stapler rear door removal on page 392.

5. Remove the stapler service cover. See Stapler service cover removal on page 398.
6. Remove the stapler controller board. See Stapler controller board removal on page 399.
7. Remove the stapler cooling fan. See Stapler cooling fan removal on page 401.
8. Remove the stapler power supply unit. See Stapler power supply unit removal on page 402.
9. Remove the stapler top cover. See Stapler top cover removal on page 406.
10. Remove the tamper main assembly. See Tamper main assembly removal on page 413.

    The accumulator assembly remains.

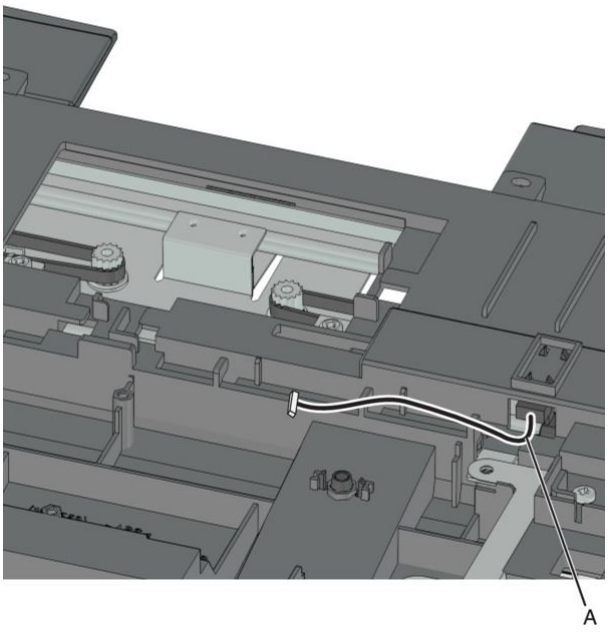
Sensor (stapler right tamper HP) removal

1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler left cover. See Stapler left cover removal on page 392.
3. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler service cover. See Stapler service cover removal on page 398.
5. Remove the stapler controller board. See Stapler controller board removal on page 399.
6. Remove the stapler cooling fan. See Stapler cooling fan removal on page 401.
7. Remove the stapler power supply unit. See Stapler power supply unit removal on page 402.
8. Remove the stapler top cover. See Stapler top cover removal on page 406.
9. Remove the tamper main assembly. See Tamper main assembly removal on page 413.
10. Remove the tamper sub-assembly. See Tamper sub-assembly removal on page 414.
11. Disconnect the sensor cable (A). Release the latches, and then remove the sensor.



Sensor (stapler left tamper HP) removal

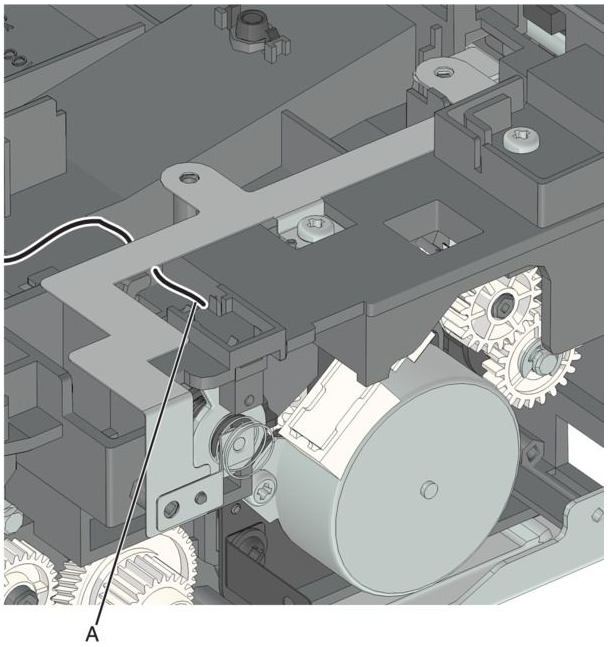
1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler left cover. See Stapler left cover removal on page 392.
3. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler service cover. See Stapler service cover removal on page 398.
5. Remove the stapler controller board. See Stapler controller board removal on page 399.
6. Remove the stapler cooling fan. See Stapler cooling fan removal on page 401.
7. Remove the stapler power supply unit. See Stapler power supply unit removal on page 402.
8. Remove the stapler top cover. See Stapler top cover removal on page 406.
9. Remove the tamper main assembly. See Tamper main assembly removal on page 413.
10. Remove the tamper sub-assembly. See Tamper sub-assembly removal on page 414.
11. Disconnect the sensor cable (A). Release the latches, and then remove the sensor.



Sensor (stapler paddle HP) removal

1. Remove the stapler right cover. See Stapler right cover removal on page 391.
2. Remove the stapler left cover. See Stapler left cover removal on page 392.
3. Remove the stapler rear cover. See Sensor (stapler rear cover) removal on page 397.
4. Remove the stapler service cover. See Stapler service cover removal on page 398.
5. Remove the stapler controller board. See Stapler controller board removal on page 399.
6. Remove the stapler cooling fan. See Stapler cooling fan removal on page 401.
7. Remove the stapler power supply unit. See Stapler power supply unit removal on page 402.
8. Remove the stapler top cover. See Stapler top cover removal on page 406.

9. Disconnect the sensor cable (A). Release the latches, and then remove the sensor.



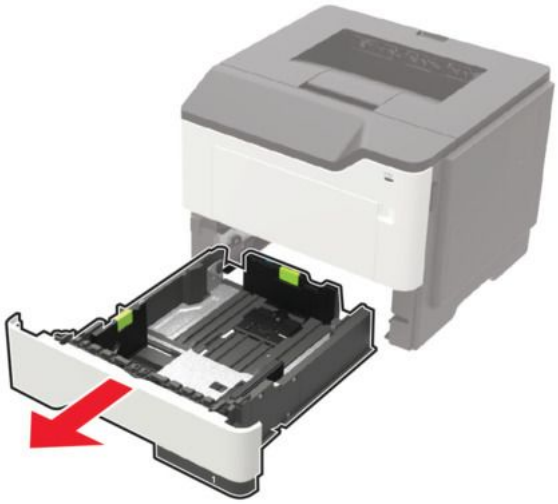
Replacing parts and supplies

Loading trays

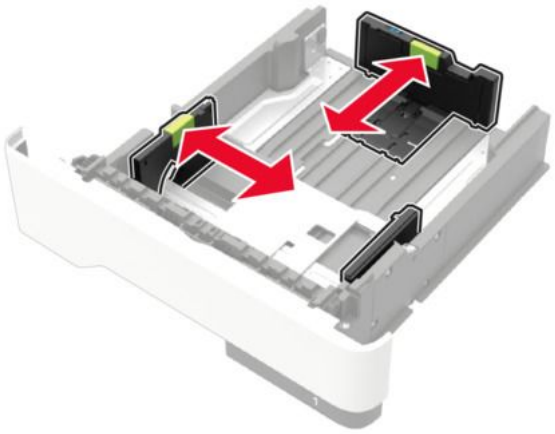
CAUTION—TIPPING HAZARD
To reduce the risk of equipment instability, load each tray separately. Keep all other trays closed until needed.

1. Remove the tray.

   Note: To avoid paper jams, do not remove trays while the printer is busy.



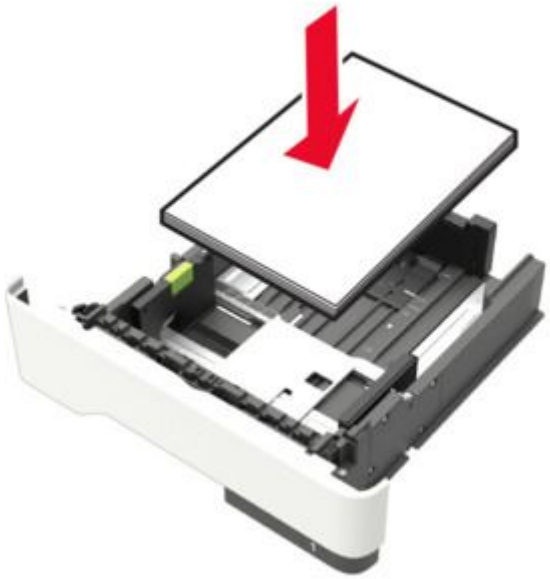
2. Adjust the paper guides to match the size of the paper that you are loading.



3. Flex, fan, and align the paper edges before loading.



4. Load the paper stack with the printable side facedown, and then make sure that the side guides fit snugly against the paper.



Notes

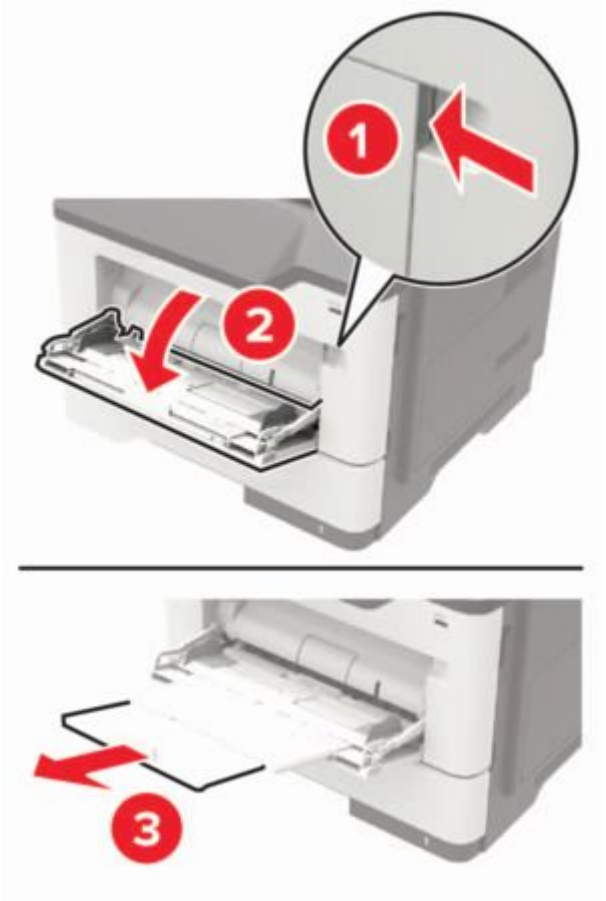
- Load letterhead facedown with the top edge of the sheet toward the front of the tray for one-sided printing.
- Load letterhead faceup with the bottom edge of the sheet toward the front of the tray for two-sided printing.
- Do not slide paper into the tray.
- To avoid paper jams, make sure that the stack height is below the maximum paper fill indicator.

5. Insert the tray.

   If necessary, set the paper size and paper type from the control panel to match the paper loaded.

Loading the multipurpose feeder

1. Open the multipurpose feeder.



2. Adjust the guide to match the size of the paper that you are loading.



3. Flex, fan, and align the paper edges before loading.



4. Load paper with the printable side faceup.

Notes

- Load letterhead faceup with the top edge of the sheet toward the front of the tray for one-sided printing.
- Load letterhead facedown with the bottom edge of the sheet toward the front of the tray for two-sided printing.
- Load envelopes with the flap facedown on the left side.
- Load European envelopes with the flap facedown and entering the printer first.

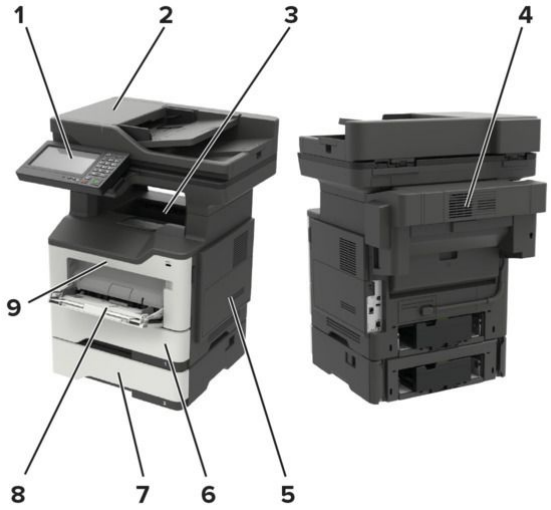
Warning—Potential Damage
Do not use envelopes with stamps, clasps, snaps, windows, coated linings, or self-stick adhesives.

5. From the control panel, set the paper size and paper type to match the paper loaded.

Component locations

Printer configurations

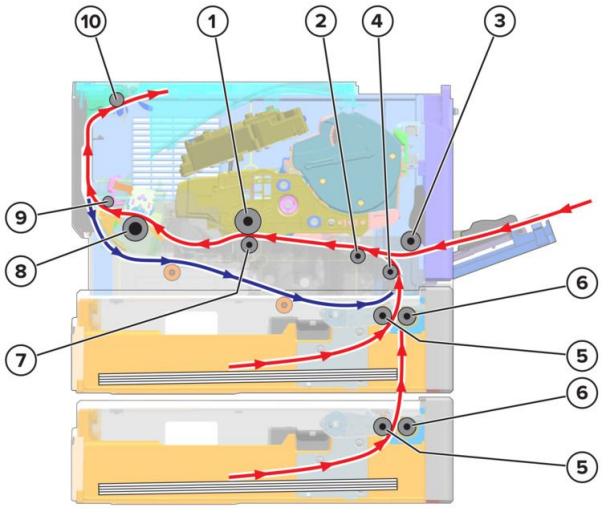
You can configure your printer by adding optional 250- or 550-sheet trays.



1	Control panel
2	Automatic document feeder (ADF)
3	Standard bin
4	Optional staple finisher
5	Controller board access cover
6	Standard 550-sheet tray
7	Optional 250- or 550-sheet tray
8	Multipurpose feeder
9	Door A

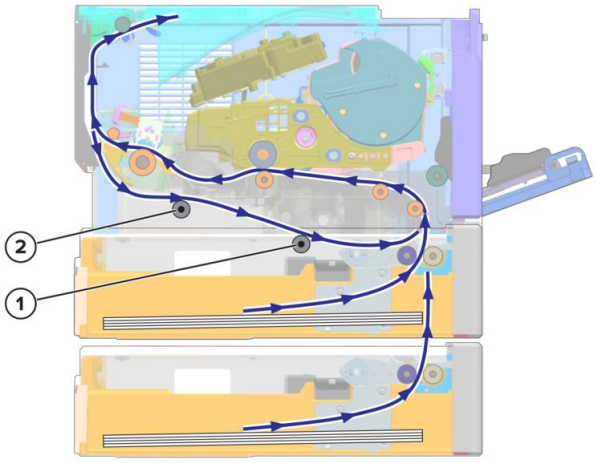
Printer roller locations

Standard path rollers



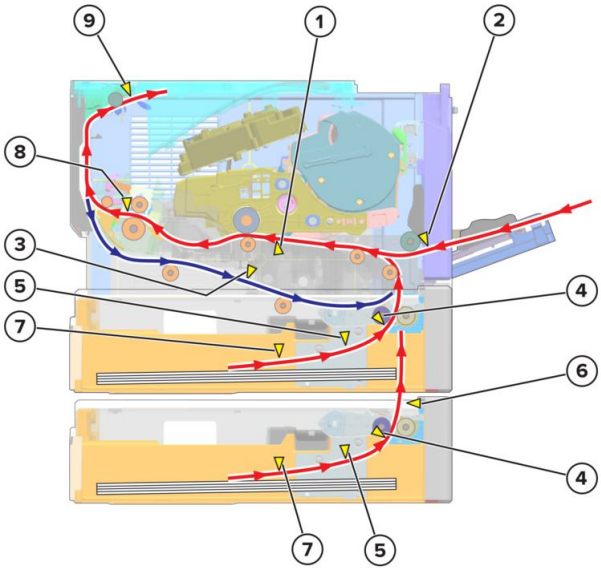
1	Photoconductor drum
2	First input roller
3	MPF pick roller
4	Second input roller
5	Pick roller
6	Separator roller
7	Transfer roller
8	Fuser roller
9	Fuser exit roller
10	Paper exit roller

Duplex path rollers



1	Duplex rear roller
2	Duplex front roller

Printer sensor locations



#	Sensor
1	Sensor (input)
2	Sensor (MPF paper present)
3	Sensor (duplex)
4	Sensor (index)

#	Sensor
5	Sensor (trailing edge)
6	Sensor (pass-through)
7	Sensor (media present)
8	Sensor (fuser exit)
9	Sensor (narrow media/bin full)

Controller board connectors

Connector	Connects to	Pin no.	Signal
JDRC1	Cartridge smart chip contact	1	+3.3V
		2	DAT_SC_CN1
		3	CLK_SC_CN1
		4	Ground
JDRC2	Imaging unit smart chip contact	1	3.3V
		2	I2C_DAT_SC_CN2
		3	I2C_CLK_SC_CN2
		4	Ground
JCART1	Motor (toner cartridge)	1	V_5CART_1 +5V
		2	S_CART_ENC_CN
		3	Ground
JBARR1	Sensor (cartridge barrel)	1	V_5V_BARR +5V
		2	S_TONER_LOW
		3	Ground
JDUPSOL1	Reverse solenoid	1	24V
		2	V_DUPSOL_CN_N
JPH1	Printhead	1	LDEN_C
		2	BOOST_CN
		3	VDO_ADJ_C
		4	Ground
		5	LPOWER_C
		6	SHADE_CN

Connector	Connects to	Pin no.	Signal
		7	Ground
		8	VIDEO -
		9	VIDEO +
		10	no connection
		11	HSYNC_CN
		12	PH_+5V
JNRW1	Sensor (narrow media)	1	V_3.3V_TRAY1_P
		2	JNRW1
		3	Ground
JTHM1	Belt fuser	1	A_FUSER_TH_C +2V_ADC
		2	Ground
JFAN1	Cooling fan	1	V_MAIN_FAN24V
		2	Ground
		3	MAIN_FAN_ENC_R
JEXIT1	Sensor (exit)	1	V_5V_PAPER_OUT
		2	S_PAPER_OUT_C
		3	Ground
JUSBD1	USB connector with flange	1	V_USBD_5V
		2	USB_DEV_N
		3	USB_DEV_N
		4	USB_DEV_GND
JRIP1	Debug port	1	Ground
		2	RXD0_RIP_CN
		3	TXD0_RIP_CN
		4	JRIP_100_+5V
JOPT1	Resettable fuse	1	24V_F_OPT
		2	S_OPT_TXR
		3	S_INPUT_FDT
		4	S_OPT_RXR
		5	Ground
		6	5V_PHD

