CX930, CX931, XC9325, XC9335

7580-138, 238, 198, 298

Service Manual

January 25, 2023

www.lexmark.com

Product information

Product name:
Lexmark CX930dhe; Lexmark CX931dse, CX931dtse; Lexmark XC9325; Lexmark XC9335 MFPs

Machine type:
7580

Model(s):
138, 198, 238, 298

Edition notice

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Notices, conventions, and safety information

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.

Conventions

Remarque : Une *Remarque* fournit des informations pouvant vous être utiles.

Avertissement : Un *Avertissement* signale un danger susceptible d'endommager le logiciel ou le matériel.

ATTENTION : La mention *Attention* vous signale un risque de blessure corporelle.

Il existe différentes mises en garde :

 **ATTENTION—RISQUE DE BLESSURE :** Signale un risque de blessure.

 **ATTENTION—RISQUE D'ELECTROCUTION :** Signale un risque d'électrocution.

 **ATTENTION—SURFACE CHAUDE :** Signale un risque de brûlure de contact.

 **ATTENTION—RISQUE DE BASCULEMENT :** Signale un risque d'écrasement.

 **ATTENTION : RISQUE DE PINCEMENT :** Signale un risque de pincement entre des pièces mobiles.

Convenciones

Nota: Las *notas* señalan información que puede serle útil.

Aviso: Las *advertencias* indican algo que podría dañar el software o el hardware del producto.

PRECAUCIÓN: Las *precauciones* indican una situación de posible peligro que puede implicar lesiones para el usuario.

Estos son los tipos de avisos de precaución que existen:

PRECAUCIÓN: POSIBLES DAÑOS PERSONALES: Indica que existe riesgo de lesiones.

PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS: Indica que existe riesgo de descarga eléctrica.

PRECAUCIÓN: SUPERFICIE CALIENTE: Indica que existe riesgo de sufrir quemaduras por contacto.

PRECAUCIÓN: RIESGO DE CAÍDA: Indica que existe peligro de aplastamiento.

PRECAUCIÓN: PELIGRO DE ATRAPAMIENTO: Existe riesgo de atrapamiento entre las piezas en movimiento.

Konventionen

Hinweis: Ein *Hinweis* enthält nützliche Informationen.

Warnung: Durch eine *Warnung* werden Sie auf einen Umstand hingewiesen, durch den die Produkthardware oder -software beschädigt werden könnte.

VORSICHT: *Vorsicht* weist auf eine mögliche gefährliche Situation hin, die ein Verletzungsrisiko birgt.

Verschiedene Vorsichtshinweise:

VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR Weist auf ein Verletzungsrisiko hin.

VORSICHT – STROMSCHLAGGEFAHR: Weist auf das Risiko eines elektrischen Schlags hin.

VORSICHT – HEISSE OBERFLÄCHE: Weist auf das Risiko von Verbrennungen bei Berührung hin.

VORSICHT – KIPPGEFAHR: Weist auf Quetschgefahr hin.

VORSICHT – QUETSCHGEFAHR: Weist auf das Risiko hin, zwischen beweglichen Komponenten eingequetscht zu werden.

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

January 25, 2023

- Added missing error codes in the Diagnostics and troubleshooting chapter.

January 23, 2023

- 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 48**.
  - Using the security reset jumper. See **“Using the security reset jumper” on page 48**.
- Updated the Engine drive board removal topic in the Parts removal chapter. See **“Engine drive board removal” on page 388**.

January 16, 2023

- Added the following assembles in the Parts catalog chapter:
  - 2520-sheet tandem tray 1. See **“2520-sheet tandem tray 1” on page 807**.
  - 2520-sheet tandem tray 2. See **“2520-sheet tandem tray 2” on page 809**.
  - 2520-sheet tandem tray 3. See **“2520-sheet tandem tray 3” on page 811**.
  - 2520-sheet tandem tray covers 1. See **“2520-sheet tandem tray covers 1” on page 813**.
  - 2520-sheet tandem tray covers 2. See **“2520-sheet tandem tray covers 2” on page 815**.
  - 2520-sheet tandem tray electronics. See **“2520-sheet tandem tray electronics” on page 817**.
  - 2520-sheet tandem tray feed 1. See **“2520-sheet tandem tray feed 1” on page 819**.
  - 2520-sheet tandem tray feed 2. See **“2520-sheet tandem tray feed 2” on page 821**.
  - 2520-sheet tandem tray transport 1. See **“2520-sheet tandem tray transport 1” on page 823**.
  - 2520-sheet tandem tray transport 2. See **“2520-sheet tandem tray transport 2” on page 825**.

December 13, 2022

- Added and updated the following topics in the Parts removal chapter:
  - Backing up eSF solutions and settings. See **“Backing up eSF solutions and settings” on page 317**.
  - Critical information for controller board or control panel replacement. See **“Critical information for controller board or control panel replacement” on page 312**.
  - Drive controller board removal. See **“Engine drive board removal” on page 388**.

November 14, 2022

- Added the Control panel removal topic in the Parts removal chapter. See **“Control panel removal” on page 355**

October 26, 2022

- Updated the graphic of the following assemblies in the Parts catalog chapter:
  - Cables 3. See **“Cables 3” on page 749**.
  - Duplex 1. See **“Duplex 1” on page 643**.
  - Electronics 2. See **“Electronics 2” on page 661**.
  - Exit 1. See **“Exit 1” on page 689**.
  - Exit 3. See **“Exit 3” on page 693**.
  - MPF 1. See **“MPF 1” on page 649**.
  - MPF 2. See **“MPF 2” on page 651**.
  - Developer. See **“Developer” on page 665**.
  - Tray 1. See **“Tray 1” on page 737**.
  - ADF registration 2. See **“ADF registration 2” on page 721**.
  - Scanner lamp assembly 3. See **“Scanner lamp assembly 3” on page 733**.
  - 3 x 520-sheet tray covers 1. See **“3 x 520-sheet tray covers 1” on page 767**.
  - 520-sheet tray transport 1. See **“520-sheet tray transport 1” on page 787**.
  - 520-sheet tray with cabinet transport 1. See **“520-sheet tray with cabinet transport 1” on page 803**.
- Added the following parts in the Parts catalog chapter:
  - PN 41X4086 (MPF rear hinge) in the Duplex 1 assembly. See **“Duplex 1” on page 643**.
  - PN 41X4085 (MPF front hinge) in the Duplex 1 assembly. See **“Duplex 1” on page 643**.
  - PN 41X4584 (Envelope tray) in the Tray 1 assembly. See **“Tray 1” on page 737**.
  - PN 41X3773 (Tray insert) in the 3 x 520-sheet tray covers 1 assembly. See **“3 x 520-sheet tray covers 1” on page 767**.
  - PN 41X3280 (Tray insert) in the 520-sheet tray transport 1 assembly and 520-sheet tray with cabinet transport 1. See **“520-sheet tray transport 1” on page 787** and **“520-sheet tray with cabinet transport 1” on page 803**.
  - PN 41X3327 (Toner contact chip) in the Developer assembly. See **“Developer” on page 665**.
- Removed the following parts in the Parts catalog chapter:
  - PN 41X3861 (Roller kit (ADF)).
  - PN 41X3869 (ADF tray sensor cable) in the ADF registration 2 assembly. See **“ADF registration 2” on page 721**.
  - PN 41X3624 (Stamp solenoid) in the ADF 2 assembly. See **“ADF 2” on page 707**.
  - PN 41X3624 (Stamp solenoid) in the ADF 2 assembly. See **“ADF 2” on page 707**.
- Updated the following parts in the Parts catalog chapter:
  - PN 41X3975 to PN 40X0588 (Sensor (MPF paper present)). See **“MPF 3” on page 653**.
  - PN 41X3633 to PN 40X7533 (Sensor (tray 1 paper size)). See **“Tray 1” on page 737**.
  - PN 41X3773 to PN 41X4263 (Tray insert). See **“Tray 1” on page 737**.
  - PN 41X3975 to PN 40X0588 (Sensor (tray 1 media level)). See **“Tray 1 feed 2” on page 741**.
  - PN 41X3919 to PN 41X3957 (3 x 520-sheet tray adjustable feet (large)). See **“3 x 520-sheet tray covers 1” on page 767**.

  - PN 41X3935 to PN 40X6676 (Sensor (520-sheet tray transport)). See **“520-sheet tray transport 1” on page 787**.
  - PN 41X3303 to PN 40X0588 in various assemblies.
- Updated the dDeveloper unit removal topic in the Parts removal chapter. See **“Developer unit removal” on page 363**.

September 27, 2022

- Added a video demonstration link in the following topics in the Service menus chapter:
  - Entering the Diagnostics menu. See **“Entering the Diagnostics menu” on page 292**.

July 27, 2022

- Added a video demonstration link in the following topics in the Parts removal chapter:
  - ADF controller board removal. See **“ADF controller board removal” on page 422**.
  - Dispenser drive (C,K) removal. See **“Dispenser drive (C, K) removal” on page 397**.
  - Dispenser drive (Y, M) removal. See **“Dispenser drive (Y, M) removal” on page 395**.
  - Drive gearbox removal. See **“Drive gearbox removal” on page 392**.
  - Front door removal. See **“Front door removal” on page 351**.
  - HVPS removal. See **“HVPS removal” on page 349**.
  - Photoconductor removal. See **“Photoconductor unit removal” on page 371**.
  - RIP controller board bracket removal. See **“Controller board bracket removal” on page 395**.
  - Scanner controller board removal. See **“Scanner controller board removal” on page 418**.
  - Upper rear cover removal. See **“Upper rear cover removal” on page 380**.
  - Lower rear cover removal. See **“Bottom rear cover removal” on page 382**.

July 6, 2022

- Added the 2000-sheet tray removals in the Parts removal chapter.

June 7, 2022

- Product announce

General information

Printer model configurations

The Lexmark™ CX930, CX931, XC9325, and XC9335 MFPs are color, network-capable laser printers. All information in this *Service Manual* pertains to all models unless explicitly noted.

The printer is available in the following models:

Model name	Configuration / description	Machine type / model number
CX930dse	Network, duplex print, scan, fax, ADF, 7.0-inch touch screen, front USB port	7580-138
XC9325		7580-198
CX931dse	Network, duplex print, scan, fax, ADF, 7.0-inch touch screen, front USB port	7580-238
XC9335		7580-298
CX931dtse	Network, duplex print, scan, fax, ADF, 7.0-inch touch screen, front USB port	7580-238

Selecting paper

Paper guidelines

Use the appropriate paper to prevent jams and help ensure trouble-free printing.

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

For more information, see the *Paper and Specialty Media Guide*.

Paper characteristics

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

Weight

Trays can feed paper of varying weights. Paper lighter than 60 g/m^2 (16 lb) may not be stiff enough to feed properly, and may cause jams. For more information, see the “Supported paper weights” topic.

Curl

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

Smoothness

Paper smoothness directly affects print quality. If paper is too rough, toner cannot fuse to it properly. If paper is too smooth, it can cause paper feeding or print quality issues. We recommend the use of paper with 50 Sheffield points.

Moisture content

The amount of moisture in paper affects both print quality and the printer ability to feed the paper correctly. Leave paper in its original wrapper until you use it. Exposure of paper to moisture changes can degrade its performance.

Before printing, store paper in its original wrapper for 24 to 48 hours. The environment in which the paper is stored must be the same as the printer . Extend the time several days if the storage or transportation environment is very different from the printer environment. Thick paper may also require a longer conditioning period.

Grain direction

Grain refers to the alignment of the paper fibers in a sheet of paper. Grain is either *grain long* which runs the length of the paper, or *grain short* which runs the width of the paper. For recommended grain direction, see the “Supported paper weights” topic.

Fiber content

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

Unacceptable paper

The following paper types are not recommended for use with the printer:

- Chemically treated papers that are used to make copies without carbon paper. They are also known as carbonless papers, carbonless copy paper (CCP), or no carbon required (NCR) paper.
- Preprinted papers with chemicals that may contaminate the printer.
- Preprinted papers that can be affected by the temperature in the printer fuser.
- Preprinted papers that require a registration (the precise print location on the page) greater than ±2.3 mm (±0.09 in.). For example, optical character recognition (OCR) forms.

  Sometimes, registration can be adjusted with a software app to print successfully on these forms.
- Coated papers (erasable bond), synthetic papers, or thermal papers.
- Rough-edged, rough or heavily textured surface papers, or curled papers.
- Recycled papers that fail EN12281:2002 (European).
- Paper weighing less than 60 g/m^2 (16 lb).
- Multiple-part forms or documents.

Storing paper

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

- Store paper in its original wrapper in the same environment as the printer for 24 to 48 hours before printing.
- Extend the time several days if the storage or transportation environment is very different from the printer environment. Thick paper may also require a longer conditioning period.
- For best results, store paper where the temperature is 21°C (70°F) and the relative humidity is 40 percent.
- Most label manufacturers recommend printing in a temperature range of 18–24°C (65–75°F) with relative humidity between 40 and 60 percent.
- Store paper in cartons, on a pallet or shelf, rather than on the floor.
- Store individual packages on a flat surface.
- Do not store anything on top of individual paper packages.
- Take paper out of the carton or wrapper only when you are ready to load it in the printer. The carton and wrapper help keep the paper clean, dry, and flat.

Selecting preprinted forms and letterhead

- Use grain long paper.
- Use only forms and letterhead printed using an offset lithographic or engraved printing process.
- Avoid paper with rough or heavily textured surfaces.
- Use inks that are not affected by the resin in toner. Inks that are oxidation-set or oil-based generally meet these requirements; latex inks might not.
- Print samples on preprinted forms and letterheads considered for use before buying large quantities. This action determines whether the ink in the preprinted form or letterhead affects print quality.
- When in doubt, contact your paper supplier.
- When printing on letterhead, load the paper in the proper orientation for your printer. For more information, see the *Paper and Specialty Media Guide*.

Supported paper sizes

Paper sizes supported by the standard tray, MPF, envelope tray, and two-sided printing

Paper size	Standard 520-sheet tray	Multipurpose feeder	Envelope tray	Two-sided printing
A3[1] 297 x 420 mm (11.69 x 16.54 in.)	√	√	X	√
A4 210 x 297 mm (8.27 x 11.7 in.)	√	√[2]	X	√
A5 148 x 210 mm (5.83 x 8.27 in.)	√[1]	√[2]	X	√
A6 105 x 148 mm (4.13 x 5.83 in.)	X	√[1]	X	X
Executive 184.2 x 266.7 mm (7.25 x 10.5 in.)	√	√[2]	X	√
Folio[1] 215.9 x 330.2 mm (8.5 x 13 in.)	√	√	X	√
Hagaki 100 x 148 mm (3.94 x 5.83 in.)	X	√[1]	X	X
JIS B4[1] 257 x 364 mm (10.12 x 14.33 in.)	√	√	X	√
JIS B5 182 x 257 mm (7.17 x 10.1 in.)	√	√[2]	X	√
Ledger[1] 279.4 x 4431.8 mm (11 x 17 in.)	√	√	X	√

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 139.7 x 181.86 mm (5.5 x 7.16 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[4] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 482.6 mm (11.69 x 19 in.).

[5] Supports paper sizes ranging from 128 x 139.7 mm (5 x 5.5 in.) to 296.93 x 482.6 mm (11.69 x 19 in.).

Paper size	Standard 520-sheet tray	Multipurpose feeder	Envelope tray	Two-sided printing
Legal[1] 215.9 x 355.6 mm (8.5 x 14 in.)	√	√	X	√
Letter 215.9 x 279.4 mm (8.5 x 11 in.)	√	√[2]	X	√
Oficio (Mexico)[1] 215.9 x 340.4 mm (8.5 x 13.4 in.)	√	√	X	√
Statement 139.7 x 215.9 mm (5.5 x 8.5 in.)	√[1]	√[2]	X	√
Universal	√[3]	√[4]	X	√[5]
7 3/4 Envelope 98.4 x 190.5 mm (3.875 x 7.5 in.)	X	√[2]	√	X
9 Envelope 98.4 x 225.4 mm (3.875 x 8.9 in.)	X	√[2]	√	X
10 Envelope 104.8 x 241.3 mm (4.12 x 9.5 in.)	X	√[2]	√	X
B5 Envelope 176 x 250 mm (6.93 x 9.84 in.)	X	√[1]	√	X
C5 Envelope 162 x 229 mm (6.38 x 9.01 in.)	X	√[2]	√	X
DL Envelope 110 x 220 mm (4.33 x 8.66 in.)	X	√[2]	√	X

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 139.7 x 181.86 mm (5.5 x 7.16 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[4] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 482.6 mm (11.69 x 19 in.).

[5] Supports paper sizes ranging from 128 x 139.7 mm (5 x 5.5 in.) to 296.93 x 482.6 mm (11.69 x 19 in.).

Notes:

- The ADF supports paper sizes ranging from 125 x 85 mm (4.92 x 3.35 in.) to 297 x 431.8 mm (11.69 x 17 in.).
- The flatbed scanner supports maximum paper size of 297 x 431.8 mm (11.69 x 17 in.).

Paper sizes supported by the optional trays

Paper size	Optional 520-sheet tray, optional 520-sheet tray with cabinet, and optional 3 x 520-sheet tray	Optional 2520-sheet tandem tray	Optional 2000-sheet tray
A3[1] 297 x 420 mm (11.69 x 16.54 in.)	√	√	X
A4 210 x 297 mm (8.27 x 11.7 in.)	√	√	√[2]
A5[1] 148 x 210 mm (5.83 x 8.27 in.)	√	√	X
A6 105 x 148 mm (4.13 x 5.83 in.)	X	X	X
Executive 184.2 x 266.7 mm (7.25 x 10.5 in.)	√	√	√[2]
Folio[1] 215.9 x 330.2 mm (8.5 x 13 in.)	√	√	X
Hagaki 100 x 148 mm (3.94 x 5.83 in.)	X	X	X
JIS B4[1] 257 x 364 mm (10.12 x 14.33 in.)	√	√	X
JIS B5 182 x 257 mm (7.17 x 10.1 in.)	√	√	√[2]

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 139.7 x 181.86 mm (5.5 x 7.16 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

Paper size	Optional 520-sheet tray, optional 520-sheet tray with cabinet, and optional 3 x 520-sheet tray	Optional 2520-sheet tandem tray	Optional 2000-sheet tray
Ledger[1] 279.4 x 4431.8 mm (11 x 17 in.)	√	√	X
Legal[1] 215.9 x 355.6 mm (8.5 x 14 in.)	√	√	X
Letter 215.9 x 279.4 mm (8.5 x 11 in.)	√	√	√[2]
Oficio (Mexico)[1] 215.9 x 340.4 mm (8.5 x 13.4 in.)	√	√	X
Statement[1] 139.7 x 215.9 mm (5.5 x 8.5 in.)	√	√	X
Universal	√[3]	√[3]	√[3]
7 3/4 Envelope 98.4 x 190.5 mm (3.875 x 7.5 in.)	X	X	X
9 Envelope 98.4 x 225.4 mm (3.875 x 8.9 in.)	X	X	X
10 Envelope 104.8 x 241.3 mm (4.12 x 9.5 in.)	X	X	X
B5 Envelope 176 x 250 mm (6.93 x 9.84 in.)	X	X	X
C5 Envelope 162 x 229 mm (6.38 x 9.01 in.)	X	X	X

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 139.7 x 181.86 mm (5.5 x 7.16 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

Paper size	Optional 520-sheet tray, optional 520-sheet tray with cabinet, and optional 3 x 520-sheet tray	Optional 2520-sheet tandem tray	Optional 2000-sheet tray
DL Envelope 110 x 220 mm (4.33 x 8.66 in.)	X	X	X

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 139.7 x 181.86 mm (5.5 x 7.16 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

Paper sizes supported by the output bins

Paper size	Standard bin		Upper bin
	Stack	Offset	Stack
A3[1] 297 x 420 mm (11.69 x 16.54 in.)	✓	✓	✓
A4 210 x 297 mm (8.27 x 11.7 in.)	✓	✓	✓
A5 148 x 210 mm (5.83 x 8.27 in.)	✓	✓	✓
A6[1] 105 x 148 mm (4.13 x 5.83 in.)	✓	✓	✓
Executive 184.2 x 266.7 mm (7.25 x 10.5 in.)	✓	✓	✓
Folio[1] 215.9 x 330.2 mm (8.5 x 13 in.)	✓	✓	✓
Hagaki[1] 100 x 148 mm (3.94 x 5.83 in.)	✓	✓	✓

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 482.6 mm (11.69 x 19 in.).

[4] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

Paper size	Standard bin		Upper bin
	Stack	Offset	Stack
JIS B4[1] 257 x 364 mm (10.12 x 14.33 in.)	√	√	√
JIS B5 182 x 257 mm (7.17 x 10.1 in.)	√	√	√
Ledger[1] 279.4 x 4431.8 mm (11 x 17 in.)	√	√	√
Legal[1] 215.9 x 355.6 mm (8.5 x 14 in.)	√	√	√
Letter 215.9 x 279.4 mm (8.5 x 11 in.)	√	√	√
Oficio (Mexico)[1] 215.9 x 340.4 mm (8.5 x 13.4 in.)	√	√	√
Statement 139.7 x 215.9 mm (5.5 x 8.5 in.)	√	√	√
Universal	√[3]	√[4]	X
7 3/4 Envelope[2] 98.4 x 190.5 mm (3.875 x 7.5 in.)	√	√	√
9 Envelope[2] 98.4 x 225.4 mm (3.875 x 8.9 in.)	√	√	√
10 Envelope[2] 104.8 x 241.3 mm (4.12 x 9.5 in.)	√	√	√

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 482.6 mm (11.69 x 19 in.).

[4] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

Paper size	Standard bin		Upper bin
	Stack	Offset	Stack
B5 Envelope[2] 176 x 250 mm (6.93 x 9.84 in.)	✓	✓	✓
C5 Envelope[2] 162 x 229 mm (6.38 x 9.01 in.)	✓	✓	✓
DL Envelope[2] 110 x 220 mm (4.33 x 8.66 in.)	✓	✓	✓

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 482.6 mm (11.69 x 19 in.).

[4] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

Paper sizes supported by the finishers

Paper size	Staple finisher			Staple, hole punch finisher			
	Stack	Offset	Staple	Stack	Offset	Staple	Hole punch
A3[1] 297 x 420 mm (11.69 x 16.54 in.)	✓	✓	✓	✓	✓	✓	✓
A4 210 x 297 mm (8.27 x 11.7 in.)	✓	✓	✓	✓	✓	✓	✓
A5 148 x 210 mm (5.83 x 8.27 in.)	✓	✓[2]	X	✓	✓[2]	✓[2]	✓[6]

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[4] Supports paper sizes ranging from 190 x 139.7 mm (7.48 x 5.5 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[5] Supports paper sizes ranging from 202.9 x 182.03 mm (7.99 x 7.17 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[6] Supports only up to 2-hole punching.

[7] Supports only up to 2-hole punching when loaded in short-edge orientation.

[8] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 320.04 x 1320.8 mm (12.6 x 52 in.).

[9] Supports paper sizes ranging from 209.97 x 148 mm (8.27 x 5.83 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

Paper size	Staple finisher			Staple, hole punch finisher			
	Stack	Offset	Staple	Stack	Offset	Staple	Hole punch
A6 105 x 148 mm (4.13 x 5.83 in.)	√	X	X	√	X	X	X
Banner Maximum width: 215.9 mm (8.5 in.) Maximum length: 1320.8 mm (52 in.)	√[1]	X	X	√[1]	X	X	X
Executive 184.2 x 266.7 mm (7.25 x 10.5 in.)	√[2]	√[2]	√[2]	√	√[2]	√[2]	√[2]
Folio[1] 215.9 x 330.2 mm (8.5 x 13 in.)	√	√	√	√	√	√	√
Hagaki 100 x 148 mm (3.94 x 5.83 in.)	√	X	X	√	X	X	X
JIS B4[1] 257 x 364 mm (10.12 x 14.33 in.)	√	√	√	√	√	√	√
JIS B5 182 x 257 mm (7.17 x 10.1 in.)	√	√[2]	√[2]	√	√[2]	√[2]	√[7]
Ledger[1] 279.4 x 4431.8 mm (11 x 17 in.)	√	√	√	√	√	√	√
Legal[1] 215.9 x 355.6 mm (8.5 x 14 in.)	√	√	√	√	√	√	√

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[4] Supports paper sizes ranging from 190 x 139.7 mm (7.48 x 5.5 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[5] Supports paper sizes ranging from 202.9 x 182.03 mm (7.99 x 7.17 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[6] Supports only up to 2-hole punching.

[7] Supports only up to 2-hole punching when loaded in short-edge orientation.

[8] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 320.04 x 1320.8 mm (12.6 x 52 in.).

[9] Supports paper sizes ranging from 209.97 x 148 mm (8.27 x 5.83 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

Paper size	Staple finisher			Staple, hole punch finisher			
	Stack	Offset	Staple	Stack	Offset	Staple	Hole punch
Letter 215.9 x 279.4 mm (8.5 x 11 in.)	√	√	√	√	√	√	√
Oficio (Mexico)[1] 215.9 x 340.4 mm (8.5 x 13.4 in.)	√	√	√	√	√	√	√
Statement 139.7 x 215.9 mm (5.5 x 8.5 in.)	√	√[2]	X	X	X	X	X
Universal	√[3]	√[4]	√[5]	√[8]	√[9]	√[9]	X
7 3/4 Envelope 98.4 x 190.5 mm (3.875 x 7.5 in.)	√	X	X	X	X	X	X
9 Envelope 98.4 x 225.4 mm (3.875 x 8.9 in.)	√	X	X	X	X	X	X
10 Envelope 104.8 x 241.3 mm (4.12 x 9.5 in.)	√	X	X	X	X	X	X
B5 Envelope 176 x 250 mm (6.93 x 9.84 in.)	√[2]	X	X	X	X	X	X
C5 Envelope 162 x 229 mm (6.38 x 9.01 in.)	√[1]	X	X	X	X	X	X
DL Envelope 110 x 220 mm (4.33 x 8.66 in.)	√	X	X	X	X	X	X

[1] Loads only in short-edge orientation.

[2] Loads only in long-edge orientation.

[3] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[4] Supports paper sizes ranging from 190 x 139.7 mm (7.48 x 5.5 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[5] Supports paper sizes ranging from 202.9 x 182.03 mm (7.99 x 7.17 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

[6] Supports only up to 2-hole punching.

[7] Supports only up to 2-hole punching when loaded in short-edge orientation.

[8] Supports paper sizes ranging from 88.9 x 98.38 mm (3.5 x 3.87 in.) to 320.04 x 1320.8 mm (12.6 x 52 in.).

[9] Supports paper sizes ranging from 209.97 x 148 mm (8.27 x 5.83 in.) to 296.93 x 431.8 mm (11.69 x 17 in.).

Supported paper types

Paper types supported by the standard tray, MPF, envelope tray, and two-sided printing

Paper type	Standard 520-sheet tray	Multipurpose feeder	Envelope tray	Two-sided printing
Bond	✓	✓	X	✓
Card Stock	✓	✓	X	✓
Colored Paper	✓	✓	X	✓
Custom Type	✓	✓	X	✓
Envelope	X	✓	✓	X
Glossy	✓	✓	X	✓
Heavy Glossy	✓	✓	X	✓
Heavy Paper	✓	✓	X	✓
Labels	✓	✓	X	X
Letterhead	✓	✓	X	✓
Light Paper	✓	✓	X	✓
Plain Paper	✓	✓	X	✓
Preprinted	✓	✓	X	✓
Recycled	✓	✓	X	✓
Rough Envelope	X	✓	✓	X
Rough Cotton	✓	✓	X	✓
Vinyl Labels	X	X	X	X

Paper types supported by the optional trays

Paper type	Optional 520-sheet tray, optional 520-sheet tray with cabinet, and optional 3 x 520-sheet tray	Optional 2520-sheet tandem tray	Optional 2000-sheet tray
Bond	✓	✓	✓
Card Stock	✓	✓	✓
Colored Paper	✓	✓	✓
Custom Type	✓	✓	✓
Envelope	X	X	X

Paper type	Optional 520-sheet tray, optional 520-sheet tray with cabinet, and optional 3 x 520-sheet tray	Optional 2520-sheet tandem tray	Optional 2000-sheet tray
Glossy	✓	✓	✓
Heavy Glossy	✓	✓	✓
Heavy Paper	✓	✓	✓
Labels	✓	✓	✓
Letterhead	✓	✓	✓
Light Paper	✓	✓	✓
Plain Paper	✓	✓	✓
Preprinted	✓	✓	✓
Recycled	✓	✓	✓
Rough Envelope	X	X	X
Rough Cotton	✓	✓	✓
Vinyl Labels	X	X	X

Paper types supported by the output bins

Paper type	Standard bin		Upper bin
	Stack	Offset	Stack
Bond	✓	✓	✓
Card Stock	✓	✓	✓
Colored Paper	✓	✓	✓
Custom Type	✓	✓	✓
Envelope	✓	✓	✓
Glossy	✓	✓	✓
Heavy Glossy	✓	✓	✓
Heavy Paper	✓	✓	✓
Labels	✓	✓	✓
Letterhead	✓	✓	✓
Light Paper	✓	✓	✓
Plain Paper	✓	✓	✓

Paper type	Standard bin		Upper bin
	Stack	Offset	Stack
Preprinted	✓	✓	✓
Recycled	✓	✓	✓
Rough Envelope	✓	✓	✓
Rough Cotton	✓	✓	✓
Vinyl Labels	X	X	X

Paper types supported by the finishers

Paper type	Staple finisher			Staple, hole punch finisher			
	Stack	Offset	Staple	Stack	Offset	Staple	Hole punch
Bond	✓	✓	✓	✓	✓	✓	✓
Card Stock	✓	✓	X	✓	✓	X	✓
Colored Paper	✓	✓	✓	✓	✓	✓	✓
Custom Type	✓	✓	✓	✓	✓	✓	✓
Envelope	✓	X	X	X	X	X	X
Glossy	✓	✓	✓	✓	✓	✓	✓
Heavy Glossy	✓	✓	X	✓	✓	X	✓
Heavy Paper	✓	✓	X	✓	✓	X	✓
Labels	✓	✓	X	X	X	X	X
Letterhead	✓	✓	✓	✓	✓	✓	✓
Light Paper	✓	✓	✓	✓	✓	✓	✓
Plain Paper	✓	✓	✓	✓	✓	✓	✓
Preprinted	✓	✓	✓	✓	✓	✓	✓
Recycled	✓	✓	✓	✓	✓	✓	✓
Rough Envelope	✓	X	X	X	X	X	X
Rough Cotton	✓	✓	X	✓	✓	X	✓
Vinyl Labels	X	X	X	X	X	X	X

Supported paper weights

520-sheet tray, 520-sheet tray with cabinet, 3 x 520-sheet tray, and 2520-sheet tandem tray	Multipurpose feeder	Envelope tray	Optional 2000-sheet tray
60–256 g/m^2 (12–68 lb)	60–216 g/m^2 (12–57 lb)	75–90 g/m^2 (20–24 lb)	60–216 g/m^2 (12–57 lb)

Notes:

- For 60–176 g/m^2 (16–47-lb bond) paper, grain long fibers are recommended.
- Paper less than 75 g/m^2 (20-lb bond) must be printed with Paper Type set to Light Paper. Failure to do so may cause excessive curl which can lead to feeding errors, especially in more humid environments.
- Two-sided printing supports paper weight from 60–162 g/m^2 (16–43-lb bond) paper.
- 100% cotton content maximum weight is 90 g/m^2 (24-lb bond).

Supported fax

Printer model	Analog fax[1]	etherFAX[2]	Fax server	Fax over IP (FoIP)[3]
CX930	✓	✓	✓	✓
CX931	✓	✓	✓	✓
XC9325	✓	✓	✓	✓
XC9335	✓	✓	✓	✓

[1] Needs an installed fax card. For more information, contact the place where you purchased the printer.

[2] Needs a subscription. For more information, go to **https://www.etherfax.net/lexmark** or contact the place where you purchased the printer.

[3] Needs an installed license bundle. For more information, contact the place where you purchased the printer.

Finding the printer serial number

1 Open the front door.

2 Locate the serial number at the left side of the printer.

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 (T10 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

- With the power cord unplugged from the electrical outlet, check if the cord is free from breakage, short circuits, disconnected wires, or incorrect connections.
- Make sure that the printer is properly grounded.
- Make sure that the power supply line voltage is within 10% of the rated line voltage.
- Make sure that the printer is securely installed on a level surface in a well-ventilated area.
- Make sure that the temperature and relative humidity are within the specifications. See **"Temperature information" on page 884**.
- Avoid locations that:
  - Generate ammonia gas
  - Are exposed to direct sunlight
  - Are near open flames
  - Are dusty
- Make sure that the recommended paper for this printer is used.
- Do a test print with paper from a newly opened package, and then check the result.

Using Safe Mode

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

Note: This setting cannot be used if the sensor (tray present) is damaged.

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

Enter Safe Mode from the Configuration menu, and then POR the printer. See **"Configuration Menu" on page 301**.

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

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 309**.

   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 48**.

3. If the effect of the jumper reset is disabled, then replace the controller board. For more information, see **"Controller board removal" on page 381**.

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 48** or **"Controller board removal" on page 381**.

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.

Fixing print quality issues

Initial print quality check

Before troubleshooting print problems, perform the following:

- Make sure that the printer is located in an area that follows the recommended operating environment and power requirement specifications.

- Check the status of supplies. Replace supplies that are low or empty.
- Load 20-lb plain letter or A4 paper. Make sure that the paper guides are properly set and locked. From the control panel, set the paper size and type to match the paper loaded in the tray.
- Print and keep the Menu settings page. The page will be used to restore the custom settings, if necessary.
- Make sure that the print resolution and toner darkness on the Menu settings page are set to their default values.
- Check the print cartridge for damage, and replace if necessary.
- Print the advanced print quality samples to see if the problem remains. Use tray 1 to test print quality problems. Look for variations in the print from what is expected.
- Make sure that the correct print driver is used to prevent print problems. If the wrong driver is installed, then incorrect characters may print and the copy may not fit the page correctly.

Blank or white pages check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 **a** Run a full calibration. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Full calibration.** Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the affected printhead for the following items: • Damage • Improper installation Is the affected printhead free any issues?	Go to step 7.	Go to step 6.
Step 6 **a** Reconnect or replace the printhead cable. **b** Reinstall or replace the printhead. See **"Printhead removal" on page 369**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Check the developer assembly for the following: • Damage • Improper installation • Insufficient carrier powder • Contamination in the high voltage contact Is the developer assembly free of any issues?	Go to step 12.	Go to step 13.
Step 12 Check the ATC sensor for damage. IS the ATC sensor free of damage?	Go to step 14.	Go to step 13.
Step 13 **a** Reconnect or replace the developer assembly cables. **b** Reinstall or replace the developer assembly. **Note:** After replacing the developer assembly, perform the ATC sensor and developer ATC adjustments. Enter the Diagnostics menu, and then navigate to: **c** **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust** and **Developer ATC Adjust**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Contact the next level of support.	Go to step 15.
Step 15 Reinstall or replace the HVPS. See **“HVPS removal” on page 349**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Dark print check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Run a full calibration. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Full calibration.** Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Run a toner density adjustment. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Toner density.** Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the transfer roller for the following: • Damage • Contamination • Improper installation Is the transfer roller free of any issues?	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 376**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Contact the next level of support.	Go to step 10.
Step 10 Reinstall or replace the HVPS. See **"HVPS removal" on page 349**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Ghost images check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Run a color registration test. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Color registration test**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Run a image registration adjustment. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Image registration**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 7.	Go to step 6.
Step 6 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the developer assembly for the following: • Damage • Improper installation • Insufficient carrier powder • Contamination in the high voltage contact Is the developer assembly free of any issues?	Go to step 8.	Go to step 9.

Action	Yes	No
Step 8 Check the ATC sensor for damage. IS the ATC sensor free of damage?	Go to step 10.	Go to step 9.
Step 9 **a** Reconnect or replace the developer assembly cables. **b** Reinstall or replace the developer assembly. **Note:** After replacing the developer assembly, perform the ATC sensor and developer ATC adjustments. Enter the Diagnostics menu, and then navigate to: **c** **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust** and **Developer ATC Adjust**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the fuser and its cables and paper guides for the following: • Damage • Obstruction in the paper path • Improper installation Is the fuser and its connectors and paper guides free of any issues?	Go to step 16.	Go to step 13.
Step 13 Check if the fuser and induction heater voltage rating matches the induction heater power supply voltage rating. Do the voltage ratings match?	Go to step 14.	Go to step 15.

Action	Yes	No
Step 14 Perform a fuser error reset. Enter the Diagnostics menu, and then navigate to: **Printer setup** > **Reset engine service error** > **Fuser error reset** > **Fuser 121.XX**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Reconnect or reinstall the fuser cables. **b** Reinstall or replace the fuser. See **"Fuser removal" on page 342**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select each motor in the drive assembly. Does the motor run?	Contact the next level of support.	Go to step 17.
Step 17 Check the drive assembly for the following: • Damage • Improper installation Is the drive assembly free of the following items?	Contact the next level of support.	Go to step 18.
Step 18 Reinstall and replace the drive assembly. See **"Drive gearbox removal" on page 392**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Gray or colored background check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Run a full calibration. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Full calibration.** Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the affected printhead for the following items: • Damage • Improper installation Is the affected printhead free any issues?	Go to step 7.	Go to step 6.
Step 6 **a** Reconnect or replace the printhead cable. **b** Reinstall or replace the printhead. See **"Printhead removal" on page 369**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the developer assembly for the following: • Damage • Improper installation • Insufficient carrier powder • Contamination in the high voltage contact Is the developer assembly free of any issues?	Go to step 12.	Go to step 13.
Step 12 Check the ATC sensor for damage. IS the ATC sensor free of damage?	Go to step 14.	Go to step 13.
Step 13 **a** Reconnect or replace the developer assembly cables. **b** Reinstall or replace the developer assembly. **Note:** After replacing the developer assembly, perform the ATC sensor and developer ATC adjustments. Enter the Diagnostics menu, and then navigate to: **c** **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust** and **Developer ATC Adjust**. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Contact the next level of support.	Go to step 15.
Step 15 Reinstall or replace the HVPS. See **"HVPS removal" on page 349**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Horizontal dark lines check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Print multiple copies of the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. **b** Check the frequency of the defect based on the print quality test page. **c** Identify the problematic part based on the print quality test page. Can the problematic part be identified?	Go to step 3.	Go to step 4.

Action	Yes	No
Step 3 Replace the suspected problematic part. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 6.	Go to step 5.
Step 5 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the developer assembly for the following: • Damage • Improper installation • Insufficient carrier powder • Contamination in the high voltage contact Is the developer assembly free of any issues?	Go to step 7.	Go to step 8.
Step 7 Check the ATC sensor for damage. IS the ATC sensor free of damage?	Go to step 9.	Go to step 8.
Step 8 **a** Reconnect or replace the developer assembly cables. **b** Reinstall or replace the developer assembly. **Note:** After replacing the developer assembly, perform the ATC sensor and developer ATC adjustments. Enter the Diagnostics menu, and then navigate to: **c** **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust** and **Developer ATC Adjust**. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Contact the next level of support.	Go to step 10.
Step 10 Reinstall or replace the HVPS. See **"HVPS removal" on page 349**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Horizontal white lines check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the affected printhead for the following items: • Damage • Improper installation Is the affected printhead free any issues?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 **a** Reconnect or replace the printhead cable. **b** Reinstall or replace the printhead. See **"Printhead removal" on page 369**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 7.	Go to step 6.
Step 6 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the developer assembly for the following: • Damage • Improper installation • Insufficient carrier powder • Contamination in the high voltage contact Is the developer assembly free of any issues?	Go to step 8.	Go to step 9.
Step 8 Check the ATC sensor for damage. IS the ATC sensor free of damage?	Go to step 10.	Go to step 9.
Step 9 **a** Reconnect or replace the developer assembly cables. **b** Reinstall or replace the developer assembly. **Note:** After replacing the developer assembly, perform the ATC sensor and developer ATC adjustments. Enter the Diagnostics menu, and then navigate to: **c** **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust** and **Developer ATC Adjust**. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the HVPS. See **"HVPS removal" on page 349**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check if any cable is damaged. Are all the cables free of damage?	Contact the next level of support.	Go to step 13.
Step 13 Reconnect or replace the affected cable. Does the problem remain?	Contact the next level of support.	The problem is solved.

Incorrect margins check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Open the left door and the affected tray insert. **b** Check the transport, pick, and feed rollers for damage and contamination. Are the rollers free of any issues?	Go to step 5.	Go to step 4.
Step 4 **a** Clean the rollers. **b** Reinstall or replace the rollers. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Run a registration adjustment. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Registration adjust** > **Engine.** Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Run a color registration adjustment. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Color registration adjustment** > Select the affected color**.** Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the affected printhead for the following items: • Damage • Improper installation Is the affected printhead free any issues?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 **a** Reconnect or replace the printhead cable. **b** Reinstall or replace the printhead. See **"Printhead removal" on page 369**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Contact the next level of support.	Go to step 12.
Step 12 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Light print check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Run a full calibration. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Full calibration.** Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Run a toner density adjustment. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Toner density.** Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the transfer roller for the following: • Damage • Contamination • Improper installation Is the transfer roller free of any issues?	Go to step 7.	Go to step 6.
Step 6 Reinstall or replace the transfer roller. See **"Transfer roller removal" on page 376**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Contact the next level of support.	Go to step 10.
Step 10 Reinstall or replace the HVPS. See **"HVPS removal" on page 349**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Missing colors check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **a** Run a full calibration. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Full calibration.** Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the affected printhead for the following items: • Damage • Improper installation Is the affected printhead free any issues?	Go to step 6.	Go to step 5.
Step 5 **a** Reconnect or replace the printhead cable. **b** Reinstall or replace the printhead. See **"Printhead removal" on page 369**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the developer assembly for the following: • Damage • Improper installation • Insufficient carrier powder • Contamination in the high voltage contact Is the developer assembly free of any issues?	Go to step 9.	Go to step 10.
Step 9 Check the ATC sensor for damage. IS the ATC sensor free of damage?	Go to step 11.	Go to step 10.

Action	Yes	No
Step 10 **a** Reconnect or replace the developer assembly cables. **b** Reinstall or replace the developer assembly. **Note:** After replacing the developer assembly, perform the ATC sensor and developer ATC adjustments. Enter the Diagnostics menu, and then navigate to: **c** **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust** and **Developer ATC Adjust**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check if any cable is damaged. Are all the cables free of damage?	Go to step 15.	Go to step 14.
Step 14 Reconnect or replace the affected cable. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Contact the next level of support.	Go to step 16.
Step 16 Reinstall or replace the HVPS. See **"HVPS removal" on page 349**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Mottled print and single color dots check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Open the left door and the affected tray insert. **b** Check the transport, pick, and feed rollers for damage and contamination. Are the rollers free of any issues?	Go to step 5.	Go to step 4.
Step 4 **a** Clean the rollers. **b** Reinstall or replace the rollers. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Open the left door. **b** Check the paper guides for damage and contamination. Are the paper guides free of any issues?	Go to step 7.	Go to step 6.
Step 6 **a** Clean the paper guides. **b** Replace the paper guides. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the developer assembly for the following: • Damage • Improper installation • Insufficient carrier powder • Contamination in the high voltage contact Is the developer assembly free of any issues?	Go to step 10.	Go to step 11.
Step 10 Check the ATC sensor for damage. IS the ATC sensor free of damage?	Go to step 12.	Go to step 11.
Step 11 **a** Reconnect or replace the developer assembly cables. **b** Reinstall or replace the developer assembly. **Note:** After replacing the developer assembly, perform the ATC sensor and developer ATC adjustments. Enter the Diagnostics menu, and then navigate to: **c** **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust** and **Developer ATC Adjust**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Go to step 14.	Go to step 13.

Action	Yes	No
Step 13 Reinstall or replace the HVPS. See **"HVPS removal" on page 349**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the affected toner dispenser for the following: • Damage • Improper installation • Improper alignment of the toner delivery pipe and toner cartridge inlet • Leaks and spills • Residual toner in the toner delivery pipe Is the affected toner dispenser free of any issues?	Contact the next level of support.	Go to step 15.
Step 15 **a** Clean the affected toner dispenser area. **b** Reinstall or replace the affected toner dispenser. See **"Toner dispenser removal" on page 408**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Mottled print and multiple color dots check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Open the left door and the affected tray insert. **b** Check the transport, pick, and feed rollers for damage and contamination. Are the rollers free of any issues?	Go to step 5.	Go to step 4.
Step 4 **a** Clean the rollers. **b** Reinstall or replace the rollers. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Open the left door. **b** Check the paper guides for damage and contamination. Are the paper guides free of any issues?	Go to step 7.	Go to step 6.
Step 6 **a** Clean the paper guides. **b** Replace the paper guides. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the transfer roller for the following: • Damage • Contamination • Improper installation Is the transfer roller free of any issues?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the transfer roller. See **"Transfer roller removal" on page 376**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the fuser and its cables and paper guides for the following: • Damage • Obstruction in the paper path • Improper installation Is the fuser and its connectors and paper guides free of any issues?	Contact the next level of support.	Go to step 12.
Step 12 Check if the fuser and induction heater voltage rating matches the induction heater power supply voltage rating. Do the voltage ratings match?	Go to step 13.	Go to step 14.
Step 13 Perform a fuser error reset. Enter the Diagnostics menu, and then navigate to: **Printer setup** > **Reset engine service error** > **Fuser error reset** > **Fuser 121.XX**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Reconnect or reinstall the fuser cables. **b** Reinstall or replace the fuser. See **"Fuser removal" on page 342**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Paper curl check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Check if the printer power voltage matches with the fuser voltage type. Do the voltage ratings match?	Go to step 3.	Go to step 2.
Step 2 Set the correct input voltage. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the fuser and its cables and paper guides for the following: • Damage • Obstruction in the paper path • Improper installation Is the fuser and its connectors and paper guides free of any issues?	Contact the next level of support.	Go to step 4.
Step 4 Check if the fuser and induction heater voltage rating matches the induction heater power supply voltage rating. Do the voltage ratings match?	Go to step 5.	Go to step 6.
Step 5 Perform a fuser error reset. Enter the Diagnostics menu, and then navigate to: **Printer setup** > **Reset engine service error** > **Fuser error reset** > **Fuser 121.XX**. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 **a** Reconnect or reinstall the fuser cables. **b** Reinstall or replace the fuser. See **"Fuser removal" on page 342**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Print crooked or skewed check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Open the left door and the affected tray insert. **b** Check the transport, pick, and feed rollers for damage and contamination. Are the rollers free of any issues?	Go to step 5.	Go to step 4.
Step 4 **a** Clean the rollers. **b** Reinstall or replace the rollers. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 **a** Run a registration adjustment. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Registration adjust** > **Engine.** Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Run a color registration adjustment. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Color registration adjustment** > Select the affected color**.** Does the problem remain?	Contact the next level of support.	The problem is solved.

Repeating defects check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Print multiple copies of the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. **b** Check the frequency of the defect based on the print quality test page. **c** Identify the problematic part based on the print quality test page. Can the problematic part be identified?	Go to step 3.	Go to step 4.

Action	Yes	No
Step 3 Replace the suspected problematic part. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Open the left door and the affected tray insert. **b** Check the transport, pick, and feed rollers for damage and contamination. Are the rollers free of any issues?	Go to step 6.	Go to step 5.
Step 5 **a** Clean the rollers. **b** Reinstall or replace the rollers. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Open the left door. **b** Check the paper guides for damage and contamination. Are the paper guides free of any issues?	Go to step 8.	Go to step 7.
Step 7 **a** Clean the paper guides. **b** Replace the paper guides. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the transfer roller for the following: • Damage • Contamination • Improper installation Is the transfer roller free of any issues?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the transfer roller. See **"Transfer roller removal" on page 376**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the developer assembly for the following: • Damage • Improper installation • Insufficient carrier powder • Contamination in the high voltage contact Is the developer assembly free of any issues?	Go to step 15.	Go to step 16.
Step 15 Check the ATC sensor for damage. IS the ATC sensor free of damage?	Go to step 17.	Go to step 16.

Action	Yes	No
Step 16 **a** Reconnect or replace the developer assembly cables. **b** Reinstall or replace the developer assembly. **Note:** After replacing the developer assembly, perform the ATC sensor and developer ATC adjustments. Enter the Diagnostics menu, and then navigate to: **c** **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust** and **Developer ATC Adjust**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Check the fuser and its cables and paper guides for the following: • Damage • Obstruction in the paper path • Improper installation Is the fuser and its connectors and paper guides free of any issues?	Contact the next level of support.	Go to step 18.
Step 18 Check if the fuser and induction heater voltage rating matches the induction heater power supply voltage rating. Do the voltage ratings match?	Go to step 19.	Go to step 20.
Step 19 Perform a fuser error reset. Enter the Diagnostics menu, and then navigate to: **Printer setup** > **Reset engine service error** > **Fuser error reset** > **Fuser 121.XX**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 **a** Reconnect or reinstall the fuser cables. **b** Reinstall or replace the fuser. See **"Fuser removal" on page 342**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Solid color or black images check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Run a full calibration. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Full calibration.** Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the affected printhead for the following items: • Damage • Improper installation Is the affected printhead free any issues?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 **a** Reconnect or replace the printhead cable. **b** Reinstall or replace the printhead. See **"Printhead removal" on page 369**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the developer assembly for the following: • Damage • Improper installation • Insufficient carrier powder • Contamination in the high voltage contact Is the developer assembly free of any issues?	Go to step 12.	Go to step 13.
Step 12 Check the ATC sensor for damage. IS the ATC sensor free of damage?	Go to step 14.	Go to step 13.

Action	Yes	No
Step 13 **a** Reconnect or replace the developer assembly cables. **b** Reinstall or replace the developer assembly. **Note:** After replacing the developer assembly, perform the ATC sensor and developer ATC adjustments. Enter the Diagnostics menu, and then navigate to: **c** **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust** and **Developer ATC Adjust**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Contact the next level of support.	Go to step 15.
Step 15 Reinstall or replace the HVPS. See **"HVPS removal" on page 349**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Text or images cut off check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Run a full calibration. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Full calibration.** Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 6.	Go to step 5.
Step 5 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the affected toner dispenser for the following: • Damage • Improper installation • Improper alignment of the toner delivery pipe and toner cartridge inlet • Leaks and spills • Residual toner in the toner delivery pipe Is the affected toner dispenser free of any issues?	Go to step 9.	Go to step 7.
Step 7 **a** Clean the affected toner dispenser area. **b** Reinstall or replace the affected toner dispenser. See **"Toner dispenser removal" on page 408**. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the affected printhead for the following items: • Damage • Improper installation Is the affected printhead free any issues?	Go to step 10.	Go to step 9.
Step 9 **a** Reconnect or replace the printhead cable. **b** Reinstall or replace the printhead. See **"Printhead removal" on page 369**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the HVPS. See **"HVPS removal" on page 349**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Contact the next level of support.	Go to step 13.
Step 13 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Toner easily rubs off check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Check if the printer power voltage matches with the fuser voltage type. Do the voltage ratings match?	Go to step 3.	Go to step 2.
Step 2 Set the correct input voltage. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the fuser and its cables and paper guides for the following: • Damage • Obstruction in the paper path • Improper installation Is the fuser and its connectors and paper guides free of any issues?	Contact the next level of support.	Go to step 4.
Step 4 Check if the fuser and induction heater voltage rating matches the induction heater power supply voltage rating. Do the voltage ratings match?	Go to step 5.	Go to step 6.
Step 5 Perform a fuser error reset. Enter the Diagnostics menu, and then navigate to: **Printer setup** > **Reset engine service error** > **Fuser error reset** > **Fuser 121.XX**. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 **a** Reconnect or reinstall the fuser cables. **b** Reinstall or replace the fuser. See **"Fuser removal" on page 342**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Uneven print density check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Run a full calibration. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Full calibration.** Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 **a** Run a toner density adjustment. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **Toner density.** Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 7.	Go to step 6.
Step 6 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the developer assembly for the following: • Damage • Improper installation • Insufficient carrier powder • Contamination in the high voltage contact Is the developer assembly free of any issues?	Go to step 8.	Go to step 9.
Step 8 Check the ATC sensor for damage. IS the ATC sensor free of damage?	Go to step 10.	Go to step 9.
Step 9 **a** Reconnect or replace the developer assembly cables. **b** Reinstall or replace the developer assembly. **Note:** After replacing the developer assembly, perform the ATC sensor and developer ATC adjustments. Enter the Diagnostics menu, and then navigate to: **c** **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust** and **Developer ATC Adjust**. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 Check the affected printhead for the following items: • Damage • Improper installation Is the affected printhead free any issues?	Go to step 12.	Go to step 11.
Step 11 **a** Reconnect or replace the printhead cable. **b** Reinstall or replace the printhead. See **"Printhead removal" on page 369**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the transfer belt for the following: • Damage • Contamination • Obstruction in the paper path • Improper installation Is the transfer belt free of any issues?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the transfer belt. See **"Transfer module removal" on page 366**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the HVPS for the following: • Damage • Contamination • Improper installation Is the HVPS free of any issues?	Contact the next level of support.	Go to step 15.
Step 15 Reinstall or replace the HVPS. See **"HVPS removal" on page 349**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Vertical white lines check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 47**.

Action	Yes	No
Step 1 Clean the affected printhead using the provided cleaning tools. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Print the Print Quality Test Pages. Navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the affected printhead for the following items: • Damage • Improper installation Is the affected printhead free any issues?	Go to step 5.	Go to step 4.
Step 4 **a** Reconnect or replace the printhead cable. **b** Reinstall or replace the printhead. See **"Printhead removal" on page 369**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the affected photoconductor and its contact for the following items: • Damage • Contamination Is the photoconductor free of any issues?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 Reinstall or replace the photoconductor. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if any cable is damaged. Are all the cables free of damage?	Contact the next level of support.	Go to step 8.
Step 8 Reconnect or replace the affected cable. 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 flushes blank pages or pages with partial prints after a jammed page has been cleared. Check your printed output for blank pages.
- When Jam Recovery is set to On or Auto, the printer reprints jammed pages.


3
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	Jam locations
1	Multipurpose feeder
2	Door A
3	Automatic document feeder
4	Standard bin
5	Horizontal transport unit
6	Staple, hole punch finisher
7	Standard tray
8	2000-sheet tray
9	Staple finisher
10	Optional trays

200-201 paper jams

200-201 paper jam messages

Error code	Description	Action
200.03	Paper fed from the MPF was detected later than expected or was never detected at the sensor (registration).	See **"Sensor (registration) never arriving or late arriving jam service check" on page 96**.
200.16	Paper fed from tray 1 was picked but it never reached the sensor (registration).	See **"Tray 1 pick failure service check" on page 109**.
200.26	Paper fed from tray 2 was picked but it never reached the sensor (registration).	See **"Optional tray pick failure service check" on page 103**.
200.36	Paper fed from tray 3 was picked but it never reached the sensor (registration).	
200.46	Paper fed from tray 4 was picked but it never reached the sensor (registration).	
200.56	Paper fed from the HCIF was picked but It never arrived at the sensor (registration).	N/A
200.91	Paper remains detected at the sensor (registration) after the printer is turned on.	See **"Sensor (registration) static jam service check" on page 99**.
200.95	Paper never cleared the sensor (registration). The paper source is undetermined.	See **"Sensor (registration) unknown source late leaving or did not clear jam service check" on page 100**.

Sensor (registration) never arriving or late arriving jam service check

Action	Yes	No
Step 1 Check if the tray guides are free of damage and set correctly for the paper size. Are the tray guides free of damage and set correctly?	Go to step 2.	Go to step 6.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **b** Find the sensor (Registration). Does the sensor status change while toggling the sensor?	Go to step 3.	Go to step 7.
Step 3 Check if the registration sensor actuator properly operates. Does the actuator properly operate?	Go to step 4.	Go to step 7.
Step 4 Check if the registration sensor actuator is free of damage. Is the actuator free of damage?	Go to step 5.	Go to step 7.
Step 5 Check if the registration sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 9.	Go to step 7.
Step 6 Set the tray guides to the size of the loaded paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Clean the sensor (registration). **b** Reconnect or replace the registration sensor cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reinstall or replace the sensor (registration). Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Registration clutch** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 13.
Step 10 Check if the registration clutch is free of damage. Is the registration clutch free of damage?	Go to step 11.	Go to step 13.
Step 11 Check if the registration clutch properly operates. Does the registration clutch properly operate?	Go to step 12.	Go to step 13.
Step 12 Check if the registration clutch cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Go to step 15.	Go to step 13.
Step 13 Reconnect or replace the registration clutch cables. See **"Registration clutch removal" on page 394**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reinstall or replace the registration clutch. See **"Registration clutch removal" on page 394**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **MPF feed clutch** **b** Touch **Start**. Does the motor run?	Go to step 16.	Go to step 19.
Step 16 Check if the MPF feed clutch is free of damage. Is the MPF feed clutch free of damage?	Go to step 17.	Go to step 19.

Action	Yes	No
Step 17 Check if the MPF feed clutch properly operates. Does the MPF feed clutch properly operate?	Go to step 18.	Go to step 19.
Step 18 Check if the MPF feed clutch cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Go to step 21.	Go to step 19.
Step 19 Reconnect or replace the MPF feed clutch cables. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Reinstall or replace the MPF feed clutch. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Transport clutch** **b** Touch **Start**. Does the motor run?	Go to step 22.	Go to step 25.
Step 22 Check if the transport clutch is free of damage. Is the transport clutch free of damage?	Go to step 23.	Go to step 25.
Step 23 Check if the transport clutch properly operates. Does the transport clutch properly operate?	Go to step 24.	Go to step 25.
Step 24 Check if the transport clutch cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Contact the next level of support.	Go to step 25.
Step 25 Reconnect or replace the transport clutch cables. Does the problem remain?	Go to step 26.	The problem is solved.

Action	Yes	No
Step 26 Reinstall or replace the transport clutch. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (registration) static jam service check

Action	Yes	No
Step 1 Check if the tray guides are free of damage and set correctly for the paper size. Are the tray guides free of damage and set correctly?	Go to step 3.	Go to step 2.
Step 2 Set the tray guides to the size of the paper loaded. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **b** Find the sensor (Registration). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 7.
Step 4 Check if the registration sensor actuator properly operates. Does the actuator properly operate?	Go to step 5.	Go to step 7.
Step 5 Check if the registration sensor actuator is free of damage. Is the actuator free of damage?	Go to step 6.	Go to step 7.
Step 6 Check if the registration sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Contact the next level of support.	Go to step 7.
Step 7 **a** Clean the sensor (registration). **b** Reconnect or replace the registration sensor cable. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Reinstall or replace the sensor (registration). Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (registration) unknown source late leaving or did not clear jam service check

Action	Yes	No
Step 1 Check if the tray guides are free of damage and set correctly for the paper size. Are the tray guides free of damage and set correctly?	Go to step 3.	Go to step 2.
Step 2 Set the tray guides to the size of the paper loaded. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **b** Find the sensor (Registration). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 7.
Step 4 Check if the registration sensor actuator properly operates. Does the actuator properly operate?	Go to step 5.	Go to step 7.
Step 5 Check if the registration sensor actuator is free of damage. Is the actuator free of damage?	Go to step 6.	Go to step 7.
Step 6 Check if the registration sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 9.	Go to step 7.
Step 7 **a** Clean the sensor (registration). **b** Reconnect or replace the registration sensor cable. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Reinstall or replace the sensor (registration). 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 & adjustments** > **Motor tests** > **Sub** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 13.
Step 10 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 11.	Go to step 13.
Step 11 Check if the sub motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 12.	Go to step 13.
Step 12 Check if the voltage is correct. Is the voltage correct?	Go to step 22.	Go to step 15.
Step 13 Reconnect or replace the sub motor cable. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reinstall or replace the motor (sub). Does the problem remain?	Go to step 22.	The problem is solved.
Step 15 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 16.	Go to step 20.
Step 16 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 17.	Go to step 20.

Action	Yes	No
Step 17 Check the option board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of any issues?	Go to step 18.	Go to step 20.
Step 18 Check the option board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the option board free of any issues?	Go to step 19.	Go to step 20.
Step 19 Check if the voltage is correct. See the wiring diagram. Is the voltage correct?	Go to step 22.	Go to step 20.
Step 20 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the engine board. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Registration clutch** **b** Touch **Start**. Does the motor run?	Go to step 23.	Go to step 26.
Step 23 Check if the registration clutch is free of damage. Is the registration clutch free of damage?	Go to step 24.	Go to step 26.

Action	Yes	No
Step 24 Check if the registration clutch properly operates. Does the registration clutch properly operate?	Go to step 25.	Go to step 26.
Step 25 Check if the registration clutch cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Contact the next level of support.	Go to step 26.
Step 26 Reconnect or replace the registration clutch cables. See **"Registration clutch removal" on page 394**. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Reinstall or replace the registration clutch. See **"Registration clutch removal" on page 394**. 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 Check if the tray guides are free of damage and set correctly for the paper size loaded. Are the tray guides free of damage and set correctly?	Go to step 3.	Go to step 2.
Step 2 Set the tray guides to the size of the paper loaded. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **b** Find the sensor (Registration). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 7.
Step 4 Check if the registration sensor actuator properly operates. Does the actuator properly operate?	Go to step 5.	Go to step 7.

Action	Yes	No
Step 5 Check if the registration sensor actuator is free of damage. Is the actuator free of damage?	Go to step 6.	Go to step 7.
Step 6 Check if the registration sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 9.	Go to step 7.
Step 7 **a** Clean the sensor (registration). **b** Reconnect or replace the registration sensor cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reinstall or replace the sensor (registration). 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 & adjustments** > **Motor tests** > **Registration clutch** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 13.
Step 10 Check if the registration clutch is free of damage. Is the registration clutch free of damage?	Go to step 11.	Go to step 13.
Step 11 Check if the registration clutch properly operates. Does the registration clutch properly operate?	Go to step 12.	Go to step 13.
Step 12 Check if the registration clutch cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Go to step 15.	Go to step 13.
Step 13 Reconnect or replace the registration clutch cables. See **"Registration clutch removal" on page 394**. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 Reinstall or replace the registration clutch. See **"Registration clutch removal" on page 394**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Transport clutch** **b** Touch **Start**. Does the motor run?	Go to step 16.	Go to step 19.
Step 16 Check if the transport clutch is free of damage. Is the transport clutch free of damage?	Go to step 17.	Go to step 19.
Step 17 Check if the transport clutch properly operates. Does the transport clutch properly operate?	Go to step 18.	Go to step 19.
Step 18 Check if the transport clutch cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Go to step 21.	Go to step 19.
Step 19 Reconnect or replace the transport clutch cables. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Reinstall or replace the transport clutch. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **520-sheet tray with cabinet transport** **b** Touch **Start**. Does the motor run?	Go to step 22.	Go to step 25.

Action	Yes	No
Step 22 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 23.	Go to step 25.
Step 23 Check if the 520-sheet tray with cabinet transport motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 24.	Go to step 25.
Step 24 Check if the voltage is correct. Is the voltage correct?	Go to step 27.	Go to step 39.
Step 25 Reconnect or replace the 520-sheet tray with cabinet transport motor cable. Does the problem remain?	Go to step 26.	The problem is solved.
Step 26 Reinstall or replace the motor (520-sheet tray with cabinet transport). Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **3 x 520-sheet tray transport**. **b** Touch **Start**. Does the motor run?	Go to step 28.	Go to step 31.
Step 28 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 29.	Go to step 31.
Step 29 Check if the 3TM transport motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 30.	Go to step 31.

Action	Yes	No
Step 30 Check if the voltage is correct. Is the voltage correct?	Go to step 33.	Go to step 39.
Step 31 Reconnect or replace the 3 x 520-sheet tray transport motor cable. Does the problem remain?	Go to step 32.	The problem is solved.
Step 32 Reinstall or replace the motor (3 x 520-sheet tray transport). Does the problem remain?	Go to step 33.	The problem is solved.
Step 33 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **520-sheet tray transport**. **b** Touch **Start**. Does the motor run?	Go to step 34.	Go to step 37.
Step 34 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 35.	Go to step 37.
Step 35 Check if the 520-sheet tray transport motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 36.	Go to step 37.
Step 36 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 39.
Step 37 Reconnect or replace the 520-sheet tray transport motor cable. Does the problem remain?	Go to step 38.	The problem is solved.
Step 38 Reinstall or replace the motor (520-sheet tray transport). Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
Step 39 Check if the cables are properly connected to the option board. Are the cables properly connected?	Go to step 40.	Go to step 44.
Step 40 Check if the connectors on the option board are free of damage. Are the connectors free of damage?	Go to step 41.	Go to step 44.
Step 41 Check the option board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the option board free of any issues?	Go to step 42.	Go to step 44.
Step 42 Check the option board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the option board free of any issues?	Go to step 43.	Go to step 44.
Step 43 Check if the voltage is correct. See the wiring diagram section. Is the voltage correct?	Contact the next level of support.	Go to step 44.
Step 44 Reconnect or replace the option board connectors. Does the problem remain?	Go to step 45.	The problem is solved.
Step 45 Replace the option board. 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 Check if the tray guides are free of damage and set correctly for the paper size loaded. Are the tray guides free of damage and set correctly?	Go to step 3.	Go to step 2.
Step 2 Set the tray guides to the size of the paper loaded. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **b** Find the sensor (Registration). Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 7.
Step 4 Check if the registration sensor actuator properly operates. Does the actuator properly operate?	Go to step 5.	Go to step 7.
Step 5 Check if the registration sensor actuator is free of damage. Is the actuator free of damage?	Go to step 6.	Go to step 7.
Step 6 Check if the registration sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 9.	Go to step 7.
Step 7 **a** Clean the sensor (registration). **b** Reconnect or replace the registration sensor cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Reinstall or replace the sensor (registration). Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Registration clutch** **b** Touch **Start**. Does the motor run?	Go to step 10.	Go to step 13.
Step 10 Check if the registration clutch is free of damage. Is the registration clutch free of damage?	Go to step 11.	Go to step 13.
Step 11 Check if the registration clutch properly operates. Does the registration clutch properly operate?	Go to step 12.	Go to step 13.
Step 12 Check if the registration clutch cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Go to step 15.	Go to step 13.
Step 13 Reconnect or replace the registration clutch cables. See **"Registration clutch removal" on page 394**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reinstall or replace the registration clutch. See **"Registration clutch removal" on page 394**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Transport clutch** **b** Touch **Start**. Does the motor run?	Go to step 16.	Go to step 19.
Step 16 Check if the transport clutch is free of damage. Is the transport clutch free of damage?	Go to step 17.	Go to step 19.

Action	Yes	No
Step 17 Check if the transport clutch properly operates. Does the transport clutch properly operate?	Go to step 18.	Go to step 19.
Step 18 Check if the transport clutch cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Go to step 21.	Go to step 19.
Step 19 Reconnect or replace the transport clutch cables. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Reinstall or replace the transport clutch. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Tray 1 pick position** **b** Touch **Start**. Does the motor run?	Go to step 22.	Go to step 25.
Step 22 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 23.	Go to step 25.
Step 23 Check if the pick/lift motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 24.	Go to step 25.
Step 24 Check if the voltage is correct. Is the voltage correct?	Go to step 27.	Go to step 33.
Step 25 Reconnect or replace the pick/lift motor cable. Does the problem remain?	Go to step 26.	The problem is solved.

Action	Yes	No
Step 26 Reinstall or replace the motor (pick/lift). Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Sub** **b** Touch **Start**. Does the motor run?	Go to step 28.	Go to step 31.
Step 28 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 29.	Go to step 31.
Step 29 Check if the sub motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 30.	Go to step 31.
Step 30 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 33.
Step 31 Reconnect or replace the sub motor cable. Does the problem remain?	Go to step 32.	The problem is solved.
Step 32 Reinstall or replace the motor (sub). Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 33 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 34.	Go to step 38.
Step 34 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 35.	Go to step 38.

Action	Yes	No
Step 35 Check the engine board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of any issues?	Go to step 36.	Go to step 38.
Step 36 Check the engine board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the engine board free of any issues?	Go to step 37.	Go to step 38.
Step 37 Check if the voltage is correct. See the wiring diagram section. Is the voltage correct?	Contact the next level of support.	Go to step 38.
Step 38 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 39.	The problem is solved.
Step 39 Replace the engine board. Does the problem remain?	Contact the next level of support.	The problem is solved.

202-203 paper jams

202-203 paper jam messages

Error code	Description	Action
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 114**.
202.93	Paper fed never reached the sensor (fuser exit). Paper source is undetermined.	N/A

Error code	Description	Action
202.94	Paper cleared the sensor (fuser exit) earlier than expected. The paper source is undetermined.	See **"Sensor (fuser exit) unknown source early leaving or never leaving jam service check" on page 115**.
202.95	Paper never cleared the sensor (fuser exit). The paper source is undetermined.	

Sensor (fuser exit) static jam service check

Action	Yes	No
Step 1 **a** Remove any paper from the output bin. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **c** Find the sensor (Fuser exit). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.
Step 2 Check if the fuser exit sensor actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the fuser exit sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.
Step 4 Check if the fuser exit sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Contact the next level of support.	Go to step 5.
Step 5 **a** Clean the sensor (fuser exit). **b** Reconnect or replace the fuser exit sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (fuser exit). Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (fuser exit) unknown source early leaving or never leaving jam service check

Action	Yes	No
Step 1 **a** Remove any paper from the output bin. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **c** Find the sensor (Fuser exit). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.
Step 2 Check if the fuser exit sensor actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the fuser exit sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.
Step 4 Check if the fuser exit sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 7.	Go to step 5.
Step 5 **a** Clean the sensor (fuser exit). **b** Reconnect or replace the fuser exit sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (fuser exit). 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 & adjustments** > **Motor tests** > **Fuser** **b** Touch **Start**. Does the motor run?	Go to step 8.	The problem is solved.
Step 8 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 9.	Go to step 11.

Action	Yes	No
Step 9 Check if the fuser motor cables are properly connected to the controller board. Are the cables properly connected?	Go to step 10.	Go to step 11.
Step 10 Check if the voltage is correct. Is the voltage correct?	Go to step 13.	Go to step 19.
Step 11 Reconnect or replace the fuser motor cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reinstall or replace the motor (fuser). Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Exit 2** **b** Touch **Start**. Does the motor run?	Go to step 14.	Go to step 17.
Step 14 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 15.	Go to step 17.
Step 15 Check if the exit 2 motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 16.	Go to step 17.
Step 16 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 19.
Step 17 Reconnect or replace the exit 2 motor cable. Does the problem remain?	Go to step 18.	The problem is solved.

Action	Yes	No
Step 18 Reinstall or replace the motor (exit 2). Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 19 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 20.	Go to step 24.
Step 20 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 21.	Go to step 24.
Step 21 Check the option board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of any issues?	Go to step 22.	Go to step 24.
Step 22 Check the option board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the engine board free of any issues?	Go to step 23.	Go to step 24.
Step 23 Check if the voltage is correct. See the wiring diagram. Is the voltage correct?	Contact the next level of support.	Go to step 24.
Step 24 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Replace the engine board. Does the problem remain?	Contact the next level of support.	The problem is solved.

221-232 paper jams

221-232 paper jam messages

Error code	Description	Action
221.91	Paper remains detected at the sensor (fuser exit 2) after the printer is turned on.	See **"Sensor (exit 2) static jam service check" on page 118**.
221.93	Paper never reached the sensor (fuser exit 2). The paper source is undetermined.	See **"Sensor (exit 2) unknown source never arriving jam service check" on page 119**.
221.95	Paper never cleared the sensor (fuser exit 2). The paper source is undetermined.	See **"Sensor (exit 2) unknown source never leaving jam service check" on page 122**.
232.93	Paper fed never reached the sensor (input) during a duplex print job. The paper source is undetermined.	N/A

Sensor (exit 2) static jam service check

Action	Yes	No
Step 1 **a** Remove any paper from the output bin. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **c** Find the sensor (Exit 2). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.
Step 2 Check if the exit 2 sensor actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the exit 2 sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.
Step 4 Check if the exit 2 sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Contact the next level of support.	Go to step 5.
Step 5 **a** Clean the sensor (exit 2). **b** Reconnect or replace the exit 2 sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Reinstall or replace the sensor (exit 2). Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (exit 2) unknown source never arriving jam service check

Action	Yes	No
Step 1 **a** Remove any paper from the output bin. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **c** Find the sensor (Fuser exit). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.
Step 2 Check if the fuser exit sensor actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the fuser exit sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.
Step 4 Check if the fuser exit sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 7.	Go to step 5.
Step 5 **a** Clean the sensor (fuser exit). **b** Reconnect or replace the fuser exit sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (fuser exit). Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Fuser** **b** Touch **Start**. Does the motor run?	Go to step 8.	The problem is solved.
Step 8 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 9.	Go to step 11.
Step 9 Check if the fuser motor cables are properly connected to the controller board. Are the cables properly connected?	Go to step 10.	Go to step 11.
Step 10 Check if the voltage is correct. Is the voltage correct?	Go to step 20.	Go to step 13.
Step 11 Reconnect or replace the fuser motor cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reinstall or replace the motor (fuser). Does the problem remain?	Go to step 20.	The problem is solved.
Step 13 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 14.	Go to step 18.
Step 14 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 15.	Go to step 18.

Action	Yes	No
Step 15 Check the option board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of any issues?	Go to step 16.	Go to step 18.
Step 16 Check the option board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the engine board free of any issues?	Go to step 17.	Go to step 18.
Step 17 Check if the voltage is correct. See the wiring diagram section. Is the voltage correct?	Contact the next level of support.	Go to step 18.
Step 18 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Replace the engine board. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 20 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Registration clutch** **b** Touch **Start**. Does the motor run?	Go to step 21.	Go to step 24.
Step 21 Check if the registration clutch is free of damage. Is the registration clutch free of damage?	Go to step 22.	Go to step 24.

Action	Yes	No
Step 22 Check if the registration clutch properly operates. Does the registration clutch properly operate?	Go to step 23.	Go to step 24.
Step 23 Check if the registration clutch cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Contact the next level of support.	Go to step 24.
Step 24 Reconnect or replace the registration clutch cables. See **"Registration clutch removal" on page 394**. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Reinstall or replace the registration clutch. See **"Registration clutch removal" on page 394**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (exit 2) unknown source never leaving jam service check

Action	Yes	No
Step 1 **a** Remove any paper from the output bin. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **c** Find the sensor (Exit 2). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.
Step 2 Check if the exit 2 sensor actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the exit 2 sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.
Step 4 Check if the exit 2 sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 7.	Go to step 5.

Action	Yes	No
Step 5 **a** Clean the sensor (exit 2). **b** Reconnect or replace the exit 2 sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (exit 2). 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 & adjustments** > **Motor tests** > **Exit 2** **b** Touch **Start**. Does the motor run?	Go to step 8.	Go to step 11.
Step 8 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 9.	Go to step 11.
Step 9 Check if the exit 2 motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 10.	Go to step 11.
Step 10 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 13.
Step 11 Reconnect or replace the exit 2 motor cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reinstall or replace the motor (exit 2). Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 13 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 14.	Go to step 18.

Action	Yes	No
Step 14 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 15.	Go to step 18.
Step 15 Check the engine board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of any issues?	Go to step 16.	Go to step 18.
Step 16 Check the engine board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the engine board free of any issues?	Go to step 17.	Go to step 18.
Step 17 Check if the voltage is correct. See the wiring diagram section. Is the voltage correct?	Contact the next level of support.	Go to step 18.
Step 18 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Replace the engine board. 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
241.16	Paper fed from tray 1 was picked but it never reached the sensor (tray 1 feed).	See **“Sensor (tray 1 feed) never arriving or late arriving jam service check” on page 125**.

Sensor (tray 1 feed) never arriving or late arriving jam service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Start** **b** Find the sensor (Tray 1 feed). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.
Step 2 Check if the tray 1 feed sensor actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the tray 1 feed sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.
Step 4 Check if the tray 1 feed sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 7.	Go to step 5.
Step 5 **a** Clean the sensor (tray 1 feed). **b** Reconnect or replace the tray 1 feed sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (tray 1 feed). 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 & adjustments** > **Motor tests** > **Tray 1 pick position** **b** Touch **Start**. Does the motor run?	Go to step 8.	Go to step 11.
Step 8 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 9.	Go to step 11.

Action	Yes	No
Step 9 Check if the pick/lift motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 10.	Go to step 11.
Step 10 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 13.
Step 11 Reconnect or replace the pick/lift motor cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reinstall or replace the motor (pick/lift). Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 13 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 14.	Go to step 18.
Step 14 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 15.	Go to step 18.
Step 15 Check the engine board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of any issues?	Go to step 16.	Go to step 18.
Step 16 Check the engine board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the engine board free of any issues?	Go to step 17.	Go to step 18.

Action	Yes	No
Step 17 Check if the voltage is correct. See the wiring diagram section. Is the voltage correct?	Contact the next level of support.	Go to step 18.
Step 18 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Replace the engine board. Does the problem remain?	Contact the next level of support.	The problem is solved.

242 paper jams

242-244 paper jam messages

Error code	Description	Action
242.23	Paper fed from tray 2 never reached the sensor (tray 2 feed).	See **"Sensor (tray 2 feed) late arriving or late leaving jam service check" on page 128**.
242.33	Paper fed from tray 3 never reached the sensor (tray 2 feed).	N/A
242.43	Paper fed from tray 4 never reached the sensor (tray 2 feed).	
242.91	Paper remains detected at the sensor (tray 2 feed) after the printer is turned on.	See **"Sensor (tray 2 feed) static jam service check" on page 127**.
242.93	Paper never arrived at the sensor (tray 2 feed). Paper source is undetermined.	See **"Sensor (tray 2 feed) unknown source late arriving or late leaving jam service check" on page 132**.
244.91	Paper remains detected at the sensor (tray 4 pass-through) after the printer is turned on. Paper source is undetermined.	N/A

Sensor (tray 2 feed) static jam service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Sensor tests** > **Start** **b** Find the sensor (Tray 2 feed). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.

Action	Yes	No
Step 2 Check if the tray 2 feed sensor actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the tray 2 feed sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.
Step 4 Check if the tray 2 feed sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Contact the next level of support.	Go to step 5.
Step 5 **a** Clean the sensor (tray 2 feed). **b** Reconnect or replace the tray 2 feed sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (tray 2 feed). Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 2 feed) late arriving or late leaving jam service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Sensor tests** > **Start** **b** Find the sensor (Tray 2 feed). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.
Step 2 Check if the tray 2 feed sensor actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the tray 2 feed sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.

Action	Yes	No
Step 4 Check if the tray 2 feed sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 7.	Go to step 5.
Step 5 **a** Clean the sensor (tray 2 feed). **b** Reconnect or replace the tray 2 feed sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (tray 2 feed). Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **520-sheet tray with cabinet transport** **b** Touch **Start**. Does the motor run?	Go to step 8.	Go to step 11.
Step 8 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 9.	Go to step 11.
Step 9 Check if the 520-sheet tray with cabinet transport motor cbale is properly connected to the controller board. Is the cable properly connected?	Go to step 10.	Go to step 11.
Step 10 Check if the voltage is correct. Is the voltage correct?	Go to step 13.	Go to step 25.
Step 11 Reconnect or replace the 520-sheet tray with cabinet transport motor cable. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Reinstall or replace the motor (520-sheet tray with cabinet transport). Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **3 x 520-sheet tray transport** **b** Touch **Start**. Does the motor run?	Go to step 14.	Go to step 17.
Step 14 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 15.	Go to step 17.
Step 15 Check if the 3 x 520-sheet tray transport motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 16.	Go to step 17.
Step 16 Check if the voltage is correct. Is the voltage correct?	Go to step 19.	Go to step 25.
Step 17 Reconnect or replace the 3 x 520-sheet tray transport motor cable. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Reinstall or replace the motor (3 x 520-sheet tray transport). Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **520-sheet tray transport** **b** Touch **Start**. Does the motor run?	Go to step 20.	Go to step 23.

Action	Yes	No
Step 20 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 21.	Go to step 23.
Step 21 Check if the 520-sheet tray transport motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 22.	Go to step 23.
Step 22 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 25.
Step 23 Reconnect or replace the 520-sheet tray transport motor cable. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Reinstall or replace the motor (520-sheet tray transport). Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 25 Check if the cables are properly connected to the option board. Are the cables properly connected?	Go to step 26.	Go to step 30.
Step 26 Check if the connectors on the option board are free of damage. Are the connectors free of damage?	Go to step 27.	Go to step 30.
Step 27 Check the option board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the option board free of any issues?	Go to step 28.	Go to step 30.

Action	Yes	No
Step 28 Check the option board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the option board free of any issues?	Go to step 29.	Go to step 30.
Step 29 Check if the voltage is correct. See the wiring diagram section. Is the voltage correct?	Contact the next level of support.	Go to step 30.
Step 30 Reconnect or replace the option board connectors. Does the problem remain?	Go to step 31.	The problem is solved.
Step 31 Replace the option board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 2 feed) unknown source late arriving or late leaving jam service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Sensor tests** > **Start** **b** Find the sensor (Tray 2 feed). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.
Step 2 Check if the tray 2 feed sensor actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the tray 2 feed sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.

Action	Yes	No
Step 4 Check if the tray 2 feed sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 7.	Go to step 5.
Step 5 **a** Clean the sensor (tray 2 feed). **b** Reconnect or replace the tray 2 feed sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (tray 2 feed). Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **520-sheet tray with cabinet transport** **b** Touch **Start**. Does the motor run?	Go to step 8.	Go to step 11.
Step 8 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 9.	Go to step 11.
Step 9 Check if the 520-sheet tray with cabinet transport motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 10.	Go to step 11.
Step 10 Check if the voltage is correct. Is the voltage correct?	Go to step 13.	Go to step 43.
Step 11 Reconnect or replace the 520-sheet tray with cabinet transport motor cable. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Reinstall or replace the motor (520-sheet tray with cabinet transport). Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **3 x 520-sheet tray transport** **b** Touch **Start**. Does the motor run?	Go to step 14.	Go to step 17.
Step 14 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 15.	Go to step 17.
Step 15 Check if the 3 x 520-sheet tray transport motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 16.	Go to step 17.
Step 16 Check if the voltage is correct. Is the voltage correct?	Go to step 19.	Go to step 43.
Step 17 Reconnect or replace the 3 x 520-sheet tray transport motor cable. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Reinstall or replace the motor (3 x 520-sheet tray transport). Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **520-sheet transport** **b** Touch **Start**. Does the motor run?	Go to step 20.	Go to step 23.

Action	Yes	No
Step 20 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 21.	Go to step 23.
Step 21 Check if the 520-sheet tray transport motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 22.	Go to step 23.
Step 22 Check if the voltage is correct. Is the voltage correct?	Go to step 25.	Go to step 43.
Step 23 Reconnect or replace the 520-sheet tray transport motor cable. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Reinstall or replace the motor (520-sheet tray transport). Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Tray 2 pick/lift** **b** Touch **Start**. Does the motor run?	Go to step 26.	Go to step 29.
Step 26 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 27.	Go to step 29.
Step 27 Check if the tray 2 pick/lift motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 28.	Go to step 29.

Action	Yes	No
Step 28 Check if the voltage is correct. Is the voltage correct?	Go to step 31.	Go to step 43.
Step 29 Reconnect or replace the tray 2 pick/lift motor cable. Does the problem remain?	Go to step 30.	The problem is solved.
Step 30 Reinstall or replace the motor (tray 2 pick/lift). Does the problem remain?	Go to step 31.	The problem is solved.
Step 31 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Tray 3 pick/lift**. **b** Touch **Start**. Does the motor run?	Go to step 32.	Go to step 35.
Step 32 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 33.	Go to step 35.
Step 33 Check if the tray 3 pick/lift motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 34.	Go to step 35.
Step 34 Check if the voltage is correct. Is the voltage correct?	Go to step 37.	Go to step 43.
Step 35 Reconnect or replace the tray 3 pick/lift motor cable. Does the problem remain?	Go to step 36.	The problem is solved.
Step 36 Reinstall or replace the motor (tray 3 pick/lift). Does the problem remain?	Go to step 37.	The problem is solved.

Action	Yes	No
Step 37 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Tray 4 pick/lift**. **b** Touch **Start**. Does the motor run?	Go to step 38.	Go to step 41.
Step 38 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 39.	Go to step 41.
Step 39 Check if the tray 4 pick/lift motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 40.	Go to step 41.
Step 40 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 43.
Step 41 Reconnect or replace the tray 4 pick/lift motor cable. Does the problem remain?	Go to step 42.	The problem is solved.
Step 42 Reinstall or replace the motor (tray 4 pick/lift). Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 43 Check if the cables are properly connected to the option board. Are the cables properly connected?	Go to step 44.	Go to step 48.
Step 44 Check if the connectors on the option board are free of damage. Are the connectors free of damage?	Go to step 45.	Go to step 48.

Action	Yes	No
Step 45 Check the option board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the option board free of any issues?	Go to step 46.	Go to step 48.
Step 46 Check the option board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the option board free of any issues?	Go to step 47.	Go to step 48.
Step 47 Check if the voltage is correct. See the wiring diagram section. Is the voltage correct?	Contact the next level of support.	Go to step 48.
Step 48 Reconnect or replace the option board connectors. Does the problem remain?	Go to step 49.	The problem is solved.
Step 49 Replace the option board. Does the problem remain?	Contact the next level of support.	The problem is solved.

4yy paper jams (staple finisher)

4yy paper jam messages (staple finisher)

Error code	Description	Action
420.11	The sensor (staple finisher paper path) detected paper.	See **"Sensor (staple finisher output option 1 position) failure 6 service check" on page 179**.
420.13	Sensor (pass-through): The paper arrives too late or never arrives.	See **"Sensor (staple finisher output option 1 position) failure 2 service check" on page 170**.
420.15	The paper does not clear the sensor (pass-through) in time.	See **"Sensor (staple finisher output option 1 position) failure 1 service check" on page 168**.

Error code	Description	Action
420.54	The sensor (compile exit) is not turned off by a fed sheet within the set time.	See **"Sensor (staple finisher output option 1 position) failure 3 service check" on page 172**.
421.13	The sensor (front tamper home) is not covered in time.	See **"Sensor (staple finisher output option 1 position) failure 9 service check" on page 186**.
421.15	The sensor (front tamper home) is not uncovered in time.	
422.13	The sensor (rear tamper home) is not covered in time.	See **"Sensor (staple finisher output option 1 position) failure 8 service check" on page 184**.
422.15	The sensor (rear tamper home) is not uncovered in time.	
423.13	The quick exit or ejector failed to reach the sensor (home).	See **"Sensor (staple finisher output option 1 position) failure 5 service check" on page 177**.
423.15	The quick exit or ejector failed to leave the sensor (home).	
425.13	The tray holder failed to reach the home position.	
425.15	The tray holder failed to leave the home position.	
428.15	The staple finisher stapler head failed to leave the home position.	See **"Sensor (staple finisher output option 1 position) failure 7 service check" on page 181**.
430.19	The staple finisher stapler head failed to prime.	See **"Sensor (staple finisher output option 1 position) failure 4 service check" on page 174**.
431.13	The sensor (staple finisher elevator beam) is not blocked in time.	See **"Sensor (staple finisher elevator beam) failure 2 service check" on page 161**.
431.15	The sensor (staple finisher elevator beam) is not unblocked in time.	See **"Sensor (staple finisher elevator beam) failure service check" on page 159**.
450.23	Sensor (MTU entry): The paper arrives too late or never arrives.	See **"Sensor (staple finisher MTU entry) failure service check" on page 153**.
450.33	Sensor (MTU entry): The paper arrives too late or never arrives (with trifold/Z-fold finisher).	
450.91	Remaining paper detected on the paper path sensor of the staple finisher.	See **"Sensor (staple finisher paper path) failure service check" on page 151**.
454.23	Sensor (outer staging path bottom): The paper arrived too late.	See **"Sensor (staple finisher outer staging path bottom) failure service check" on page 155**.
454.25	Sensor (outer staging path bottom): The paper does not clear the sensor in time.	
454.33	Sensor (outer staging path bottom): The paper arrived too late (with trifold/Z-fold finisher).	
454.35	Sensor (outer staging path bottom): The paper does not clear the sensor in time (with trifold/Z-fold finisher).	

Error code	Description	Action
457.25	Sensor (accumulator): The paper does not clear the sensor in time.	See **"Sensor (staple finisher compiler tray paper presence) failure service check" on page 146**.
457.35	Sensor (accumulator): The paper does not clear the sensor in time (with trifold/Z-fold finisher).	
461.90	The sensor (staple finisher stack height) failed to detect an off status three times consecutively within the set time.	See **"Sensor (staple finisher stack height) failure service check" on page 157**.
465.23	The exit roller cam failed to reach the home position.	See **"Sensor (staple finisher compiler exit roller) failure service check" on page 143**.
465.25	The exit roller cam failed to leave the home position.	
468.23	The front tamper failed to reach the home position.	See **"Sensor (staple finisher tamper front) failure service check" on page 191**.
468.25	The front tamper failed to leave the home position.	
468.33	The front tamper failed to reach the home position (with trifold/Z-fold finisher).	
468.35	The front tamper failed to leave the home position (with trifold/Z-fold finisher).	
469.23	The rear tamper failed to reach the home position.	See **"Sensor (staple finisher tamper rear) failure service check" on page 193**.
469.25	The rear tamper failed to leave the home position.	
469.33	The rear tamper failed to reach the home position (with trifold/Z-fold finisher).	
469.35	The rear tamper failed to leave the home position (with trifold/Z-fold finisher).	
470.23	The tray holder failed to reach the home position.	See **"Sensor (staple finisher compiler tray) failure service check" on page 148**.
470.25	The tray holder failed to leave the home position.	
470.33	The tray holder failed to reach the home position (with trifold/Z-fold finisher).	
470.35	The tray holder failed to leave the home position (with trifold/Z-fold finisher).	
477.64	The motor (staple finisher bin elevator) was unable to adjust the height within the set time.	See **"Motor (staple finisher bin elevator) failure service check" on page 141**.
480.23	The staple finisher stapler head failed to reach the home position.	See **"Sensor (staple finisher stapler head) failure 2 service check" on page 165**.
480.25	The staple finisher stapler head failed to leave the home position.	

Error code	Description	Action
480.33	The staple finisher stapler head failed to reach the home position (with trifold/Z-fold finisher).	See **"Sensor (staple finisher stapler head) failure service check" on page 163**.
480.35	The staple finisher stapler head failed to leave the home position (with trifold/Z-fold finisher).	See **"Sensor (staple finisher stapler head) failure 2 service check" on page 165**.
481.29	The staple finisher stapler head failed to prime.	See **"Sensor (staple finisher stapler head) failure service check" on page 163**.
481.39	The staple finisher stapler head failed to prime (with trifold/Z-fold finisher).	
484.23	The staple finisher stapler transport failed to reach the home position.	See **"Sensor (staple finisher stapler transport) failure service check" on page 188**.
484.25	The staple finisher stapler transport failed to leave the home position.	
484.33	The staple finisher stapler transport failed to reach the home position (with trifold/Z-fold finisher).	
484.35	The staple finisher stapler transport failed to leave the home position (with trifold/Z-fold finisher).	

Motor (staple finisher bin elevator) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher stacker height). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.

Action	Yes	No
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (staple finisher stacker bin) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher stacker bin). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher lift shaft unit for proper installation. Is the staple finisher lift shaft unit properly installed?	Go to step 10.	Go to step 9.
Step 9 Reseat the staple finisher lift shaft unit. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the staple finisher lift shaft unit for damage. **b** Check the staple finisher lift shaft unit gears and rollers for wear or damage. Are the staple finisher lift shaft unit and its gears and rollers free of wear or damage?	Go to step 12.	Go to step 11.

Action	Yes	No
Step 11 Replace the staple finisher lift shaft unit. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 13.
Step 13 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher compiler exit roller) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the staple finisher lower ejector unit is properly installed and free of damage. **b** Check the staple finisher lower ejector unit gears and rollers for wear and damage. Are the gears and rollers properly installed and free of wear or damage?	Go to step 4.	Go to step 3.
Step 3 Replace the defective rollers or gears. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher ejector clamp/paddle). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
Step 6 Replace the sensor. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher stack clamp). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the sensor. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests.** **b** Find the motor (compiler eject). Did the motor run?	Go to step 12.	Go to step 11.
Step 11 Replace the motor. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Replace the staple finisher lower ejector unit. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Check the bin clamp clutch for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the bin clamp clutch properly installed and free of damage?	Go to step 14.	Go to step 15.
Step 14 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (bin clamp clutch). Did the motor run?	Go to step 16.	Go to step 15.
Step 15 Replace the bin clamp clutch. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 17.
Step 17 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher compiler tray paper presence) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the staple finisher lower ejector unit is properly installed and free of damage. **b** Check the staple finisher lower ejector unit gears and rollers for wear and damage. Are the gears and rollers properly installed and free of wear or damage?	Go to step 4.	Go to step 3.
Step 3 Replace the defective rollers or gears. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher ejector clamp/paddle). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
Step 6 Replace the sensor. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher stack clamp). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the sensor. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests.** **b** Find the motor (compiler eject). Did the motor run?	Go to step 12.	Go to step 11.
Step 11 Replace the motor. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the staple finisher lower ejector unit. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Check the bin clamp clutch for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the bin clamp clutch properly installed and free of damage?	Go to step 14.	Go to step 15.
Step 14 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (bin clamp clutch). Did the motor run?	Go to step 16.	Go to step 15.

Action	Yes	No
Step 15 Replace the bin clamp clutch. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 17.
Step 17 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher compiler tray) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the staple finisher lower ejector unit is properly installed and free of damage. **b** Check the staple finisher lower ejector unit gears and rollers for wear and damage. Are the gears and rollers properly installed and free of wear or damage?	Go to step 4.	Go to step 3.
Step 3 Replace the defective rollers or gears. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher ejector clamp/paddle). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
Step 6 Replace the sensor. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher stack clamp). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the sensor. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests.** **b** Find the motor (compiler eject). Did the motor run?	Go to step 12.	Go to step 11.
Step 11 Replace the motor. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Replace the staple finisher lower ejector unit. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Check the bin clamp clutch for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the bin clamp clutch properly installed and free of damage?	Go to step 14.	Go to step 15.
Step 14 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (bin clamp clutch). Did the motor run?	Go to step 16.	Go to step 15.
Step 15 Replace the bin clamp clutch. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 17.
Step 17 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher paper path) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the staple finisher transport rollers, gears, and belt for wear, damage, and obstruction. Are the staple finisher transport rollers, gears, and belt free of wear, damage, and obstruction?	Go to step 4.	Go to step 3.
Step 3 Replace the staple finisher transport rollers, gears, or belt. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the staple finisher stapler transport. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher feed). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 8.	Go to step 7.
Step 7 Replace the sensor. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher transport). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 9.
Step 9 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Replace the sensor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the motor (staple finisher transport) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 12.	Go to step 13.
Step 12 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher transport). Did the motor run?	Go to step 14.	Go to step 13.
Step 13 Replace the motor. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher MTU entry) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher feed). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (staple finisher transport) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher transport). Did the motor run?	Go to step 8.	Go to step 7.

Action	Yes	No
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher lower transport guide rollers and gears for wear, damage, and obstruction. Are the staple finisher lower transport guide rollers and gears free of wear, damage, and obstruction?	Go to step 10.	Go to step 9.
Step 9 Replace the staple finisher lower transport guide rollers or gears. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the staple finisher lower transport guide. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the staple finisher transport rollers, gears, and belt for wear, damage, and obstruction. Are the staple finisher transport rollers, gears, and belt free of wear, damage, and obstruction?	Go to step 13.	Go to step 12.
Step 12 Replace the staple finisher transport rollers, gears, or belt. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the staple finisher stapler transport. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher outer staging path bottom) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher transport). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (staple finisher transport) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher transport). Did the motor run?	Go to step 8.	Go to step 7.

Action	Yes	No
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher lower transport guide rollers and gears for wear, damage, and obstruction. Are the staple finisher lower transport guide rollers and gears free of wear, damage, and obstruction?	Go to step 10.	Go to step 9.
Step 9 Replace the staple finisher lower transport guide rollers or gears. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the staple finisher lower transport guide. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the staple finisher upper ejector unit rollers and gears for wear, damage, and obstruction. Are the staple finisher upper ejector unit rollers and gears free of wear, damage, and obstruction?	Go to step 13.	Go to step 12.
Step 12 Replace the staple finisher upper ejector unit rollers and gears. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the staple finisher upper ejector unit. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher stack height) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher stacker height). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (staple finisher stacker bin) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher stacker bin). Did the motor run?	Go to step 8.	Go to step 7.

Action	Yes	No
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher lift shaft unit for proper installation. Is the staple finisher lift shaft unit properly installed?	Go to step 10.	Go to step 9.
Step 9 Reseat the staple finisher lift shaft unit. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the staple finisher lift shaft unit for damage. **b** Check the staple finisher lift shaft unit gears and rollers for wear or damage. Are the staple finisher lift shaft unit and its gears and rollers free of wear or damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher lift shaft unit. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 13.
Step 13 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher elevator beam) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher stack height). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (staple finisher stacker bin) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher stacker bin). Did the motor run?	Go to step 8.	Go to step 7.

Action	Yes	No
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher lift shaft unit for proper installation. Is the staple finisher lift shaft unit properly installed?	Go to step 10.	Go to step 9.
Step 9 Reseat the staple finisher lift shaft unit. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the staple finisher lift shaft unit for damage. **b** Check the staple finisher lift shaft unit gears and rollers for wear or damage. Are the staple finisher lift shaft unit and its gears and rollers free of wear or damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher lift shaft unit. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 13.
Step 13 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher elevator beam) failure 2 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the motor (staple finisher stacker bin) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 3.	Go to step 4.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher stacker bin). Did the motor run?	Go to step 5.	Go to step 4.
Step 4 Replace the motor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (stack height). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 8.	Go to step 7.

Action	Yes	No
Step 7 Replace the sensor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher lift shaft unit for proper installation. Is the staple finisher lift shaft unit properly installed?	Go to step 10.	Go to step 9.
Step 9 Reseat the staple finisher lift shaft unit. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the staple finisher lift shaft unit for damage. **b** Check the staple finisher lift shaft unit gears and rollers for wear or damage. Are the staple finisher lift shaft unit and its gears and rollers free of wear or damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher lift shaft unit. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 13.
Step 13 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher stapler head) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher unit carriage position). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (staple finisher unit carriage position) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher unit carriage position). Did the motor run?	Go to step 8.	Go to step 7.

Action	Yes	No
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher stapler head for proper installation. Is the staple finisher stapler head properly installed?	Go to step 10.	Go to step 9.
Step 9 Reseat the staple finisher stapler head. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the staple finisher stapler head for damage. **b** Make sure that the staple finisher stapler head cable is properly connected. Is the staple finisher stapler head free of wear or damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher stapler head. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the staple finisher drive unit for proper installation. Is the staple finisher drive unit properly installed?	Go to step 14.	Go to step 13.
Step 13 Reseat the staple finisher drive unit. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher drive unit for damage. **b** Check the staple finisher drive unit gears for wear or damage. Are the staple finisher drive unit and its gears free of wear or damage?	Go to step 16.	Go to step 15.
Step 15 Replace the staple finisher drive unit. Does the problem remain?	Go to step 16.	The problem is solved.

Action	Yes	No
Step 16 **a** Reseat the staple finisher stapler cable. **b** Check the staple finisher stapler cable for damage. Is the staple finisher stapler cable free of damage?	Go to step 18.	Go to step 17.
Step 17 Replace the staple finisher stapler cable. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 19.
Step 19 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher stapler head) failure 2 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher unit carriage position). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.

Action	Yes	No
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (staple finisher unit carriage position) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the motor (staple finisher unit carriage position). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple head for proper installation. Is the staple finisher stapler head properly installed?	Go to step 10.	Go to step 9.
Step 9 Reseat the staple finisher stapler head. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the staple finisher stapler head for damage. **b** Make sure that the staple finisher stapler head cable is properly connected. Is the staple finisher stapler head free of wear or damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher stapler head. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Check the staple finisher drive unit for proper installation. Is the staple finisher drive unit properly installed?	Go to step 14.	Go to step 13.
Step 13 Reseat the staple finisher drive unit. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher drive unit for damage. **b** Check the staple finisher drive unit gears for wear or damage. Are the staple finisher drive unit and its gears free of wear or damage?	Go to step 16.	Go to step 15.
Step 15 Replace the staple finisher drive unit. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Make sure that the staple finisher position bracket cables are properly connected. **b** Check the staple finisher position bracket for damage, wear, and obstruction. Is the staple finisher position bracket free of damage, wear, and obstruction?	Go to step 18.	Go to step 17.
Step 17 Replace the staple finisher position bracket. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Reseat the staple finisher stapler cable. **b** Check the staple finisher stapler cable for damage. Is the staple finisher stapler cable free of damage?	Go to step 20.	Go to step 19.
Step 19 Replace the staple finisher stapler cable. Does the problem remain?	Go to step 20.	The problem is solved.

Action	Yes	No
Step 20 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 21.
Step 21 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher output option 1 position) failure 1 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher transport). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the motor (staple finisher transport) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher transport). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher lower transport guide rollers and gears for wear, damage, and obstruction. Are the staple finisher lower transport guide rollers and gears free of wear, damage, and obstruction?	Go to step 10.	Go to step 9.
Step 9 Replace the staple finisher lower transport guide rollers or gears. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the staple finisher lower transport guide. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the staple finisher upper ejector unit rollers and gears for wear, damage, and obstruction. Are the staple finisher upper ejector unit rollers and gears free of wear, damage, and obstruction?	Go to step 13.	Go to step 12.
Step 12 Replace the staple finisher upper ejector unit rollers and gears. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the staple finisher upper ejector unit. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher output option 1 position) failure 2 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher feed). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the motor (staple finisher transport) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher transport). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher lower transport guide rollers and gears for wear, damage, and obstruction. Are the staple finisher lower transport guide rollers and gears free of wear, damage, and obstruction?	Go to step 10.	Go to step 9.
Step 9 Replace the staple finisher lower transport guide rollers or gears. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the staple finisher lower transport guide. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the staple finisher transport rollers, gears, and belt for wear, damage, and obstruction. Are the staple finisher transport rollers, gears, and belt free of wear, damage, and obstruction?	Go to step 13.	Go to step 12.
Step 12 Replace the staple finisher transport rollers, gears, or belt. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the staple finisher stapler transport. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher output option 1 position) failure 3 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher transport). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the motor (staple finisher transport) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher transport). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher lower transport guide rollers and gears for wear, damage, and obstruction. Are the staple finisher lower transport guide rollers and gears free of wear, damage, and obstruction?	Go to step 10.	Go to step 9.
Step 9 Replace the staple finisher lower transport guide rollers or gears. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the staple finisher lower transport guide. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the staple finisher upper ejector unit rollers and gears for wear, damage, and obstruction. Are the staple finisher upper ejector unit rollers and gears free of wear, damage, and obstruction?	Go to step 13.	Go to step 12.
Step 12 Replace the staple finisher upper ejector unit rollers and gears. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the staple finisher upper ejector unit. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher output option 1 position) failure 4 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher unit carriage position). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the motor (staple finisher unit carriage position) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher unit carriage position). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher stapler head for proper installation. Is the staple finisher stapler head properly installed?	Go to step 10.	Go to step 9.
Step 9 Reseat the staple finisher stapler head. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the staple finisher stapler head for damage. **b** Make sure that the staple finisher stapler head cable is properly connected. Is the staple finisher stapler head free of wear or damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher stapler head. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the staple finisher drive unit for proper installation. Is the staple finisher drive unit properly installed?	Go to step 14.	Go to step 13.
Step 13 Reseat the staple finisher drive unit. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
Step 14 **a** Check the staple finisher drive unit for damage. **b** Check the staple finisher drive unit gears for wear or damage. Are the staple finisher drive unit and its gears free of wear or damage?	Go to step 16.	Go to step 15.
Step 15 Replace the staple finisher drive unit. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Reseat the staple finisher stapler cable. **b** Check the staple finisher stapler cable for damage. Is the staple finisher stapler cable free of damage?	Go to step 18.	Go to step 17.
Step 17 Replace the staple finisher stapler cable. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 19.
Step 19 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher output option 1 position) failure 5 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the staple finisher lower ejector unit is properly installed and free of damage. **b** Check the staple finisher lower ejector unit gears and rollers for wear and damage. Are the gears and rollers properly installed and free of wear or damage?	Go to step 4.	Go to step 3.
Step 3 Replace the defective rollers or gears. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher ejector clamp/paddle). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
Step 5 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
Step 6 Replace the sensor. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher stack clamp). Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
Step 8 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the sensor. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests.** **b** Find the motor (compiler eject). Did the motor run?	Go to step 12.	Go to step 11.
Step 11 Replace the motor. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the staple finisher lower ejector unit. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 **a** Check the bin clamp clutch for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the bin clamp clutch properly installed and free of damage?	Go to step 14.	Go to step 15.
Step 14 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (bin clamp clutch). Did the motor run?	Go to step 16.	Go to step 15.

Action	Yes	No
Step 15 Replace the bin clamp clutch. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 17.
Step 17 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher output option 1 position) failure 6 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the staple finisher transport rollers, gears, and belt for wear, damage, and obstruction. Are the staple finisher transport rollers, gears, and belt free of wear, damage, and obstruction?	Go to step 4.	Go to step 3.
Step 3 Replace the staple finisher transport rollers, gears, or belt. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Replace the staple finisher stapler transport. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher feed). Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
Step 6 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 8.	Go to step 7.
Step 7 Replace the sensor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher transport). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 9.
Step 9 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 11.	Go to step 10.
Step 10 Replace the sensor. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the motor (staple finisher transport) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 12.	Go to step 13.

Action	Yes	No
Step 12 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher transport). Did the motor run?	Go to step 14.	Go to step 13.
Step 13 Replace the motor. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher output option 1 position) failure 7 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher unit carriage position). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.

Action	Yes	No
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (staple finisher unit carriage position) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher unit carriage position). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher stapler head for proper installation. Is the staple finisher stapler head properly installed?	Go to step 10.	Go to step 9.
Step 9 Reseat the staple finisher stapler head. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Check the staple finisher stapler head for damage. **b** Make sure that the staple finisher head cable is properly connected. Is the staple finisher stapler head free of wear or damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher stapler head. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Check the staple finisher drive unit for proper installation. Is the staple finisher drive unit properly installed?	Go to step 14.	Go to step 13.
Step 13 Reseat the staple finisher drive unit. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher drive unit for damage. **b** Check the staple finisher drive unit gears for wear or damage. Are the staple finisher drive unit and its gears free of wear or damage?	Go to step 16.	Go to step 15.
Step 15 Replace the staple finisher drive unit. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Make sure that the staple finisher position bracket cables are properly connected. **b** Check the staple finisher position bracket for damage, wear, and obstruction. Is the staple finisher position bracket free of damage, wear, and obstruction?	Go to step 18.	Go to step 17.
Step 17 Replace the staple finisher position bracket. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 **a** Reseat the staple finisher stapler cable. **b** Check the staple finisher stapler cable for damage. Is the staple finisher stapler cable free of damage?	Go to step 20.	Go to step 19.
Step 19 Replace the staple finisher stapler cable. Does the problem remain?	Go to step 20.	The problem is solved.

Action	Yes	No
Step 20 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 21.
Step 21 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher output option 1 position) failure 8 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher rear tamper home). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the motor (compiler rear tamper) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (compiler rear tamper). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Reseat the staple finisher tamper sensor cable. **b** Check the staple finisher tamper sensor cable for damage. Is the staple finisher tamper sensor cable free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the staple finisher tamper sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Reseat the staple finisher tamper cable. **b** Check the staple finisher tamper cable for damage. Is the staple finisher tamper cable free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher tamper cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check if the staple finisher compiler tray front and rear tamper guides are movable. **b** Check the staple finisher compiler tray gears for wear and damage. Are the staple finisher compiler tray tamper guides movable, and the gears free of wear and damage?	Go to step 14.	Go to step 13.

Action	Yes	No
Step 13 Replace the staple finisher compiler tray. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher output option 1 position) failure 9 service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher front tamper home). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (compiler front tamper) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (compiler front tamper). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Reseat the staple finisher tamper sensor cable. **b** Check the staple finisher tamper sensor cable for damage. Is the staple finisher tamper sensor cable free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the staple finisher tamper sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Reseat the staple finisher tamper cable. **b** Check the staple finisher tamper cable for damage. Is the staple finisher tamper cable free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher tamper cable. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 **a** Check if the staple finisher compiler tray front and rear tamper guides are movable. **b** Check the staple finisher compiler tray gears for wear and damage. Are the staple finisher compiler tray tamper guides movable, and the gears free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Replace the staple finisher compiler tray. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher stapler transport) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher unit carriage position). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (staple finisher unit carriage position) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (staple finisher unit carriage position). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the staple finisher stapler head for proper installation. Is the staple finisher stapler head properly installed?	Go to step 10.	Go to step 9.
Step 9 Reseat the staple finisher stapler head. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 **a** Check the staple finisher stapler head for damage. **b** Make sure that the staple finisher head cable is properly connected. Is the staple finisher stapler head free of wear or damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher stapler head. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the staple finisher drive unit for proper installation. Is the staple finisher drive unit properly installed?	Go to step 14.	Go to step 13.
Step 13 Reseat the staple finisher drive unit. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher drive unit for damage. **b** Check the staple finisher drive unit gears for wear or damage. Are the staple finisher drive unit and its gears free of wear or damage?	Go to step 16.	Go to step 15.
Step 15 Replace the staple finisher drive unit. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Make sure that the staple finisher position bracket cables are properly connected. **b** Check the staple finisher position bracket for damage, wear, and obstruction. Is the staple finisher position bracket free of damage, wear, and obstruction?	Go to step 18.	Go to step 17.
Step 17 Replace the staple finisher position bracket. Does the problem remain?	Go to step 18.	The problem is solved.

Action	Yes	No
Step 18 **a** Reseat the staple finisher stapler cable. **b** Check the staple finisher stapler cable for damage. Is the staple finisher stapler cable free of damage?	Go to step 20.	Go to step 19.
Step 19 Replace the staple finisher stapler cable. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 21.
Step 21 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher tamper front) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher front tamper home). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.

Action	Yes	No
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (compiler front tamper) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (compiler front tamper). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Reseat the staple finisher tamper sensor cable. **b** Check the staple finisher tamper sensor cable for damage. Is the staple finisher tamper sensor cable free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the staple finisher tamper sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Reseat the staple finisher tamper cable. **b** Check the staple finisher tamper cable for damage. Is the staple finisher tamper cable free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher tamper cable. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 **a** Check if the staple finisher compiler tray front and rear tamper guides are movable. **b** Check the staple finisher compiler tray gears for wear and damage. Are the staple finisher compiler tray tamper guides movable, and the gears free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Replace the staple finisher compiler tray. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (staple finisher tamper rear) failure service check

Action	Yes	No
Step 1 **a** Open the left door, and then remove the jammed paper. **b** Open the upper left door, and then remove the jammed paper. **c** Remove the tray insert, and then remove the jammed paper. **d** Remove the jammed paper in the staple finisher bin. **e** Make sure that the staple finisher paper path is free from obstructions. **f** Make sure that the fuser area is free from obstructions. **g** Open the finisher front door, and then turn the knob to remove any jammed paper. Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests**. **b** Find the sensor (staple finisher rear tamper home). Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Check the sensor for proper installation and damage. **b** Make sure that the sensor cable is properly connected and free of damage. Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the sensor. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the motor (compiler rear tamper) for proper installation and damage. Is the motor properly installed and free of damage?	Go to step 6.	Go to step 7.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Find the motor (compiler rear tamper). Did the motor run?	Go to step 8.	Go to step 7.
Step 7 Replace the motor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 **a** Reseat the staple finisher tamper sensor cable. **b** Check the staple finisher tamper sensor cable for damage. Is the staple finisher tamper sensor cable free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the staple finisher tamper sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 **a** Reseat the staple finisher tamper cable. **b** Check the staple finisher tamper cable for damage. Is the staple finisher tamper cable free of damage?	Go to step 12.	Go to step 11.
Step 11 Replace the staple finisher tamper cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Check if the staple finisher compiler tray front and rear tamper guides are movable. **b** Check the staple finisher compiler tray gears for wear and damage. Are the staple finisher compiler tray tamper guides movable, and the gears free of wear and damage?	Go to step 14.	Go to step 13.
Step 13 Replace the staple finisher compiler tray. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the staple finisher controller board for proper installation and damage. **b** Reseat all the connectors on the controller board. Is the staple finisher controller board properly installed and free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the staple finisher controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

4yy paper jams (SHPF)

4yy paper jam messages (SHPF)

Error code	Description	Action
400.13	Paper arrived at the sensor (HPT transport) too late.	See **"Sensor (HTU transport) late-arriving or -leaving jam service check" on page 198**.
420.11	Paper remains detected at the sensor (SHPF finisher paper path).	See **"Sensor (SHPF paper path) static jam service check" on page 232**.

Error code	Description	Action
420.13	The paper arrives at the sensor (SHPF feed) too late or never arrives.	See **“Sensor (SHPF feed) late- or never-arriving jam service check” on page 202**.
420.15	The paper does not clear the sensor (pass-through) in time.	See **“Sensor (SHPF transport) late-arriving or -leaving jam service check” on page 206**.
420.54	The sensor (compile exit) is not turned off by a sheet fed within the set time.	
421.13	The sensor (front tamper home) is not covered in time.	See **“Sensor (SHPF compiler front tamper) never-arriving or -leaving jam service check” on page 216**.
421.15	The sensor (front tamper home) is not uncovered in time.	
422.13	The sensor (rear tamper home) is not covered in time.	See **“Sensor (SHPF compiler rear tamper) never-arriving or -leaving jam service check” on page 218**.
422.15	The sensor (rear tamper home) is not uncovered in time.	
423.13	The quick exit or ejector failed to reach the sensor (home).	See **“Sensor (SHPF ejector clamp/paddle) failure service check” on page 233**.
423.15	The quick exit or ejector failed to leave the sensor (home).	
425.13a	The paper does not clear the sensor (SHPF compile paper present) in time.	See **“Sensor (SHPF compiler paper present) never-arriving jam service check” on page 212**.
428.13	The stapler head failed to reach the home position.	See **“Sensor (SHPF staple unit carriage position) failure service check” on page 229**.
428.15	The stapler head failed to leave the home position.	
430.19	The stapler head failed to prime.	See **“SHPF staple unit failure service check” on page 235**.
431.13	The sensor (stapler elevator beam) is not blocked in time.	See **“Motor (SHPF stacker bin) failure service check” on page 220**.
431.15	The sensor (stapler elevator beam) is not unblocked in time.	See **“Sensor (SHPF stack height) failure service check” on page 236**.
440.19	Finisher out of specification jam.	See **“Sensor (SHPF transport) out of range speed jam service check” on page 209**.
450.23	The paper arrives at the sensor (MTU entry) too late or never arrives.	See **“Sensor (SHPF feed) late- or never-arriving jam service check” on page 202**.
450.33	The paper arrives at the sensor (MTU entry) too late or never arrives (with trifold/Z-fold finisher).	
450.91	Paper remains detected at the sensor (SHPF finisher paper path).	See **“Sensor (SHPF paper path) static jam service check” on page 232**.

Error code	Description	Action
454.23	Sensor (outer staging path bottom): The paper arrived too late.	See **"Sensor (SHPF transport) late-arriving or -leaving jam service check" on page 206**.
454.25	Sensor (outer staging path bottom): The paper does not clear the sensor in time.	
454.33	Sensor (outer staging path bottom): The paper arrived too late (with trifold/Z-fold finisher).	
457.25	Sensor (accumulator): The paper does not clear the sensor in time.	See **"Sensor (SHPF compiler paper present) never-arriving jam service check" on page 212**.
457.35	Sensor (accumulator): The paper does not clear the sensor in time (with trifold/Z-fold finisher).	
461.90	The sensor (inline stack height) failed to detect an off status three times consecutively within the set time.	See **"Sensor (SHPF stack height) failure service check" on page 236**.
465.23	The exit roller cam failed to reach the home position.	See **"Sensor (SHPF ejector clamp/paddle) failure service check" on page 233**.
465.25	The exit roller cam failed to leave the home position.	
468.23	The front tamper failed to reach the home position.	See **"Sensor (SHPF compiler front tamper) never-arriving or -leaving jam service check" on page 216**.
468.25	The front tamper failed to leave the home position.	
468.33	The front tamper failed to reach the home position (with trifold/Z-fold finisher).	
468.35	The front tamper failed to leave the home position (with trifold/Z-fold finisher).	
469.23	The rear tamper failed to reach the home position.	See **"Sensor (SHPF compiler rear tamper) never-arriving or -leaving jam service check" on page 218**.
469.25	The rear tamper failed to leave the home position.	
469.33	The rear tamper failed to reach the home position (with trifold/Z-fold finisher).	
469.35	The rear tamper failed to leave the home position (with trifold/Z-fold finisher).	
477.64	The stapler bin elevator motor was unable to adjust the height within the set time.	See **"Sensor (SHPF stack height) failure service check" on page 236**.
479.25	The sensor (SHPF stacker bin) detected a level lower than the set limit.	See **"Motor (SHPF stacker bin) failure service check" on page 220**.
479.35		
480.23	The stapler head failed to reach the home position.	See **"Sensor (SHPF staple unit carriage position) failure service check" on page 229**.
480.25	The stapler head failed to leave the home position.	

Error code	Description	Action
481.25	The staple stacker failed.	See **"Sensor (SHPF staple unit carriage position) failure service check" on page 229**.
481.29	The stapler head failed to prime.	See **"SHPF staple unit failure service check" on page 235**.
481.39	The stapler head failed to prime (with trifold/Z-fold finisher).	See **"SHPF staple unit failure service check" on page 235**.
484.23	The stapler transport failed to reach the home position.	See **"Sensor (SHPF staple unit carriage position) failure service check" on page 229**.
484.25	The stapler transport failed to leave the home position.	
484.33	The stapler transport failed to reach the home position (with trifold/Z-fold finisher).	
484.35	The stapler transport failed to leave the home position (with trifold/Z-fold finisher).	

Sensor (HTU transport) late-arriving or -leaving jam service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove, and then load a supported paper into the tray. For more information on loading paper, see **"Avoiding jams" on page 92**. For more information on supported paper, see **"Selecting paper" on page 27**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Change the settings to match the size, type, and weight of the paper loaded. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform a print test on paper from a fresh package. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path for paper fragments and partially fed paper. Is the paper path free of paper fragments and partially fed paper?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 Remove the paper fragments and partially fed paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if the HTU is properly installed. Is the HTU properly installed?	Go to step 8.	Go to step 9.
Step 8 Check if the HTU is free of damage. Is the HTU free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the HTU. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (HTU transport)**. Does the motor run?	Go to step 14.	Go to step 11.
Step 11 Check the motor (HTU transport) and its cable for the following: • improper connection/installation • damage Is the motor (HTU transport) free of the previous items?	Go to step 14.	Go to step 12.
Step 12 Reconnect or replace the HTU transport motor cable. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Reinstall or replace the motor (HTU transport). See **"Horizontal transport motor assembly removal" on page 560**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check if the HTU transport is free of damage and separation. Is the HTU transport free of damage and separation?	Go to step 16.	Go to step 15.

Action	Yes	No
Step 15 Replace the HTU transport. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (HTU transport)**. **b** Find the sensor (HTU transport). Does the sensor status change while toggling the sensor?	Go to step 21.	Go to step 17.
Step 17 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the sensor (HTU transport) and its cable for the following: • improper connection/installation • damage Is the sensor (HTU transport) free of the previous items?	Go to step 21.	Go to step 19.
Step 19 Reconnect or replace the HTU transport sensor cable. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Reinstall or replace the sensor (HTU transport). Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Check the SHPF top door, SHPF top door actuator, and SHPF top door hinge for the following: • improper installation • damage Are the parts free of the previous items?	Go to step 23.	Go to step 22.
Step 22 Reinstall or replace the SHPF top door. See **"Finisher top cover assembly removal" on page 531**. Does the problem remain?	Go to step 23.	The problem is solved.

Action	Yes	No
Step 23 Check the SHPF transport roller for the following: • pick failure • wear • damage • revolution failure Is the SHPF transport roller free of the previous items?	Go to step 25.	Go to step 24.
Step 24 Reinstall or replace the SHPF transport roller. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 27.	Go to step 26.
Step 26 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 28.
Step 28 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF feed) late- or never-arriving jam service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove, and then load a supported paper into the tray. For more information on loading paper, see **"Avoiding jams" on page 92**. For more information on supported paper, see **"Selecting paper" on page 27**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Change the settings to match the size, type, and weight of the paper loaded. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform a print test on paper from a fresh package. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path for paper fragments and partially fed paper. Is the paper path free of paper fragments and partially fed paper?	Go to step 7.	Go to step 6.
Step 6 Remove the paper fragments and partially fed paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if the HTU is properly installed. Is the HTU properly installed?	Go to step 8.	Go to step 9.
Step 8 Check if the HTU is free of damage. Is the HTU free of damage?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the HTU. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 Check the HTU docking bracket for the following: • improper connection/installation • damage Is the HTU docking bracket free of the previous items?	Go to step 12.	Go to step 11.
Step 11 Reinstall or replace the HTU docking bracket. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (HTU transport)**. Does the motor run?	Go to step 16.	Go to step 13.
Step 13 Check the motor (HTU transport) and its cable for the following: • improper connection/installation • damage Is the motor (HTU transport) free of the previous items?	Go to step 16.	Go to step 14.
Step 14 Reconnect or replace the HTU transport motor cable. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Reinstall or replace the motor (HTU transport). See **"Horizontal transport motor assembly removal" on page 560**. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF feed)**. **b** Find the sensor (SHPF feed). Does the sensor status change while toggling the sensor?	Go to step 21.	Go to step 17.
Step 17 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 18.	The problem is solved.

Action	Yes	No
Step 18 Check the sensor (SHPF feed) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF feed) free of the previous items?	Go to step 21.	Go to step 19.
Step 19 Reconnect or replace the SHPF feed sensor cable. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Reinstall or replace the sensor (SHPF feed). Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Check the SHPF transport roller for the following: • pick failure • wear • damage • revolution failure Is the SHPF transport roller free of the previous items?	Go to step 23.	Go to step 22.
Step 22 Reinstall or replace the SHPF transport roller. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Check the SHPF top door, SHPF top door actuator, SHPF top door hinge for the following: • improper installation • damage Are the parts free of the previous items?	Go to step 25.	Go to step 24.
Step 24 Reinstall or replace the SHPF top door. See **"Finisher top cover assembly removal" on page 531**. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Check if the HTU transport is free of damage and separation. Is the HTU transport free of damage and separation?	Go to step 27.	Go to step 26.

Action	Yes	No
Step 26 Replace the HTU transport. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Check the hole punch unit (2/4 hole) for the following: • improper installation • damage • separation Is the hole punch unit (2/4 hole) free of the previous items?	Go to step 29.	Go to step 28.
Step 28 Reinstall or replace the hole punch unit (2/4 hole). Does the problem remain?	Go to step 29.	The problem is solved.
Step 29 Check the hole punch unit (2/3 hole) for the following: • improper installation • damage • separation Is the hole punch unit (2/3 hole) free of the previous items?	Go to step 31.	Go to step 30.
Step 30 Reinstall or replace the hole punch unit (2/3 hole). Does the problem remain?	Go to step 31.	The problem is solved.
Step 31 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 33.	Go to step 32.
Step 32 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 33.	The problem is solved.
Step 33 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 34.

Action	Yes	No
Step 34 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF transport) late-arriving or -leaving jam service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove, and then load a supported paper into the tray. For more information on loading paper, see **"Avoiding jams" on page 92**. For more information on supported paper, see **"Selecting paper" on page 27**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Change the settings to match the size, type, and weight of the paper loaded. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform a print test on paper from a fresh package. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path for paper fragments and partially fed paper. Is the paper path free of paper fragments and partially fed paper?	Go to step 7.	Go to step 6.
Step 6 Remove the paper fragments and partially fed paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (HTU transport)**. Does the motor run?	Go to step 11.	Go to step 8.

Action	Yes	No
Step 8 Check the motor (HTU transport) and its cable for the following: • improper connection/installation • damage Is the motor (HTU transport) free of the previous items?	Go to step 11.	Go to step 9.
Step 9 Reconnect or replace the HTU transport motor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reinstall or replace the motor (HTU transport). See **"Horizontal transport motor assembly removal" on page 560**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (SHPF transport)**. Does the motor run?	Go to step 15.	Go to step 12.
Step 12 Check the motor (SHPF transport) and its cable for the following: • improper connection/installation • damage Is the motor (SHPF transport) free of the previous items?	Go to step 15.	Go to step 13.
Step 13 Reconnect or replace the SHPF transport motor cable. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Reinstall or replace the motor (SHPF transport). See **"Finisher transport motor removal" on page 544**. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF transport)**. **b** Find the sensor (SHPF transport). Does the sensor status change while toggling the sensor?	Go to step 20.	Go to step 16.

Action	Yes	No
Step 16 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Check the sensor (SHPF transport) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF transport) free of the previous items?	Go to step 20.	Go to step 18.
Step 18 Reconnect or replace the SHPF transport sensor cable. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Reinstall or replace the sensor (SHPF transport). Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Check the SHPF transport roller for the following: • pick failure • wear • damage • revolution failure Is the SHPF transport roller free of the previous items?	Go to step 22.	Go to step 21.
Step 21 Reinstall or replace the SHPF transport roller. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Check the SHPF feed roller for the following: • pick failure • wear • damage • revolution failure Is the SHPF feed roller free of the previous items?	Go to step 24.	Go to step 23.
Step 23 Reinstall or replace the SHPF feed roller. Does the problem remain?	Go to step 24.	The problem is solved.

Action	Yes	No
Step 24 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 26.	Go to step 25.
Step 25 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 26.	The problem is solved.
Step 26 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 27.
Step 27 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF transport) out of range speed jam 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** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (SHPF transport)**. Does the motor run?	Go to step 6.	Go to step 3.
Step 3 Check the motor (SHPF transport) and its cable for the following: • improper connection/installation • damage Is the motor (SHPF transport) free of the previous items?	Go to step 6.	Go to step 4.
Step 4 Reconnect or replace the SHPF transport motor cable. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Reinstall or replace the motor (SHPF transport). See **"Finisher transport motor removal" on page 544**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF feed)**. **b** Find the sensor (SHPF feed). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 7.
Step 7 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the sensor (SHPF feed) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF feed) free of the previous items?	Go to step 11.	Go to step 9.
Step 9 Reconnect or replace the SHPF feed sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reinstall or replace the sensor (SHPF feed). Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF transport)**. **b** Find the sensor (SHPF transport). Does the sensor status change while toggling the sensor?	Go to step 16.	Go to step 12.
Step 12 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 13.	The problem is solved.

Action	Yes	No
Step 13 Check the sensor (SHPF transport) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF transport) free of the previous items?	Go to step 16.	Go to step 14.
Step 14 Reconnect or replace the SHPF transport sensor cable. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Reinstall or replace the sensor (SHPF transport). Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the SHPF transport roller for the following: • pick failure • wear • damage • revolution failure Is the SHPF transport roller free of the previous items?	Go to step 18.	Go to step 17.
Step 17 Reinstall or replace the SHPF transport roller. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 20.	Go to step 19.
Step 19 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 21.

Action	Yes	No
Step 21 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF compiler paper present) never-arriving jam 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** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (SHPF compiler eject)**. Does the motor run?	Go to step 6.	Go to step 3.
Step 3 Check the motor (SHPF compiler eject) and its cable for the following: • improper connection/installation • damage Is the motor (SHPF compiler eject) free of the previous items?	Go to step 4.	Go to step 6.
Step 4 Reconnect or replace the SHPF compiler eject motor cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reinstall or replace the motor (SHPF compiler eject). Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF compiler paper present)**. **b** Find the sensor (SHPF compiler paper present). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 7.

Action	Yes	No
Step 7 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the sensor (SHPF compiler paper present) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF compiler paper present) free of the previous items?	Go to step 11.	Go to step 9.
Step 9 Reconnect or replace the SHPF compiler paper present sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reinstall or replace the sensor (SHPF compiler paper present). Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF ejector clamp/paddle)**. **b** Find the sensor (SHPF ejector clamp/paddle). Does the sensor status change while toggling the sensor?	Go to step 16.	Go to step 12.
Step 12 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check the sensor (SHPF ejector clamp/paddle) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF ejector clamp/paddle) free of the previous items?	Go to step 16.	Go to step 14.

Action	Yes	No
Step 14 Reconnect or replace the SHPF ejector clamp/paddle sensor cable. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Reinstall or replace the sensor (SHPF ejector clamp/paddle). Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF stack clamp)**. **b** Find the sensor (SHPF stack clamp). Does the sensor status change while toggling the sensor?	Go to step 21.	Go to step 17.
Step 17 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the sensor (SHPF stack clamp) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF stack clamp) free of the previous items?	Go to step 21.	Go to step 19.
Step 19 Reconnect or replace the SHPF stack clamp sensor cable. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Reinstall or replace the sensor (SHPF stack clamp). Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Check the drive gearbox section properly operates. Does the drive gearbox section properly operate?	Go to step 24.	Go to step 22.

Action	Yes	No
Step 22 Check the SHPF compiler eject gearbox connection on the SHPF controller board for the following: • open circuit • short circuit • improper connection Is the connection free from the previous items?	Go to step 24.	Go to step 23.
Step 23 Reinstall or replace the SHPF compiler gear box. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 26.	Go to step 25.
Step 25 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 26.	The problem is solved.
Step 26 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 27.
Step 27 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF compiler front tamper) never-arriving or -leaving jam 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** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (SHPF compiler front tamper)**. Does the motor run?	Go to step 6.	Go to step 3.
Step 3 Check the motor (SHPF compiler front tamper) and its cable for the following: • improper connection/installation • damage Is the motor free of the previous items?	Go to step 4.	Go to step 6.
Step 4 Reconnect or replace the SHPF compiler front tamper motor cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reinstall or replace the motor (SHPF compiler front tamper). Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF front tamper)**. **b** Find the sensor (SHPF front tamper). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 7.
Step 7 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the sensor (SHPF front tamper) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF front tamper) free of the previous items?	Go to step 11.	Go to step 9.
Step 9 Reconnect or replace the SHPF front tamper sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reinstall or replace the sensor (SHPF front tamper). Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check if the SHPF compiler front tamper slide section for deformity. Is the slide section deformed?	Go to step 12.	Go to step 13.
Step 12 Replace the SHPF compiler front tamper. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 15.	Go to step 14.
Step 14 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 16.
Step 16 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF compiler rear tamper) never-arriving or -leaving jam 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** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (SHPF compiler rear tamper)**. Does the motor run?	Go to step 6.	Go to step 3.
Step 3 Check the motor (SHPF compiler rear tamper) and its cable for the following: • improper connection/installation • damage Is the motor free of the previous items?	Go to step 4.	Go to step 6.
Step 4 Reconnect or replace the SHPF compiler rear tamper motor cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reinstall or replace the motor (SHPF compiler rear tamper). Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF rear tamper)**. **b** Find the sensor (SHPF rear tamper). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 7.
Step 7 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the sensor (SHPF rear tamper) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF rear tamper) free of the previous items?	Go to step 11.	Go to step 9.
Step 9 Reconnect or replace the SHPF rear tamper sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reinstall or replace the sensor (SHPF rear tamper). Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check if the SHPF compiler rear tamper slide section for deformity. Is the slide section deformed?	Go to step 12.	Go to step 13.
Step 12 Replace the SHPF compiler rear tamper. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 15.	Go to step 14.
Step 14 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 16.
Step 16 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (SHPF stacker bin) failure 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** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (SHPF stacker bin)**. Does the motor run?	Go to step 6.	Go to step 4.
Step 3 Check the motor (SHPF stacker bin) and its cable for the following: • improper connection/installation • damage Is the motor (SHPF stacker bin) free of the previous items?	Go to step 6.	Go to step 4.
Step 4 Reconnect or replace the SHPF stacker bin motor cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reinstall or replace the motor (SHPF stacker bin). See **"Stacker motor assembly removal" on page 540**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF stack height)**. **b** Find the sensor (SHPF stack height). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 7.
Step 7 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Check the sensor (SHPF stack height) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF stack height) free of the previous items?	Go to step 11.	Go to step 9.
Step 9 Reconnect or replace the SHPF stack height sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reinstall or replace the sensor (SHPF stack height). Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the drive gearbox section properly operates. Does the drive gearbox section properly operate?	Go to step 14.	Go to step 12.
Step 12 Check the SHPF compiler eject gearbox connection on the SHPF controller board for the following: • open circuit • short circuit • improper connection Is the connection free from the previous items?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the SHPF compiler gear box. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Remove paper in the SHPF bin. **b** Check the bin for paper fragments and debris. Is the bin free of paper fragments and debris?	Go to step 16.	Go to step 15.
Step 15 Remove the paper fragments and debris in the bin. Does the problem remain?	Go to step 16.	The problem is solved.

Action	Yes	No
Step 16 Check the SHPF bin paper path for any paper fragment and debris. Is the bin paper path free of paper fragments and debris?	Go to step 18.	Go to step 17.
Step 17 Remove the paper fragments and debris in the bin paper path. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the SHPF bin front belt for the following: • loose tension • separation Is the front belt free of the previous items?	Go to step 20.	Go to step 19.
Step 19 Reinstall or replace the SHPF bin front belt. See **"Stacker belt removal" on page 536**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Check the SHPF bin rear belt for the following: • loose tension • separation Is the rear belt free of the previous items?	Go to step 22.	Go to step 21.
Step 21 Reinstall or replace the SHPF bin rear belt. See **"Stacker belt removal" on page 536**. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Check if the SHPF stack clamp clutch properly operates. Does the stack clamp clutch properly operate?	Go to step 25.	Go to step 23.
Step 23 Check the SHPF stack clamp clutch connection on the SHPF controller board for the following: • open circuit • short circuit • improper connection Is the connection free from the previous items?	Go to step 25.	Go to step 24.

Action	Yes	No
Step 24 Reinstall or replace the SHPF stack clamp clutch. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Check if the SHPF stack clamp sensor actuator properly operates. Does the sensor actuator properly operate?	Go to step 27.	Go to step 26.
Step 26 Replace the SHPF stack clamp sensor actuator. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF stack clamp)**. **b** Find the sensor (SHPF stack clamp). Does the sensor status change while toggling the sensor?	Go to step 32.	Go to step 28.
Step 28 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 29.	The problem is solved.
Step 29 Check the sensor (SHPF stack clamp) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF stack clamp) free of the previous items?	Go to step 32.	Go to step 30.
Step 30 Reconnect or replace the SHPF stack clamp sensor cable. Does the problem remain?	Go to step 31.	The problem is solved.
Step 31 Reinstall or replace the sensor (SHPF stack clamp). Does the problem remain?	Go to step 32.	The problem is solved.
Step 32 Check if the SHPF stack clamp properly operates. Does the SHPF stack clamp properly operate?	Go to step 35.	Go to step 33.

Action	Yes	No
Step 33 Check the SHPF stack clamp for the following: • failure to revolve • failure to slide Is the SHPF stack clamp free of the previous items?	Go to step 35.	Go to step 34.
Step 34 Replace the SHPF stack clamp. Does the problem remain?	Go to step 35.	The problem is solved.
Step 35 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 37.	Go to step 36.
Step 36 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 37.	The problem is solved.
Step 37 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 38.
Step 38 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (puncher home) failure service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove, and then load a supported paper into the tray. For more information on loading paper, see **"Avoiding jams" on page 92**. For more information on supported paper, see **"Selecting paper" on page 27**. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Change the settings to match the size, type, and weight of the paper loaded. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform a print test on paper from a fresh package. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path for paper fragments and partially fed paper. Is the paper path free of paper fragments and partially fed paper?	Go to step 7.	Go to step 6.
Step 6 Remove the paper fragments and partially fed paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the hole punch unit paper path for paper fragments and partially fed paper. Is the paper path free of paper fragments and partially fed paper?	Go to step 9.	Go to step 8.
Step 8 Remove the paper fragments and partially fed paper. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the hole punch unit (2/4 hole) for the following: • improper installation • damage • separation Is the hole punch unit (2/4 hole) free of the previous items?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the hole punch unit (2/4 hole). Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Check the hole punch unit (2/3 hole) for the following: • improper installation • damage • separation Is the hole punch unit (2/3 hole) free of the previous items?	Go to step 13.	Go to step 12.
Step 12 Reinstall or replace the hole punch unit (2/3 hole). Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check if the HPU controller board for the following: • improper connection • open circuit • short circuit Is the HPU controller board free of the previous items?	Contact the next level of support.	Go to step 14.
Step 14 Reinstall or replace the HPU controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF stack clamp) failure 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** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (SHPF compiler eject)**. Does the motor run?	Go to step 6.	Go to step 3.

Action	Yes	No
Step 3 Check the motor (SHPF compiler eject) and its cable for the following: • improper connection/installation • damage Is the motor (SHPF compiler eject) free of the previous items?	Go to step 6.	Go to step 4.
Step 4 Reconnect or replace the SHPF compiler eject motor cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reinstall or replace the motor (SHPF compiler eject). Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF stack clamp)**. **b** Find the sensor (SHPF stack clamp). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 7.
Step 7 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the sensor (SHPF stack clamp) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF stack clamp) free of the previous items?	Go to step 11.	Go to step 9.
Step 9 Reconnect or replace the SHPF stack clamp sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reinstall or replace the sensor (SHPF stack clamp). Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Check if the SHPF stack clamp clutch properly operates. Does the stack clamp clutch properly operate?	Go to step 14.	Go to step 12.
Step 12 Check the SHPF stack clamp clutch connection on the SHPF controller board for the following: • open circuit • short circuit • improper connection Is the connection free from the previous items?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the SHPF stack clamp clutch. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check if the SHPF stack clamp properly operates. Does the SHPF stack clamp properly operate?	Go to step 17.	Go to step 15.
Step 15 Check the SHPF stack clamp for the following: • failure to revolve • failure to slide Is the SHPF stack clamp free of the previous items?	Go to step 17.	Go to step 16.
Step 16 Replace the SHPF stack clamp. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 19.	Go to step 18.
Step 18 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 19.	The problem is solved.

Action	Yes	No
Step 19 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 20.
Step 20 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF staple unit carriage position) failure service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove, and then load a supported paper into the tray. For more information on loading paper, see **"Avoiding jams" on page 92**. For more information on supported paper, see **"Selecting paper" on page 27**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Change the settings to match the size, type, and weight of the paper loaded. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform a print test on paper from a fresh package. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path for paper fragments and partially fed paper. Is the paper path free of paper fragments and partially fed paper?	Go to step 7.	Go to step 6.
Step 6 Remove the paper fragments and partially fed paper. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 Check if the SHPF staple unit properly operates. Does the SHPF staple unit properly operate?	Go to step 12.	Go to step 8.
Step 8 Check if the motor (SHPF staple) properly operates. Does the motor properly operate?	Go to step 12.	Go to step 9.
Step 9 Remove any debris or obstruction near the staple unit. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check the staple cartridge for the following: • improper installation • damage Is the staple cartridge free of the previous items?	Go to step 12.	Go to step 11.
Step 11 Replace the SHPF staple unit. See **"Stapler assembly removal" on page 555**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF staple unit carriage position)**. **b** Find the sensor (SHPF staple unit carriage position). Does the sensor status change while toggling the sensor?	Go to step 17.	Go to step 13.
Step 13 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check the sensor (SHPF staple unit carriage position) and its cable for the following: • improper connection/installation • damage Is the sensor free of the previous items?	Go to step 17.	Go to step 15.

Action	Yes	No
Step 15 Reconnect or replace the SHPF staple unit carriage position sensor cable. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Reinstall or replace the sensor (SHPF staple unit carriage position). Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Remove any debris or obstruction near the SHPF staple carriage rail. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the SHPF staple carriage rail for the following: • damage • deformation Is the SHPF staple carriage rail free of the previous items?	Go to step 20.	Go to step 19.
Step 19 Replace the SHPF staple carriage rail. See **"Rail assembly removal" on page 556**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 20 Check if the SHPF staple unit carriage board for the following: • improper connection • open circuit • short circuit Is the board free of the previous items?	Go to step 22.	Go to step 21.
Step 21 Reinstall or replace the SHPF staple unit carriage board. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 24.	Go to step 23.

Action	Yes	No
Step 23 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 24.	The problem is solved.
Step 24 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 25.
Step 25 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF paper path) static jam service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the paper path for paper fragments and partially fed paper. Is the paper path free of paper fragments and partially fed paper?	Go to step 4.	Go to step 3.
Step 3 Remove the paper fragments and partially fed paper. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 6.	Go to step 5.
Step 5 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 7.

Action	Yes	No
Step 7 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF ejector clamp/paddle) failure 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** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF ejector clamp/paddle)**. **b** Find the sensor (SHPF ejector clamp/paddle). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the sensor (SHPF ejector clamp/paddle) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF ejector clamp/paddle) free of the previous items?	Go to step 7.	Go to step 5.
Step 5 Reconnect or replace the SHPF ejector clamp/paddle sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (SHPF ejector clamp/paddle). Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 Check the drive gearbox section properly operates. Does the drive gearbox section properly operate?	Go to step 10.	Go to step 8.
Step 8 Check the SHPF compiler eject gearbox connection on the SHPF controller board for the following: • open circuit • short circuit • improper connection Is the connection free from the previous items?	Go to step 10.	Go to step 9.
Step 9 Reinstall or replace the SHPF compiler gear box. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Check if the eject pinch cam and paddle cam for fail to slide. Do the cams fail to slide?	Go to step 12.	Go to step 11.
Step 11 Replace the SHPF eject clamp/paddle. See **"Eject chute assembly removal" on page 545**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 14.	Go to step 13.
Step 13 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 15.
Step 15 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

SHPF staple unit failure service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the SHPF staple unit properly operates. Does the SHPF staple unit properly operate?	Go to step 7.	Go to step 3.
Step 3 Check if the motor (SHPF staple) properly operates. Does the motor properly operate?	Go to step 7.	Go to step 4.
Step 4 Remove any debris or obstruction near the staple unit. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the staple cartridge for the following: • improper installation • damage Is the staple cartridge free of the previous items?	Go to step 7.	Go to step 6.
Step 6 Replace the SHPF staple unit. See **"Stapler assembly removal" on page 555**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if the SHPF staple unit carriage board for the following: • improper connection • open circuit • short circuit Is the board free of the previous items?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the SHPF staple unit carriage board. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 11.	Go to step 10.
Step 10 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 12.
Step 12 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF stack height) failure service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the SHPF bin front belt for the following: • loose tension • separation Is the front belt free of the previous items?	Go to step 4.	Go to step 3.
Step 3 Reinstall or replace the SHPF bin front belt. See **"Stacker belt removal" on page 536**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the SHPF bin rear belt for the following: • loose tension • separation Is the rear belt free of the previous items?	Go to step 6.	Go to step 5.

