Lexmark™

B2650, M3250, MS621, and MS622 printers

4600-830, -835, -895

Service Manual

- **Start diagnostics**

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July 12, 2023   www.lexmark.com

Product information

Product name:
Lexmark B2650dn, Lexmark B2650dw, Lexmark M3250, Lexmark MS621dn, Lexmark MS622de printers

Machine type:
4600

Model(s):
830, 835, 895

Edition notice

July 12, 2023

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P/N

Table of contents

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.

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.

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

⚠️ **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** 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 PERSONALES:** 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 PERSONALES:** 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 PERSONALES:** 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 PERSONALES:** 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.

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: 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.

  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.

Change history

Change history

July 12, 2023

- Added the duplex gear kit removal topic in the Parts removal chapter. See **"Duplex gear kit removal" on page 187**.
- 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 91**.
- Updated the 230 paper jam messages topic in the Diagnostics and troubleshooting chapter. See **"230 paper jam messages" on page 89**.
- 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 105**.

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 140**.
  - Updated the Fuser temperature error service check. See **"Fuser temperature error service check" on page 111**.

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 108**.

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 85**.

January 23, 2023

- Updated the Controller board connectors topic in the Component locations chapter. See **"Controller board connectors" on page 259**.

January 18, 2023

- Added the Converting controller boards installation note in the Controller board removal topic in the Parts removal chapter. See **"Controller board removal" on page 197**.

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" on page 27**.
  - Using the security reset jumper. See **"Using the security reset jumper" on page 28**.

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 222**.

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 287**.
- 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" on page 272**.

August 26, 2022

- Updated the graphic in the Paper transport 1 assembly in the Parts catalog chapter. See **"Paper transport 1" on page 285**.

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 239**.

August 23, 2022

- Added the Isolation roller sleeve removal topic in the Parts removal chapter. See **"Isolation roller removal" on page 222**.
- Updated the Entering recovery mode topic in the Service menus chapter. See **"Entering Recovery mode" on page 154**.

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 239**.
- Updated the graphic in the Electronics 4 assembly in the Parts catalog chapter. See **"Electronics 4" on page 283**.

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 291**.

March 30, 2022

- 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 297**.
- 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 295**.

March 22, 2022

- Added the following parts in the Electronics 3 assembly in the Parts catalog chapter:
  - PN 41X2667 (Bin full flag)

  See **"Electronics 3" on page 281**.
- Updated the graphic of the Electronics 3 assembly to include the #8 callout. See **"Electronics 3" on page 281**.

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 287**.
- Updated the graphic of the Paper transport 2 assembly to include the #6 callout. See **"Paper transport 2" on page 287**.
- 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 295**.

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 283**.
- 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 283**.

October 1, 2021

- Updated 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 285**.
- Updated the graphics to add callout #7 in the Paper transport 1 assembly in the Parts catalog chapter. See **"Paper transport 1" on page 285**.
- Updated the description of the following parts in the Control panel assembly in the Parts catalog chapter:
  - Control panel covers to Control panel front cover (PN 41X1978).
  - Control panel covers to Control panel front cover (PN 41X2258).

  See **"Control panel" on page 275**.
- Updated the Media present sensor flag removal in the Parts removal chapter. See **"Sensor (toner density) and media present sensor flag removal" on page 239**.
- 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 108**.
- Added the 900 error service check topic in the Diagnostics and troubleshooting chapter. See **"900 error service check" on page 132**.
- Replaced the System software error service check with the 900 error service check topic in the Diagnostics and troubleshooting chapter.

March 5, 2021

- Added the B2650dw model in the Printer model configurations topic in the General information chapter. For more information, see **"Printer model configurations" on page 21**.
- Added the following part in the Control panel assembly topic in the Parts catalog chapter:
  - Integrated wireless card (B2650dw) (41X2894)
  - Wireless cable (B2650dw) (41X2270)

  For more information, see **"Control panel" on page 275**.

November 17, 2020

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

October 9, 2020

- Removed the following parts from the Electronics 1 topic in the Parts catalog chapter:
  - Controller board (MS622 and M3250) (41X1195)

September 8, 2020

- 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.

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

- Updated graphics in the Solid black pages check topic in the Diagnostics and troubleshooting chapter.

April 13, 2020

- 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 the following parts in the Parts catalog chapter:
  – PN(41X2805) Bezel (B2650)
  – PN(41X2864) Bezel (M3250)
  – PN(41X2699) Bezel (2.4" Blank)
- Updated topics to include both BSD and Channel models in the following chapters:
  – Parts removals
  – Parts catalog
  – Options and features
- Added links for video demonstration on the following topics in the Parts removal chapter:
  – Fuser removal
  – MPF pick roller and separator pad 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 Updating the printer firmware topic to include using a USB cable connection option.
- Updated the wiring diagrams on the following models:
  – MS622
  – M3250
- 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.

June 17, 2019

- 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

- Front USB host cable (41X2630) was added to the Electronics 4 Parts catalog.

November 16, 2018

- Controller board (MS622) (41X2512) was added to the Electronics 1 Parts catalog. Notes regarding compatibility were also added.
- 41X1369 FRU PN was changed to 41X2526 on the Control panel Parts catalog.

September 14, 2018

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

September 7, 2018

- 41X1189 FRU PN was changed to 41X1627 on the Control panel Parts catalog.
- 41X1190 FRU PN was changed to 41X1628 on the Control panel Parts catalog.
- Control panel cover and buttons FRU descriptions were changed to Control panel covers 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

- Output device diagnostics section under Service menus was deleted.

May 4, 2018

- 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.

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.

General information

Printer model configurations

The Lexmark^{TM} MS622de, MS621dn, B2650dn, and M3250 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 number
MS622de	Network-ready e-Task monochrome laser printer with 4.3" color touch screen display and internal duplex for medium workgroups with USB HDD installed	4600-835
MS621dn	Network-ready monochrome laser printer with 2.4" color display and internal duplex for medium workgroups	4600-830
B2650dn	Network-ready monochrome laser printer with 2.4" color display and internal duplex for medium workgroups	4600-830
B2650dw	Network-ready monochrome laser printer with 2.4" color display, wireless, and internal duplex for medium workgroups.	4600-838
M3250	Network-ready e-Task monochrome laser printer with 4.3" color touch screen display and internal duplex for medium workgroups with USB HDD installed	4600-895

Finding the serial number

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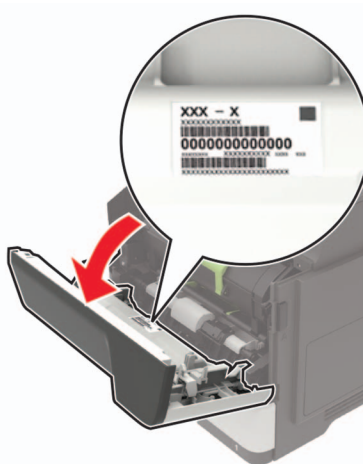
Paper support

Supported paper sizes

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

Paper size	Tray	Multipurpose feeder	Two-sided printing
A4 210 x 297 mm (8.3 x 11.7 in.)	√	√	√
A5 210 x 148 mm (5.8 x 8.3 in.)	√	√	X
A5 LEF* 148 x 210 mm (5.8 x 8.3 in.)	√	√	X
A6* 105 x 148 mm (4.1 x 5.8 in.)	√	√	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
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 (3 x 5 in.) to 216 x 356 mm (8.5 x 14 in.)	√	√	X
7 3/4 Envelope (Monarch) 98 x 191 mm (3.9 x 7.5 in.)	X	√	X
9 Envelope 98 x 225 mm (3.9 x 8.9 in.)	X	√	X
* This paper size is not supported in the optional tray.			

Paper size	Tray	Multipurpose feeder	Two-sided printing
10 Envelope 105 x 241 mm (4.1 x 9.5 in.)	X	✓	X
DL Envelope 110 x 220 mm (4.3 x 8.7 in.)	X	✓	X
C5 Envelope 162 x 229 mm (6.4 x 9 in.)	X	✓	X
B5 Envelope 176 x 250 mm (6.9 x 9.8 in.)	X	✓	X
Other Envelope 76.2 x 127 mm (3 x 5 in.) to 216 x 356 mm (8.5 x 14 in.)	X	✓	X
* This paper size is not supported in the optional tray.			

Supported paper types

Paper type	Tray	Multipurpose feeder	Two-sided printing
Plain paper	✓	✓	✓
Card stock	X	✓	X
Transparency	✓	✓	X
Recycled	✓	✓	✓
Paper labels[1]	✓	✓	X
Bond[2]	✓	✓	✓
Letterhead	✓	✓	✓
Preprinted	✓	✓	✓
Colored Paper	✓	✓	✓
Light Paper	✓	✓	✓
Heavy Paper[2]	✓	✓	✓
Rough/Cotton	✓	✓	✓

[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.

Paper type	Tray	Multipurpose feeder	Two-sided printing
Envelope	X	✓	X
Rough envelope	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

	Tray	Multipurpose feeder	Two-sided printing
Paper weight	60–120 g/m^2 (16–32 lb)	60–216 g/m^2 (16–58 lb)	60–90 g/m^2 (16–24 lb)

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

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 D'ELECTROCUTION : 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.

ATTENTION—RISQUE D'ELECTROCUTION : 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.

ATTENTION—RISQUE D'ELECTROCUTION : 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.

ATTENTION—SURFACE CHAUDE : 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.

ATTENTION : RISQUE DE PINCEMENT : 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

⚠ **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: PELIGRO DE DESCARGAS ELÉCTRICAS:** 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.

⚠ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** 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.

⚠ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** 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.

⚠ **PRECAUCIÓN: SUPERFICIE CALIENTE:** 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.

⚠ **PRECAUCIÓN: PELIGRO DE ATRAPAMIENTO:** 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

⚠ **VORSICHT – STROMSCHLAGGEFAHR:** 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.

⚠ **VORSICHT – STROMSCHLAGGEFAHR:** 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.

⚠ **VORSICHT – STROMSCHLAGGEFAHR:** 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.

⚠ **VORSICHT – STROMSCHLAGGEFAHR:** 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.

⚠ **VORSICHT – HEISSE OBERFLÄCHE:** Das Innere des Druckers kann sehr heiß sein. Vermeiden Sie Verletzungen, indem Sie heiße Komponenten stets abkühlen lassen, bevor Sie ihre Oberfläche berühren.

⚠️ **VORSICHT – QUETSCHGEFAHR:** 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.

Securing the printer

Resetting the printer without admin credentials

Notes:

- Resetting the printer or replacing the controller board deletes all security settings.

- Before changing the security settings, ask permission from your administrator.

1 Perform an Out of Service Erase to reset the printer to factory defaults without using admin credentials. For more information, see **"Erasing printer memory" on page 30**.

   Warning—Potential Damage: This method makes the device vulnerable to hacking because it allows the creation of an admin account afterwards. By default, newer firmware versions restrict Out of Service Erase to admin users only, making the printer more secure and remembering the admin password more important.

2 If Out of Service Erase is unavailable, then use the security reset jumper to reset the printer to factory defaults. For more information, see **"Using the security reset jumper" on page 28**.

3 If the effect of the jumper reset is disabled, then replace the controller board. For more information, see **"Controller board removal" on page 197**.

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.

Notes:

- To enable the effect of the security reset jumper, from the home screen 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, perform an Out of Service Erase or replace the controller board. See **"Resetting the printer without admin credentials" on page 27** or **"Controller board removal" on page 197**.

1 Turn off the printer.

2 Remove the controller board shield.

3 Locate the security jumper (A) on the controller board.
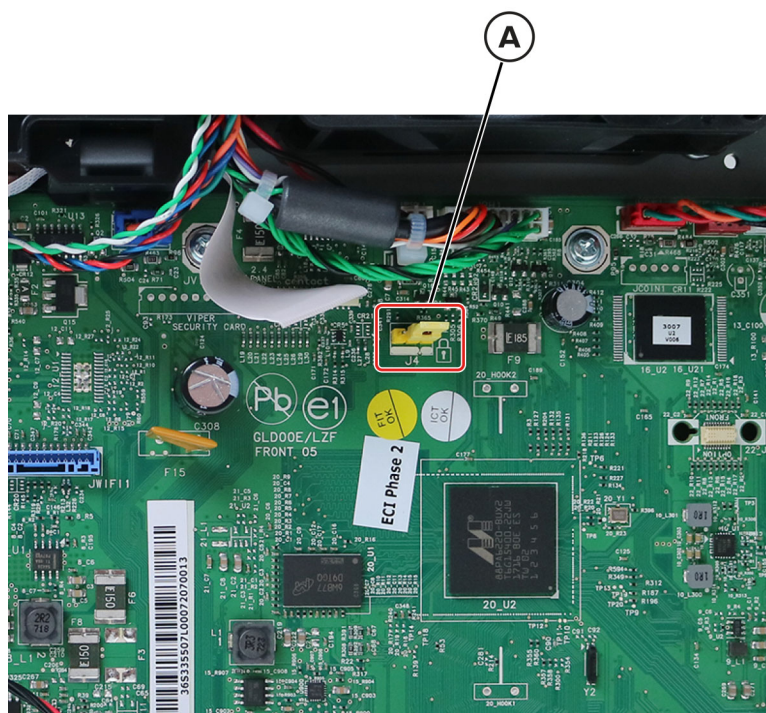
4 Move the jumper to cover the middle and exposed prongs.

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

5 Attach the controller board shield.

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.

Fixing print quality issues

- **"Initial print quality check" on page 31**
- **"Gray background or toner fog check" on page 32**
- **"Blank pages check" on page 34**
- **"Print is too dark check" on page 40**

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 31**.

Actions	Yes	No

Step 1
 a Turn off the printer, wait for 10 seconds, and then turn on the printer.
 b From the control panel:
   1 Increase the toner darkness in the Quality menu.
     Note: 8 is the factory default setting.
   2 Set the paper type, texture, and weight in the Paper menu to match the paper loaded.
 	
 Does the problem remain?
	Go to step 2.	The problem is solved.

Step 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?	Go to step 4.	Go to step 3.
Step 3 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 4.	The problem is solved.

Actions	Yes	No
Step 4 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?	Go to step 5.	Go to step 6.
Step 5 Repair or replace the charge roller contact on the imaging unit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the imaging unit. Does the problem remain?	Go to step 7.	The problem is solved.
Step 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?	Go to step 9.	Go to step 8.
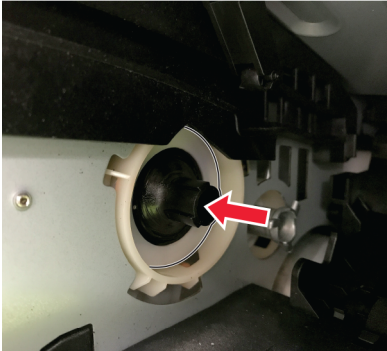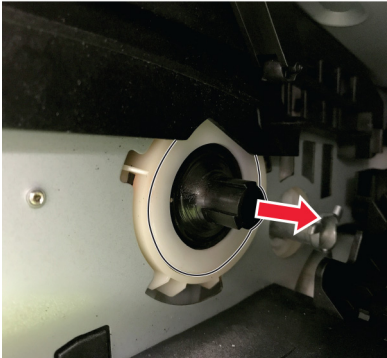
Actions	Yes	No
Step 8 Reseat the connections. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **Note:** Poor electrical contact to the photoconductor is the most likely source of a full page background defect. **a** Remove any contamination from the photoconductor charge contact (C) on the right side of the frame. **b** Perform a print test. Does the problem remain?	Go to step 10.	The problem is solved.
Step 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?	Go to step 11.	Contact the next level of support.
Step 11 Replace the power supply. See **"Power supply removal" on page 225**. Does the problem remain?	Contact the next level of support.	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 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **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?	Go to step 4.	The problem is solved.
Step 4 Check the imaging unit for damage and proper installation, and replace if necessary. Does the problem remain?	Go to step 5.	The problem is solved.

Actions	Yes	No
Step 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?	Go to step 6.	Go to step 7.

Actions	Yes	No
Step 6 Reach inside the printer and manually reposition the coupler in the direction of the red arrow as shown. Does the problem remain?	Go to step 7.	The problem is solved.
Step 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?	Go to step 8.	Contact the next level of support.
Step 8 Check all connections in the power supply. If necessary, replace the power supply. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Reseat cable JPS1 on the controller board. Does the problem remain?	Go to step 10.	The problem is solved.

Actions	Yes	No
Step 10 Replace the cable. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **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?	Go to step 13.	Go to step 12.
Step 12 Replace the transfer roller. See **"Transfer roller removal" on page 213**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the transfer roller left contact spring on the transfer roller left arm for damage. Is the contact spring free of damage?	Go to step 15.	Go to step 14.
Step 14 Replace the transfer roller left arm with cable. Does the problem remain?	Go to step 15.	The problem is solved.
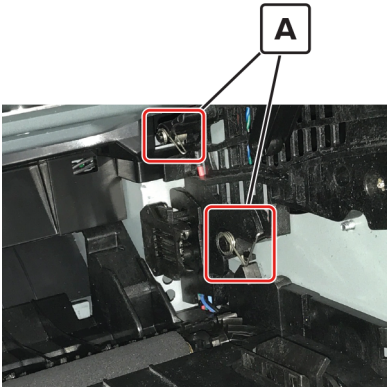
Actions	Yes	No
Step 15 **a** Check the coupler for signs of damage. The coupler is located on the main drive motor. • Good condition • Bad condition **b** If the coupler is damaged, then replace the main drive motor. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Reseat the printhead cables on the controller board. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Replace the laser printhead. See **"Printhead removal" on page 250**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Print is too dark check
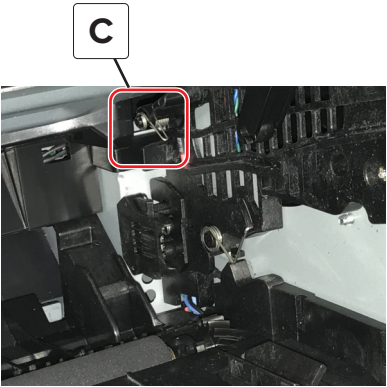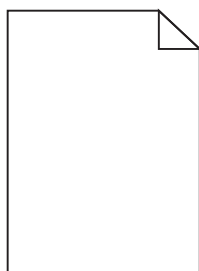

Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the Initial print quality check. See **"Initial print quality check" on page 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **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?	Go to step 4.	The problem is solved.
Step 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?	Go to step 5.	The problem is solved.
Step 5 Depending on the operating system, specify the paper type, texture, and weight from Printing Preferences or Print dialog. Does the problem remain?	Go to step 6.	The problem is solved.

Actions	Yes	No
Step 6 **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?	Go to step 7.	The problem is solved.
Step 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?	Go to step 8.	The problem is solved.
Step 8 Replace the imaging unit. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check if the imaging unit contacts (A) are bent, damaged, or not in proper contact with the imaging unit. A Are the contacts free from damage, not bent and in proper contact with the imaging unit?	Go to step 10.	Contact the next level of support.
Step 10 Check all connections on the power supply for proper connection. Is the power supply properly connected?	Contact the next level of support.	Go to step 11.
Step 11 Replace the connections. Does the problem remain?	Go to step 12.	The problem is solved.

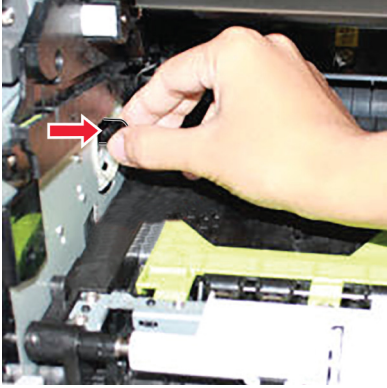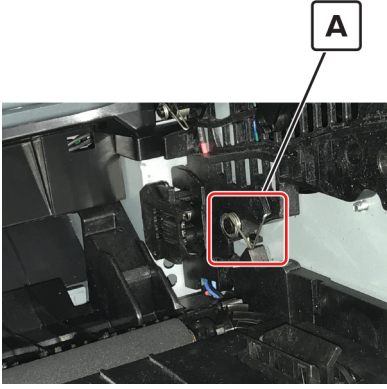| Actions	Yes	No
Step 12 Replace the power supply. See **"Power supply removal" on page 225**. Does the problem remain?	Contact the next level of support.	The problem is solved.

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 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.

Step 3
 	
a Turn off the printer, wait for 10 seconds, and then turn on the printer.
b From the control panel:
  1 Increase the toner darkness in the Quality menu.
    Note: 8 is the factory default setting.
  2 Set the paper type, texture, and weight in the Paper menu to match the paper loaded.
 	
Does the problem remain?
	Go to step 4.	The problem is solved.

Actions	Yes	No
Step 4 **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?	Go to step 5.	The problem is solved.
Step 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?	Go to step 6.	Go to step 7.

Step 6
a Check the status of the imaging unit.
   1 From the home screen, select **Status/supplies**.
   2 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?
	Go to step 7.	Go to step 8.

Step 7 Replace the imaging unit. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the transfer roller. See **"Transfer roller removal" on page 213**. Does the problem remain?	Go to step 9.	The problem is solved.

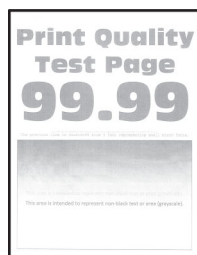| Actions	Yes	No
Step 9 Clean the printhead lens. See **"Cleaning the printhead lenses" on page 267**. **Note:** This is applicable only to models installed with a galvo LSU. To determine whether the LSU is galvo, check the serial number of the printer. The sixth digit character assigned should be in the 0–9 or B–N range (Example: 4514 20HH 007CR). Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the power supply. See **"Power supply removal" on page 225**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the cartridge gearbox for damage. Is the cartridge gearbox free from damage?	Go to step 13.	Go to step 12.
Step 12 Replace the cartridge gearbox. See **"Cartridge gearbox removal" on page 185**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check connection JCART1 on the controller board and the connection on the cartridge gearbox. Are the connections properly connected?	Go to step 15.	Go to step 14.
Step 14 Replace the connections. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Replace the cartridge gearbox. See **"Cartridge gearbox removal" on page 185**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Replace the controller board. See **"Controller board removal" on page 197**. Does the problem remain?	Contact the next level of support.	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 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Adjust the guides in the tray to the correct position for the paper loaded. Does the problem remain?	Go to step 4.	The problem is solved.
Step 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?	Go to step 5.	The problem is solved.
Step 5 Depending on the operating system, specify the paper size from Printing Preferences or Print dialog. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Remove paper from the tray, and then turn it over. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 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?	Go to step 8.	The problem is solved.
Step 8 Make sure that the printer supports the paper loaded. Is the paper supported?	Contact the next level of support.	Go to step 9.
Step 9 Load a supported paper. Does the problem remain?	Contact the next level of support.	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 31**.

Actions	Yes	No
Step 1 **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?	Go to step 2.	The problem is solved.
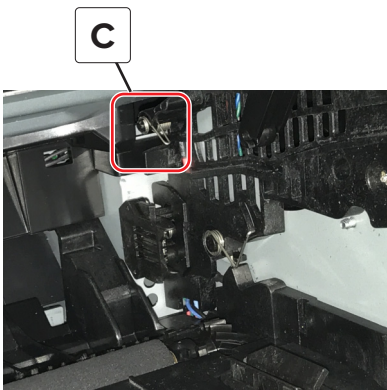
Actions	Yes	No
Step 2 **a** Check if the paper loaded is from a fresh package. 　**Note:** The amount of moisture in paper affects both print quality and printer ability to feed paper correctly. **b** Make sure that the printer supports the paper loaded. For a complete list of supported paper, see the printer *User's Guide*. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 4.	The problem is solved.
Step 4 If the fuser has reached end of life, then replace the maintenance kit. Does the problem remain?	Contact the next level of support.	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 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **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?	Go to step 4.	Go to step 5.
Step 4 Repair or replace the charge roller contact on the imaging unit. Does the problem remain?	Go to step 5.	The problem is solved.

Actions	Yes	No
Step 5 Replace the imaging unit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check if the imaging unit contact (C) is contaminated, broken, or bent out of proper position. ![C] Is the contact contaminated, broken, or bent out of proper position?	Go to step 7.	Go to step 8.
Step 7 Clean or repair the imaging unit contacts. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 8 Check the high voltage metal contacts on the imaging unit for damage. If necessary, replace the imaging unit. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check cable JPS1 from the controller board to the power supply for proper connection. Is the cable properly connected?	Go to step 11.	Go to step 10.
Step 10 Reseat the cable. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the cable. Does the problem remain?	Contact the next level of support.	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 31**.

Actions	Yes	No
Step 1 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?	Go to step 2.	Go to step 3.
Step 2 Replace the imaging unit. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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)?	Go to step 4.	Contact the next level of support.
Step 4 Replace the fuser. See **"Fuser removal" on page 245**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the transfer roller. See **"Transfer roller removal" on page 213**. Does the problem remain?	Contact the next level of support.	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 31**.
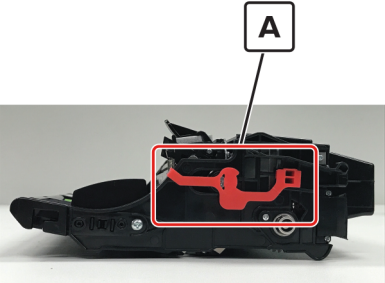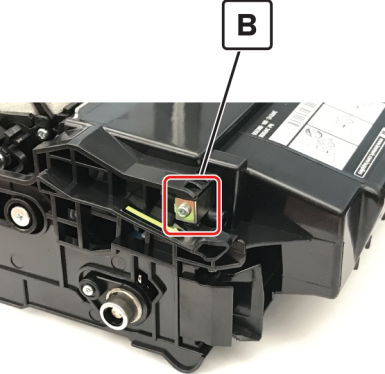
Actions	Yes	No
Step 1 Check the guides in the tray where the skewed prints are sourced from. **Note:** If paper is sourced from the MPF, then proceed to **step 9**. Does the position of the guides match the paper loaded?	Go to step 3.	Go to step 2.
Step 2 Adjust the guides to match the paper loaded. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 5.	Go to step 4.
Step 4 Remove the paper, and then load a supported one. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the tray pick roller for excess wear and contamination. Is the pick roller free from excess wear and contamination?	Go to step 7.	Go to step 6.
Step 6 Replace the pick roller. See **"Pick roller assembly removal" on page 235**. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 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?	Go to step 8.	The problem is solved.
Step 8 Adjust the margins. From the Diagnostic menu, select **REGISTRATION**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 9 Check the guides in the MPF tray. Does the position of the guides match the paper loaded?	Go to step 11.	Go to step 10.
Step 10 Adjust the guides to match the paper loaded. Does the problem remain?	Go to step 11.	The problem is solved.
Step 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?	Go to step 13.	Go to step 12.
Step 12 Remove the paper, and then load a supported one. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the MPF pick roller for excess wear and contamination. Is the MPF pick roller free from excess wear and contamination?	Go to step 15.	Go to step 14.
Step 14 Replace the MPF pick roller. See **"MPF pick roller and separator pad removal" on page 216**. Does the problem remain?	Go to step 15.	The problem is solved.

Actions	Yes	No
Step 15 Perform the paper skew adjustment. See **"Printhead assembly adjustment" on page 176**. Does the problem remain?	Contact the next level of support.	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 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Remove, and then reinstall the imaging unit. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the imaging unit. Does the problem remain?	Go to step 5.	The problem is solved.

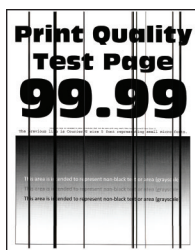| Actions	Yes	No
Step 5 Remove the fuser, and check for damage or debris on the rollers and belts. Are the rollers and belts free of damage or debris?	Contact the next level of support.	Go to step 6.
Step 6 Replace the fuser. Does the problem remain?	Contact the next level of support.	The problem is 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 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Turn off the printer, wait for 10 seconds, and then turn on the printer. Does the problem remain?	Go to step 4.	The problem is solved.

Actions	Yes	No
Step 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?	Go to step 5.	Contact the next level of support.
Step 5 Replace the power supply. See **"Power supply removal" on page 225**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Vertical light bands check
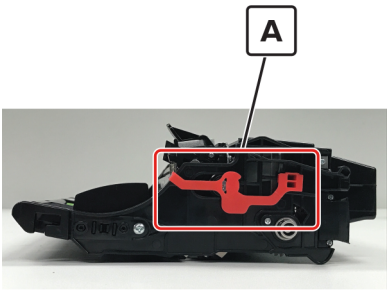
Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the Initial print quality check. See **"Initial print quality check" on page 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Clean the printhead lens. See **"Cleaning the printhead lenses" on page 267**. **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?	Go to step 4.	The problem is solved.
Step 4 Replace the printhead. See **"Printhead removal" on page 250**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the imaging unit. Does the problem remain?	Contact the next level of support.	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 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Remove, and then reinstall the toner cartridge and imaging unit. Does the problem remain?	Go to step 4.	The problem is solved.
Step 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?	Go to step 5.	The problem is solved.
Step 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?	Contact the next level of support.	The problem is solved.
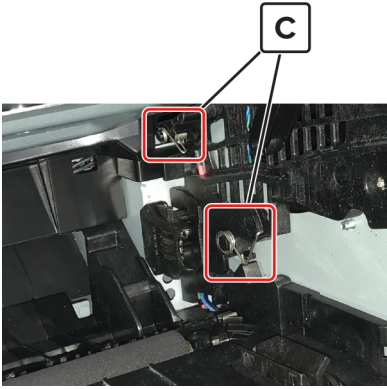
Vertical dark streaks with print missing check

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 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.

Actions	Yes	No
Step 3 **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?	Go to step 4.	Go to step 5.
Step 4 Repair or replace the charge roller contact on the imaging unit. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the imaging unit. Does the problem remain?	Go to step 6.	The problem is solved.

Actions	Yes	No
Step 6 Check if the imaging unit contacts (C) are contaminated or bent out of proper position. ![C] Are the contacts contaminated and bent out of proper position?	Go to step 7.	Go to step 8.
Step 7 Clean or repair the imaging unit contacts. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check connection JPS1 on the controller board and the connections on the power supply. Are the connections properly connected?	Go to step 10.	Go to step 9.
Step 9 Reconnect the cables. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the power supply. See **"Power supply removal" on page 225**. Does the problem remain?	Contact the next level of support.	The problem is solved.

White streaks and voided areas check
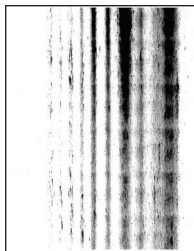
Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the Initial print quality check. See **"Initial print quality check" on page 31**.
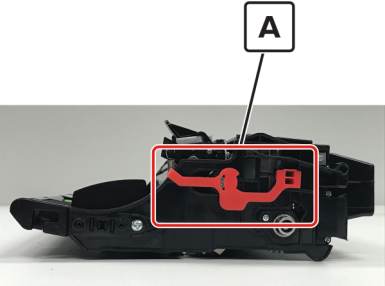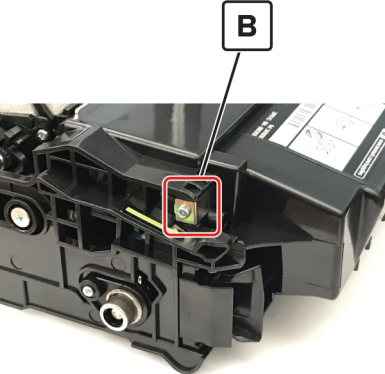
Actions	Yes	No
Step 1 Check if the printer is using a genuine and supported Lexmark toner cartridge. **Note:** If the printer is using a third-party cartridge, do not replace the imaging unit. Refer the users to their cartridge supplier. Is the printer using a genuine and supported toner cartridge?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 4.	The problem is solved.
Step 4 **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?	Go to step 5.	The problem is solved.

Actions	Yes	No
Step 5 Check the shutter tab (A) on the toner cartridge for signs of damage. Is the shutter tab damaged?	Go to step 6.	Go to step 7.
Step 6 Replace the imaging unit and the toner cartridge. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Clean the printhead lens. See **"Cleaning the printhead lenses" on page 267**. **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?	Go to step 8.	The problem is solved.
Step 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?	Go to step 9.	Go to step 10.

Diagnostics and troubleshooting

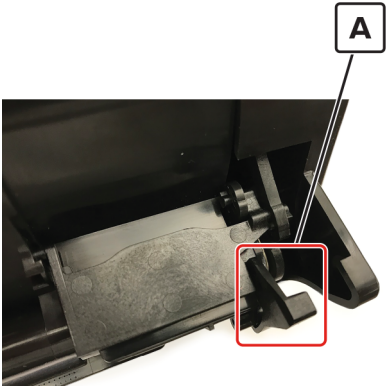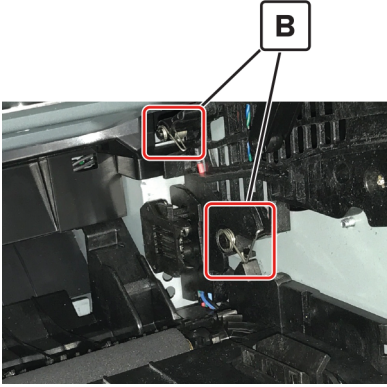| Actions	Yes	No
Step 9 Clean or repair the imaging unit contacts. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 10 Check connection JPS1 on the controller board and all the connections on the power supply. Are the connections properly connected?	Go to step 12.	Go to step 11.
Step 11 Replace the connections. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the power supply. See **"Power supply removal" on page 225**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the printhead. See **"Printhead removal" on page 250**. Does the problem remain?	Contact the next level of support.	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 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 From the control panel, adjust the Toner Darkness setting to 7. **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?	Contact the next level of support.	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 .

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Remove, and then reinstall the imaging unit. Does the problem remain?	Go to step 4.	The problem is solved.
Step 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?	Go to step 6.	Go to step 5.
Step 5 Using a pair of pliers, remove the separator plastic fragments and other obstructions. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the imaging unit. Does the problem remain?	Go to step 7.	The problem is solved.

Actions	Yes	No
Step 7 Check the imaging unit contact block (B) for damage or improper installation. Is the imaging unit contact block damaged or improperly installed?	Go to step 8.	Contact the next level of support.
Step 8 Reinstall or replace the imaging unit contact block. Does the problem remain?	Contact the next level of support.	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 31**.

Actions	Yes	No
Step 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?	Go to step 2.	Go to step 3.
Step 2 Replace the imaging unit. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the main drive gearbox. See **"Main drive gearbox removal" on page 179**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Incorrect margins on prints check
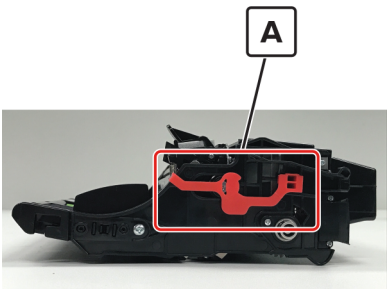

Note: Before performing this print quality check, go to the control panel home screen and navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the Initial print quality check. See **"Initial print quality check" on page 31**.
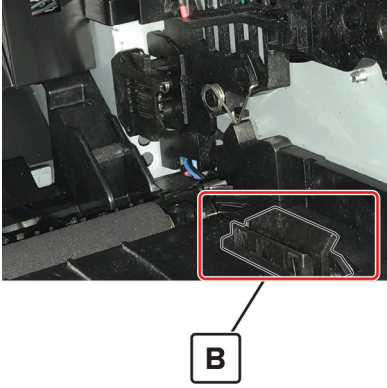
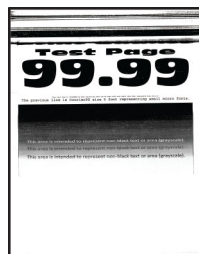| Actions	Yes	No
Step 1 Adjust the guides in the tray according to the size of the paper loaded. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Do one of the following: • From the printer control panel, set the paper size in the Paper menu to match the paper loaded in the tray. • Change the paper loaded in the tray to match the paper size specified in the tray settings. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Depending on your operating system, specify the paper size from Printing Preferences or from the Print dialog. Does the problem remain?	Go to step 4 or contact the next level of support.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then select **Registration**. **b** Adjust the margins as necessary. Does the problem remain?	Contact the next level of support.	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 31**.
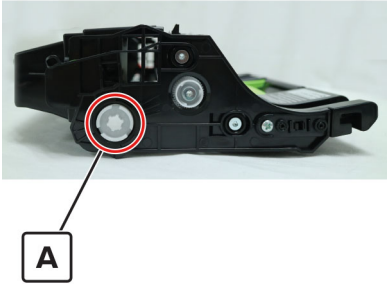
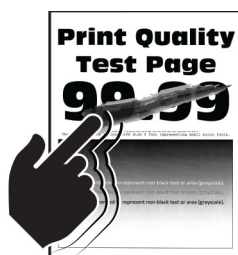| Actions	Yes	No
Step 1 Check if the printer is using a genuine and supported Lexmark toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer the users to their cartridge supplier. Is the printer using a genuine and supported toner cartridge?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Go to step 4.	The problem is solved.
Step 4 Remove, and then reinstall the fuser. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the fuser. See **"Fuser removal" on page 245**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reseat the connections on the power supply. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the power supply. See **"Power supply removal" on page 225**. Does the problem remain?	Contact the next level of support.	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 31**.

Actions	Yes	No
Step 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?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.

Step 3
a Check the status of the imaging unit.
   1 From the home screen, select **Status/supplies**.
   2 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?
	Go to step 4.	Go to step 5.

Step 4 Replace the imaging unit. Does the problem remain?	Go to step 5.	The problem is solved.
Step 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?	Go to step 6.	Go to step 7.
Step 6 Replace the transfer roller. See **"Transfer roller removal" on page 213**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the printer for stray toner contamination. Is the printer contaminated with stray toner?	Go to step 8.	Contact the next level of support.

Actions	Yes	No
Step 8 Using an approved toner vaccum cleaner, completely clean the printer, toner cartridge, and imaging unit of toner contamination. Does the problem remain?	Contact the next level of support.	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 |
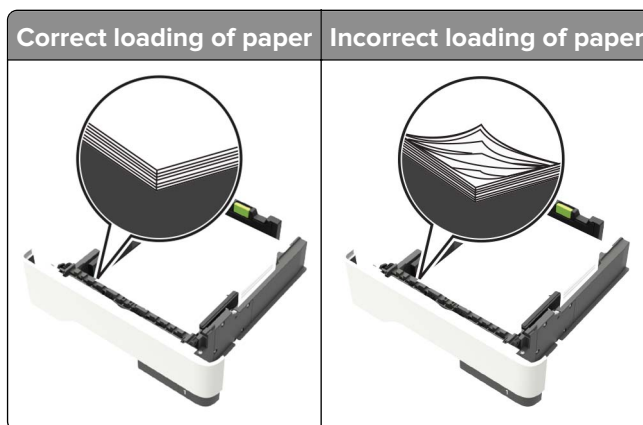
- Do not load or remove a tray while the printer is printing.
- Do not load too much paper. Make sure that the stack height is below the maximum paper fill indicator.

- Do not slide paper into the tray. Load paper as shown in the illustration.
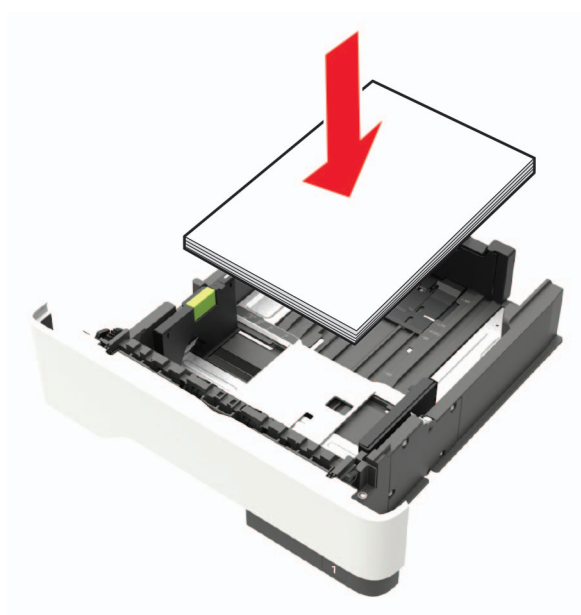
- Make sure that the paper guides are positioned correctly and are not pressing tightly against the paper or envelopes.
- Push the tray firmly into the printer after loading paper.

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.
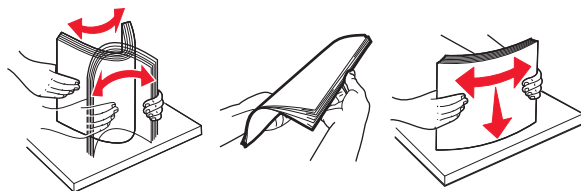
- Do not use paper that has been cut or trimmed by hand.
- Do not mix paper sizes, weights, or types in the same tray.
- Make sure that the paper size and type are set correctly on the computer or printer control panel.
- Store paper according to manufacturer recommendations.

Identifying jam locations

Notes:

- When Jam Assist is set to On, the printer automatically flushes blank pages or partially printed pages after a jammed page has been cleared. Check your printed output for blank pages.
- When Jam Recovery is set to On or Auto, the printer reprints jammed pages.
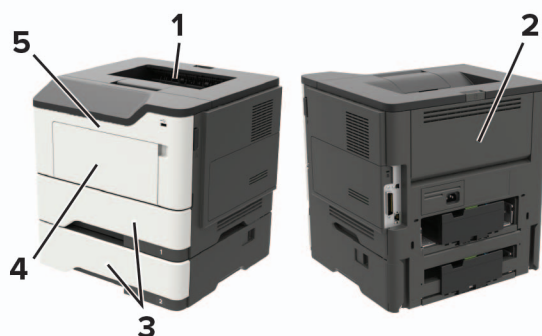
	Jam location
1	Standard bin
2	Rear door
3	Tray [x]
4	Multipurpose feeder
5	Door A

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 75**.
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 77**.
200.05	Paper fed from the MPF never cleared the sensor (input).	
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 78**.
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 **"Tray 1 to sensor (input) jam at trailing edge service check" on page 79**.
200.15	Paper fed from tray 1 never cleared the sensor (input).	

Error code	Description	Action
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 81**.
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 82**.
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 81**.
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 82**.
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 81**.
200.43	Paper fed from tray 4 was detected later than expected or was never detected at the sensor (input).	
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 82**.
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 84**.

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

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Input tray quick print** > **Tray 1** > **Single** **b** Check if the same error occurs. Does the same problem remain?	Go to step 10.	Go to step 3.
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?	Go to step 5.	Go to step 4.
Step 4 Replace the MPF pick roller and separator pad. See **"MPF pick roller and separator pad removal" on page 216**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the MPF gearbox for wear and damage. Is the MPF gearbox free of wear and damage?	Go to step 7.	Go to step 6.
Step 6 Replace the MPF gearbox. See **"MPF gearbox removal" on page 180**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **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?	Go to step 10.	Go to step 8.
Step 8 Check the solenoid for wear and damage. Is the solenoid free of wear and damage?	Go to step 10.	Go to step 9.

Action	Yes	No
Step 9 Replace the MPF solenoid. See **"MPF solenoid removal" on page 186**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **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?	Go to step 13.	Go to step 11.
Step 11 **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?	Go to step 13.	Go to step 12.
Step 12 Replace the sensor. See **"Sensors (duplex and input) removal" on page 229**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **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?	Contact the next level of support.	The problem is solved.
Step 14 Replace the jam access cover. See **"Jam access cover removal" on page 213**. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Input tray quick print** > **Tray 1** > **Single** **b** Check if the same error occurs. Does the same problem remain?	Go to step 8.	Go to step 3.
Step 3 Check the MPF gearbox for wear and damage. Is the MPF gearbox free of wear and damage?	Go to step 5.	Go to step 4.
Step 4 Replace the MPF gearbox. See **"MPF gearbox removal" on page 180**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **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?	Go to step 8.	Go to step 6.
Step 6 Check the solenoid for wear and damage. Is the solenoid free of wear and damage?	Go to step 8.	Go to step 7.
Step 7 Replace the MPF solenoid. See **"MPF solenoid removal" on page 186**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the transfer roller and its spring for improper installation and damage. Is the transfer roller properly installed and free of damage?	Go to step 10.	Go to step 9.

Action	Yes	No
Step 9 Reinstall or replace the transfer roller. See **"Transfer roller removal" on page 213**. Does the problem remain?	Go to step 10.	Go to step 11.
Step 10 Check if the fuser cam is functional and free of damage. Is the fuser cam functional and free of damage?	Contact the next level of support.	Go to step 11.
Step 11 Replace the fuser cam. See **"Fuser actuator removal" on page 183**. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Enter the Diagnostics menu, and then navigate to: **Input tray quick print** > **MPF Tray** > **Single** b Check if the same error occurs. Does the same problem remain?	Go to step 7.	Go to step 3.
Step 3 Check the tray 1 pick roller for wear and damage. Is the pick roller free of wear and damage?	Go to step 5.	Go to step 4.
Step 4 Replace the pick roller. See **"Pick roller assembly removal" on page 235**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the tray 1 separator roller assembly for wear and damage. Is the separator roller assembly free of wear and damage?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 Replace the separator roller assembly. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **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?	Go to step 9.	Go to step 8.
Step 8 **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?	Contact the next level of support.	Go to step 9.
Step 9 Replace the motor. See **"Pick/lift motor gearbox removal" on page 237**. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Input tray quick print** > **MPF tray** > **Single** **b** Check if the same error occurs. Does the same problem remain?	Go to step 5.	Go to step 3.
Step 3 Check the tray 1 separator roller assembly for wear and damage. Is the separator roller assembly free of wear and damage?	Go to step 5.	Go to step 4.
Step 4 Replace the separator assembly. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the transfer roller and its spring for improper installation and damage. Is the transfer roller properly installed and free of damage?	Go to step 7.	Go to step 6.
Step 6 Reinstall or replace the transfer roller. See **"Transfer roller removal" on page 213**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if the fuser cam is functional and free of damage. Is the fuser cam functional and free of damage?	Go to step 9.	Go to step 8.
Step 8 Replace the fuser cam. See **"Fuser actuator removal" on page 183**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **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?	Contact the next level of support.	Go to step 10.
Step 10 **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?	Contact the next level of support.	Go to step 11.
Step 11 Replace the sensor. See **"Sensors (duplex and input) removal" on page 229**. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 a Enter the Diagnostics menu, and then navigate to: **Input tray quick print** > **MPF Tray** > **Single** b Check if the same error occurs. Does the same problem remain?	Go to step 7.	Go to step 3.
Step 3 Check the optional tray pick roller for wear and damage. Is the pick roller free of wear and damage?	Go to step 5.	Go to step 4.
Step 4 Replace the pick roller. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the optional tray separator roller assembly for wear and damage. Is the separator roller assembly free of wear and damage?	Go to step 7.	Go to step 6.
Step 6 Replace the separator roller assembly. See **"Separator roller assembly removal" on page 253**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 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?	Go to step 9.	Go to step 8.
Step 8 Replace the tray insert. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 **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?	Contact the next level of support.	Go to step 10.
Step 10 Replace the optional tray. Does the problem remain?	Contact the next level of support.	The problem is solved.

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

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Input tray quick print** > **MPF tray** > **Single** **b** Check if the same error occurs. Does the same problem remain?	Go to step 5.	Go to step 3.
Step 3 Check the optional tray separator roller assembly for wear and damage. Is the separator roller assembly free of wear and damage?	Go to step 5.	Go to step 4.
Step 4 Replace the separator roller assembly. See **"Separator roller assembly removal" on page 253**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the transfer roller and its spring for improper installation and damage. Is the transfer roller properly installed and free of damage?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 Reinstall or replace the transfer roller. See **"Transfer roller removal" on page 213**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if the fuser cam is functional and free of damage. Is the fuser cam functional and free of damage?	Go to step 9.	Go to step 8.
Step 8 Replace the fuser cam. See **"Fuser actuator removal" on page 183**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **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?	Contact the next level of support.	Go to step 10.
Step 10 **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?	Contact the next level of support.	Go to step 11.
Step 11 Replace the sensor. See **"Sensors (duplex and input) removal" on page 229**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input) static jam service check

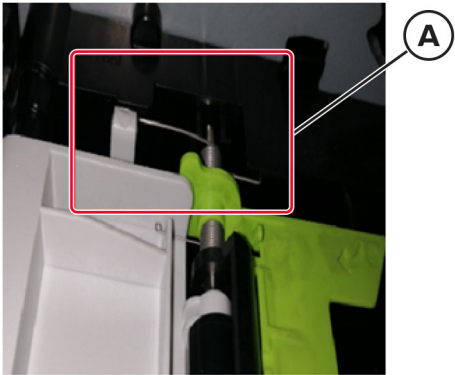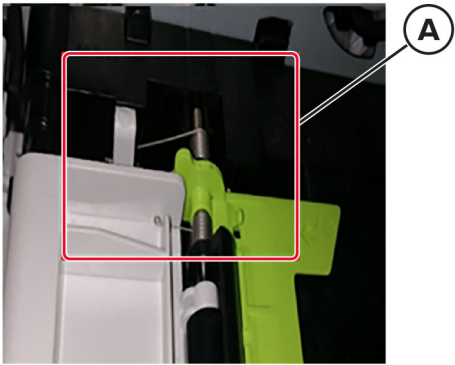| Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Sensor tests** **b** Find the sensor (Input). Does the sensor status change while toggling the sensor?	Contact the next level of support.	Go to step 3.
Step 3 **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?	Contact the next level of support.	Go to step 4.
Step 4 Replace the sensor. See **"Sensors (duplex and input) removal" on page 229**. Does the problem remain?	Contact the next level of support.	The problem is solved.

202 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 85**.
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 87**.
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 85**.
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 87**.
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 85**.
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 87**.

Error code	Description	Action
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 85**.
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 87**.
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 85**.
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 87**.
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 88**.
202.93	The sensor (fuser exit) detected a jam during or after a flush action.	

Sensor (fuser exit) jam at leading edge service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Input tray quick print** **b** Do feed tests from different trays. Check if the same error occurs. Does the same problem remain?	Go to step 3.	Go to step 8.

Action	Yes	No
Step 3 Make sure that both of the jam access cover springs (A) are in the correct position. • Correct • Incorrect Does the same problem remain?	Go to step 4.	The problem is solved.
Step 4 Check if the fuser cam is functional and free of damage. Is the fuser cam functional and free of damage?	Go to step 5.	Go to step 5.
Step 5 Replace the fuser cam. See **"Fuser actuator removal" on page 183**. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 **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?	Go to step 7.	The problem is solved.
Step 7 Check the fuser for problems. See **"Fuser temperature error service check" on page 111**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Do the service checks related to the affected source tray. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (fuser exit) jam at trailing edge service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **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?	Go to step 4.	Go to step 3.
Step 3 Replace the rear door and cover or rear access door. See **"Rear door and cover removal" on page 245**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the redrive assembly and its components for wear and damage. Are the redrive assembly and its components free of wear and damage?	Contact the next level of support.	Go to step 5.

Action	Yes	No
Step 5 Replace the redrive assembly. See **"Redrive assembly removal" on page 247**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (fuser exit) static jam service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 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?	Go to step 3.	The problem is solved.
Step 3 Check if the fuser cam is functional and free of damage. Is the fuser cam functional and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the fuser cam. See **"Fuser actuator removal" on page 183**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 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?	Go to step 7.	Go to step 6.
Step 6 Replace the fuser. See **"Fuser removal" on page 245**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
Step 7 Check the fuser for problems. See **"Fuser temperature error service check" on page 111**. Does the problem remain?	Contact the next level of support.	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 90**.
230.05	Paper fed from the MPF never cleared the sensor (duplex).	See **"Sensor (duplex) jam at trailing edge service check" on page 92**.
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 91**.
230.15	Paper fed from tray 1 never cleared the sensor (duplex).	See **"Sensor (duplex) jam at trailing edge service check" on page 92**.
230.23	Paper fed from tray 2 never reached the sensor (duplex).	See **"Sensor (duplex) jam at leading edge service check" on page 90**.
230.25	Paper fed from tray 2 never cleared the sensor (duplex).	See **"Sensor (duplex) jam at trailing edge service check" on page 92**.
230.33	Paper fed from tray 3 never reached the sensor (duplex).	See **"Sensor (duplex) jam at leading edge service check" on page 90**.
230.35	Paper fed from tray 3 never cleared the sensor (duplex).	See **"Sensor (duplex) jam at trailing edge service check" on page 92**.
230.43	Paper fed from tray 4 never reached the sensor (duplex).	See **"Sensor (duplex) jam at leading edge service check" on page 90**.
230.45	Paper fed from tray 4 never cleared the sensor (duplex).	See **"Sensor (duplex) jam at trailing edge service check" on page 92**.
230.91	Paper remains detected at the sensor (duplex) after the printer is turned on.	See **"Sensor (duplex) static jam service check" on page 93**.