Connector	Connects to	Pin no.	Signal
JTDS1	Sensor (toner density)	1	S_TDS_LED_PWM
		2	S_A_TDS_C
		3	no connection
		4	V_TDS+5V_C
JDUPPI1	Sensor (duplex and input)	1	V_5V_DUPLEX
		2	S_DUPLEX_C
		3	no connection
		4	V_5V_DUPLEX
		5	S_PAPER_IN_C
		6	Ground
JFEED1	Feed solenoid	1	V_FDSOL +24V_MSF
		2	V_FDSOL
JP_PRE1	Sensor (paper present)	1	V_5V_PAPER_P
		2	S_PAPER_P_C
		3	Ground
JMPFPP1	Sensor (MPF)	1	V_3.3V_MPF_PP
		2	S_MPF_SNS_R
		3	Ground
JMPFSOL1	MPF solenoid	1	V_MPFSOL +24V_MSF
		2	V_MPFSOL-
JPSU1	Power supply	1	NC_JPSU1
		2	PSU_DET_CN
		3	CHARGE_C
		4	SERVO_OUT_C
		5	DEV_C
		6	TXENABLE_C
		7	TX_C
		8	FUSER_RELAY
		9	TAR_C
		10	FUSER_ON_C
		11	ZEROX_C

Connector	Connects to	Pin no.	Signal
		12	SHUTOFF_24V
		13	24V_CONT
		14	Ground
		15	24V
		16	Ground
		17	24V
		18	Ground
JMTR1	Motor (main)	1	MAIN_HALL_U_CN
		2	MAIN_HALL_V_CN
		3	MAIN_HALL_W_CN
		4	MAIN_FG_CN
		5	Ground
		6	5V_ENG
		7	V_MAINC1_U
		8	V_MAINC1_V
		9	V_MAINC1_W
JRESET1	not used	--	not used
JCVR1	Cover open	1	V_5V_INDEX
		2	S_INDEX_C
		3	Ground
JINDEX1	Sensor (stack height)	1	V_5V_INDEX
		2	S_INDEX_C
		3	Ground
JSTAG1	Staging solenoid	--	not used
JFUSB1	Thumb drive	1	V_FUSB_L
		2	USB_FRONT_N
		3	USB_FRONT_P
		4	NC_JFUSB_P4
		5	Ground
JSPKR1	External speaker	1	SPEAKER1
		2	SPEAKER2

Connector	Connects to	Pin no.	Signal
JHOME1	Sensor (flatbed home)	1	+3V_HOME
		2	Ground
		3	BHOME_FBR
JVIP2	Secure element SIM	1	G_TXD
		2	+3.3v
		3	G_TXD
		4	Ground
		5	G_CS
		6	G_RXD
JFBM1	Motor (flatbed)	1	FBM_A-
		2	FBM_A+
		3	FBM_B+
		4	FBM_B-
JFBCIS1	Flatbed CIS FFC	N/A	N/A
JADF1	ADF FFC	N/A	N/A
J30	Security jumper	1	+3.3V
		2	Ground
		3	Ground
JBINS1	Sensor (bin full)	1	V_3.3V_BINS
		2	PAPER_FULL_S_R
		3	Ground
		4	Ground
JT_PRE1	Sensor (tray present)	1	V_3.3V_TRAY1
		2	S_TRAY1_C
		3	Ground
JACM1	Sensor (ACM)	1	+5V_ENG
		2	S_ACM_SEN_C
		3	Ground
JPHONE2	not used	--	--
JUICC1	Control panel FFC	N/A	N/A
JBSCIS1	Backside CIS FFC	N/A	N/A

Connector	Connects to	Pin no.	Signal
JSTAPL1	Stapler unit	1	+24V_F_OPT
		2	S_STP_TXR
		3	Ground
		4	S_STP_RXR R161
		5	Ground
		6	Ground
		7	Ground

Maintenance

Inspection guide

The purpose of this inspection guide is to aid you in identifying the intervals, based on page count, at which parts must be inspected (for visible physical damage), cleaned, or replaced.
If any unsafe conditions exist, find out how serious the hazard could be and if you can continue before you correct the hazard.
As you service the machine, check for the following:

- Damaged, missing, or altered parts, especially in the area of the On/Off switch and the power supply
- Damaged, missing, or altered covers, especially in the area of the top cover and the power supply cover
- Possible safety exposure from any non-Lexmark attachments

Use the following table to determine when specified parts should be inspected:

PART	EVERY SERVICE CALL	EVERY 200K
Fuser	Inspect	Replace
MPF pick roller and separator pad	Inspect	Replace
Pick tires	Inspect	Replace
Separator roller assembly	Inspect	Replace
Transfer roller	Inspect	Replace

Scheduled maintenance

Maintenance kits

Part number and kit	Contents
41X1227—Maintenance Kit (100 V)	• 41X1180—Fuser (100 V) • 41X1197—MPF pick roller and separator pad • 41X1198—Pick tires • 41X1212—Separator roller assembly • 40X8393—Transfer roller

Part number and kit	Contents
41X1225—Maintenance Kit (110 V)	• 41X1178—Fuser (110 V) • 41X1197—MPF pick roller and separator pad • 41X1198—Pick tires • 41X1212—Separator roller assembly • 40X8393—Transfer roller
41X1226—Maintenance Kit (220 V)	• 41X1179—Fuser (220 V) • 41X1197—MPF pick roller and separator pad • 41X1198—Pick tires • 41X1212—Separator roller assembly • 40X8393—Transfer roller

When performing the 200K scheduled maintenance procedure, the following areas should be cleaned of media dust and toner contamination:

- Media trays
- Imaging unit area
- Transfer roller area
- Duplex area
- Standard bin

Resetting the maintenance counter

The printer shows an 80.xy error when the maintenance interval reaches 200,000 pages.

Note: Always reset the maintenance counter after installing a maintenance kit.

1. Enter the Configuration menu. For more information, see Entering the Configuration menu on page 266
2. In the Configuration menu, select **Supply Usage And Counters**, and then select **Reset Maintenance Counter**.

Once initiated, the operation cannot be canceled.

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

Cleaning the printer

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.

CAUTION—SHOCK HAZARD
pour éviter tout risque d'électrocution lors du nettoyage de l'extérieur de l'imprimante, débranchez le cordon d'alimentation électrique de la prise et déconnectez tous les câbles de l'imprimante avant de continuer.

CAUTION—SHOCK HAZARD
Para evitar el riesgo de descarga eléctrica al limpiar el exterior de la impresora, desconecte el cable de alimentación de la toma eléctrica y desconecte todos los cables de la impresora antes de realizar la operación.

CAUTION—SHOCK HAZARD
Um das Risiko eines elektrischen Schlags beim Reinigen des Druckergehäuses zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose, und ziehen Sie alle Kabel vom Drucker ab, bevor Sie fortfahren.

Note:

- Perform this task after every few months.
- Damage to the printer caused by improper handling is not covered by the printer warranty.

1. Turn off the printer, and then unplug the power cord from the electrical outlet.
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. Wipe the outside of the printer with a damp, soft, lint-free cloth.

   Note:
   - Do not use household cleaners or detergents, as they may damage the finish of the printer.
   - Make sure that all areas of the printer are dry after cleaning.

5. Connect the power cord to the electrical outlet, and then turn on the printer.

Cleaning the scanner

1. Open the scanner cover.



2. Using a damp, soft, lint-free cloth, wipe the following areas:
    - ADF glass



    - ADF glass pad



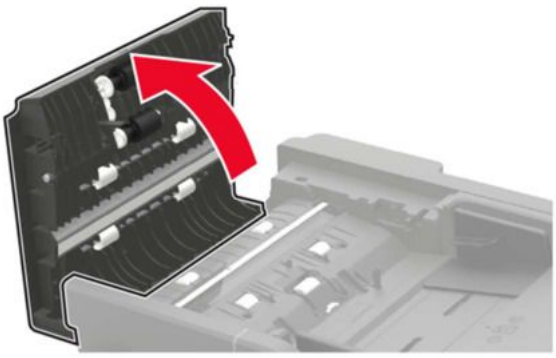
    - Scanner glass



- Scanner glass pad

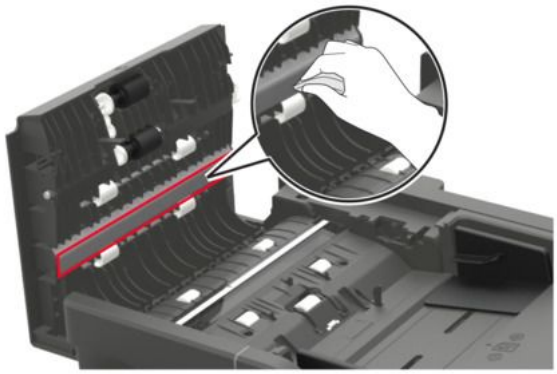


3. Close the scanner cover.
4. Open the ADF cover.

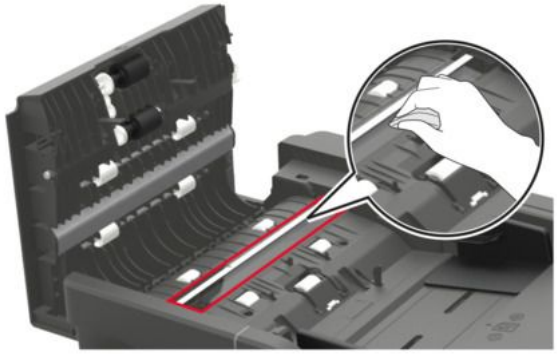


5. Using a damp, soft, lint-free cloth, wipe the following areas:

- ADF glass pad in the ADF cover



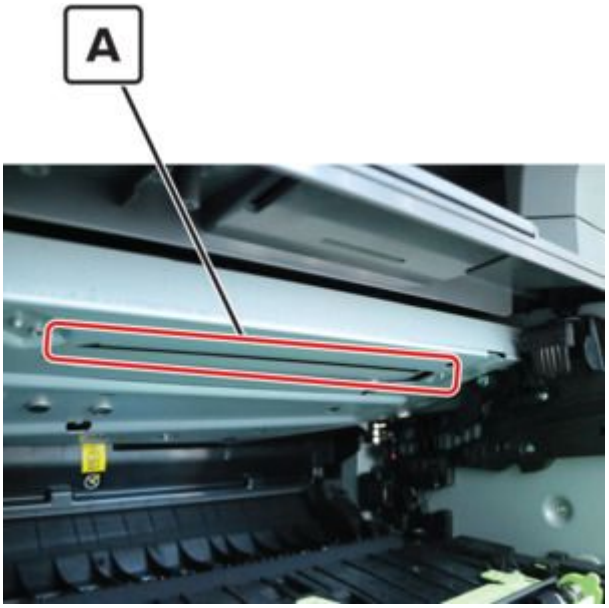
- ADF glass in the ADF cover



6. Close the ADF cover.

Cleaning the printhead lenses

1. Open the front door.
2. Remove the toner cartridge and imaging unit.
3. From the printhead access opening (A) in the top of the frame at the front of the printer, find the printhead lens.



4. Insert a soft, lint-free cloth in the opening, and gently move the cloth back and forth along the surface of the lens to clean it.
5. Repeat step 4.
6. Reinstall the imaging unit and toner cartridge.
7. Close the front door.

Parts catalog

Legend

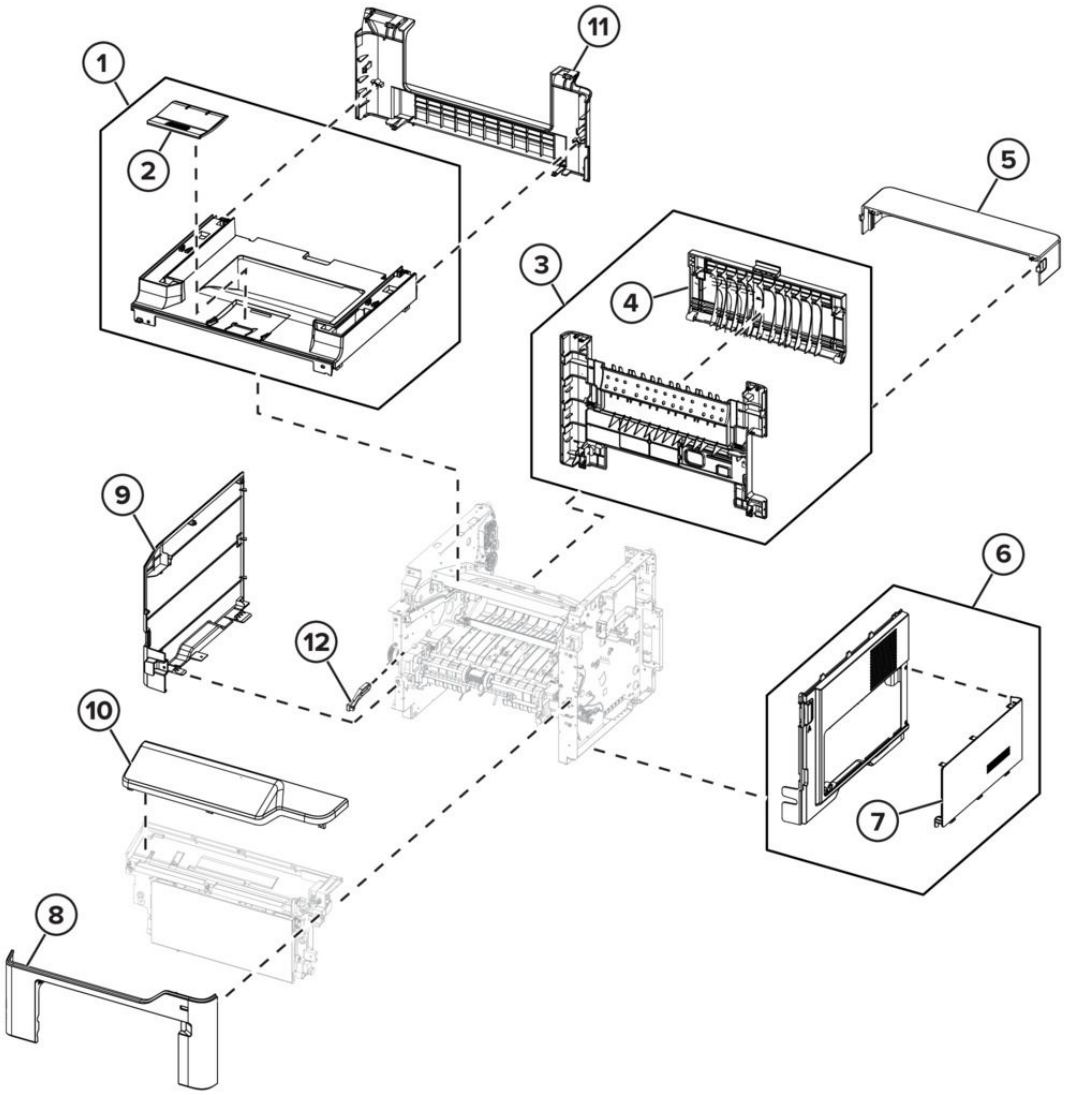
The following column headings are used in the parts catalog:

- **ASM-index**—Identifies the assembly and the item in the diagram. For example, 3-1 indicates Assembly 3 and item 1 in the table.
- **Part number**—Identifies the unique number that correlates with the part.
- **Units/mach**—Refers to the number of units actually used in the base machine or product.
- **Units/option**—Refers to the number of units in a particular option.
- **Units/FRU**—Refers to the number of units in a particular 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 pictured in the illustration.
- **PP** (parts packet) in the Description column indicates that the part is contained in a parts packet.