Action	Yes	No
Step 5 Reinstall or replace the SHPF bin rear belt. See **"Stacker belt removal" on page 536**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (SHPF stacker bin)**. Does the motor run?	Go to step 10.	Go to step 8.
Step 7 Check the motor (SHPF stacker bin) and its cable for the following: • improper connection/installation • damage Is the motor (SHPF stacker bin) free of the previous items?	Go to step 10.	Go to step 8.
Step 8 Reconnect or replace the SHPF stacker bin motor cable. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Reinstall or replace the motor (SHPF stacker bin). See **"Stacker motor assembly removal" on page 540**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Remove paper in the SHPF bin. **b** Check the bin for paper fragments and debris. Is the bin free of paper fragments and debris?	Go to step 12.	Go to step 11.
Step 11 Remove the paper fragments and debris in the bin. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the SHPF bin paper path for any paper fragment and debris. Is the bin paper path free of paper fragments and debris?	Go to step 14.	Go to step 13.

Action	Yes	No
Step 13 Remove the paper fragments and debris in the bin paper path. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF stack height)**. **b** Find the sensor (SHPF stack height). Does the sensor status change while toggling the sensor?	Go to step 19.	Go to step 15.
Step 15 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check the sensor (SHPF stack height) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF stack height) free of the previous items?	Go to step 19.	Go to step 17.
Step 17 Reconnect or replace the SHPF stack height sensor cable. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Reinstall or replace the sensor (SHPF stack height). Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 21.	Go to step 20.
Step 20 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 22.

Action	Yes	No
Step 22 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

User attendance messages

0y user attendance errors

2-9 user attendance messages

Error code	Description	Action
2.12	The stapler unit is low on staples.	See **"Staple supply error service check" on page 248**.
3.01	The standard bin is full.	See **"Sensor (bin full) error service check" on page 240**.
3.41	The finisher bin is full.	See **"Sensor (SHPF stacker bin) failure service check" on page 250**.
3.42		
3.43		
3.44		
3.45		
3.46		
3.47		
8.01	The front door was detected as open.	See **"Undetected front door service check" on page 241**.
8.03	The left door was detected as open.	See **"Undetected left door service check" on page 242**.
8.04	The exit door was detected as open.	See **"Undetected exit door service check" on page 244**.
8.11	The tray left cover was detected as open.	See **"Undetected tray door service check" on page 243**.

Error code	Description	Action
8.41	A finisher door was detected as open.	See **"Undetected SHPF front cover service check" on page 245** or **"Undetected HTU door service check" on page 246**.
8.42		
8.43		
8.44		
8.46		
8.47		
8.48		
8.49		

Sensor (bin full) error service check

Action	Yes	No
Step 1 **a** Remove any paper from the output bin. **b** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Bin full** **c** Find the sensor (Bin full). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.
Step 2 Check if the bin full sensor actuator properly operates. Does the bin full sensor actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the bin full sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.
Step 4 Check if the bin full sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Contact the next level of support.	Go to step 5.
Step 5 **a** Clean the sensor (bin full). **b** Reconnect or replace the bin full sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (bin full). Does the problem remain?	Contact the next level of support.	The problem is solved.

Undetected front door service check

Action	Yes	No
Step 1 Close the front door. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the front door actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 7.
Step 3 Check if the front door actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 7.
Step 4 Check if the front door switch is properly aligned and fastened. Is the swtich properly aligned and fastened?	Go to step 5.	Go to step 7.
Step 5 Check if the exit door switch cable is free of the following: • Loose connection on both ends • Damage Is the cable free of the previous items?	Go to step 6.	Go to step 7.
Step 6 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 7.
Step 7 Reconnect or replace the front door switch cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace or reinstall the front door switch. See **“Front door switch removal” on page 354**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Undetected left door service check

Action	Yes	No
Step 1 Close the left door. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the left door actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 7.
Step 3 Check if the left door actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 7.
Step 4 Check if the left door switch is properly aligned and fastened. Is the swtich properly aligned and fastened?	Go to step 5.	Go to step 7.
Step 5 Check if the exit door switch cable is free of the following: • Loose connection on both ends • Damage Is the cable free of the previous items?	Go to step 6.	Go to step 7.
Step 6 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 7.
Step 7 Reconnect or replace the left door switch cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace or reinstall the left door switch. See **“Left door switch removal” on page 383**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Undetected tray door service check

Action	Yes	No
Step 1 **a** Identify the affected tray. **b** Close the affected tray door. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the affected tray door actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 7.
Step 3 Check if the affected door actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 7.
Step 4 Check if the affected tray door switch is properly aligned and fastened. Is the swtich properly aligned and fastened?	Go to step 5.	Go to step 7.
Step 5 Check if the affected tray door switch cable is free of the following: • Loose connection on both ends • Damage Is the cable free of the previous items?	Go to step 6.	Go to step 7.
Step 6 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 7.
Step 7 Reconnect or replace the affected tray door switch cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace or reinstall the affected tray door switch. Does the problem remain?	Contact the next level of support.	The problem is solved.

Undetected exit door service check

Action	Yes	No
Step 1 Close the exit door. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the exit door actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 7.
Step 3 Check if the exit door actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 7.
Step 4 Check if the exit door switch is properly aligned and fastened. Is the swtich properly aligned and fastened?	Go to step 5.	Go to step 7.
Step 5 Check if the exit door switch cable is free of the following: • Loose connection on both ends • Damage Is the cable free of the previous items?	Go to step 6.	Go to step 7.
Step 6 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 7.
Step 7 Reconnect or replace the exit door switch cable. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace or reinstall the exit door switch. Does the problem remain?	Contact the next level of support.	The problem is solved.

Undetected SHPF front cover service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove any debris or obstruction near the SHPF front door switch. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the SHPF front door switch for the following: • failure to operate • improper installation Is the SHPF front door switch free of the previous items?	Go to step 5.	Go to step 4.
Step 4 Reinstall or replace the SHPF front door switch. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Check the **b** SHPF front cover, **c** SHPF front cover actuator, **d** SHPF front cover door hinge, **e** SHPF front cover magnet for the following: • failure to operate • improper installation • damage Are the parts free of the previous items?	Go to step 7.	Go to step 6.
Step 6 Reinstall or replace the SHPF front cover. See **"Finisher front cover removal" on page 527**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 10.
Step 10 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Undetected HTU door 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** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (HTU door)**. **b** Find the sensor (HTU door). Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 3.
Step 3 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the sensor (HTU door) and its cable for the following: • improper connection/installation • damage Is the sensor free of the previous items?	Go to step 7.	Go to step 5.
Step 5 Reconnect or replace the HTU door sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Reinstall or replace the sensor (HTU door). Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Check the **b** HTU door, **c** HTU door actuator, **d** HTU door hinge for the following: • failure to operate • improper installation • damage Are the parts free of the previous items?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the HTU door. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 11.	Go to step 10.
Step 10 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 12.
Step 12 Replace the SHPF controller board. See **“Finisher controller board removal” on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Staple supply 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 Remove, and then load a supported paper into the tray. For more information on loading paper, see **"Avoiding jams" on page 92**. For more information on supported paper, see **"Selecting paper" on page 27**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Change the settings to match the size, type, and weight of the paper loaded. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform a print test on paper from a fresh package. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the paper path for paper fragments and partially fed paper. Is the paper path free of paper fragments and partially fed paper?	Go to step 7.	Go to step 6.
Step 6 Remove the paper fragments and partially fed paper. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Check the **b** SHPF front cover, **c** SHPF front cover actuator, **d** SHPF front cover door hinge, **e** SHPF front cover magnet for the following: • failure to operate • improper installation • damage Are the parts free of the previous items?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Reinstall or replace the SHPF front cover. See **"Finisher front cover removal" on page 527**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check if the SHPF staple unit properly operates. Does the SHPF staple unit properly operate?	Go to step 14.	Go to step 10.
Step 10 Check if the motor (SHPF staple) properly operates. Does the motor properly operate?	Go to step 14.	Go to step 11.
Step 11 Remove any debris or obstruction near the staple unit. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Check the staple cartridge for the following: • improper installation • damage Is the staple cartridge free of the previous items?	Go to step 14.	Go to step 13.
Step 13 Replace the SHPF staple unit. See **"Stapler assembly removal" on page 555**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Check if the SHPF staple unit carriage board for the following: • improper connection • open circuit • short circuit Is the board free of the previous items?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the SHPF staple unit carriage board. Does the problem remain?	Go to step 16.	The problem is solved.

Action	Yes	No
Step 16 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 18.	Go to step 17.
Step 17 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 19.
Step 19 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (SHPF stacker bin) failure 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** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Motor tests**. **b** Select the **Motor (SHPF stacker bin)**. Does the motor run?	Go to step 6.	Go to step 4.
Step 3 Check the motor (SHPF stacker bin) and its cable for the following: • improper connection/installation • damage Is the motor (SHPF stacker bin) free of the previous items?	Go to step 6.	Go to step 4.
Step 4 Reconnect or replace the SHPF stacker bin motor cable. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Reinstall or replace the motor (SHPF stacker bin). See **"Stacker motor assembly removal" on page 540**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF stack height)**. **b** Find the sensor (SHPF stack height). Does the sensor status change while toggling the sensor?	Go to step 11.	Go to step 7.
Step 7 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the sensor (SHPF stack height) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF stack height) free of the previous items?	Go to step 11.	Go to step 9.
Step 9 Reconnect or replace the SHPF stack height sensor cable. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Reinstall or replace the sensor (SHPF stack height). Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF stacker bin)**. **b** Find the sensor (SHPF stacker bin). Does the sensor status change while toggling the sensor?	Go to step 16.	Go to step 12.
Step 12 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 13.	The problem is solved.

Action	Yes	No
Step 13 Check the sensor (SHPF stacker bin) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF stacker bin) free of the previous items?	Go to step 16.	Go to step 14.
Step 14 Reconnect or replace the SHPF stacker bin sensor cable. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Reinstall or replace the sensor (SHPF stacker bin). Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check if the SHPF stack clamp clutch properly operates. Does the stack clamp clutch properly operate?	Go to step 19.	Go to step 17.
Step 17 Check the SHPF stack clamp clutch connection on the SHPF controller board for the following: • open circuit • short circuit • improper connection Is the connection free from the previous items?	Go to step 19.	Go to step 18.
Step 18 Reinstall or replace the SHPF stack clamp clutch. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Check if the SHPF stack clamp sensor actuator properly operates. Does the sensor actuator properly operate?	Go to step 21.	Go to step 20.
Step 20 Replace the SHPF stack clamp sensor actuator. Does the problem remain?	Go to step 21.	The problem is solved.

Action	Yes	No
Step 21 **a** Enter the Diagnostics menu, and then navigate to: **Output device diagnostics** > **Sensor tests** > **Sensor (SHPF stack clamp)**. **b** Find the sensor (SHPF stack clamp). Does the sensor status change while toggling the sensor?	Go to step 26.	Go to step 22.
Step 22 Remove any debris or obstruction near the sensor. Does the problem remain?	Go to step 23.	The problem is solved.
Step 23 Check the sensor (SHPF stack clamp) and its cable for the following: • improper connection/installation • damage Is the sensor (SHPF stack clamp) free of the previous items?	Go to step 26.	Go to step 24.
Step 24 Reconnect or replace the SHPF stack clamp sensor cable. Does the problem remain?	Go to step 25.	The problem is solved.
Step 25 Reinstall or replace the sensor (SHPF stack clamp). Does the problem remain?	Go to step 26.	The problem is solved.
Step 26 Check if the SHPF stack clamp properly operates. Does the SHPF stack clamp properly operate?	Go to step 29.	Go to step 27.
Step 27 Check the SHPF stack clamp for the following: • failure to revolve • failure to slide Is the SHPF stack clamp free of the previous items?	Go to step 29.	Go to step 28.
Step 28 Replace the SHPF stack clamp. Does the problem remain?	Go to step 29.	The problem is solved.

Action	Yes	No
Step 29 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 31.	Go to step 30.
Step 30 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 31.	The problem is solved.
Step 31 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 32.
Step 32 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

1y user attendance errors

11-12 user attendance messages

Error code	Description	Action
11.92	A wrong paper type, size, or orientation was detected on the MPF.	N/A
12.99	A wrong setting for paper type, size, or orientation was detected on the finisher.	See **"Unsupported paper in SHPF service check" on page 254**.

Unsupported paper in SHPF service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove, and then load a supported paper into the tray. For more information on loading paper, see **"Avoiding jams" on page 92**. For more information on supported paper, see **"Selecting paper" on page 27**. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 Change the settings to match the size, type, and weight of the paper loaded. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform a print test on paper from a fresh package. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Remove any debris or obstruction near the SHPF front door switch. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the SHPF front door switch for the following: • failure to operate • improper installation Is the SHPF front door switch free of the previous items?	Go to step 8.	Go to step 7.
Step 7 Reinstall or replace the SHPF front door switch. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Remove any debris or obstruction near the SHPF top door switch. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the SHPF top door switch for the following: • failure to operate • improper installation Is the SHPF top door switch free of the previous items?	Go to step 11.	Go to step 10.
Step 10 Reinstall or replace the SHPF top door switch. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Remove any debris or obstruction near the SHPF front door switch. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Check the SHPF front door switch for the following: • failure to operate • improper installation Is the SHPF front door switch free of the previous items?	Go to step 14.	Go to step 13.
Step 13 Reinstall or replace the SHPF front door switch. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** Check the **b** SHPF top door, **c** SHPF top door actuator, **d** SHPF top door hinge for the following: • improper installation • damage Are the parts free of the previous items?	Go to step 16.	Go to step 15.
Step 15 Reinstall or replace the SHPF top door. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 18.	Go to step 17.
Step 17 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 19.
Step 19 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

3y user attendance errors

31-39 user attendance messages

Error code	Description	Action
31.00a	The finisher stapler unit is low on staples.	See **"Staple supply error service check" on page 248**.
31.00b		
31.00c		
31.00d		
31.00e		
31.00j	The finisher hole punch box is undetected.	See **"Hole punch box failure service check" on page 258**.
31.00k	The finisher hole punch box is full.	
31.00l		
31.00m		
31.00n		
31.00o		
31.00p		
31.00q	The finisher hole punch box is undetected.	
31.40	A black print cartridge smart chip or sensor communication error was detected.	See **"Cartridge error service check" on page 262**.
31.41	A cyan print cartridge smart chip or sensor communication error was detected.	
31.42	A magenta print cartridge smart chip or sensor communication error was detected.	
31.43	A yellow print cartridge smart chip or sensor communication error was detected.	
31.60	Imaging unit/photoconductor (K) smart chip or sensor communication problem was detected.	See **"Photoconductor error service check" on page 262**.
31.61	Imaging unit/photoconductor (C) smart chip or sensor communication problem was detected.	
31.62	Imaging unit/photoconductor (M) smart chip or sensor communication problem was detected.	
31.63	Imaging unit/photoconductor (Y) smart chip or sensor communication problem was detected.	

Hole punch box failure service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the hole punch box is set properly. Is the hole punch box set properly?	Go to step 3.	Go to step 4.
Step 3 Check the hole punch box for the following: • damage • deformation Is the hole punch box free of the previous items?	Go to step 5.	Go to step 4.
Step 4 Replace the hole punch box. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check if the HPU controller board for the following: • improper connection • open circuit • short circuit Is the HPU controller board free of the previous items?	Contact the next level of support.	Go to step 6.
Step 6 Reinstall or replace the HPU controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

8y user attendance errors

80-88 user attendance messages

Error code	Description	Action
80.01	The maintenance kit is nearly low.	N/A
80.21	The maintenance kit is very low.	
80.31	The maintenance kit must be replaced.	

Error code	Description	Action
81.01	The fuser is low.	See **"Fuser maintenance kit service check" on page 261**.
81.21	The fuser is very low.	
81.31	The fuser must be replaced.	
82.00	The waste toner bottle capacity is low.	See **"Waste toner bottle error service check" on page 263**.
82.12	The waste toner bottle capacity is very low.	
82.22	The waste toner bottle is full. The user-selected EWS set point has been reached.	
82.42	The waste toner bottle must be replaced.	
83.01	The transfer module is low.	See **"Transfer module error service check" on page 264**.
83.21	The transfer module is very low.	
83.31	The transfer module must be replaced.	
84.01C	The cyan photoconductor is nearly low.	See **"Photoconductor error service check" on page 262**.
84.01K	The black photoconductor is nearly low.	
84.01M	The magenta photoconductor is nearly low.	
84.01Y	The yellow photoconductor is nearly low.	
84.11C	The cyan photoconductor is low.	
84.11K	The black photoconductor is low.	
84.11M	The magenta photoconductor is low.	
84.11Y	The yellow photoconductor is low.	
84.21C	The cyan photoconductor is very low.	
84.21K	The black photoconductor is very low.	
84.21M	The magenta photoconductor is very low.	
84.21Y	The yellow photoconductor is very low.	
84.31C	The cyan photoconductor is nearly empty. The sensor threshold has been reached.	
84.31K	The black photoconductor is nearly empty. The sensor threshold has been reached.	
84.31M	The magenta photoconductor is nearly empty. The sensor threshold has been reached.	
84.31Y	The yellow photoconductor is nearly empty. The sensor threshold has been reached.	
84.41C	The cyan photoconductor must be replaced.	
84.41K	The black photoconductor must be replaced.	
84.41M	The magenta photoconductor must be replaced.	

Error code	Description	Action
85.01C	The cyan developer/developer kit is nearly low.	N/A
85.01K	The black developer/developer kit is nearly low.	
85.01M	The magenta developer/developer kit is nearly low.	
85.01Y	The yellow developer/developer kit is nearly low.	
85.11C	The cyan developer/developer kit is low.	
85.11K	The black developer/developer kit is low.	
85.11M	The magenta developer/developer kit is low.	
85.11Y	The yellow developer/developer kit is low.	
85.21C	The cyan developer/developer kit is very low.	
85.21K	The black developer/developer kit is very low.	
85.21M	The magenta developer/developer kit is very low.	
85.21Y	The yellow developer/developer kit is very low.	
85.31C	The cyan developer/developer kit is nearly empty.	
85.31K	The black developer/developer kit is nearly empty.	
85.31M	The magenta developer/developer kit is nearly empty.	
85.31Y	The yellow developer/developer kit is nearly empty.	
85.41C	The cyan developer/developer kit must be replaced.	
85.41K	The black developer/developer kit must be replaced.	
85.41M	The magenta developer/developer kit must be replaced.	
85.41Y	The yellow developer/developer kit must be replaced.	
86.33	The filter must be replaced.	

Error code	Description	Action
88.00C	The cyan toner cartridge is nearly low.	See **"Cartridge error service check" on page 262**.
88.00K	The black toner cartridge is nearly low.	
88.00M	The magenta toner cartridge is nearly low.	
88.00Y	The yellow toner cartridge is nearly low.	
88.10C	The cyan toner cartridge is low.	
88.10K	The black toner cartridge is low.	
88.10M	The magenta toner cartridge is low.	
88.10Y	The yellow toner cartridge is low.	
88.20C	The cyan toner cartridge is very low.	
88.20K	The black toner cartridge is very low.	
88.20M	The magenta toner cartridge is very low.	
88.20Y	The yellow toner cartridge is very low.	
88.40C	The cyan toner cartridge must be replaced.	
88.40K	The black toner cartridge must be replaced.	
88.40M	The magenta toner cartridge must be replaced.	
88.40Y	The yellow toner cartridge must be replaced.	

Fuser maintenance kit service check

Action	Yes	No
a Replace the fuser. See **"Fuser removal" on page 342**. **b** Reset the maintenance counter. Enter the Diagnostics menu, and then navigate to: **Printer setup** > **Reset Maintenance Counter** > **Fuser maintenance kit reset** Does the problem remain?	Contact the next level of support.	The problem is solved.

Cartridge error service check

Action	Yes	No
Step 1 Check if the affected toner cartridge is free of damage and leaks. Is the affected toner cartridge free of damage and leaks?	Go to step 2.	Go to step 4.
Step 2 Check if the affected toner cartridge is properly installed and supported. Is the affected toner cartridge properly installed and supported?	Go to step 3.	Go to step 4.
Step 3 Check if the affected toner cartridge contacts are clean and uncontaminated. Are the contacts clean and uncontaminated?	Contact the next level of support.	Go to step 4.
Step 4 Reinstall or replace the affected toner cartridge. Does the problem remain?	Contact the next level of support.	The problem is solved.

Photoconductor error service check

Action	Yes	No
Step 1 Check if the affected photoconductor is free of damage and leaks. Is the photoconductor free of damage and leaks?	Go to step 2.	Go to step 4.
Step 2 Check if the affected photoconductor is properly installed. Is the photoconductor properly installed?	Go to step 3.	Go to step 4.
Step 3 Check if the affected photoconductor is clean and uncontaminated. Is the photoconductor clean and uncontaminated?	Contact the next level of support.	Go to step 4.
Step 4 Reinstall or replace the affected photoconductor. Does the problem remain?	Contact the next level of support.	The problem is solved.

Waste toner bottle error service check

Action	Yes	No
Step 1 **a** Replace the waste toner bottle. **b** Reset the waste toner bottle counter. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Close the waste toner bottle door. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the waste toner bottle door actuator properly operates. Does the actuator properly operate?	Go to step 4.	Go to step 8.
Step 4 Check if the waste toner bottle door actuator is free of damage. Is the actuator free of damage?	Go to step 5.	Go to step 8.
Step 5 Check if the waste toner bottle door switch is properly aligned and fastened. Is the swtich properly aligned and fastened?	Go to step 6.	Go to step 8.
Step 6 **a** Check if the waste toner bottle door switch cable is free of the following: • Loose connection on both ends • Damage Is the cable free of the previous items?	Go to step 7.	Go to step 8.
Step 7 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 8.
Step 8 Reconnect or replace the waste toner bottle door switch cable. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace or reinstall the waste toner bottle door switch. Does the problem remain?	Contact the next level of support.	The problem is solved.

Transfer module error service check

Action	Yes	No
a Replace the transfer module. See **"Transfer module removal" on page 366**. **b** Reset the maintenance counter. Enter the Diagnostics menu, and then navigate to: **Printer setup** > **Reset Maintenance Counter** > **Transfer module cleaner and roller kit** Does the problem remain?	Contact the next level of support.	The problem is solved.

Printer hardware errors

100–115 errors

100-102 error messages

Error code	Description	Action
100.21	The sensor (tray 1 level) does not turn on within the specified time during the tray 1 lift up.	See **"Sensor (tray 1 paper size) failure service check" on page 265**.
100.22	The sensor (tray 2 level) does not turn on within the specified time during the tray 2 lift up.	See **"Sensor (optional tray paper size) failure service check" on page 269**.
100.23	The sensor (tray 3 level) does not turn on within the specified time during the tray 3 lift up.	
100.24	The sensor (tray 4 level) does not turn on within the specified time during the tray 4 lift up.	
100.26	Motor (HCIF pick/lift) failure.	N/A
100.27	YMC link sensor detection error.	See **"Drive assembly failure service check" on page 272**.
100.30	Yellow calibration warning in ATC adjustment.	N/A
100.31	Magenta calibration warning in ATC adjustment.	
100.32	Cyan calibration warning in ATC adjustment.	
100.33	Black calibration warning in ATC adjustment.	
100.51	Trays connected to the printer are unusable.	N/A
100.70	Machine throughput/productivity is not set.	N/A
102.00	The tray module connected is the incorrect type.	N/A
102.01	An error was detected in the tray module.	N/A

111-115 error messages

Error code	Description	Action
111.91	Printhead (C) error	See **"Printhead error service check" on page 265**
112.91	Printhead (K) error	
113.91	Printhead (M) error	
114.91	Printhead (Y) error	
115.00	Printhead (CMYK) error	

Printhead error service check

Action	Yes	No
Step 1 **a** Check the FFC of the affected printhead for the following: • Loose connection • Damage due to pinching • Pressure on both ends of the cable Is the FFC properly connected and free of damage?	Go to step 2.	Go to step 3.
Step 2 Check if the affected printhead is properly installed and free of damage. Is the printhead properly installed and free of damage?	Contact the next level of support.	Go to step 4.
Step 3 Replace the FFC of the affected printhead. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Reinstall or replace the printhead. See **"Printhead removal" on page 369**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (tray 1 paper size) failure service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Tray 1 paper present** **b** Find the sensor (tray 1 paper present). Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.

Action	Yes	No
Step 2 Check if the tray 1 paper present sensor actuator properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the tray 1 paper present sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.
Step 4 Check if the tray 1 paper present sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 7.	Go to step 5.
Step 5 **a** Clean the sensor (tray 1 paper present). **b** Reconnect or replace the tray 1 paper present sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (tray 1 paper present). 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 & adjustments** > **Motor tests** > **Tray 1 pick position**. **b** Touch **Start**. Does the motor run?	Go to step 8.	Go to step 11.
Step 8 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 9.	Go to step 11.
Step 9 Check if the pick/lift motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 10.	Go to step 11.

Action	Yes	No
Step 10 Check if the voltage is correct. Is the voltage correct?	Go to step 20.	Go to step 13.
Step 11 Reconnect or replace the pick/lift motor cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reinstall or replace the motor (pick/lift). Does the problem remain?	Go to step 20.	The problem is solved.
Step 13 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 14.	Go to step 18.
Step 14 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 15.	Go to step 18.
Step 15 Check the engine board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of the previous items?	Go to step 16.	Go to step 18.
Step 16 Check the engine board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the board free of the previous items?	Go to step 17.	Go to step 18.
Step 17 Check if the voltage is correct. See the wiring diagram. Is the voltage correct?	Contact the next level of support.	Go to step 18.

Action	Yes	No
Step 18 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Replace the engine board. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 20 Check if the tray guides are free of damage and set correctly for the paper size. Are the tray guides free of damage and set correctly?	Go to step 22.	Go to step 21.
Step 21 Set the tray guides to the size of the loaded paper. Does the problem remain?	Go to step 22.	The problem is solved.
Step 22 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Tray 1 paper size** **b** Find the sensor (tray 1 paper size). Does the sensor status change while toggling the sensor?	Go to step 23.	Go to step 26.
Step 23 Check if the tray 1 paper size sensor actuator properly operates. Does the actuator properly operate?	Go to step 24.	Go to step 26.
Step 24 Check if the tray 1 paper size sensor actuator is free of damage. Is the actuator free of damage?	Go to step 25.	Go to step 26.
Step 25 Check if the tray 1 paper size sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Contact the next level of support.	Go to step 26.
Step 26 **a** Clean the sensor (tray 1 paper size). **b** Reconnect or replace the tray 1 paper size sensor cable. Does the problem remain?	Go to step 27.	The problem is solved.

Action	Yes	No
Step 27 Reinstall or replace the sensor (tray 1 paper size). See **"Sensor (paper size) removal" on page 409**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (optional tray paper size) failure service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Sensor tests** > **Tray x paper present** **b** Find the sensor (tray x paper present). **Note:** x indicates the number of the affected tray. Does the sensor status change while toggling the sensor?	Go to step 2.	Go to step 5.
Step 2 Check if the tray x paper present sensor properly operates. Does the actuator properly operate?	Go to step 3.	Go to step 5.
Step 3 Check if the tray x paper present sensor actuator is free of damage. Is the actuator free of damage?	Go to step 4.	Go to step 5.
Step 4 Check if the tray x paper present sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Go to step 7.	Go to step 5.
Step 5 **a** Clean the sensor (tray x paper present). **b** Reconnect or replace the tray 2 paper present sensor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the sensor (tray x paper present). See **"Sensor (3 x 520-sheet tray paper present) removal" on page 461**. Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Additional input tray diagnostics** > **Motor tests** > **Tray x pick/lift**. **b** Touch **Start**. **Note:** x indicates the number of the affected tray. Does the motor run?	Go to step 8.	Go to step 11.
Step 8 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 9.	Go to step 11.
Step 9 Check if the tray x pick/lift motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 10.	Go to step 11.
Step 10 Check if the voltage is correct. Is the voltage correct?	Go to step 20.	Go to step 13.
Step 11 Reconnect or replace the tray x pick/lift motor cable. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Reinstall or replace the motor (tray x pick/lift). See **"Motor (3 x 520-sheet tray pick/lift) removal" on page 462**. Does the problem remain?	Go to step 20.	The problem is solved.
Step 13 Check if the cables are properly connected to the option board. Are the cables properly connected?	Go to step 14.	Go to step 18.
Step 14 Check if the connectors on the option board are free of damage. Are the connectors free of damage?	Go to step 15.	Go to step 18.

Action	Yes	No
Step 15 **a** Check the option board for the following: • Expansion due to heat and humidity • Damaged pins • Burnt out components • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the board free of the any issues?	Go to step 16.	Go to step 18.
Step 16 **a** Check the option board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the board free of any contamination?	Go to step 17.	Go to step 18.
Step 17 Check if the voltage is correct. See the wiring diagram section. Is the voltage correct?	Contact the next level of support.	Go to step 18.
Step 18 Reconnect or replace the option board connectors. Does the problem remain?	Go to step 19.	The problem is solved.
Step 19 Replace the option board. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 20 Check if the tray guides are free of damage and set correctly for the paper size. Are the tray guides free of damage and set correctly?	Go to step 22.	Go to step 21.
Step 21 Set the tray guides to the size of the loaded paper. Does the problem remain?	Go to step 22.	The problem is solved.

Action	Yes	No
Step 22 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** > **Tray x paper size** **b** Find the sensor (tray x paper size). **Note:** x indicates the number of the affected tray. Does the sensor status change while toggling the sensor?	Go to step 23.	Go to step 26.
Step 23 Check if the tray x paper size sensor properly operates. Does the actuator properly operate?	Go to step 24.	Go to step 26.
Step 24 Check if the tray x paper size sensor actuator is free of damage. Is the actuator free of damage?	Go to step 25.	Go to step 26.
Step 25 Check if the tray x paper size sensor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Contact the next level of support.	Go to step 26.
Step 26 **a** Clean the sensor (tray x paper size). **b** Reconnect or replace the tray 2 paper size sensor cable. Does the problem remain?	Go to step 27.	The problem is solved.
Step 27 Reinstall or replace the sensor (tray x paper size). Does the problem remain?	Contact the next level of support.	The problem is solved.

Drive assembly failure service check

Action	Yes	No
Step 1 Check if the drive assembly is free of wear and damage. Is the drive gear free of wear and damage?	Go to step 2.	Go to step 8.
Step 2 Check if the drive assembly has proper mesh. Does the drive gear have proper mesh?	Go to step 3.	Go to step 8.

Action	Yes	No
Step 3 Check if the drive assembly cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Go to step 4.	Go to step 8.
Step 4 Check if the voltage is correct. Is the voltage correct?	Go to step 5.	Go to step 12.
Step 5 Check if the drive assembly clutch free of damage. Is the clutch free of damage?	Go to step 6.	Go to step 10.
Step 6 Check if the drive assembly clutch properly operates. Does the clutch properly operate?	Go to step 7.	Go to step 10.
Step 7 Check if the drive assembly clutch cables are properly connected to the controller board. Are the cables properly connected to the controller board?	Contact the next level of support.	Go to step 10.
Step 8 Reconnect or replace the drive assembly cables. See **“Drive gearbox removal” on page 392**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Reinstall or replace the drive assembly. See **“Drive gearbox removal” on page 392**. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 10 Reconnect or replace the drive assembly clutch cables. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Reinstall or replace the drive assembly clutch. Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
Step 12 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 13.	Go to step 17.
Step 13 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 14.	Go to step 17.
Step 14 Check the option board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of the previous items?	Go to step 15.	Go to step 17.
Step 15 Check the option board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the board free of the previous items?	Go to step 16.	Go to step 17.
Step 16 Check if the voltage is correct. See the wiring diagram. Is the voltage correct?	Contact the next level of support.	Go to step 17.
Step 17 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Replace the engine board. Does the problem remain?	Contact the next level of support.	The problem is solved.

12y errors

12y error messages

Error code	Description	Action
120.80	Motor (fuser) did not turn on.	N/A
120.83	The motor (fuser) stalled.	See **"Fuser temperature error service check" on page 276**.
121.00	During an attempt to heat up, the fuser was not detected.	
121.01		
121.03	The fuser hardware and driver are mismatched.	
121.11	The fuser reached the required temperature (during final EWC/line voltage detection) too late.	
121.13	The fuser reached the required temperature (during final EWC/line voltage detection) too fast.	
121.14	The fuser is heating too fast.	
121.16	Induction heater input voltage power error.	
121.17	A fuser heater error (runaway on LV machine) was detected.	
121.50	The fuser reached a temperature out of range.	
121.52		
121.53		
121.54		
121.56		
121.57		
121.58		
121.59		
121.71	An open fuser main heater thermistor was detected.	
121.72	AN open fuser secondary heater thermistor was detected.	
121.99	A fuser wrap was detected.	
129.03	The ATC sensor detects an error in the black toner density.	N/A
129.13	The ATC sensor detects an error in the cyan toner density	
129.23	The ATC sensor detects an error in the magenta toner density.	
129.33	The ATC sensor detects an error in the yellow toner density.	

Fuser temperature error service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Printer setup** > **Reset engine service error** > **Fuser error reset** **b** Touch **121.xx.** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the fuser is properly installed and free of wear and damage. Is the fuser properly installed and free of wear and damage?	Go to step 3.	Go to step 5.
Step 3 Check if the fuser cable is properly connected to the controller board. Is the fuser cable properly connected to the controller board?	Go to step 4.	Go to step 5.
Step 4 Check if the fuser voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 7.
Step 5 Reconnect or replace the fuser cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the fuser. See **"Fuser removal" on page 342**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if the LVPS is properly installed. Is the LVPS properly installed?	Go to step 8.	Go to step 10.
Step 8 Check if the LVPS cables are properly connected. Are the cables properly connected?	Go to step 9.	Go to step 10.
Step 9 Check if the input and output voltages are correct. Are the input and output voltages are correct?	Contact the next level of support.	Go to step 10.

Action	Yes	No
Step 10 Reconnect or replace the LVPS cable. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Reinstall the LVPS. See **"LVPS removal" on page 383**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the LVPS with the correct input and output voltages. See **"LVPS removal" on page 383**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (fuser) failure service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Printer setup** > **Reset engine service error** > **Fuser error reset** **b** Touch **121.xx.** Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 3.	Go to step 5.
Step 3 Check if the motor drive gear cables are properly connected to the controller board. Are the cables properly connected?	Contact the next level of support.	Go to step 4.
Step 4 Reconnect or replace the LVPS cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reinstall or replace the motor (fuser). Does the problem remain?	Contact the next level of support.	The problem is solved.

14y errors

140-141 error messages

Error code	Description	Action
140.80	The motor (sub) did not turn on.	See **"Motor (sub) failure service check" on page 280**.
141.80	The motor (KCMY photoconductor) did not turn on.	See **"Motor (main) failure service check" on page 278**.

Motor (main) failure service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Main**. **b** Touch **Start**. Does the motor run?	Go to step 2.	Go to step 5.
Step 2 Check if the motor drive gear is free of wear, damage, and bearing blockage. Is the motor free of wear, damage, and bearing blockage?	Go to step 3.	Go to step 5.
Step 3 Check if the main motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 4.	Go to step 5.
Step 4 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 7.
Step 5 Reconnect or replace the main motor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the motor (main). Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
Step 7 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 8.	Go to step 12.
Step 8 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 9.	Go to step 12.
Step 9 Check the engine board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of the previous items?	Go to step 10.	Go to step 12.
Step 10 Check the engine board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the board free of the previous items?	Go to step 11.	Go to step 12.
Step 11 Check if the voltage is correct. See the wiring diagram. Is the voltage correct?	Contact the next level of support.	Go to step 12.
Step 12 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the engine board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Motor (sub) failure service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Sub**. **b** Touch **Start**. Does the motor run?	Go to step 2.	Go to step 5.
Step 2 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 3.	Go to step 5.
Step 3 Check if the sub motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 4.	Go to step 5.
Step 4 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 7.
Step 5 Reconnect or replace the sub motor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the motor (sub). Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 7 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 8.	Go to step 12.
Step 8 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 9.	Go to step 12.

Action	Yes	No
Step 9 **a** Check the engine board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of the previous items?	Go to step 10.	Go to step 12.
Step 10 **a** Check the engine board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the board free of the previous items?	Go to step 11.	Go to step 12.
Step 11 Check if the voltage is correct. See the wiring diagram. Is the voltage correct?	Contact the next level of support.	Go to step 12.
Step 12 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the engine board. Does the problem remain?	Contact the next level of support.	The problem is solved.

15y errors

155-158 error messages

Error code	Description	Action
155.80	The motor (K toner add) did not turn on.	N/A
156.80	The motor (C toner add) did not turn on.	
157.80	The motor (M toner add) did not turn on.	
158.80	The motor (Y toner add) did not turn on.	

17y errors

17y error messages

Error code	Description	Action
171.82	The main fan speed did not ramp up to the required level.	N/A
172.82	LVPS fan error.	See **"Fuser exhaust fan failure service check" on page 282**.

Fuser exhaust fan failure service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Fuser fan**. **b** Touch **Start**. Does the motor run?	Go to step 2.	Go to step 5.
Step 2 Check if the motor drive gear is properly installed and free of wear, damage, and bearing blockage. Is the gear properly installed and free of wear, damage, and bearing blockage?	Go to step 3.	Go to step 5.
Step 3 Check if the fuser exhaust fan motor cable is properly connected to the controller board. Is the cable properly connected?	Go to step 4.	Go to step 5.
Step 4 Check if the voltage is correct. Is the voltage correct?	Contact the next level of support.	Go to step 7.
Step 5 Reconnect or replace the fuser exhaust fan motor cable. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Reinstall or replace the motor (fuser exhaust fan). Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
Step 7 Check if the cables are properly connected to the engine board. Are the cables properly connected?	Go to step 8.	Go to step 12.
Step 8 Check if the connectors on the engine board are free of damage. Are the connectors free of damage?	Go to step 9.	Go to step 12.
Step 9 **a** Check the engine board for the following: • Expansion due to heat and humidity • Damaged pins • Signs of overheating • Bulging or missing components • Solder joint connection issues Is the engine board free of the previous items?	Go to step 10.	Go to step 12.
Step 10 **a** Check the engine board for contamination such as the following: • Corrosion • Degradation • Metallization • Chemical leakage Is the board free of the previous items?	Go to step 11.	Go to step 12.
Step 11 Check if the voltage is correct. See the wiring diagram. Is the voltage correct?	Contact the next level of support.	Go to step 12.
Step 12 Reconnect or replace the engine board connectors. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Replace the engine board. Does the problem remain?	Contact the next level of support.	The problem is solved.

18y errors

18y error messages

Error code	Description	Action
184.82	Marking fan error.	See **"Cartridge fan error service check" on page 284**.

Cartridge fan error service check

Action	Yes	No
Step 1 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** > **Sub**. **b** Touch **Start**. Does the motor run?	Go to step 2.	Go to step 4.
Step 2 Check if the motor (cartridge fan) is free of wear, damage, and bearing blockage. Is the motor free of wear, damage, and bearing blockage?	Go to step 3.	Go to step 4.
Step 3 Check if the cartridge fan motor cable is properly connected to the controller board. Is the cable properly connected to the controller board?	Contact the next level of support.	Go to step 4.
Step 4 Reconnect or replace the cartridge fan motor cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reinstall or replace the motor (cartridge fan). Does the problem remain?	Contact the next level of support.	The problem is solved.

3yy errors

335-388 error messages

Error code	Description	Action
335.53	The motor (stapler move position) did not turn on.	See **"Sensor (SHPF staple unit carriage position) failure service check" on page 229**.
335.55	The motor (stapler move position) ran too slow.	

Error code	Description	Action
377.60	The motor (stapler bin elevator) did not turn on.	See **"Motor (SHPF stacker bin) failure service check" on page 220**.
377.61	The motor (stapler bin elevator) did not turn off.	
377.70	The motor (trifold stapler bin elevator) did not turn on.	
377.71	The motor (trifold stapler bin elevator) did not turn on.	

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. E-mail the text file to your next level of support.

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

Notes:

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

1. Open a web browser, type **`http://printer_IP_address/se`**, and then press **Enter**.
2. Click **Logs Gzip Compressed**.

   Note: A logs.tar.gz file is saved to the Downloads folder. The file may take several minutes to save. You may rename the file if a logs.tar.gz already exists in the Downloads folder.

3 E-mail the logs to your next level of support.

Note: To download the FWdebug log to a flash drive, see **"General SE Menu" on page 307**.

C. Collecting the settings from the Menu Settings Page

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

Copying the Menu Settings Page from the Embedded Web Server (EWS)

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

1 Open a web browser, type **`http://printer_IP_address`**, and then press **Enter**.

2 Click Settings, and then select one of the settings pages from the links shown on the page.

3 Copy all the information, and then save it as a text file.

4 E-mail the text file to your next level of support.

Printing the Menu Settings Page

1 From the home screen, navigate to:

Reports > **Menu Settings Page**

2 E-mail a scanned copy of the Menu settings page to your next level of support.

Note: Use the scan to E-mail functionality, if available.

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

90y errors

900 error messages

Error code	Description	Action
900.xx	RIP firmware errors.	--

940-980 errors

940-980 error messages

Error code	Description	Action
940.00	RIP to engine communication failure.	N/A
941.00	Engine board failure.	See **"Engine board failure service check" on page 288**.
941.01	Engine board failure (EEPROM error).	
941.72	Engine board failure (power supply to drive board error).	
941.73	Engine board failure (IO-setup error)	
941.74	Engine board failure (communication error between drive board and controller board).	
941.75	Engine board failure (WDT circuit error on the drive board).	
941.76	Engine board failure (FPGA config timeout).	
941.90	Engine board failure (Fuse 10 failure on the drive board).	
941.91	Engine board failure (Fuse 11 failure on the drive board).	
941.92	Engine board failure (Fuse 12 failure on the drive board).	
941.93	Engine board failure (Fuse 13 failure on the drive board).	
941.94	Engine board failure (Fuse 14 open circuit on the drive board).	
941.95	Engine board failure (Fuse 15 open circuit on the drive board).	
941.96	Engine board failure (Fuse 16 open circuit on the drive board).	
941.97	Engine board failure (Fuse 17 open circuit on the drive board).	

Error code	Description	Action
980.03a	Finisher communication failure.	See **"SHPF controller board failure service check" on page 289**.
980.03b		
980.20a		
980.20b		
980.30a		
980.30b		
980.30c		
980.30d		
980.31a	Finisher software download failure.	
980.31b		
980.31c		
980.31d		
980.31e		
980.31f		

Engine board failure service check

Action	Yes	No
Step 1 Check if the LVPS is properly installed. Is the LVPS properly installed?	Go to step 2.	Go to step 4.
Step 2 Check if the LVPS cables are properly connected. Are the cables properly connected?	Go to step 3.	Go to step 4.
Step 3 Check if the input and output voltages are correct. Are the input and output voltages are correct?	Contact the next level of support.	Go to step 4.
Step 4 Reconnect or replace the LVPS cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Reinstall the LVPS. See **"LVPS removal" on page 383**. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Replace the LVPS with the correct input and output voltage. See **"LVPS removal" on page 383**. Does the problem remain?	Contact the next level of support.	The problem is solved.

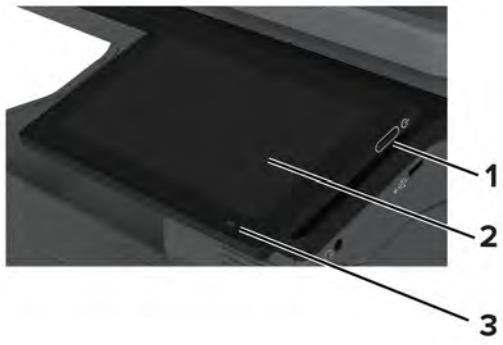
SHPF controller board failure service check

Action	Yes	No
Step 1 Restart the printer. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the connectors on the SHPF controller board are properly connected. Are the connectors properly connected?	Go to step 4.	Go to step 3.
Step 3 Reconnect the connectors on the SHPF controller board. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check if the SHPF controller board is free of damage. Is the controller board free of damage?	Contact the next level of support.	Go to step 5.
Step 5 Replace the SHPF controller board. See **"Finisher controller board removal" on page 532**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Service menus

Understanding the printer control panel

Using the control panel



	Control panel part	Function
1	Power button	• Turn on or turn off the printer. **Note:** To turn off the printer, press and hold the power button for five seconds. • Set the printer to Sleep or Hibernate mode. • Wake the printer from Sleep or Hibernate mode.
2	Display	• View the printer messages and supply status. • Set up and operate the printer.
3	Indicator light	Check the status of the printer.

Understanding the status of the indicator light

Indicator light	Printer status
Off	The printer is off.
Solid blue	The printer is ready.
Blinking blue	The printer is printing or processing data.
Blinking red	The printer requires user intervention.
Solid amber	The printer is in Sleep mode.
Blinking amber	The printer is in Deep Sleep or Hibernate mode.

Diagnostics menu

Entering the Diagnostics menu

Note: For a video demonstration, see **Entering the Diagnostic menu**.

The Diagnostics menu contains tests that are used to help isolate printer issues.

1. From the home screen, touch the on-screen keypad.
2. Touch ****36**.
3. Touch the start icon or **OK**.

Entering the Diagnostics menu using the POR key

Note: For a video demonstration, see **Entering the Diagnostics menu**.

1. Turn off the printer.
2. Open the front door, turn on the printer, and then close the front door when the loading icon appears.

3. On the control panel, touch **DIAGNOSTICS_MODE** > **Boot**.
   Wait for the printer to boot and for the Diagnostics menu to appear.

Reports

Device Settings

This report lists all the current printer settings.

Enter the Diagnostics menu, and then navigate to:

Reports > **Device Settings**

Installed Licenses

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

Enter the Diagnostics menu, and then navigate to:

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

Advanced Print Quality Samples

This setting prints a list of the printer settings and sample pages to check print quality.

Enter the Diagnostics menu, and then navigate to:

Advanced Print Quality Samples > **Advanced Print Quality Test Pages**

Format Fax Storage

This setting deletes stored fax jobs.

Enter the Diagnostics menu, and then navigate to:

Format Fax Storage > **Start**

Event log

Display Log

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

1. Enter the Diagnostics menu, and then navigate to:
   Event Log > **Display Log**
2. Select a log to print.

Print Log

This setting lists an extended version of the various printer events.

Enter the Diagnostics menu, and then navigate to:

Event Log > **Print Log** > **Start**

Note: Depending on the operational history of the printer, the events that appear in the report vary.

Print Log Summary

This setting lists a brief summary of the various printer events.

Enter the Diagnostics menu, and then navigate to:

Event Log > **Print Log Summary** > **Start**

Note: Depending on the operational history of the printer, the events that appear in the report vary.

Mark Log

This setting allows you to create a service, maintenance, or custom log entry. Each log entry is added in the printer event log.

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

   Event Log > **Mark Log**

2. Select a log that you want to create, and then touch **Start**.

Input tray quick print

This setting lets you print a single or continuous Quick Test page in either duplex or simplex mode.

1. Enter the Diagnostics menu, and then select **Input tray quick print**.
2. Select a paper source.
3. Select whether to print a single or continuous test page.

Output bin quick feed

This setting lets you send a single or continuous test page to a bin.

1. Enter the Diagnostics menu, and then touch **Output bin quick feed**.
2. Select the bin to send the test page to.
3. Select whether to send a single or continuous test page.

Printer setup

Printed page count (mono)

This setting displays the number 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 number 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.

Note: Contamination of the second transfer roller may result from printing up to the physical edges of the page.

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

   Printer setup > **Enable edge-to-edge (printing)**
2. Select a setting.

Note: This feature does not work in PPDS emulation.

Enable edge-to-edge (copy)

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

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

   Printer setup > **Enable edge-to-edge (copy)**
2. Select a setting.

Processor ID

This setting shows 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 shows the serial number of the printer.

1. Enter the Diagnostics menu, and then touch **Printer setup**.
2. View the serial number.

Model name

This setting displays the model name of the printer.

1. Enter the Diagnostics menu, and then touch **Printer setup**.
2. View the model name.

Printer diagnostics and adjustments

Sensor tests

1. Enter the Diagnostics menu, and then touch **Printer diagnostics & adjustments**.
2. From the Sensor tests section, touch **Start**.

   A list of 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

Bin full
Black-only retract
Exit 2
Exit door switch
Feed
Front door switch
Fuser exit
Left door switch
MPF paper present
Registration
Tray 1 paper present
Tray 1 paper size
Tray 1 pick position

Motor tests

1. Enter the Diagnostics menu, and then touch **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.

List of motor tests

Black-only developer roller clutch
C toner supply
Cooling fan
Duplex transport clutch
Exhaust fan
Exit 2
Exit diverter 1 solenoid
Exit diverter 2 solenoid
Fuser
Fuser fan
K toner supply
M toner supply
Main
MPF feed clutch
Offset stack solenoid
Registration clutch
Sub
Toner density shutter solenoid
Transfer fan
Transport clutch
Tray 1 pick/lift
Y toner supply
YMC retract solenoid

Registration adjust

This setting lets you adjust the skew and margins. You can also perform a Quick test after the adjustment.

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

   Printer diagnostics & adjustments > **Registration adjust**

2. Select a setting.

Color registration adjust

This setting lets you adjust the color registration and print or reset the default settings.

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

   Printer diagnostics and adjustments > **Color registration adjust**

2. Select a color to adjust.

Universal Override

This setting lets you feed custom paper sizes to a Custom Media Tray.

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

   Printer diagnostics & adjustments > **Universal Override**

2. Select a paper source, and then adjust the settings.

Scanner Diagnostics

Motor Tests

1. Enter the Diagnostics menu, and then touch **Scanner Diagnostics** > **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 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.

List of motor tests

Flatbed Scanner
ADF Transport
ADF Pick
ADF Deskew
ADF Separator

Sensor Test

This test verifies the status of the scanner sensors.

1. Enter the Diagnostics menu, and then touch **Scanner Diagnostics**.
2. From the Sensor Test section, touch **Start**.

   A list of 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

Sensor (FB CCD Home)
Sensor (ADF closed)
Sensor (ADF media present)
Sensor (ADF gap detect)
Sensor (ADF pick)
Sensor (ADF trail)
Sensor (ADF 1st scan)
Sensor (ADF 2nd scan)
Sensor (ADF media exit)
Sensor (ADF top door interlock)
Sensor (ADF open angle)
Sensor (FB media length)
Sensor (FB length 2)
Sensor (ADF paper length 1)
Sensor (ADF paper length 2)
Sensor (ADF mixed paper width 1)
Sensor (ADF mixed paper width 2)
Sensor (ADF mixed paper width 3)
Sensor (ADF width 1)
Sensor (ADF width 2)
Sensor (ADF width 3)

Feed Test

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

1 Enter the Diagnostics menu, and then touch **Scanner Diagnostics** > **Feed Test**.

2 Select a paper size.

3 From the Feed Test section, touch **Start**.

Additional input tray diagnostics

Sensor tests

1. Enter the Diagnostics menu, and then touch **Additional input tray diagnostics**.
2. From the Sensor tests section, touch **Start**.

   A list of 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

Feed
Optional tray door switch
Tray 2 paper present
Tray 2 paper size
Tray 2 pick position
Tray 3 paper present
Tray 3 paper size
Tray 3 pick position
Tray 4 paper present
Tray 4 paper size
Tray 4 pick position

Configuration Menu

Entering Configuration Menu

From the home screen, touch **Settings** > **Device** > **Maintenance** > **Configuration Menu**.

Configuration Menu

Menu item	Description
USB Configuration USB PnP 1* 2	Change the USB driver mode of the printer to improve its compatibility with a personal computer.
USB Configuration USB Scan to Local On* Off	Set whether the USB device driver enumerates as a USB Simple device (single interface) or as a USB Composite device (multiple interfaces).
USB Configuration USB Speed Full Auto*	Set the USB port to run at full speed and disable its high-speed capabilities.
Tray Configuration Size Sensing Tray [x] Sensing Off On* Oficio/Folio Sensing Folio* Oficio (Mexico) Statement/A5 Sensing Sense Statement* Sense A5 Executive/B5 Sensing Sense Exec* Sense B5	Set the tray to sense automatically the paper size loaded into it.
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	Display a message that lets the user change the paper size and paper type settings after inserting the tray.
Tray Configuration Paper Prompts Auto* Multipurpose Feeder Manual Paper	Set the paper source that the user fills when a prompt to load paper appears. **Note:** For Multipurpose Feeder to appear, in the Paper menu, set Configure MP to Cassette.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
Tray Configuration Envelope Prompts Auto* Multipurpose Feeder Manual Envelope	Set the paper source that the user fills when a prompt to load envelope appears. **Note:** For Multipurpose Feeder to appear, in the Paper menu, set Configure MP to Cassette.
Tray Configuration Action for Prompts Prompt user* Continue Use current	Set the printer to resolve paper- or envelope-related change prompts.
Tray Configuration Envelope Tray Setup Off* On	Enable the envelope tray to print envelopes.
Tray Configuration Multiple Universal Sizes Off* On	Set the tray to support multiple universal paper sizes.
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 the supply usage history, such as number of pages and days remaining, to the factory shipped level.
Supply Usage And Counters Large Media Adjustments Off* On	Allow adjustments when printing for large or thick media.
Supply Usage And Counters ITM Reset Reset Black Cartridge Counter Reset Cyan Cartridge Counter Reset Magenta Cartridge Counter Reset Yellow Cartridge Counter Reset Maintenance Counter	Reset the counter after installing a new supply item or maintenance kit.
Supply Usage And Counters Tiered Coverage Ranges	Adjust the amount of color coverage for each printing range.
Printer Emulations PPDS Emulation Off* On	Set the printer to recognize and use the PPDS data stream.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
Printer Emulations PS Emulation Off On*	Set the printer to recognize and use the PS data stream.
Printer Emulations Enable Prescribe Off* On	Activate Prescribe. **Note:** The Prescribe license must be installed.
Printer Emulations Emulator Security Page Timeout 0–60 (60*)	Set the page timeout during emulation.
Printer Emulations Emulator Security Reset Emulator After Job Off* On	Reset the emulator after a print job.
Printer Emulations Emulator Security Disable Printer Message Access Off On*	Disable access to printer message during emulation.
Fax Configuration Fax Low Power Support Disable Sleep Permit Sleep Auto*	Set fax to enter Sleep mode whenever the printer determines that it must.
Fax Configuration Fax Storage Location NAND Disk*	Set the storage location for all faxes. **Note:** This menu item appears only when a hard disk or an ISD is installed.
Print Configuration Black Only Mode Off* On	Print non-copy jobs in grayscale.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
Print Configuration Color Trapping Off 1 2* 3 4 5	Enhance the printed output to compensate for misregistration in the printer.
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.
Device Operations Quiet Mode Off* On	Set the printer to operate in Quiet Mode. **Note:** Enabling this setting slows down the overall performance of the printer.
Device Operations Panel Menus Off On*	Enable access to the printer menus from the control panel.
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 of the documents even if the job is two-sided printing.
Device Operations Minimum Copy Memory 80 MB* 100 MB	Set the minimum memory allocation for storing copy jobs.
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 Off On*	Show existing error messages on the display after the printer remains inactive on the home screen for a length of time.
Device Operations Honor orientation on fast path copy Off* On	Enable the printer to use the orientation setting under the Copy menu when sending quick copy jobs.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
App Configuration LES Applications Off On*	Enable Lexmark Embedded Solutions (LES) applications.
Finisher Configuration Exit Tray 2 Setting Off* On	Enable the use of the second output bin.
Scanner Configuration Scanner Manual Registration Print Quick Test	Print a Quick Test target page. **Note:** Make sure that the margin spacing on the target page is uniform all the way around the target. If it is not, then the printer margins must be reset.
Scanner Configuration Scanner Manual Registration Front ADF Registration Rear ADF Registration Flatbed Registration	Manually register the flatbed and ADF after replacing the ADF, scanner glass, or controller board.
Scanner Configuration Reset Maintenance Counter	Reset the counter after replacing the ADF maintenance kit.
Scanner Configuration Edge Erase Flatbed Edge Erase (3*) ADF Edge Erase (3*)	Set the size, in millimeters, of the no-print area around an ADF or flatbed scan job.
Scanner Configuration Disable Scanner No* Yes ADF Only	Disable the scanner when it is not working properly.
Scanner Configuration Tiff Byte Order CPU Endianness* Little Endian Big Endian	Set the byte order of a TIFF-formatted scan output.
Scanner Configuration Exact Tiff Rows Per Strip On* Off	Set the RowsPerStrip tag value of a TIFF-formatted scan output.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Service Engineer (SE) Menu

Entering Invalid Engine Mode

This mode lets the printer load the correct firmware code.

1. Turn off the printer.
2. Lift the ADF.
3. Turn on the printer.
4. When the following icon shows on the display, close the ADF.

5. On the menu that appears on the display, touch **->** until ENGINE_FLASH appears.
6. Touch **ENGINE_FLASH** only once.

   Notes:

   - The menu is selected when it turns green.
   - Make sure that ENGINE_FLASH does not have an asterisk (*).
7. Touch **Boot**.

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.

1. Unplug the power cord from the electrical outlet.
2. Open the ADF door.
3. Connect the power cord to the electrical outlet.

When the display shows the following icon, close the ADF door.

4 Touch **->** to navigate the menu that appears on the display, and then select **RECOVERY**.

Note: The selected menu turns green.

5 Touch **Boot**.

Entering the SE Menu

1 From the home screen, touch the on-screen keypad.

2 Touch * * **411**.

3 Touch the start icon or **GO**.

General SE Menu

- Capture Logs to USB Drive

  Note: This setting allows you to save a log file to a USB drive.
- Capture Logs to Internal Storage
- 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

Top-level menu	Intermediate menu
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
Enable Dual-NIC	N/A
Enable BLE	N/A
Netconfig Debug Level	N/A
IPP ICONS	Delete intermediate icons
	Delete current icons

Scanner SE Menu

Enter this setting to view the calibration data.

Parts removal

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.
- **Intelligent storage drive (ISD)**—Some printers may have an ISD installed. ISD uses non-volatile flash memory to store 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
- Intelligent storage drive (ISD)

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

Erasing printer memory

To erase volatile memory or buffered data in your printer, turn off the printer.

To erase nonvolatile memory, device and network settings, security settings, and embedded solutions, do the following:

1. From the home screen, touch **Settings** > **Device** > **Maintenance** > **Out of Service Erase**.
2. Touch the **Sanitize all information on nonvolatile memory** check box, and then touch **ERASE**.
3. Touch **Start initial setup wizard** or **Leave printer offline**, and then touch **Next**.
4. Start the operation.

Note: This process also destroys the encryption key that is used to protect user data. Destroying the encryption key makes the data irrecoverable.

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

To prevent damage to the electrostatic discharge (ESD)-sensitive parts in the printer, 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.
- Use the ESD wrist strap. 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 in 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 311**.

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 317**.

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.

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.

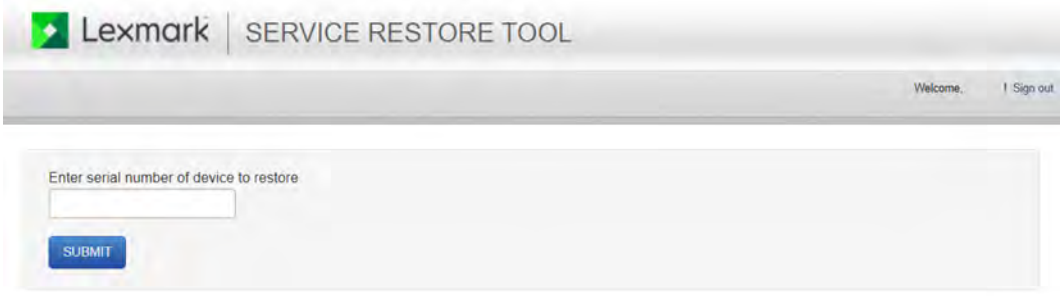
Note: If you do not have access to Service Restore Tool, then contact your next level of support.

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.

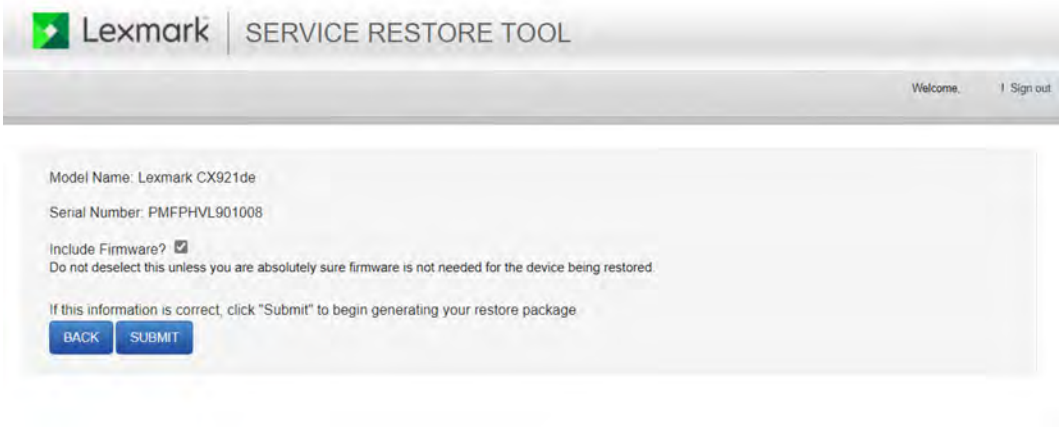
Using the Service Restore Tool

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.

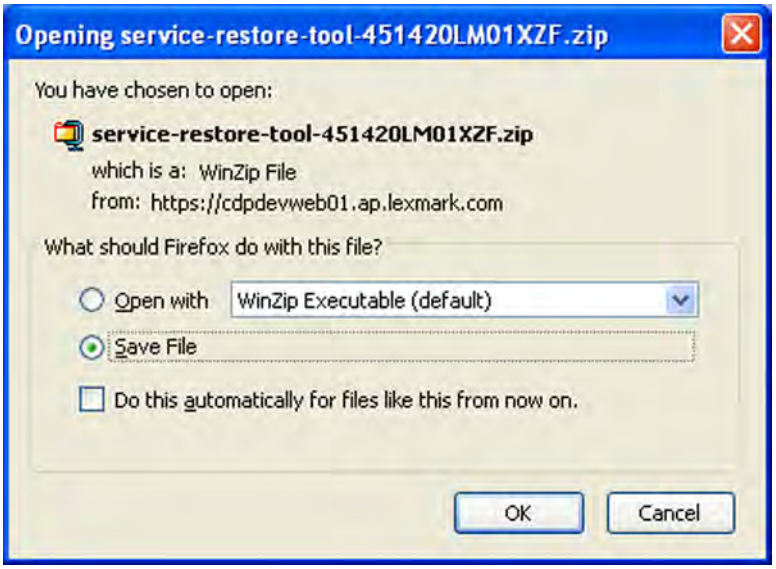


Note: Make sure that the serial number that appears on the verification screen is correct.



4 Save the zip file.

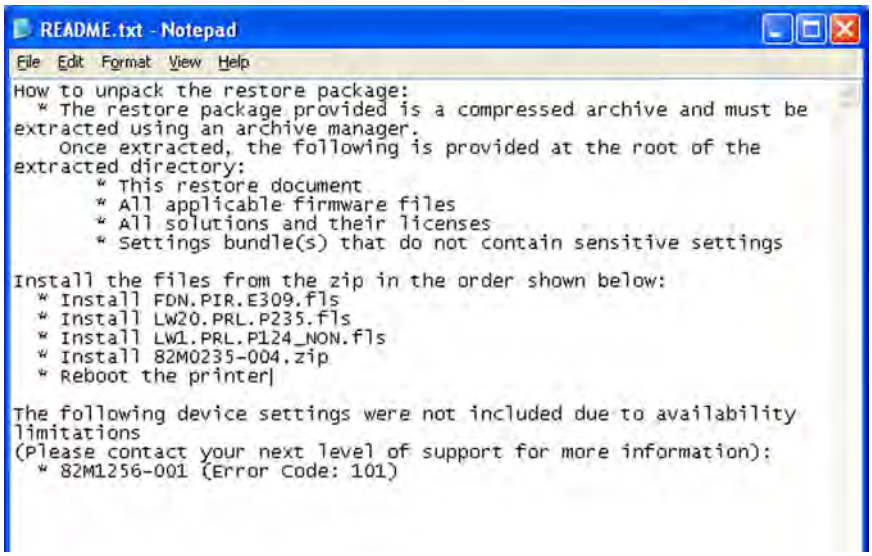
Note: Make sure that the serial number in the zip file matches the serial number of the printer being restored.



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 316**.
- To load the zip files that are extracted from the Service Restore Tool, see **"Restoring licenses and configuration settings" on page 315**.



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.

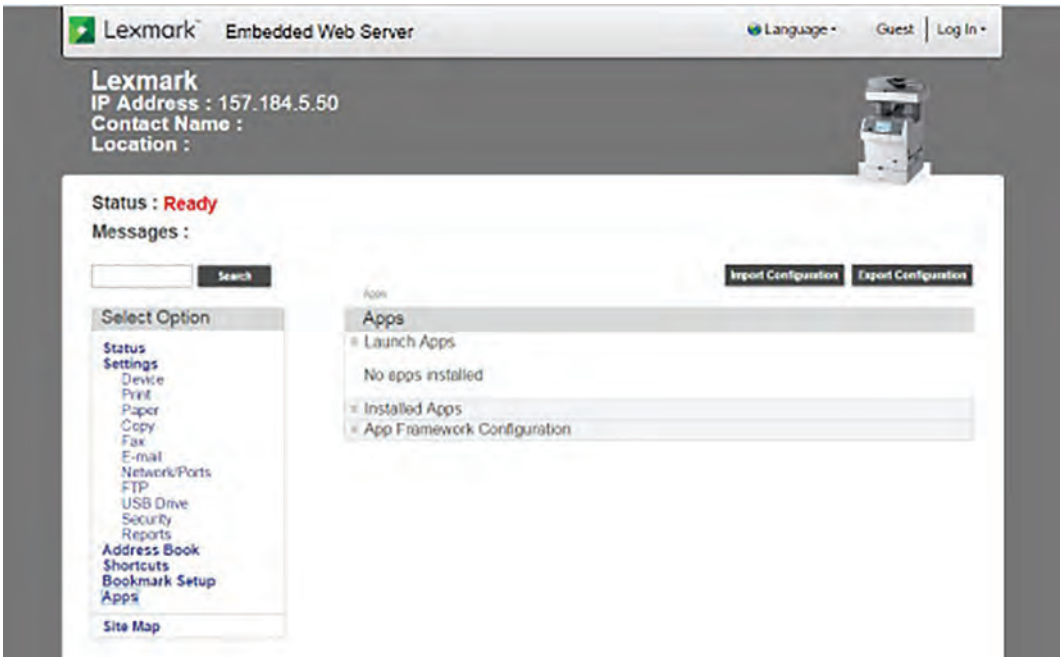
Notes:

- 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.

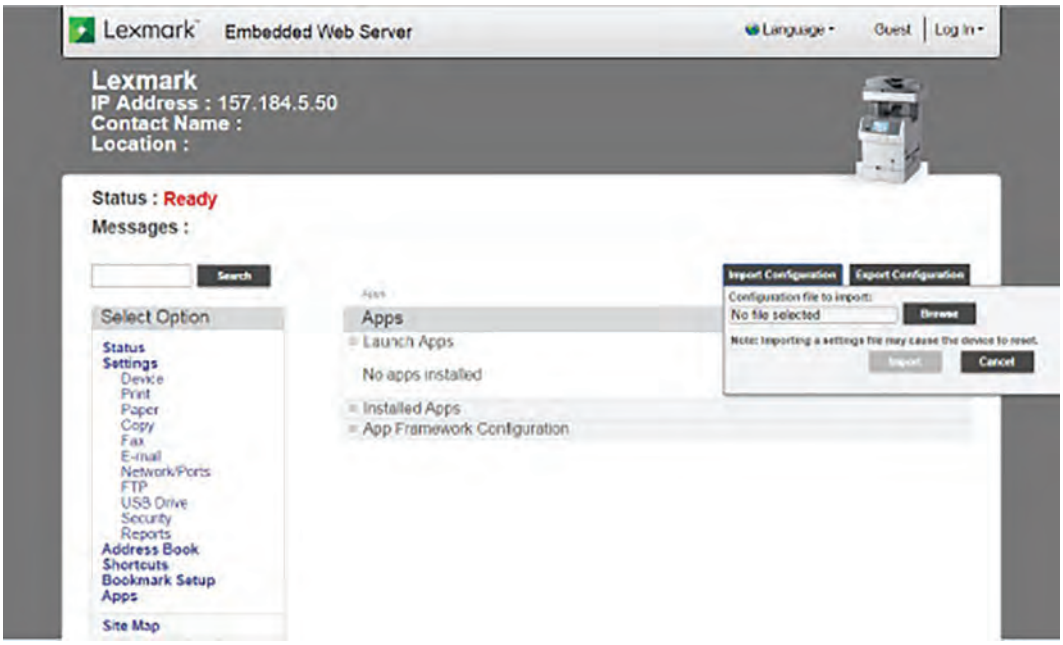
Restoring licenses and configuration settings

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

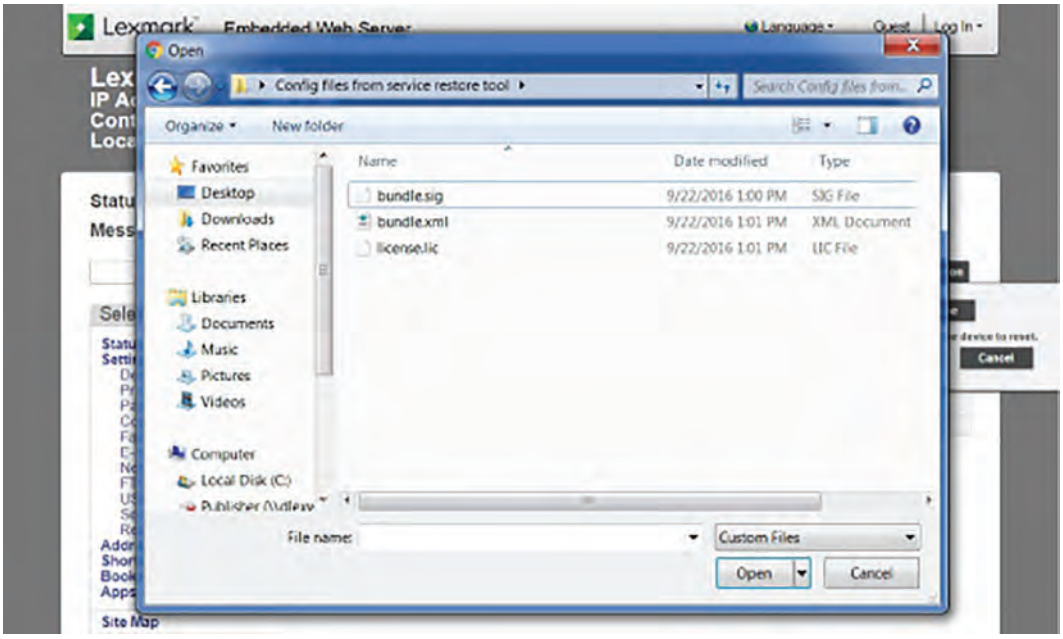
1 Open a web browser, and then type the printer IP address to access the Embedded Web Server.



2 Click **Import Configuration**, and then click **Browse**.



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.

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

Using a flash drive

This procedure applies only to printer models with front USB support.

1. Insert the flash drive.
2. Select the file that you need to flash.

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

Using a network computer

Using the File Transfer Protocol (FTP)

Make sure that the printer is in ready state before flashing.

1. Turn on the printer.
2. Obtain the IP address:
   - From the home screen
   - From the Network Overview section of the Network/Ports menu
3. From the command prompt of a network computer, open an FTP session to the printer IP address.
4. Use a PUT command to place the firmware file on the printer.

   The printer performs a POR sequence and terminates the FTP session.
5. Repeat step 2 through step 4 for the other files.

Using the Embedded Web Server

Make sure that the printer is in ready state before flashing.

1. Open a web browser, and then type the printer IP address.
2. From the home page, navigate to:

   Settings > **Device** > **Update Firmware**
3. Select the file to use.

   The printer performs a POR sequence.
4. Repeat step 2 through step 4 for the other files.

Backing up eSF solutions and settings

Note: Export the eSF solutions and settings from the printer before replacing the controller board.

Exporting eSF solutions and settings file

1. Reset the printer into Invalid engine mode. See **“Entering Invalid Engine Mode” on page 306**.
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 Click **Apps**, click **Export Configuration**, and then select one of the options in the dropdown menu.

4 Click **Export**.

Note: The size limit of the export file is 128 KB.

Adjustments

Registration adjustment

Image misalignments can occur after printhead replacement. Perform this procedure to correct the position of the image relative to the paper edges.

Note: You cannot perform mechanical registration or skew adjustments on this printhead.

Before performing the procedure, make sure that the paper guides are properly set and the paper settings on the printer match the paper size loaded in the tray.

Adjusting the skew

The skew adjustment changes the angle of the horizontal lines so that the lines can be aligned with the leading edge of the page. As the skew setting is changed, the top line on the test page stays in place at the left end, while its right end tilts up or down. All horizontal lines on the page tilt at that same angle while the vertical lines remain vertical. Changing the skew setting moves the right edge of the page up and down, and changes the angle of the top and bottom lines. If the skew is properly adjusted, then the horizontal lines at the top of the page are parallel to the leading edge of the page.

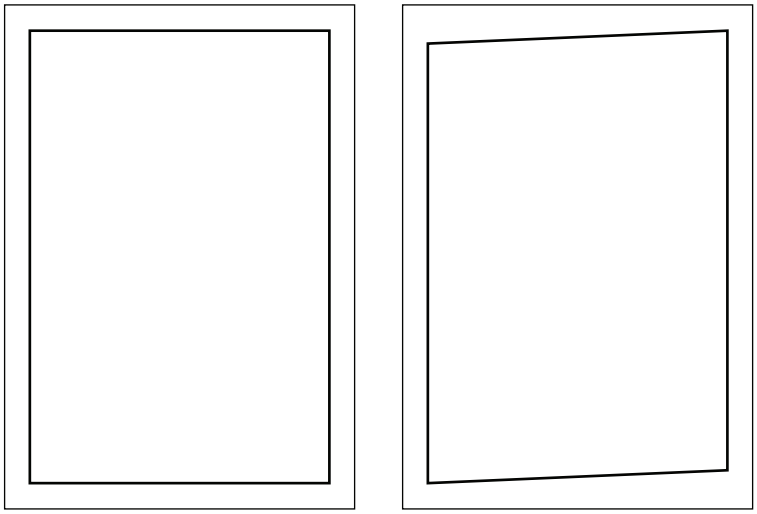
To check for skew:

1 Enter the Diagnostics Menu, and then navigate to:

Printer diagnostics and adjustments > **Registration adjust** > select a paper source.

2 Select **Quick Test**.

The printer prints a test page.



Note: If there is no skew on the page, then go to Adjusting the margins topic. See **"Adjusting the margins" on page 320**.

To adjust the skew:

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

   Printer diagnostics and adjustments > **Registration adjust** > select a paper source > **Top Skew**

2. Adjust the value.

   Notes:

   - Increasing the value of the skew rotates the horizontal lines clockwise. The left end of the line remains in the same place and the right end moves downward.
   - Decreasing the value of the skew rotates the horizontal lines counterclockwise. The left end of the line remains in the same place and the right end moves upward.

3. Print a Quick Test page to verify the change.
4. Repeat step 1 through step 3 until the horizontal line is properly aligned with the leading edge of the page.
5. Check for proper margin alignment. See **"Adjusting the margins" on page 320**.

Adjusting the margins

To check for proper margin alignment:

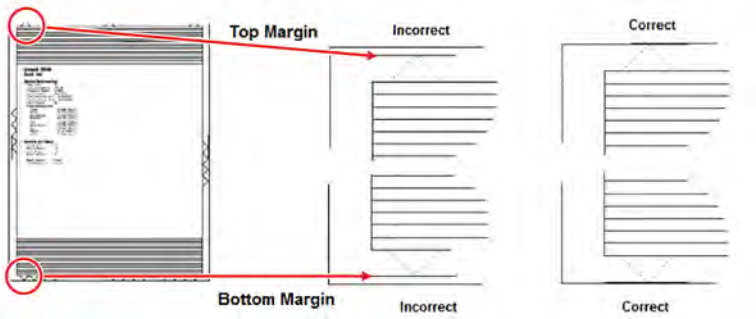
1. Enter the Diagnostics Menu, and then navigate to:

   Printer diagnostics and adjustments > **Registration adjust** > select a paper source.

2. Select **Quick Test**.

   The printer prints a test page.

3. Check the top and bottom margins of the test page for proper alignment.



To adjust the margins:

1. Refer to the test page, and then check the arrows along the margins.

   Notes:

   - The arrows must be completely visible along the edges.
   - The tip of the arrows must point to the edges of the paper.

2. Enter the Diagnostics Menu, and then navigate to:

   Printer diagnostics and adjustments > **Registration adjust** > select a paper source.

3. Select the margin to adjust.

4. Adjust the value.

   Notes:

   - Increasing the value of the top margin setting pushes the top edge of the image downward.
   - Increasing the value of the bottom margin setting pushes the bottom edge of the image upward.
   - Increasing the value of the left margin setting pushes the left margin to the right.
   - Increasing the value of the right margin setting pushes the right margin to the left.

5. Print a Quick Test page to verify the change.

6. Repeat step 3 through step 5 until the margins are correct.

7. Check for proper color alignment. See **“Adjusting the color alignment” on page 321**.

Adjusting the color alignment

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

   Printer diagnostics and adjustments > **Color alignment adjust** > **AA Adjustment**

   Note: The procedure is performed on the cyan, magenta, and yellow colors.

2. Enter the Diagnostics Menu, and then navigate to:

   Printer diagnostics and adjustments > **Color alignment adjust** > **Cyan** > **Quick Test**

   Check the alignment markings on the test page. Follow the instructions on the test page to correct the color misalignment.

3. Enter the Diagnostics Menu, and then navigate to:

   Printer diagnostics and adjustments > **Color alignment adjust** > **Yellow** > **Quick Test**

   Check the alignment markings on the test page. Follow the instructions on the test page to correct the color misalignment.

4. Enter the Diagnostics Menu, and then navigate to:

   Printer diagnostics and adjustments > **Color alignment adjust** > **Magenta** > **Quick Test**

   Check the alignment markings on the test page. Follow the instructions on the test page to correct the color misalignment.

5. If color misalignment still occurs, then repeat step 1 through step 4.

Printhead characterization

Notes:

- A new printhead includes a flash drive that contains the characterization data.
- After installing a new printhead, enter the characterization data using any of the following procedures.
- The characterization data cannot be used on another printhead. Erase the files from the flash drive after entering the characterization data.

Entering characterization data from the flash drive

Note: This procedure applies only to printer models with front USB support.

1. Insert the flash drive into the USB port.

   Note: The printer copies automatically the required data from the flash drive. The printer restarts after copying the data.

2. While the printer is restarting, remove the flash drive.

3. Perform the printhead adjustment. See **“Registration adjustment” on page 318**.

Entering characterization data using WinBlast

1. On your laptop, create a folder and name it Printhead data.

2. Copy the flash drive contents to the folder.

3. Connect the laptop to the printer using a USB cable.

4. In the Printhead data folder, run the WinBlast application.

5 Select the printer.

6 Click **...**, access the Printhead data folder, and then select the .npa file.

7 Click **Send**.

On the control panel, the printer shows its status while processing the files. After the update, restart the printer.

8 Perform the printhead adjustment. See **"Registration adjustment" on page 318**.

Entering characterization data on a network

Note: Request permission from the customer to use the network.

1 On your Windows laptop, create a folder and name it Printhead data.

2 Copy the flash drive contents to the folder. Take note of the .npa filename.

3 Obtain the IP address of the printer.

4 On the laptop, use the command prompt to enter the Printhead data folder.

5 Type the following:

`tcpipblast.exe <printer IP address> <.npa filename>`

For example:

6 Press **Enter**.

On the control panel, the printer shows its status while processing the files. After the update, restart the printer.

7 Perform the printhead adjustment. See **"Registration adjustment" on page 318**.

Sensor (waste toner bottle) calibration

To ensure the accuracy of the waste toner level detection, calibrate the sensor (waste toner bottle).

1 Enter the Diagnostics menu, and then navigate to:

Printer setup > **Waste toner sensor calibration**

2 Remove the waste toner bottle.

3 Select **Start calibration**.

If the calibration is successful, then a **`Test passed`** message appears on the display.

4 Install the waste toner bottle, and then restart the printer.

Removal procedures

When replacing printer parts, take note of the following:

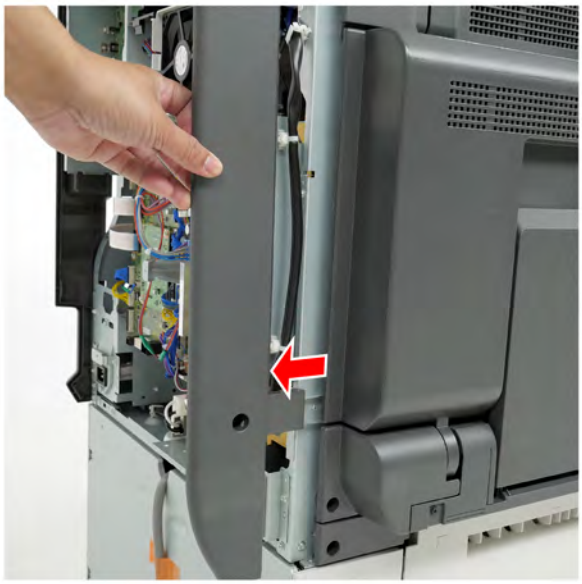
- Some removal procedures require removing cable ties. Do not forget to install these cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.
- Remove the cartridges before removing other printer parts. Carefully set the cartridges on a clean, smooth, and flat surface. Protect the cartridges from light while out of the printer.
- Disconnect all external cables from the printer to prevent possible damage during service.
- Unless otherwise stated, install the parts in reverse order of removal.
- When installing a part held with several screws, start all screws before the final tightening.
- For printers that have an electronic power switch, make sure to unplug the power cord after powering off.

Left side removals

Left edge cover removal

1. Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.
2. Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.
3. Remove the two screws (A).

4 Remove the cover.

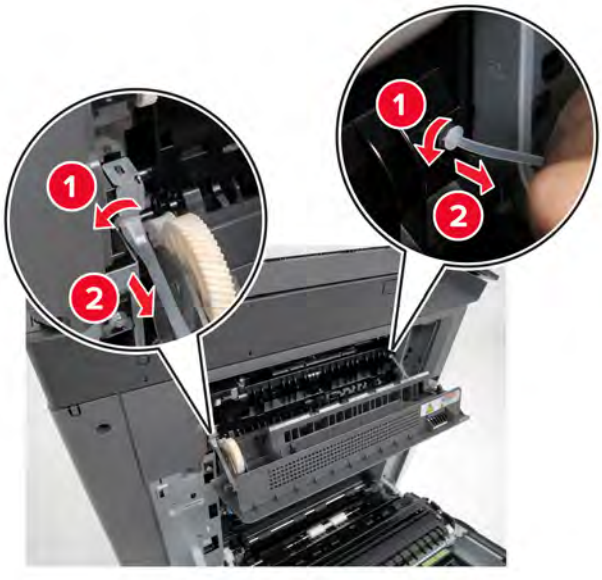


Exit door removal

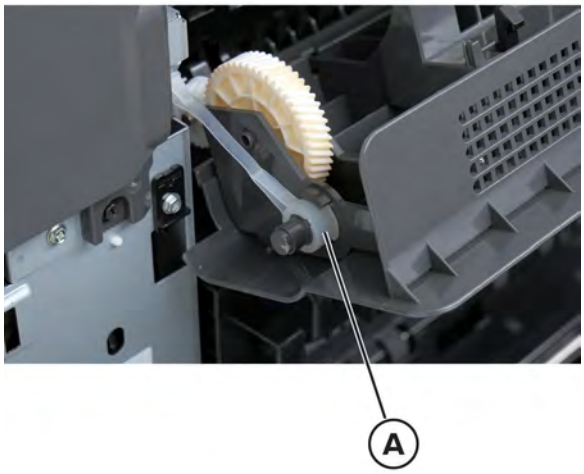
1 Open door A.

2 Open door C.

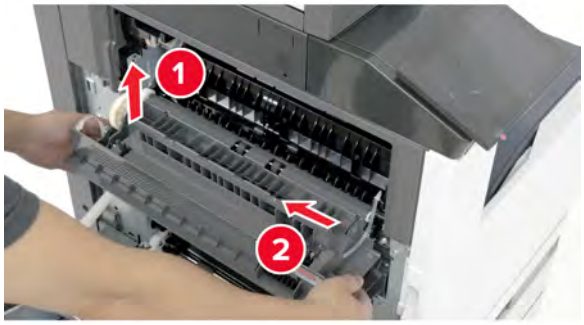
3 Release the two straps.



Note: If releasing the left strap is difficult, then release the right strap (A) first.

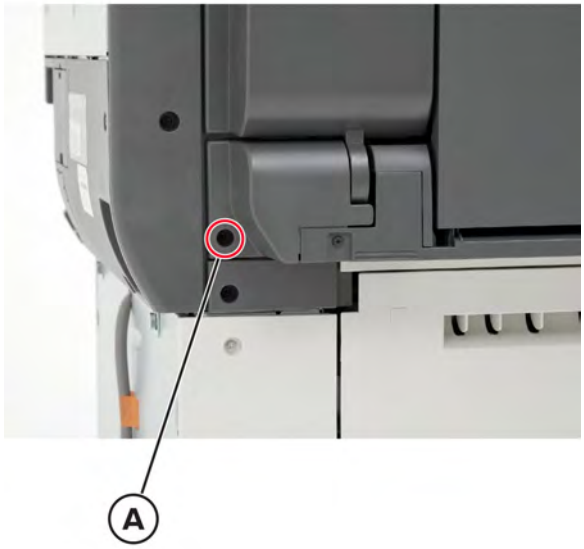


4 Remove the door.



Left door rear cover removal

1 Remove the screw (A).



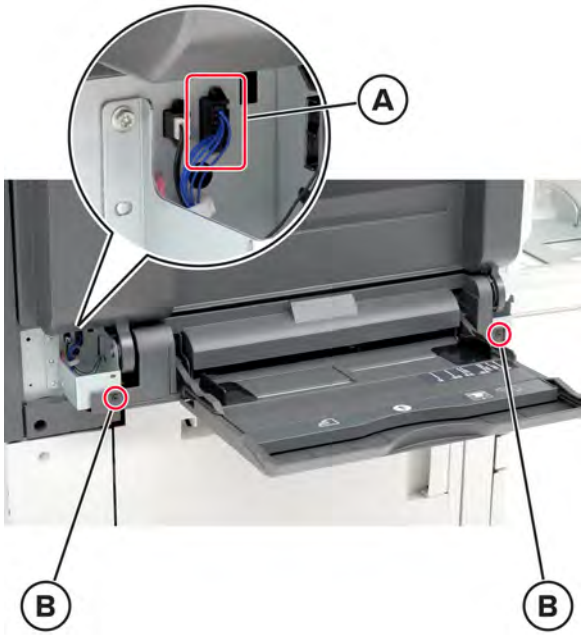
2 Remove the cover.

MPF removal

1 Remove the left door front cover. See **“Left door front cover removal” on page 369**.

2 Remove the left door rear cover. See **“Left door rear cover removal” on page 325**.

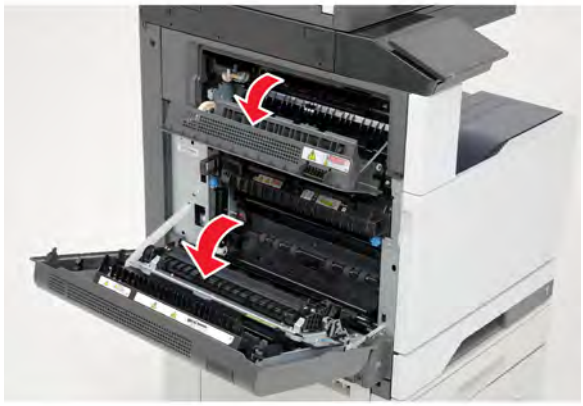
3 Disconnect the cable (A), and then remove the two screws (B).



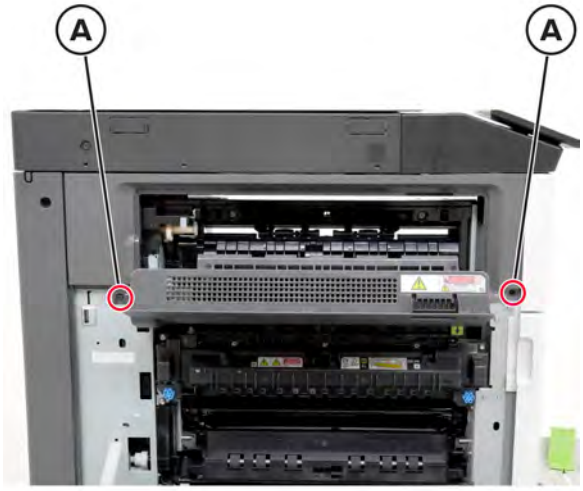
4 Remove the MPF.

Top left cover removal

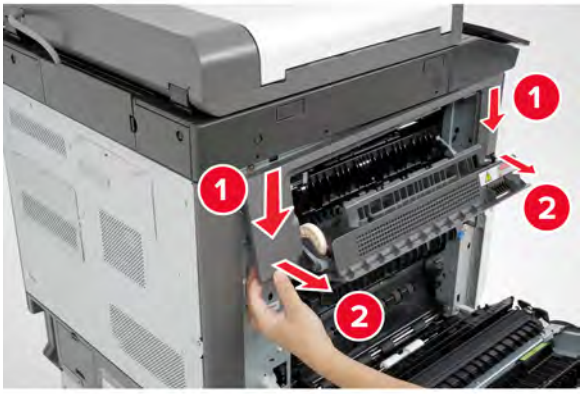
1 Open the doors.



2 Remove the two screws (A).



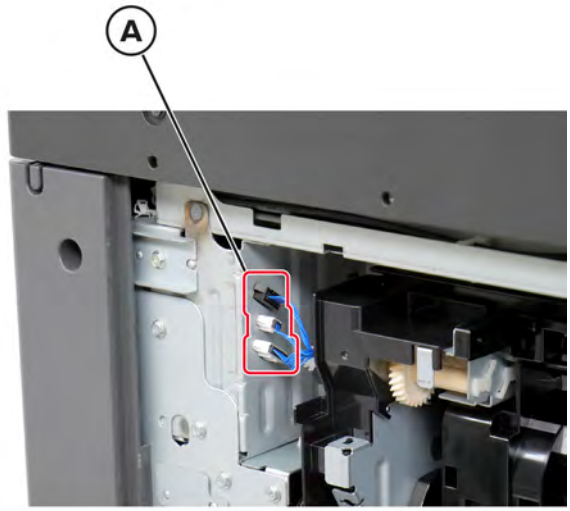
3 Remove the cover.



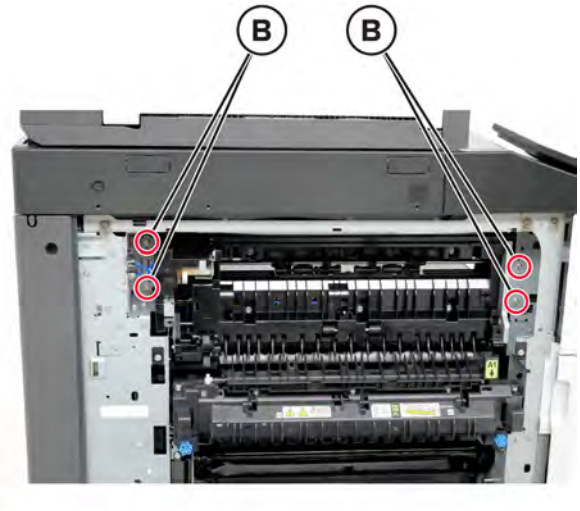
Exit 2 transport removal

1 Remove the top left cover. See **“Top left cover removal” on page 326**.

2 Disconnect the cables (A).



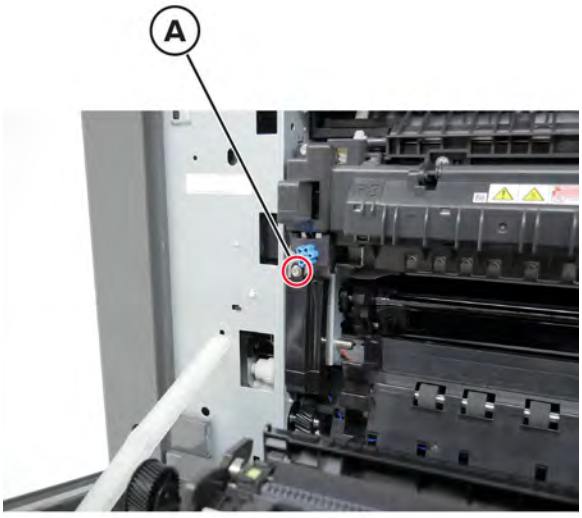
3 Remove the four screws (B).



4 Remove the exit 2 transport.

Registration cable cover removal

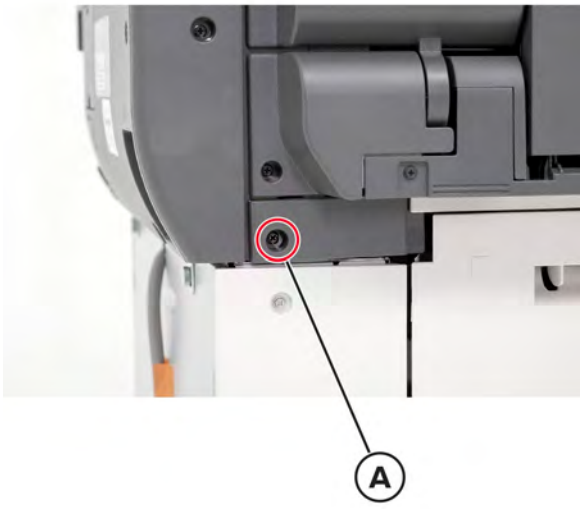
1 Open the left door, and then remove the screw (A).



2 Remove the cover.

MPF rear cover removal

1 Remove the screw (A).



2 Remove the cover.

MPF front cover removal

1 Remove the screw (A).

2 Remove the cover.

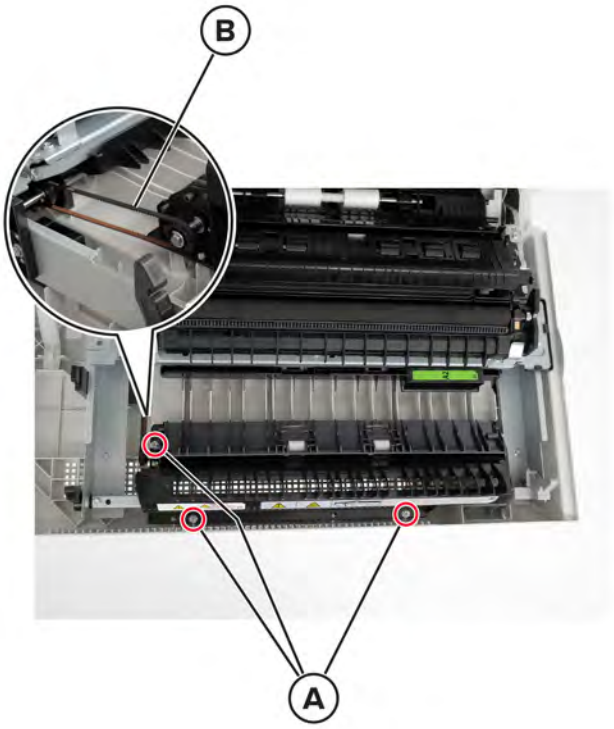
Upper duplex guide removal

1 Open door A.

2 Remove the three screws (A).

3 Release the belt (B).

Note: The belt can also be removed by pulling it while rotating the gears.



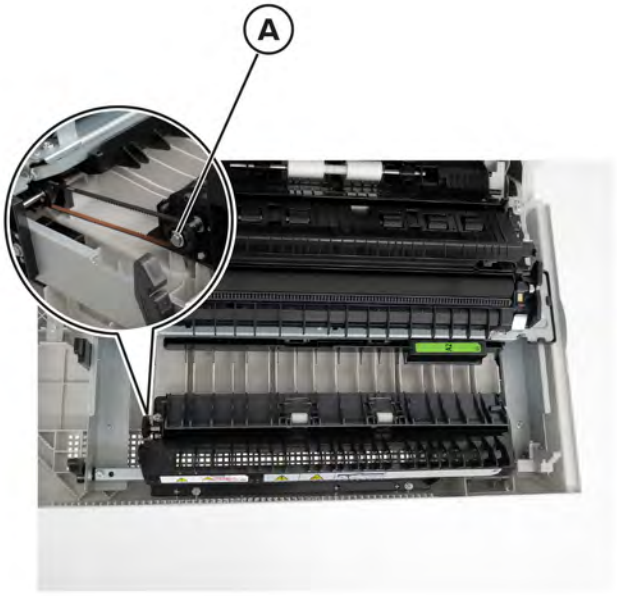
4 Remove the guide.

Duplex rear belt removal

1 Open door A.

2 Remove the E-clip (A), remove the gear, and then remove the belt.

Note: The belt can also be removed by pulling it while rotating the gears.

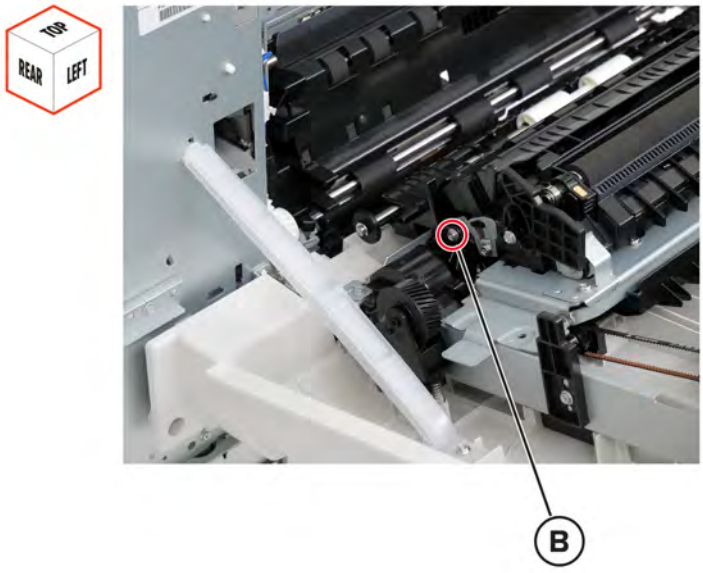


Lower duplex guide removal

1 Open door A.

2 Remove the E-clip (A), and then remove the retainer.

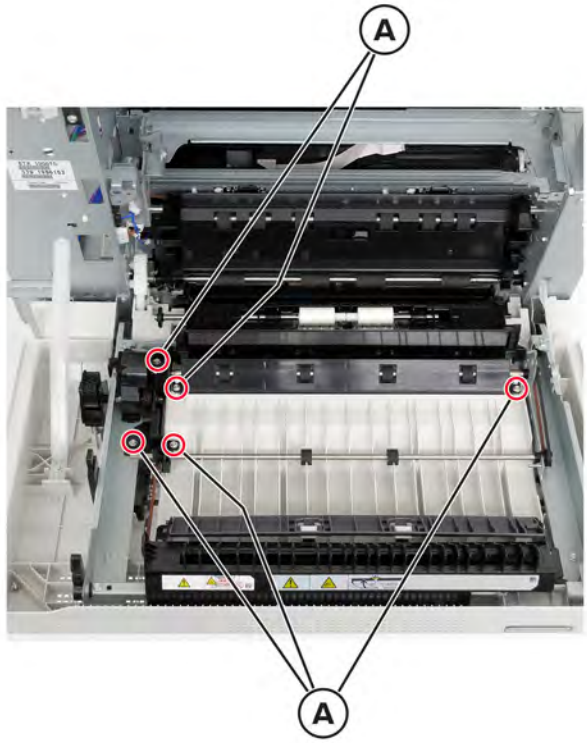
3 Remove the screw (B), and then remove the guide.



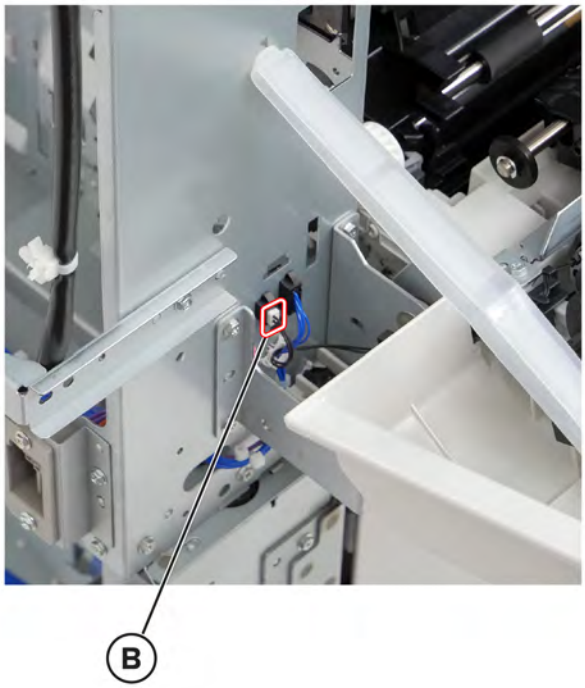
Lower duplex transport rollers removal

1. Remove the lower duplex guide. See **"Lower duplex guide removal" on page 332**.
2. Remove the five screws (A), two belts, and then remove the covers.

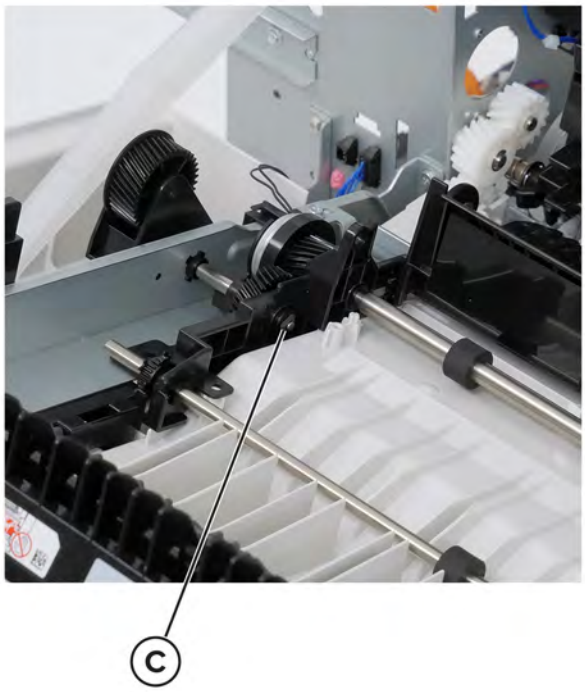
   Note: The belt can also be removed by pulling it while rotating the gears.



3 Disconnect the cable (B).

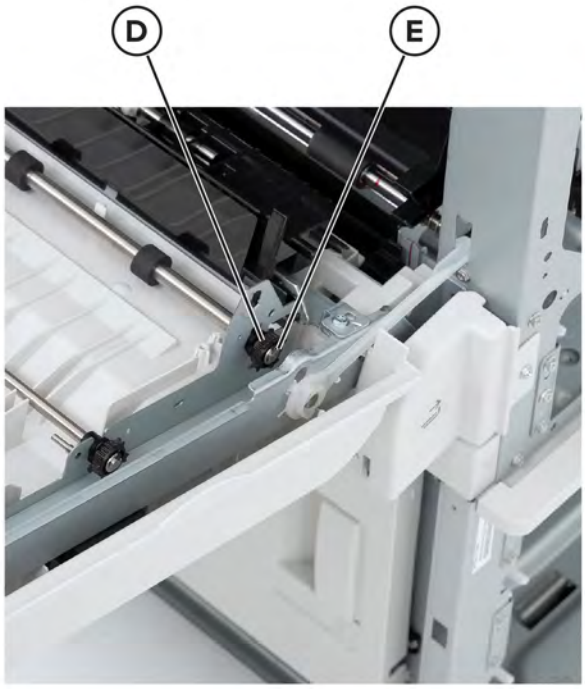


4 Remove the clip (C).



5 Unlock the bushing (D), and then release the shaft.

6 Remove the E-clip (E), and then remove the bushing.



7 Remove the transport rollers.

Duplex transport clutch removal

1 Remove the lower duplex guide. See **“Lower duplex guide removal” on page 332**.

2 Remove the lower duplex transport rollers. See **“Lower duplex transport rollers removal” on page 333**.

3 Remove the E-clip (A), and then remove the clutch.

Duplex front belt removal

1 Remove the lower duplex guide. See **“Lower duplex guide removal” on page 332**.

2 Remove the lower duplex transport rollers. See **“Lower duplex transport rollers removal” on page 333**.

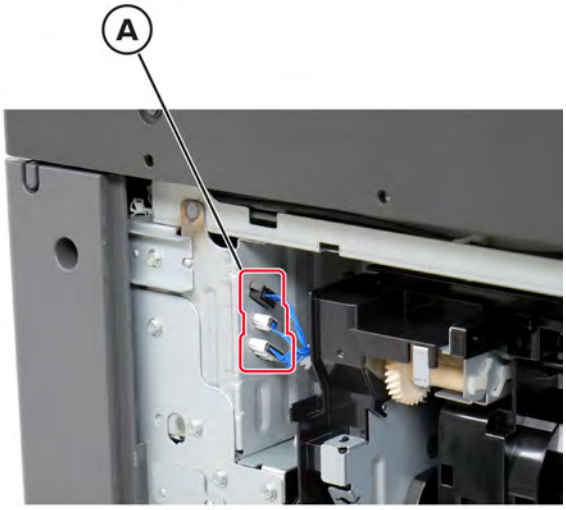
3 Remove the belt.

Note: The belt can be removed by pulling it while rotating the gears.

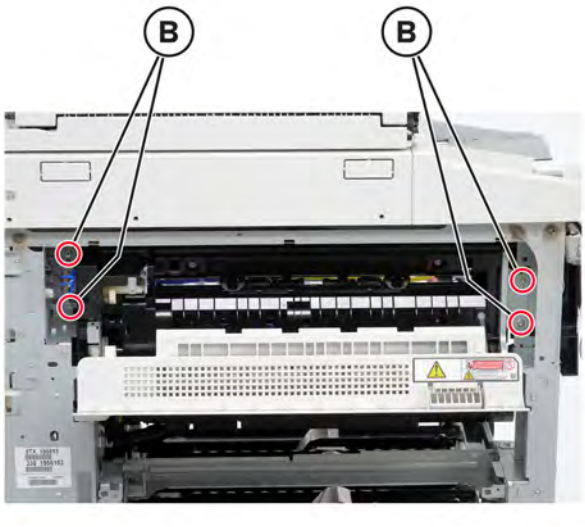
Exit transport with door and exit bail removal

1 Remove the top left cover. See **“Top left cover removal” on page 326**.

2 Disconnect the cables (A).



3 Remove the four screws (B).



4 Remove the exit transport with door and exit bail.

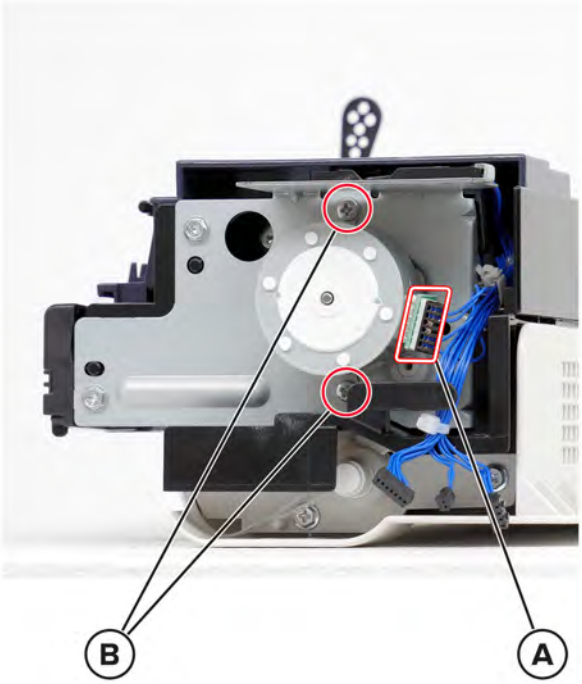
Installation note: Make sure that the exit bail is properly installed. See **"Exit 1 bail removal" on page 403**.

Motor (exit 2) removal

1 Remove the top left cover. See **"Top left cover removal" on page 326**.

2 Remove the exit transport, door, and exit bail. See **"Exit transport with door and exit bail removal" on page 337**.

3 Disconnect the cable (A), and then remove the two screws (B).



4 Remove the motor.

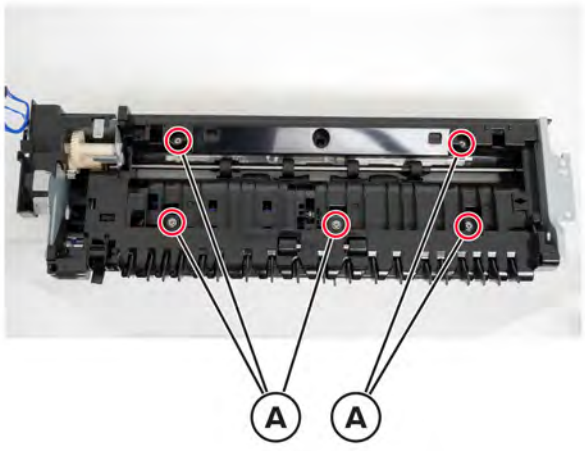
Exit transport cover and exit bail removal

1 Remove the exit door. See **"Exit door removal" on page 324**.

2 Remove the top left cover. See **"Top left cover removal" on page 326**.

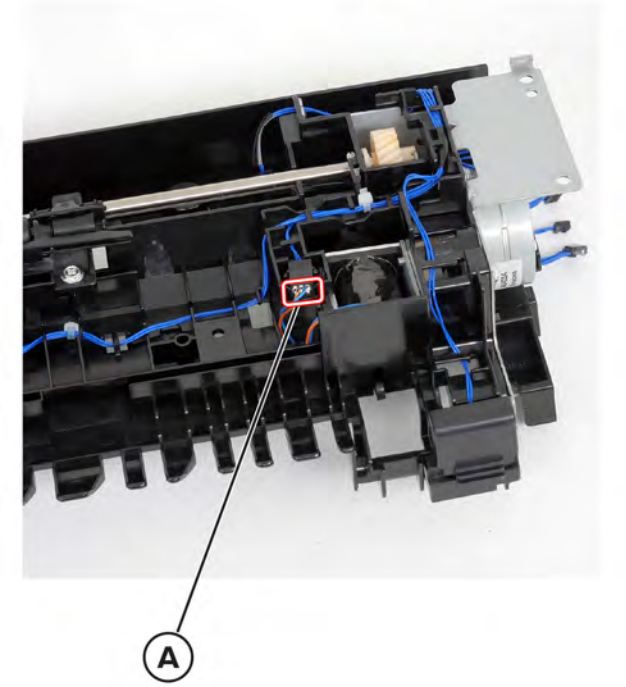
3 Remove the exit 2 transport. See **"Exit 2 transport removal" on page 328**.

4 Remove the five screws (A), and then remove the cover.

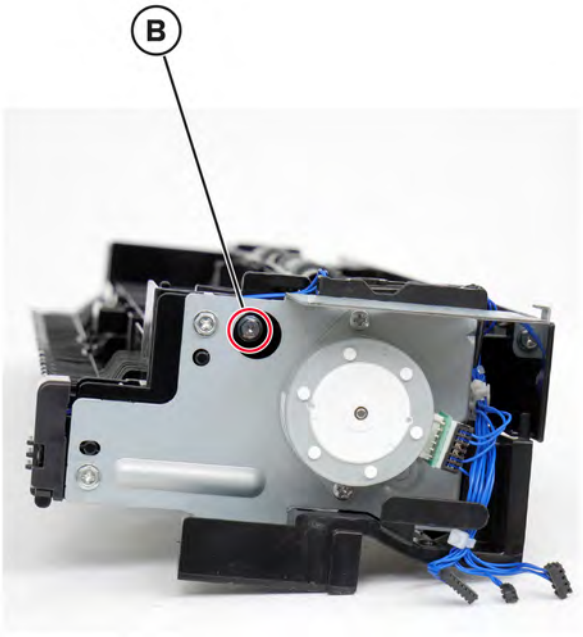


Exit diverter 2 solenoid removal

1. Remove the exit door. See **“Exit door removal” on page 324**.
2. Remove the top left cover. See **“Top left cover removal” on page 326**.
3. Remove the exit 2 transport. See **“Exit 2 transport removal” on page 328**.
4. Disconnect the cable (A).



5 Remove the screw (B), and then remove the solenoid.



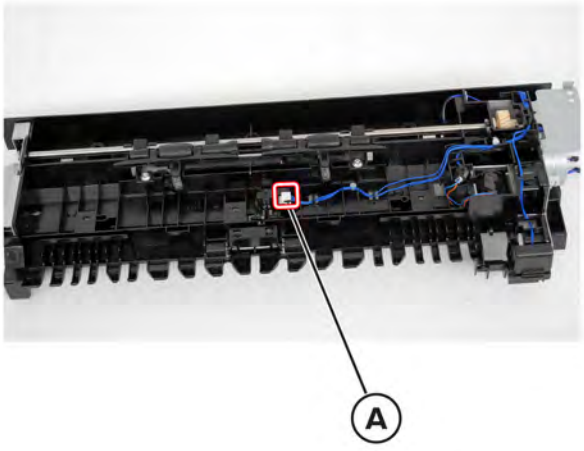
Sensor (exit 2) removal

1 Remove the exit door. See **"Exit door removal" on page 324**.

2 Remove the top left cover. See **"Top left cover removal" on page 326**.

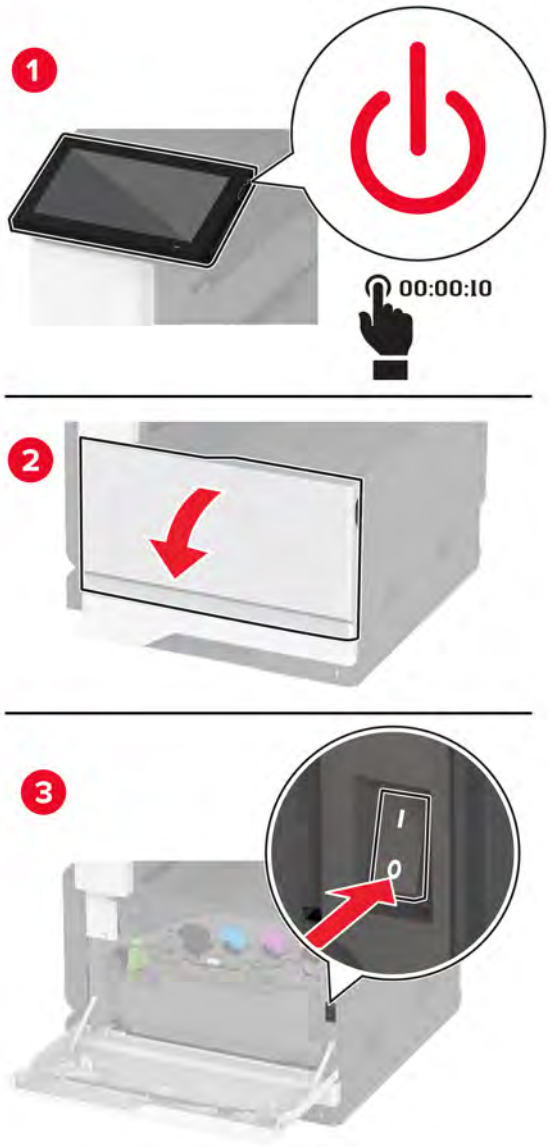
3 Remove the exit 2 transport. See **"Exit 2 transport removal" on page 328**.

4 Disconnect the cable (A), and then remove the sensor.



Fuser removal

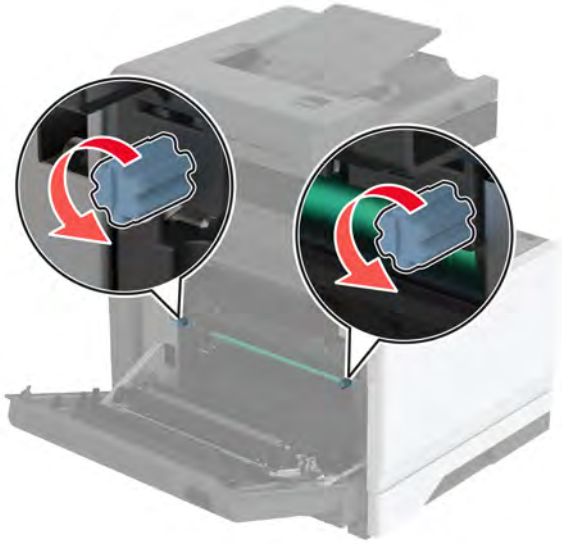
1 Turn off the printer.



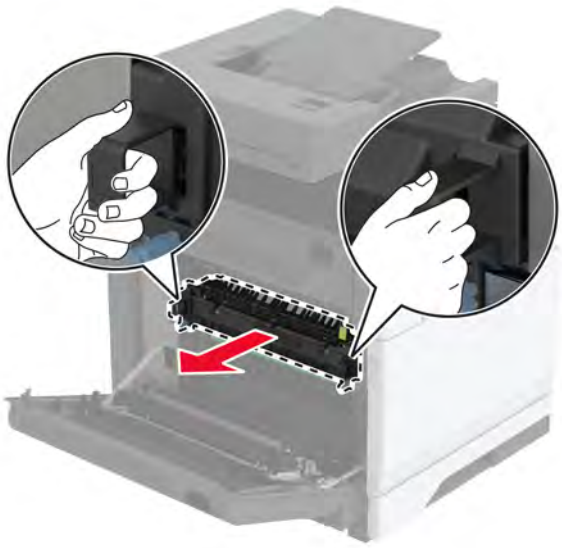
2 Open door A.

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.

3 Unlock the fuser.



4 Remove the fuser.



Right side removals

Right edge cover removal

1 Remove the upper rear cover. See **“Upper rear cover removal” on page 380**.

2 Remove the bottom rear cover. See **“Bottom rear cover removal” on page 382**.

3 Remove the screw (A).

4 Remove the cover.

Installation note: Align the hooks with their slots.

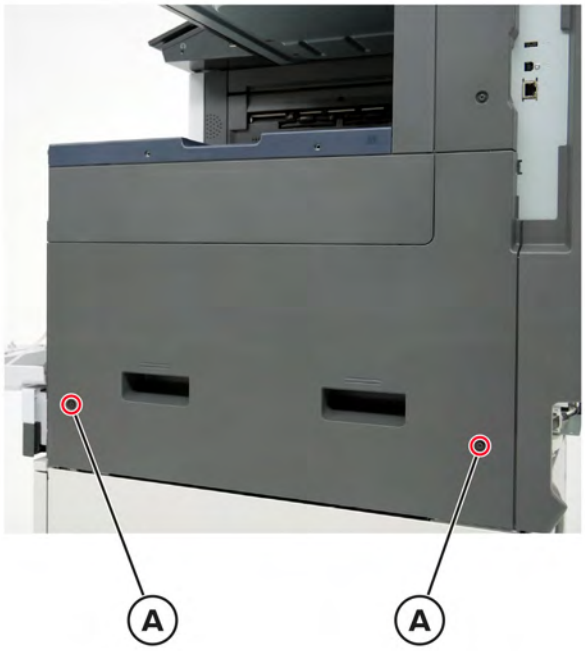
Right column cover removal

1 Remove the screw (A).

2 Remove the cover.

Right cover removal

1 Remove the two screws (A).



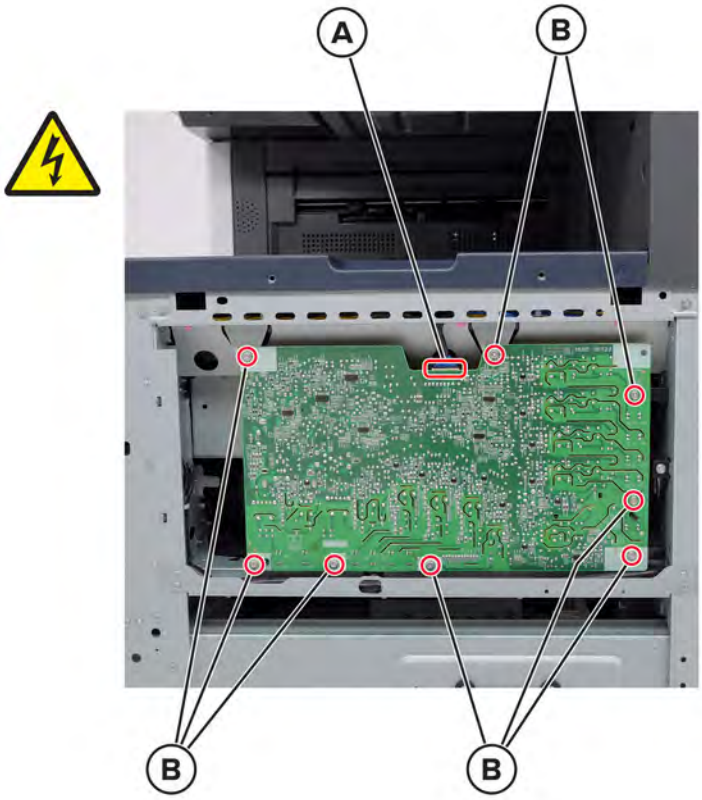
2 Remove the cover.

HVPS removal

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

1 Remove the right cover. See **"Right cover removal" on page 347**.

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



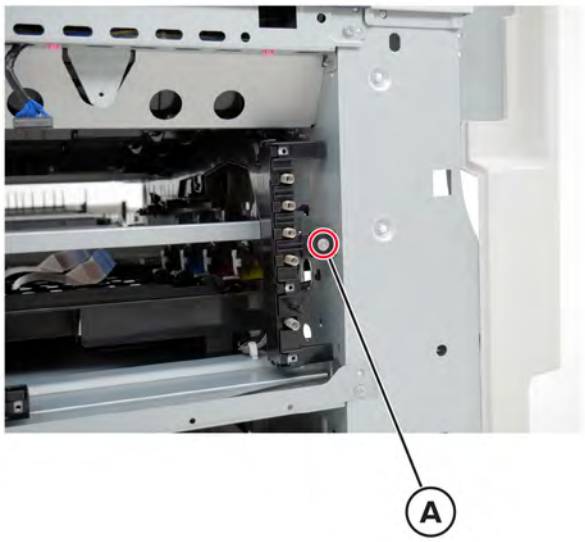
3 Remove the HVPS.

HVPS/transfer module contacts

1 Remove the right cover. See **"Right cover removal" on page 347**.

2 Remove the HVPS. See **"HVPS removal" on page 349**.

3 Remove the screw, and then remove the contact.



HVPS/developer contacts removal

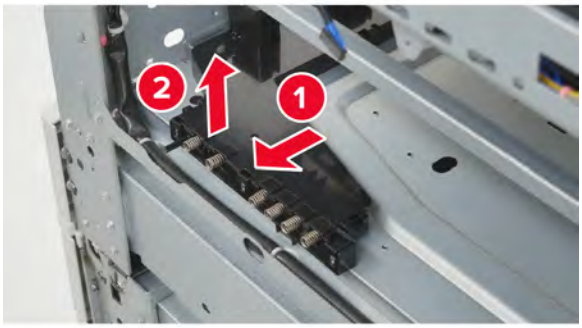
1 Remove the right cover. See **“Right cover removal” on page 347**.

2 Remove the HVPS. See **“HVPS removal” on page 349**.

3 Remove the developer unit cable cover. See **“Developer unit cable cover removal” on page 363**.

4 Remove the developer units. See **“Developer unit removal” on page 363**.

5 Release, and then remove the contact.



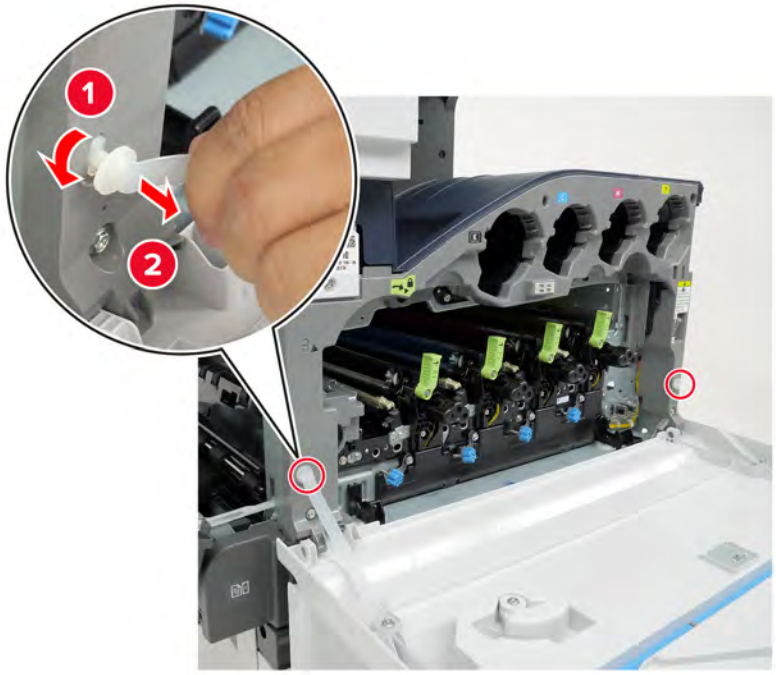
Front side removals

Front door removal

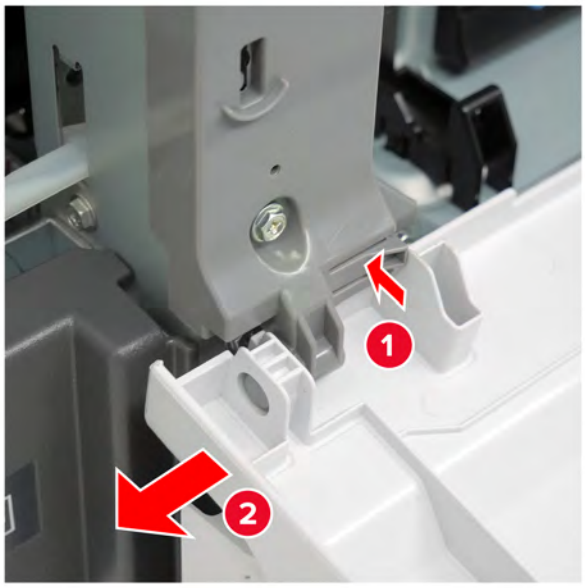
Note: For a video demonstration, see **Front door removal**.

1 Open the front door.

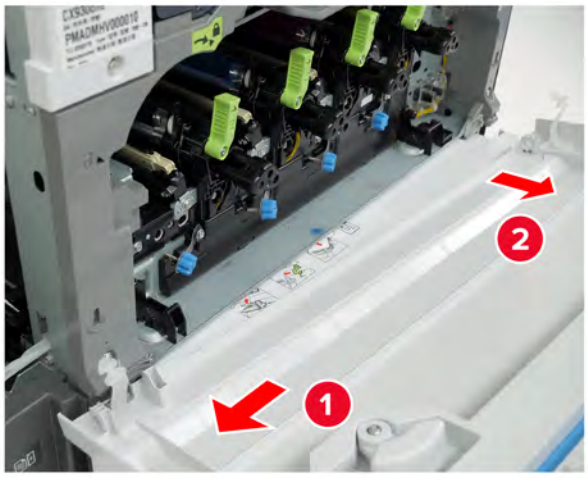
2 Release the two straps.



3 Release the latch, and then release the hinges.



4 Remove the door.

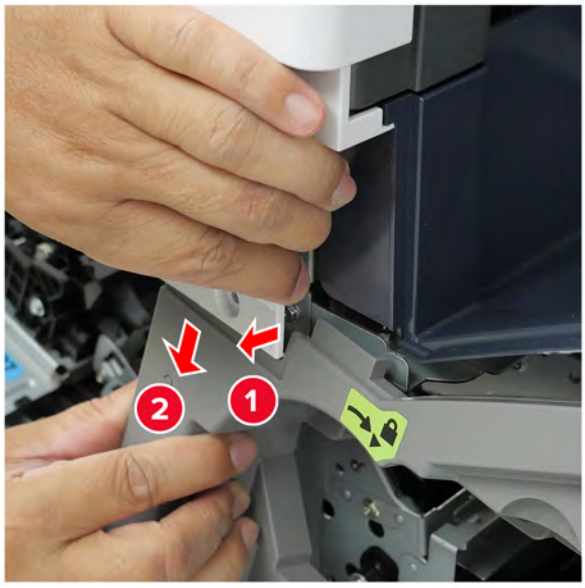


Inner front cover removal

1 Remove the front door. See **“Front door removal” on page 351**.

2 Remove the seven screws (A).

3 Remove the cover.

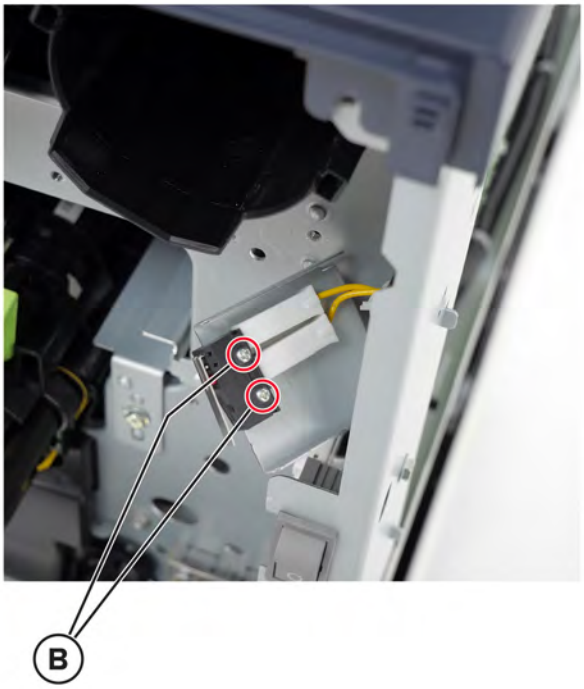


Installation note: Insert the inner front cover under the exit column cover.

Front door switch removal

1. Remove the front door. See **“Front door removal” on page 351**.
2. Remove the inner front cover. See **“Inner front cover removal” on page 353**.
3. Remove the screw (A), and then pull the bracket.

4 Using a #1 Phillips screwdriver, disconnect the two cables (B), and then remove the two screws (C).



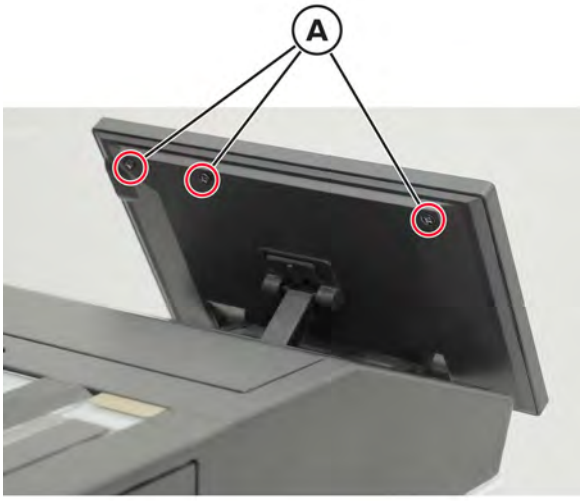
5 Remove the switch.

Control panel removal

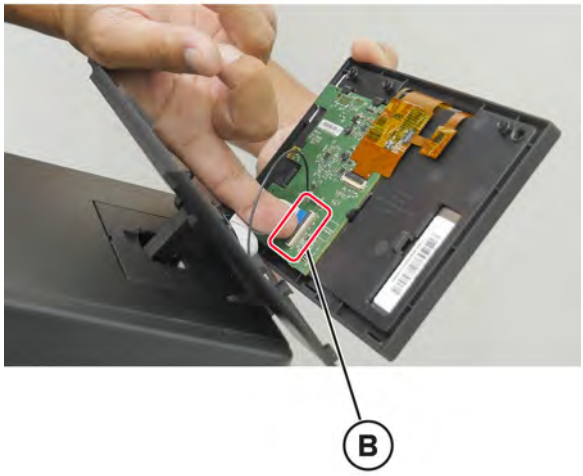
Note: For a video demonstration, see **Control panel removal**.

1 Lift the ADF.

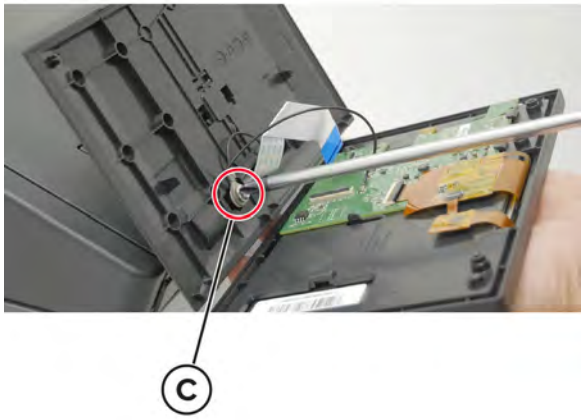
2 Remove the three screws (A).



3 Remove the connector (B).



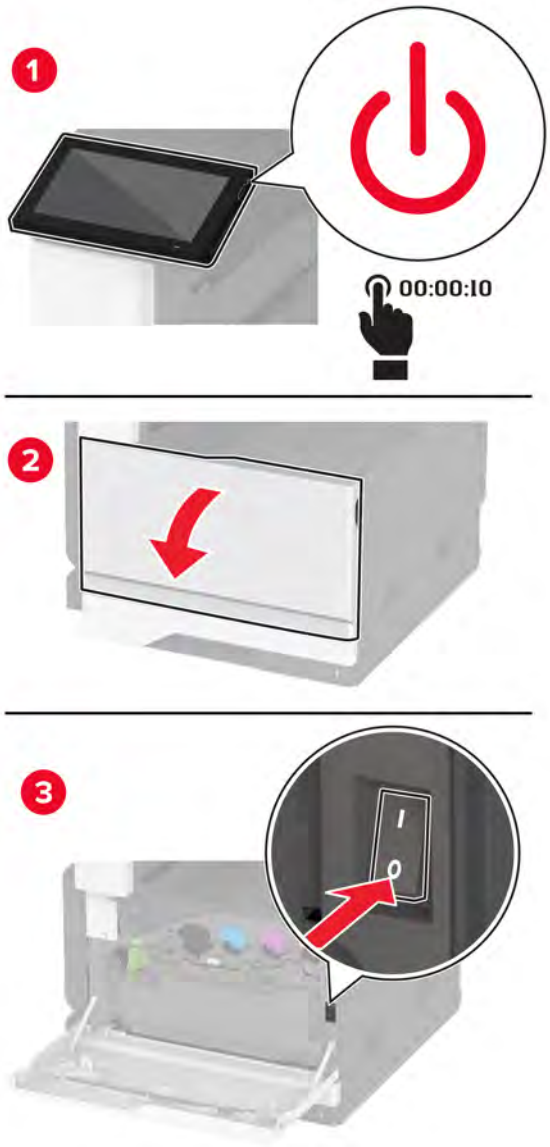
4 Remove the screw (A).



5 Remove the control panel.

Fuser removal

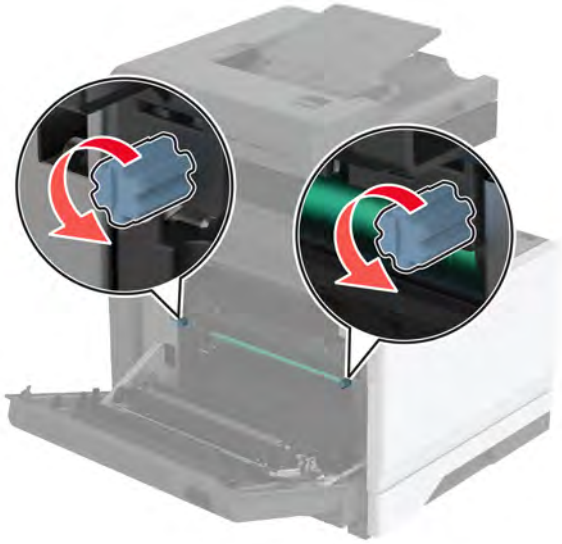
1 Turn off the printer.



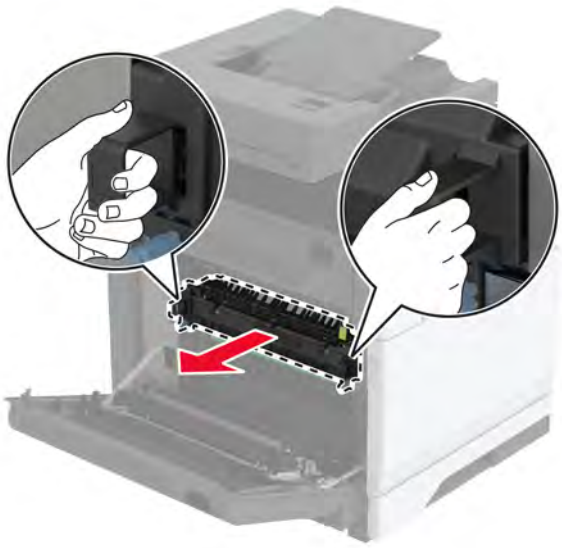
2 Open door A.

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.

3 Unlock the fuser.



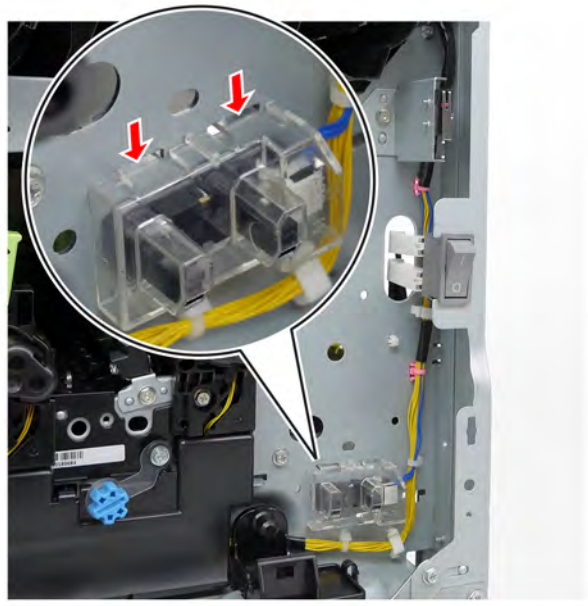
4 Remove the fuser.



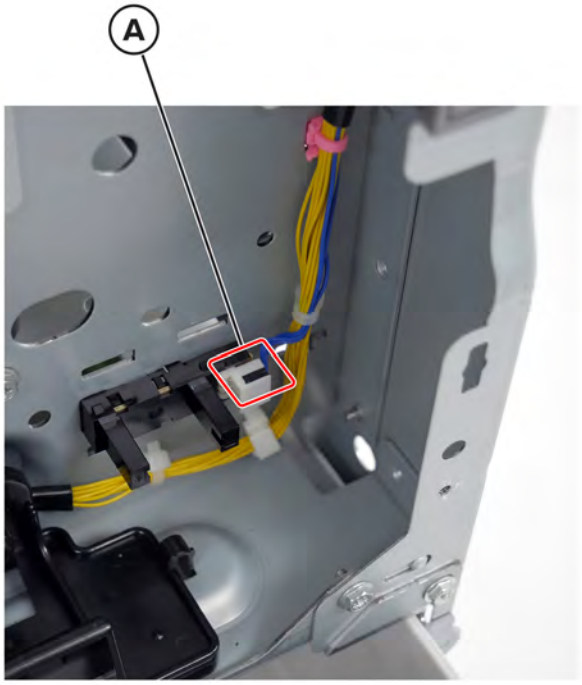
Sensor (waste toner bottle full) removal

1 Remove the right cover. See **"Right cover removal" on page 347**.

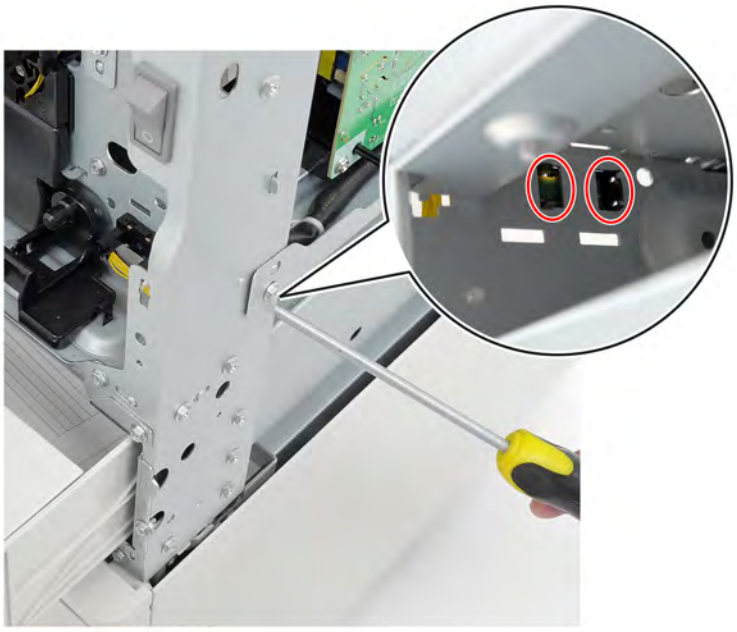
2 Release the latches, and then remove the cover.