Sensor (duplex) jam at leading edge service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Input tray quick print** **b** Do feed tests from different trays. Check if the same error occurs. Does the same problem remain?	Go to step 3.	Perform the appropriate service check for the specific error.
Step 3 **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?	Go to step 6.	Go to step 4.
Step 4 Check the solenoid for wear and damage. Is the solenoid free of wear and damage?	Go to step 6.	Go to step 5.
Step 5 Replace the reverse solenoid. See **"Reverse solenoid removal" on page 184**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **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?	Go to step 9.	Go to step 7.
Step 7 **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?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Replace the sensor. See **"Sensors (duplex and input) removal" on page 229**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **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?	Contact the next level of support.	Go to step 10.
Step 10 Replace the duplex assembly. See **"Duplex assembly removal" on page 227**. Does the problem remain?	Contact the next level of support.	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" on page 71**.

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" on page 184**.

7 Check the redrive for wear, damage, and improper mesh. For more information, see **"Redrive assembly removal" on page 247**.

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 assembly removal" on page 227**.

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 187**.

11 Check the duplex linkage and belt for damage and improper installation. For more information, see **"Duplex assembly removal" on page 227**.

Sensor (duplex) jam at trailing edge service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **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?	Go to step 5.	Go to step 3.
Step 3 **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?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. See **"Sensors (duplex and input) removal" on page 229**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **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?	Contact the next level of support.	Go to step 6.
Step 6 Replace the duplex assembly. See **"Duplex assembly removal" on page 227**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (duplex) static jam service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **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?	Contact the next level of support.	Go to step 3.
Step 3 **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?	Contact the next level of support.	Go to step 4.
Step 4 Replace the sensor. See **"Sensors (duplex and input) removal" on page 229**. Does the problem remain?	Contact the next level of support.	The problem is solved.

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 94**.
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 96**.
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" on page 79**.
241.82	The motor (tray 1 pick) has stalled.	See **"Tray 1 pick failure service check" on page 96**.
241.83	The motor (tray 1 pick) has stalled.	
241.84	The motor (tray 1 pick) has stalled.	

MPF pick failure service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Input tray quick print** > **Tray 1** > **Single** **b** Check if the same error occurs. Does the same problem remain?	Go to step 3.	Perform the appropriate service check for the specific error.
Step 3 **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?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the jam access cover. See **"Jam access cover removal" on page 213**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 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?	Go to step 7.	Go to step 6.
Step 6 Replace the MPF pick roller and separator pad. See **"MPF pick roller and separator pad removal" on page 216**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **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?	Go to step 10.	Go to step 8.

Action	Yes	No
Step 8 **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?	Go to step 10.	Go to step 9.
Step 9 Replace the sensor (MPF paper present). See **"Sensor (MPF paper present) removal" on page 219**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **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?	Go to step 13.	Go to step 12.
Step 11 Check the solenoid for wear and damage. Is the solenoid free of wear and damage?	Go to step 13.	Go to step 12.
Step 12 Replace the MPF solenoid. See **"MPF solenoid removal" on page 186**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the MPF gearbox for wear and damage. Is the MPF gearbox free of wear and damage?	Contact the next level of support.	Go to step 14.
Step 14 Replace the MPF gearbox. See **"MPF gearbox removal" on page 180**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (MPF paper present) static jam service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **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?	Contact the next level of support.	Go to step 3.
Step 3 **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?	Contact the next level of support.	Go to step 4.
Step 4 Replace the sensor (MPF paper present). See **"Sensor (MPF paper present) removal" on page 219**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Tray 1 pick failure service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **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?	Contact the next level of support.	Go to step 3.
Step 3 Reseat the motor cable, and then check the motor for wear and damage. Is the motor free of wear and damage?	Contact the next level of support.	Go to step 4.

Action	Yes	No
Step 4 Replace the motor. See **"Pick/lift motor gearbox removal" on page 237**. Does the problem remain?	Contact the next level of support.	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 100**.
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 99**.
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 100**.
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 101**.
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 99**.
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 100**.
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 101**.
242.47	Paper fed from tray 4 never cleared the sensor (tray 2 pass-through).	
242.82	The motor (tray 2 pick) has stalled.	See **"Optional tray pick failure service check" on page 101**.
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 99**.
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 100**.

Error code	Description	Action
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 101**.
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 100**.
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 101**.

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 100**.
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 99**.
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 100**.
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 101**.
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 101**.
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 99**.
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 100**.
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 101**.
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 100**.

Error code	Description	Action
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 101**.

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 100**.
244.82	The motor (tray 4 pick) has stalled.	See **"Optional tray pick failure service check" on page 101**.
244.83	The motor (tray 4 pick) has stalled.	
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 99**.

Optional tray sensor (tray x pass-through) static jam service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **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?	Contact the next level of support.	Go to step 3.
Step 3 **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?	Contact the next level of support.	Go to step 4.
Step 4 Replace the affected optional tray. Does the problem remain?	Contact the next level of support.	The problem is solved.

Optional tray sensor (tray x pass-through) jam at leading edge service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Input tray quick print** **b** Do feed tests from tray 3 and tray 4. Check if the same error occurs. Does the same problem remain?	Go to step 3.	Perform the appropriate service check for the specific error.
Step 3 **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?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the affected separator roller assembly or tray insert. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **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?	Contact the next level of support.	Go to step 6.
Step 6 **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?	Contact the next level of support.	Go to step 7.
Step 7 Replace the affected optional tray. Does the problem remain?	Contact the next level of support.	The problem is solved.

Optional tray sensor (tray x pass-through) jam at trailing edge service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 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?	Go to step 4.	Go to step 3.
Step 3 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 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?	Contact the next level of support.	Go to step 5.
Step 5 Reinstall or replace the affected separator roller assembly or tray insert. Does the problem remain?	Contact the next level of support.	The problem is solved.

Optional tray pick failure service check

Action	Yes	No
Step 1 Make sure that the paper is loaded properly. Use the recommended paper. See **"Avoiding jams" on page 71**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Restart the printer. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **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?	Go to step 4.	Go to step 7.
Step 4 Check the source tray pick motor gears for damage. Are the gears free of damage?	Go to step 6.	Go to step 5.
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?	Contact the next level of support.	Go to step 6.
Step 6 Replace the affected tray insert. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the optional tray. Does the problem remain?	Contact the next level of support.	The problem is solved.

User attendance messages (0–99.99)

User attendance messages

Error code	Description	Action
31.40	The toner cartridge is missing or unresponsive.	See **"Unsupported or unresponsive toner cartridge service check" on page 104**.
31.60	The imaging unit is missing or unresponsive.	See **"Unsupported or unresponsive imaging unit service check" on page 105**.
32.40	The toner cartridge is unsupported.	See **"Unsupported or unresponsive toner cartridge service check" on page 104**.
32.60	The imaging unit is unsupported.	See **"Unsupported or unresponsive imaging unit service check" on page 105**.
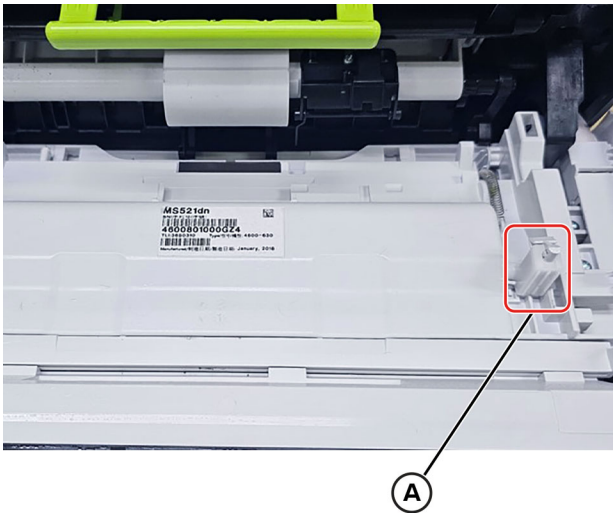
Error code	Description	Action
41.40	The imaging unit and toner cartridge are mismatched or incompatible.	See **"Mismatched supplies error service check" on page 106**.
42.xx	The toner cartridge is incompatible due to printer region mismatch.	
43.40	A toner cartridge shutter error was detected.	
44.40	The toner cartridge and printer are mismatched.	
44.60	The imaging unit and printer are mismatched.	
61	The hard disk is defective.	See **"Hard disk failure service check" on page 108**
62	The hard disk is full.	
80.0x	The remaining life of the fuser is nearly low.	See **"Maintenance kit low service check" on page 107**.
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.	
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

Action	Yes	No
Step 1 Check whether the toner cartridge installed is genuine. Is the cartridge a genuine and supported Lexmark unit?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported Lexmark toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **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?	Go to step 5.	Go to step 4.
Step 4 Clean or replace the toner cartridge. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **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?	Go to step 7.	Go to step 6.
Step 6 Clean, repair, or replace the smart chip contact. See **"Toner cartridge smart chip contact removal" on page 201**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Reseat the smart chip contact cable on the controller board. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the sensor (cartridge barrel) and its actuator for damage and misalignment. Are the sensor and its actuator properly installed and free of damage?	Go to step 10.	Go to step 9.

Action	Yes	No
Step 9 Replace the sensor. See **"Cartridge barrel shutter sensor kit removal" on page 204**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reseat sensor cable from the controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Unsupported or unresponsive imaging unit service check

Action	Yes	No
Step 1 Check if the cartridge plunger (A) is damaged or missing. Is the cartridge plunger (A) damaged or missing?	Replace the MPF with front access cover. See **"MPF with front access cover removal" on page 207**.	Go to step 2.
Step 2 Check whether the imaging unit installed is genuine. Is the imaging unit a genuine and supported Lexmark unit?	Go to step 4	Go to step 3.
Step 3 Install a genuine and supported Lexmark imaging unit. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 **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?	Go to step 6.	Go to step 5.
Step 5 Clean or replace the imaging unit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **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?	Go to step 8.	Go to step 7.
Step 7 Clean or repair the smart chip contact. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reseat the smart chip contact cable on the controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Mismatched supplies error service check

Action	Yes	No
Step 1 Check whether the supplies installed are genuine. Are the supplies genuine and supported Lexmark units?	Go to step 3.	Go to step 2.
Step 2 Install genuine and supported Lexmark units. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 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?	Contact the next level of support.	Go to step 4.
Step 4 Replace the affected supply with the correct unit. Does the problem remain?	Contact the next level of support.	The problem is solved.

Maintenance kit low service check

Action	Yes	No
Step 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?	Go to step 2.	Go to step 3.
Step 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?	Go to step 3.	The problem is solved.
Step 3 Check if the printer has feed problems by doing a feed test. Does the printer have a problem feeding during the test?	Go to step 4.	Go to step 5.
Step 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?	Go to step 5.	The problem is solved.
Step 5 Replace the affected maintenance kit with a new supply unit. Does the problem remain?	Contact the next level of support.	The problem is solved.

Hard disk failure service check

Action	Yes	No
Step 1 Delete unnecessary files. **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?	Go to step 2.	The problem is solved.
Step 2 Make sure that the printer is using the latest firmware version. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the hard disk cable is properly installed. **b** Check the cable for damage, and replace if necessary. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **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?	Go to step 5.	The problem is solved.
Step 5 Check the controller board pins for damage. Are the pins free of damage?	Contact the next level of support.	Go to step 6.
Step 6 Replace the controller board. See **"Controller board removal" on page 197**. Does the problem remain?	Contact the next level of support.	The problem is solved.

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 109**.
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.	
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

Action	Yes	No
Step 1 **a** Remove the top cover. See **"Top cover removal" on page 249**. **b** Remove the right cover. See **"Right cover removal" on page 189**. **c** Reseat the printhead cable from the printhead and the controller board. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the printhead and its cables for damage and improper installation. Is the printhead free of damage and properly installed?	Contact the next level of support.	Go to step 3.

Action	Yes	No
Step 3 Reinstall or replace the printhead. See **"Printhead removal" on page 250**. **Installation note:** Perform all the mechanical and electronic adjustments to the printhead after replacing it. See **"Printhead assembly adjustment" on page 176**. Does the problem remain?	Contact the next level of support.	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 111**.
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.	See **"Fuser temperature error service check" on page 111**.
121.21	Fuser low power trace heating rate (from 165ºC to 180ºC) went over the limit.	
121.22	Open fuser relay was detected.	
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).

Notes:

- 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 225**.

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 245**.

Most likely parts to replace

- Fuser
  - For the part number, go to **"Electronics 1" on page 277**.
  - For the removal procedure, go to **"Fuser removal" on page 245**.
- Power supply
  - For the part number, go to **"Electronics 1" on page 277**.
  - For the removal procedure, go to **"Power supply removal" on page 225**.

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 112**.
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 114**.
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.

Action	Yes	No
Step 1 **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 245**. **c** Remove the right cover. See **"Right cover removal" on page 189**. **d** Reseat all the cables from the controller board. **e** ⚠ Reseat all the cables from the power supply. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **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?	Go to step 3.	Go to step 5.
Step 3 **a** Disconnect the fuser cable from the power supply, and then turn on the printer. **b** ⚠ Check if the voltage output of the fuser cable socket on the power supply is normal (100V, 110V, or 220V). Does the power supply provide the fuser with the normal voltage value?	Go to step 4.	Go to step 5.
Step 4 **a** Turn off the printer, and then remove the power cord. **b** Remove the power supply. See **"Power supply removal" on page 225**. **c** ⚠ Check the power supply, including its fuse and capacitors, for damage. Is the power supply free of damage?	Contact the next level of support.	Go to step 5.
Step 5 Replace the power supply. See **"Power supply removal" on page 225**. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Replace the controller board. See **"Controller board removal" on page 197**. Does the problem remain?	Contact the next level of support.	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.

Action	Yes	No
Step 1 **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 245**. **c** Remove the right cover. See **"Right cover removal" on page 189**. **d** Reseat all the cables from the controller board. **e** ⚡ Reseat all the cables from the power supply. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **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?	Contact the next level of support.	Go to step 3.
Step 3 Replace the power supply. See **"Power supply removal" on page 225**. Does the problem remain?	Contact the next level of support.	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" on page 115**.
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 116**.
128.33	Photoconductor drum measurement is too different from calibration.	
128.34	Photoconductor drum measurement is too close to baseline.	
128.35	Photoconductor drum measurement data is not enough.	

Toner density error service check

Action	Yes	No
Step 1 Reseat the toner density sensor cable. See **"Sensor (toner density) and media present sensor flag removal" on page 239**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **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?	Go to step 3.	Replace the affected toner cartridge and imaging unit, and then go to step 3.
Step 3 **a** Remove the transfer roller to access the area underneath it. See **"Transfer roller removal" on page 213**. **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?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 **a** Remove the sensor (toner density). See **"Sensor (toner density) and media present sensor flag removal" on page 239**. **b** Check the sensor and its wiper bracket for damage. Are the sensor and its wiper bracket free of damage?	Go to step 5.	Go to step 6.
Step 5 **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 239**. **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?	Go to step 6.	Go to step 7.
Step 6 Replace the sensor (toner density). See **"Sensor (toner density) and media present sensor flag removal" on page 239**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the pick roller cam. See **"Pick roller assembly removal" on page 235**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Photoconductor measurement error service check

Action	Yes	No
Step 1 **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?	Go to step 3.	Go to step 2.
Step 2 Clean or replace the imaging unit. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **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?	Go to step 5.	Go to step 4.
Step 4 Clean or repair the smart chip contact. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Remove the right cover. See **"Right cover removal" on page 189**. **b** Reseat the smart chip contact cable on the controller board. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check whether the imaging unit installed is genuine. Is the imaging unit a genuine and supported Lexmark unit?	Go to step 8.	Go to step 7.
Step 7 Install a genuine and supported Lexmark imaging unit. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **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?	Contact the next level of support.	Go to step 9.
Step 9 Clean or replace the imaging unit. Does the problem remain?	Contact the next level of support.	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 118**.
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

Action	Yes	No
Step 1 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?	Go to step 3.	Go to step 2.
Step 2 Clean or repair the smart chip contact. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 a Remove the right cover. See **"Right cover removal" on page 189**. b Reseat the CTLS contact cable on the controller board. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the imaging unit for problems. See **"Unsupported or unresponsive imaging unit service check" on page 105**. Does the problem remain?	Contact the next level of support.	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 119**.
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

Action	Yes	No
Step 1 **a** Remove the left cover. See **"Left cover removal" on page 177**. **b** Remove the right cover. See **"Right cover removal" on page 189**. **c** Reseat the cable from the main drive gearbox and the controller board. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Motor tests** > **Transport** **b** Touch **Start**. Does the motor run?	Contact the next level of support.	Go to step 3.
Step 3 Check the motor and its gears for misalignment, wear, and damage. Is the main drive gearbox properly installed and free of wear and damage?	Contact the next level of support.	Go to step 4.

Action	Yes	No
Step 4 Reinstall or replace the main drive gearbox. See **"Main drive gearbox removal" on page 179**. Does the problem remain?	Contact the next level of support.	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 120**.
155.81	Motor (cartridge) does not turn off.	
155.82	Motor (cartridge) speed did not ramp up to the required level.	
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

Action	Yes	No
Step 1 **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?	Go to step 3.	The problem is solved.
Step 2 Replace the MPF with front access cover. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **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?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Clean or replace the cartridge. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Remove the left cover. See **"Left cover removal" on page 177**. **b** Remove the right cover. See **"Right cover removal" on page 189**. **c** Reseat the cable from the motor (cartridge) and the controller board. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **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?	Contact the next level of support.	Go to step 7.
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?	Contact the next level of support.	Go to step 8.
Step 8 Reinstall or replace the cartridge gearbox. See **"Cartridge gearbox removal" on page 185**. Does the problem remain?	Contact the next level of support.	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 124**.
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 124**.
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.	
163.80	The motor (tray 3 pick) does not turn on.	See **"Optional tray pick drive failure service check" on page 124**.
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.	

Error code	Description	Action
164.80	The motor (tray 4 pick) does not turn on.	See **"Optional tray pick drive failure service check" on page 124**.
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 125**.
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.	
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 125**.
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 125**.
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

Action	Yes	No
Step 1 **a** Remove tray 1. **b** Remove the right cover. See **"Right cover removal" on page 189**. **c** Reseat the cable from the pick/lift motor gearbox and the controller board. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **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?	Contact the next level of support.	Go to step 3.
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?	Contact the next level of support.	Go to step 4.
Step 4 Reinstall or replace the pick/lift motor gearbox. See **"Pick/lift motor gearbox removal" on page 237**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Optional tray pick drive failure service check

Action	Yes	No
Step 1 Check if the optional tray motor (pick) runs. Does the motor run?	Go to step 3.	Go to step 2.
Step 2 Reseat the motor cable, and then reseat the cable on the optional tray controller board. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **a** Remove the optional tray. **b** Under the printer, check the interconnect cable for damage. Is the cable free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the interconnect cable. See **"Interconnect cable removal" on page 191**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 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?	Go to step 6.	The problem is solved.
Step 6 **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?	Contact the next level of support.	Go to step 7.
Step 7 Replace the tray insert. Does the problem remain?	Contact the next level of support.	The problem is solved.

Optional tray pass-through drive failure service check

Action	Yes	No
Step 1 **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?	Go to step 3.	Go to step 2.
Step 2 Reseat the motor cable, and then reseat the cable on the optional tray controller board. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **a** Remove the optional tray. **b** Under the printer, check the interconnect cable for damage. Is the cable free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the interconnect cable. See **"Interconnect cable removal" on page 191**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 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?	Go to step 6.	The problem is solved.
Step 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?	Contact the next level of support.	Go to step 7.
Step 7 Replace the tray insert. Does the problem remain?	Contact the next level of support.	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 127**.
171.83	Cooling fan error.	
171.84	Cooling fan error.	
171.85	Cooling fan error.	

Cooling fan failure service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Motor tests** > **Fan (main)** **b** Touch **Start**. Does the fan spin?	Contact the next level of support.	Go to step 2.
Step 2 **a** Remove the right cover. See **"Right cover removal" on page 189**. **b** Reseat the fan cable from the controller board. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the fan. See **"Cooling fan removal" on page 193**. Does the problem remain?	Contact the next level of support.	The problem is solved.

6yy errors

600-664 error messages

Error code	Description	Action
600.01	Toner tally from the RIP was not received.	See **"Engine error service check" on page 129**.
600.02	Video did not start.	
600.04	Duplex page was not picked.	
600.05	Invalid PH NVRAM Type error was detected.	
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.	

Error code	Description	Action
611.02	An Input ISR error occurred and the printhead was not ready.	See **"Printhead communication error service check" on page 130**.
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 109**.
611.34	A mirror motor lock error was detected.	See **"Printhead communication error service check" on page 130**.
655.80	Motor (cartridge) does not turn on.	See **"Cartridge drive failure service check" on page 120**.
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 124**.
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 124**.
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.	

Error code	Description	Action
663.80	Motor (tray 3 pick) does not turn on.	See **"Optional tray pick drive failure service check" on page 124**.
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 124**.
664.81	Motor (tray 4 pick) does not turn off.	
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.	

Engine error service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Remove the right cover. See **"Right cover removal" on page 189**. **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?	Contact the next level of support.	Go to step 3.
Step 3 Replace the controller board. See **"Controller board removal" on page 197**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Printhead communication error service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Remove the top cover. See **"Top cover removal" on page 249**. **b** Remove the right cover. See **"Right cover removal" on page 189**. **c** Reseat the printhead cable from the printhead and the controller board. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Update the firmware to the latest version. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the printhead and its cables for damage and improper installation. Is the printhead free of damage and properly installed?	Contact the next level of support.	Go to step 5.
Step 5 Reinstall or replace the printhead. See **"Printhead removal" on page 250**. **Installation note:** Perform all the mechanical and electronic adjustments to the printhead after replacing it. See **"Printhead assembly adjustment" on page 176**. Does the problem remain?	Contact the next level of support.	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**.

  Notes:

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

2 Click **History Information**, copy all information, and then save it as a text file.

3 Email the text file to your next level of support.

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

Notes:

- Make sure 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 Email the logs to your next level of support.

  Note: To download the FWdebug log to a flash drive, see **"General SE Menu" on page 155**.

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 Email 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 email a scanned copy of the page 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 errors

900 error messages

Error code	Description	Action
900.xx	RIP firmware errors	Go to **"900 error service check" on page 132**.

900 error service check

Action	Yes	No
Step 1 **a** Perform a POR. **b** Check if a 900.xx error code appears on the display. Does a 900.xx error code appear?	Go to step 4.	Go to step 2.
Step 2 Check if another type of error code appears instead of the 900.xx error code. Does a different error code appear?	Go to step 3.	Go to step 4.
Step 3 See the error code and its service instructions in the printer *Service Manual*. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **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?	Go to step 12.	Go to step 5.

Action	Yes	No
Step 5 **a** From the control panel, navigate to the **Reports** menu. **b** Select **Device Statistics** and **Device Settings**. Does the problem remain?	Go to step 12.	Go to step 6.
Step 6 Check if the printer has a scanner. Does the printer have a scanner?	Go to step 7.	Go to step 8.
Step 7 Using the scanner, perform a one-page copy job in color. Does the problem remain?	Go to step 12.	Go to step 8.
Step 8 **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?	Go to step 9.	Go to step 10.
Step 9 **a** Start the printer in **Invalid engine mode**. See **"Entering Invalid engine mode" on page 153**. **b** Check if an `Invalid Engine Code` message appears. Does an `Invalid Engine Code` message appear?	Go to step 10.	Contact the next level of support.
Step 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?	Go to step 11.	Contact the next level of support.
Step 11 Update the firmware to the latest version. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 **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?	Go to step 13.	The problem is solved.
Step 13 Check if a hard disk installed. Is a hard disk installed?	Go to step 14.	Go to step 17.
Step 14 **a** Check for buffered print jobs, and then delete them. See **"Hard disk failure service check" on page 108**. **b** Perform a POR. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Turn off the printer. **b** Uninstall the hard disk drive. **c** Perform a POR. Does the problem remain?	Go to step 17.	Go to step 16.
Step 16 Replace the hard disk. Does the problem remain?	Go to step 17.	The problem is solved.
Step 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?	Go to step 18.	Go to step 21.

Action	Yes	No
Step 18 **a** Turn off the printer. **b** Remove all the installed components. **c** Turn on the printer. Does the problem remain?	Go to step 21.	Go to step 19.

Step 19
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?
	Go to step 20.	The problem is solved.

Step 20 **a** Turn off the printer. **b** Replace the components that caused the error. **c** Turn on the printer. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the controller board. See **"Controller board removal" on page 197**. Does the problem remain?	Contact the next level of support.	The problem is solved.

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 136**.
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.

Action	Yes	No
Step 1 Check if the control panel was recently replaced. Was the control panel recently replaced?	Go to step 2.	Go to step 4.
Step 2 Replace the current control panel with the original control panel. See **"Control panel (2.4-inch display) cover, buttons, and board removal" on page 210** or **"Control panel (4.3-inch display) cover, buttons, and board removal " on page 212**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 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?	Contact the next level of support.	The problem is solved.
Step 4 Check if the controller board was recently replaced. Was the controller board recently replaced?	Go to step 5.	Contact the next level of support.

Action	Yes	No
Step 5 Replace the current controller board with the original controller board. See **"Controller board removal" on page 197**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 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?	Contact the next level of support.	The problem is solved.

Other symptoms

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 137**.
The display does not respond when touching the icons.	See **"Unresponsive control panel or display service check" on page 138**.
The display shows a blank screen.	
The optional tray is unresponsive.	See **"Dead optional tray service check" on page 140**.

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.

Action	Yes	No
Step 1 Turn on the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the power voltage. Is the proper line voltage used?	Go to step 4.	Go to step 3.
Step 3 Plug the power cord into the correct line voltage socket. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the power cord for damage. Is the power cord free of damage?	Go to step 6.	Go to step 5.
Step 5 Replace the power cord. Does the problem remain?	Go to step 6.	The problem is solved.
Step 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?	Go to step 8.	Go to step 7.
Step 7 Reseat or replace the cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform the power supply service check. See **"LVPS service check" on page 112**. Does the problem remain?	Contact the next level of support.	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..

Action	Yes	No
Step 1 Wake the printer from Sleep Mode. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 If the control has a LED indicator, check the LED indicator. Is the LED indicator blinking red or blue?	Go to step 3.	Go to **"LVPS service check" on page 112**
Step 3 Turn off the printer. Check the control panel cable for proper connection to the controller board. Is the control panel cable properly connected?	Go to step 5.	Go to step 4.
Step 4 Reseat the cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Remove the control panel without removing the cable. Check the cable for improper connection to the control panel. Is the cable properly connected?	Go to step 7.	Go to step 6.
Step 6 Reseat the cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the control panel cable for damage. Is the control panel cable free of damage?	Go to step 9.	Go to step 8.
Step 8 Replace the cable. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the display card (UICC) cable for proper connection to the control panel board. Is the display card cable properly connected?	Go to step 11.	Go to step 10.

Action	Yes	No
Step 10 Reseat the cable. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the display card cable for damage. Is the display card cable free of damage?	Contact the next level of support.	Go to step 12.
Step 12 Replace the control panel. Does the problem remain?	Contact the next level of support.	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 291**.

   b Remove the tray insert, and then check if the label is present.
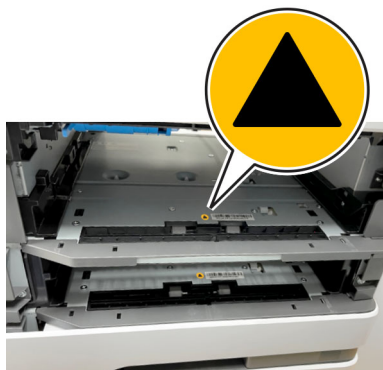
   If the part number of the optional tray does not start with 36S or the label is not present, then the optional tray is incompatible.

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" on page 191**.

Service menus

Understanding the printer control panel

Using the printer control panel

MS621 and B2650
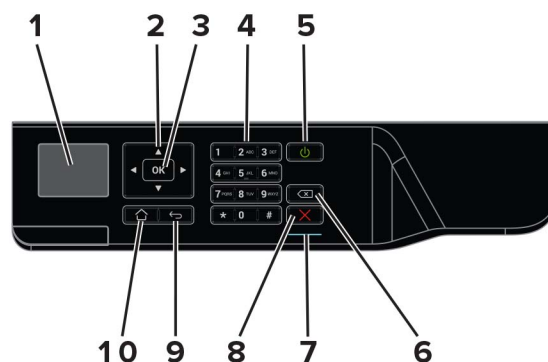
	Use the	To
1	Display	View printing options, printer status, and error messages.
2	Arrow buttons	Scroll through menus or move between screens and menu options.
3	Select button	• Select menu options. • Save the setting.
4	Numeric keypad	Enter numbers or symbols in an input field.
5	Power button	Turn on or turn off the printer. **Note:** To turn off the printer, press and hold the power button for five seconds.
6	Backspace button	Move the cursor backward and delete a character in an input field.
7	Indicator light	Check the printer status.
8	Stop or Cancel button	Stop the current printer task.
9	Back button	Return to the previous screen.
10	Home button	Go to the home screen.

MS622 and M3250
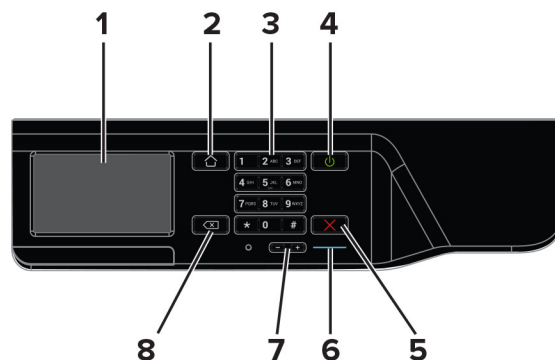
	Use the	To
1	Display	View printing options, printer status, and error messages.
2	Home button	Go to the home screen.
3	Keypad	Enter numbers or symbols in an input field.
4	Power button	Turn on or turn off the printer. **Note:** To turn off the printer, press and hold the power button for five seconds.
5	Stop or Cancel button	Stop the current printer task.
6	Indicator light	Check the printer status.
7	Volume buttons	Adjust the volume of the headset or speaker.
8	Backspace button	Move the cursor backward and delete a character in an input field.

Understanding the status of the power button and indicator light

Indicator light	Printer status
Off	The printer is off or in Hibernate mode.
Blue	The printer is ready or processing data.
Red	The printer requires user intervention.

Power button light	Printer status
Off	The printer is off, ready, or processing data.
Solid amber	The printer is in sleep mode.
Blinking amber	The printer is in hibernate mode.

Using the home screen

When the printer is turned on, the display shows the home screen. Use the home screen buttons and icons to initiate an action.

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

Touch		To
1	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.
2	Job Queue	Show all the current print jobs. **Note:** You can also access this setting by touching the top section of the home screen.
3	Change Language	Change the language on the printer display.
4	Settings	Access the printer menus.
5	USB Drive	View, select, or print photos and documents from a flash drive.
6	Held Jobs	Show all the current held print jobs.

These settings may also appear on the home screen

Touch	To
Bookmarks	Access bookmarks.
App Profiles	Access application profiles.
Lock Device	Prevent users from accessing any printer functions from the home screen.

Service menus

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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** > **Device Settings**

For non-touch-screen printer models, press OK to navigate through the settings.

Installed Licenses

This setting lists all the installed licenses and their feature data.

Enter the Diagnostics menu, and then navigate to:

Reports > **Licenses** > **Installed Licenses**

For non-touch-screen printer models, press OK to navigate through the settings.

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

For non-touch-screen printer models, press OK to navigate through the settings.

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**

For non-touch-screen printer models, press <kbd>OK</kbd> to navigate through the settings.

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**

For non-touch-screen printer models, press <kbd>OK</kbd> to navigate through the settings.

2 Press <kbd>OK</kbd> or 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**

For non-touch-screen printer models, press <kbd>OK</kbd> to navigate through the settings.

2 Press <kbd>OK</kbd> or 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**

For non-touch-screen printer models, press <kbd>OK</kbd> to navigate through the settings.

2 Select a log that you want to create, and then press <kbd>OK</kbd> or 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 select **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 select **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 **OK** 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 select **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 select **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 select **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.

1 Enter the Diagnostics menu, and then navigate to:

Printer Setup > **Enable edge-to-edge (printing)**

For non-touch-screen printer models, press **OK** to navigate through the settings.

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)**

For non-touch-screen printer models, press **OK** to navigate through the settings.

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 select **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 select **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 select **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.

For non-touch-screen printer models, press **OK** to navigate through the settings.

1 Enter the Diagnostics menu, and then navigate to:

Printer Setup > **Engine setting [x]**

2 Select a setting, enter a value, and then press **OK** or 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.

For non-touch-screen printer models, press **OK** to navigate through the settings.

1 Enter the Diagnostics menu, and then navigate to:

   Printer Setup > **EP setup**

2 Select a setting.

Printer diagnostics and adjustments

Sensor tests

For non-touch-screen printer models, press **OK** to navigate through the settings.

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.

   Notes:

   - 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.
   - For the fuser exit sensor actuator, toggle it toward the rear door.

List of sensor tests

Test
MPF media present
Pick roller index (tray 1)
Media out (tray 1)
Input
Narrow media
Fuser exit
Duplex path 1
Output bin full
Door interlock
Trailing edge

Motor tests

For non-touch-screen printer models, press **OK** to navigate through the settings.

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Motor tests**

2 Select a motor, and then touch **Start**.

Notes:

- If the motor is activated, then it is properly working.
- Some motors require automatic deactivation 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 **OK**.

List of motor tests

Test
MPF pick
Pick (tray 1) picking
Pick (tray 1) lifting
Duplex solenoid
Redrive solenoid
K toner add
Transport
Fan (main)

Memory tests

For non-touch-screen printer models, press **OK** 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 **OK** or touch **Start**.

Registration adjust

This setting lets you adjust the skew, margins, or perform a Quick Test.

For non-touch-screen printer models, press OK to navigate through the settings.

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.

For non-touch-screen printer models, press OK to navigate through the settings.

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 OK 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.

For non-touch-screen printer models, press OK to navigate through the settings.

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > **Universal Override**

2 Select a setting to adjust.

Additional input tray diagnostics

Sensor tests

For non-touch-screen printer models, press OK to navigate through the settings.

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.

>   **Notes:**
>
>   - 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
Pick roller index (tray [x])	Remove tray [x].
Media low (tray [x])	
Pass-through (tray [x])	
Media size (tray [x]) switch [x]	

Motor tests

For non-touch-screen printer models, press [OK] to navigate through the settings.

1 Enter the Diagnostics menu, and then navigate to:

Additional input tray diagnostics > **Motor tests**

2 Select a motor, and then press [OK] or touch **Start**.

>   **Notes:**
>
>   - 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.

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).
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description

USB Configuration
USB Speed
    Full
    Auto*
	Set the USB port to run at full speed and disable its high-speed capabilities.

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.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
Printer Emulations PPDS Emulation Off* On	Set the printer to recognize and use the PPDS data stream.
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*)	Adjust the toner density when printing documents.
Device Operations Quiet Mode Off* On	Set the printer to operate in Quiet Mode. **Note:** Enabling this setting slows down the printer performance.
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.
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.

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.
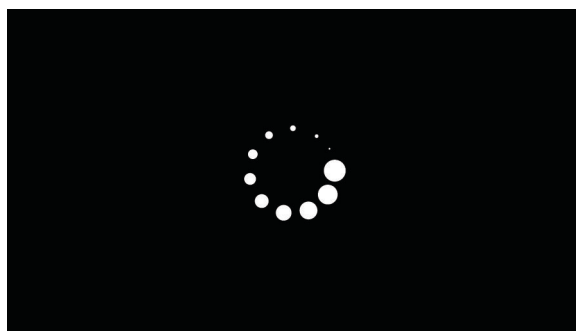
For 2.4-, 4.3-, 7-, and 10-inch displays with number pads

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.
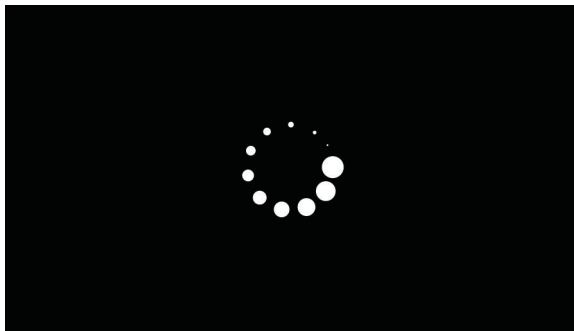
For 2.8-, 4.3-, 7-, and 10-inch displays without number pads

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

To access the Service Engineer (SE) menu:

1 Turn on the printer.

2 When the home screen appears, press * * **411** on the control panel.

For 2-line control panels, press the right arrow button twice, press **OK**, and then press the left arrow button.

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
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

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

ATTENTION—RISQUE D'ELECTROCUTION : 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.

ATTENTION—RISQUE D'ELECTROCUTION : 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.

ATTENTION—RISQUE D'ELECTROCUTION : 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.

ATTENTION—SURFACE CHAUDE : 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.

ATTENTION : RISQUE DE PINCEMENT : 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

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** 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.

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** 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.

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** 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.

⚠️ **PRECAUCIÓN: SUPERFICIE CALIENTE:** 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.

⚠️ **PRECAUCIÓN: PELIGRO DE ATRAPAMIENTO:** 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

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** 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.

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** 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.

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** 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.

⚠️ **VORSICHT – HEISSE OBERFLÄCHE:** Das Innere des Druckers kann sehr heiß sein. Vermeiden Sie Verletzungen, indem Sie heiße Komponenten stets abkühlen lassen, bevor Sie ihre Oberfläche berühren.

⚠️ **VORSICHT – QUETSCHGEFAHR:** 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.

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

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

⚠️ **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.

Warning—Potential Damage: Observe all precautions when handling ESD sensitive parts. See **"Handling ESD-sensitive parts" on page 159**.

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 165**.

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 136**

Restoring the printer configuration

Restore the printer to its correct configuration to complete the replacement service. Use the Service Restore Tool to download the software bundle, and then flash the printer settings and embedded solutions.

Note: If you do not have access to Service Restore Tool, then contact your next level of support.

Note: 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.
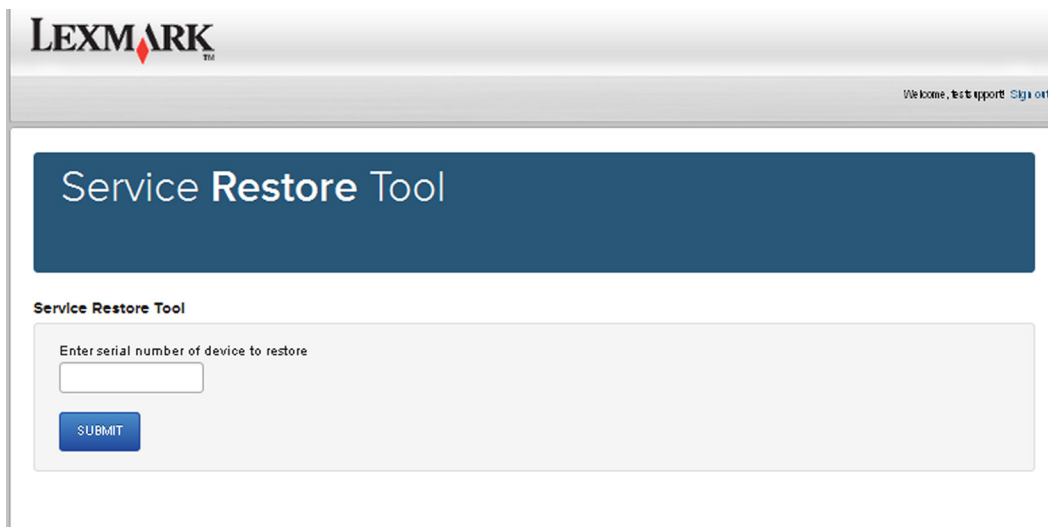
Using the Service Restore Tool

1 Go to **https://cdp.lexmark.com/service-restore-tool/** to access the tool.

2 Log in using your Lexmark or partner login.
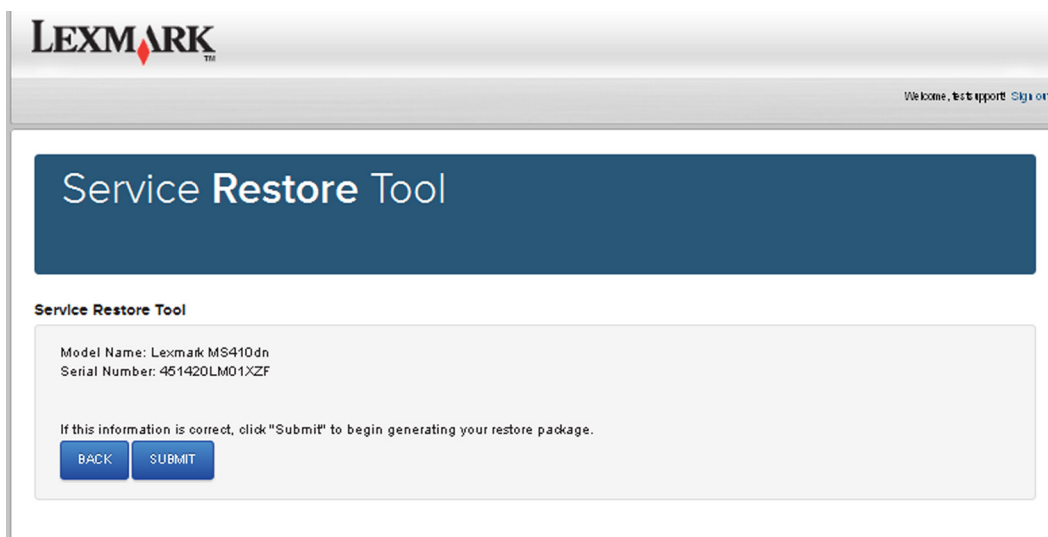
If your login fails, then contact your next level of support.

3 Enter the printer serial number, and then submit the information.

Note: Make sure that the serial number that appears on the verification screen is correct.

4 Save the zip file.

Note: Make sure that the serial number in the zip file matches the serial number of the printer being restored.
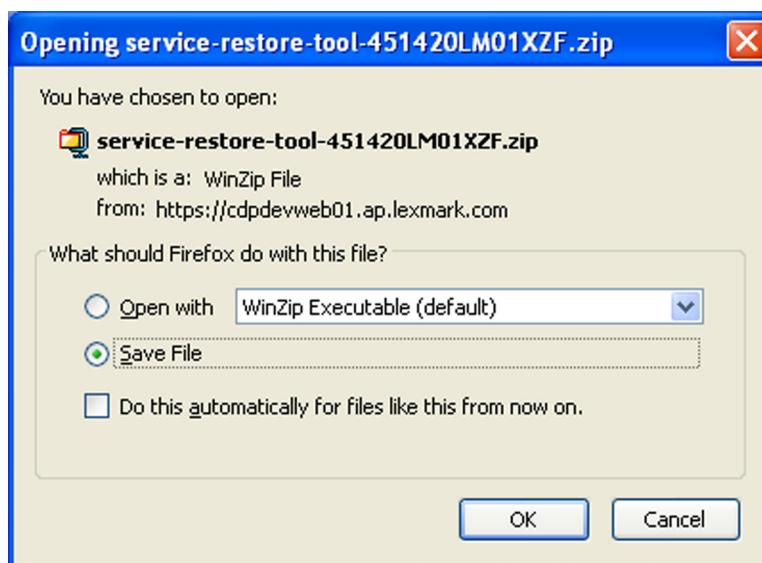
5 Extract the contents of the zip file, open the *Readme* file, and then follow the instructions in the file.

> **Notes:**
>
> - Perform the install instructions on the *Readme* file in the exact order shown. Restart the printer only if the file says so.
> - For more information on how to flash the downloaded files, see **"Updating the printer firmware " on page 164**.
> - To load the zip files that are extracted from the Service Restore Tool, see **"Restoring solutions, licenses, and configuration settings" on page 163**.
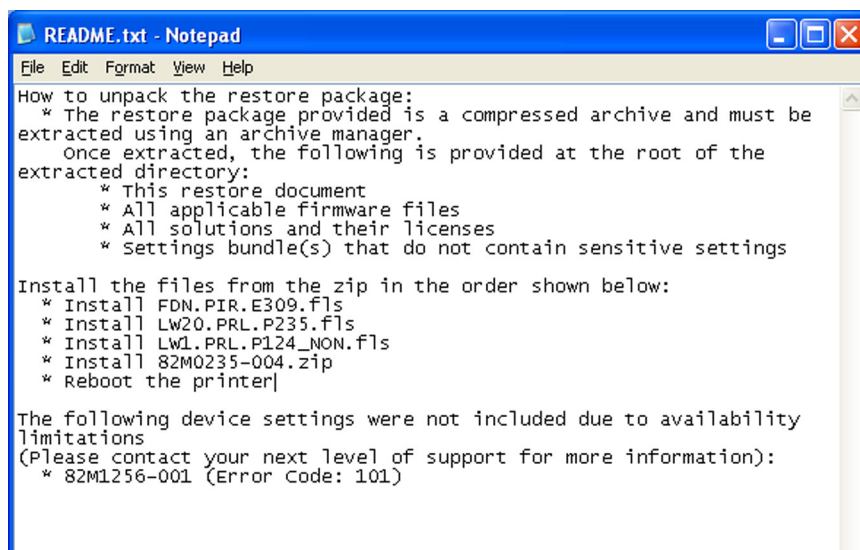
6 If the printer had eSF apps previously installed, then confirm from the customer if all the eSF apps have been installed after performing the installation instructions in the *Readme* file.

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 the zip files that are extracted from the Service Restore Tool, do the following:

1 Open a web browser, and then type the printer IP address.
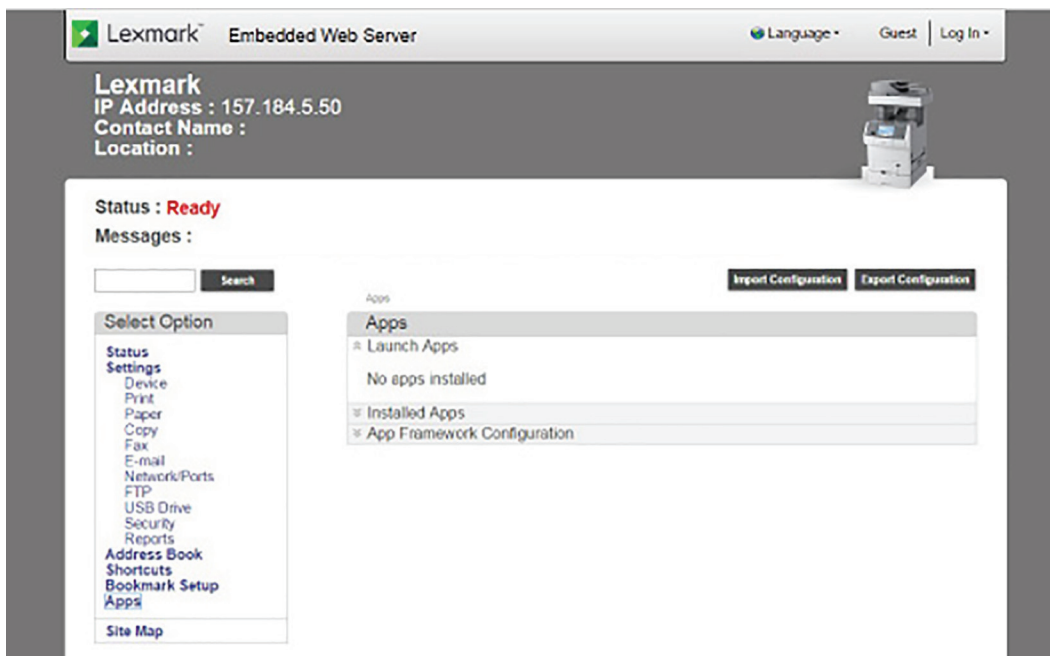
2 Click **Import Configuration**, and then click **Browse**.

Parts removal
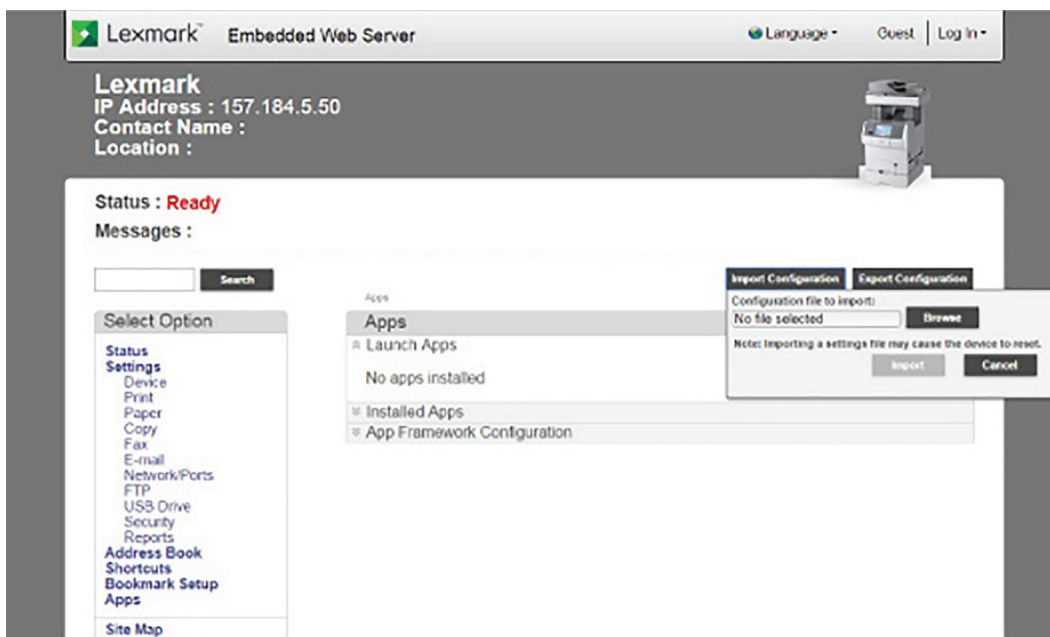
3 Navigate to the folder where the zip files are extracted from the Service Restore Tool.
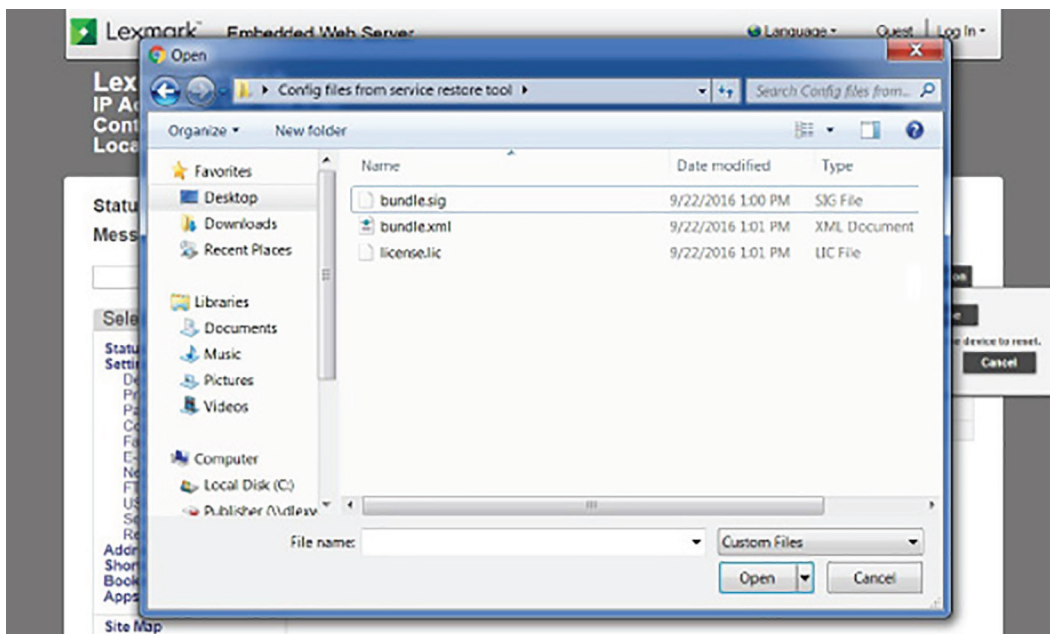
4 Select the file to import, and then click **Import**.

5 Repeat step 2 through step 4 for the other files that are included in the extracted zip file.

Updating the printer firmware

Warning—Potential Damage: Before updating the printer firmware, ask the next level of support for the correct code. Using an incorrect code level may damage the printer.