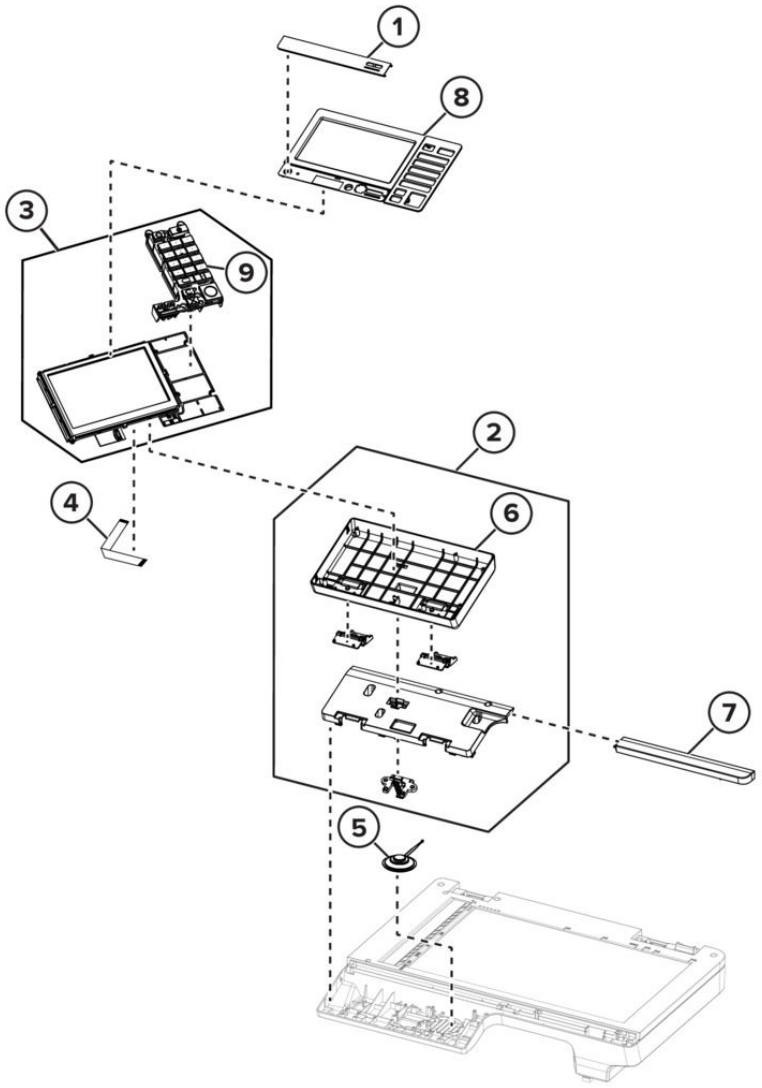
Covers



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X1343	1	1	Top cover	Stapler top cover removal on page 406	
2	40X9102	1	1	Output extender	--	
3	41X1357	1	1	Rear door and cover	Rear door and cover removal on page 363	
4	41X2275	1	1	Rear access door	--	
5	40X8521	1	1	Dust cover	--	
6	41X1166	1	1	Right cover	Right cover removal on page 312	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
7	41X1233	1	1	Controller board access cover	Right cover removal on page 312	
8	41X1164	1	1	Nameplate	Nameplate removal on page 326	
9	41X1168	1	1	Left cover	Left cover removal on page 302	
10	41X1358	1	1	Top access cover	Top access cover removal on page 328	
11	41X2501	1	1	Scanner rear cover	Scanner rear cover removal on page 362	
12	41X2300	1	1	Access cover link	--	

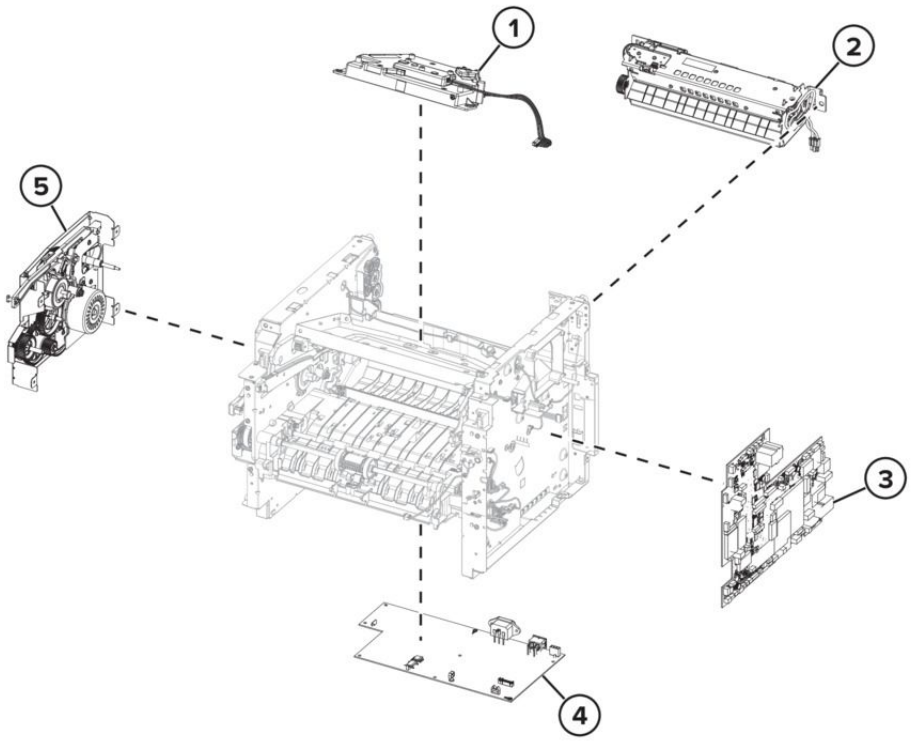
Control panel



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X2439	1	1	Bezel (MX622)	Bezel removal on page 328	
1	41X2609	1	1	Bezel (XM3250)	Bezel removal on page 328	
2	41X2440	1	1	Control panel covers and hinges	Control panel covers and buttons removal on page 330	
3	41X1150	1	1	Control panel display assembly	Control panel display assembly removal on page 329	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
4	41X2232	1	1	Control panel flat cable	Control panel flat cable removal on page 335	
5	41X2230	1	1	Speaker	Speaker removal on page 333	
6	41X1354	1	1	Control panel rear cover	Control panel covers and buttons removal on page 330	
7	41X1345	1	1	Scanner front cover	Scanner front cover removal on page 333	
8	41X0543	1	1	Control panel front cover	Control panel covers and buttons removal on page 330	
9	41X0207	1	1	Control panel button kit	--	

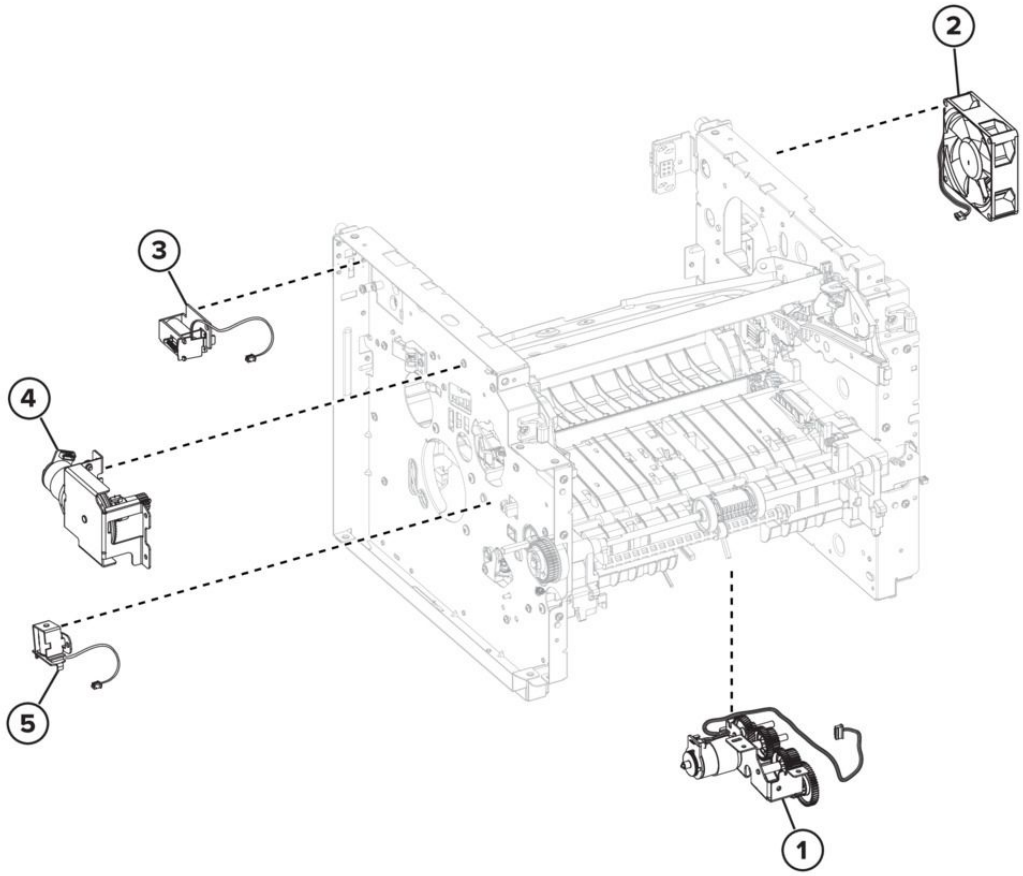
Electronics 1



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X1185	1	1	Printhead	Printhead removal on page 370	
2	41X1178	1	1	Fuser, 110V	Fuser removal on page 364	
2	41X1179	1	1	Fuser, 220V	Fuser removal on page 364	
2	41X1180	1	1	Fuser, 100V	Fuser removal on page 364	
3	41X1363	1	1	Controller board	Controller board removal	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
4	41X1201	1	1	Power supply, 100V/110V	Power supply removal on page 346	
4	41X1202	1	1	Power supply, 220V	Power supply removal on page 346	
5	41X1224	1	1	Main drive gearbox	Main drive gearbox removal on page 303	

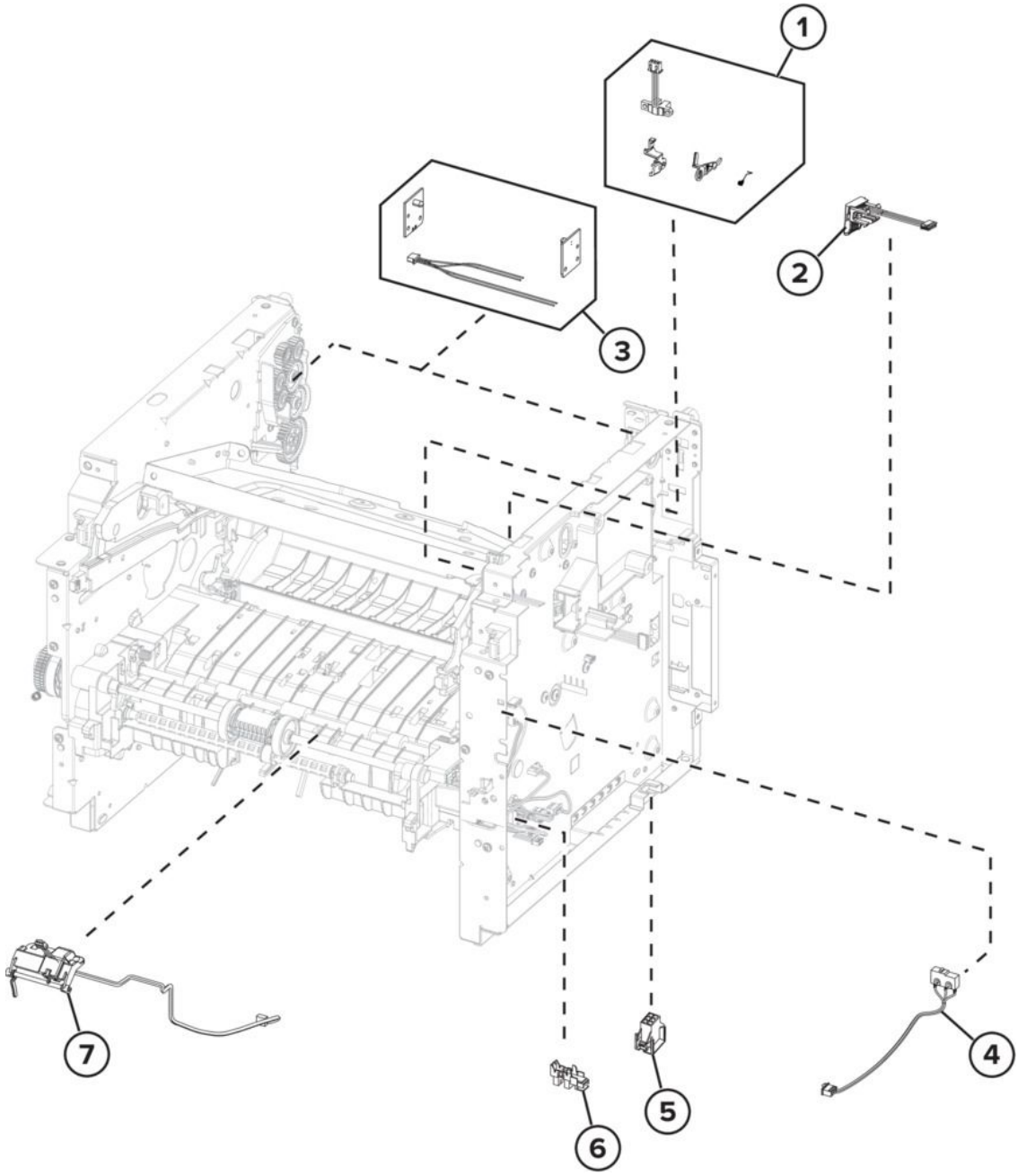
Electronics 2



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X1989	1	1	Pick/lift motor gearbox	Lift cam removal on page 356	
2	41X2259	1	1	Cooling fan	Cooling fan removal	
3	41X1214	1	1	Reverse solenoid	Reverse solenoid removal	
4	41X1237	1	1	Cartridge gearbox	Cartridge gearbox removal on page 310	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
5	41X1213	1	1	MPF solenoid	MPF solenoid removal on page 309	

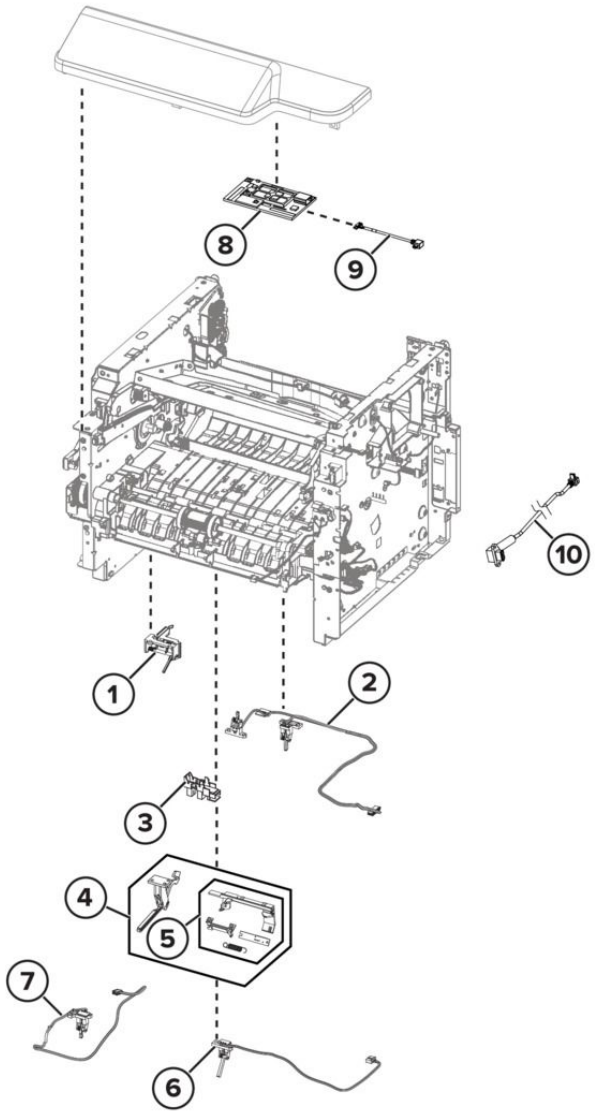
Electronics 3



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X1988	1	1	Sensor (cartridge barrel)	Cartridge barrel shutter sensor kit removal on page 323	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
2	41X1162	1	1	Toner cartridge smart chip contact	Toner cartridge smart chip contact removal on page 321	
3	41X2274	1	1	Sensor (bin full)	Sensor (bin full) removal on page 369	
4	41X1209	1	1	Sensor (front door)	Sensor (front door) removal on page 338	
5	41X1236	1	1	Interconnect cable	Interconnect cable removal on page 315	
6	41X1238	1	1	Sensor (tray present)	Sensor (tray present) removal on page 316	
7	41X1210	1	1	Sensor (MPF paper present)	Sensor (MPF paper present) removal on page 342	

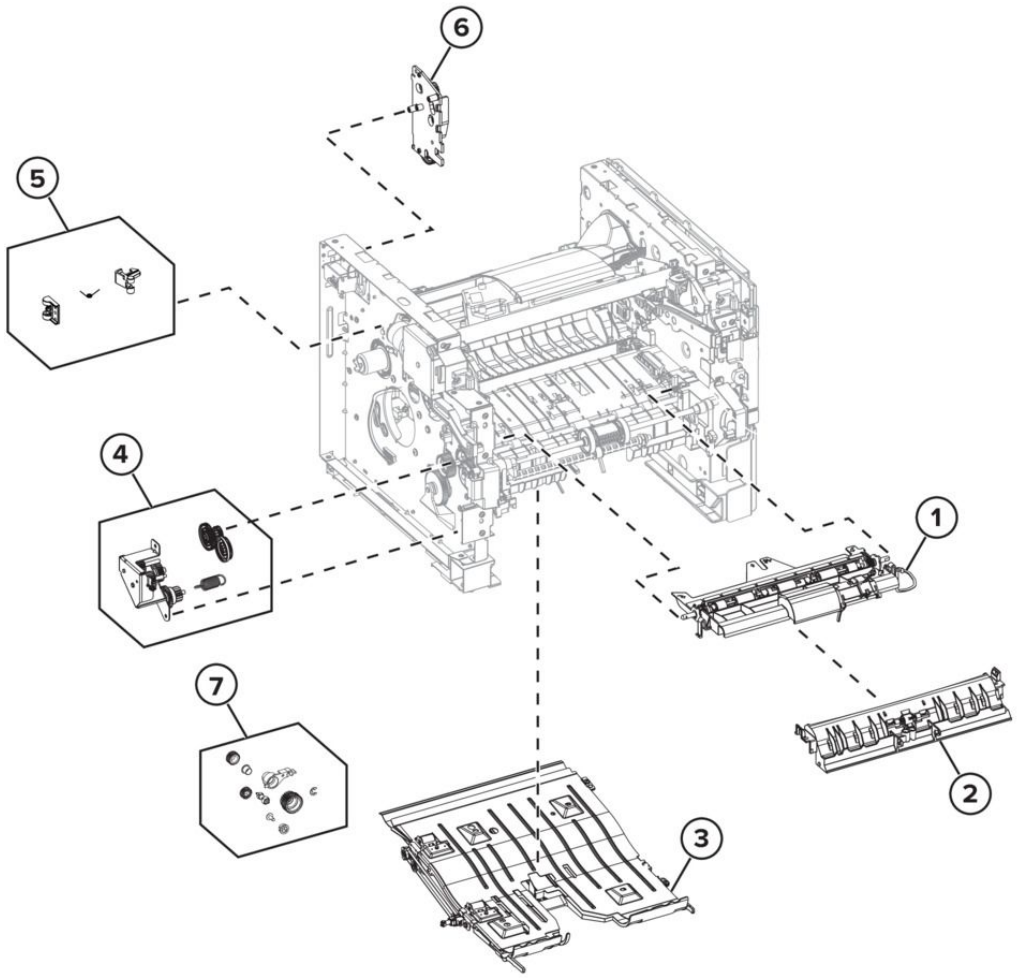
Electronics 4



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X1208	1	1	Sensor (trailing edge)	Sensor (trailing edge) removal on page 354	
2	41X1206	1	1	Sensor (duplex and input)	Sensors (duplex and input) removal on page 349	
3	41X1238	1	1	Sensor (paper present)	Sensor (paper present) removal on page 353	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
4	41X4453	1	1	Paper present sensor flag kit • Paper present sensor flag and bracket • Toner density sensor and bracket • Spring • Screw • Grease	Sensor (toner density) and media present sensor flag removal on page 358	
5	41X4456	1	1	Toner density sensor kit • Toner density sensor and bracket • Spring • Screw • Grease	Sensor (toner density) and media present sensor flag removal on page 358	
6	40X8044	1	1	Sensor (index)	Sensor (index) removal on page 350	
7	41X1241	1	1	Sensor (narrow media)	Sensor (narrow media) removal on page 357	
8	41X2894	1	1	Integrated wireless card (MB2650adwe)	--	
9	41X2270	1	1	Wireless cable (MB2650adwe)	--	
10	41X2630	1	1	Front USB host cable	--	