3 Disconnect the cable (A).



4 Release the latches, and then remove the sensor.

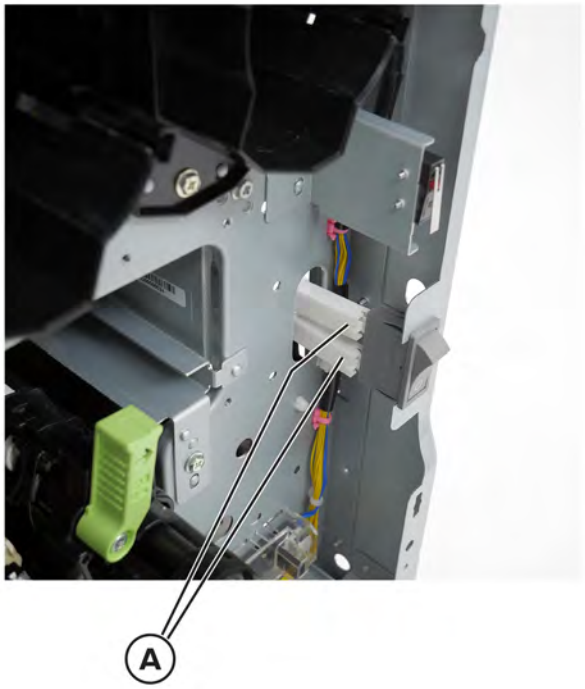


Power switch removal

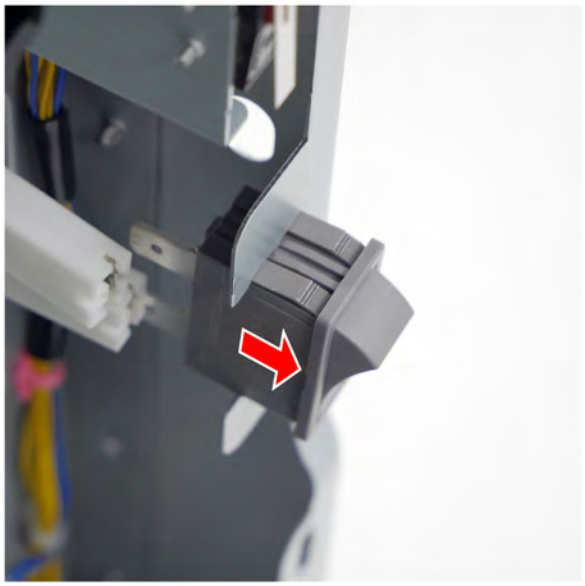
1 Remove the front door. See **"Front door removal" on page 351**.

2 Remove the inner front cover. See **"Inner front cover removal" on page 353**.

3 Disconnect the two cables (A).



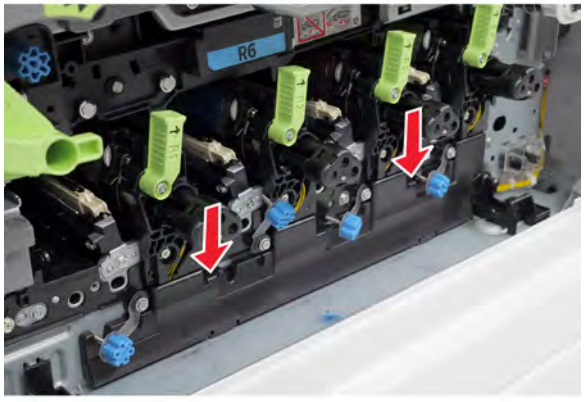
4 Release the latches, and then remove the switch.



Developer unit cable cover removal

1 Open the front door.

2 Release the latches, and then remove the cover.



Developer unit removal

1 Enter the Diagnostics menu, and then touch: **Printer diagnostics and adjustments** > **Imaging process adjustment** > **ATC sensor adjust**.

   a Note down the value/s for **ATC sensor bar code** for the developer unit/s you will replace.

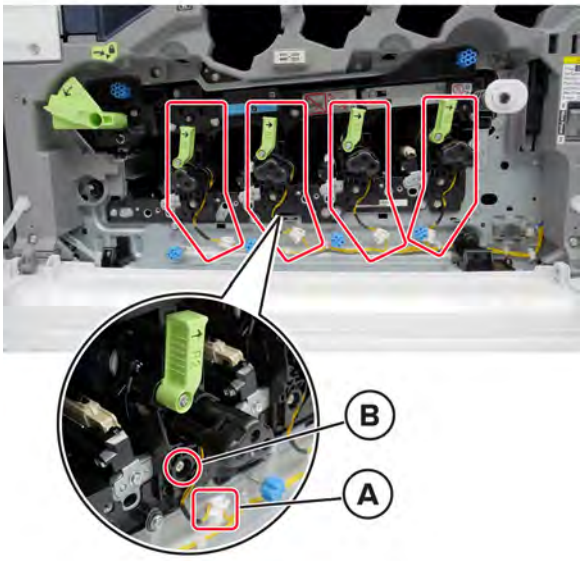
   b Touch **ATC sensor adjust** > **ATC sensors setup coefficient**, and then note down the value/s for the developer unit/s you will replace.

   Note: These values should change after replacing the developer unit.

2 Turn off the printer.

3 Remove the developer unit cable cover. See **"Developer unit cable cover removal" on page 363**.

4 Disconnect the cable (A), and then remove the screw (B).



5 Remove the developer unit.

Warning—Potential Damage: Do not touch the developer roller on the developer unit.

Installation notes:

- Make sure to perform the step 1 before removing the developer unit/s you want to replace.
- Cover the work surface with paper before unpacking the new developer unit and developer carrier powder.

1 Pry the developer unit cover open to remove it.

2 Apply enough powder to coat the magnet roll fully, and then turn the knob to apply the powder evenly.

3 Reinstall the developer unit cover, and then remove the excess powder with a brush.

4 Install the gear cover on the new developer unit.

5 Note down the value printed on the bar code sticker on the developer unit.

6 After installing the new developer unit, enter the Diagnostics menu, and then touch: **Printer diagnostics and adjustments** > **Imaging process adjustments** > **ATC Sensor Adjust**.

7 Touch the **ATC Sensor Bar Code** of the developer unit you installed. Enter the value from the bar code sticker, and then touch **OK** > **Start**.

8 After getting a **Test Passed** message, touch the back button, and then touch **Developer ATC**. Touch **ATC Sensor Control** for the developer unit you replaced, and then touch **On** > **Start**.

9 After getting a **Test Passed** message, touch the back button, and then touch **ATC Sensor Adjust**.

Check that the value for **ATC Sensor Bar Code** for the developer unit you replaced has changed to the value you entered.

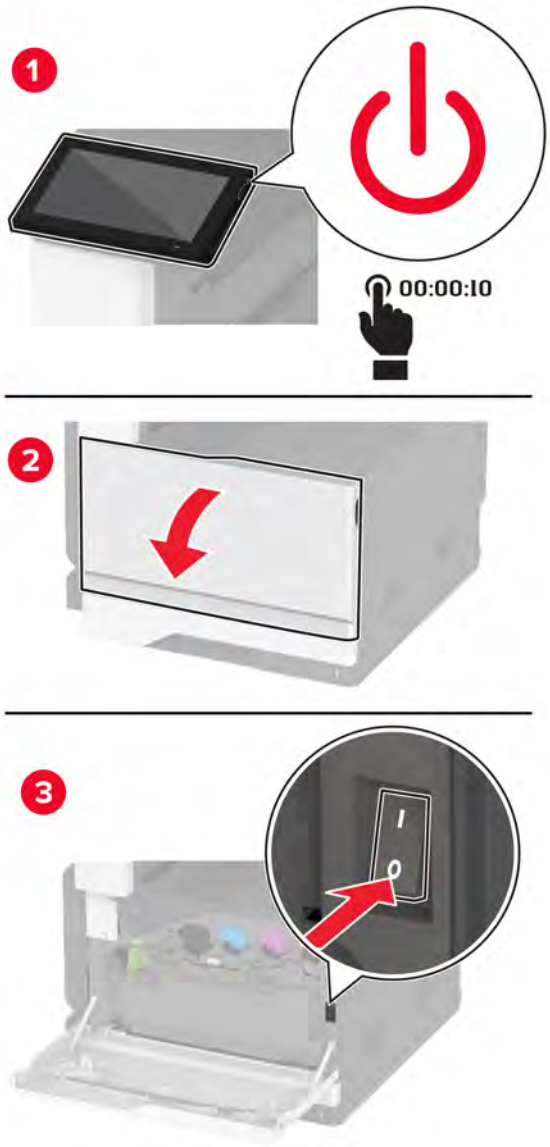
10 Touch **ATC Sensors Setup Coefficient**.

Check that the value for **ATC Sensor Setup Coefficient** has changed for the developer unit you replaced.

11 Perform a POR.

Transfer module removal

1 Turn off the printer.



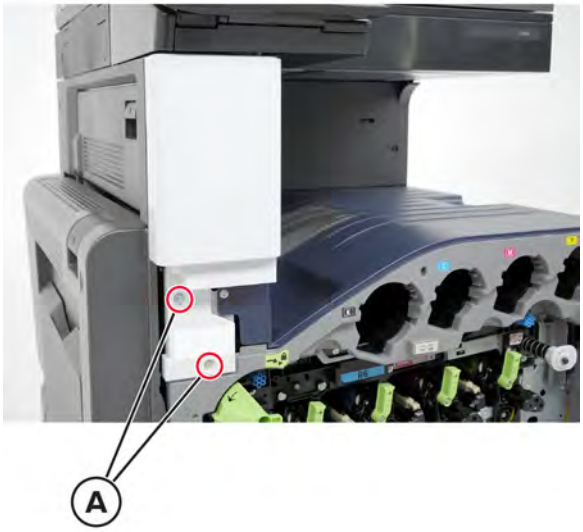
2 Unlock the waste toner bottle.

3 Remove the waste toner bottle.

Note: To avoid spilling the toner, place the bottle in an upright position.

Left column cover removal

1. Open the front door.
2. Remove the two screws (A), and then remove the cover.



Left door front cover removal

1 Pull the tray, and then remove the screw (A).

2 Remove the cover.

Printhead removal

1 Remove the developer unit cable cover. See **“Developer unit cable cover removal” on page 363**.

2 Remove the appropriate developer unit. See **“Developer unit removal” on page 363**.

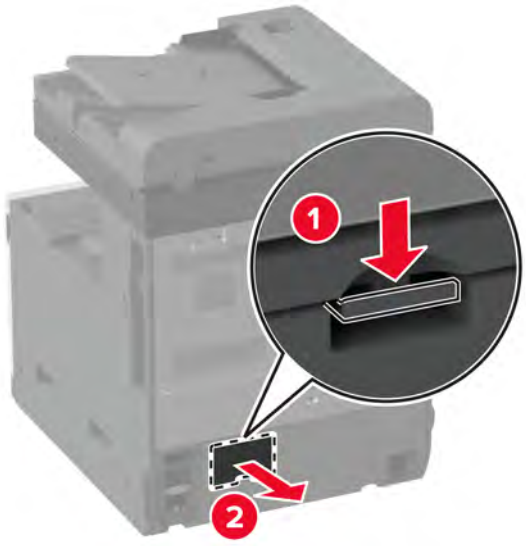
3 Remove the screw from the appropriate printhead.

4 Under the printhead, disconnect the FFC (E).

A	Screw, printhead (K)
B	Screw, printhead (C)
C	Screw, printhead (M)
D	Screw, printhead (Y)

Lower rear connector cover removal

1 Remove the lower rear connector cover.



Photoconductor unit removal

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

1 Open the front door.

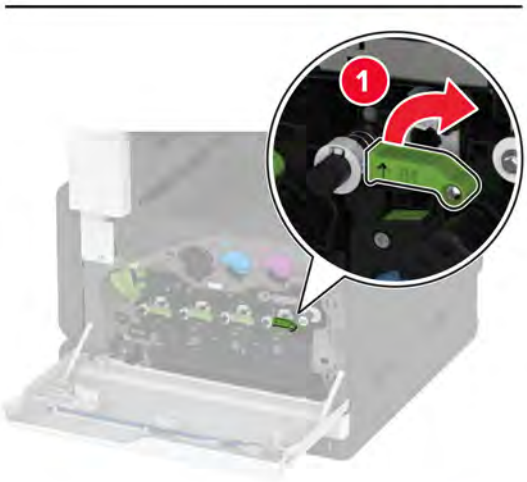
2 Unlock the waste toner bottle.

3 Remove the waste toner bottle.

Note: To avoid spilling the toner, place the bottle in an upright position.

4 Unlock the photoconductor unit.

Warning—Potential Damage: To avoid toner contamination, do not touch the end of the photoconductor unit.


1


2


3

5 Remove the used photoconductor unit.

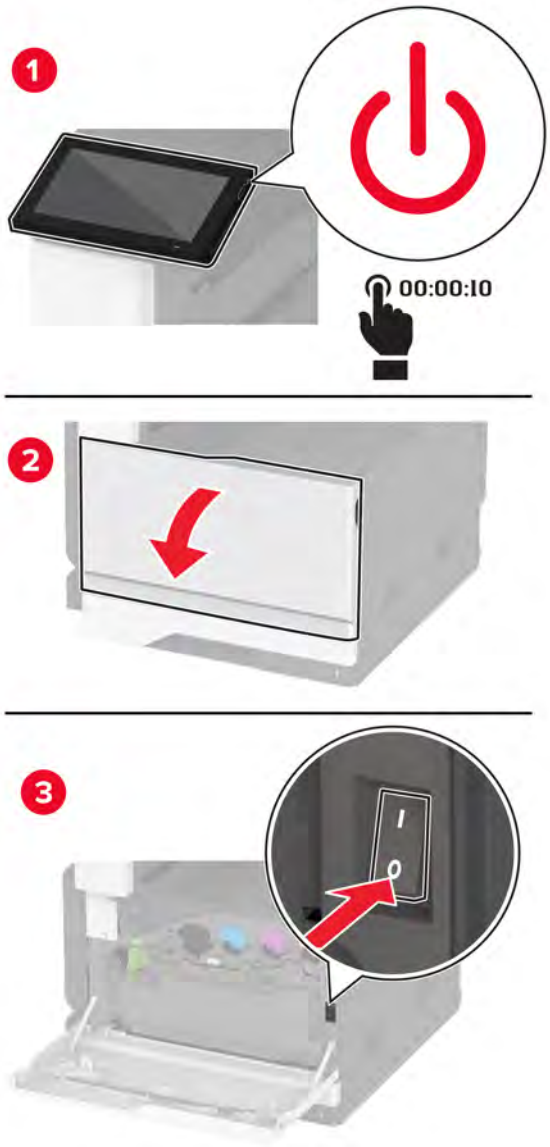
Toner cartridge removal

1 Open the front door.

2 Remove the toner cartridge.

Transfer roller removal

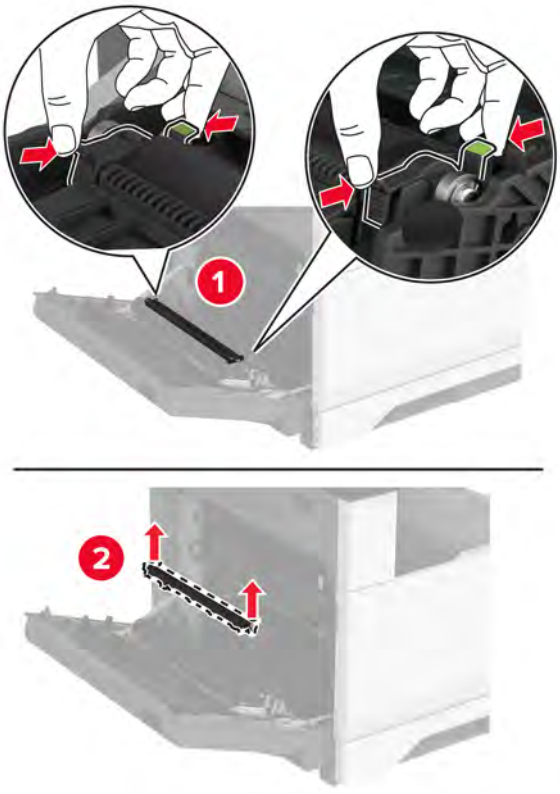
1 Turn off the printer.



2 Open door A.

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.

3 Remove the transfer roller.

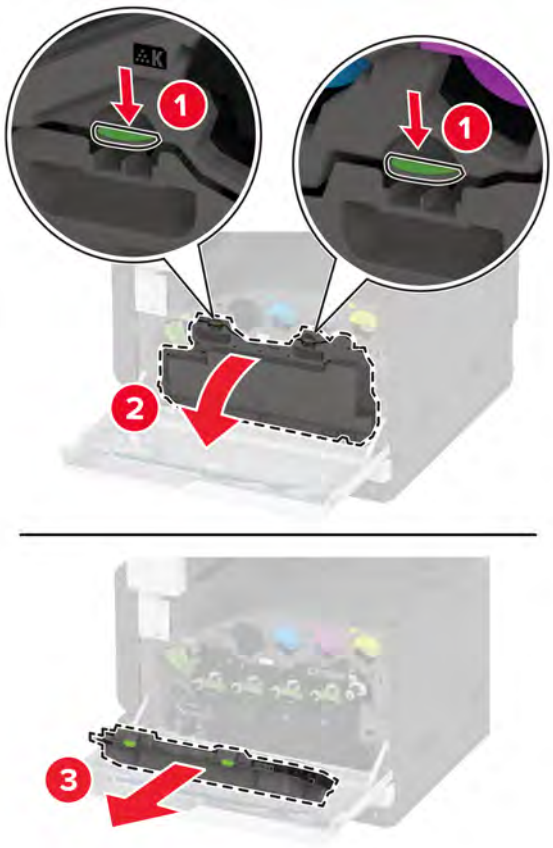


Waste toner bottle removal

1 Open the front door.

2 Unlock the waste toner bottle.

3 Remove the waste toner bottle.



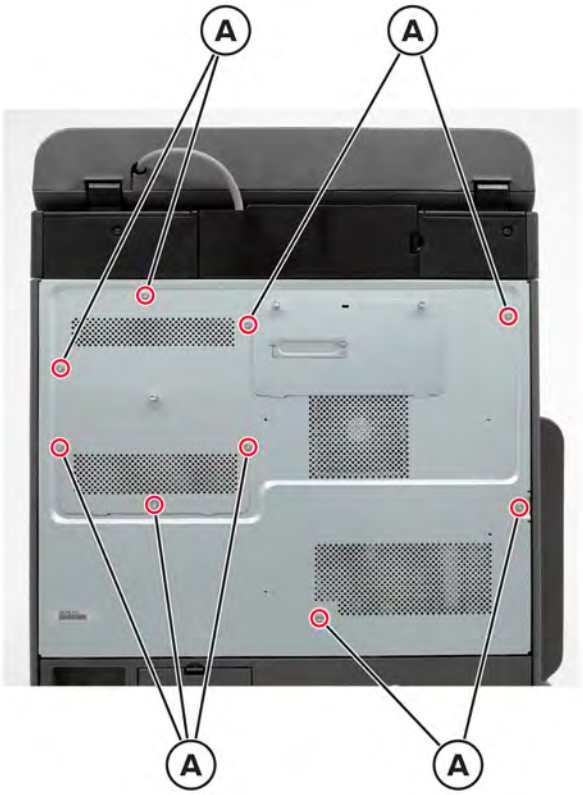
Note: To avoid spilling the toner, place the bottle in an upright position.

Rear side removals

Upper rear cover removal

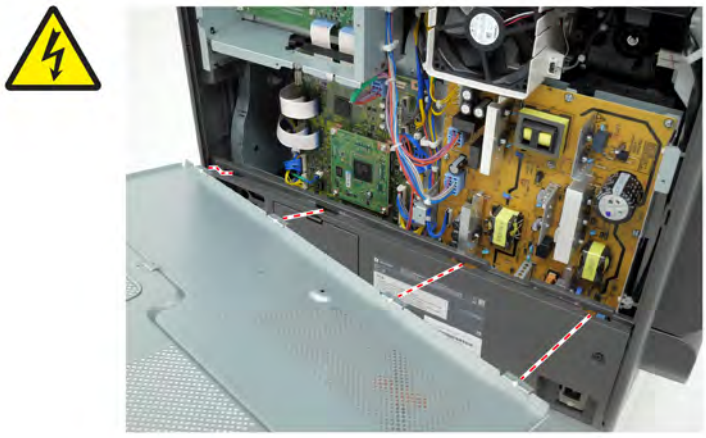
Note: For a video demonstration, see **Upper rear cover removal**.

1 Remove the nine screws (A).



2 Remove the cover.

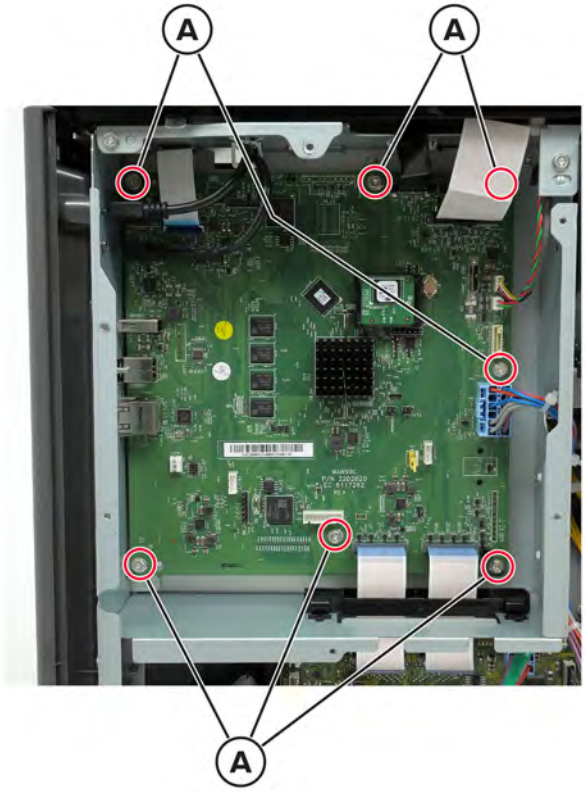
Installation note: Align the tabs with their slots.



Controller board removal

1 Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

2 Disconnect all the cables, and then remove the seven screws (A).



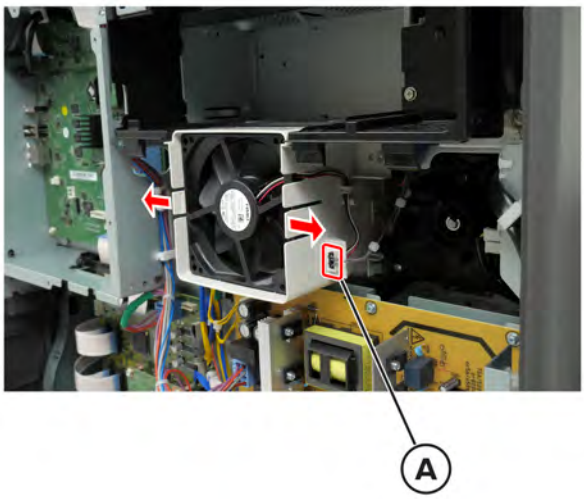
3 Remove the board.

Fuser exhaust fan removal

1 Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

2 Disconnect the cable (A), and then release it from its guides.

3 Release the latches, and then remove the fan.



Installation note: Pay attention to the correct direction of the fan.

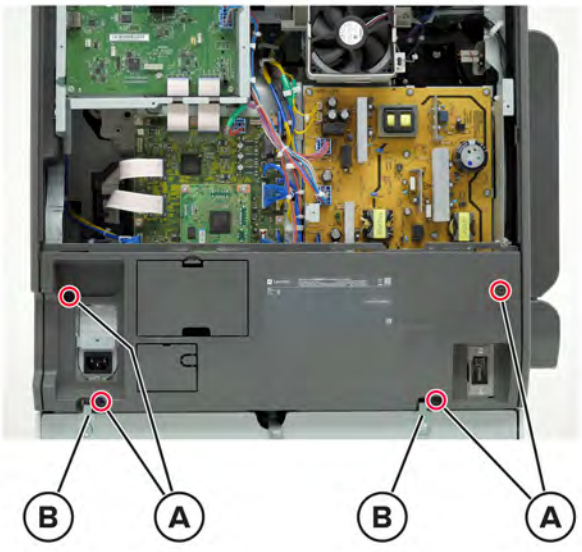
Bottom rear cover removal

Note: For a video demonstration, see **Bottom rear cover removal**.

1 Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

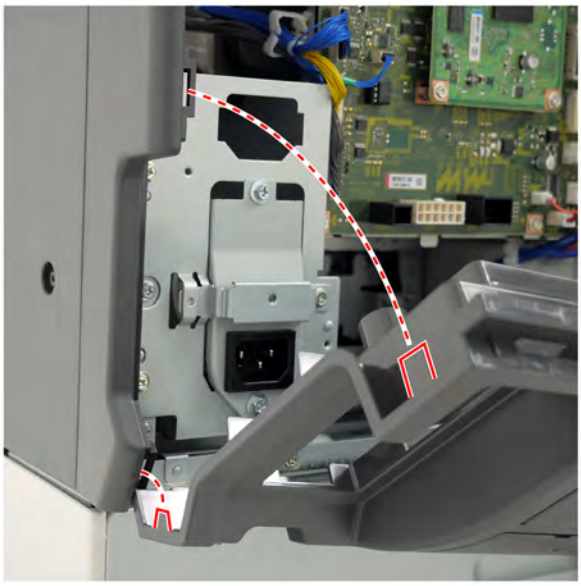
2 Remove the four screws (A).

Note: In some configurations, the tray locks (B) must also be removed.



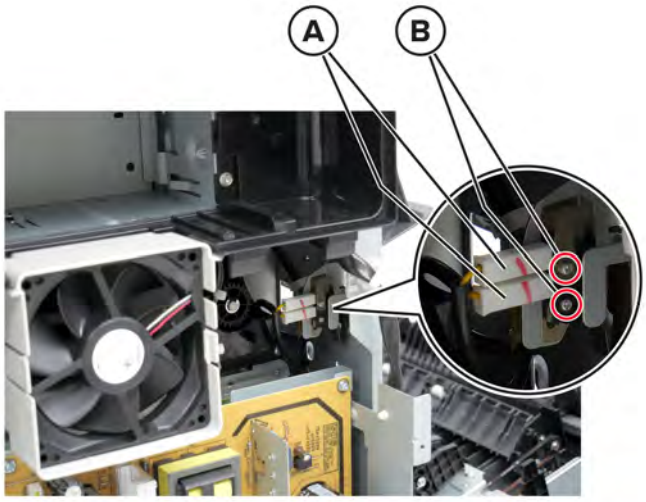
3 Remove the cover.

Installation note: Align the tabs with their slots.



Left door switch removal

1. Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.
2. Using a #1 Phillips screwdriver, disconnect the cables (A), and then remove the two screws.



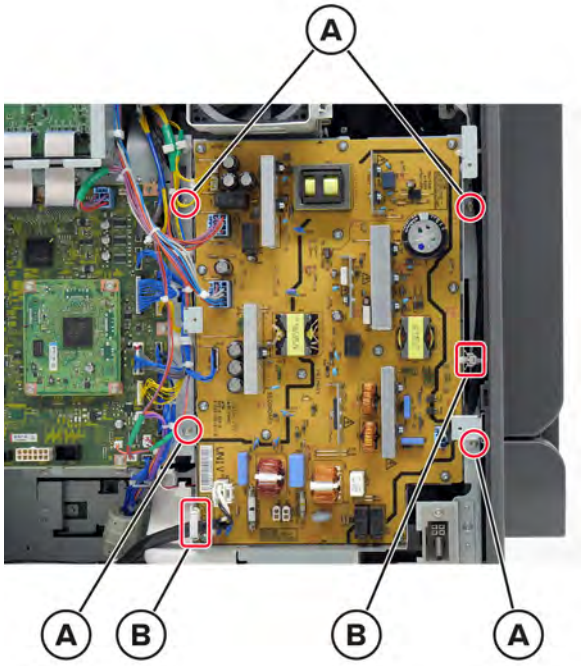
3. Remove the switch.

LVPS removal

1. Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.
2. Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.
3. Disconnect all the cables, remove the four screws (A).

4 Release the cable guides (B), and then remove the LVPS.

Installation note: Pay attention to the cable routes.



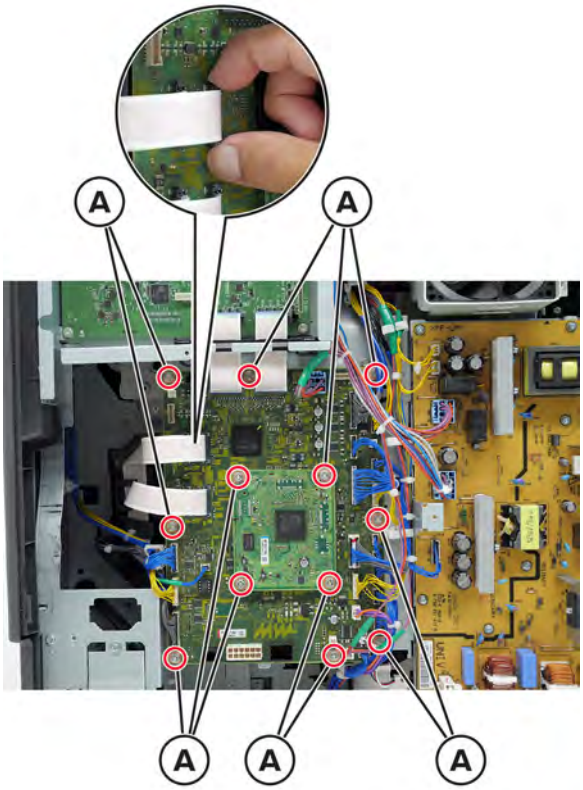
MCU board removal

Note: For a video demonstration, see **MCU board removal**.

1 Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

2 Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.

3 Disconnect all of the cables, and then remove the 4 screws (A).



4 Remove the smaller board, and then remove the four standoffs behind it.

5 Remove the MCU board.

Installation notes:

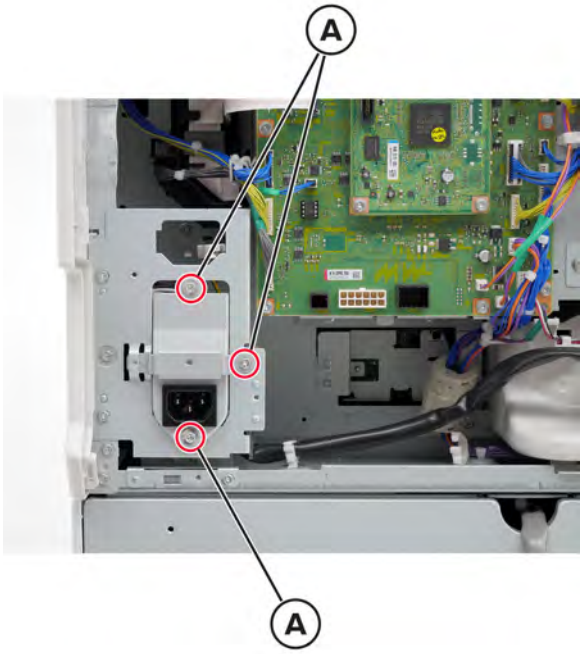
- Some controller boards have a TPM card or ISD card attached. Make sure to install these cards to the new controller board.
- After the new controller board is installed, restore the printer configuration. See **"Restoring the printer configuration" on page 313**

Power receptacle bracket removal

1 Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

2 Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.

3 Remove the three screws (A), and then remove the bracket.

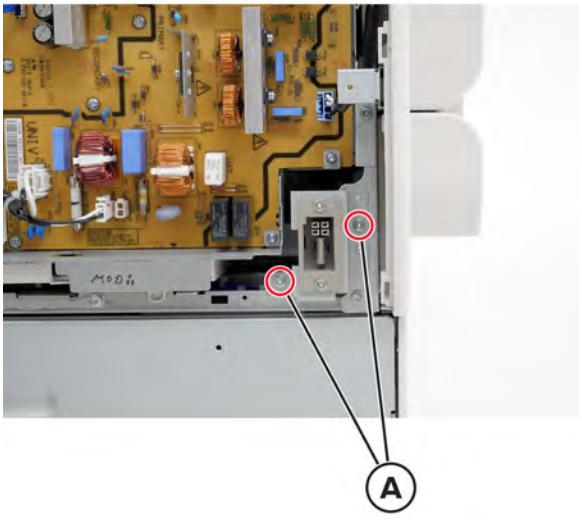


Interface connector bracket removal

1 Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

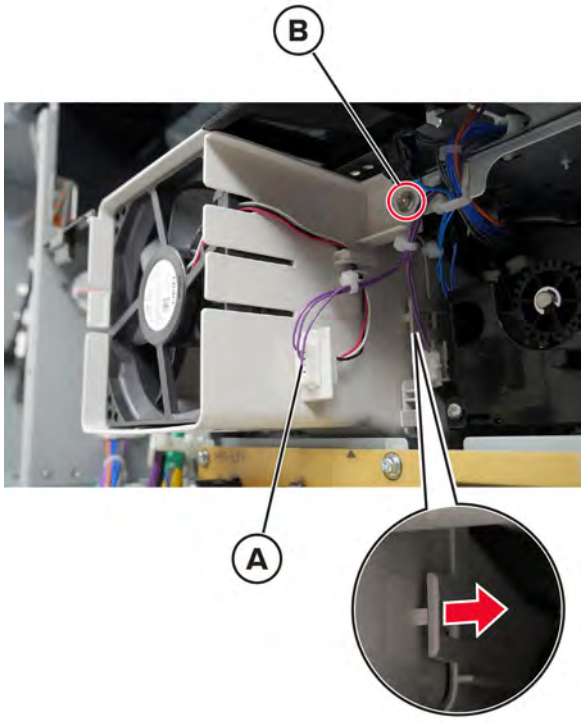
2 Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.

3 Remove the two screws (A), and then remove the bracket.



Fuser exhaust duct removal

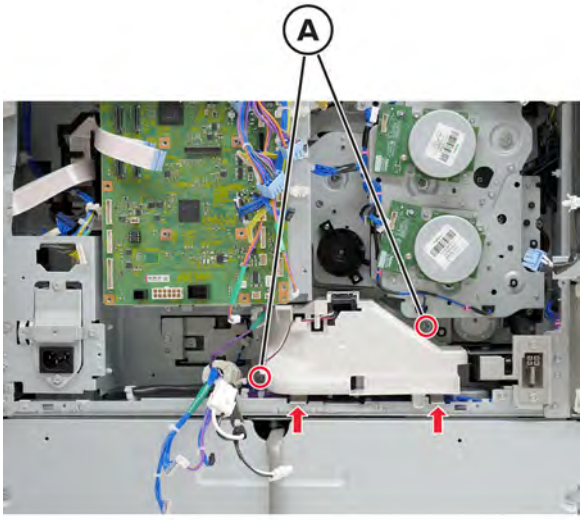
1. Remove the upper rear cover. See **“Upper rear cover removal” on page 380**.
2. Disconnect the cable (A), and then remove the screw (B).
3. Release the latches on each side, and then remove the duct.



Cartridge fan removal

1. Remove the upper rear cover. See **“Upper rear cover removal” on page 380**.
2. Remove the bottom rear cover. See **“Bottom rear cover removal” on page 382**.
3. Disconnect the fan cable (P410) from the engine controller board.

4 Remove the two screws (A), release the latches, and then remove the fan duct.



5 Release the latch, and then remove the fan.

Installation note: Pay attention to the orientation of the fan.

Engine drive board removal

Note: For a video demonstration, see **Engine drive board removal**.

Warning—Potential Damage: Do not replace the engine drive board and controller board together to avoid potential loss of NVM data.

Backing up the NVM data

Before replacing the engine drive board, back up the NVM data.

Warning—Potential Damage: If the NVM data is not backed up before removing the engine drive board, the NVM data needs to be manually entered after installing a new engine drive board. For more information, see 'Entering the NVM data' in the succeeding 'Installation Notes.'

1 Enter the Diagnostics menu, and then touch: **Printer setup** > **NVM Functions** > **Backup NVM data**.

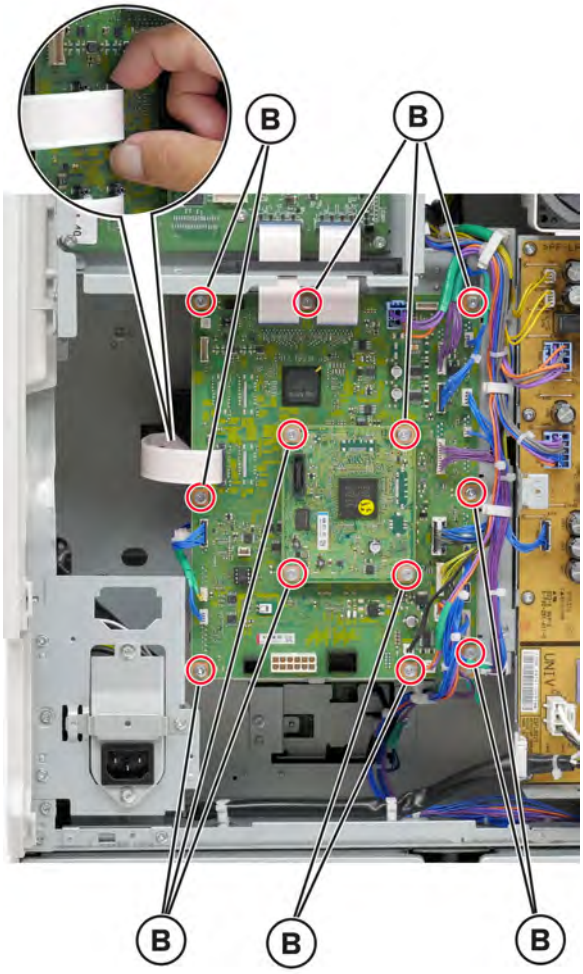
2 Wait for the backup process to complete.

Removing the engine drive board

1. Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.
2. Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.
3. Remove the screw (A).

4. Disconnect all the cables, and then remove the 12 screws (B).

   Warning—Potential Damage: Do not pull the FFC without releasing the connector first.



5 Remove the engine drive board.

Installation Notes

- Some controller boards have a TPM card or ISD card attached. Make sure to install these cards to the new controller board.
- After the new controller board is installed, restore the printer configuration. See **"Restoring the printer configuration" on page 313**

Restoring the NVM data

After a new engine drive board is installed, restore the NVM data backed up before removing the older engine drive board. If backup and restoration of NVM data are not possible, see 'Entering the NVM data' (succeeding topic).

1 Enter the Diagnostics menu using the POR key. See **"Entering the Diagnostics menu using the POR key" on page 292**.

Note: If the printer is turned on without using the POR key, the following error message may appear on the control panel display: **`950.20 Engine factory data mismatch. See service manual.`**

2 Touch **Printer setup** > **Engine factory information** > **Restore engine factory information**.

The printer reboots automatically.

3 Enter the Diagnostics menu. See **"Entering the Diagnostics menu" on page 292**.

4 Touch **Printer setup** > **NVM functions** > **Restore NVM data**.

5 Wait for the restoration process to complete.

The printer then reboots automatically.

Entering the NVM data

If backup and restoration of NVM data are not possible because of a damaged engine drive board, or backup was not performed before the board's removal, the printer's engine birth certificate values need to be entered.

1 Find the printer NVM factory sheet.

2 Note the NVM values for the printer.

3 Enter the Diagnostics menu, and then touch: **Printer setup** > **NVM Functions** > **Write NVM Data**.

4 Enter the required values.

Engine drive board bracket removal

1 Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

2 Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.

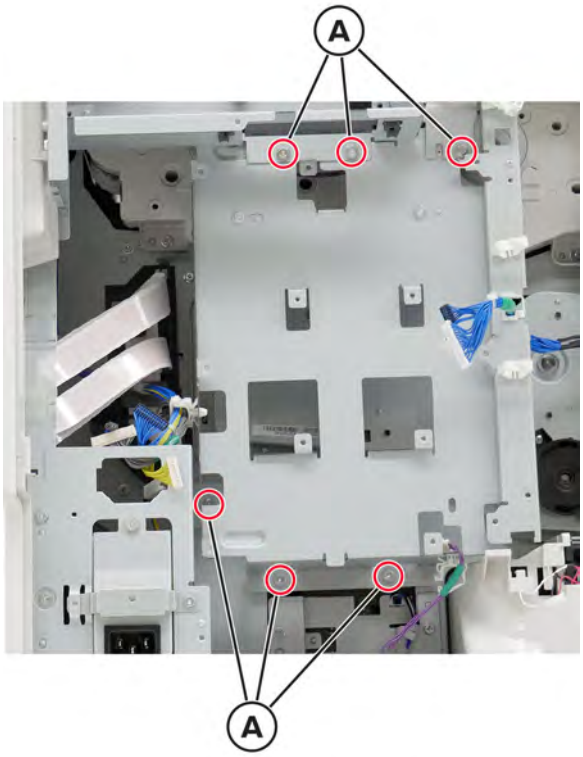
3 Remove the LVPS. See **"LVPS removal" on page 383**.

4 Remove the MCU board. See **"MCU board removal" on page 384**.

5 Remove the engine drive board. See **"Engine drive board removal" on page 388**.

6 Remove the controller board bracket. See **"Controller board bracket removal" on page 395**.

7 Remove the six screws (A).



8 Remove the board bracket.

Drive gearbox removal

Note: For a video demonstration, see **Drive gearbox removal**.

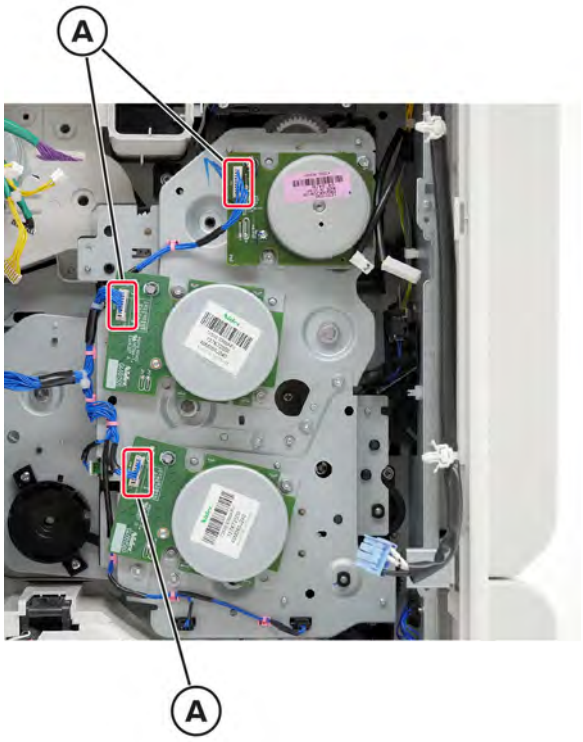
1 Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

2 Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.

3 Remove the LVPS. See **"LVPS removal" on page 383**.

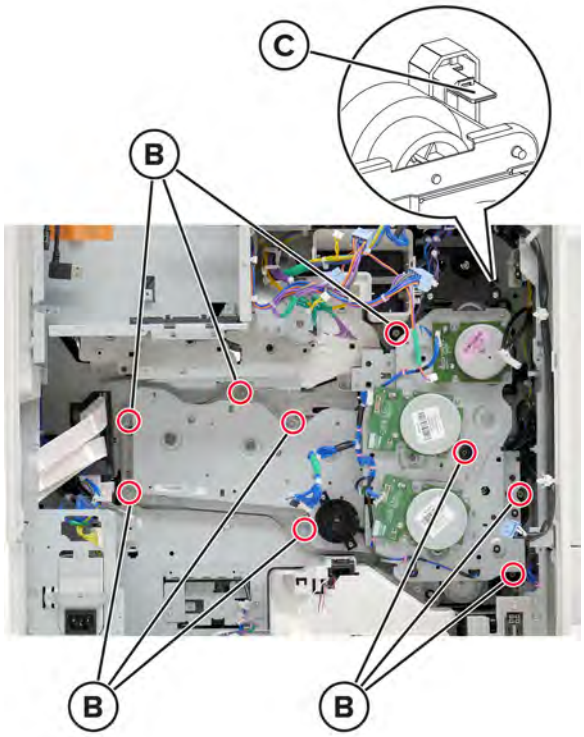
4 Remove the engine drive board bracket. See **"Engine drive board bracket removal" on page 391**.

5 Disconnect the cables (A).

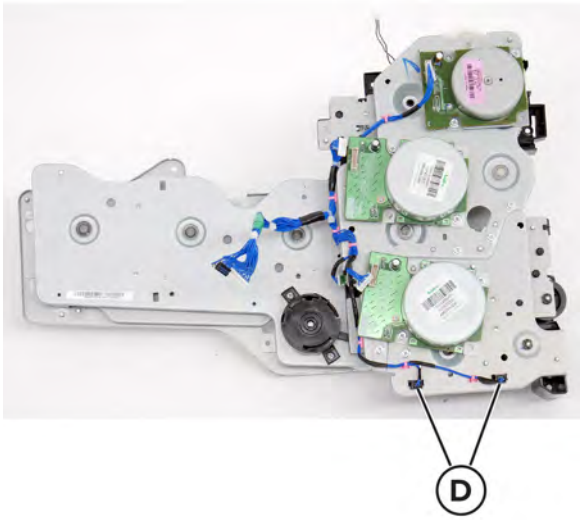


6 Remove the nine screws (B).

7 Release the latch (C), and then remove the gearbox.



8 Disconnect the cables (D) from the gearbox.



Registration clutch removal

1 Remove the upper rear cover. See **“Upper rear cover removal” on page 380**.

2 Remove the bottom rear cover. See **“Bottom rear cover removal” on page 382**.

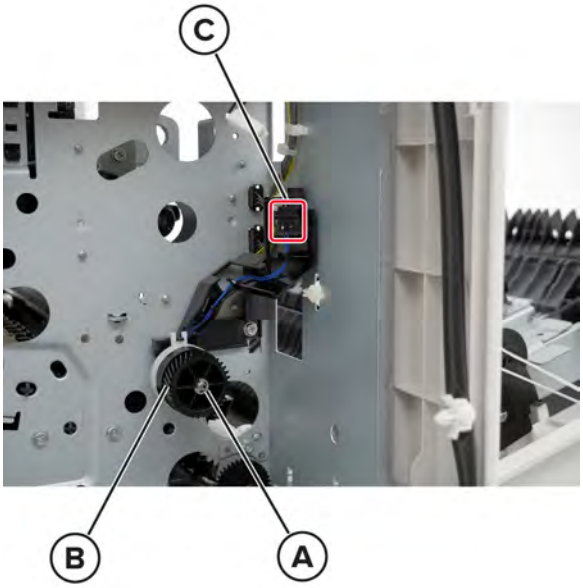
3 Remove the LVPS. See **“LVPS removal” on page 383**.

4 Remove the engine drive board bracket. See **“Engine drive board bracket removal” on page 391**.

5 Remove the drive gearbox. See **“Drive gearbox removal” on page 392**.

6 Remove the e-clip (A), and then remove the gear (B).

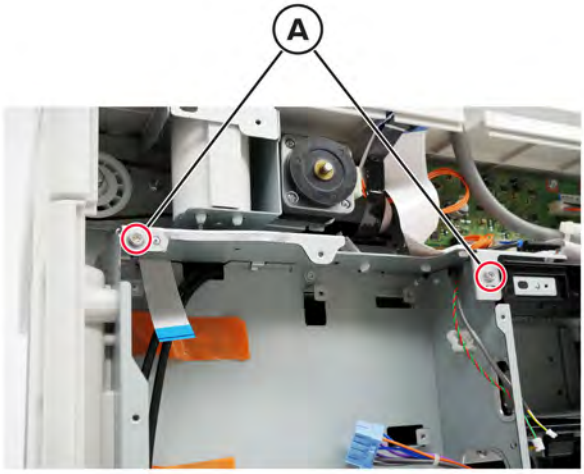
7 Disconnect the cable (C), and then remove the clutch.



Controller board bracket removal

Note: For a video demonstration, see **Controller board bracket removal**.

1. Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.
2. Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.
3. Remove the LVPS. See **"LVPS removal" on page 383**.
4. Remove the engine drive board bracket. See **"Engine drive board bracket removal" on page 391**.
5. Remove the two screws (A), and then remove the top bracket.



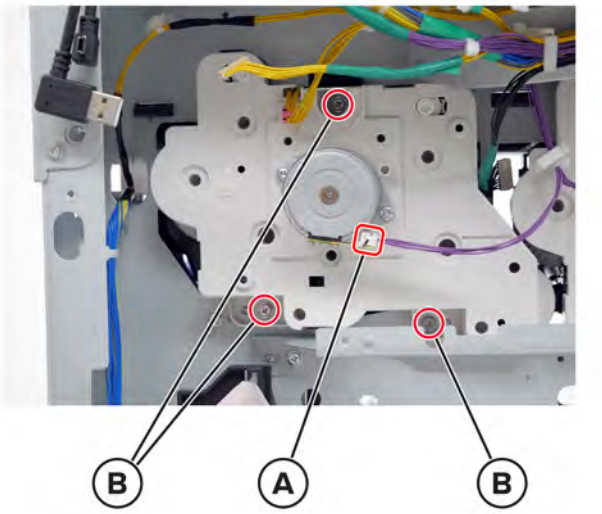
6. Disconnect all the controller board cables, and then remove the six screws from the bracket.
7. Remove the bracket.

Dispenser drive (Y, M) removal

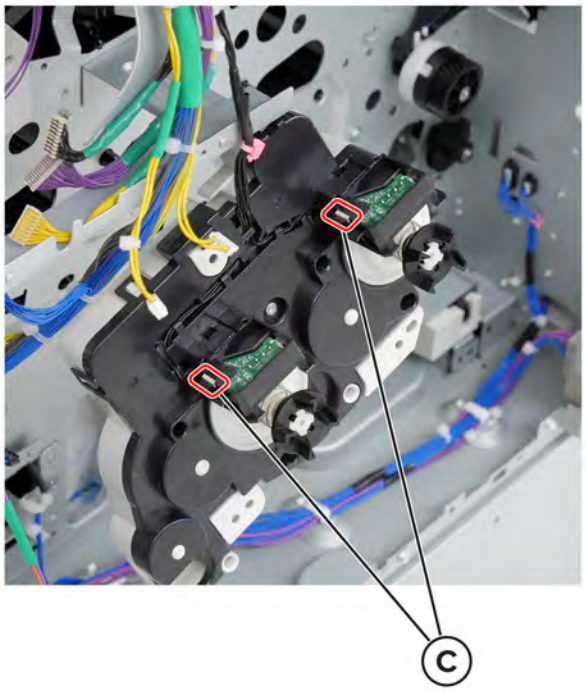
Note: For a video demonstration, see **Dispenser drive (Y,M) removal**.

1. Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.
2. Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.
3. Remove the LVPS. See **"LVPS removal" on page 383**.
4. Remove the engine drive board bracket. See **"Engine drive board bracket removal" on page 391**.
5. Remove the controller board bracket. See **"Controller board bracket removal" on page 395**.

6 Disconnect the cable (A), and then remove the three screws (B).



7 Behind the dispenser drive, disconnect the two cables (C).



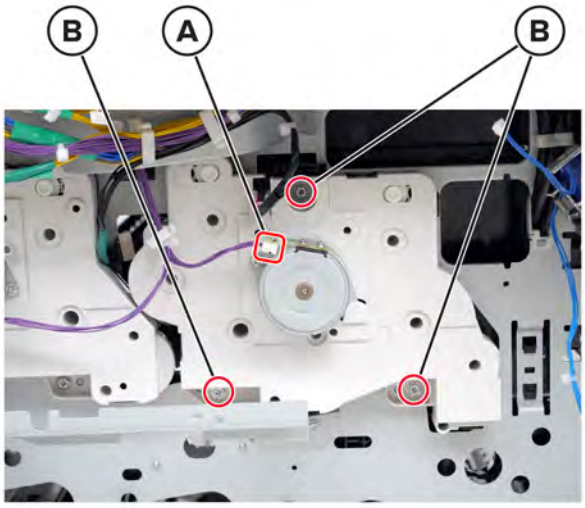
8 Release, and then remove the cables from the dispenser drive.

Installation note: Pay attention to the cable routes.

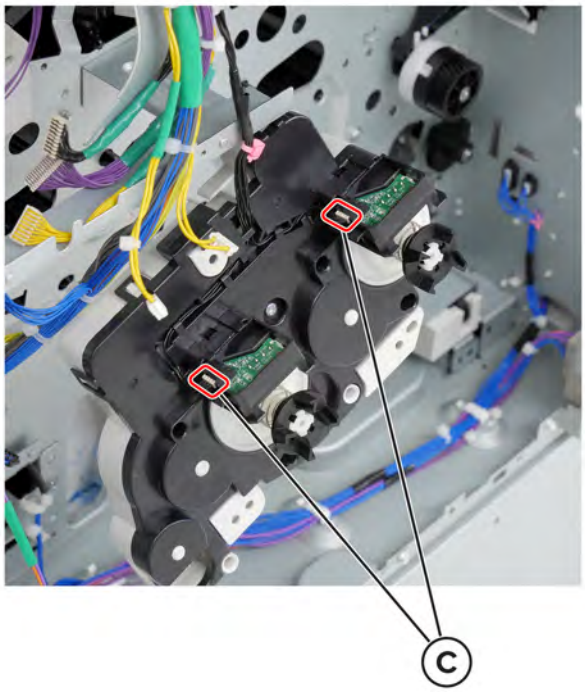
Dispenser drive (C, K) removal

Note: For a video demonstration, see **Dispenser drive (C,K) removal**.

1. Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.
2. Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.
3. Remove the LVPS. See **"LVPS removal" on page 383**.
4. Remove the engine drive board bracket. See **"Engine drive board bracket removal" on page 391**.
5. Remove the controller board bracket. See **"Controller board bracket removal" on page 395**.
6. Remove the drive gearbox. See **"Drive gearbox removal" on page 392**.
7. Disconnect the cable (A), and then remove the three screws (B).



8 Behind the dispenser drive, disconnect the two cables (C).



9 Release, and then remove the cables from the dispenser drive.

Installation note: Pay attention to the cable routes.

Printhead FFC removal

1 Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

2 Remove the bottom rear cover. See **"Bottom rear cover removal" on page 382**.

3 Remove the right cover. See **"Right cover removal" on page 347**.

4 Remove the HVPS. See **"HVPS removal" on page 349**.

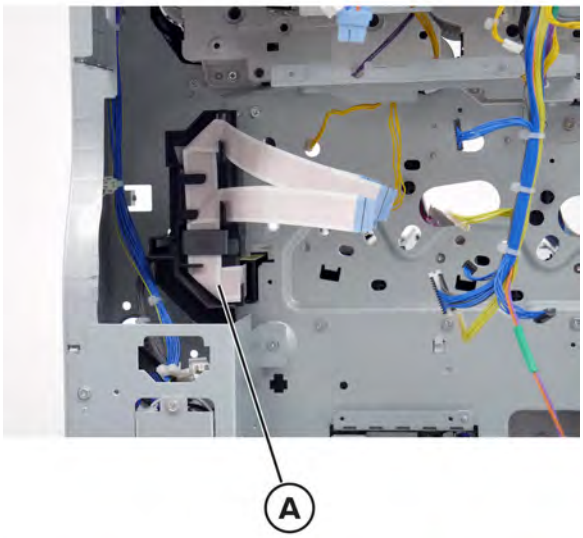
5 Remove the developer unit cable cover. See **"Developer unit cable cover removal" on page 363**.

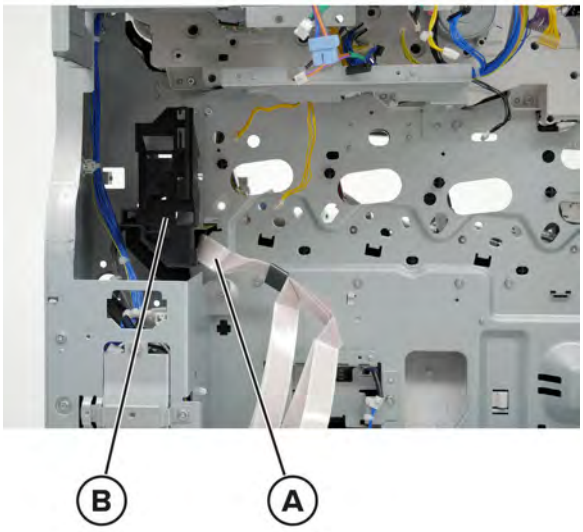
6 Remove the developer units. See **"Developer unit removal" on page 363**.

7 Disconnect all the printhead FFC from the engine drive board.

8 Release the FFC (A) from its guide.

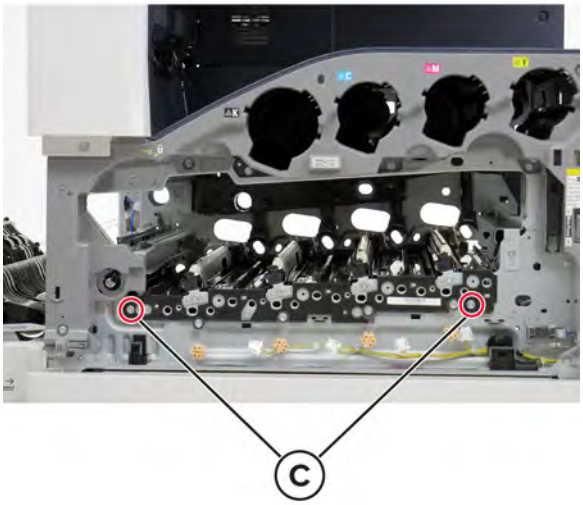
9 Remove the cable guide (B).





10 Release the cables from their hole and frame.

11 Remove the two screws (C), and then remove the printhead tray.



12 Remove the appropriate printhead of the target FFC.

13 Remove the FFC.

Printhead wiper removal

1 Open the front door.

2 Remove the printhead wiper.

Top side removals

Exit column cover removal

1 Remove the left column cover. See **“Left column cover removal” on page 368**.

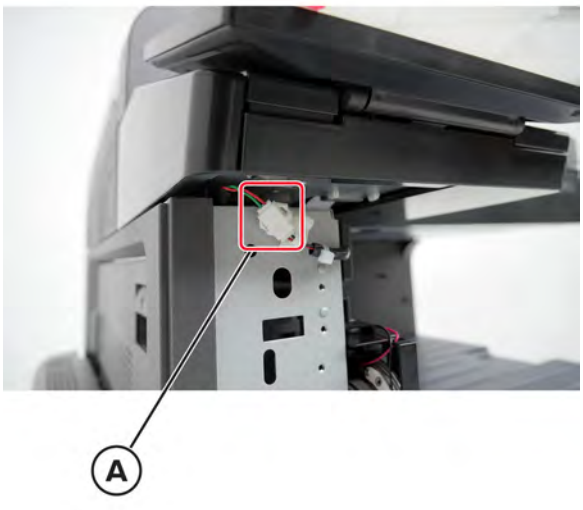
2 Remove the cover.

Speaker removal

1 Remove the left column cover. See **“Left column cover removal” on page 368**.

2 Remove the exit column cover. See **“Exit column cover removal” on page 401**.

3 Disconnect the cable (A).



4 Release the latch, and then remove the speaker housing.

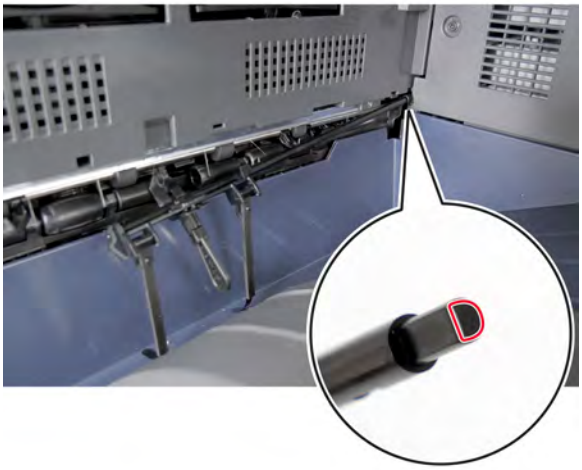
5 Release the latch and cable, and then remove the speaker.

Installation note: Pay attention to the cable route.

Exit 1 bail removal

Release the latch, and then remove the bail.

Note: The end of the shaft and its corresponding slot are D-shaped.

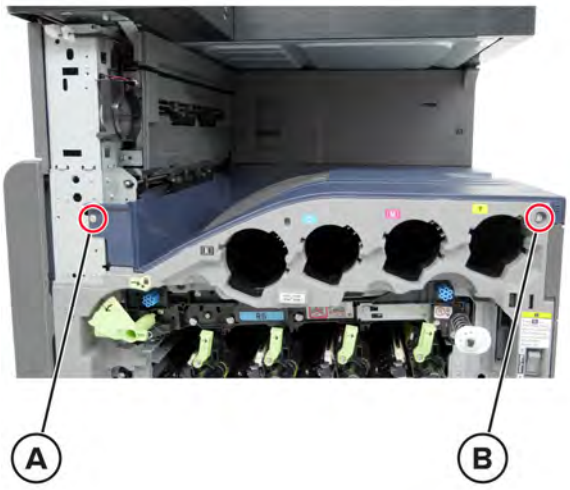


Installation note: Align the latches to their slots.

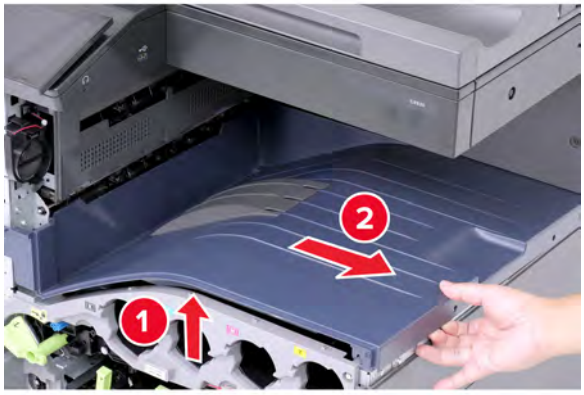
Standard bin cover removal

For a video demonstration, see **Standard bin cover removal**.

1. Remove the left column cover. See **“Left column cover removal” on page 368**.
2. Remove the exit column cover. See **“Exit column cover removal” on page 401**.
3. Remove the exit 1 bail. See **“Exit 1 bail removal” on page 403**.
4. Remove the screw (A), and then loosen the screw (B).



5 Release, and then remove the cover.



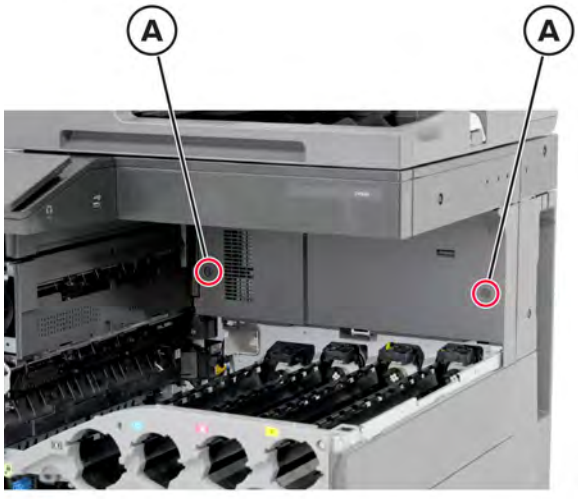
Installation note: Align the tabs with their slots.

6 Remove the cover (C) from the standard bin cover.

Installation note: Make sure that the cover (C) is reinstalled.

Bin rear cover removal

1. Remove the left column cover. See **“Left column cover removal” on page 368**.
2. Remove the exit column cover. See **“Exit column cover removal” on page 401**.
3. Remove the exit 1 bail. See **“Exit 1 bail removal” on page 403**.
4. Remove the standard bin cover. See **“Standard bin cover removal” on page 404**.
5. Remove the two screws (A), and then remove the cover.



Toner cartridge contact removal

1 Remove the left column cover. See **“Left column cover removal” on page 368**.

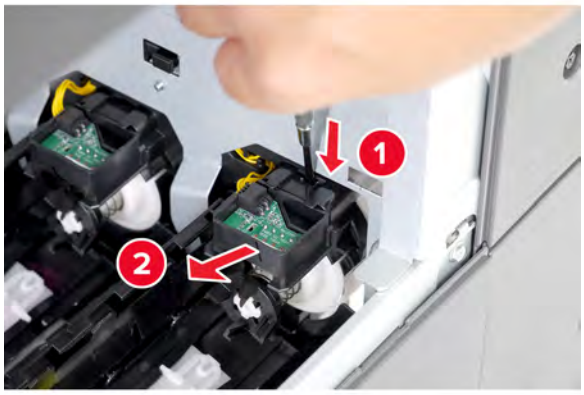
2 Remove the exit column cover. See **“Exit column cover removal” on page 401**.

3 Remove the exit 1 bail. See **“Exit 1 bail removal” on page 403**.

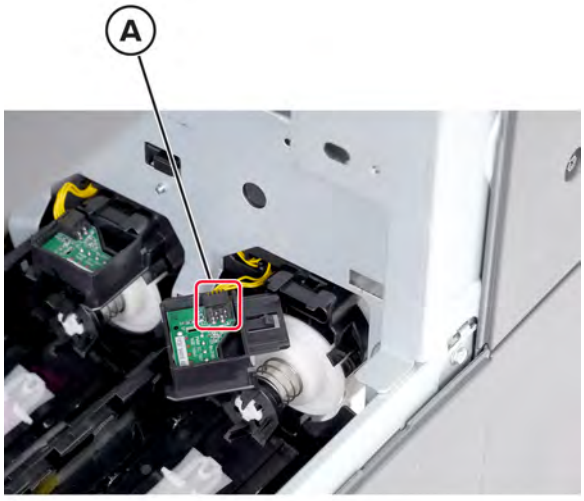
4 Remove the standard bin cover. See **“Standard bin cover removal” on page 404**.

5 Remove the bin rear cover. See **“Bin rear cover removal” on page 406**.

6 Release the latch, and then pull the contact.



7 Disconnect the cable (A), and then remove the contact.



Sensor (environment) removal

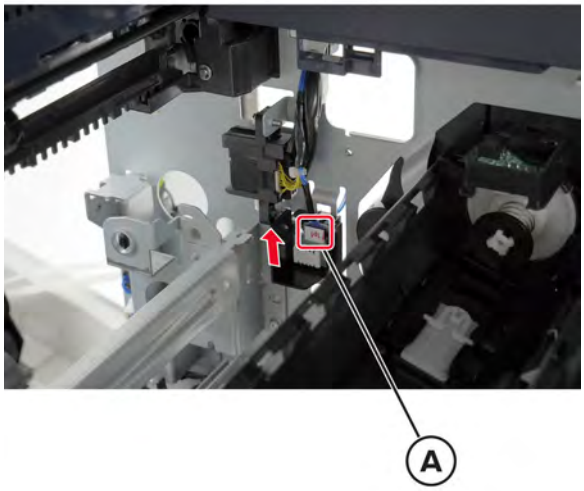
1 Remove the left column cover. See **“Left column cover removal” on page 368**.

2 Remove the exit column cover. See **“Exit column cover removal” on page 401**.

3 Remove the exit 1 bail. See **“Exit 1 bail removal” on page 403**.

4 Remove the standard bin cover. See **"Standard bin cover removal" on page 404**.

5 Disconnect the cable (A).



6 Lift, and then remove the sensor.

Toner dispenser removal

1 Remove the left column cover. See **"Left column cover removal" on page 368**.

2 Remove the exit column cover. See **"Exit column cover removal" on page 401**.

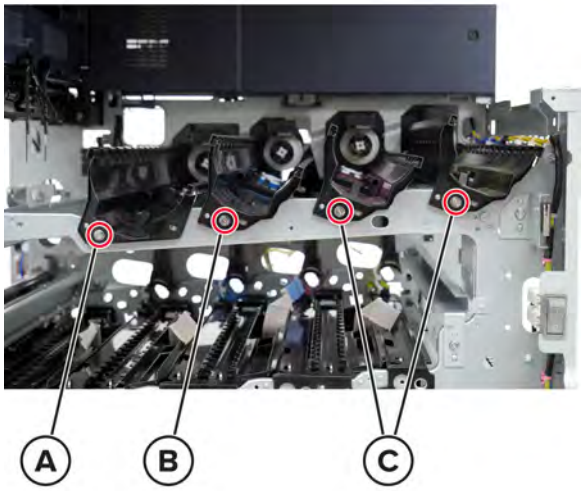
3 Remove the exit 1 bail. See **"Exit 1 bail removal" on page 403**.

4 Remove the standard bin cover. See **"Standard bin cover removal" on page 404**.

5 Remove the front door. See **"Front door removal" on page 351**.

6 Remove the inner front cover. See **"Inner front cover removal" on page 353**.

7 Remove the appropriate screw from the target dispenser.



A	K toner dispenser screw
B	C toner dispenser screw
C	Y, M toner dispenser screw

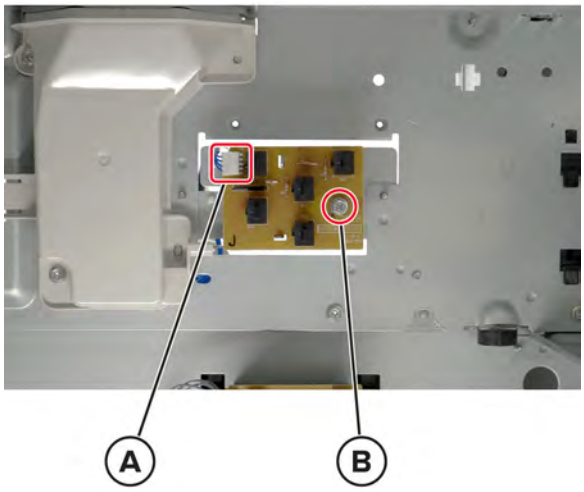
8 Remove the dispenser.

Bottom side removals

Sensor (paper size) removal

1 Remove the tray 1 tray insert.

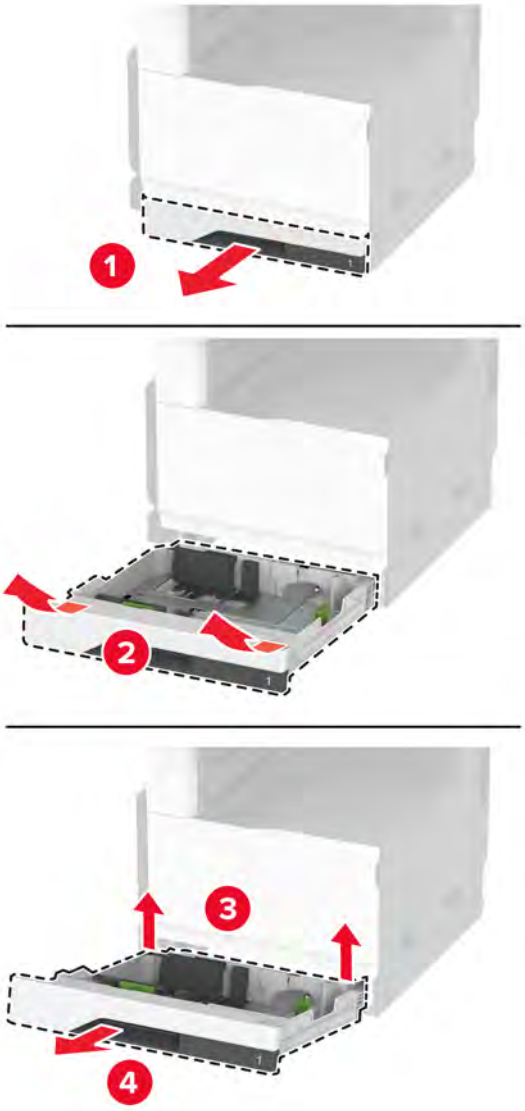
2 Disconnect the cable (A) under the printer, and then remove the screw (B).



3 Remove the sensor.

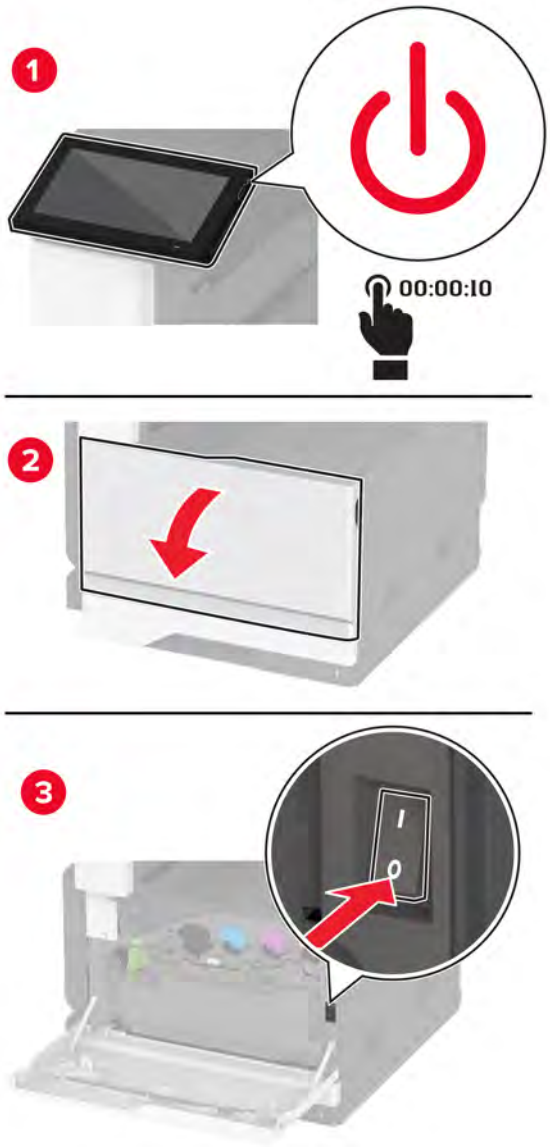
520-sheet tray insert removal

1 Remove the used tray insert.



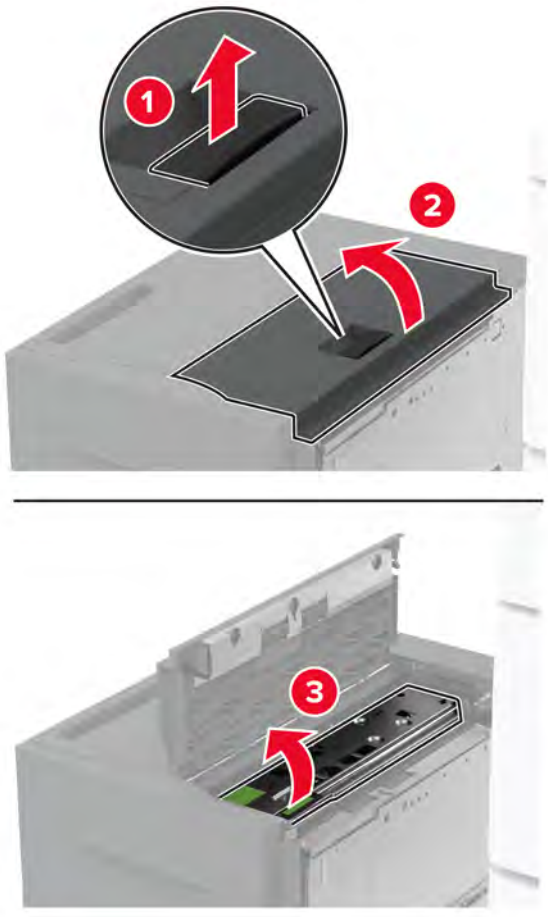
2000-sheet tray roller kit removal

1 Turn off the printer.

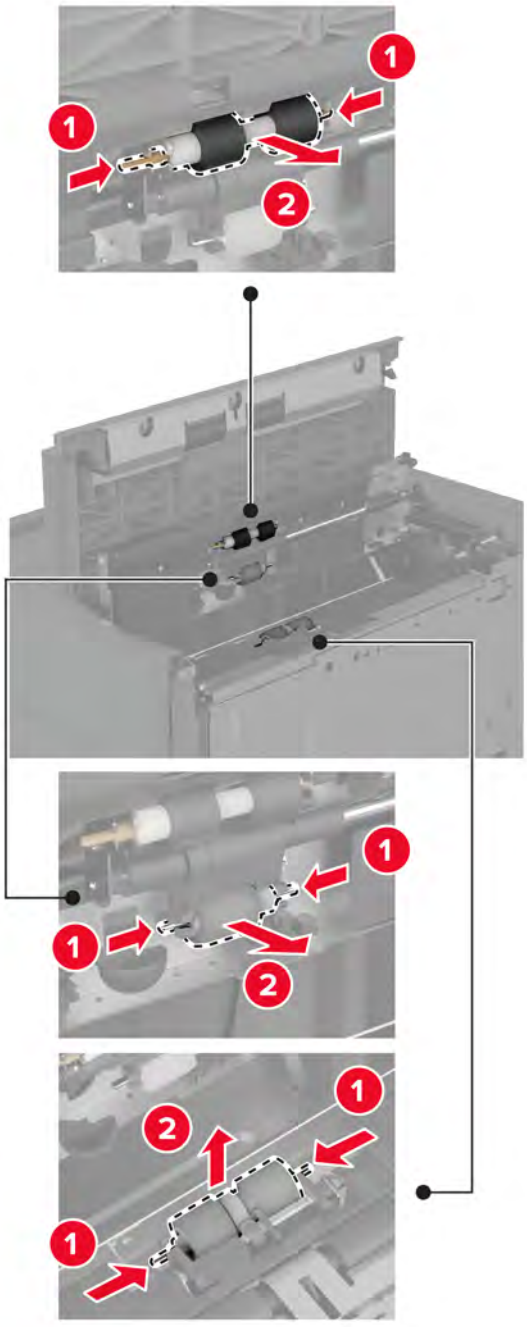


2 Slide the tray to the left.

3 Open door J, and then open the roller kit cover.

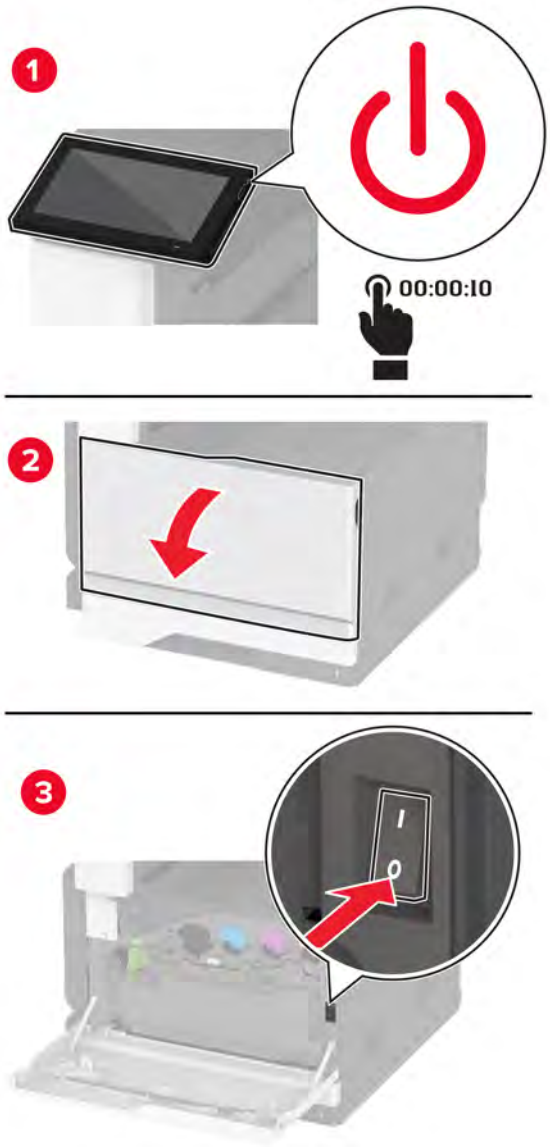


4 Locate and remove the roller kit.

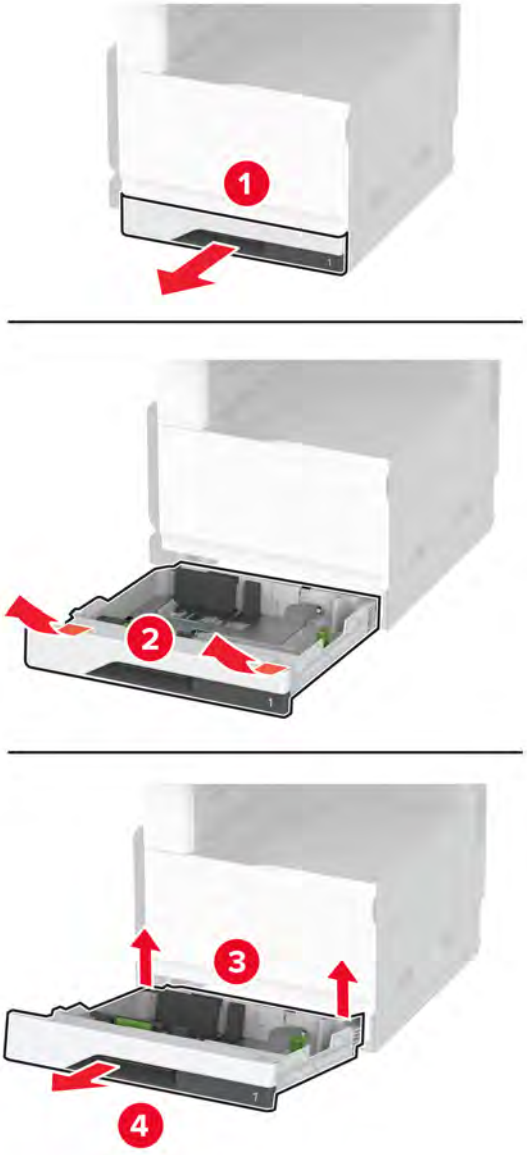


Tray roller kit removal

1 Turn off the printer.

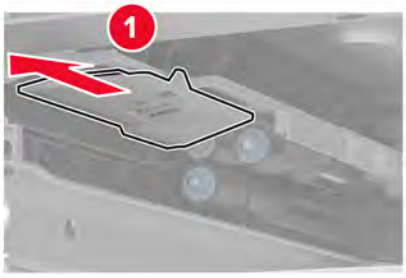


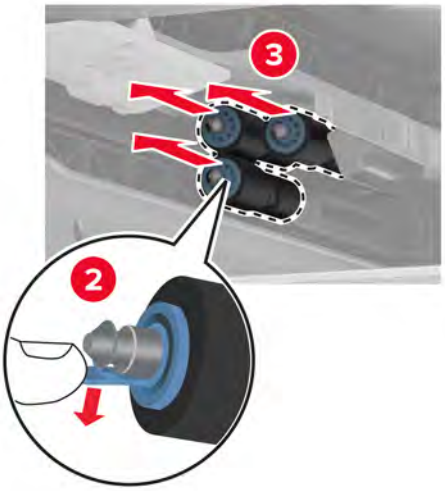
2 Remove the standard tray.



3 Remove the tray roller kit.

Warning—Potential Damage: To prevent damage from electrostatic discharge, touch any exposed metal frame of the printer before accessing or touching interior areas of the printer.


1


3
2

Scanner removals

Scanner cable cover removal

1 Release the latch.

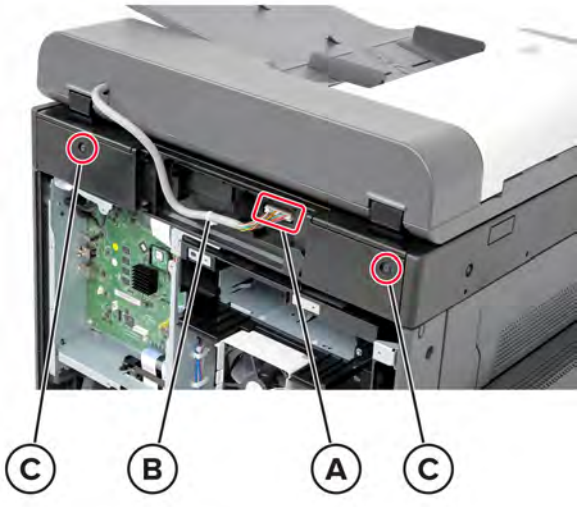
2 Remove the cover.

Scanner rear cover removal

1 Remove the scanner cable cover. See **"Scanner cable cover removal" on page 417**.

2 Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

3 Disconnect the cable (A), release the guide (B), and then remove the two screws (C).



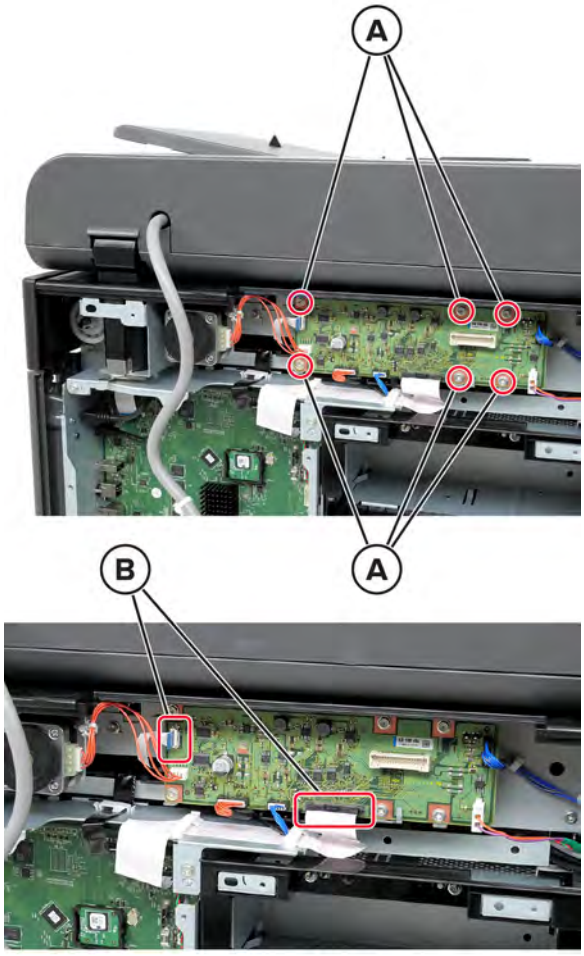
4 Remove the cover.

Scanner controller board removal

Note: For a video demonstration, see **Scanner controller board removal**.

1. Remove the scanner cable cover. See **"Scanner cable cover removal" on page 417**.
2. Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.
3. Disconnect all the cables, and then remove the six screws (A).

   Warning—Potential Damage: Be careful not to break the FFC connectors (B).

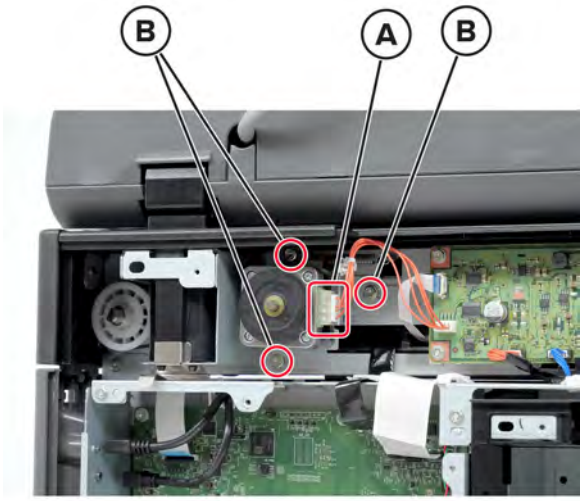


4. Remove the board.

Motor (scanner) removal

1. Remove the scanner cable cover. See **"Scanner cable cover removal" on page 417**.
2. Remove the upper rear cover. See **"Upper rear cover removal" on page 380**.

3 Disconnect the cable (A), and then remove the three screws (B).

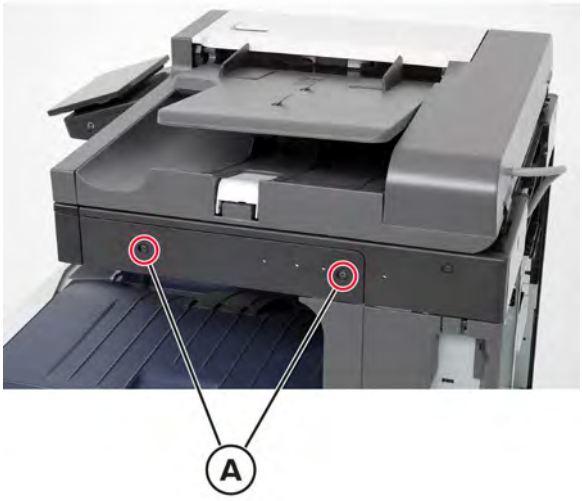


4 Remove the motor.

Installation note: Make sure that the belt is engaged with the motor.

Scanner right cover removal

1 Remove the two screws (A).



2 Remove the cover.

Scanner right edge cover removal

1 Remove the scanner right cover. See **"Scanner right cover removal" on page 419**.

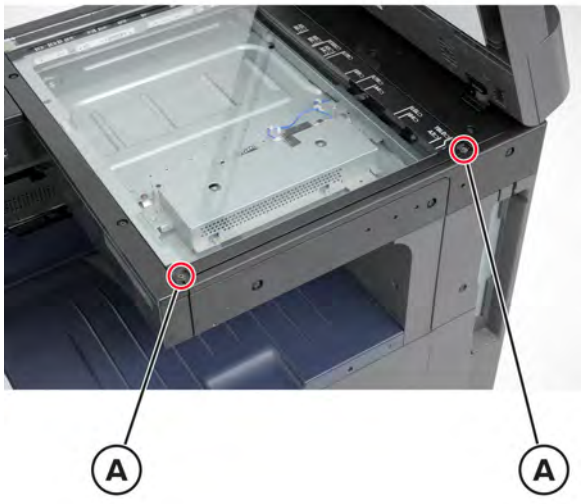
2 Remove the screw (A).

3 Remove the cover.

Scanner glass retainer cover removal

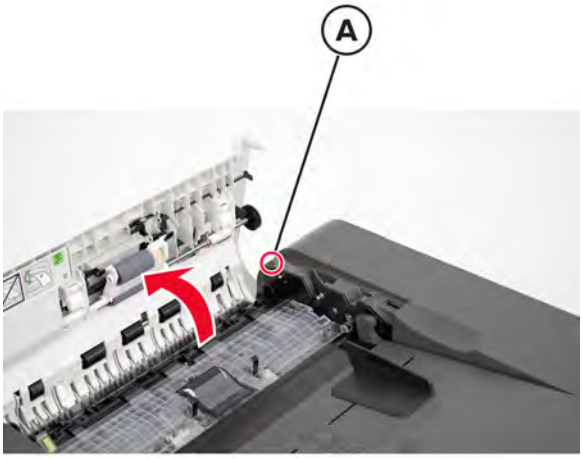
1 Open the scanner cover.

2 Remove the two screws (A), and then remove the cover.

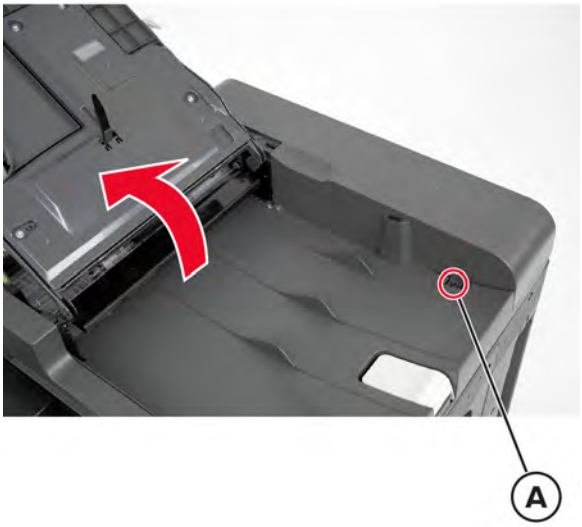


ADF rear cover removal

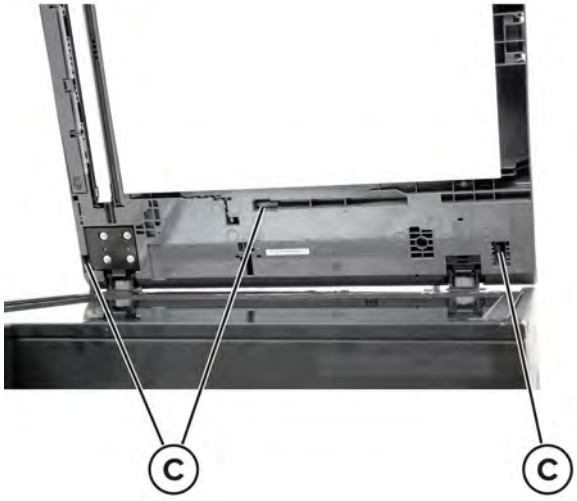
1 Open the ADF cover, and then remove the screw (A).



2 Lift the ADF tray, and then remove the screw (B).



3 Under the ADF, release the latches (C).



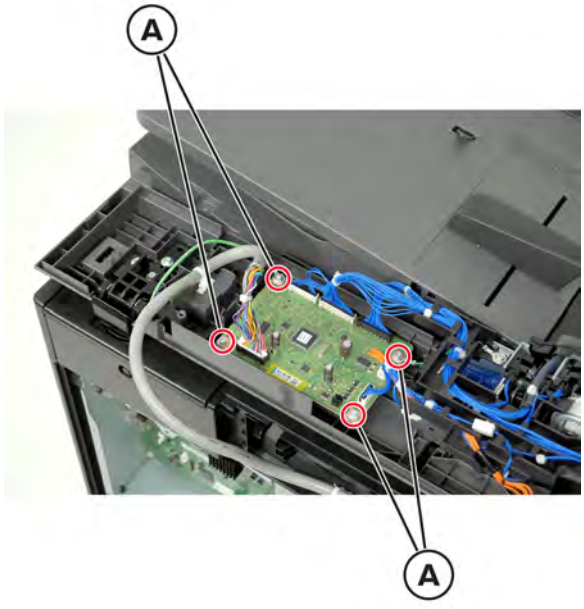
4 Remove the cover.

ADF controller board removal

For a video demonstration, see **ADF controller board removal**.

1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 421**.

2 Disconnect all the cables, and then remove the four screws (A).

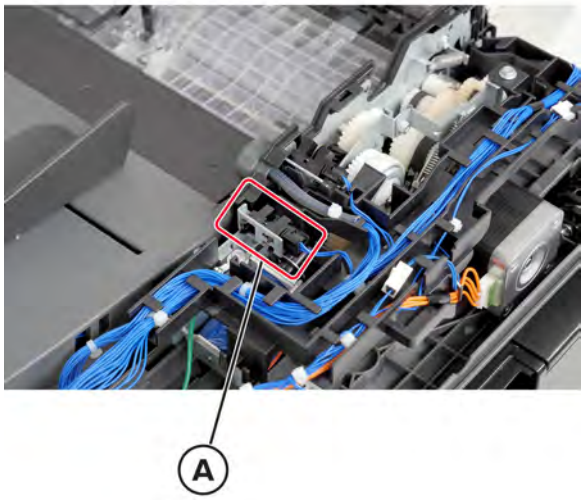


3 Remove the board.

Sensor (ADF cover) removal

1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 421**.

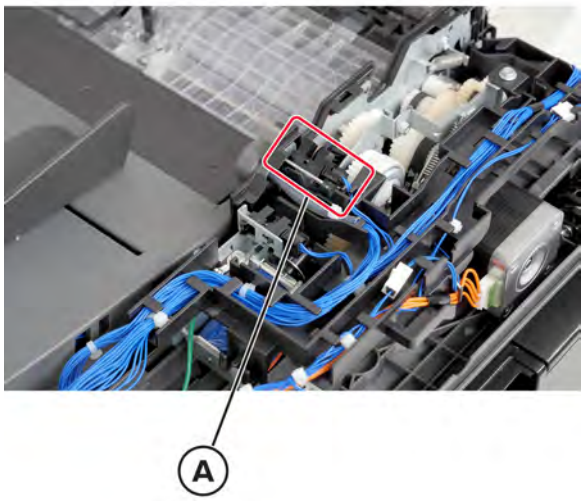
2 Disconnect the cable (A), and then remove the sensor.



Sensor (ADF paper present) removal

1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 421**.

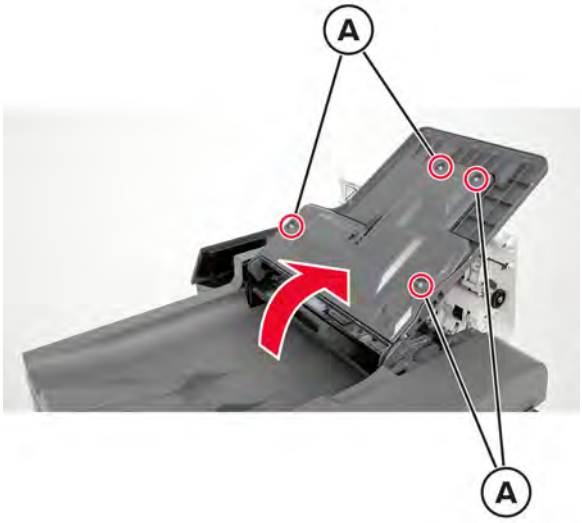
2 Disconnect the cable (A), and then remove the sensor.



ADF tray bottom cover removal

1 Open the ADF cover.

2 Lift the tray, and then remove the four screws (A).

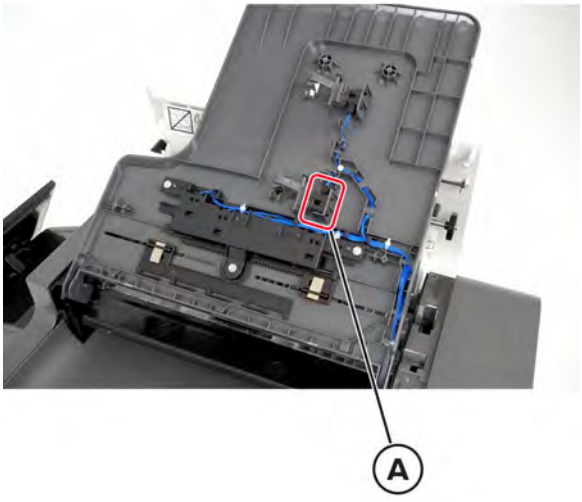


3 Remove the cover.

Sensor (ADF paper length 1) removal

1 Remove the ADF tray bottom cover. See **“ADF tray bottom cover removal” on page 424**.

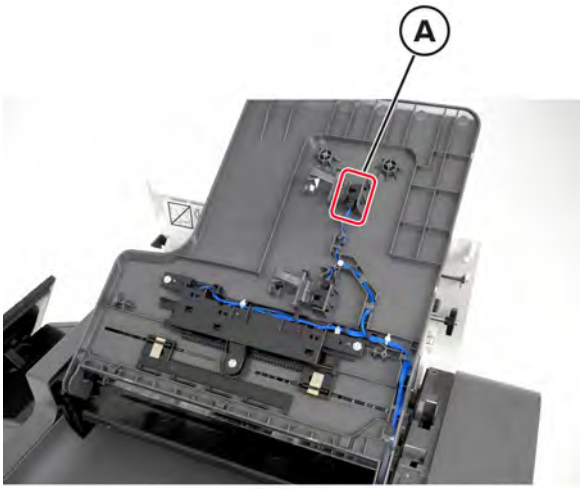
2 Disconnect the cable (A), and then remove the sensor.



Sensor (ADF paper length 2) removal

1 Remove the ADF tray bottom cover. See **"ADF tray bottom cover removal" on page 424**.

2 Disconnect the cable (A), and then remove the sensor.



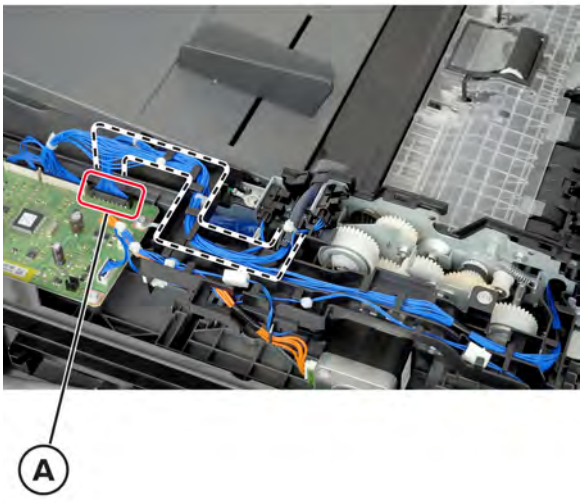
ADF tray removal

1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 421**.

2 Open the ADF cover.

3 Disconnect the cable (A), and then release it from its guides.

Installation note: Pay attention to the cable route.

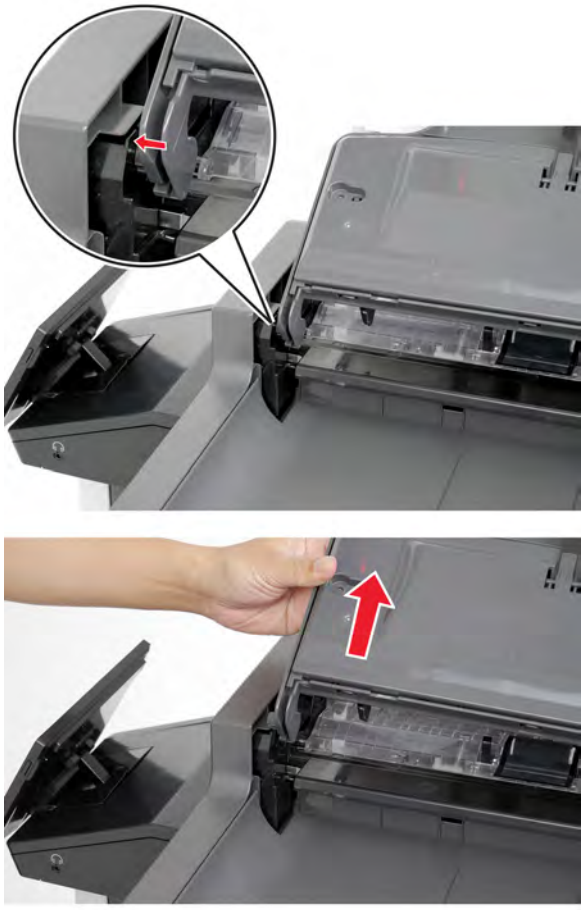


4 Release the hinge.

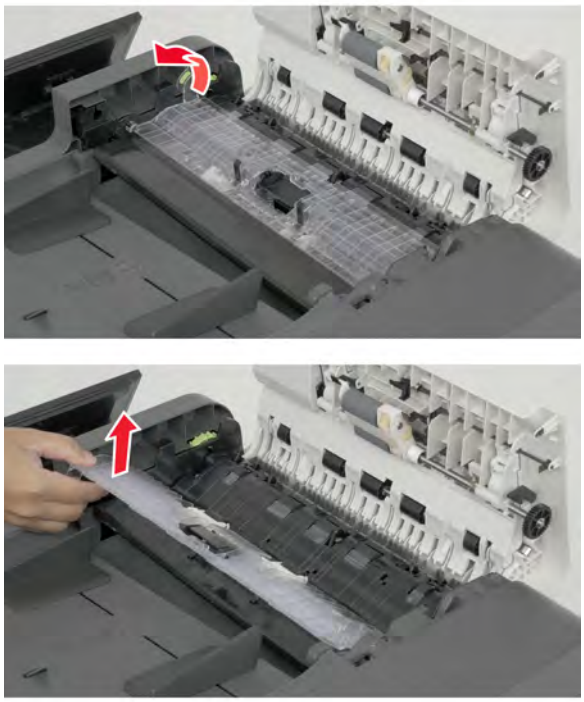
5 Remove the tray.

ADF separator guide removal

1. Open the ADF cover.
2. Lift the ADF tray, and then release the hinge.



3 Remove the guide.

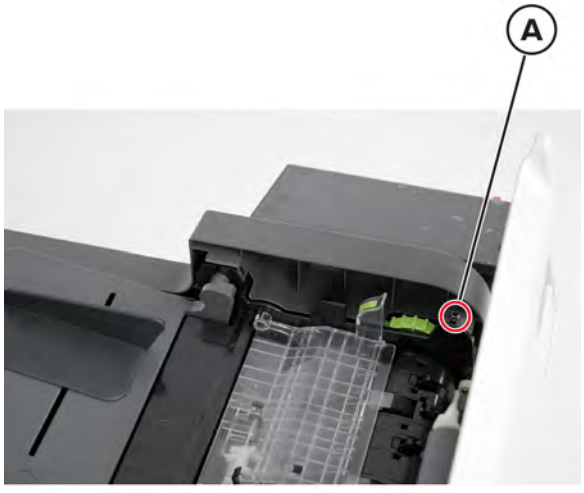


4 Remove the separator roller cover.

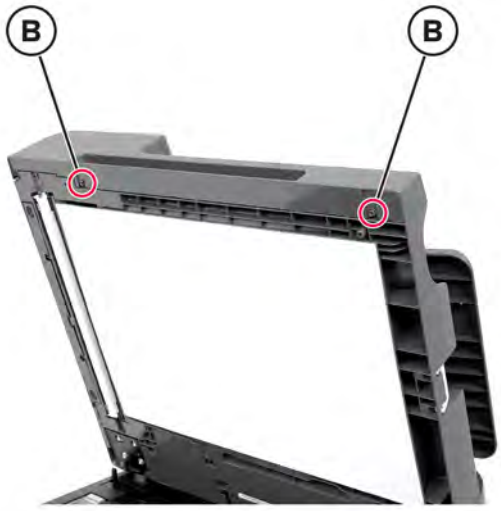
5 Remove the separator roller.

ADF front cover removal

1 Open the ADF cover, and then remove the screw (A).



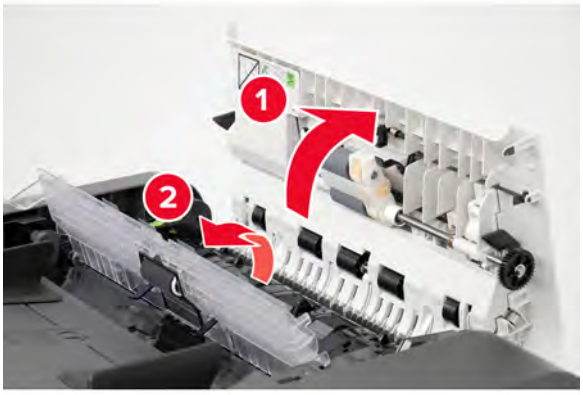
2 Under the ADF, remove the three screws (B).



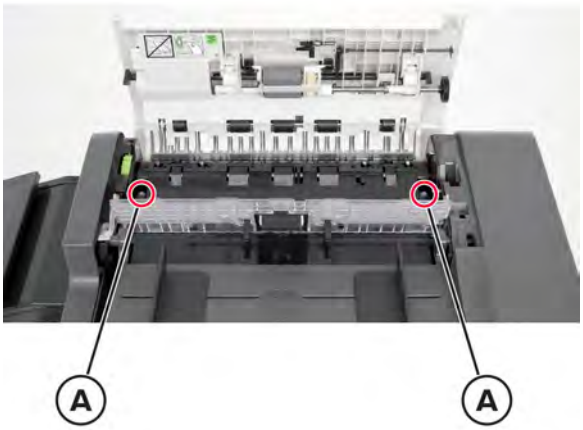
3 Remove the cover.

ADF duplex guide removal

1 Open the doors.



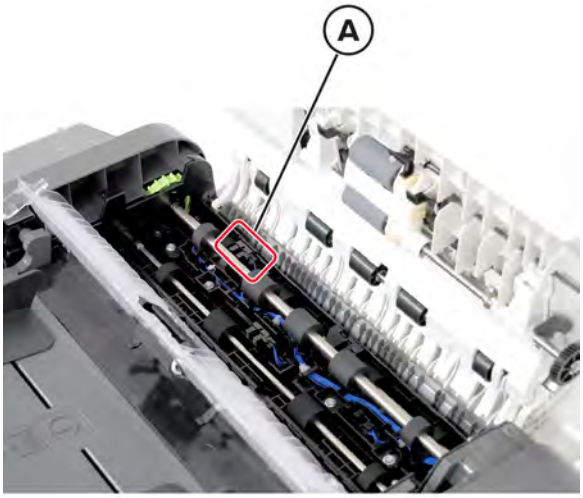
2 Remove the two screws (A), and then remove the guide.



Sensor (ADF mixed paper width 2) removal

1 Remove the ADF duplex guide. See **"ADF duplex guide removal" on page 429**.

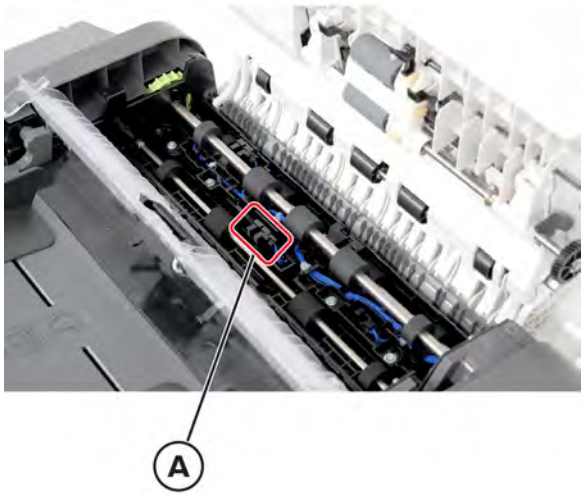
2 Disconnect the cable (A), and then remove the sensor.



Sensor (ADF scan 2) removal

1 Remove the ADF duplex guide. See **"ADF duplex guide removal" on page 429**.

2 Disconnect the cable (A), and then remove the sensor.

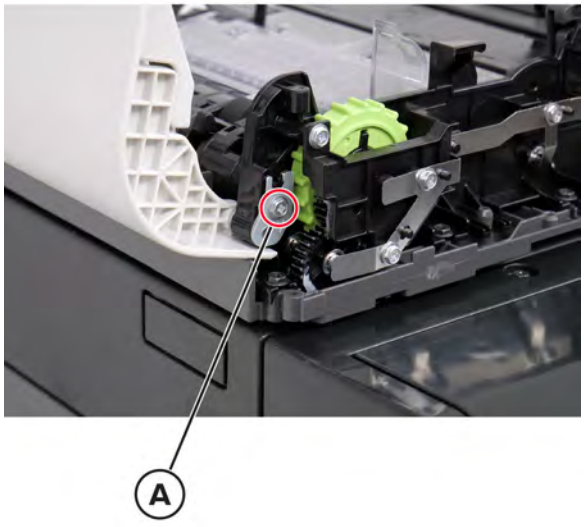


ADF door removal

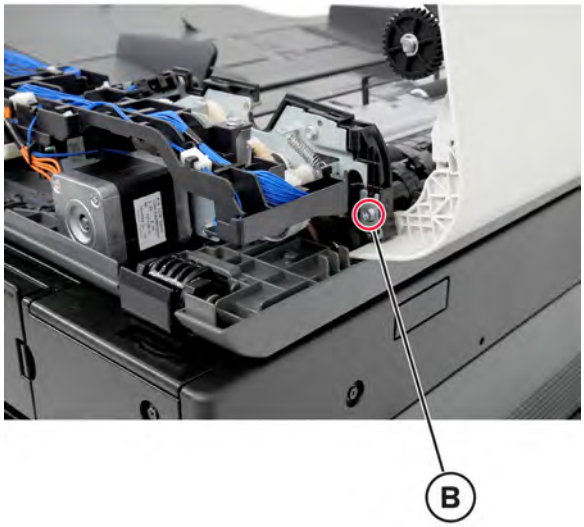
1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 421**.

2 Remove the ADF front cover. See **"ADF front cover removal" on page 428**.

3 Remove the screw (A), and then remove the hinge bracket.



4 Remove the screw (B), and then remove the hinge bracket.

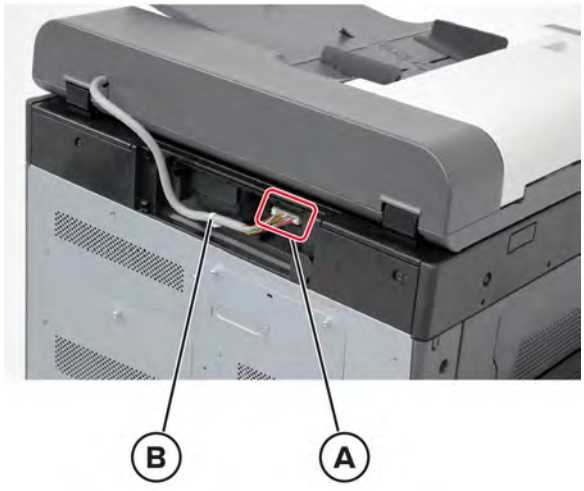


5 Remove the door.

ADF removal

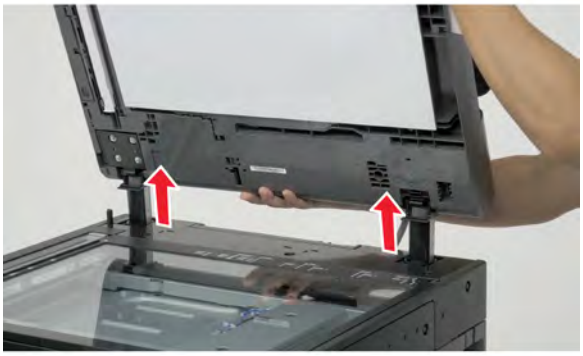
1 Remove the scanner cable cover. See **“Scanner cable cover removal” on page 417**.

2 Disconnect the cable (A), and then release the cable guide (B).



3 Open the scanner cover.

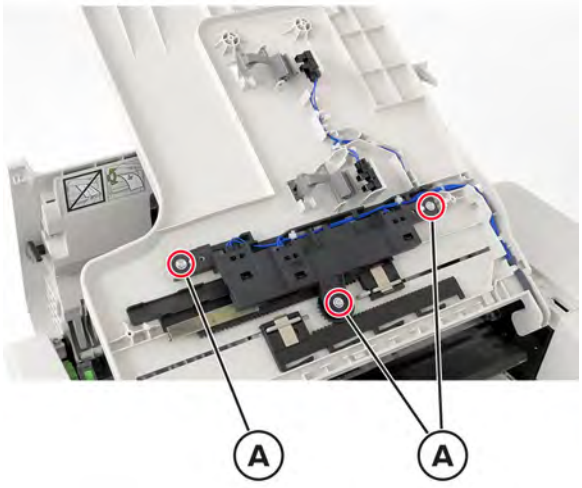
4 Lift, and then remove the ADF.



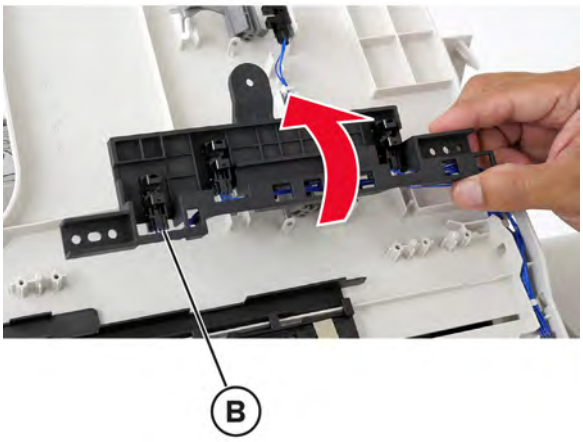
Sensor (ADF tray paper width 3) removal

1 Remove the ADF tray bottom cover. See **“ADF tray bottom cover removal” on page 424**.

2 Remove the three screws (A).



3 Under the cover, disconnect the cable (B).

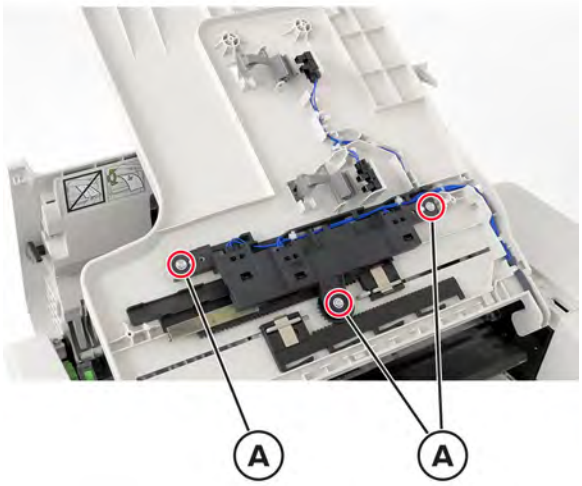


4 Remove the sensor.

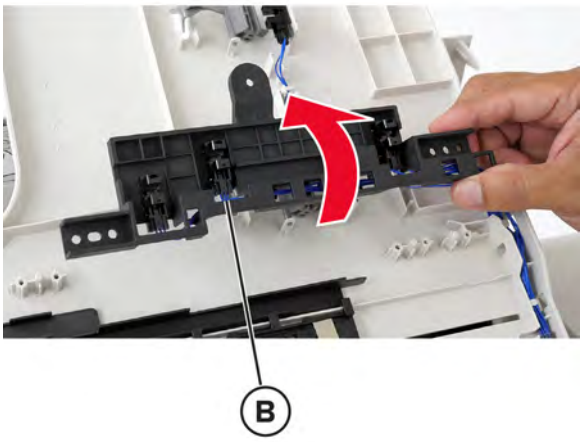
Sensor (ADF tray paper width 2) removal

1 Remove the ADF tray bottom cover. See **"ADF tray bottom cover removal" on page 424**.

2 Remove the three screws (A).



3 Under the cover, disconnect the cable (B).

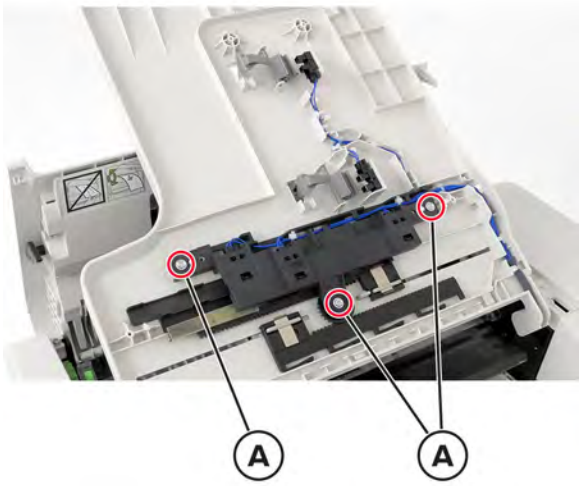


4 Remove the sensor.

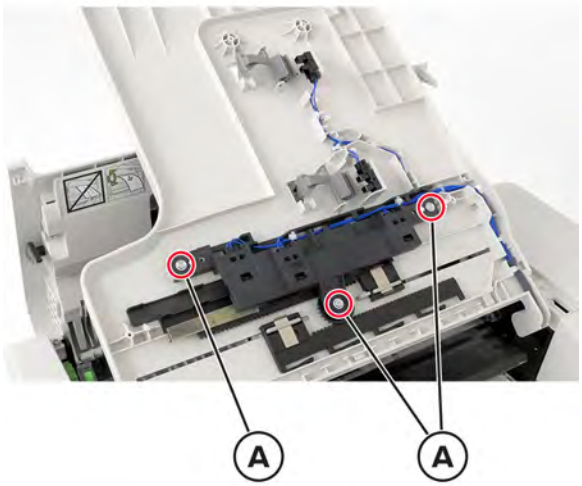
Sensor (ADF tray paper width 1) removal

1 Remove the ADF tray bottom cover. See **"ADF tray bottom cover removal" on page 424**.

2 Remove the three screws (A).



3 Under the cover, disconnect the cable (B).



4 Remove the sensor.

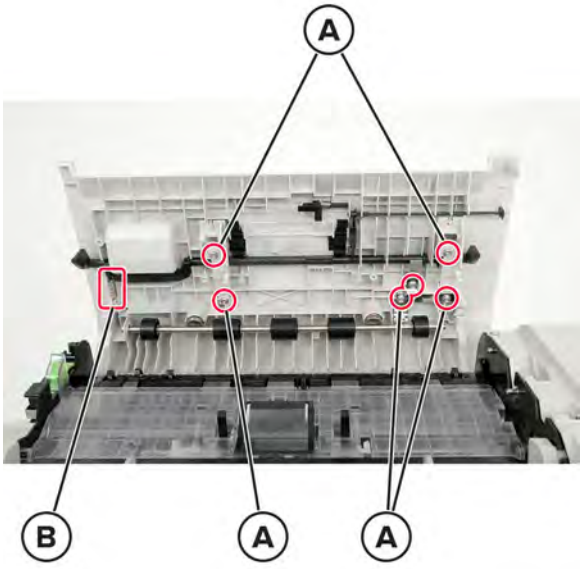
ADF door latch removal

1 Open the ADF cover.

2 Remove the three screws, and then remove the cover.

3 Remove the six screws (A), and then remove the covers and plate.

4 Release the spring (B).

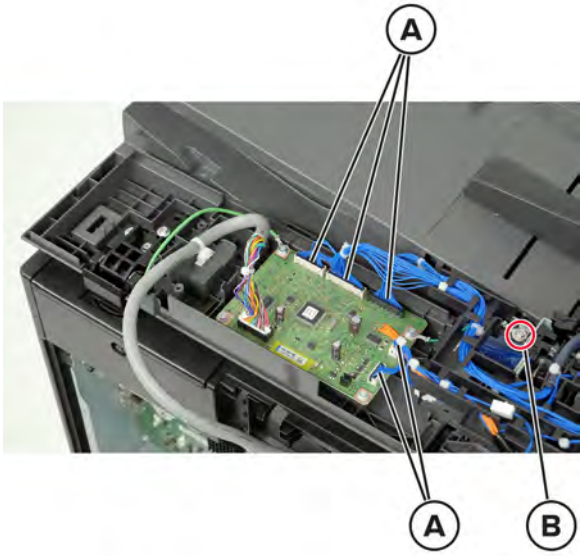


5 Remove the door latch.

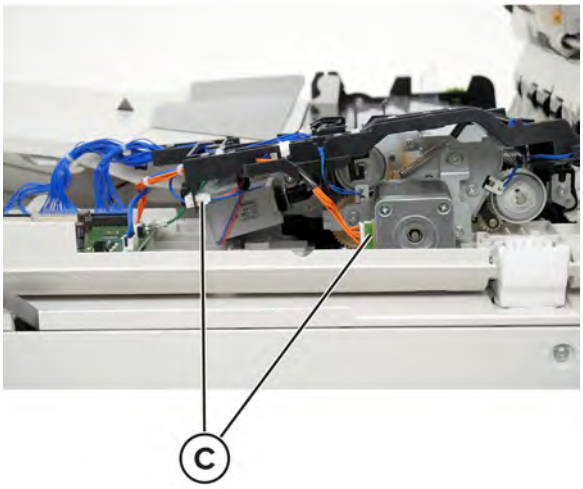
ADF cable guide removal

1 Remove the ADF rear cover. See **"ADF rear cover removal" on page 421**.

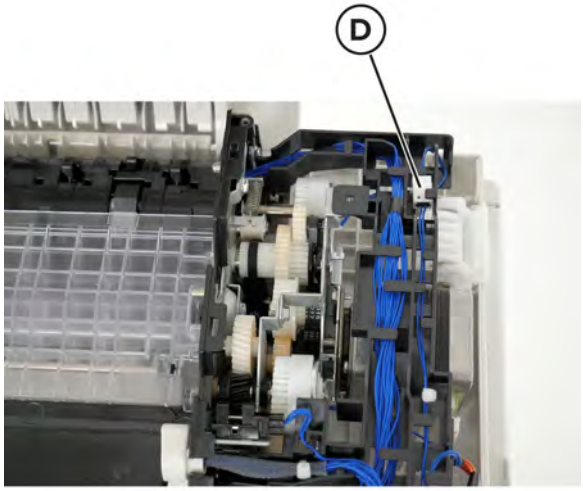
2 Disconnect the cables (A), and then remove the ground screw (B).



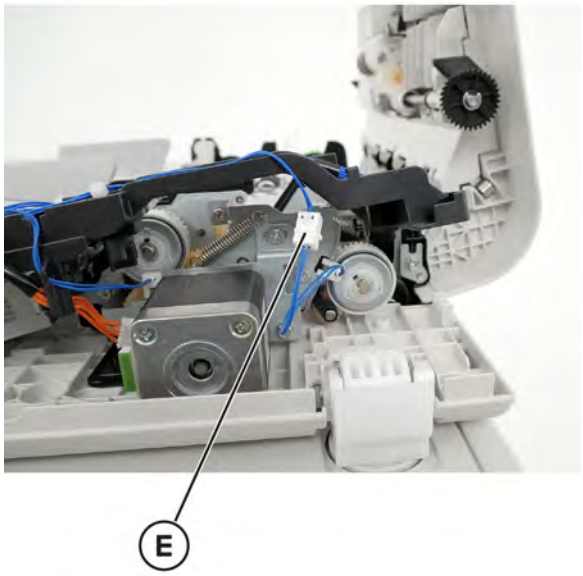
3 Disconnect the cables (C).



4 Disconnect the cable (D).

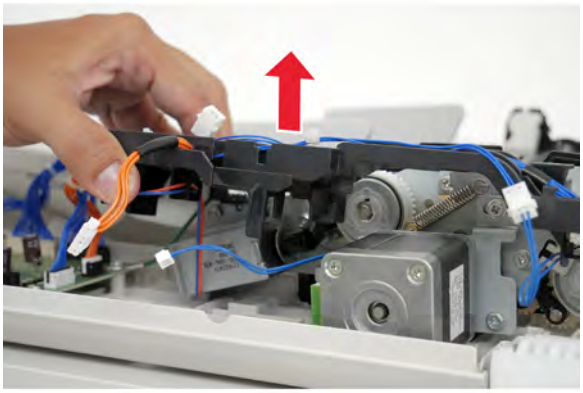


5 Disconnect the cable (E).



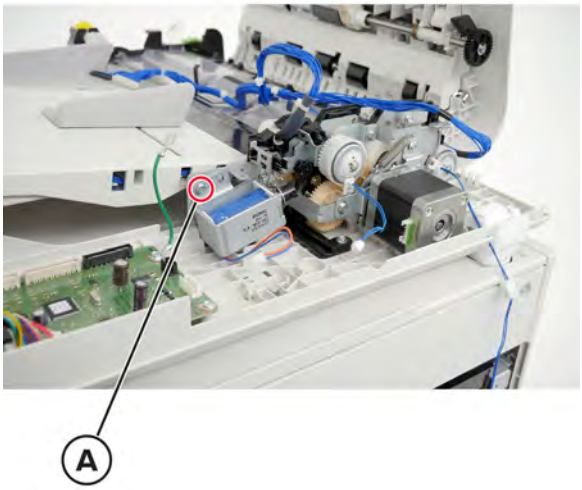
6 Lift the cable guide, and then release the cables from it.

Installation note: Pay attention to the cable routes.

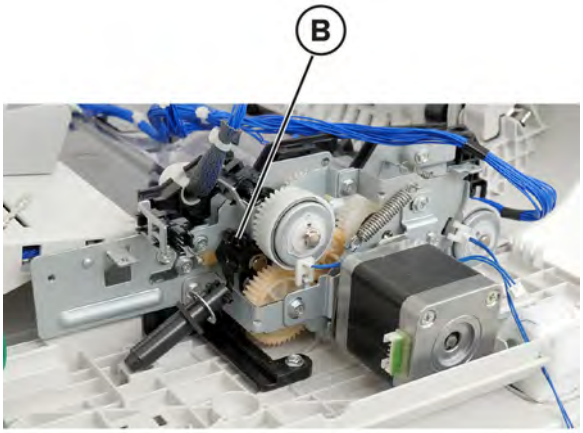


ADF nip solenoid removal

1. Remove the ADF rear cover. See **"ADF rear cover removal" on page 421**.
2. Remove the ADF cable guide. See **"ADF cable guide removal" on page 437**.
3. Remove the screw (A), and then remove the solenoid.

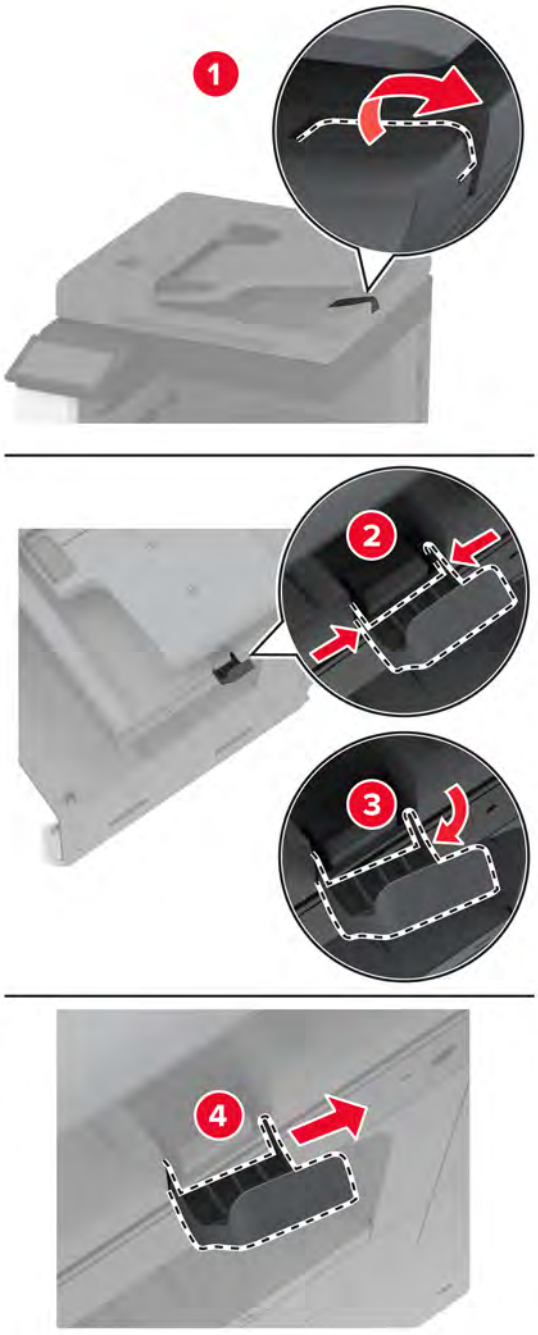


Warning—Potential Damage: Do not lose the washers (A).


B

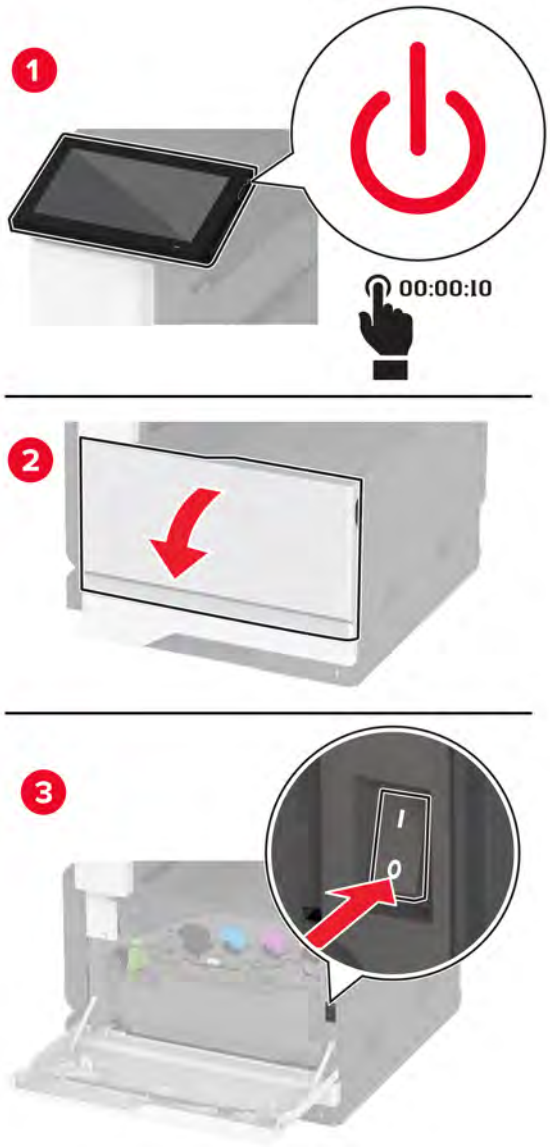
ADF bin paper stopper removal

1 Remove the used ADF bin paper stopper.

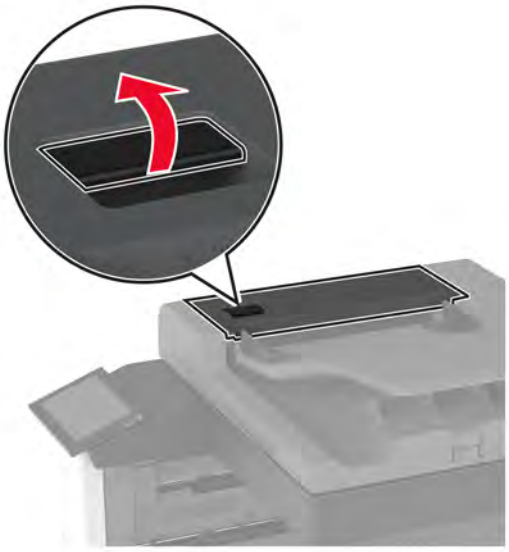


ADF roller kit removal

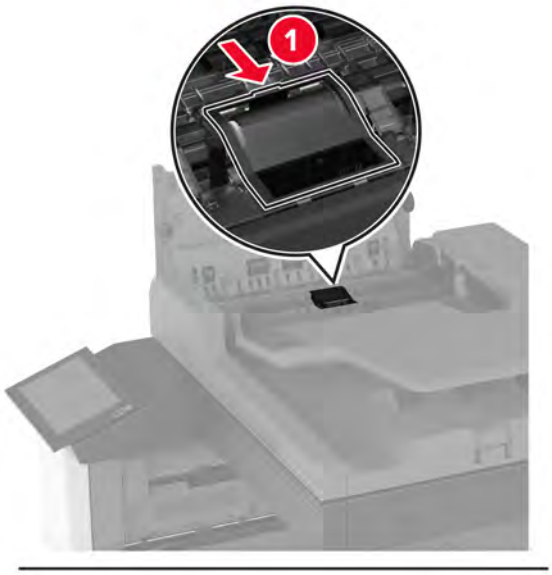
1 Turn off the printer.



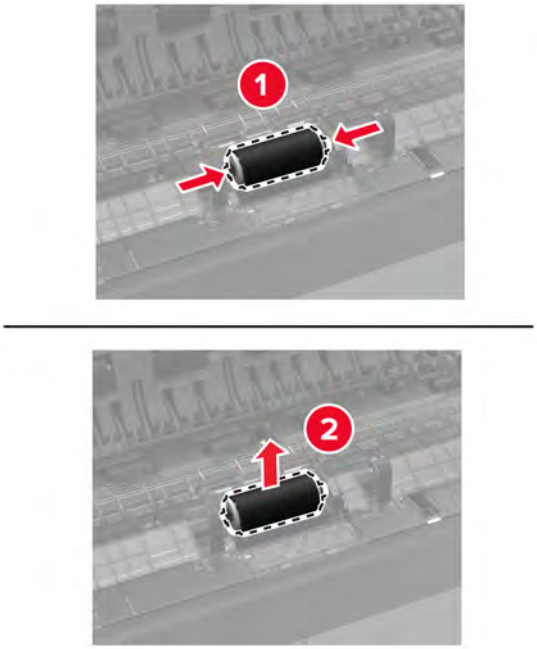
2 Open the ADF top cover.



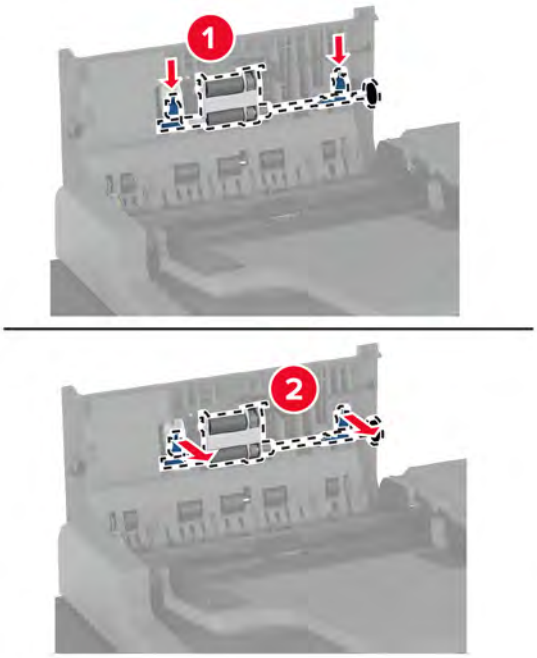
3 Remove the separator roller cover.



4 Remove the separator roller.

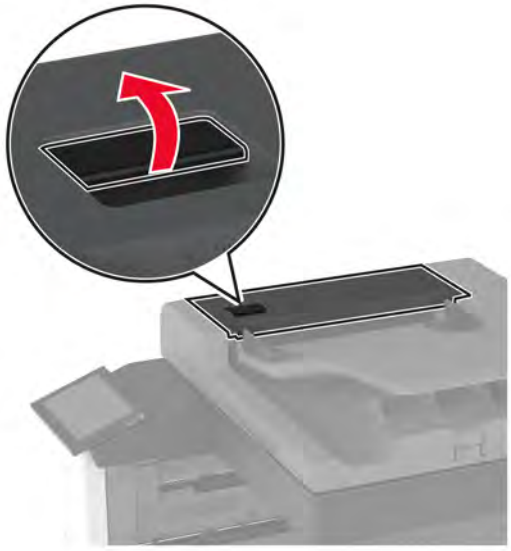


5 Remove the pick roller assembly.

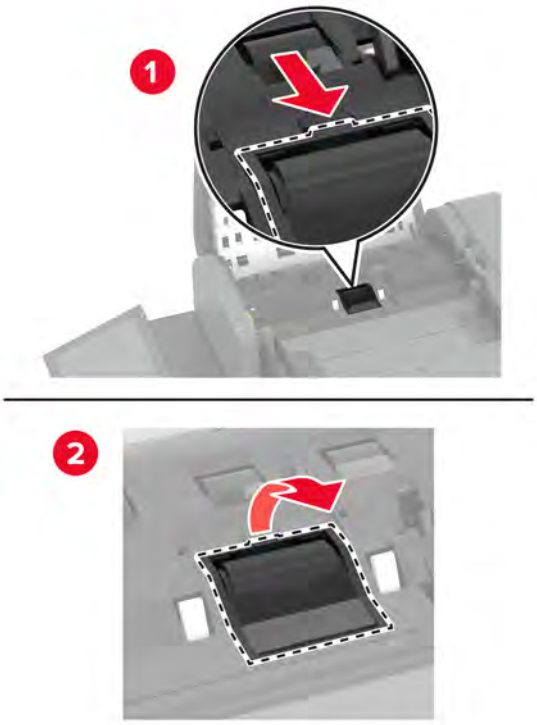


ADF separator roller cover removal

1 Open the ADF top cover.



2 Remove the separator roller cover.

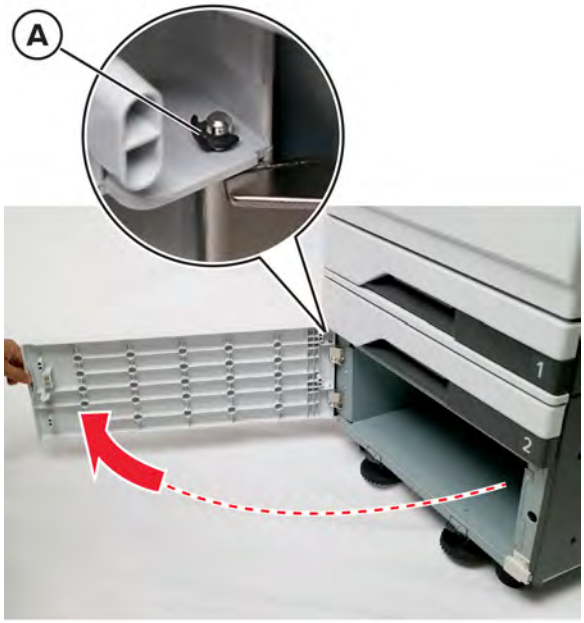


Optional 520-sheet tray with cabinet removals

520-sheet tray with cabinet front cover removal

1 Open the 520-sheet tray with cabinet front cover.

2 Remove the c-clip (A).

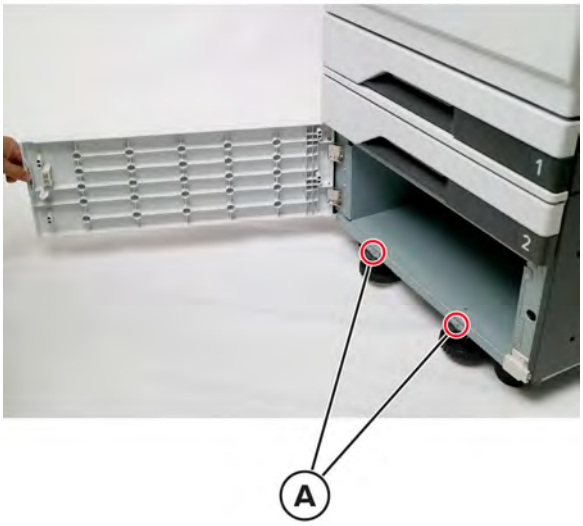


3 Lift to remove the cover.

520-sheet tray with cabinet adjust feet removal

1 Open the 520-sheet tray with cabinet front cover.

2 Remove the two screws (A).

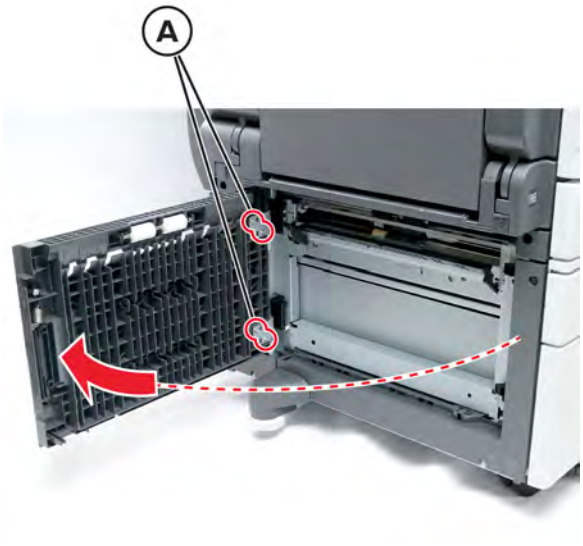


3 Remove the adjustable feet.

520-sheet tray with cabinet door removal

1 Open the 520-sheet tray with cabinet door.

2 Remove the four screws (A).

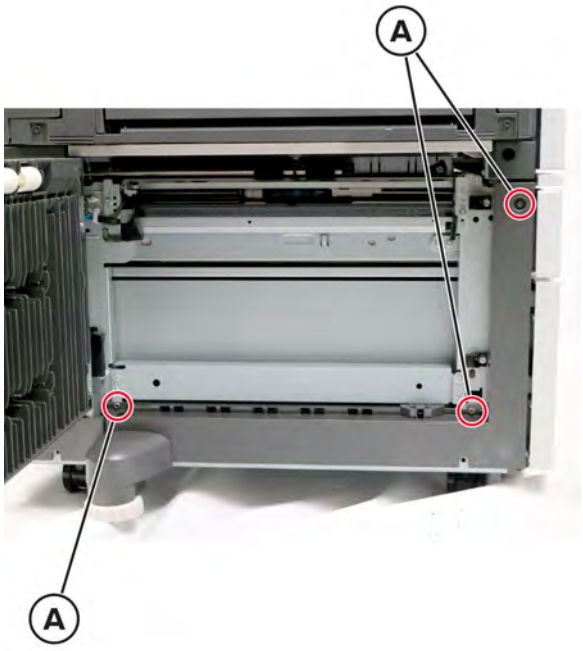


3 Remove the door.

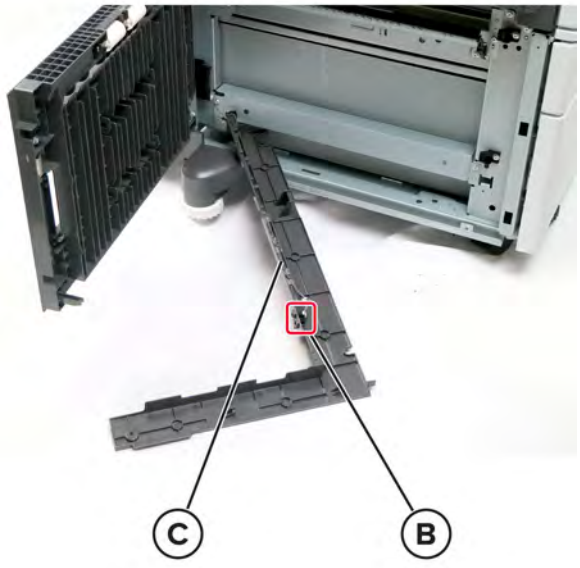
520-sheet tray with cabinet front left cover

1 Open the 520-sheet tray with cabinet door.

2 Remove the three screws (A).



3 Disconnect the connector (B) and then unroute the cable (C).



4 Remove the cover.

520-sheet tray with cabinet rear left cover removal

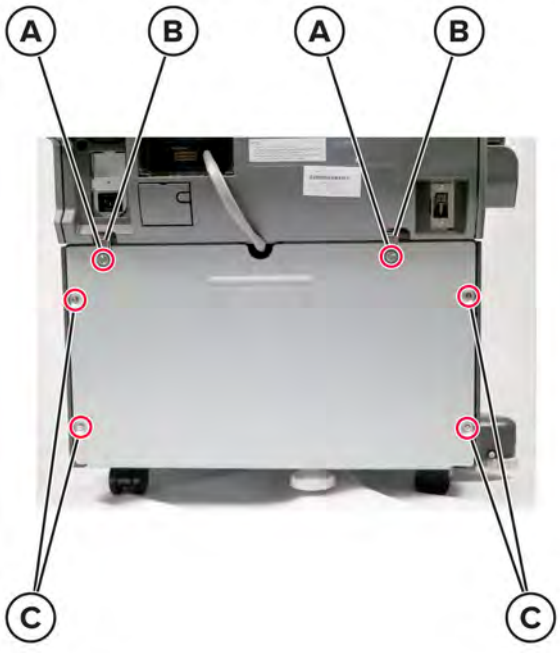
1 Remove the screw (A) and then remove the cover.