Using a flash drive

Note: The printer must be in ready state to update the firmware.

This option is available only in printer models with front USB port.

1 Insert the flash drive into the USB port.

2 Depending on the printer model, do any of the following:
- From the control panel, navigate to **USB Menu: Print from USB** > **Accept** or **OK**, and then select the file that you need to flash.
- Select the firmware file.

Note: Do not turn off the printer while the update is going on.

Using a network computer

Using the File Transfer Protocol (FTP)

Note: The printer must be in ready state to update the firmware.

1 Turn on the printer.

2 Obtain the IP address from the home screen.

3 From the command prompt of a network computer, open an FTP session to the printer IP address.

4 Use a PUT command to place the firmware file on the printer.

The printer performs a POR sequence and terminates the FTP session.

Using the Embedded Web Server

Note: The printer must be in ready state to update the firmware.

1 Open a web browser, and then type the printer IP address.

2 Click **Settings** > **Device** > **Update Firmware**.

3 Select the file to use.

The printer performs a POR sequence and terminates the EWS session.

Using a USB cable connection

Note: Make sure that the cable is connected to the rear USB port.

Using USB Flash Utility

1 Go to **support.lexmark.com**, and then download USB Flash Utility.

2 Extract, and then run the utility.

3 Click **Browse Files**, and then browse to the firmware file directory.

4 Select the firmware file.

5 Select the source printer.

6 Click **Start**.

Using USButil

1 Go to **support.lexmark.com**, and then download USButil.

2 Extract, and then drag and drop the firmware file onto the USButil icon.

3 A command prompt window appears briefly.

Note: Make sure to disconnect other USB devices when using USButil.

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 **"Entering Invalid engine mode" on page 153**.

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 **"Entering Invalid engine mode" on page 153**.

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.
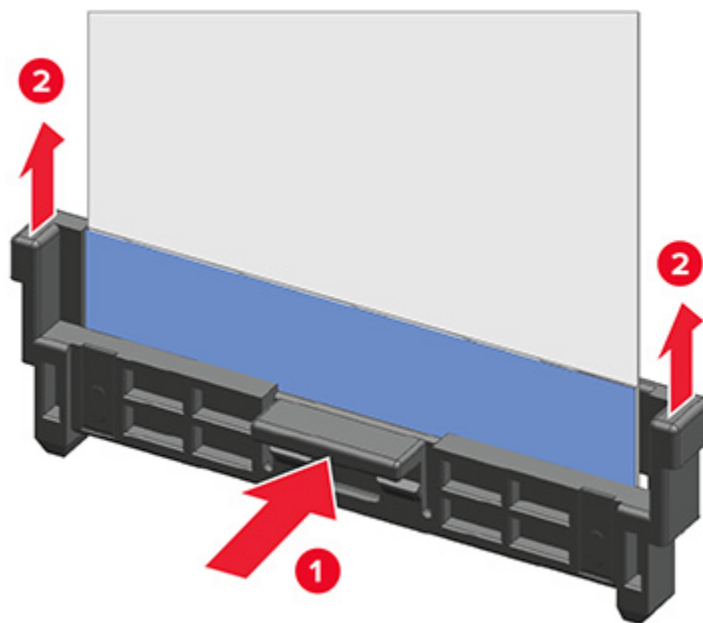
Ribbon cable connectors

Zero Insertion Force (ZIF) connectors

These connectors are used on the boards and cards that are installed in the printer.

To avoid damaging the connectors and their cables, observe the following:

- Do not insert the cables where the contacts are facing the locking actuator.
- Do not insert the cables diagonally into the ZIF socket.
- Avoid using a fingernail or sharp object to open the locking actuator.
- Avoid pressing against the cables when opening the locking actuator.

These are the types of the ZIF connectors that are used in this printer:

- Horizontal top contact connector
- Horizontal bottom contact connector
- Vertical mount contact connector
- Horizontal sliding connector

Horizontal top contact connector

This connector uses a back flip locking actuator to lock the ribbon cable into the ZIF connector.

Warning—Potential Damage: When opening or closing this type of actuator, lift or close the two tabs located on each end of the actuator. The two tabs should be moved simultaneously. Do not close the actuator from the center.

Removing the cable

1 Unlock the actuator.
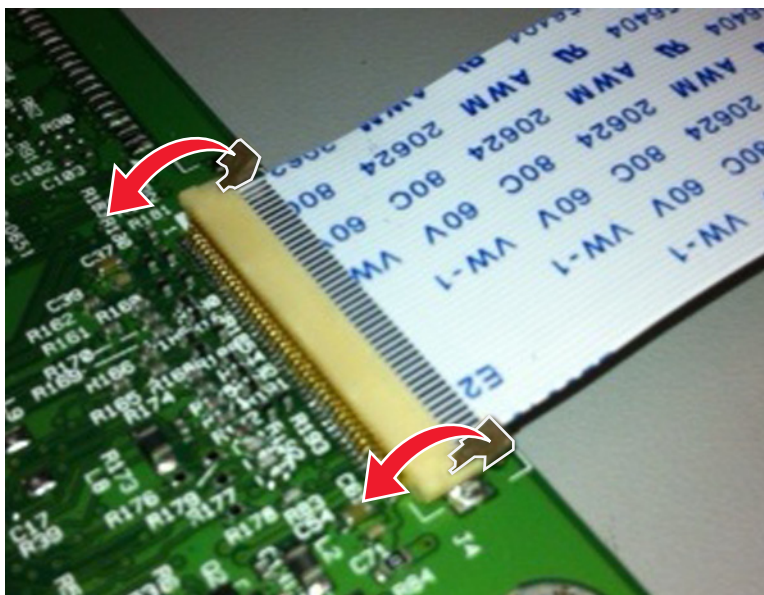
2 Remove the cable.

Inserting the cable

Make sure that the actuator is unlocked before installing the cable. The tabs are vertical when the actuator is locked.

1 Insert the cable on top of the actuator with the contacts facing up.

 Note: Make sure that the cable is installed squarely into the connector to avoid intermittent failures.

2 Rotate the locking actuator to the locked position.

 Notes:

- Do not move the cable while locking the actuator.
- If the cable moves, open the actuator, reposition the cable, and then close the actuator.
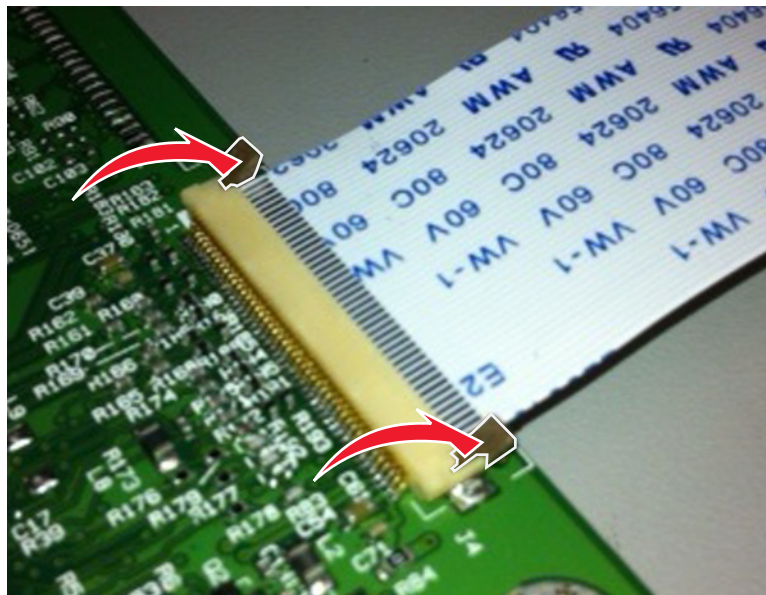
Horizontal bottom contact connector

This connector uses a flip locking actuator to lock the ribbon cable into the ZIF connector.

Warning—Potential Damage: When opening or closing this type of actuator, gently lift the center of the actuator using your finger. Do not use a fingernail or screwdriver to open the actuator to avoid damaging the ribbon cable. Do not close the actuator from its ends.

Removing the cable

1 Unlock the actuator.
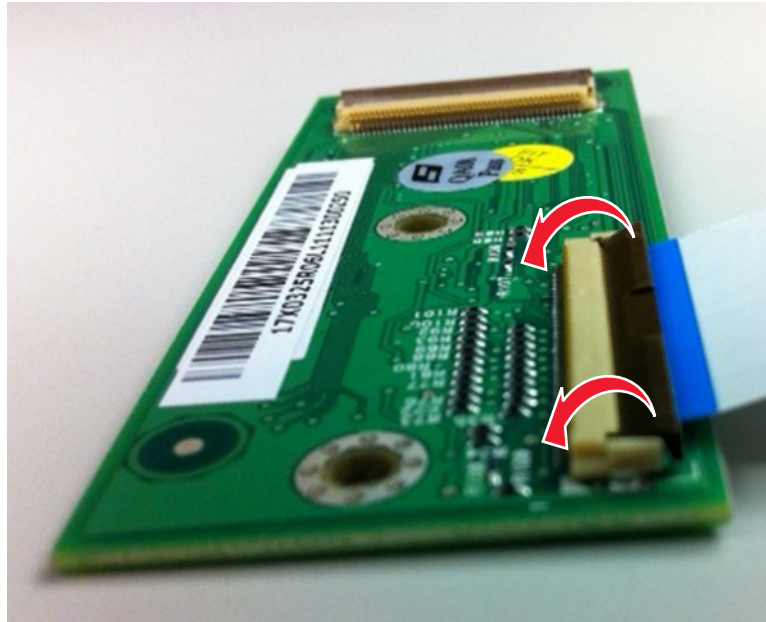
2 Remove the cable.

Inserting the cable

1 Make sure that the actuator is in the open position.

2 Insert the cable below the actuator with the contacts facing downward and away from the locking actuator.

Note: Make sure that the cable is installed squarely into the connector to avoid intermittent failures.

3 Rotate the locking actuator to the locked position.

Vertical mount contact connector

This connector uses a back flip locking actuator to lock the ribbon cable into the ZIF connector.

Warning—Potential Damage: When opening or closing this type of actuator, gently lift the center of the actuator using your finger. Do not use a fingernail or screwdriver to open the actuator to avoid damaging the ribbon cable. Do not close the actuator from its ends.

Removing the cable

1 Rotate the locking actuator from the center of the actuator to the unlocked position.
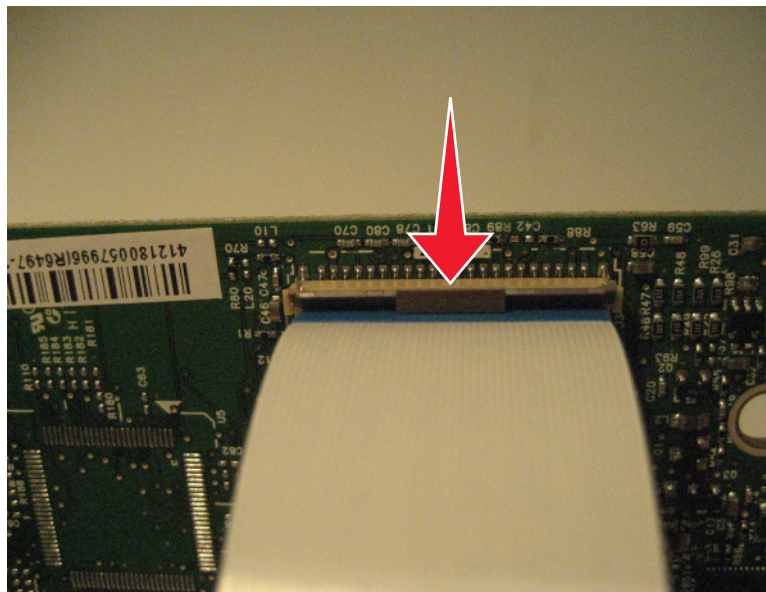
2 Remove the cable.

Parts removal

Inserting the cable

1 Make sure that the locking actuator is in the open position.

2 Insert the cable on top of the actuator with the contacts facing away from the locking actuator.

Note: Make sure that the cable is installed squarely into the connector to avoid intermittent failures.

3 Rotate the locking actuator to the locked position.

Notes:

- Do not move the cable while locking the actuator.
- If the cable moves, open the actuator, reposition the cable, and then close the actuator.
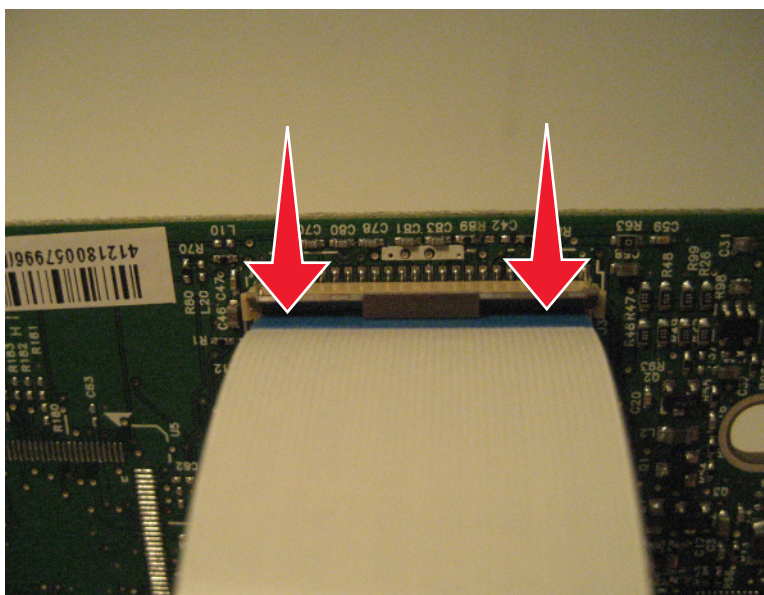
Horizontal sliding contact connector

This connector uses a slide locking actuator to lock the ribbon cable into the ZIF connector.

Warning—Potential Damage: When opening or closing this type of actuator, gently push or pull the two tabs located on each end of the actuator. Do not close the actuator from the center of the actuator. Do not use a screwdriver to open or close the actuator to avoid damage to the cable or connector.

Removing the cable

1 Slide the tabs away from the connector.
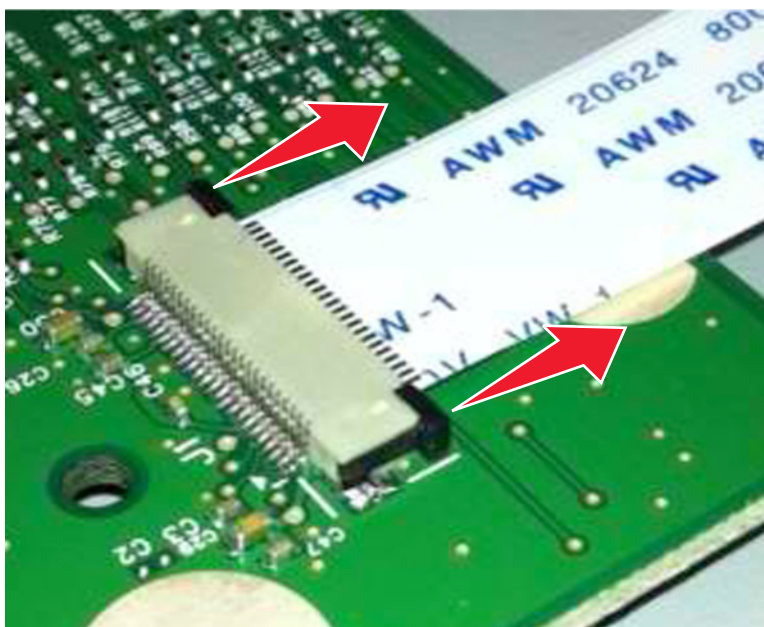
2 Remove the cable.

Inserting the cable

1 Make sure that the locking actuator is in the open position. If you are opening the connector, then pull back the end tabs using equal force to avoid breaking the connector.
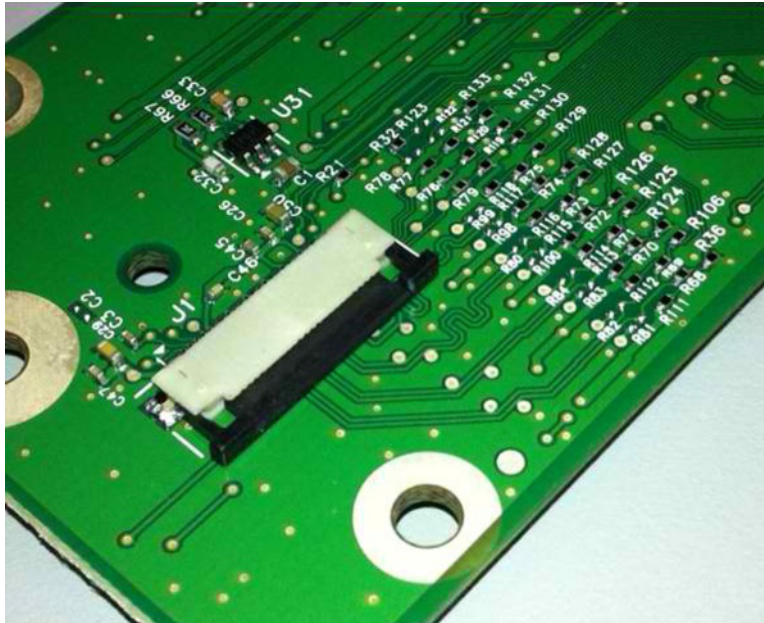
2 Insert the cable on top of the actuator with the contacts facing away from the locking actuator.

3 Slide the locking actuator toward the connector to lock the cable.

   Notes:

   • Do not move the cable while locking the actuator.
   • If the cable moves, open the actuator, reposition the cable, and then close the actuator.
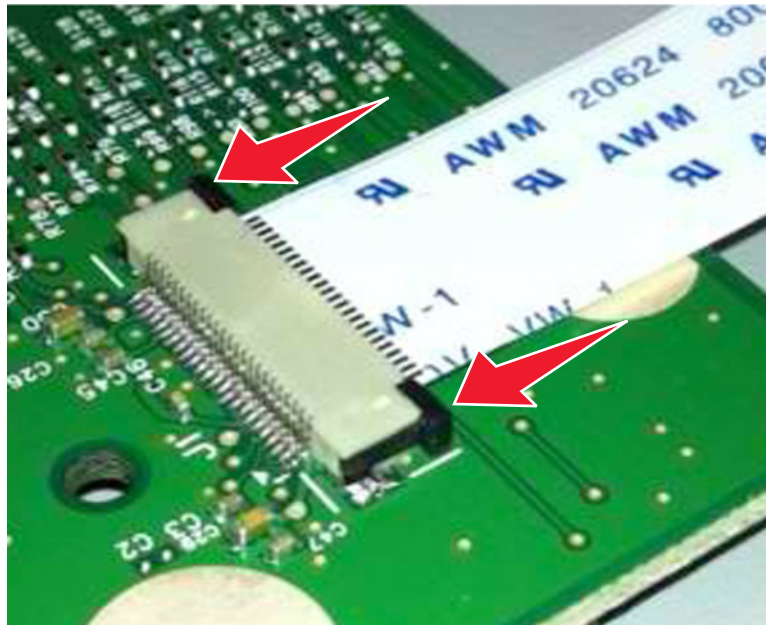
Low insertion force (LIF) connector

Warning—Potential Damage: When installing a cable into an LIF connector, avoid bending the edges of the cables and damaging the contacts on the cables.

Inserting the cable

1 Make sure that the contacts of the controller board and connectors are on the same side.
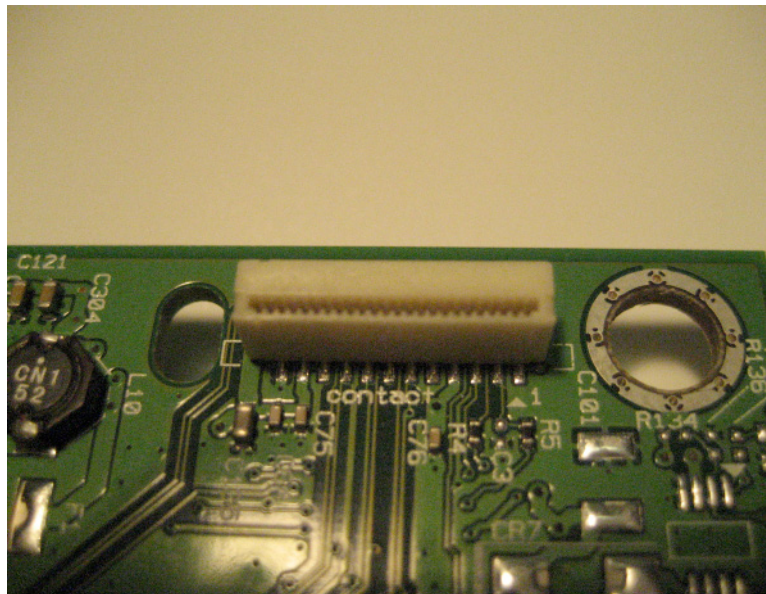
2 Insert the cable.

   Note: Make sure that the cable is installed straight into the connector to avoid intermittent failures.
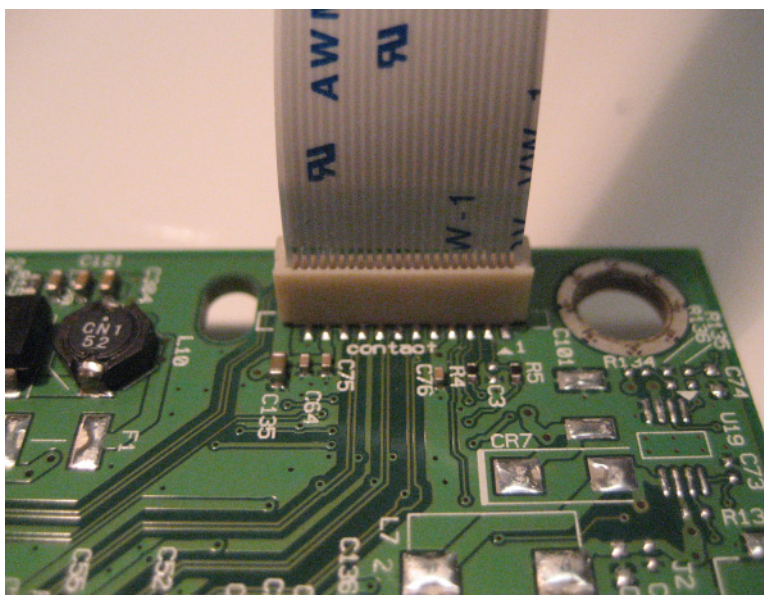
Printhead assembly adjustment

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.
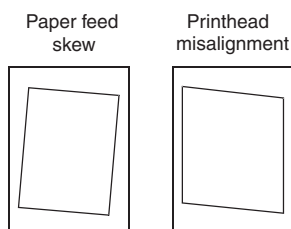
To adjust the printhead:

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.
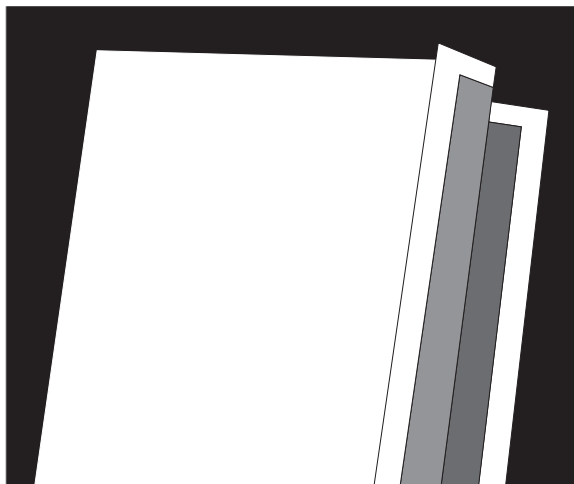
5 If the grid lines of the right flap align below the corresponding lines on the left side, then adjust the printhead clockwise relative to the printer, and recheck. If the grid lines of the left flap align below the corresponding lines of the right side, then adjust the printhead counterclockwise.
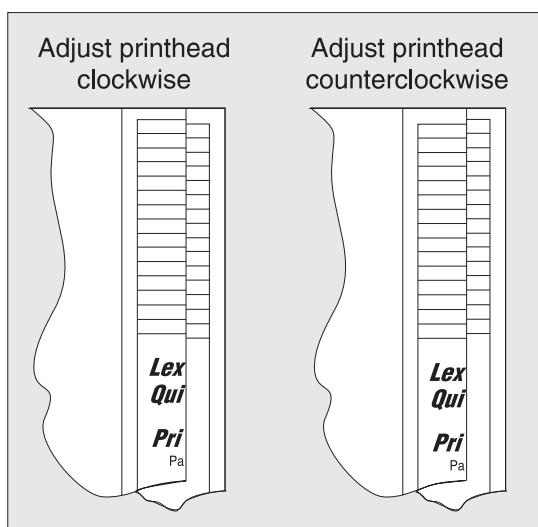
6 Print another Quick test page, and check if adjustments are still needed.

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 **"Registration adjust" on page 149**.

Left side removals

Left cover removal

1 Open the front door.

2 Position the printer on its right side.

3 Remove the screw (A).

4 Release the latches (B).
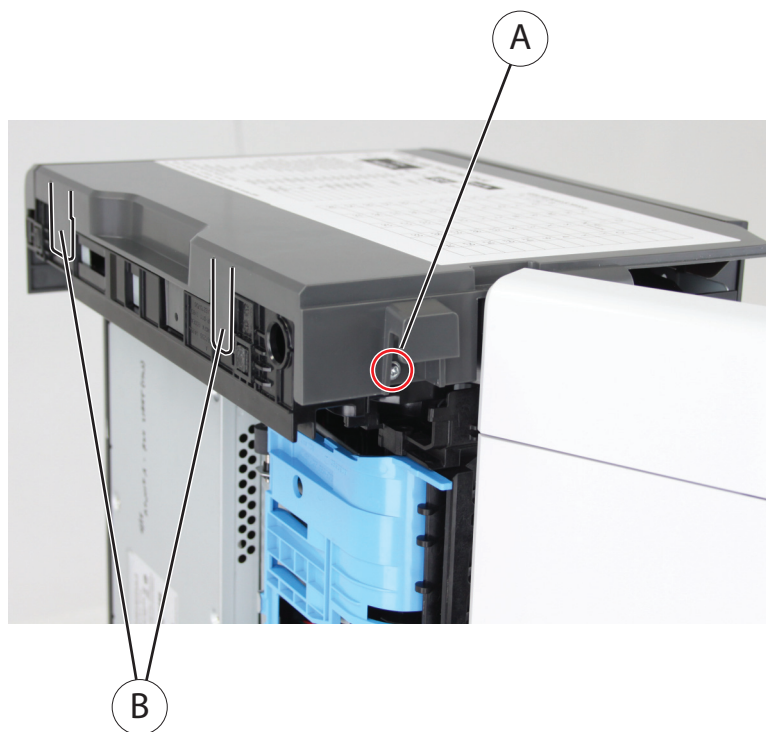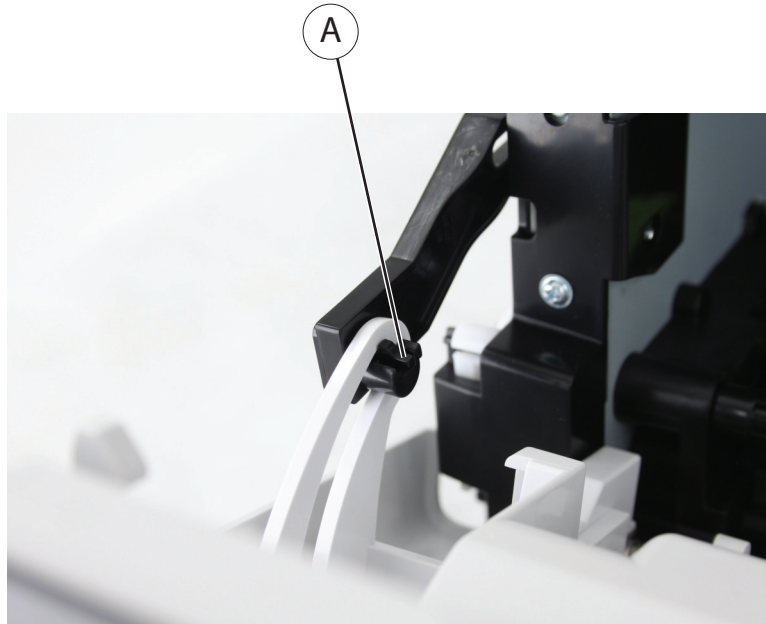
5 Remove the left cover.
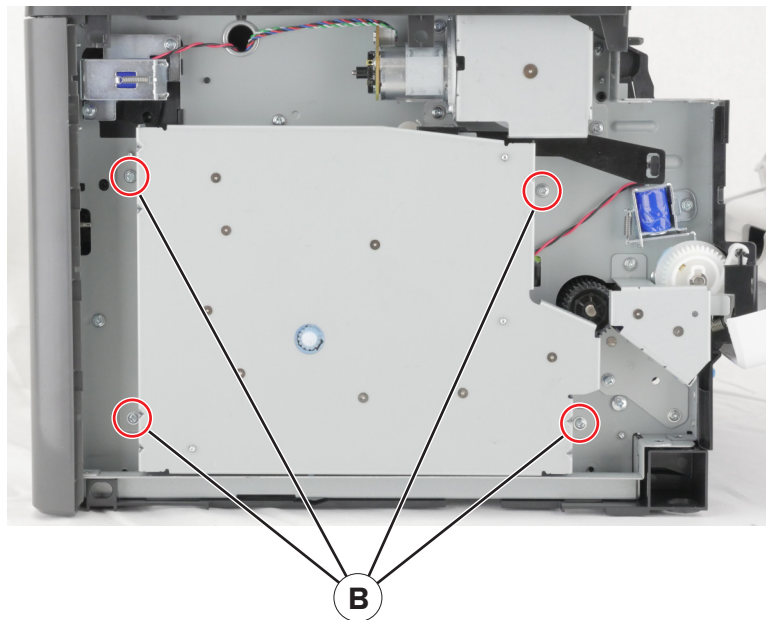
Note: The front cover hinders the removal.

Main drive gearbox removal

1 Remove the left cover. See **"Left cover removal" on page 177**.

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).
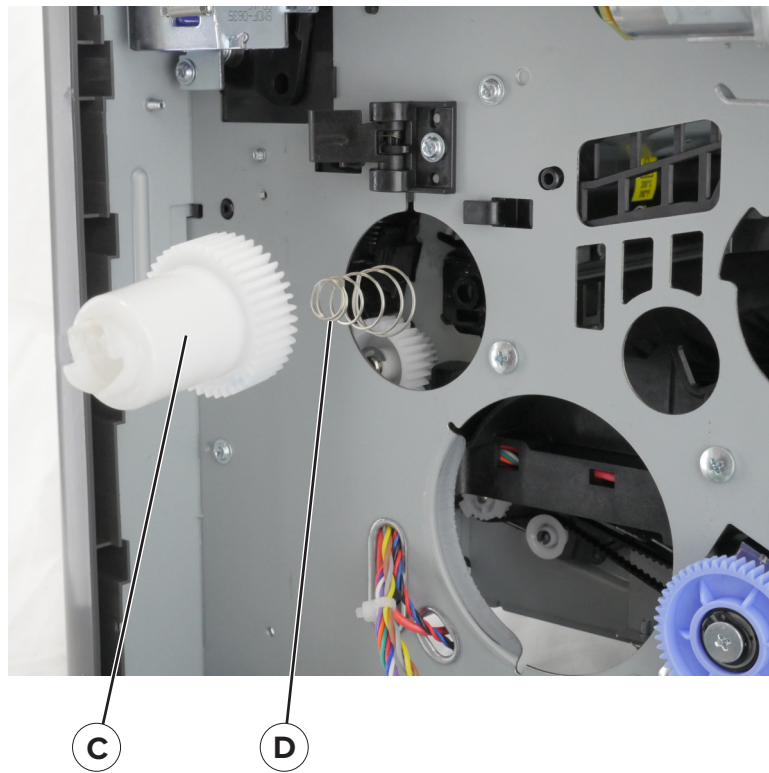
MPF gearbox removal

1 Remove the front door. See **"MPF with front access cover removal" on page 207**.

2 Remove the left cover. See **"Left cover removal" on page 177**.

3 Remove the main drive gearbox. See **"Main drive gearbox removal" on page 179**.

4 Disconnect the spring (A).

5 Remove the three screws (B).
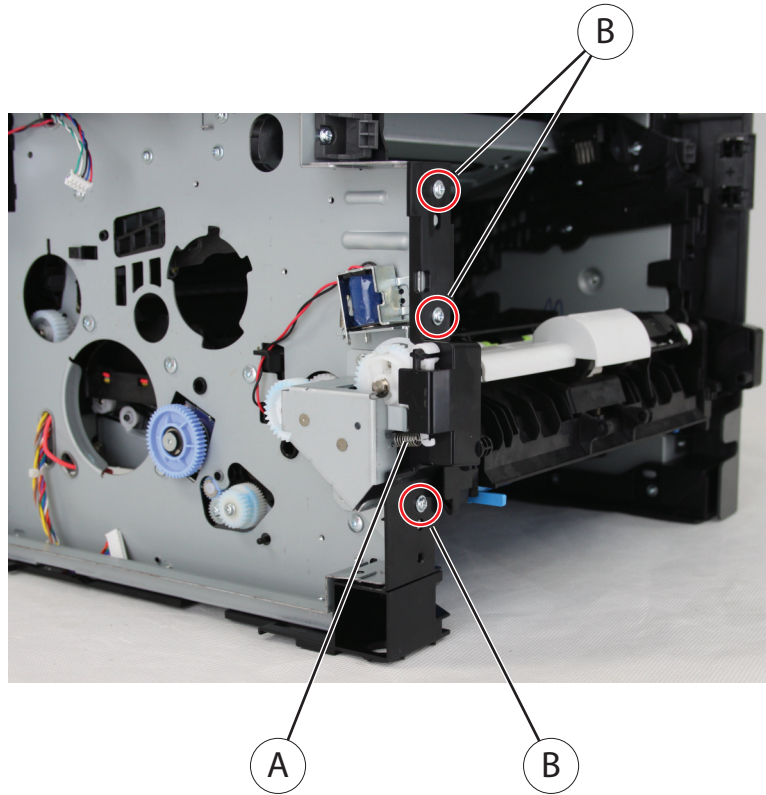
6 Remove the three screws (C).
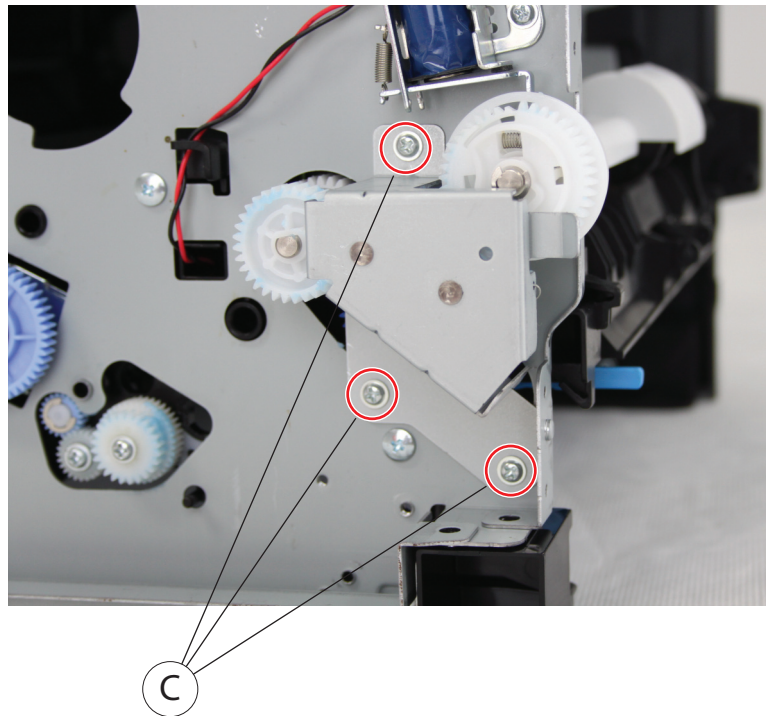
7 Remove the E-clip (D), and then remove the gear.

Note: The solenoid hinders the removal.

Parts removal

(D)
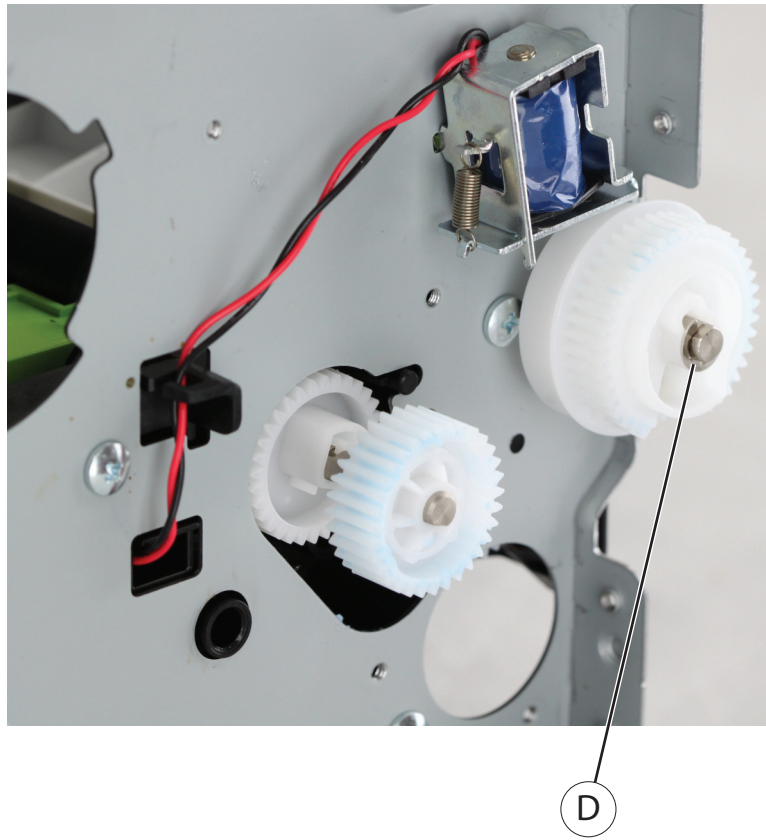
8 Release the two latches (E), and then remove the gears (F).
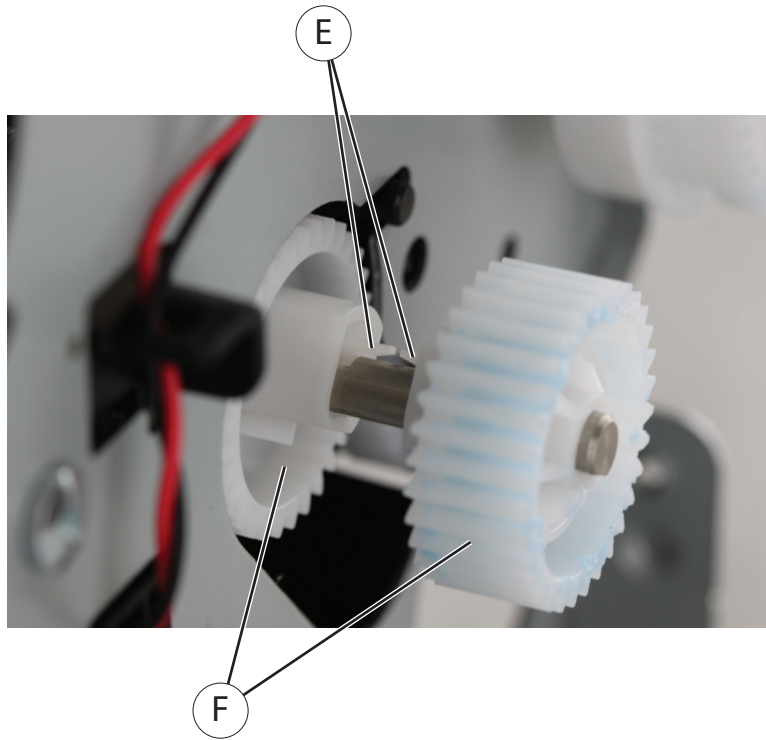
Fuser actuator removal

1 Remove the left cover. See **"Left cover removal" on page 177**.

2 Release the latch (A), and then detach the link.

3 Remove the four screws (B).

4 Remove the screw (C).
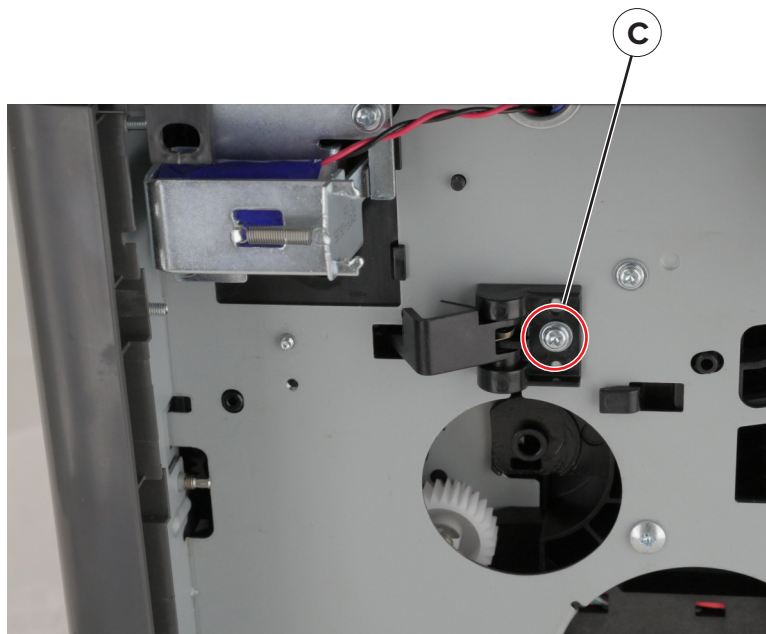
5 Remove the fuser actuator.

Installation note: To test if the actuator is properly installed, push, and then release the actuator (A). The actuator should bounce back.
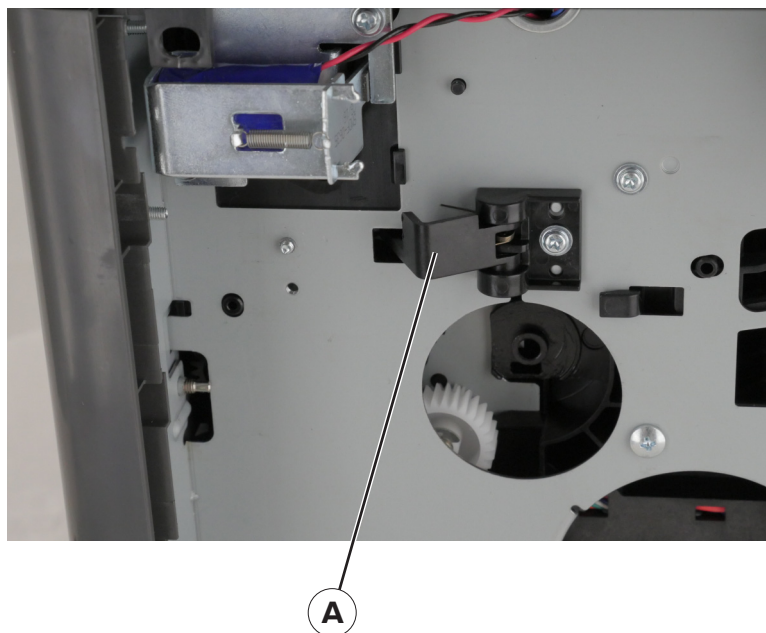
Reverse solenoid removal

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Remove the left cover. See **"Left cover removal" on page 177**.

3 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

Parts removal

4 Remove the top cover. See **"Top cover removal" on page 249**.

5 Disconnect the cable JDUPSOL1 from the controller board.

6 Remove the two screws (A).
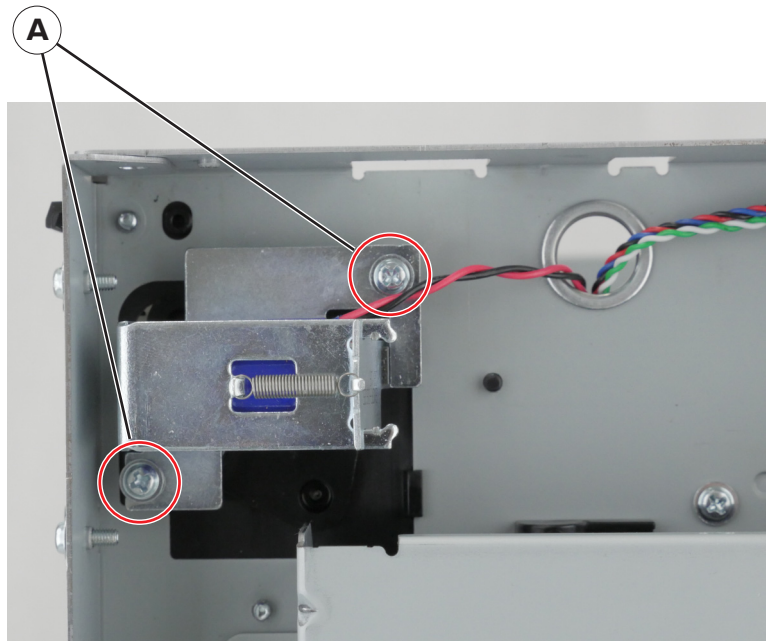
7 Remove the solenoid.

Cartridge gearbox removal

1 Remove the left cover. See **"Left cover removal" on page 177**.

2 Remove the four screws (A).

Parts removal
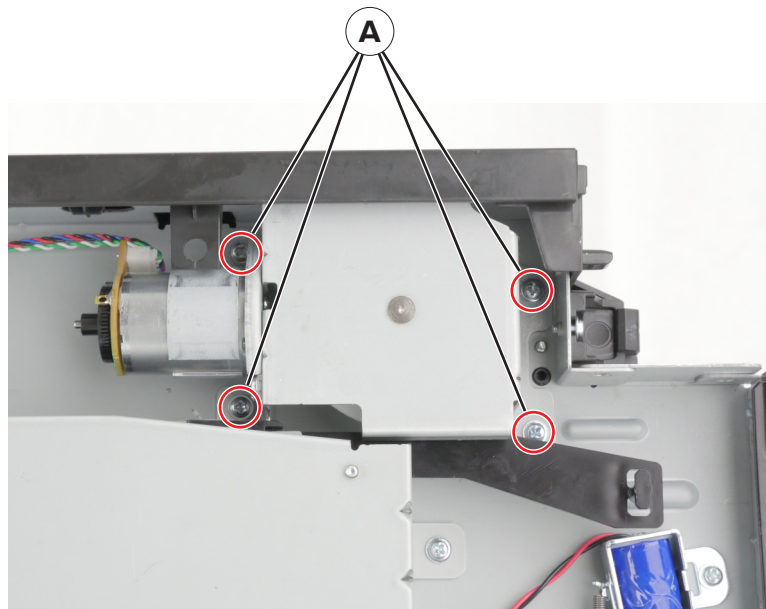
3 Remove the screw (B).
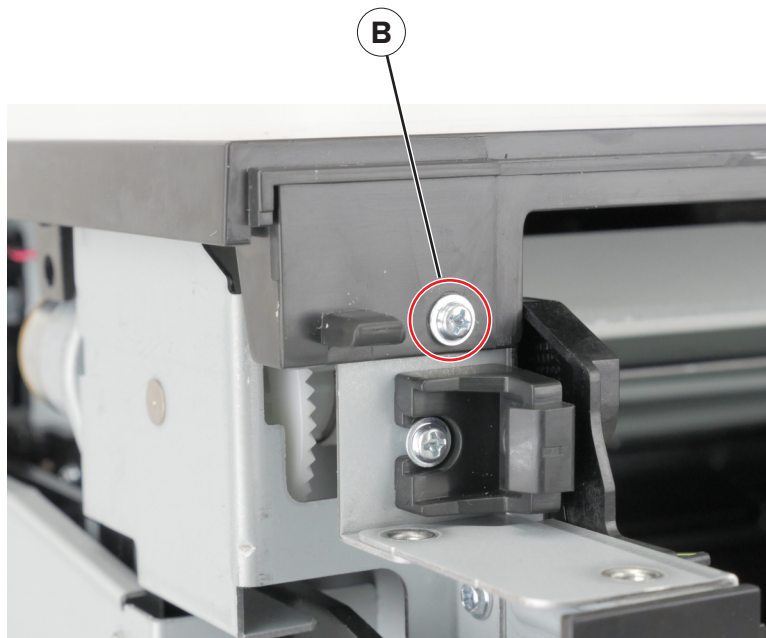
4 Lift the top cover enough to remove the cartridge gearbox.

5 While lifting the cover, disconnect the cable from the gearbox, and then remove the gearbox.

MPF solenoid removal

1 Remove the left cover. See **"Left cover removal" on page 177**.

2 Remove the screw (A).
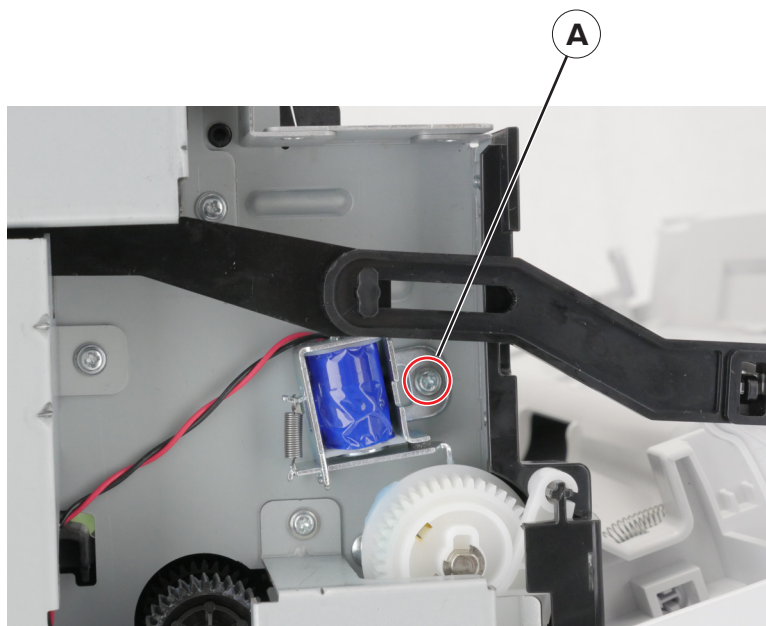
3 Cut the cable, and then remove the solenoid.

4 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

5 Remove the power supply. See **"Power supply removal" on page 225**.

6 Remove the duplex assembly. See **"Duplex assembly removal" on page 227**.

7 Release the cut cable.

   Note: Pay attention to the cable route.

8 Open the controller board access cover, and then disconnect the cable.

Duplex gear kit removal

1 Remove the left cover. See **"Left cover removal" on page 177**.

2 Remove the main drive gearbox. See **"Main drive gearbox removal" on page 179**.

3 Remove the duplex. See **"Duplex assembly removal" on page 227**.

4 Remove the five screws (A).
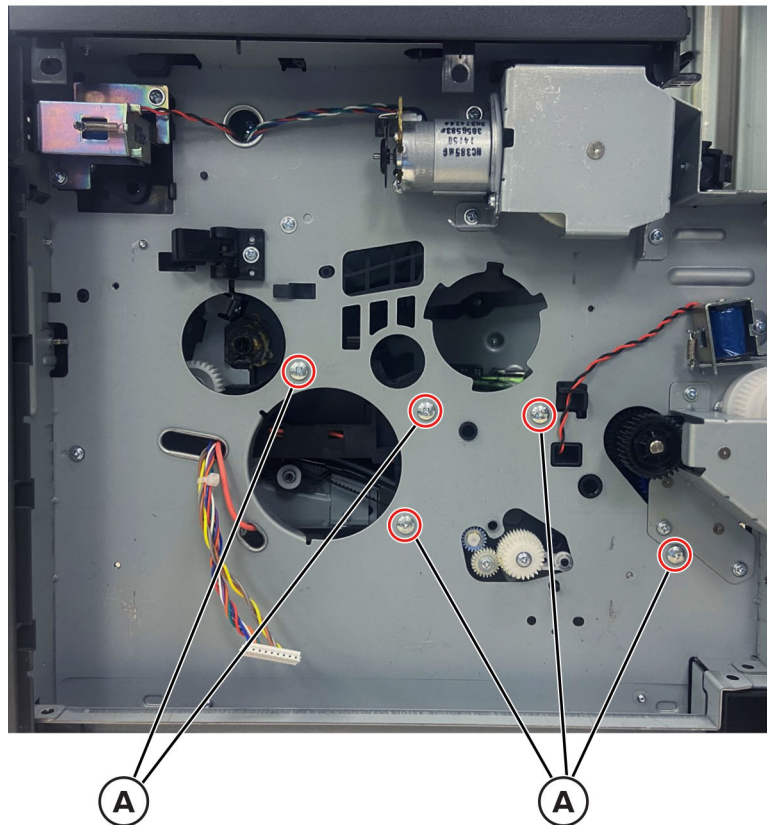
5 Pull the left frame to release it from the main frame.