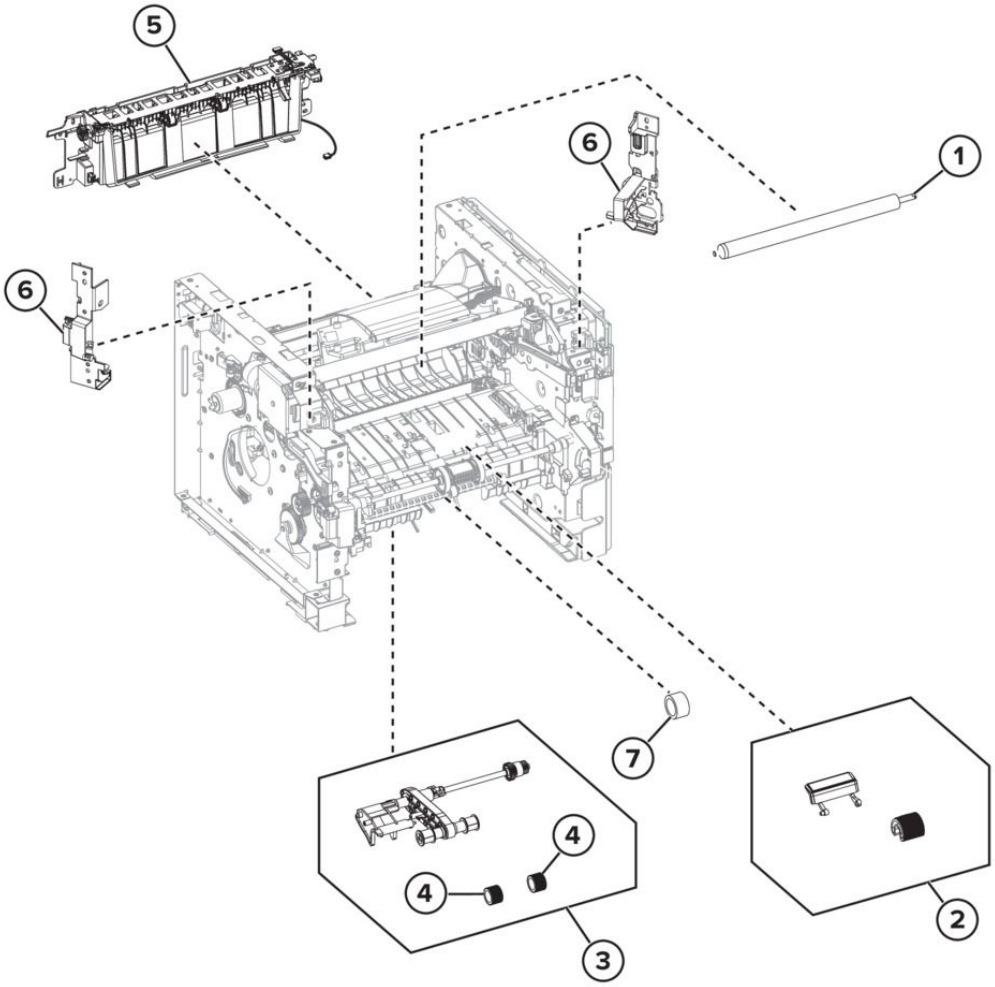
Paper transport 1



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X1183	1	1	Jam access cover	Jam access cover removal on page 337	
2	41X1184	1	1	Front input guide	Front input guide removal on page 343	
3	41X1176	1	1	Duplex assembly	Duplex removal on page 347	
4	41X1182	1	1	MPF gearbox	MPF gearbox removal on page 304	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
5	41X2255	1	1	Fuser actuator	Fuser actuator removal on page 306	
6	41X2256	1	1	Redrive gear plate	Redrive gear assembly removal on page 365	
7	41X4214	1	1	Duplex gear kit	Duplex gear kit removal on page 311	

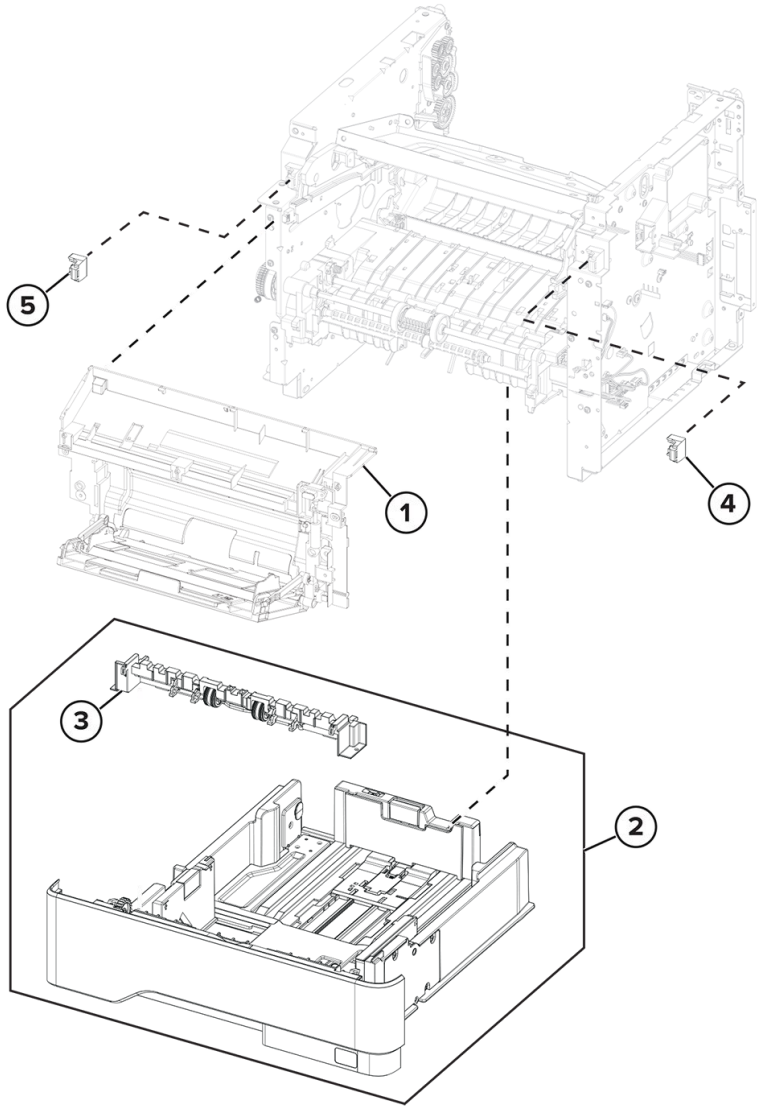
Paper transport 2



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	40X8393	1	1	Transfer roller	Transfer roller removal on page 336	
2	41X1197	1	1	MPF pick roller and separator pad	MPF pick roller and separator pad removal on page 339	
3	41X1196	1	1	Pick roller assembly	Pick roller assembly removal on page 351	
4	41X1198	2	2	Pick tire	--	

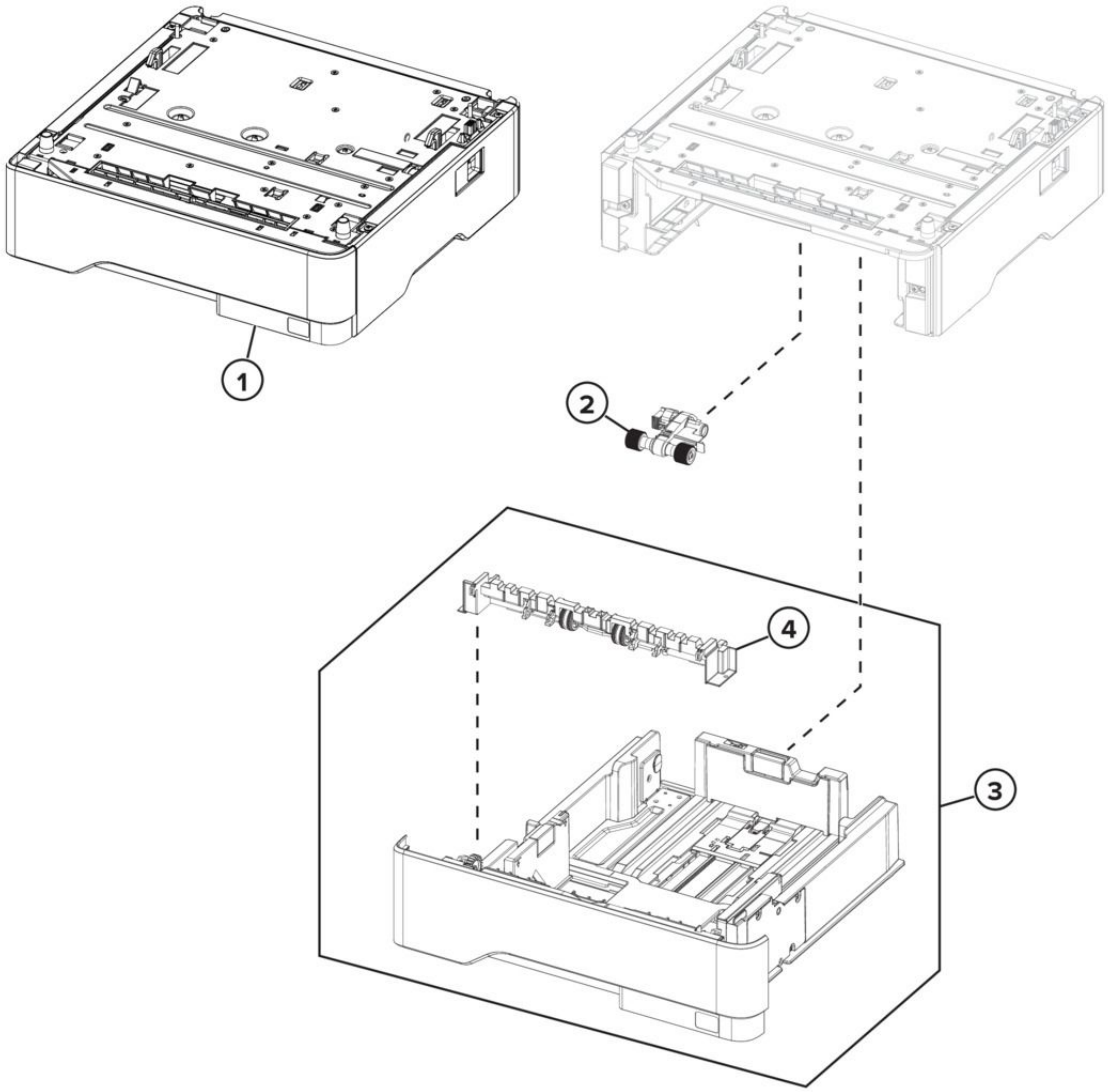
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
5	41X1371	1	1	Redrive assembly	Redrive assembly removal	
6	41X4474	1	1	Mounting bracket	--	
7	41X4545	1	1	Isolation roller	Isolation roller removal on page 344	

MPF and standard tray



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X2605	1	1	MPF with front access cover	MPF with front access cover removal	
2	41X1987	1	1	Standard 550-sheet tray insert	--	
3	41X1212	1	1	Separator roller assembly	--	
4	41X6407	2	1	Front cover latch	--	
5	41X6407	2	1	Front cover latch	--	

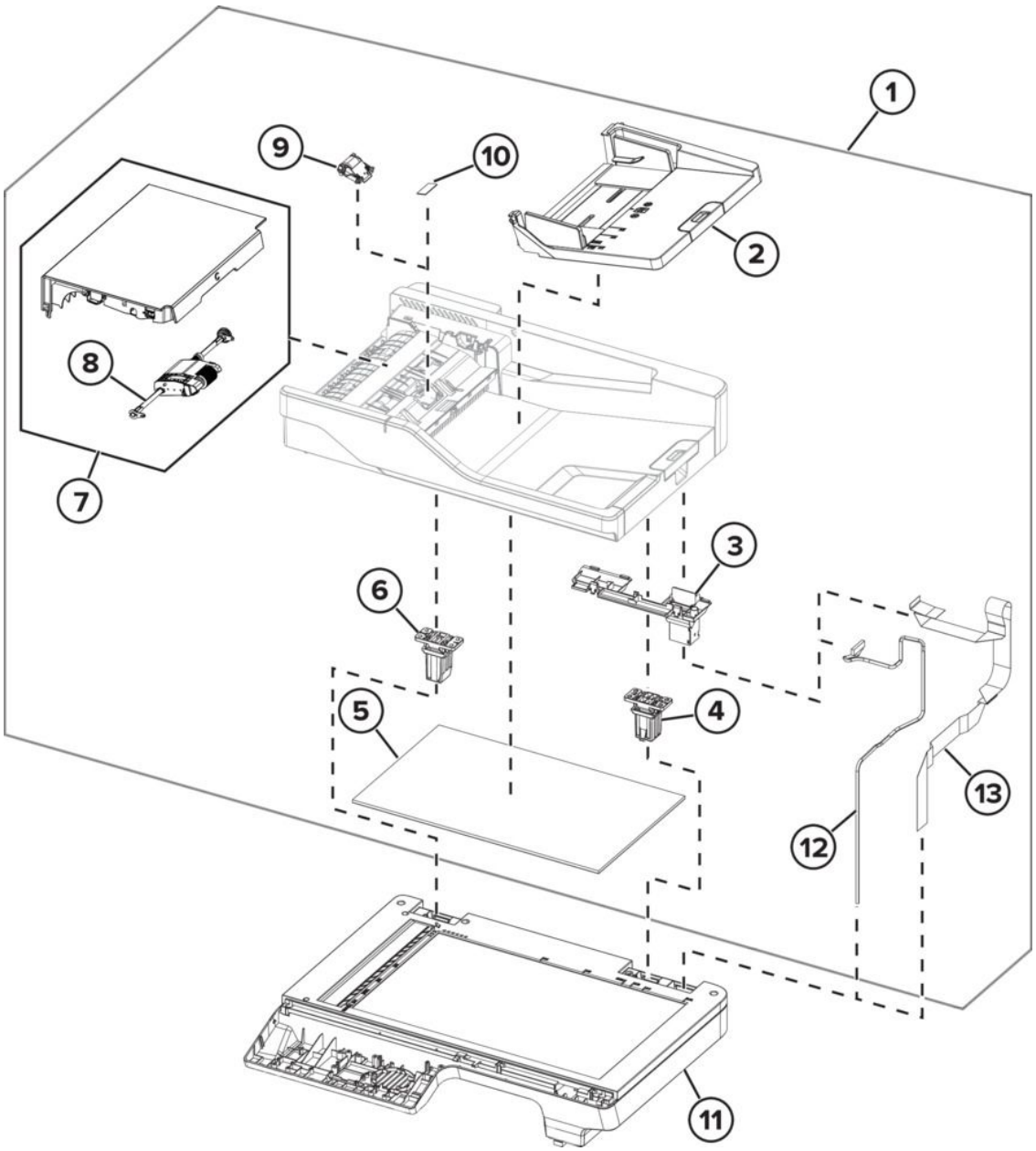
Optional trays



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X1216	1	1	Optional 550-sheet tray	--	
1	41X1217	1	1	Optional 250-sheet tray	--	
1	41X2813	1	1	Optional 550-sheet tray, lockable	--	
2	41X1239	1	1	Pick roller	--	
3	41X1222	1	1	550-sheet tray insert (optional tray)	--	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
3	41X1221	1	1	250-sheet tray insert (optional tray)	--	
3	41X2814	1	1	550-sheet tray insert (lockable optional tray)	--	
4	41X1212	1	1	Separator roller assembly	Separator roller assembly removal on page 385	
NS	40X8033	1	1	Lockable tray key	--	