520-sheet tray with cabinet rear cover removal

1 Remove the two flat head screws (A) and then remove the two bracket (B) to unlock the rear cover.

Note: In some cases, the rear cover is already unlocked.

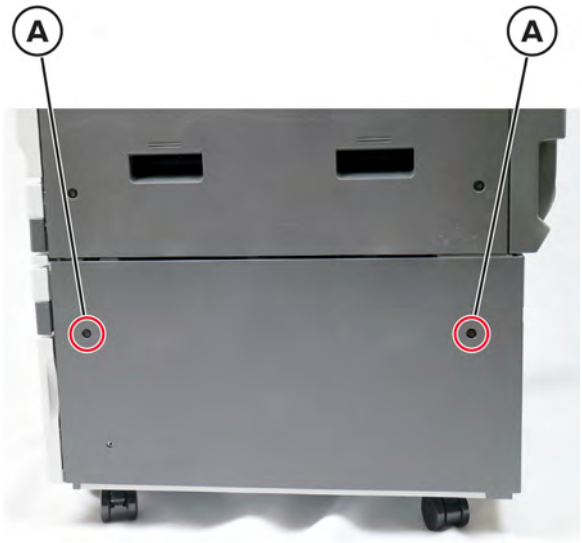
2 Remove the four screws (C).



3 Remove the rear cover.

520-sheet tray with cabinet right cover removal

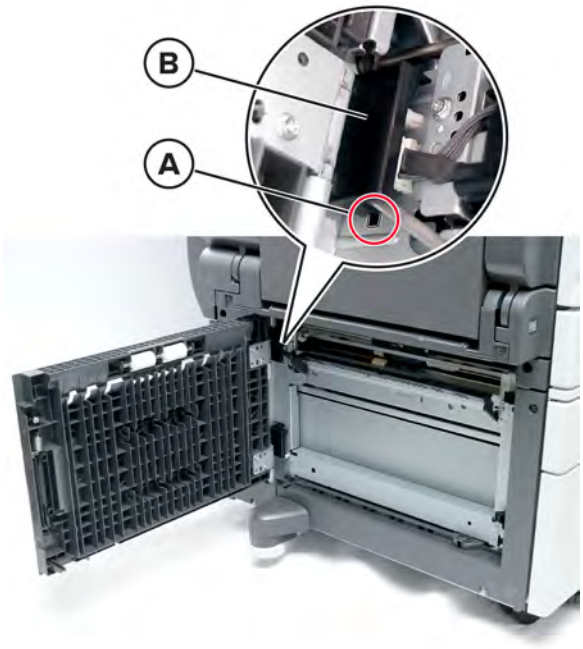
1 Remove the two screws (A) and then remove the cover.



520-sheet tray with cabinet paper feeder removal

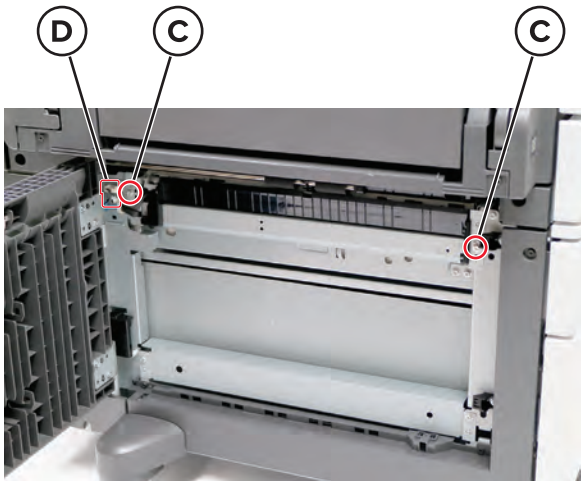
1 Remove the tray insert.

2 Remove the latch (A) and then remove the connector cover (B).



3 Remove the two screws (C) and then remove the two connectors (D).

Installation note: Take note of the cable routing before removing the part.



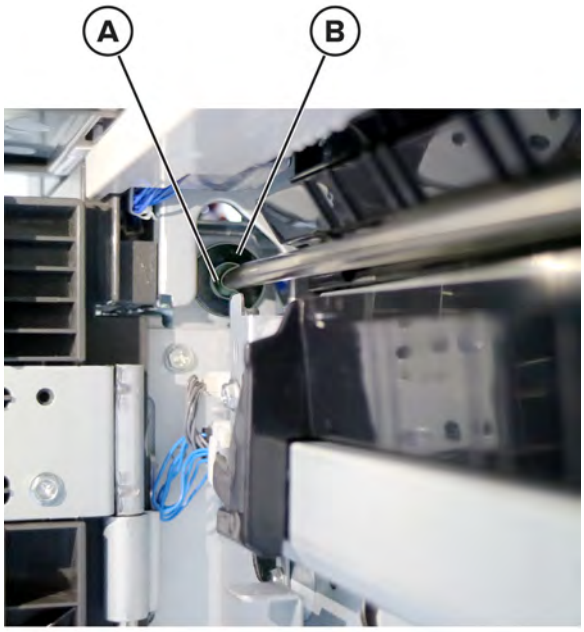
4 Remove the paper feeder.

520-sheet tray with cabinet transport roller removal

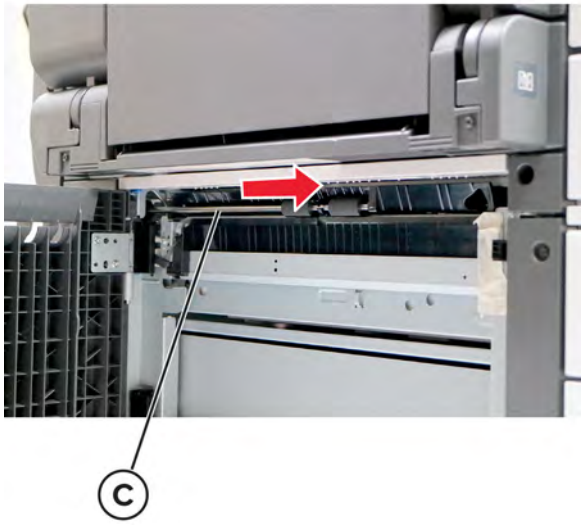
1 Remove the transport gear (34T). See **"Transport gear (34T) removal" on page 456**.

2 Open the 520-sheet tray with cabinet door.

3 Remove the c-clip (A) and then remove the bushing (B).



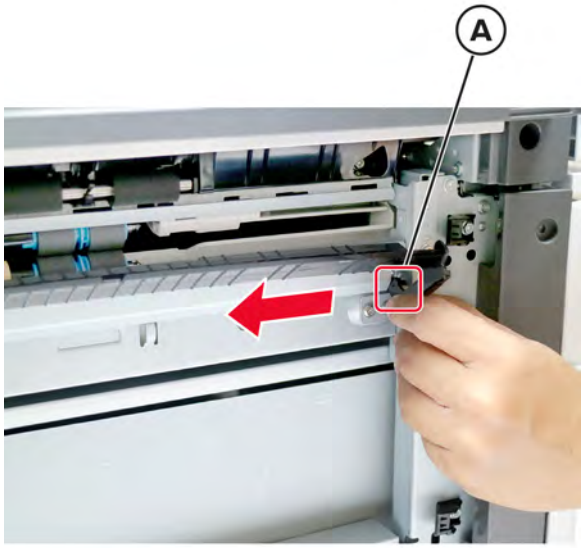
4 Remove the shaft (C) by sliding it to the left.



520-sheet tray with cabinet turn guide removal

1 Open the 520-sheet tray with cabinet door.

2 Release the hinge (A) and then slide the turn guide to the left to remove it.

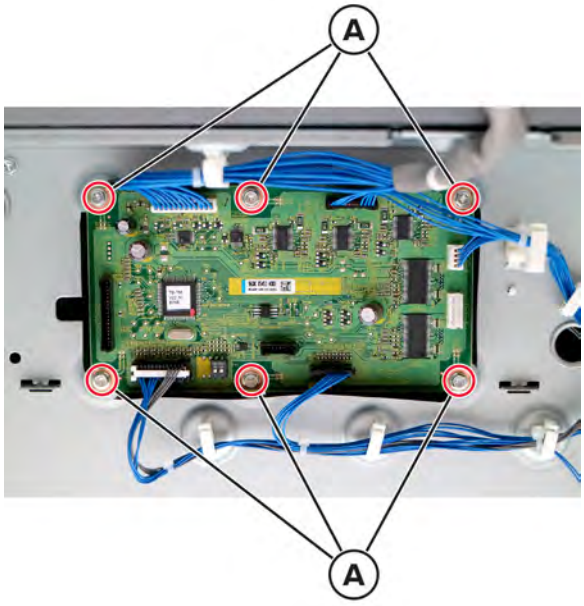


520-sheet tray with cabinet controller board removal

1 Remove the rear cover. See **"520-sheet tray with cabinet rear cover removal" on page 449**.

2 Disconnect all connectors on the controller board.

3 Remove the six screws (A).



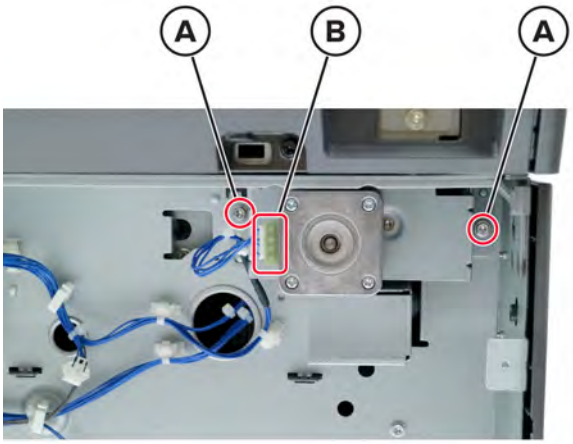
4 Remove the controller board.

Motor (520-sheet tray with cabinet transport) removal

1 Remove the rear cover. See **"520-sheet tray with cabinet rear cover removal" on page 449**.

2 Remove the two screws (A) and then remove the connector (B).

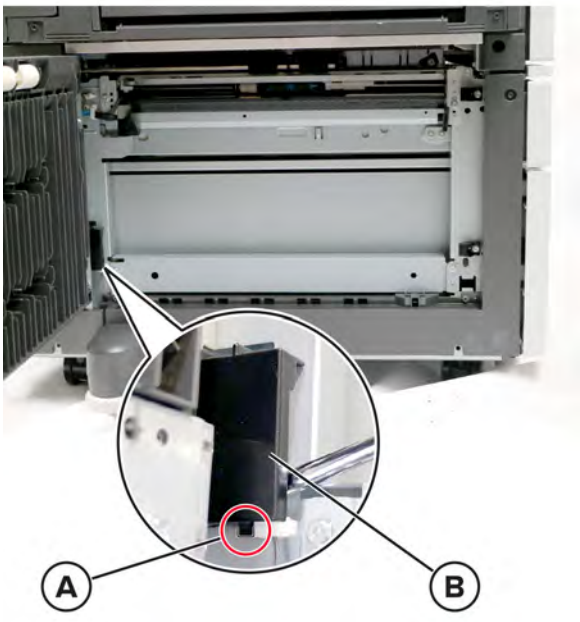
3 Release the cable guide and then remove the motor.



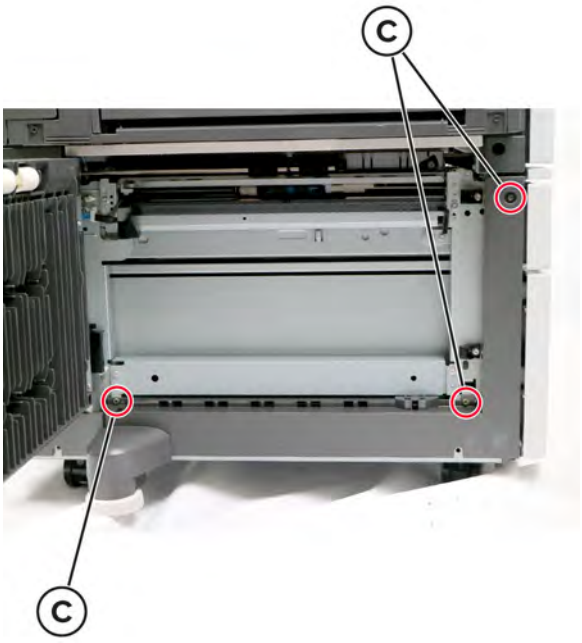
Sensor (520-sheet tray with cabinet door interlock) removal

1 Open the 520-sheet tray with cabinet door.

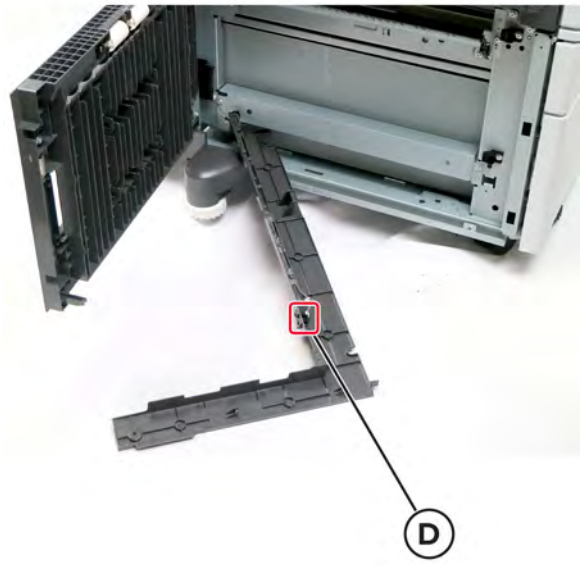
2 Remove the latch (A) and then remove the connector cover (B).



3 Remove the three screws (C).



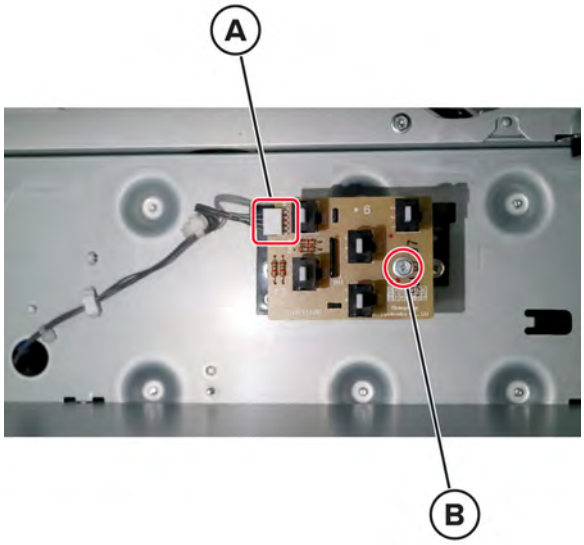
4 Remove the connector (D) and then remove the sensor.



Sensor (520-sheet tray with cabinet paper size) removal

1 Remove the tray insert.

2 Remove the connector (A) and then remove the screw (B).



3 Remove the sensor.

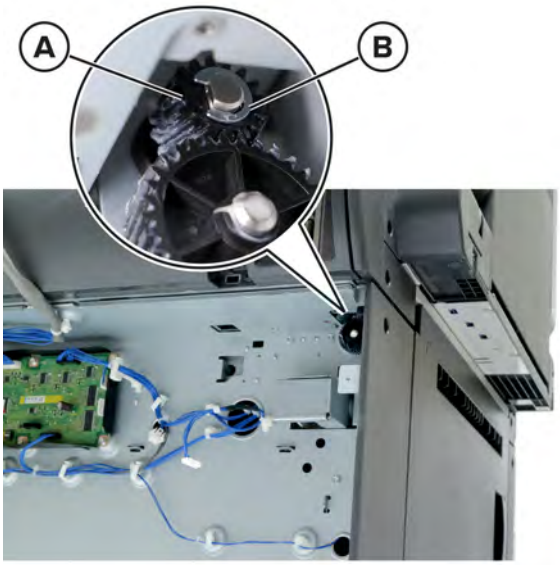
Transport gear (34T) removal

1 Remove the rear cover. See **"520-sheet tray with cabinet rear cover removal" on page 449**.

2 Remove the motor (520-sheet tray with cabinet transport). See **"Motor (520-sheet tray with cabinet transport) removal" on page 454**.

3 Remove the e-clip (A) and then remove the gear (B).

Installation note: Take note of the cable routing before removing the part.

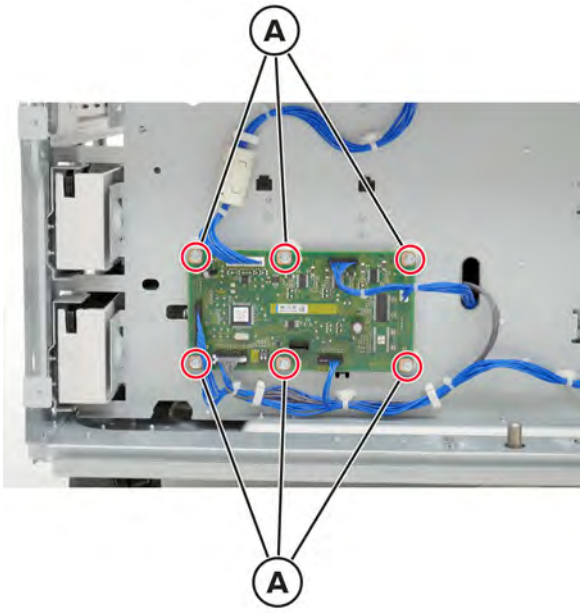


Optional 3 x 520-sheet tray removals

3 x 520-sheet tray controller board removal

1 Remove the 3 x 520-sheet tray rear cover.

2 Disconnect all the cables, and then remove the six screws (A).

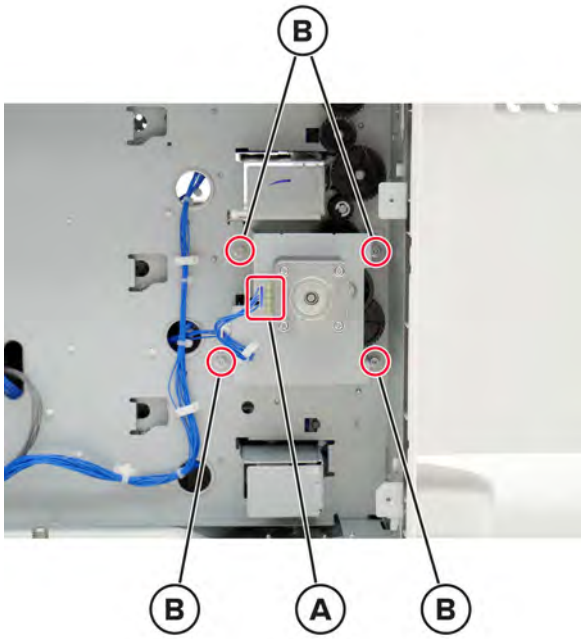


3 Remove the board.

Motor (3 x 520-sheet tray transport) removal

1 Remove the 3 x 520-sheet tray rear cover.

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



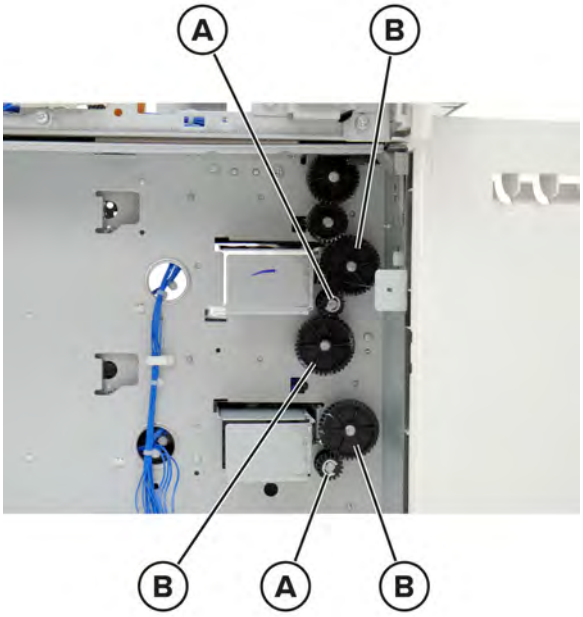
3 Remove the motor.

3 x 520-sheet tray gears (39T) removal

1 Remove the 3 x 520-sheet tray rear cover.

2 Remove the motor (3 x 520-sheet tray transport). See **“Motor (3 x 520-sheet tray transport) removal” on page 458**.

3 Remove the appropriate E-clip (A) from the target gear (B).

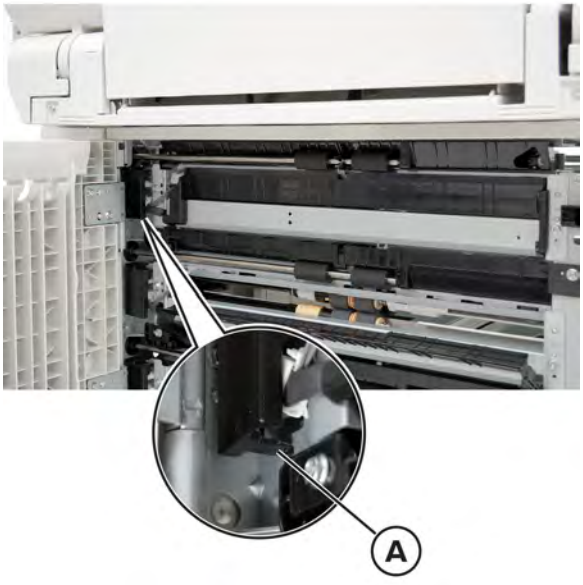


4 Remove the gear.

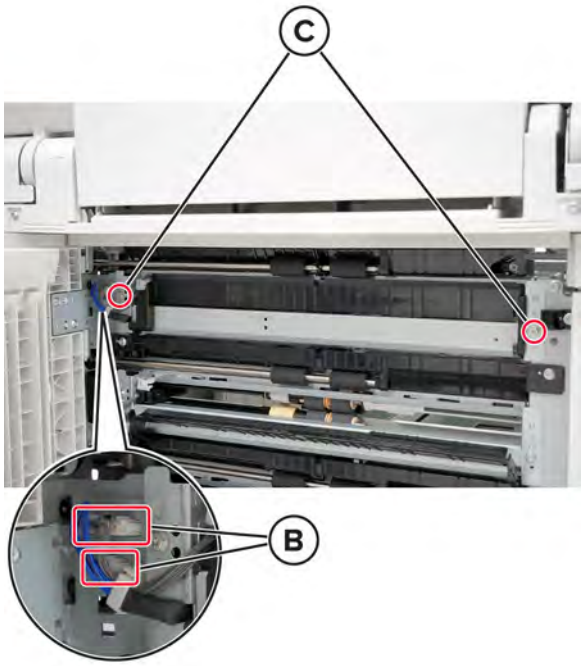
3 x 520-sheet tray feeder (tray 2) removal

1 Open the door.

2 Release the latch (A), and then remove the cover.



3 Disconnect the cables (B), and then remove the two screws (C).

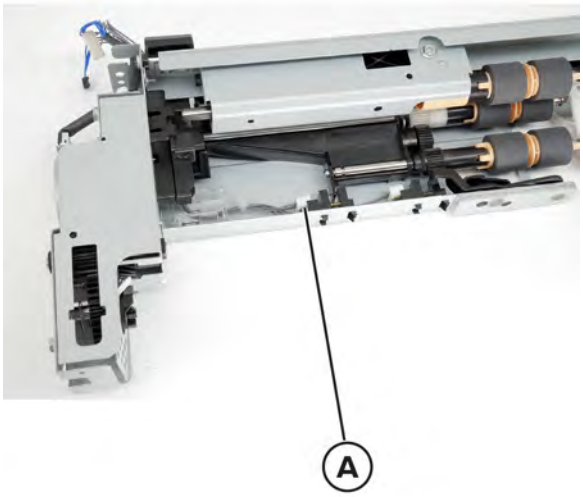


4 Release, and then remove the feeder.

Sensor (3 x 520-sheet tray pick position) removal

1 Remove the 3 x 520-sheet tray feeder (tray 2). See **"3 x 520-sheet tray feeder (tray 2) removal" on page 459**.

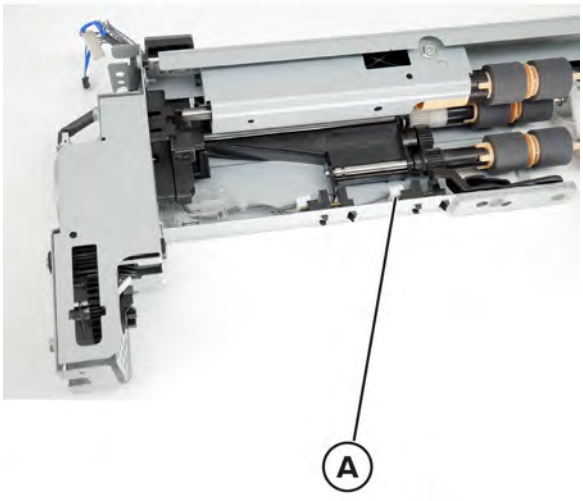
2 Disconnect the cable (A), and then remove the sensor.



Sensor (3 x 520-sheet tray paper present) removal

1 Remove the 3 x 520-sheet tray feeder (tray 2). See **"3 x 520-sheet tray feeder (tray 2) removal" on page 459**.

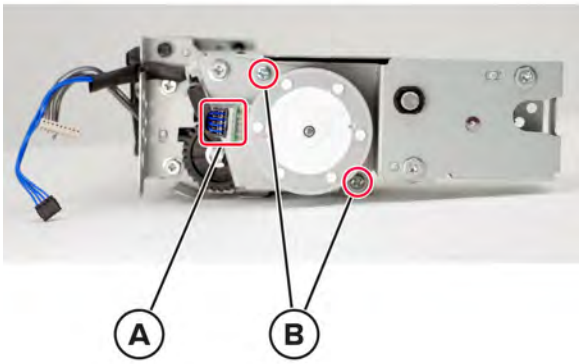
2 Disconnect the cable (A), and then remove the sensor.



Motor (3 x 520-sheet tray pick/lift) removal

1 Remove the 3 x 520-sheet tray feeder (tray 2). See **"3 x 520-sheet tray feeder (tray 2) removal" on page 459**.

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

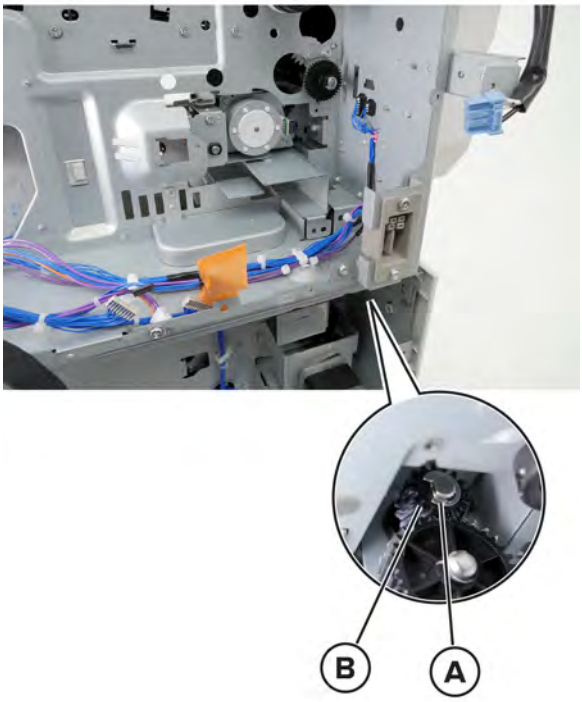


3 Remove the motor.

3 x 520-sheet tray gear (34T) removal

1 Remove the 3 x 520-sheet tray rear cover.

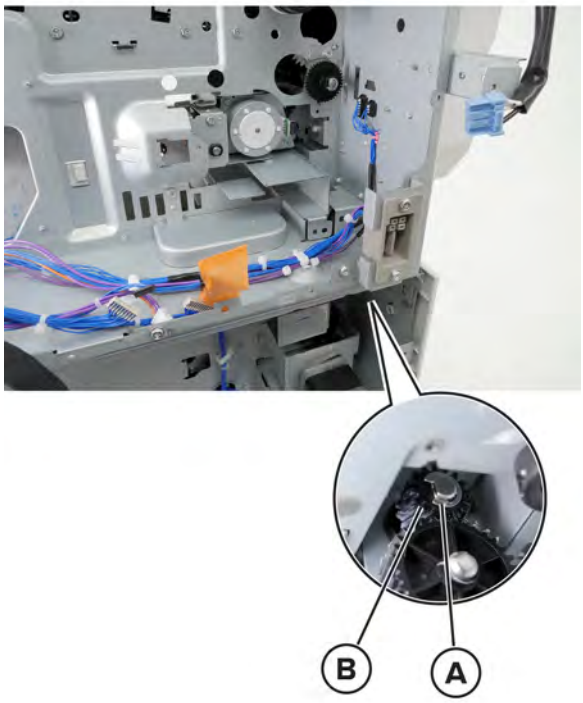
2 Remove the E-clip (A) under the printer, and then remove the gear (B).



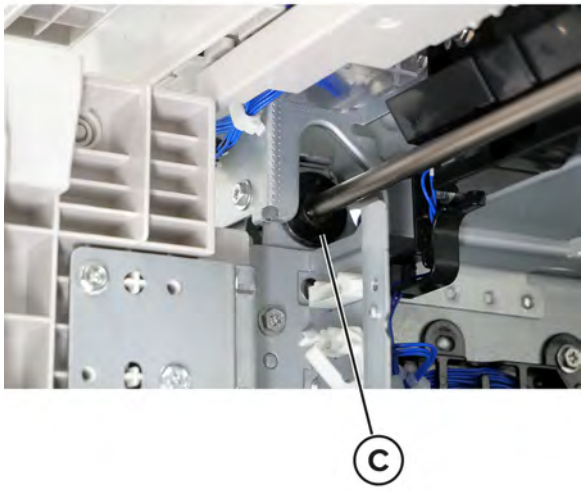
3 x 520-sheet tray transport roller (tray 2) removal

1 Remove the 3 x 520-sheet tray rear cover.

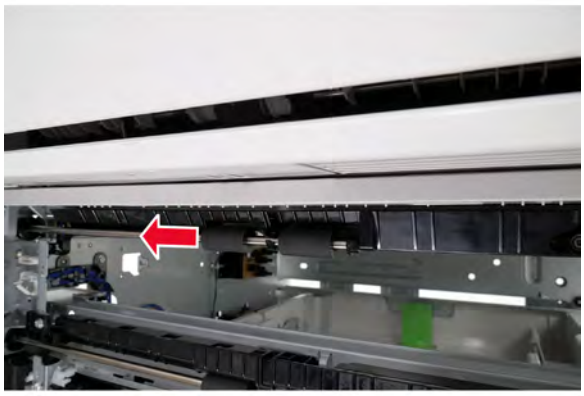
2 Remove the E-clip (A) under the printer, and then remove the gear (B).



3 Open the door, and then release the bushing (C).



4 Release the shaft, and then remove the transport roller.

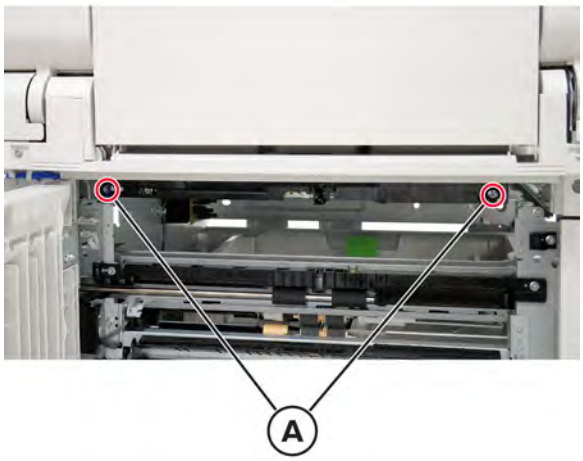


Sensor (3 x 520-sheet tray transport [tray 2]) removal

1 Remove the 3 x 520-sheet tray rear cover.

2 Remove the 3 x 520-sheet tray transport roller (tray 2). See **"3 x 520-sheet tray transport roller (tray 2) removal" on page 463**.

3 Remove the two screws (A) from the guide.

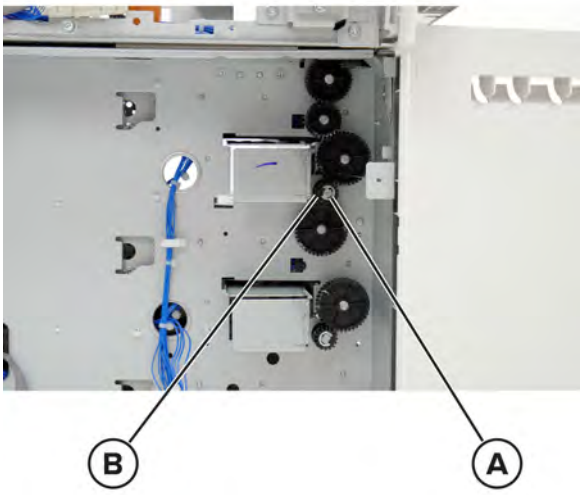


4 Disconnect the sensor behind the guide, and then remove it.

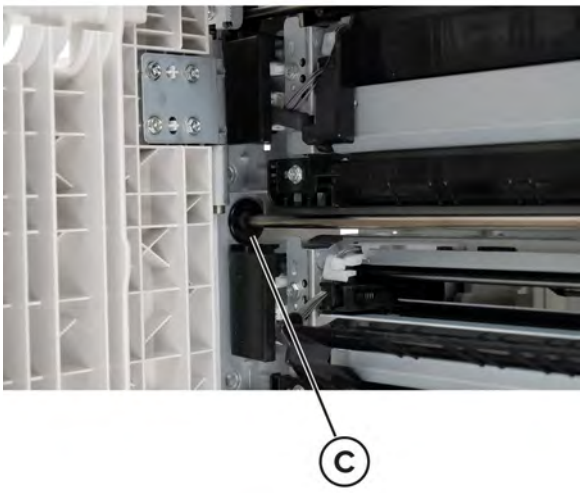
3 x 520-sheet tray transport roller (tray 3) removal

1 Remove the 3 x 520-sheet tray rear cover.

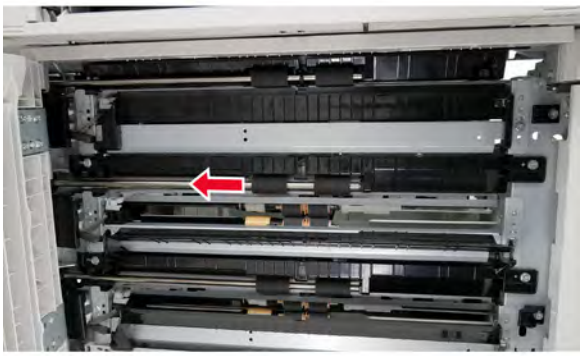
2 Remove the E-clip (A), and then remove the gear (B).



3 Open the door, and then release the bushing (C).



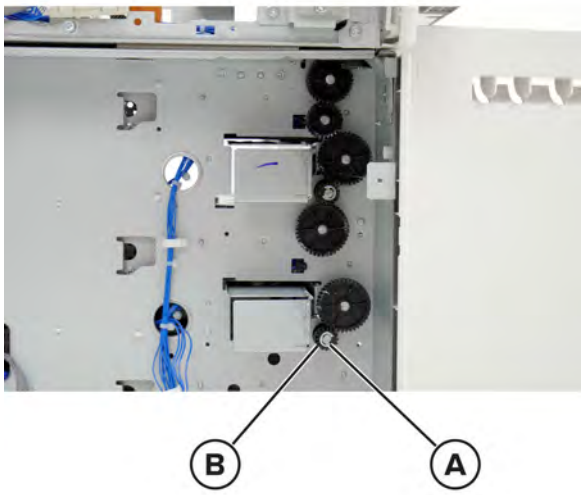
4 Release the shaft, and then remove the transport roller.



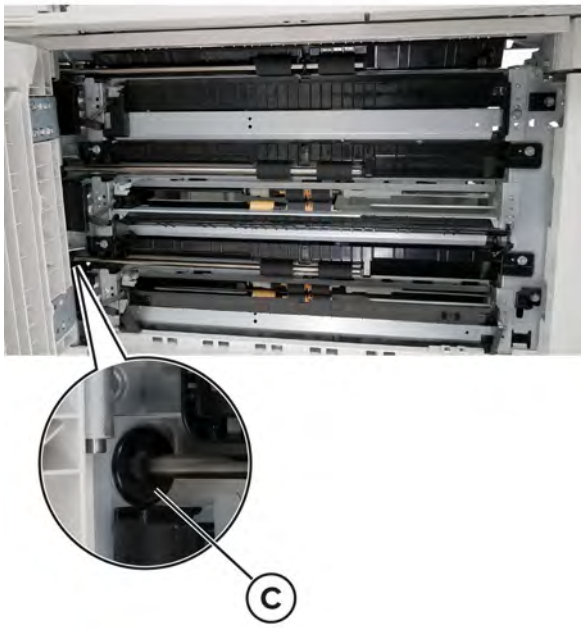
3 x 520-sheet tray transport roller (tray 4) removal

1 Remove the 3 x 520-sheet tray rear cover.

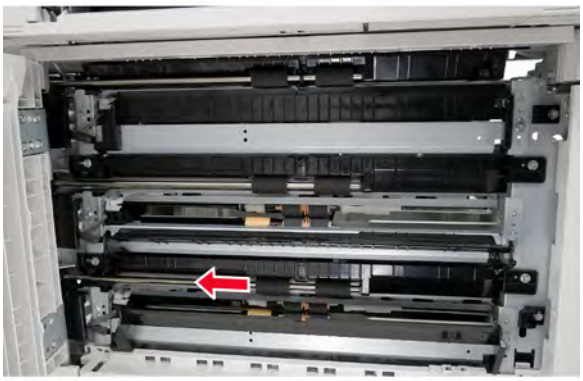
2 Remove the E-clip (A), and then remove the gear (B).



3 Open the door, and then release the bushing (C).



4 Release the shaft, and then remove the transport roller.

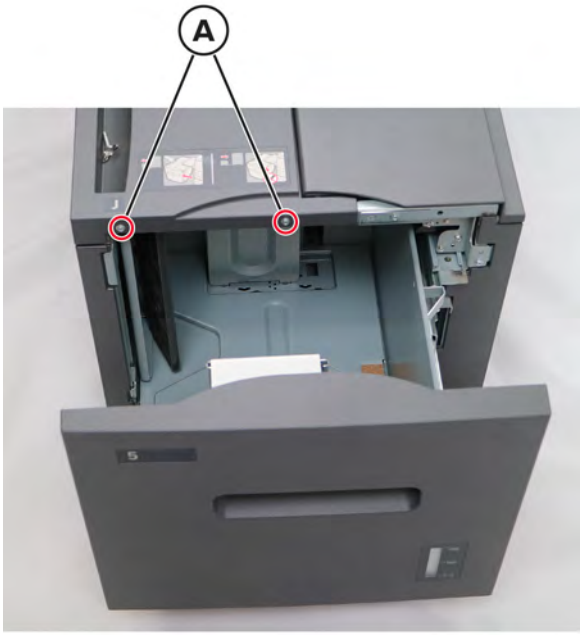


Optional 2000-sheet tray removals

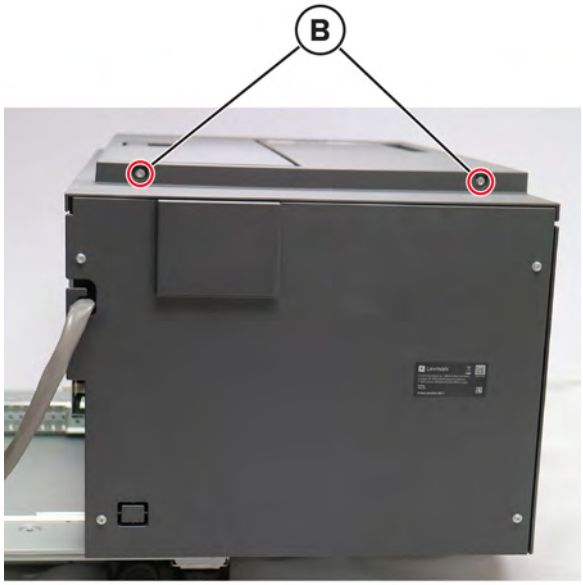
2000-sheet tray top cover removal

1 Pull the tray insert.

2 Remove the two screws (A).



3 Remove the two screws (B).

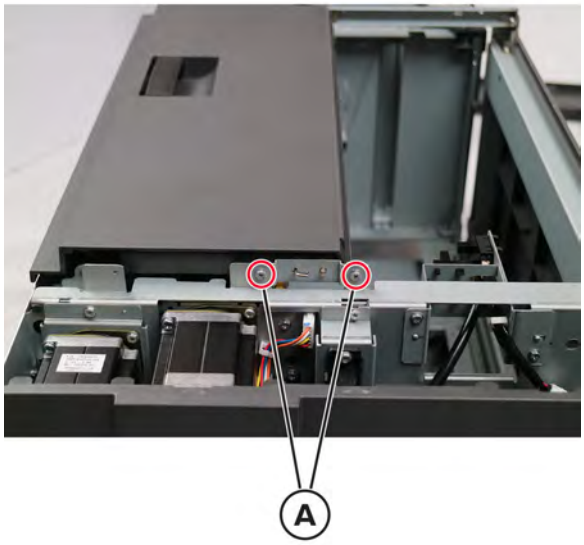


4 Remove the top cover.

2000-sheet tray top door removal

1 Remove the top cover. **“2000-sheet tray top cover removal” on page 467**.

2 Remove the two screws (A).



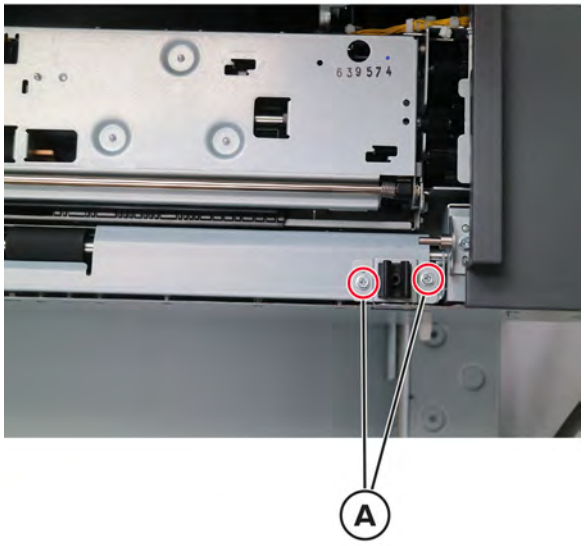
3 Remove the bracket, and then remove the top door.

2000-sheet tray top door interlock switch removal

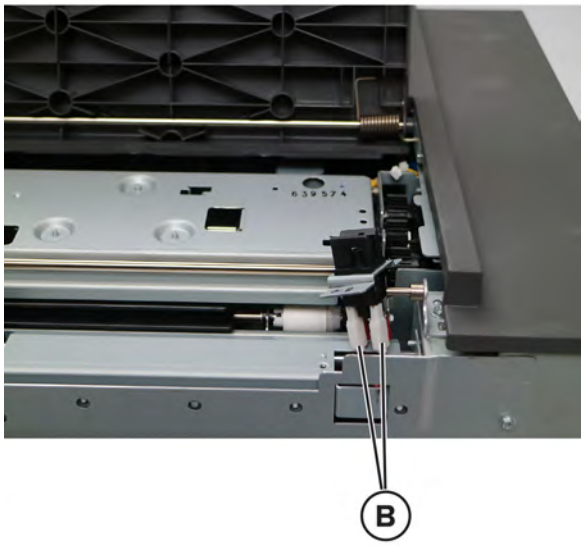
1 Open the top door.

2 Open the inner top cover.

3 Remove the two screws (A).



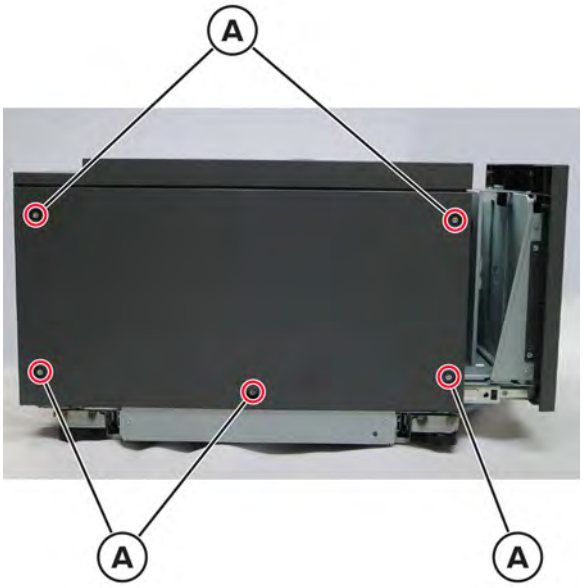
4 Remove the two connectors (b).



5 Remove the top door interlock switch.

2000-sheet tray left cover removal

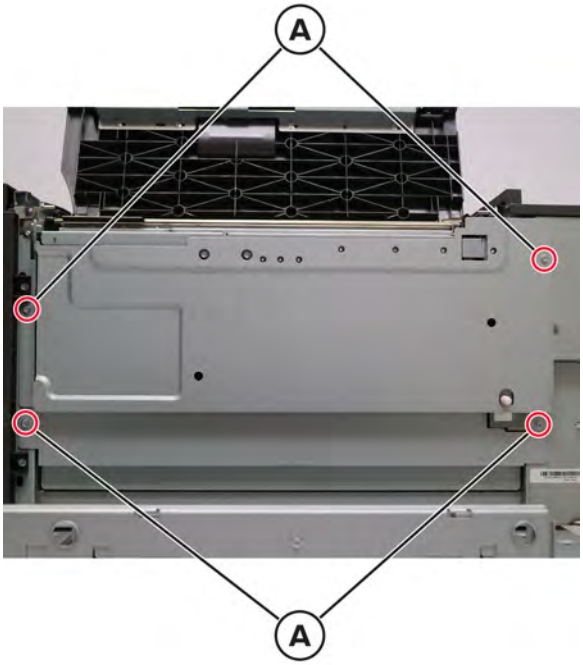
1 Remove the five screws (A).



2 Remove the left cover.

2000-sheet tray right cover removal

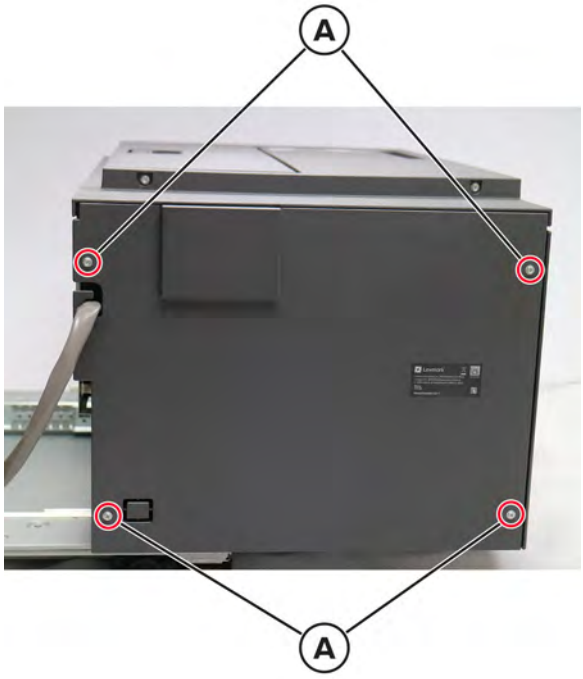
1 Remove the four screws (A).



2 Remove the right cover.

2000-sheet tray rear cover removal

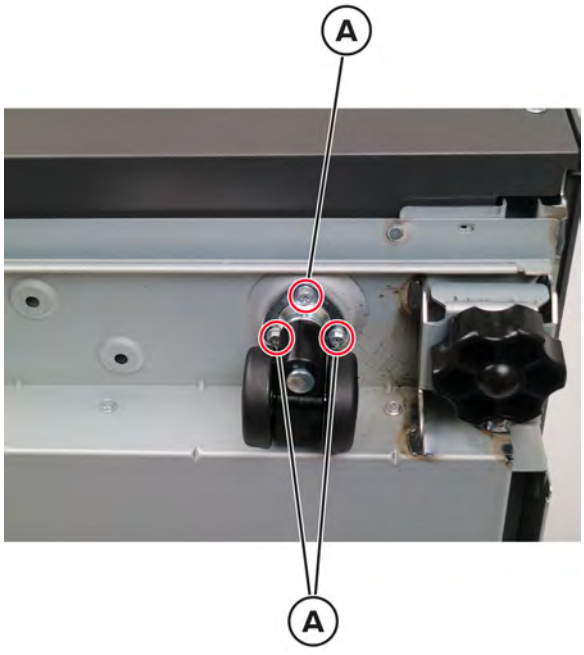
1 Remove the four screws (A).



2 Remove the rear cover.

2000-sheet tray caster wheel removal

1 Remove the three screws (A).



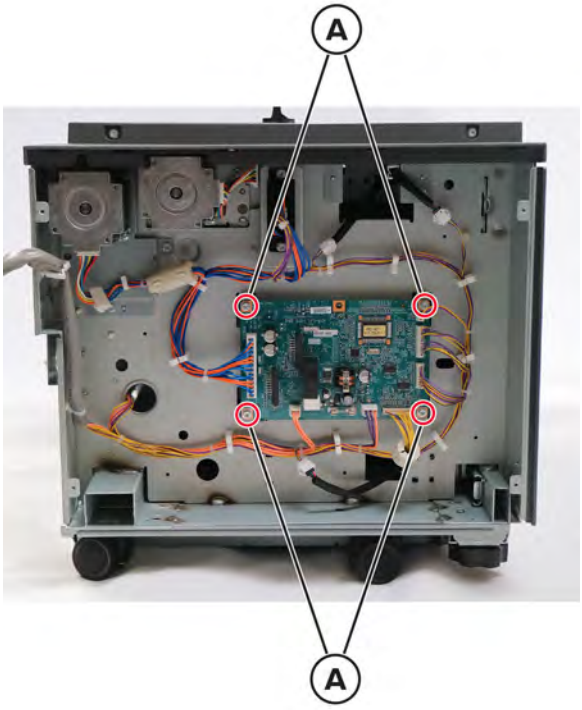
2 Remove the caster wheel.

2000-sheet tray controller board removal

1 Remove the left cover. See **“2000-sheet tray left cover removal” on page 470**.

2 Remove the connectors on the controller board.

3 Remove the four screws (A).



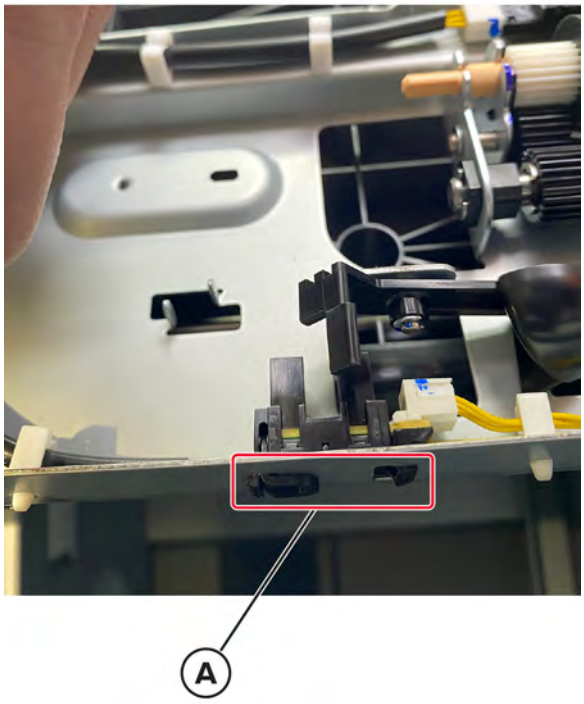
4 Remove the controller board.

Sensor (2000-sheet tray paper present) removal

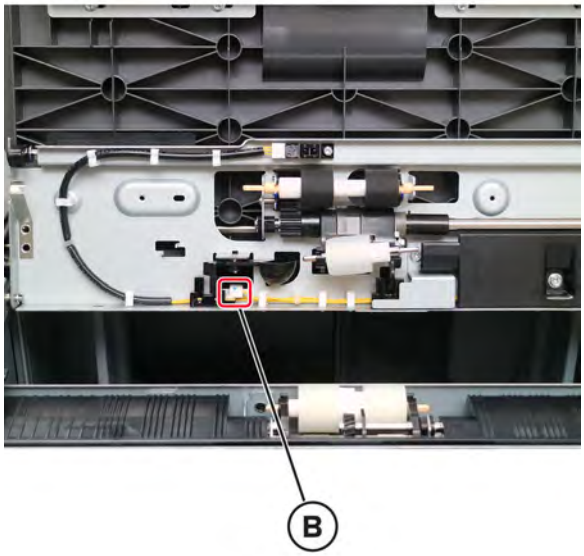
1 Open the top door.

2 Open the inner top cover.

3 Release the latch (A) behind the sensor.



4 Remove the connector (B).



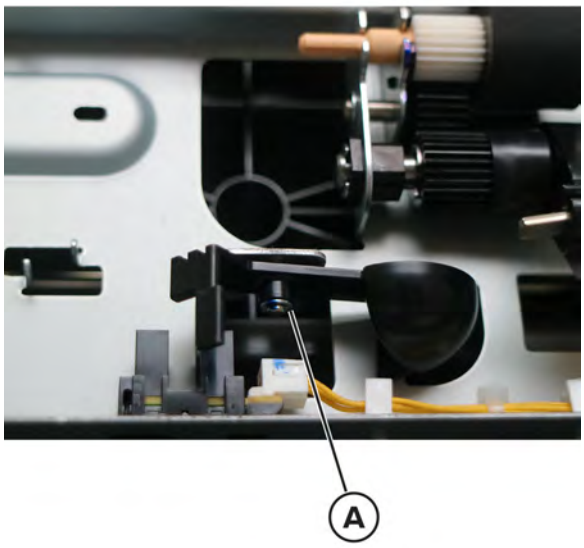
5 Remove the sensor.

2000-sheet tray paper present flag removal

1 Open the top door.

2 Open the inner top cover.

3 Remove the e-clip (A).



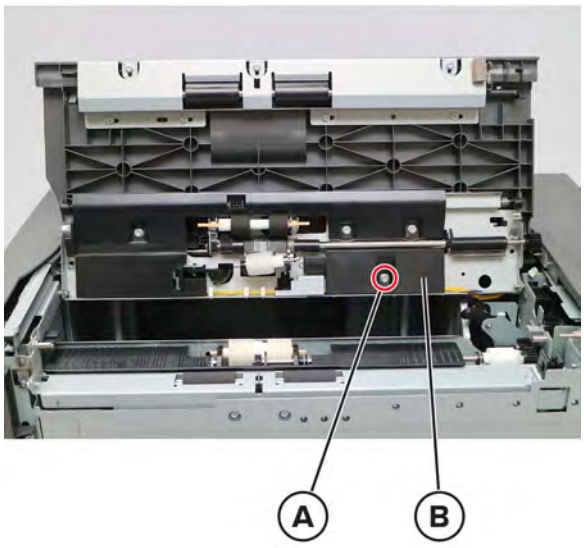
4 Remove the paper present flag.

Sensor (2000-sheet tray pick position) removal

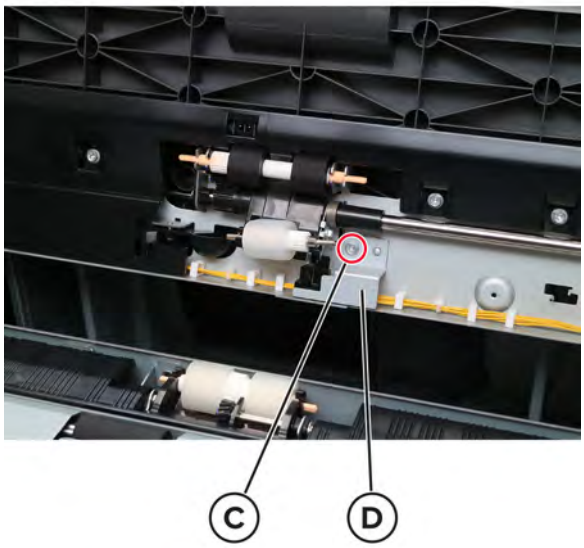
1 Open the top door.

2 Open the inner top cover.

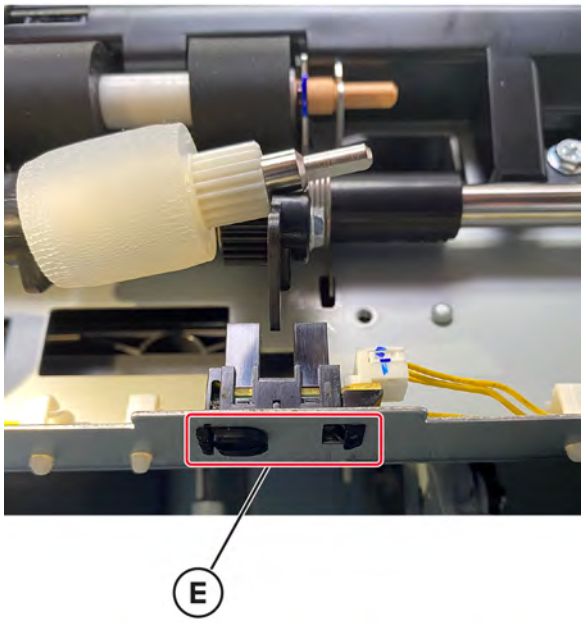
3 Remove the screw (A), and then remove the cover (B).



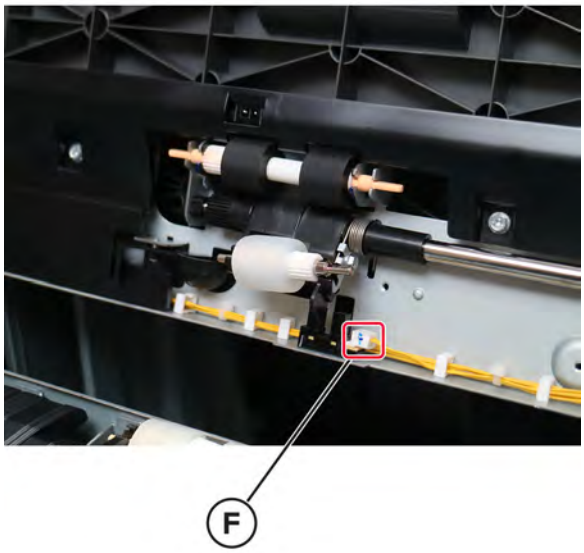
4 Remove the screw (C), and then remove the bracket (D).



5 Remove the latch (E) behind the sensor.



6 Remove the connector (F), and then remove the sensor.

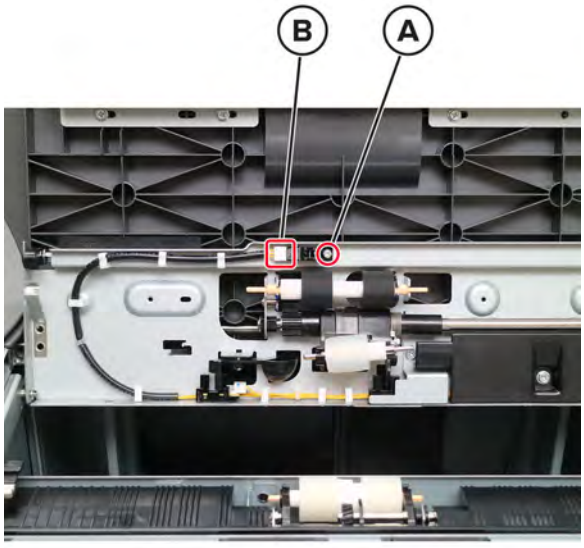


Sensor (2000-sheet tray feed) removal

1 Open the top door.

2 Open the inner top cover.

3 Remove the screw (A), and then remove the connector (B).

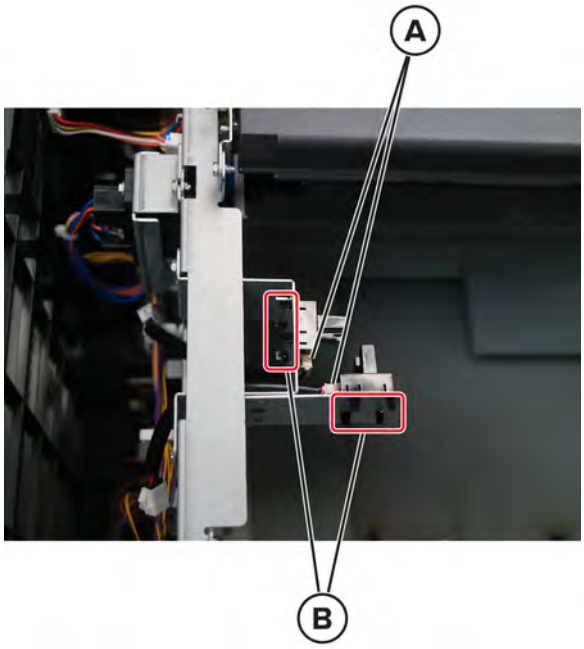


4 Remove the sensor.

Sensor (2000-sheet tray paper size 1 and 2) removal

1 Remove the top cover. **“2000-sheet tray top cover removal” on page 467**.

2 Remove the two connectors (A), and then release the latches (B).



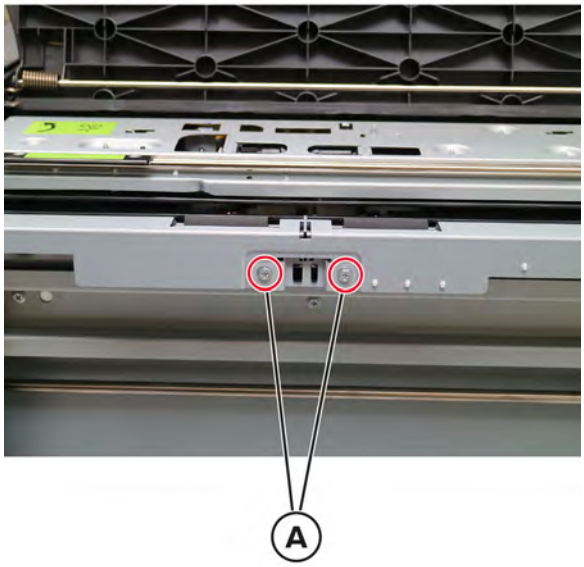
3 Remove the sensors.

Sensor (2000-sheet tray transport) removal

1 Remove the right cover. See **“2000-sheet tray right cover removal” on page 470**.

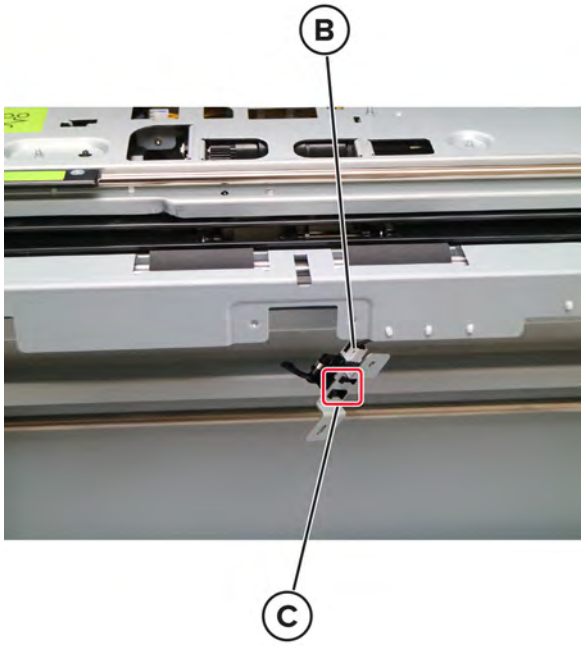
2 Open the top door.

3 Remove the two screws (A).



4 Remove the connector (B).

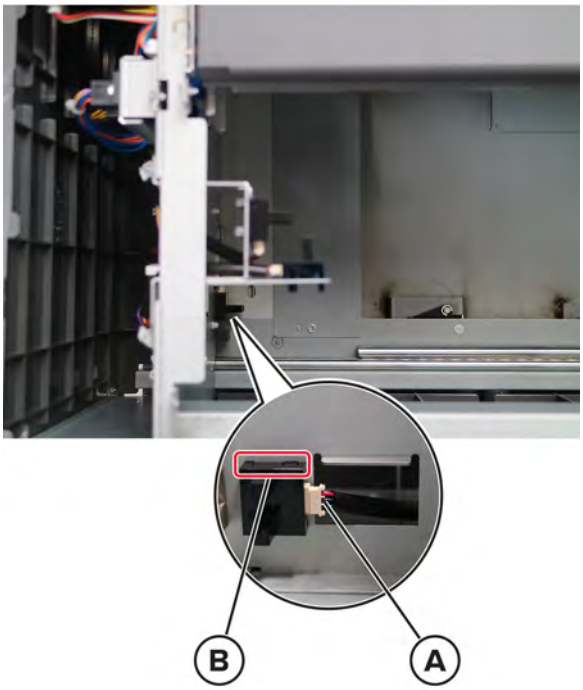
5 Remove the latch (C), and then remove the sensor.



Sensor (2000-sheet tray insert) removal

1 Remove the top cover. See **“2000-sheet tray top cover removal” on page 467**.

2 Remove the connector (A), and then release the latch (B).

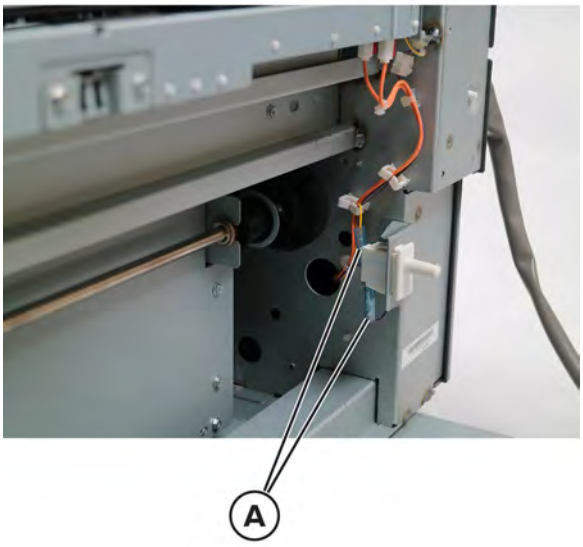


3 Remove the sensor.

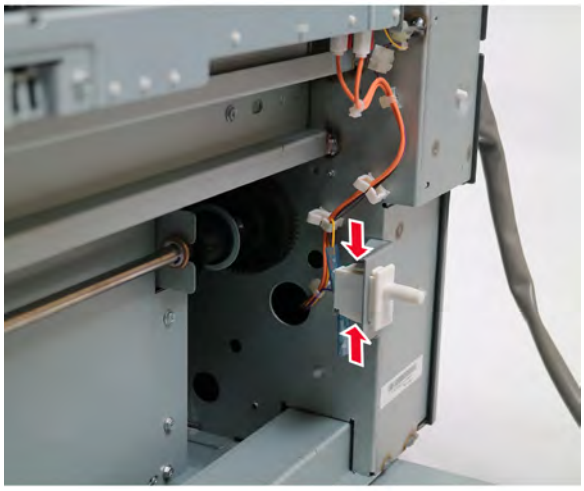
2000-sheet tray set switch removal

1 Remove the right cover. See **“2000-sheet tray right cover removal” on page 470**.

2 Remove the two connectors (A).



3 Pinch to release the latch.

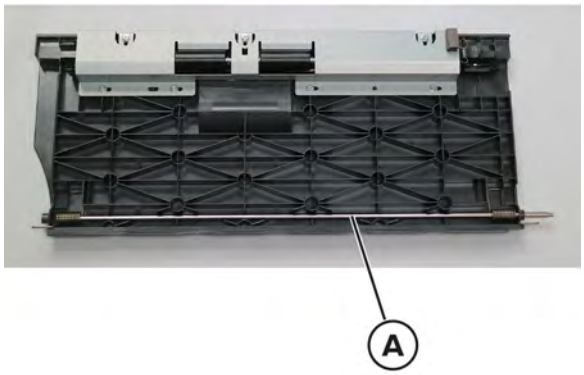


4 Remove the switch.

2000-sheet tray spring removal

1 Remove the top door. See **“2000-sheet tray top door removal” on page 468**.

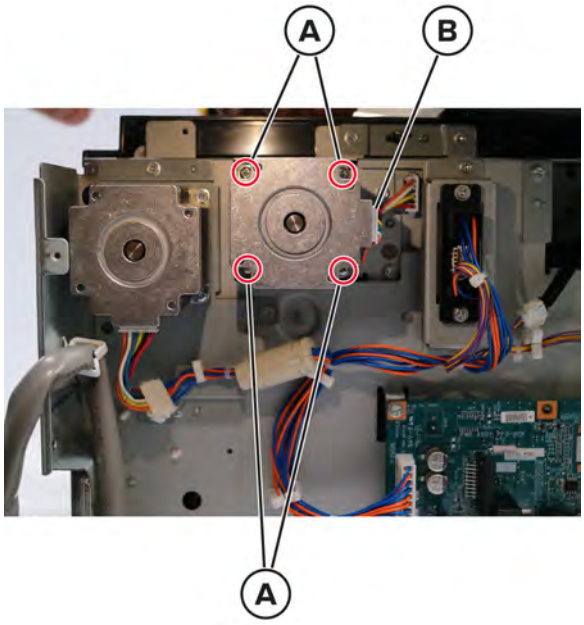
2 Slide out the shaft (A), and then remove the spring.



Installation note: Take note of the original position of the spring and shaft.

Motor (2000-sheet tray pick/lift) removal

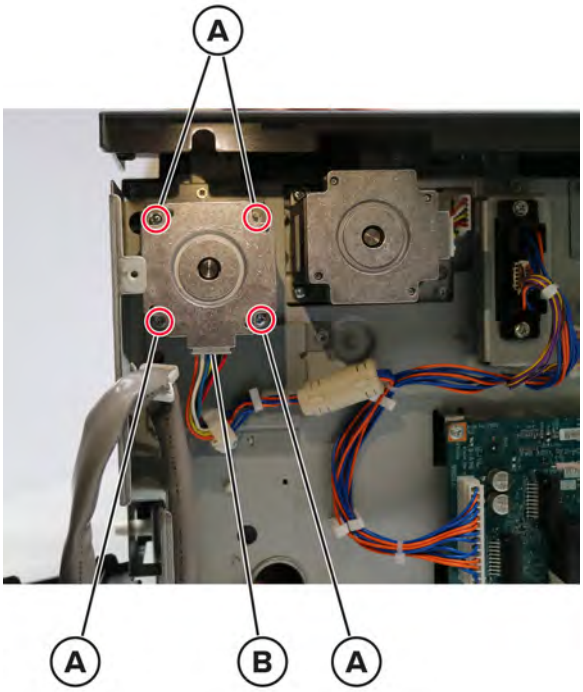
1. Remove the left cover. See **"2000-sheet tray left cover removal" on page 470**.
2. Remove the four screws (A), and then remove the connector (B).



3. Remove the motor.

Motor (2000-sheet tray transport) removal

1. Remove the left cover. See **“2000-sheet tray left cover removal” on page 470**.
2. Remove the four screws (A), and then remove the connector (B).

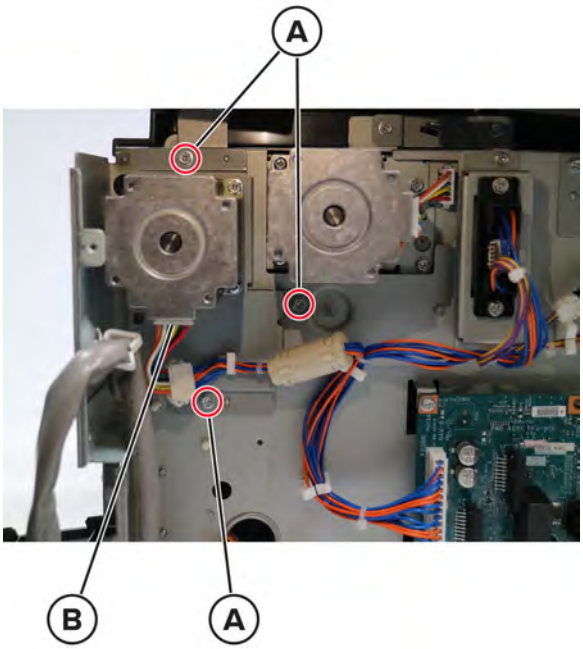


3. Remove the motor.

2000-sheet tray gearbox removal

1 Remove the left cover. See **“2000-sheet tray left cover removal” on page 470**.

2 Remove the three screws (A), and then remove the connector (B).



3 Remove the gearbox.

Staple finisher removals

Staple finisher stapler roll knob removal

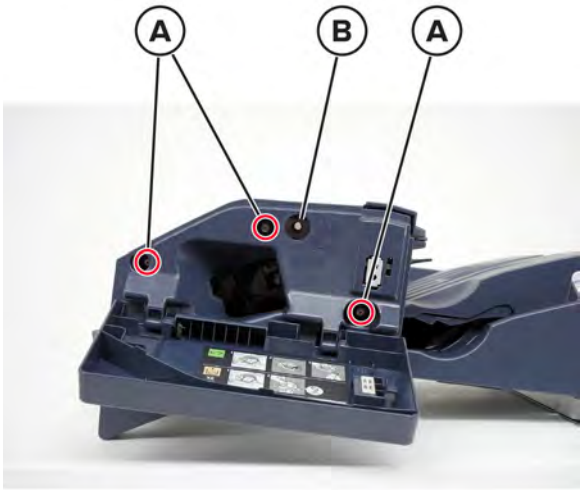
1 Open the staple finisher front cover.

2 Remove the roll knob (A).

Staple finisher front cover removal

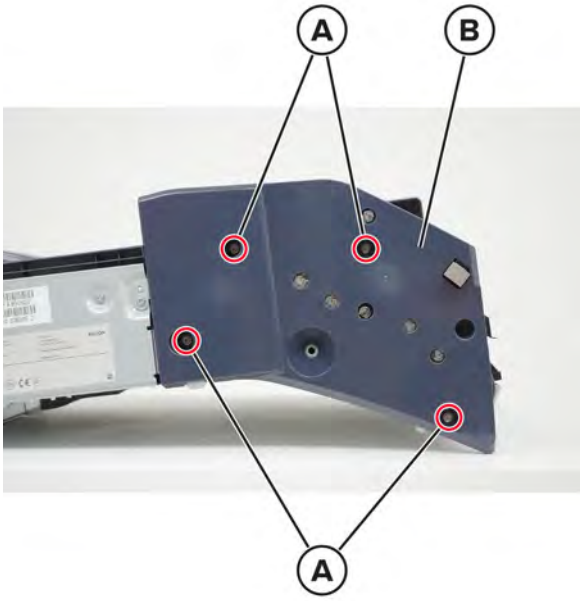
1 Remove the stapler roll knob. See **“Staple finisher stapler roll knob removal” on page 484**.

2 Remove the three screws (A), and then remove the cover (B).



Staple finisher rear cover removal

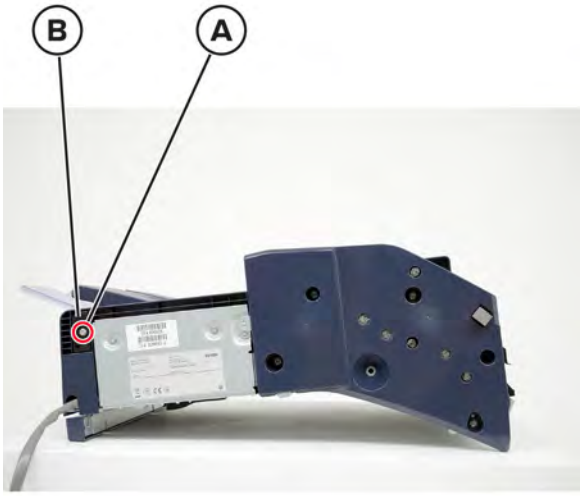
1 Remove the four screws (A).



2 Remove the cover (B).

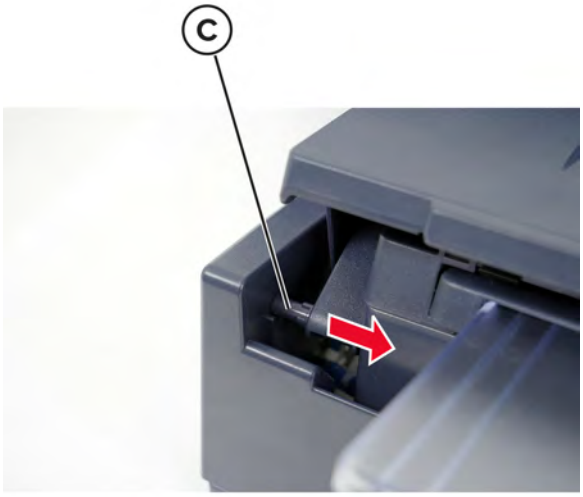
Staple finisher base tray removal

1 Remove the screw (A), and then remove the hinge (B).



2 Push the tray upward.

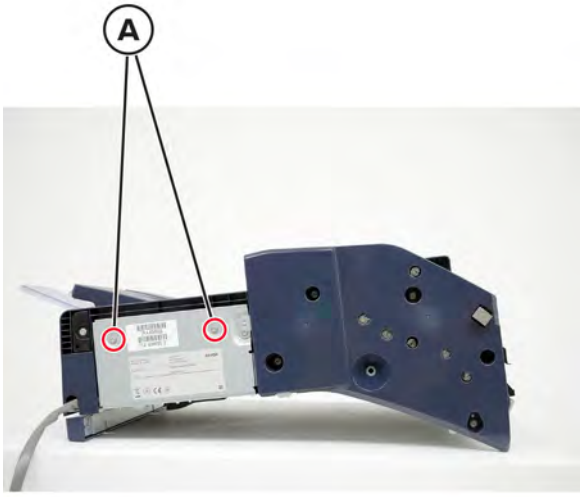
3 Push the tray to the right to loosen the hinge (C), and then remove the base tray.



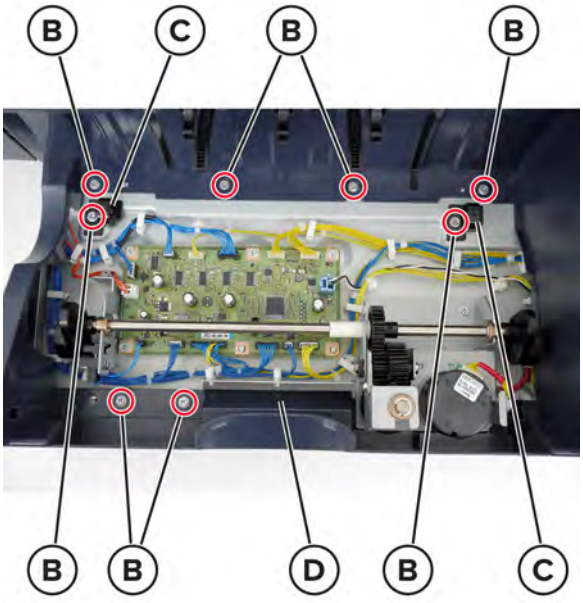
Staple finisher stacker base tray removal

1 Remove the staple finisher base tray. See **"Staple finisher base tray removal" on page 485**.

2 Remove the two screws (A).



3 Remove the eight screws (B), remove the two hinges (C), and then remove the stacker base tray (D).

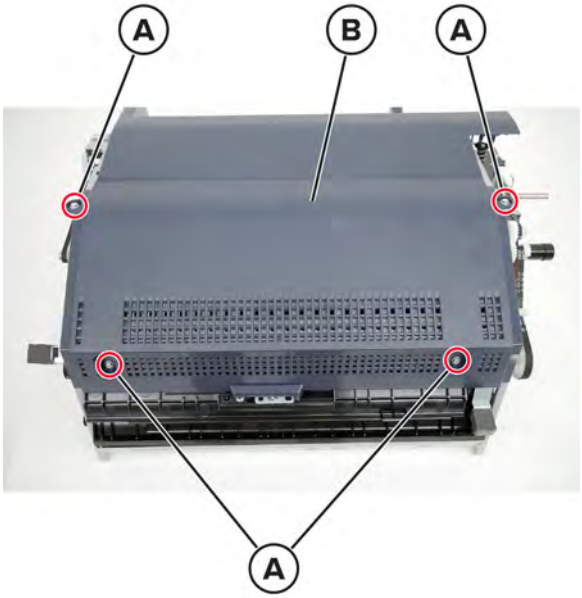


Staple finisher top LH cover removal

1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

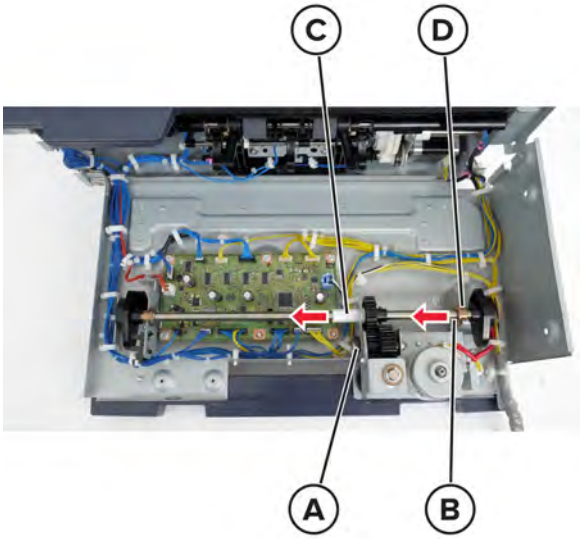
3 Remove the four screws (A), and then remove the cover (B).



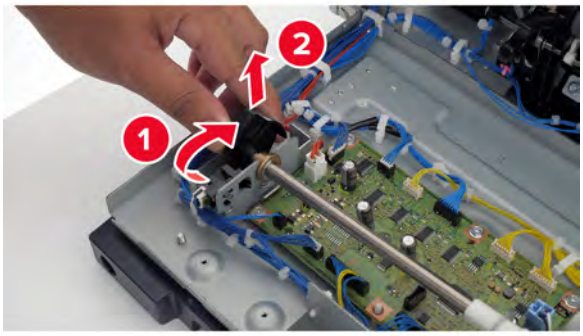
Staple finisher lift shaft removal

1 Remove the staple finisher stacker base tray. See **"Staple finisher stacker base tray removal" on page 487**.

2 Remove KL-clip (A), remove the E-clip (B), and then move the shaft bracket (C) and bushing (D) to the left.



3 Turn the lift shaft assembly to the release position, and then lift to remove it.

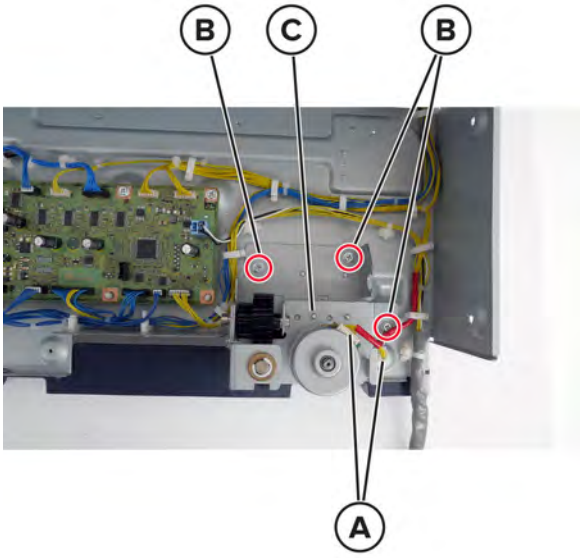


Staple finisher lift motor bracket removal

1 Remove the staple finisher stacker base tray. See **"Staple finisher stacker base tray removal" on page 487**.

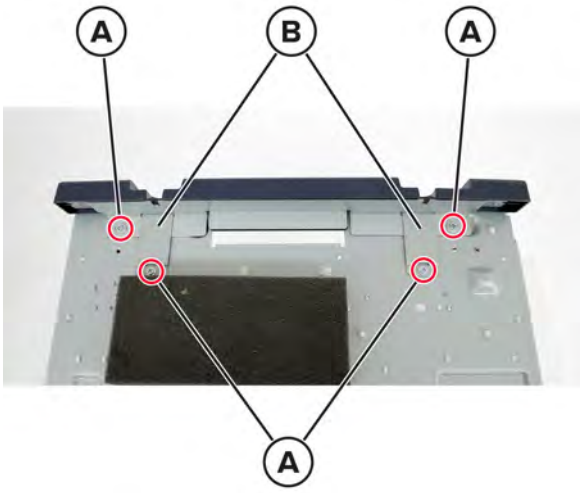
2 Remove the staple finisher lift shaft. See **"Staple finisher lift shaft removal" on page 488**.

3 Disconnect the two cables (A), remove the three screws (B), and then remove the lift motor bracket (C).



Staple finisher docking bracket removal

1 Remove the four screws (A).

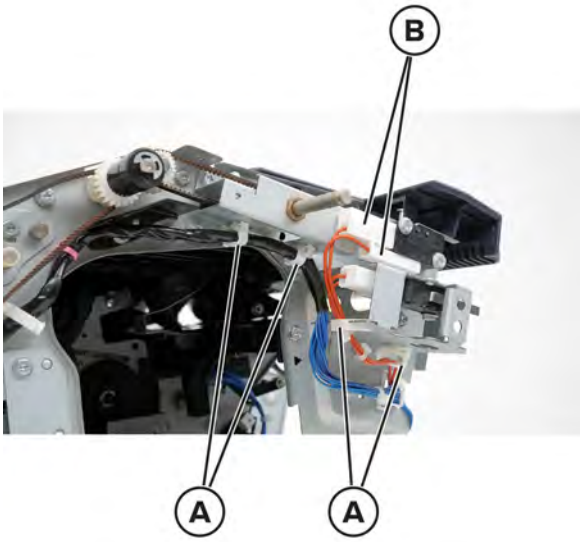


2 Remove the docking bracket (B).

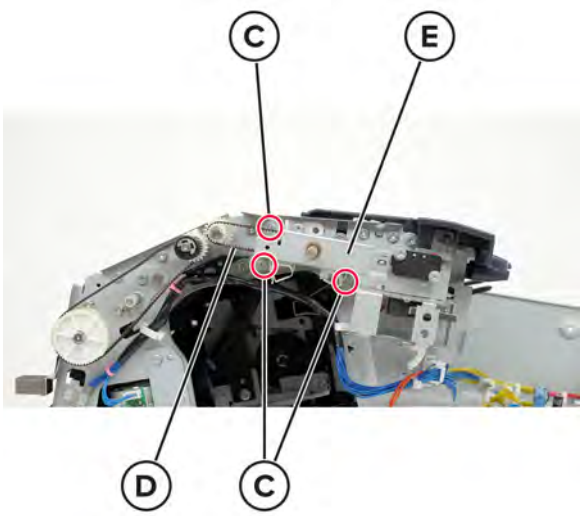
Staple finisher top eject cover subassembly removal

1 Remove the staple finisher top LH cover assembly. See **“Staple finisher top LH cover removal” on page 487**.

2 Release the cables from the four cable clamps (A), and then disconnect the two cables (B).



3 Remove the three screws (C), remove the belt (D), and then remove the jam shaft bracket (E).



4 Remove the screw (F), and then remove the front hinge bracket (G).

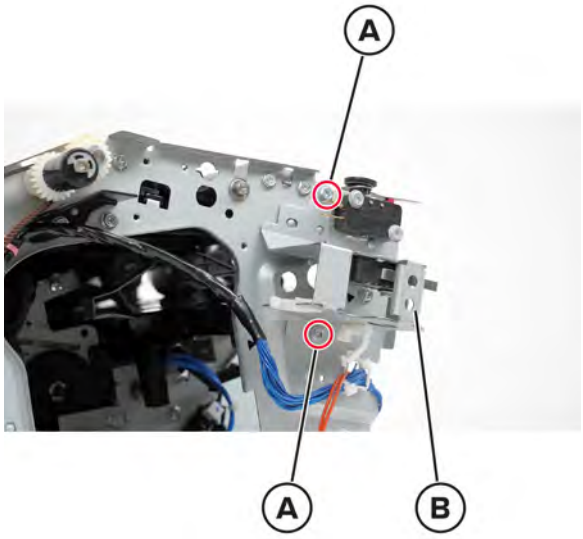
5 Remove the cover.

Staple finisher front interlock bracket assembly removal

1 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

2 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

3 Remove the two screws (A), and then remove the front interlock bracket assembly (B).



Staple finisher upper transport guide removal

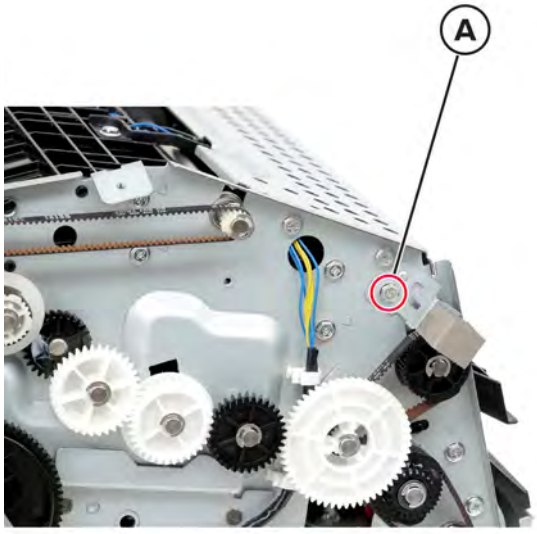
1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

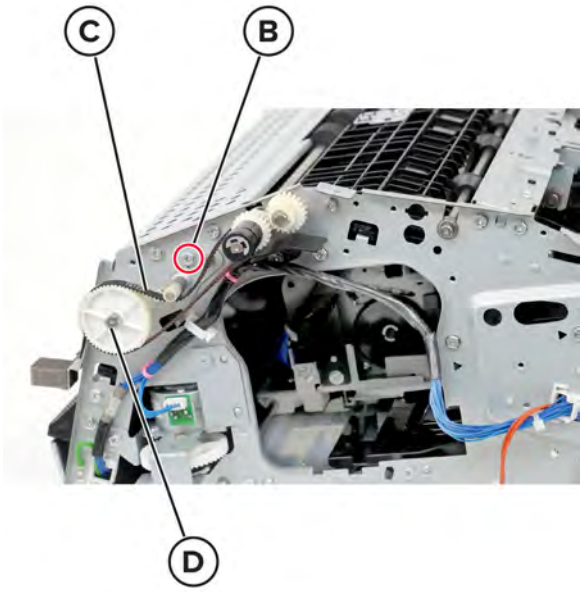
3 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

4 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

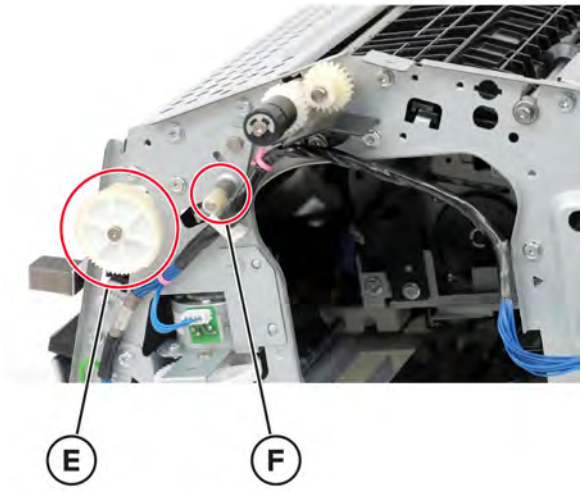
5 Remove the screw (A) on the right side.



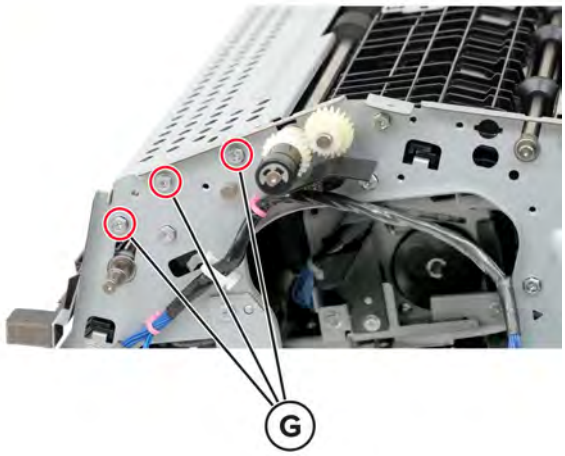
6 Remove the screw (B), remove the belt (C), and then remove the E-clip (D) on the left side.



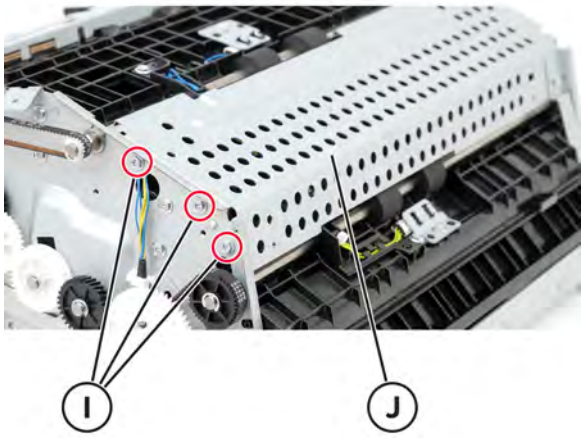
7 Remove the gear (E), and then remove the roller (F).



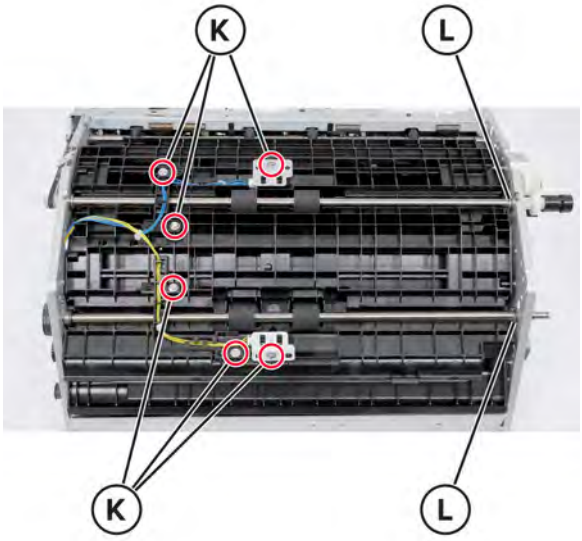
8 Remove the three screws (G) on the left side.



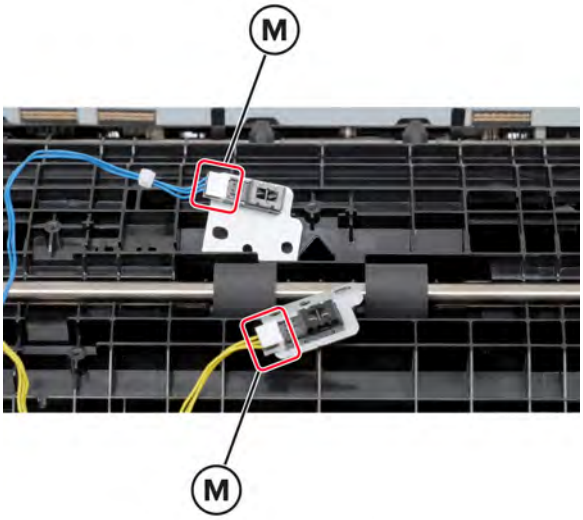
9 Remove the three screws (I) on the right side, and then remove upper tie plate (J).



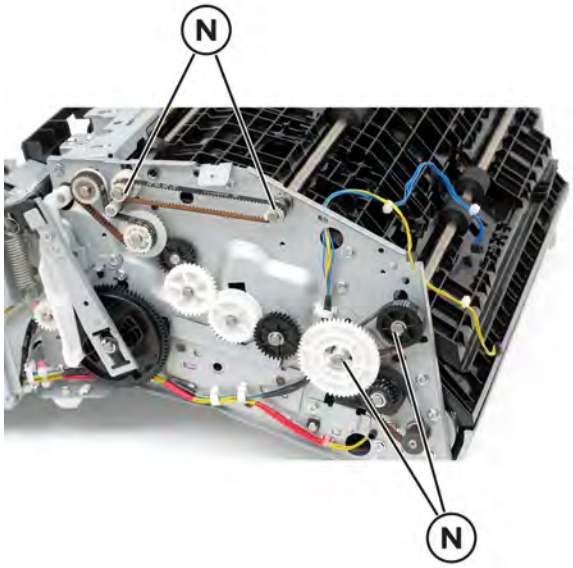
10 Remove the six screws (K), remove the two E-clips (L), and then remove the cable from the cable holders.



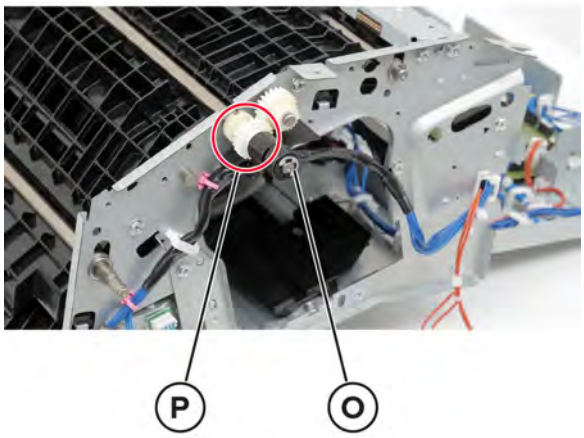
11 Disconnect the two cables (M) from the sensors.



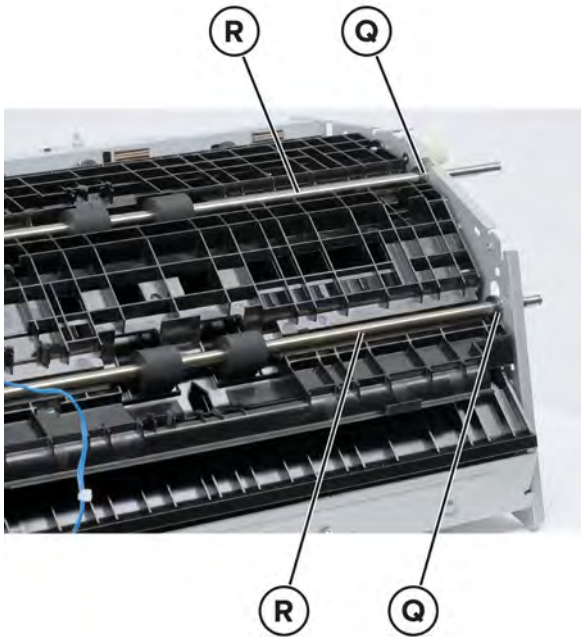
12 Remove the four E-clips (N), and then remove the gears.



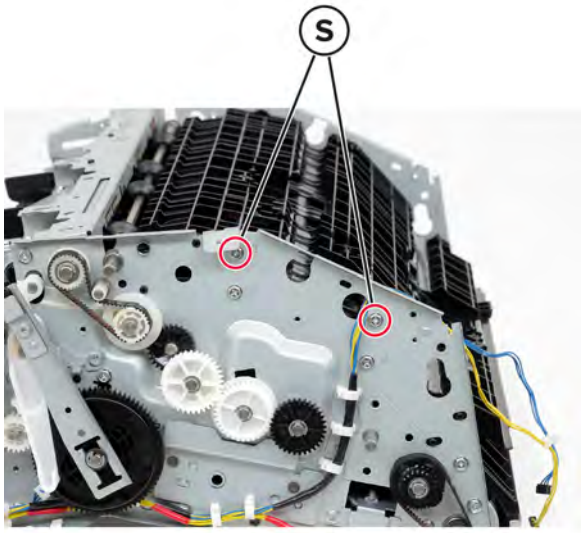
13 Remove the E-clip (O), and then remove gears (P).



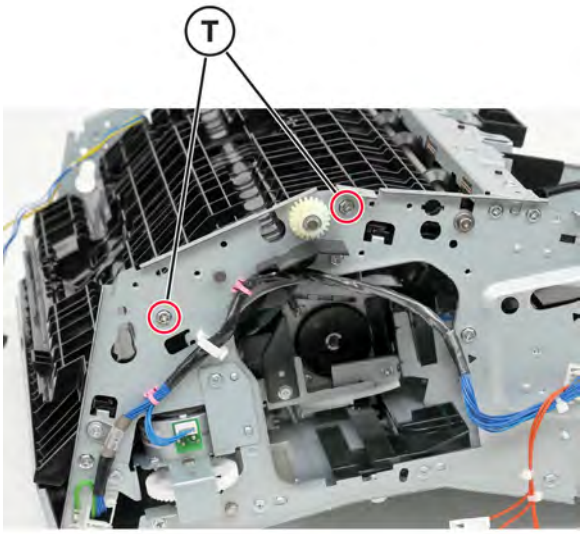
14 Release the two bushings (Q), then remove the two rollers (R).



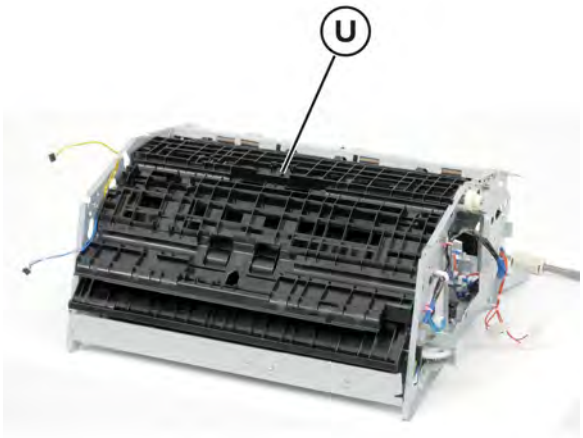
15 Remove the two screws (S) on the right side.



16 Remove the two screws (T) on the left side.



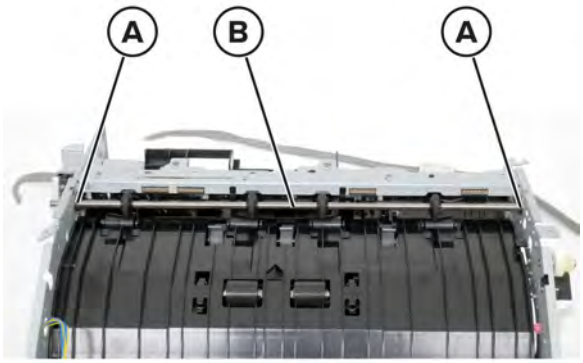
17 Remove the upper transport guide (U).



Staple finisher compiler exit roller removal

1. Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.
2. Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.
3. Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.
4. Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.
5. Remove the staple finisher upper transport guide. See **"Staple finisher upper transport guide removal" on page 492**.

6 Remove the two E-clips (A), and then remove the roller (B).



Staple finisher lower chute removal

1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

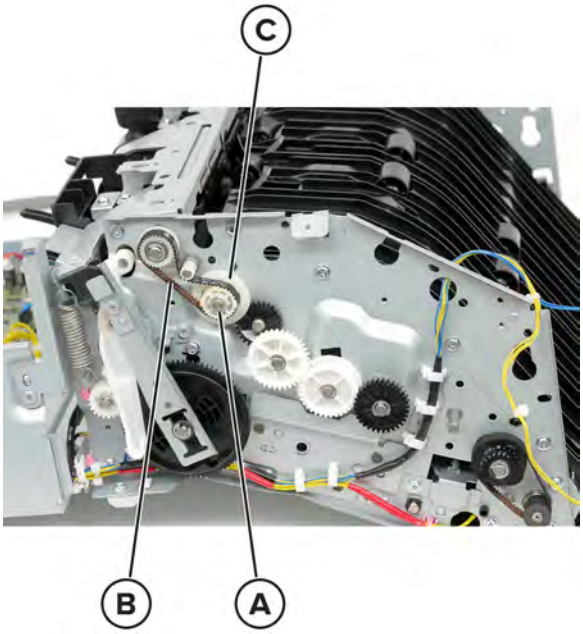
3 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

4 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

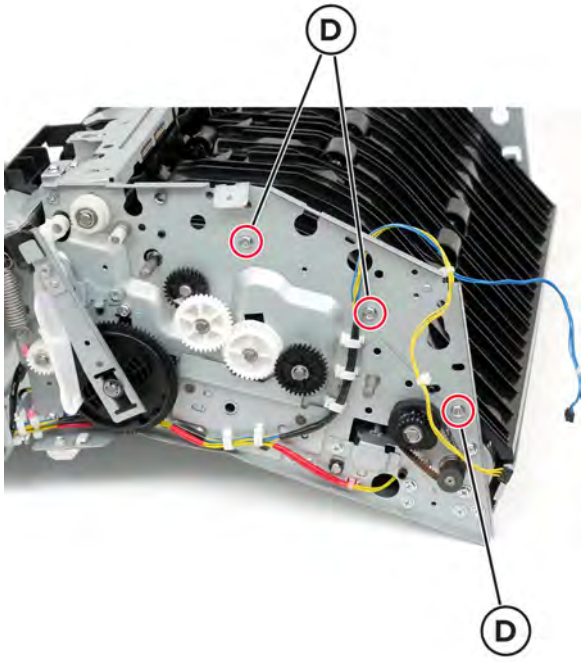
5 Remove the staple finisher upper transport guide. See **"Staple finisher upper transport guide removal" on page 492**.

6 Remove the staple finisher compile exit roller. See **"Staple finisher compiler exit roller removal" on page 498**.

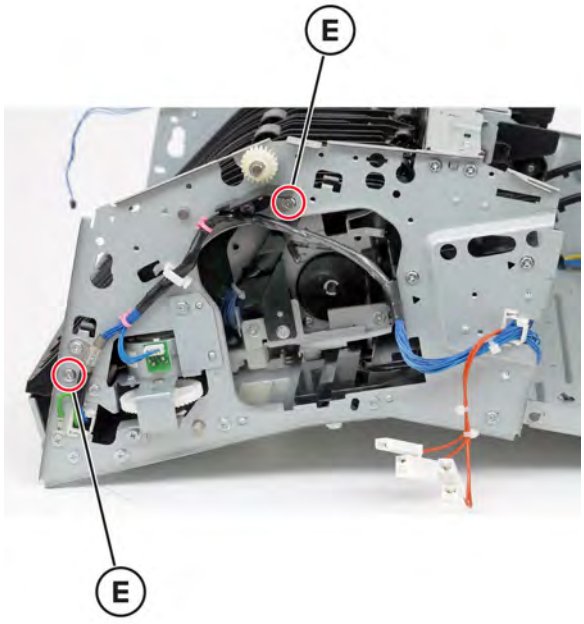
7 Remove the E-clip (A), remove the belt (B), and then remove the gear (C) on the right side.



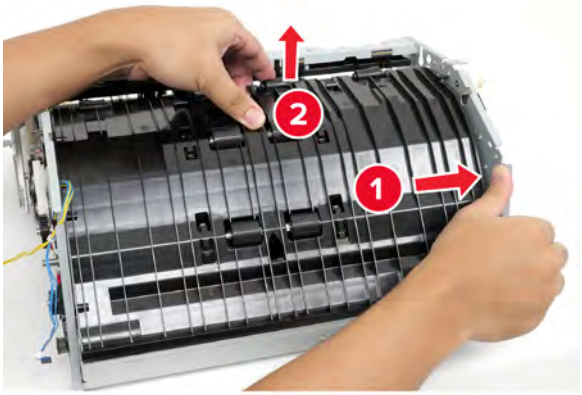
8 Remove the three screws (D).



9 Remove the two screws (E) on the left side.



10 Push the frame to release the latch, and then raise the lower chute to remove it.



Staple finisher subpaddle assembly removal

1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

3 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

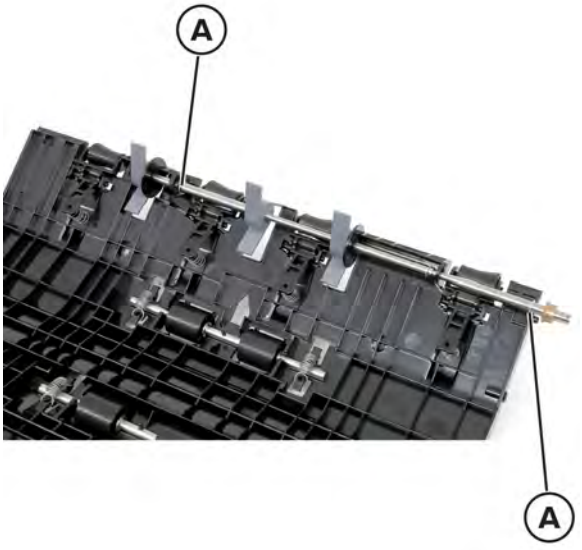
4 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

5 Remove the staple finisher upper transport guide. See **"Staple finisher upper transport guide removal" on page 492**.

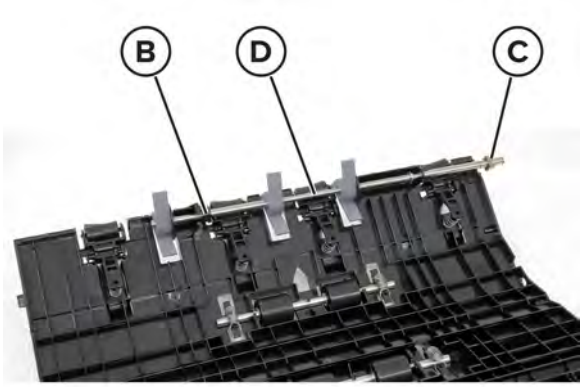
6 Remove the staple finisher compiler exit roller. See **"Staple finisher compiler exit roller removal" on page 498**.

7 Remove the staple finisher lower chute. See **"Staple finisher lower chute removal" on page 499**.

8 Remove the two E-clips (A).



9 Release the bushing (B), remove the bushing (C), and then remove the subpaddle assembly (D).



Staple finisher upper eject plate removal

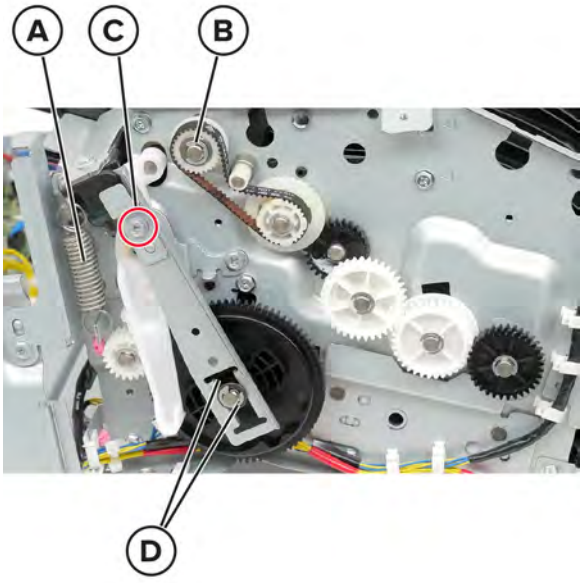
1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

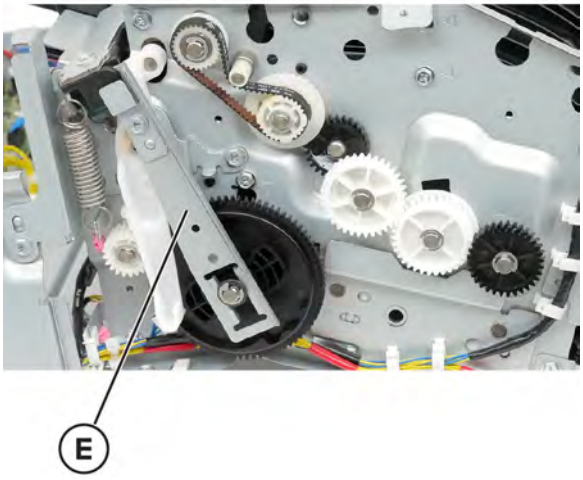
3 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

4 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

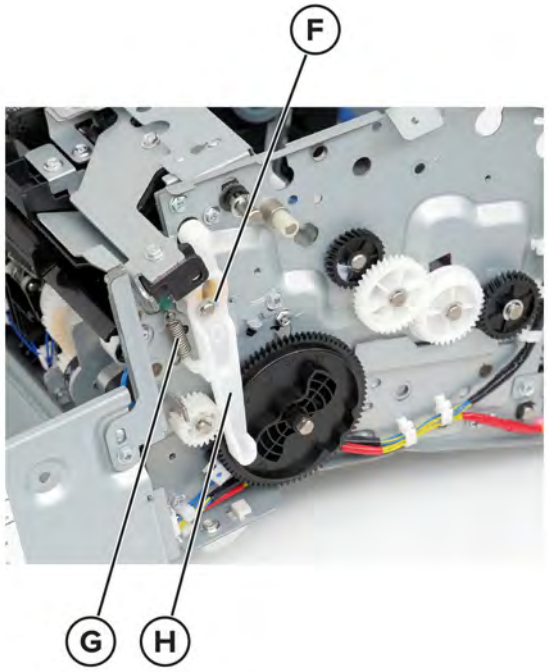
5 Remove the spring (A), remove the E-clip (B), remove the screw (C), and then remove the E-clip with washer (D) on the right side.



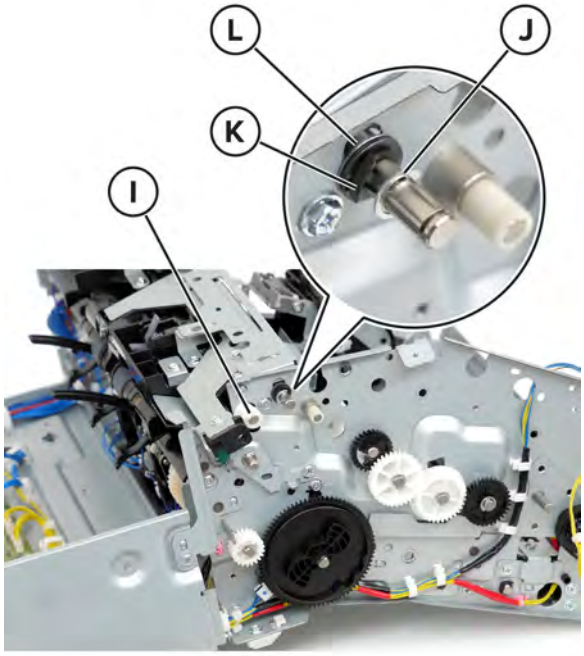
6 Remove the cam link (E).



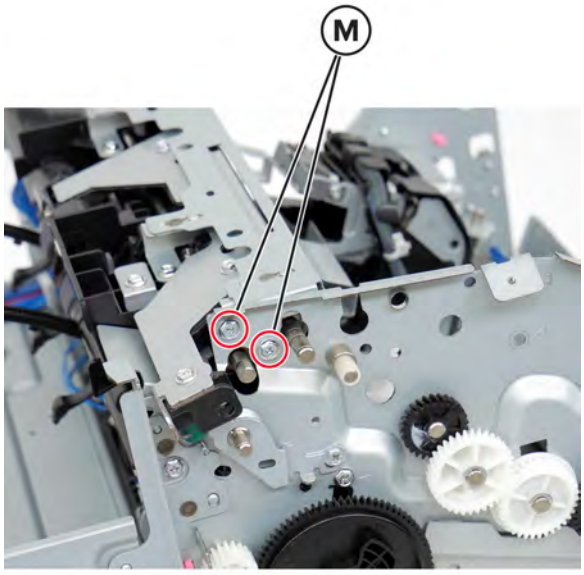
7 Remove the E-clip (F), remove the spring (G), and then remove the subpaddle link (H).



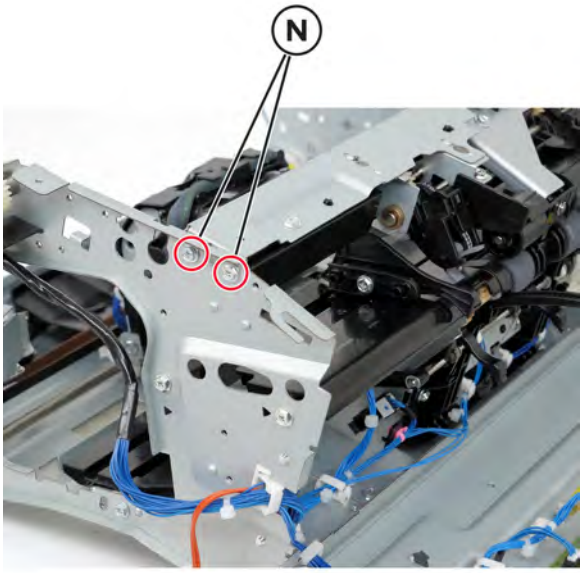
8 Remove the subshaft link (I), remove the E-clip (J), remove the KL-clip (K), and then remove the bushing (L).



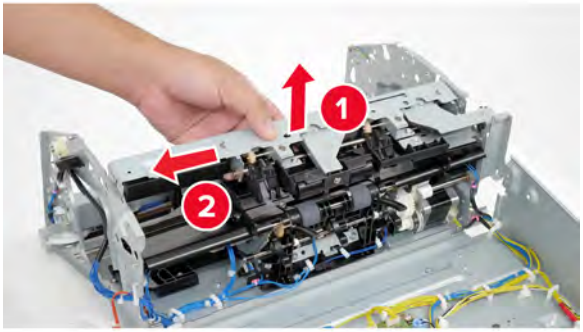
9 Remove the two screws (M) on the right side.



10 Remove the two screws (N) on the left side.



11 Remove the upper eject plate.



Staple finisher compiler tray removal

1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

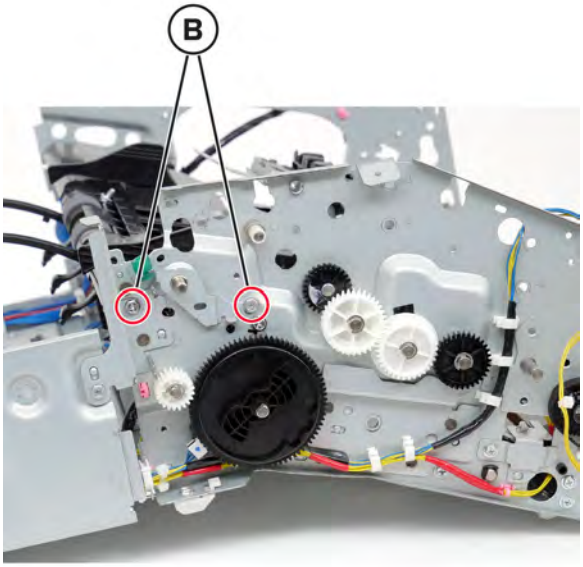
3 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

4 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

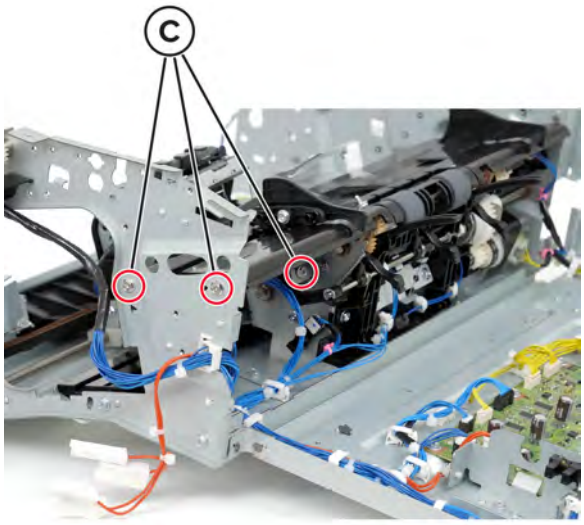
5 Remove the staple finisher upper eject plate. See **"Staple finisher upper eject plate removal" on page 502**.

6 Disconnect the two cables (A).

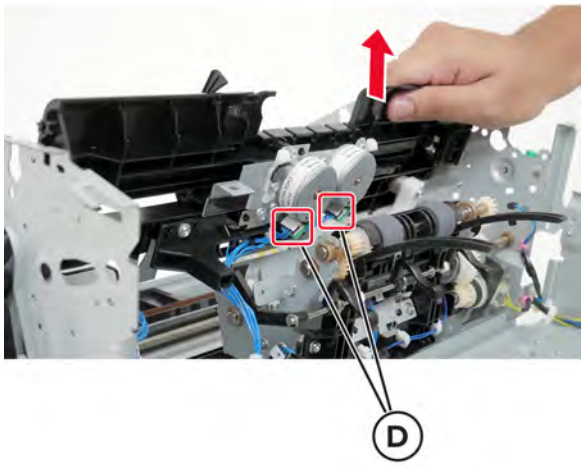
7 Remove the two screws (B) on the right side.



8 Remove the three screws (C) on the left side.



9 Raise the compile tray, disconnect the two cables (D), and then remove the compile tray.



Staple finisher low eject clamp removal

1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

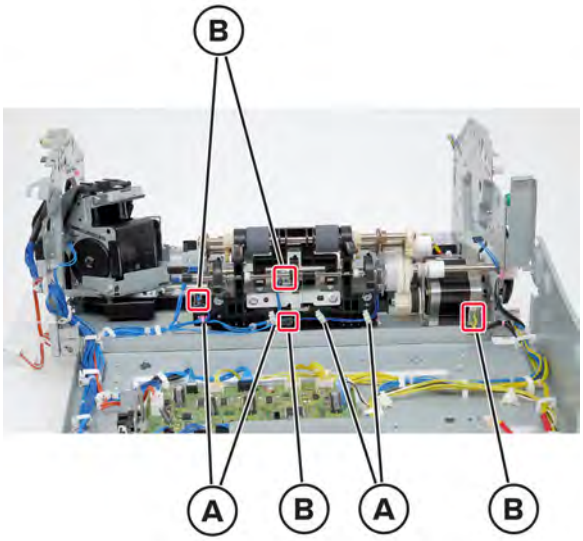
3 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

4 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

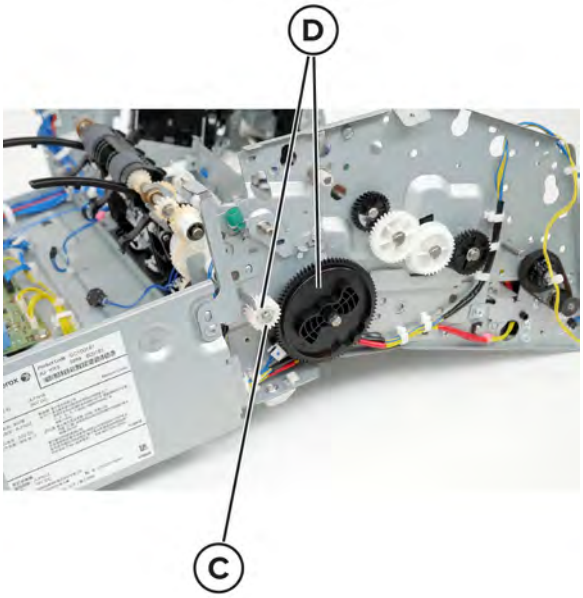
5 Remove the staple finisher upper eject plate. See **"Staple finisher upper eject plate removal" on page 502**.

6 Remove the staple finisher compiler tray. See **"Staple finisher compiler tray removal" on page 505**.

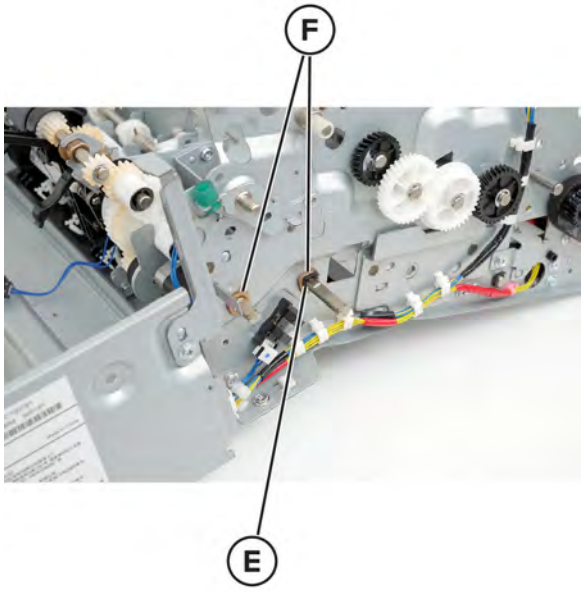
7 Release the four cable clamps (A), and then disconnect the four cables (B).



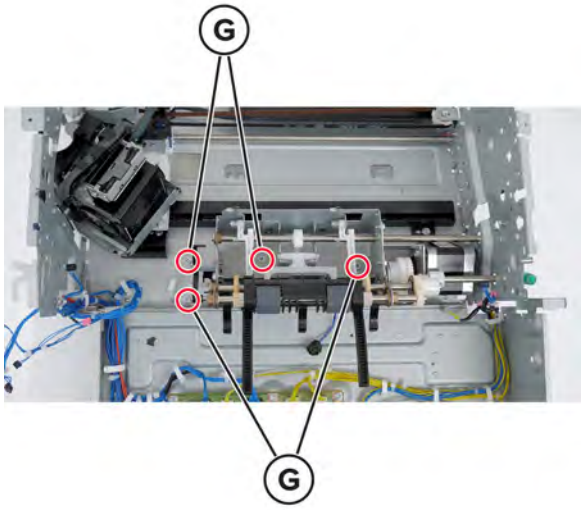
8 Remove the E-clip (C), and then remove the two gears (D) on the right side.



9 Remove the KL-clip (E), and then remove the two bushings (F).



10 Remove the four screws (G), and then remove the low eject clamp.



Staple finisher set clamp shaft removal

1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

3 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

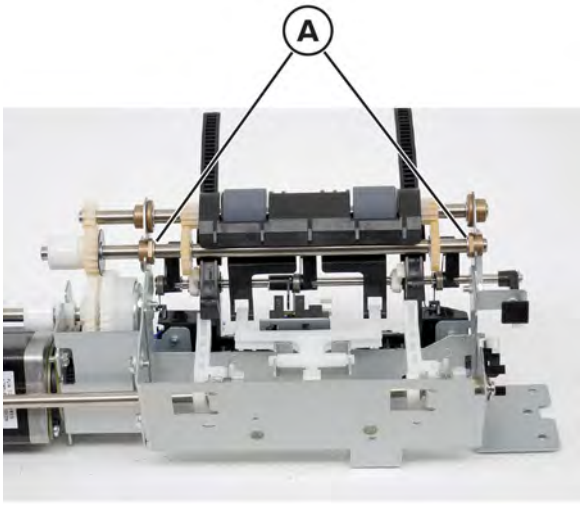
4 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

5 Remove the staple finisher upper eject plate. See **"Staple finisher upper eject plate removal" on page 502**.

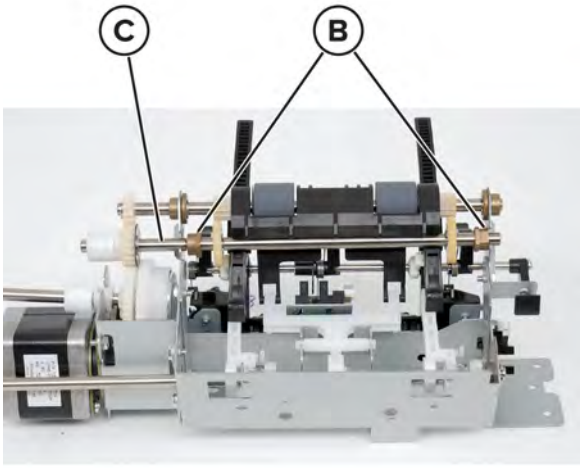
6 Remove the staple finisher compiler tray. See **"Staple finisher compiler tray removal" on page 505**.

7 Remove the staple finisher low eject clamp. See **"Staple finisher low eject clamp removal" on page 507**.

8 Remove the two E-clips (A).



9 Release the two bushings (B), and then remove the set clamp shaft (C).



Staple finisher roller assembly removal

1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

3 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

4 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

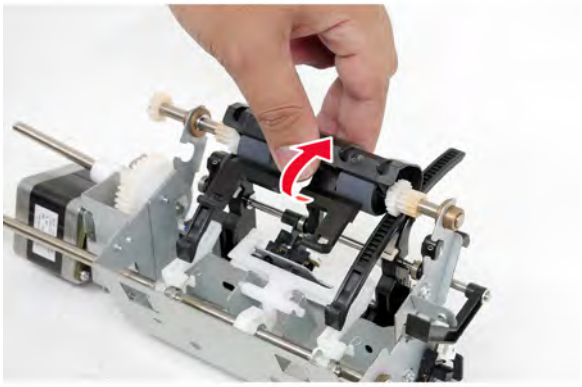
5 Remove the staple finisher upper eject plate. See **"Staple finisher upper eject plate removal" on page 502**.

6 Remove the staple finisher compiler tray. See **"Staple finisher compiler tray removal" on page 505**.

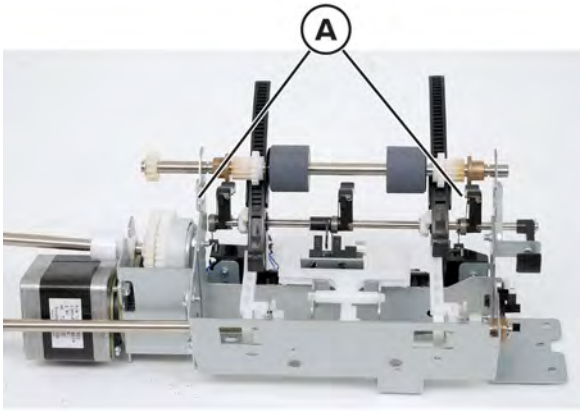
7 Remove the staple finisher low eject clamp. See **"Staple finisher low eject clamp removal" on page 507**.

8 Remove the staple finisher set clamp shaft. See **"Staple finisher set clamp shaft removal" on page 509**.

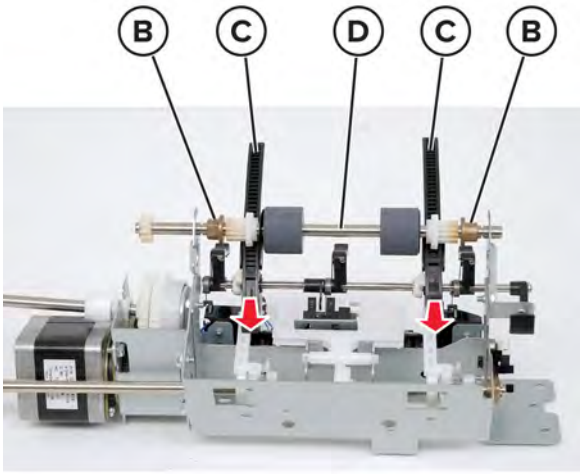
9 Remove the paper eject guide arm.



10 Remove the two E-clips (A).

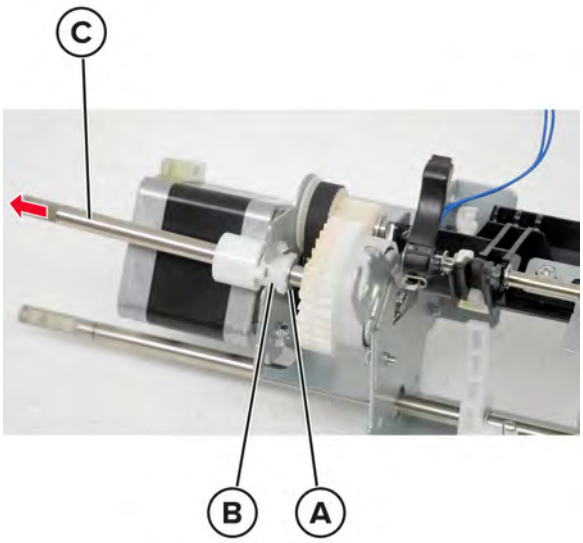


11 Release the two bushings (B), remove the two shaft guides (C), and then remove the roller assembly (D).



Staple finisher eject cam clutch removal

1. Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.
2. Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.
3. Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.
4. Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.
5. Remove the staple finisher upper eject plate. See **"Staple finisher upper eject plate removal" on page 502**.
6. Remove the staple finisher compiler tray. See **"Staple finisher compiler tray removal" on page 505**.
7. Remove the staple finisher low eject clamp. See **"Staple finisher low eject clamp removal" on page 507**.
8. Remove the staple finisher set clamp shaft. See **"Staple finisher set clamp shaft removal" on page 509**.
9. Remove the E-clip (A), release the bushing (B), and then remove the eject cam clutch (C).

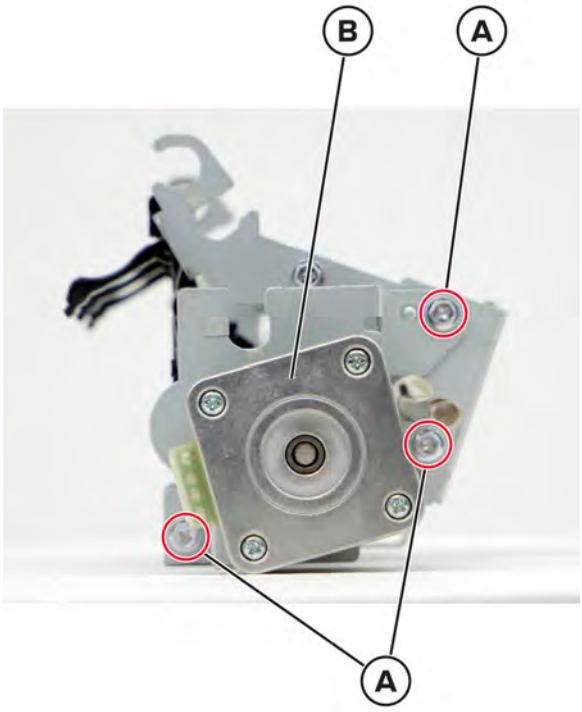


Motor (staple finisher eject) removal

1. Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.
2. Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.
3. Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.
4. Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.
5. Remove the staple finisher upper eject plate. See **"Staple finisher upper eject plate removal" on page 502**.
6. Remove the staple finisher compiler tray. See **"Staple finisher compiler tray removal" on page 505**.
7. Remove the staple finisher low eject clamp. See **"Staple finisher low eject clamp removal" on page 507**.
8. Remove the staple finisher set clamp shaft. See **"Staple finisher set clamp shaft removal" on page 509**.

9 Remove the staple finisher eject cam clutch. See **"Staple finisher eject cam clutch removal" on page 512**.

10 Remove the three screws (A), and then remove the motor (B).



Motor (staple finisher transport) removal

1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

3 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

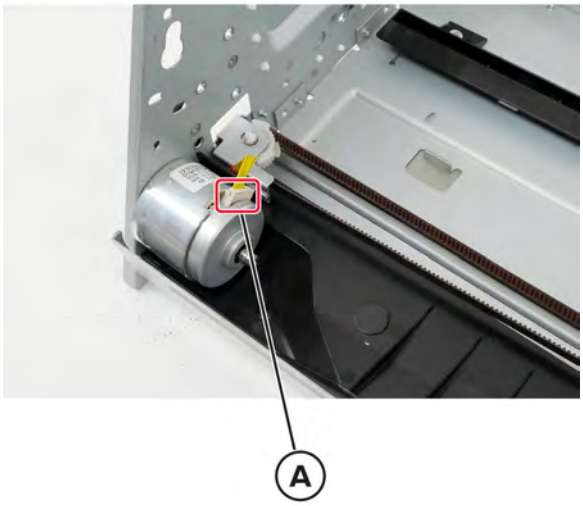
4 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

5 Remove the staple finisher upper transport guide. See **"Staple finisher upper transport guide removal" on page 492**.

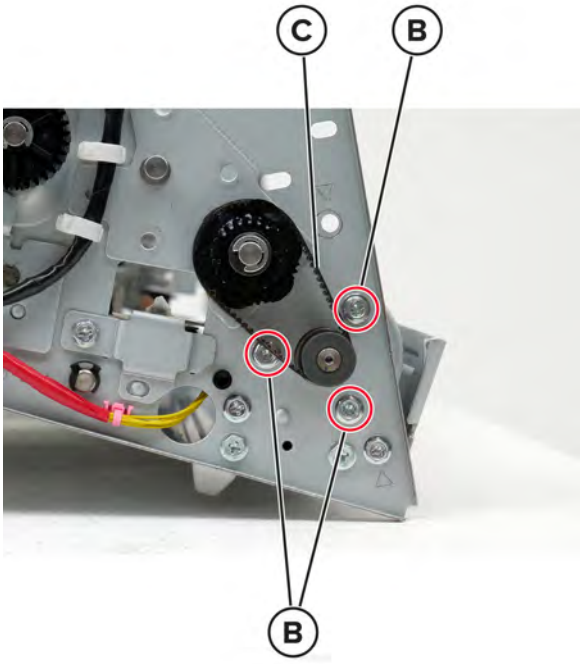
6 Remove the staple finisher compiler exit roller. See **"Staple finisher compiler exit roller removal" on page 498**.

7 Remove the staple finisher lower chute. See **"Staple finisher lower chute removal" on page 499**.

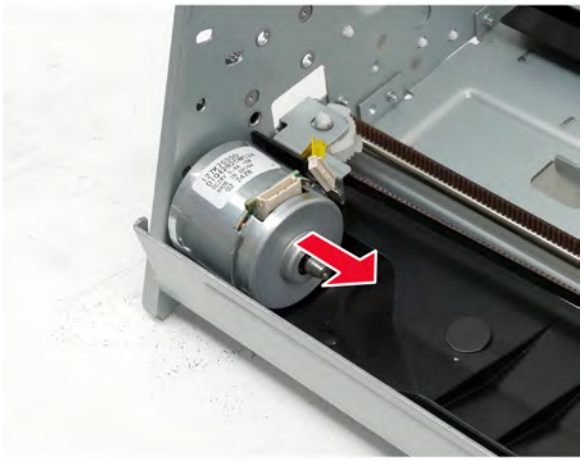
8 Disconnect the cable (A).



9 Remove the three screws (B), and then release the belt (C) on the right side.



10 Remove the motor.



Staple finisher motor idler gear 1 removal

1 Remove the staple finisher front cover. See **“Staple finisher front cover removal” on page 484**.

2 Remove the staple finisher rear cover. See **“Staple finisher rear cover removal” on page 485**.

3 Remove the staple finisher top LH cover. See **“Staple finisher top LH cover removal” on page 487**.

4 Remove the staple finisher top eject cover subassembly. See **“Staple finisher top eject cover subassembly removal” on page 490**.