6 Remove the duplex drive bushing (B).
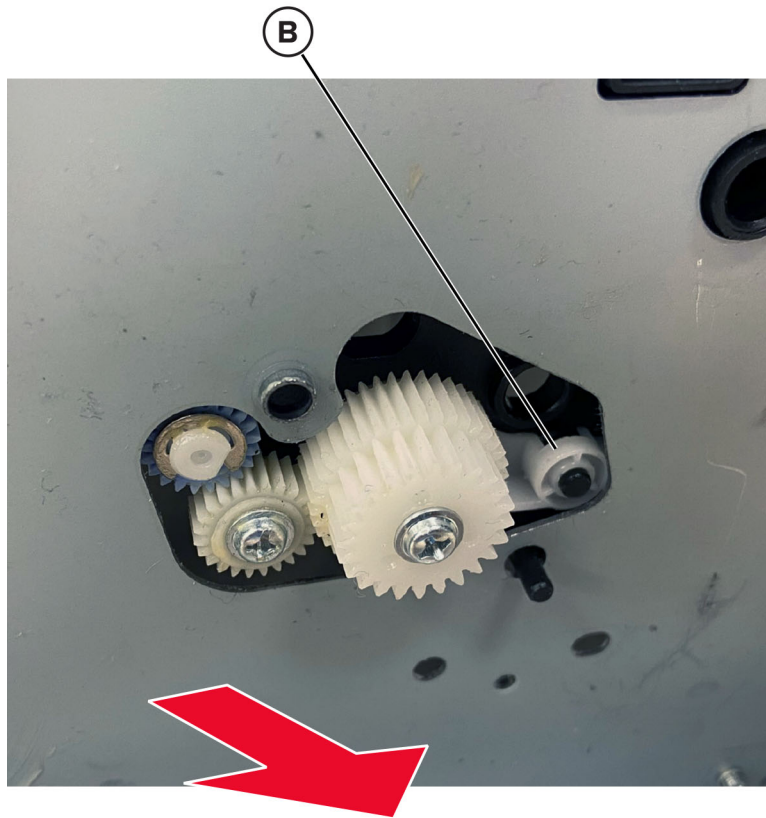
Right side removals

Right cover removal

1 Open the front door.

2 Using a flat-head screwdriver, open the controller board access cover.
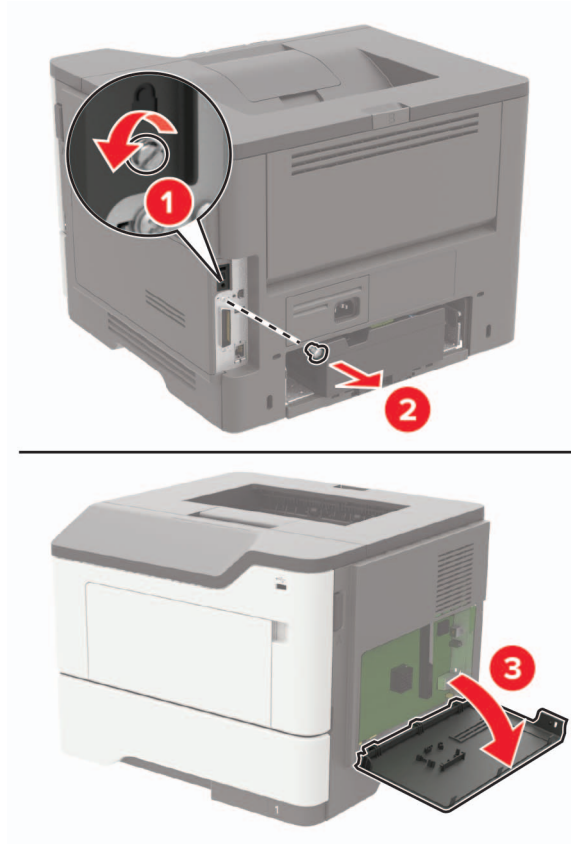
3 Position the printer on its left side, and then remove the screw (A).

4 Remove the two screws (B) using a #1 Phillips screwdriver.
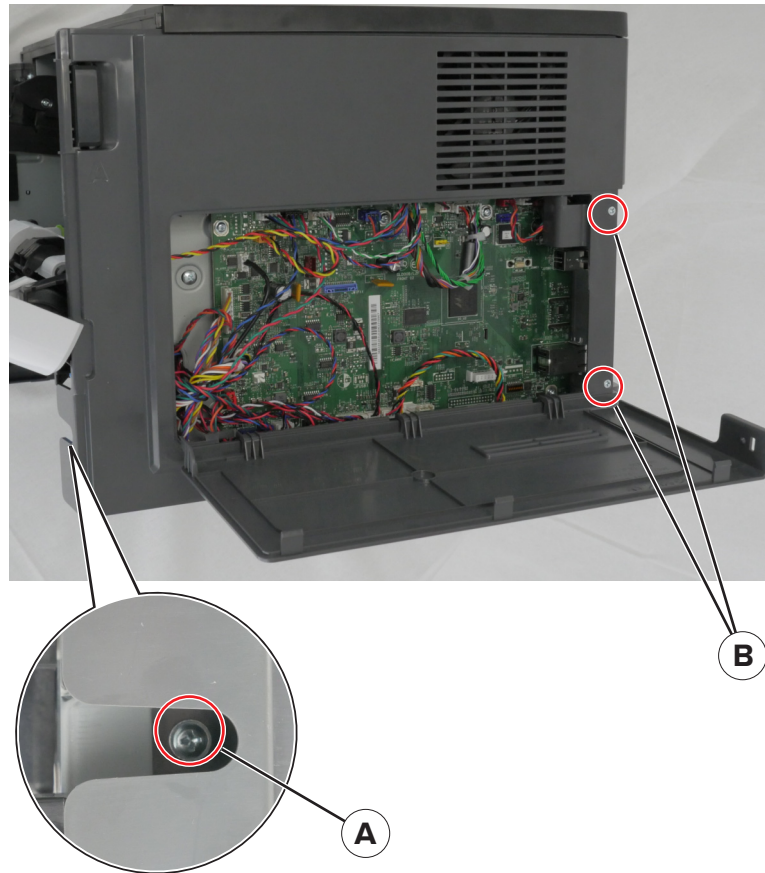
5 Release the two latches (C).
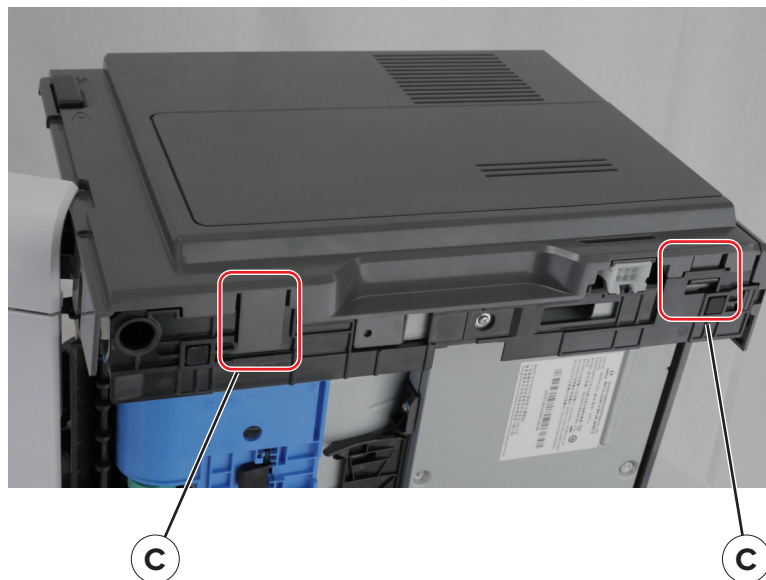
6 Remove the right cover.

Note: The front cover hinders the removal.

Interconnect cable removal

1 Remove the right cover. See **"Right cover removal" on page 189**.

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).
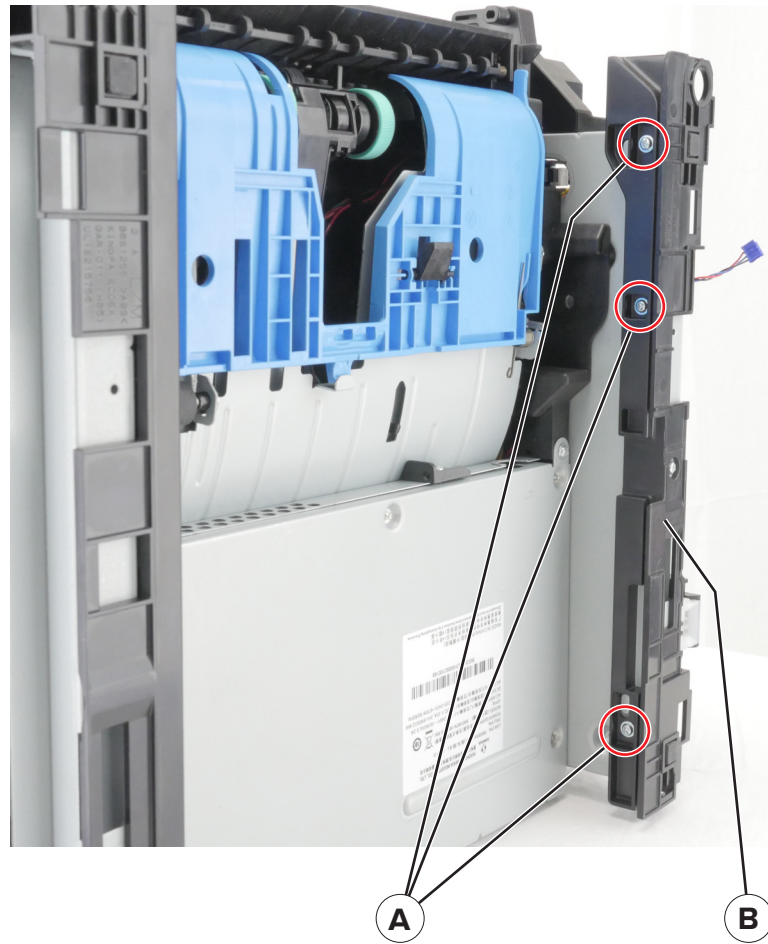
6 Release the two latches (C).
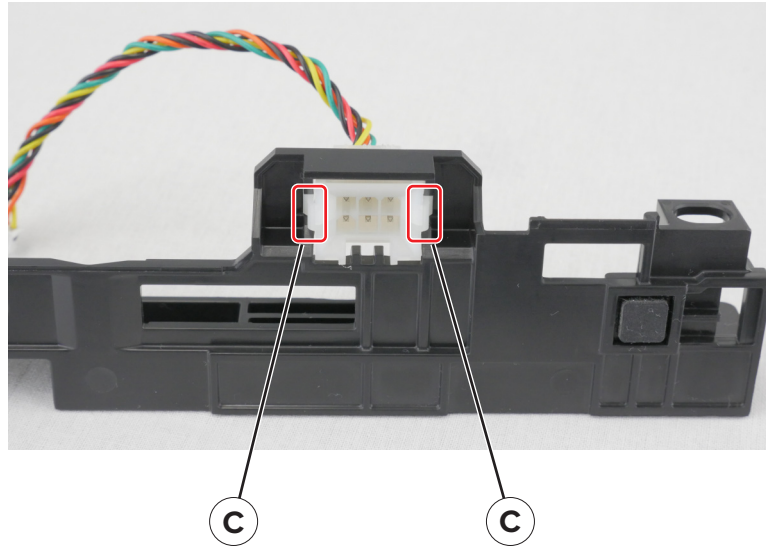
7 Remove the cable.

Sensor (tray present) removal

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Disconnect the cable (A).

3 Release the three latches (B), and then pry to remove the sensor.
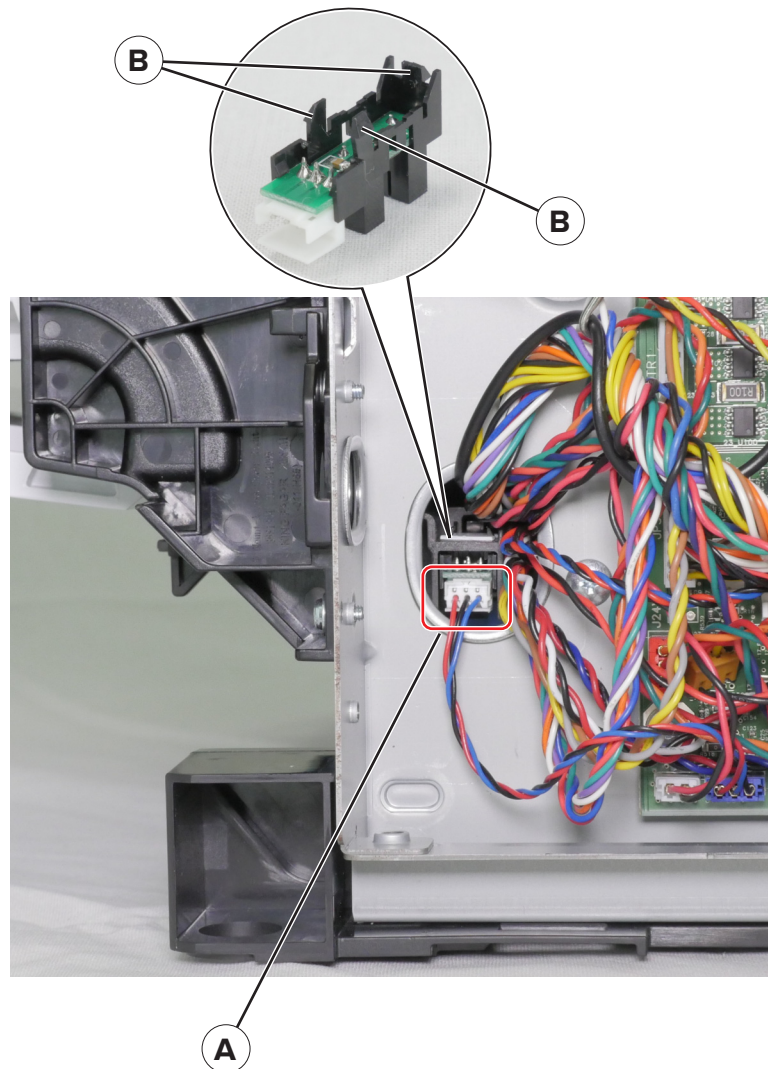
Cooling fan removal

MS621 and B2650 cooling fan

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Disconnect the cable JFAN1 from the controller board.

3 Remove the three screws (A), and then remove the fan duct.
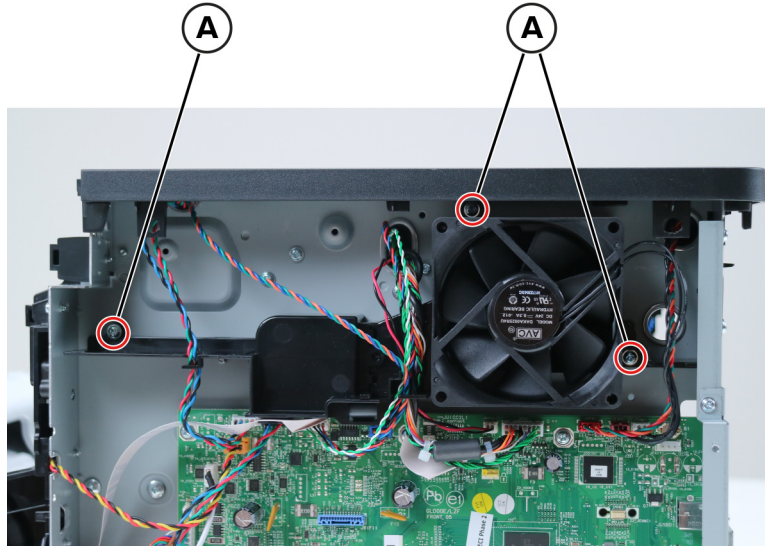
4 Remove the screw (B), and then remove the fan bracket.
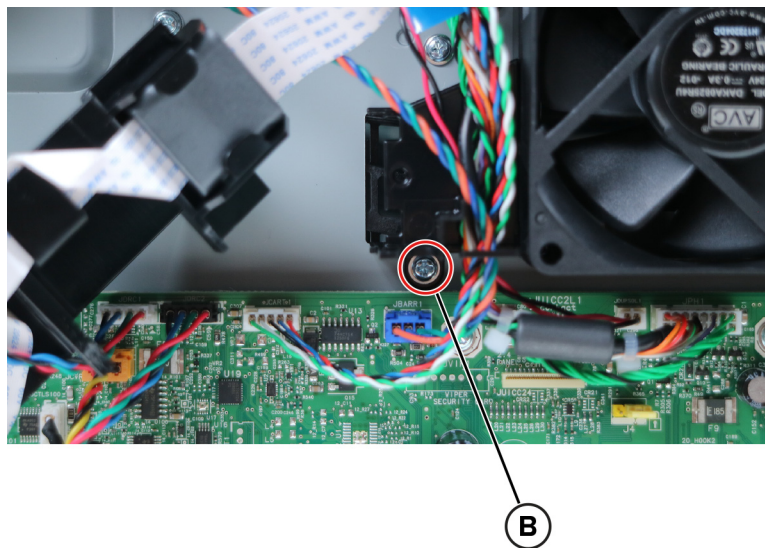
5 Remove the two screws (C), and then remove the fan.
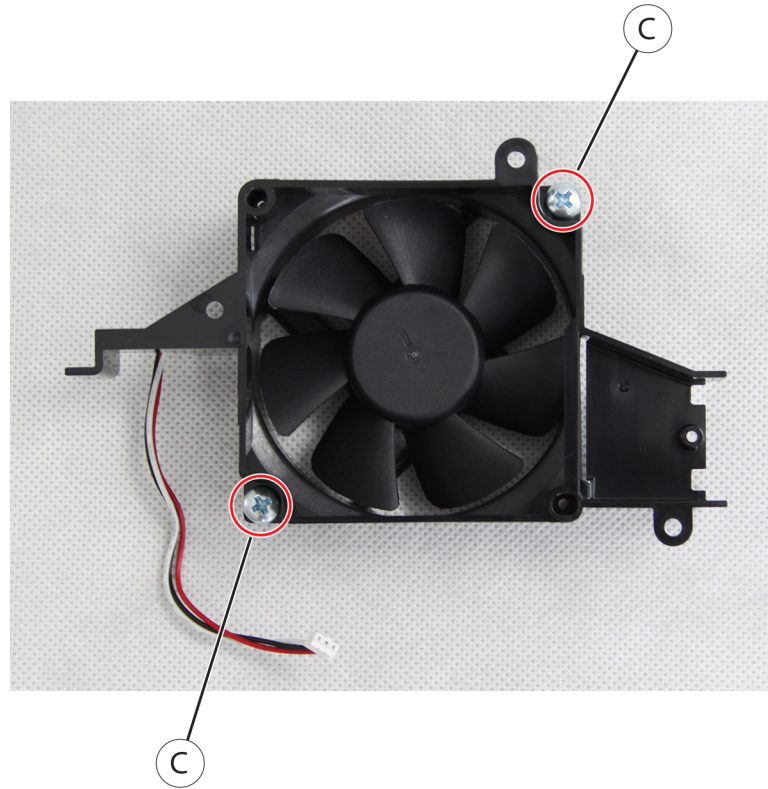
MS622 and M3250 cooling fan

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Disconnect the cable JFAN1 from the controller board.

3 Remove the three screws (A), and then remove the fan duct.
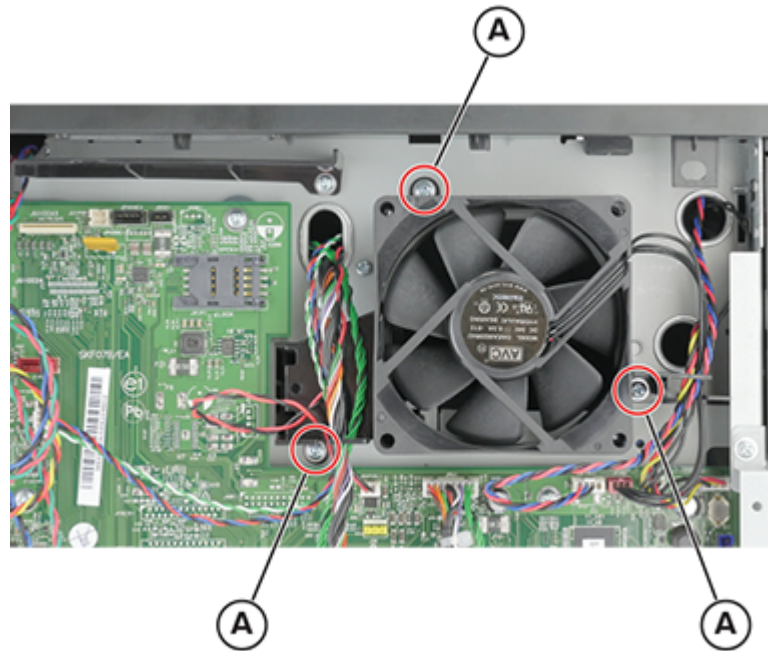
4 Remove the two screws (B), and then remove the fan.

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, 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.

Converting controller boards

To replace an L-shaped controller board with a rectangle-shaped controller board or replacing a rectangle-shaped controller board with an L-shaped controller board, do the following:

1 Take note of the controller board ports.

| L-shaped controller board | |
| Rectangle-shaped controller board | |
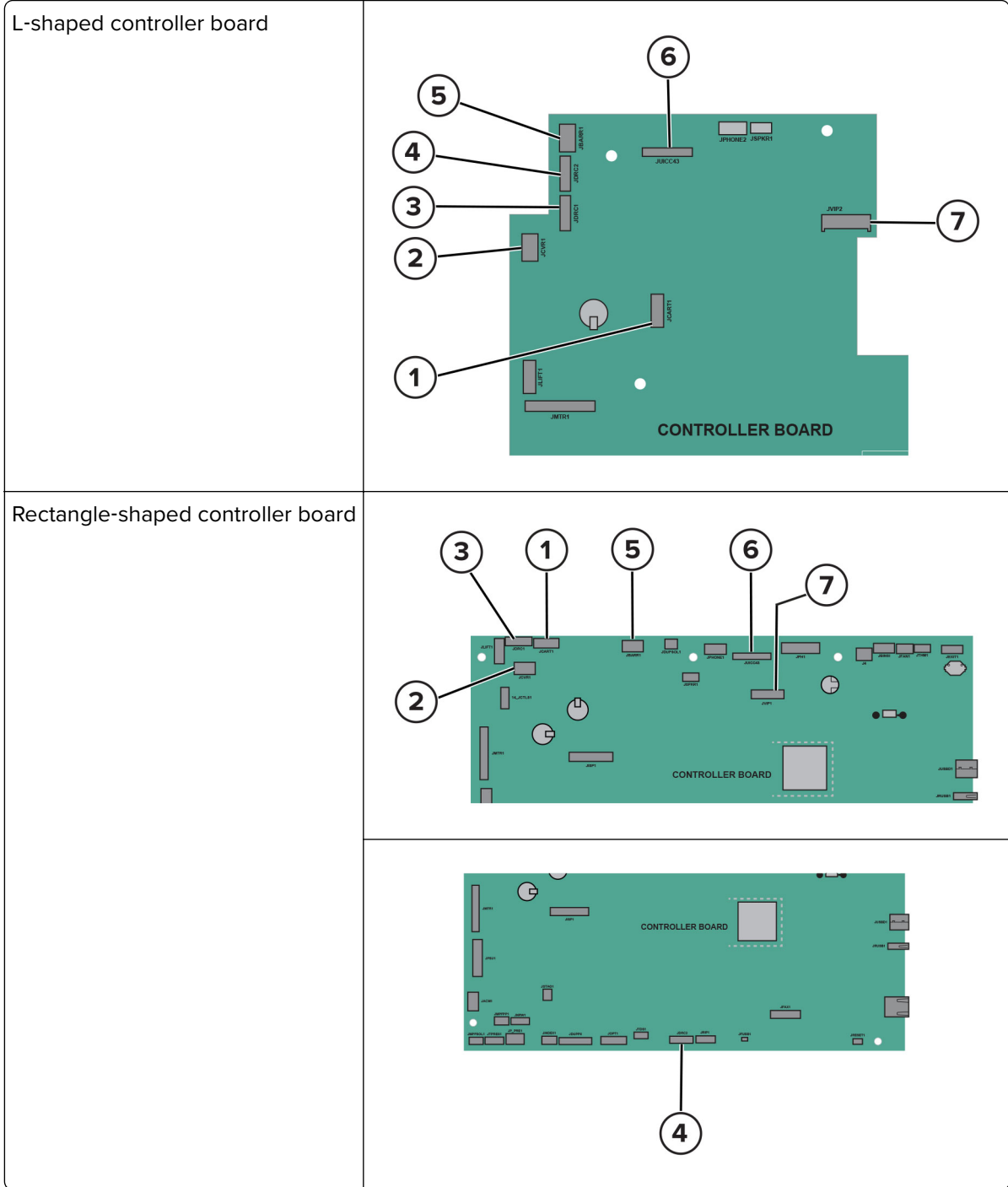
Refer to the following table to know the appropriate controller board port for each connector.

Port number	Connector	Connects to
1	JCART1	Motor (cartridge)
2	JCVR1	Sensor (cover open)
3	JDRC1	Cartridge smart chip contact
4	JDRC2	Imaging unit smart chip contact

Parts removal

Port number	Connector	Connects to
5	JBARR1	Sensor (cartridge barrel)
6	JUICC43	Control panel
7	JV1P2	Secure card

2 Connect the connector to its corresponding port number.

Example:

Connect the JCART1 connector from the L-shaped controller board to the port #1 in the rectangle-shaped controller board.

MS621 and B2650 controller board

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Disconnect all the cables.

3 Remove the ground screw (A) and the four screws (B).
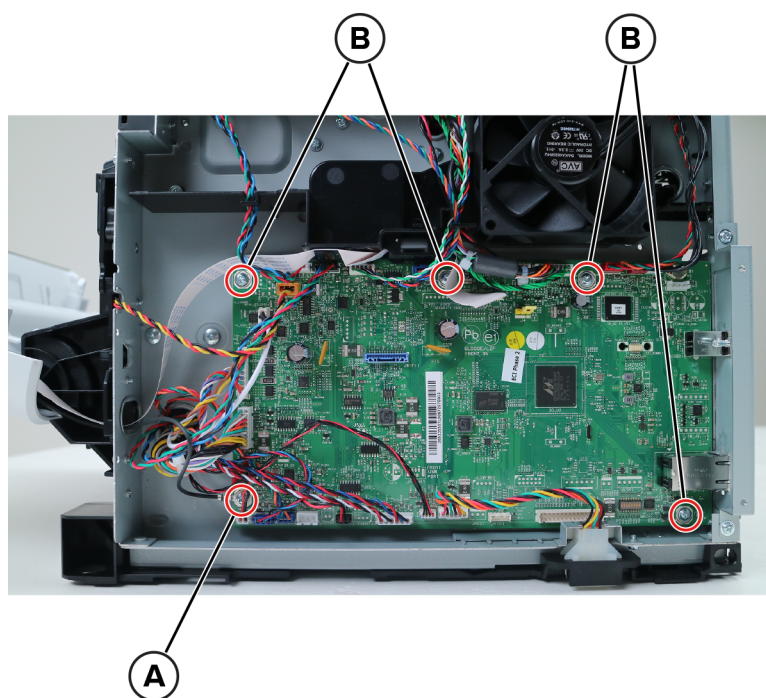
4 Remove the screw (C).
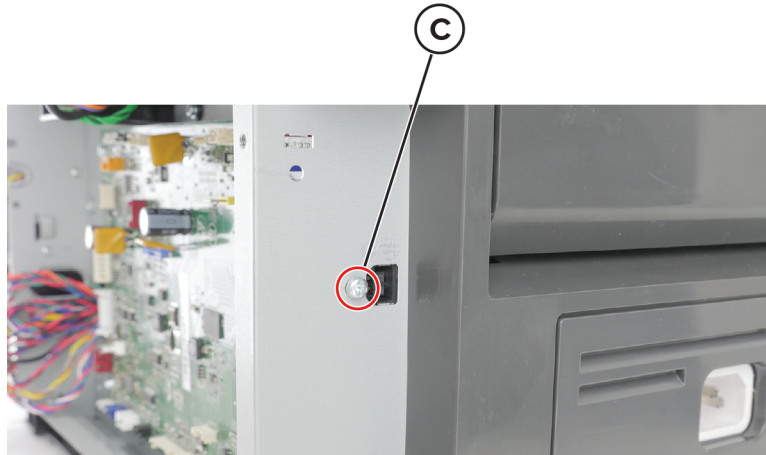
5 Remove the controller board.

MS622 and M3250 controller board

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Disconnect all the cables.

3 Remove the seven screws (A) and the screw (B) from the rear of the printer.
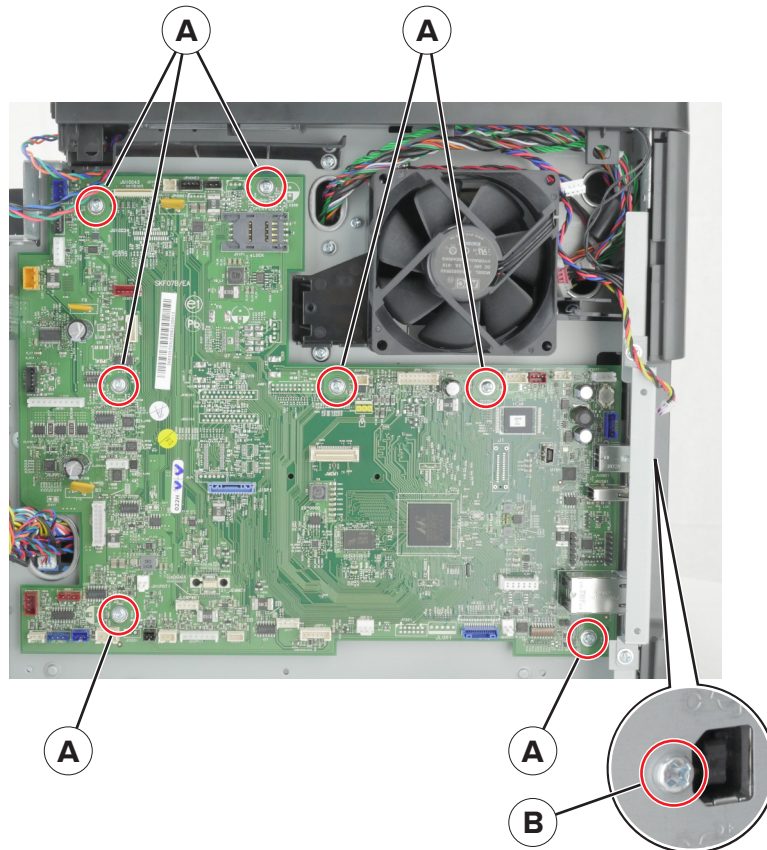
4 Remove the controller board.

Toner cartridge smart chip contact removal

1 Remove the top cover. See **"Top cover removal" on page 249**.

2 Remove the right cover. See **"Right cover removal" on page 189**.

3 Disconnect the cable JBARR1 from the controller board.
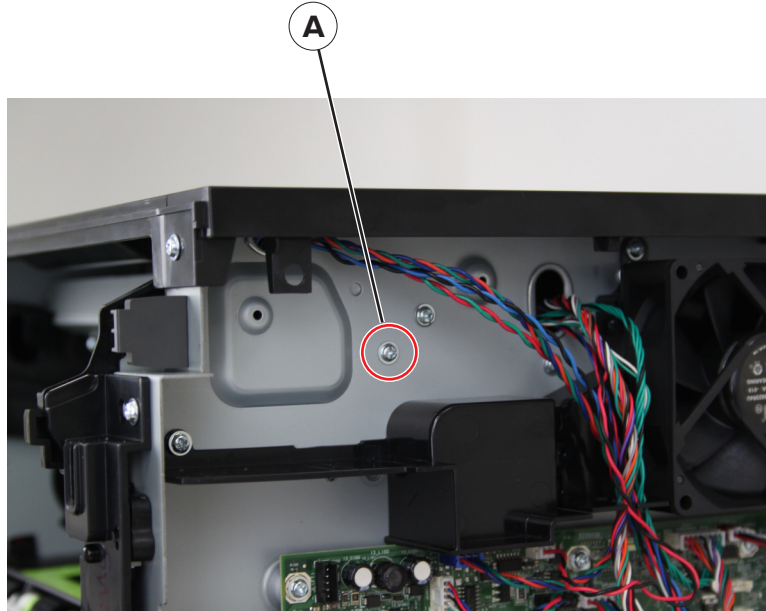
4 Remove the screw (A).

5 Remove the two screws (B), and then lower the right cartridge guide.

6 Slightly pull the right cartridge guide to detach it.

Note: The laser scanning unit frame (C) hinders the detachment.

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.
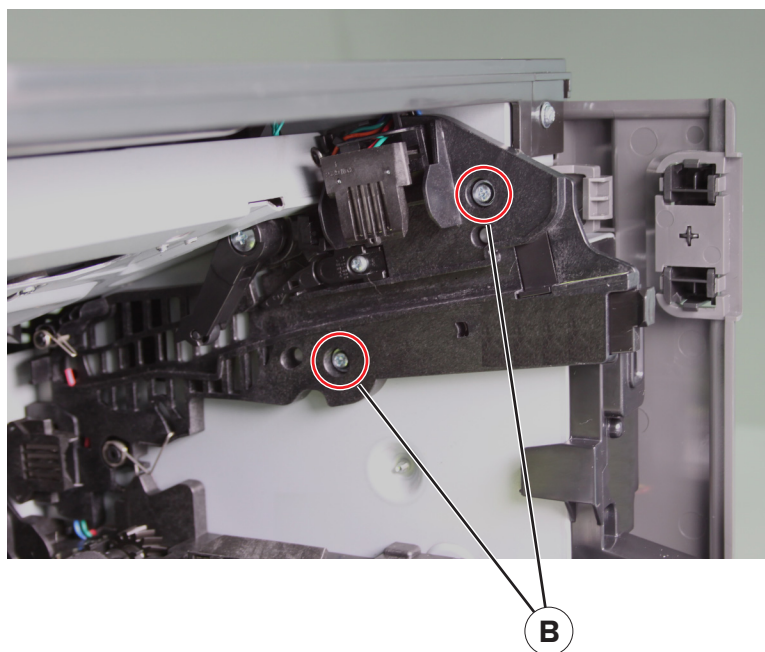
7 Release the four latches (E).
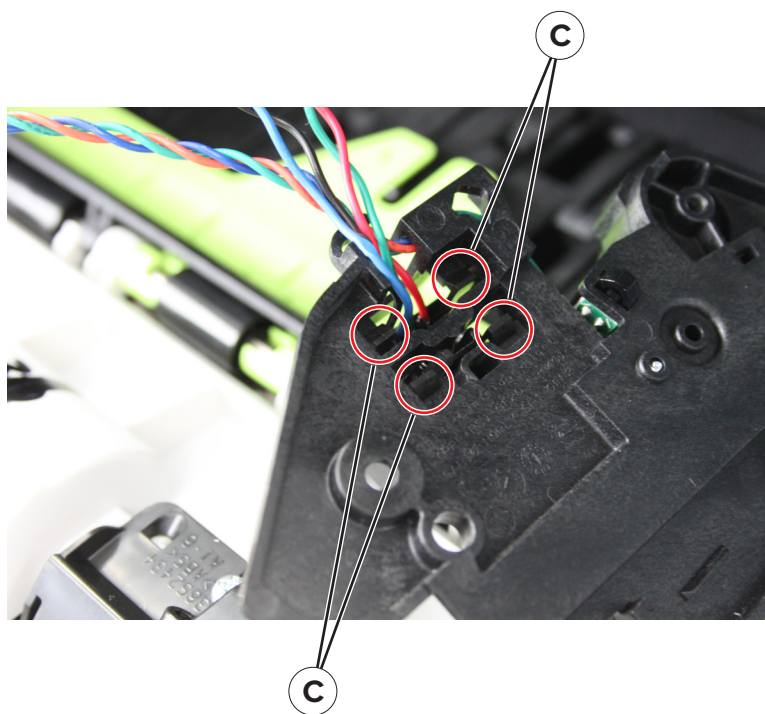
8 Remove the toner cartridge smart chip contact.

   Note: Pay attention to the original position of the spring (F), actuator (G), and lock (H).
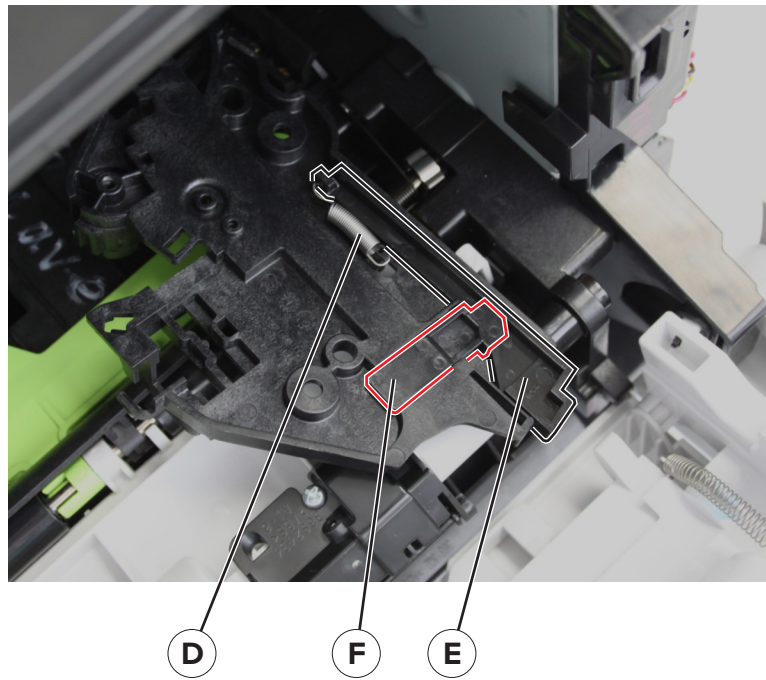
Installation notes:

- To test if the spring and actuator are properly installed, press the actuator (A). The lock (B) should move up.
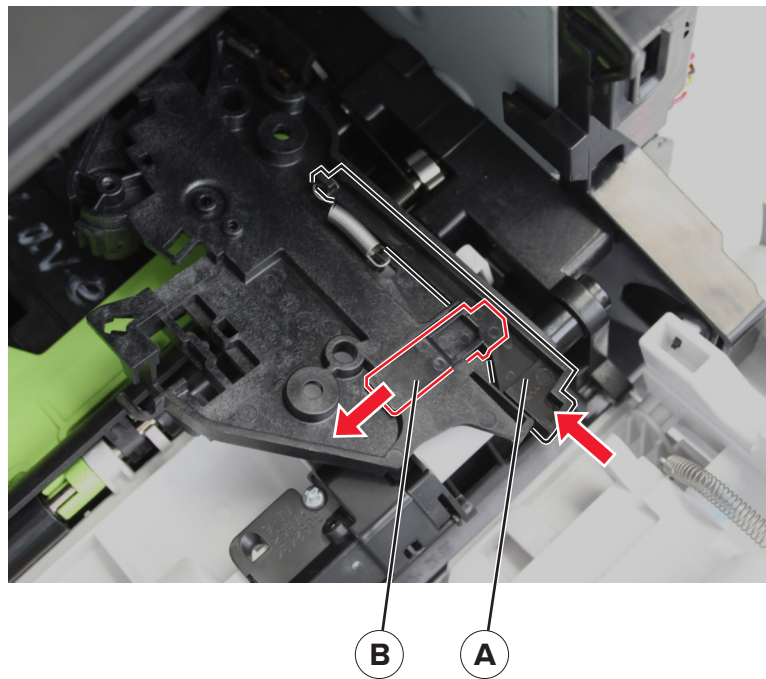
- Make sure that the tab (C) at the back of the cartridge guide is properly installed as shown.
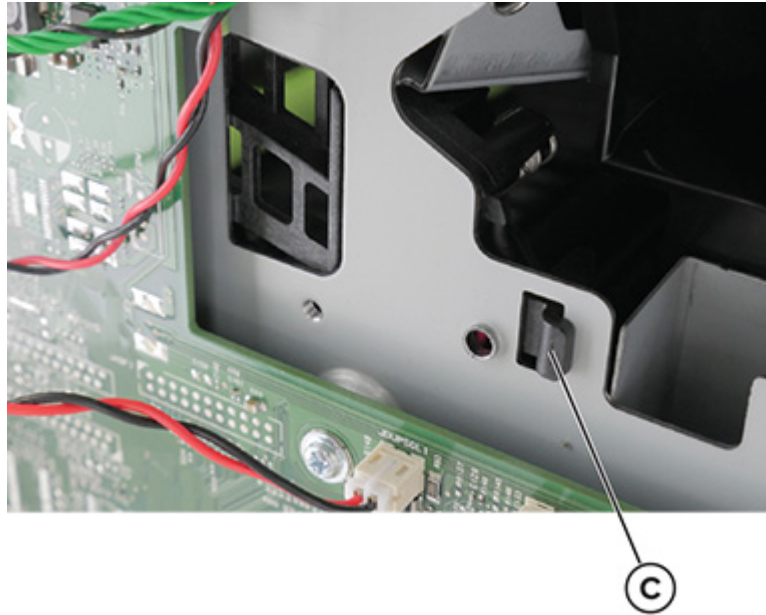
Cartridge barrel shutter sensor kit removal

1 Remove the top cover. See **"Top cover removal" on page 249**.

2 Remove the right cover. See **"Right cover removal" on page 189**.

3 Disconnect the cable JCVR1 from the controller board.

4 Remove the screw (A), and then remove the bracket, actuator, spring, and sensor.

Parts removal
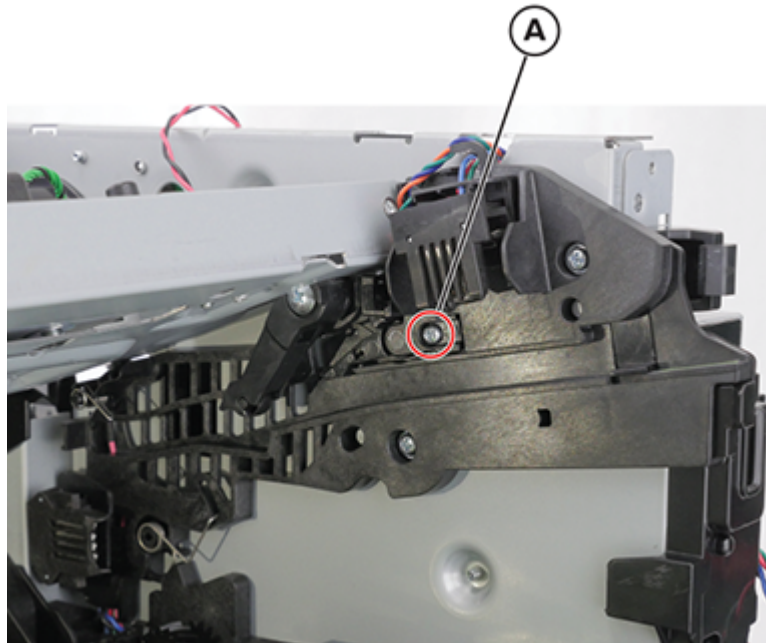
Installation notes:

a Install the sensor (cartridge barrel shutter) actuator (A) as shown.

Note: Make sure that the spring (B) is behind the boss (C).
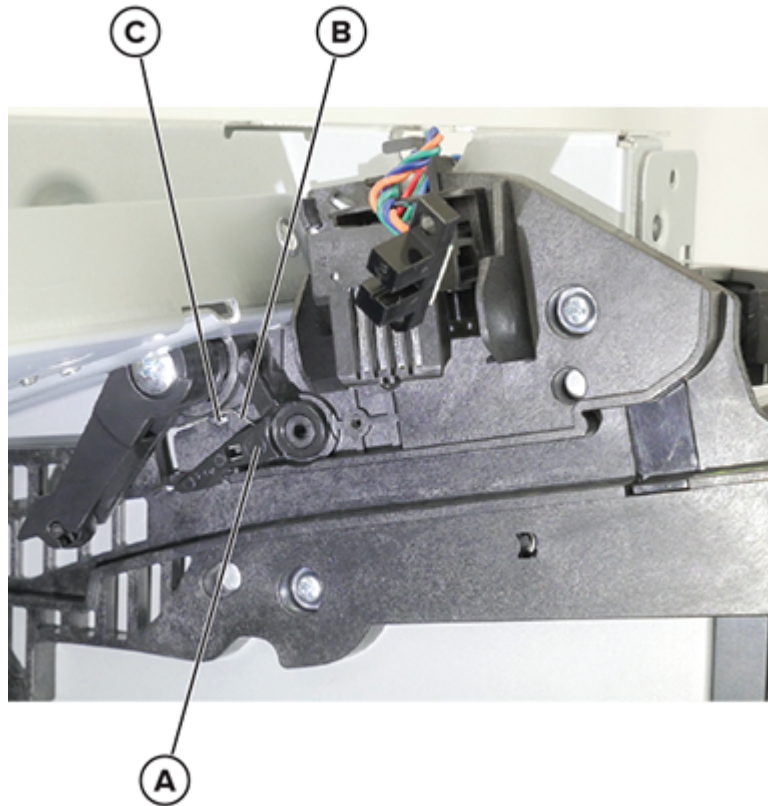
b Install the bracket (D) to the sensor (E) as shown.
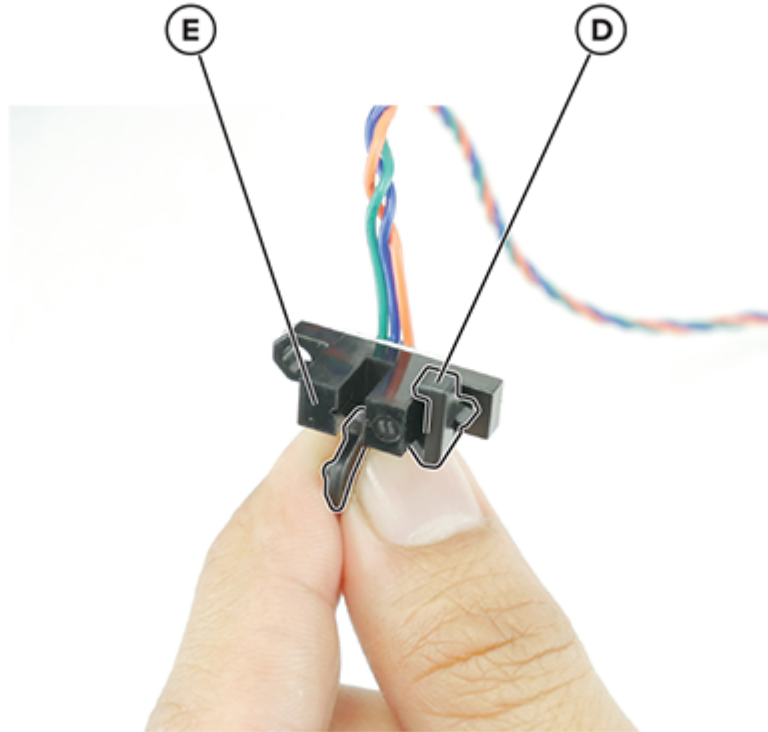
c Install the sensor and bracket as shown.

Note: Make sure that sensor is aligned with the actuator.
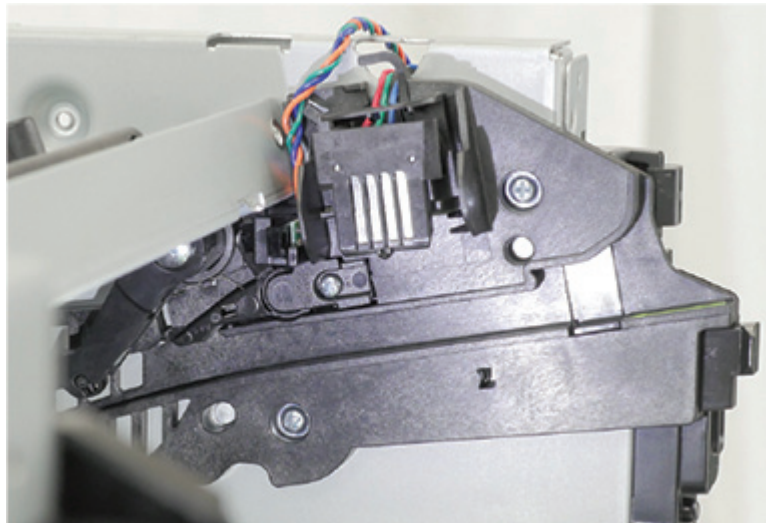
Front removals

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.
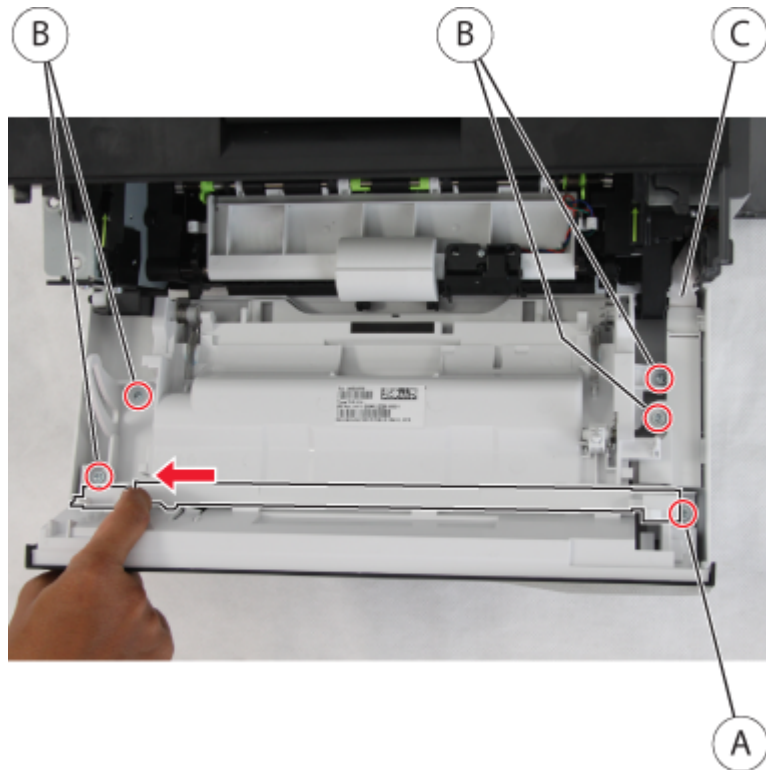
MPF with front access cover removal

1 Remove the nameplate. See .

2 Remove the right cover. See .

3 Release the latch (A), and then detach the link.
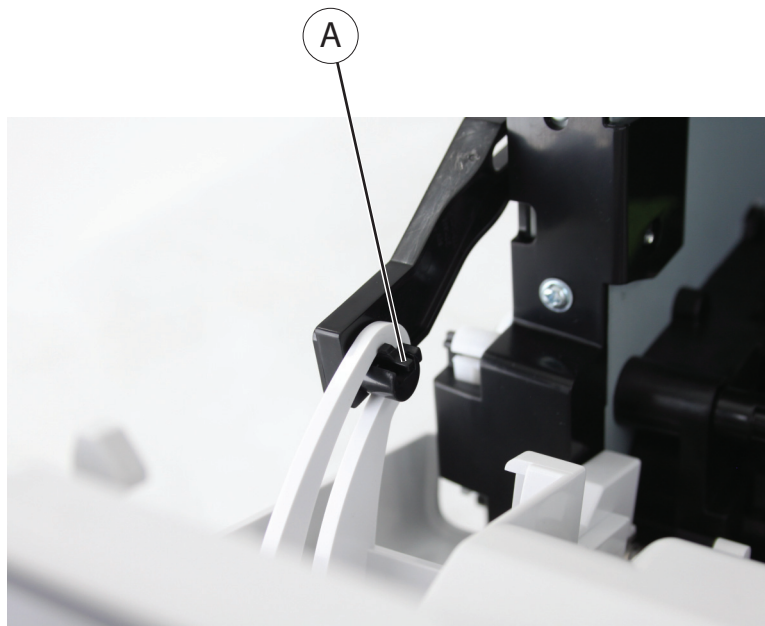
4 On the controller board, disconnect the control panel cable and remove the ground screw.