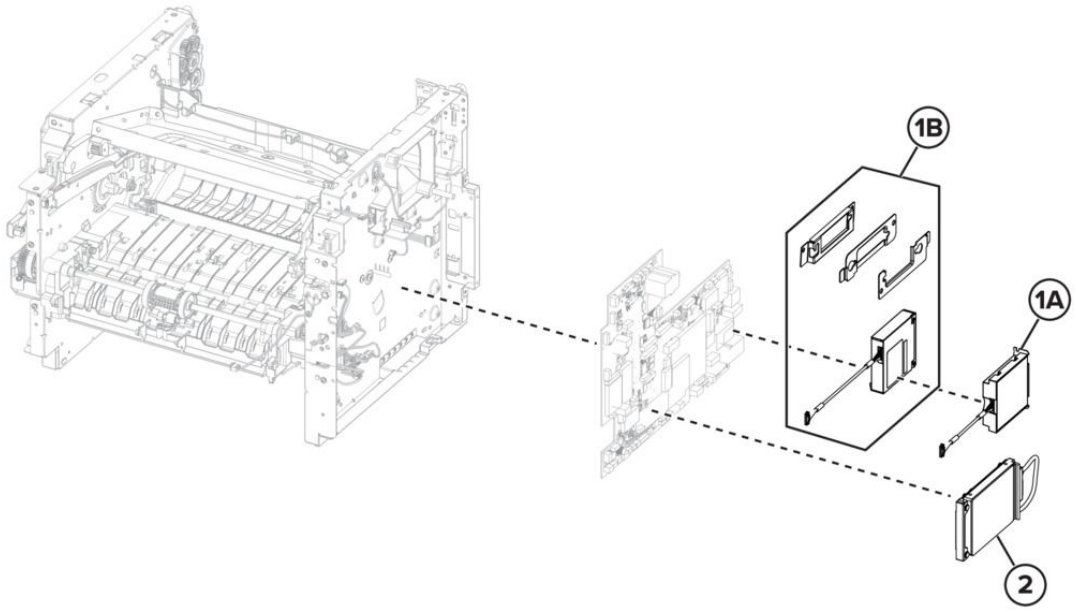
Imaging



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	41X1329	1	1	ADF assembly	ADF assembly removal on page 375	
2	41X1335	1	1	ADF tray	ADF tray removal on page 373	
3	41X2221	1	1	ADF cable cover	--	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
4	41X1321	1	1	ADF right hinge	ADF right hinge removal on page 378	
5	41X1324	1	1	ADF cushion	--	
6	40X9129	1	1	ADF left hinge	ADF left hinge removal on page 377	
7	41X1318	1	1	ADF access door	ADF access door removal on page 379	
8	41X1326	1	1	ADF roller	ADF roller removal on page 372	
9	41X1325	1	1	Standard ADF separator roller **Note:** For printers that experience frequent multi-feed operations, use the High torque ADF separator roller (41X2855) when replacing the ADF separator roller.	ADF separator roller removal on page 373	
9	41X2855	1	1	High torque ADF separator roller	ADF separator roller removal on page 373	
10	41X1322	1	1	ADF restraint pad	ADF restraint pad removal on page 372	
11	41X1332	1	1	Flatbed scanner	Flatbed scanner assembly removal on page 379	
12	41X1315	1	1	ADF cable	--	
13	41X1316	1	1	ADF flat cable	ADF flat cable removal on page 381	

Fax card and hard disk



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1A	41X1374	1	1	Fax card **Note:** This part is applicable only to the following models: • MX622, MB2650, XM3250 (8th digit printer serial number is less than or equal to 3)	Fax card removal on page 319	

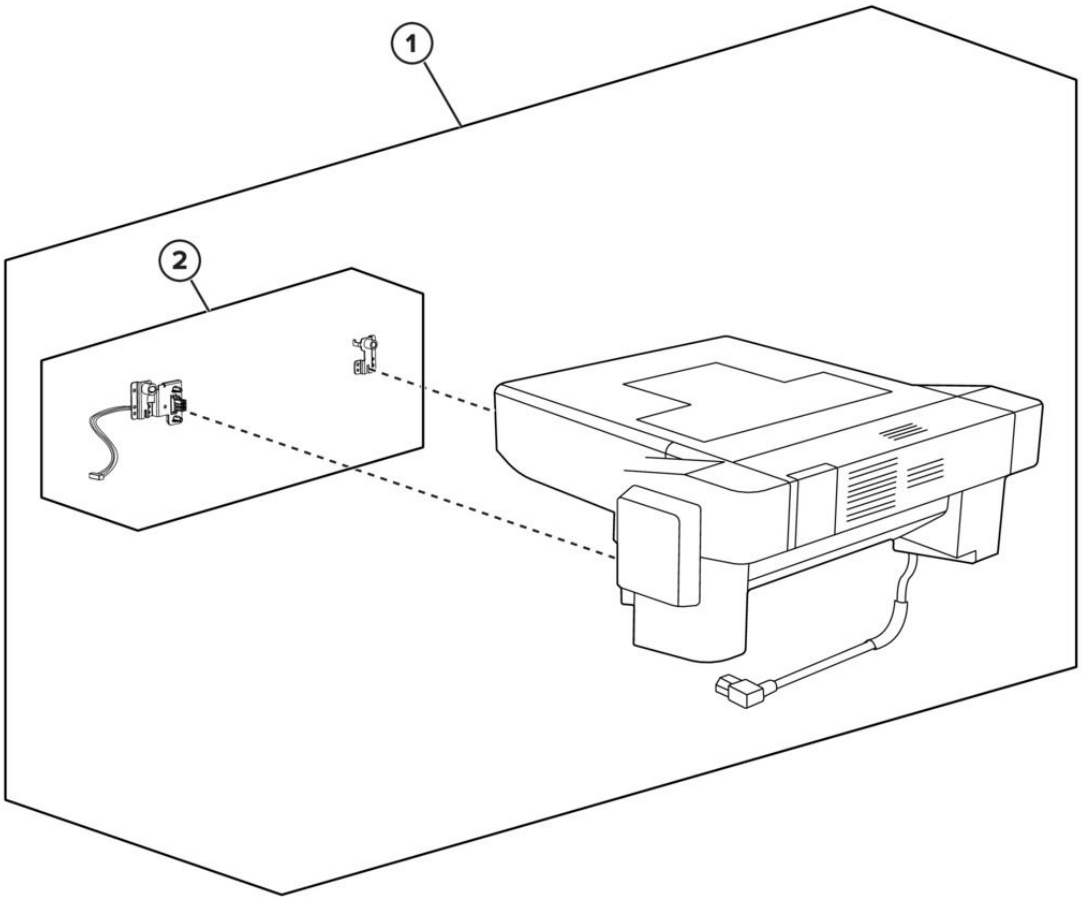
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1B	41X2936	1	1	Fax card kit **Note:** This part is applicable only to the following models: • MX622, MB2650, XM3250(8th digit of printer serial number is greater than or equal to 4)	Fax card removal on page 319	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
				Note: ◦ The print head already has an adapter installed.		

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
				◦ Do not cover up the telecom label. • MX622, MB2650, XM3250(8th digit of printer serial number is less than or equal to 3) **Note:** Install the adapter plate and telecom label.		

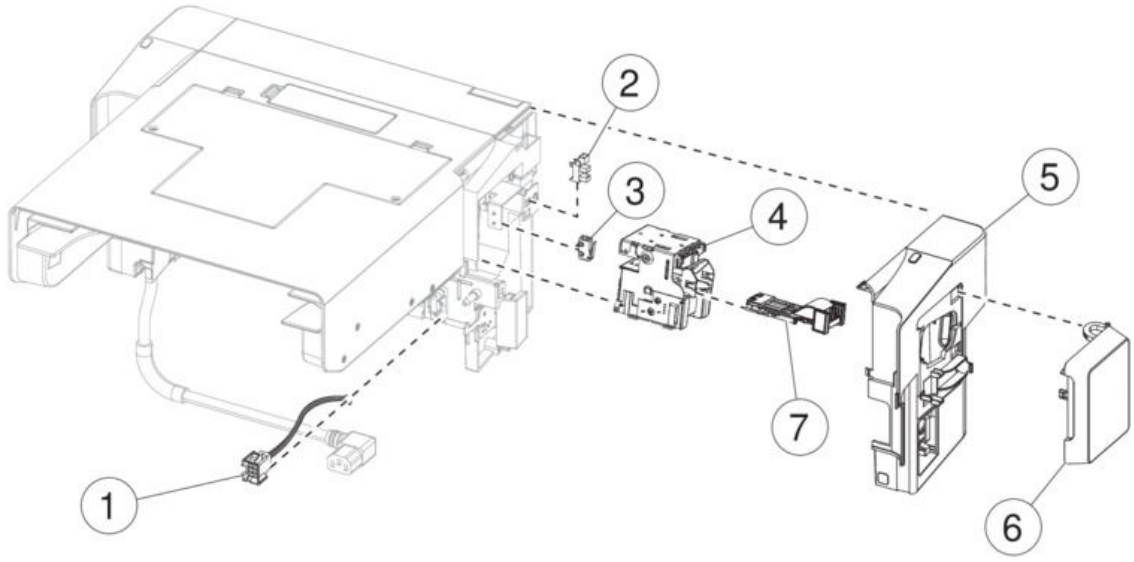
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
2	40X9934	1	1	Printer hard disk (MX622adhe), 500GB	--	

Staple finisher option



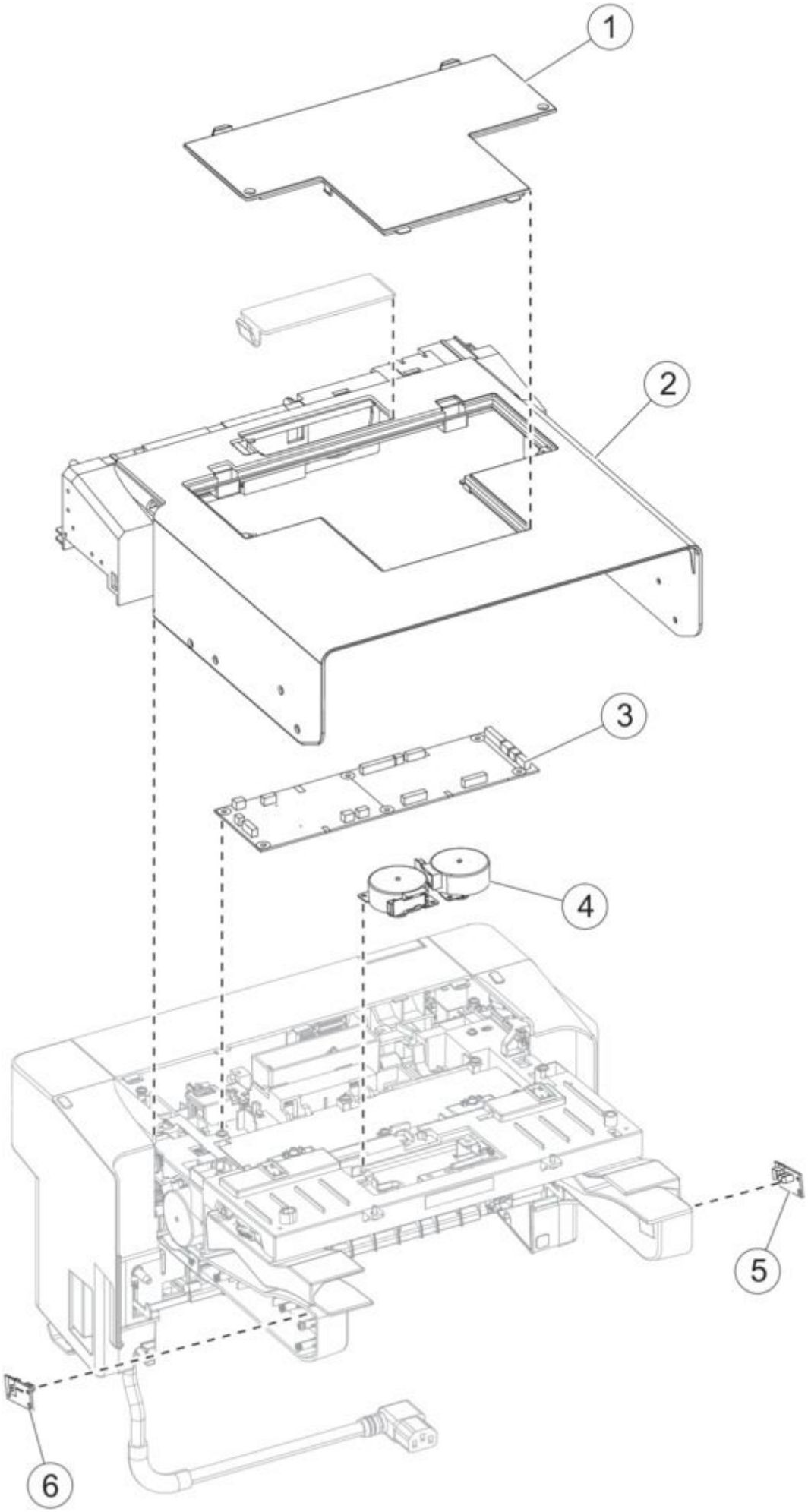
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	40X8121	1	1	Staple finisher option	Staple finisher option removal on page 386	
2	41X1252	1	1	Staple finisher mounting bracket	--	

Staple finisher (right)



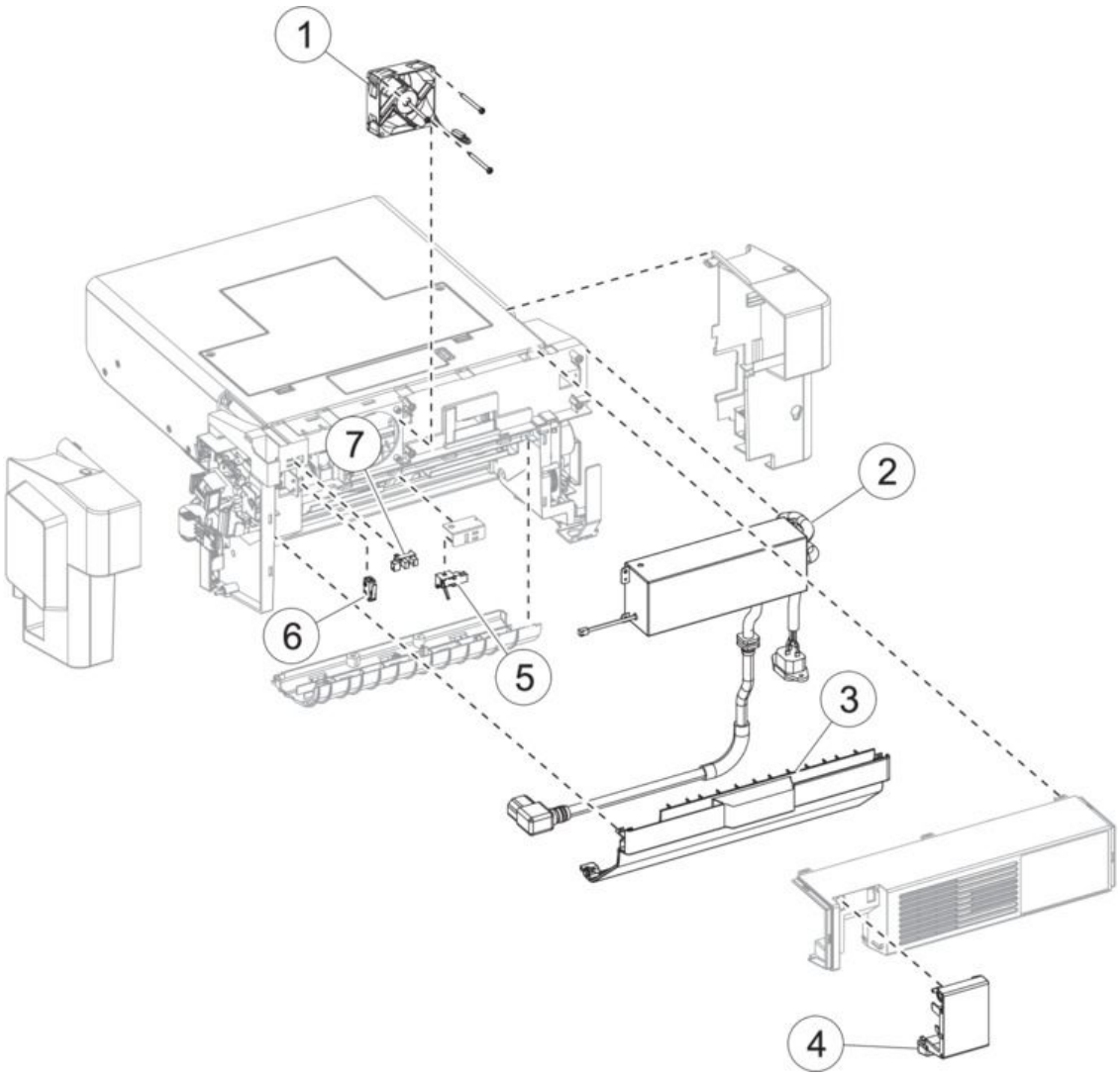
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	40X8144	1	1	Stapler interface cable	Stapler interface cable removal on page 404	
2	40X7592	1	1	Sensor (stapler access door)	Sensor (stapler access door) removal on page 393	
3	40X8139	1	1	Stapler door close limit switch with cable	Stapler door close limit switch removal on page 394	
4	40X8142	1	1	Stapler carriage assembly	Stapler carriage assembly removal on page 394	
5	40X8130	1	1	Stapler right cover	Stapler right cover removal on page 391	
6	40X8129	1	1	Stapler cartridge access door	Stapler cartridge access door removal on page 389	
7	40X8149	1	1	Staple roll holder	Staple roll holder removal on page 390	

Staple finisher (top)


1
2
3
4
5
6

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	40X8140	1	1	Stapler service cover	Stapler service cover removal on page 398	
2	40X8141	1	1	Stapler top cover	Stapler top cover removal on page 406	
3	40X8137	1	1	Stapler controller board	Stapler controller board removal on page 399	
4	40X8125	1	1	Stapler tamper motor	Motor (stapler left tamper) removal on page 399 or Motor (stapler right tamper) removal on page 400	
5	40X8131	1	1	Sensor (stapler bin full send)	Sensor (stapler bin full send) removal on page 409	
6	40X8132	1	1	Sensor (stapler bin full receive)	Sensor (stapler bin full receive) removal on page 408	