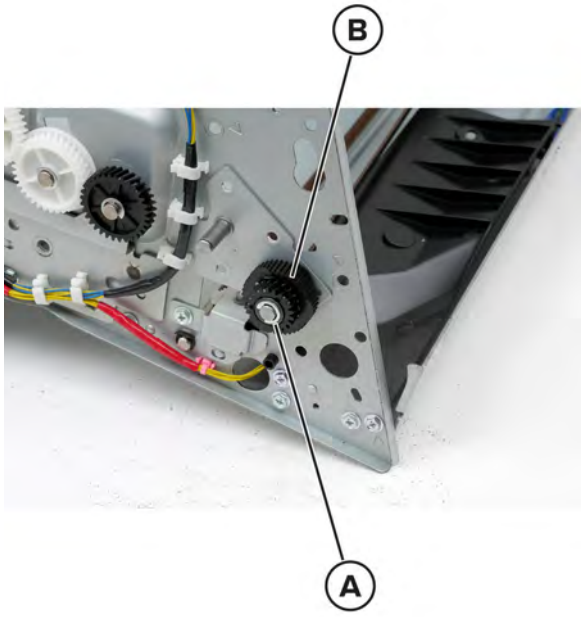
5 Remove the staple finisher upper transport guide. See **“Staple finisher upper transport guide removal” on page 492**.

6 Remove the staple finisher compiler exit roller. See **“Staple finisher compiler exit roller removal” on page 498**.

7 Remove the staple finisher lower chute. See **“Staple finisher lower chute removal” on page 499**.

8 Remove the motor (staple finisher transport). See **“Motor (staple finisher transport) removal” on page 513**.

9 Remove the E-clip (A), and then remove the gear (B) on the right side.



Staple finisher staple drive bracket assembly

1 Remove the staple finisher front cover. See **“Staple finisher front cover removal” on page 484**.

2 Remove the staple finisher rear cover. See **“Staple finisher rear cover removal” on page 485**.

3 Remove the staple finisher top LH cover. See **“Staple finisher top LH cover removal” on page 487**.

4 Remove the staple finisher top eject cover subassembly. See **“Staple finisher top eject cover subassembly removal” on page 490**.

5 Remove the staple finisher upper transport guide. See **“Staple finisher upper transport guide removal” on page 492**.

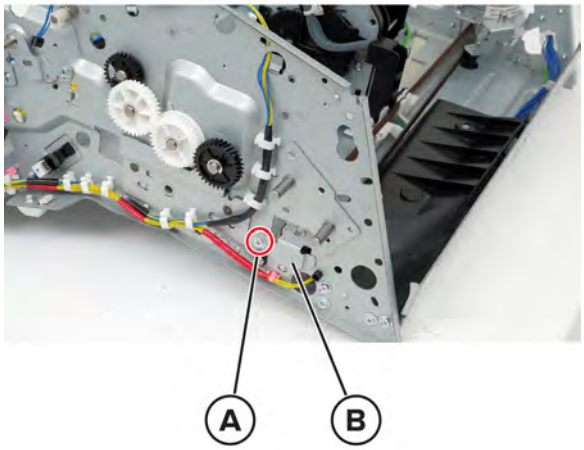
6 Remove the staple finisher compiler exit roller. See **“Staple finisher compiler exit roller removal” on page 498**.

7 Remove the staple finisher lower chute. See **“Staple finisher lower chute removal” on page 499**.

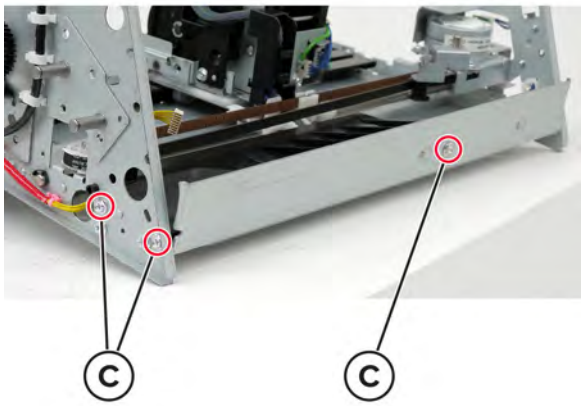
8 Remove the motor (staple finisher transport). See **“Motor (staple finisher transport) removal” on page 513**.

9 Remove the staple finisher motor idler gear 1. See **“Staple finisher motor idler gear 1 removal” on page 515**.

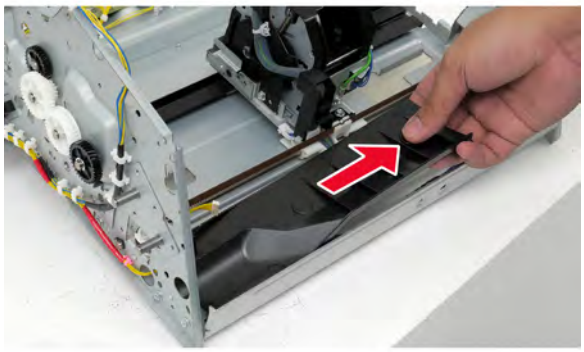
10 Remove the screw (A), and then remove the tension bracket (B) on the right side.



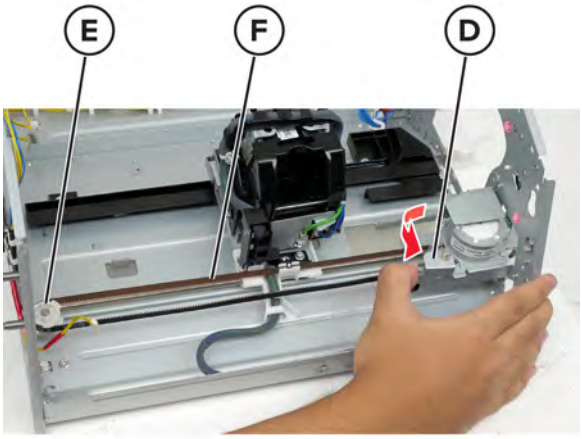
11 Remove the three screws (C).



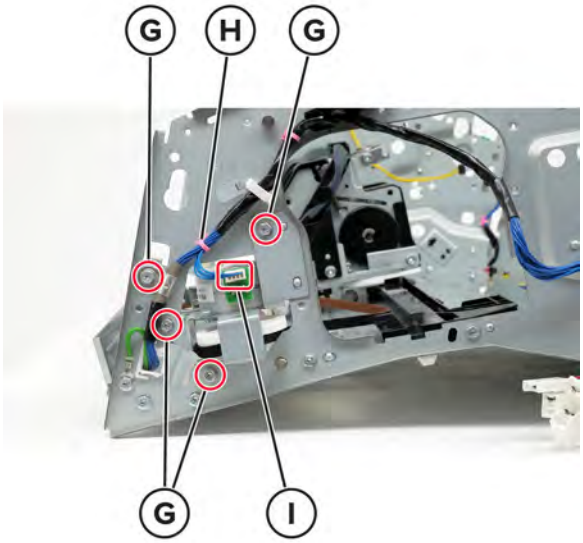
12 Remove the staple harness.



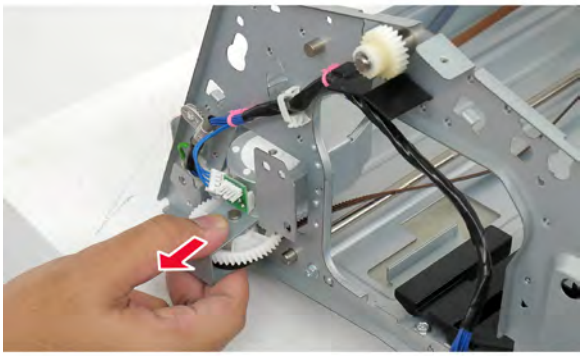
13 Rotate tension belt bracket (D), remove the gear (E), and then remove the belt (F).



14 Remove the four screws (G), release the cable tie (H), and then disconnect the cable (I).

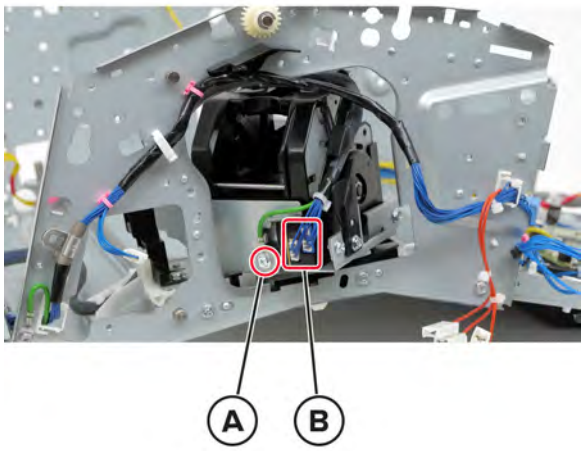


15 Remove the staple drive bracket assembly.

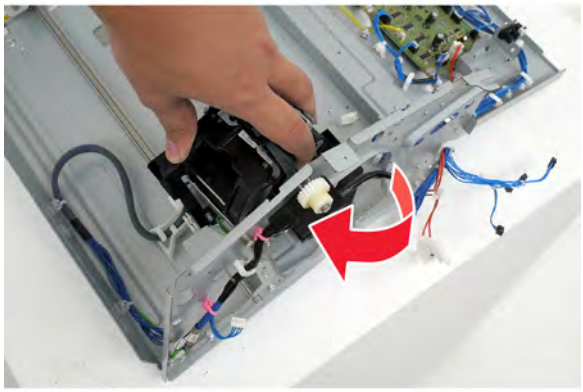


Staple finisher staple assembly

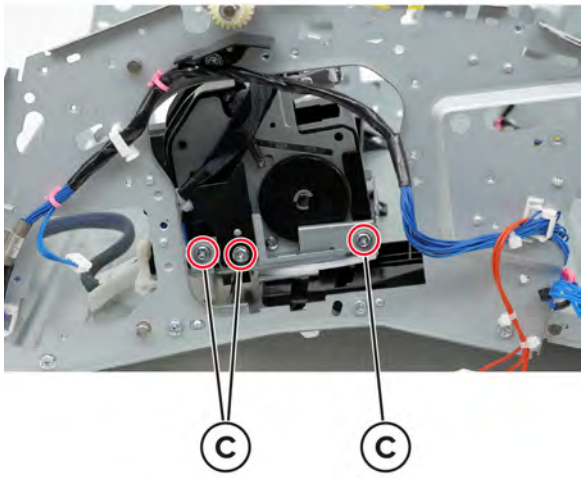
1. Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.
2. Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.
3. Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.
4. Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.
5. Remove the staple finisher upper transport guide. See **"Staple finisher upper transport guide removal" on page 492**.
6. Remove the staple finisher compiler exit roller. See **"Staple finisher compiler exit roller removal" on page 498**.
7. Remove the staple finisher lower chute. See **"Staple finisher lower chute removal" on page 499**.
8. Remove the motor (staple finisher transport). See **"Motor (staple finisher transport) removal" on page 513**.
9. Remove the staple finisher motor idler gear 1. See **"Staple finisher motor idler gear 1 removal" on page 515**.
10. Remove the staple finisher staple drive bracket assembly. See **"Staple finisher staple drive bracket assembly" on page 516**.
11. Remove the screw (A), and then disconnect the two cables (B).



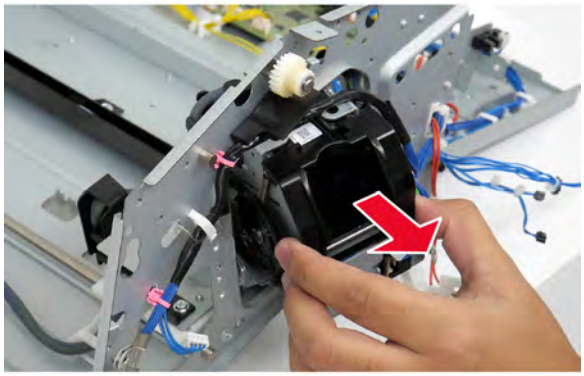
12 Move the staple assembly from its home position.



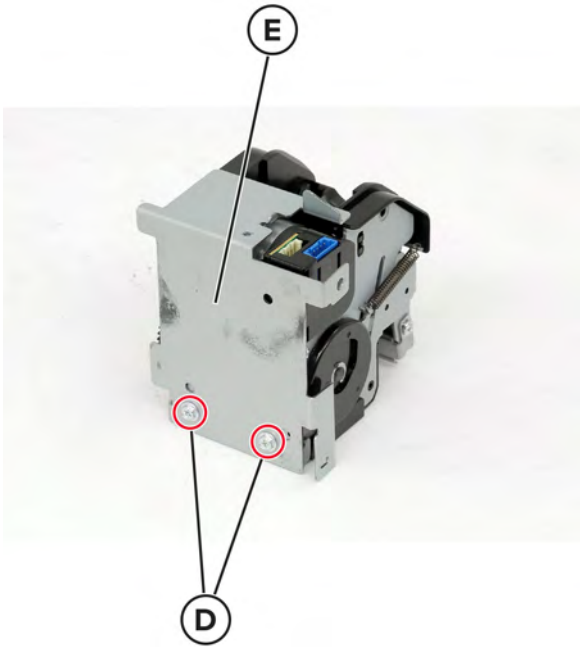
13 Remove the three screws (C).



14 Move the staple assembly back to its home position, and then remove the staple assembly.



15 Remove the two screws (D), and then remove bracket (E).



Staple finisher staple rail assembly removal

1 Remove the staple finisher front cover. See **“Staple finisher front cover removal” on page 484**.

2 Remove the staple finisher rear cover. See **“Staple finisher rear cover removal” on page 485**.

3 Remove the staple finisher top LH cover. See **“Staple finisher top LH cover removal” on page 487**.

4 Remove the staple finisher top eject cover subassembly. See **“Staple finisher top eject cover subassembly removal” on page 490**.

5 Remove the staple finisher upper transport guide. See **“Staple finisher upper transport guide removal” on page 492**.

6 Remove the staple finisher compiler exit roller. See **“Staple finisher compiler exit roller removal” on page 498**.

7 Remove the staple finisher lower chute. See **“Staple finisher lower chute removal” on page 499**.

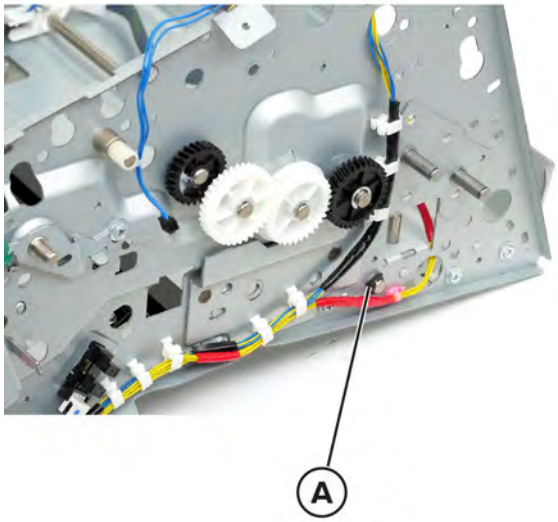
8 Remove the motor (staple finisher transport). See **“Motor (staple finisher transport) removal” on page 513**.

9 Remove the motor idler gear 1. See **“Staple finisher motor idler gear 1 removal” on page 515**.

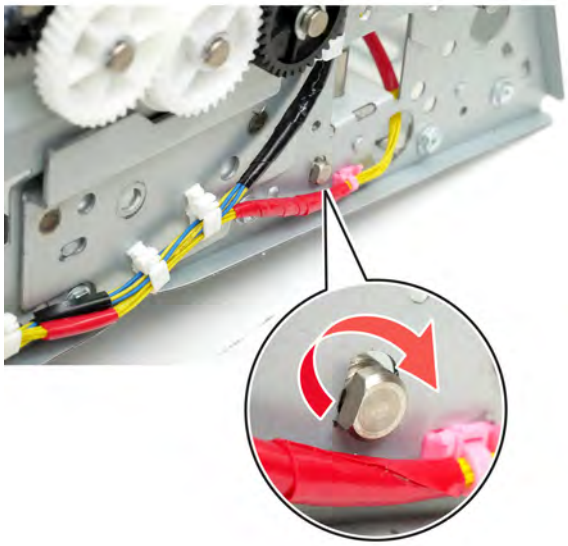
10 Remove the staple finisher staple drive bracket assembly. See **“Staple finisher staple drive bracket assembly” on page 516**.

11 Remove the staple finisher staple assembly. See **“Staple finisher staple assembly” on page 519**.

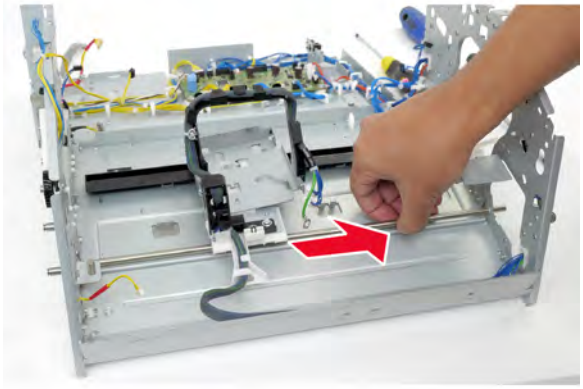
12 Remove the KL-clip (A).



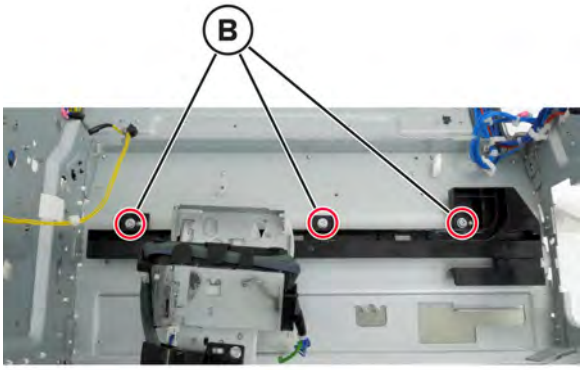
13 Rotate the rail to the correct position to release the rail from the frame.



14 Remove the rail from the frame.



15 Remove the three screws (B).



16 Release the staple carriage rail from the tabs.

17 Rotate the staple carriage to remove the rail.

Staple finisher subpaddle removal

1 Remove the staple finisher front cover. See **"Staple finisher front cover removal" on page 484**.

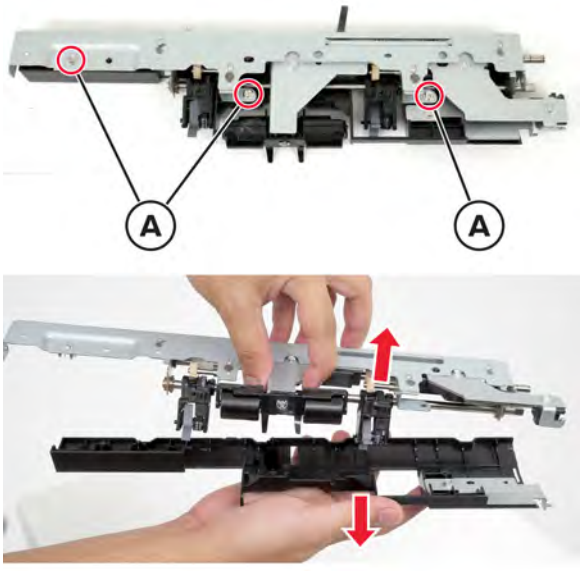
2 Remove the staple finisher rear cover. See **"Staple finisher rear cover removal" on page 485**.

3 Remove the staple finisher top LH cover. See **"Staple finisher top LH cover removal" on page 487**.

4 Remove the staple finisher top eject cover subassembly. See **"Staple finisher top eject cover subassembly removal" on page 490**.

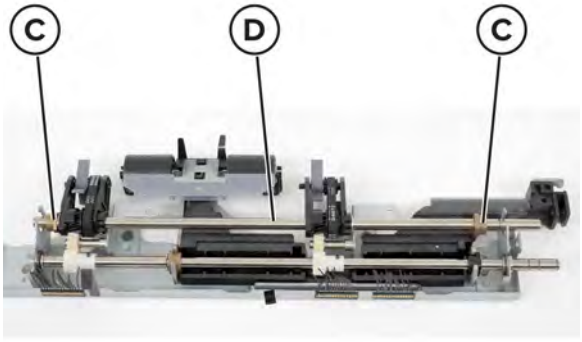
5 Remove the staple finisher upper eject plate. See **"Staple finisher upper eject plate removal" on page 502**.

6 Remove the three screws (A), and then remove the subpaddle from the cover.

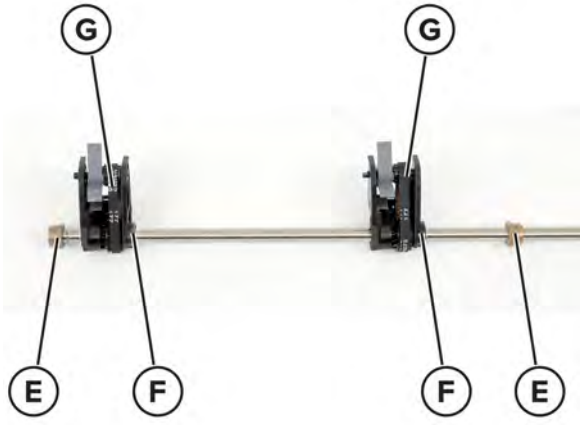


7 Remove the two E-clips (B).

8 Release the two bushings (C), and then remove the subpaddle (D).

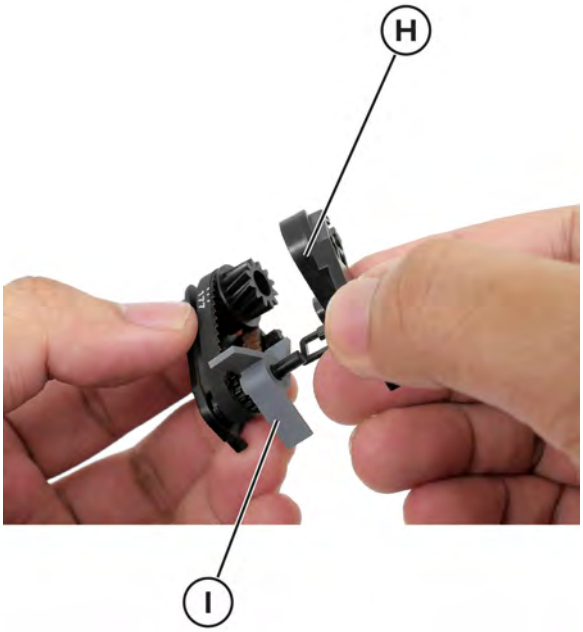


9 Remove the two bushings (E), remove the two E-clips (F), and then remove the two subpaddles (G).



10 Remove the bracket (H) holding the subpaddle, and then remove the subpaddle (I).

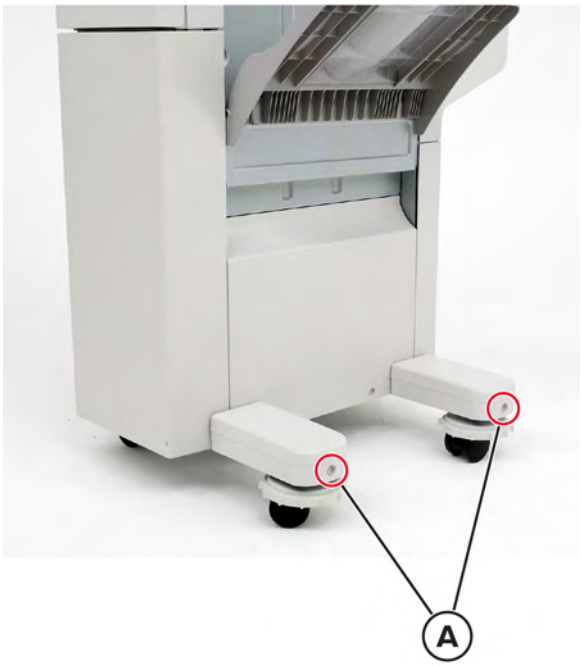
Note: Do this step on the two subpaddles.



Multiposition staple, hole punch finisher removals

Foot cover removal

1 Remove the two screws (A).



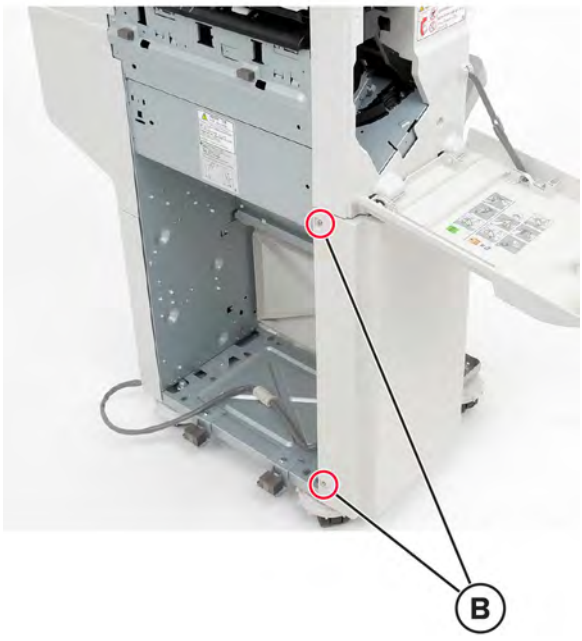
2 Remove the foot cover.

Finisher front cover removal

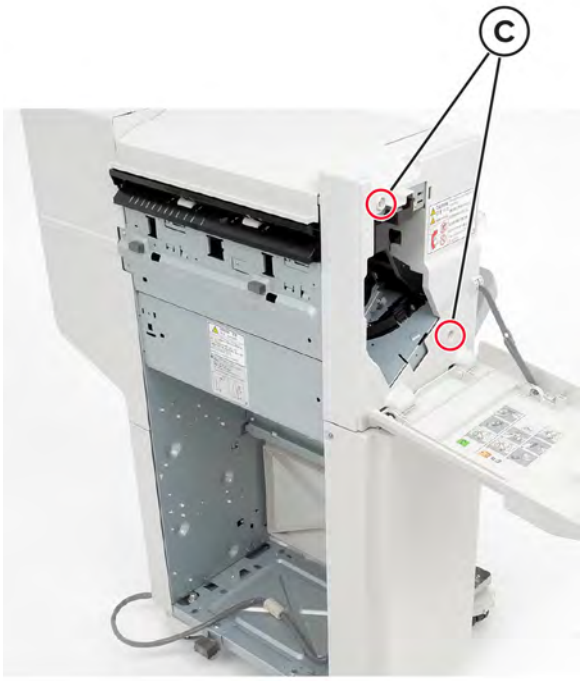
1 Remove the foot cover. See **"Foot cover removal" on page 526**.

2 Remove the screw (A).

3 Remove the two screws (B).



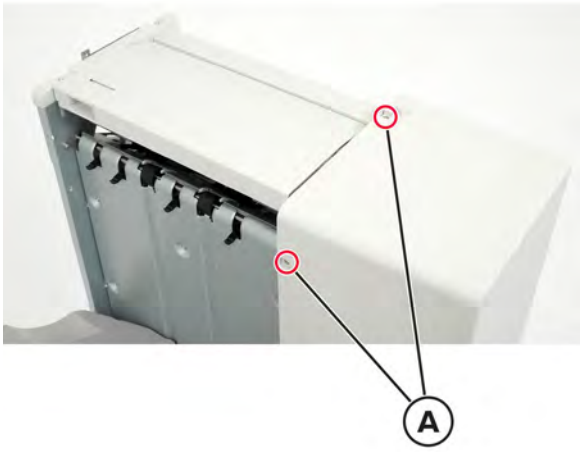
4 Remove the three screws (C).



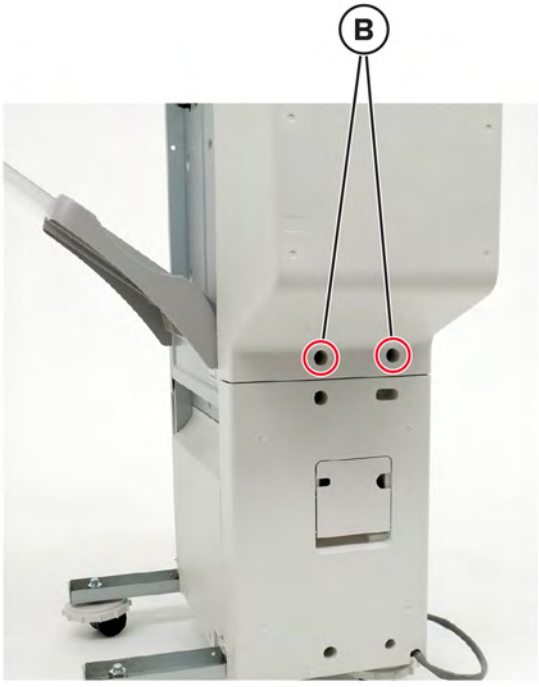
5 Remove the finisher front cover.

Finisher upper rear cover removal

1 Remove the two screws (A).



2 Remove the two screws (B).



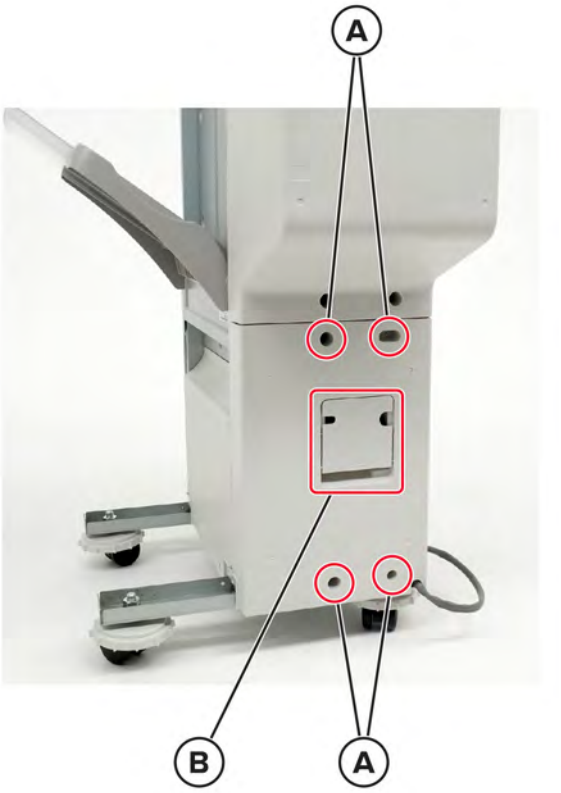
3 Remove the finisher upper rear cover.

Finisher lower rear cover removal

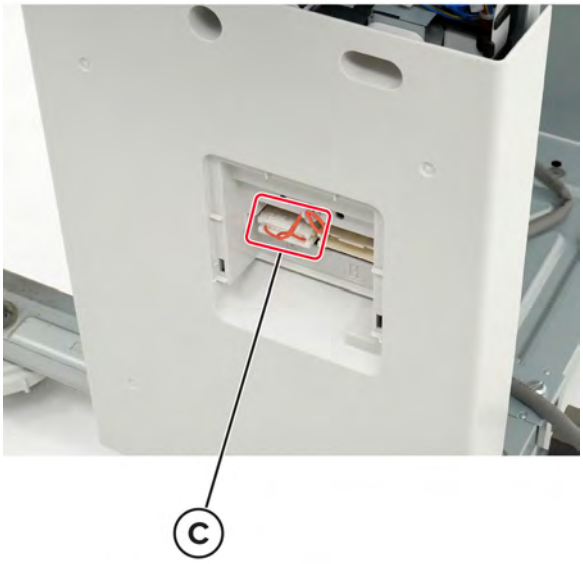
1 Remove the foot cover. See **“Foot cover removal” on page 526**.

2 Remove the four screws (A).

3 Remove the plate (B).



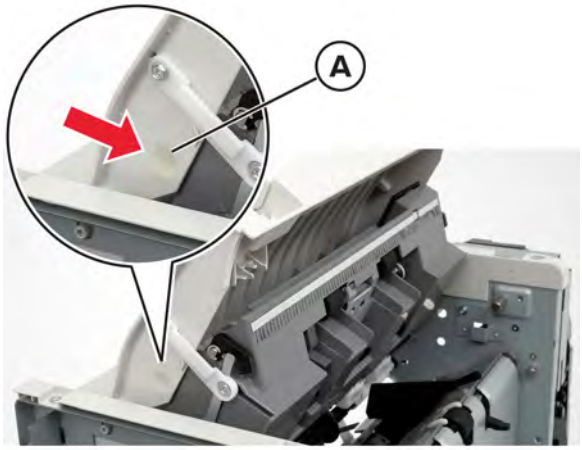
4 Release the snap (C).



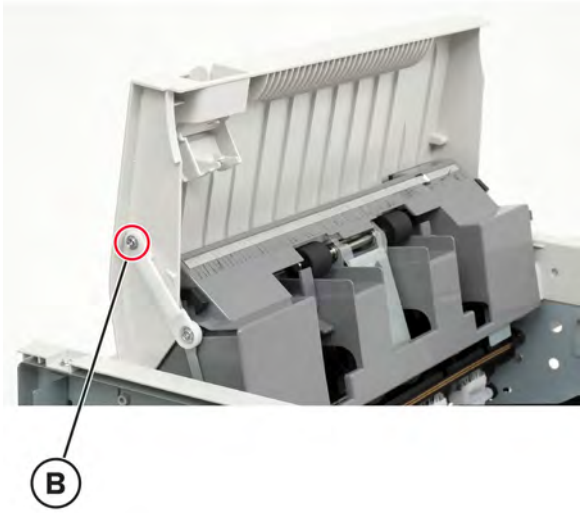
5 Remove the finisher lower rear cover.

Finisher top cover assembly removal

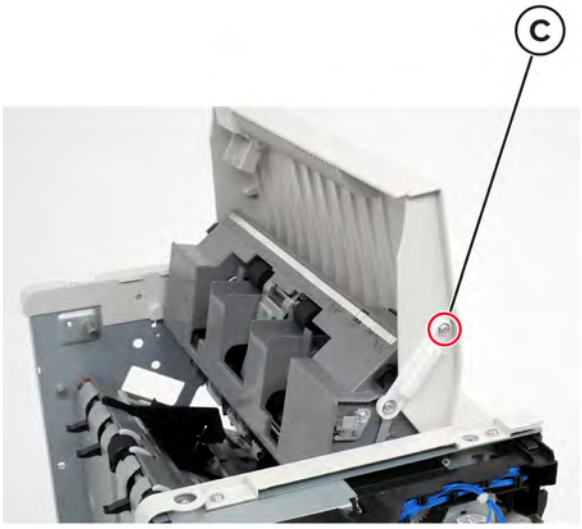
1. Remove the finisher front cover. See **“Finisher front cover removal” on page 527**.
2. Remove the finisher upper rear cover. See **“Finisher upper rear cover removal” on page 529**.
3. Open the top assembly.
4. Press the recess (A) to let the cover move upright.



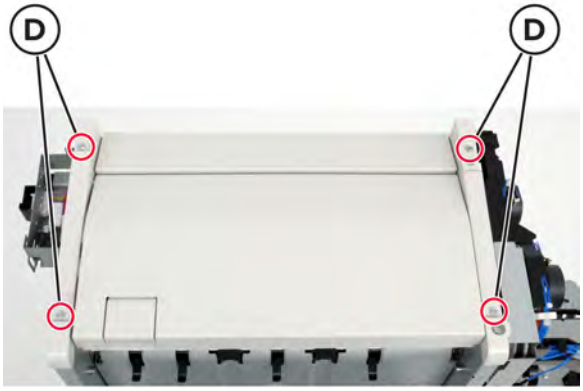
5. Remove the screw (B).



6 Remove the screw (C).



7 Remove the four screws (D).



8 Remove the finisher top cover assembly.

Finisher controller board removal

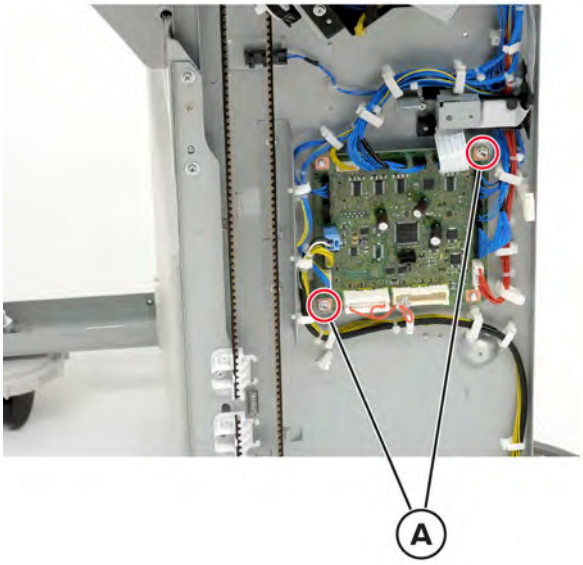
1 Remove the foot cover. See **"Foot cover removal" on page 526**.

2 Remove the finisher upper rear cover. See **"Finisher upper rear cover removal" on page 529**.

3 Remove the finisher lower rear cover. See **"Finisher lower rear cover removal" on page 529**.

4 Remove all cables and connectors from the controller board.

5 Remove the two screws (A).

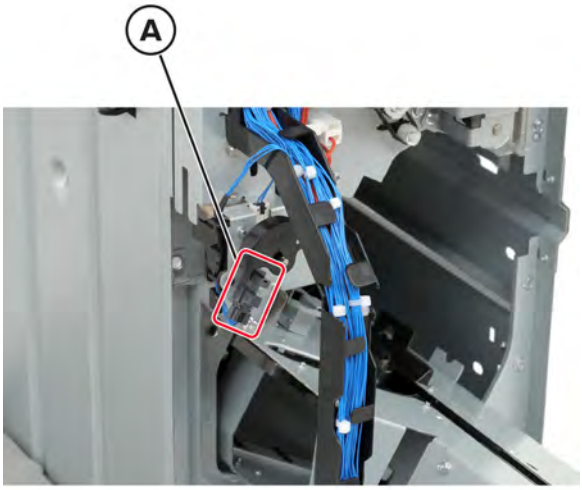


6 Remove the finisher controller board.

Set clamp home sensor removal

1 Remove the finisher upper rear cover. See **"Finisher upper rear cover removal" on page 529**.

2 Remove the connector (A).



3 Remove the set clamp home sensor.

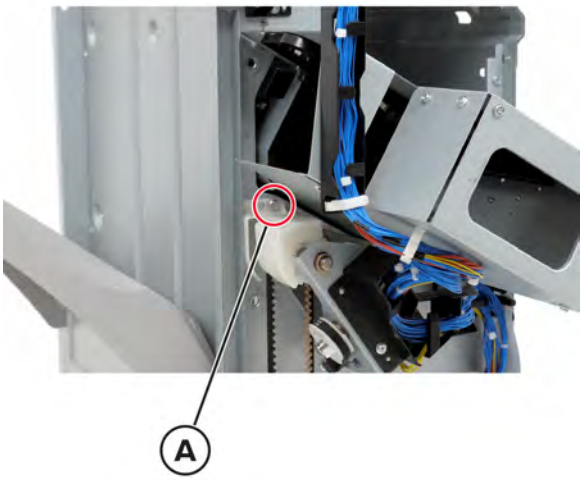
Rear pulley cover removal

1 Remove the foot cover. See **"Foot cover removal" on page 526**.

2 Remove the finisher upper rear cover. See **"Finisher upper rear cover removal" on page 529**.

3 Remove the finisher lower rear cover. See **"Finisher lower rear cover removal" on page 529**.

4 Remove the screw (A).



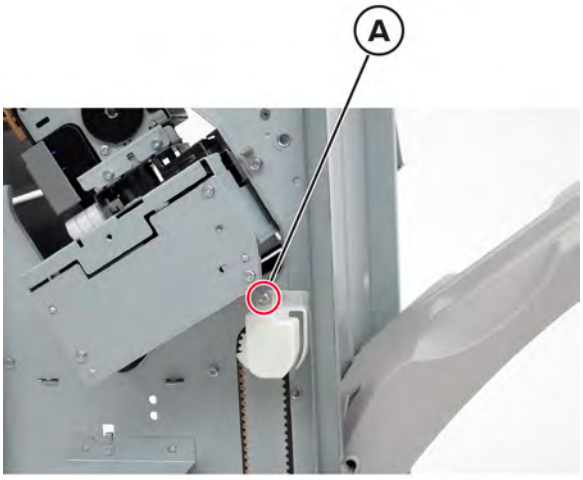
5 Remove the rear pulley cover.

Front pulley cover removal

1 Remove the foot cover. See **"Foot cover removal" on page 526**.

2 Remove the finisher front cover. See **"Finisher front cover removal" on page 527**.

3 Remove the screw (A).



4 Remove the front pulley cover.

Carriage tray assembly removal

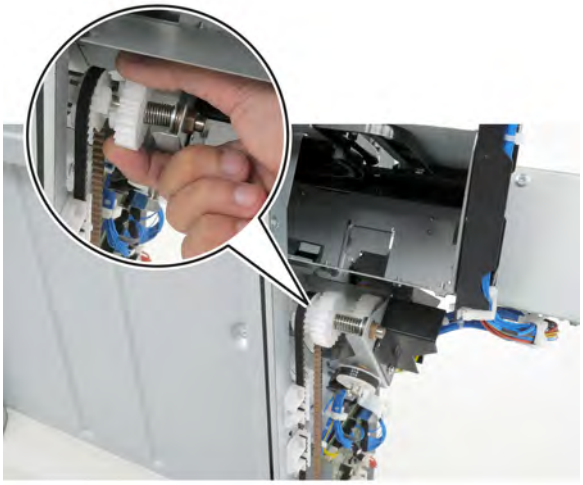
1 Remove the foot cover. See **"Foot cover removal" on page 526**.

2 Remove the finisher upper rear cover. See **"Finisher upper rear cover removal" on page 529**.

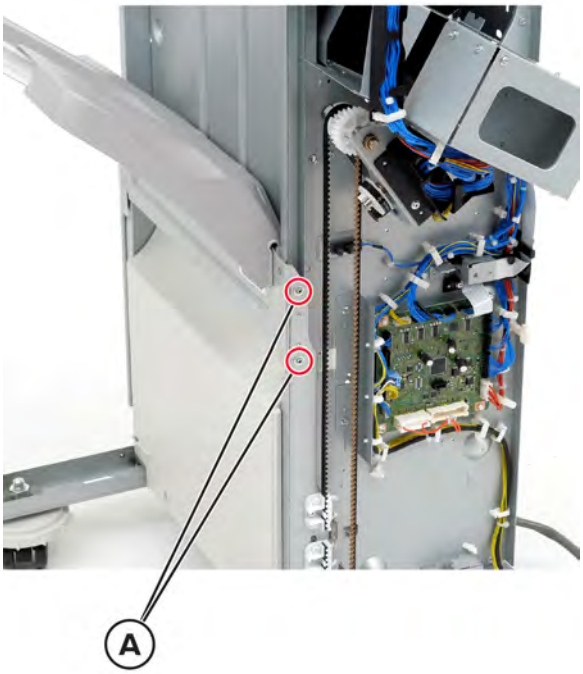
3 Remove the finisher lower rear cover. See **"Finisher lower rear cover removal" on page 529**.

4 Remove the rear pulley cover. See **"Rear pulley cover removal" on page 533**.

5 Pull the rear pulley, and then lower the stacker tray.



6 Remove the two screws (A).



7 Remove the two screws (B).

8 Remove the carriage tray assembly.

Stacker belt removal

1 Remove the foot cover. See **“Foot cover removal” on page 526**.

2 Remove the finisher front cover. See **“Finisher front cover removal” on page 527**.

3 Remove the finisher upper rear cover. See **“Finisher upper rear cover removal” on page 529**.

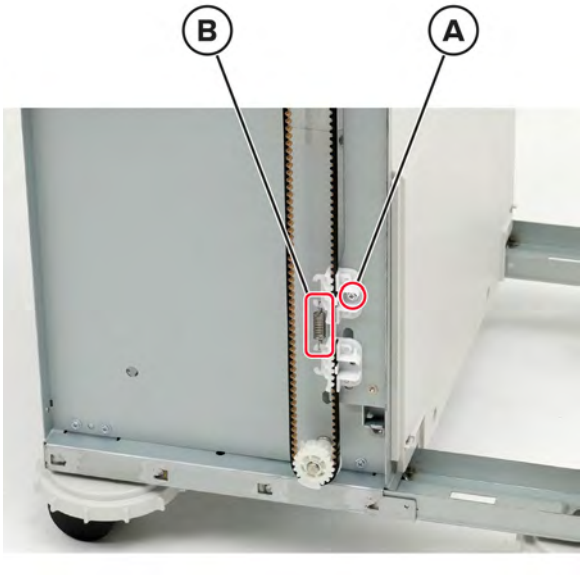
4 Remove the finisher lower rear cover. See **“Finisher lower rear cover removal” on page 529**.

5 Remove the rear pulley cover. See **“Rear pulley cover removal” on page 533**.

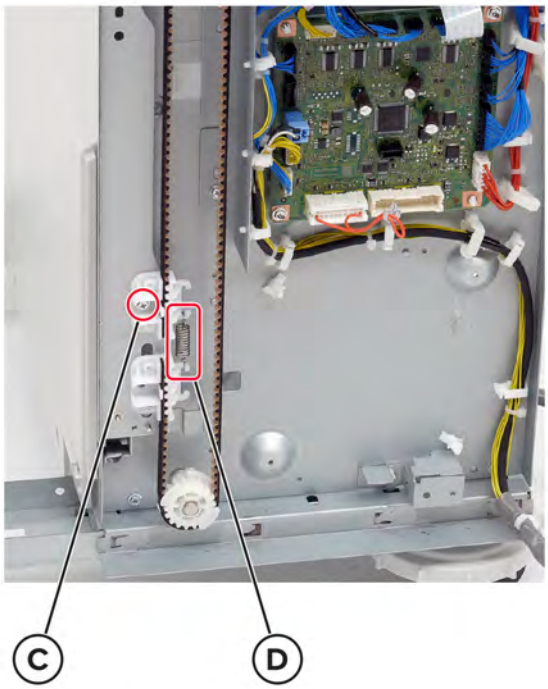
6 Remove the front pulley cover. See **“Front pulley cover removal” on page 534**.

7 Remove the carriage tray assembly. See **“Carriage tray assembly removal” on page 534**.

8 Remove the screw (A), remove the spring (B), and then remove the front stacker belt.



9 Remove the screw (C) and spring (D), and then remove the rear stacker belt.



10 Remove the stacker belt.

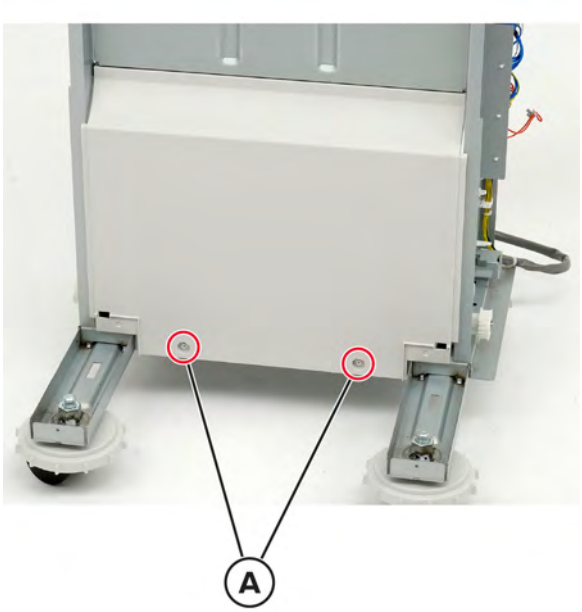
RH cover removal

1 Remove the foot cover. See **"Foot cover removal" on page 526**.

2 Remove the finisher front cover. See **"Finisher front cover removal" on page 527**.

3 Remove the finisher lower rear cover. See **“Finisher lower rear cover removal” on page 529**.

4 Remove the two screws (A).



5 Remove the RH cover.

Tray guide removal

1 Remove the foot cover. See **“Foot cover removal” on page 526**.

2 Remove the finisher front cover. See **“Finisher front cover removal” on page 527**.

3 Remove the finisher upper rear cover. See **“Finisher upper rear cover removal” on page 529**.

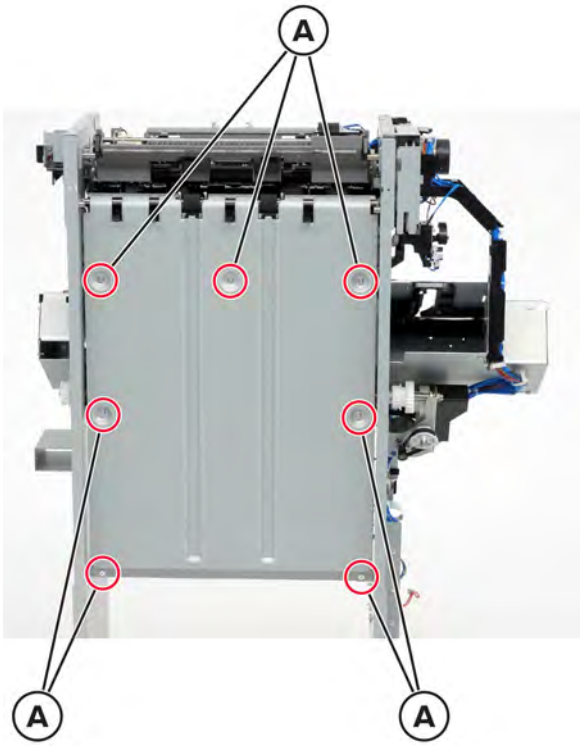
4 Remove the finisher lower rear cover. See **“Finisher lower rear cover removal” on page 529**.

5 Remove the rear pulley cover. See **“Rear pulley cover removal” on page 533**.

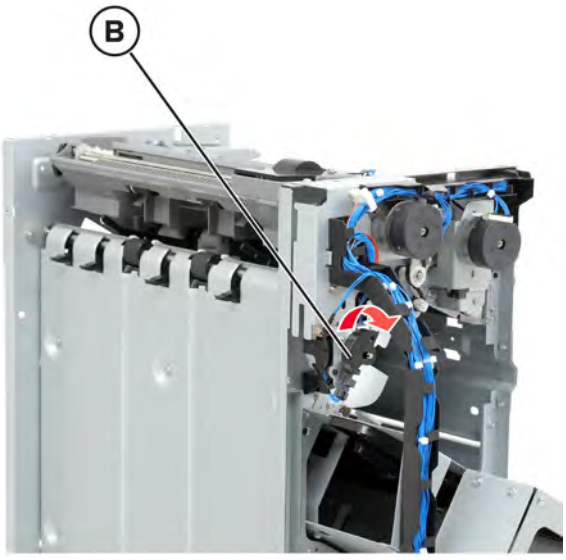
6 Remove the carriage tray assembly. See **“Carriage tray assembly removal” on page 534**.

7 Remove the RH cover. See **“RH cover removal” on page 537**.

8 Remove the seven screws (A).



9 Rotate the latch (B) downward.



10 Remove the tray guide.

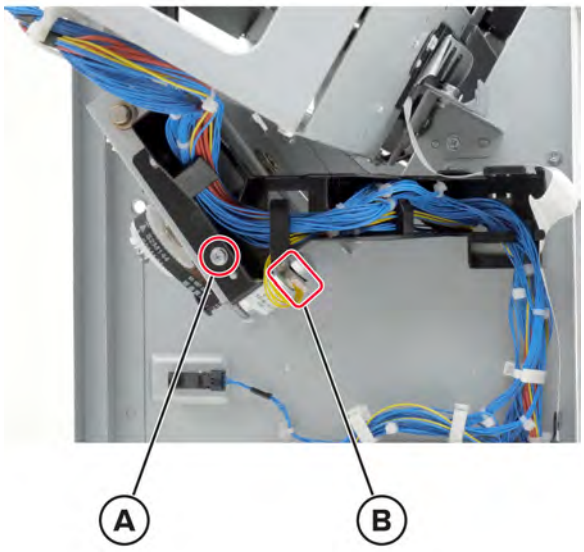
Harness guide removal

1 Remove the foot cover. See **“Foot cover removal” on page 526**.

2 Remove the finisher upper rear cover. See **“Finisher upper rear cover removal” on page 529**.

3 Remove the finisher lower rear cover. See **“Finisher lower rear cover removal” on page 529**.

4 Remove the screw (A), and then the connector (B).



5 Remove the harness guide.

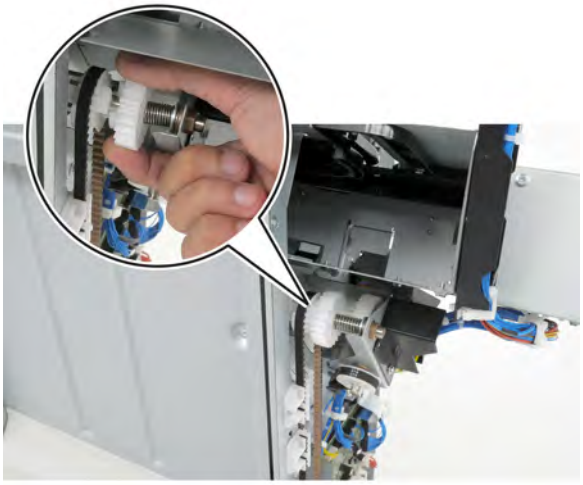
Stacker motor assembly removal

1 Remove the foot cover. See **“Foot cover removal” on page 526**.

2 Remove the finisher upper rear cover. See **“Finisher upper rear cover removal” on page 529**.

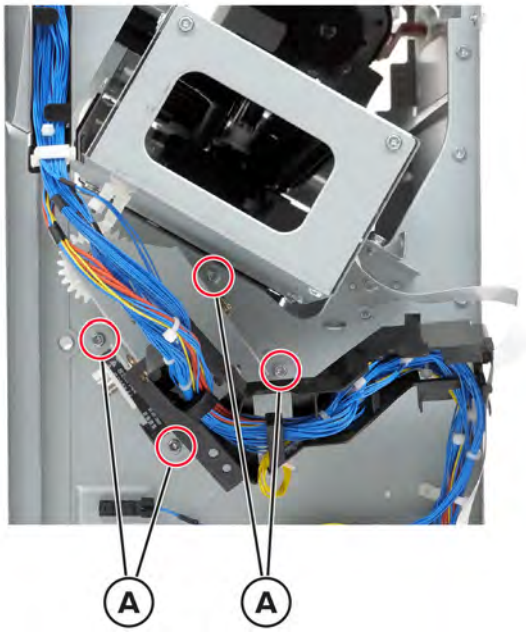
3 Remove the rear pulley cover. See **“Rear pulley cover removal” on page 533**.

4 Pull the rear pulley, and then lower the stacker tray.



5 Remove the harness guide. See **"Harness guide removal" on page 540**.

6 Remove the four screws (A).



7 Remove the stacker motor assembly.

Eject motor drive bracket assembly removal

1 Remove the foot cover. See **"Foot cover removal" on page 526**.

2 Remove the finisher front cover. See **"Finisher front cover removal" on page 527**.

3 Remove the finisher upper rear cover. See **"Finisher upper rear cover removal" on page 529**.

4 Remove the finisher lower rear cover. See **"Finisher lower rear cover removal" on page 529**.

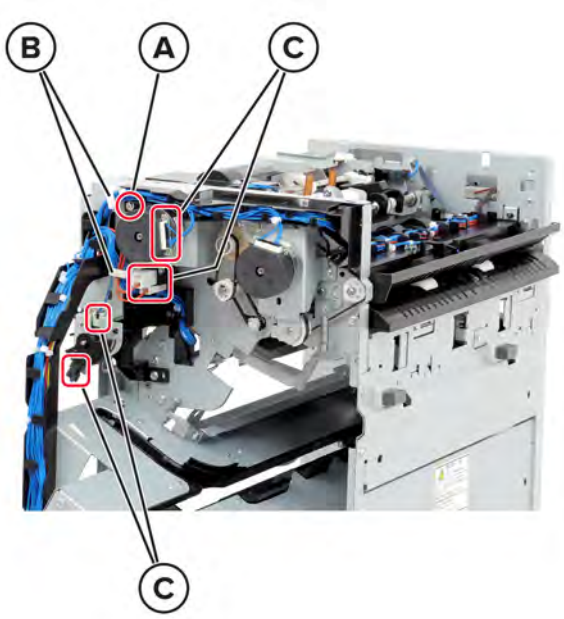
5 Remove the rear pulley cover. See **"Rear pulley cover removal" on page 533**.

6 Remove the front pulley cover. See **"Front pulley cover removal" on page 534**.

7 Remove the tray guide. See **"Tray guide removal" on page 538**.

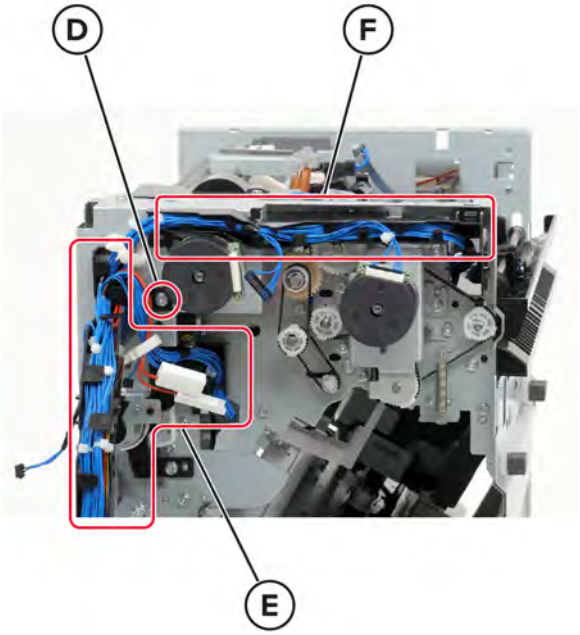
8 Remove the harness guide. See **"Harness guide removal" on page 540**.

9 Remove the screw (A), remove the two clamps (B), and then remove the four connectors (C).



10 Remove the screw (D).

11 Remove the interlock harness guide (E), and then remove the upper harness guide (F).

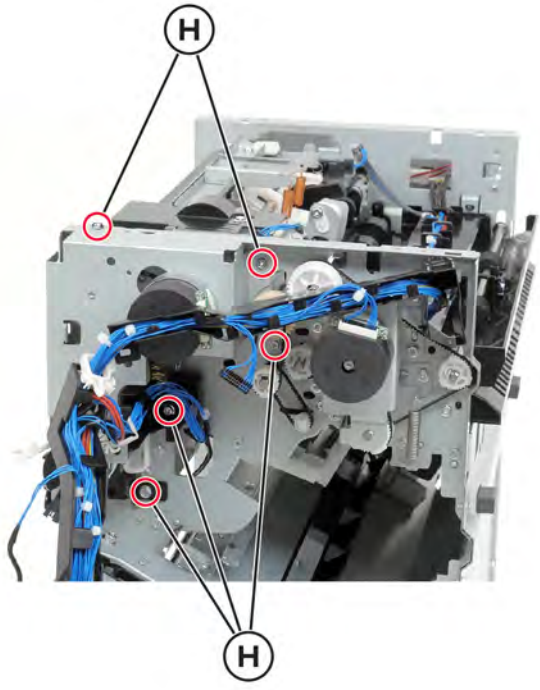


12 Rotate the harness guide, and then release the tab (G).

13 Remove the harness guide.

14 Remove the cables along the interlock harness guide and upper harness guide.

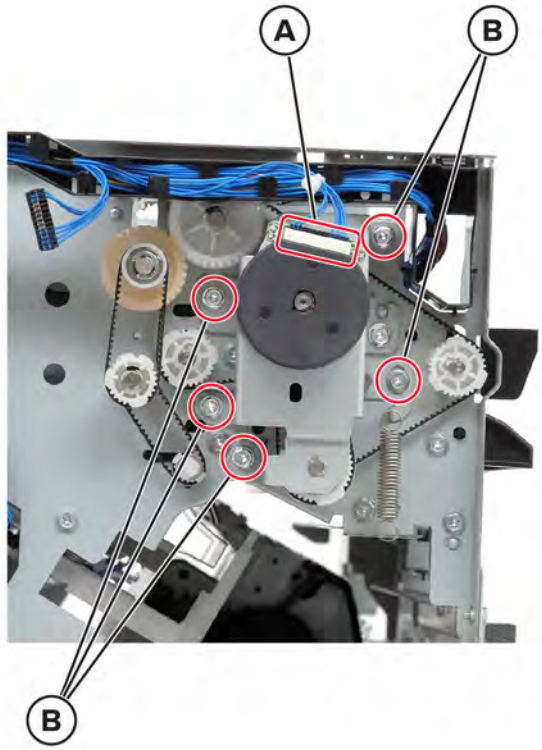
15 Remove the five screws (H).



16 Remove the eject motor drive bracket assembly.

Finisher transport motor removal

1. Remove the foot cover. See **“Foot cover removal” on page 526**.
2. Remove the finisher upper rear cover. See **“Finisher upper rear cover removal” on page 529**.
3. Remove the finisher lower rear cover. See **“Finisher lower rear cover removal” on page 529**.
4. Remove the connector (A) and then remove the four screws (B).

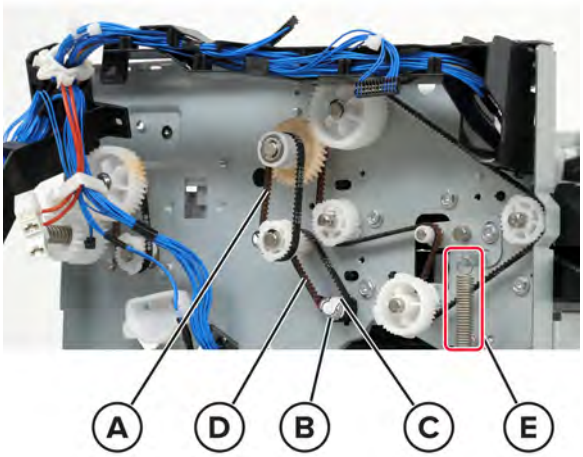


5. Remove the finisher transport motor.

Finisher transport belt removal

1. Remove the upper rear cover. See **“Finisher upper rear cover removal” on page 529**.
2. Remove the finisher transport motor. See **“Finisher transport motor removal” on page 544**.
3. Remove the outer belt (A).
4. Remove the E-clip (B) from the pulley, and then remove the pulley (C).
5. Remove the inner belt (D).

6 Remove the tension spring (E).

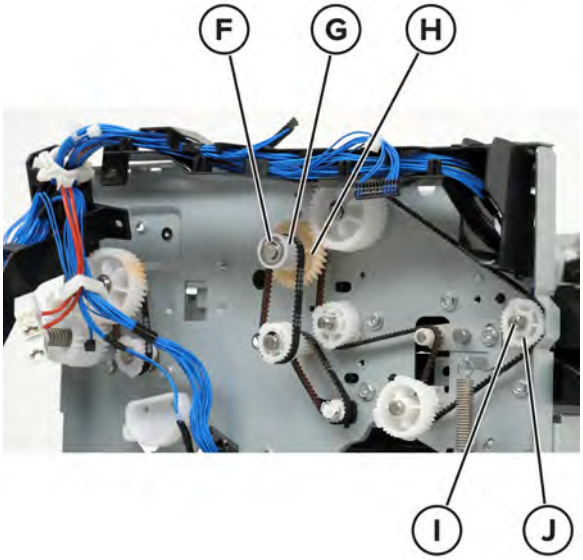


7 Remove the E-clip (F) from the one-way pulley (G), and then remove the pulley.

8 Remove the inner gear (H).

9 Remove the tab (I) on the gear (J), and then remove the gear.

10 Remove the finisher transport belt.



Eject chute assembly removal

1 Remove the finisher front cover. See **"Finisher front cover removal" on page 527**.

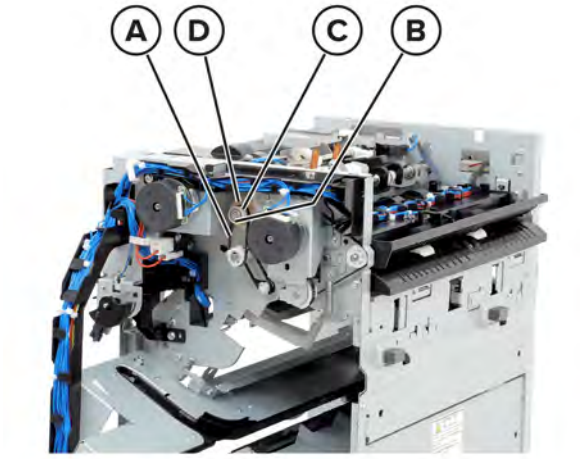
2 Remove the finisher upper rear cover. See **"Finisher upper rear cover removal" on page 529**.

3 Remove the finisher top cover assembly. See **"Finisher top cover assembly removal" on page 531**.

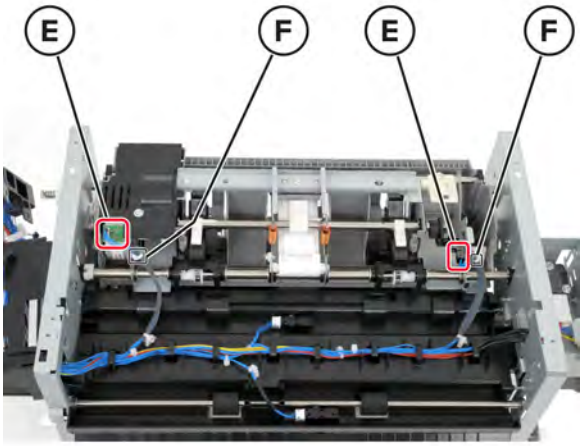
4 Remove the outer belt (A).

5 Remove the E-clip (B) from the pulley (C), and then remove the pulley.

6 Remove the inner belt, and then remove the gear (D).

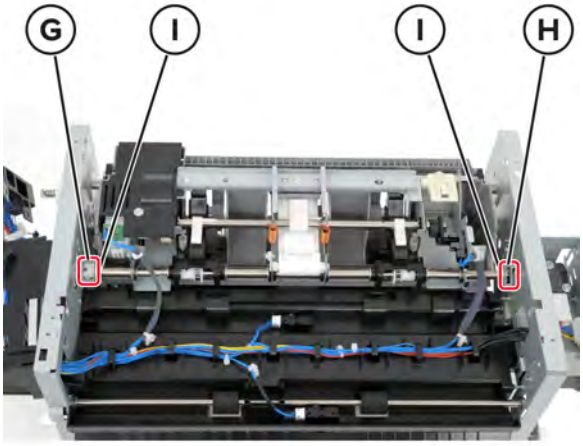


7 Remove the two connectors (E), and then remove the two clamps (F).

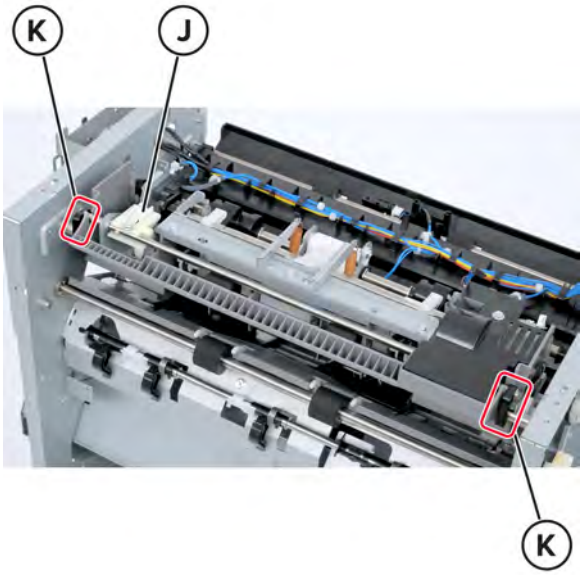


8 Remove the plastic clip (G) and then remove the E-clip (H).

9 Move the two bearings (I) to the center of the shaft.



10 Press the lever (J), and then release the latches (K).



11 Remove the eject chute assembly.

Set clamp main shaft assembly removal

1 Remove the foot cover. See **“Foot cover removal” on page 526**.

2 Remove the finisher front cover. See **“Finisher front cover removal” on page 527**.

3 Remove the finisher upper rear cover. See **“Finisher upper rear cover removal” on page 529**.

4 Remove the finisher lower rear cover. See **“Finisher lower rear cover removal” on page 529**.

5 Remove the rear pulley cover. See **“Rear pulley cover removal” on page 533**.

6 Remove the front pulley cover. See **“Front pulley cover removal” on page 534**.

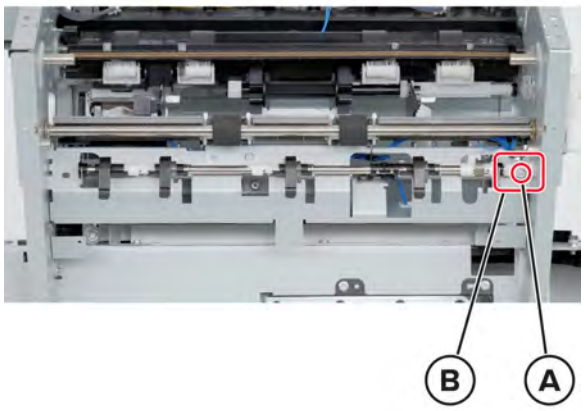
7 Remove the harness guide. See **“Harness guide removal” on page 540**.

8 Remove the stacker motor assembly. See **“Stacker motor assembly removal” on page 540**.

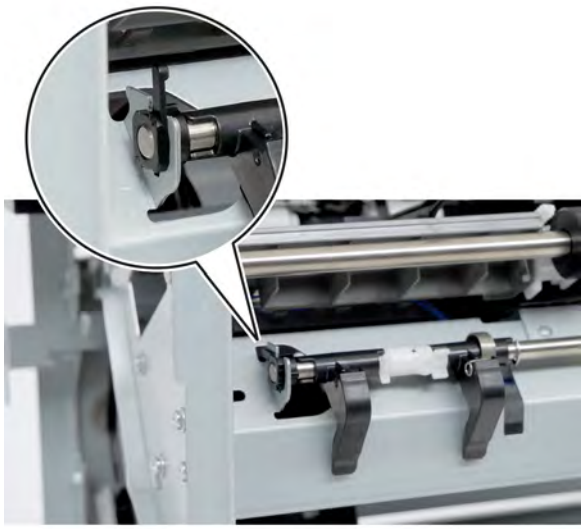
9 Remove the eject motor drive bracket assembly. See **“Eject motor drive bracket assembly removal” on page 541**.

10 Remove the screw (A).

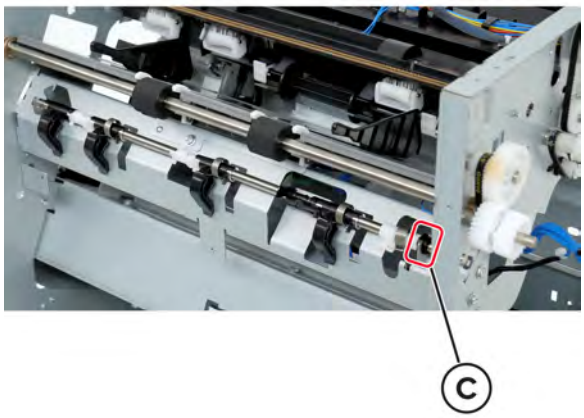
11 Move the shaft holder (B) to the end of the right side.



12 Release the tab, and then rotate it upright.

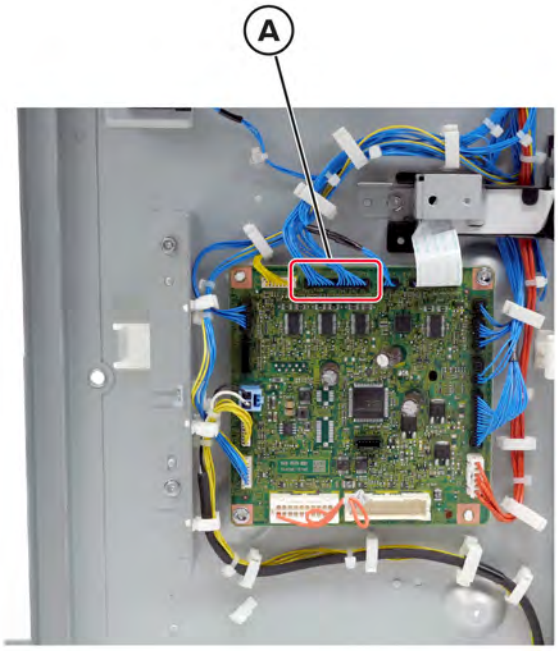


13 Move the bearing (C) to the end of the left side, and then lift the set clamp main shaft assembly to remove it.

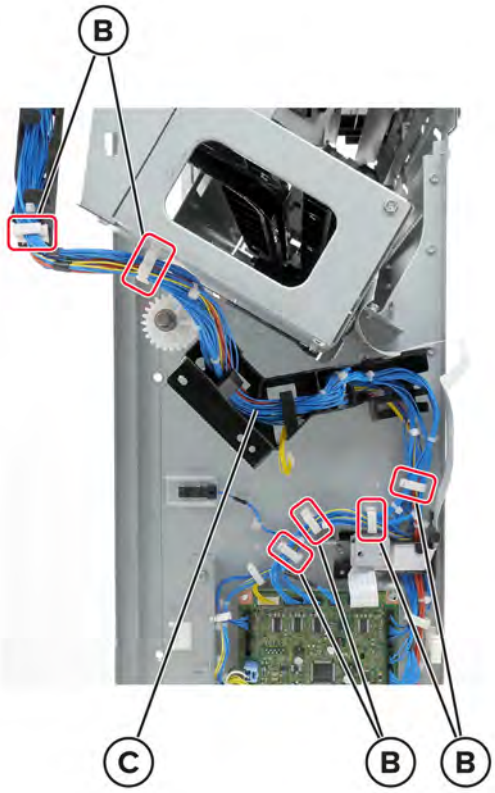


Compile tray assembly removal

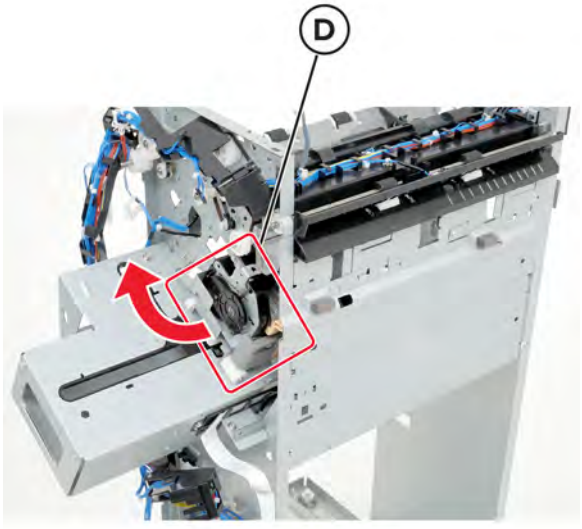
1. Remove the foot cover. See **“Foot cover removal” on page 526**.
2. Remove the finisher front cover. See **“Finisher front cover removal” on page 527**.
3. Remove the finisher upper rear cover. See **“Finisher upper rear cover removal” on page 529**.
4. Remove the finisher lower rear cover. See **“Finisher lower rear cover removal” on page 529**.
5. Remove the rear pulley cover. See **“Rear pulley cover removal” on page 533**.
6. Remove the front pulley cover. See **“Front pulley cover removal” on page 534**.
7. Remove the tray guide. See **“Tray guide removal” on page 538**.
8. Remove the harness guide. See **“Harness guide removal” on page 540**.
9. Remove the stacker motor assembly. See **“Stacker motor assembly removal” on page 540**.
10. Remove the eject motor drive bracket assembly. See **“Eject motor drive bracket assembly removal” on page 541**.
11. Remove the finisher transport motor. See **“Finisher transport motor removal” on page 544**.
12. Remove the eject chute assembly. See **“Eject chute assembly removal” on page 545**.
13. Remove the set clamp main shaft assembly. See **“Set clamp main shaft assembly removal” on page 547**.
14. Remove the connector (A).



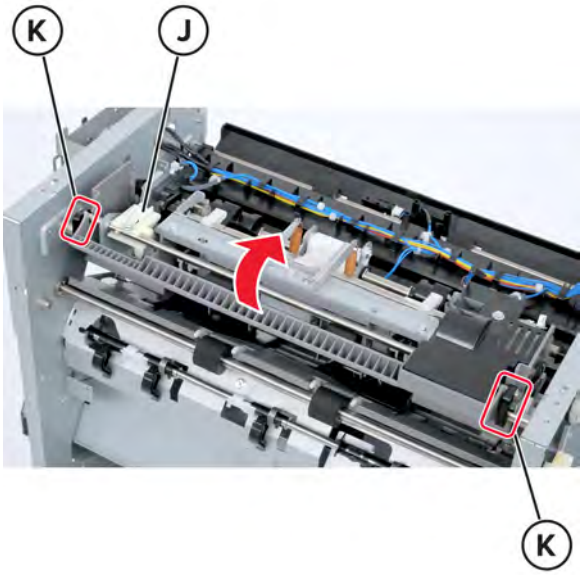
15 Remove the six clamps (B), and then remove the cable (C) from the harness guide.



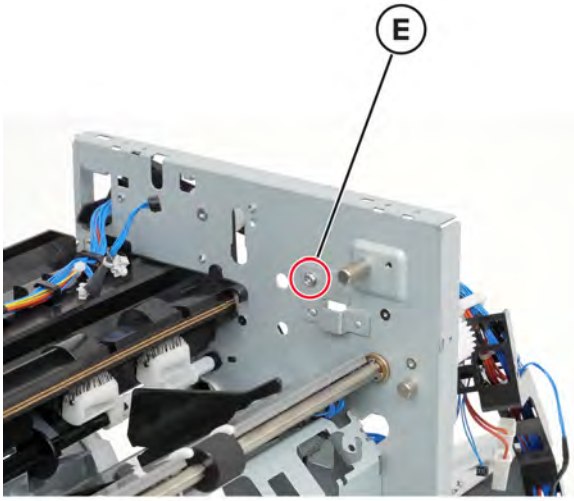
16 Move the stapler (D) to the rear end of the rail.



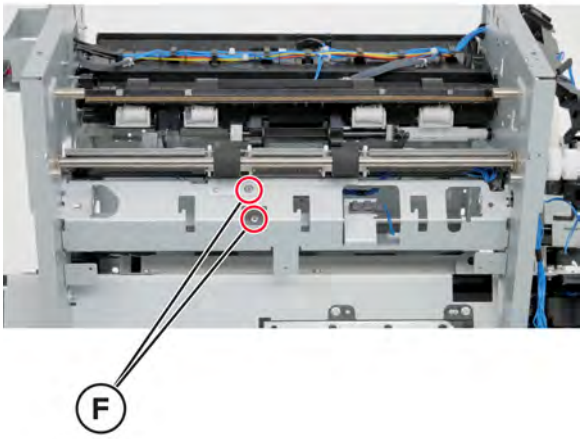
17 Press the lever (J), release the latches (K), and then lift the eject chute assembly.



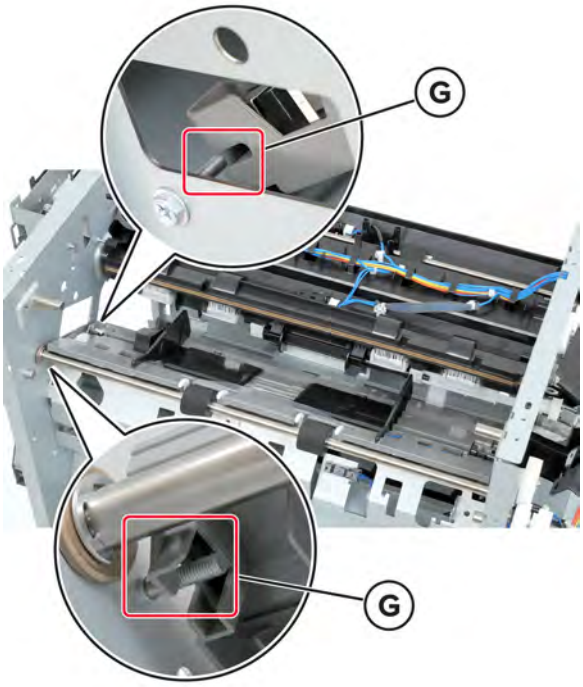
18 Remove the screw (E) of the interlock guide, and then remove the interlock guide.



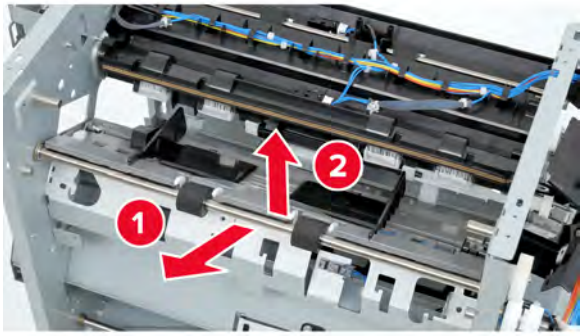
19 Remove the two screws (F).



20 Release the two latches (G).



21 Pull the compile tray assembly forward, and then lift to remove it.



Entrance roller assembly removal

1 Remove the foot cover. See **"Foot cover removal" on page 526**.

2 Remove the finisher front cover. See **"Finisher front cover removal" on page 527**.

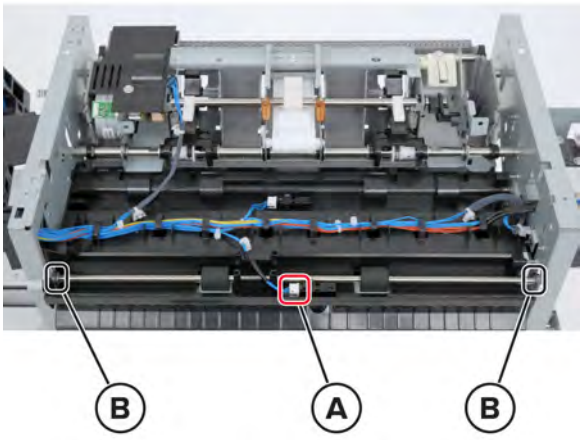
3 Remove the finisher top cover assembly. See **"Finisher top cover assembly removal" on page 531**.

4 Remove the finisher transport motor. See **"Finisher transport motor removal" on page 544**.

5 Remove the finisher transport belt. See **"Finisher transport belt removal" on page 544**.

6 Remove the three connectors (A).

7 Remove the two E-clips (B), and then remove the entrance roller assembly.



Upper chute assembly removal

1 Remove the entrance roller assembly. See **"Entrance roller assembly removal" on page 553**.

2 Remove the screw (A).

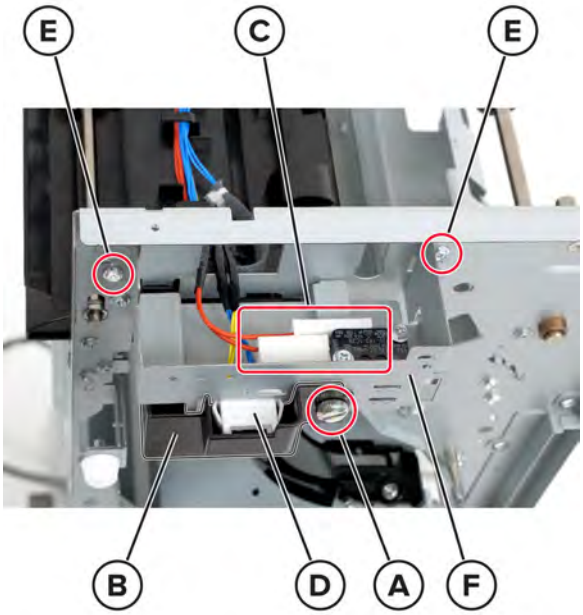
3 Pull forward the dummy chute (B) to remove it.

4 Disconnect the connectors (C).

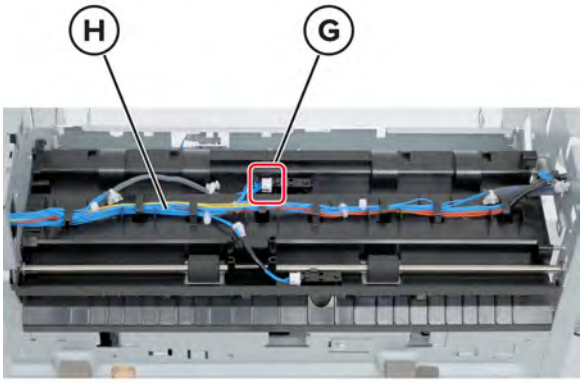
5 Release the clamp (D).

6 Remove the two screws (E).

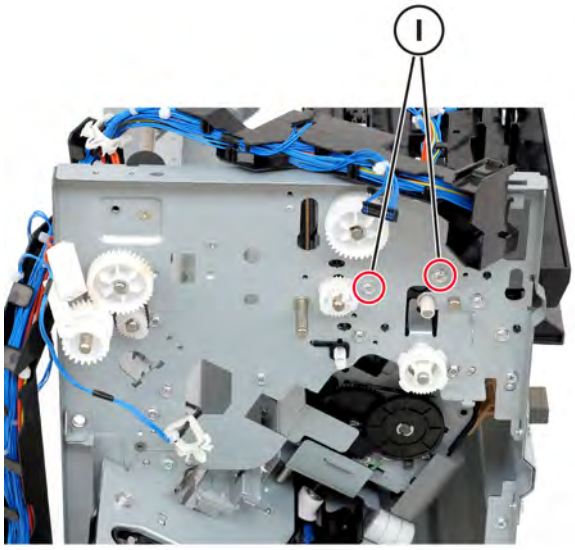
7 Remove the interlock bracket (F).



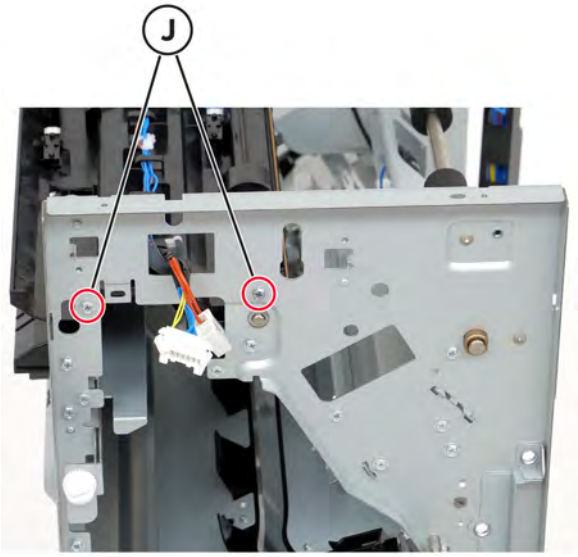
8 Remove the connector (G) and then remove the cable (H) from the harness.



9 Remove the two screws (I).



10 Loosen the two screws (J).



11 Remove the upper chute assembly.

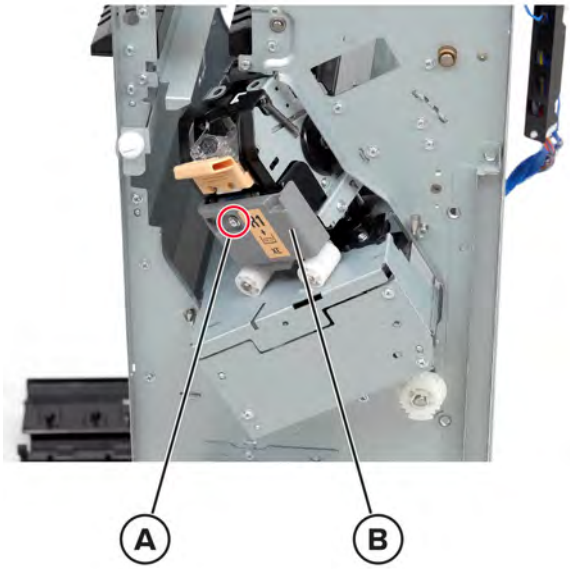
Stapler assembly removal

1 Open the front access door.

2 Move the stapler assembly to the front.

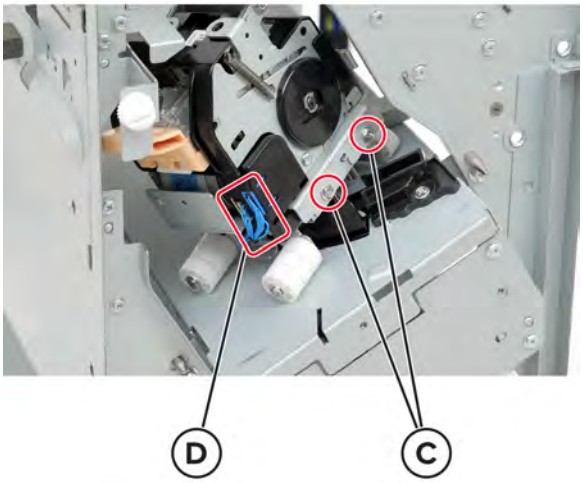
3 Remove the screw (A).

4 Remove the cover (B).



5 Remove the two screws (C).

6 Remove the connector (D).



7 Remove the stapler assembly.

Rail assembly removal

1 Remove the foot cover. See **“Foot cover removal” on page 526**.

2 Remove the finisher front cover. See **“Finisher front cover removal” on page 527**.

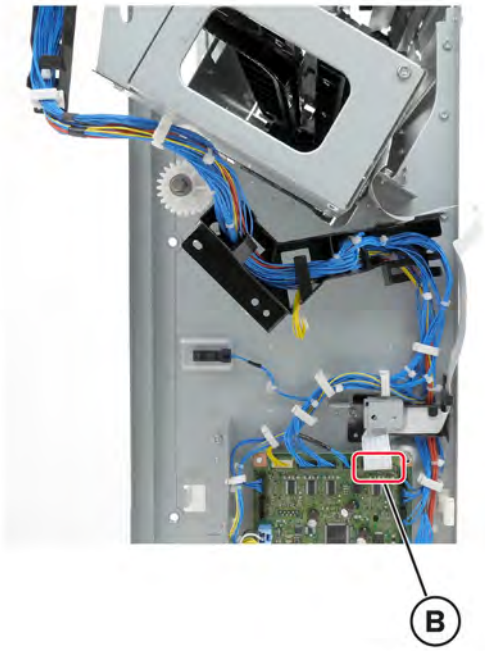
3 Remove the finisher upper rear cover. See **“Finisher upper rear cover removal” on page 529**.

4 Remove the finisher lower rear cover. See **“Finisher lower rear cover removal” on page 529**.

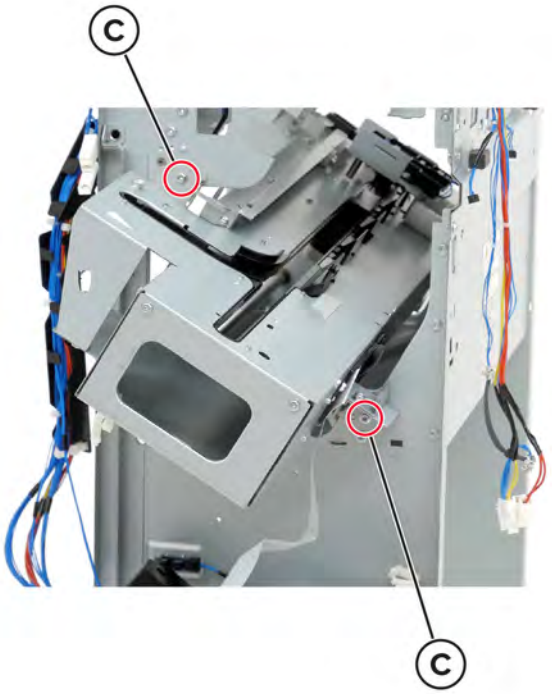
5 Remove the stapler assembly. See **“Stapler assembly removal” on page 555**.

6 Rotate the harness guide, and then release the tab (A).

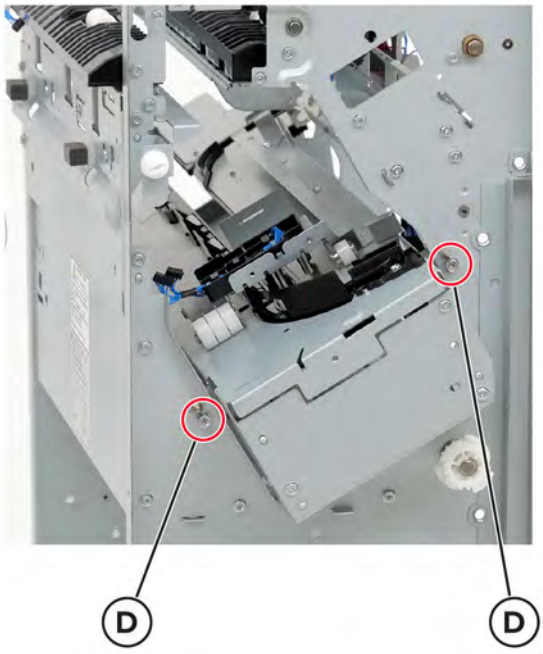
7 Release the FFC (B), and then remove it from the harness.



8 Remove the two screws (C).



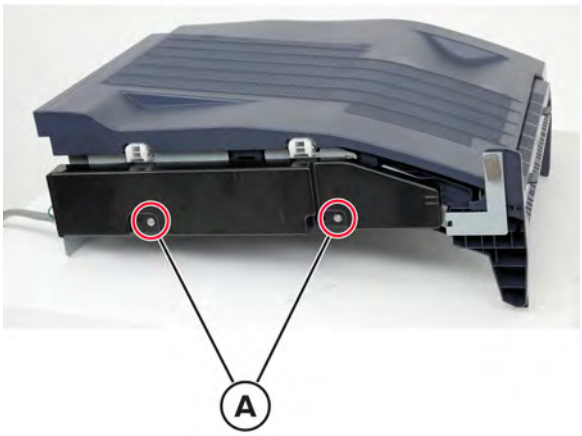
9 Remove the two screws (D).



10 Remove the rail assembly.

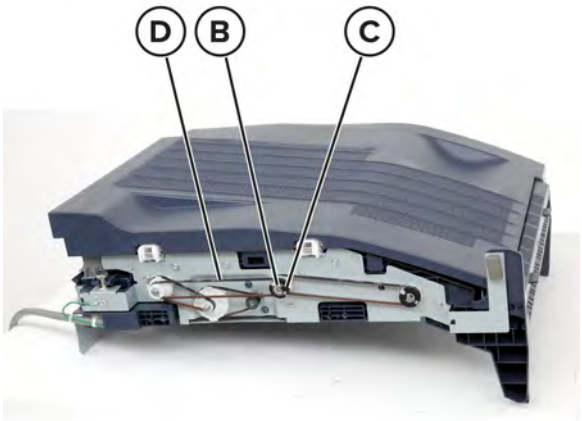
Horizontal transport belt removal

1 Remove the two screws (A), and then remove the front cover.



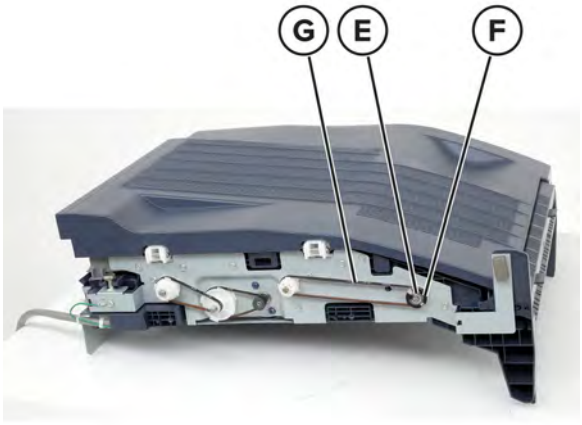
2 Remove the E-clip (B), and then remove the collar (C).

3 Remove the first belt (D).

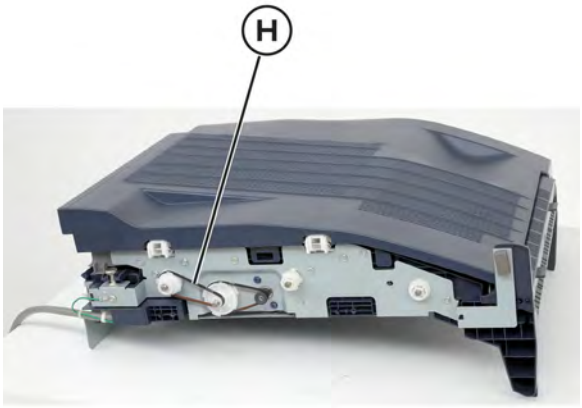


4 Remove the E-clip (E), and then remove the collar (F) from the second belt (G).

5 Remove the second belt.



6 Remove the third belt (H).

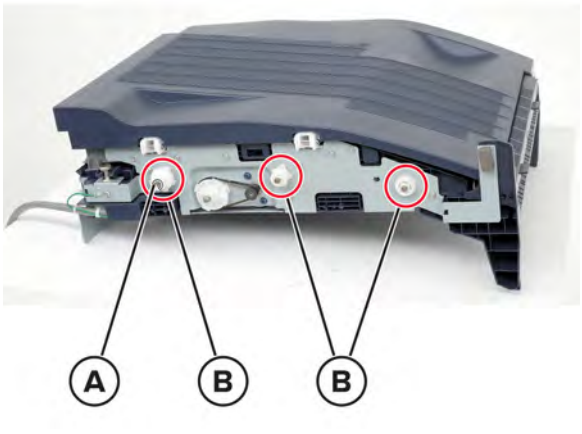


Horizontal transport motor assembly removal

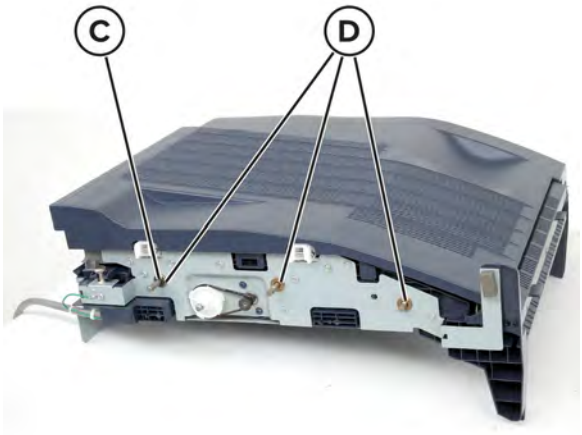
1 Remove the horizontal transport belt. See **“Horizontal transport belt removal” on page 559**.

2 Remove the E-clip (A).

3 Remove the gears (B).



4 Remove the washer (C), and then remove the bearings (D).

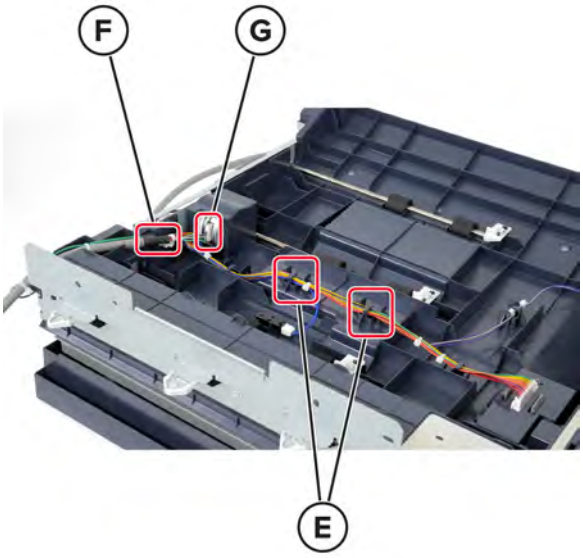


5 Place the horizontal transport unit on its top side.

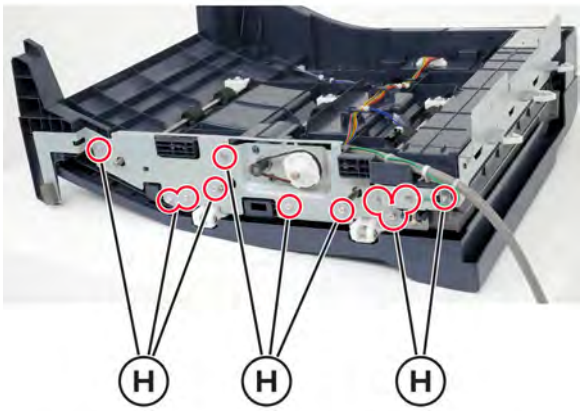
6 Remove the two harnesses (E).

7 Release the tie-out (F).

8 Remove the connector (G).



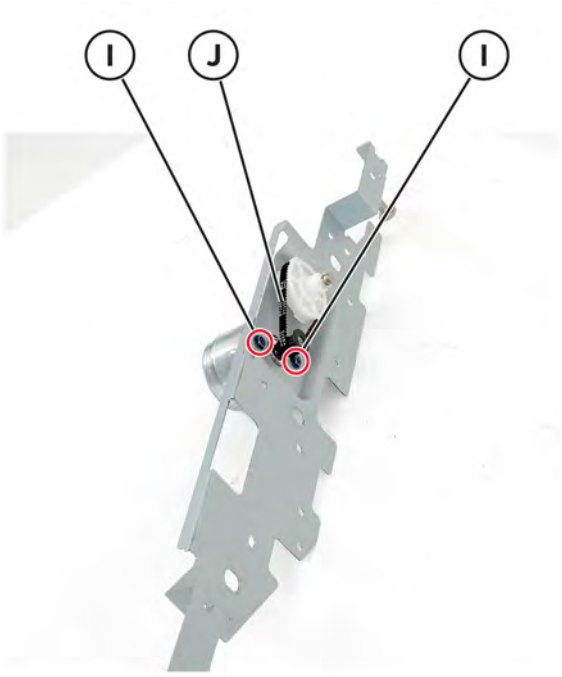
9 Remove the eleven screws (H).



10 Remove the frame.

11 Remove the screws (I), and then remove the belt (J).

12 Remove the horizontal transport motor.

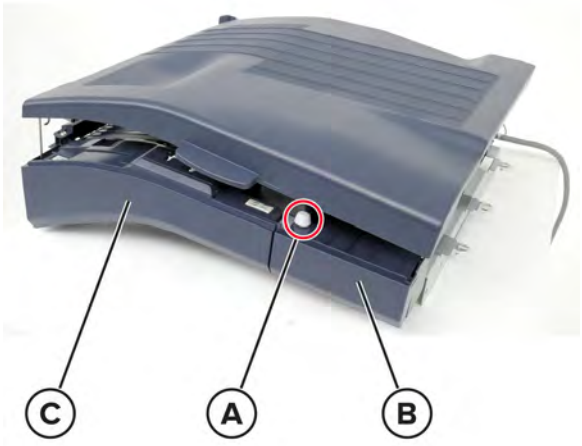


Horizontal transport open sensor removal

1 Open the top cover.

2 Remove the screw (A).

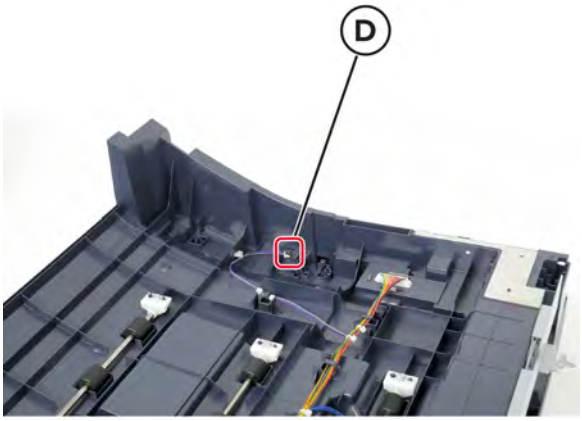
3 Remove the chute (B), and then remove the front cover (C).



4 Place the horizontal transport unit on its top side.

5 Remove the connector (D).

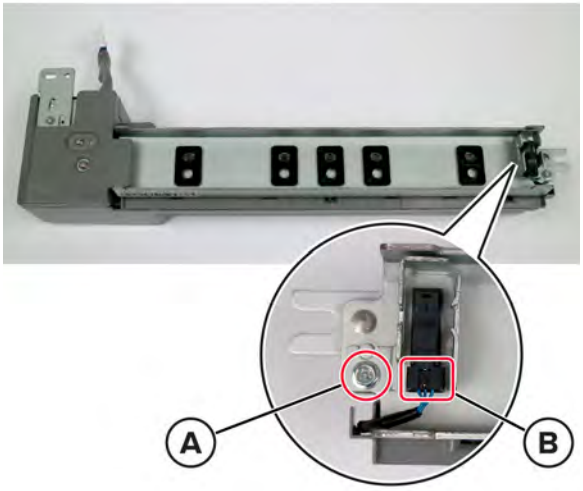
6 Remove the horizontal transport open sensor.



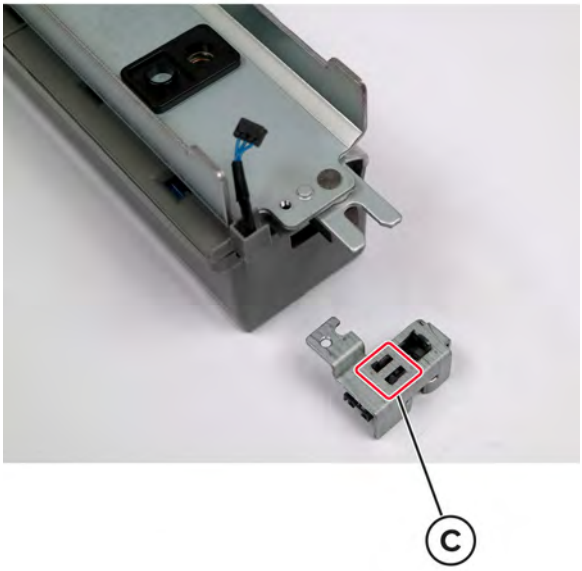
Sensor (hole punch box) removal

1 Remove the hole punch unit..

2 Remove the screw (A) and then disconnect the connector (B).



3 Release the latch (C).

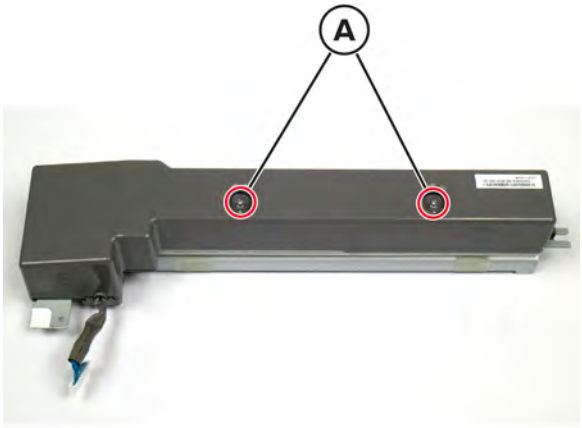


4 Remove the sensor from the bracket.

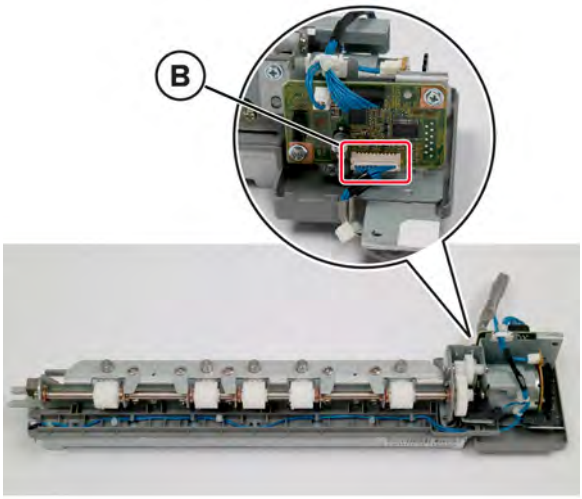
HPU interface cable removal

1 Remove the hole punch unit.

2 Remove the two screws (A) and then remove the cover.



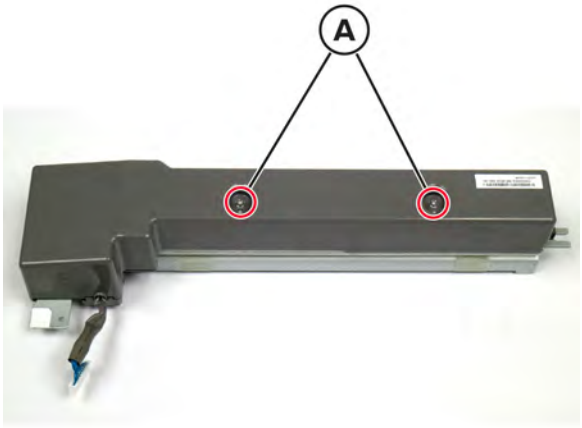
3 Remove the interface cable (B).



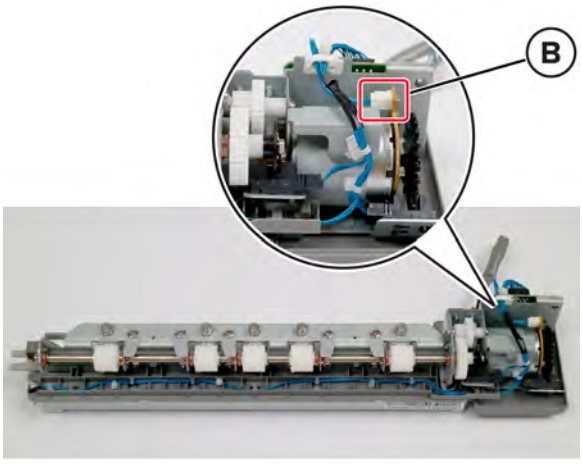
HPU motor cable removal

1 Remove the hole punch unit.

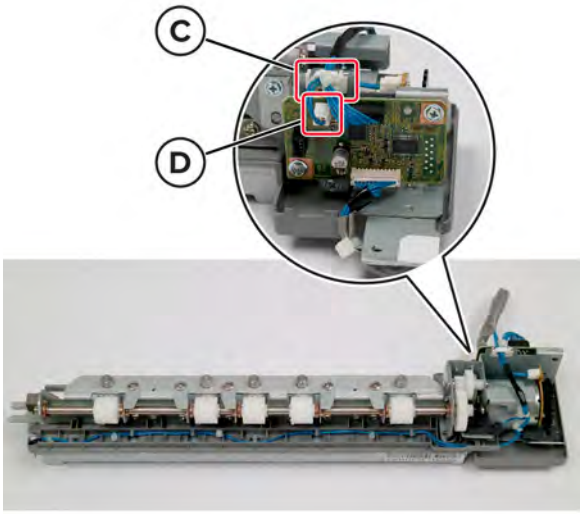
2 Remove the two screws (A) and then remove the cover.



3 Disconnect the connector (B).



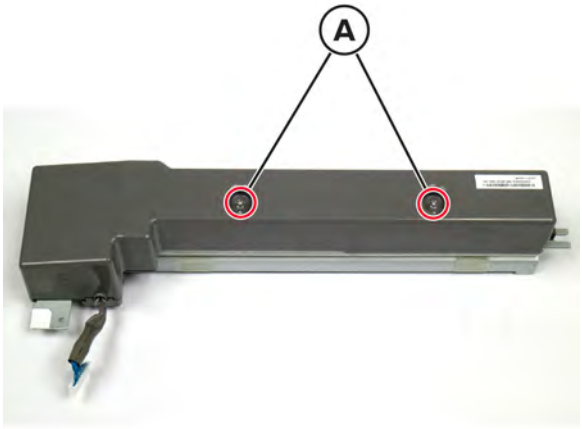
4 Release the clamp (C) and then disconnect the connector (D).



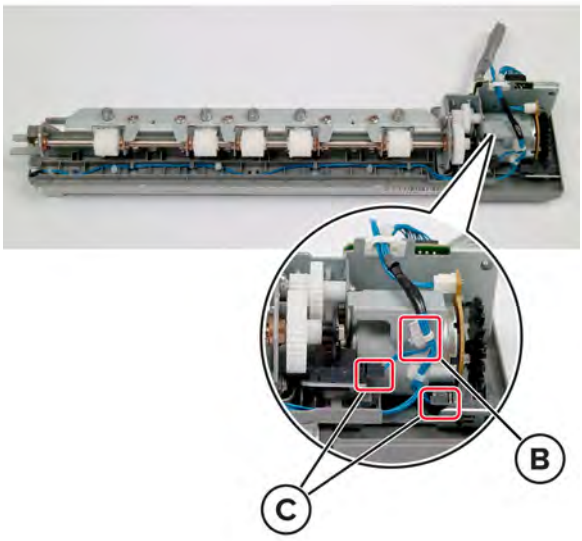
5 Remove the cable.

HPU sensor cable removal

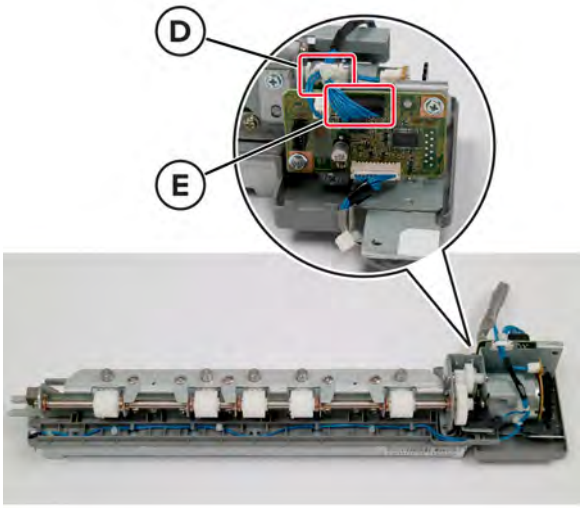
1. Remove the hole punch unit.
2. Remove the two screws (A) and then remove the cover.



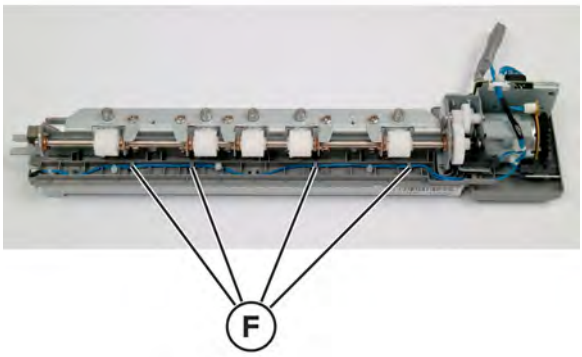
3. Release the push-tie (B) and then disconnect the two connectors (C).



4 Release the clamp (D) and then disconnect the connector (E).

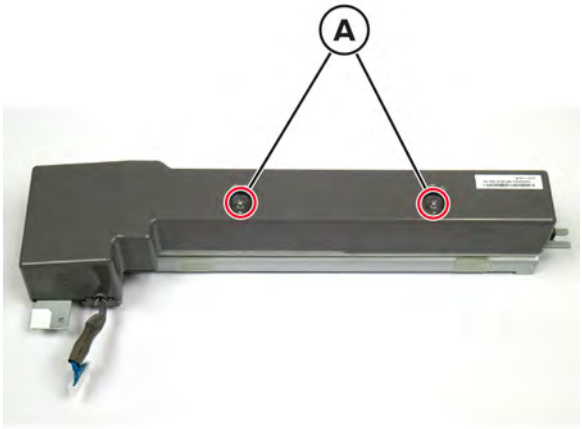


5 Release the cable from the harness guide (F) and then remove the cable.

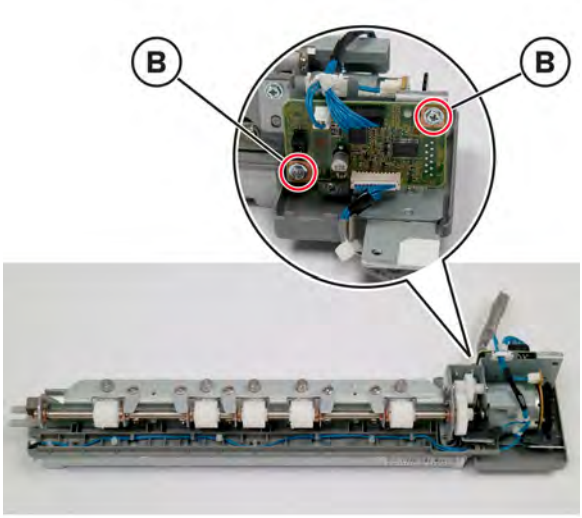


HPU controller board removal

1. Remove the hole punch unit.
2. Remove the two screws (A) and then remove the cover.



3. Disconnect all the connectors on the controller board.
4. Remove the two screws (B).

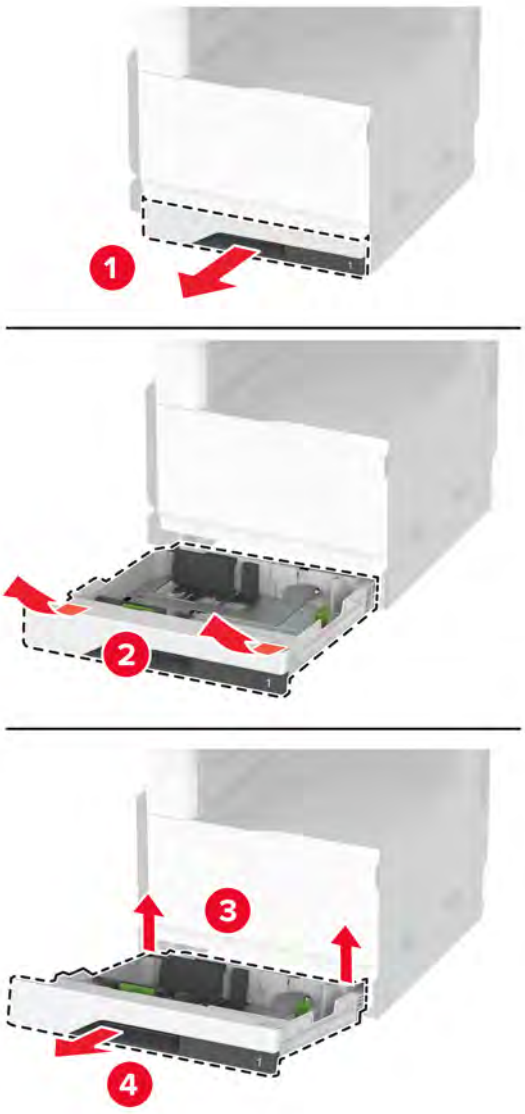


5. Remove the controller board.

Replacing parts

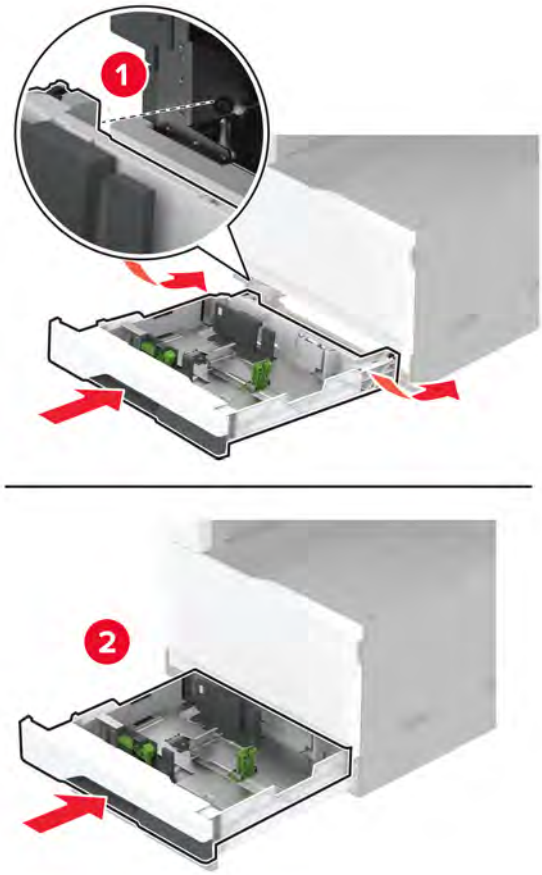
Replacing the 520-sheet tray insert

1 Remove the used tray insert.



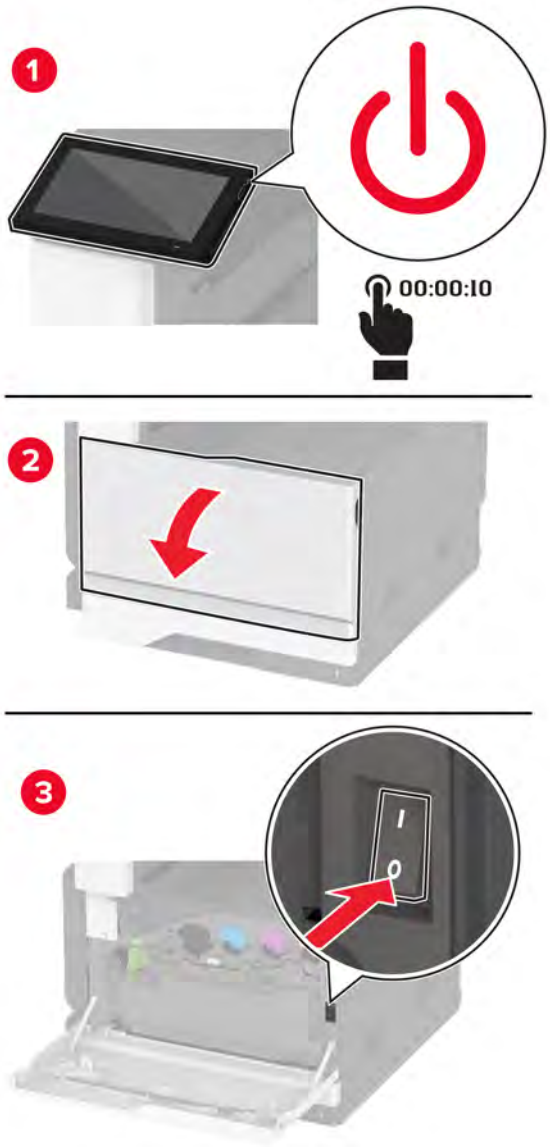
2 Unpack the new tray insert, and then remove all the packing material.

3 Insert the new tray insert.



Replacing the fuser

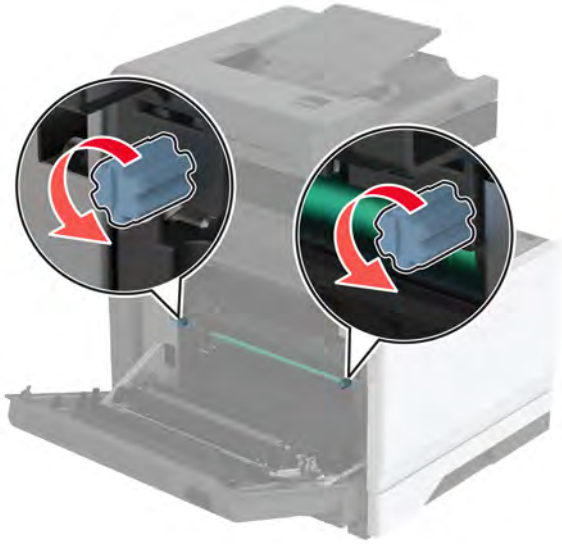
1 Turn off the printer.



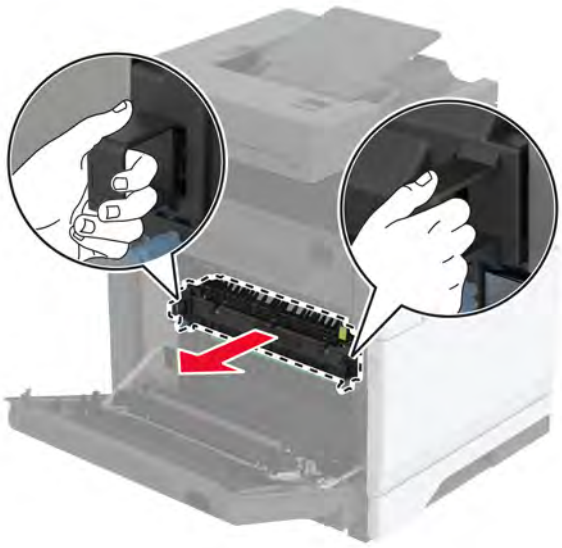
2 Open door A.

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.

3 Unlock the used fuser.

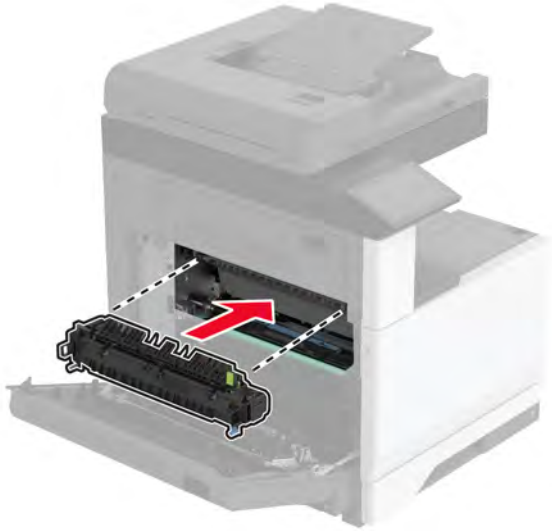


4 Remove the used fuser.

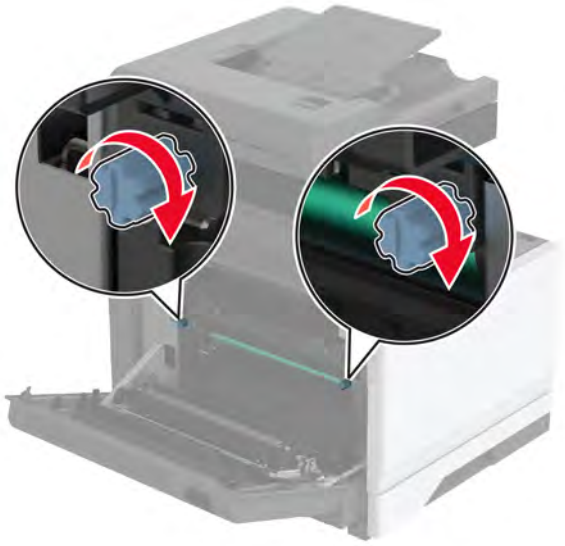


5 Unpack the new fuser.

6 Insert the new fuser.



7 Lock the new fuser.

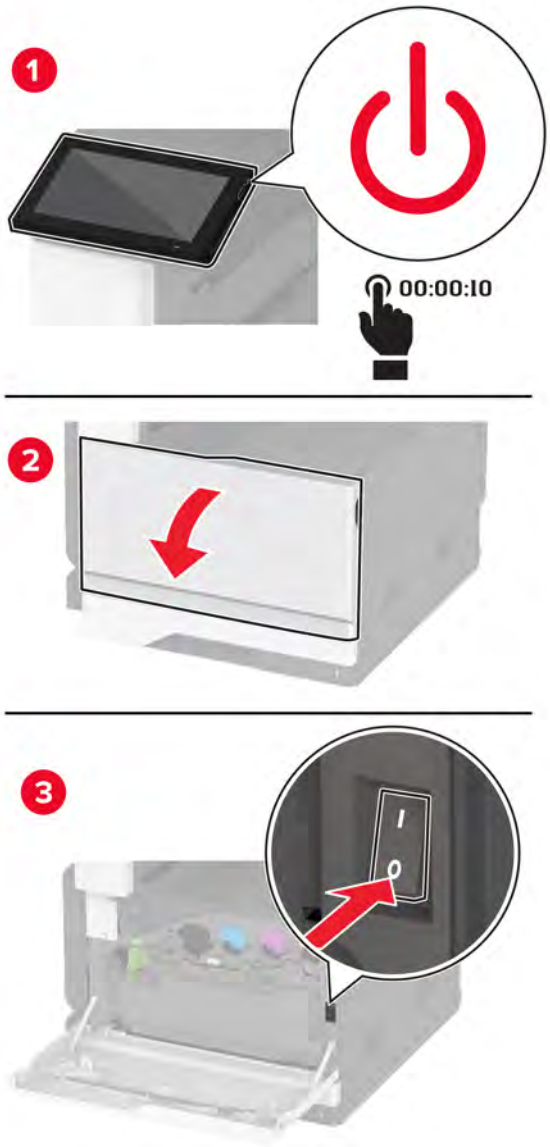


8 Close the door.

9 Turn on the printer.

Replacing the transfer roller

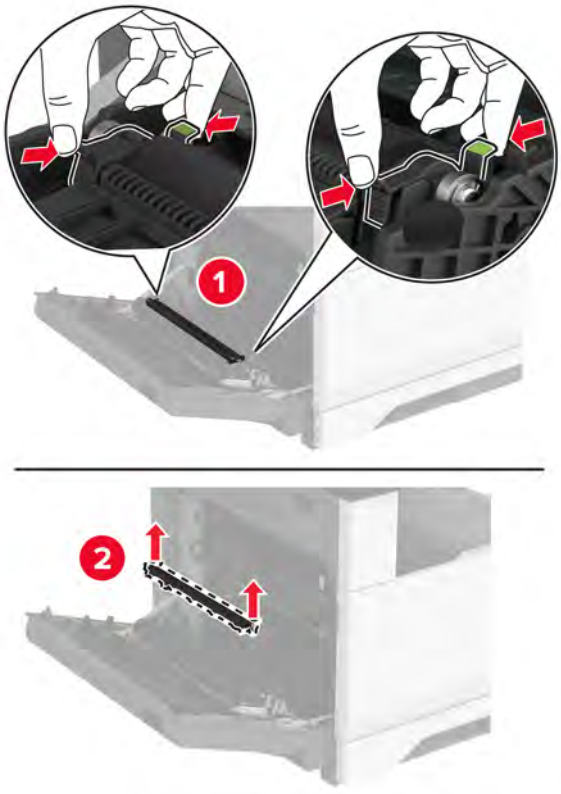
1 Turn off the printer.



2 Open door A.

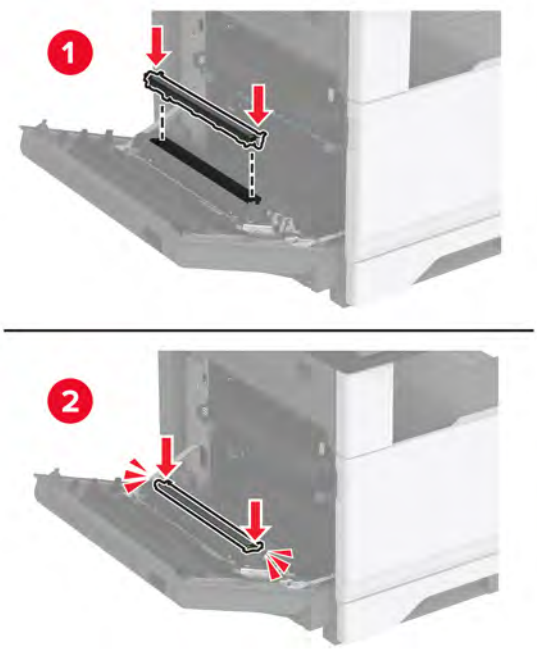
CAUTION—HOT SURFACE: The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching it.

3 Remove the used transfer roller.



4 Unpack the new transfer roller.

5 Insert the new transfer roller until it *clicks* into place.

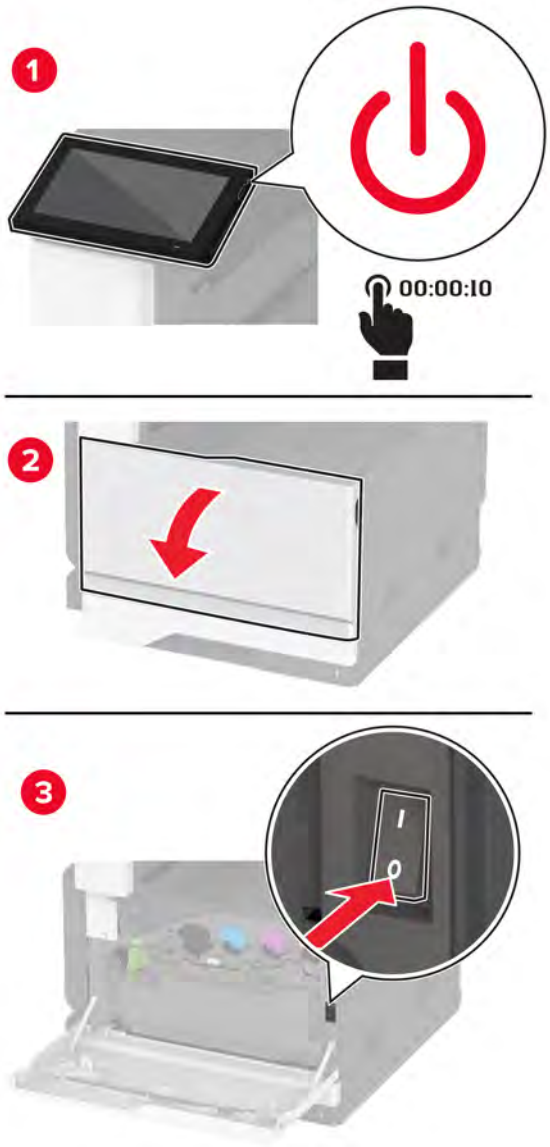


6 Close door A, and then close the front door.

7 Turn on the printer.

Replacing the transfer module

1 Turn off the printer.



2 Unlock the waste toner bottle.

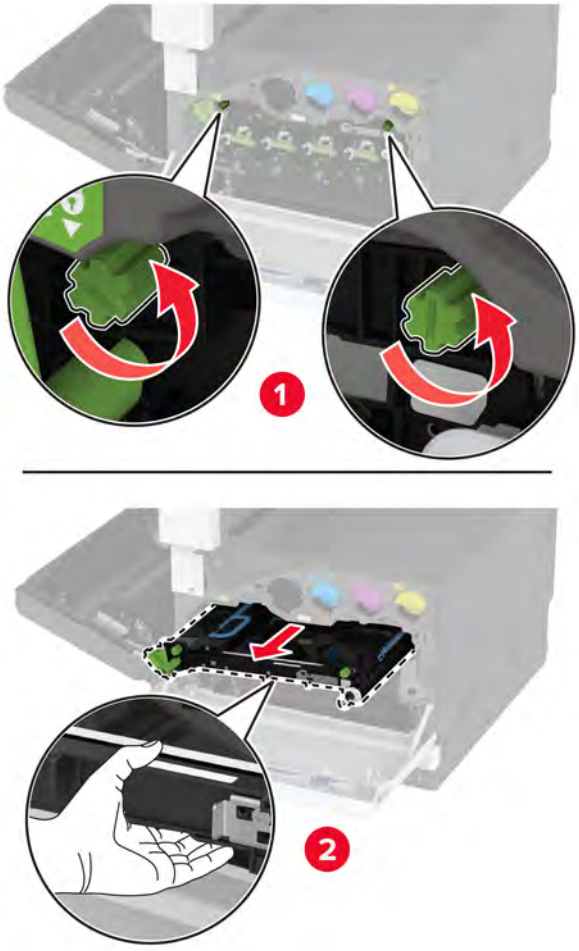
3 Remove the waste toner bottle.

Note: To avoid spilling the toner, place the bottle in an upright position.

4 Open door A.

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.

5 Unlock, and then pull out the used transfer module.



6 Remove the used transfer module.

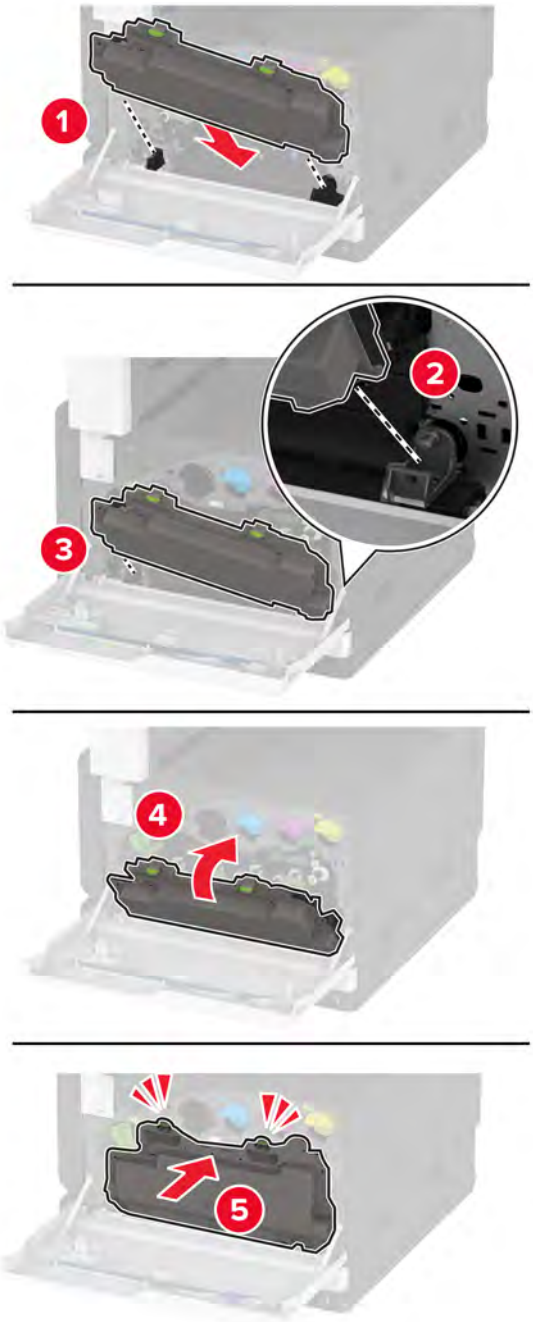
7 Unpack the new transfer module.

Warning—Potential Damage: Do not touch the transfer belt. Doing so may affect the print quality of future print jobs.

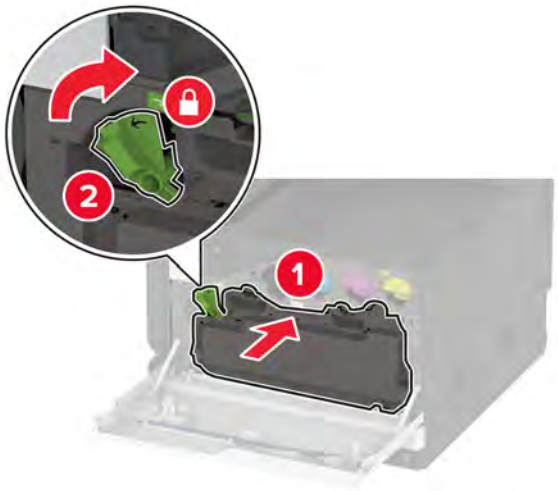
8 Insert the new transfer module until it *clicks* into place.

9 Lock the new transfer module, and then close door A.

10 Insert the waste toner bottle until it *clicks* into place.



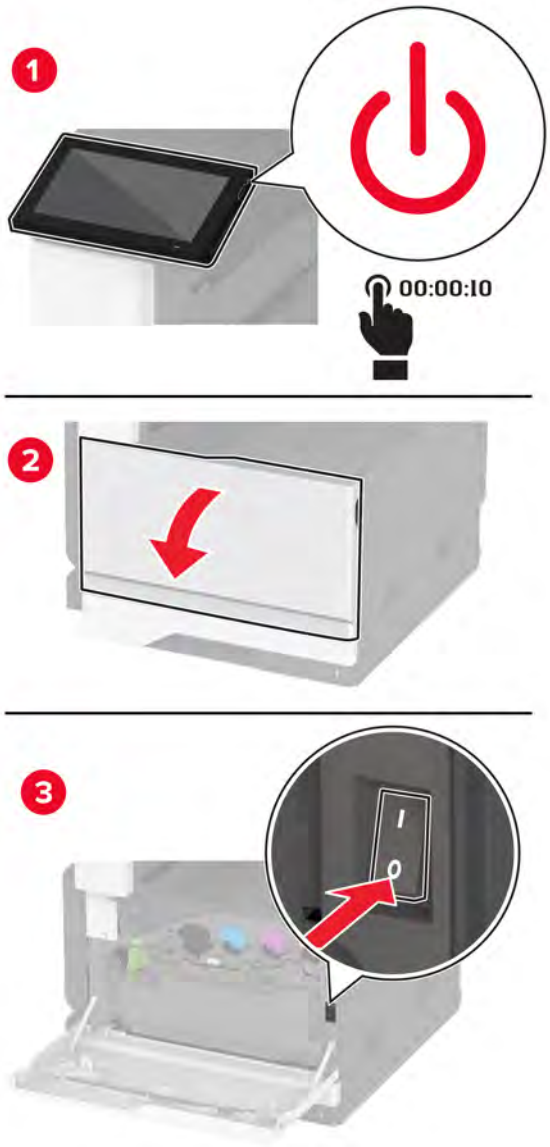
11 Lock the waste toner bottle.



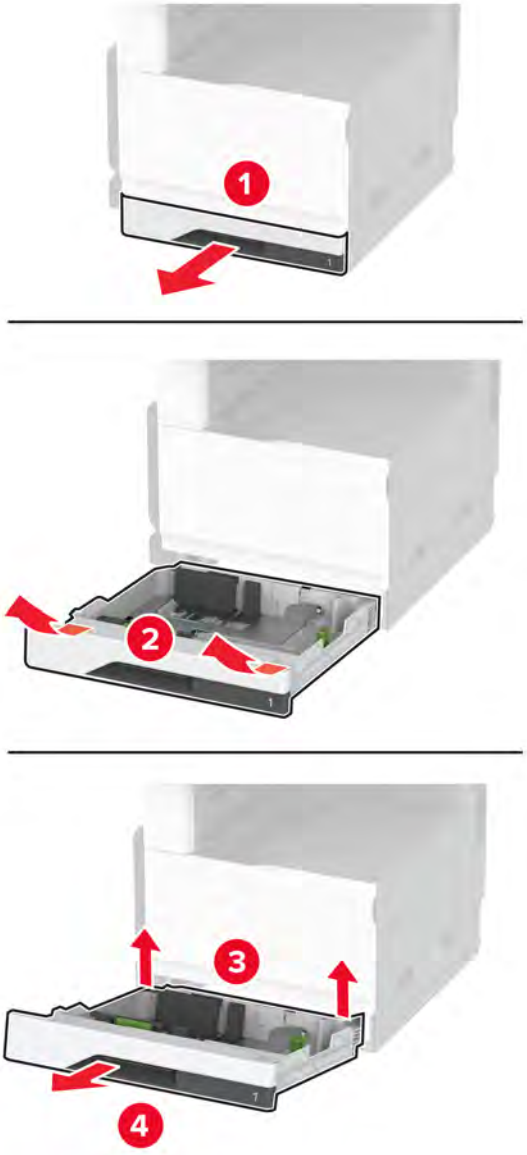
12 Turn on the printer.