5 Push the MPF with front access cover to the right, and then remove it.
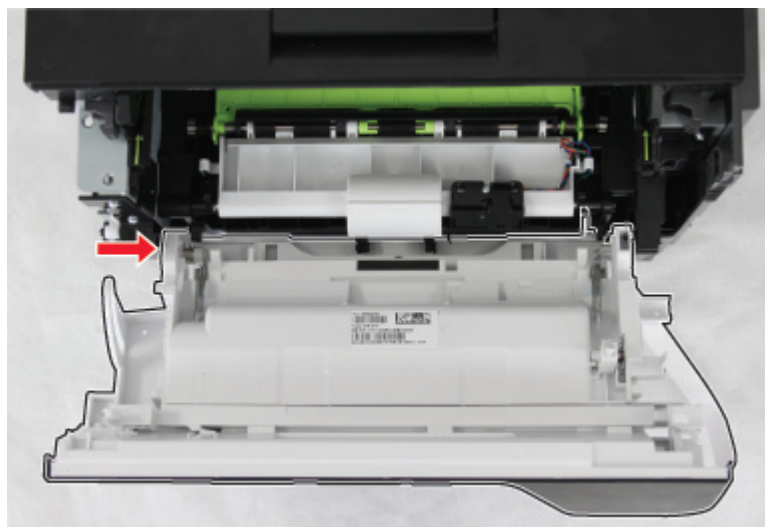
Control panel assembly removal (MS621 and B2650)

1 Remove the nameplate. See .

2 Open the controller board access cover, and then disconnect the control panel cable.

3 Remove the three screws (A) and the bezel (B).
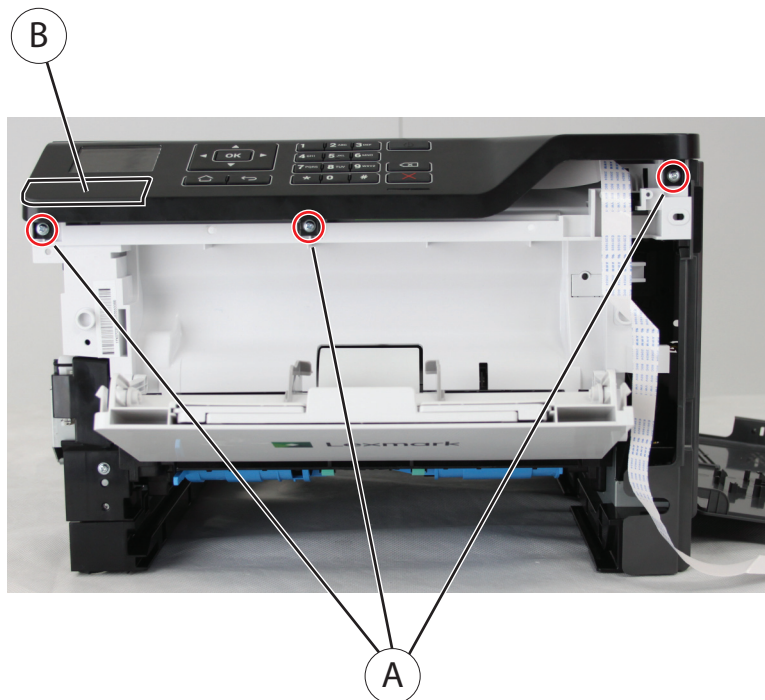
4 Remove the control panel assembly.

Control panel assembly removal (MS622 and M3250)

1 Remove the right cover. See .

2 Remove the nameplate. See .

3 Remove the three screws (A) and the bezel (B).
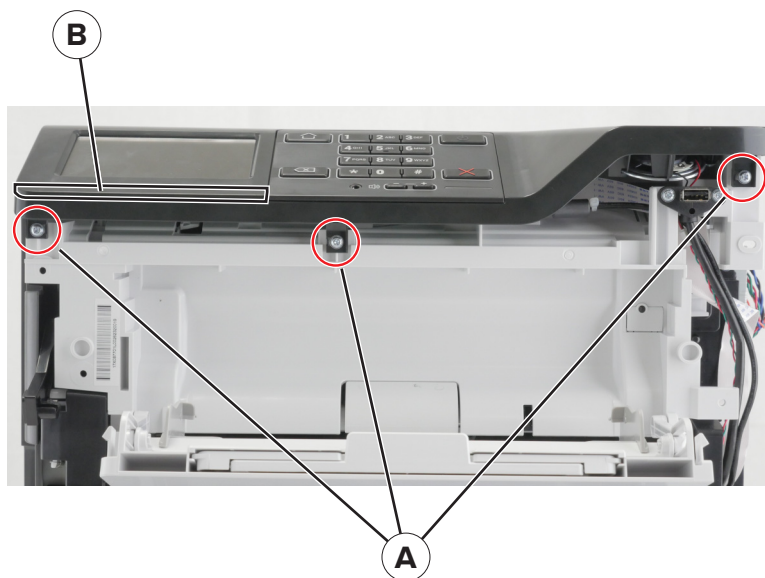
4 Open the front door.

5 Remove the screw (C).

6 Open the controller board access cover, and then disconnect the control panel cables.

7 Lift the stopper (D), and then remove the control panel cables.

8 Remove the control panel assembly.

Control panel (2.4-inch display) cover, buttons, and 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, 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 assembly. See **“Control panel assembly removal (MS621 and B2650)” on page 208**.

2 Disconnect the cable (A), and then remove the 12 screws (B).

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.
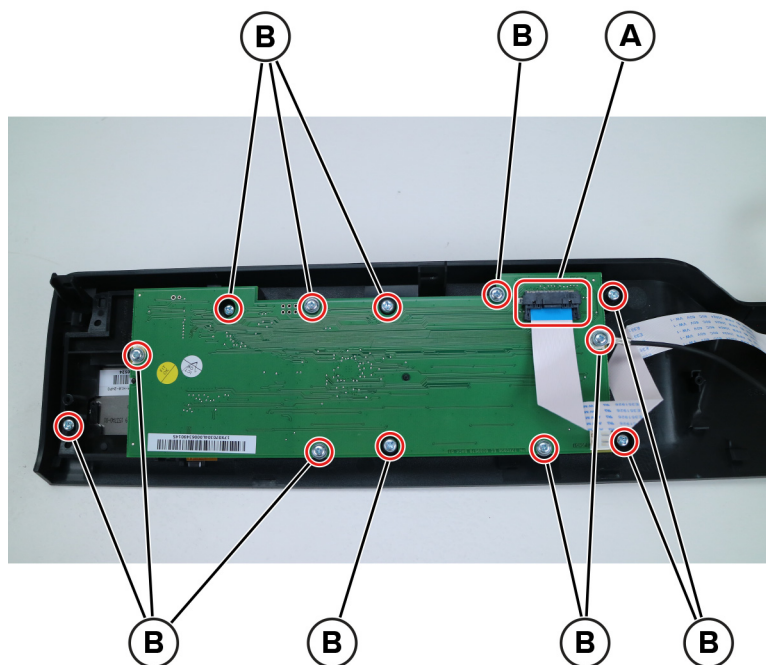
3 Remove the cover, buttons, and board.

Control panel (4.3-inch display) cover, buttons, and 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, 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 right cover. See **"Right cover removal" on page 189**.

2 Remove the nameplate. See **"Nameplate removal" on page 207**.

3 Remove the control panel assembly. See **"Control panel assembly removal (MS622 and M3250)" on page 209**.

4 Release the latch (A), and then remove the cable.

5 Remove the 10 screws (B).
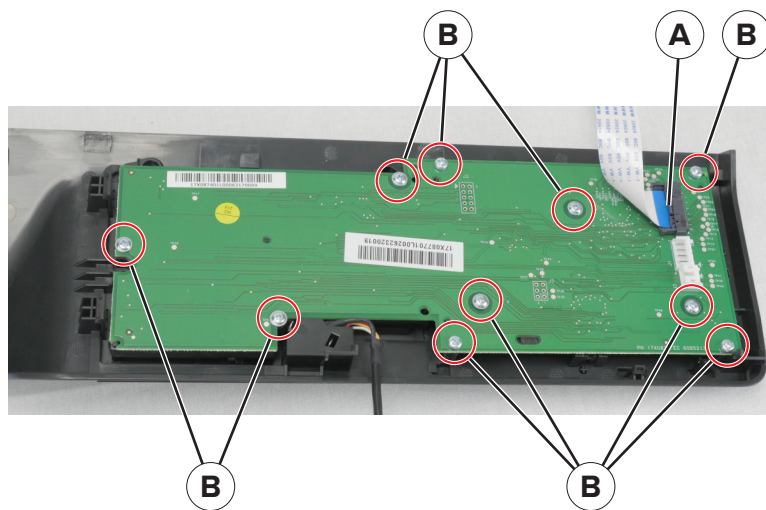
6 Remove the control panel cover, buttons, and board.

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.
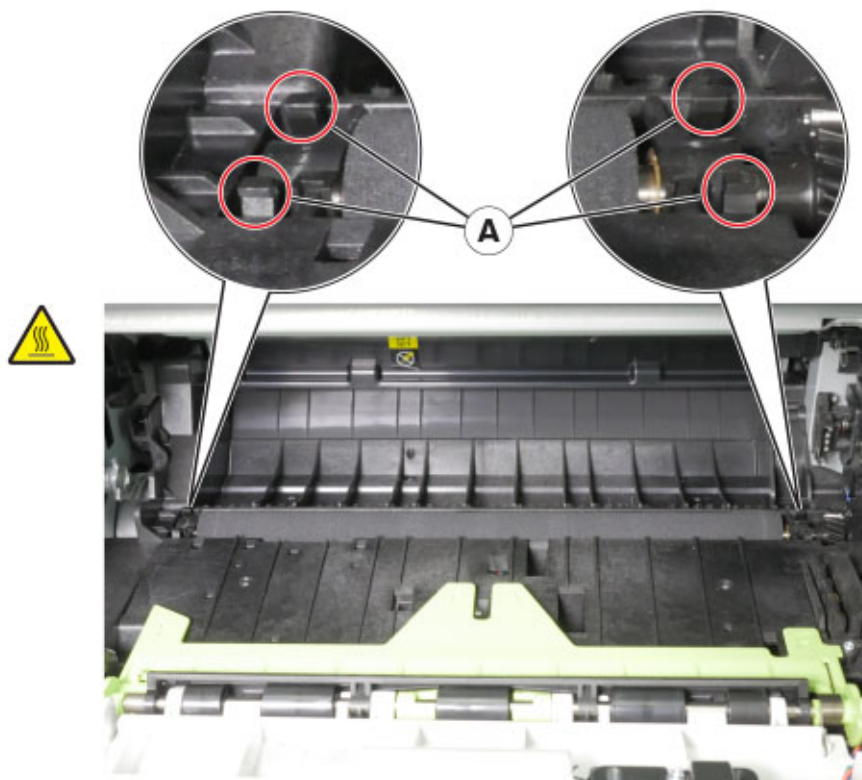
3 Remove the roller.

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.
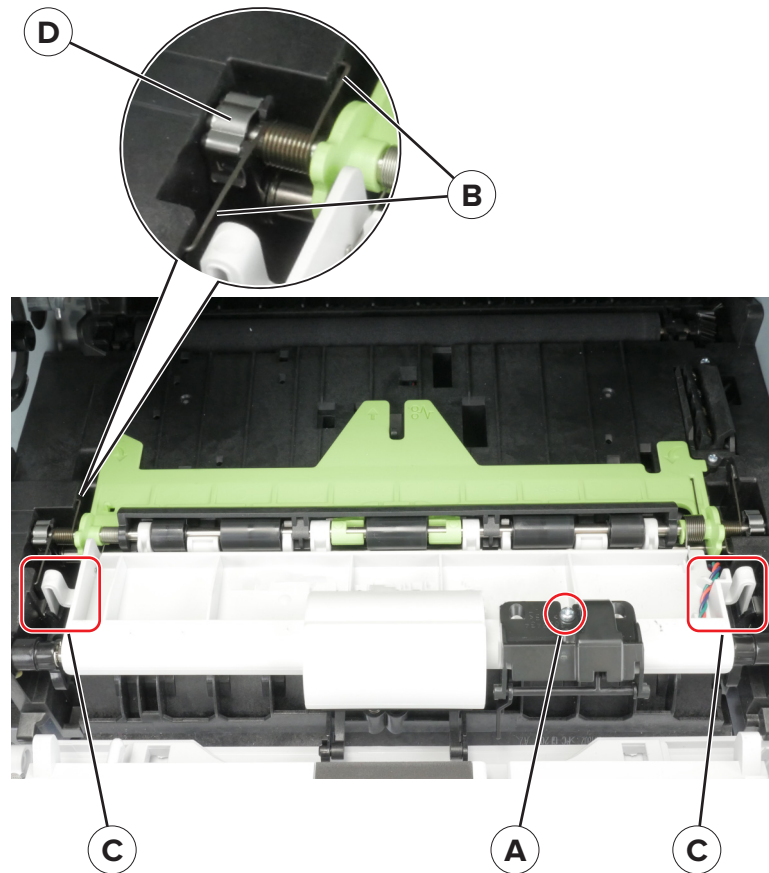
7 Remove the cover.

Sensor (front door) removal

1 Remove the nameplate. See **"Nameplate removal" on page 207**.

2 Remove the right cover. See **"Right cover removal" on page 189**.

3 Disconnect the JCVR1 and control panel cables from the controller board.

4 Remove the four screws (A).
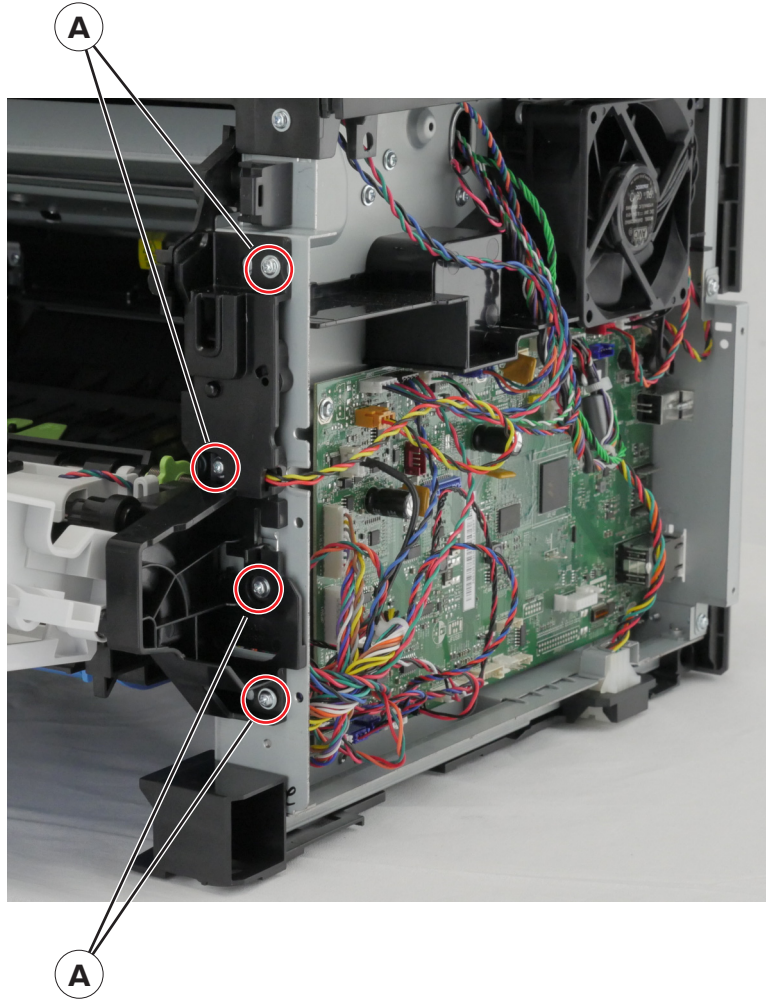
5 Using a #1 Phillips screwdriver, remove the screw (B).
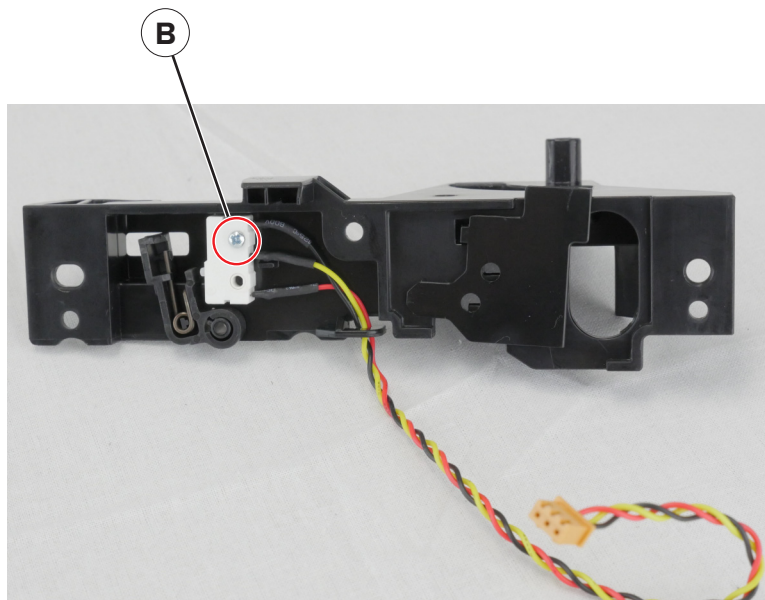
6 Remove the sensor.

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.
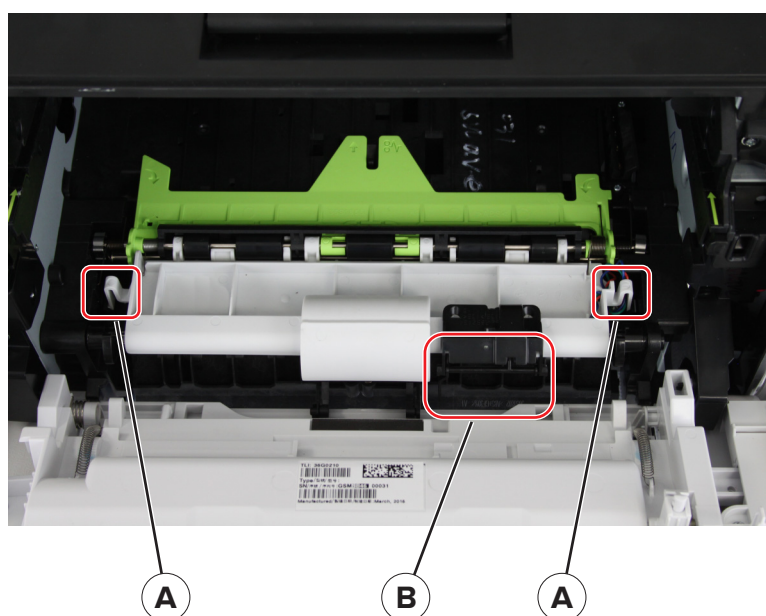
3 Using a #1 Phillips screwdriver, remove the two screws (C).

Parts removal

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4 Hold the end of the shaft (D), and then pull out the roller to remove it.
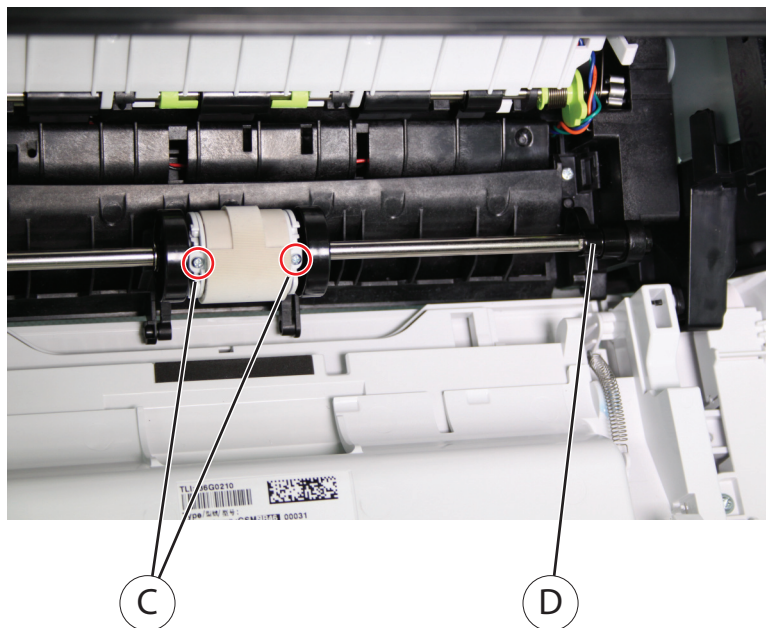
5 Remove the two E-clips (A).
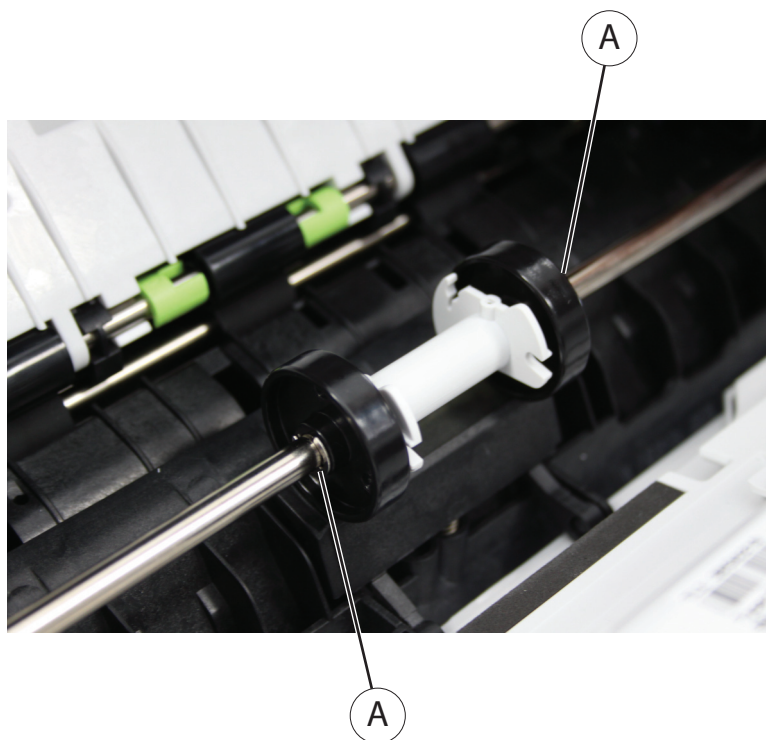
6 Move the roller (B) to the left, and then remove the pin (C).

7 Move the hub (D) and roller (E) to the right.
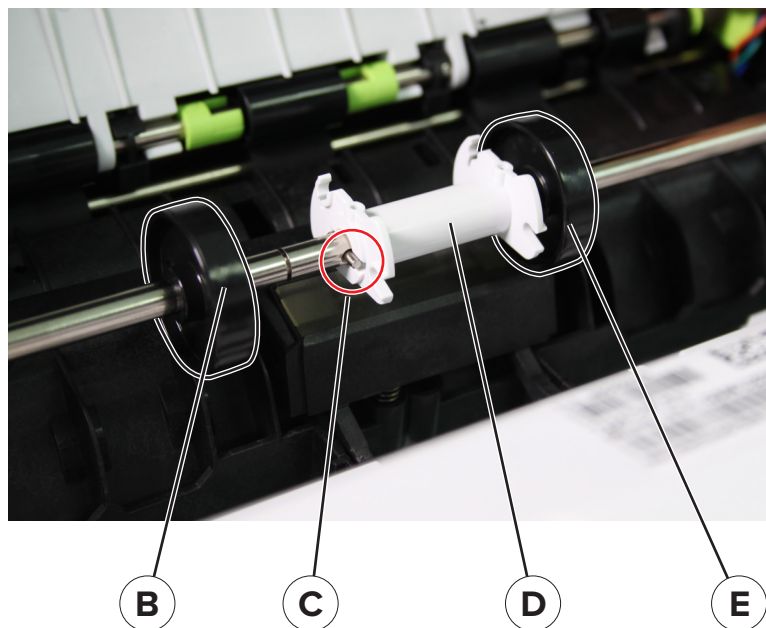
8 Push the separator pad (F) to the right.
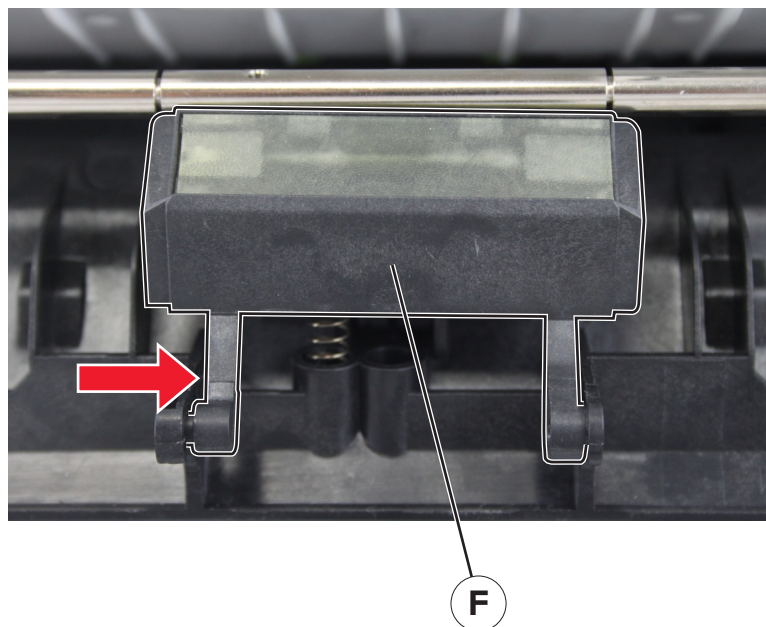
9 Push down the pad to remove it.

Warning—Potential Damage: Do not lose the spring (G).

G
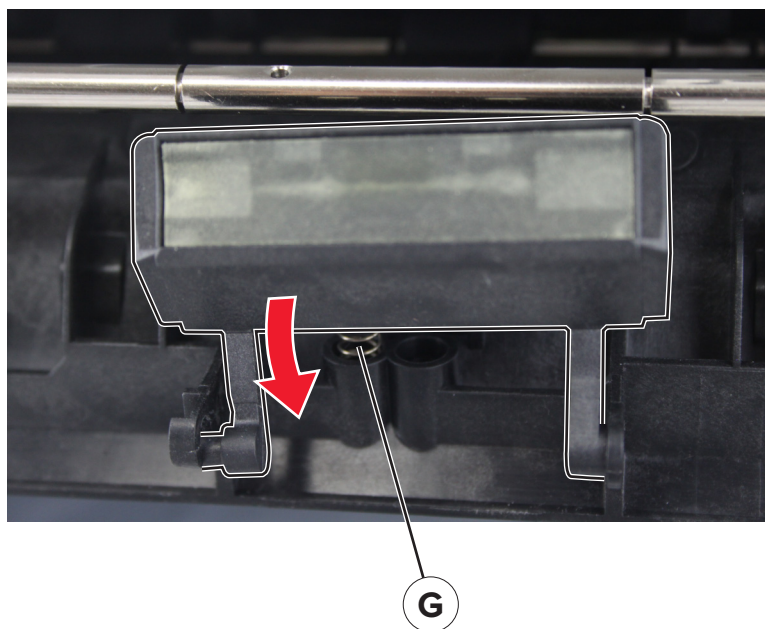
Note: For a video demonstration, see **MPF pick roller and separator pad removal** at **infoserve.lexmark.com/ids/sma**.

Sensor (MPF paper present) removal

1 Open the front door.

2 Remove the screw (A).

A
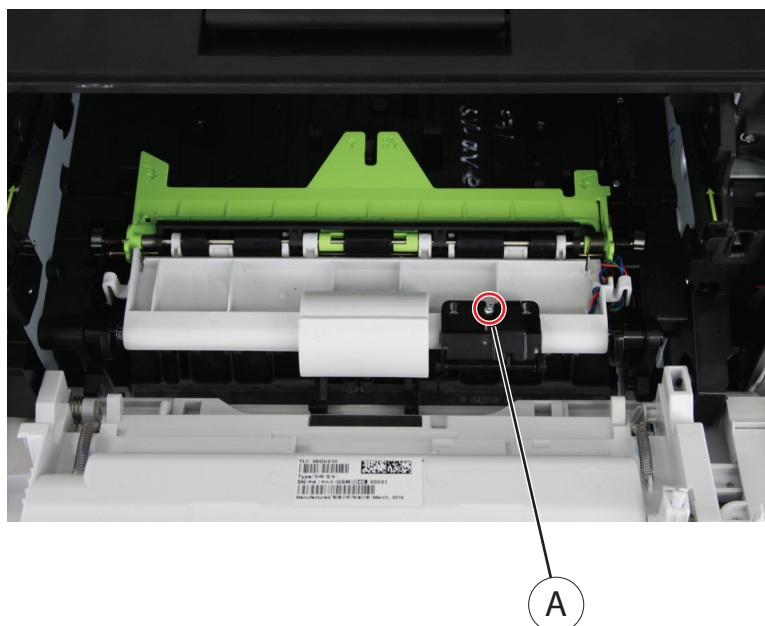
3 Open the controller board access cover, disconnect the cable JMPFPP1, and then release the cable.

4 Remove the sensor.

   Installation note: Pay attention to the position of the MPF sensor flag when installing the sensor.

Parts removal

Front input guide removal

1 Remove the MPF with front access cover. See **"MPF with front access cover removal" on page 207**.

2 Remove the MPF pick roller and separator pad. See **"MPF pick roller and separator pad removal" on page 216**.

3 Remove the two screws (A).
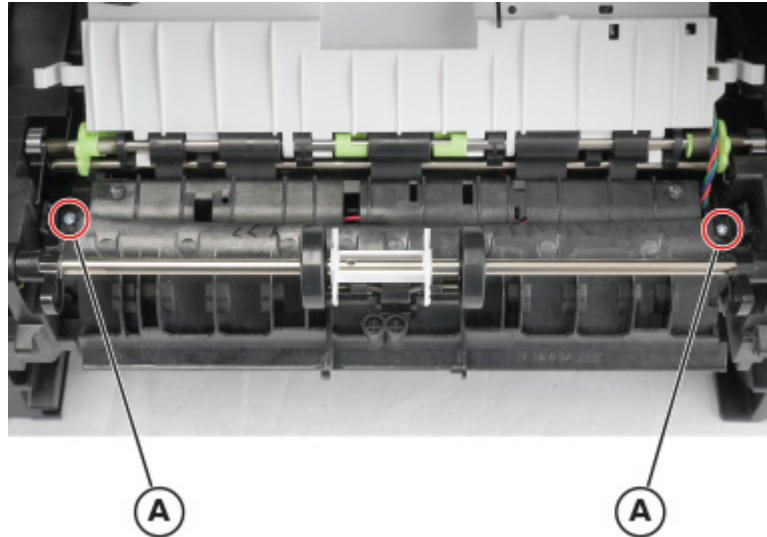
4 Remove the input guide.

Front USB host cable removal

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Remove the nameplate. See **"Nameplate removal" on page 207**.

3 Remove the two screws (A).
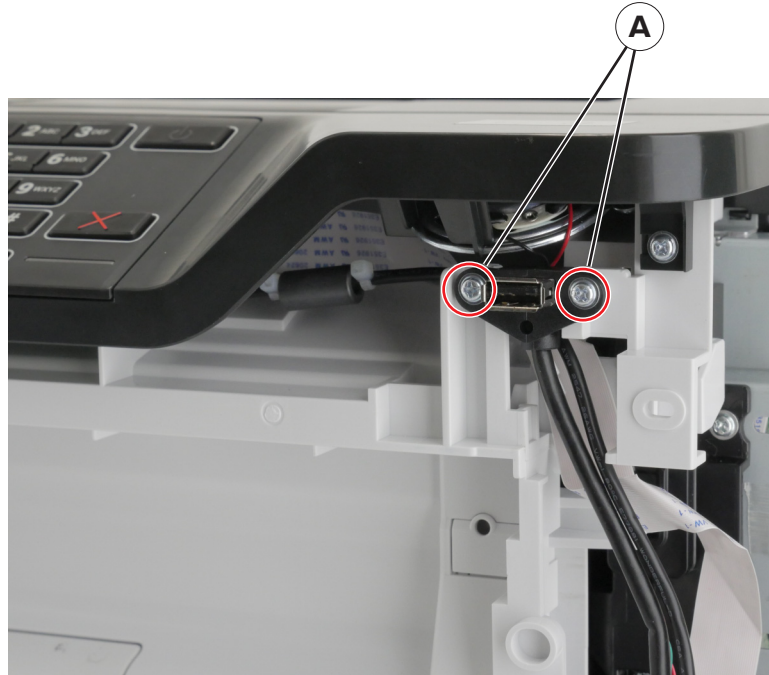
4 Open the front door.

5 Remove the screw (B).

6 Disconnect the cable JPHONE2 from the controller board.

7 Lift the stopper (C), and then remove the cable.
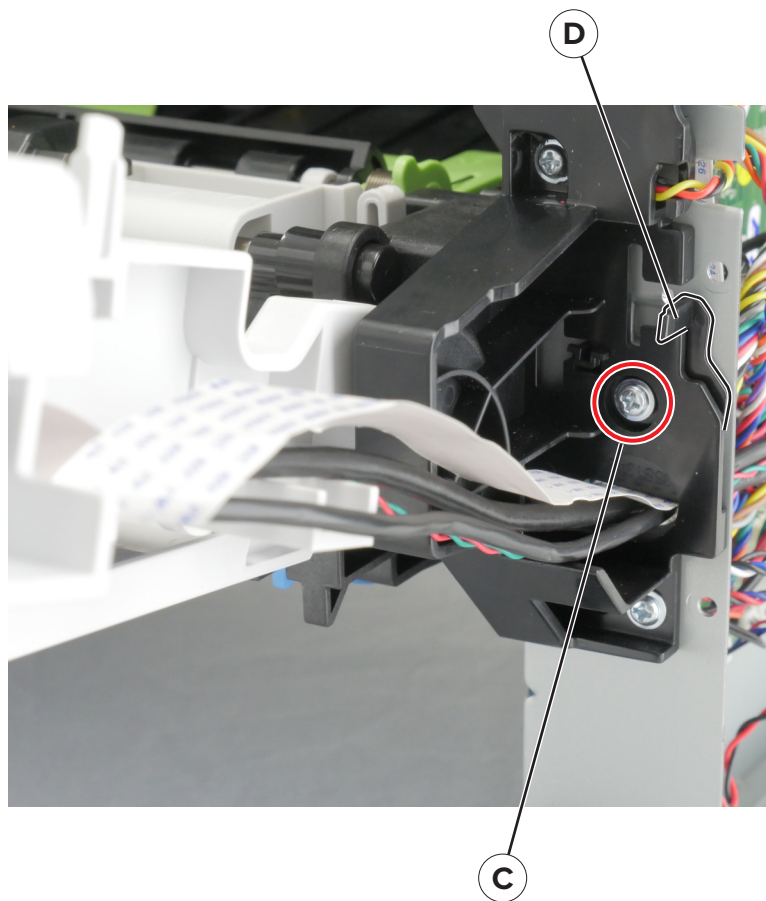
Isolation roller removal

For a video demonstration, see **Isolation roller removal**.

1 Remove the front door. See **"MPF with front access cover removal" on page 207**.

2 Remove the jam access cover. See **"Jam access cover removal" on page 213**.

3 Remove front input guide. See **"Front input guide removal" on page 220**.

4 Remove the roller (A) by cutting it off the shaft.
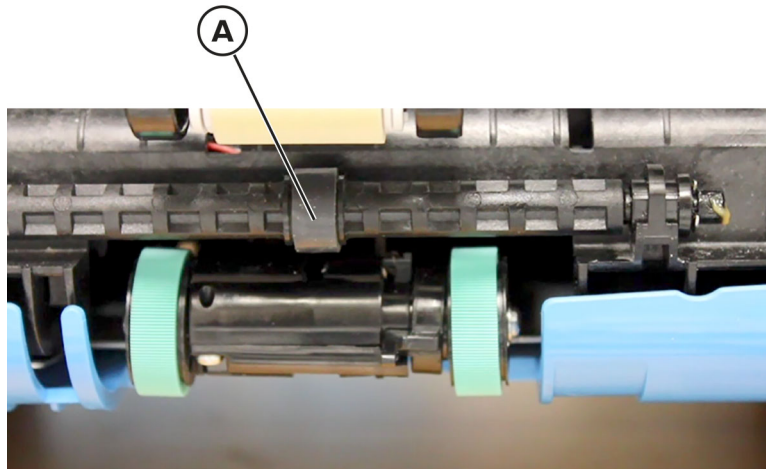
5 Remove the e-clip (C), and then remove the right bearing (B).
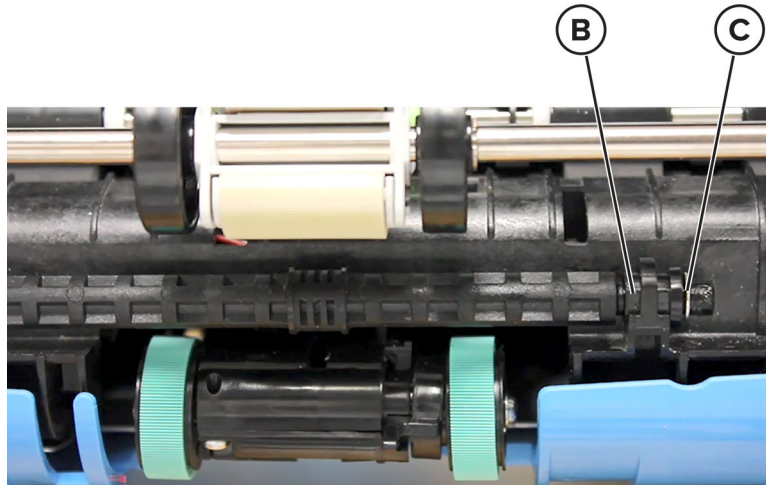
Warning—Potential Damage: Do not lose the spring (D).
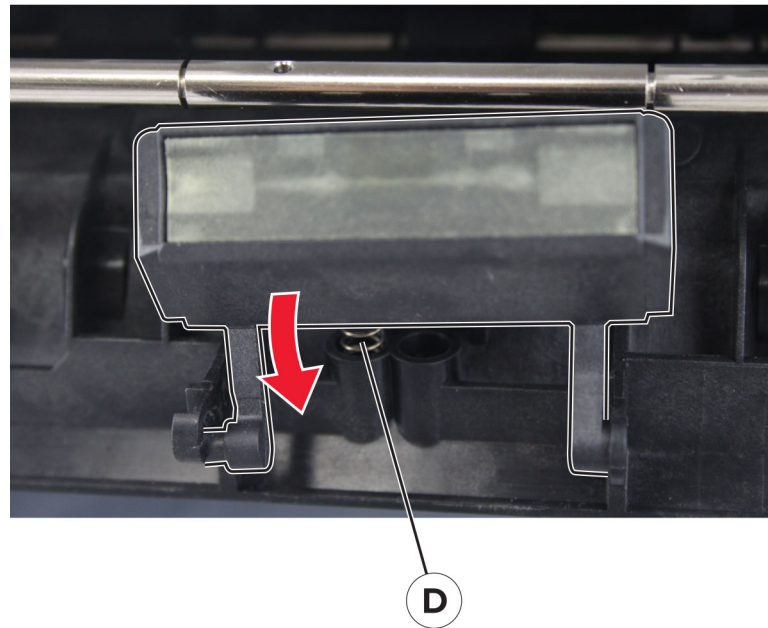
Installation note: When looping the isolation roller with the spring hook, make sure not to pierce the sleeve. Refer to the following illustrations:

Correct	Incorrect
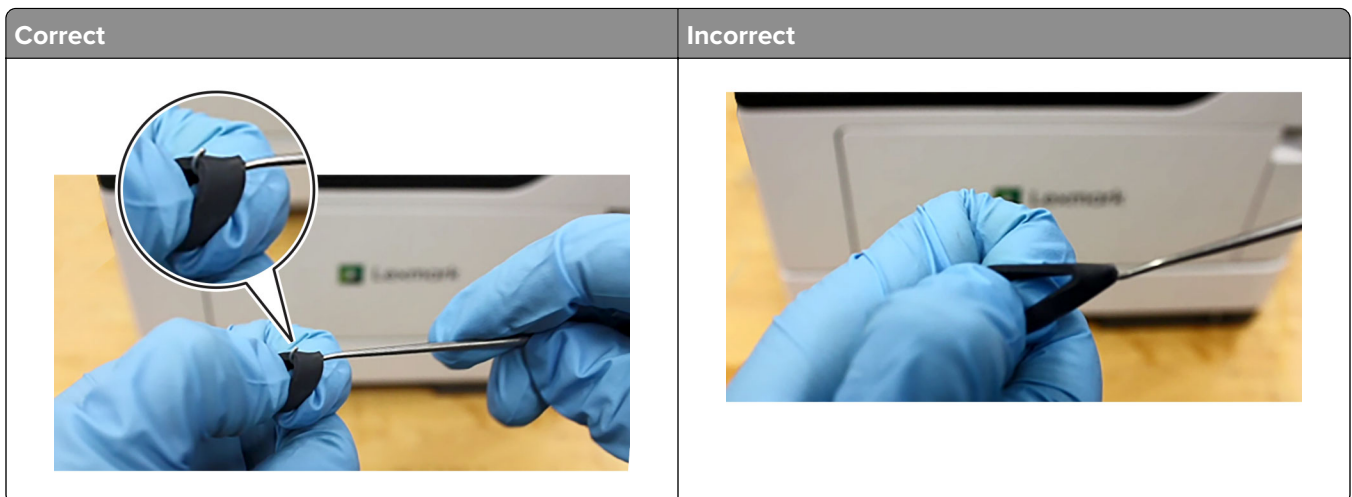
Bottom removals

Power supply removal

1 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

2 Disconnect the cable (A), and then remove the screws (B).
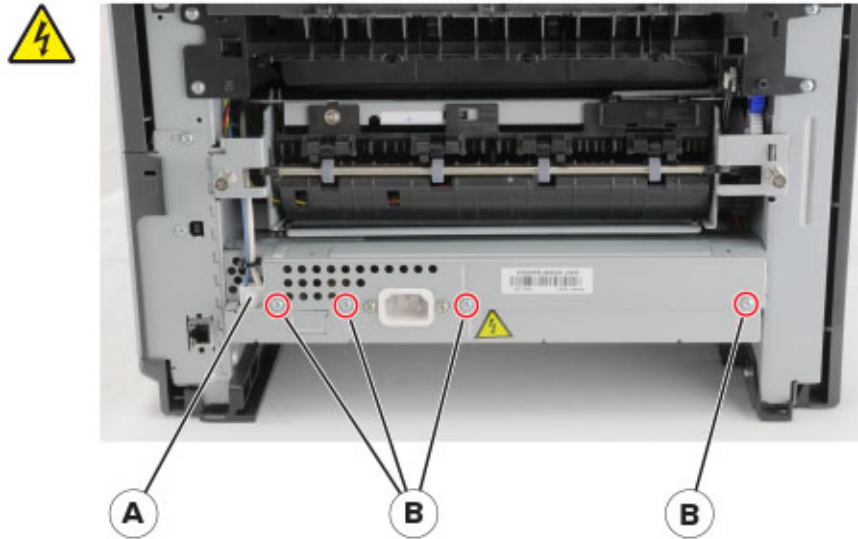
3 Disconnect the cable (C) under the printer, and then remove the two screws (D).

4 Disconnect the three cables (E).
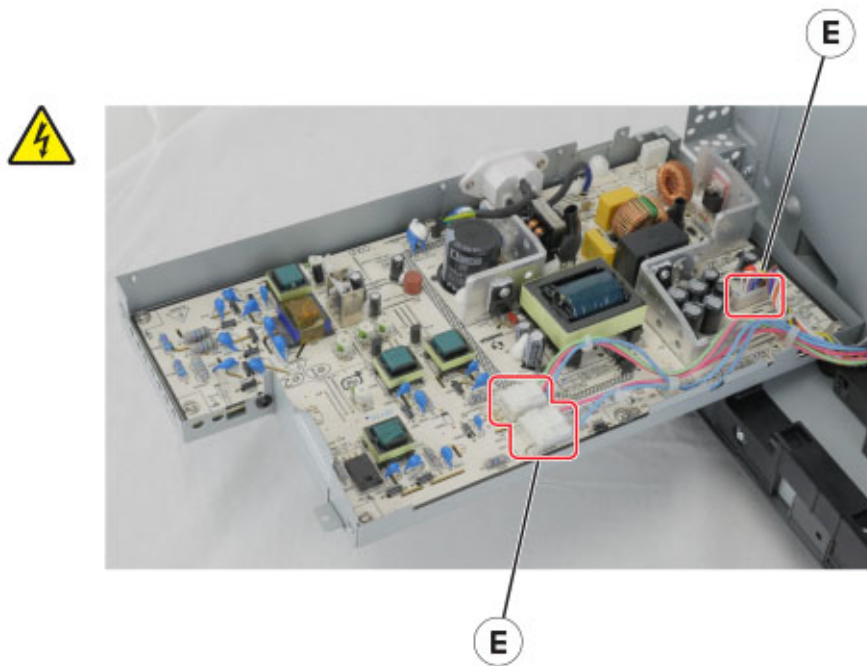
5 Remove the power supply.

Duplex assembly removal

1 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

2 Remove the power supply. See **"Power supply removal" on page 225**.

3 Position the printer on its right side.

4 Remove the two screws (A) and the screw (B) on the left side of the printer.

5 Remove the power supply shield.

6 Remove the four screws (C).

7 Remove the duplex.

> **Note:** Make sure that the duplex link (D) stays attached to the duplex assembly.
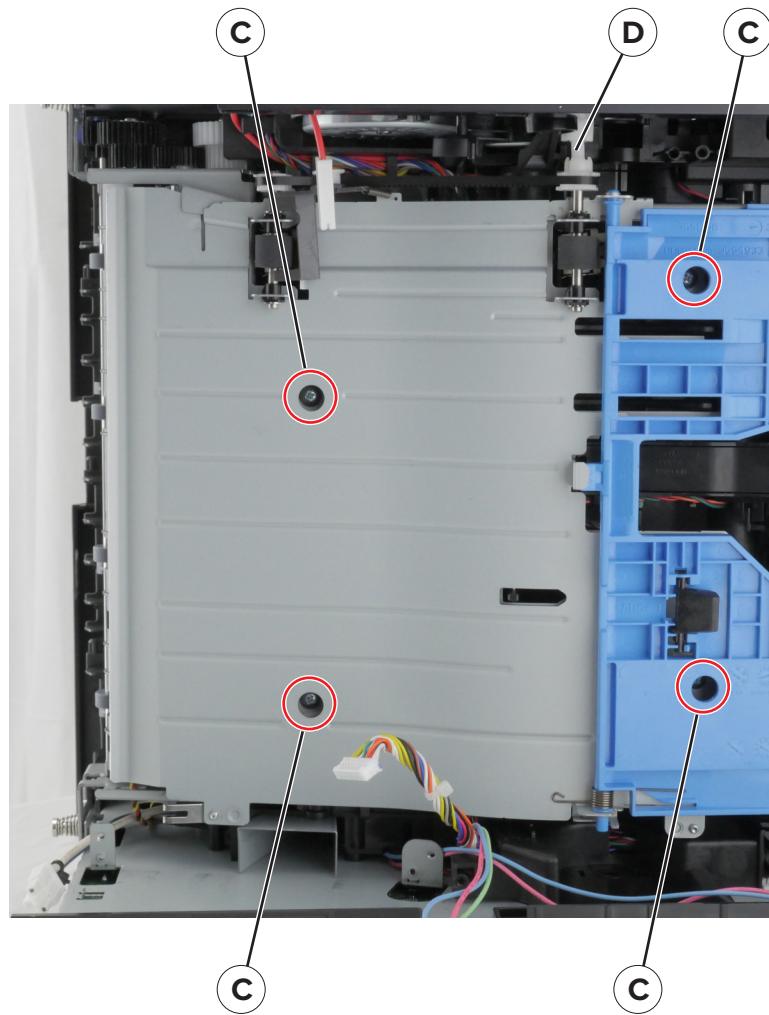
Sensors (duplex and input) removal

1 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

2 Remove the power supply. See **"Power supply removal" on page 225**.

3 Remove the duplex. See **"Duplex assembly removal" on page 227**.

4 Remove the two screws (A), cut the cable near the frame, and then remove the sensors.
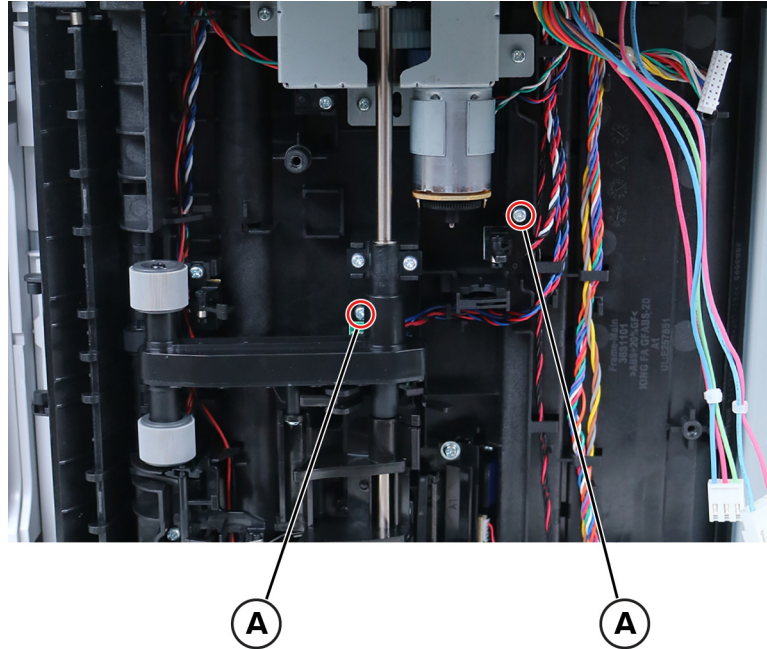
5 Open the controller board access cover, and then disconnect the cable JDUPPI1.

6 Remove the cables.

Installation note: Route the sensor (input) cable (A) and sensor (duplex) cable (B) as shown.