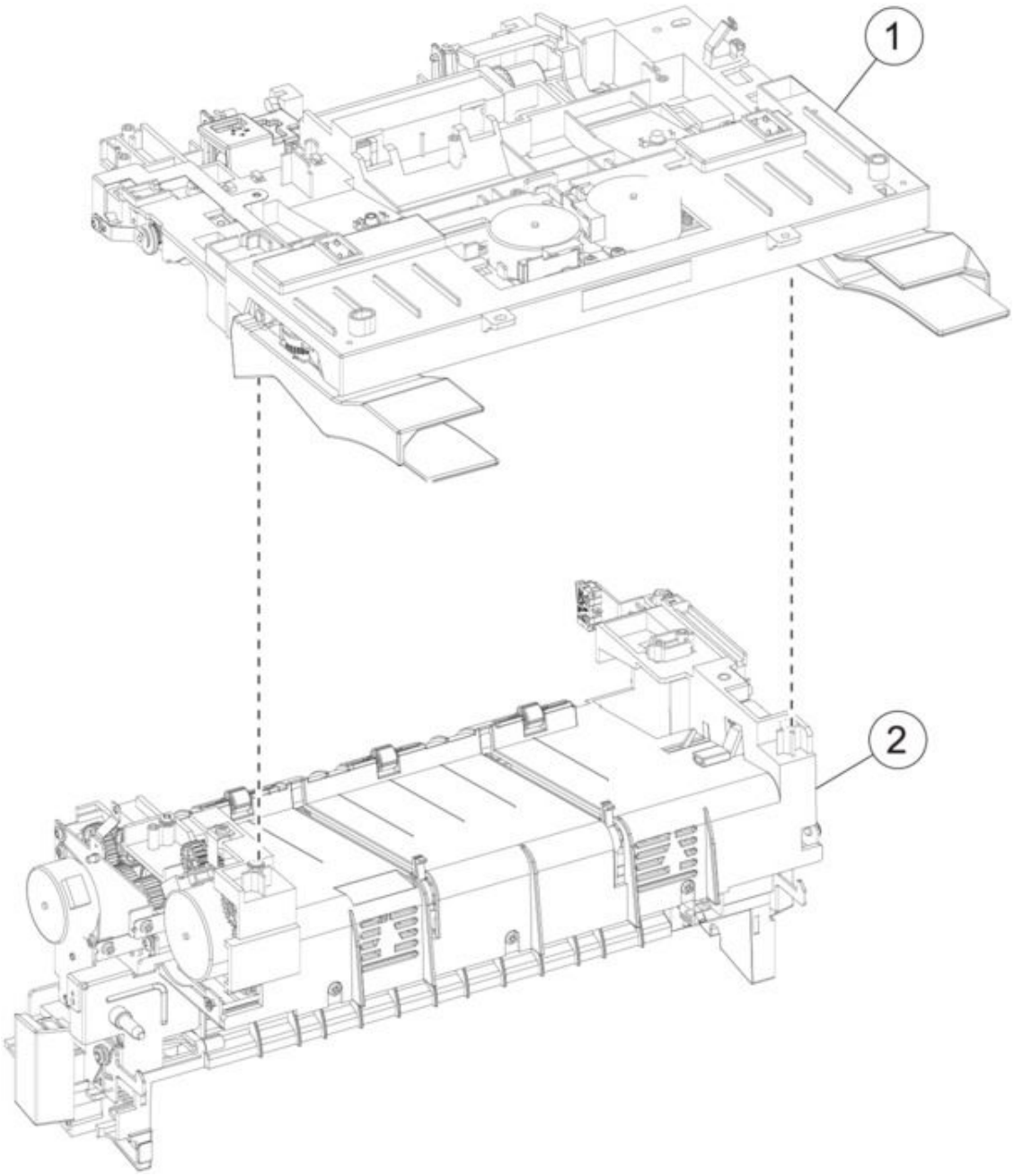
Staple finisher (rear)



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	40X8148	1	1	Stapler cooling fan	Stapler cooling fan removal on page 401	
2	40X8135	1	1	Stapler power supply unit	Stapler power supply unit removal on page 402	
2	40X8540	1	1	Stapler power supply unit—China	Stapler power supply unit removal on page 402	
3	40X8128	1	1	Stapler rear door	Stapler rear door removal on page 392	

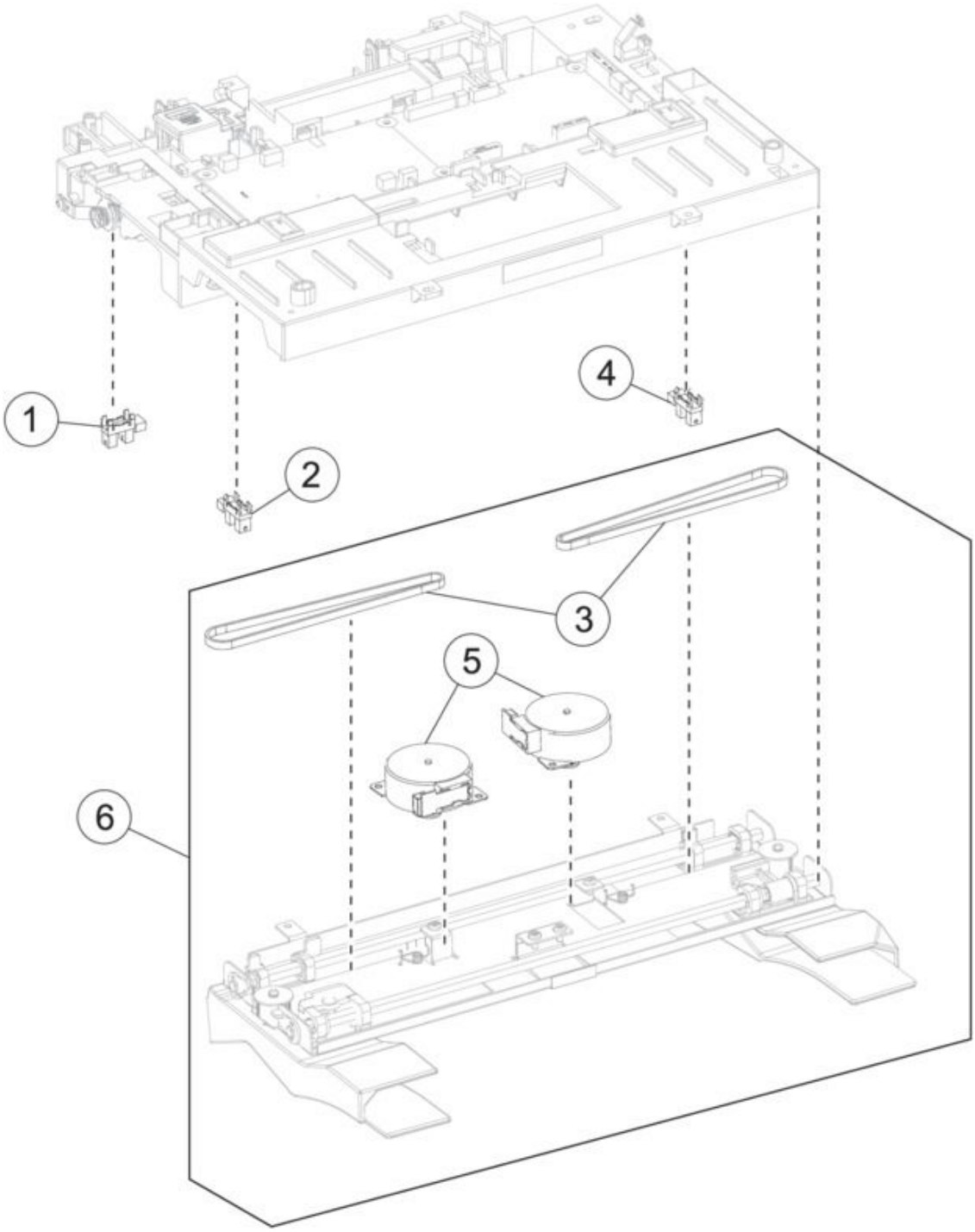
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
4	40X8458	1	1	Trapped staple access door	Trapped staple access door removal on page 398	
5	40X8134	1	1	Sensor (stapler pass through)	Sensor (stapler pass through) removal on page 411	
6	40X8138	1	1	Stapler rear door close limit switch with cable	Stapler rear cover close limit switch removal on page 400	
7	40X7592	1	1	Sensor (stapler rear door)	Sensor (stapler rear cover) removal on page 397	

Staple finisher exit assembly



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	40X8748	1	1	Stapler tamper main assembly	Tamper main assembly removal on page 413	
2	40X8751	1	1	Stapler accumulator assembly	Stapler accumulator assembly removal on page 417	

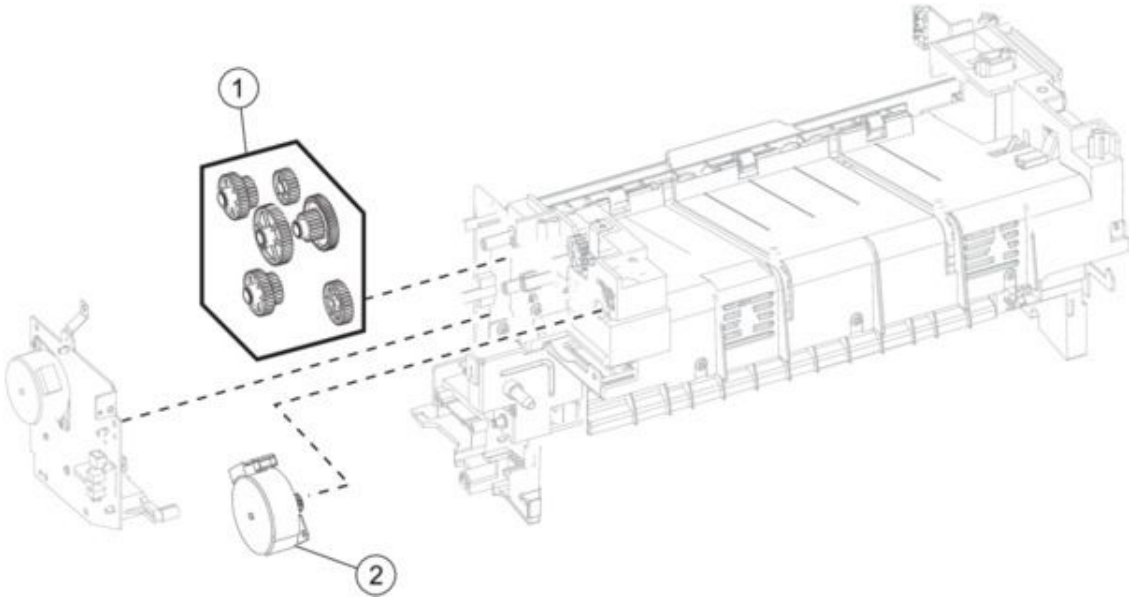
Staple finisher tamper assembly



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	40X8754	1	1	Sensor (stapler paddle HP)	Sensor (stapler paddle HP) removal on page 419	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
2	40X8754	1	1	Sensor (stapler left tamper HP)	Sensor (stapler left tamper HP) removal on page 419	
3	40X8750	2	2	Stapler tamper drive belt	Tamper drive belt removal on page 415	
4	40X8754	1	1	Sensor (stapler right tamper HP)	Sensor (stapler right tamper HP) removal on page 418	
5	40X8125	2	1	Stapler tamper motor	Motor (stapler left tamper) removal on page 399 or Motor (stapler right tamper) removal on page 400	
6	40X8749	1	1	Tamper sub-assembly	Tamper sub-assembly removal on page 414	

Staple finisher accumulator assembly



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
1	40X8752	1	1	Stapler diverter gearbox	Diverter gearbox removal on page 416	
2	40X8753	1	1	Motor (stapler paddle)	Motor (stapler paddle) removal on page 396	

Maintenance kits

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	41X1227	1	1	Maintenance Kit (100 V) • Fuser (100 V) • MPF pick roller and separator pad • Pick tires • Separator roller assembly • Transfer roller	N/A	
NS	41X1225	1	1	Maintenance Kit (110 V) • Fuser (110 V) • MPF pick roller and separator pad • Pick tires • Separator roller assembly • Transfer roller	N/A	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	41X1226	1	1	Maintenance Kit (220 V) • Fuser (220 V) • MPF pick roller and separator pad • Pick tires • Separator roller assembly • Transfer roller	N/A	

Power cords

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	40X0269	1	1	Power cord, 2.5 m (straight)—USA, Canada	N/A	
NS	40X3141	1	1	Power cord, 2.5 m (straight)—Europe and others	N/A	
NS	40X0288	1	1	Power cord, 2.5 m (straight)—Argentina	N/A	
NS	40X0271	1	1	Power cord, 2.5 m (straight)—United Kingdom	N/A	
NS	40X0275	1	1	Power cord, 2.5 m (straight)—Israel	N/A	
NS	40X1772	1	1	Power cord, 2.5 m (straight)—Switzerland	N/A	
NS	40X1773	1	1	Power cord, 2.5 m (straight)—South Africa	N/A	
NS	40X0273	1	1	Power cord, 2.5 m (straight)—Traditional Italy	N/A	
NS	40X1774	1	1	Power cord, 2.5 m (straight)—Denmark	N/A	
NS	40X4596	1	1	Power cord, 2.5 m (straight)—Brazil	N/A	
NS	40X0303	1	1	Power cord, 2.5 m (straight)—China	N/A	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	40X0270	1	1	Power cord, 2.5 m (straight)—Japan	N/A	
NS	40X1792	1	1	Power cord, 2.5 m (straight)—Korea	N/A	
NS	40X1791	1	1	Power cord, 2.5 m (straight)—Taiwan	N/A	
NS	40X0301	1	1	Power cord, 2.5 m (straight)—Australia	N/A	

Miscellaneous

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	40X9934	1	1	Hard disk, SATA	--	
NS	41X1010	1	1	User Flash Memory, 256MB	--	
NS	41X1002	1	1	Forms and Bar Code card	--	
NS	41X1004	1	1	IPDS card	--	
NS	41X1006	1	1	PRESCRIBE card	--	
NS	41X1014	1	1	Font card, Traditional Chinese **Note:** This part is obsolete.	--	
NS	41X1013	1	1	Font card, Simplified Chinese	--	
NS	41X1015	1	1	Font card, Korean	--	
NS	41X1016	1	1	Font card, Japanese	--	
NS	41X1872	1	1	Marknet N8372, Front WiFi—FSM	--	
NS	40X8523	1	1	RS-232C Serial Interface card	--	
NS	40X8524	1	1	Parallel 1284-B Interface card	--	
NS	41X1945	1	1	MarkNet N8230 Fiber Ethernet 100BASE-FX (LC), 1000BASE-SX (LC) (Fiber + side backpack)	--	
NS	41X2055	1	1	Smart card	--	

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure	Notes
NS	40X1367	1	1	Parallel cable, 10 feet	--	
NS	40X1368	1	1	USB 2.0 cable, 2 meters	--	
NS	3086579	1	1	Software CD **Note:** The part number is for internal use only and is not orderable.	--	
NS	41X0997	1	1	Contact Authentication Device	--	
NS	41X0998	1	1	Contactless Authentication Device	--	

Printer specifications

Power consumption

Product power consumption

The following table documents the power consumption characteristics of the product.

Note: Some modes may not apply to your product.

Mode	Description	Power consumption (Watts)
Printing	The product is generating hard-copy output from electronic inputs.	670
Copy	The product is generating hard-copy output from hard-copy original documents.	680
Scan	The product is scanning hard-copy documents.	23.5
Ready	The product is waiting for a print job.	16.5
Sleep Mode	The product is in a high-level energy-saving mode.	2.5
Hibernate	The product is in a low-level energy-saving mode.	0.1
Off	The product is plugged into an electrical outlet, but the power switch is turned off.	0.1

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 (in minutes):	15

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

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.

Applicability of Regulation (EU) 2019/2015 and (EU) 2019/2020

Per Commission Regulation (EU) 2019/2015 and (EU) 2019/2020, the light source contained within this product or its component is intended to be used for Image Capture or Image Projection only, and is not intended for use in other applications.

Selecting a location for the printer

- Leave enough room to open trays, covers, and doors and to install hardware options.
- Make sure that airflow in the room meets the latest revision of the ASHRAE 62 standard or the CEN Technical Committee 156 standard.
- Provide a flat, sturdy, and stable surface.
- Keep the printer:
    - Clean, dry, and free of dust
    - Away from stray staples and paper clips
    - Away from the direct airflow of air conditioners, heaters, or ventilators

- Free from direct sunlight and humidity extremes

- Observe the recommended temperatures and avoid fluctuations.

Ambient temperature	10 to 32°C (50 to 90°F)
Storage temperature	0 to 40°C (32 to 104°F)

- Allow the following recommended amount of space around the printer for proper ventilation:



1	Top	800 mm (32 in.)
2	Rear	203 mm (8 in.)
3	Right side	305 mm (12 in.)
4	Front	510 mm (20 in.)
5	Left side	203 mm (8 in.)

Noise emission levels

The following measurements were made in accordance with ISO 7779 and reported in conformance with ISO 9296.

Note: Some modes may not apply to your product.

1-meter average sound pressure, dBA	
Printing	55 (one-sided), 54 (two-sided)
Scanning	55
Copying	56
Ready	N/A

Values are subject to change. See www.lexmark.com for current values.