Replacing the tray roller kit

1 Turn off the printer.

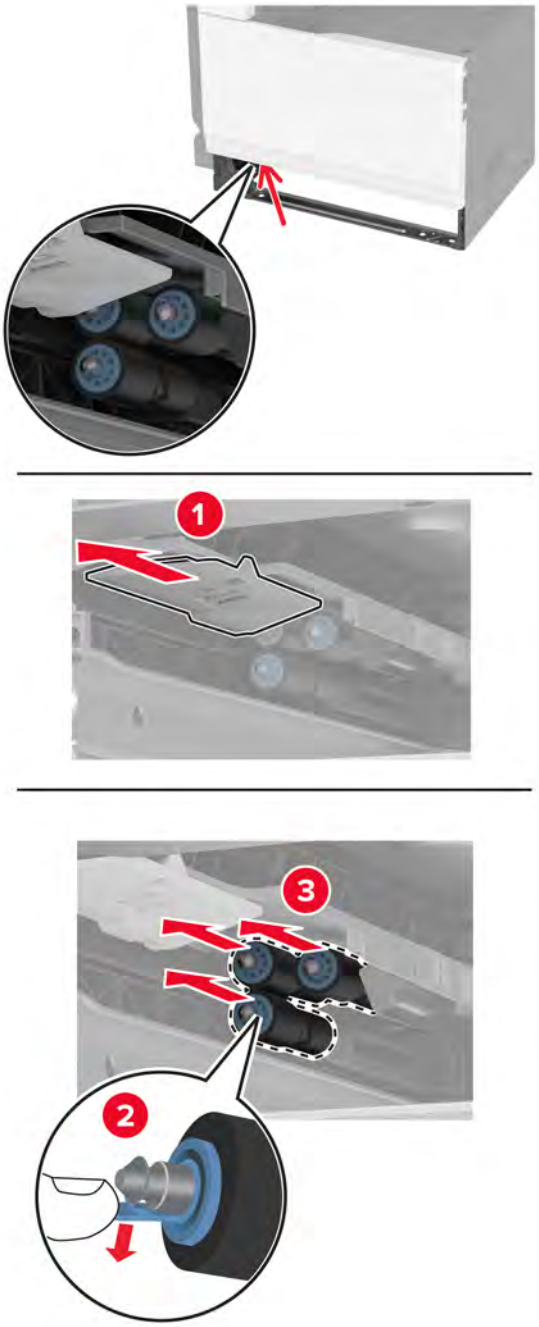


2 Remove the standard tray.



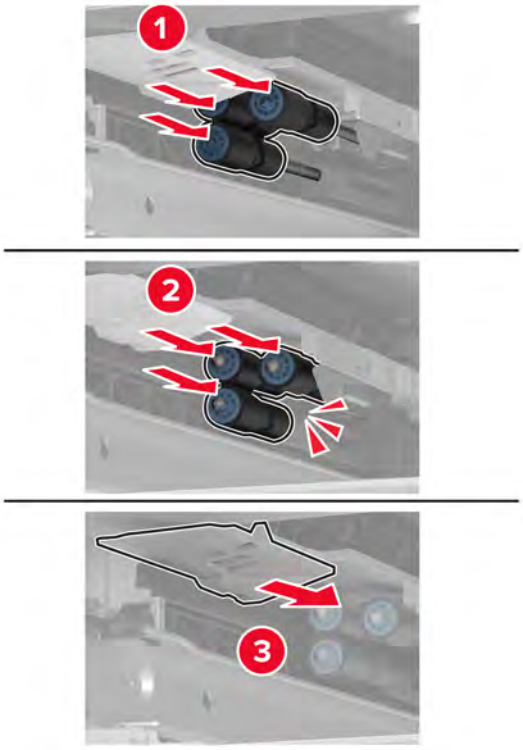
3 Remove the used tray roller kit.

Warning—Potential Damage: To prevent damage from electrostatic discharge, touch any exposed metal frame of the printer before accessing or touching interior areas of the printer.



4 Unpack the new tray roller kit.

5 Insert the new tray roller kit until it *clicks* into place.

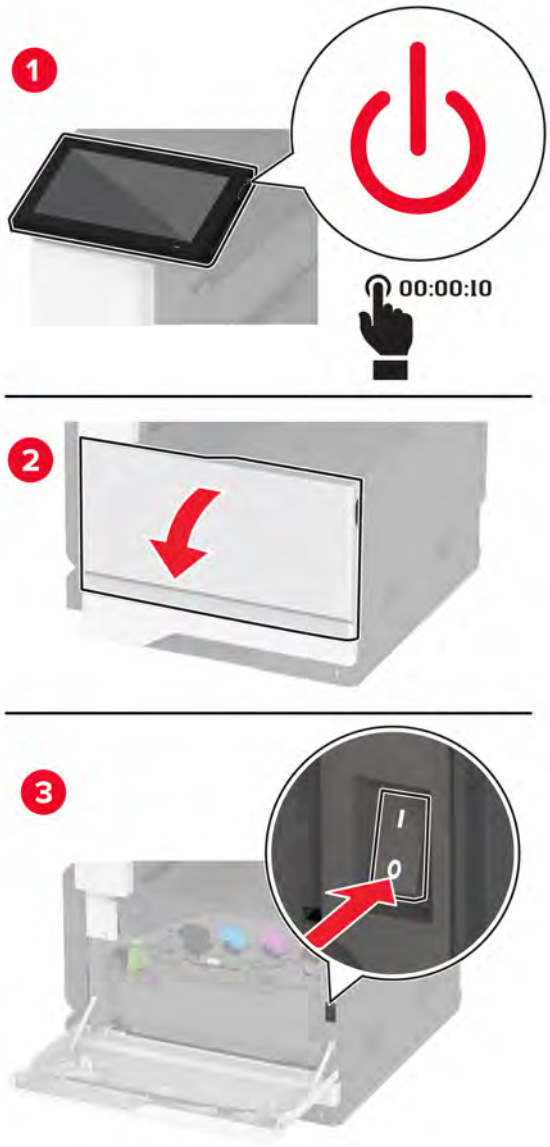


6 Insert the tray.

7 Turn on the printer.

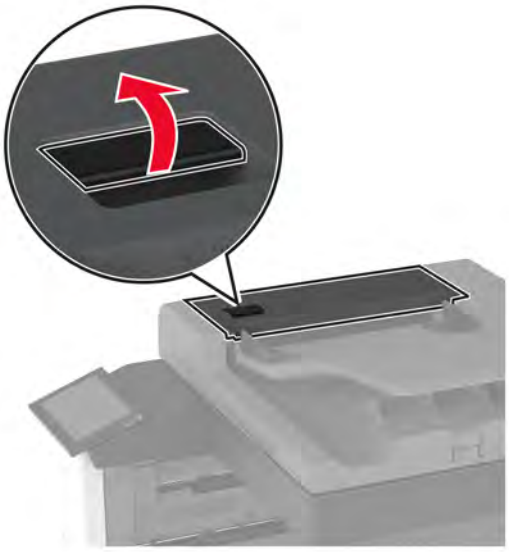
Replacing the ADF roller kit

1 Turn off the printer.

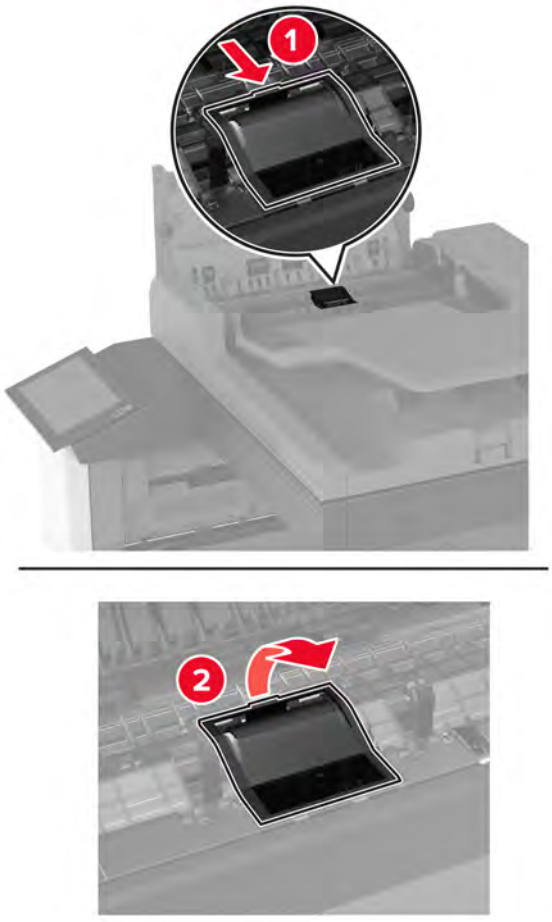


2 Open the ADF top cover.

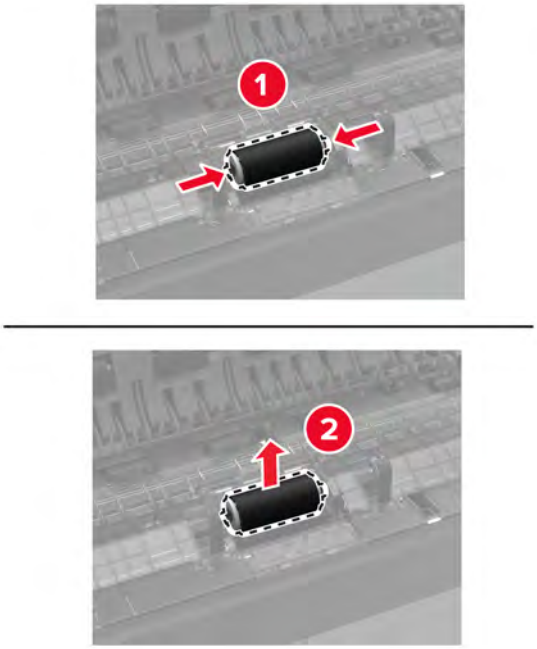
s



3 Remove the separator roller cover.

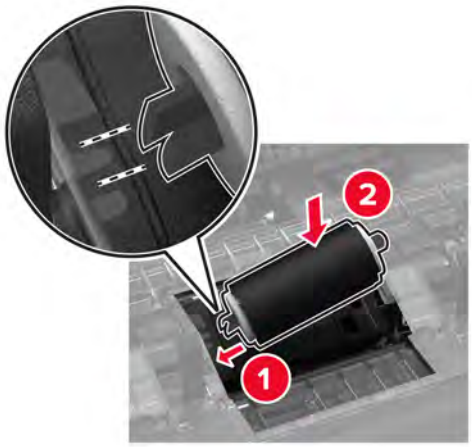


4 Remove the used separator roller.

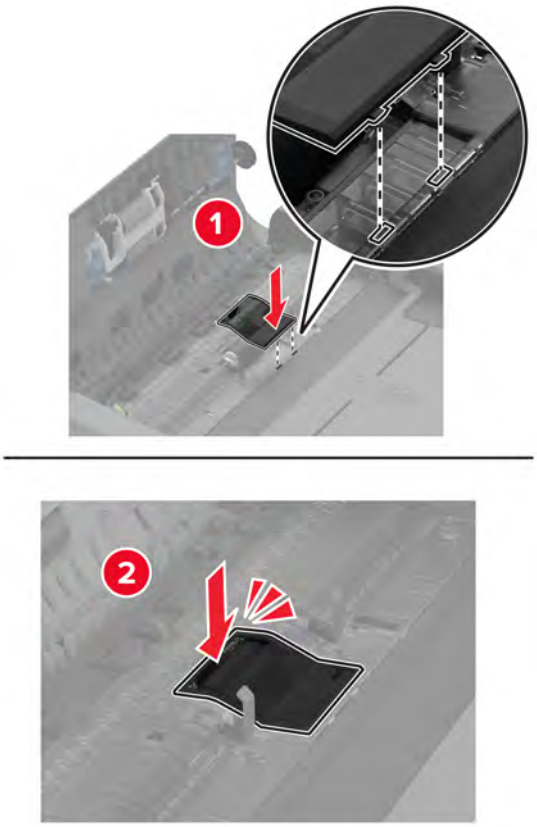


5 Unpack the new separator roller.

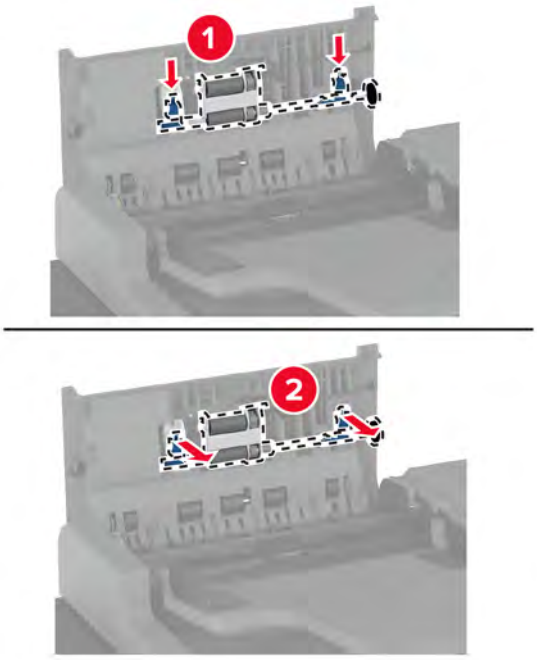
6 Insert the new separator roller.



7 Insert the separator roller cover until it *clicks* into place.

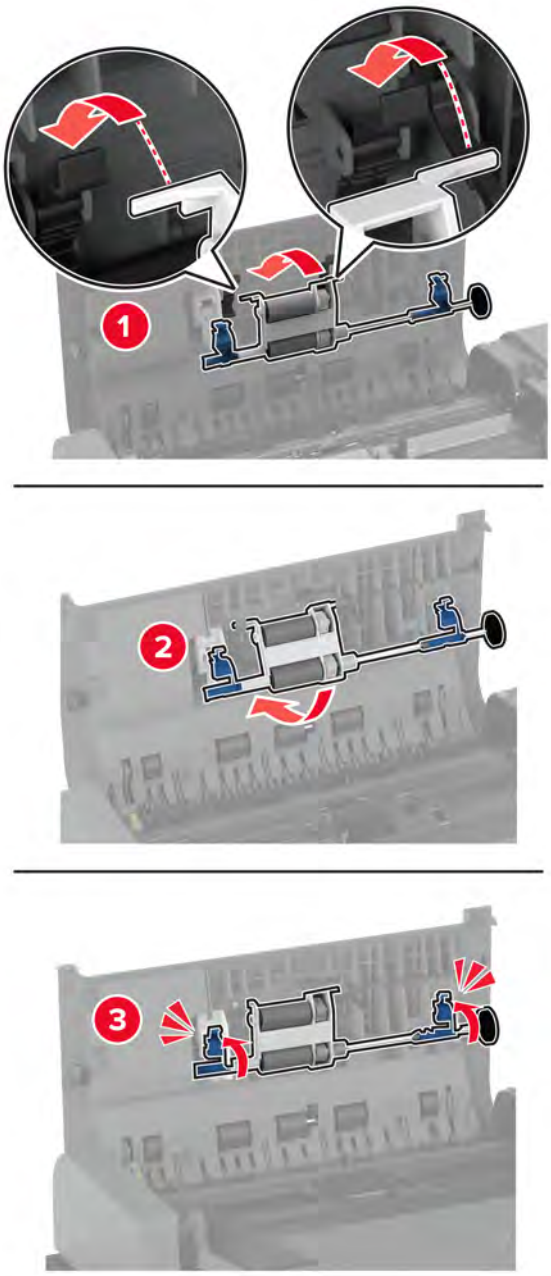


8 Remove the used separator roller assembly.



9 Unpack the new separator roller assembly.

10 Insert the new separator roller assembly until it *clicks* into place.



11 Close the ADF top cover.

12 Turn on the printer.

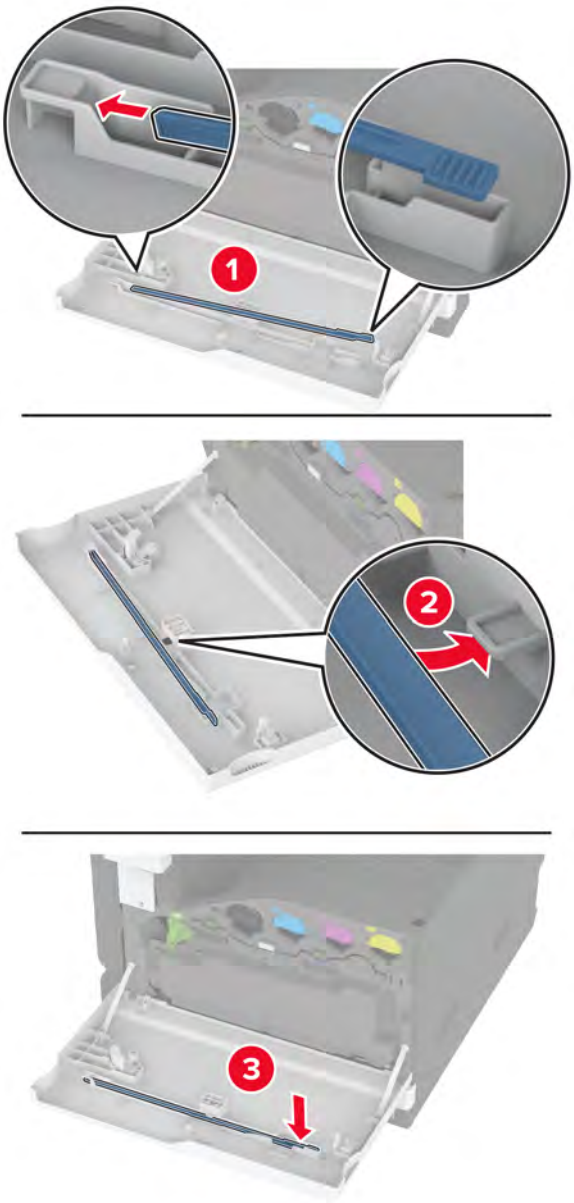
Replacing the printhead wiper

1 Open the front door.

2 Remove the used printhead wiper.

3 Unpack the new printhead wiper.

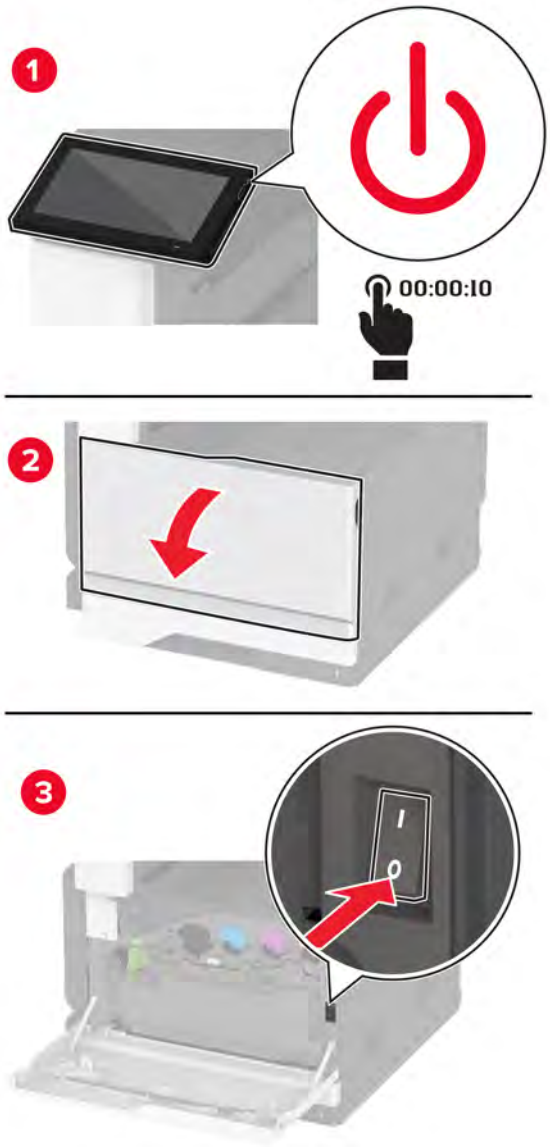
4 Insert the new printhead wiper.



5 Close the door.

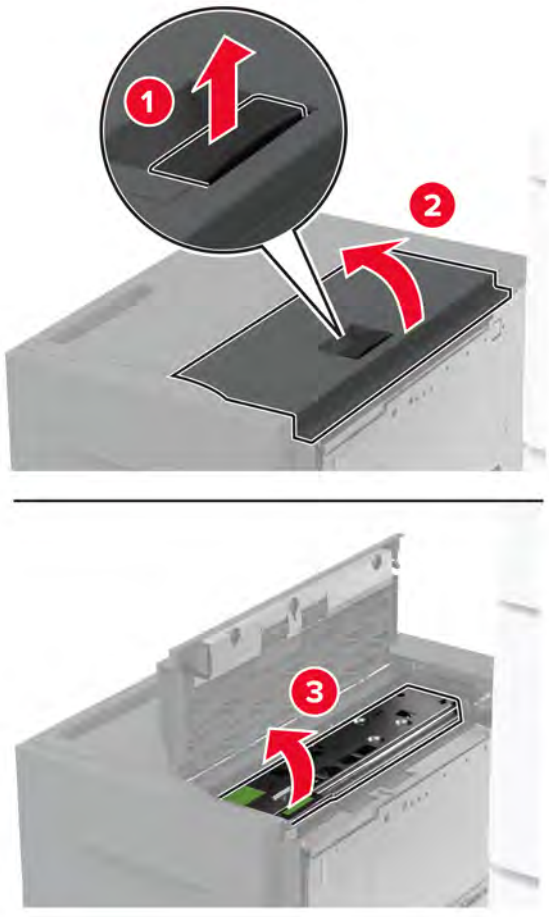
Replacing the 2000-sheet tray roller kit

1 Turn off the printer.

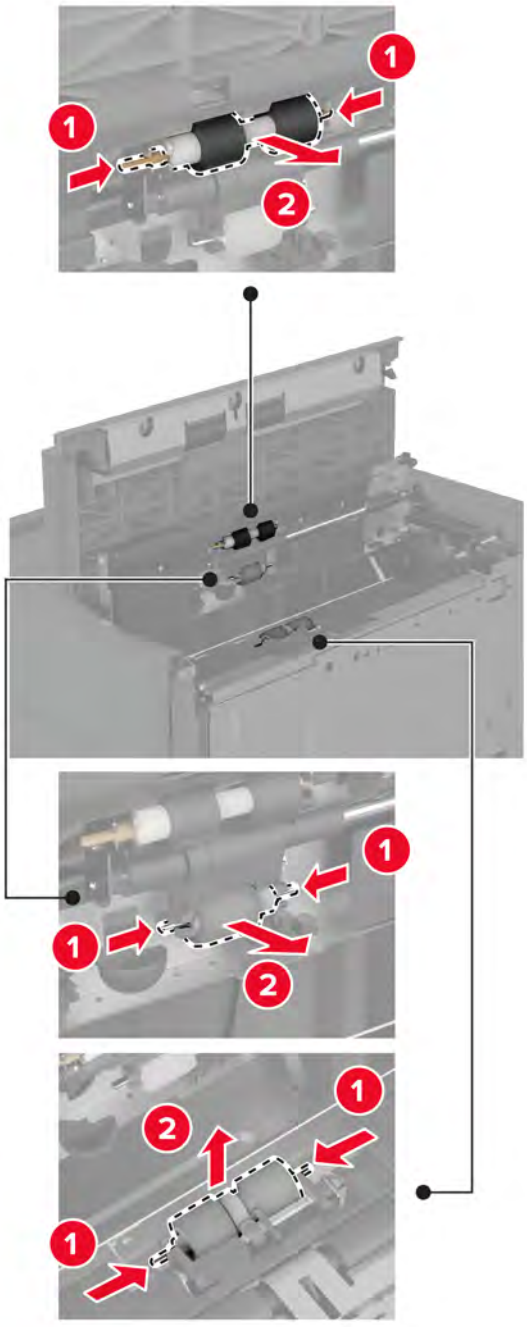


2 Slide the tray to the left.

3 Open door J, and then open the roller kit cover.

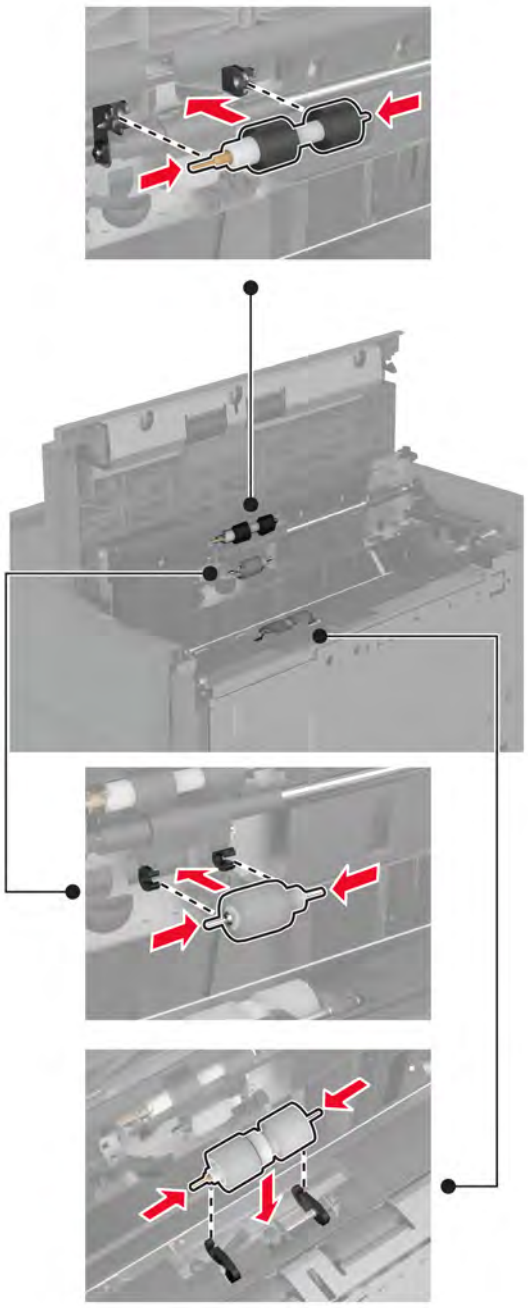


4 Locate and remove the used roller kit.



5 Unpack the new roller kit.

6 Insert the new roller kit.



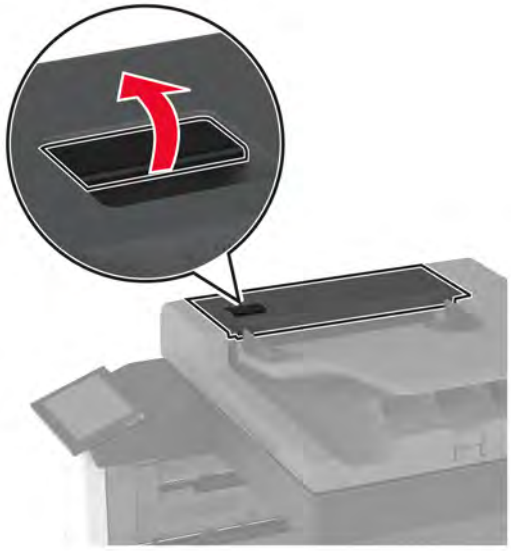
7 Close the roller kit cover, and then close door J.

8 Slide the tray back into place.

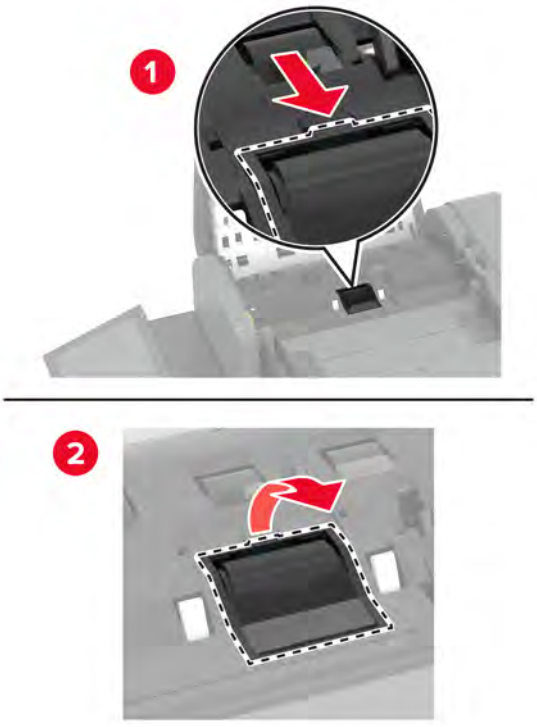
9 Turn on the printer.

Replacing the ADF separator roller cover

1 Open the ADF top cover.

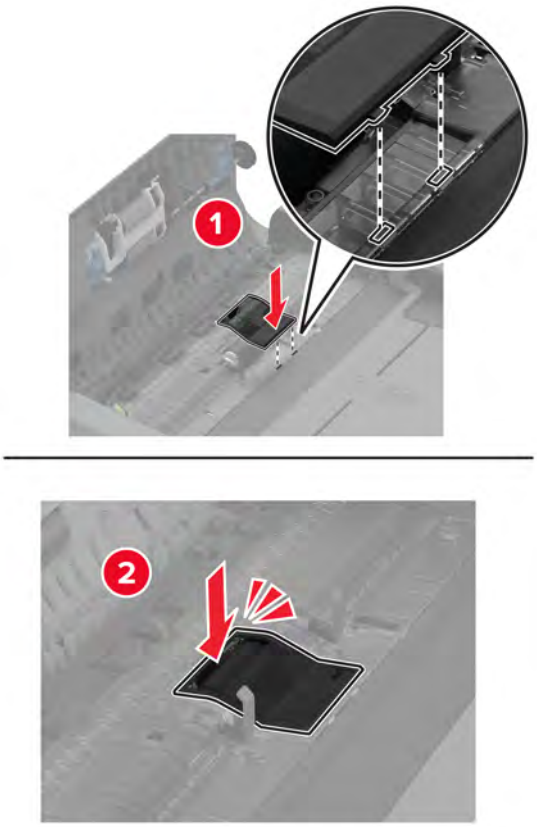


2 Remove the used separator roller cover.



3 Unpack the new separator roller cover.

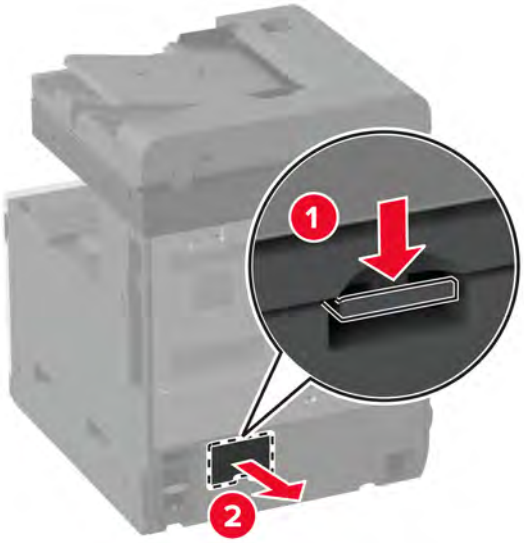
4 Insert the new separator roller cover until it *clicks* into place.



5 Close the ADF top cover.

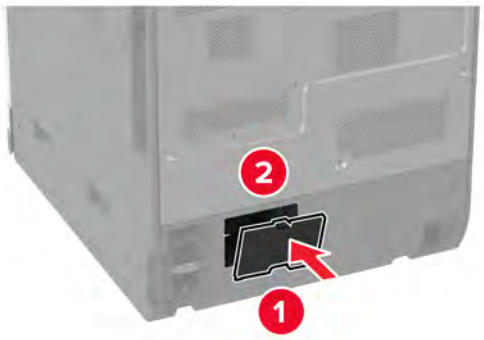
Replacing the lower rear connector cover

1 Remove the used lower rear connector cover.



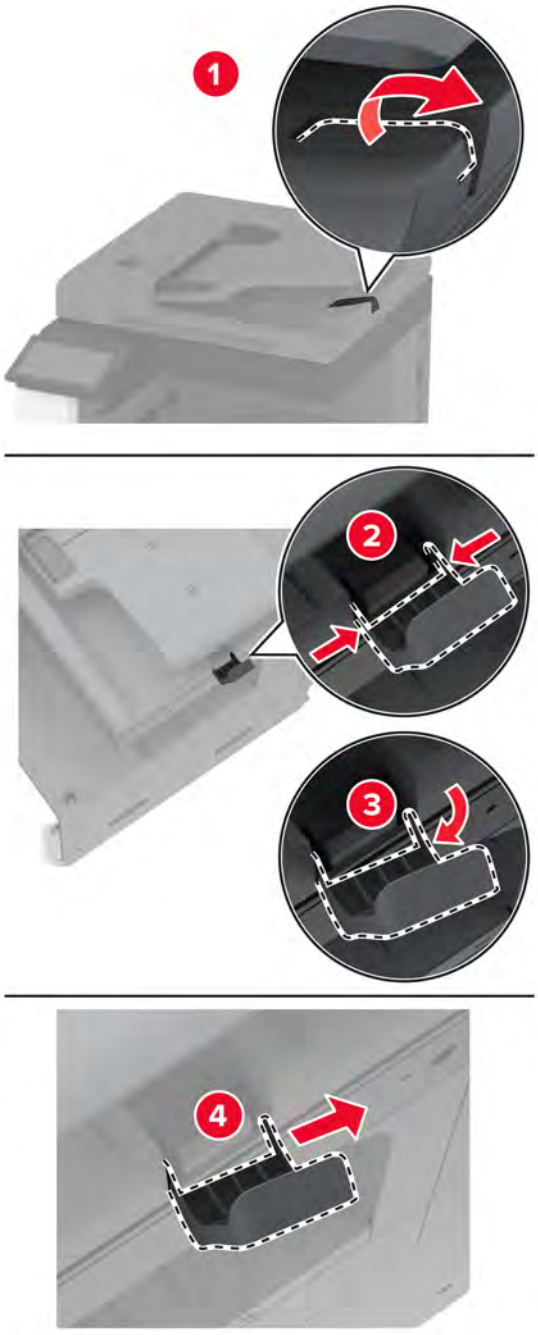
2 Unpack the new lower rear connector cover.

3 Insert the new lower rear connector cover until it *clicks* into place.



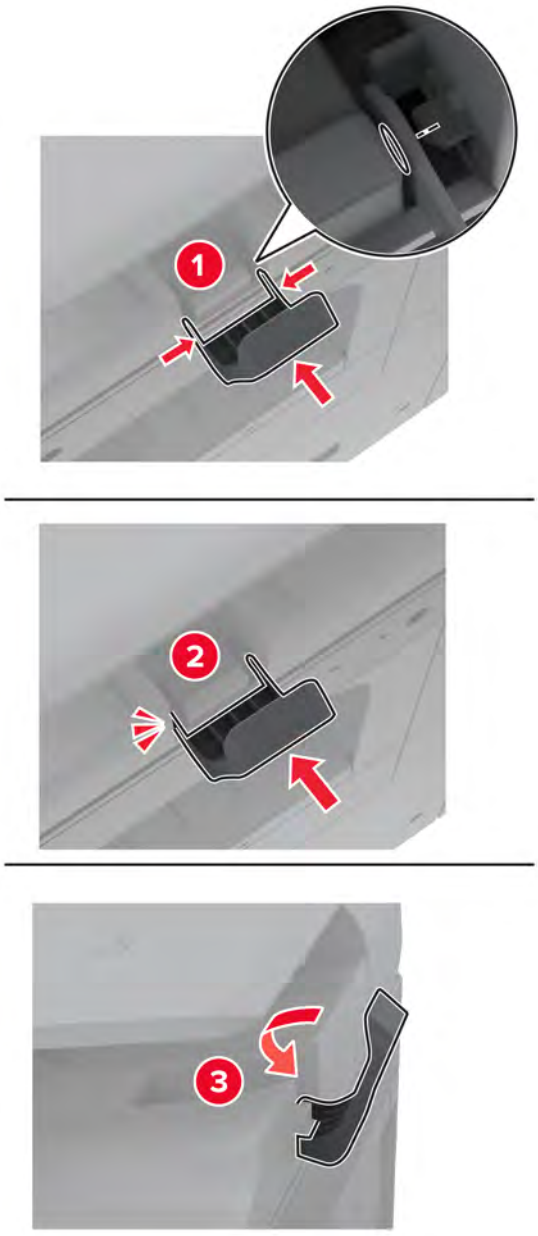
Replacing the ADF bin paper stopper

1 Remove the used ADF bin paper stopper.



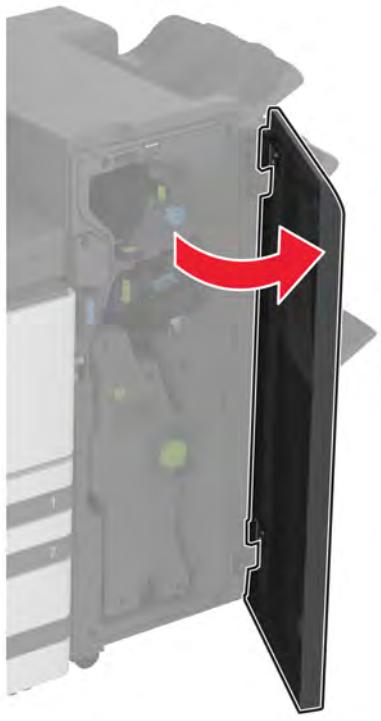
2 Unpack the new ADF bin paper stopper.

3 Insert the new ADF bin paper stopper.

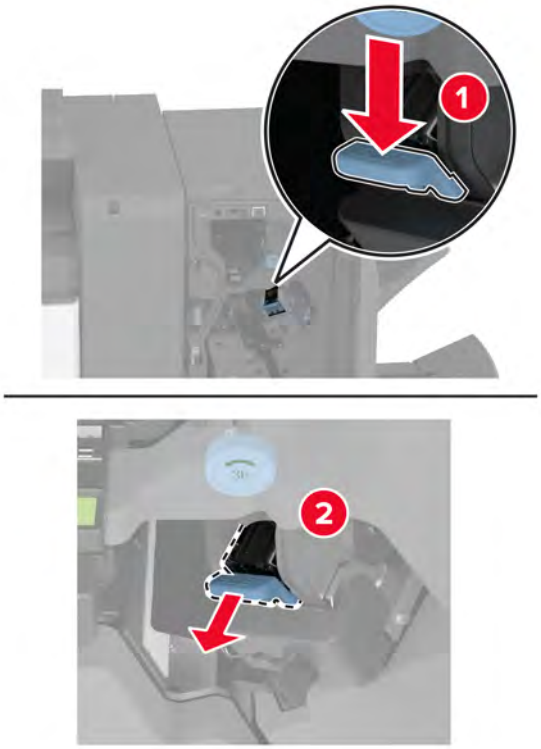


Replacing the standard staple cartridge holder

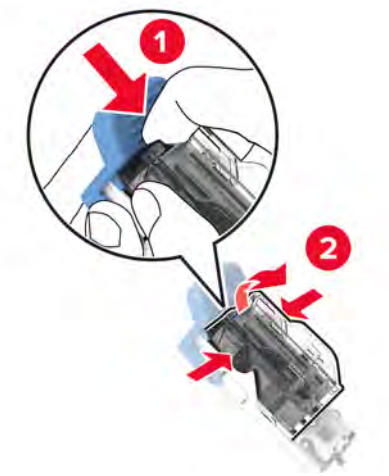
1 Open the finisher door.



2 Remove the used staple cartridge holder.

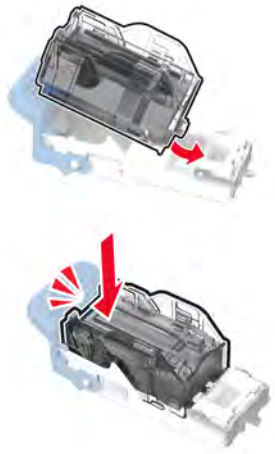


3 Remove the staple cartridge.

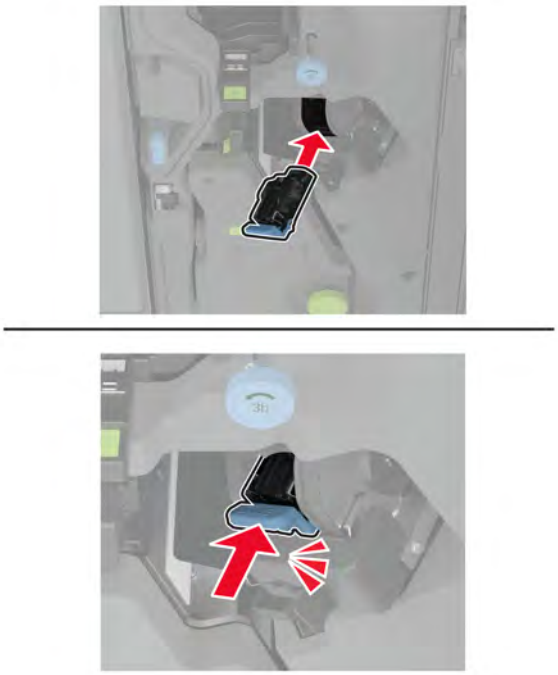


4 Unpack the new staple cartridge holder.

5 Insert the staple cartridge into the new staple cartridge holder until it *clicks* into place.



6 Insert the new staple cartridge holder until it *clicks* into place.



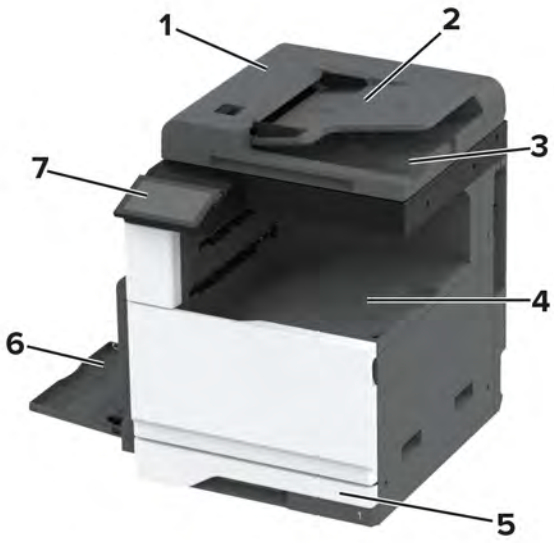
7 Close the finisher door.

Component locations

Printer configurations

Note: Make sure to configure the printer on a flat, sturdy, and stable surface.

Basic model

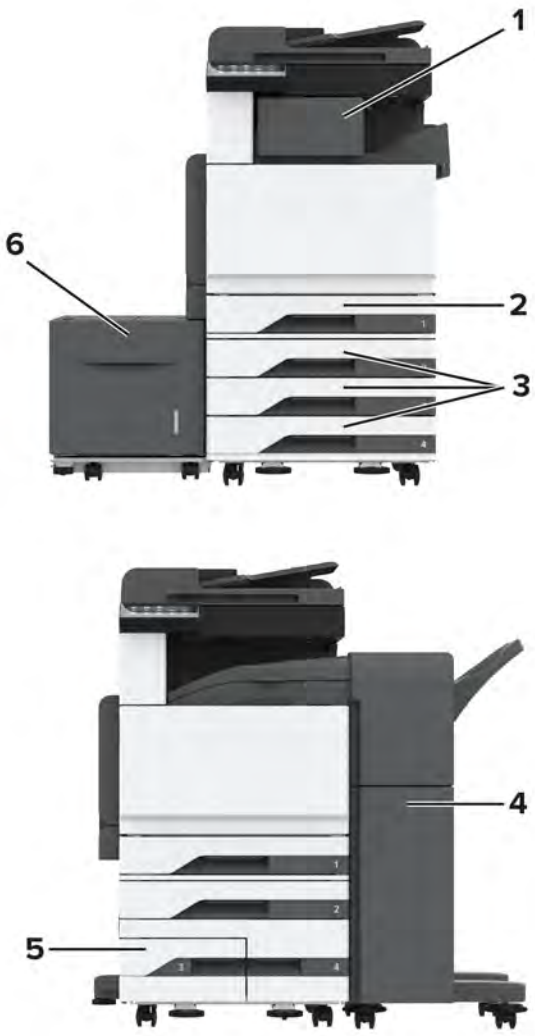


1	Automatic document feeder (ADF)
2	ADF tray
3	ADF bin
4	Standard bin
5	Standard 520-sheet tray
6	Multipurpose feeder
7	Control panel

Configured model

CAUTION—TIPPING HAZARD: Installing one or more options on your printer or MFP may require a caster base, furniture, or other feature to prevent instability causing possible injury. For more information on supported configurations, see **www.lexmark.com/multifunctionprinters**.

CAUTION—TIPPING HAZARD: To reduce the risk of equipment instability, load each tray separately. Keep all other trays closed until needed.



1	Staple finisher **Note:** Not supported if another finisher is installed.
2	Standard 520-sheet tray
3	Optional 3 x 520-sheet tray
4	Staple, hole punch finisher **Note:** Supported only if optional trays are installed.
5	Optional 2520-sheet tandem tray
6	Optional 2000-sheet tray

Maintenance

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.

   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.

Cleaning the touch screen

CAUTION—SHOCK HAZARD: To avoid the risk of electric 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.

1. Turn off the printer, and then unplug the power cord from the electrical outlet.
2. Using a damp, soft, lint-free cloth, wipe the touch screen.

Notes:

- Do not use household cleaners or detergents, as they may damage the touch screen.
- Make sure that the touch screen is dry after cleaning.

3 Connect the power cord to the electrical outlet, and then turn on the printer.

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.

Cleaning the scanner

1 Open the scanner cover.

2 Using a damp, soft, lint-free cloth, wipe the following areas:

- ADF glass pad

- Scanner glass pad

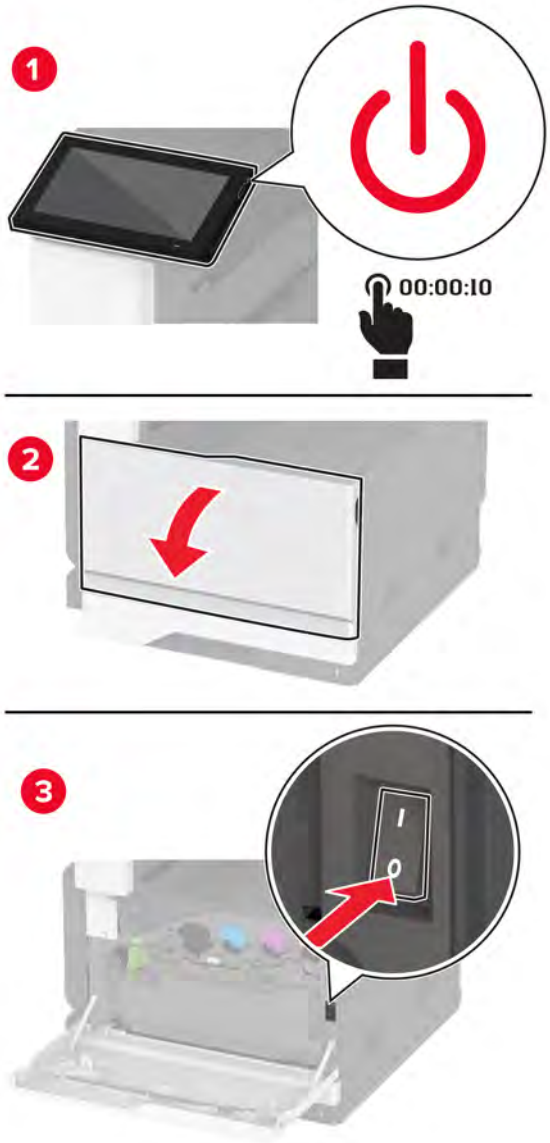
- ADF glass

- Scanner glass

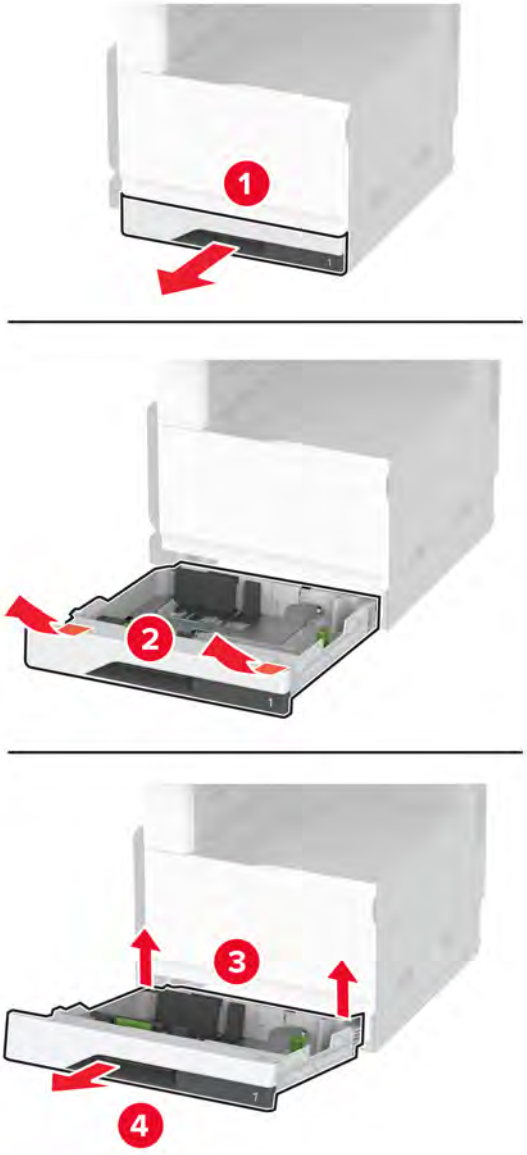
3 Close the scanner cover.

Cleaning the tray roller kit

1 Turn off the printer.

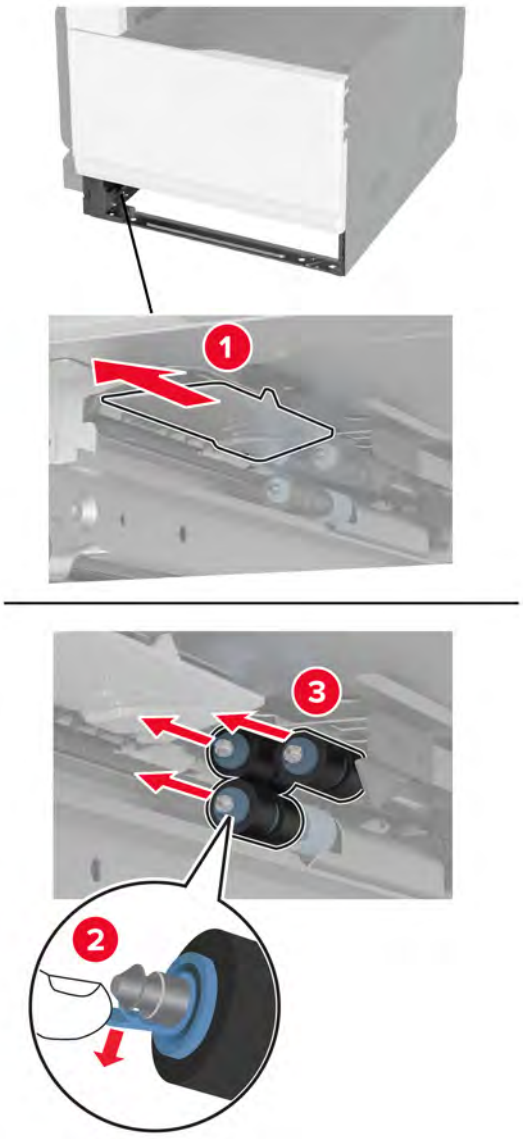


2 Remove the standard tray.



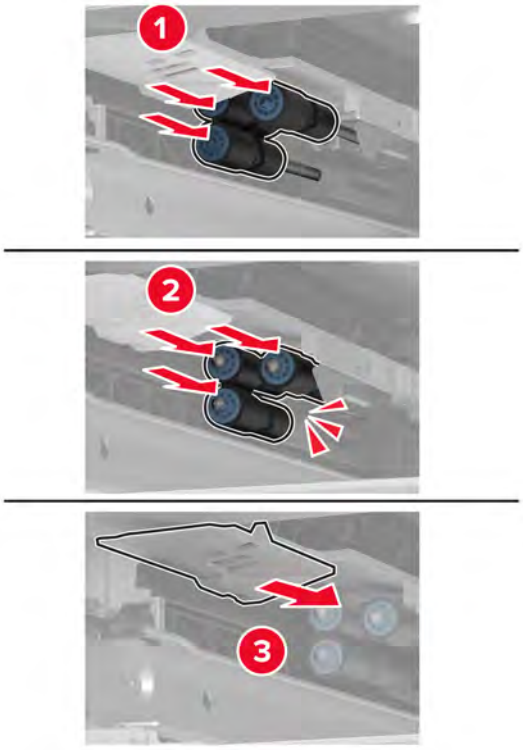
3 Remove the tray roller kit.

Warning—Potential Damage: To prevent damage from electrostatic discharge, touch any exposed metal frame of the printer before accessing or touching interior areas of the printer.



4 Apply water to a soft, lint-free cloth, and then wipe the feed rollers.

5 Insert the roller kit until it *clicks* into place.

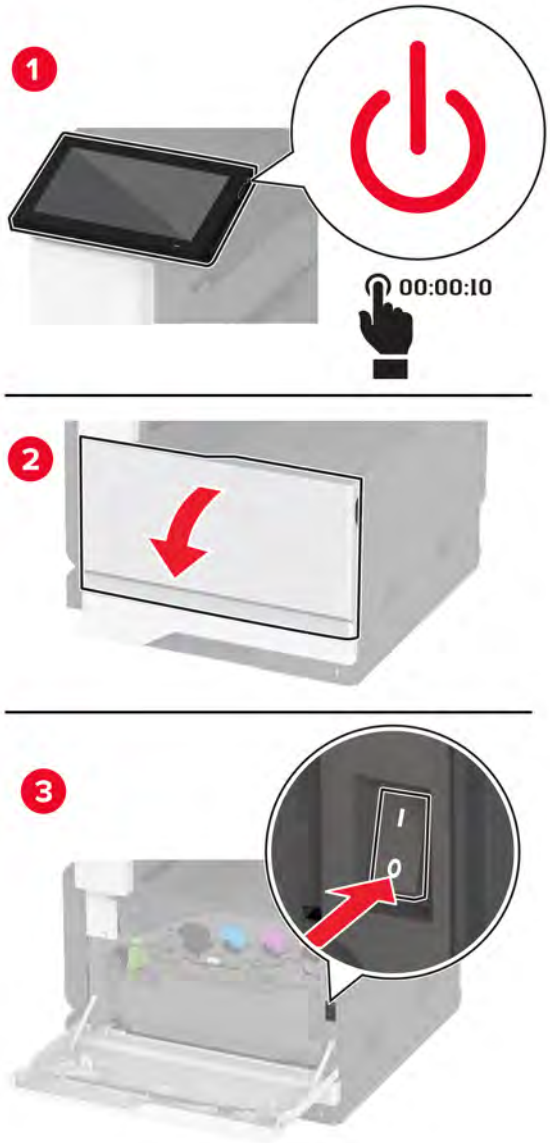


6 Insert the tray.

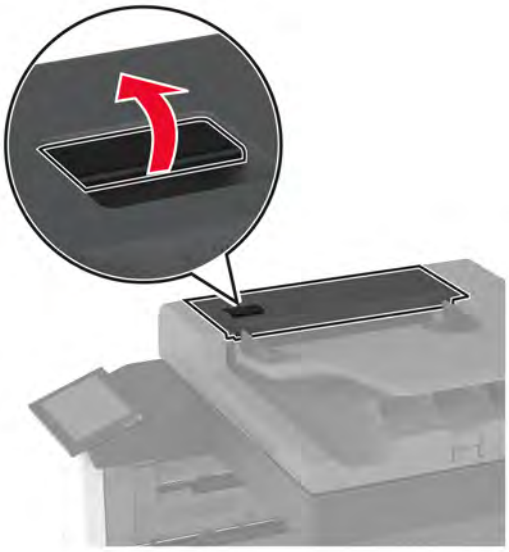
7 Turn on the printer.

Cleaning the ADF roller kit

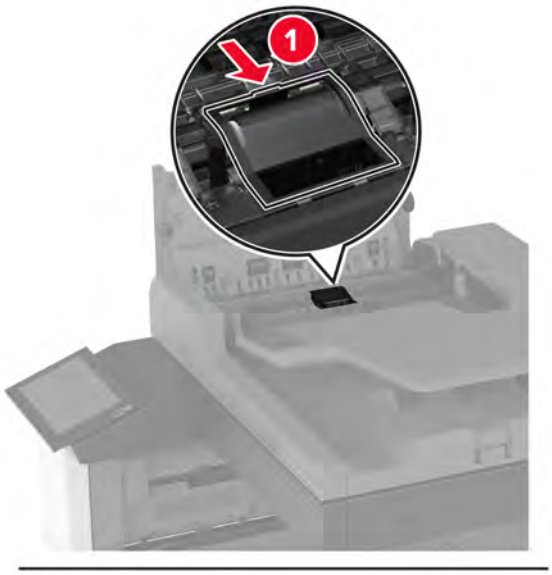
1 Turn off the printer.



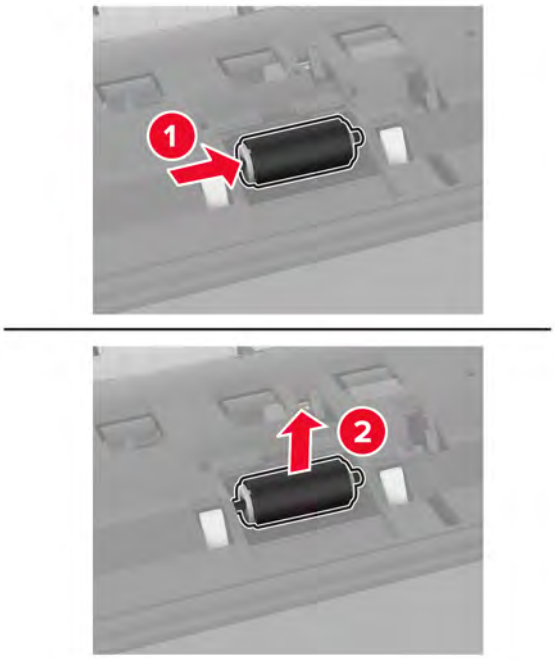
2 Open the ADF top cover.



3 Remove the separator roller cover.

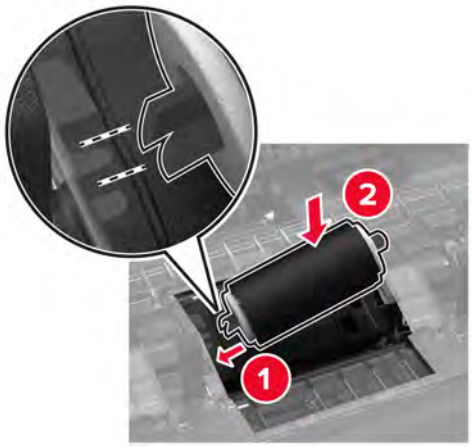


4 Remove the separator roller.

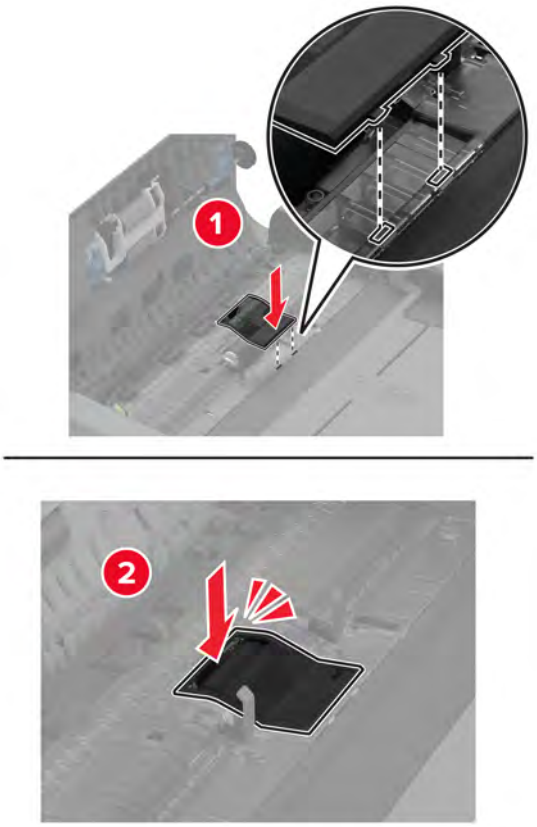


5 Apply water to a soft, lint-free cloth, and then wipe the roller kit.

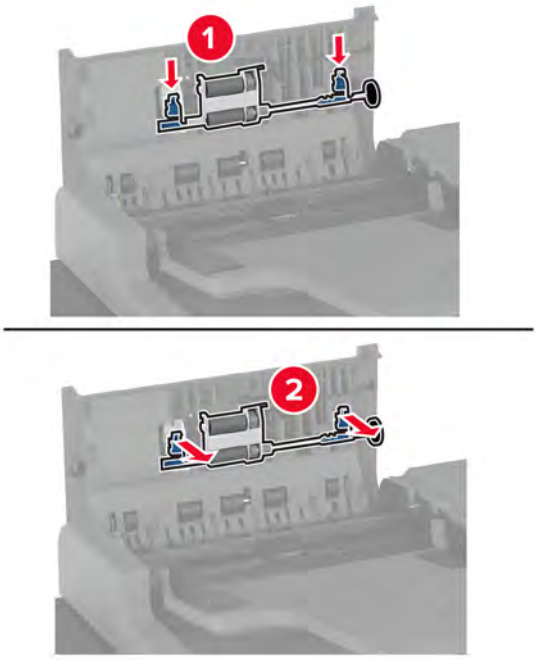
6 Insert the separator roller.



7 Insert the separator roller cover until it *clicks* into place.

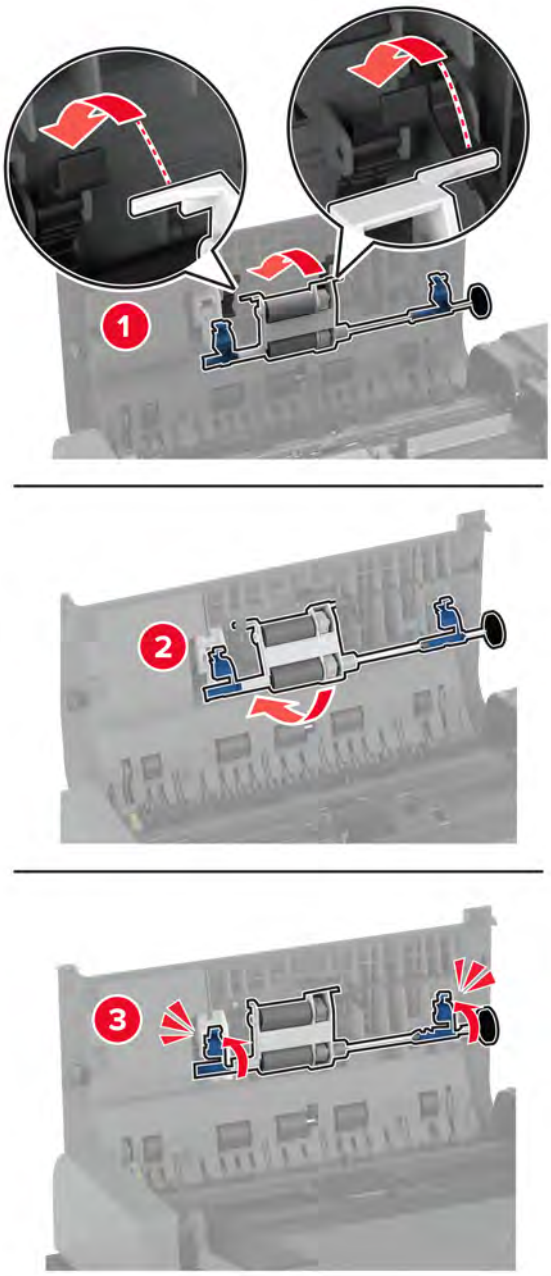


8 Remove the separator roller assembly.



9 Apply water to a soft, lint-free cloth, and then wipe the roller kit.

10 Insert the separator roller assembly until it *clicks* into place.

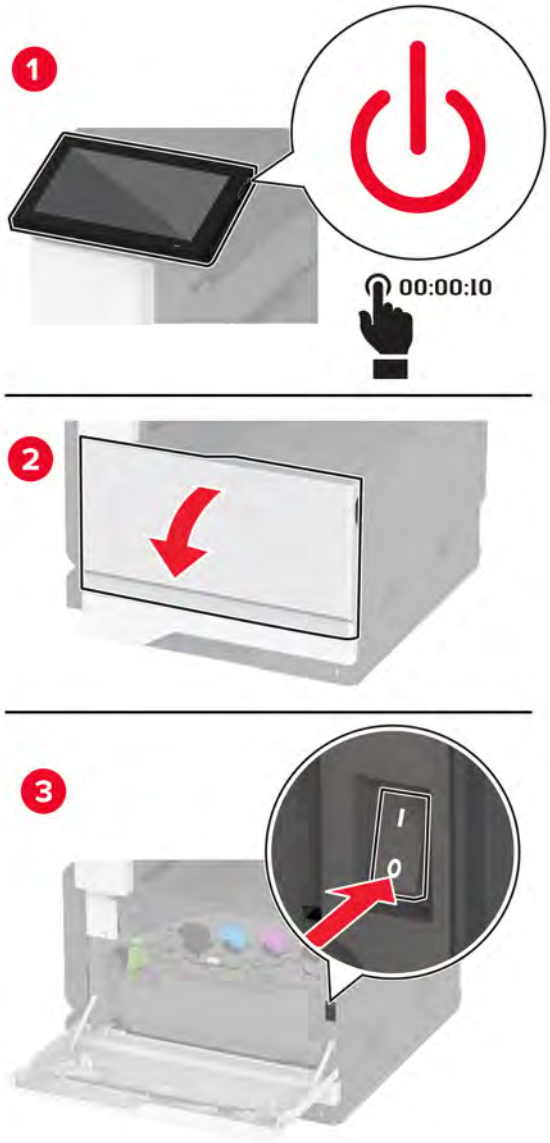


11 Close the ADF top cover.

12 Turn on the printer.

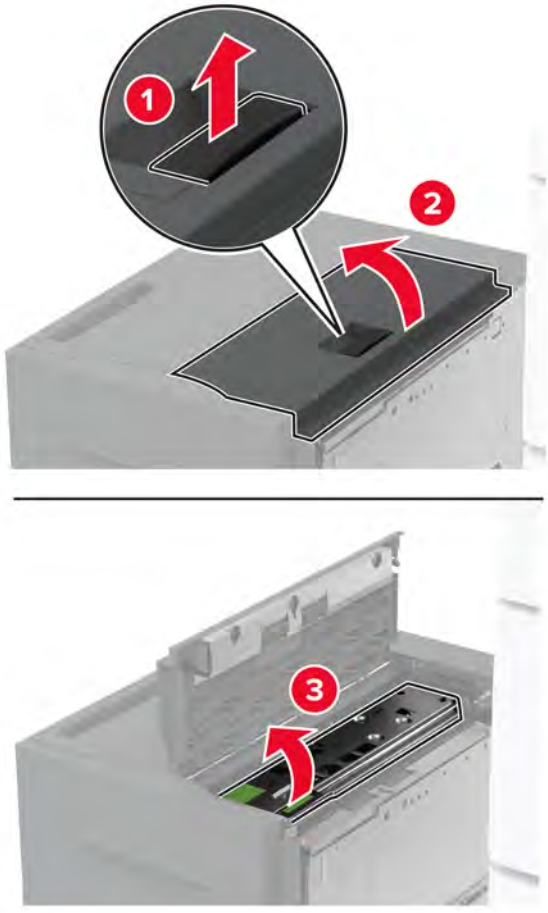
Cleaning the 2000-sheet tray roller kit

1 Turn off the printer.

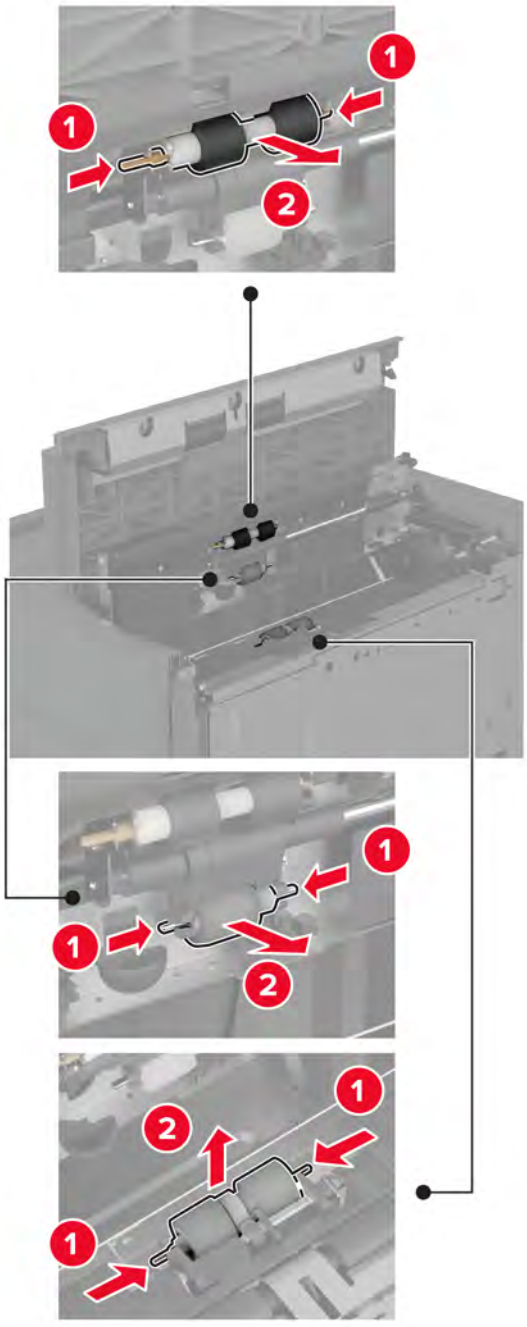


2 Slide the tray to the left.

3 Open door J, and then open the roller kit cover.

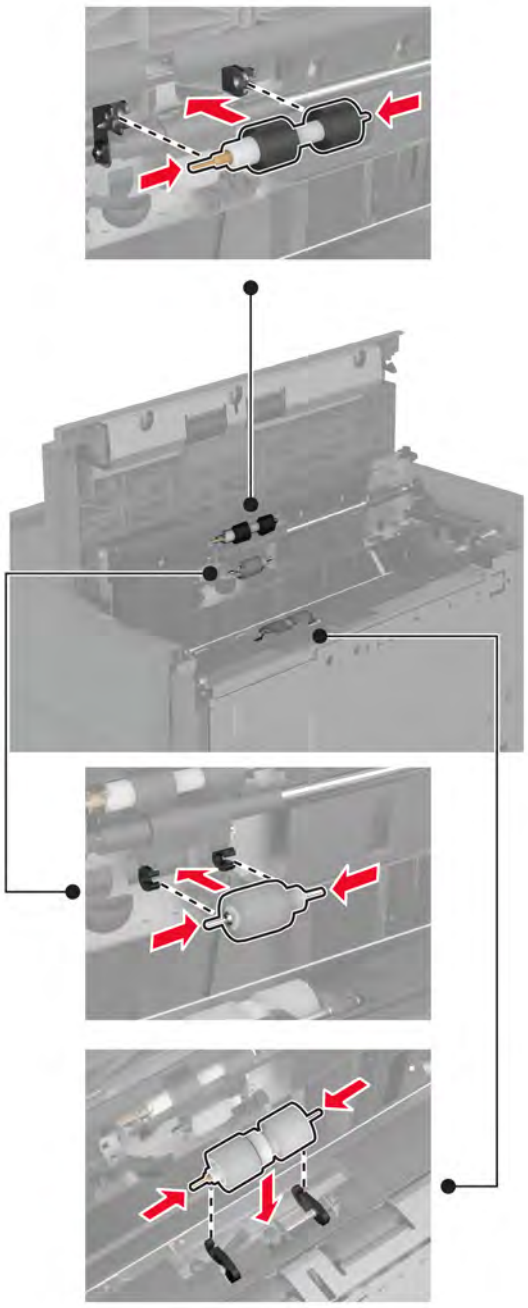


4 Locate, and then remove the tray roller kit.



5 Apply water to a soft, lint-free cloth, and then wipe the roller kit.

6 Insert the roller kit.



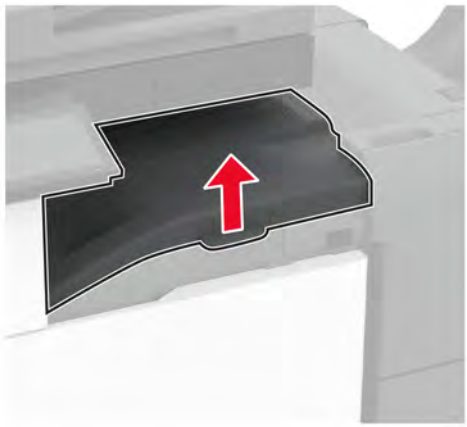
7 Close the roller kit cover, and then close door J.

8 Slide the tray back into place.

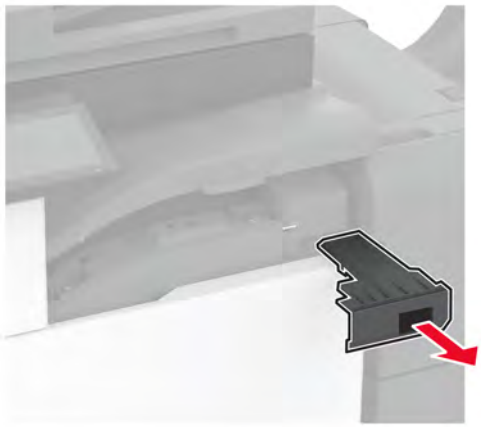
9 Turn on the printer.

Emptying the hole punch box

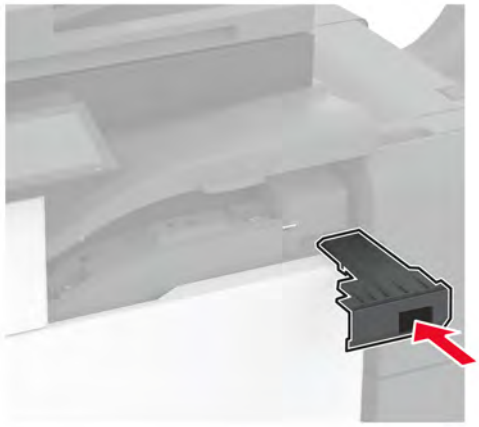
1 Lift paper transport cover F.



2 Remove, and then empty the hole punch box.



3 Insert the hole punch box.



4 Close the cover.

Inspection guide

Use this guide in identifying the parts that must be inspected, cleaned, or replaced based on the page count.

If any unsafe condition exists, find out how serious the hazard is and if you can continue before you correct the hazard.

As you service the printer, check for the following:

- Damaged, missing, or altered parts, especially in the area of the power switch and the power supply
- Damaged, missing, or altered covers, especially in the area of the top and power supply covers
- Possible safety exposure from any non-Lexmark attachments

Use the following table to determine when to inspect the following parts.

Note: After replacing parts, reset the maintenance counter. For more information, see **"Resetting the maintenance counter" on page 634**.

EP					
Frequency	**Printhead**	**Fuser**	**Transfer belt**	**Developer unit**	**Transfer roller**
Every service call	Clean during the following: • Fixing a print quality issue • Removing an EP component • Removing an EP supply	Inspect during the following: • Fixing a paper jam issue • Fixing a print quality issue	Inspect when fixing a print quality issue.		N/A
50K	Clean	N/A	N/A	N/A	N/A

EP					
Frequency	**Printhead**	**Fuser**	**Transfer belt**	**Developer unit**	**Transfer roller**
200K	Clean	Replace the part, and then reset the maintenance counter.	Replace the part, and then reset the maintenance counter.	1 Inspect 2 Clean	Replace the part, and then reset the maintenance counter.
480K	Clean	N/A	N/A	Replace the part, and then reset the maintenance counter.	N/A
Notes	N/A	N/A	N/A	Use a toner vacuum and cloth to remove all toner spillage from the printer.	N/A

Paper input	
Frequency	**Tray insert guides**
Every service call	Inspect when fixing a repetitive paper jam.
10K	N/A
50K	N/A
200K	N/A
300K	N/A
480K	N/A
Notes	N/A

ADF scanner assembly				
Frequency	**ADF rollers**	**Flatbed scanner glass**	**ADF scanner glass**	**ADF paper path**
Every service call	Clean when fixing a paper jam issue.	Clean when fixing a scan quality issue.		
10K	N/A	Clean	Clean	Clean
200K	Replace the part, and then reset the maintenance counter.	Clean	Clean	Inspect Clean
Notes	--	N/A	N/A	N/A

Paper path				
Frequency	**Pick rollers**	**MPF pick rollers**	**Duplex paper path**	**HCF pick rollers**
Every service call	Inspect, and then clean when fixing a paper jam.			
50K	N/A	Replace the part, and then reset the maintenance counter.	N/A	N/A

Paper path				
Frequency	**Pick rollers**	**MPF pick rollers**	**Duplex paper path**	**HCF pick rollers**
200K	Replace the part, and then reset the maintenance counter.	N/A	Inspect Clean	Inspect Clean
300K	N/A	N/A	N/A	Replace the part, and then reset the maintenance counter.
Notes	N/A	N/A	N/A	N/A

Finisher		
Frequency	**Paper path**	**Paper path rollers and paddles**
Every service call	Inspect, and then clean when fixing a paper jam.	
300K	Clean	Clean
Notes	N/A	N/A

Others	
Frequency	**Toner spill**
Every service call	Clean
200K	Clean
480K	Clean
Notes	Use a toner vacuum and cloth to remove all toner spillage from the printer.

Scheduled maintenance

The control panel displays an **8x.yy** error when it reaches certain page counts. It is necessary to replace the appropriate maintenance kit to maintain print quality and printer reliability.

Note: When replacing the maintenance kit, install all the parts that are included in the box, and then reset the maintenance counter.

Maintenance kits

The printer may stop printing when the rated life of a supply is reached.

To see which error codes indicate that a supply is nearing its end of life, see **"80-88 user attendance messages" on page 258**.

The parts are available as a maintenance kit with the following part numbers:

Note: After replacing the part or maintenance kit, reset the maintenance counter. See **"Resetting the maintenance counter" on page 634**.

Part number and kit	Contents	Maintenance interval
41X3874—Fuser maintenance kit, 100V[1]	• 41X3759—Fuser (100V)[1] • 41X3756—Second transfer roller • 41X3755—Transfer module • 41X3775—Roller kit	200K
41X3875—Fuser maintenance kit, 110V[2]	• 41X4114—Fuser (110V)[21] • 41X3756—Second transfer roller • 41X3755—Transfer module • 41X3775—Roller kit	200K
41X3876—Fuser maintenance kit, 220V	• 41X3761—Fuser (220V) • 41X3756—Second transfer roller • 41X3755—Transfer module • 41X3775—Roller kit	200K
41X4113—Fuser maintenance kit, 120V	• 41X3760—Fuser (120V) • 41X3756—Second transfer roller • 41X3755—Transfer module • 41X3775—Roller kit	200K
41X3877—Developer kit	• 41X3754—Developer unit (Y) • 41X4055—Developer unit (M) • 41X4056—Developer unit (C) • 41X4057—Developer unit (K)	480K
41X3878—MPF roller kit	• 41X3784—MPF rollers • 41X3783—MPF separator pad	50K
41X4059—ADF roller kit	• 41X3860—ADF feed rollers	200K
41X4168—HCF roller kit	• 41X4168—HCF pick rollers	300K
[1] Supported in printers that are sold in Japan. [2] Supported in printers that are sold in Taiwan.		

When performing the scheduled maintenance procedure, the following areas should be cleaned of media dust and toner contamination:

- Trays
- Toner cartridge area
- Developer unit area
- Transfer roll area
- Duplex area
- Standard bin
- Horizontal transport unit area (if equipped)
- Finisher bins (if equipped)

Resetting the maintenance counter

Fuser reset

Diagnostics menu > **Printer setup** > **Reset Maintenance Counter** > **Maintenance Kit reset**

Developer unit reset

Diagnostics menu > **Printer setup** > **Reset Maintenance Counter** > **Reset developer kit counter**

ADF roller reset

Settings menu > **Device** > **Maintenance** > **Configuration Menu** > **Scanner configuration** > **Resetting ADF Maintenance Counter**

MPF roller reset

Diagnostics menu > **Printer setup** > **Reset Maintenance Counter** > **Multipurpose feeder roller reset**

Parts catalog

Legend

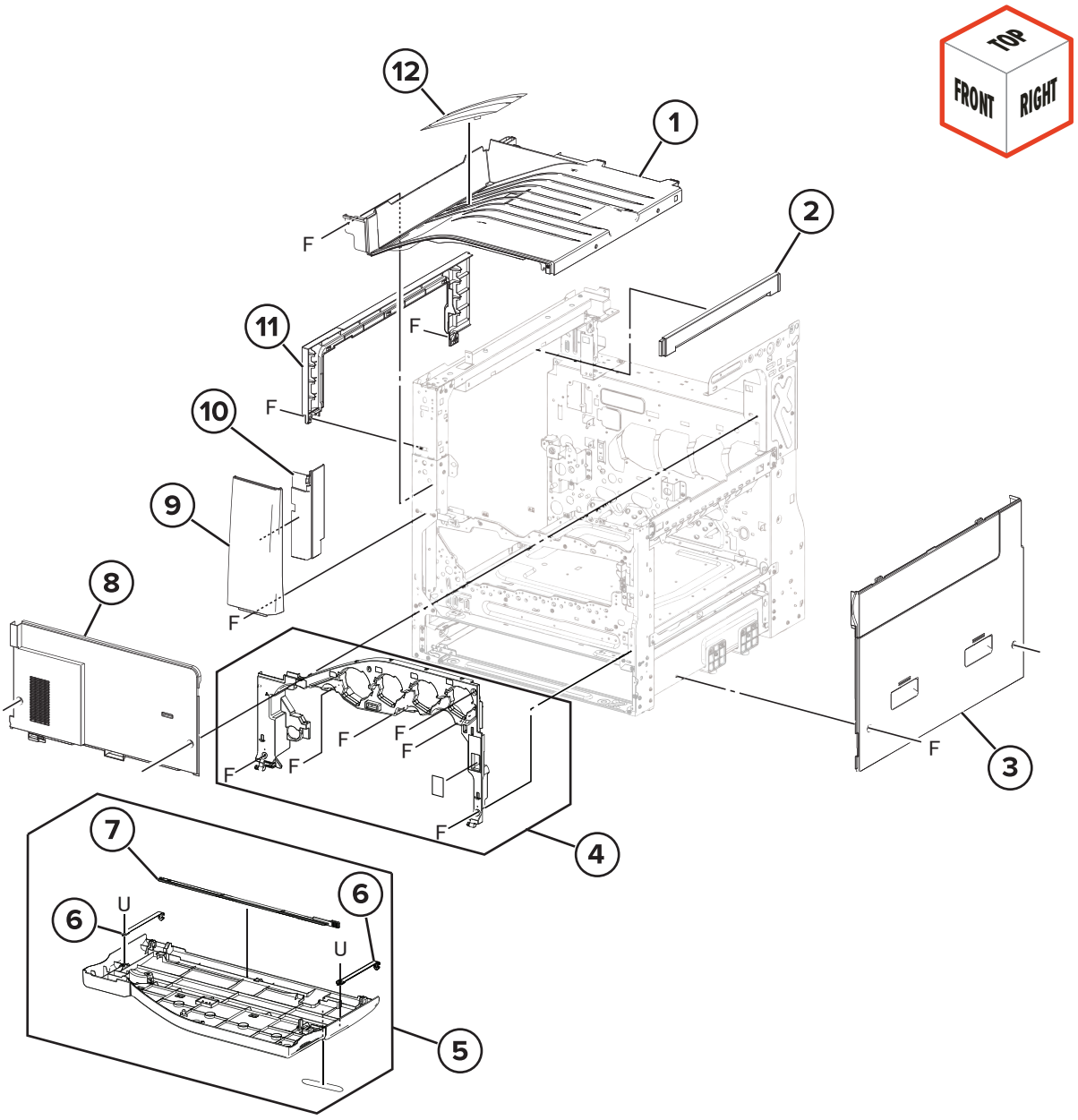
The following column headings are used in the parts catalog:

- **Asm-index**—Identifies the item in the illustration
- **P/N**—Identifies the part number of a FRU
- **Units/mach**—Refers to the number of units in a printer
- **Units/opt**—Refers to the number of units in an option
- **Units/FRU**—Refers to the number of units in a FRU
- **Description**—A brief description of the part

The following abbreviations are used in the parts catalog:

- **NS** (not shown) in the Asm-index column indicates that the part is procurable but is not shown in the illustration.
- **PP** (parts packet) in the Description column indicates that the part is contained in a parts packet.

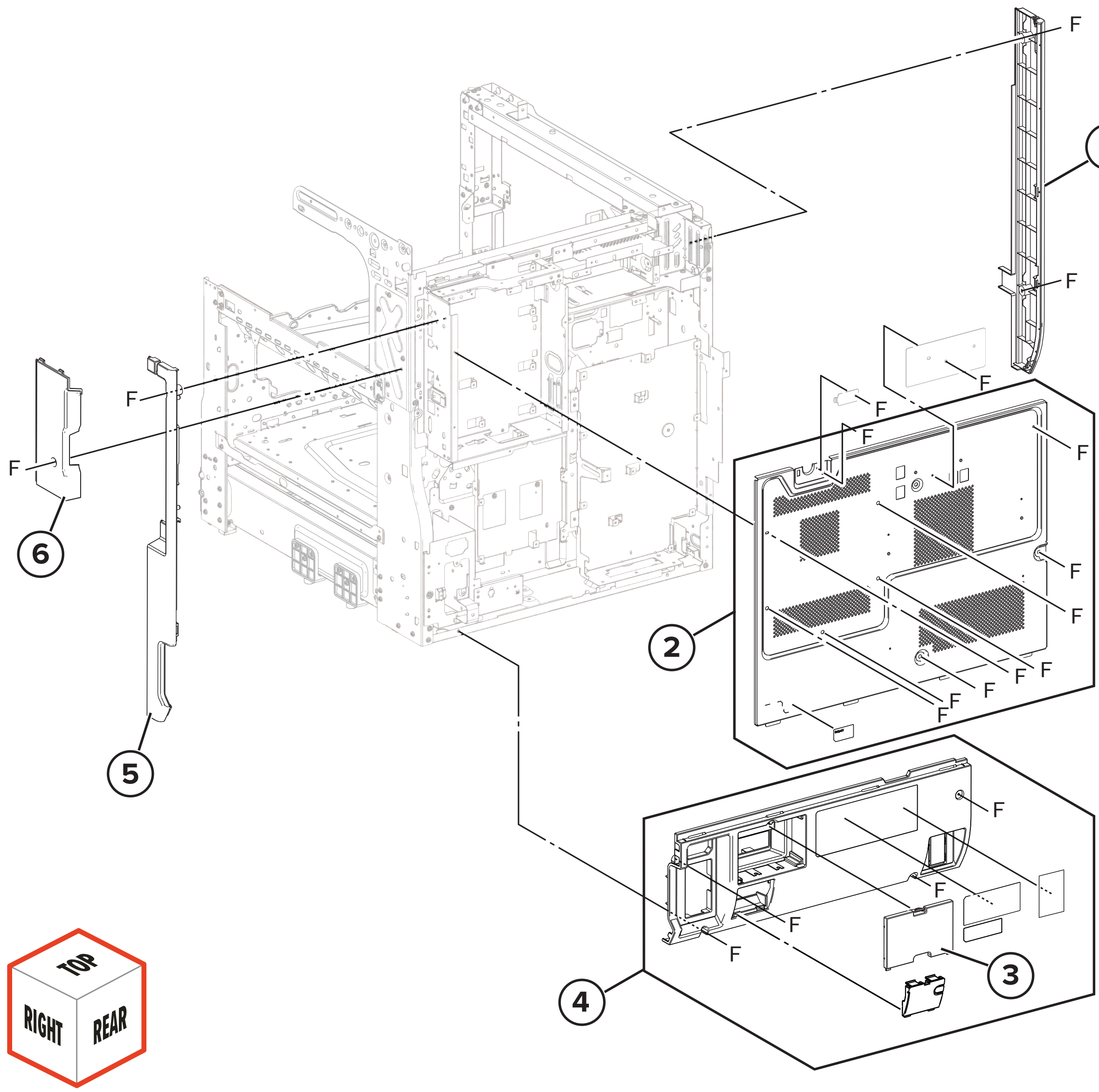
Assembly 1: Covers 1



Assembly 1: Covers 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3832	1	1	Standard bin cover	“Standard bin cover removal” on page 404
2	41X3836	1	1	Exit edge cover	--
3	41X3834	1	1	Right cover	“Right cover removal” on page 347
4	41X3839	1	1	Inner front cover	“Inner front cover removal” on page 353
5	41X3840	1	1	Front door	“Front door removal” on page 351
6	41X3830	1	1	Front door straps	--
7	41X3831	1	1	Printhead cleaner	--
8	41X3833	1	1	Bin rear cover	“Bin rear cover removal” on page 406
9	41X3837	1	1	Left column cover	“Left column cover removal” on page 368
10	41X3835	1	1	Exit column cover	“Exit column cover removal” on page 401
11	41X3838	1	1	Top left cover	“Top left cover removal” on page 326
12	41X4100	1	1	Standard bin upper cover	--
NS	41X2939	1	1	Gap filler cover	--

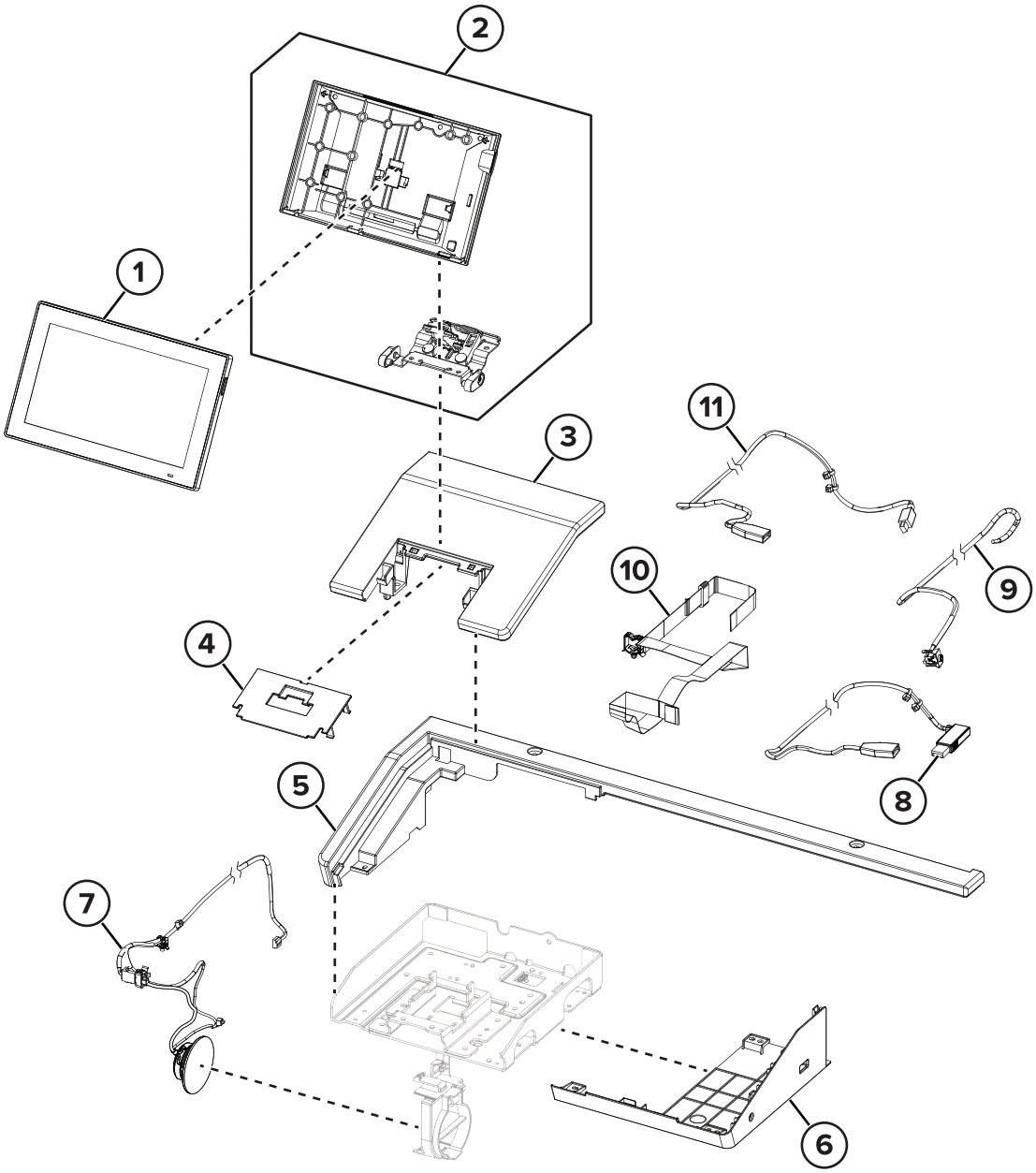
Assembly 2: Covers 2



Assembly 2: Covers 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3844	1	1	Left edge cover	“Left edge cover removal” on page 323
2	41X3846	1	1	Top rear cover	--
3	41X3841	1	1	Interface cable cover	“Interface connector bracket removal” on page 386
4	41X3845	1	1	Bottom rear cover	“Bottom rear cover removal” on page 382
5	41X3843	1	1	Right edge cover	“Right edge cover removal” on page 344
6	41X3842	1	1	Right column cover	“Right column cover removal” on page 346

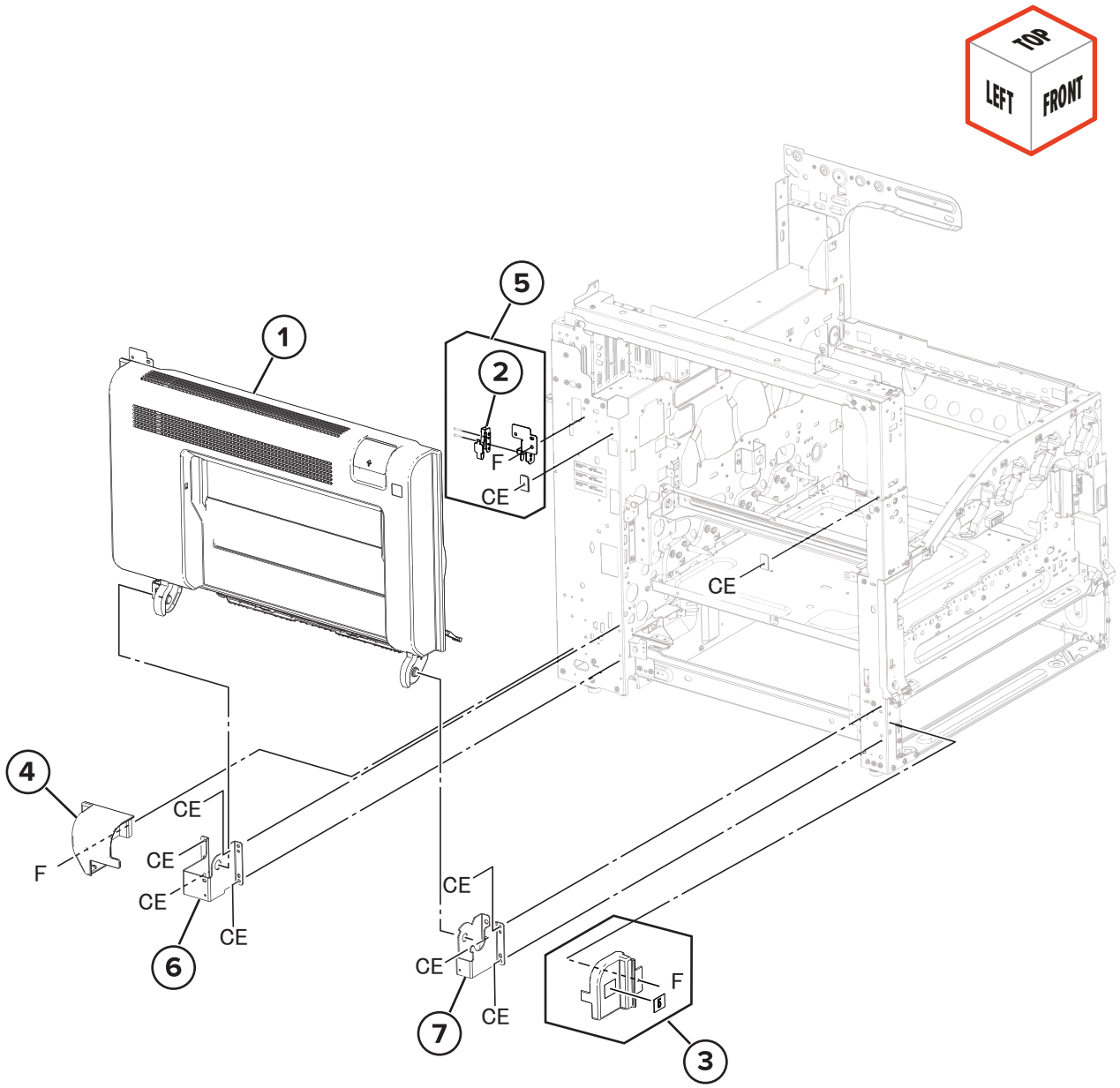
Assembly 3: Control panel



Assembly 3: Control panel

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2880	1	1	Control panel	--
2	41X3708	1	1	Control panel hinge bracket	--
3	41X4514	1	1	Control panel hinge bracket cover	--
4	41X4457	1	1	Control panel hinge cover	--
5	41X4513	1	1	Control panel left cover	--
6	41X4515	1	1	Control panel bottom cover	--
7	41X4133	1	1	Control panel speaker	--
8	41X4136	1	1	Control panel USB	--
9	41X4135	1	1	Control panel Jack	--
10	41X4481	1	1	Control panel FFC	--

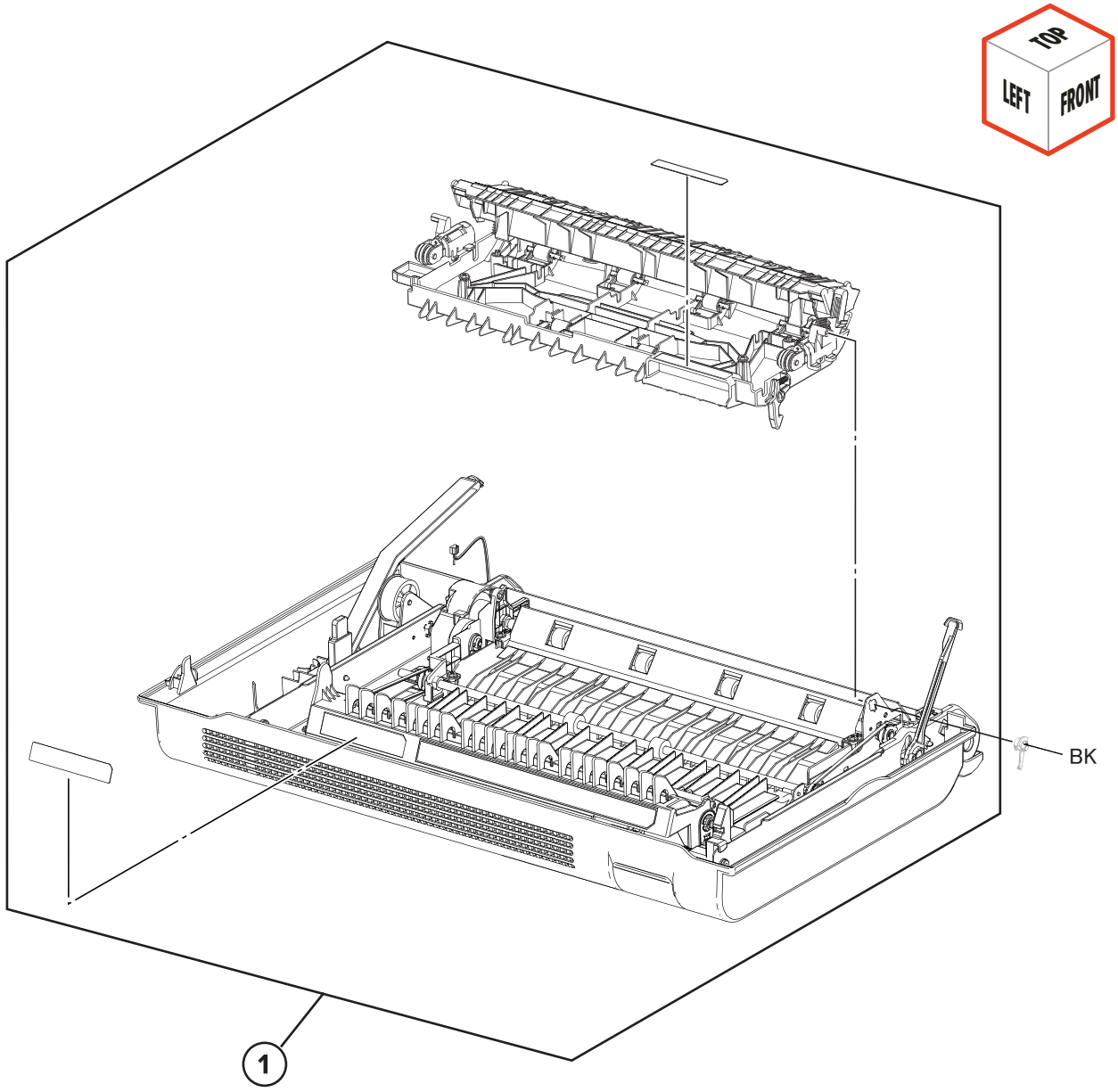
Assembly 4: Duplex 1



Assembly 4: Duplex 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3788	1	1	Duplex transport	--
2	41X3789	1	1	Left door switch	**“Left door switch removal” on page 383**
3	41X3786	1	1	Left door front cover	**“Left door front cover removal” on page 369**
4	41X3787	1	1	Left door rear cover	**“Left door rear cover removal” on page 325**
5	41X3785	1	1	Left door interlock switch assembly	--
6	41X4086	1	1	MPF rear hinge	--
7	41X4085	1	1	MPF front hinge	--

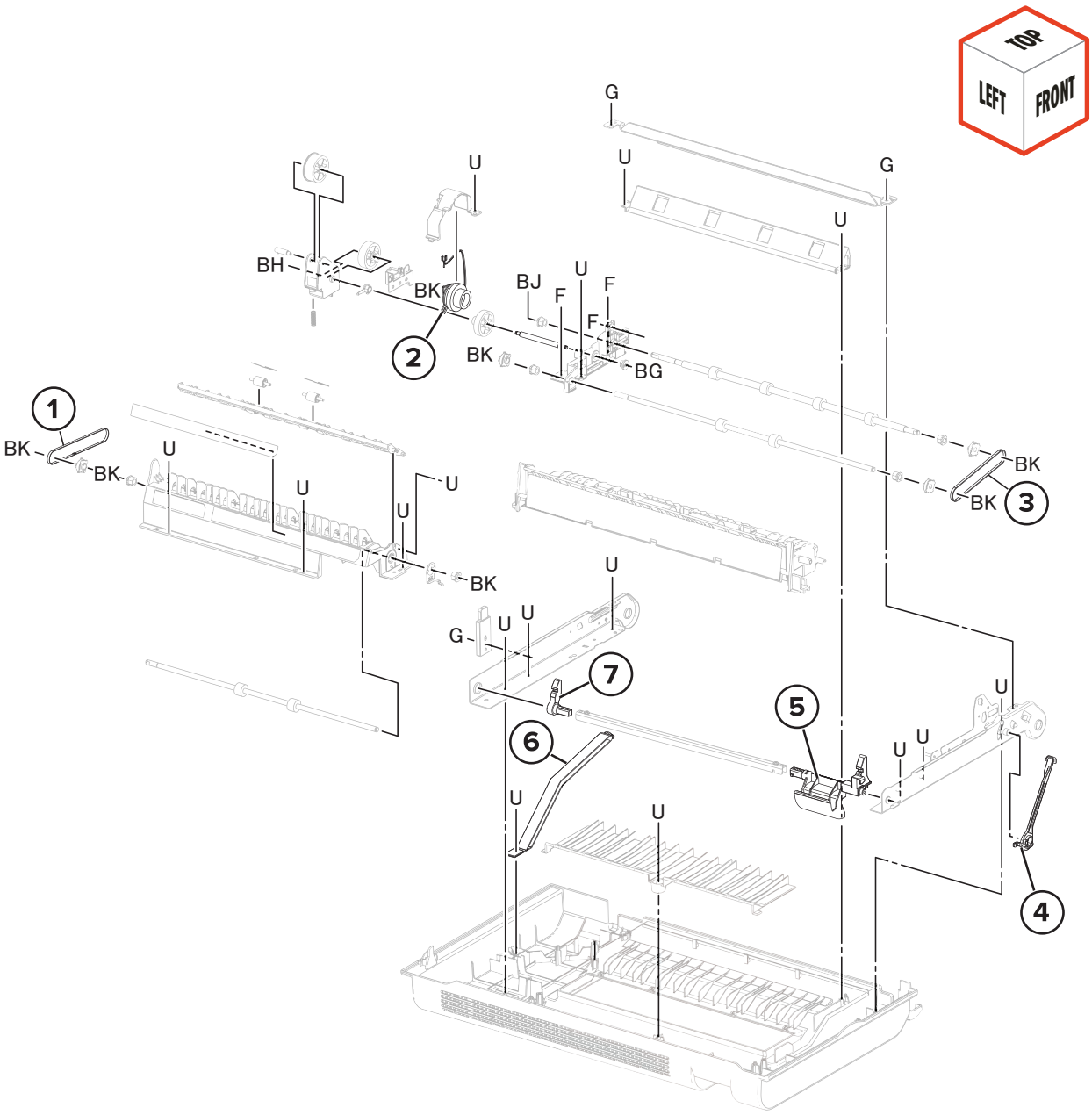
Assembly 5: Duplex 2



Assembly 5: Duplex 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4117	1	1	Inner duplex guide	--

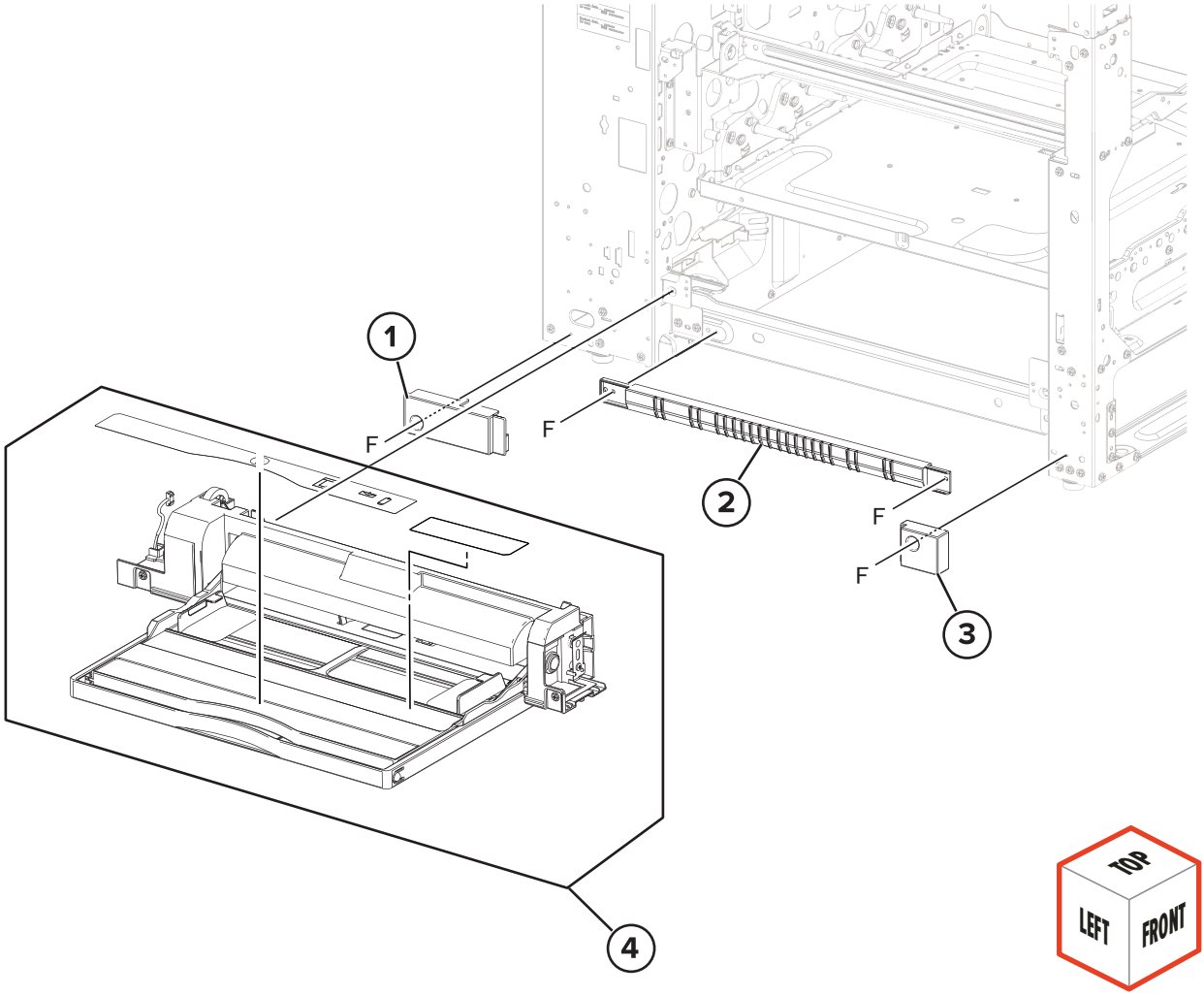
Assembly 6: Duplex 3



Assembly 6: Duplex 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3791	1	1	Duplex rear belt	“Duplex rear belt removal” on page 331
2	41X3793	1	1	Duplex transport clutch	“Duplex transport clutch removal” on page 335
3	41X3792	1	1	Duplex front belt	“Duplex front belt removal” on page 336
4	41X3795	1	1	Left door front strap	--
5	41X3790	1	1	Left door latch	--
6	41X3794	1	1	Left door rear strap	--
7	41X3796	1	1	Rear latch lever	--

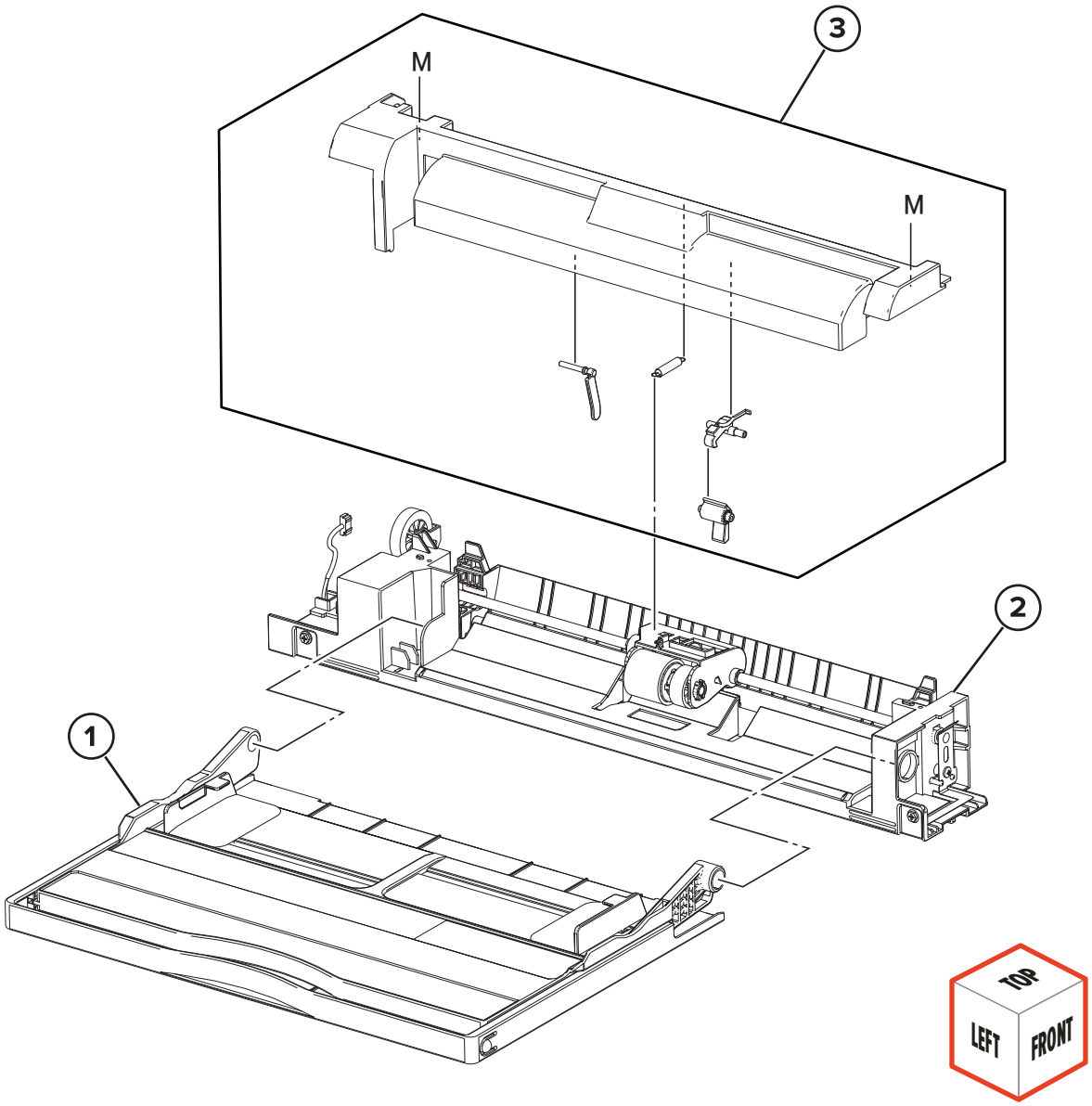
Assembly 7: MPF 1



Assembly 7: MPF 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3778	1	1	MPF rear cover	**“MPF rear cover removal” on page 329**
2	41X3777	1	1	Transport guide	--
3	41X3776	1	1	MPF front cover	**“MPF front cover removal” on page 330**
4	41X3779	1	1	MPF	**“MPF removal” on page 326**

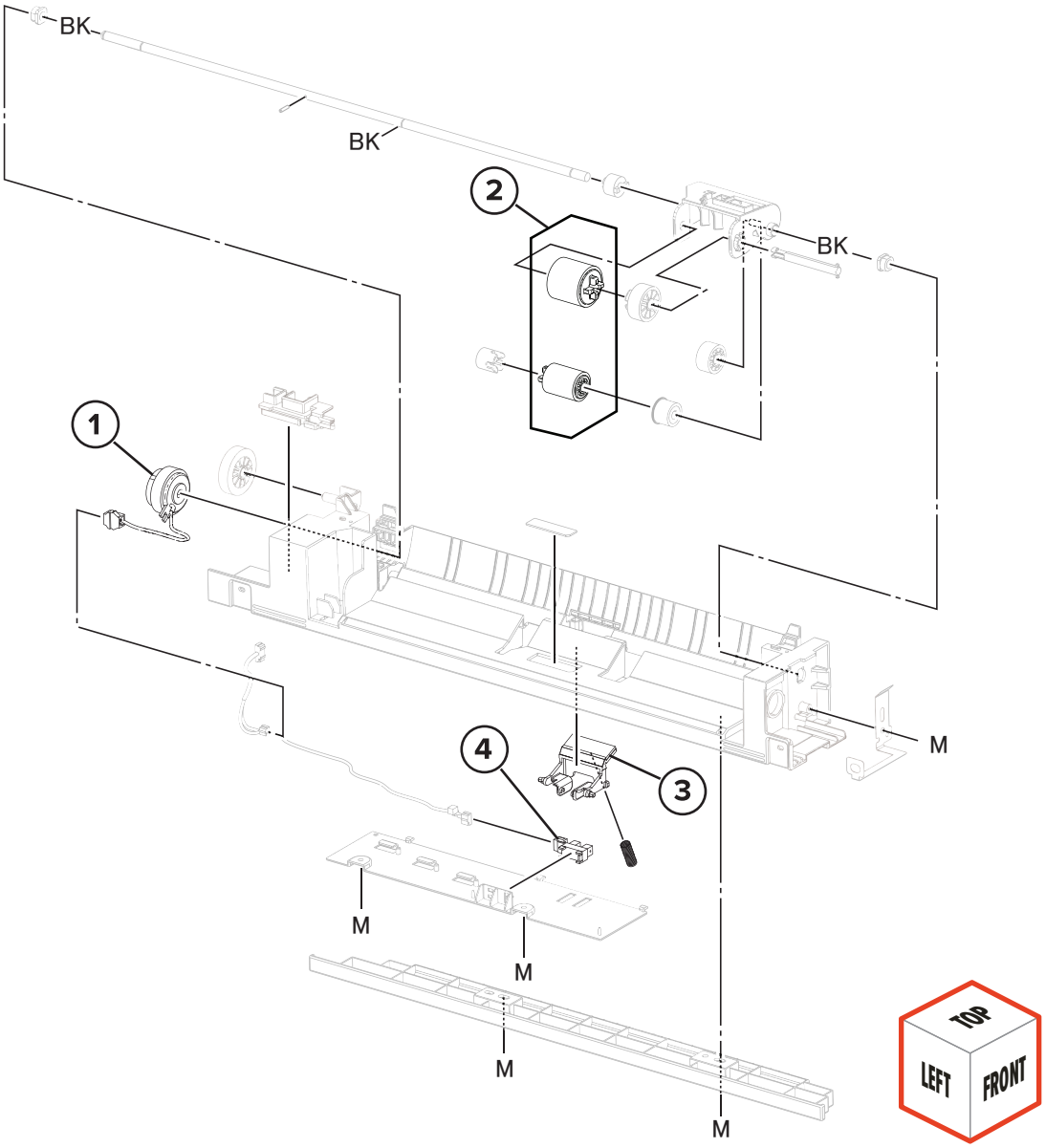
Assembly 8: MPF 2



Assembly 8: MPF 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3781	1	1	MPF tray	--
2	41X3780	1	1	MPF paper feeder	--
3	41X4084	1	1	MPF top cover	--

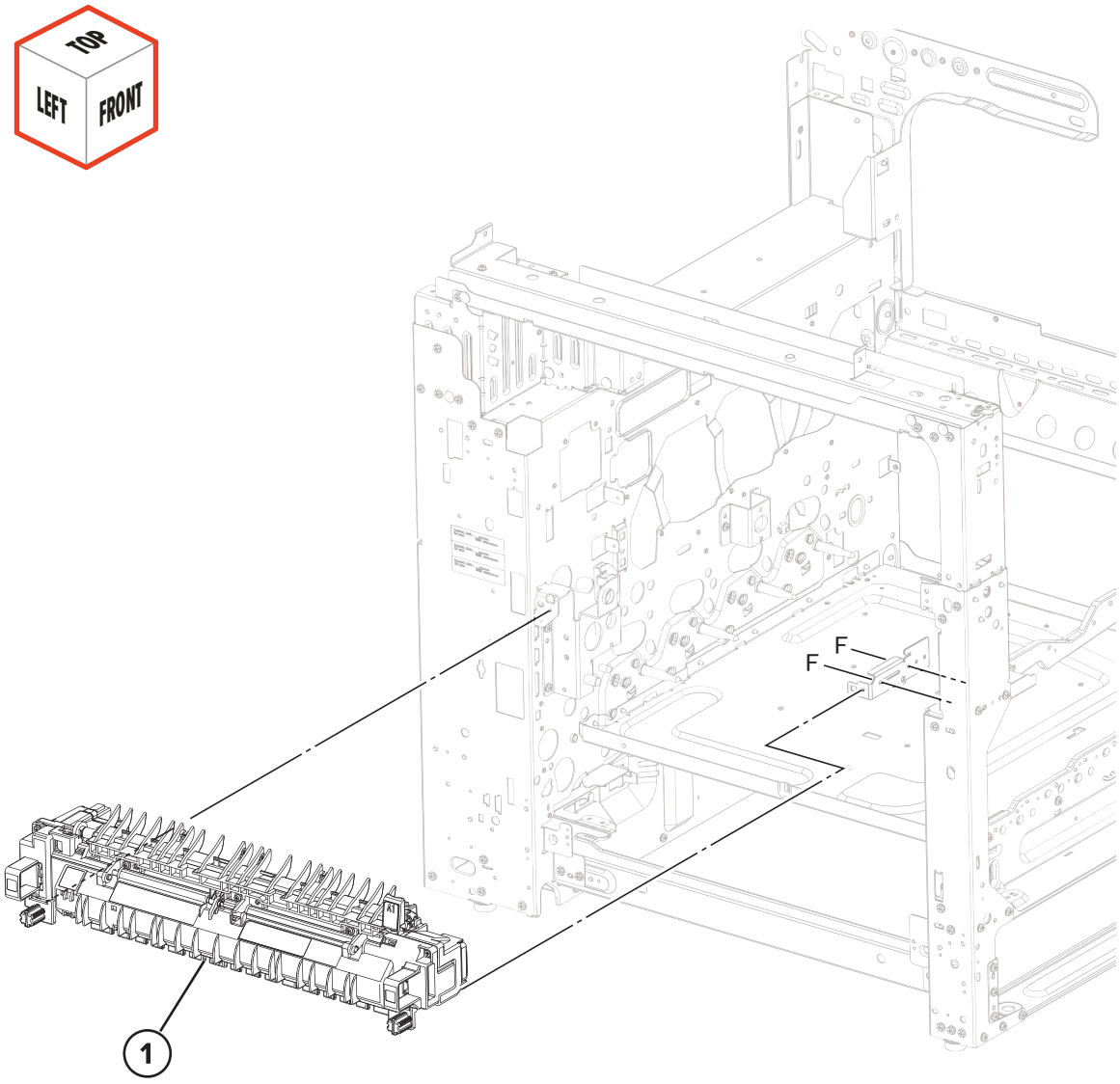
Assembly 9: MPF 3



Assembly 9: MPF 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3782	1	1	MPF feed clutch	--
2	41X3784	1	1	Roller kit (MPF)	--
3	41X3783	1	1	MPF separator pad	--
4	40X0588	1	1	Sensor (MPF paper present)	--

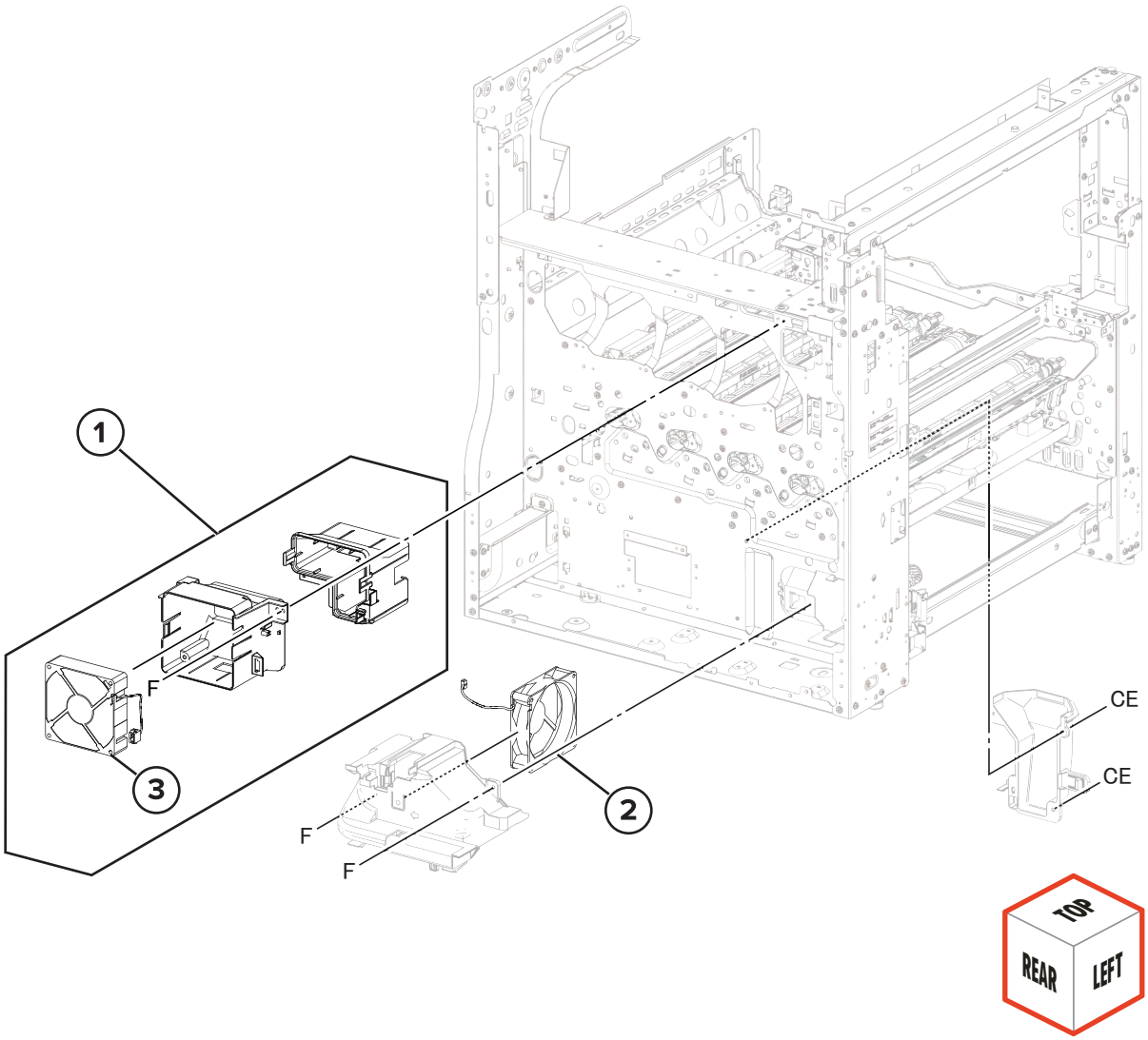
Assembly 10: Fuser



Assembly 10: Fuser

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3759	1	1	Fuser (100 V)	“Fuser removal” on page 342
1	41X4114	1	1	Fuser (110 V)	“Fuser removal” on page 342
1	41X3760	1	1	Fuser (120 V)	“Fuser removal” on page 342
1	41X3761	1	1	Fuser (220 V)	“Fuser removal” on page 342

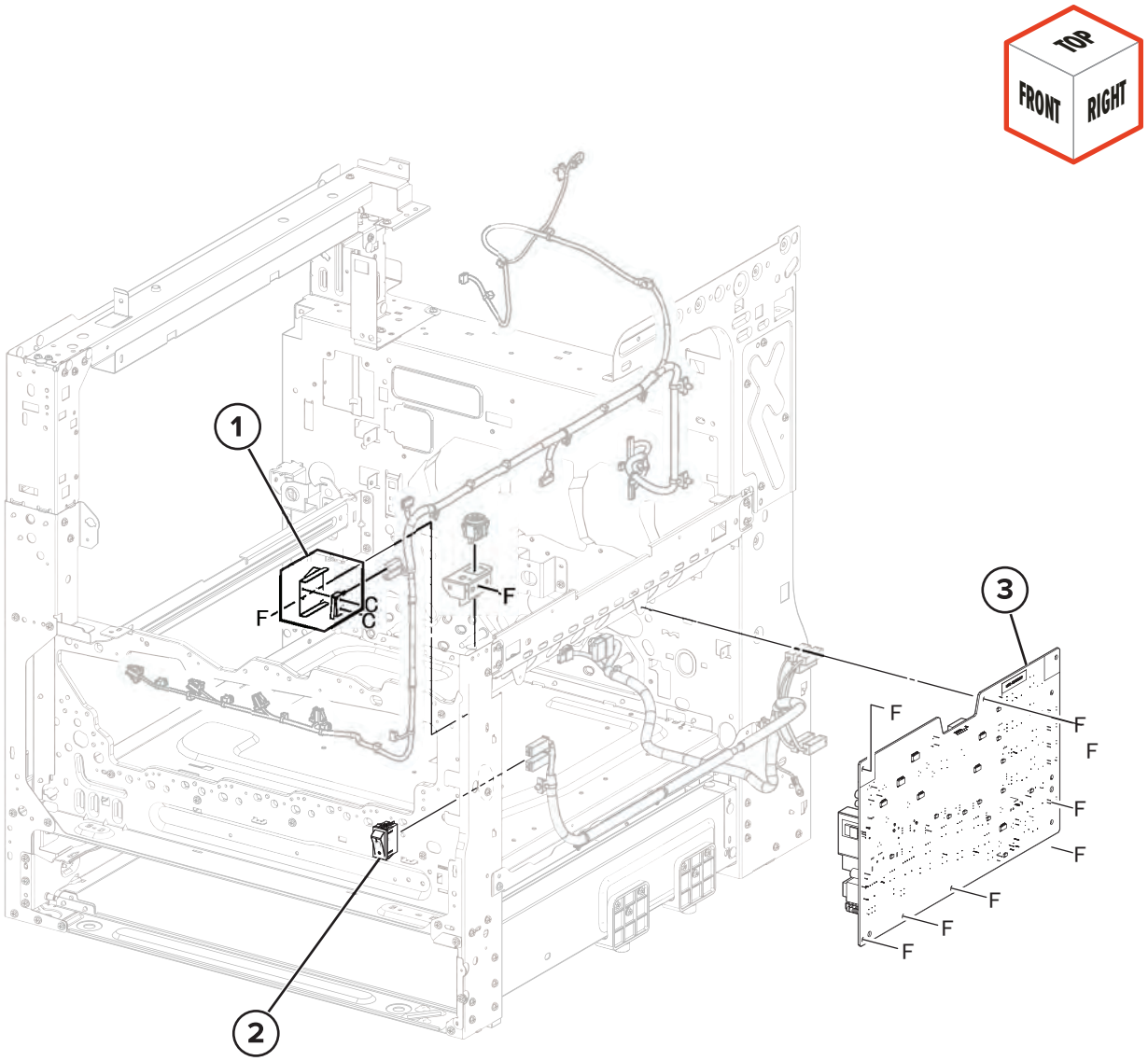
Assembly 11: Fuser exhaust



Assembly 11: Fuser exhaust

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3743	1	1	Fuser exhaust duct	“Fuser exhaust duct removal” on page 387
2	41X3745	1	1	Cartridge fan	“Cartridge fan removal” on page 387
3	41X3744	1	1	Fuser exhaust fan	“Fuser exhaust fan removal” on page 381

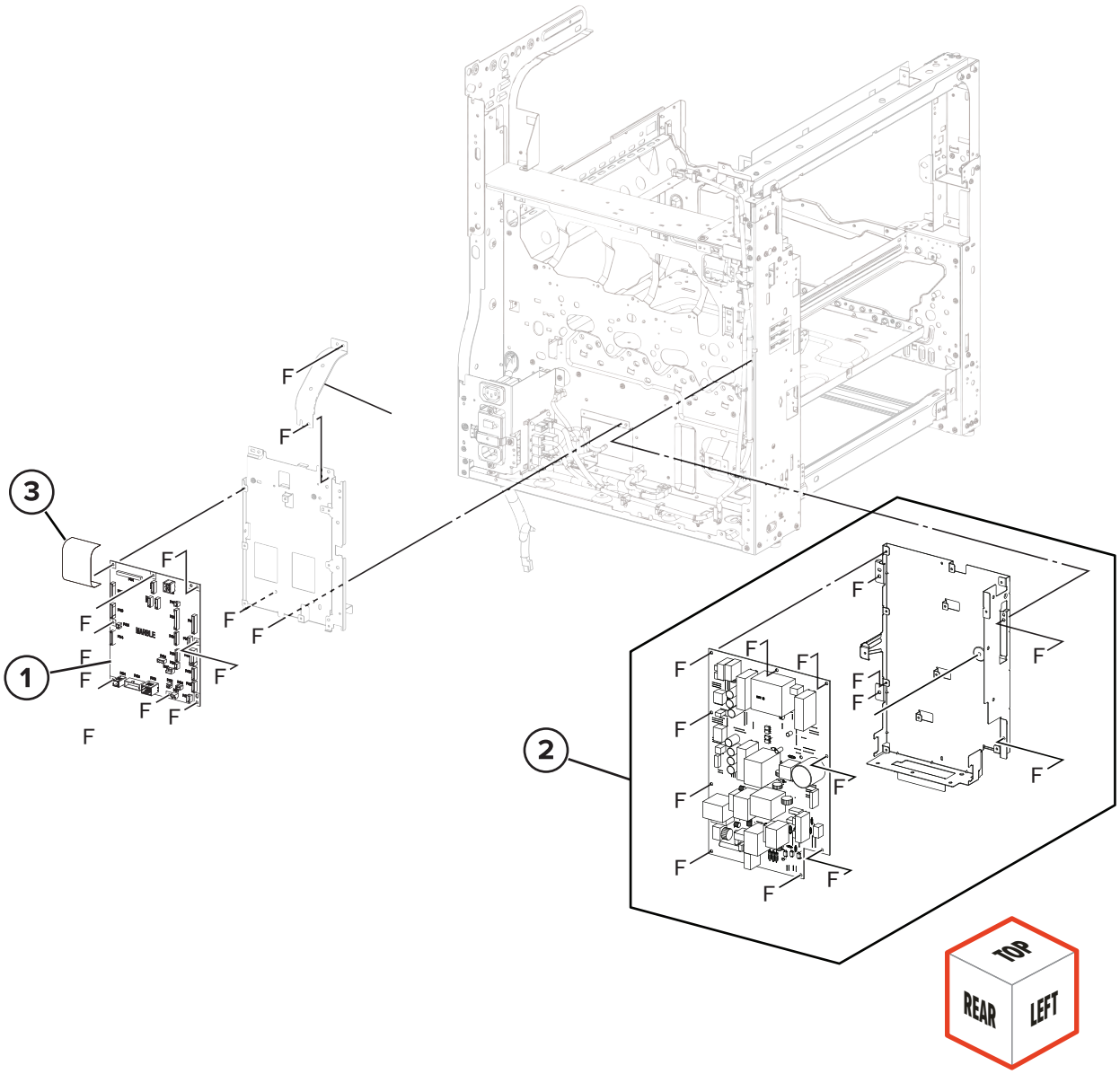
Assembly 12: Electronics 1



Assembly 12: Electronics 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3815	1	1	Front door switch	“Front door switch removal” on page 354
2	41X3814	1	1	Main power switch	--
3	41X3816	1	1	HVPS	“HVPS removal” on page 349

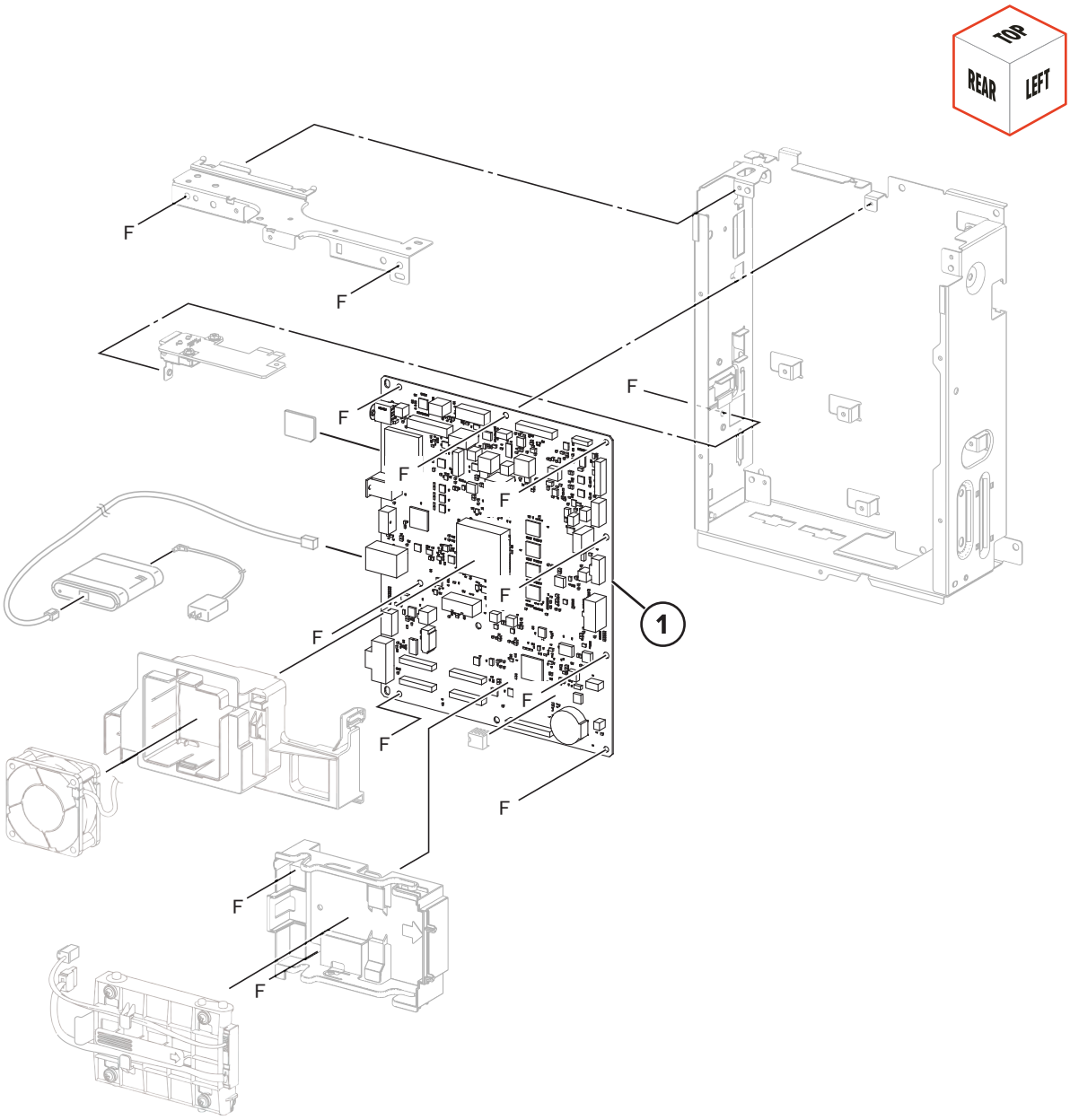
Assembly 13: Electronics 2



Assembly 13: Electronics 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3818	1	1	Engine drive board	“Engine drive board removal” on page 388
2	41X3817	1	1	LVPS	“LVPS removal” on page 383
3	41X4095	2	1	Flat cable	--
NS	41X4107	1	1	MCU board	“MCU board removal” on page 384
NS	41X4483	1	1	Controller board port cover	--

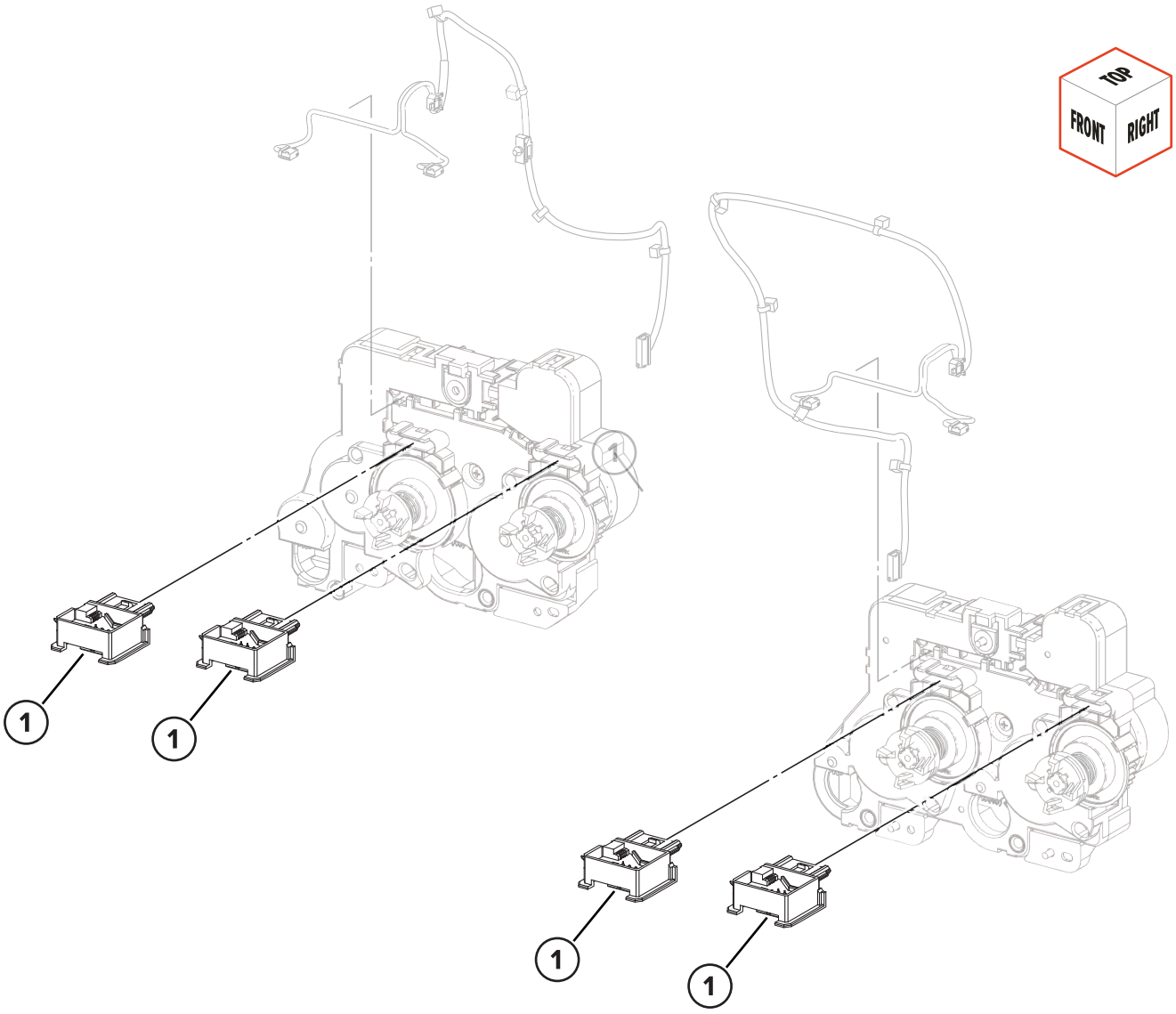
Assembly 14: Electronics 3



Assembly 14: Electronics 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2923	1	1	Controller board	“Controller board removal” on page 381