Parts removal
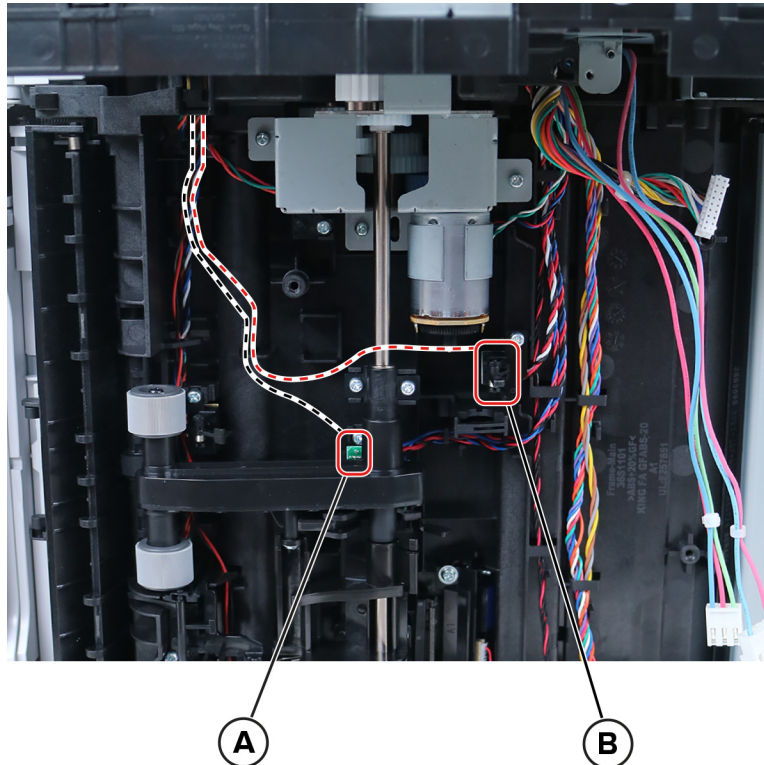
Sensor (index) removal

1 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

2 Remove the power supply. See **"Power supply removal" on page 225**.

3 Remove the duplex. See **"Duplex assembly removal" on page 227**.

4 Remove the right cover. See **"Right cover removal" on page 189**.

5 Disconnect the cable JINDEX1.

6 Remove the screw (A).
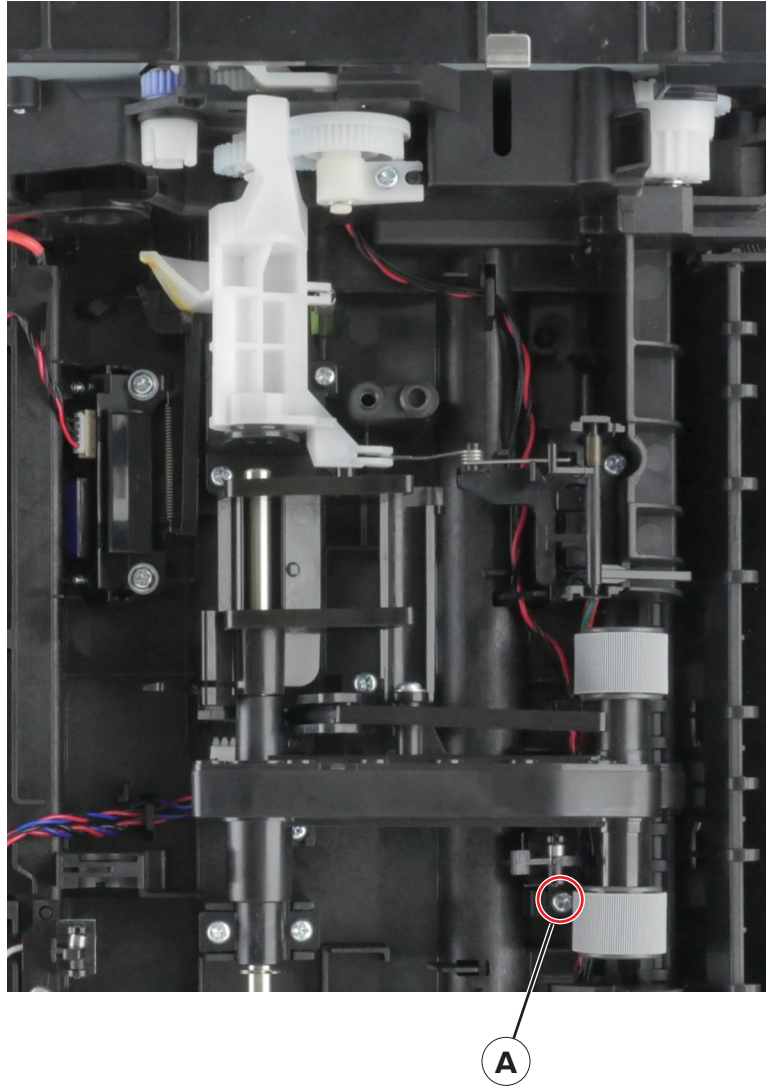
7 Remove the sensor.

Sensor (paper present) removal

1 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

2 Remove the power supply. See **"Power supply removal" on page 225**.

3 Remove the duplex. See **"Duplex assembly removal" on page 227**.

4 Disconnect the cable from the sensor (A).
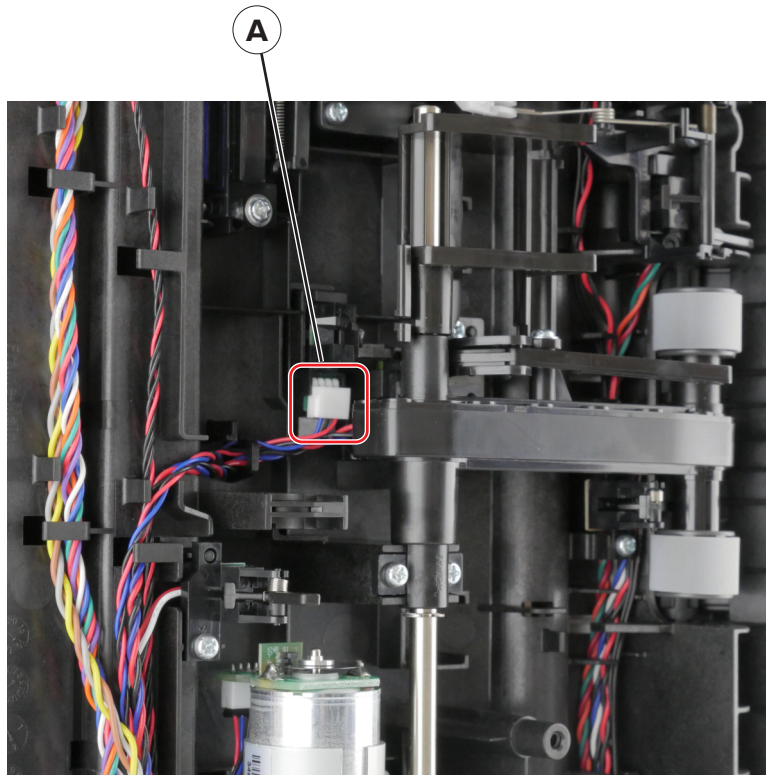
5 Release the three latches (B).

Sensor (trailing edge) removal

1 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

2 Remove the power supply. See **"Power supply removal" on page 225**.

3 Remove the duplex. See **"Duplex assembly removal" on page 227**.

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.
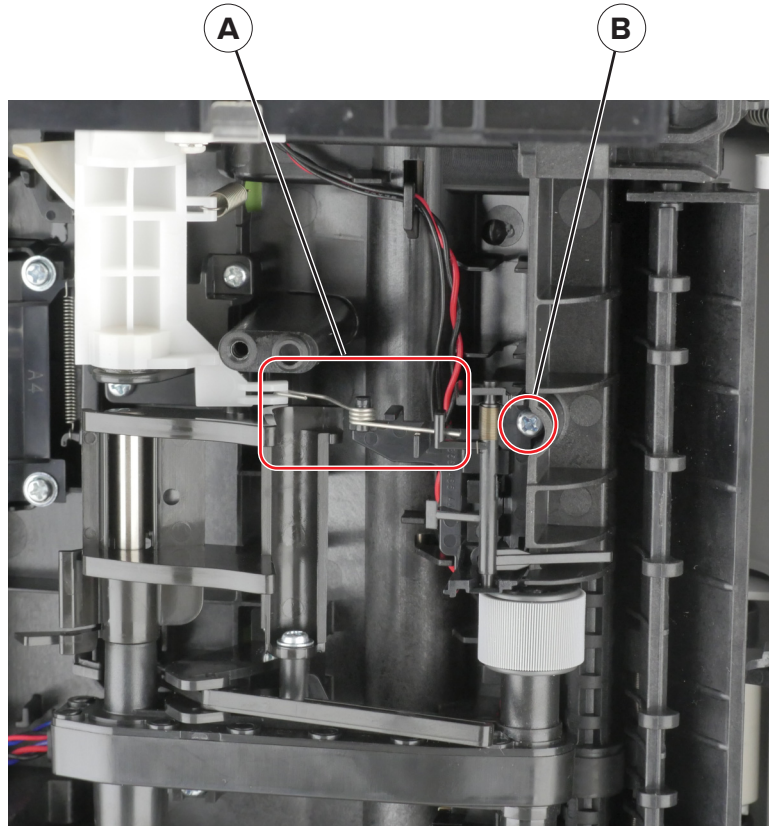
6 Remove the screw (C) and sensor.
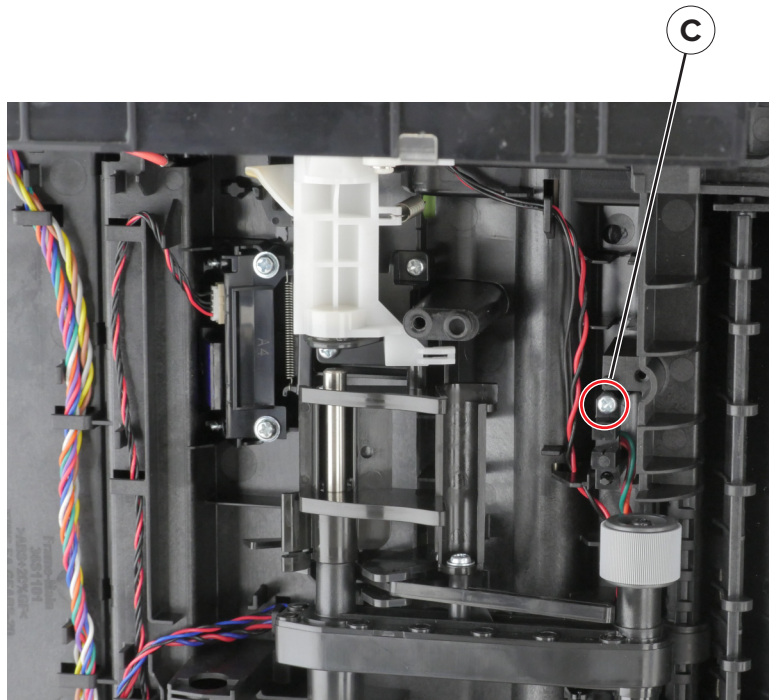
Parts removal

Pick roller assembly removal

1 Remove the left cover. See **"Left cover removal" on page 177**.

2 Remove the main drive gearbox. See **"Main drive gearbox removal" on page 179**.

3 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

4 Remove the power supply. See **"Power supply removal" on page 225**.

5 Remove the duplex. See **"Duplex assembly removal" on page 227**.

6 Remove the six screws (A) and unhook the spring (B).
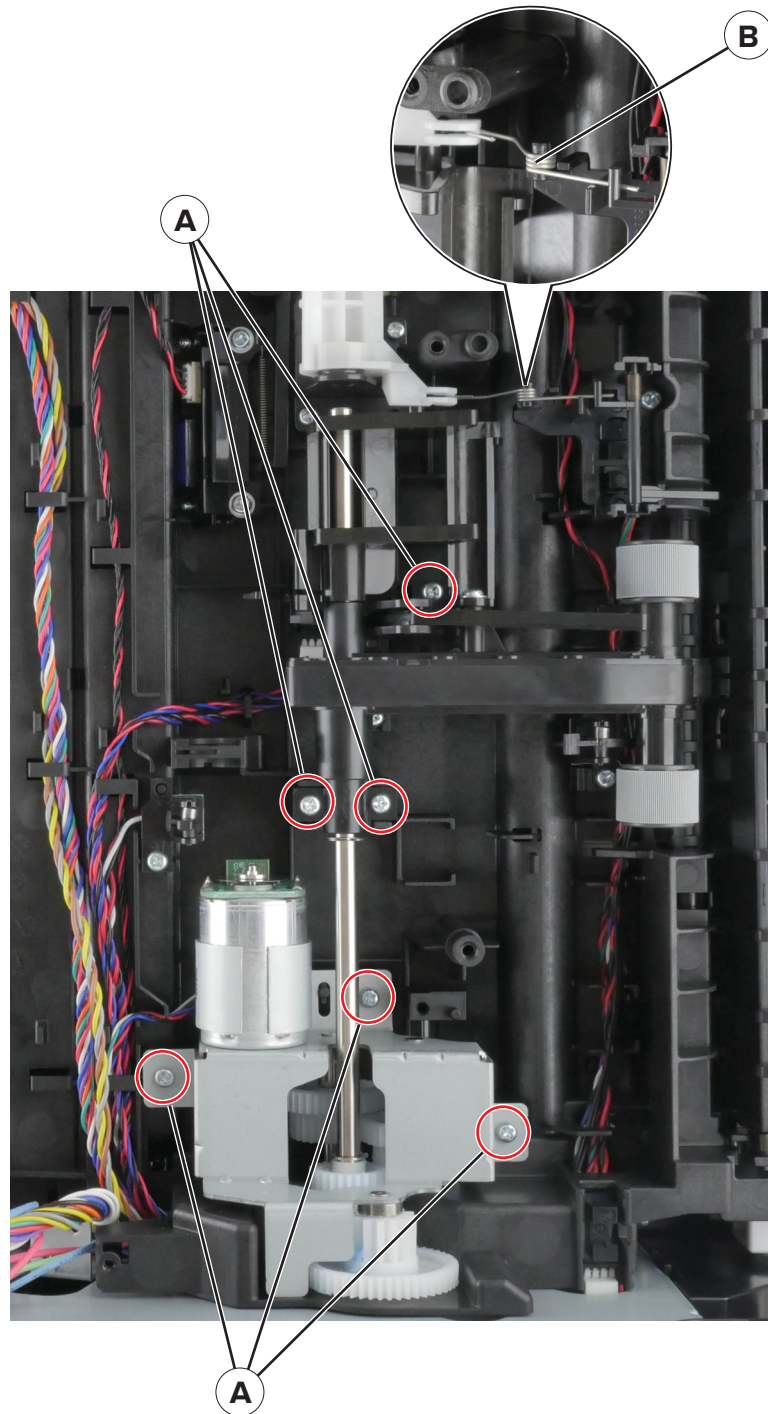
7 Remove the pick roller assembly and the media present sensor flag.

8 Remove the two screws (A) and release the two springs (B).
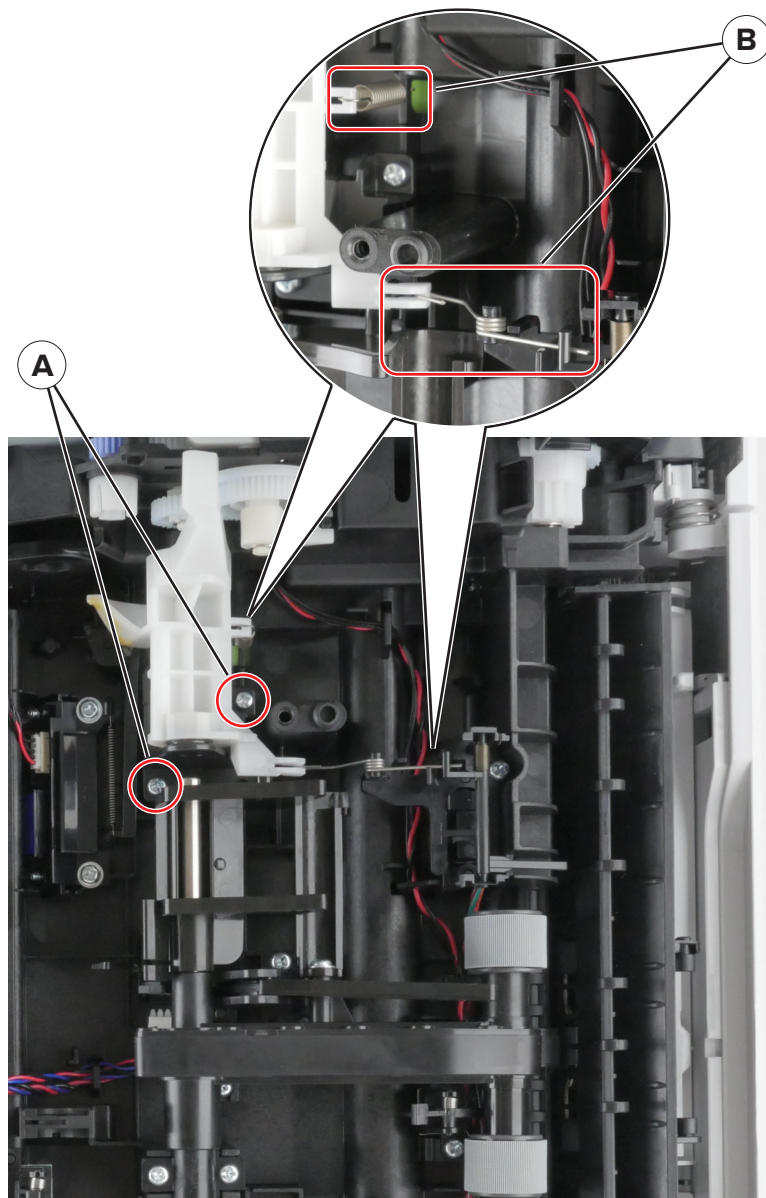
9 Remove the lift cam.

Pick/lift motor gearbox removal

1 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

2 Remove the power supply. See **"Power supply removal" on page 225**.

3 Remove the duplex. See **"Duplex assembly removal" on page 227**.

4 Remove the six screws (A).

5 Detach the spring (B).
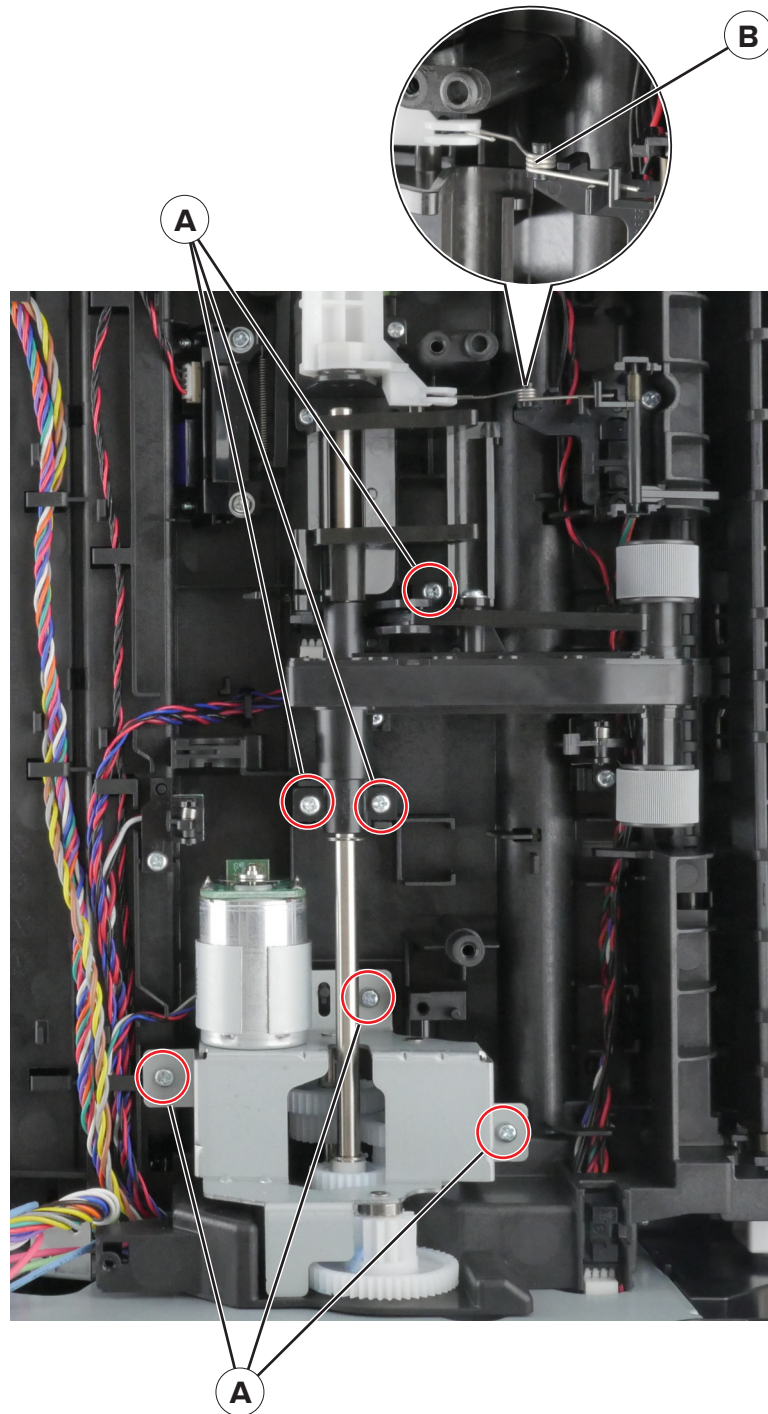
6 Lift the pick roller assembly.

7 Disconnect the cable from the gearbox.

8 Remove the gearbox.

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 245**.

4 Remove the power supply. See **"Power supply removal" on page 225**.

5 Remove the duplex. See **"Duplex assembly removal" on page 227**.

6 Remove the screws (A).
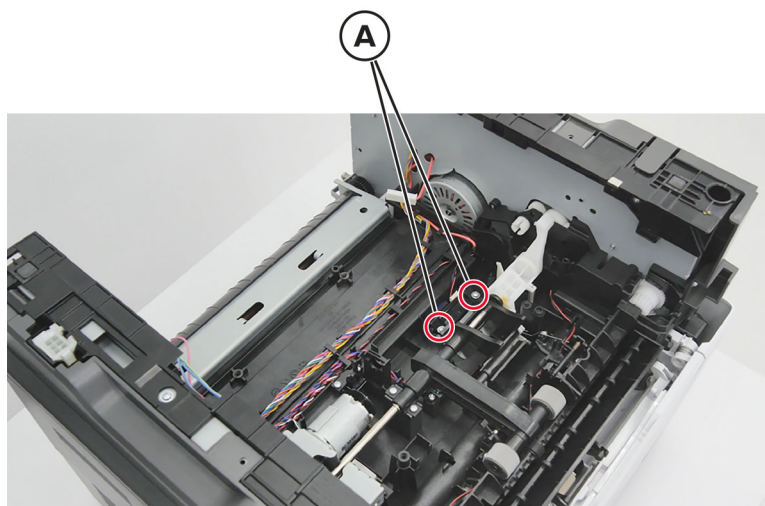
7 Remove the sensor (B), and then remove the wiper (C).

8 Disconnect the connector (D).

Parts removal
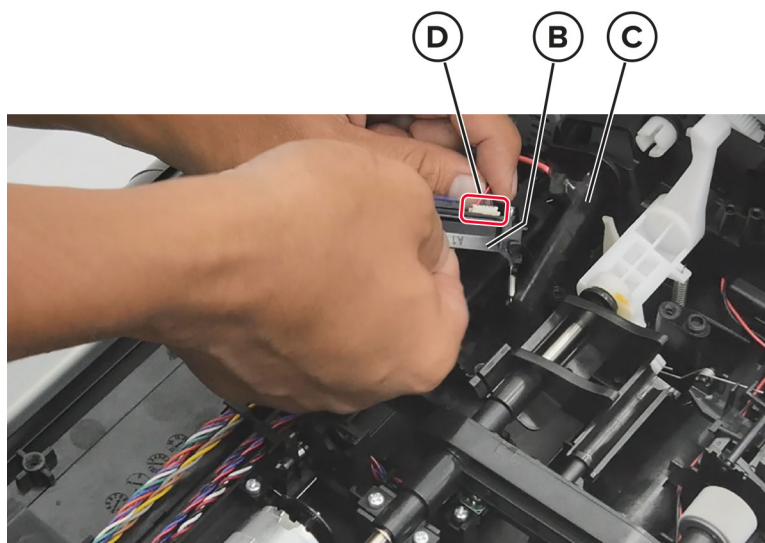
9 Remove the screw (E).
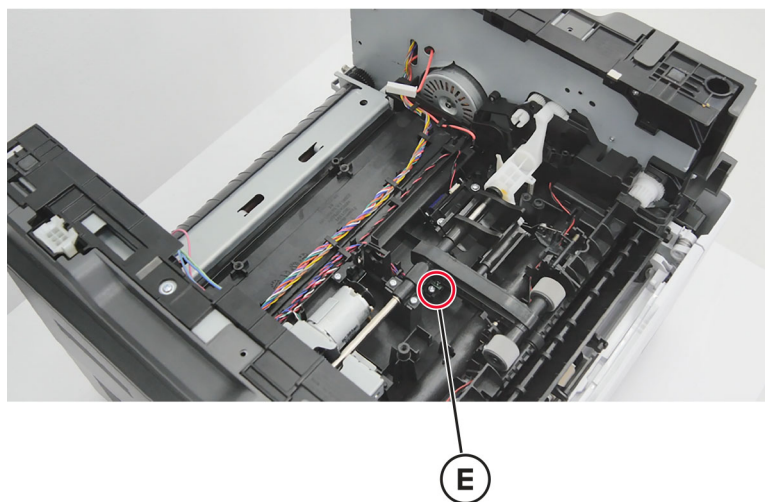
10 Lift the pick roller and then remove the sensor flag and bracket (F).
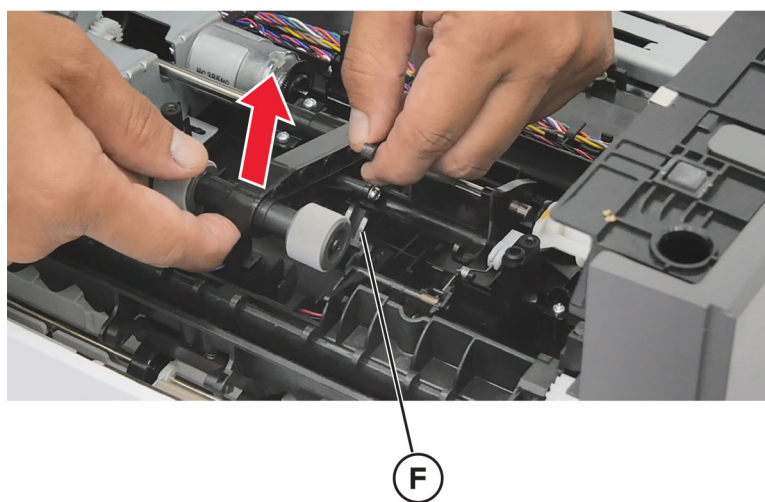
Installation note: Refer to the following procedures when installing the toner density sensor and media present sensor flag:

1 Pull down the actuator, and then place the wiper (G) in position.
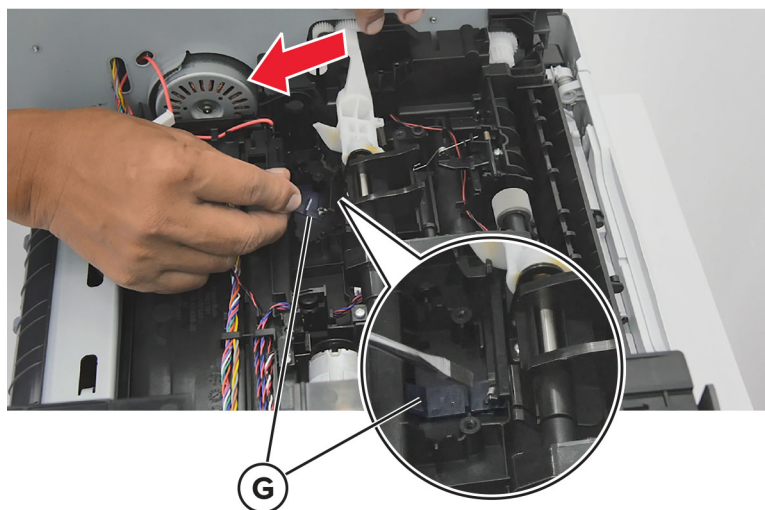
2 Attach the sensor bracket (H) and the spring (I).
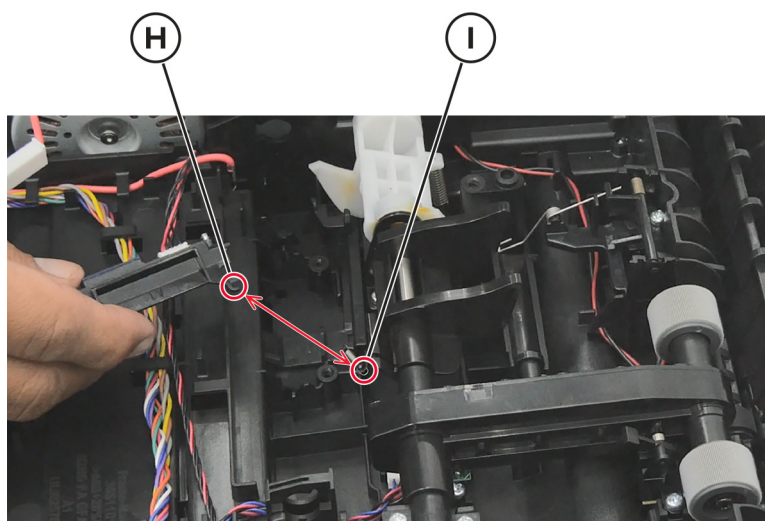
3 Connect the connector (J) to the sensor, and then route the cable on the harness (K).

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).
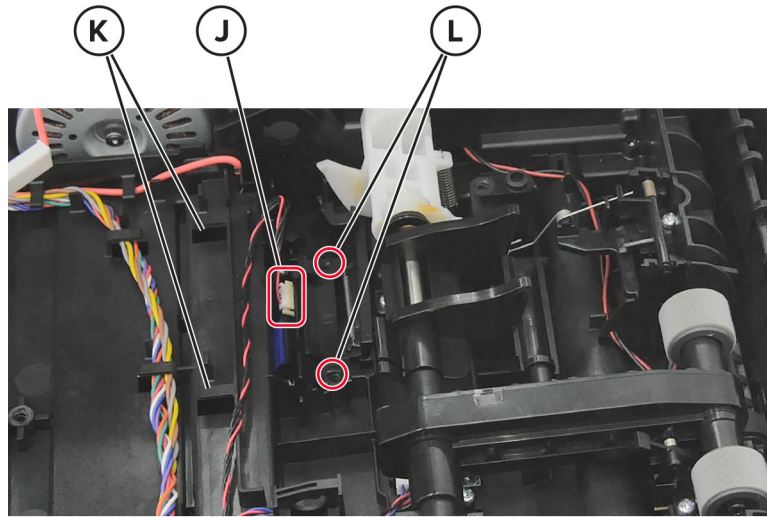
Note: After securing the sensor bracket using screws, do the following:

a Apply RheoGel 793 to the top and bottom of the shutter blade extension.
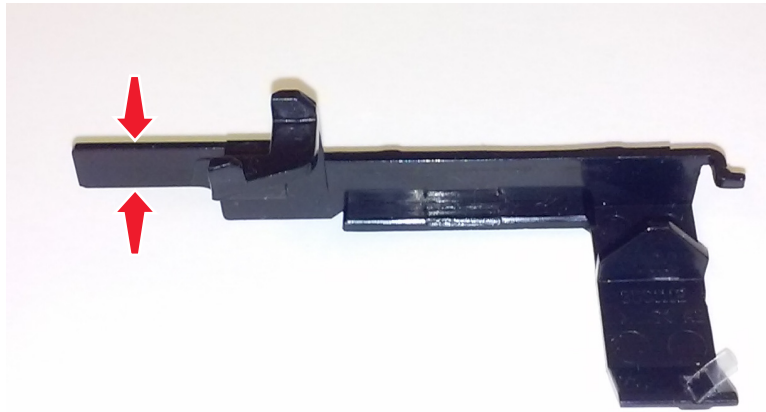
b Apply RheoGel 793 to the point of contact between the bracket (A) and cam.

Parts removal

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c Apply RheoGel 793 to the point of contact to the lower edge (B) where the wiper bracket glides.
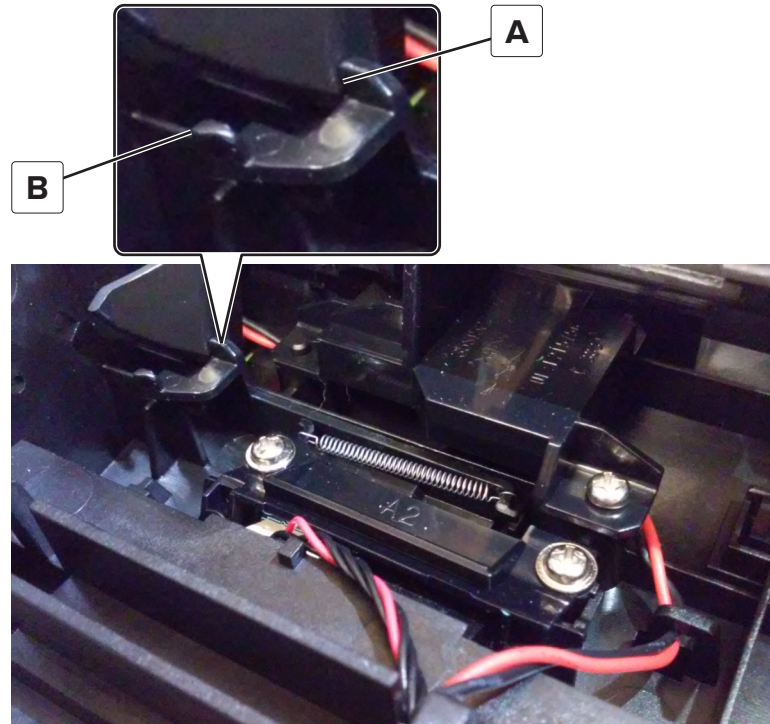
5 Lift the pick roller, and then place the bracket (M) in position.
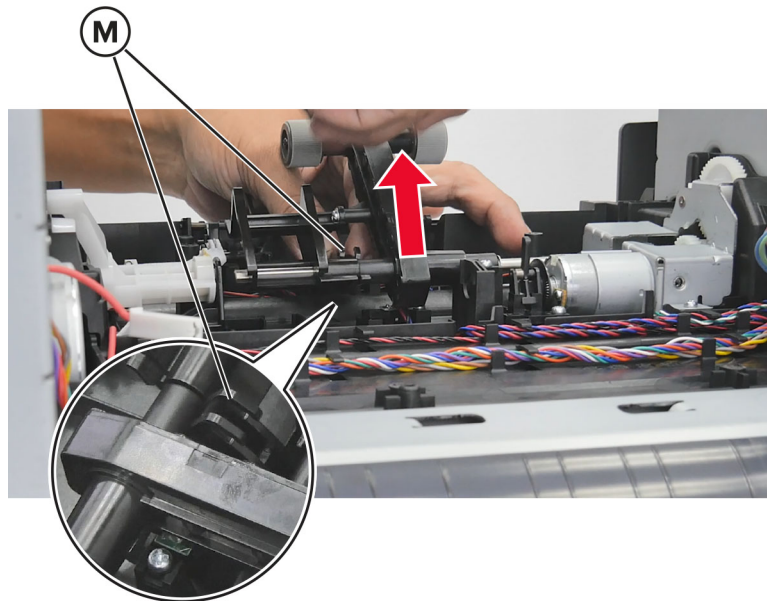
6 Secure the bracket in place using screws (N).
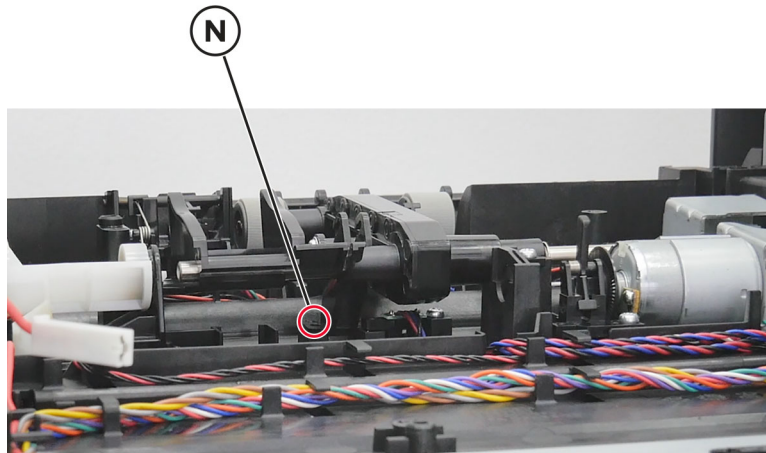
7 Install the sensor flag (O) into the bracket.
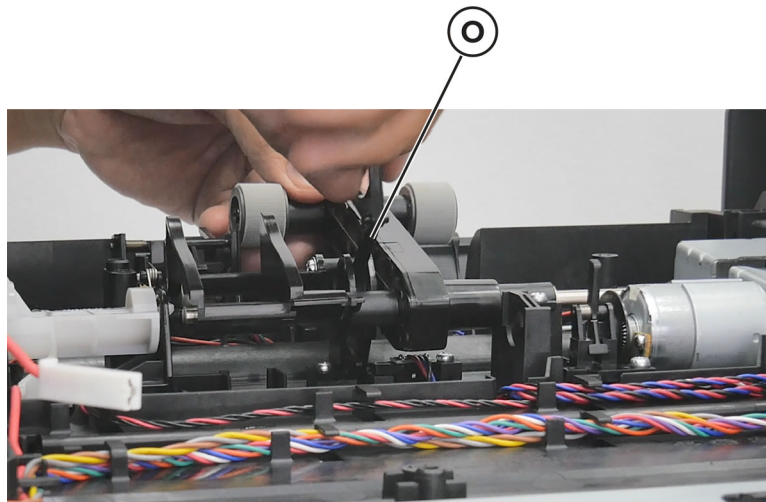
Note: To check if the sensor flag is properly installed, do the following:

a Lift the pick roller.

b If the sensor flag goes along with the pick roller when lifted, then the sensor flag is properly installed.

Rear side removals

Rear door and cover removal

1 Open the rear door.

2 Remove the two screws (A).
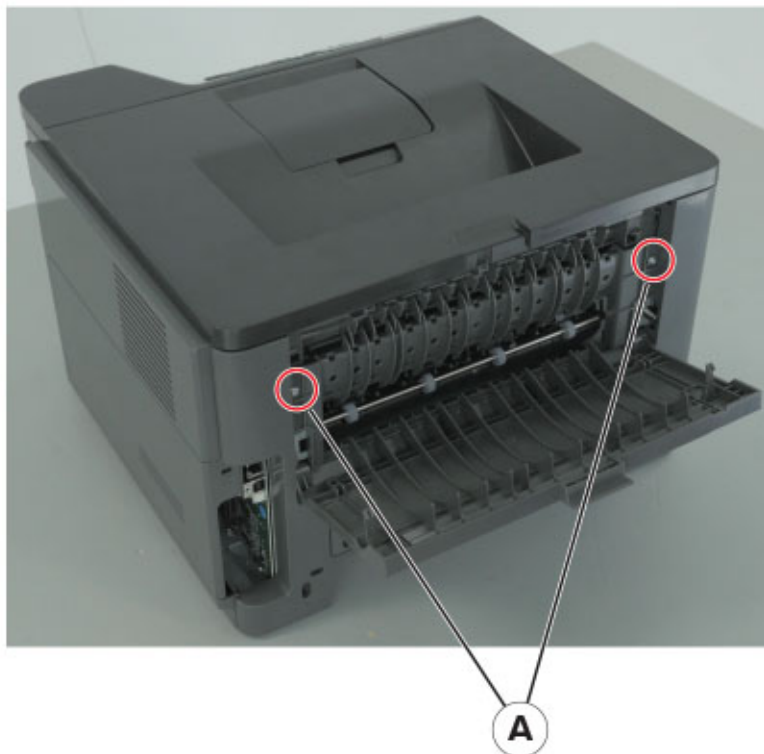
3 Remove the rear door and cover.

Fuser removal

Note: For a video demonstration, see **Fuser removal**.

1 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

2 Remove the right cover. See **"Right cover removal" on page 189**.

3 Disconnect the cable JEXIT1.

4 Disconnect the two cables (A), and then remove the two screws (B).
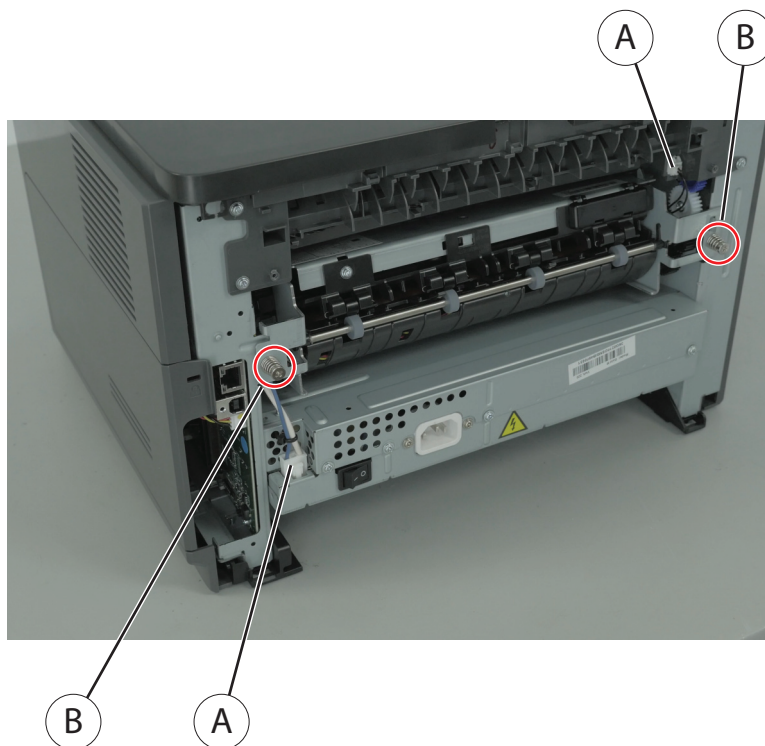
5 Remove the fuser.

Installation note: Open the front door before installing the fuser. To check if the fuser is properly installed, open and close the front door and check if the fuser shutter moves to the left and right.

Sensor (bin full) removal

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Remove the left cover. See **"Left cover removal" on page 177**.

3 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

4 Remove the top cover. See **"Top cover removal" on page 249**.

5 Remove the redrive assembly. See **"Redrive assembly removal" on page 247**.

6 Remove the two screws (A), and then remove the plate.
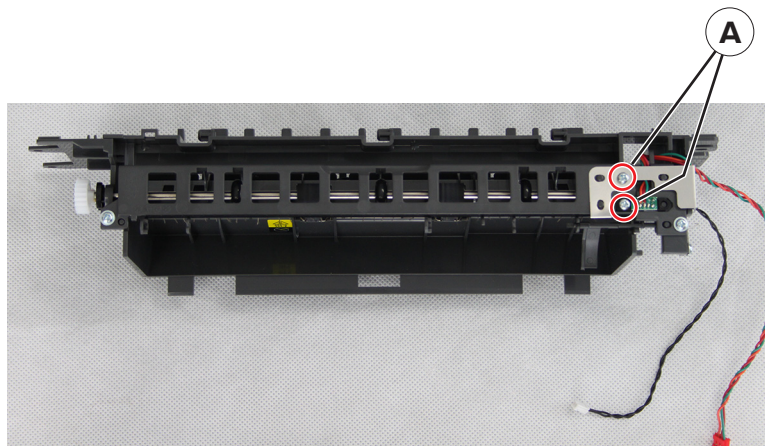
7 Remove the sensor.

Redrive assembly removal

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Remove the left cover. See **"Left cover removal" on page 177**.

3 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

4 Remove the top cover. See **"Top cover removal" on page 249**.

5 Disconnect the cables JNRW1 and JFUTHM1 from the controller board.

6 Remove the four screws (A) and the cable (B).
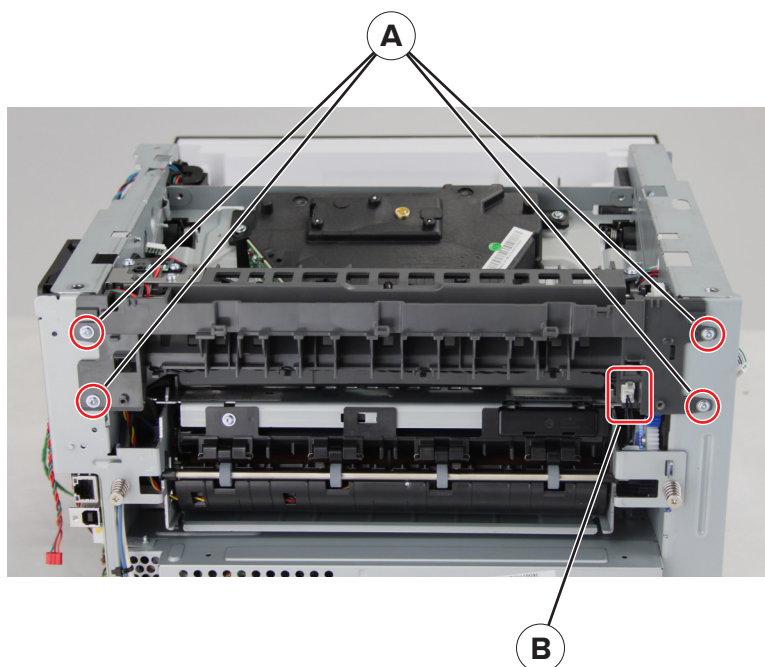
7 Remove the redrive assembly.

Redrive gear plate removal

1 Remove the top cover. See **"Top cover removal" on page 249**.

2 Remove the left cover. See **"Left cover removal" on page 177**.

3 Remove the redrive assembly. See **"Redrive assembly removal" on page 247**.

4 Remove the two screws (A), and then detach the reverse solenoid.

> **Note:** Do not disconnect the reverse solenoid cable from the controller board.
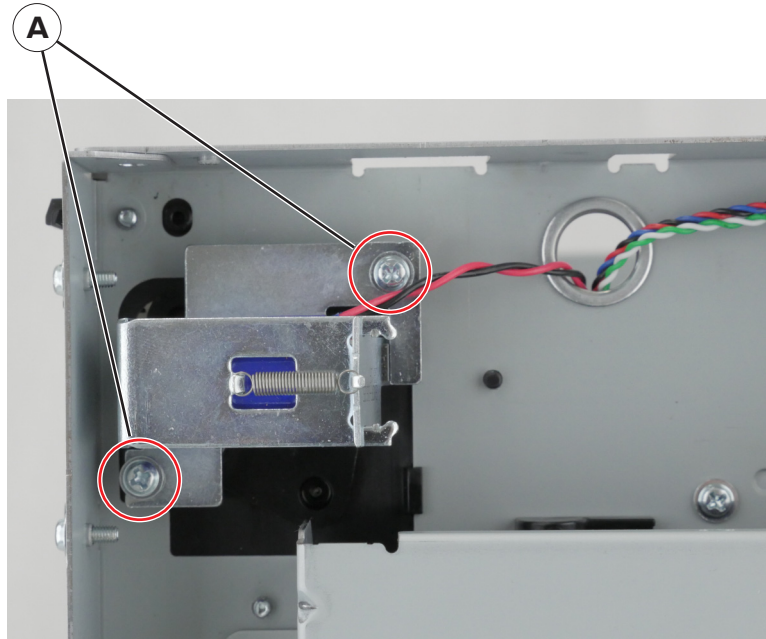
5 Remove the two screws (B).
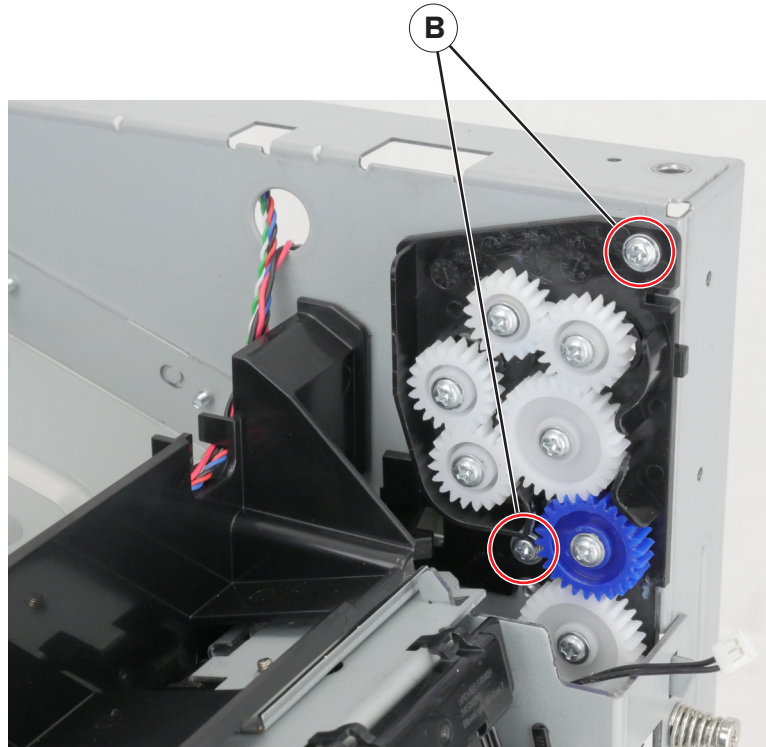
6 Remove the redrive gear plate.

Top side removals

Top cover removal

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Remove the left cover. See **"Left cover removal" on page 177**.

3 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

4 Open the front door.

5 Remove the two screws (A).
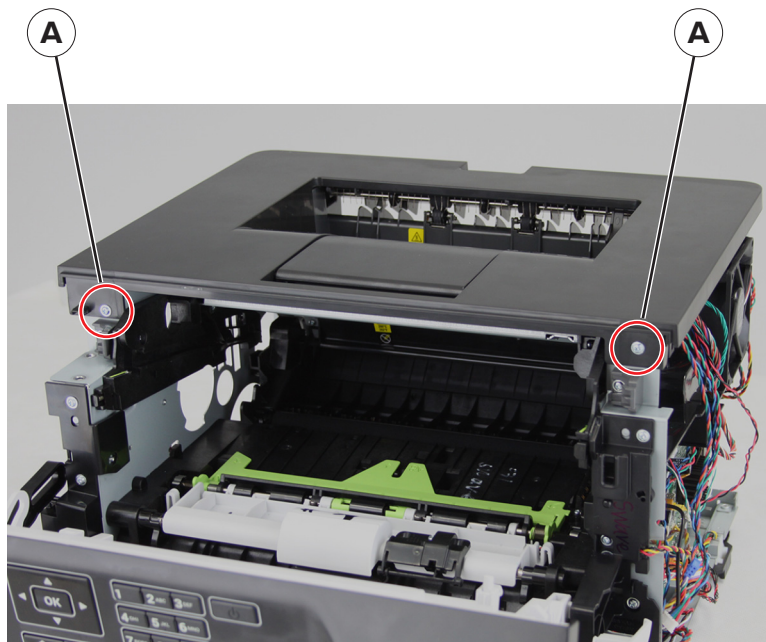
6 Pull, and then lift the top cover to remove it.

Printhead removal

1 Remove the right cover. See **"Right cover removal" on page 189**.

2 Remove the left cover. See **"Left cover removal" on page 177**.

3 Remove the rear cover. See **"Rear door and cover removal" on page 245**.

4 Remove the top cover. See **"Top cover removal" on page 249**.

5 Using a small, flat-blade screwdriver or a sharp pencil, mark the location of the printhead on the printer frame.
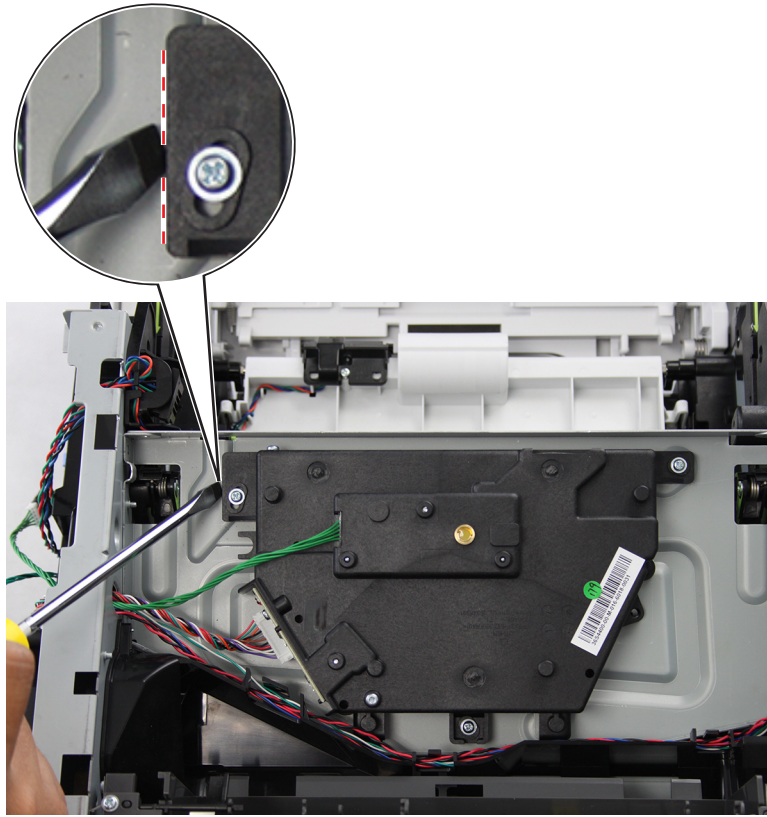
6 Disconnect the printhead cable from the controller board.