Temperature information

Ambient operating temperature	10 to 32°C (50 to 90°F)
Shipping temperature	-20 to 40°C (-4 to 104°F)
Storage temperature and relative humidity	0 to 40°C (32 to 104°F) 8 to 80% RH

Options and features

Available internal options

- 256MB user flash memory
- 500GB Hard Disk Drive (SATA)
- Firmware Cards (DLEs)
    - Forms and Bar Code Card
    - IPDS card
    - PRESCRIBE Card
- DBCS Font Cards
    - Traditional Chinese Font Card
    - Simplified Chinese Font Card
    - Korean Font Card
    - Japanese Font Card
- Internal Print Server
    - Marknet N8372
- Local Interface Cards
    - RS-232C Serial Interface Card2
    - Parallel 1284-B Interface Card2
    - Marknet N8230 Fiber Ethernet 100BASE-FX(LC), 1000BASE-SX(LC) (Fiber + side cover)

Input/output configurations and capacities

Printer model	Number of standard trays	Maximum number of optional trays*	Maximum number of trays
MX622, MB2650, and XM3250	2	3	5

* The printer can support a maximum of three optional trays in one configuration.

Printer model	Standard tray	Multipurpose feeder	Total standard capacity	Maximum optional capacity	Maximum input capacity
MX622, MB2650, and XM3250	550	100	650	1650	2300

Paper capacity means 20-lb xerographic paper at ambient environment per sheet.

Printer model	Number of standard destinations
MX622, MB2650, and XM3250	1

Printer model	Standard output capacity	Maximum output capacity
MX622, MB2650, and XM3250	250	250

Paper capacity means 20-lb xerographic paper at ambient environment per sheet.

Theory of operation

POR sequence

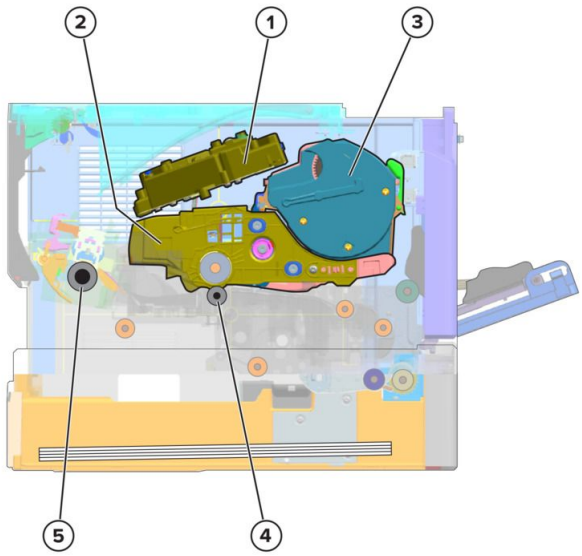
As the printer is turned on, the engine code goes through a series of tests to verify hardware integrity. If a hardware failure is detected, then it is reported to the printer. If the POR sequence cannot be completed successfully, then the printer may post an error message. The message states that service 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 PC 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

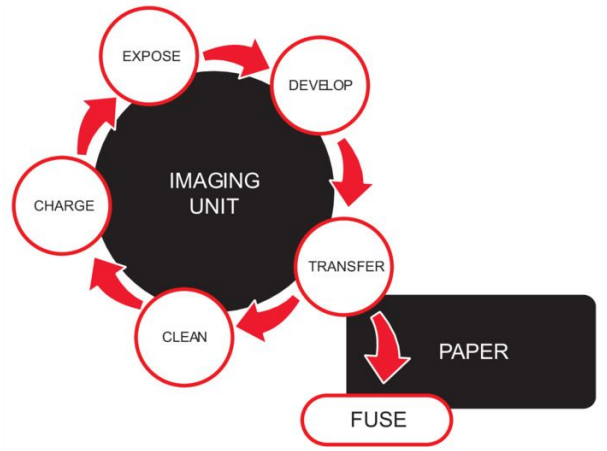
Print engine layout



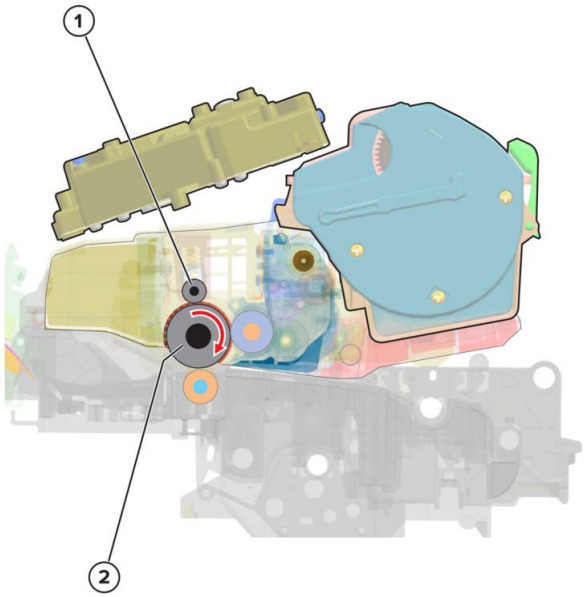
1	Printhead
2	Imaging unit
3	Toner cartridge
4	Transfer roller
5	Fuser

Print cycle

Flowchart



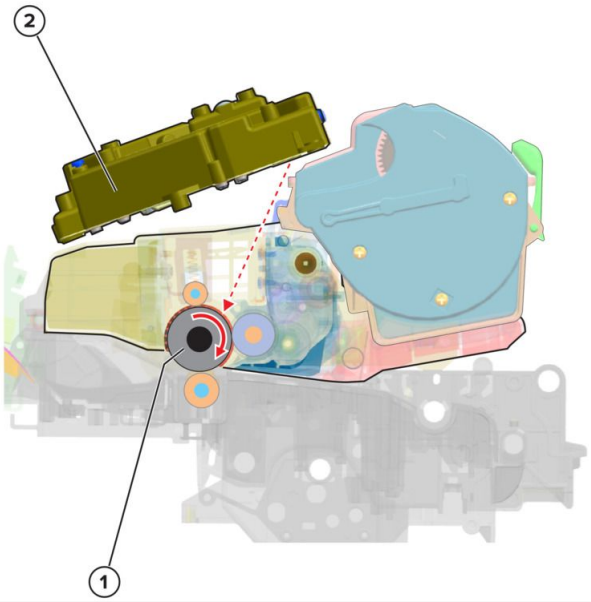
Charge



1	Charge roller
2	Photoconductor drum

A uniform negative electrical charge is applied by the charge roller to the surface of the photoconductor drum. The photoconductive properties of the surface material allow it to hold the charge as long as it is not exposed to light.

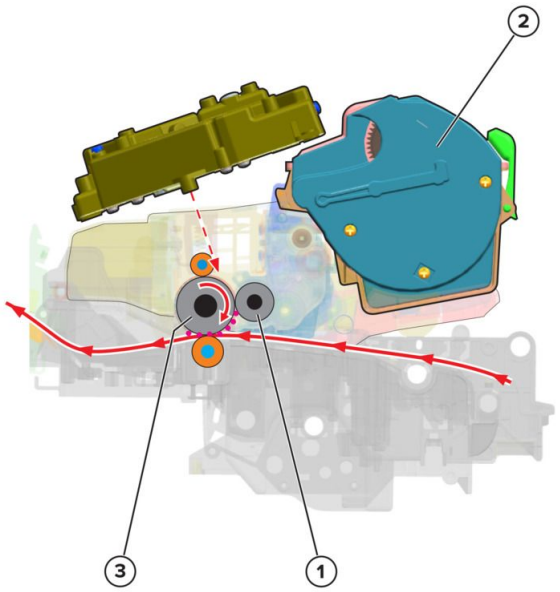
Expose



1	Photoconductor drum
2	Printhead

The printhead emits the light that contacts the surface of the photoconductor drum. The light turns on or off coinciding with the digital latent image. The light causes areas of the photoconductor drum surface to lose charge, resulting in a relative opposite polarity.

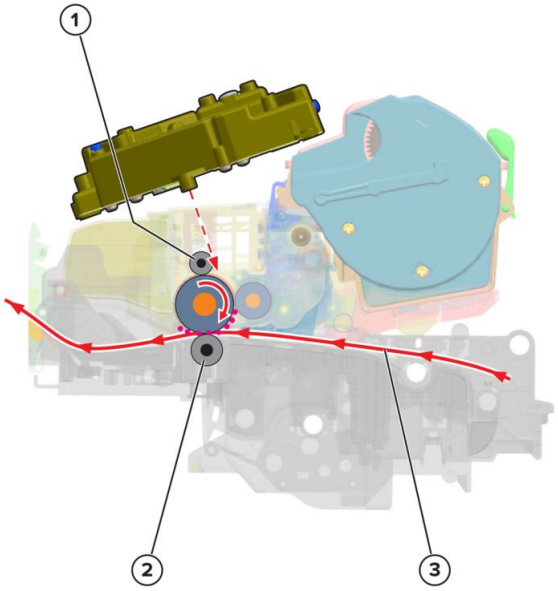
Develop



1	Developer roller
2	Toner cartridge
3	Photoconductor drum

The developer unit applies the toner from the toner cartridge to the photoconductor drum. The difference in charge causes the toner particles to attract to the photoconductor drum areas which are exposed to light.

Transfer



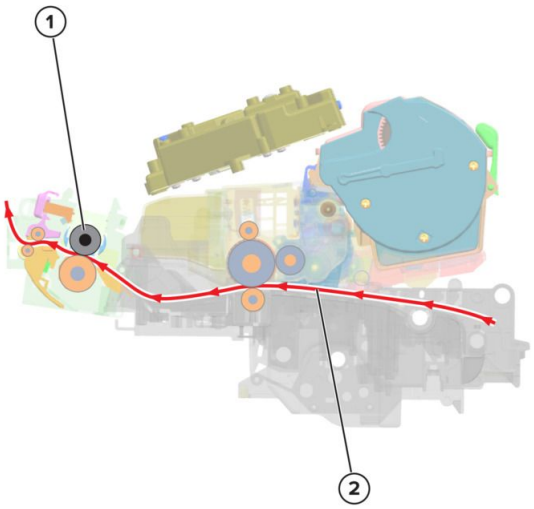
1	Charge roller
2	Transfer roller
3	Paper

The transfer roller applies a positive charge to the paper, which is pressed between the transfer roller and the photoconductor drum. Due to relative opposite polarities between the paper, from the transfer roller, and the photoconductor drum, from the charge roller, the charge attracts the toner onto the paper.

Clean

The cleaning blade removes the toner residue from the photoconductor drum. The cycle (charge, expose, develop, transfer, and clean) repeats until the whole image is transferred to the paper.

Fuse

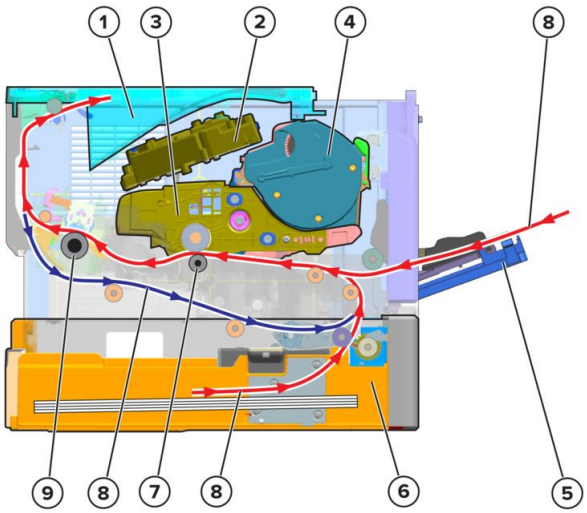


1	Fuser
2	Paper

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.

Printer operation

Printer sections

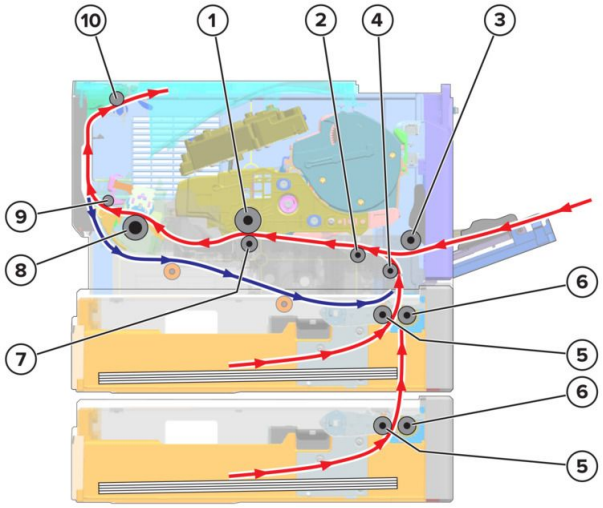


1	Bin

2	Printhead
3	Imaging unit
4	Toner cartridge
5	MPF
6	Tray
7	Transfer roller
8	Paper paths
9	Fuser

Printer paper path

One-sided print job



1	Photoconductor drum
2	First input roller
3	MPF pick roller
4	Second input roller
5	Pick roller
6	Separator roller
7	Transfer roller
8	Fuser
9	Fuser exit roller

10	Paper exit roller

The pick roller picks and feeds the paper to the separator roller. The separator roller feeds the paper to the second input roller, which feeds it to the first input roller. For MPF print jobs, the MPF pick roller picks and feeds the paper to the first input roller.

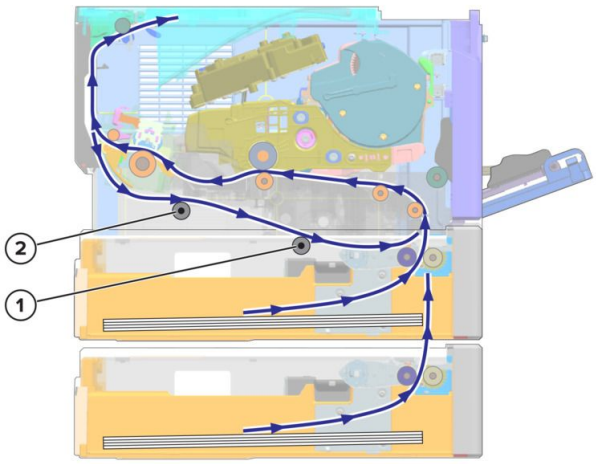
The deskew shutter along the first input roller corrects the skew on the paper.

The first input roller feeds the paper to the transfer roller. At the transfer roller, the photoconductor drum transfers the developed image to the paper to create the printed image.

As the paper passes the fuser, heat and pressure are applied to permanently bond the toner to the paper.

After printing, the printer ejects the paper by the exit roller.

Two-sided print job

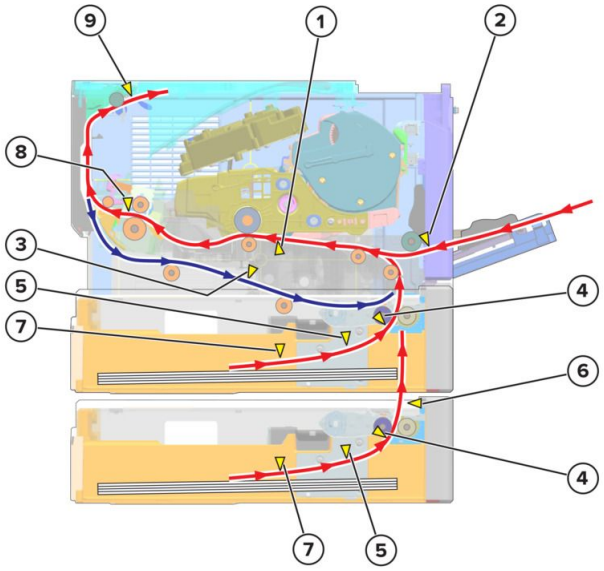


1	Duplex rear roller
2	Duplex front roller

After the first side is printed, the paper is diverted to the top of the paper exit roller. The duplex path opens, and then the paper reverses direction to get its opposite page printed.

The paper travels along the duplex path until it reenters the second input roller. From there, the paper continues its path until the print job is done.

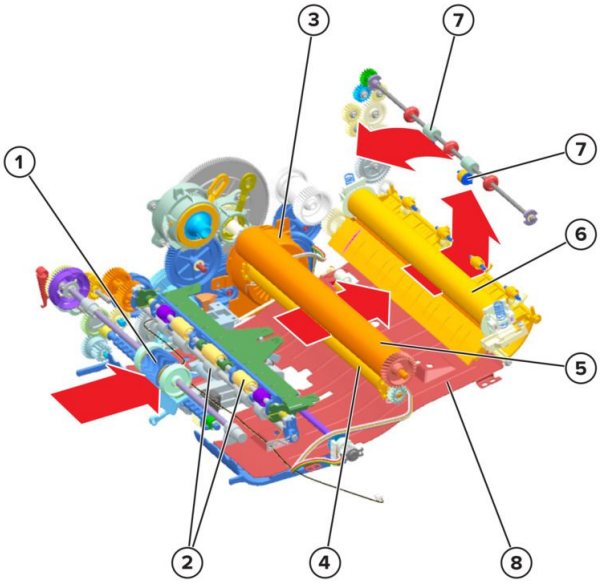
Printer paper path sensors



#	Sensor	Function
1	Sensor (input)	Detects the paper traveling between the first input roller and the transfer roller
2	Sensor (MPF paper present)	Detects if paper is in the MPF tray
3	Sensor (duplex)	Detects the paper traveling along the duplex path
4	Sensor (index)	Detects if the pick roller is at the correct height to pick paper from the tray **Note:** The sensor in the standard tray is supported only in some printer models.
5	Sensor (trailing edge)	Detects the trailing edge of the paper fed from the tray
6	Sensor (pass-through)	Detects paper fed from tray 2
7	Sensor (media present)	Detects if paper is in the tray **Note:** The sensor in the standard tray is supported only in some printer models.
8	Sensor (fuser exit)	Detects the paper exiting the fuser

#	Sensor	Function
9	Sensor (narrow media/bin full)	Detects if the paper is narrow and the bin is full

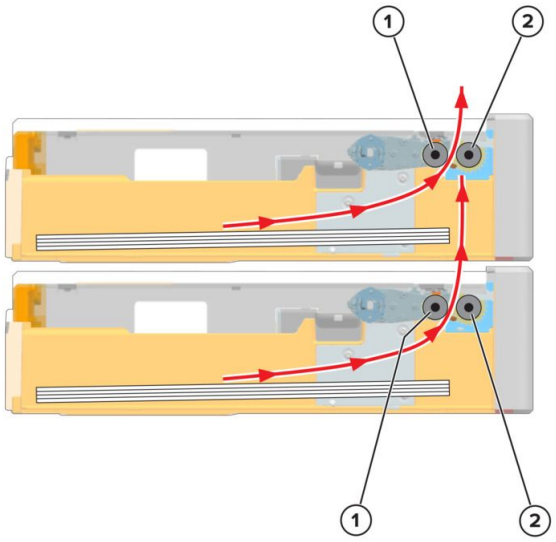
Main drive



1	MPF
2	Paper input
3	Main drive gearbox motor
4	Transfer roller
5	Photoconductor
6	Fuser
7	Paper exit
8	Duplex

The gearbox provides mechanical power to the printer. Its motor transfer power through a number of gears to the following parts: MPF, paper input, transfer roll, photoconductor drum, fuser, paper exit, and duplex.