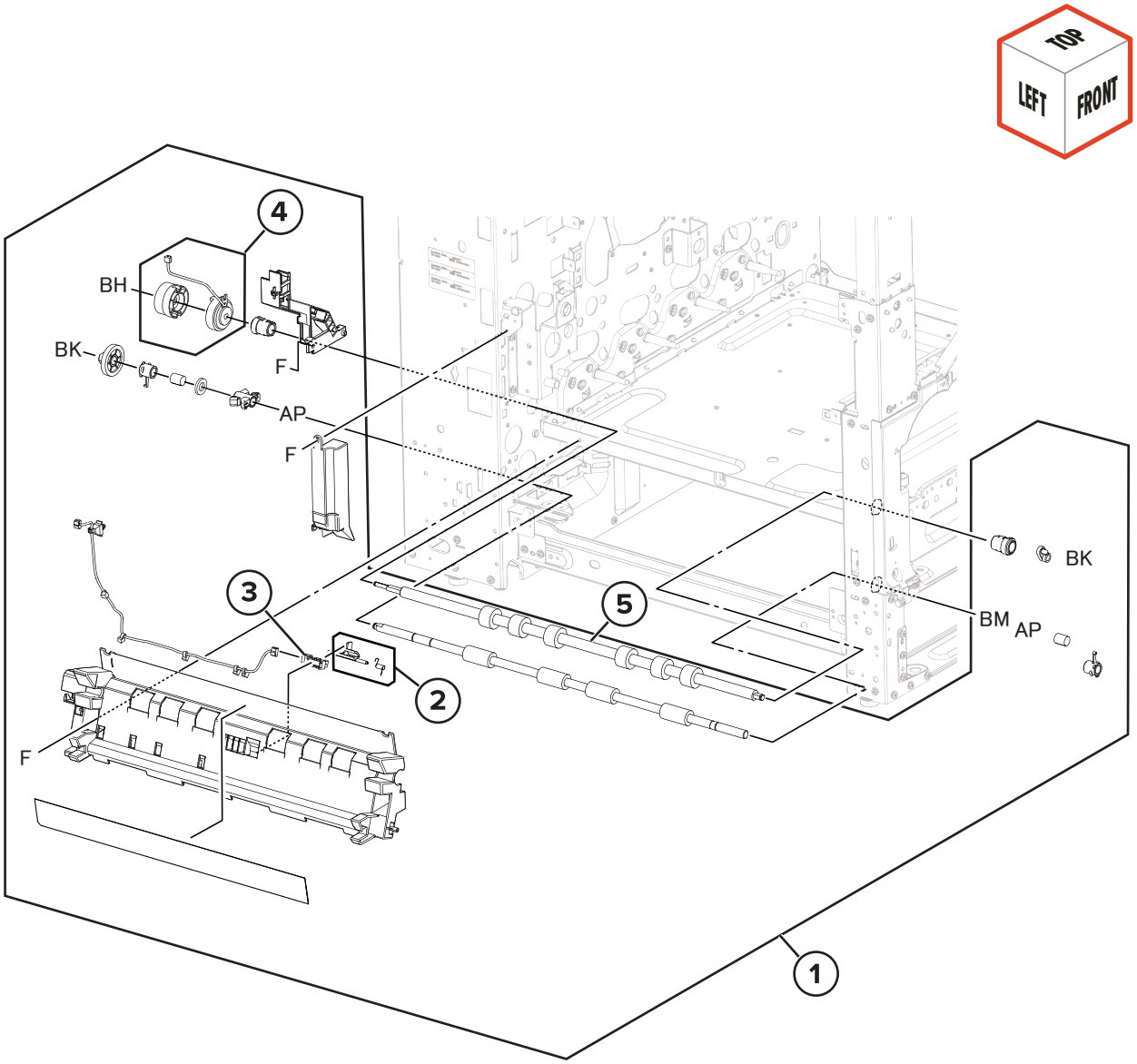
Assembly 15: Developer



Assembly 15: Developer

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3327	4	1	Toner contact chip	--

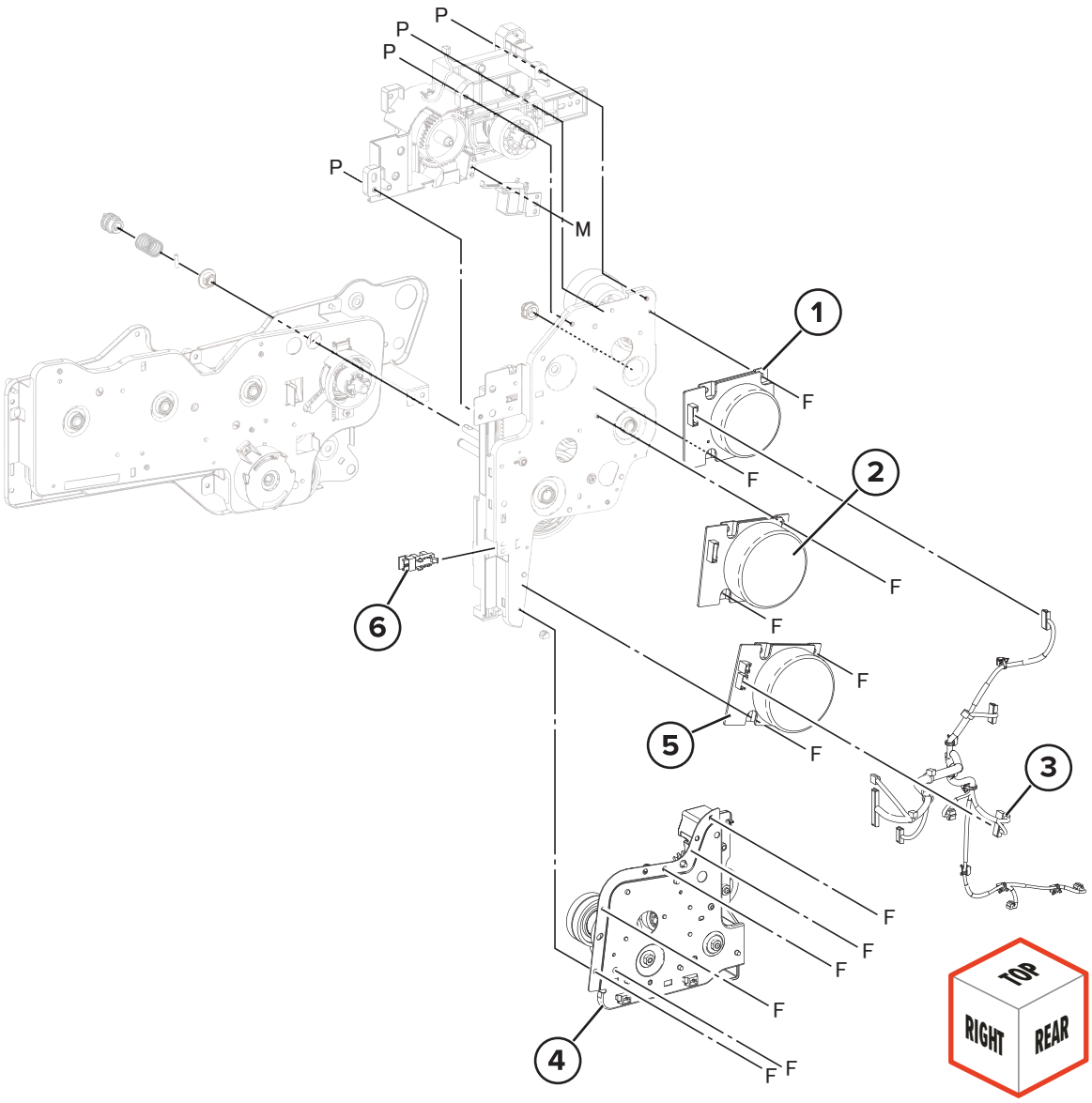
Assembly 16: Registration



Assembly 16: Registration

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3797	1	1	Registration transport	--
2	41X3798	1	1	Registration sensor actuator and spring	--
3	40X0588	1	1	Sensor (registration)	--
4	41X3801	1	1	Registration clutch	**“Registration clutch removal” on page 394**
5	41X3800	1	1	Registration roller	--

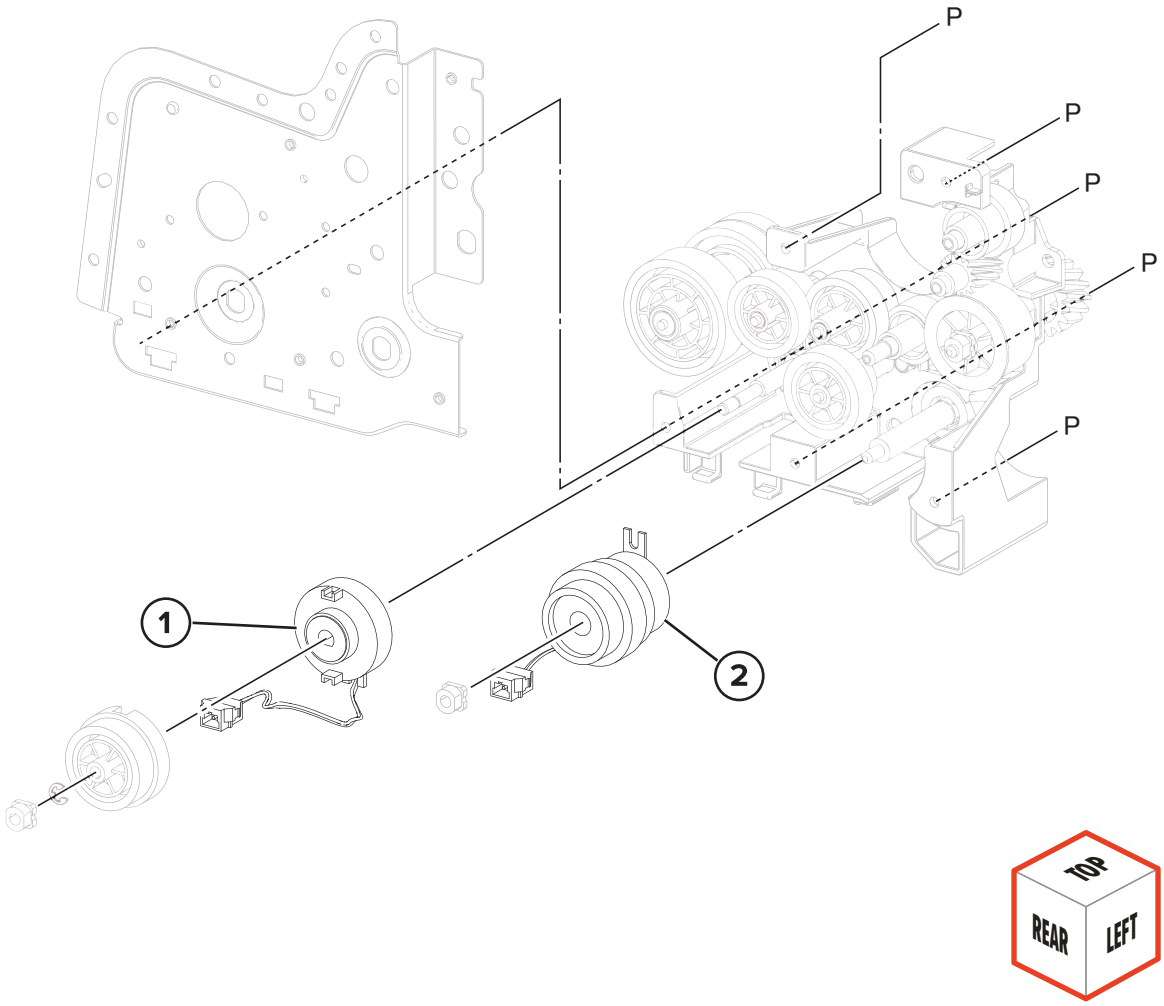
Assembly 17: Motors 1



Assembly 17: Motors 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3737	1	1	Motor (fuser)	--
2	41X3738	1	1	Motor (main)	--
3	41X3822	1	1	Drive gearbox cable	--
4	41X3740	1	1	Drive gear bracket	--
5	41X3738	1	1	Motor (sub)	--
6	41X3739	1	1	Sensor (black-only retract)	--

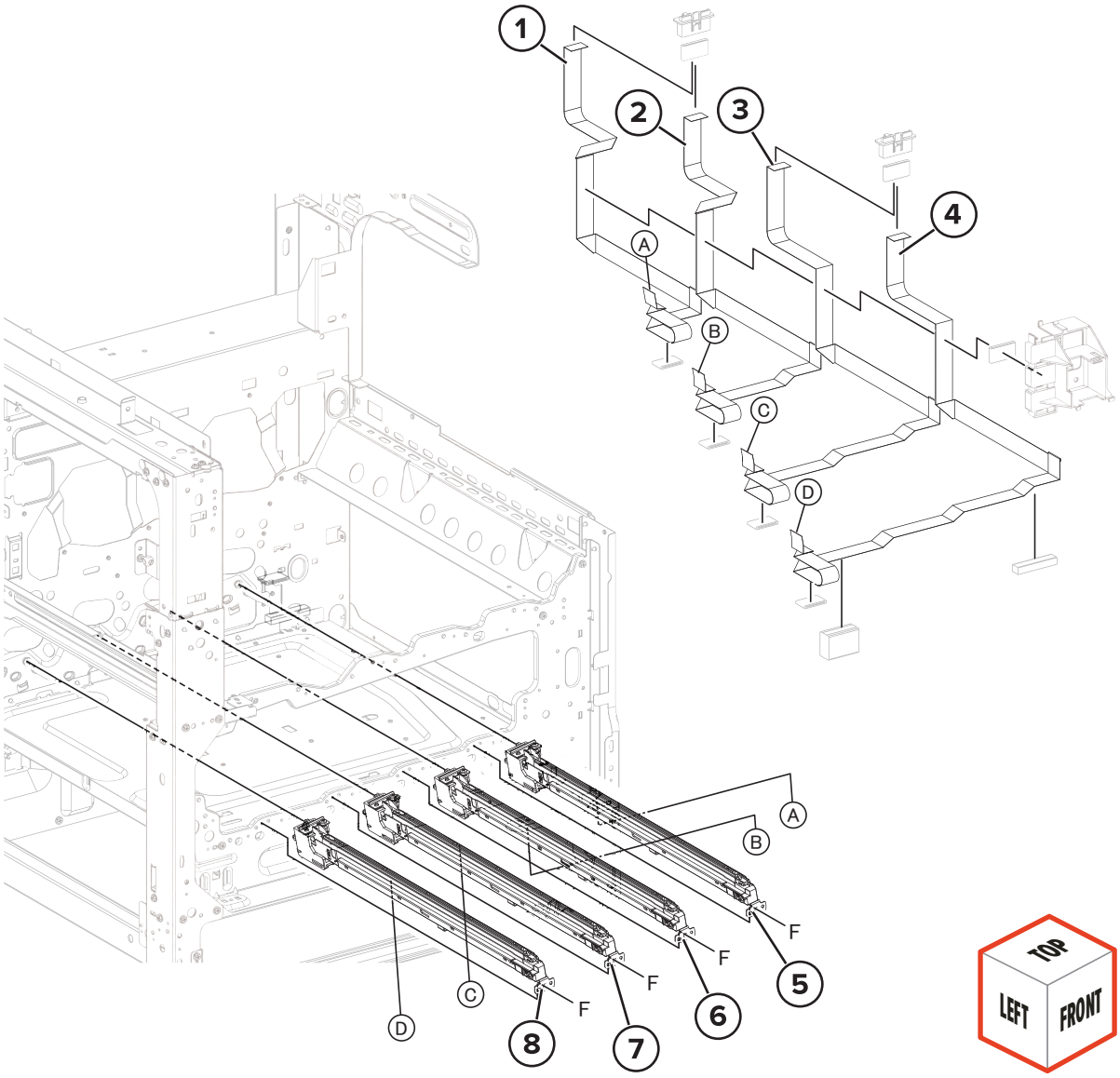
Assembly 18: Motors 2



Assembly 18: Motors 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3742	1	1	K developer clutch	--
2	41X3741	1	1	Transport roller clutch	--

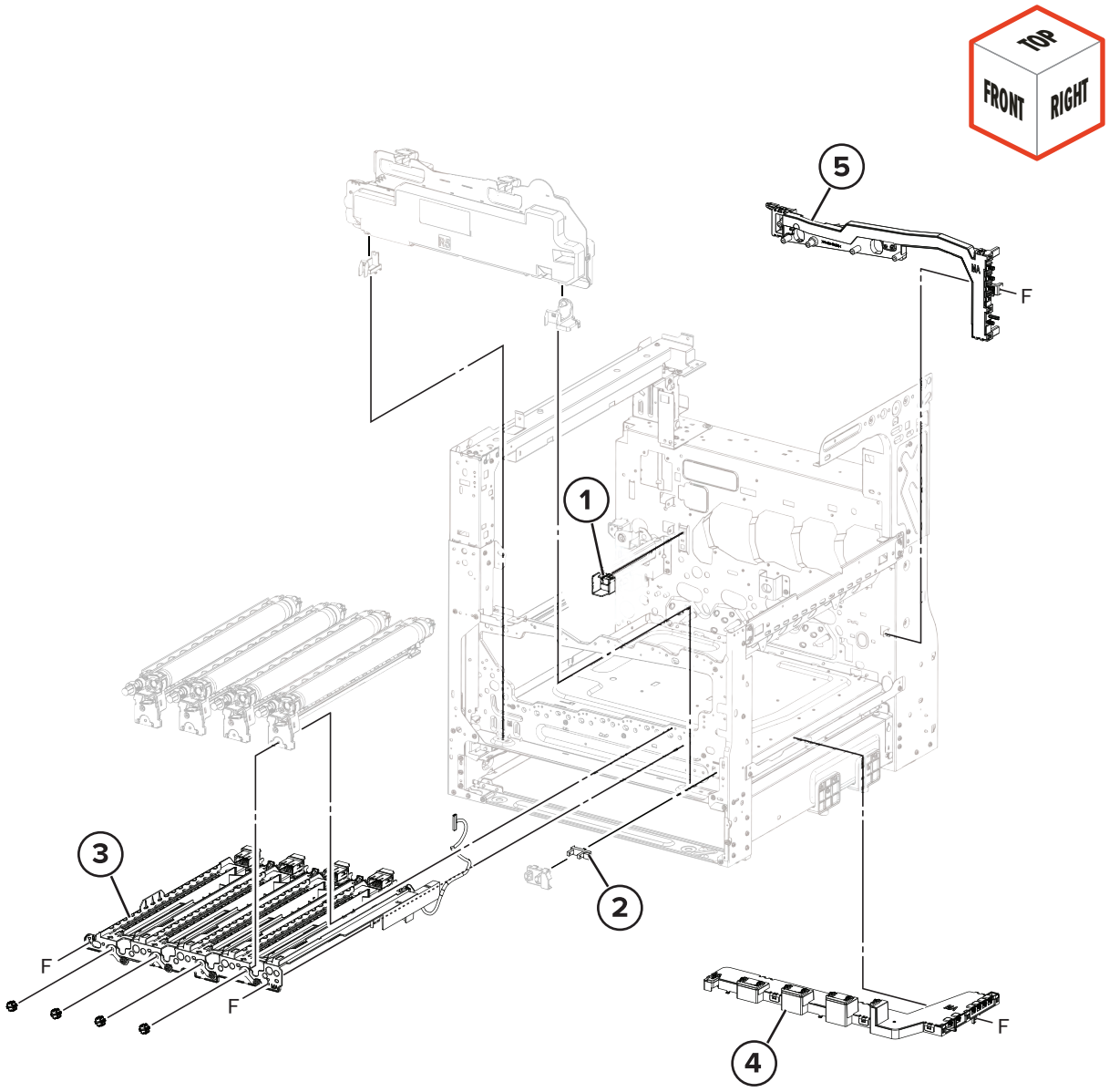
Assembly 19: LPH



Assembly 19: LPH

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3735	1	1	Printhead FFC (Y)	“Printhead FFC removal” on page 398
2	41X3734	1	1	Printhead FFC (M)	“Printhead FFC removal” on page 398
3	41X3733	1	1	Printhead FFC (C)	“Printhead FFC removal” on page 398
4	41X3732	1	1	Printhead FFC (K)	“Printhead FFC removal” on page 398
5	41X3728	1	1	Printhead (Y)	“Printhead removal” on page 369
6	41X3728	1	1	Printhead (M)	“Printhead removal” on page 369
7	41X3728	1	1	Printhead (C)	“Printhead removal” on page 369
8	41X3728	1	1	Printhead (K)	“Printhead removal” on page 369

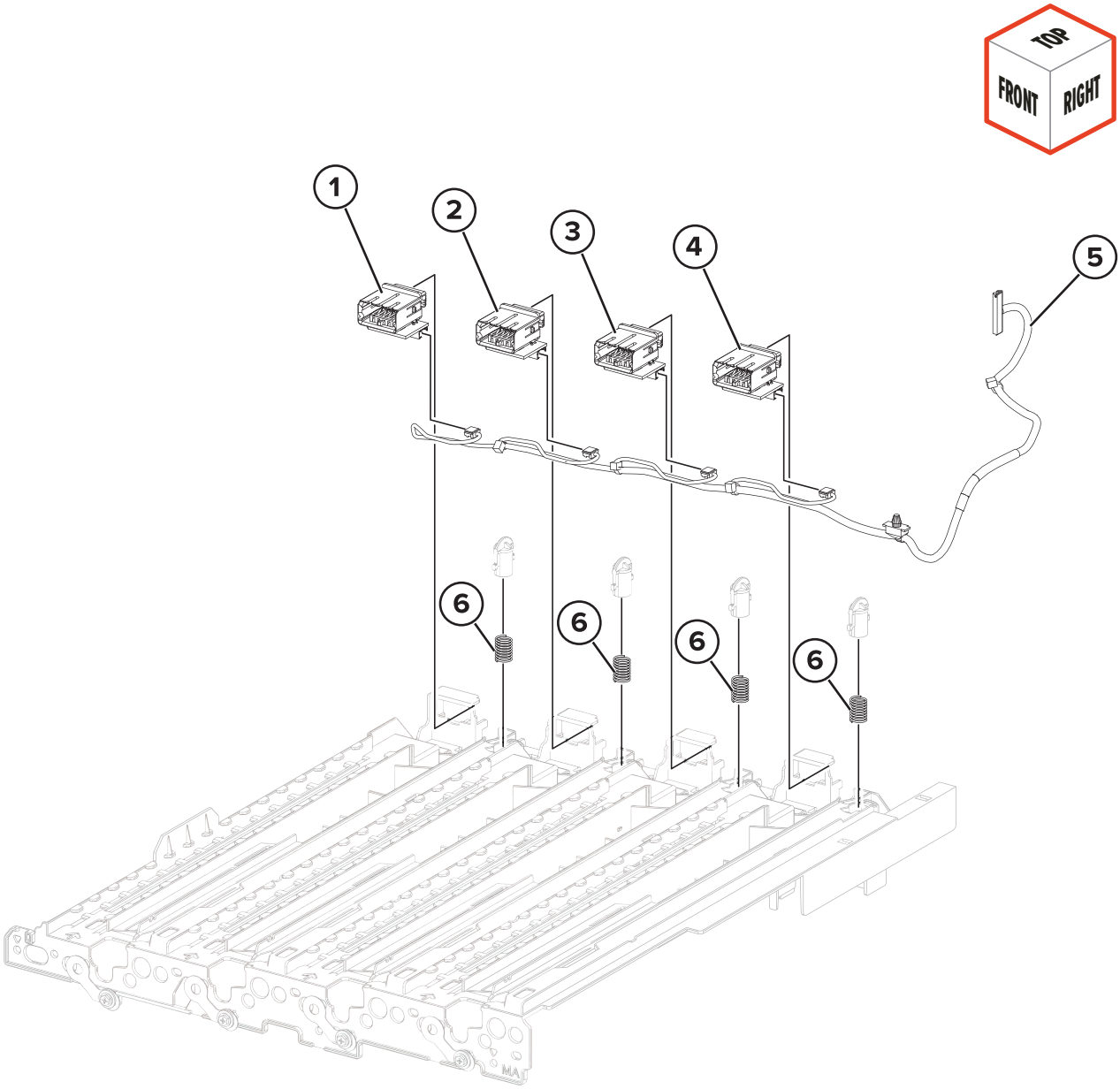
Assembly 20: Photoconductor 1



Assembly 20: Photoconductor 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3766	1	1	Sensor (environment)	**“Sensor (environment) removal” on page 407**
2	41X3355	1	1	Sensor (waste toner bottle full)	**“Sensor (waste toner bottle full) removal” on page 359**
3	41X3763	1	1	Photoconductor tray	--
4	41X3764	1	1	HVPS contact frame	--
5	41X3765	1	1	Photoconductor contact frame	--

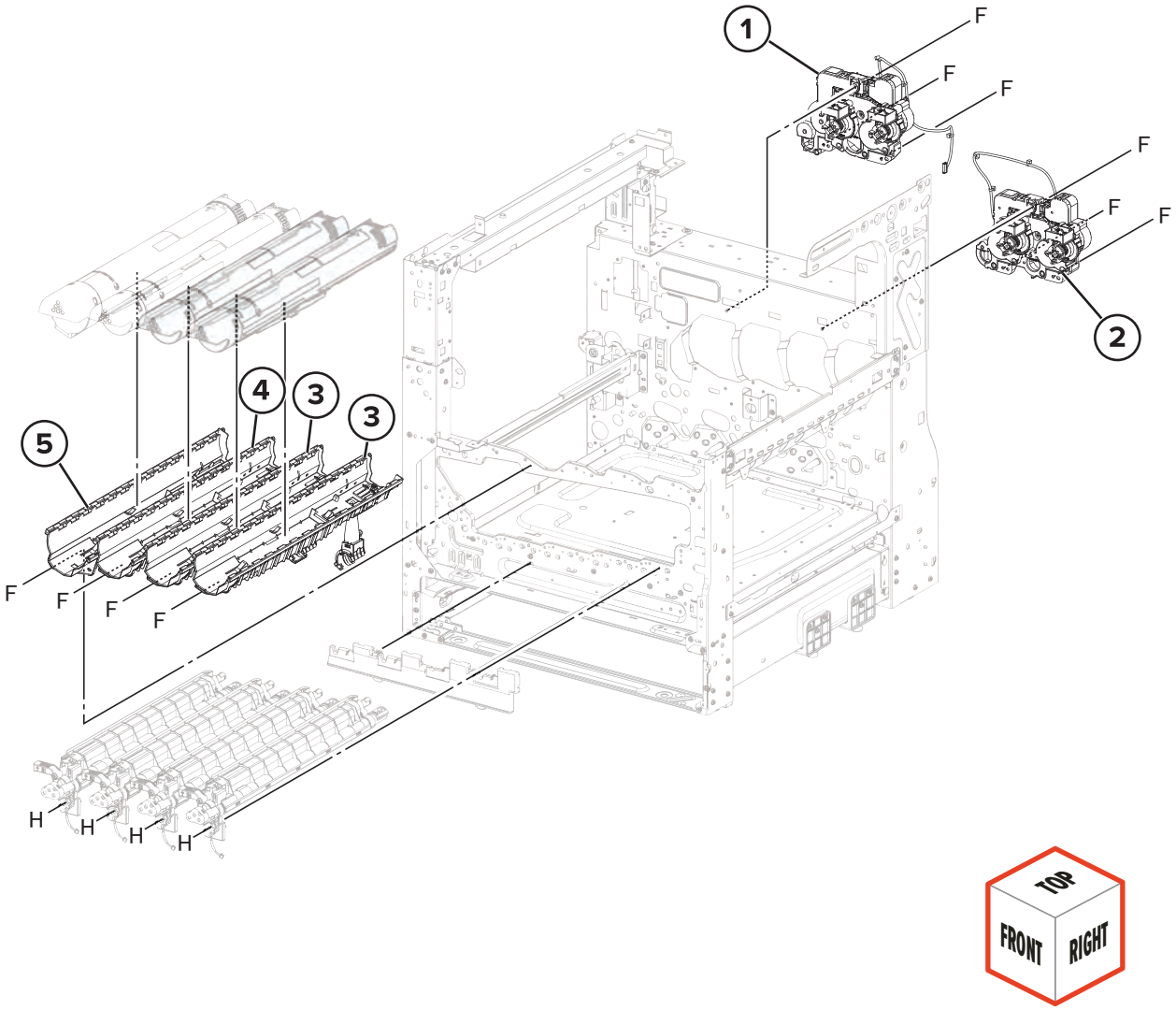
Assembly 21: Photoconductor 2



Assembly 21: Photoconductor 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3767	1	1	Photoconductor contact (K)	--
2	41X3767	1	1	Photoconductor contact (C)	--
3	41X3767	1	1	Photoconductor contact (M)	--
4	41X3767	1	1	Photoconductor contact (Y)	--
5	41X3771	1	1	Photoconductor contacts cable	--

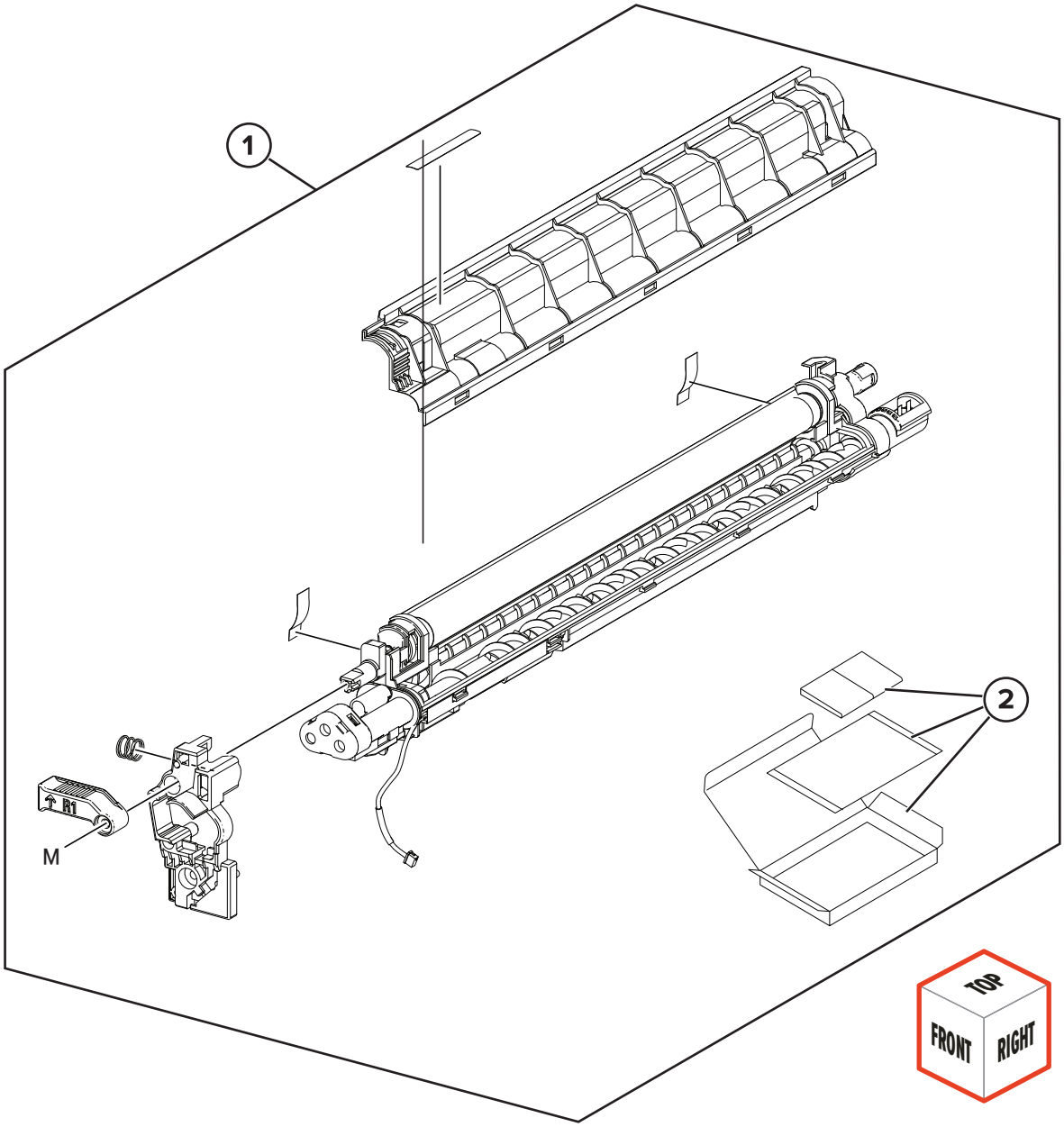
Assembly 22: Toner supply 1



Assembly 22: Toner supply 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3750	1	1	Dispenser drive (C, K)	“Dispenser drive (C, K) removal” on page 397
2	41X3749	1	1	Dispenser drive (Y, M)	“Dispenser drive (Y, M) removal” on page 395
3	41X3746	1	1	Toner dispenser (Y, M)	“Toner dispenser removal” on page 408
4	41X3747	1	1	Toner dispenser (C)	“Toner dispenser removal” on page 408
5	41X3748	1	1	Toner dispenser (K)	“Toner dispenser removal” on page 408

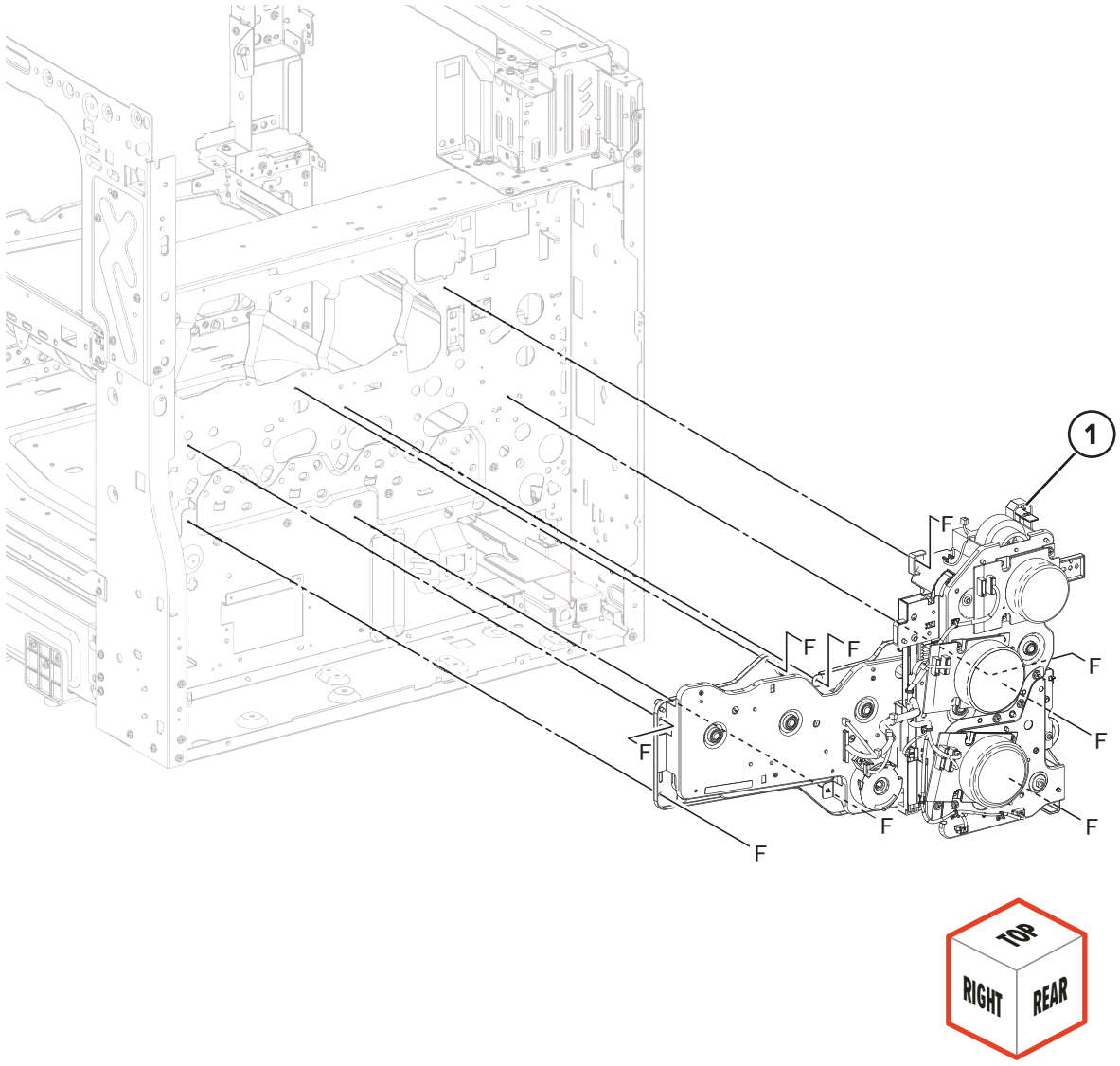
Assembly 23: Toner supply 2



Assembly 23: Toner supply 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3754	1	1	Developer unit (Y)	“Developer unit removal” on page 363
1	41X4055	1	1	Developer unit (M)	“Developer unit removal” on page 363
1	41X4056	1	1	Developer unit (C)	“Developer unit removal” on page 363
1	41X4057	1	1	Developer unit (K)	“Developer unit removal” on page 363
2	41X3753	1	1	Developer carrier (Y)	--
2	41X4052	1	1	Developer carrier (M)	--
2	41X4053	1	1	Developer carrier (C)	--
2	41X4054	1	1	Developer carrier (K)	--

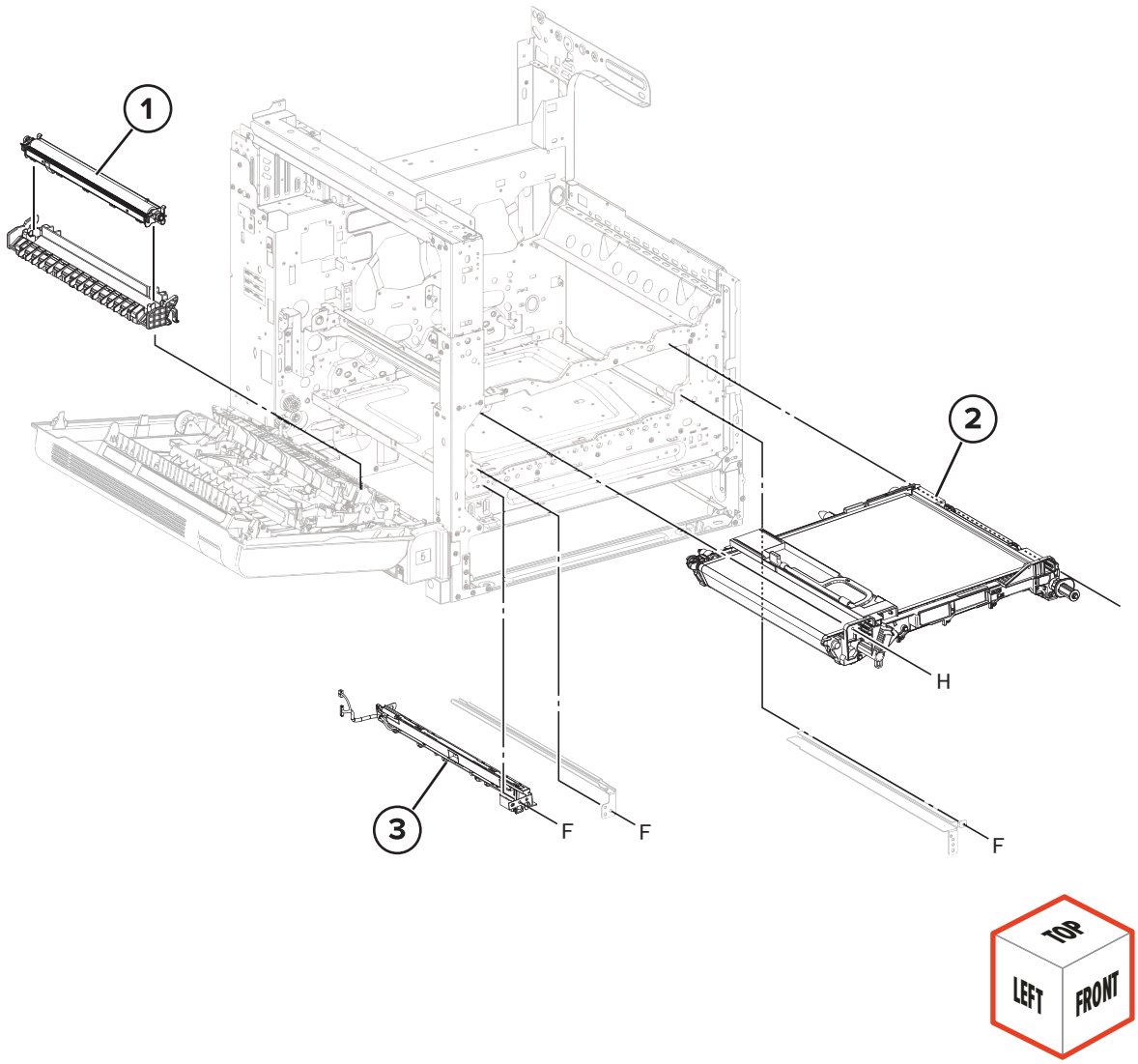
Assembly 24: Drive assembly



Assembly 24: Drive assembly

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3736	1	1	Drive gearbox	“Drive gearbox removal” on page 392

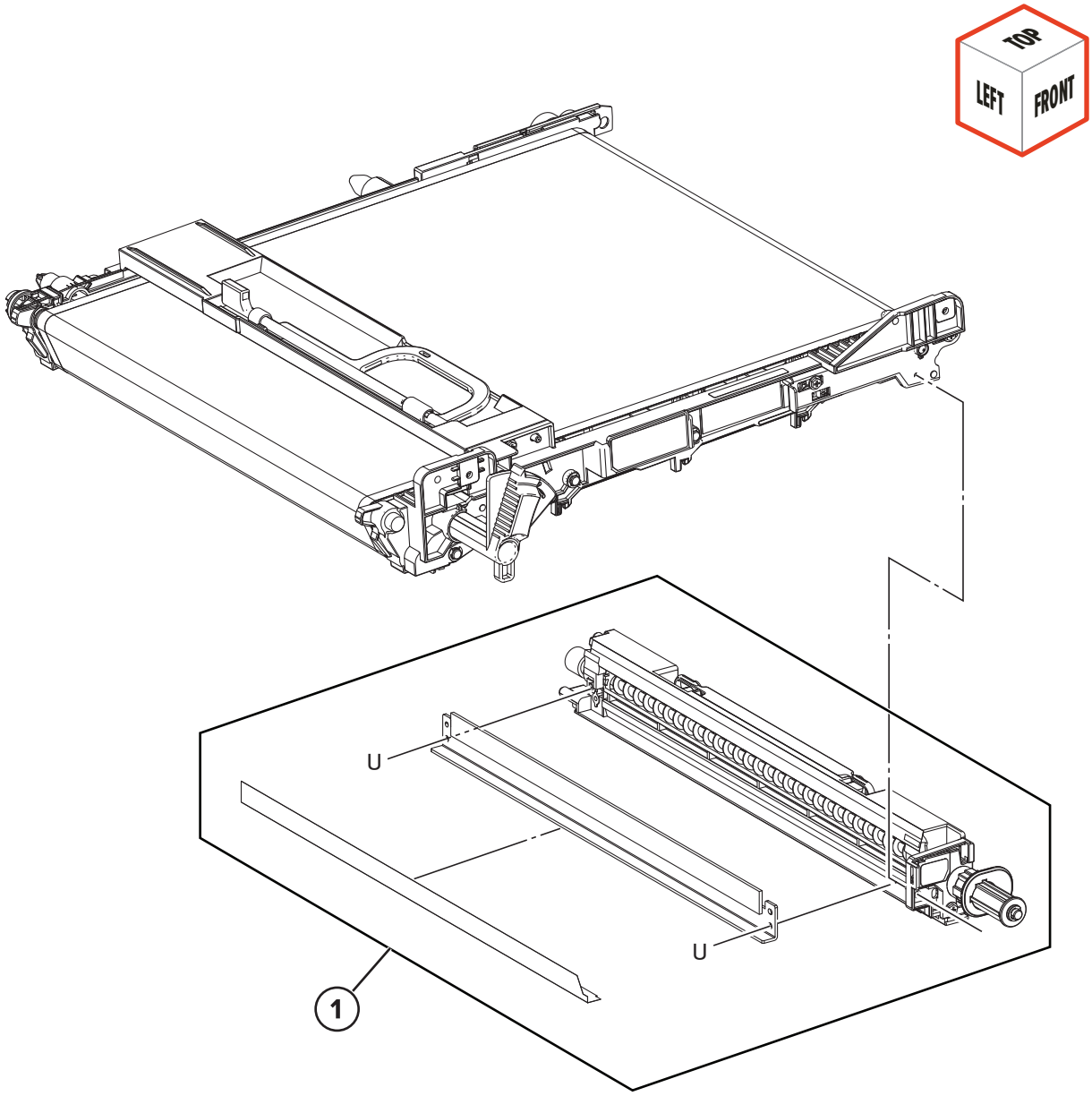
Assembly 25: Transfer 1



Assembly 25: Transfer 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3756	1	1	Second transfer roller	--
2	41X3755	1	1	Transfer module	“Transfer module removal” on page 366
3	41X3757	1	1	Sensor (TPS)	--

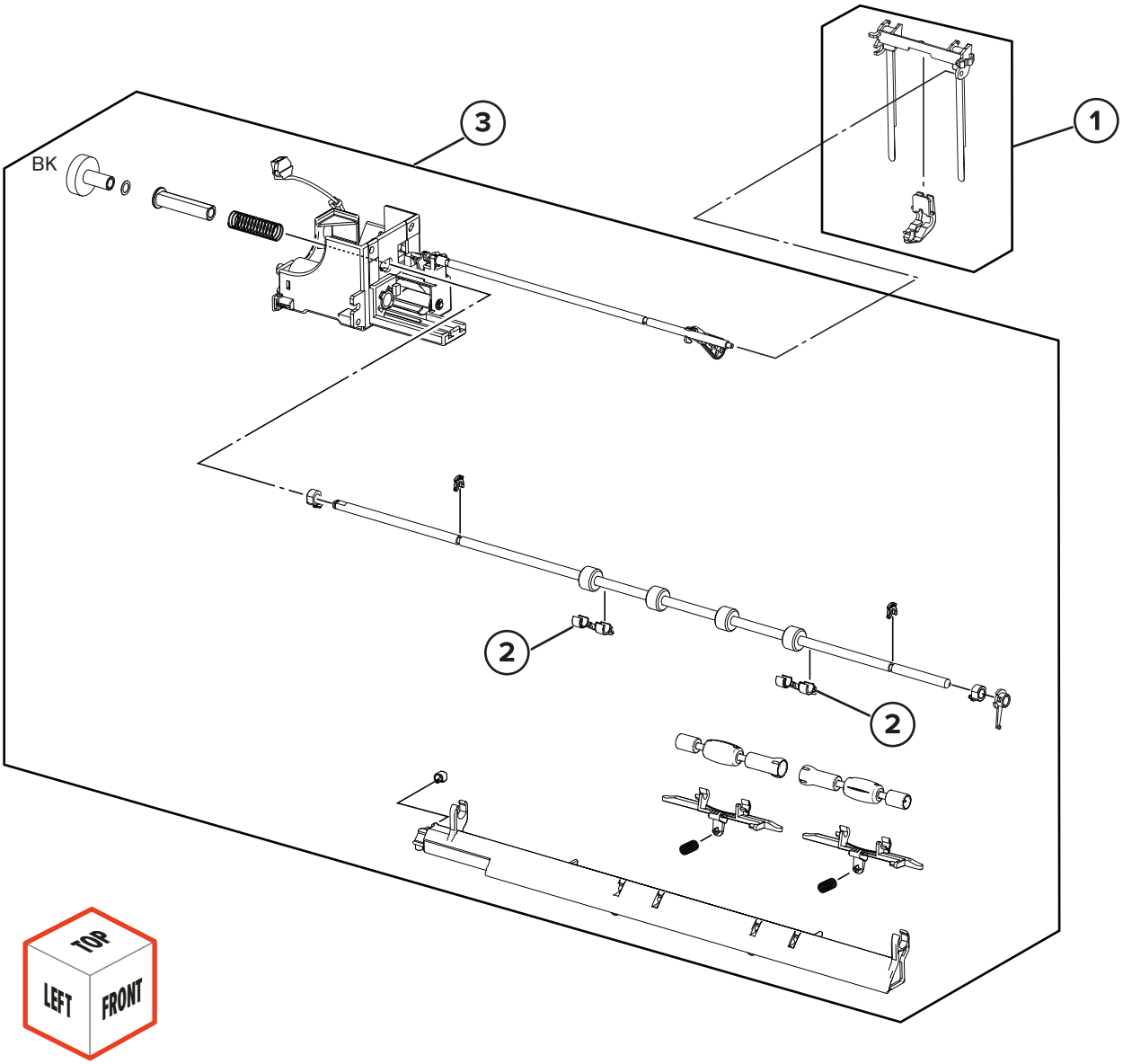
Assembly 26: Transfer 2



Assembly 26: Transfer 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3758	1	1	Transfer module cleaner	--

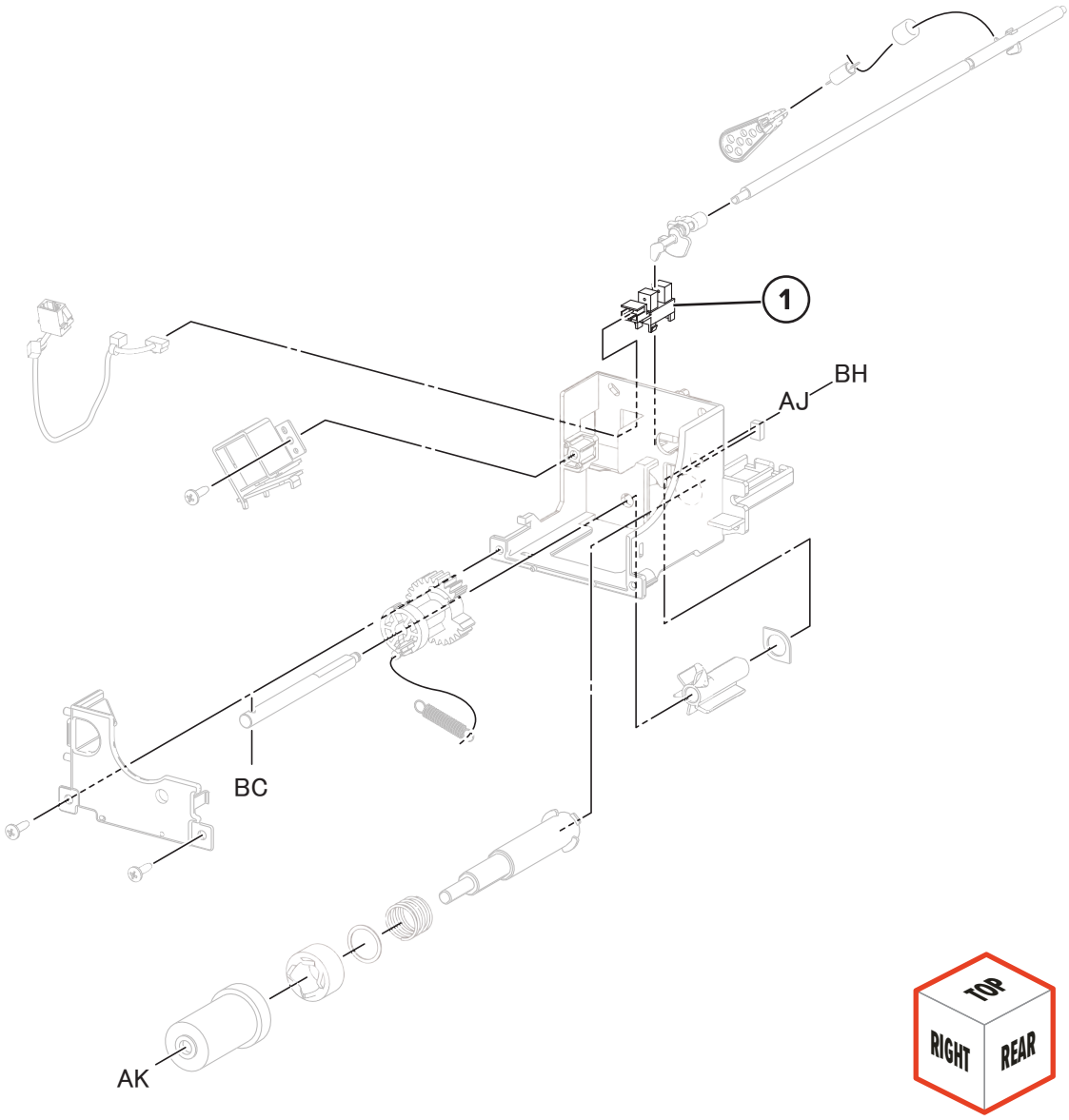
Assembly 27: Exit 1



Assembly 27: Exit 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3803	1	1	Exit 1 bail	“Exit 1 bail removal” on page 403
2	40X6724	1	1	Exit 1 guard	--
3	41X3802	1	1	Exit 1 transport	“Exit transport cover and exit bail removal” on page 339

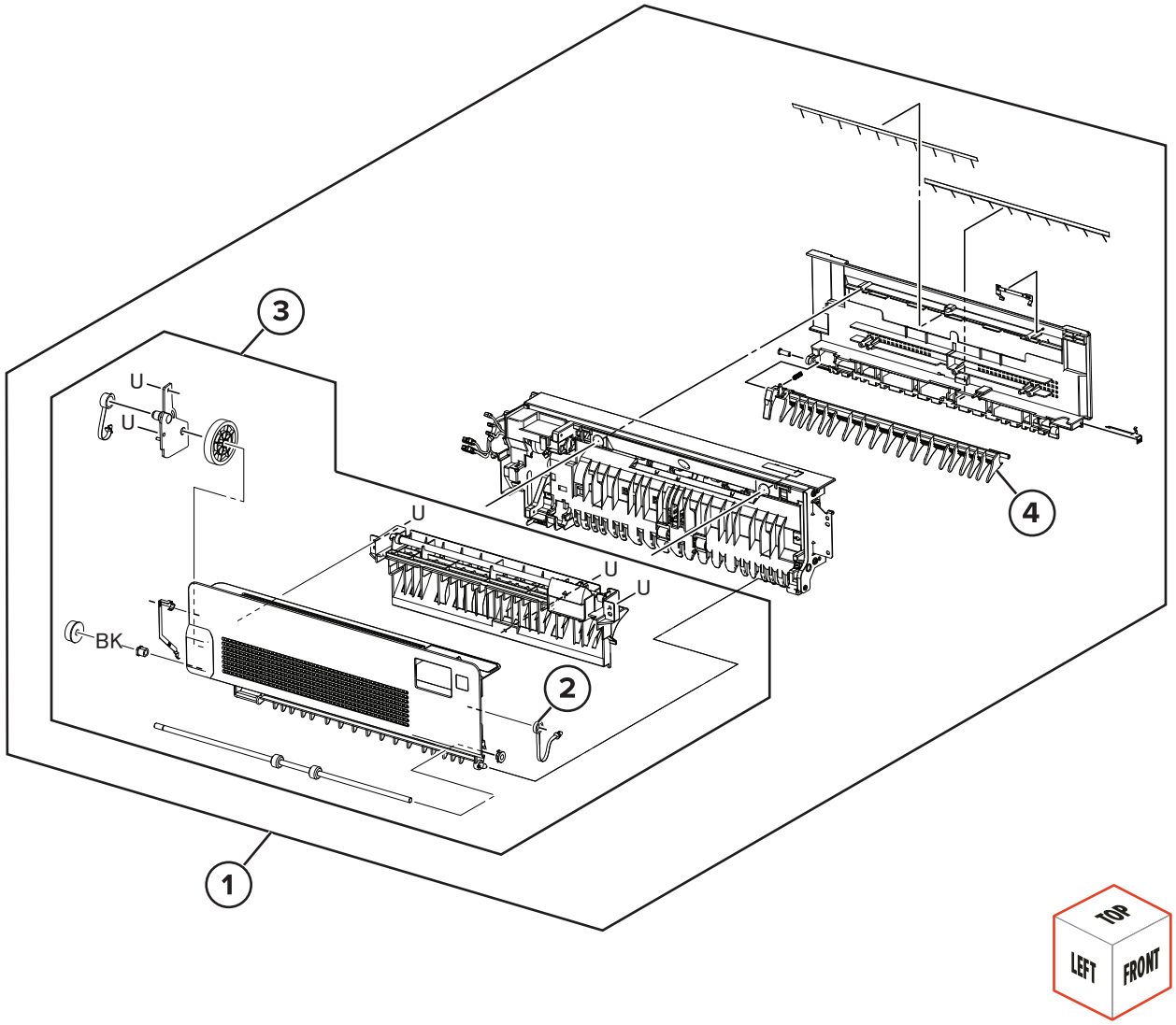
Assembly 28: Exit 2



Assembly 28: Exit 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0588	1	1	Sensor (bin full)	--

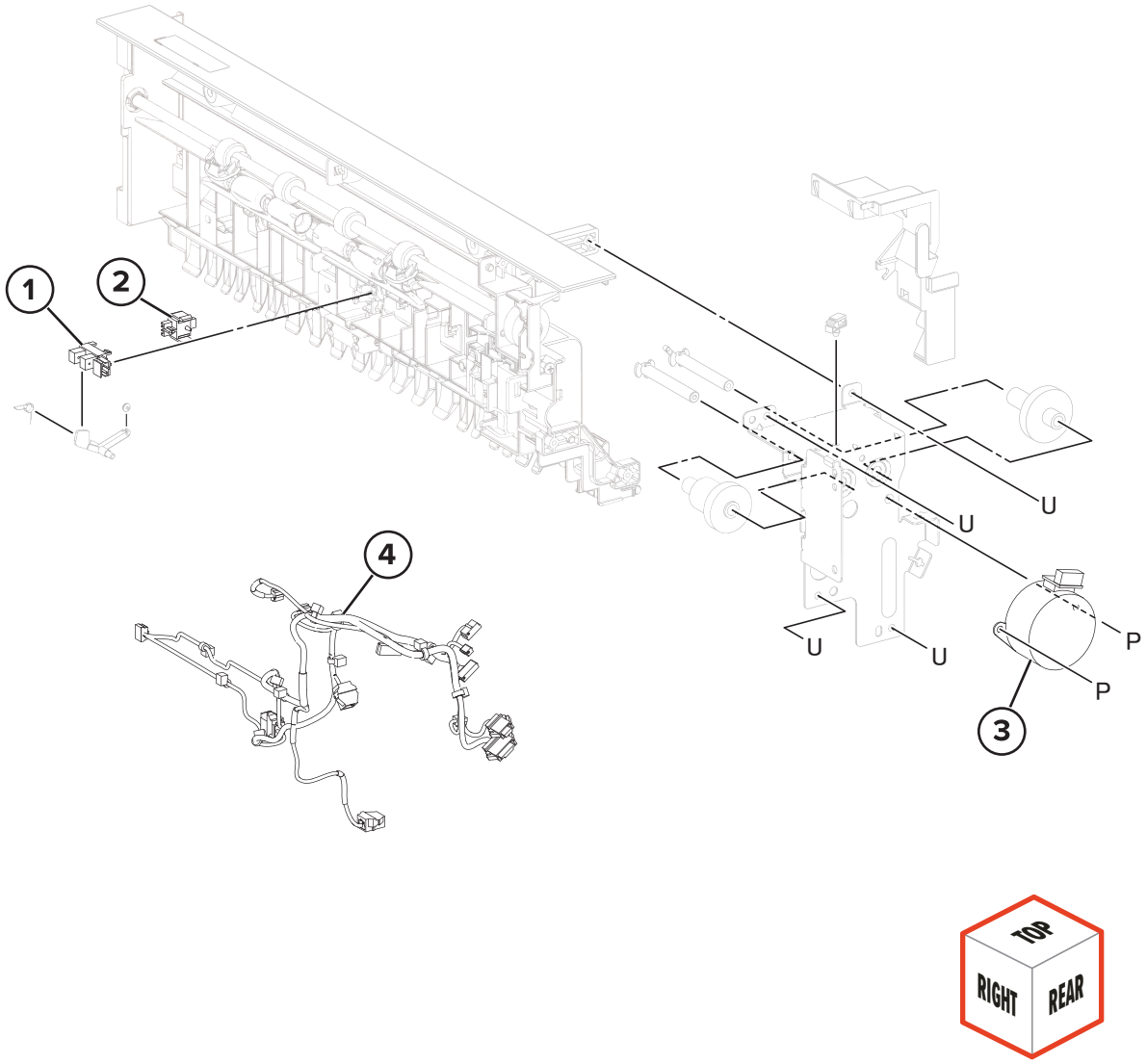
Assembly 29: Exit 3



Assembly 29: Exit 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3804	1	1	Exit 2 transport and door	**“Exit 2 transport removal” on page 328**
2	41X3806	1	1	Exit door strap	--
3	41X3805	1	1	Exit door	**“Exit door removal” on page 324**
4	41X3807	1	1	Exit diverter	--

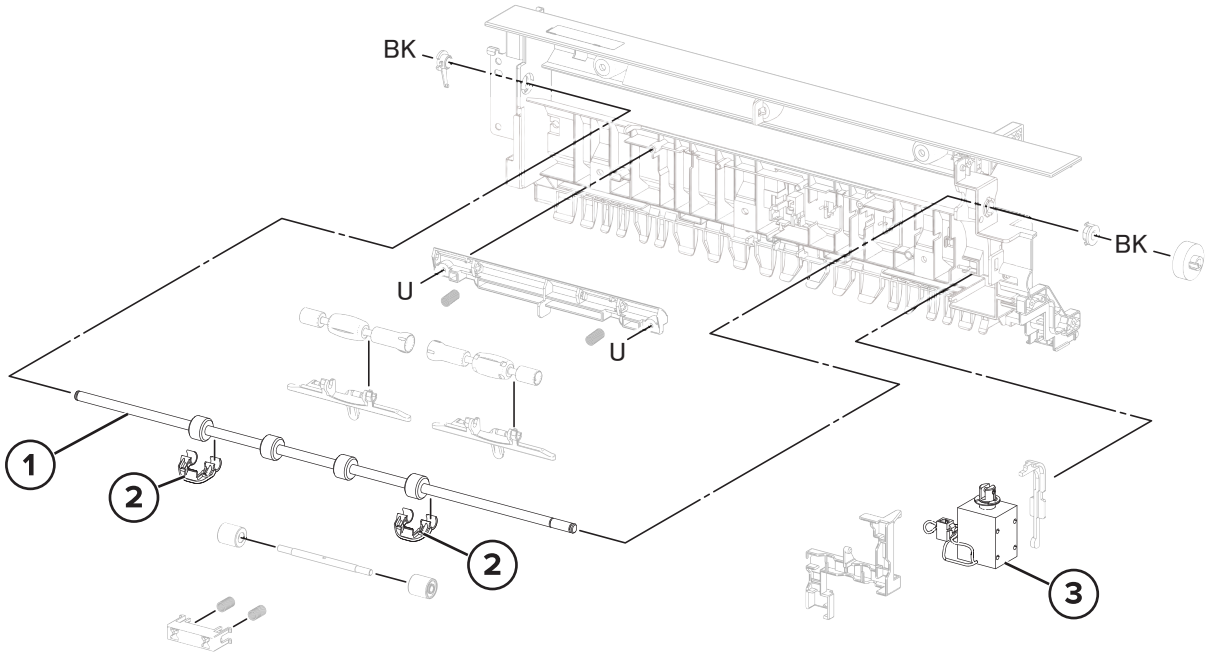
Assembly 30: Exit 4



Assembly 30: Exit 4

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0588	1	1	Sensor (exit 2)	“Sensor (exit 2) removal” on page 341
2	40X6700	1	1	Exit door switch	--
3	41X3809	1	1	Motor (exit 2)	“Motor (exit 2) removal” on page 338
4	41X3810	1	1	Exit 2 transport cable	--

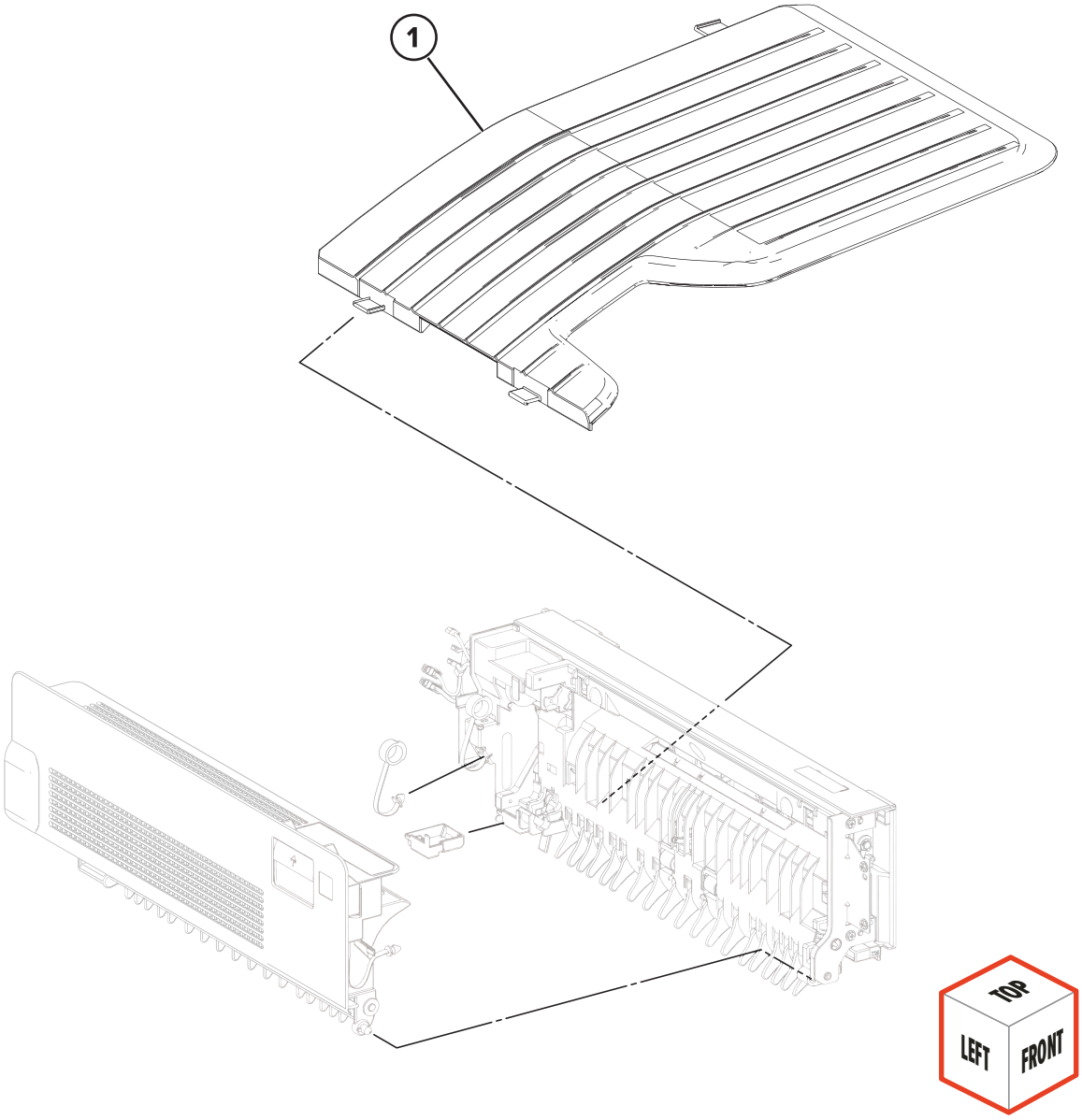
Assembly 31: Exit 5



Assembly 31: Exit 5

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3811	1	1	Exit 2 roller	--
2	40X6724	1	1	Exit 2 guard	--
3	41X3812	1	1	Exit diverter 2 solenoid	**“Exit diverter 2 solenoid removal” on page 340**

Assembly 32: Exit 6



Assembly 32: Exit 6

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4092	1	1	Exit 2 bin	--

Assembly 33: Maintenance kits

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3874	1	1	Fuser maintenance kit, 100V[1, 2]	--
1	41X3875	1	1	Fuser maintenance kit, 110V[1, 3]	--
1	41X3876	1	1	Fuser maintenance kit, 220V[1]	--
1	41X4113	1	1	Fuser maintenance kit, 120V[1]	--
1	41X3877	1	1	Developer kit[1]	--
1	41X3878	1	1	MPF roller kit[1]	--
1	41X4059	1	1	ADF roller kit[1]	--
1	41X4168	1	1	HCF roller kit[1]	--

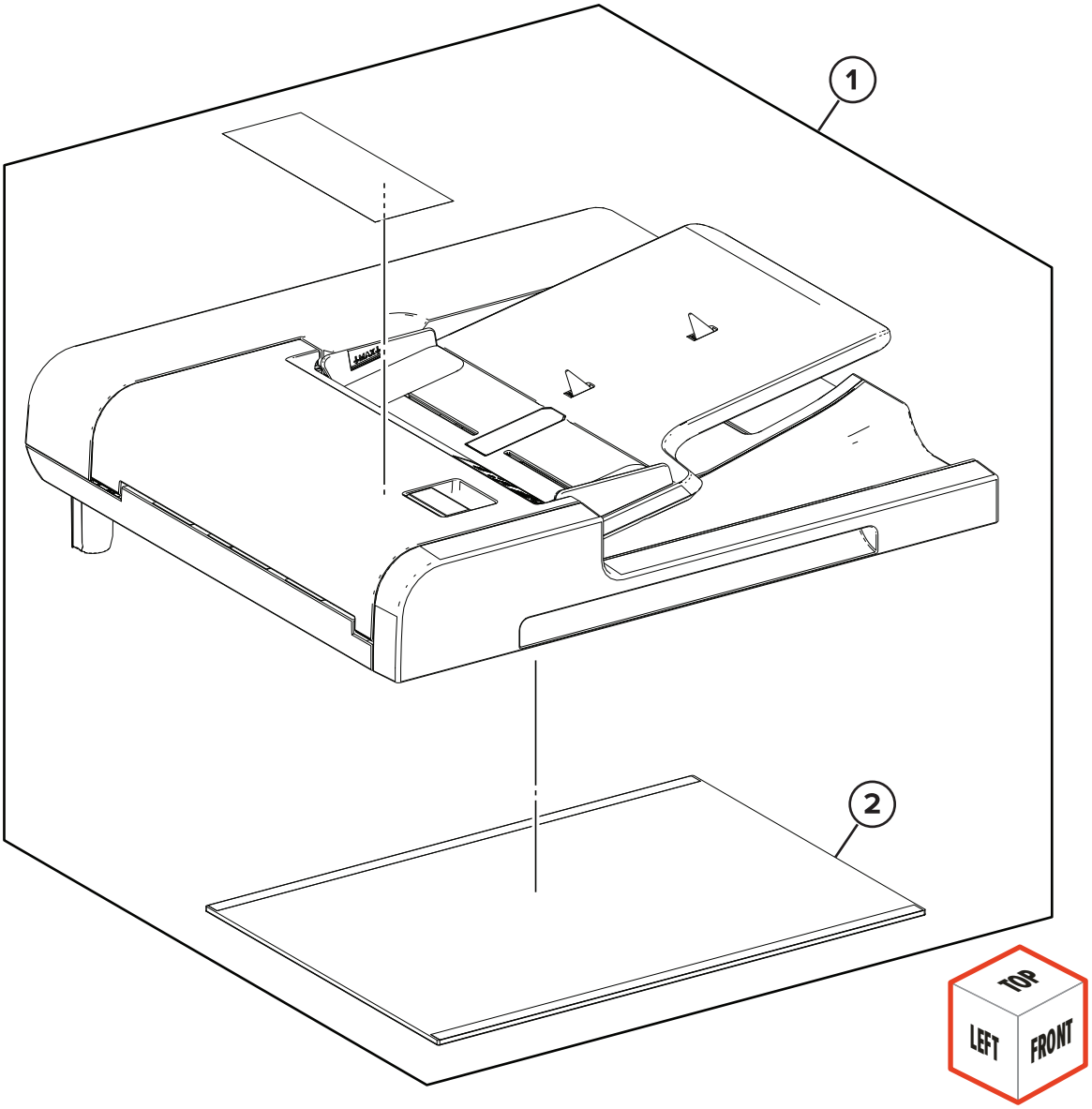
Notes:

- Parts with [1] in the description have FRU sheets.
- Parts with [2] in the description are supported in printers that are sold in Japan.
- Parts with [3] in the description are supported in printers that are sold in Taiwan.

Assembly 34: Miscellaneous

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	40X9652	1	1	Fiber Gigabit ISP adapter	--
NS	41X0997	1	1	Contact Authentication Device	--
NS	41X0998	1	1	Contactless Authentication Device	--
NS	41X1374	1	1	Fax card	--
NS	41X2854	1	1	Intelligent Storage Solution Flash Card (128GB)	--
NS	40X9934	1	1	Hard disk, 320GB	--
NS	41X4387	1	1	Power cord, 2.5 m (right angle, 10 A)—Brazil	--
NS	41X4388	1	1	Power cord, 2.5 m (right angle, 10 A)—India	--
NS	41X4389	1	1	Power cord, 2.5 m (right angle, 10 A)—Korea	--
NS	41X4390	1	1	Power cord, 2.5 m (right angle, 10 A)—EMEA	--
NS	41X4391	1	1	Power cord, 2.5 m (right angle, 10 A)—USA	--
NS	41X4392	1	1	Power cord, 2.5 m (right angle, 10 A)—Taiwan	--
NS	41X2873	1	1	Trusted platform module smart card	--
NS	41X1873	1	1	Chinook wireless network card	--
NS	40X0305	1	1	Power cord, 8 ft	--
NS	40X0283	1	1	Power cord, 8 ft (right angle)	--
NS	40X0255	1	1	Power cord, 8 ft (right angle)—Argentina	--
NS	40X0256	1	1	Power cord, 8 ft (right angle)—USA	--
NS	40X0257	1	1	Power cord, 8 ft (right angle)—Italy	--
NS	40X0258	1	1	Power cord, 8 ft (right angle)—Europe	--
NS	40X0260	1	1	Power cord, 8 ft (right angle, 13 A)	--
NS	40X0304	1	1	Power cord, 8 ft (right angle)	--
NS	40X0295	1	1	Power cord, 8 ft (right angle)—Israel	--
NS	40X0311	1	1	Power cord, 8 ft (right angle)—China	--
NS	40X0312	1	1	Power cord, 8 ft (right angle)—Australia, New Zealand	--
NS	40X4819	1	1	RS232C serial adapter	--

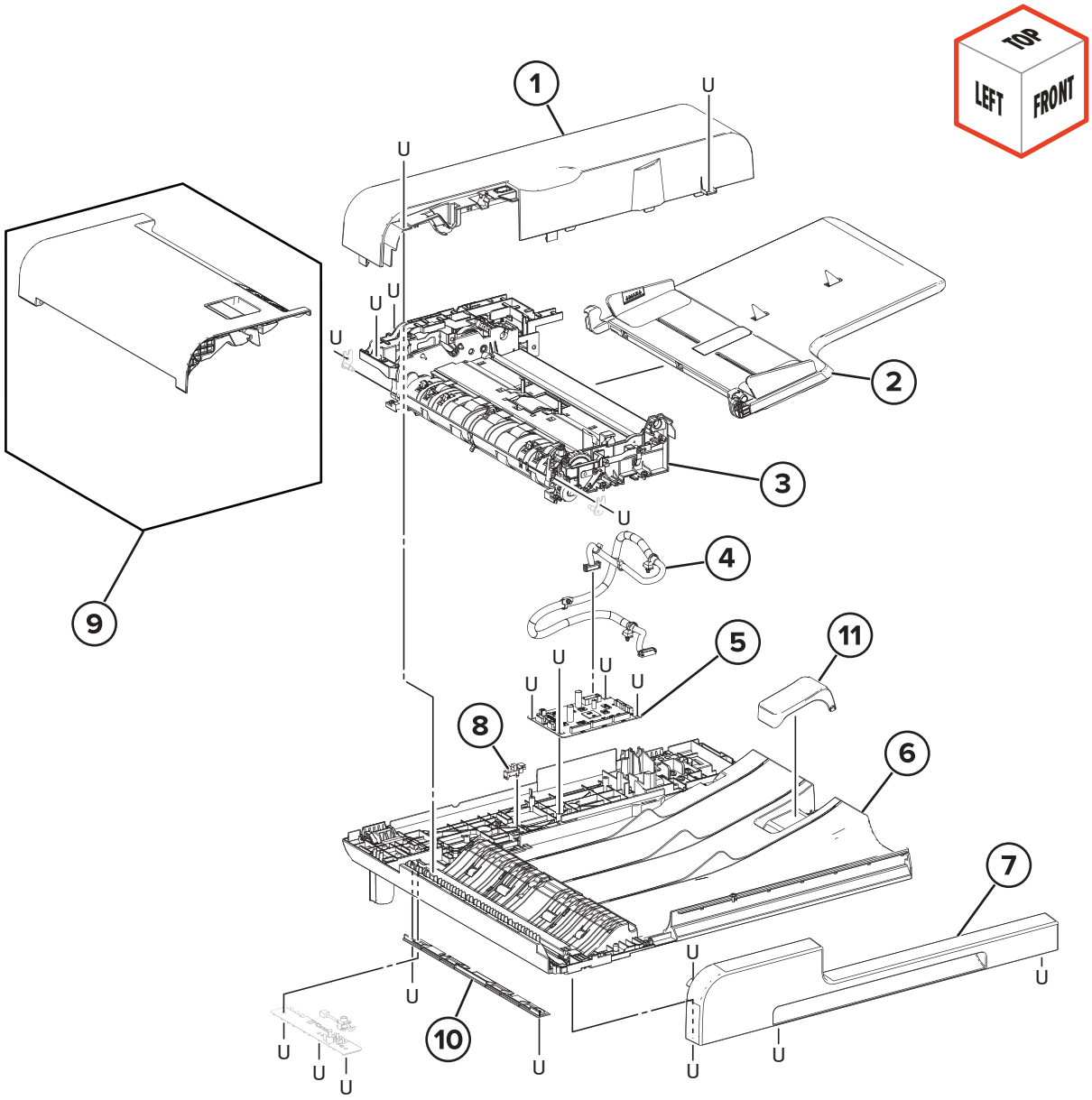
Assembly 35: ADF 1



Assembly 35: ADF 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3850	1	1	ADF	“ADF removal” on page 432
2	41X3849	1	1	Scanner glass pad	--

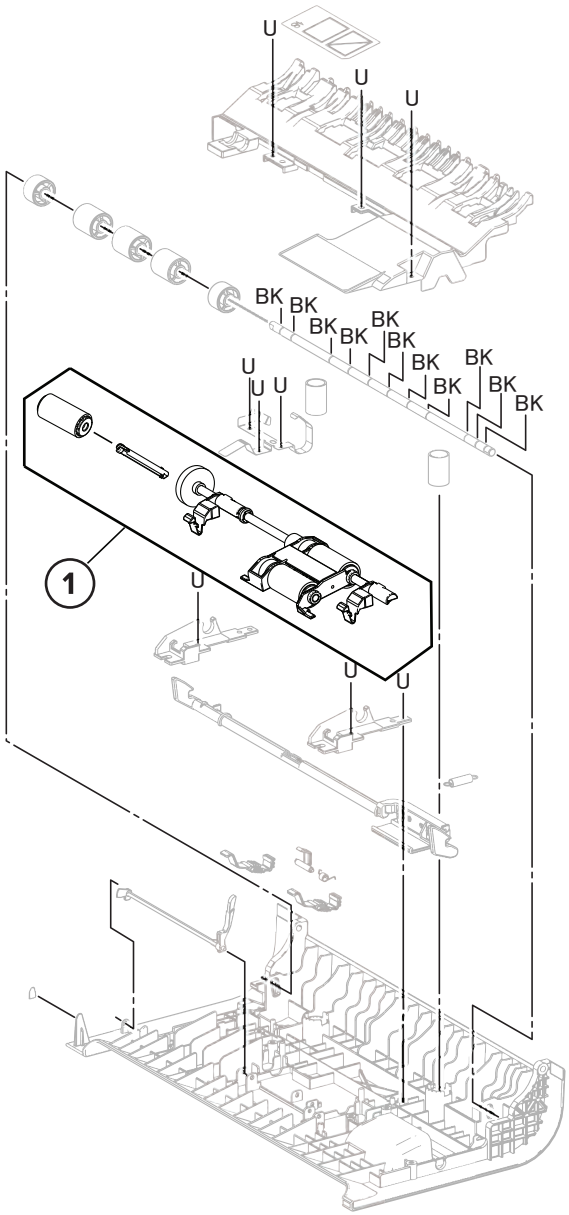
Assembly 36: ADF 2



Assembly 36: ADF 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3853	1	1	ADF rear cover	“ADF rear cover removal” on page 421
2	41X3852	1	1	ADF tray	“ADF tray removal” on page 425
3	41X3858	1	1	ADF transport	--
4	41X3857	1	1	ADF interface cable	--
5	41X3856	1	1	ADF controller board	“ADF controller board removal” on page 422
6	41X3851	1	1	ADF bottom frame	--
7	41X3854	1	1	ADF front cover	“ADF front cover removal” on page 428
8	40X7403	1	1	Sensor (ADF cover)	“Sensor (ADF cover) removal” on page 423
9	41X3859	1	1	ADF door	“ADF door removal” on page 431
10	41X3855	1	1	ADF registration nip cover	--
11	41X4187	1	1	ADF bin stopper	--

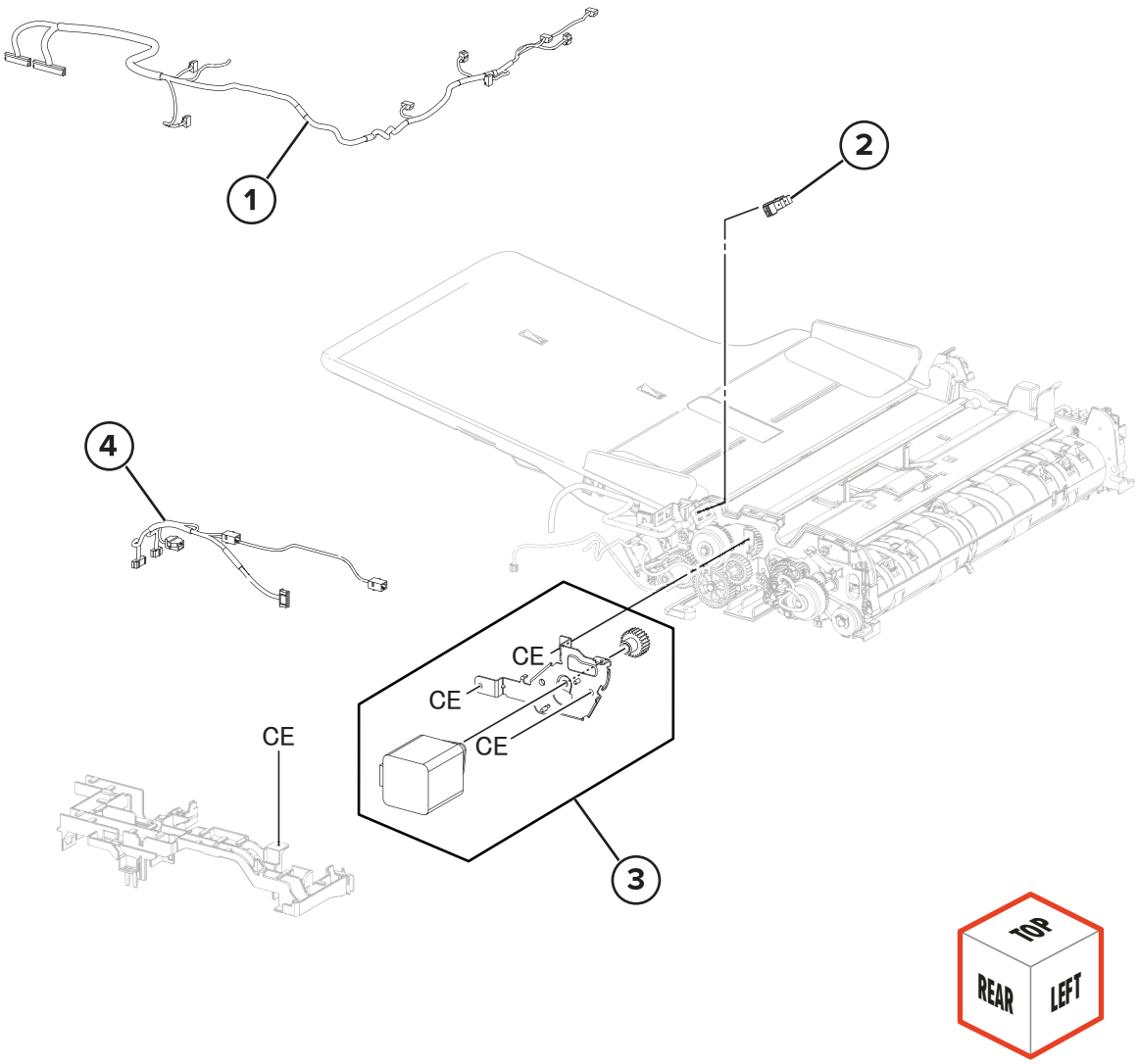
Assembly 37: ADF feed 1



Assembly 37: ADF feed 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3860	1	1	ADF paper feeder	--

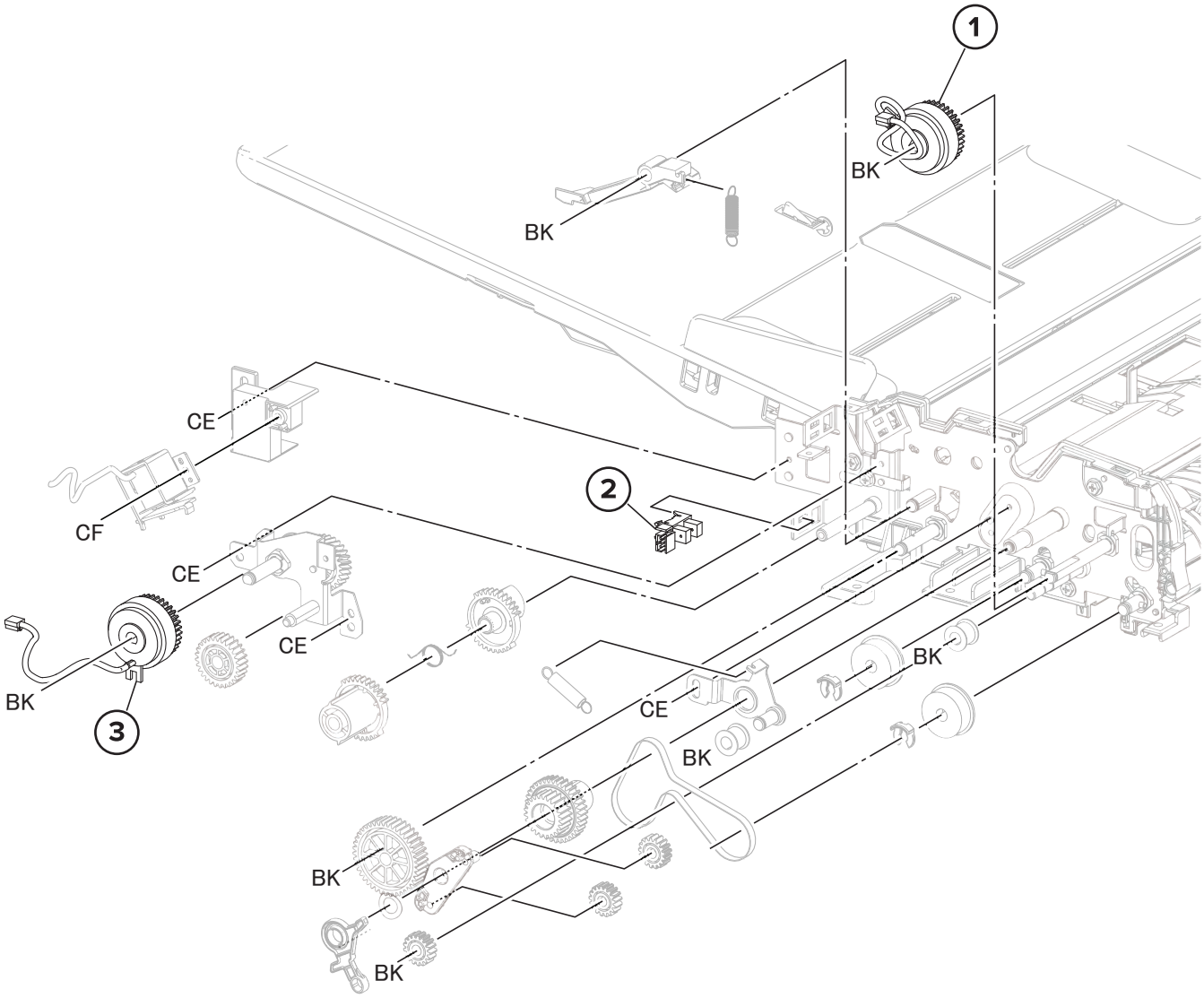
Assembly 38: ADF feed 2



Assembly 38: ADF feed 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4074	1	1	ADF cable 2	--
2	40X7403	1	1	Sensor (ADF paper present)	**“Sensor (ADF paper present) removal” on page 423**
3	41X3862	1	1	Motor (feed)	--
4	41X3863	1	1	ADF motor cable	--

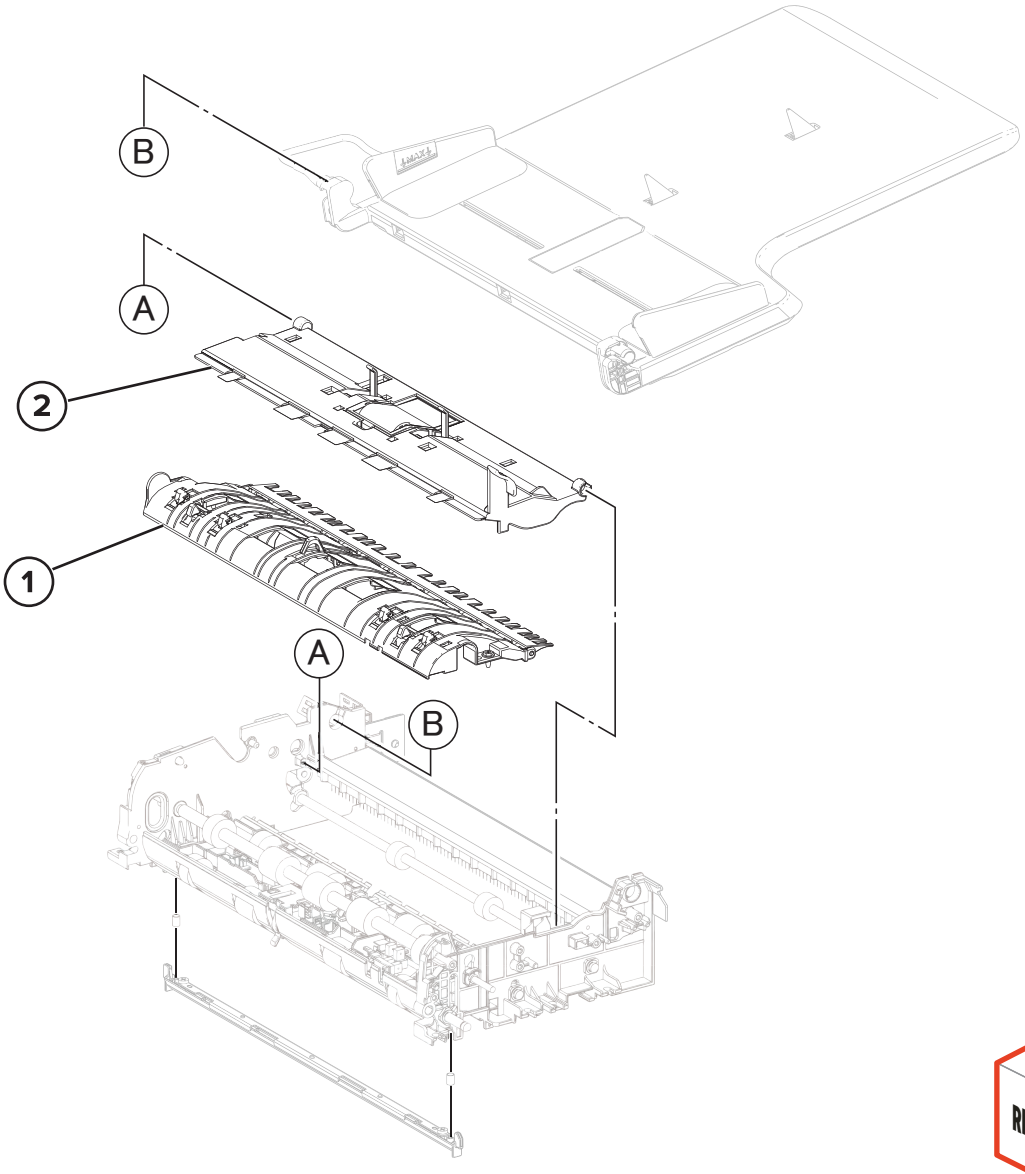
Assembly 39: ADF feed 3



Assembly 39: ADF feed 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3864	1	1	ADF transport clutch	--
2	40X7403	1	1	Sensor (ADF exit roller nip)	--
3	41X3864	1	1	ADF feed clutch	--

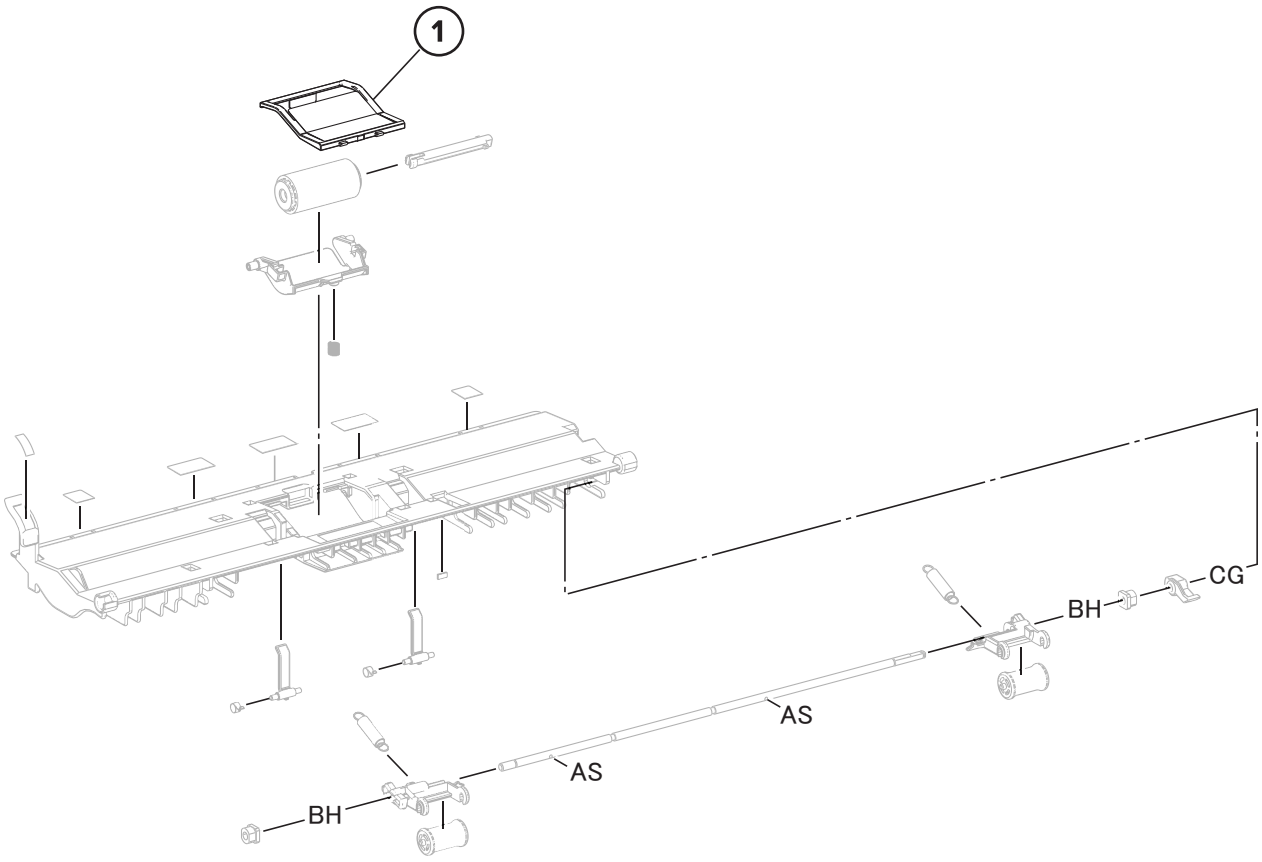
Assembly 40: ADF feed 4



Assembly 40: ADF feed 4

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3870	1	1	ADF separator guide	**“ADF separator guide removal” on page 427**
2	41X3865	1	1	ADF duplex guide	**“ADF duplex guide removal” on page 429**

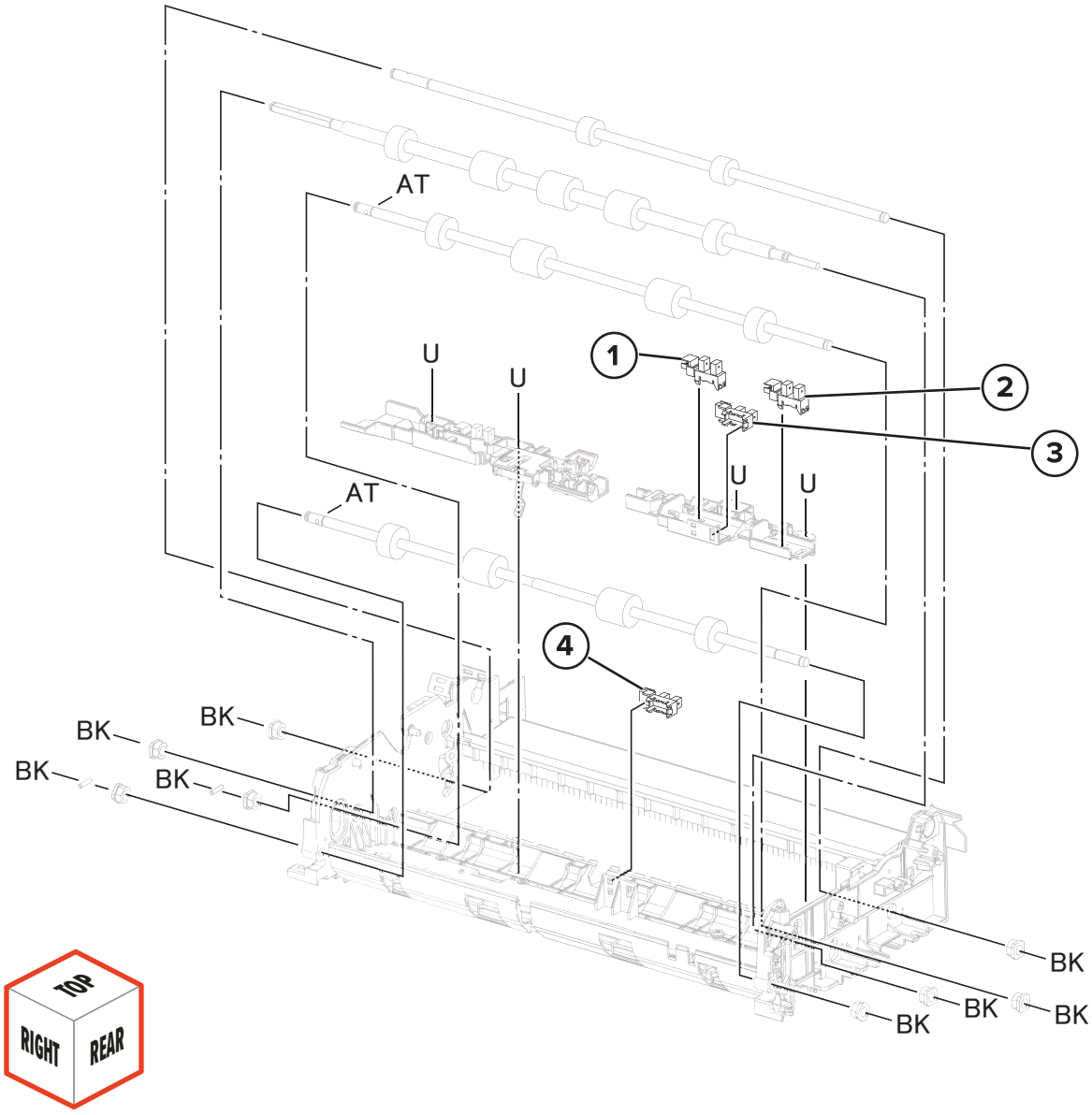
Assembly 41: ADF feed 5



Assembly 41: ADF feed 5

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3609	1	1	ADF separator cover	--

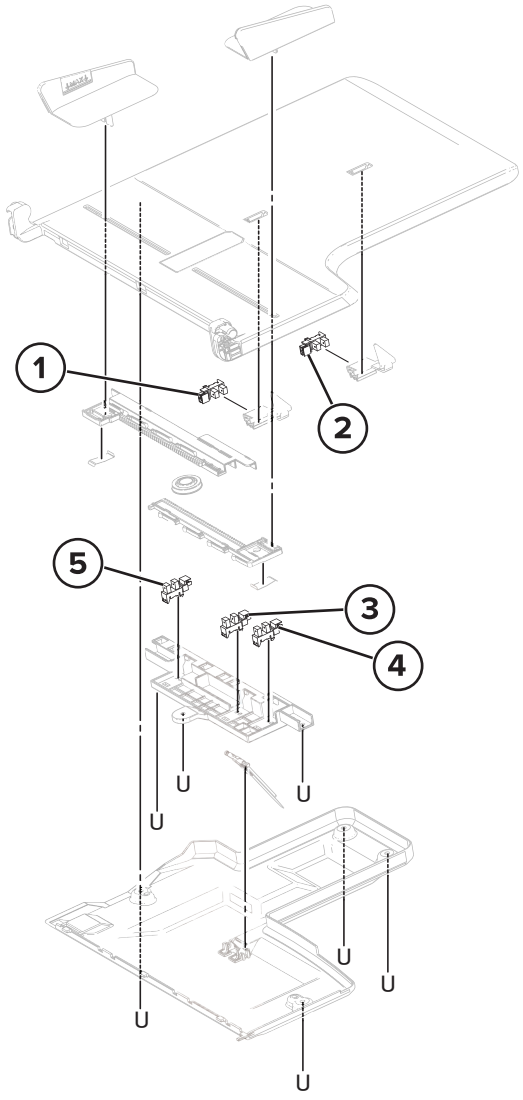
Assembly 42: ADF registration 1



Assembly 42: ADF registration 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X7403	1	1	Sensor (ADF mixed paper width 3)	--
2	40X7403	1	1	Sensor (ADF mixed paper width 1)	--
3	40X7403	1	1	Sensor (ADF mixed paper width 2)	**“Sensor (ADF mixed paper width 2) removal” on page 430**
4	40X7403	1	1	Sensor (ADF scan 2)	**“Sensor (ADF scan 2) removal” on page 431**

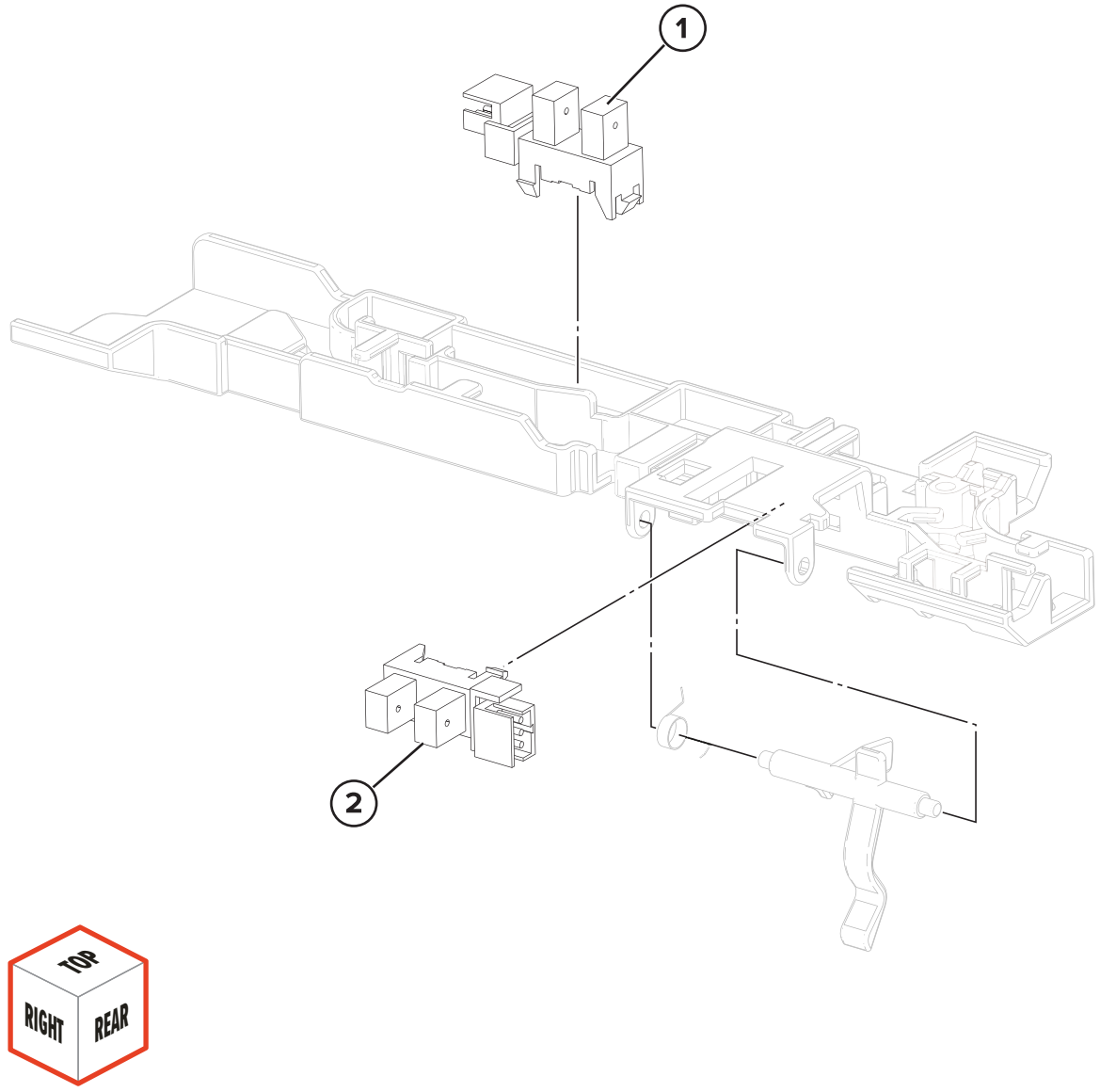
Assembly 43: ADF registration 2



Assembly 43: ADF registration 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X7403	1	1	Sensor (ADF paper length 1)	“Sensor (ADF paper length 1) removal” on page 424
2	40X7403	1	1	Sensor (ADF paper length 2)	“Sensor (ADF paper length 2) removal” on page 425
3	40X7403	1	1	Sensor (ADF tray paper width 2)	“Sensor (ADF tray paper width 2) removal” on page 434
4	40X7403	1	1	Sensor (ADF tray paper width 3)	“Sensor (ADF tray paper width 3) removal” on page 433
5	40X7403	1	1	Sensor (ADF tray paper width 1)	“Sensor (ADF tray paper width 1) removal” on page 435

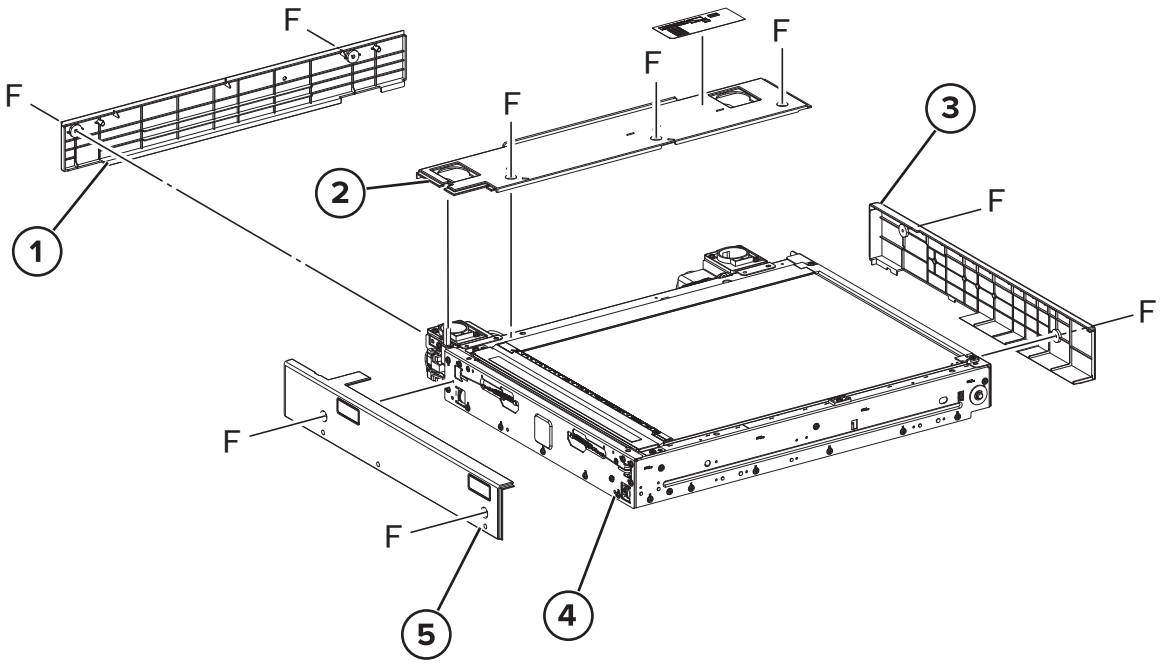
Assembly 44: ADF transport



Assembly 44: ADF transport

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X7403	1	1	Sensor (ADF transport)	--
2	40X7403	1	1	Sensor (ADF scan 1)	--

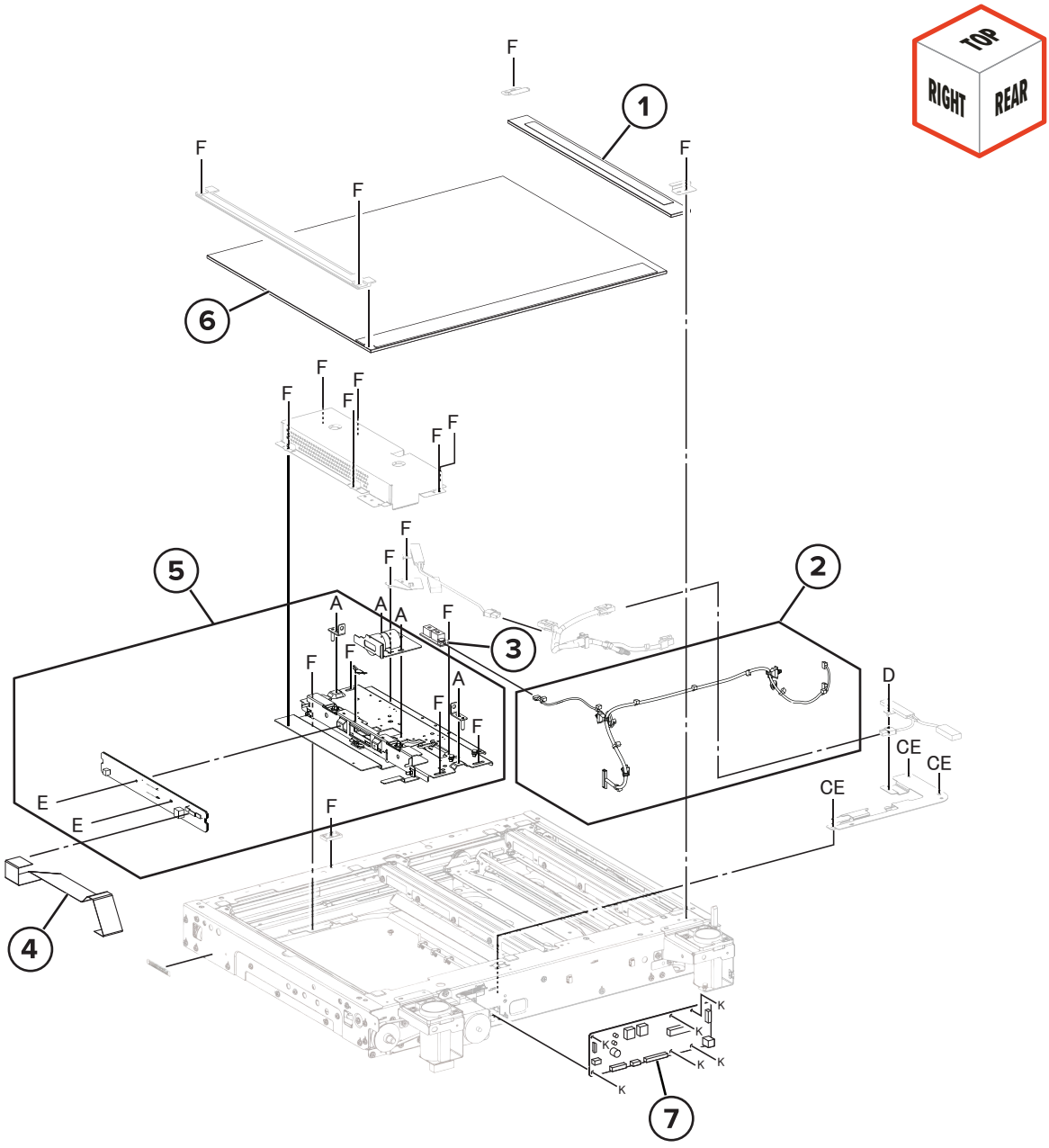
Assembly 45: Scanner covers



Assembly 45: Scanner covers

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3714	1	1	Scanner rear cover	“Scanner rear cover removal” on page 417
2	41X3713	1	1	Scanner top cover	--
3	41X3712	1	1	Scanner right cover	“Scanner right cover removal” on page 419
4	41X3715	1	1	Flatbed scanner	--
5	41X3711	1	1	Scanner left cover	--

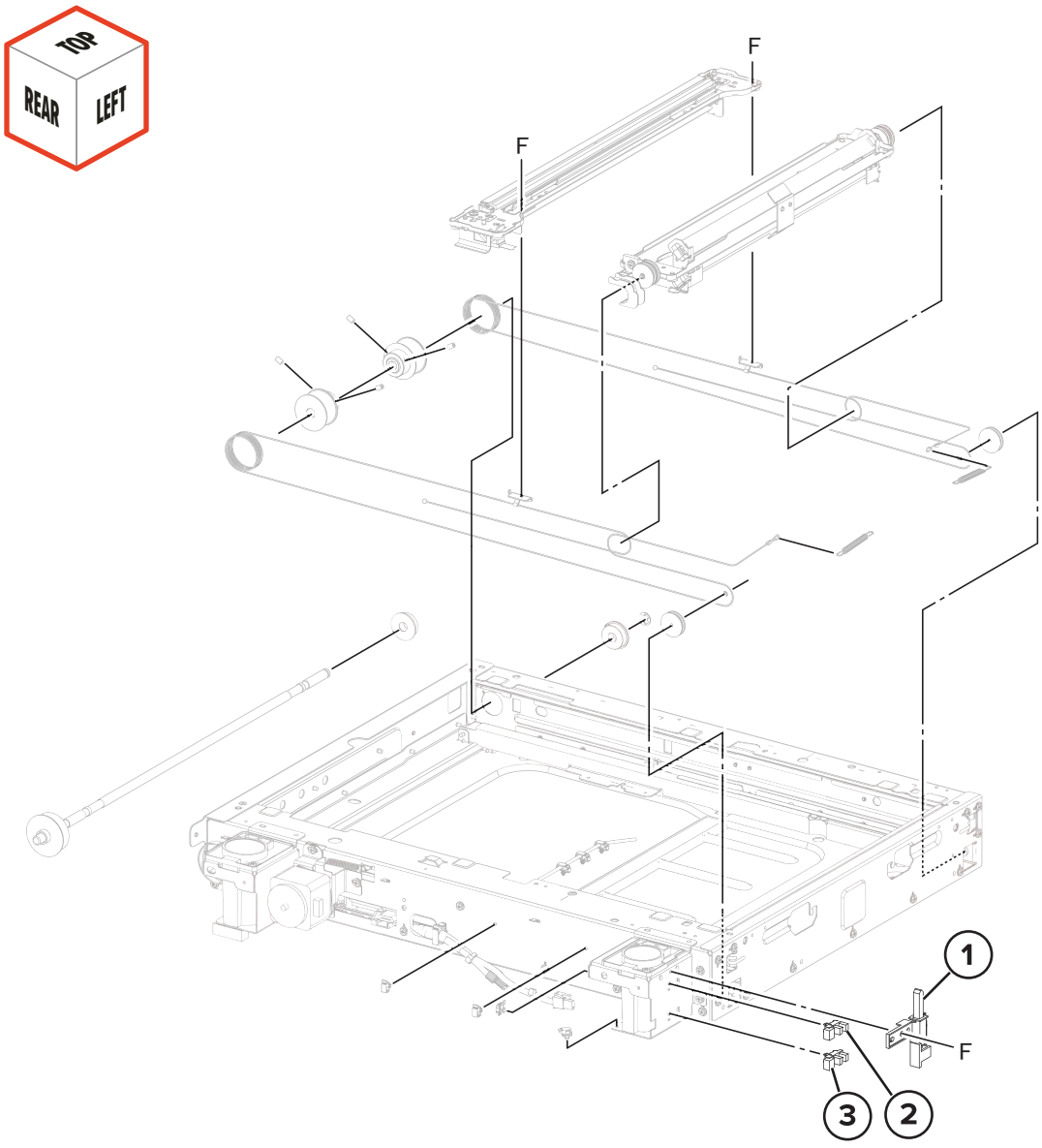
Assembly 46: Scanner CCD assembly



Assembly 46: Scanner CCD assembly

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3568	1	1	ADF glass	--
2	41X3717	1	1	Scanner sensor cable	--
3	41X3577	1	1	Sensor (scanner paper size)	--
4	41X3716	1	1	CCD FFC	--
5	41X3718	1	1	Scanner CCD module	--
6	41X3569	1	1	Scanner glass	--
7	41X3574	1	1	Scanner controller board	--

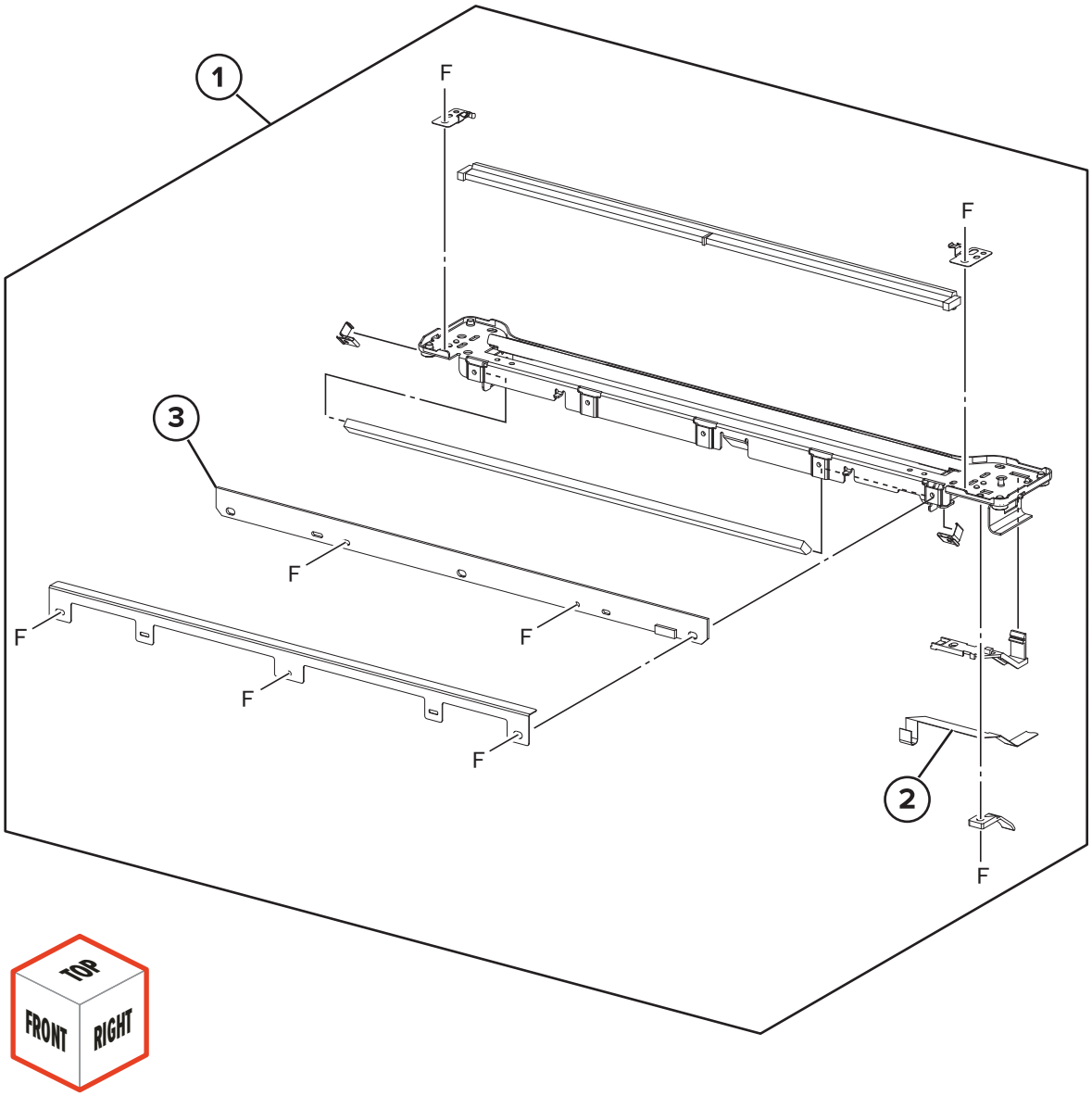
Assembly 47: Scanner lamp assembly 1



Assembly 47: Scanner lamp assembly 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3719	1	1	Sensor angle actuator	--
2	40X7403	1	1	Sensor (scanner cover angled)	--
3	40X0588	1	1	Sensor (scanner cover closed)	--

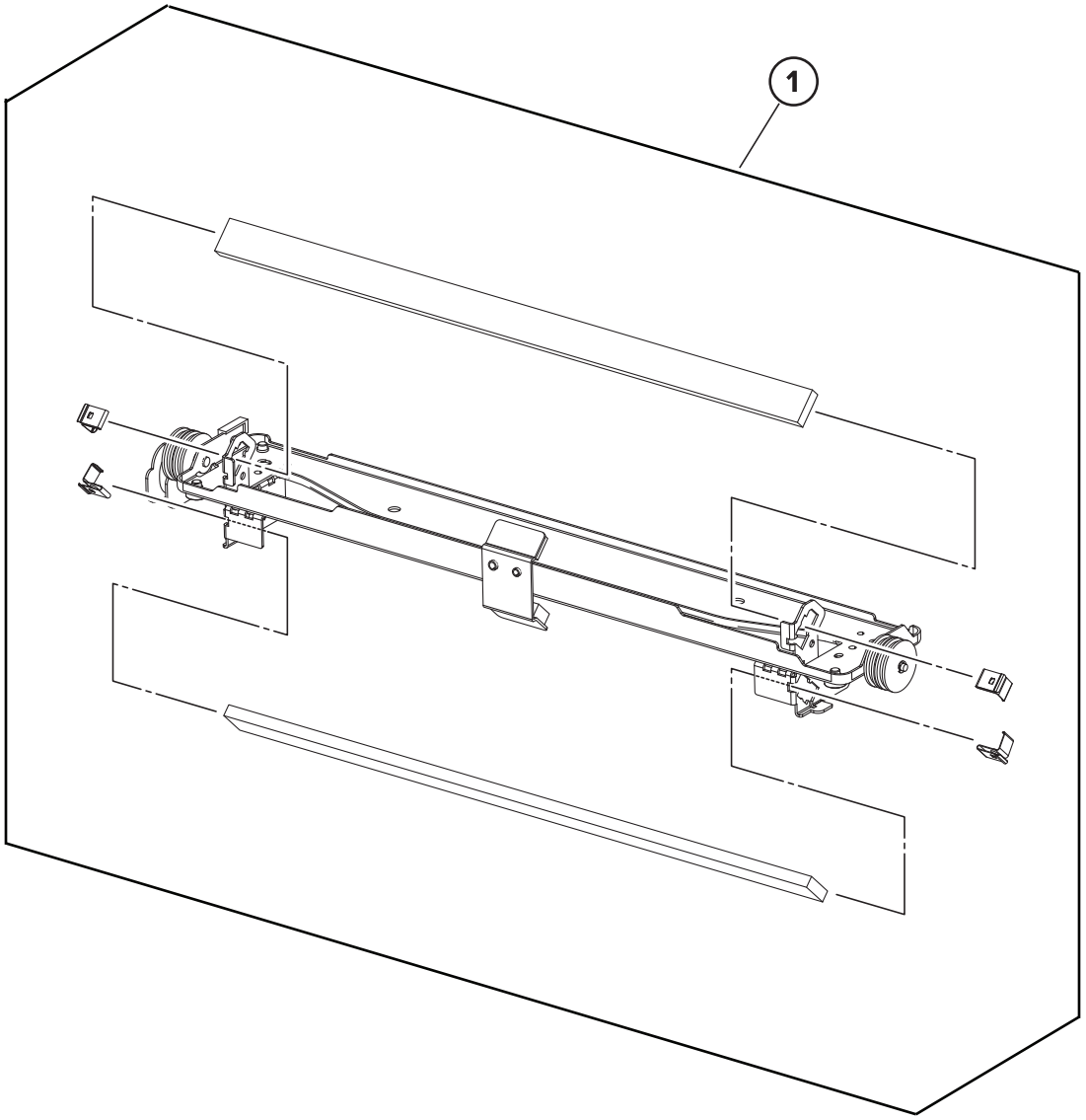
Assembly 48: Scanner lamp assembly 2



Assembly 48: Scanner lamp assembly 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3720	1	1	Scanner lamp	--
2	41X3722	1	1	Scanner lamp FFC	--
3	41X3721	1	1	Scanner lamp LED	--

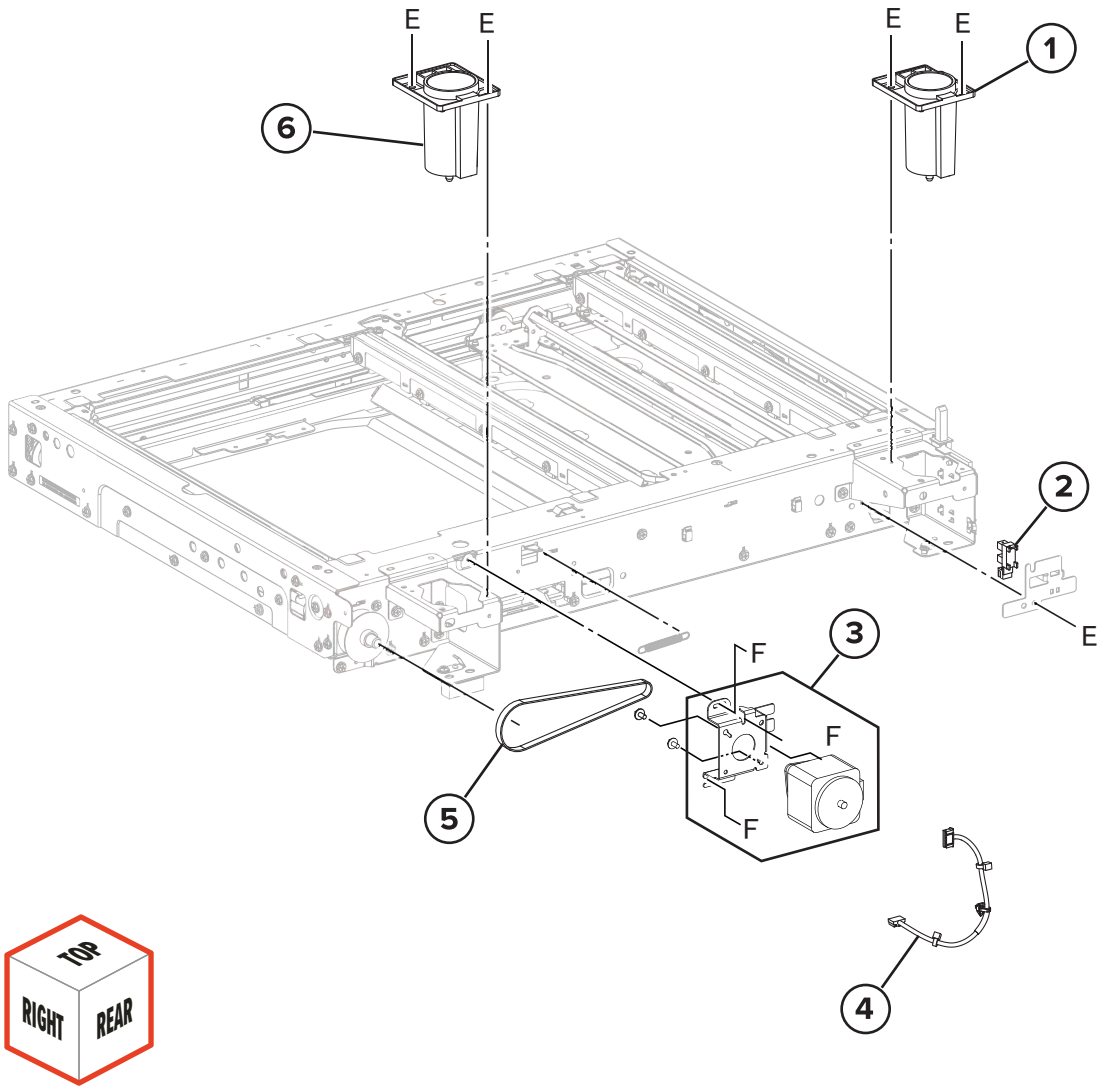
Assembly 49: Scanner lamp assembly 3



Assembly 49: Scanner lamp assembly 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3723	1	1	Scanner mirror	--

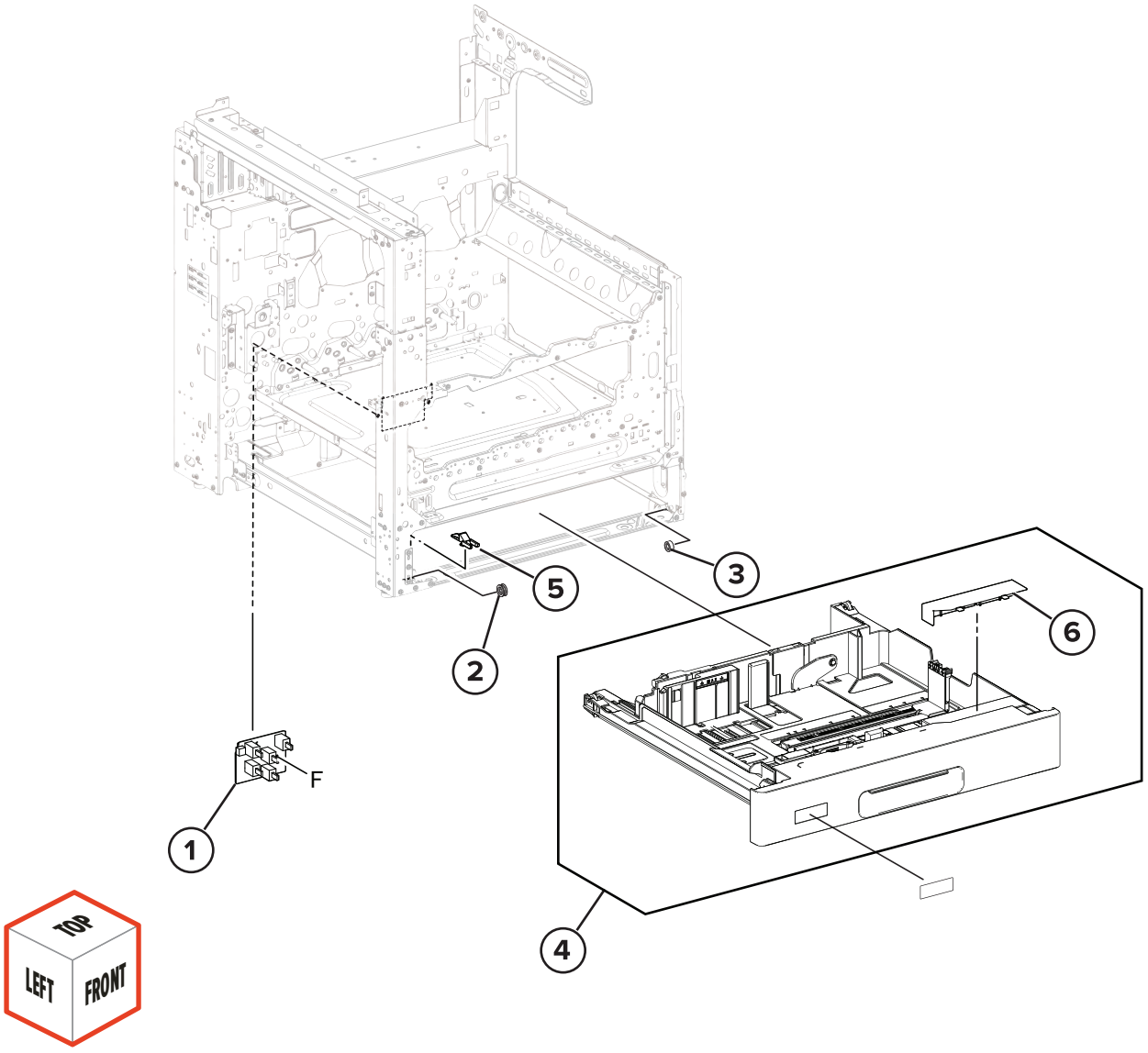
Assembly 50: Scanner transport



Assembly 50: Scanner transport

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3725	1	1	ADF left hinge support	--
2	40X0588	1	1	Sensor (scanner lamp)	--
3	41X4274	1	1	Motor (scanner)	**“Motor (scanner) removal” on page 418**
4	41X3724	1	1	Scanner motor cable	--
5	41X3581	1	1	Scanner motor belt	--
6	41X3726	1	1	ADF right hinge support	--

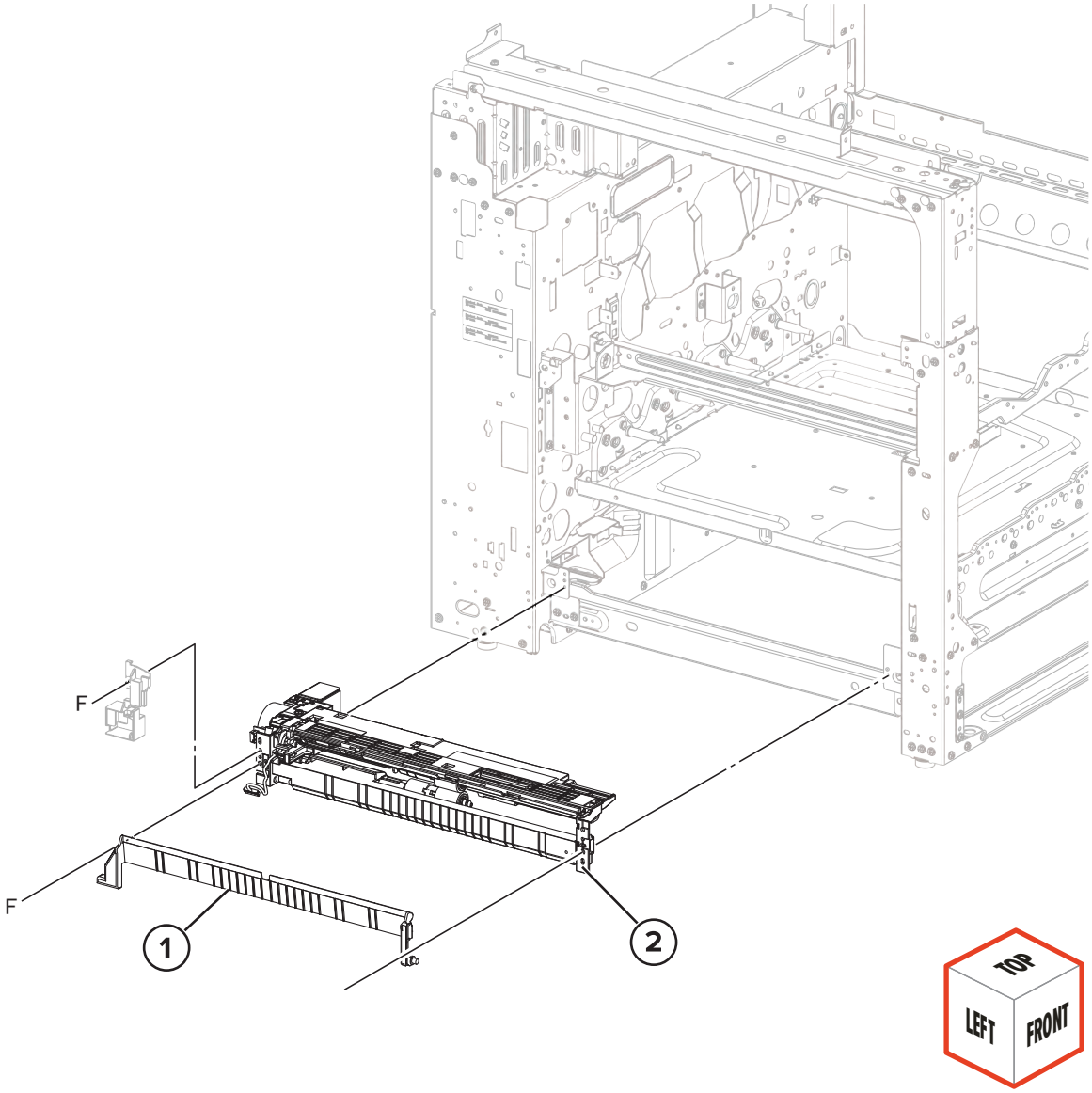
Assembly 51: Tray 1



Assembly 51: Tray 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X7533	1	1	Sensor (tray 1 paper size)	--
2	41X4081	1	1	Tray guide left roller	--
3	40X6653	1	1	Tray guide right roller	--
4	41X4263	1	1	Tray insert	--
5	41X4080	1	1	Tray 1 stopper	--
6	41X4082	1	1	Tray 1 compartment cover	--
NS	41X4584	1	1	Envelope tray	--

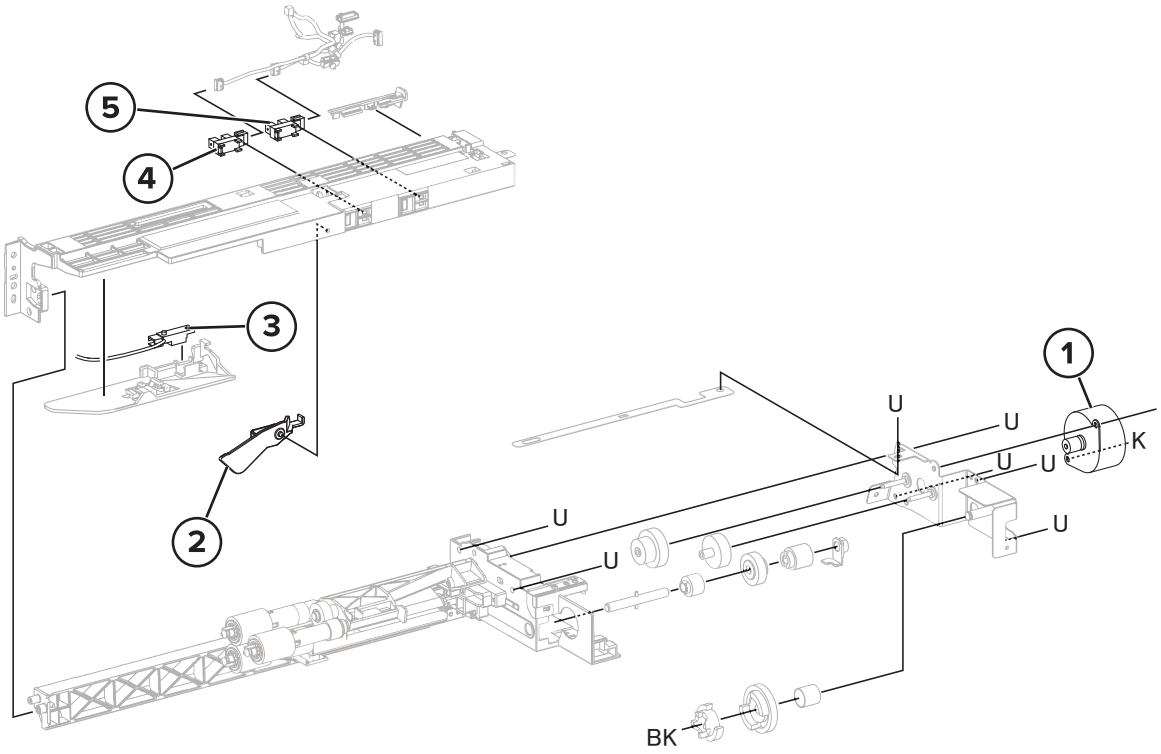
Assembly 52: Tray 1 feed 1



Assembly 52: Tray 1 feed 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X6699	1	1	Turn guide	--
2	41X3774	1	1	Tray 1 feeder	--