7 Remove the three screws (A).
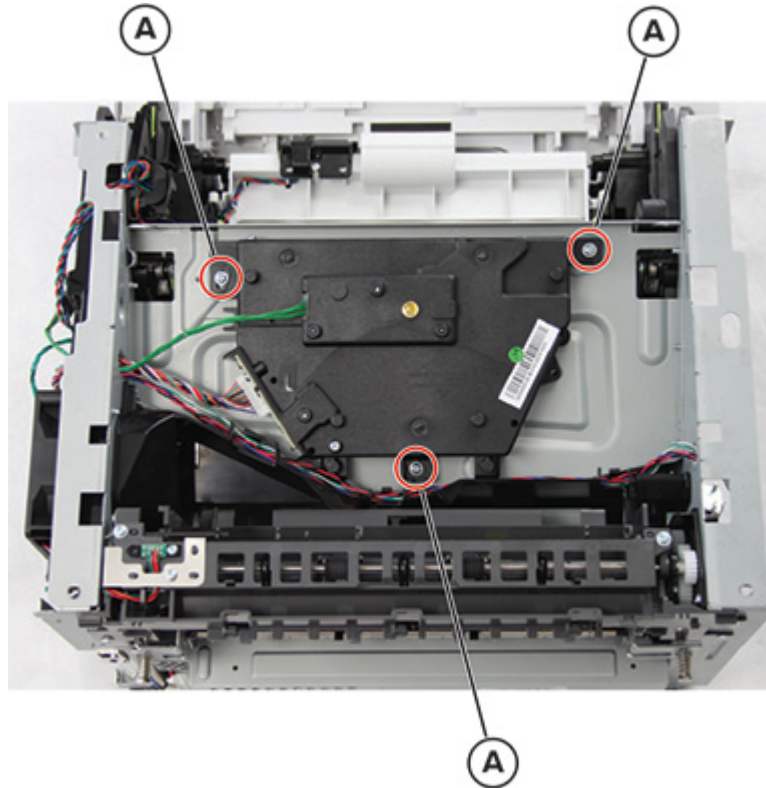
8 Remove the printhead.

Installation note: Perform all the mechanical and electronic adjustments to the printhead after replacing it. See **"Printhead assembly adjustment" on page 176**.

Optional 250/550-sheet tray removals

Separator roller assembly removal

1 Remove the tray insert.

2 Under the tray, remove the screw (A).
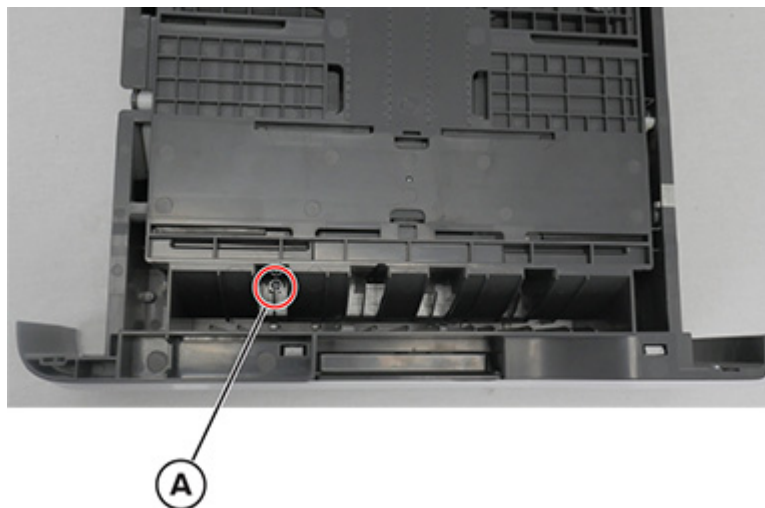
3 Remove the screw (B) on the left side. Do the same for the screw (C) on the opposite side.
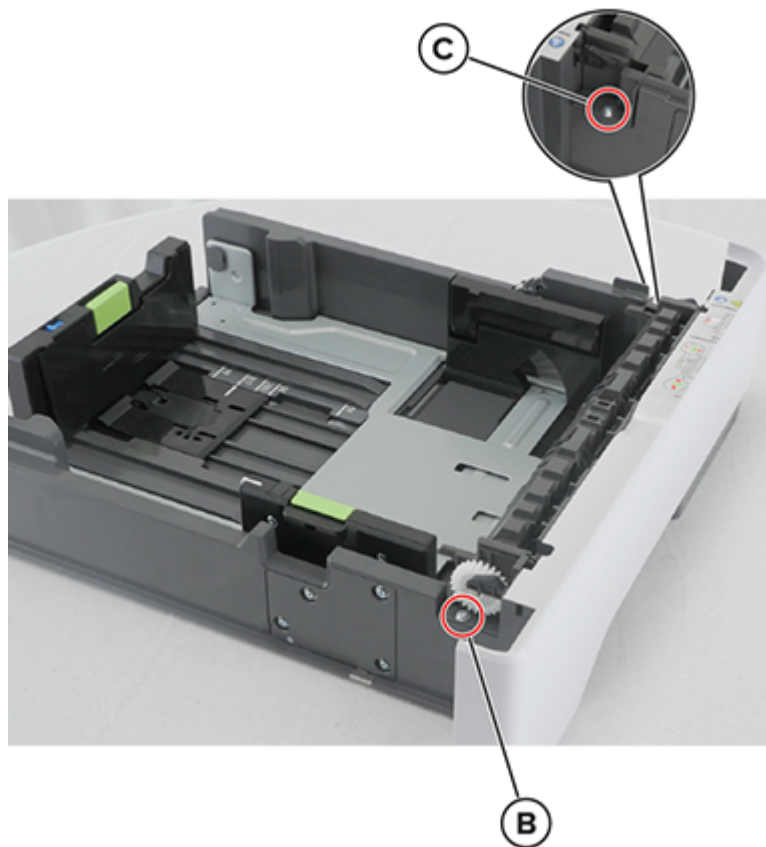
4 Remove the roller assembly.

Component locations

Printer configurations

You can configure your printer by adding optional 250- or 550-sheet trays.

1	Control panel
2	Standard bin
3	Controller board access cover
4	Standard 550-sheet tray
5	Optional 250- or 550-sheet tray
6	Multipurpose feeder
7	Door A

Printer roller locations

Standard path rollers
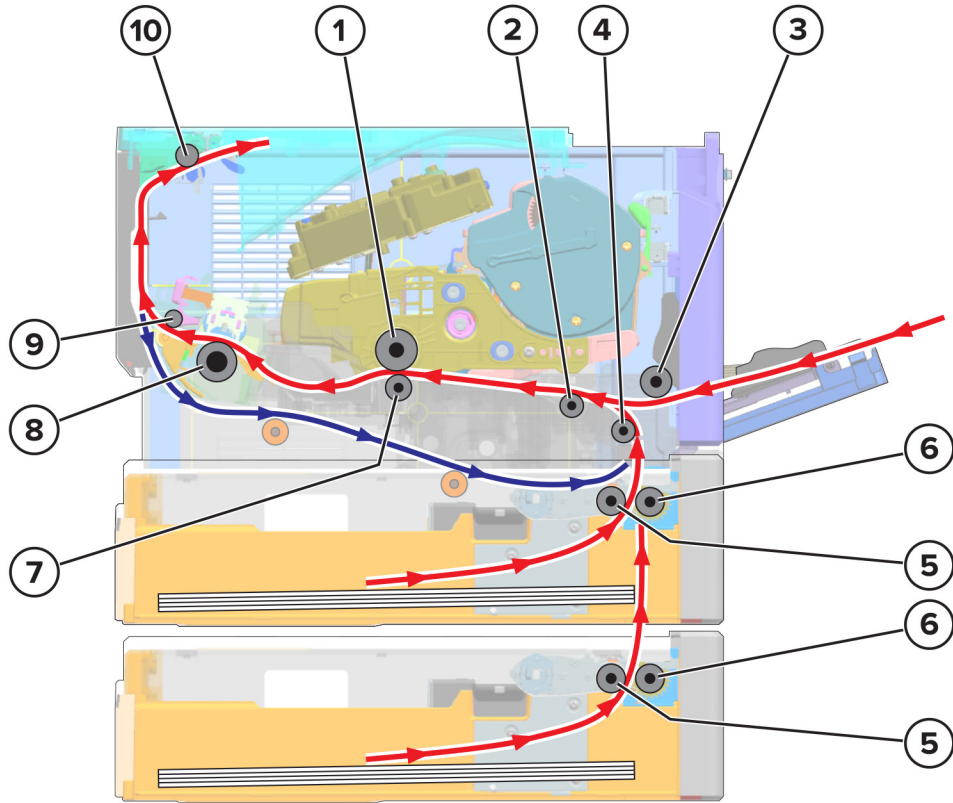
1	Photoconductor drum
2	First input roller
3	MPF pick roller
4	Second input roller
5	Pick roller
6	Separator roller
7	Transfer roller
8	Fuser roller
9	Fuser exit roller
10	Paper exit roller

Duplex path rollers

1	Duplex rear roller
2	Duplex front roller

Component locations
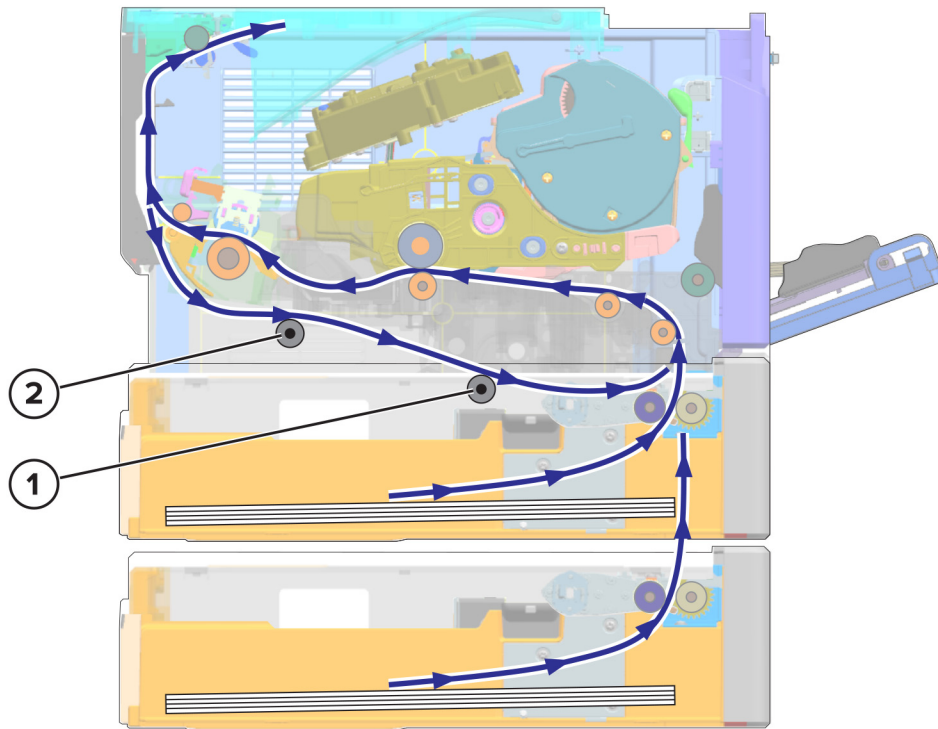
Printer sensor locations
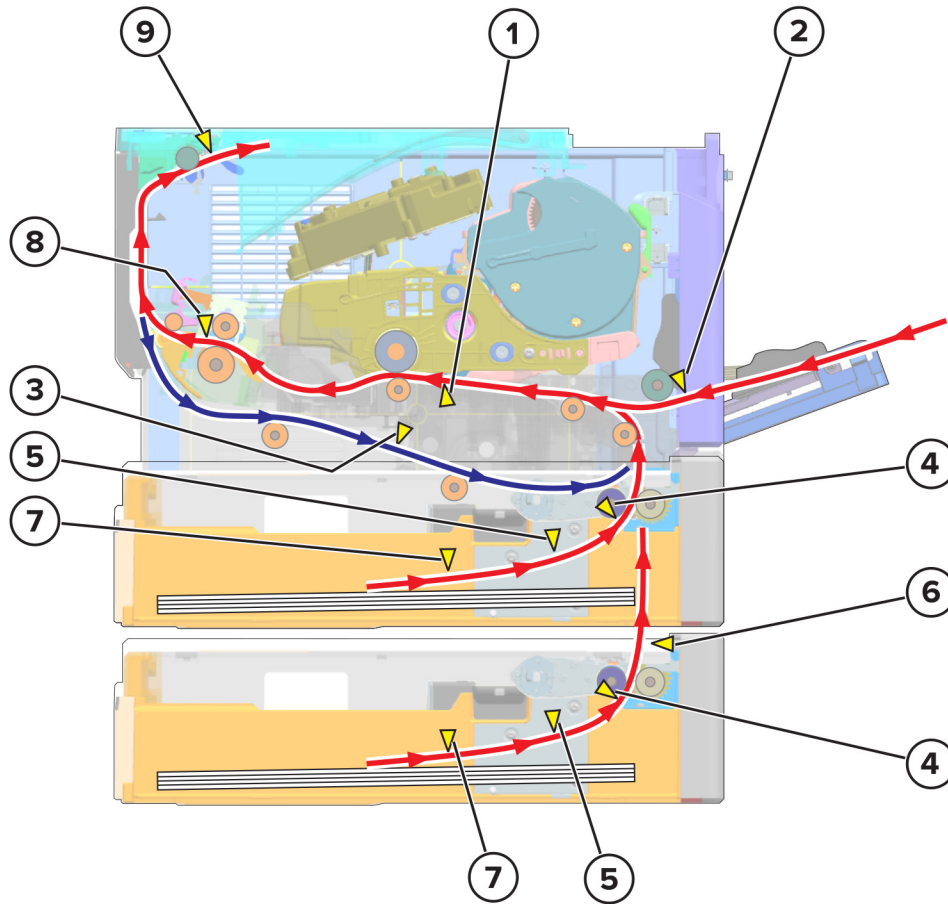
#	Sensor
1	Sensor (input)
2	Sensor (MPF paper present)
3	Sensor (duplex)
4	Sensor (index)
5	Sensor (trailing edge)
6	Sensor (pass-through)
7	Sensor (media present)
8	Sensor (fuser exit)
9	Sensor (narrow media/bin full)

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
JUICC43	2.4-inch control panel FFC	N/A	N/A
JUICC2L1	2-line control panel FFC	N/A	N/A
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
		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

Component locations

Connector	Connects to	Pin no.	Signal
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
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

Component locations

Connector	Connects to	Pin no.	Signal
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
JT_PRE1 (L-shaped controller board)	Sensor (tray present)	1	V_3.3V_TRAY1_P
		2	S_TRAY1PP_C
		3	Ground
JTPRES1 (rectangle-shaped controller board)			
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
		12	SHUTOFF_24V
		13	24V_CONT
		14	Ground
		15	24V
		16	Ground
		17	24V
		18	Ground

Component locations

Connector	Connects to	Pin no.	Signal
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
JWIFI1	Wireless network	1	Ground
		2	NC_USB_DP
		3	NC_USB_DM
		4	Ground
		5	USB_WIFI_P_CN
		6	USB_WIFI_N_CN
		7	Ground
		8	no connection
		9	ISP_RESET-
		10	5V
		11	SDA_ISP
		12	5V
		13	SCL_ISP
		14	5V_WIFI
		M1	Ground
		M2	Ground
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

Component locations

Connector	Connects to	Pin no.	Signal
JFUSB1	Thumb drive	1	V_FUSB_L
		2	USB_FRONT_N
		3	USB_FRONT_P
		4	NC_JFUSB_P4
		5	Ground
JLIFT1	Motor (ACM)	1	V_5V_ACM
		2	S_ACM_ENC_C
		3	Ground
		4	V_ACM_MOT2-
		5	ACM_MOT2+
JACM	Sensor (trailing edge)	1	+5V
		2	TRAIL_EDGE_SNS
		3	Ground
JVIP1 (rectangle-shaped controller board)	Secure card	1	G_TXD_V2
		2	+3.3v
		3	G_CLK_V2
JVIP2 (L-shaped controller board)		4	GROUND
		5	G_CS_V2
		6	G_RXD_V2

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

The control panel displays an 80.xy error when it reaches 200K page counts. It is necessary to install the appropriate maintenance kit to maintain the print quality and reliability of the printer. Reset the maintenance counter after replacing the maintenance kit.

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
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

Part number and kit	Contents
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

Always reset the maintenance counter after installing the maintenance kit.

1 POR into the Configuration menu, and navigate to **Reset Maintenance Counter**.

2 Depending on the printer model, press **OK** or touch ✔ to reset the counter, or press **X** to exit without resetting the counter.

Once initiated, the operation cannot be canceled.

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.

⚠️ **ATTENTION—RISQUE D'ELECTROCUTION :** 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.

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** 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.

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** 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.

Notes:

- 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.

> **Notes:**
>
> - 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 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.
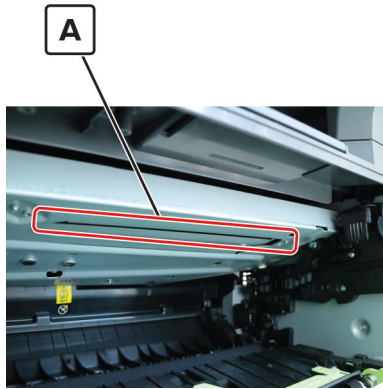
4 Insert a soft, lint-free cloth in the opening, and gently move the cloth back and forth along the surface of the lens to clean it.

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 item in the illustration.
- **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/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.

Assembly 1: Covers
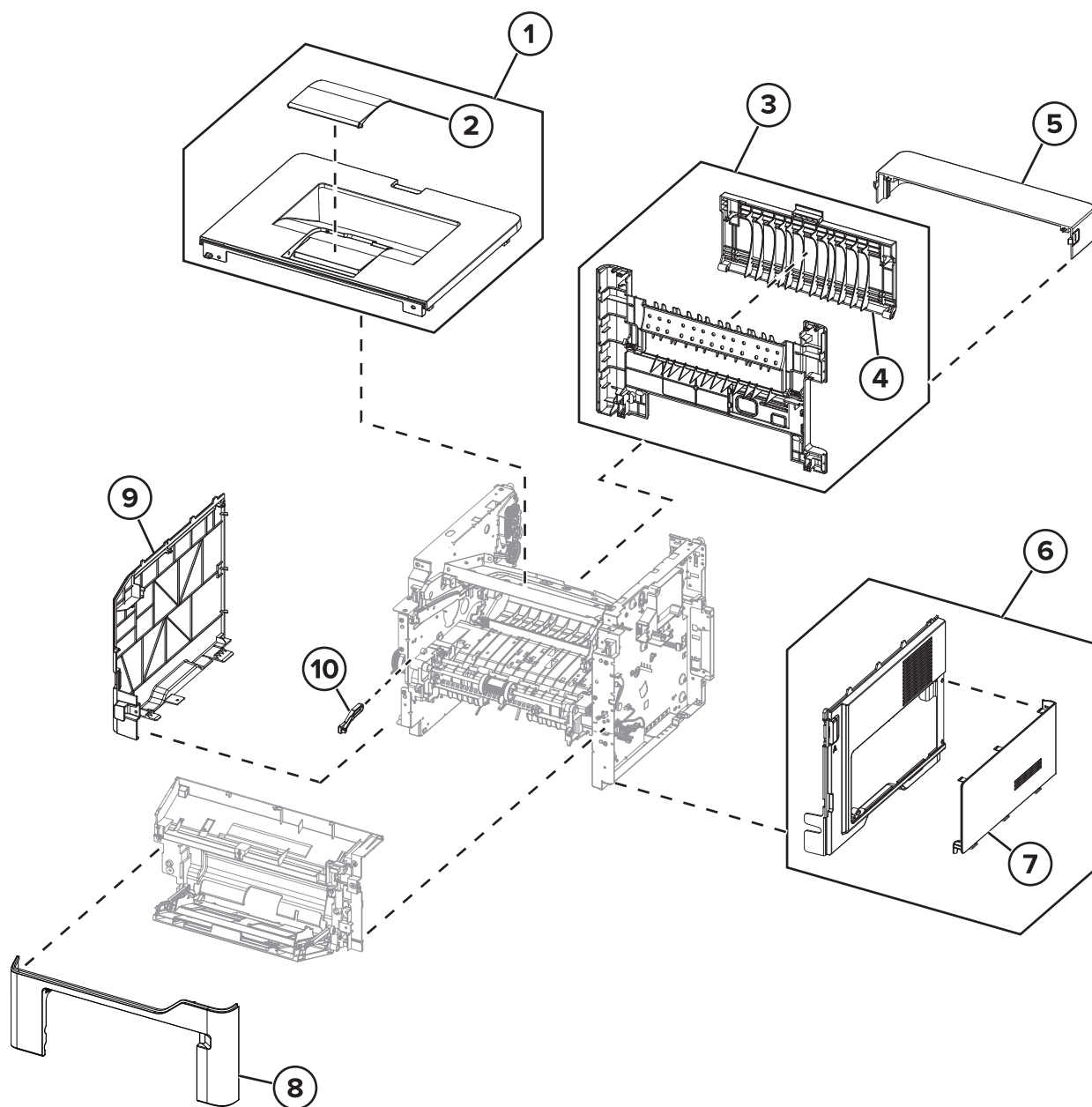
Assembly 1: Covers

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X1172	1	1	Top cover	**"Top cover removal" on page 249**
2	41X1231	1	1	Output extender	--
3	41X1170	1	1	Rear door and cover	**"Rear door and cover removal" on page 245**
4	41X1232	1	1	Rear access door	--
5	40X8521	1	1	Dust cover	--
6	41X1166	1	1	Right cover	**"Right cover removal" on page 189**
7	41X1233	1	1	Right access cover	--
8	41X1164	1	1	Nameplate	**"Nameplate removal" on page 207**
9	41X1168	1	1	Left cover	**"Left cover removal" on page 177**
10	41X2300	1	1	Access cover link	--

Assembly 2: Control panel
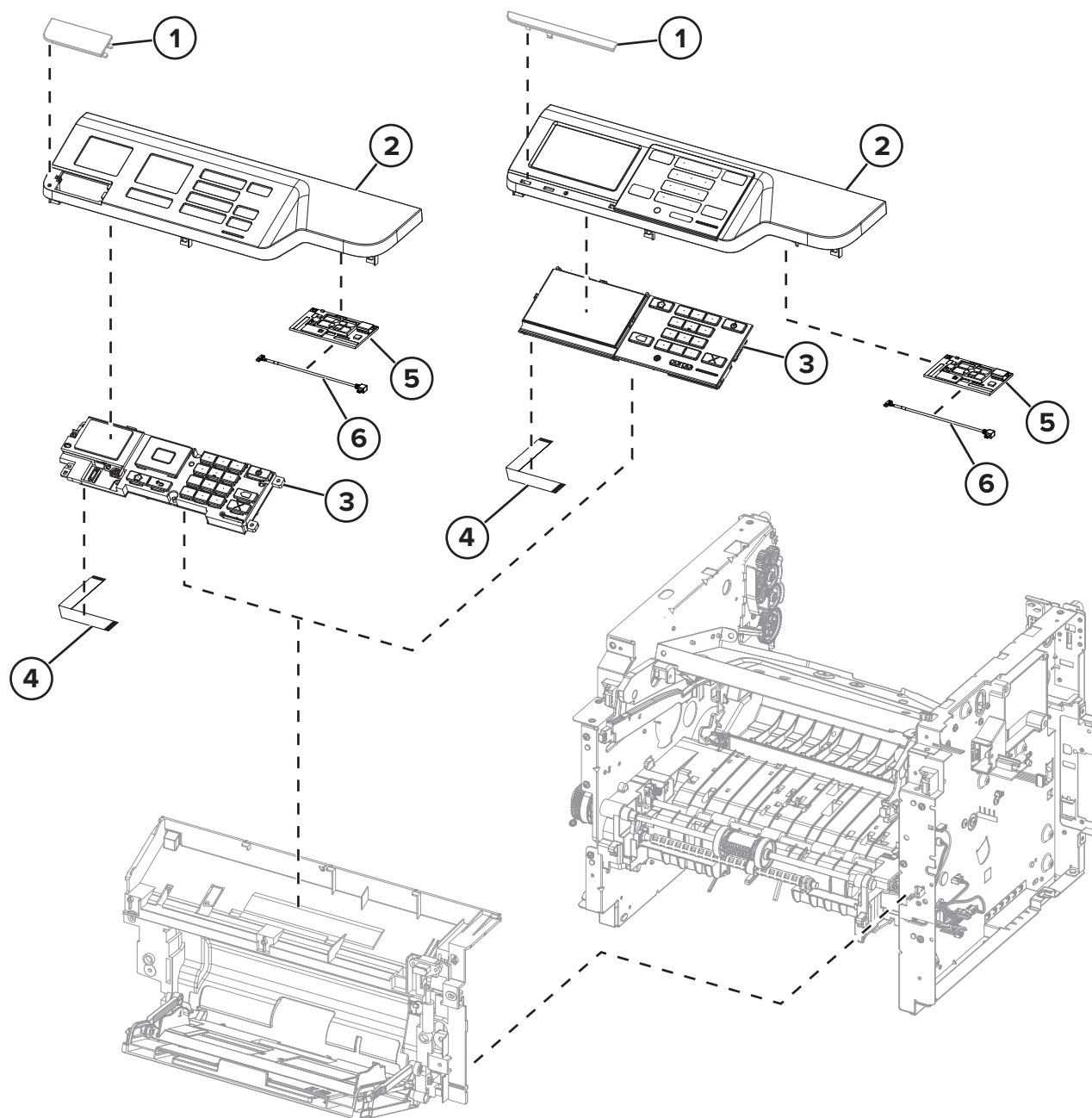
Assembly 2: Control panel

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X1158	1	1	Bezel (MS621)	--
1	41X2805	1	1	Bezel (B2650)	--
1	41X2699	1	1	Bezel (2.4" Blank)	--
1	41X1159	1	1	Bezel (MS622)	--
1	41X2864	1	1	Bezel (M3250)	--
2	41X1978	1	1	Control panel front cover (MS621 and B2650)	**"Control panel (2.4-inch display) cover, buttons, and board removal" on page 210**
2	41X2258	1	1	Control panel front cover (MS622 and M3250)	**"Control panel (4.3-inch display) cover, buttons, and board removal " on page 212**
3	41X1627	1	1	Control panel display assembly (MS621 and B2650)	--
3	41X1628	1	1	Control panel display assembly (MS622 and M3250)	--
4	41X2257	1	1	Control panel flat cable (MS621 and B2650)	--
4	41X2526	1	1	Control panel flat cable (MS622 and M3250)	--
5	41X2894	1	1	Integrated wireless card (B2650dw)	--
6	41X2270	1	1	Wireless cable (B2650dw)	--

Assembly 3: Electronics 1
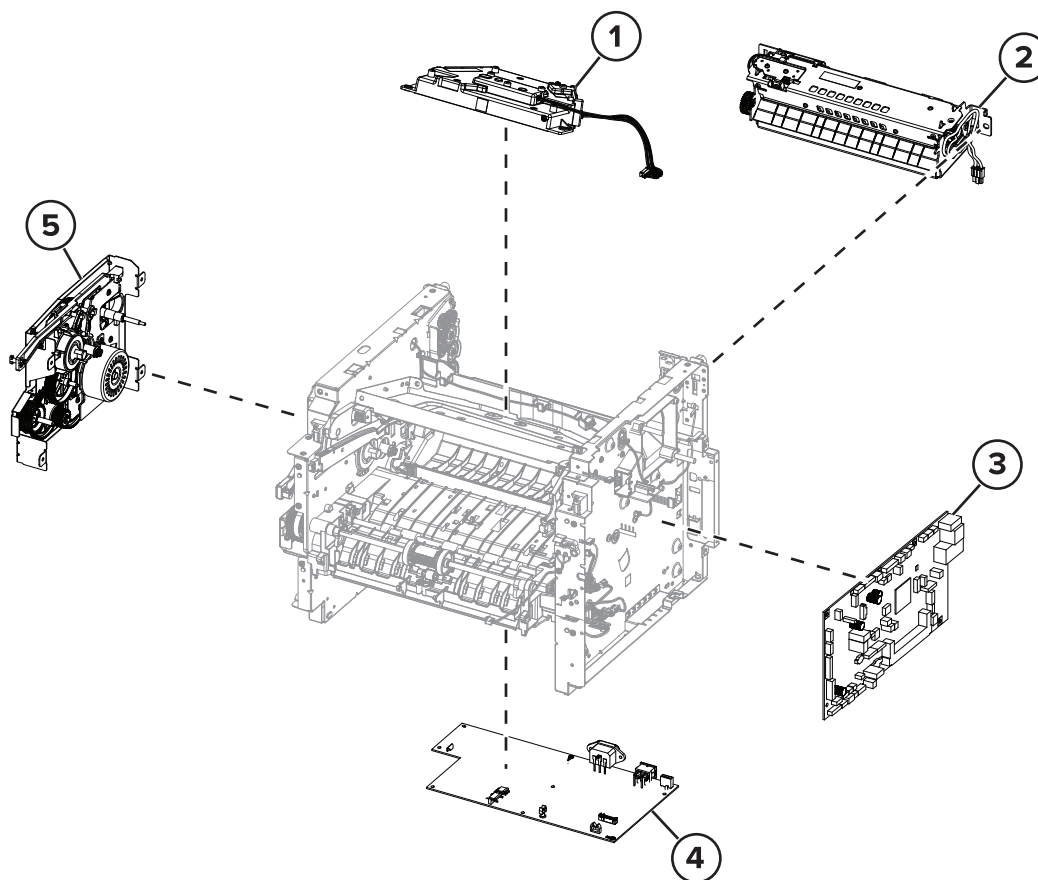
Assembly 3: Electronics 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X1185	1	1	Printhead	**"Printhead removal" on page 250**
2	41X1178	1	1	Fuser, 110V	**"Fuser removal" on page 245**
2	41X1179	1	1	Fuser, 220V	**"Fuser removal" on page 245**
2	41X1180	1	1	Fuser, 100V	**"Fuser removal" on page 245**
3	41X2512	1	1	Controller board (MS622 and M3250) • This part is the original board for new printers (8th digit of printer serial number≥*2*). • This part can be installed on old printers (8th digit of printer serial number=*0*, or *1*). The control panel flat cable (41X2526) also needs to be installed.	**"Controller board removal" on page 197**
3	41X1194	1	1	Controller board (MS621 and B2650)	**"Controller board removal" on page 197**
4	41X1201	1	1	Power supply, 100V/110V	**"Power supply removal" on page 225**
4	41X1202	1	1	Power supply, 220V	**"Power supply removal" on page 225**
5	41X1224	1	1	Main drive gearbox	**"Main drive gearbox removal" on page 179**

Assembly 4: Electronics 2
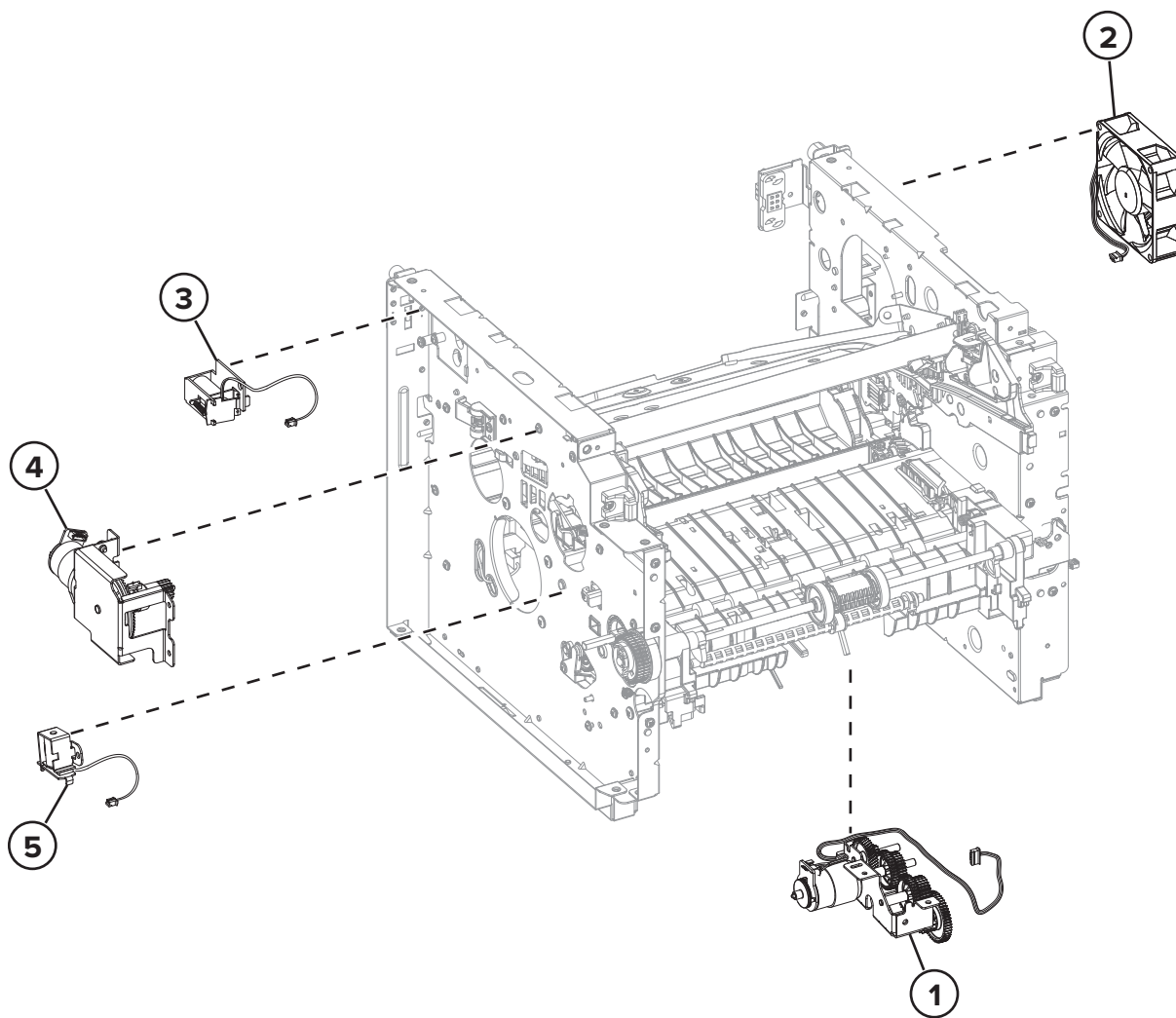
Assembly 4: Electronics 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X1989	1	1	Pick/lift motor gearbox	**"Pick/lift motor gearbox removal" on page 237**
2	41X2259	1	1	Cooling fan	**"Cooling fan removal" on page 193**
3	41X1214	1	1	Reverse solenoid	**"Reverse solenoid removal" on page 184**
4	41X1237	1	1	Cartridge gearbox	**"Cartridge gearbox removal" on page 185**
5	41X1213	1	1	MPF solenoid	**"MPF solenoid removal" on page 186**

Assembly 5: Electronics 3
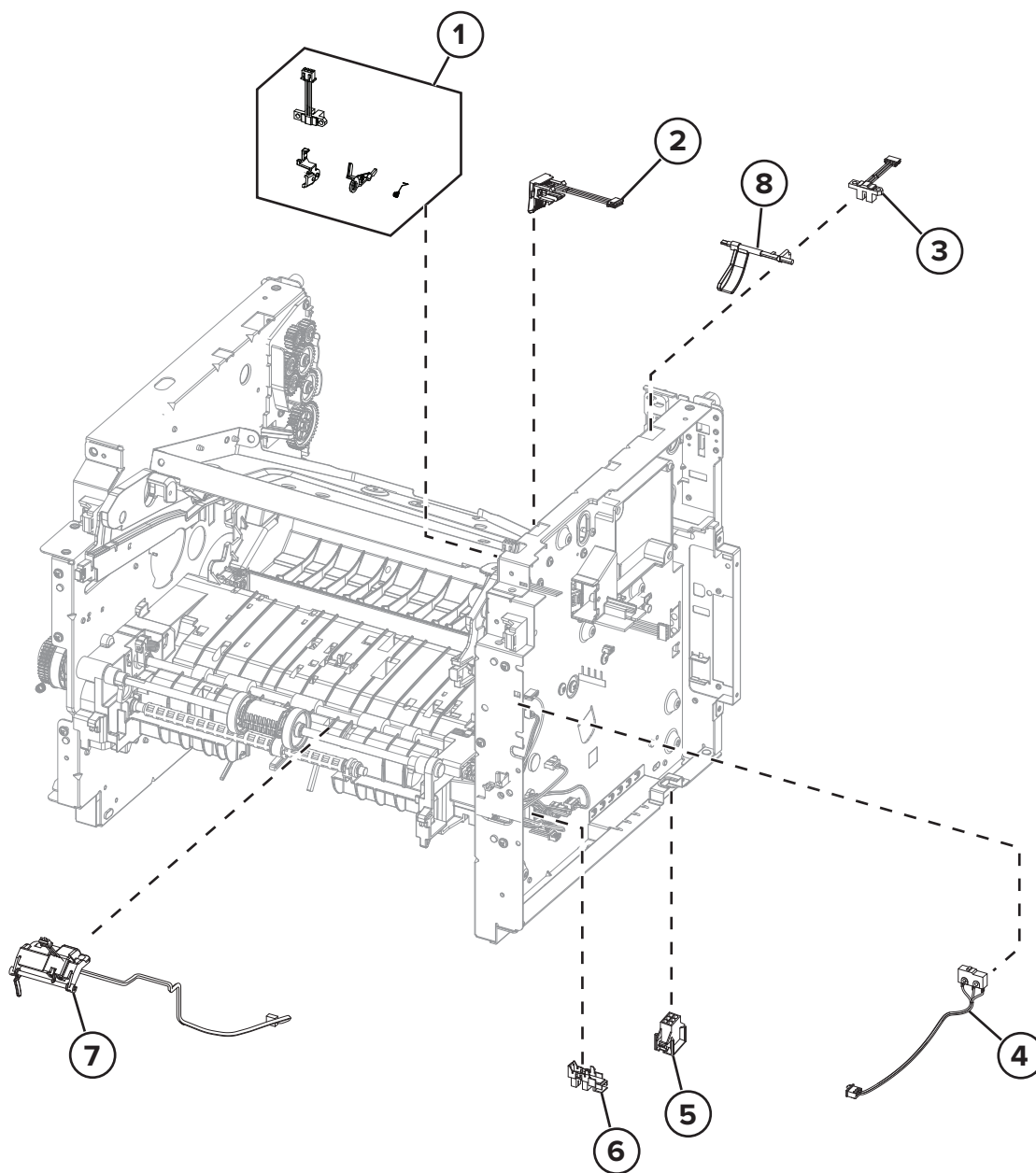
Assembly 5: Electronics 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X1988	1	1	Sensor (cartridge barrel)	**"Cartridge barrel shutter sensor kit removal" on page 204**
2	41X1162	1	1	Toner cartridge smart chip contact	**"Toner cartridge smart chip contact removal" on page 201**
3	41X1211	1	1	Sensor (bin full, MS621 and B2650)	**"Sensor (bin full) removal" on page 246**
3	41X2260	1	1	Sensor (bin full, MS622 and M3250)	**"Sensor (bin full) removal" on page 246**
4	41X1209	1	1	Sensor (front door)	**"Sensor (front door) removal" on page 214**
5	41X1236	1	1	Interconnect cable	**"Interconnect cable removal" on page 191**
6	41X1238	1	1	Sensor (tray present)	**"Sensor (tray present) removal" on page 192**
7	41X1210	1	1	Sensor (MPF paper present)	**"Sensor (MPF paper present) removal" on page 219**
8	41X2667	1	1	Bin full flag	--

Assembly 6: Electronics 4
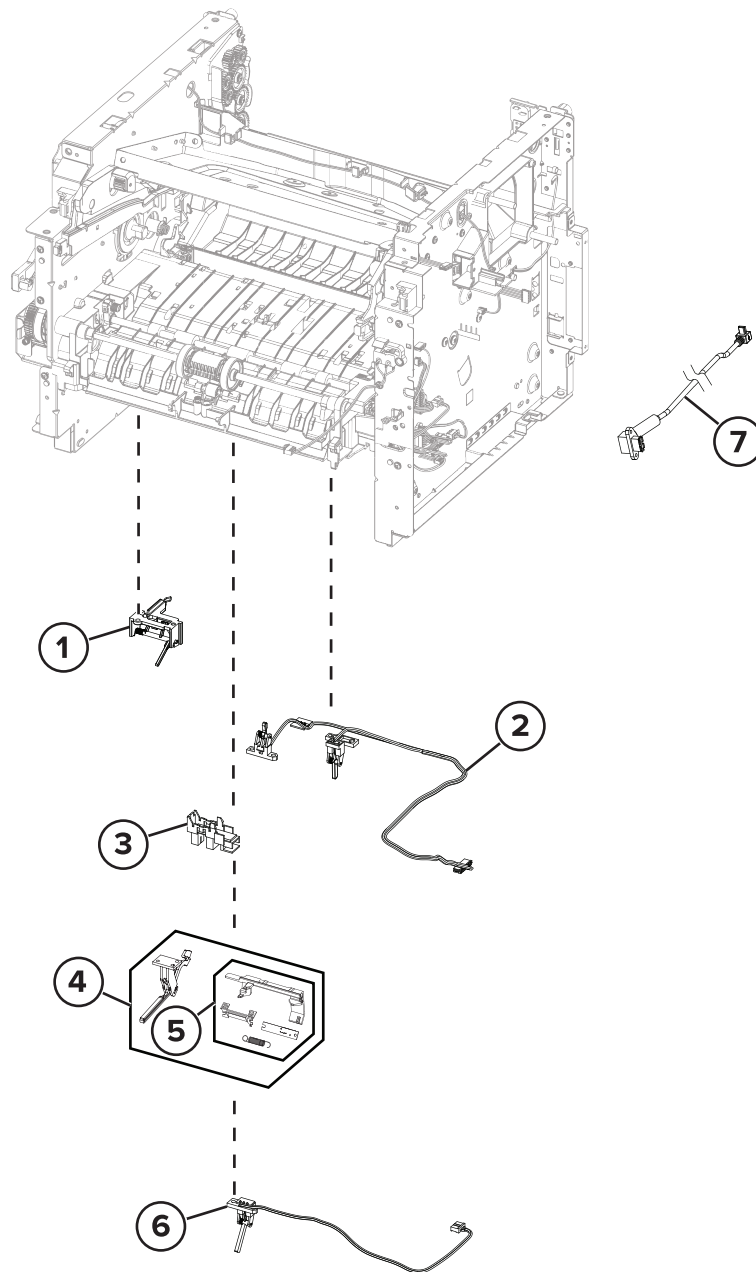
Assembly 6: Electronics 4

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X1208	1	1	Sensor (trailing edge)	**"Sensor (trailing edge) removal" on page 233**
2	41X1206	1	1	Sensor (duplex and input)	**"Sensors (duplex and input) removal" on page 229**
3	41X1238	1	1	Sensor (paper present)	**"Sensor (paper present) removal" on page 231**
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 239**
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 239**
6	40X8044	1	1	Sensor (index)	**"Sensor (index) removal" on page 231**
7	41X2630	1	1	Front USB host cable	**"Front USB host cable removal" on page 220**

Assembly 7: Paper transport 1
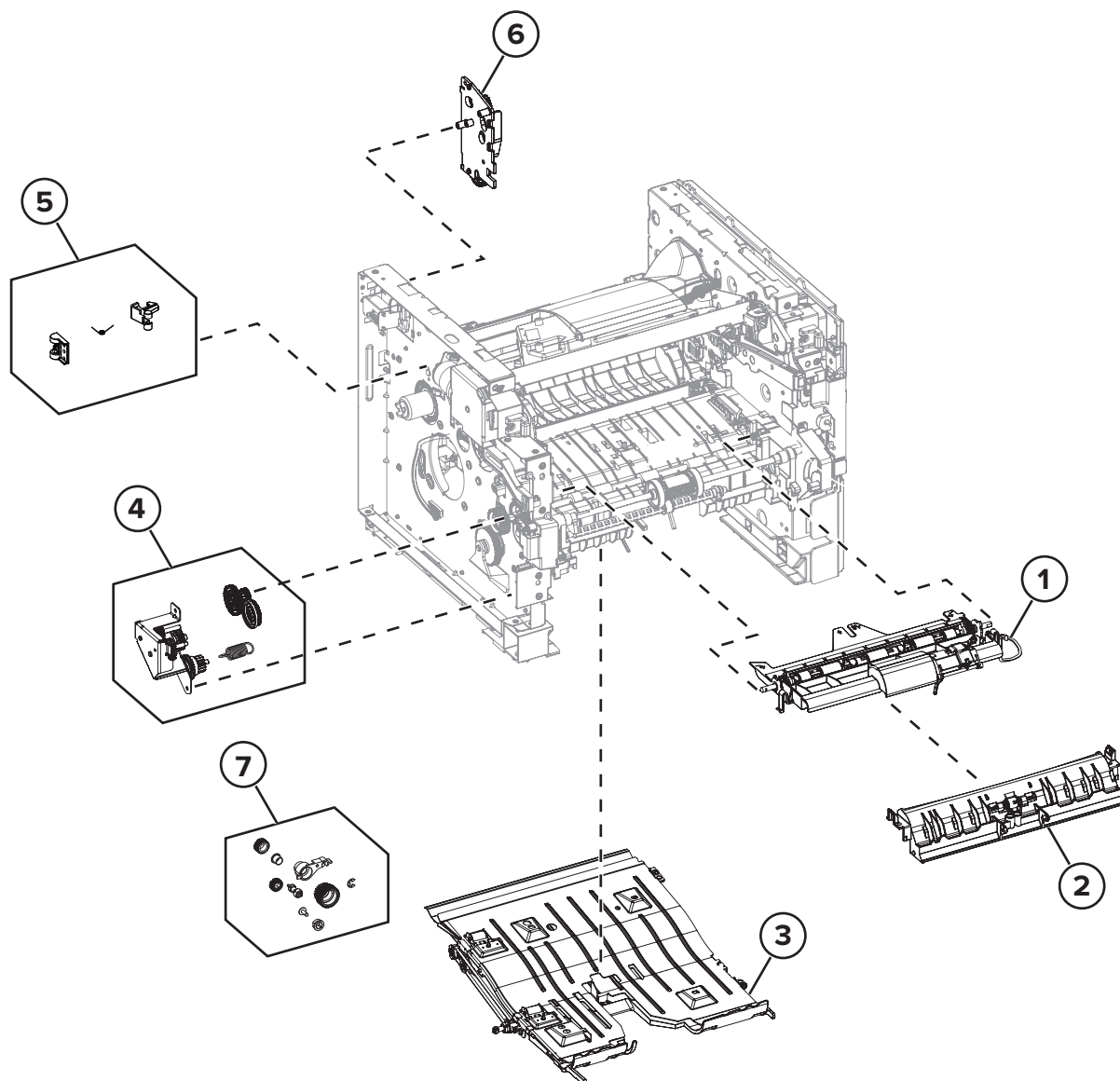
Assembly 7: Paper transport 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X1183	1	1	Jam access cover	**"Jam access cover removal" on page 213**
2	41X1184	1	1	Front input guide	**"Front input guide removal" on page 220**
3	41X1176	1	1	Duplex assembly	**"Duplex assembly removal" on page 227**
4	41X1182	1	1	MPF gearbox	**"MPF gearbox removal" on page 180**
5	41X2255	1	1	Fuser actuator	**"Fuser actuator removal" on page 183**
6	41X2256	1	1	Redrive gear plate	**"Redrive gear plate removal" on page 248**
7	41X4214	1	1	Duplex gear kit	--

Assembly 8: Paper transport 2
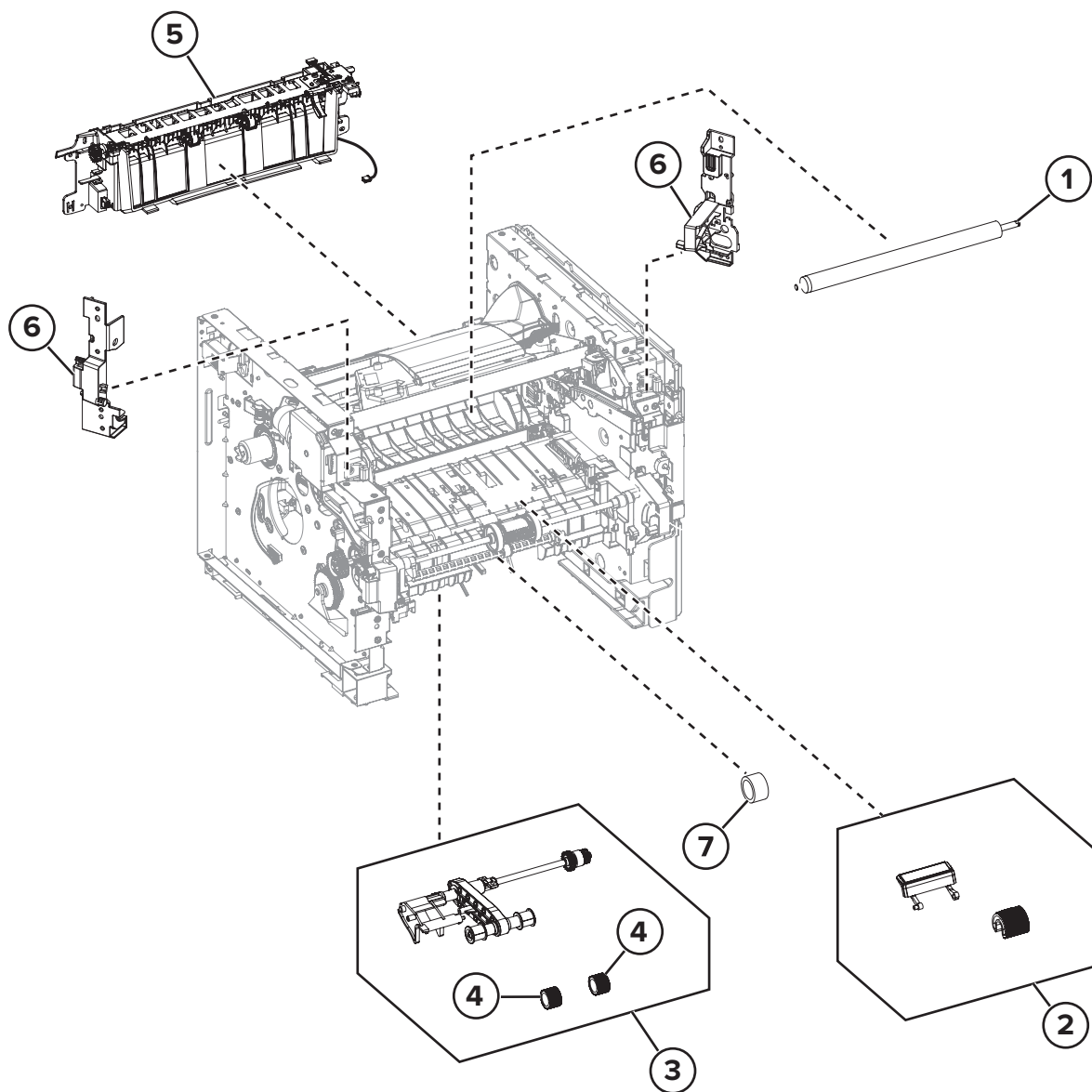
Assembly 8: Paper transport 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X8393	1	1	Transfer roller	**"Transfer roller removal" on page 213**
2	41X1197	1	1	MPF pick roller and separator pad	**"MPF pick roller and separator pad removal" on page 216**
3	41X1196	1	1	Pick roller assembly	**"Pick roller assembly removal" on page 235**
4	41X1198	2	2	Pick tire	--
5	41X1204	1	1	Redrive assembly (MS621 and B2650)	**"Redrive assembly removal" on page 247**
5	41X2261	1	1	Redrive assembly (MS622 and M3250)	**"Redrive assembly removal" on page 247**
6	41X4474	1	1	Mounting bracket	--
7	41X4545	1	1	Isolation roller	**"Isolation roller removal" on page 222**