Tray drive

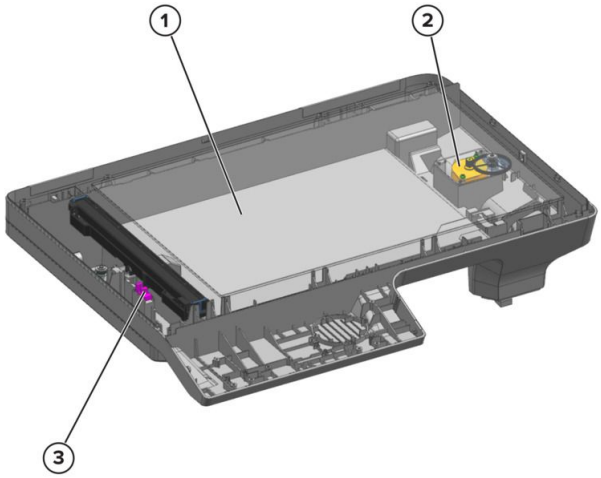


1	Pick roller
2	Separator roller

To prepare for feeding, the lift plate raises to push the paper against the pick roller. The lift plate stops pushing at the point where the pick roller is at the proper height for picking. After the pick roller is in position, it feeds the topmost paper to the separator roller. The separator roller rotates in a direction opposite to the pick roller to ensure that only one sheet is fed at a time.
The motor (pick/lift) controls the pick roller and lift plate.
The lift plate in the standard tray is supported only in some printer models.

ADF and scanner operation

Flatbed scanner drive

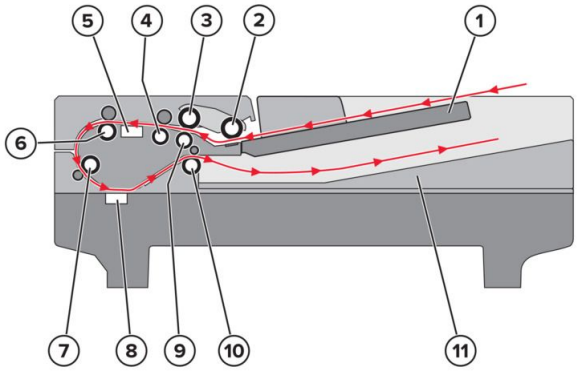


1	Scanner glass
2	Motor (FB scanner)
3	Sensor (FB CIS home)

The flatbed scanner has a scanner lamp that is used to illuminate the surface of the document. The reflections produced are processed to create the scan image.
For flatbed scan jobs, the flatbed scanner moves across the scanner glass area to scan the front side of the document (facedown). The motor (FB scanner) controls the scanner position. The scanner is detected at its home position by the sensor (FB CIS home).
For ADF scan jobs, the flatbed scanner stays at the left to scan the document.

ADF paper path

Note: For more information about the sensors and their locations, see ADF paper path sensors on page 502.



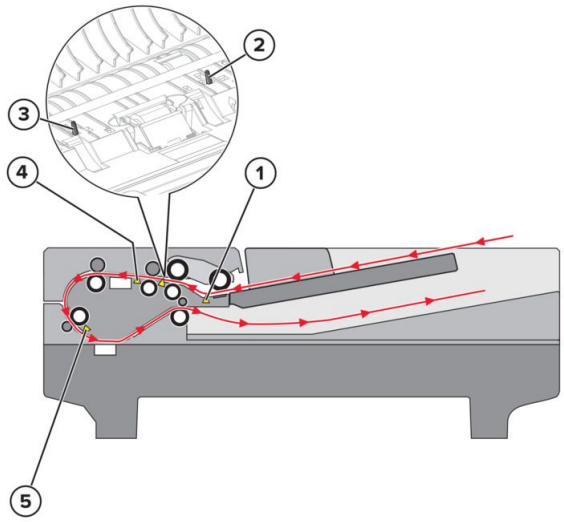
1	ADF tray
2	Pick roller
3	Feed roller
4	Separator roller
5	CIS
6	1st scan area
7	Transport roller 1
8	CIS
9	2nd scan area
10	Exit roller
11	ADF bin

After the sensor (ADF paper present) detects paper in the ADF tray, the pick roller drops and advances the paper into the ADF.
The paper passes through the feed roller and separator roller. The separator roller minimizes the possibility of feeding multiple sheets.
The paper then actuates the sensors (pick and deskew). The sensor (pick) detects the leading edge of the paper and adjusts the pick/feed timings while the sensor (deskew) detects the paper for any skew. The deskew roller slows down the paper to perform the skew correction.
The contact image sensors (CIS) are placed almost in direct contact with the object to be scanned and are therefore perfect for scanning flat materials such as paper.

Note: The motor (pick) runs the pick and feed rollers.

For duplex scan jobs, the paper actuates the sensor (ADF 1st scan) and proceeds to the 1st scan area. Failure to actuate the sensor results to a paper jam error. The back side of the document is scanned.
The transport rollers continue to advance the paper until it actuates the sensor (ADF 2nd scan) and reaches the 2nd scan area. For simplex or duplex scan jobs, the front side of the document is scanned on the 2nd scan area.
The exit roller picks and drops the paper into the ADF bin. The motor (transport) runs the transport, deskew, and exit rollers.

ADF paper path sensors



#	Sensor	Function
1	Sensor (ADF paper present)	• Detects paper presence in the ADF tray • Raises the pick arm after the last sheet to prepare for the next batch of scanning
2	Sensor (ADF pick)	Detects the leading edge of the incoming sheet and adjusts pick/feed timings

#	Sensor	Function
3	Sensor (ADF deskew)	Detects skew of the incoming sheet and applies necessary deskew algorithm
4	Sensor (ADF 1st scan)	Detects the paper about to be scanned at its back side
5	Sensor (ADF 2nd scan)	Detects the paper about to be scanned at its front side

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
CIS	Contact Image Sensors
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	Electrophotographic Process
EPROM	Erasable Programmable Read-Only Memory
ESD	Electrostatic Discharge
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
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	Multifunction Printer
MPF	Multipurpose Feeder
MROM	Masked Read Only Memory
MS	Microswitch
NVM	Non-volatile Memory
NVRAM	Non-volatile 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
UICC	User Interface Controller Card
UPR	Used Parts Return
V ac	Volts alternating current
V dc	Volts direct current
VTB	Vacuum Transport Belt
Y	Yellow

Index

A

acronyms 504

additional input tray diagnostics
- motor tests 265
- sensor tests 265

ADF theory
- paper path 501
- paper path sensors 502

advanced print quality samples 256

available internal options 489

avoiding paper jams 98

B

blank pages 45

C

change history 13

charge 492

clean 494

cleaning
- exterior of the printer 435
- interior of the printer 435
- printhead lenses 438

cleaning the printer 435

cleaning the scanner 435

clipped pages or images 88

compressed images appear on prints 91

configuration file
- exporting 301
- importing 301

configuration menu
- accessing 266

configurations
- printer models 22

connectors
- controller board 427

contacting customer support 252

control panel
- critical information 278
- using 253

controller board
- critical information 278

customer support
- contacting 252

D

data security notice 38

develop 493

diagnostics menu
- accessing 256
- controller calibration 264
- feed test 264
- scanner calibration reset 264

E

electrostatic-sensitive parts 278

embedded solutions 289

emission notices 487

error codes
- 0-99.99 176
- 111 error messages 189
- 121 error messages 191
- 126 error messages 193
- 128 error messages 196
- 133 error messages 200
- 140 error messages 202
- 155 error messages 203
- 161 error messages 206
- 162-164 error messages 206
- 166-168 error messages 207
- 171 error messages 212
- 200 paper jam messages 100
- 202 paper jam messages 119
- 221 paper jam messages 120
- 230 paper jam messages 125
- 240-241 paper jam messages 133
- 242 paper jam messages 138
- 243 paper jam messages 139
- 244 paper jam messages 140
- 420 error messages 162
- 421 error messages 162
- 422 error messages 162
- 423 error messages 162
- 424 error messages 162
- 428 error messages 162
- 429 error messages 162
- 430 error messages 162
- 600 error messages 213
- 602 error messages 213
- 611 error messages 213
- 655 error messages 213
- 661 error messages 213
- 662 error messages 213
- 663 error messages 213
- 664 error messages 213
- 680 error messages 213
- 840 error messages 228

842 error messages 228

843 error messages 228

845 error messages 228

900 errror messages 220

ESD-sensitive parts 278

eSF solutions 289

event log

display log 257

mark log 257

print log 257

print log summary 257

exporting configuration file 301

expose 493

F

fax error log codes 241

finding

serial number 22

fine lines are not printed correctly 86

flashing the printer firmware 287

flashing the printer firmware

using winbidi 287

folded or wrinkled paper 61

format fax storage 256

fuse 495

H

home screen icons

using 254

horizontal bottom contact connector 292

horizontal light bands 73

horizontal sliding contact connector 296

horizontal top contact connector 291

I

identifying jam locations 99

importing configuration file 301

incorrect margins on prints 92

indicator light 254

input capacities 489

input configurations 489

inspection guide 433

invalid code, fixing 270

invalid engine mode

accessing 270

J

jams

avoiding 98

L

loading

multipurpose feeder 422

loading envelopes
in the multipurpose feeder 422
loading trays 420
locating paper jams 99
locations
duplex path rollers 425
duplex path sensors 426
standard path rollers 425
standard path sensors 426
low insertion force (LIF) connector 298
lubrication
guidelines 434

M

maintenance counter 434
maintenance kit
resetting the counter 434
maintenance kits 433
menu
Configuration Menu 266
moving the printer 486
multipurpose feeder
loading 422

N

noise emission levels 487
Non-Lexmark supply 187
notices 486, 486, 485, 485, 487, 488

O

output capacities 489
output configurations 489
output device diagnostics
sensor tests 266
staple test 265

P

paper curl 59
paper jams
280 paper jam messages 145
281 paper jam messages 150
284 paper jam messages 156
291 paper jam messages 160
295 paper jam messages 160
avoiding 98
paper path, duplex 496
paper path, simplex 496
paper size
setting 23
paper sizes
supported 23
paper type

setting 23

paper types
supported 27

paper weights
supported 29

parts catalog legend 440

POR sequence 33

power-on reset sequence 33

print cycle 492

print cycle
charge 492
clean 494
develop 493
expose 493
flowchart 492
fuse 495
transfer 494

print engine layout 491

print is too dark 51

print is too light 55

print quality
initial check 41

print quality troubleshooting
blank pages 45
compressed images appear on prints 91
fax reception service check 238
fax transmission service check 234
fine lines are not printed correctly 86
folded or wrinkled paper 61
gray background on prints 41
horizontal light bands 73
incorrect margins on prints 92
paper curl 59
print is too dark 51
print is too light 55
repeating defects 66
skewed print 68
solid black pages 63
streaked vertical lines appear on prints 71
toner specks appear on prints 96
vertical dark bands 77
vertical dark streaks with print missing 79
white streaks and voided areas 82

printer
minimum clearances 486
selecting a location 486

printer condition 254

printer configurations 424

printer diagnostics
input tray quick print 258
output bin quick feed 258

printer diagnostics & adjustments
memory tests 261
motor tests 261
sensor tests 260
universal override 262

printer diagnostics and adjustments
add-on cards tests 261
margin offset 262
registration adjust 261

printer messages
Non-Lexmark supply 187

printer model
configurations 22

printer sections 495

printer setup
enable edge-to-edge (copy) 259
enable edge-to-edge (printing) 259
engine setting [x] 260
EP setup 260
model name 259
permanent page count 258
printed page count (color) 258
printed page count (mono) 258
process ID 259
serial number 259

printer status 254

printhead lenses
cleaning 438

print quality troubleshooting
clipped pages or images 88
toner rubs off 94
vertical light bands 75

R

recovery mode
accessing 270

removal
ADF roller 372
ADF separator roller 373
control panel flat cable 335
control panel front cover 330
control panel hinges 330
control panel rear cover 330
control panel support cover 330
controller board 318
duplex gear kit 311
lift cam 356
redrive gear assembly 365
separator roller assembly 385
speaker 333

removal procedures
tips 300

removals
accumulator assembly 417
ADF access door 379
ADF assembly 375
ADF cable 383
ADF flat cable 381
ADF left hinge 377
ADF restraint pad 372
ADF right hinge 378
ADF tray 373
cartridge gearbox 310
control panel bezel 328
control panel display assembly 329
cooling fan 317
diverter gearbox 416
duplex 347
duplex sensor 349
fax card 319
flatbed scanner assembly 379
front input guide 343
front USB host cable 343
fuser 364
fuser actuator 306
hard drive 314
input sensor 349
interconnect cable 315
isolation roller sleeve 344
jam access 337
left cover 302
main drive gearbox 303
media present sensor flag 358
motor (pick) assembly 352
motor (stapler left tamper) 399
motor (stapler paddle) 396
motor (stapler right tamper) 400
MPF gearbox 304
MPF pick roller and separator pad 339
MPF solenoid 309
MPF with front access cover 327
nameplate 326
pick roller assembly 351
pick/lift motor gearbox 355
power supply 346
printhead 370
rear door and cover 363
redrive assembly 363
reverse solenoid 308
right cover 312
scanner assembly 374
scanner front cover 333

scanner rear cover 362

sensor (bin full) 369

sensor (cartridge barrel shutter) 323

sensor (front door) 338

sensor (index) 350

sensor (MPF paper present) 342

sensor (narrow media) 357

sensor (paper present) 353

sensor (stapler access door) 393

sensor (stapler bin full receive) 408

sensor (stapler bin full send) 409

sensor (stapler left tamper HP) 419

sensor (stapler paddle HP) 419

sensor (stapler pass through) 411

sensor (stapler rear cover) 397

sensor (stapler right tamper HP) 418

sensor (toner density) 358

sensor (trailing edge) 354

sensor (tray present) 316

staple finisher option 386

staple roll holder 390

stapler carriage assembly 394

stapler cartridge access door 389

stapler controller board 399

stapler cooling fan 401

stapler door close limit switch 394

stapler interface cable 404

stapler left cover 392

stapler power supply unit 402

stapler rear cover 396

stapler rear cover close limit switch 400

stapler rear door 392

stapler right cover 391

stapler service cover 398

stapler top cover 406

tamper drive belt 415

tamper main assembly 413

tamper sub-assembly 414

toner cartridge smart chip contact 321

top access cover 328

top cover 366

transfer roller 336

trapped staple access door 398

reports

device settings 256

installed licenses 256

resetting

supply usage counters 187

resetting the printer

without admin credentials 35

resetting the supply usage counters 187

restoring
configuration file 282
license file 282
restoring configuration 279
ribbon cables 290
roller locations 425

S

safe mode 34

scanner
cleaning 435

scanner diagnostics
controller calibration 264
feed test 264
motor tests 262
scanner calibration reset 264
sensor tests 263

scanner theory
flatbed 500
scheduled maintenance 433

security reset jumper
using 36
selecting a location for the printer 486
sensor locations 426
sensors, paper path 498
service engineer (SE) menu
accessing 272
fax SE menu 273
general SE 272
network SE menu 272
scanner SE menu 274
solid black pages 63
streaked vertical lines appear on prints 71

supply usage counters
resetting 187
supported paper sizes 23
supported paper types 27
supported paper weights 29

T

theory
duplex paper path 496
main drive 499
paper path sensors 498
simplex paper path 496
tray drive 500

theory of operation
POR sequence 491
printer control 491
theory, ADF paper path 501
theory, ADF paper path sensors 502

theory, flatbed scanner 500

toner rubs off 94

toner specks appear on prints 96

tools, required 29

transfer 494

tray
  drive 500

trays
  loading 420

troubleshooting
  base printer symptoms 247
  fax symptoms 231
  initial check 33

troubleshooting, hardware errors
  fuser temperature error 192

Troubleshooting, other symptoms
  dead optional tray 251

troubleshooting, paper jams
  paper in a duplex job failed to arrive at the sensor (redrive) 128

troubleshooting, print quality
  blank pages 45
  compressed images appear on prints 91
  fax reception service check 238
  fax transmission service check 234
  fine lines are not printed correctly 86
  folded or wrinkled paper 61
  gray background on prints 41
  horizontal light bands 73
  incorrect margins on prints 92
  paper curl 59
  print is too dark 51
  print is too light 55
  repeating defects 66
  skewed print 68
  solid black pages 63
  streaked vertical lines appear on prints 71
  toner specks appear on prints 96
  vertical dark bands 77
  vertical dark streaks with print missing 79
  white streaks and voided areas 82

troubleshooting, service checks
  950–953 service error messages 226

troubleshooting, print quality
  clipped pages or images 88
  toner rubs off 94
  vertical light bands 75

U

using the control panel 253

using the home screen 254

using the service restore tool 279

V

vertical dark bands 77

vertical dark streaks with print missing 79

vertical mount contact connector 294

W

white streaks and voided areas 82

Z

zero insertion force (ZIF) connectors 290

Service Manual