Assembly 9: MPF and standard tray
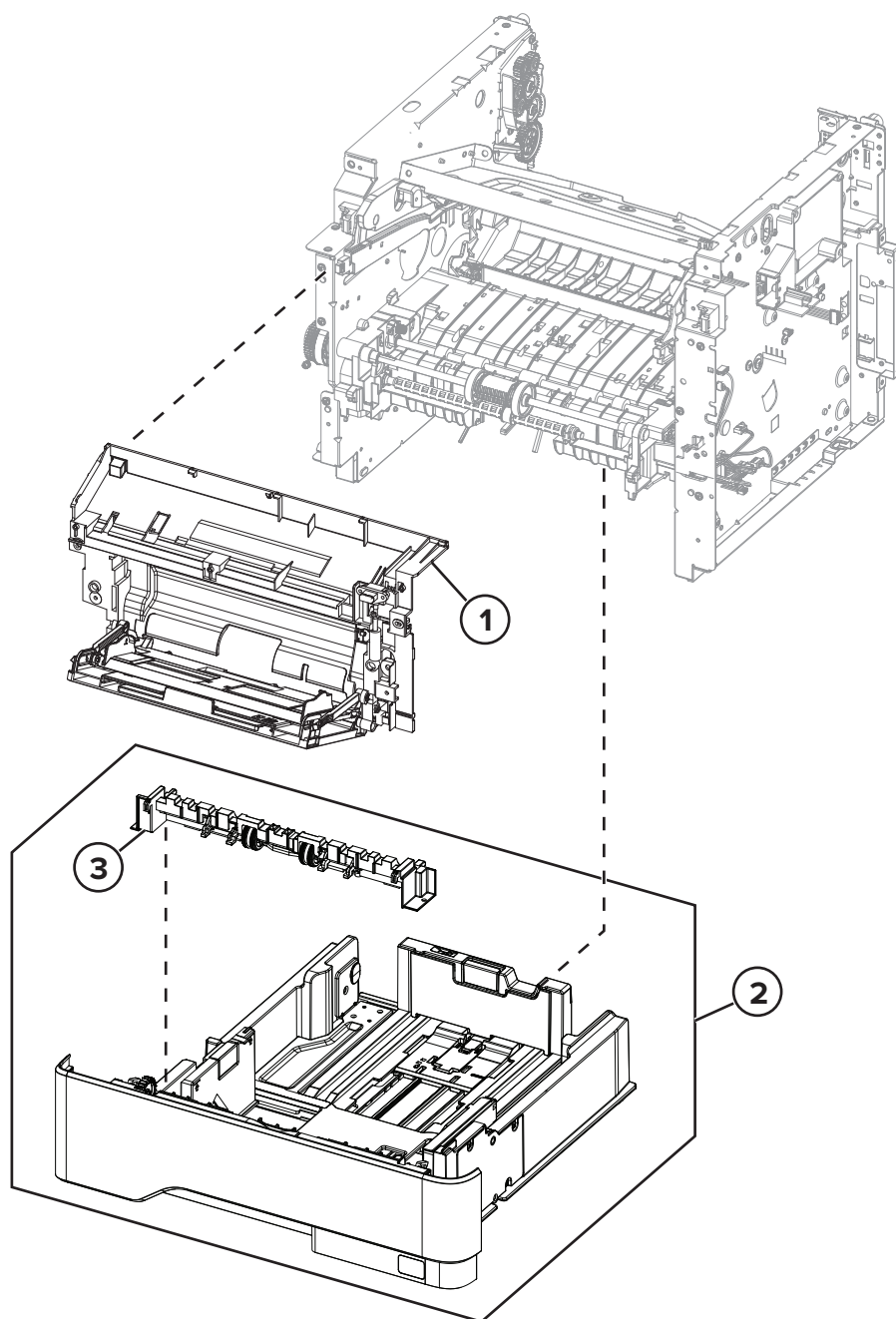
Assembly 9: MPF and standard tray

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2605	1	1	MPF with front access cover	**"MPF with front access cover removal" on page 207**
2	41X1987	1	1	Standard 550-sheet tray insert	--
3	41X1212	1	1	Separator roller assembly	--

Assembly 10: Optional trays
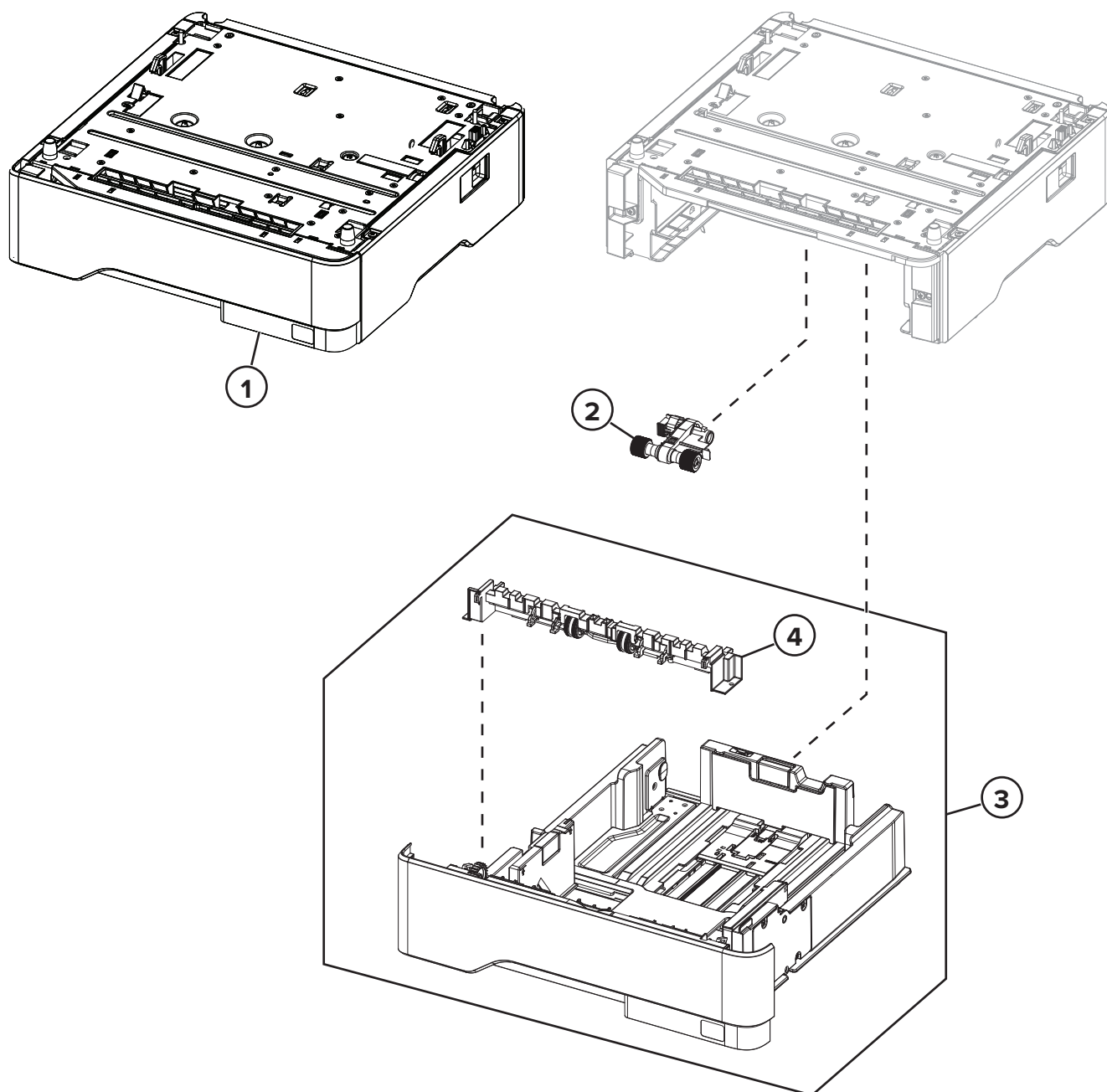
Assembly 10: Optional trays

Asm-index	P/N	Units/opt	Units/FRU	Description	Removal procedure
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)	--
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 253**
NS	40X8033	1	1	Lockable tray key	--

Assembly 11: Maintenance kits

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
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
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

Assembly 12: Power cords

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
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
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

Assembly 13: Miscellaneous

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	41X1026	1	1	Hard disk, 500GB (USB)	--
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	41X1372	1	1	Marknet N8370, Rear WiFi	--
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	41X2051	1	1	Parallel card, thin (MS521)	--
NS	41X1945	1	1	MarkNet N8230 Fiber Ethernet 100BASE-FX (LC), 1000BASE-SX (LC) (Fiber + side backpack)	--
NS	41X2055	1	1	Smart card	--
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.	N/A
Scan	The product is scanning hard-copy documents.	N/A
Ready	The product is waiting for a print job.	9.5
Sleep Mode	The product is in a high-level energy-saving mode.	2.2
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:
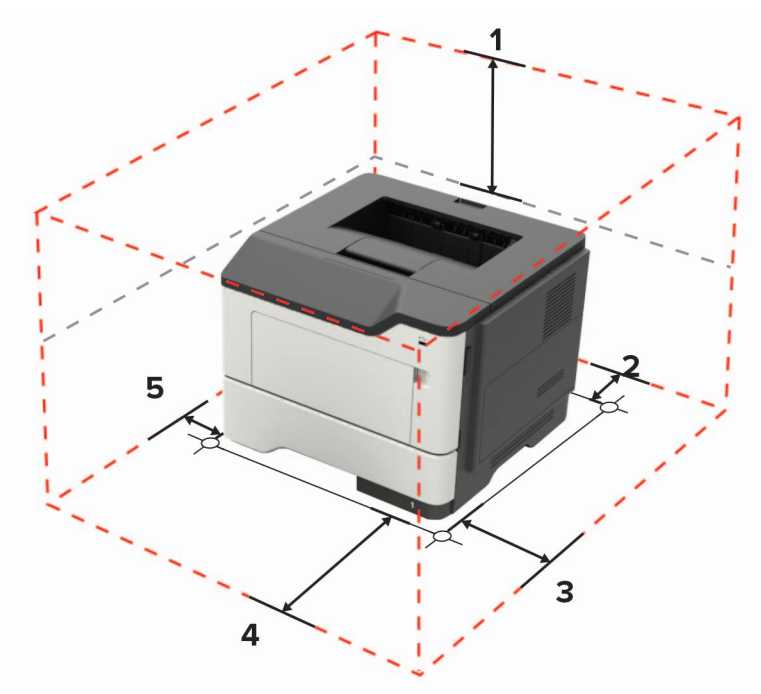
1	Top	305 mm (12 in.)
2	Rear	100 mm (3.94 in.)
3	Right side	110 mm (4.33 in.)
4	Front	305 mm (12 in.)
5	Left side	65 mm (2.56 in.)

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
Scanning	N/A
Copying	N/A
Ready	15

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 (USB) (MS622 and M3250)
- 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 Servers
  - Marknet N8370
  - Marknet N8372
- Local Interface Cards
  - RS-232C Serial Interface Card2
  - Parallel 1284-B Interface Card2
  - Thin Parallel
  - Marknet N8230 Fiber Ethernet 100BASE-FX(LC), 1000BASE-SX(LC) (Fiber + side backpack) (MS622 and M3250)

Input/output configurations and capacities

Input sources

Printer model	Number of standard trays	Maximum number of optional trays[*]	Maximum number of trays
MS621, B2650	2	3	5
MS622, M3250	2	3	5
[*] The printer can support a maximum of three optional trays in one configuration.			

Input capacities

Printer model	Standard tray	Multipurpose feeder	Total standard capacity	Maximum optional capacity	Maximum input capacity
MS621, B2650	550	100	650	1650	2300
MS622, M3250	550	100	650	1650	2300
Paper capacity means 20-lb xerographic paper at ambient environment per sheet.					

Output destinations

Printer model	Number of standard destinations
MS621, B2650	1
MS622, M3250	1

Output capacities

Printer model	Standard output capacity	Maximum output capacity
MS621, B2650	250	250
MS622, M3250	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.

Print cycle operation

Print engine layout
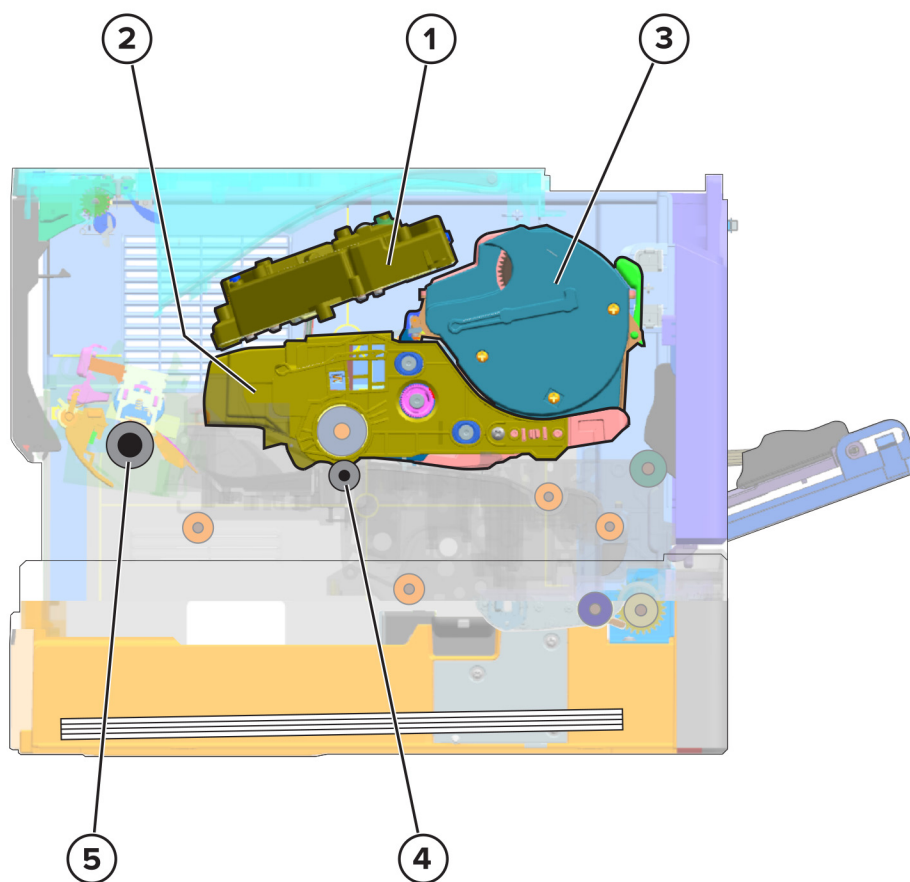
1	Printhead
2	Imaging unit
3	Toner cartridge
4	Transfer roller

Theory of operation

5	Fuser

Print cycle

Flowchart

Charge

1	Charge roller
2	Photoconductor drum
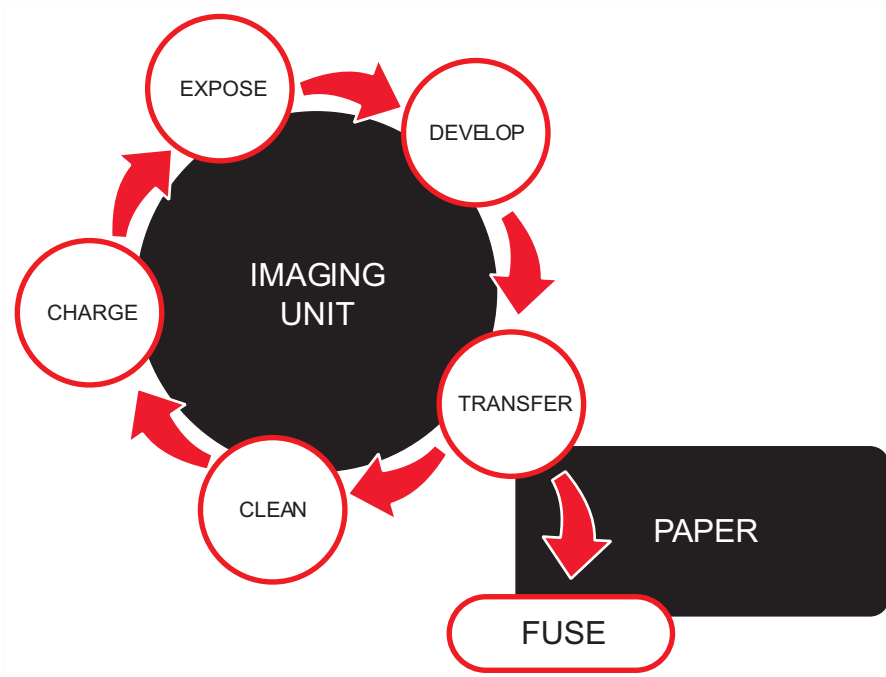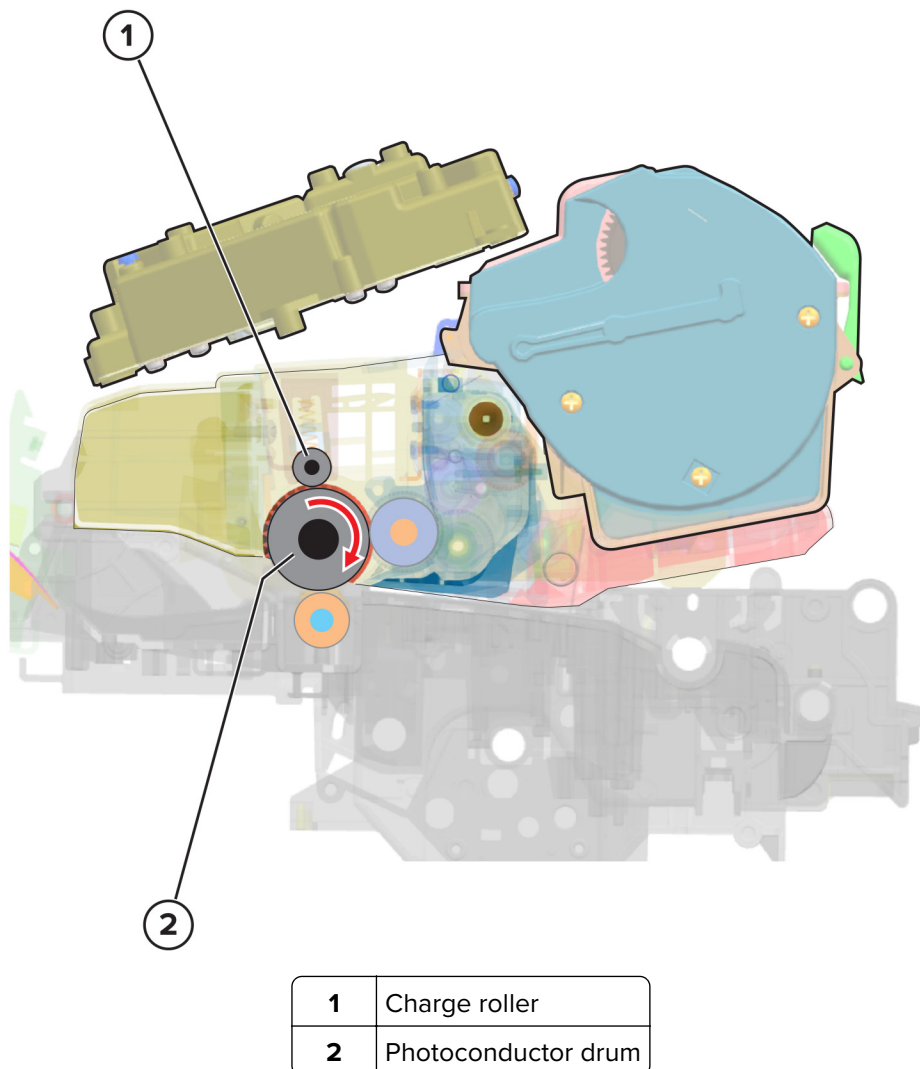
A uniform negative electrical charge is applied by the charge roller to the surface of the photoconductor drum. The photoconductive properties of the surface material allow it to hold the charge as long as it is not exposed to light.

Expose
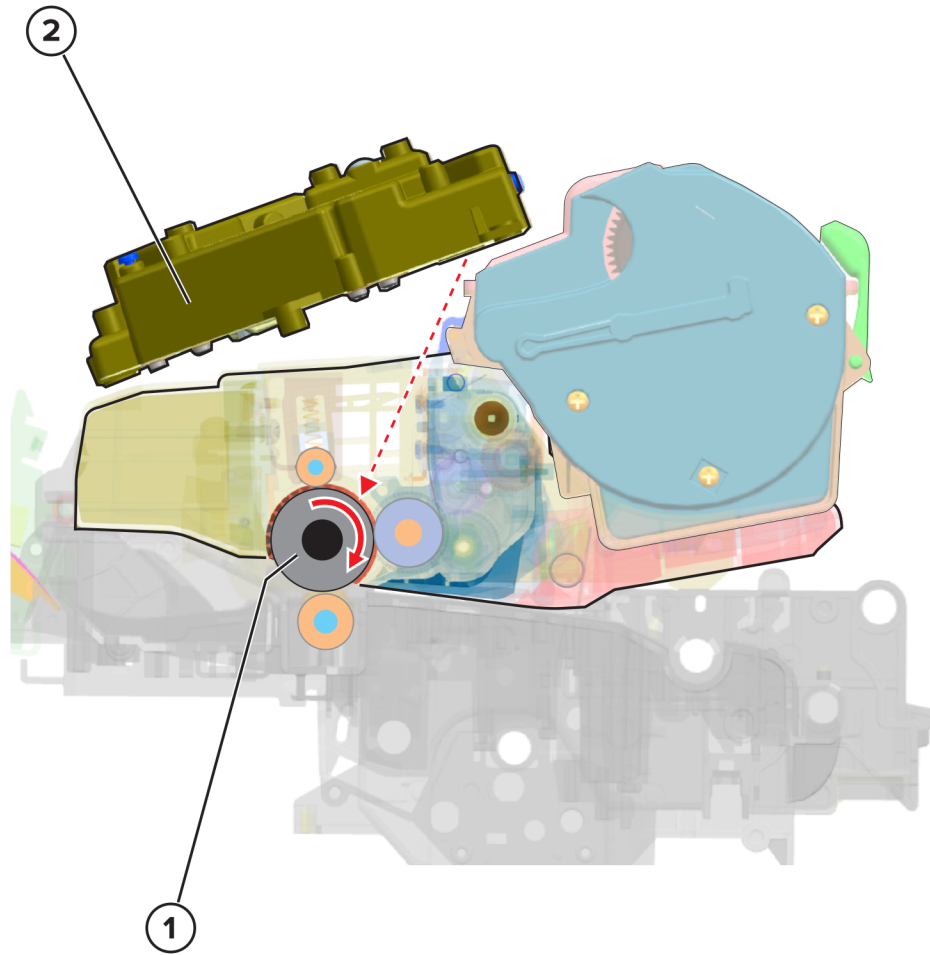
1	Photoconductor drum
2	Printhead

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
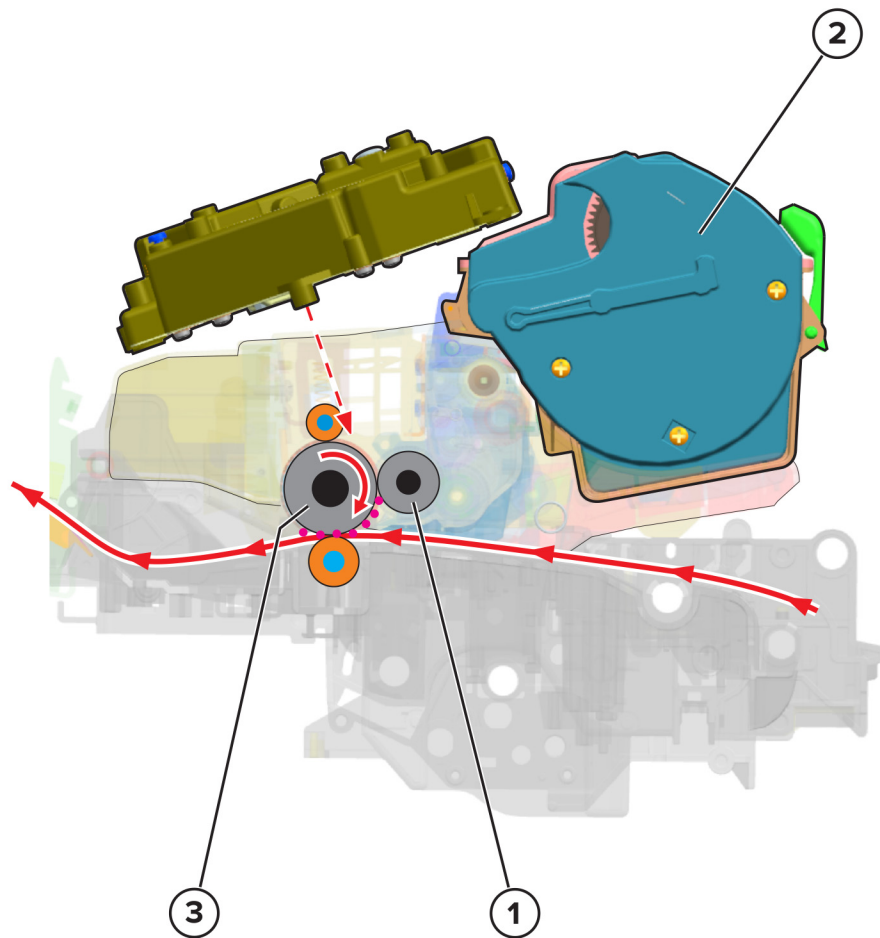
1	Developer roller
2	Toner cartridge
3	Photoconductor drum

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
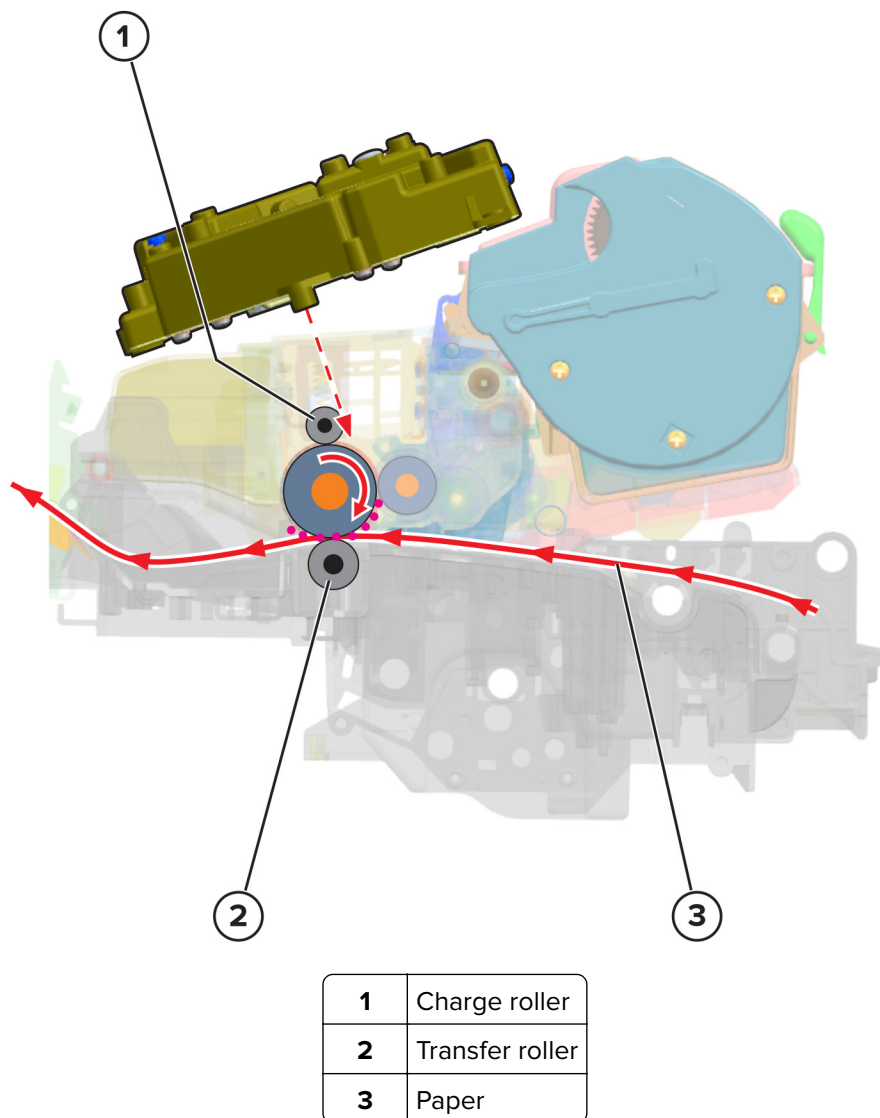
The transfer roller applies a positive charge to the paper, which is pressed between the transfer roller and the photoconductor drum. Due to relative opposite polarities between the paper, from the transfer roller, and the photoconductor drum, from the charge roller, the charge attracts the toner onto 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
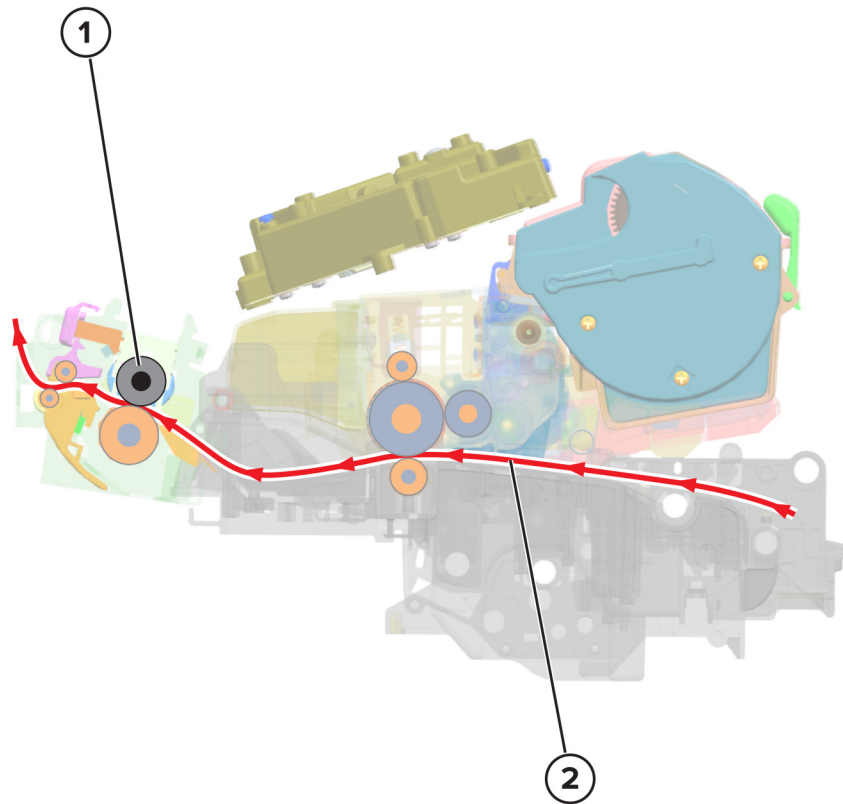
1	Fuser
2	Paper

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
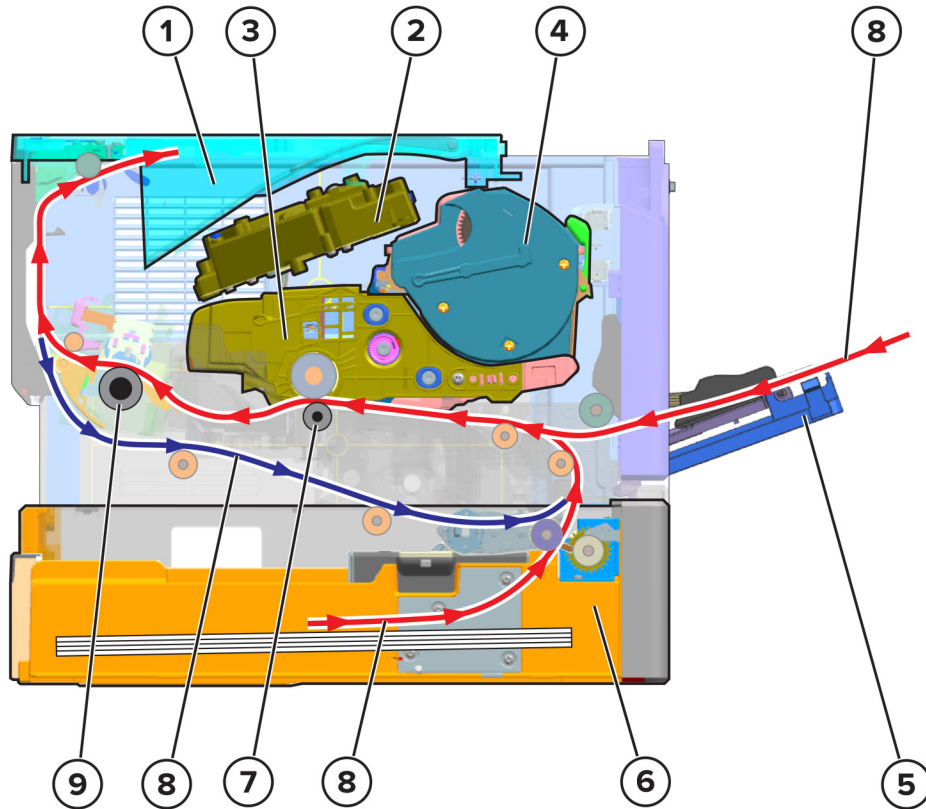
1	Bin
2	Printhead
3	Imaging unit
4	Toner cartridge
5	MPF
6	Tray
7	Transfer roller
8	Paper paths
9	Fuser

Printer paper path

One-sided print job
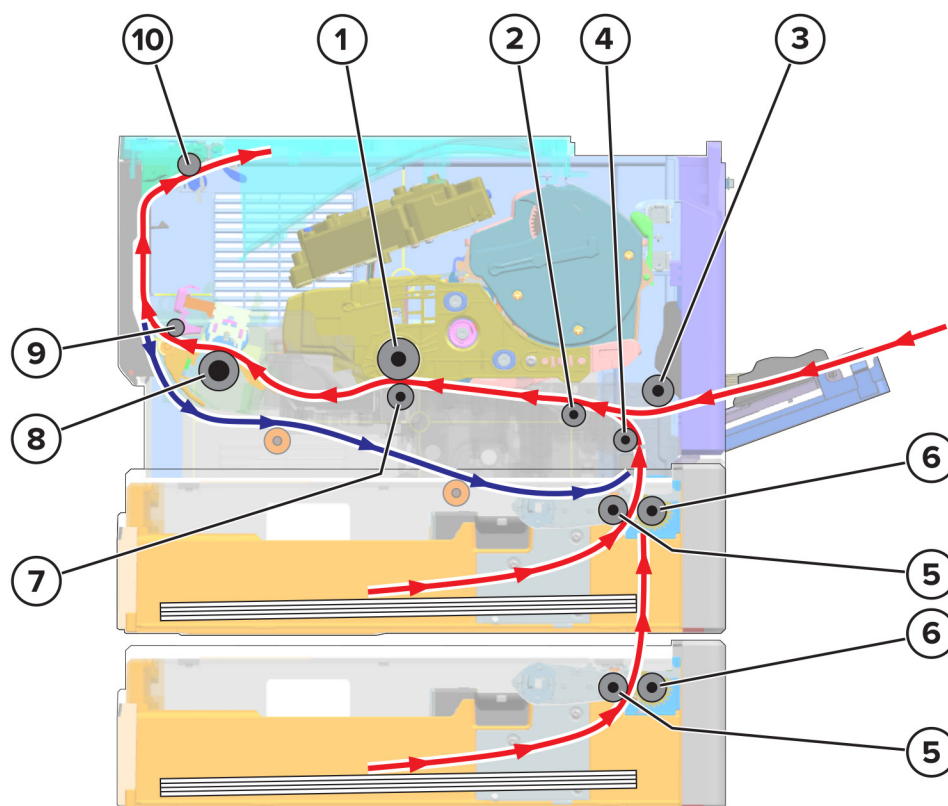
1	Photoconductor drum
2	First input roller
3	MPF pick roller
4	Second input roller
5	Pick roller
6	Separator roller
7	Transfer roller
8	Fuser
9	Fuser exit roller
10	Paper exit roller

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.

Theory of operation

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
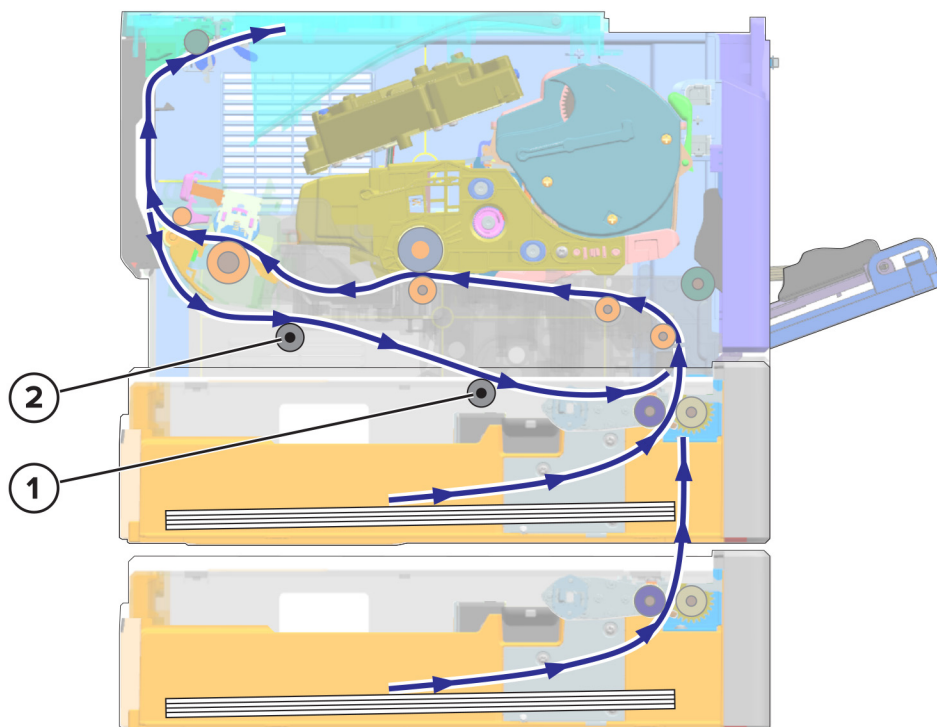
1	Duplex rear roller
2	Duplex front roller

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
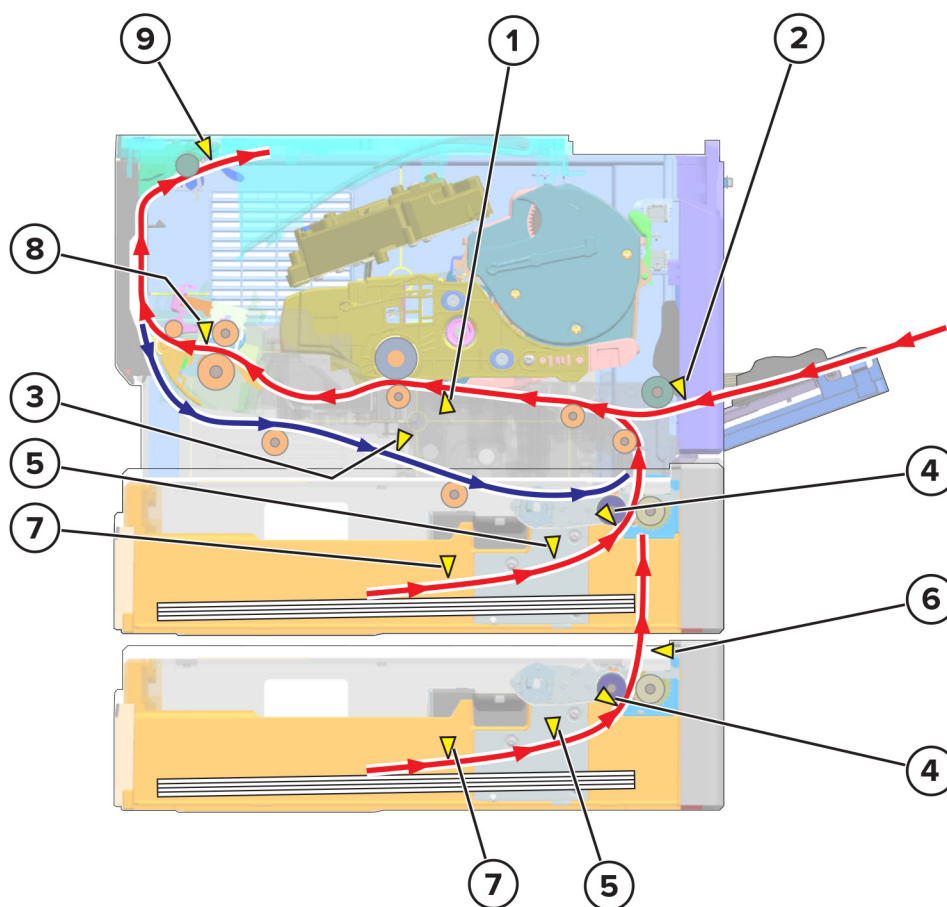
#	Sensor	Function
1	Sensor (input)	Detects the paper traveling between the first input roller and the transfer roller
2	Sensor (MPF paper present)	Detects if paper is in the MPF tray
3	Sensor (duplex)	Detects the paper traveling along the duplex path
4	Sensor (index)	Detects if the pick roller is at 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
9	Sensor (narrow media/bin full)	Detects if the paper is narrow and the bin is full

Theory of operation
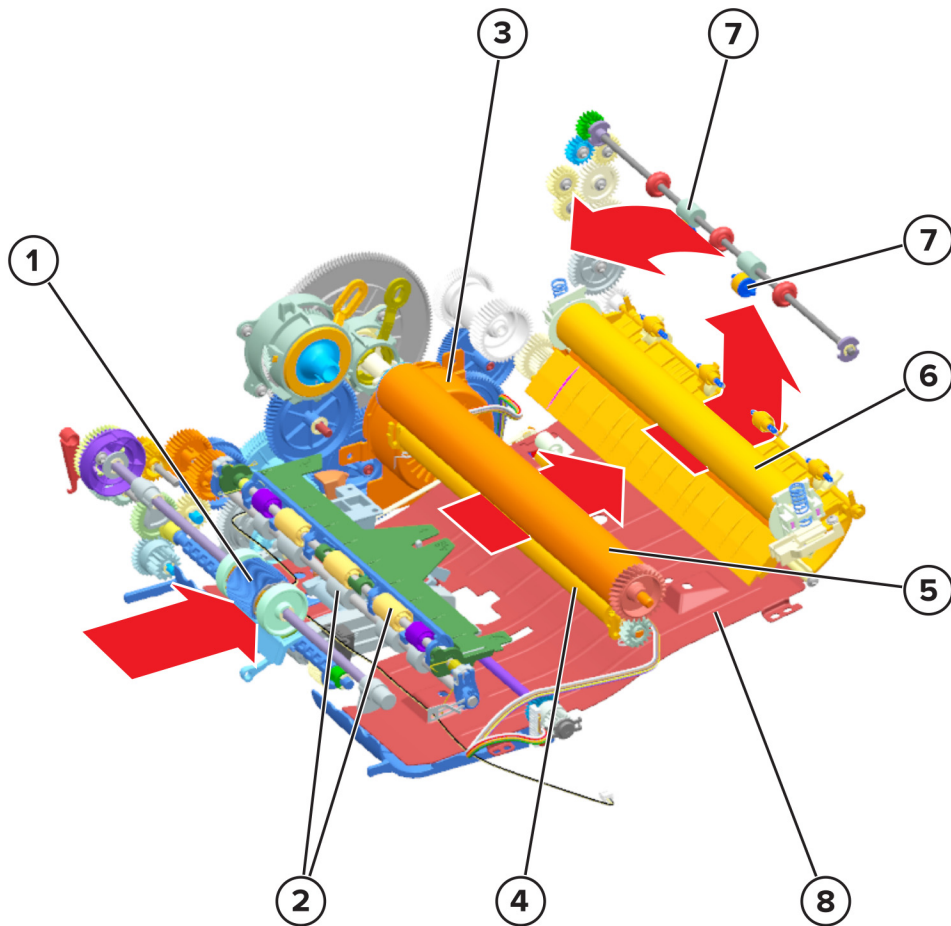
Main drive

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
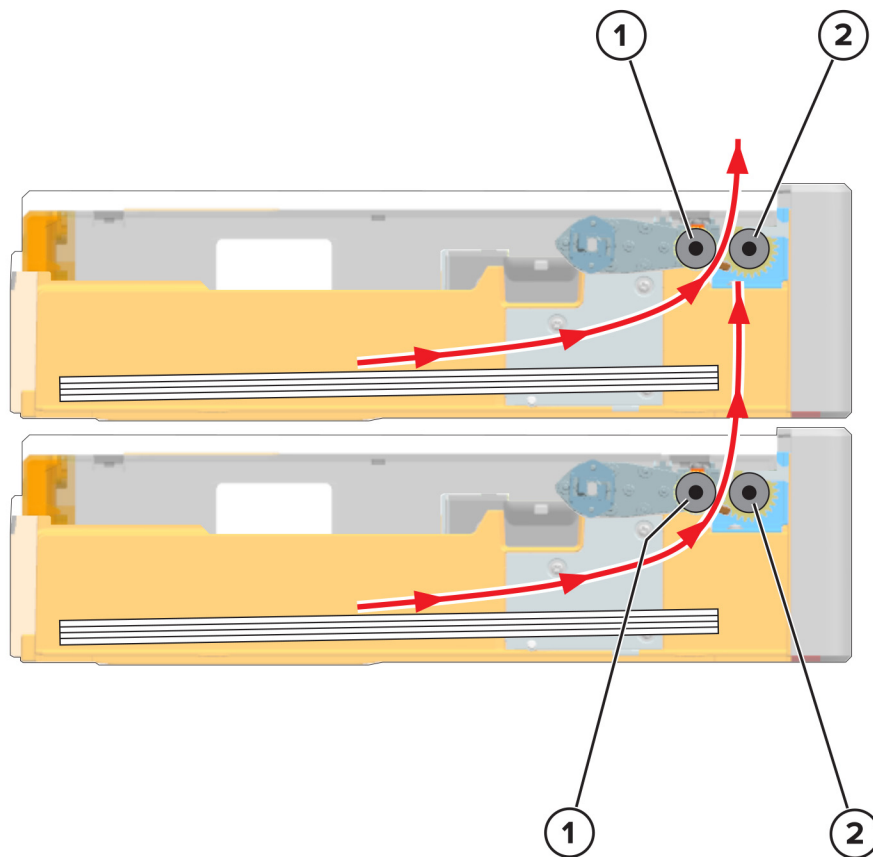
1	Pick roller
2	Separator roller

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.

Acronyms

Acronyms

ASIC	Application-Specific Integrated Circuit
BLDC	Brushless DC Motor
BOR	Black Only Retract
C	Cyan
CCD	Charge Coupled Device
CCP	Carbonless Copy Paper
CRC	Cyclic Redundancy Check
CSU	Customer Setup
CTLS	Capacitance Toner Level Sensing
DIMM	Dual Inline Memory Module
DRAM	Dynamic Random Access Memory
EDO	Enhanced Data Out
EP	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
ITU	Image Transfer Unit
K	Black
LCD	Liquid Crystal Display
LDAP	Lightweight Directory Access Protocol
LED	Light-Emitting Diode
LVPS	Low Voltage Power Supply
M	Magenta
MB	Megabyte
MFP	Multi-Function Printer
MPF	Multipurpose Feeder
MROM	Masked Read Only Memory

MS	Microswitch
NVM	Nonvolatile Memory
NVRAM	Nonvolatile Random Access Memory
OEM	Original Equipment Manufacturer
OPT	Optical Sensor
PC	Photoconductor
pel, pixel	Picture element
POR	Power-On Reset
POST	Power-On Self Test
PSD	Position Sensing Device
PWM	Pulse Width Modulation
RIP	Raster Imaging Processor
ROM	Read Only Memory
SDRAM	Synchronous Dual Random Access Memory
SIMM	Single Inline Memory Module
SRAM	Static Random Access Memory
TPS	Toner Patch Sensing
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

Part number index

Part number index

Part number index

Part name index

Part name index

B2650, MS621
WIRING DIAGRAM

CONTROL PANEL

POWER SUPPLY UNIT

CONTROLLER BOARD

PCN5 — FUSER ASSEMBLY
PCN7
PCN1
Sw1
PCN6
PCN7
PCN3 PCN2 — IMAGING UNIT CONTACTS (OPC & CHARGE) / TONER LEVEL SENSING
PCN4 — TRANSFER ROLL SPRING

SENSOR (CARTRIDGE BARREL)
MOTOR (CARTRIDGE)
IMAGING UNIT SMART CHIP CONTACT
CARTRIDGE SMART CHIP CONTACT
MOTOR (LIFT/PICK) — JLIFT1
SENSOR (COVER OPEN) — JCVR1
JDRC1 JDRC2
JCART1
JBARR1
JUICC24
J4
TONER LEVEL SENSING — 14_JCTLS1O0
JWIFI1
MAIN MOTOR — JMTR1
JPSU1

SOLENOID (REVERSE)
PRINTHEAD
SENSOR (NARROW)
FAN
FUSER ASSEMBLY
PCN 5
JDUPSOL1 JPH1
JNRW1 JFAN1 JTHM1
JEXIT1

SENSOR (TRAILING EDGE) — JACM1
JFUSB1
JUSBD1 — USB MALE PLUG
JPHY1 — ETHERNET
JRESET1

MPF SOLENOID — JMPFSOL1
SENSOR (TRAY PRESENT) — JTPRES1
SENSOR (MPF PAPER PRESENT) — JMPFPP1
SENSOR (PAPER PRESENT) — JP_PRE1
JINDEX1 JDUPPI1 JTDS1 JOPT1

SENSOR (INDEX)
SENSOR (DUPLEX)
SENSOR (INPUT)
THUMB DRIVE
SENSOR (TONER DENSITY)
TRAY OPTIONS AUTO CONNECT

MS622de, M3250
WIRING DIAGRAM

Note: This is the original board for old printers
(8th digit of printer serial number=0, or 1).

CONTROL PANEL

POWER SUPPLY UNIT

CONTROLLER BOARD

FUSER ASSEMBLY

PCN5

PCN1

Sw1

PCN6

PCN7

PCN3   PCN2

PCN4

IMAGING UNIT
CONTACTS
(OPC & CHARGE)

TONER LEVEL
SENSING

TRANSFER ROLL
SPRING

SENSOR
(CARTRIDGE
BARREL)

IMAGING UNIT
SMART CHIP CONTACT

CARTRIDGE
SMART CHIP CONTACT

SENSOR
(COVER OPEN)

MOTOR
(CARTRIDGE)

MOTOR
(LIFT/PICK)

MOTOR
(MAIN)

JUICC43

JPHONE2 JSPKR1

JVIP2

JDUPSOL1

JPH1

JBINS1 JFAN1 JTHM1

JEXIT1

SECURE
CARD

SOLENOID
(REVERSE)

PRINTHEAD

SENSOR
(BIN FULL)

FAN

FUSER
ASSEMBLY

PCN 5

THUMB DRIVE

JUSBD1

USB MALE PLUG

JRUSB1

TYPE A

ETHERNET

JISP1

SENSOR
(NARROW)

SENSOR
(ACM)

JNRW1

JMPSOL1 JT_PRE1 JMPFPP1 JP_PRE1 JINDEX1 JDUPPI1 JTDS1 JGPT1 JFAX2 JRESET1

FAX CARD

SOLENOID
(MPF)

SENSOR
(TRAY PRESENT)

SENSOR
(MPF)

SENSOR
(PAPER PRESENT)

SENSOR
(INDEX)

TRAY OPTIONS
AUTOCONNECT

SENSOR
(TONER DENSITY)

SENSOR
(DUPLEX)

SENSOR
(INPUT)

MS622de, M3250
WIRING DIAGRAM

Note: This is the original board for new printers
(8th digit of printer serial number≥2).

CONTROL PANEL

POWER SUPPLY UNIT

CONTROLLER BOARD

FUSER ASSEMBLY

PCN5

PCN7

PCN1

Sw1

PCN6

PCN7

PCN3 PCN2

IMAGING UNIT CONTACTS (OPC & CHARGE)

TONER LEVEL SENSING

PCN4

TRANSFER ROLL SPRING

SOLENOID (REVERSE)

SENSOR (CARTRIDGE BARREL)

MOTOR (CARTRIDGE)

CARTRIDGE SMART CHIP CONTACT

MOTOR (LIFT/PICK)

JLIFT1   JDRC1   JCART1

JCVR1

SENSOR (COVER OPEN)

TONER LEVEL SENSING

14_JCTLS1

JMTR1

MAIN MOTOR

JISP1

JPSU1

JSTAG1

SENSOR (TRAILING EDGE)

JACM1

SENSOR (MPF PAPER PRESENT)

JMPFPP1 JNRW1

MPF SOLENOID

JMPFSOL1 JTPRES1

JP_PRE1

JINDEX1 JDUPPII

JOPT1

JTDS1

JDRC2 JRIP1

JFUSB1

JRESET1

SENSOR (TRAY PRESENT)

SENSOR (PAPER PRESENT)

SENSOR (INDEX)

SENSOR (DUPLEX)

SENSOR (INPUT)

TRAY OPTIONS AUTO CONNECT

SENSOR (TONER DENSITY)

JBARR1   JDUPSOL1

JPHONE1

JUICC43

JSPKR1

JVIP1

JPH1

J4

JBINSI JFAN1 JTHM1

JEXIT1

SECURE CARD

PRINTHEAD

SENSOR (BIN FULL)

FAN

FUSER ASSEMBLY

PCN 5

JUSBD1

USB MALE PLUG

JRUSB1

TYPE A

JFAX1

ETHERNET

FAX CARD

THUMB DRIVE

IMAGING UNIT SMART CHIP CONTACT