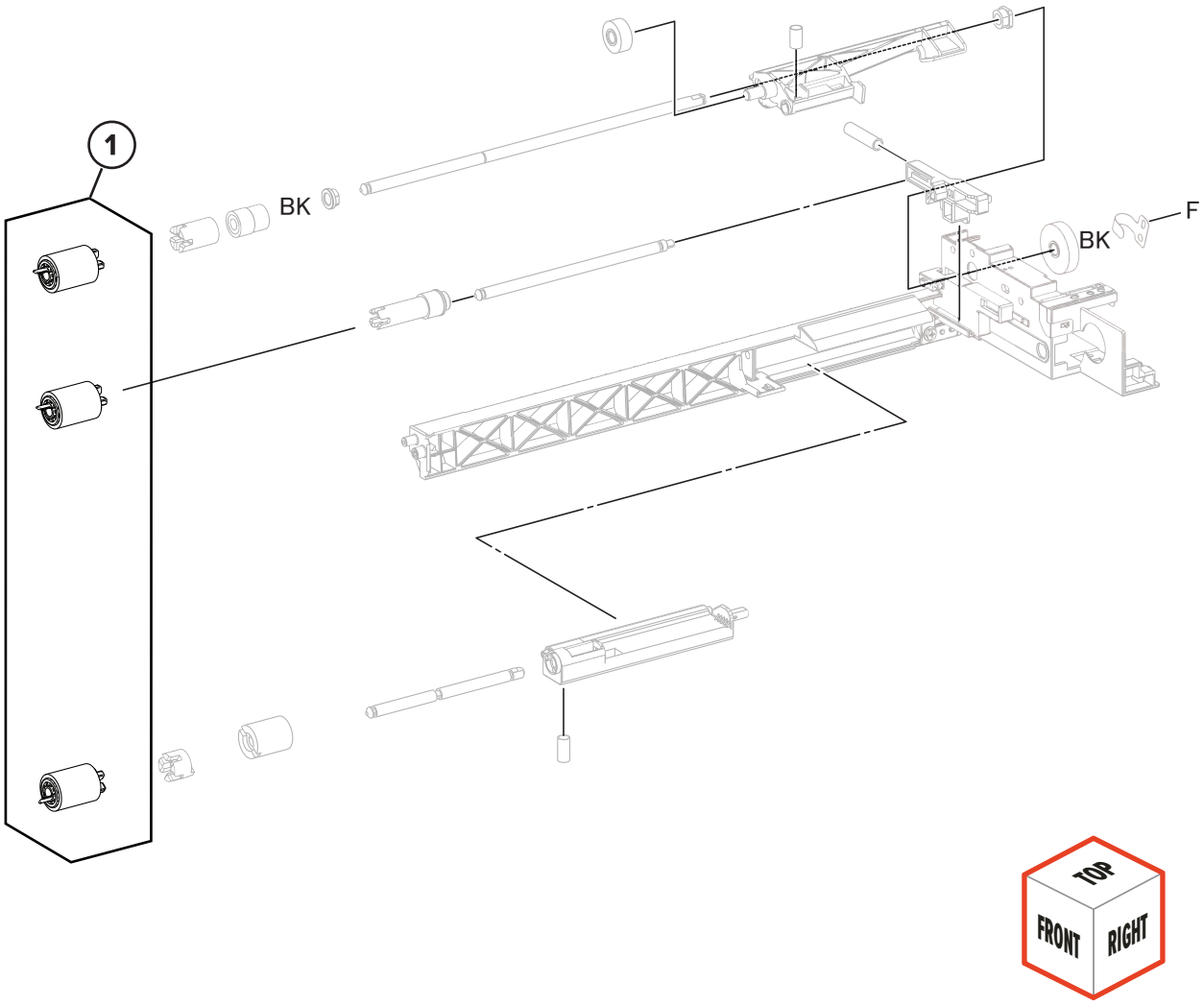
Assembly 53: Tray 1 feed 2



Assembly 53: Tray 1 feed 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X6658	1	1	Motor (pick/lift)	--
2	40X0587	1	1	Paper present sensor actuator	--
3	40X0589	1	1	Sensor (tray 1 feed)	--
4	40X0588	1	1	Sensor (tray 1 media level)	--
5	40X0588	1	1	Sensor (tray 1 paper present)	--

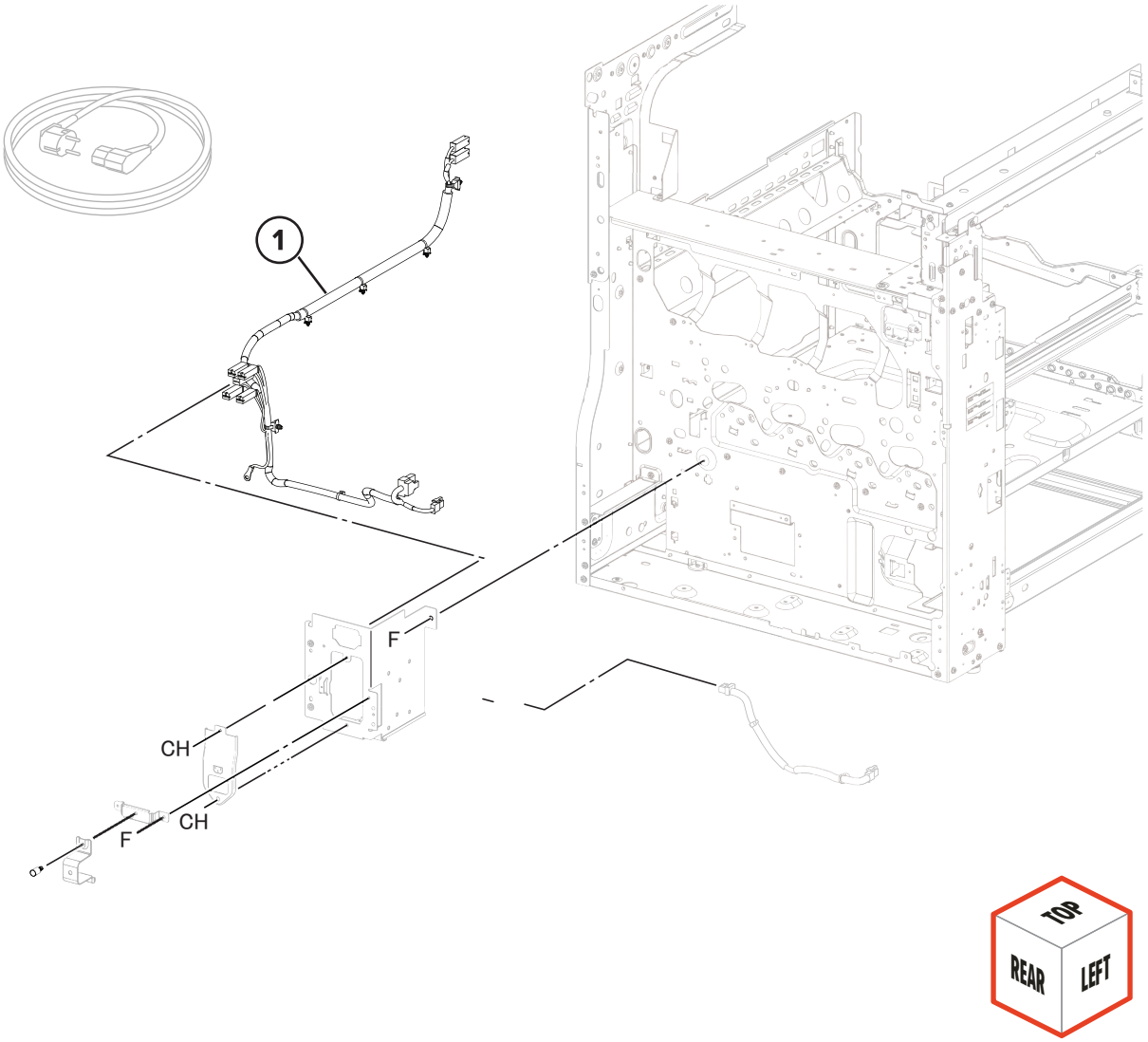
Assembly 54: Tray 1 feed 3



Assembly 54: Tray 1 feed 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3775	1	1	Roller kit (tray)	“Tray roller kit removal” on page 414

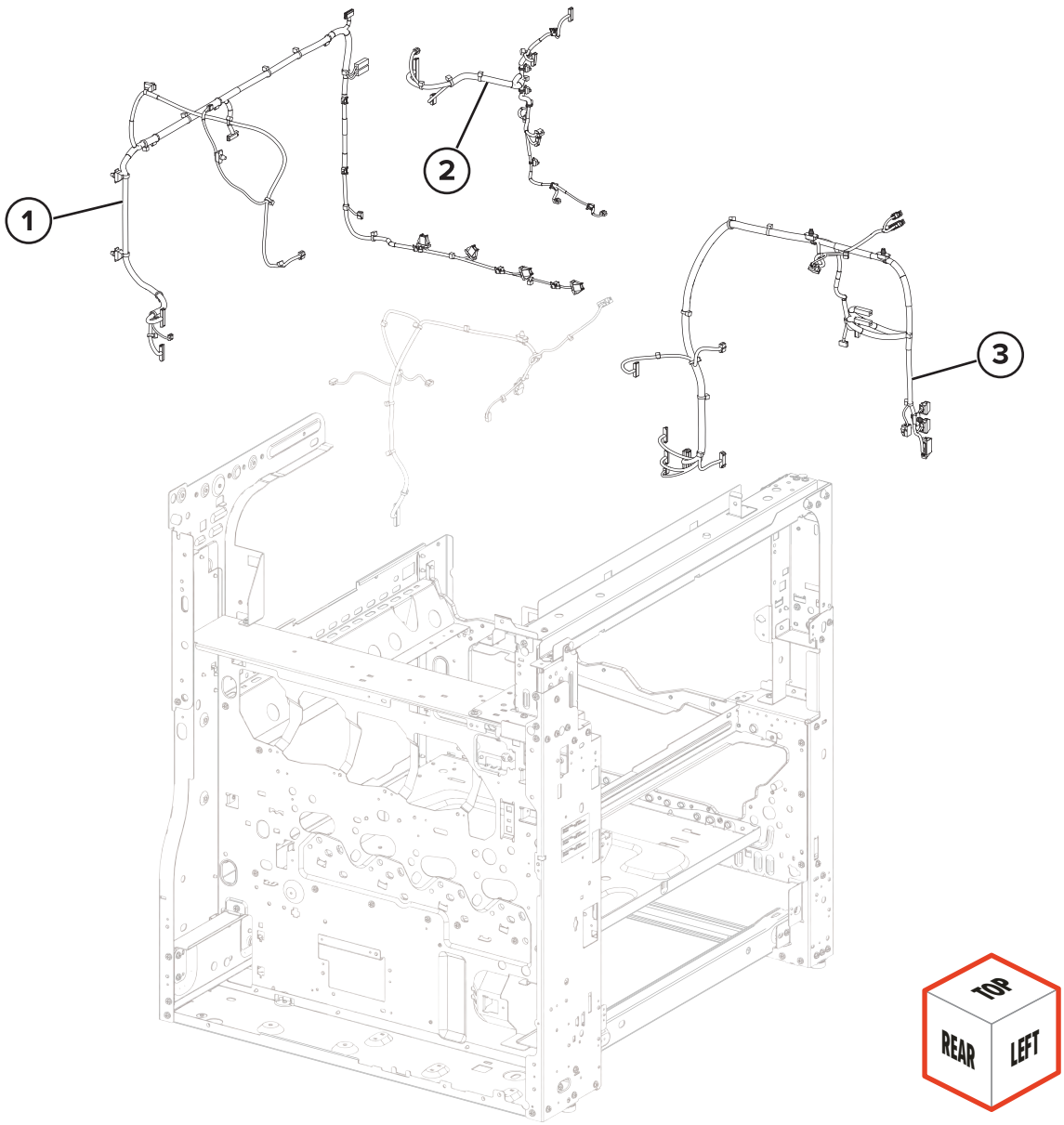
Assembly 55: Cables 1



Assembly 55: Cables 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3819	1	1	AC supply cable	--

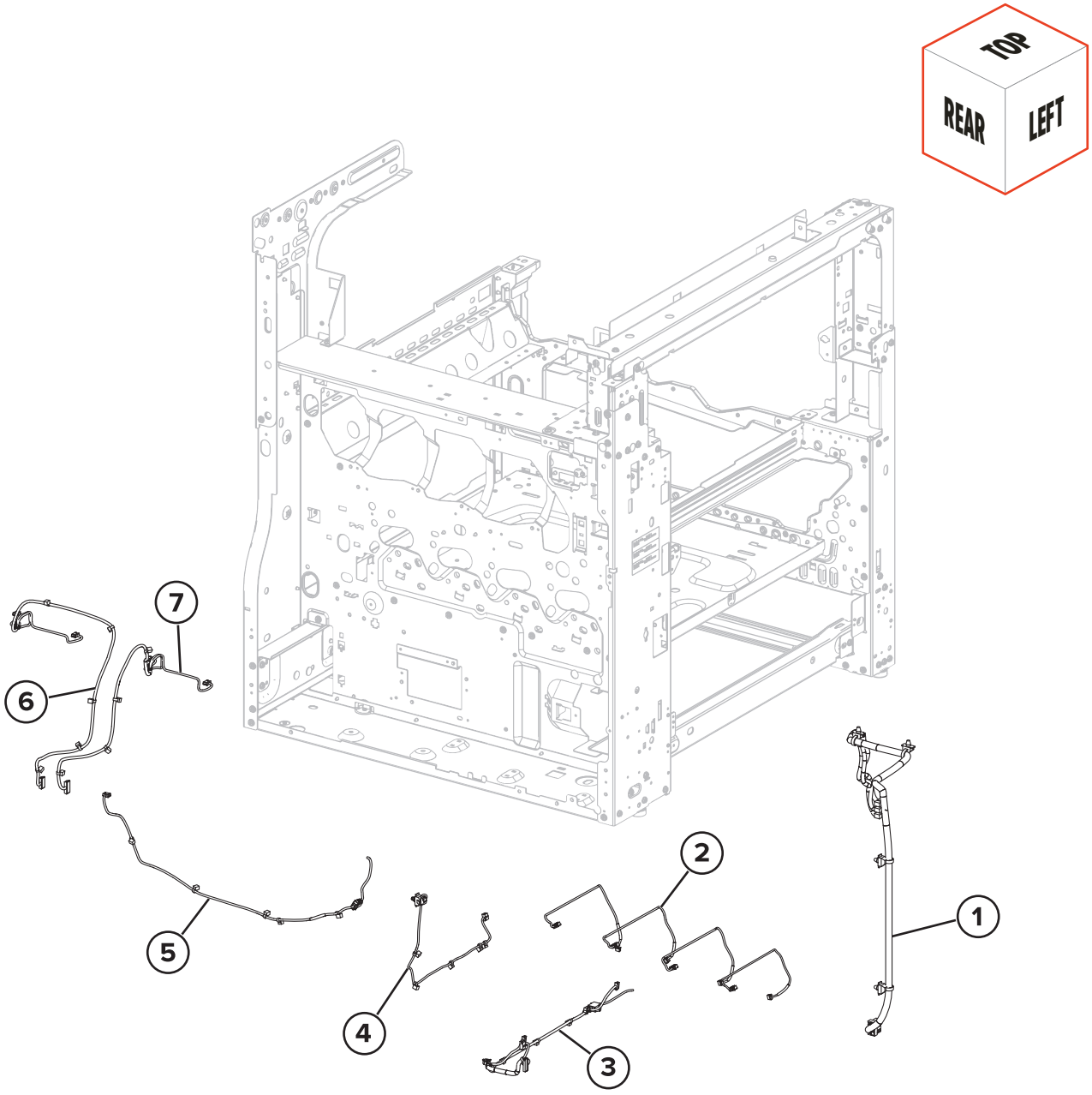
Assembly 56: Cables 2



Assembly 56: Cables 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3820	1	1	HVPS cable	--
2	41X3822	1	1	Drive controller board cable	--
3	41X3821	1	1	Duplex transport cable	--

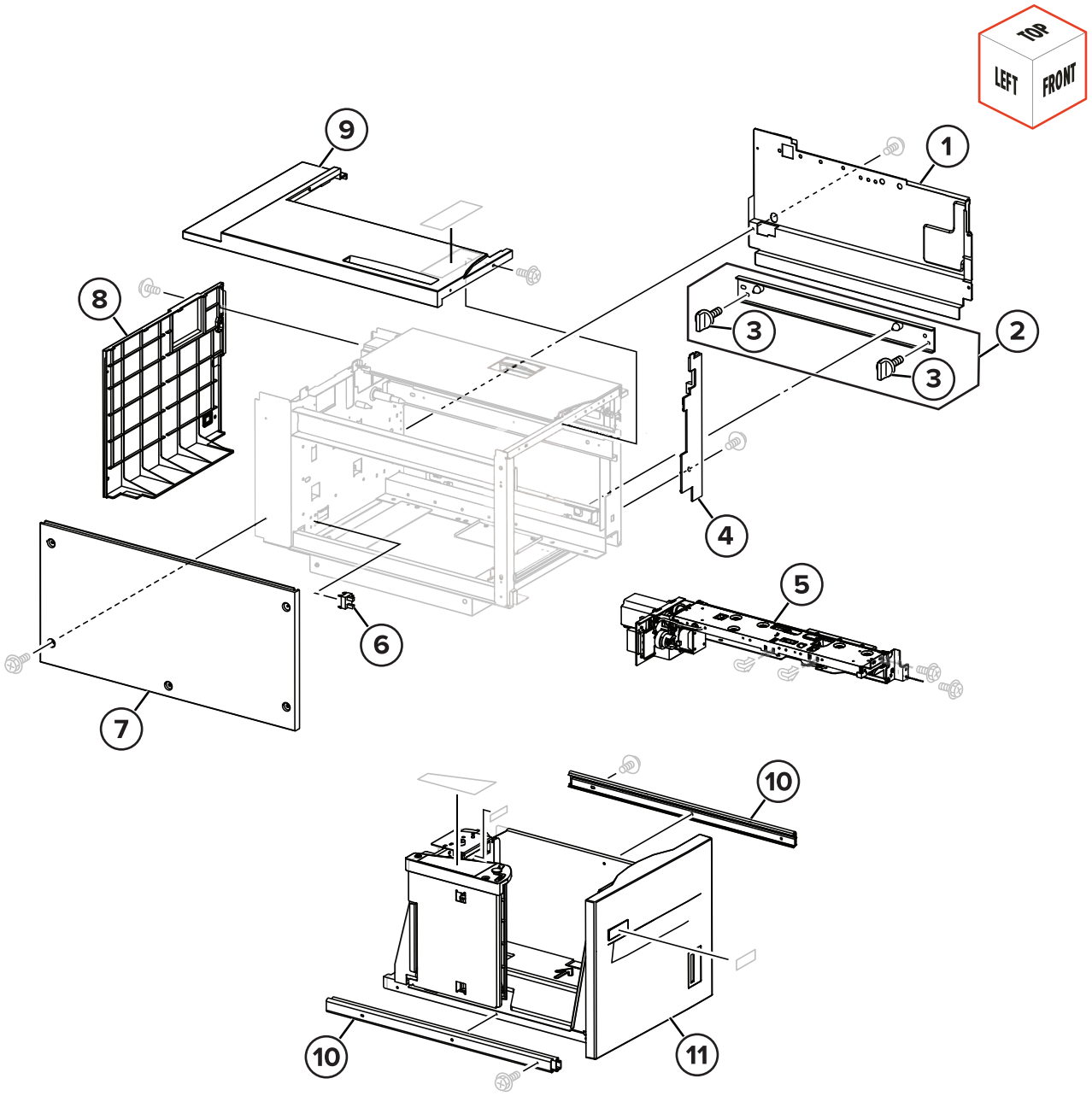
Assembly 57: Cables 3



Assembly 57: Cables 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3823	1	1	Fuser cable	--
2	41X3829	1	1	Developer contact cable	--
3	41X3825	1	1	TPS cable	--
4	41X3826	1	1	Registration sensor cable	--
5	41X3824	1	1	Feed cable	--
6	41X3827	1	1	Toner cartridge contact cable (Y, M)	--
7	41X3828	1	1	Toner cartridge contact cable (C, K)	--

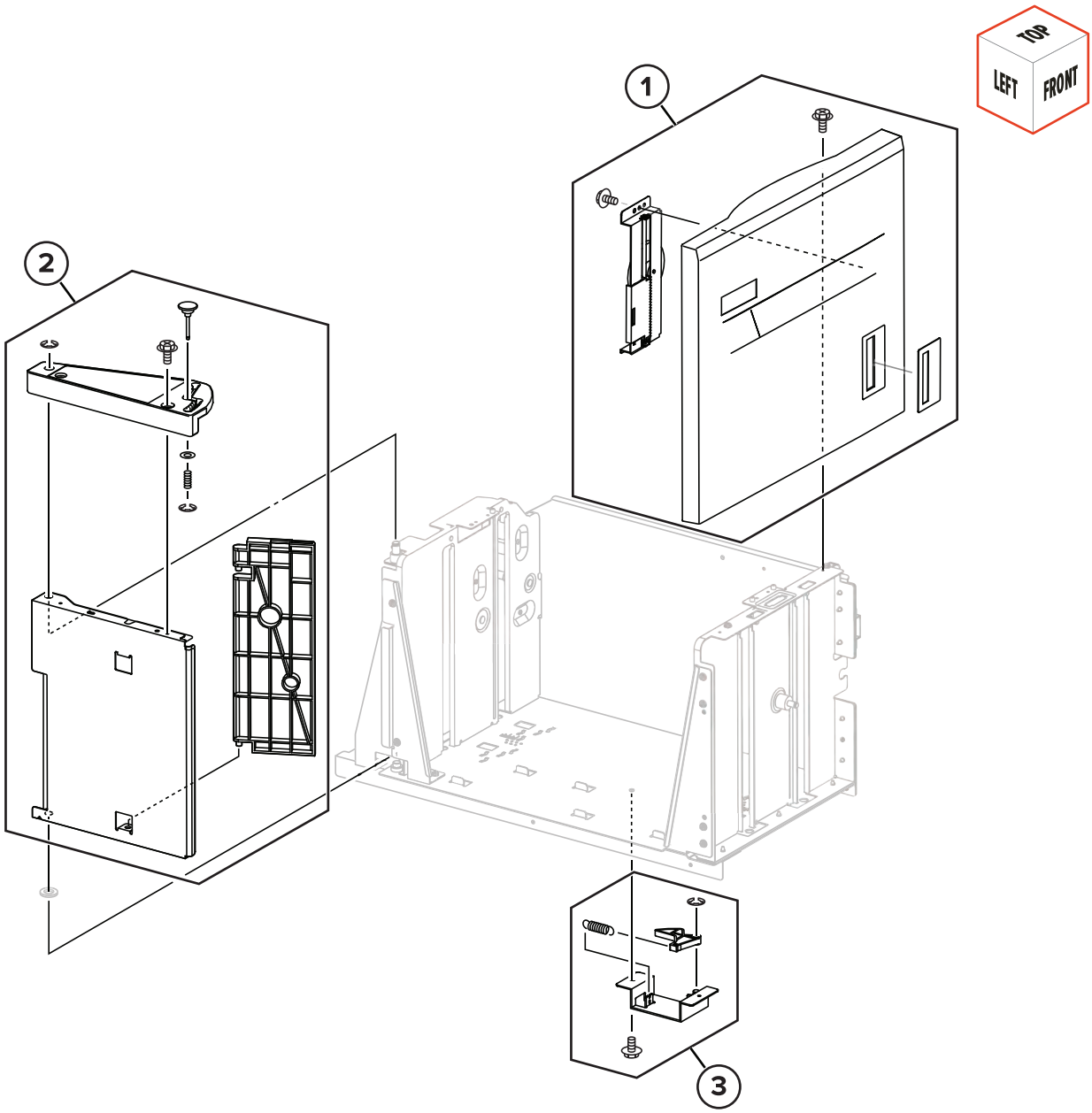
Assembly 58: 2000-sheet tray covers 1



Assembly 58: 2000-sheet tray covers 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4121	1	1	2000-sheet tray right cover	“2000-sheet tray right cover removal” on page 470
2	41X4475	1	1	2000-sheet tray docking bracket	--
3	41X4241	1	1	2000-sheet tray docking bracket screw	--
4	41X4122	1	1	2000-sheet tray right edge cover	--
5	40X7398	1	1	2000-sheet tray paper feeder	--
6	40X0739	1	1	Sensor (2000-sheet tray paper present)	“Sensor (2000-sheet tray paper present) removal” on page 472
7	41X4041	1	1	2000-sheet tray left cover	“2000-sheet tray left cover removal” on page 470
8	41X4039	1	1	2000-sheet tray rear cover	“2000-sheet tray rear cover removal” on page 471
9	41X4038	1	1	2000-sheet tray top cover	“2000-sheet tray top cover removal” on page 467
10	41X4118	1	1	2000-sheet tray rail	--
11	41X4040	1	1	2000-sheet tray insert	--

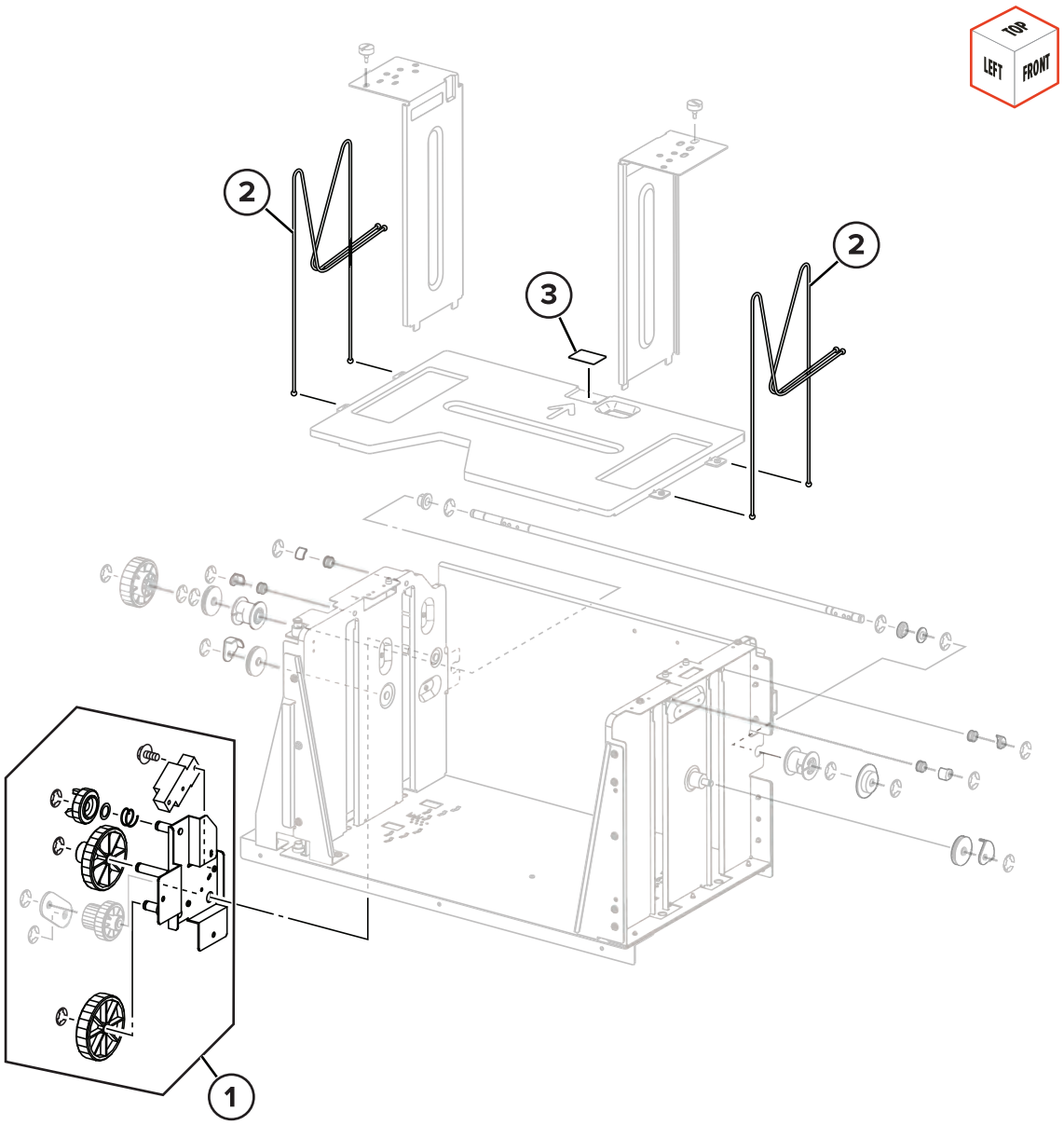
Assembly 59: 2000-sheet tray covers 2



Assembly 59: 2000-sheet tray covers 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4042	1	1	2000-sheet tray insert front cover	--
2	41X4127	1	1	2000-sheet tray end guide	--
3	41X4125	1	1	2000-sheet tray latch	--

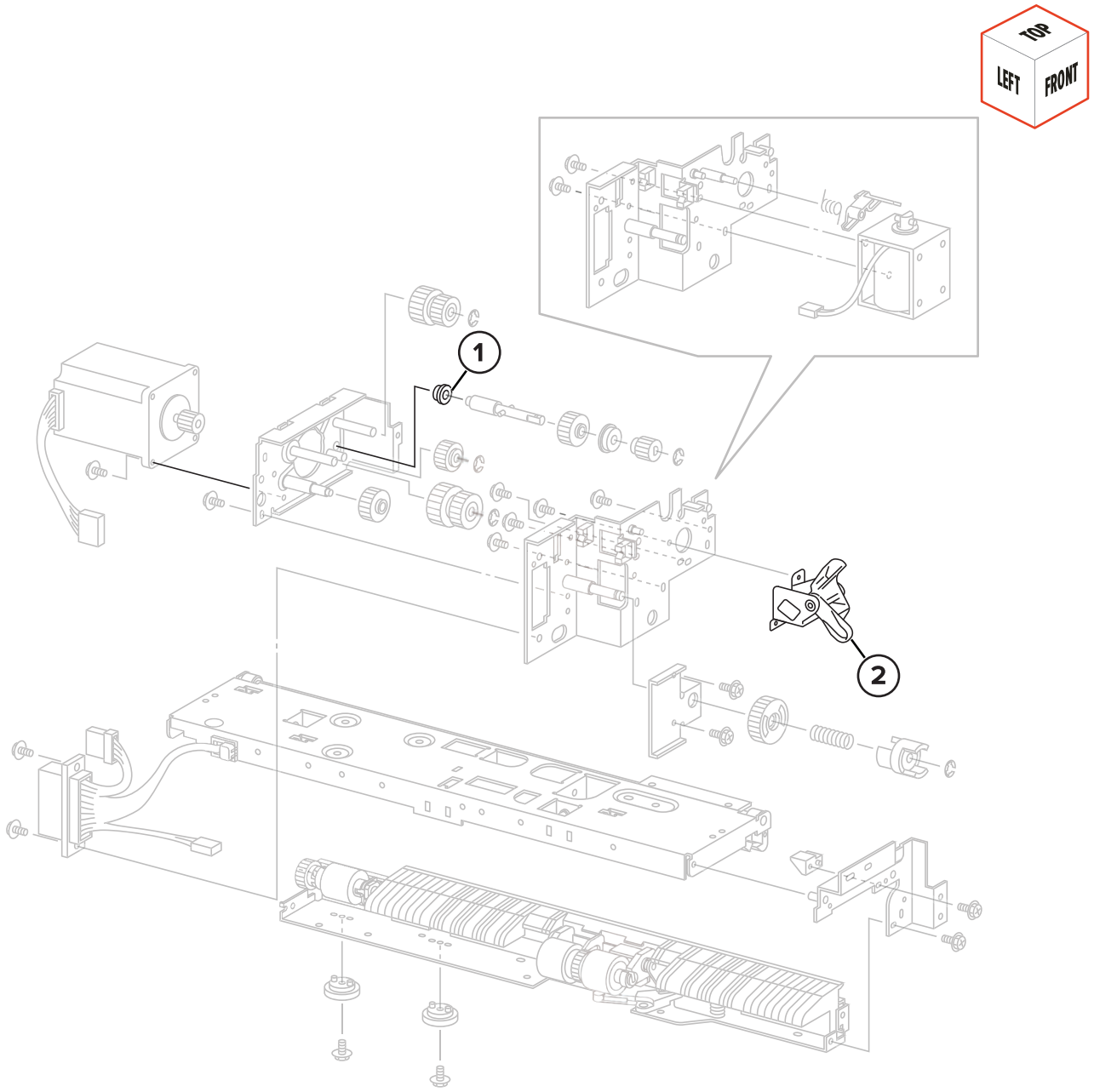
Assembly 60: 2000-sheet tray insert



Assembly 60: 2000-sheet tray insert

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0753	1	1	2000-sheet tray insert gearbox	“2000-sheet tray gearbox removal” on page 483
2	41X4128	1	1	2000-sheet tray elevator lift cable	--
3	40X0752	1	1	2000-sheet tray separator pad	--

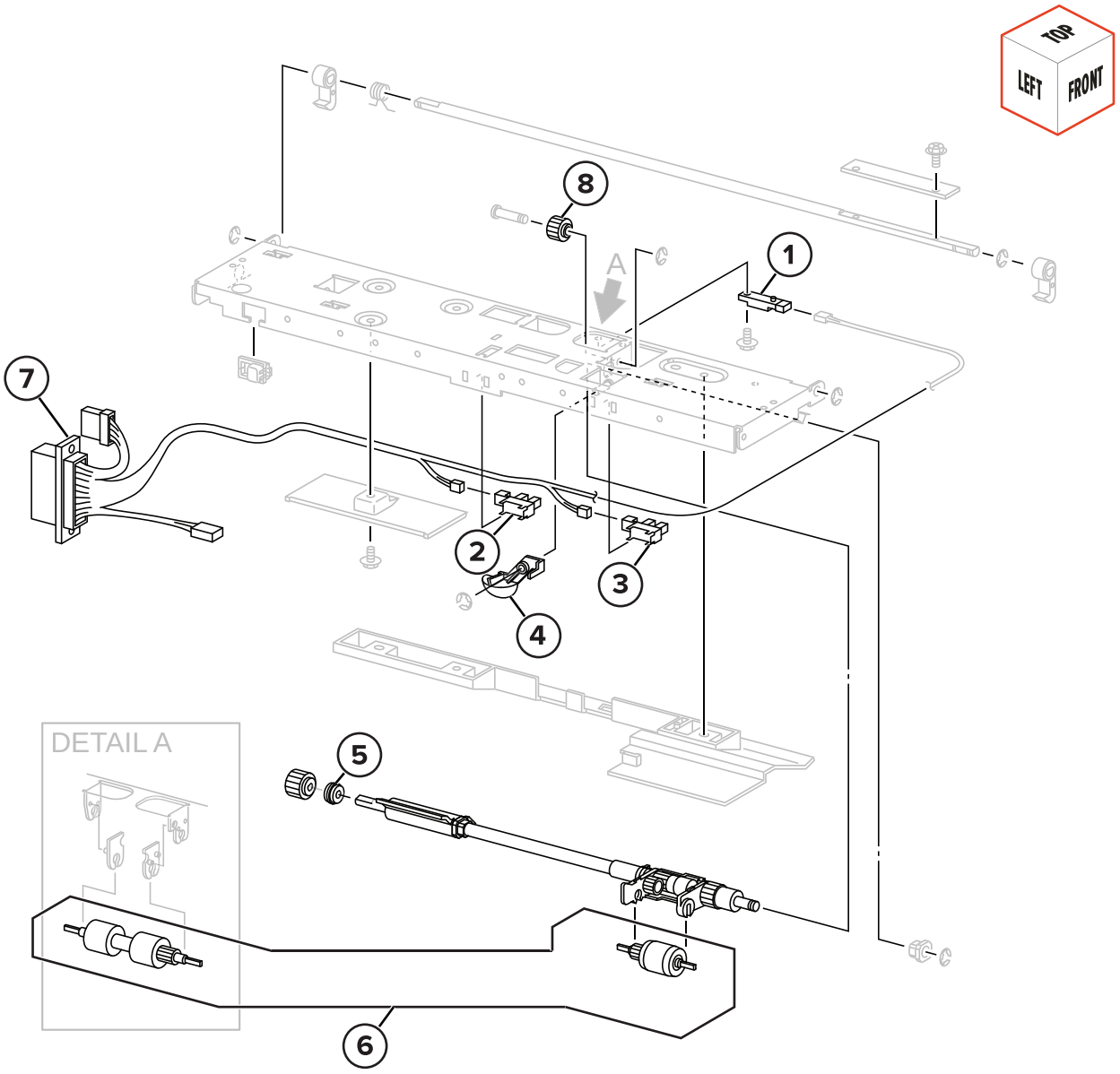
Assembly 61: 2000-sheet tray feed 1



Assembly 61: 2000-sheet tray feed 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0913	1	1	Ball bearing (6mm)	--
2	40X6790	1	1	2000-sheet tray pick roller raise lever	--

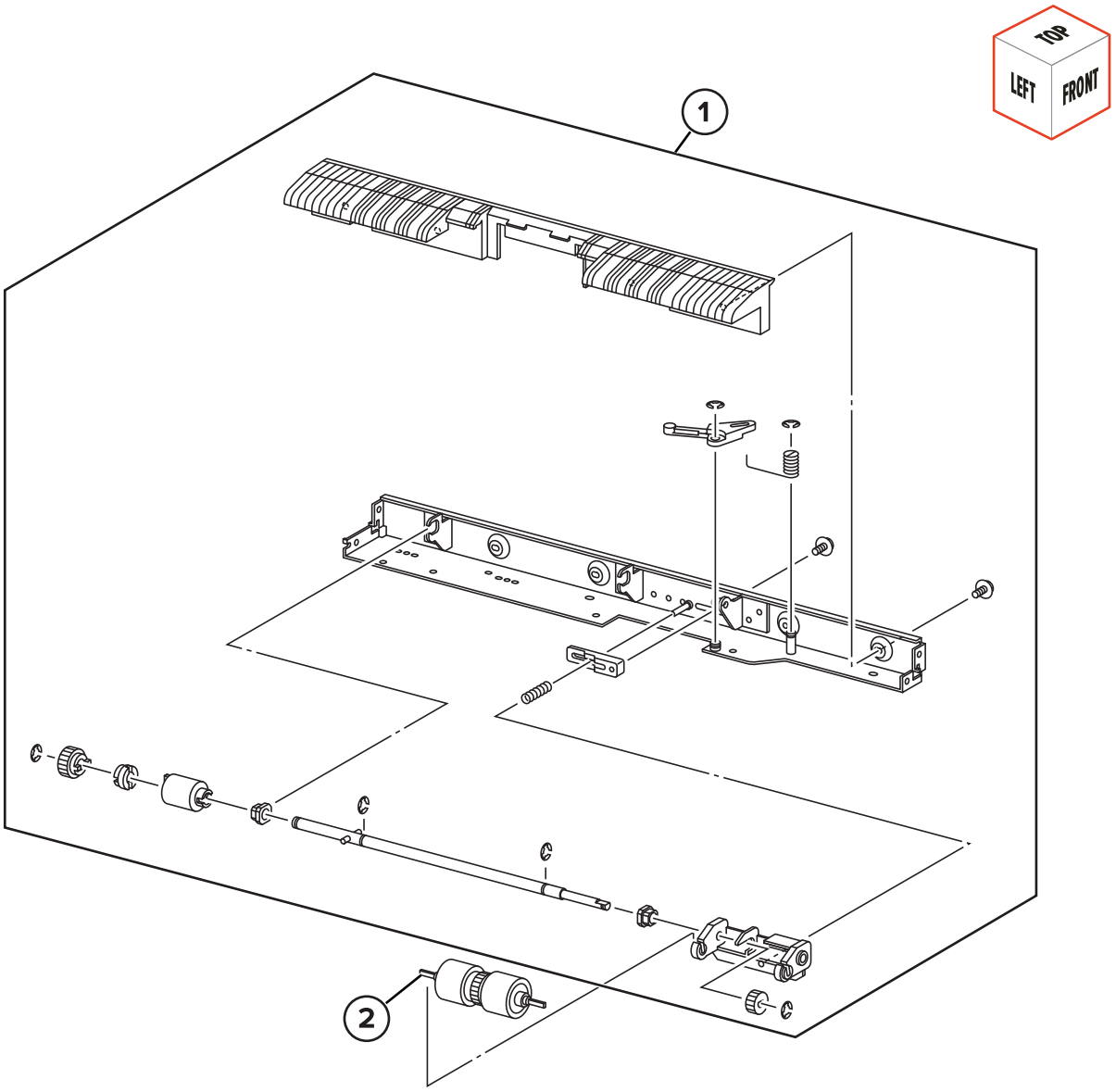
Assembly 62: 2000-sheet tray feed 2



Assembly 62: 2000-sheet tray feed 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0589	1	1	Sensor (2000-sheet tray feed)	"Sensor (2000-sheet tray feed) removal" on page 476
2	40X0768	1	1	Sensor (2000-sheet tray paper present)	--
3	40X0768	1	1	Sensor (2000-sheet tray pick position)	"Sensor (2000-sheet tray pick position) removal" on page 474
4	40X0767	1	1	2000-sheet tray paper present sensor actuator	--
5	40X0913	1	1	Ball bearing (6mm)	--
6	41X4058	1	1	Roller kit (2000-sheet tray)	--
7	40X0766	1	1	Feeder unit cable	--
8	40X0765	1	1	Pick roller idler gear	--

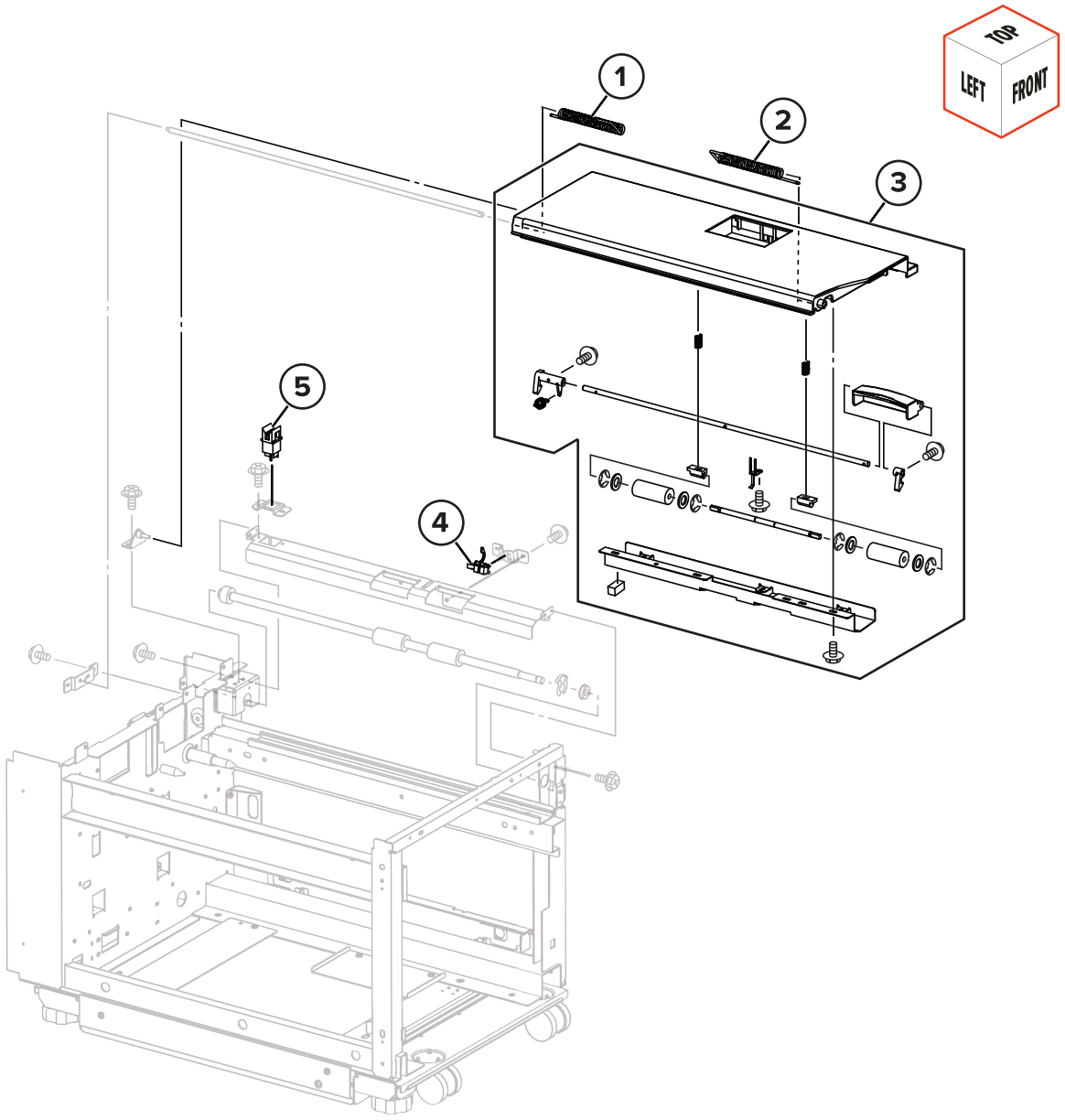
Assembly 63: 2000-sheet tray feed 3



Assembly 63: 2000-sheet tray feed 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0771	1	1	2000-sheet tray separator guide	--
2	41X4168	1	1	Roller kit (2000-sheet tray)	--

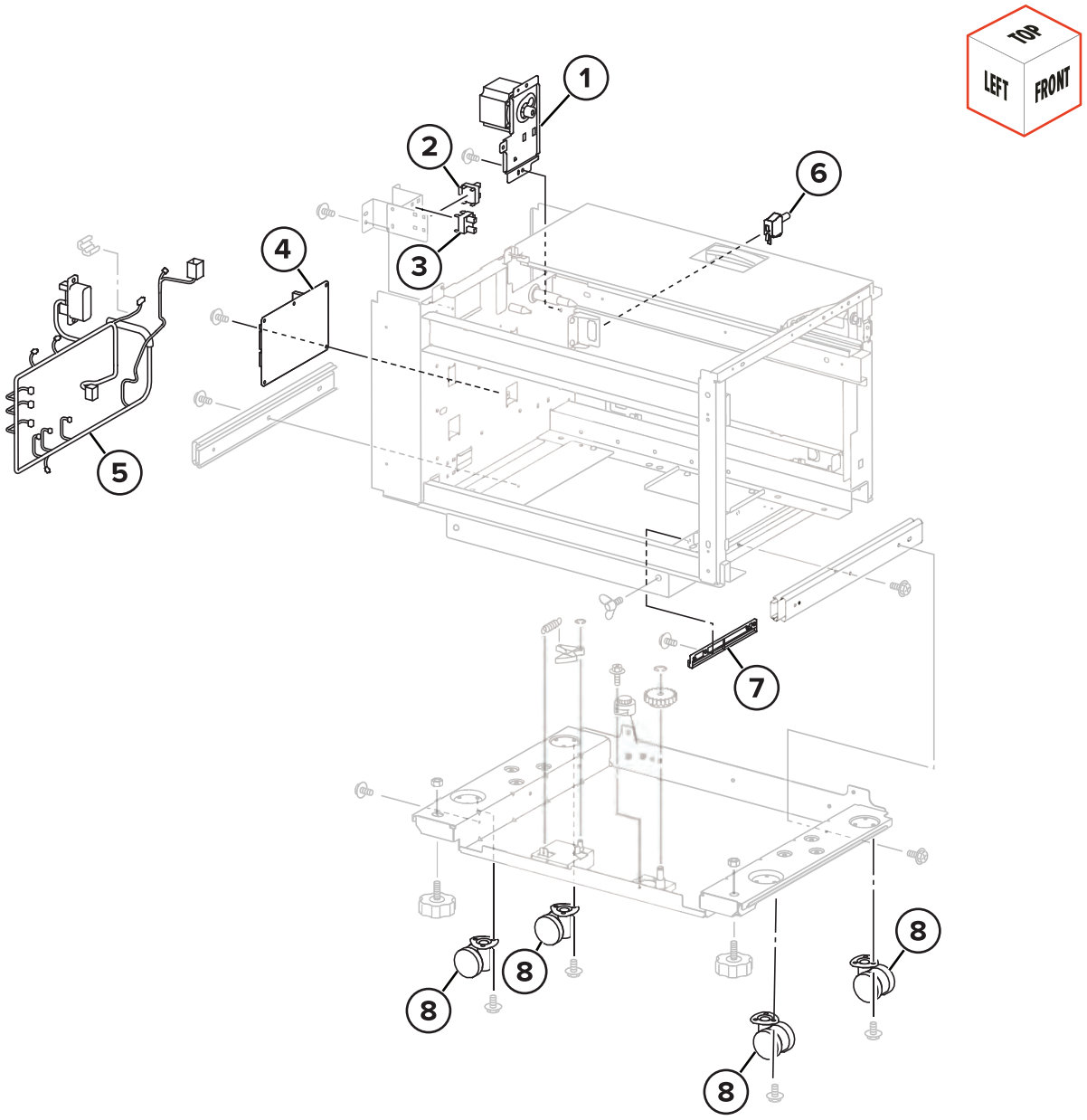
Assembly 64: 2000-sheet tray transport 1



Assembly 64: 2000-sheet tray transport 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X7440	1	1	2000-sheet tray top door rear spring	--
2	40X7450	1	1	2000-sheet tray top door front spring	--
3	41X4037	1	1	2000-sheet tray top door	**“2000-sheet tray top door removal” on page 468**
4	40X0774	1	1	Sensor (2000-sheet tray transport)	**“Sensor (2000-sheet tray transport) removal” on page 477**
5	40X0553	1	1	2000-sheet tray top door interlock switch	**“2000-sheet tray top door interlock switch removal” on page 469**

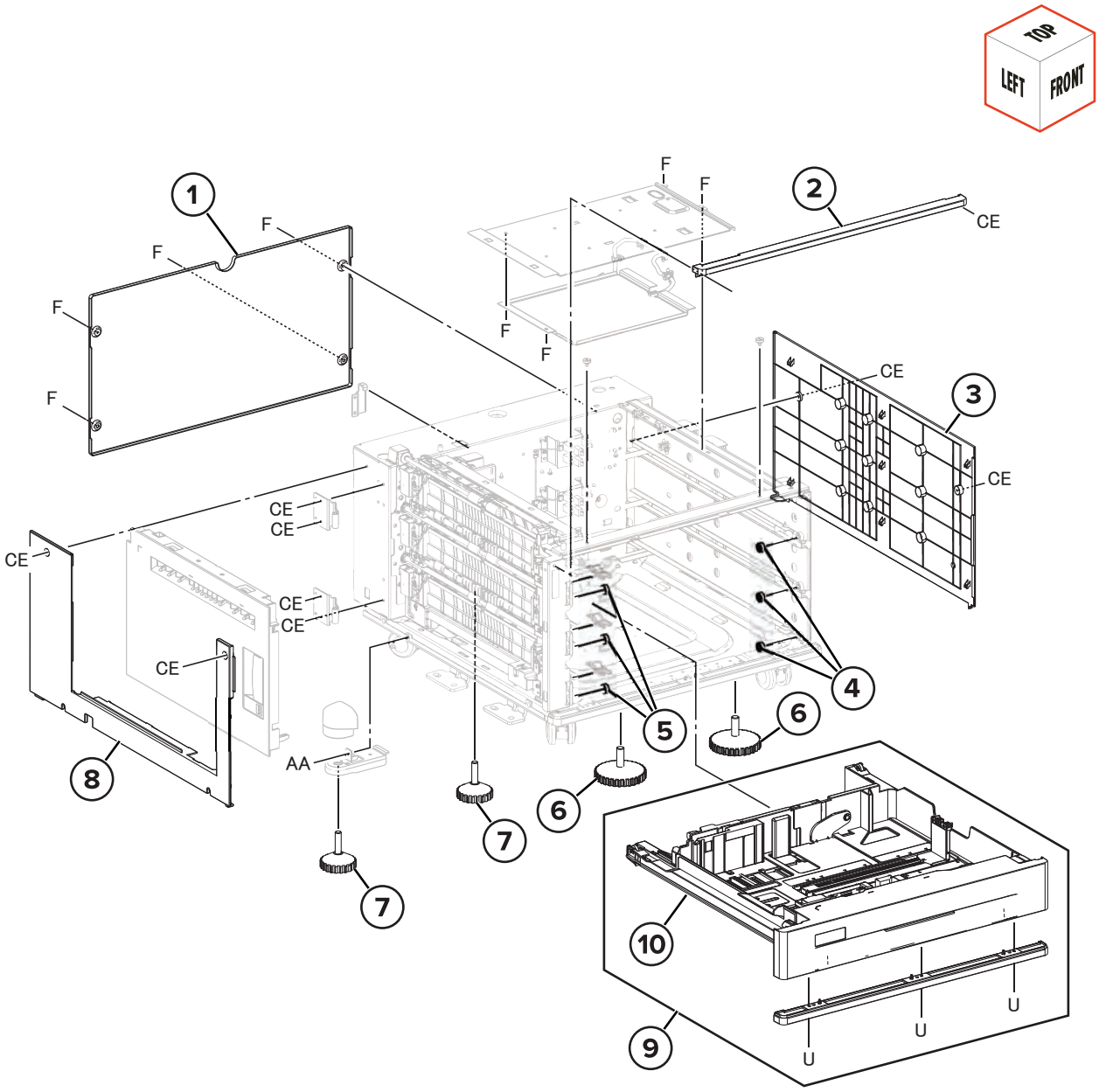
Assembly 65: 2000-sheet tray transport 2



Assembly 65: 2000-sheet tray transport 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0776	1	1	Motor (2000-sheet tray transport)	“Motor (2000-sheet tray transport) removal” on page 482
2	40X0739	1	1	Sensor (2000-sheet tray paper size 1 and 2)	“Sensor (2000-sheet tray paper size 1 and 2) removal” on page 477
3	40X0739	1	1	Sensor (2000-sheet tray paper size 1 and 2)	“Sensor (2000-sheet tray paper size 1 and 2) removal” on page 477
4	41X4130	1	1	2000-sheet tray controller board	“2000-sheet tray controller board removal” on page 472
5	40X0779	1	1	2000-sheet tray board cable	--
6	40X0777	1	1	2000-sheet tray set switch	“2000-sheet tray set switch removal” on page 479
7	40X6792	1	1	2000-sheet tray sliding rack	--
8	40X0741	1	1	2000-sheet tray caster wheel	“2000-sheet tray caster wheel removal” on page 471

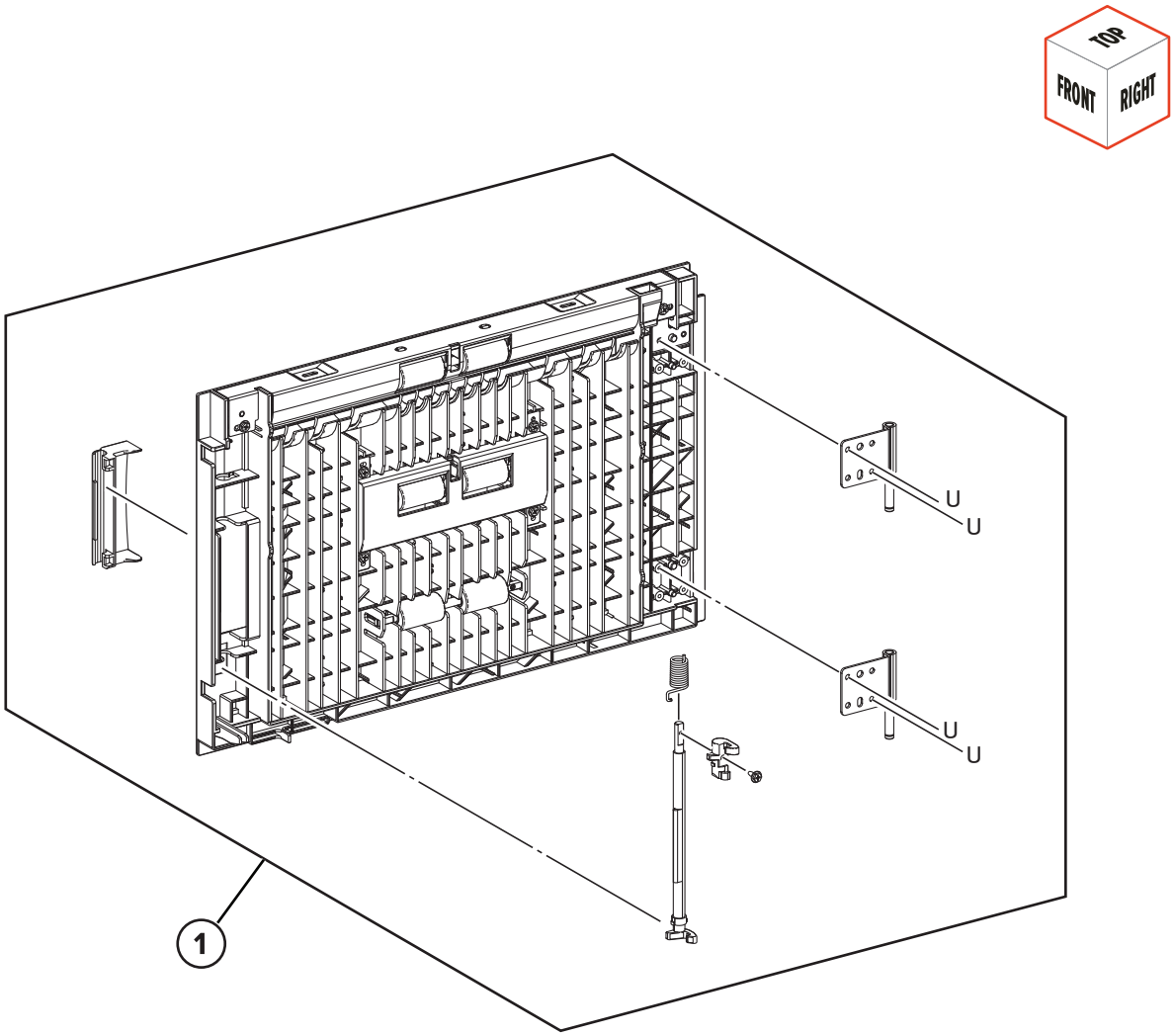
Assembly 66: 3 x 520-sheet tray covers 1



Assembly 66: 3 x 520-sheet tray covers 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3901	1	1	3 x 520-sheet tray rear cover	--
2	41X3904	1	1	3 x 520-sheet tray top cover	--
3	41X3903	1	1	3 x 520-sheet tray right cover	--
4	40X6653	1	1	Tray guide left roller	--
5	40X6652	1	1	Tray guide right roller	--
6	41X3957	1	1	3 x 520-sheet tray adjustable feet (large)	--
7	41X3917	1	1	3 x 520-sheet tray adjustable feet	--
8	41X3902	1	1	3 x 520-sheet tray left cover	--
9	41X4112	1	1	3 x 520-sheet tray insert assembly	--
10	41X3773	1	1	Tray insert	--

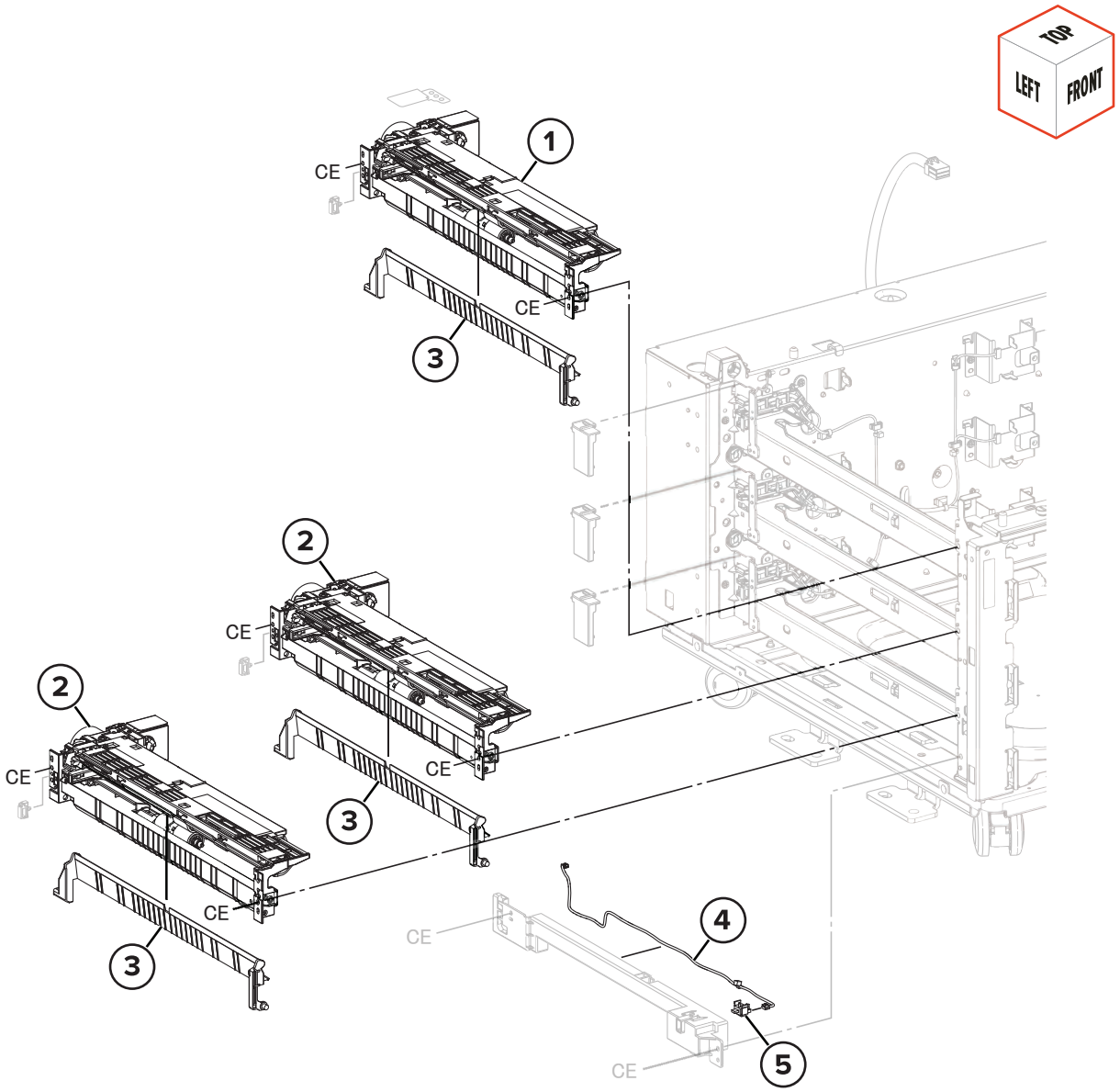
Assembly 67: 3 x 520-sheet tray covers 2



Assembly 67: 3 x 520-sheet tray covers 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3920	1	1	3 x 520-sheet tray door	--

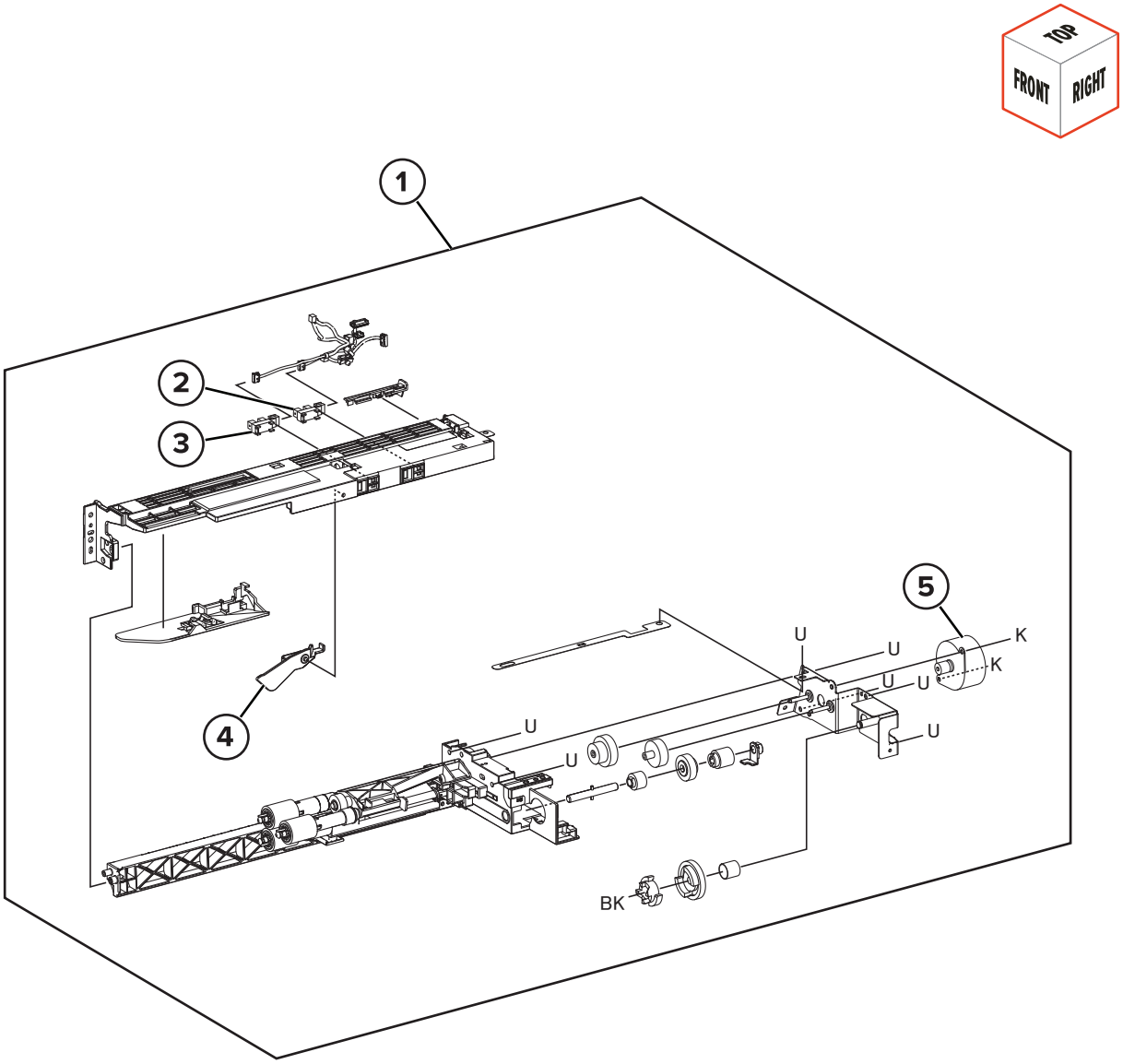
Assembly 68: 3 x 520-sheet tray feed 1



Assembly 68: 3 x 520-sheet tray feed 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3908	1	1	3 x 520-sheet tray paper feeder (tray 2)	--
2	41X4245	1	1	3 x 520-sheet tray paper feeder (tray 4)	--
2	41X4245	1	1	3 x 520-sheet tray paper feeder (tray 4)	--
3	40X6699	1	1	Turn guide	--
4	41X3921	1	1	3 x 520-sheet tray door switch cable	--
5	40X6700	1	1	3 x 520-sheet tray door switch	--

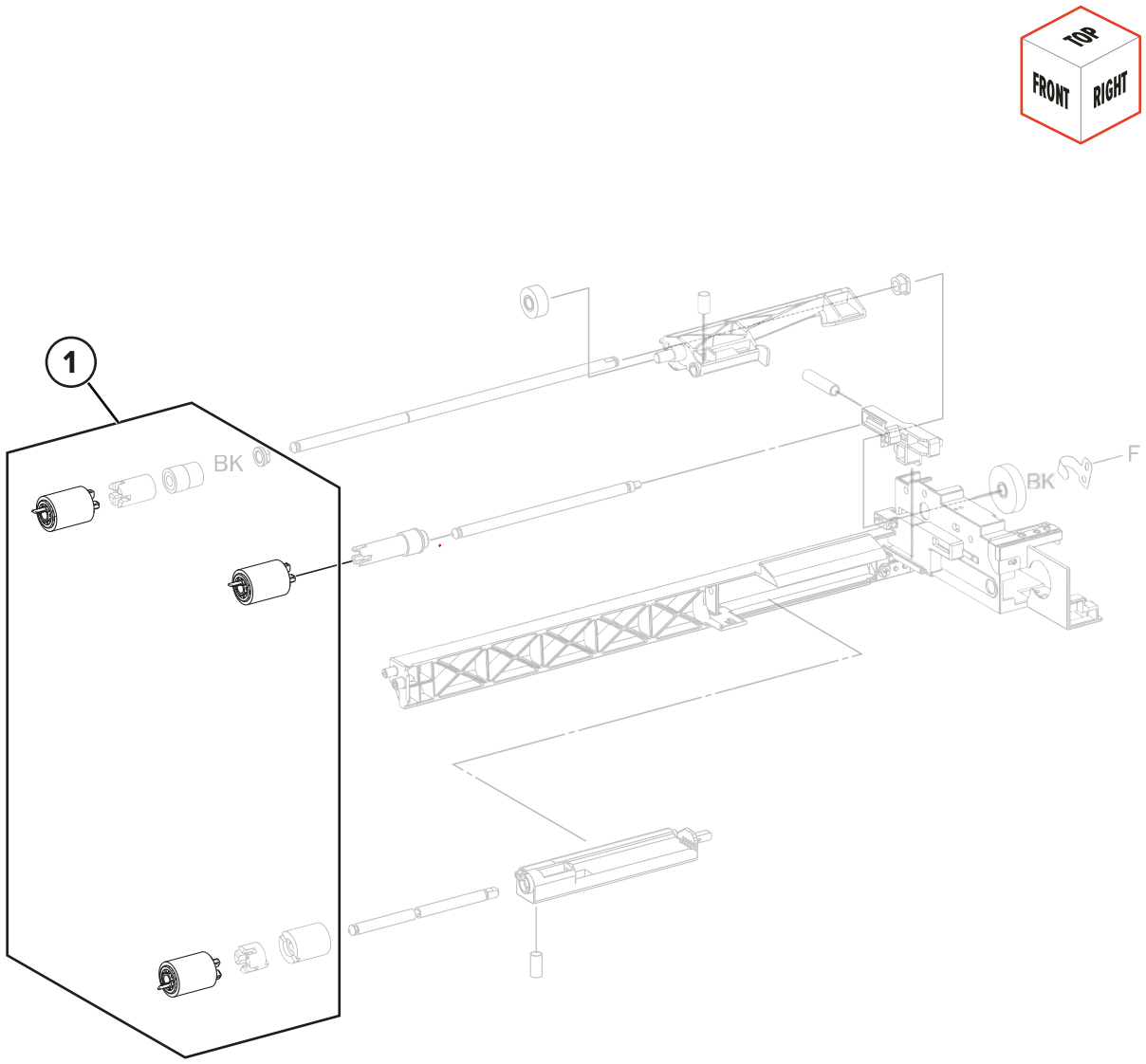
Assembly 69: 3 x 520-sheet tray feed 2



Assembly 69: 3 x 520-sheet tray feed 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4245	1	1	3 x 520-sheet tray feeder (low)	--
2	40X0588	1	1	Sensor (pick position)	--
3	40X0588	1	1	Sensor (paper present)	--
4	40X0587	1	1	Paper present sensor actuator	--
5	40X6658	1	1	Motor (pick/lift)	--

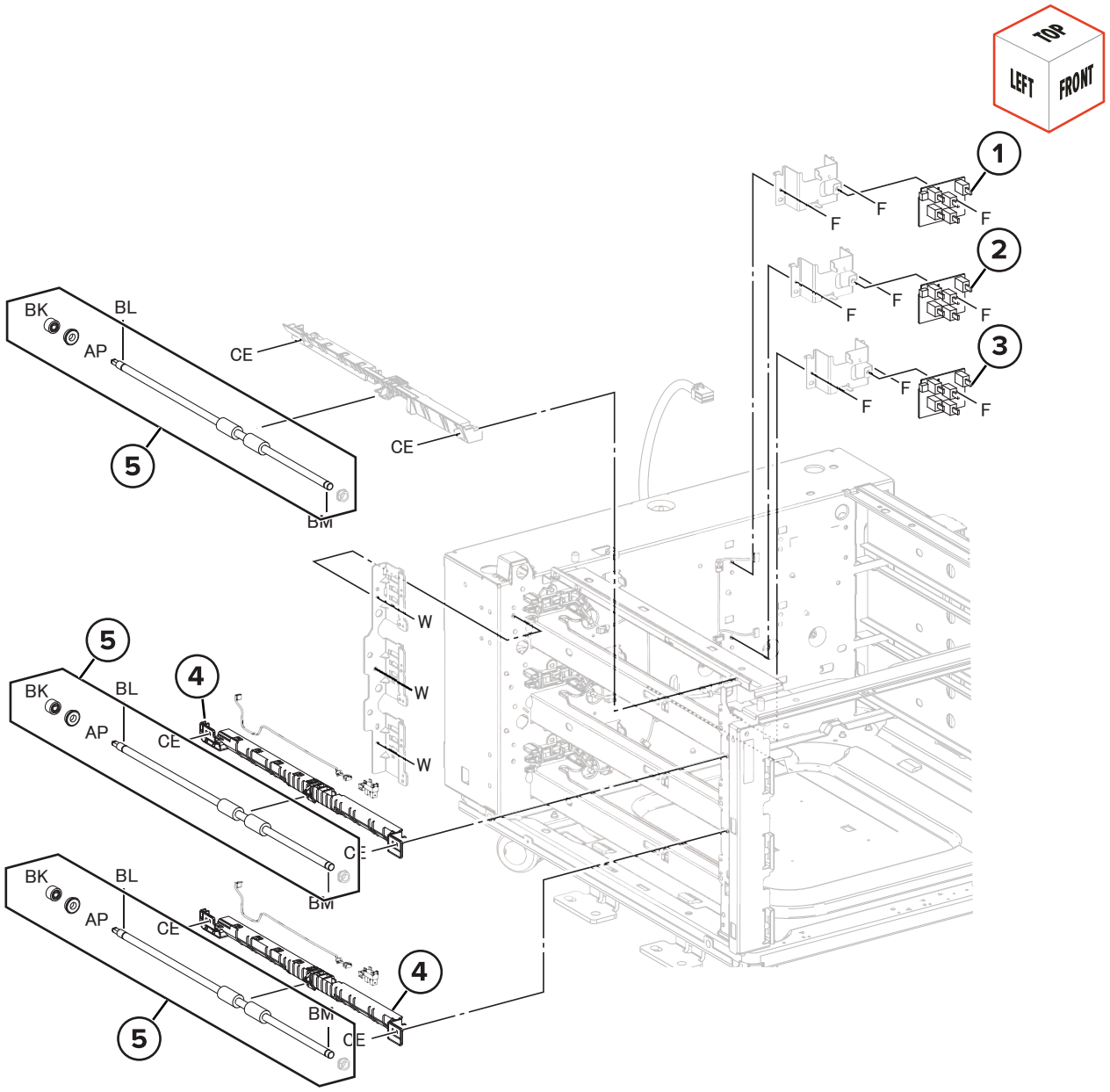
Assembly 70: 3 x 520-sheet tray feed 3



Assembly 70: 3 x 520-sheet tray feed 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3775	1	1	Roller kit (3 x 520-sheet tray)	--

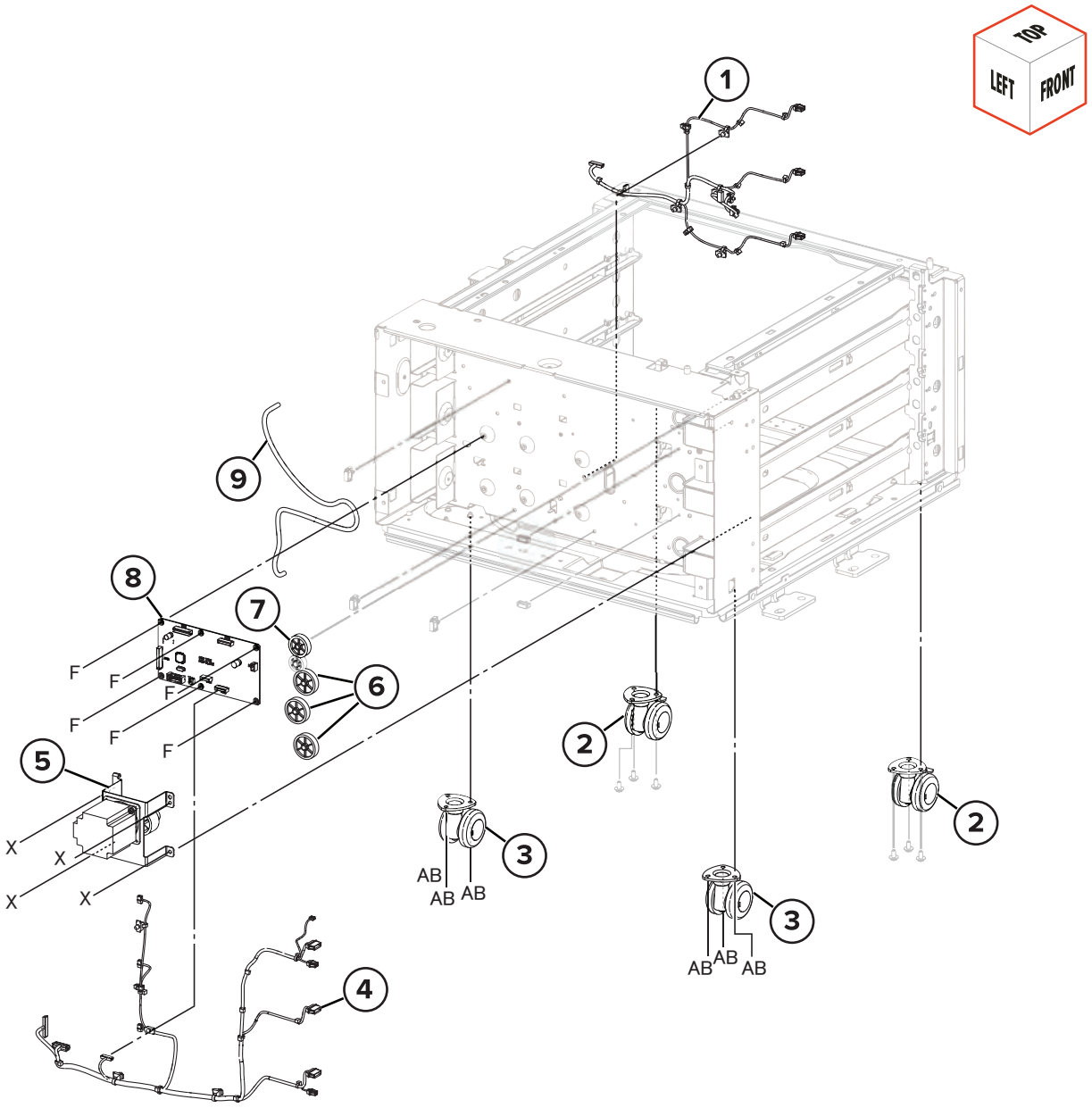
Assembly 71: 3 x 520-sheet tray transport 1



Assembly 71: 3 x 520-sheet tray transport 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X7533	1	1	Sensor (3 x 520-sheet tray paper size)	--
2	40X7533	1	1	Sensor (3 x 520-sheet tray paper size)	--
3	40X7533	1	1	Sensor (3 x 520-sheet tray paper size)	--
4	41X3923	1	1	3 x 520-sheet tray transport bracket	--
5	41X3907	1	1	3 x 520-sheet tray transport roller	--

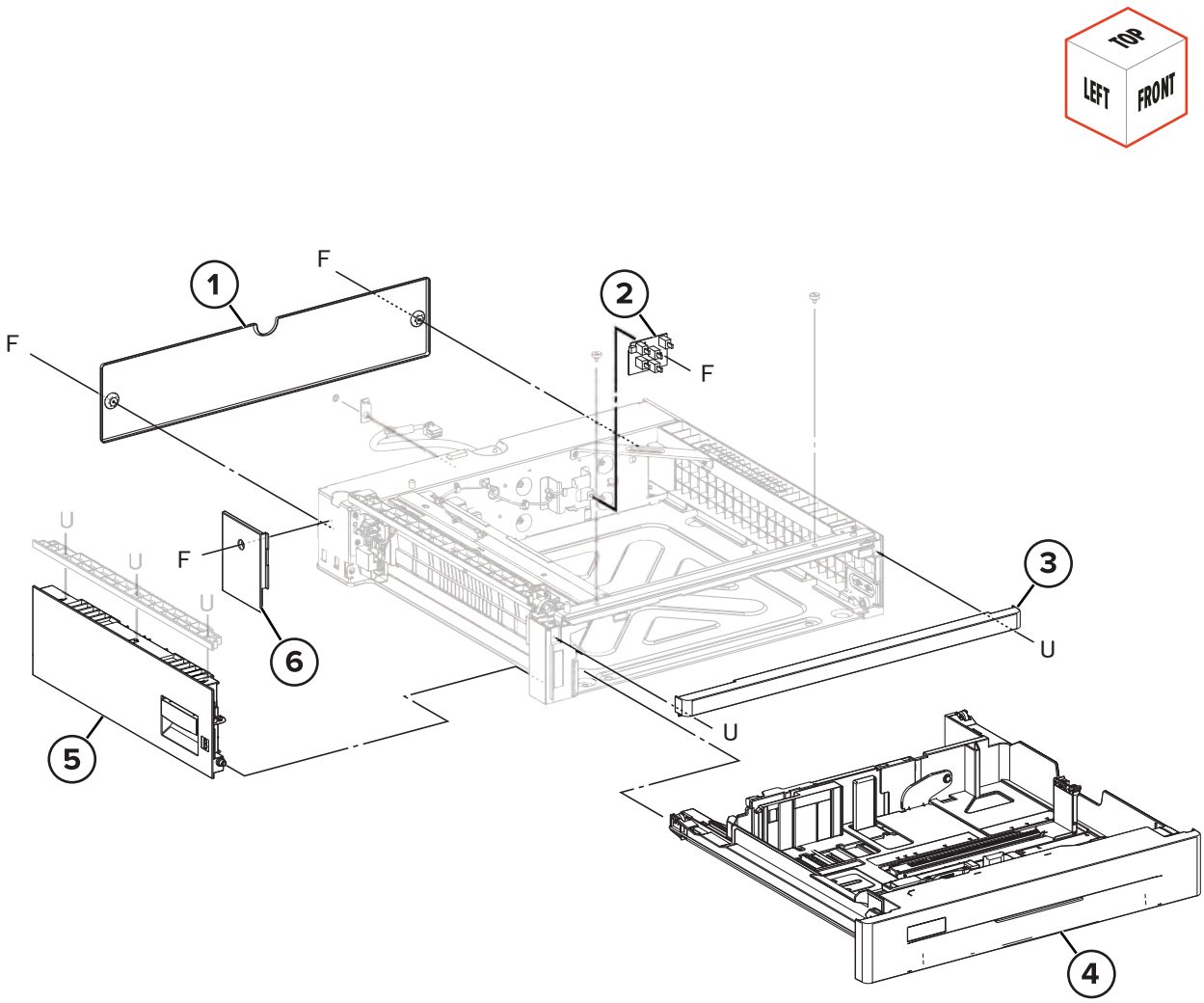
Assembly 72: 3 x 520-sheet tray transport 2



Assembly 72: 3 x 520-sheet tray transport 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3930	1	1	3 x 520-sheet tray motor cable	--
2	41X3950	1	1	3 x 520-sheet tray right casters	--
3	41X3911	1	1	3 x 520-sheet tray left casters	--
4	41X3928	1	1	3 x 520-sheet tray sensor cable	--
5	41X3926	1	1	Motor (3 x 520-sheet tray transport)	--
6	40X6669	1	1	Transport gear (39T)	--
7	40X6668	1	1	Transport gear (34T)	--
8	41X3927	1	1	3 x 520-sheet tray controller board	--
9	41X3929	1	1	3 x 520-sheet tray interface cable	--

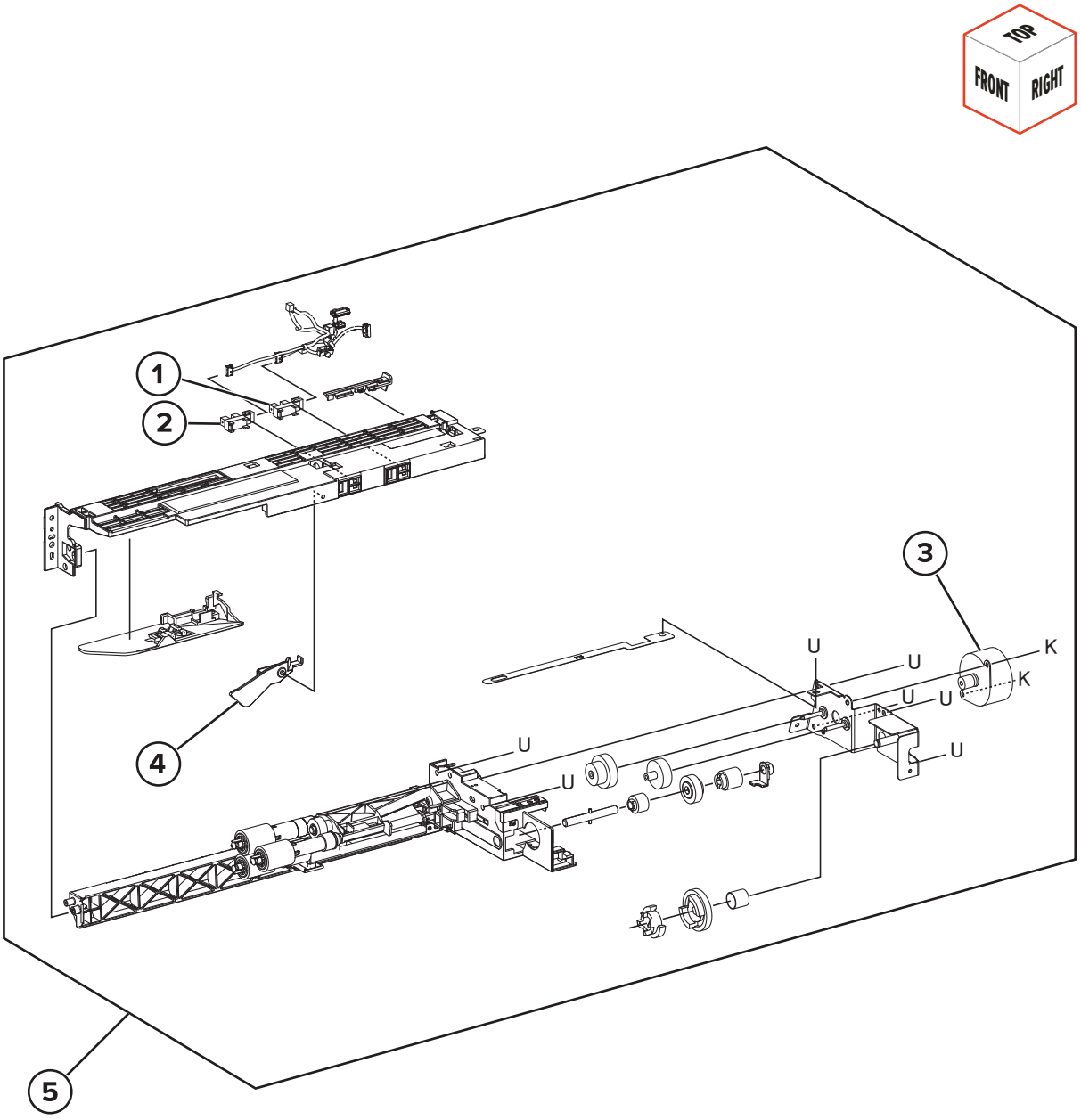
Assembly 73: 520-sheet tray covers



Assembly 73: 520-sheet tray covers

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3933	1	1	520-sheet tray rear cover	--
2	40X7533	1	1	Sensor (520-sheet tray paper size)	--
3	41X3934	1	1	520-sheet tray top cover	--
4	41X3773	1	1	Tray insert	--
5	41X3931	1	1	520-sheet tray door	--
6	41X3932	1	1	520-sheet tray left cover	--

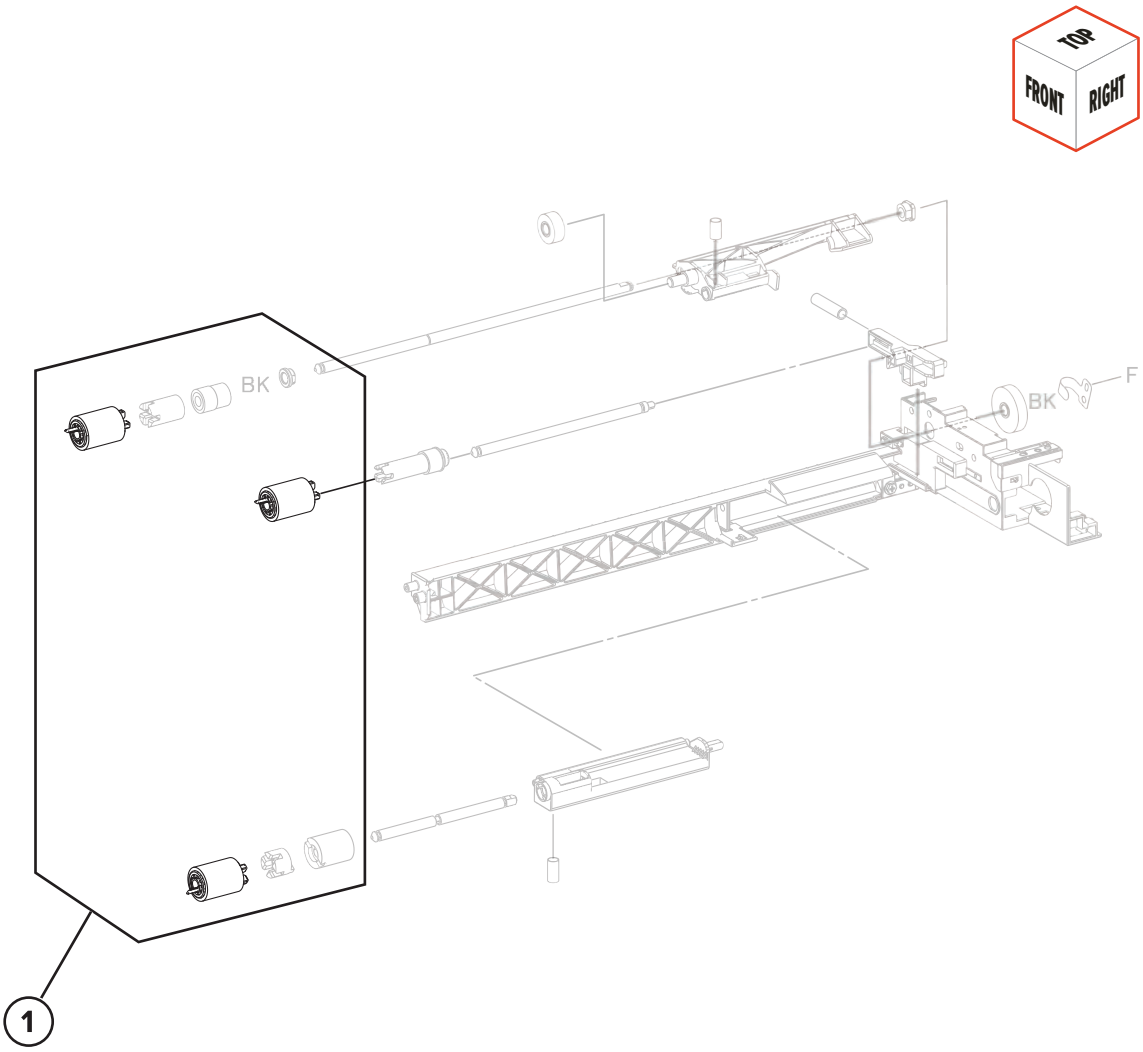
Assembly 74: 520-sheet tray feed 1



Assembly 74: 520-sheet tray feed 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0588	1	1	Sensor (pick position)	--
2	40X0588	1	1	Sensor (paper present)	--
3	40X6658	1	1	Motor (pick/lift)	--
4	40X0587	1	1	Paper present sensor actuator	--
5	41X3908	1	1	520-sheet tray feeder (low)	--

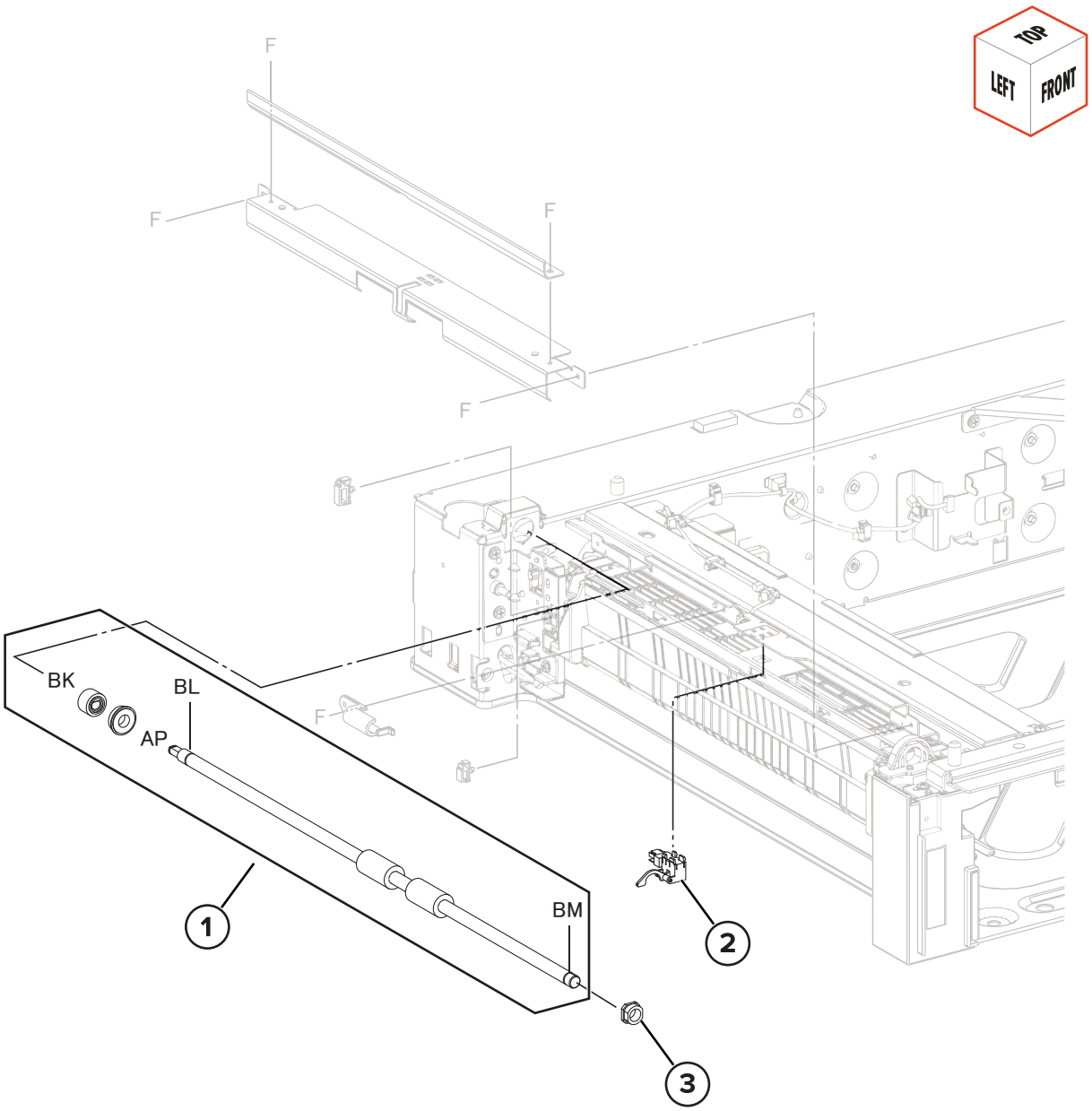
Assembly 75: 520-sheet tray feed 2



Assembly 75: 520-sheet tray feed 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3775	1	1	Roller kit (520-sheet tray)	--

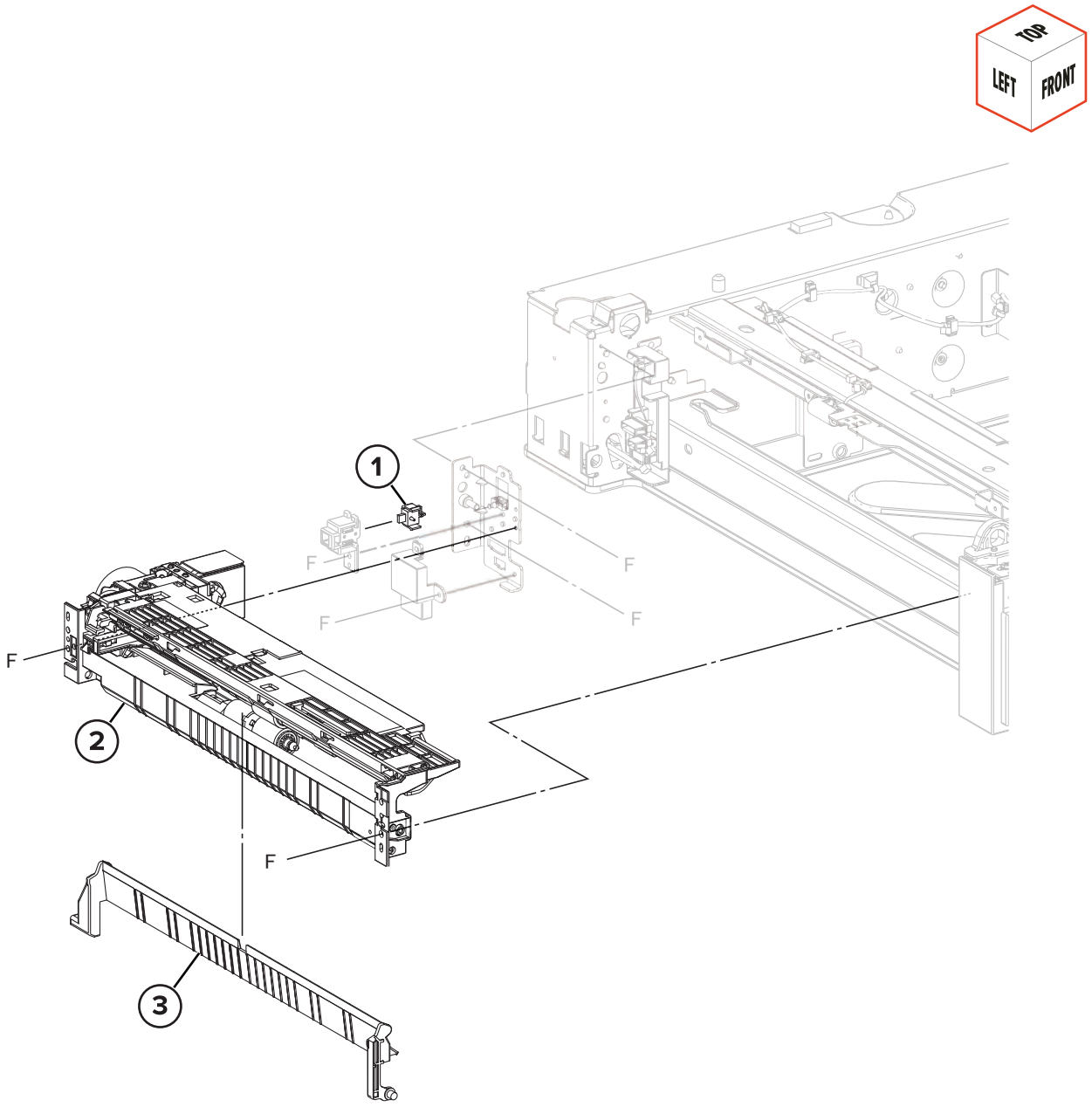
Assembly 76: 520-sheet tray transport 1



Assembly 76: 520-sheet tray transport 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3935	1	1	520-sheet tray transport roller	--
2	40X6676	1	1	Sensor (520-sheet tray transport)	--
3	41X3280	1	1	520-sheet tray transport roller bearing	--

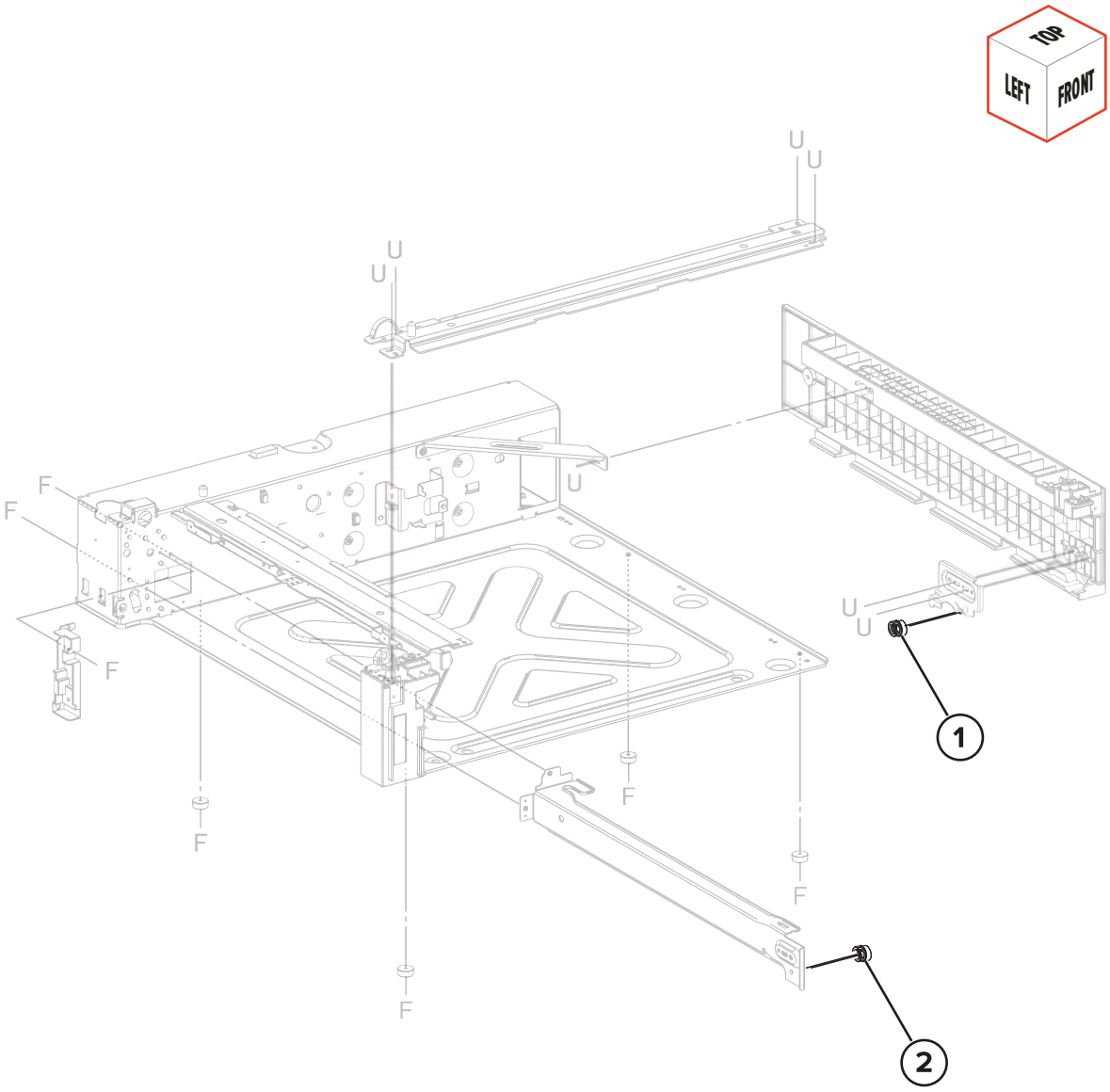
Assembly 77: 520-sheet tray transport 2



Assembly 77: 520-sheet tray transport 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X6700	1	1	520-sheet tray door switch	--
2	41X3908	1	1	520-sheet tray paper feeder	--
3	40X6699	1	1	Turn guide	--

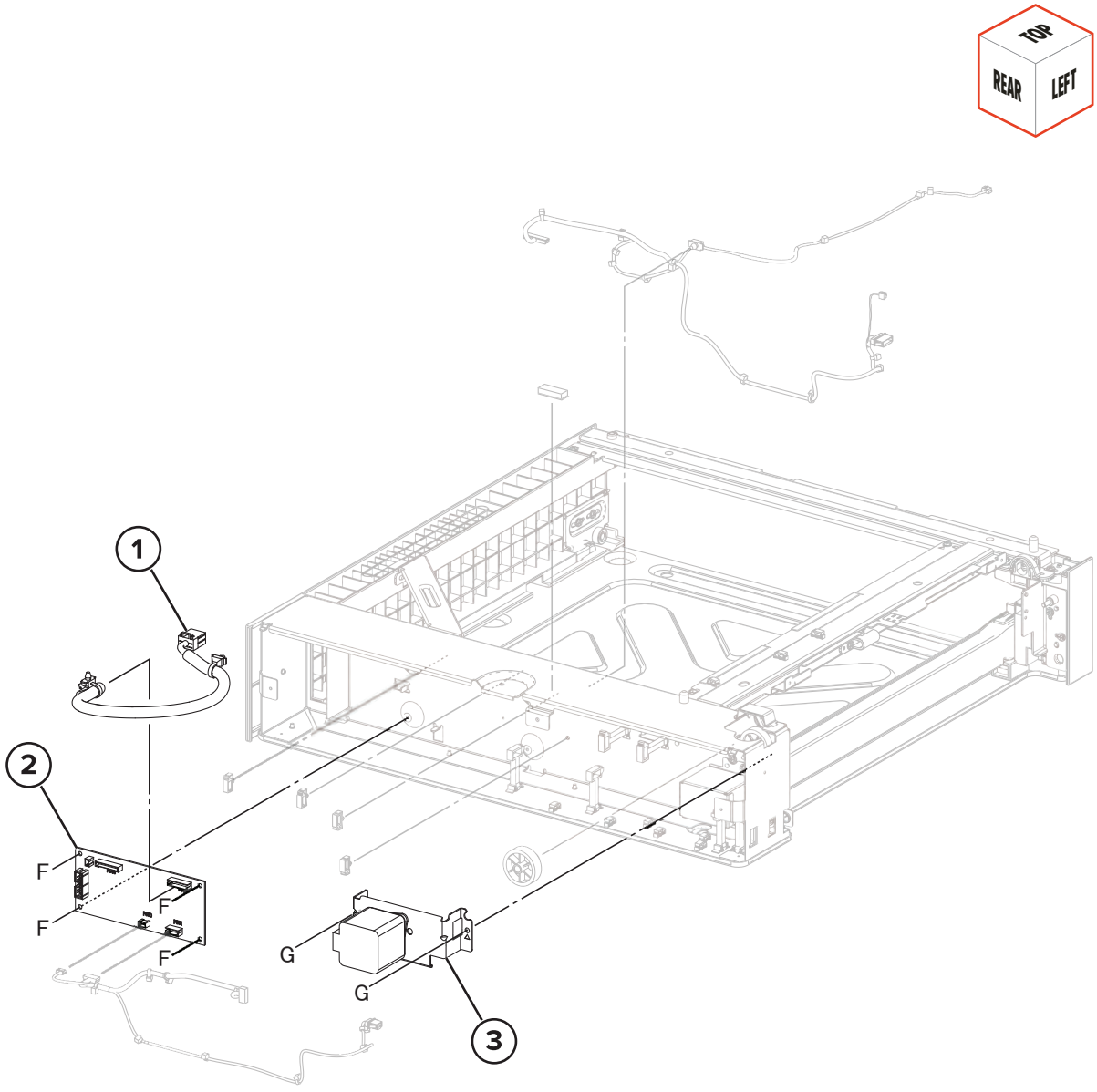
Assembly 78: 520-sheet tray transport 3



Assembly 78: 520-sheet tray transport 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X6653	1	1	Tray guide right roller	--
2	40X6652	1	1	Tray guide left roller	--

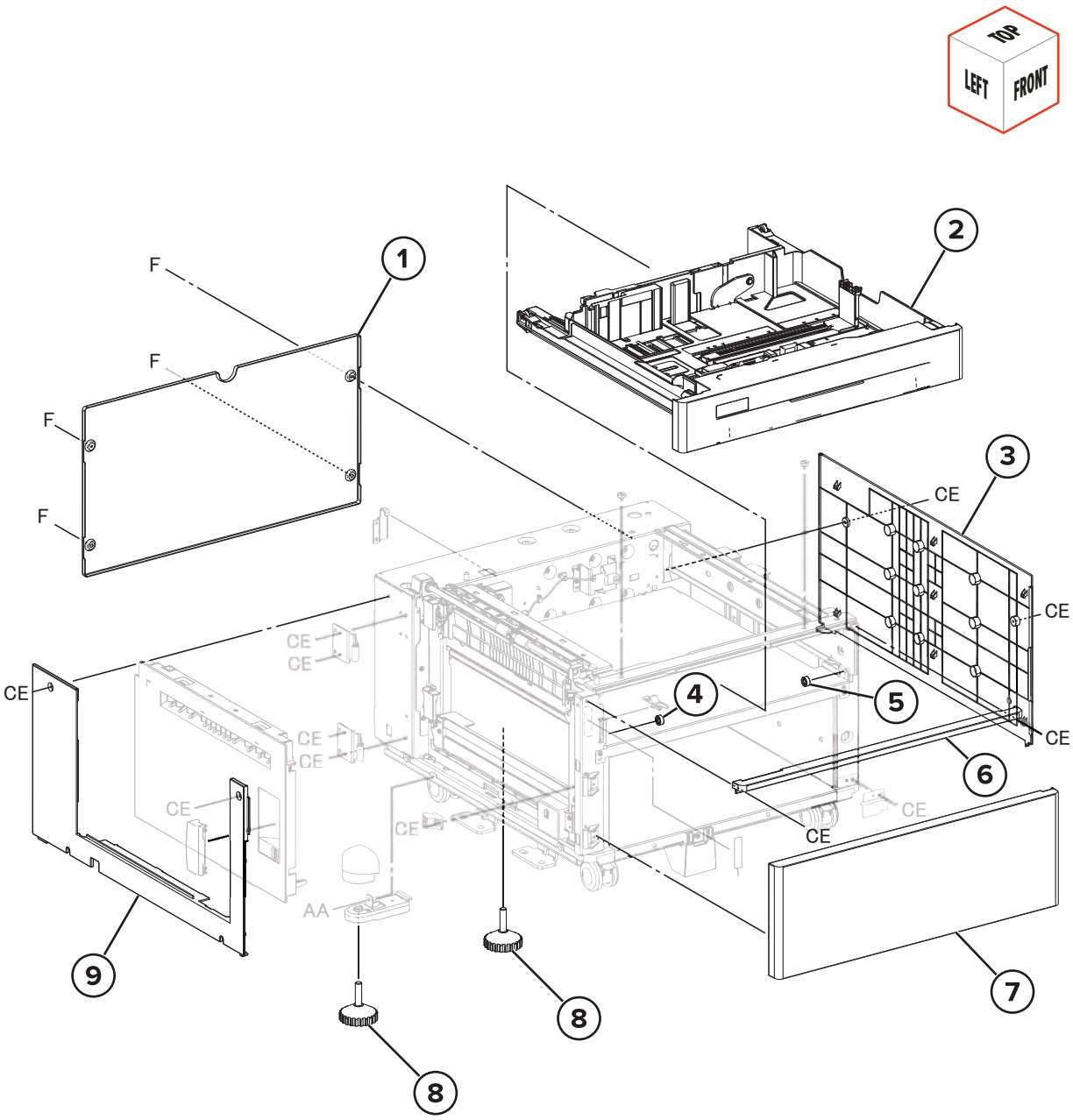
Assembly 79: 520-sheet tray transport 4



Assembly 79: 520-sheet tray transport 4

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3938	1	1	520-sheet tray interface cable	--
2	41X3937	1	1	520-sheet tray controller board	--
3	41X3936	1	1	Motor (520-sheet tray transport)	--

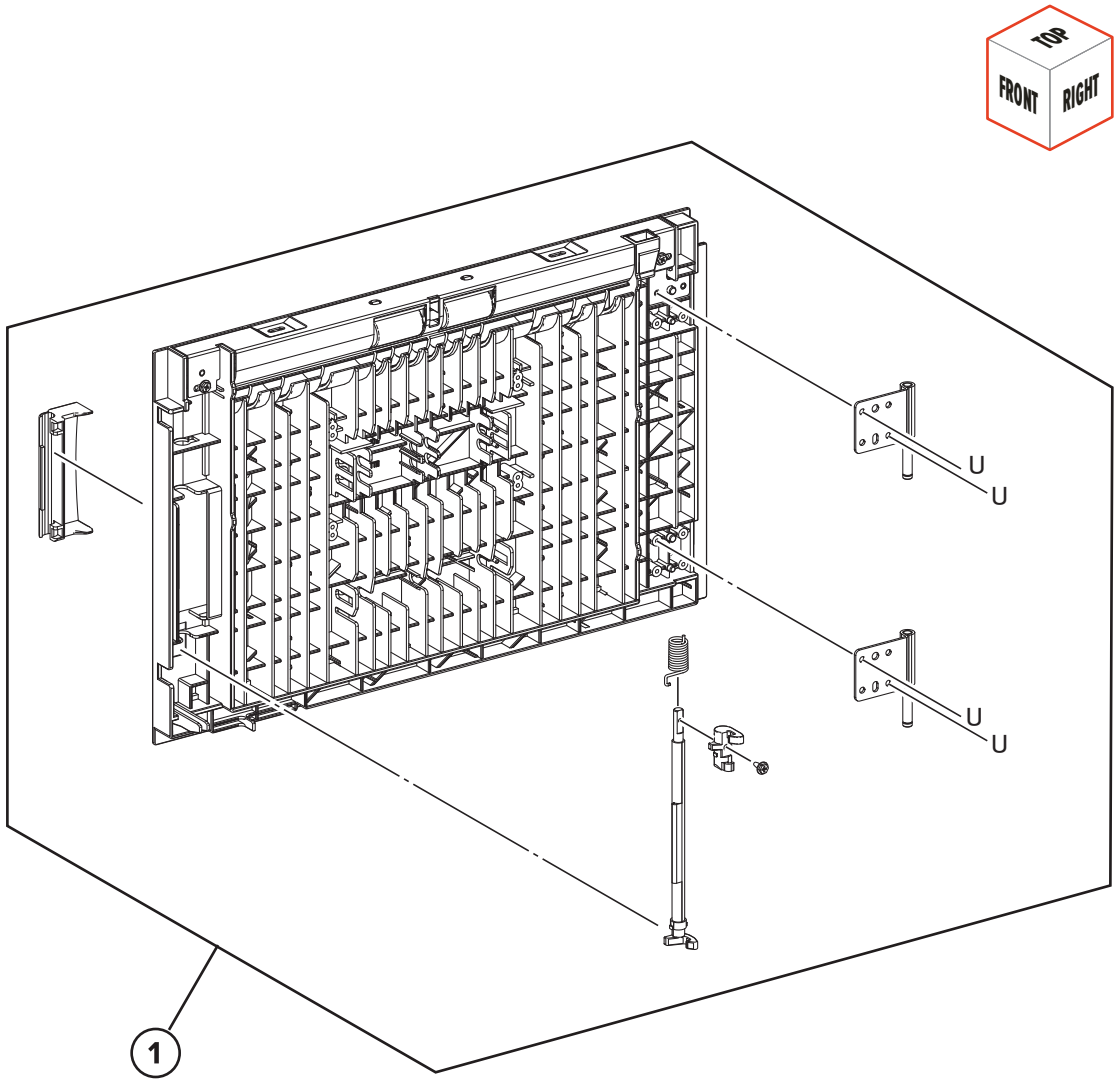
Assembly 80: 520-sheet tray with cabinet covers 1



Assembly 80: 520-sheet tray with cabinet covers 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3901	1	1	520-sheet tray with cabinet rear cover	--
2	41X3773	1	1	Tray insert	--
3	41X3903	1	1	520-sheet tray with cabinet right cover	--
4	40X6652	1	1	Tray guide left roller	--
5	40X6653	1	1	Tray guide right roller	--
6	41X3904	1	1	520-sheet tray with cabinet top cover	--
7	41X3905	1	1	520-sheet tray with cabinet front cover	--
8	41X3917	1	1	520-sheet tray with cabinet adjustable feet	--
9	41X3902	1	1	520-sheet tray with cabinet left cover	--

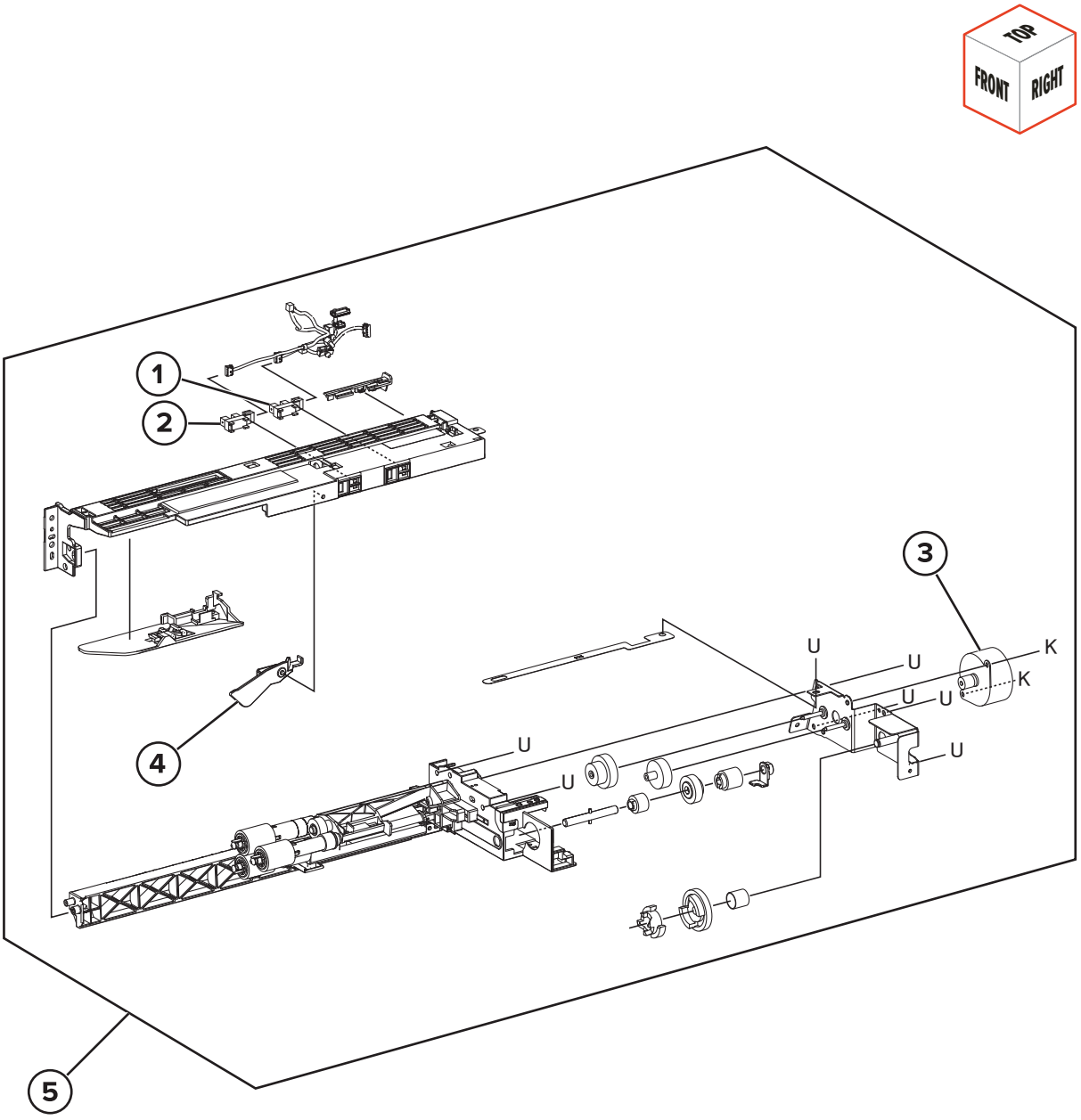
Assembly 81: 520-sheet tray with cabinet covers 2



Assembly 81: 520-sheet tray with cabinet covers 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3906	1	1	520-sheet tray with cabinet door	--

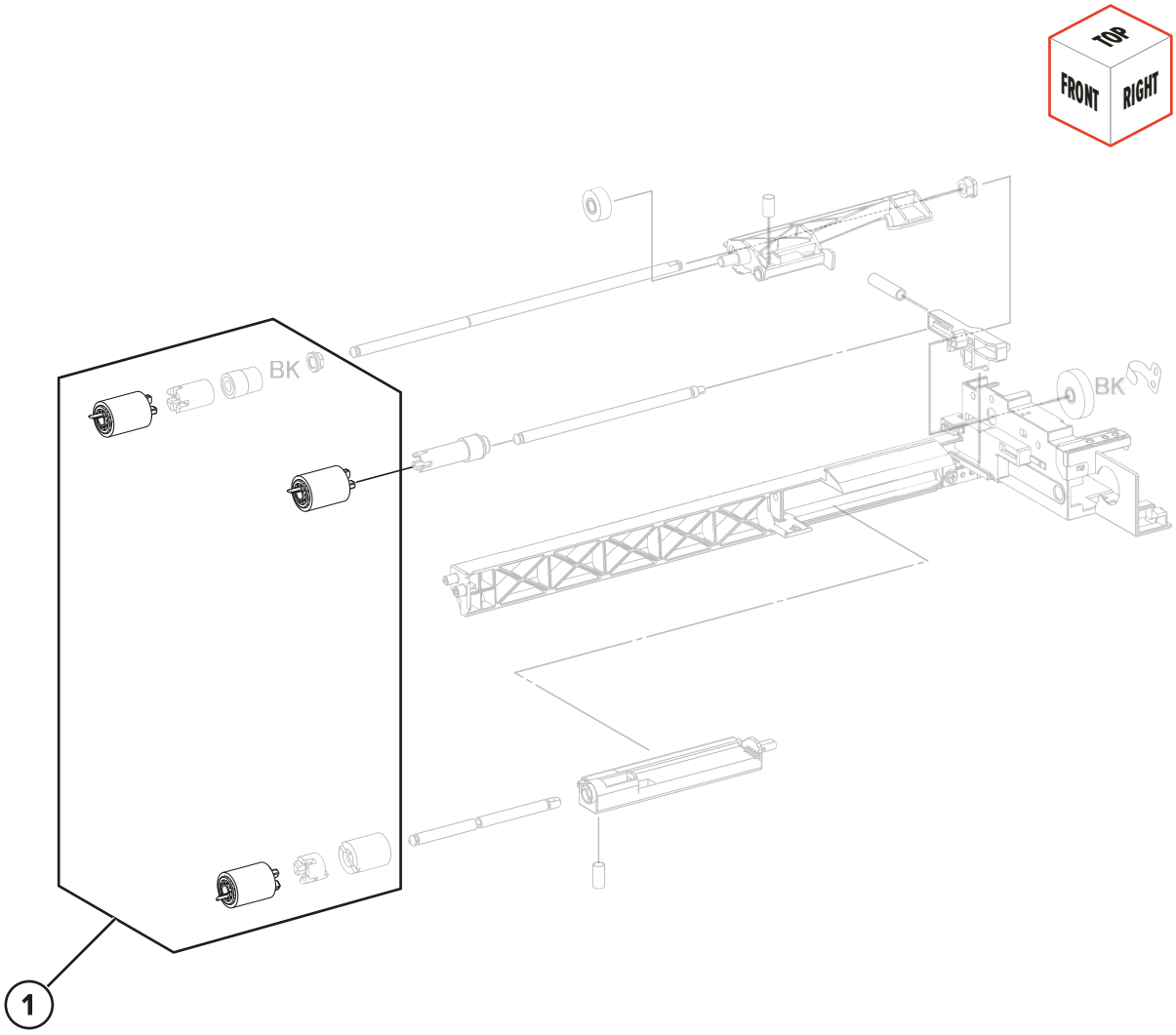
Assembly 82: 520-sheet tray with cabinet feed 1



Assembly 82: 520-sheet tray with cabinet feed 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0588	1	1	Sensor (pick position)	--
2	40X0588	1	1	Sensor (paper present)	--
3	40X6658	1	1	Motor (pick/lift)	--
4	40X0587	1	1	Paper present sensor actuator	--
5	41X3908	1	1	520-sheet tray with cabinet feeder (low)	--

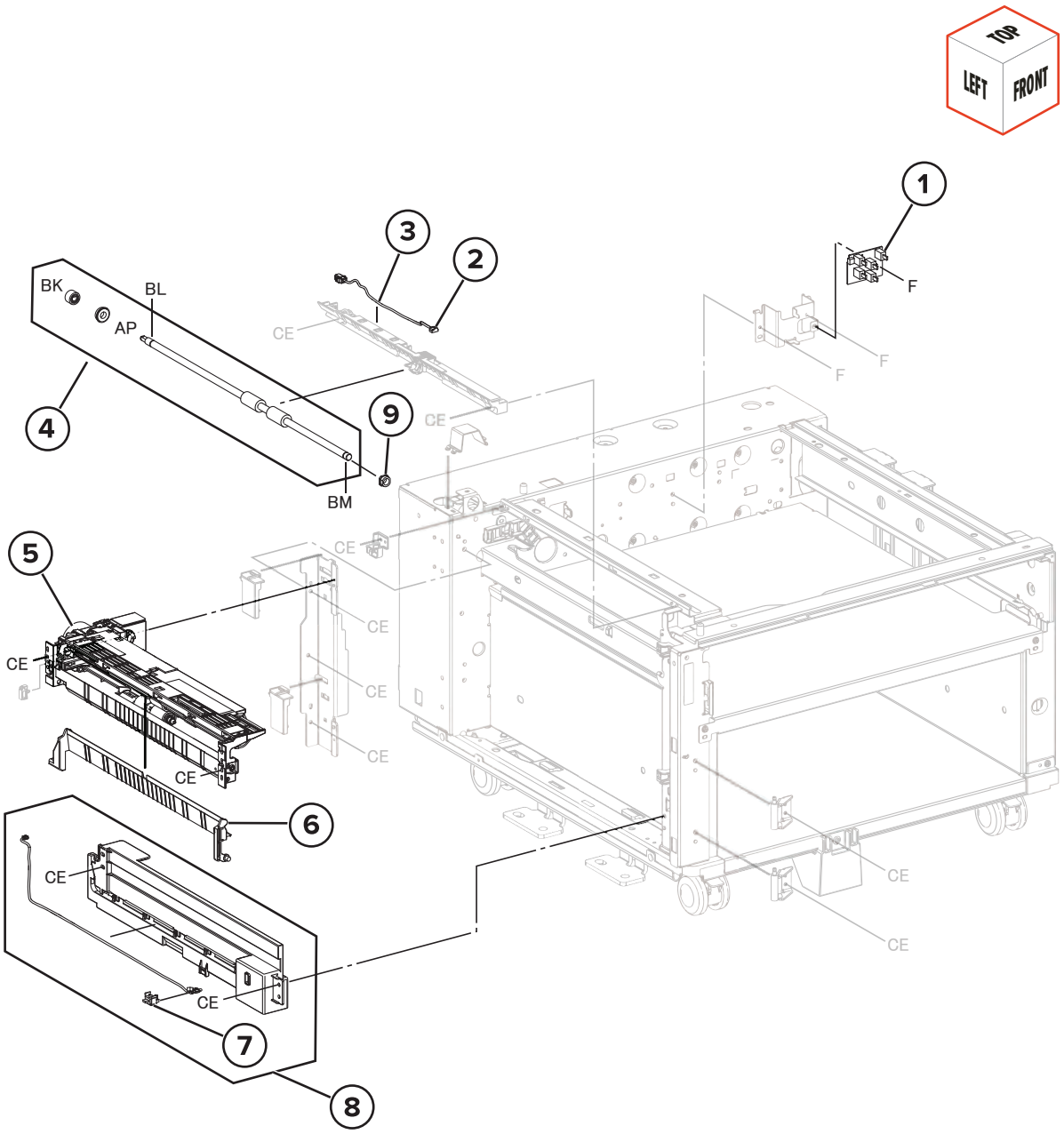
Assembly 83: 520-sheet tray with cabinet feed 2



Assembly 83: 520-sheet tray with cabinet feed 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3775	1	1	Roller kit (520-sheet tray with cabinet)	--

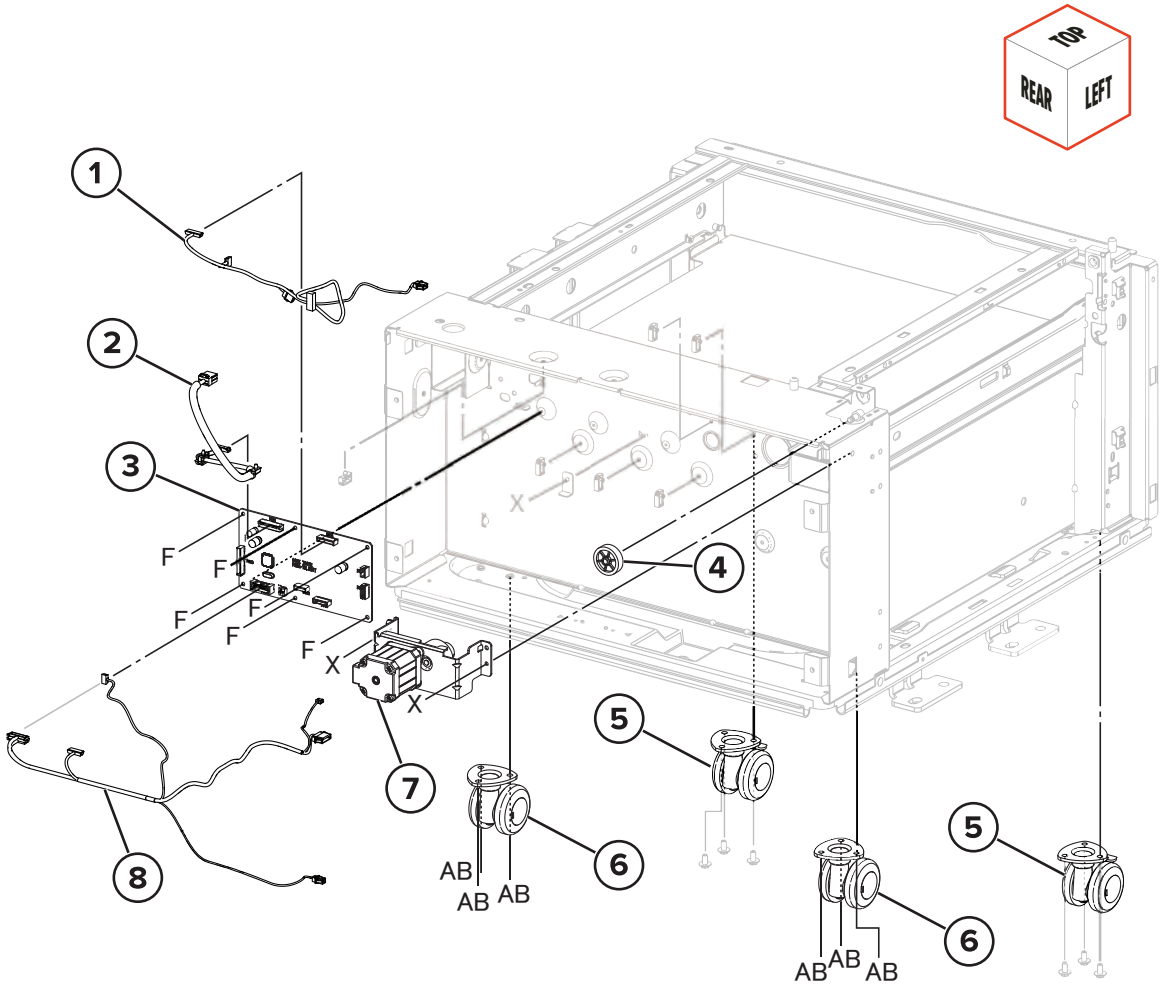
Assembly 84: 520-sheet tray with cabinet transport 1



Assembly 84: 520-sheet tray with cabinet transport 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X7533	1	1	Sensor (520-sheet tray with cabinet paper size)	--
2	40X0588	1	1	Sensor (520-sheet tray with cabinet transport)	--
3	41X3910	1	1	520-sheet tray with cabinet transport sensor cable	--
4	41X3907	1	1	520-sheet tray with cabinet transport roller	--
5	41X3908	1	1	520-sheet tray with cabinet paper feeder	--
6	40X6699	1	1	Turn guide	--
7	40X6700	1	1	520-sheet tray with cabinet door switch	--
8	41X3909	1	1	520-sheet tray with cabinet door switch cover	--
9	41X3280	1	1	520-sheet tray with cabinet transport roller bearing	--

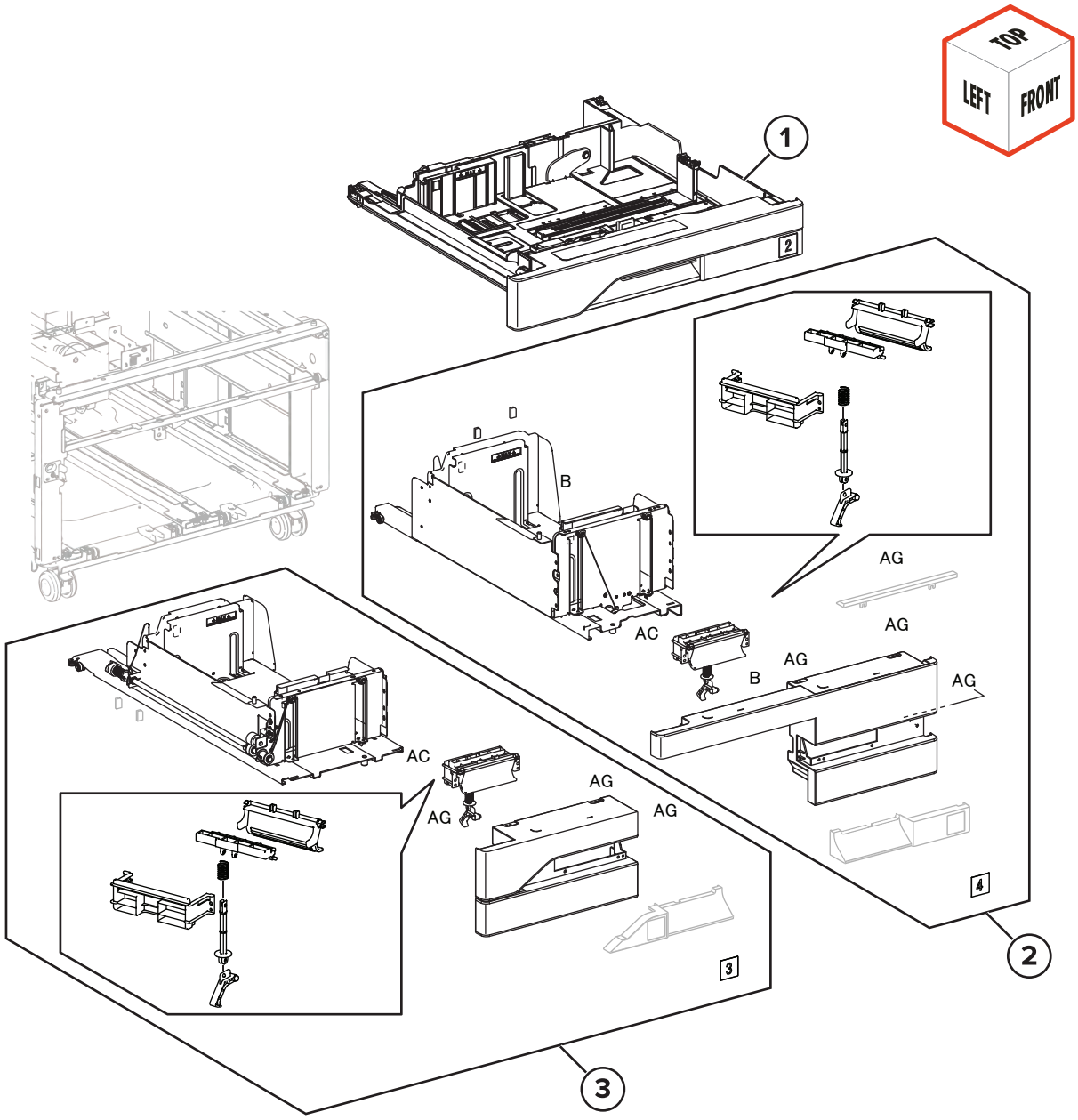
Assembly 85: 520-sheet tray with cabinet transport 2



Assembly 85: 520-sheet tray with cabinet transport 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4532	1	1	520-sheet tray with cabinet motor cable	--
2	41X3915	1	1	520-sheet tray with cabinet interface cable	--
3	41X3947	1	1	520-sheet tray with cabinet controller board	--
4	40X6668	1	1	Transport gear (34T)	--
5	41X3950	1	1	520-sheet tray with cabinet front caster	--
6	41X3911	1	1	520-sheet tray with cabinet rear caster	--
7	41X3944	1	1	Motor (520-sheet tray with cabinet transport)	--
8	41X3916	1	1	520-sheet tray with cabinet sensor cable	--

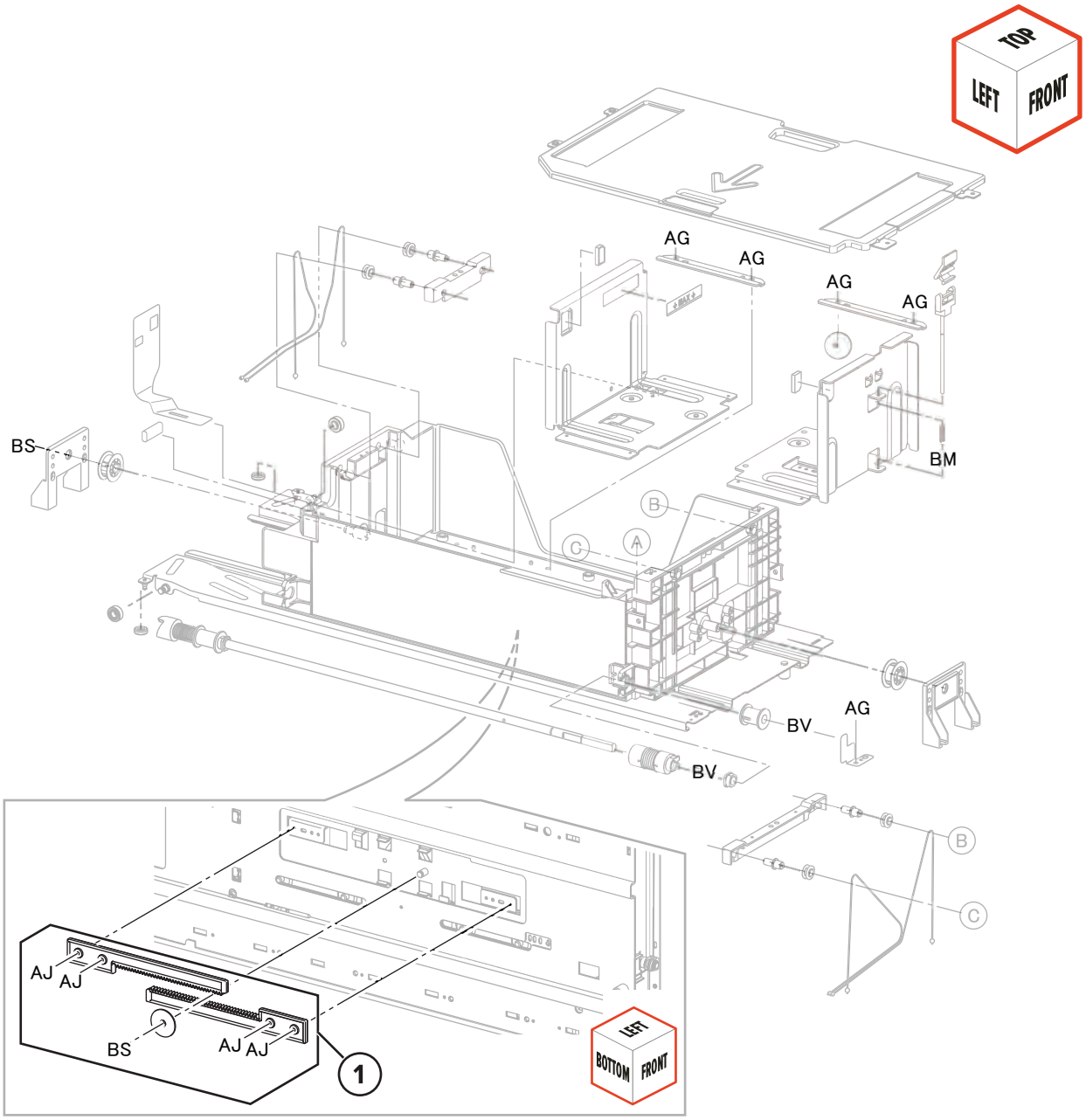
Assembly 86: 2520-sheet tandem tray 1



Assembly 86: 2520-sheet tandem tray 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3773	1	1	2520-sheet tandem tray 2	--
2	41X3939	1	1	2520-sheet tandem tray 4	--
3	41X3940	1	1	2520-sheet tandem tray 3	--

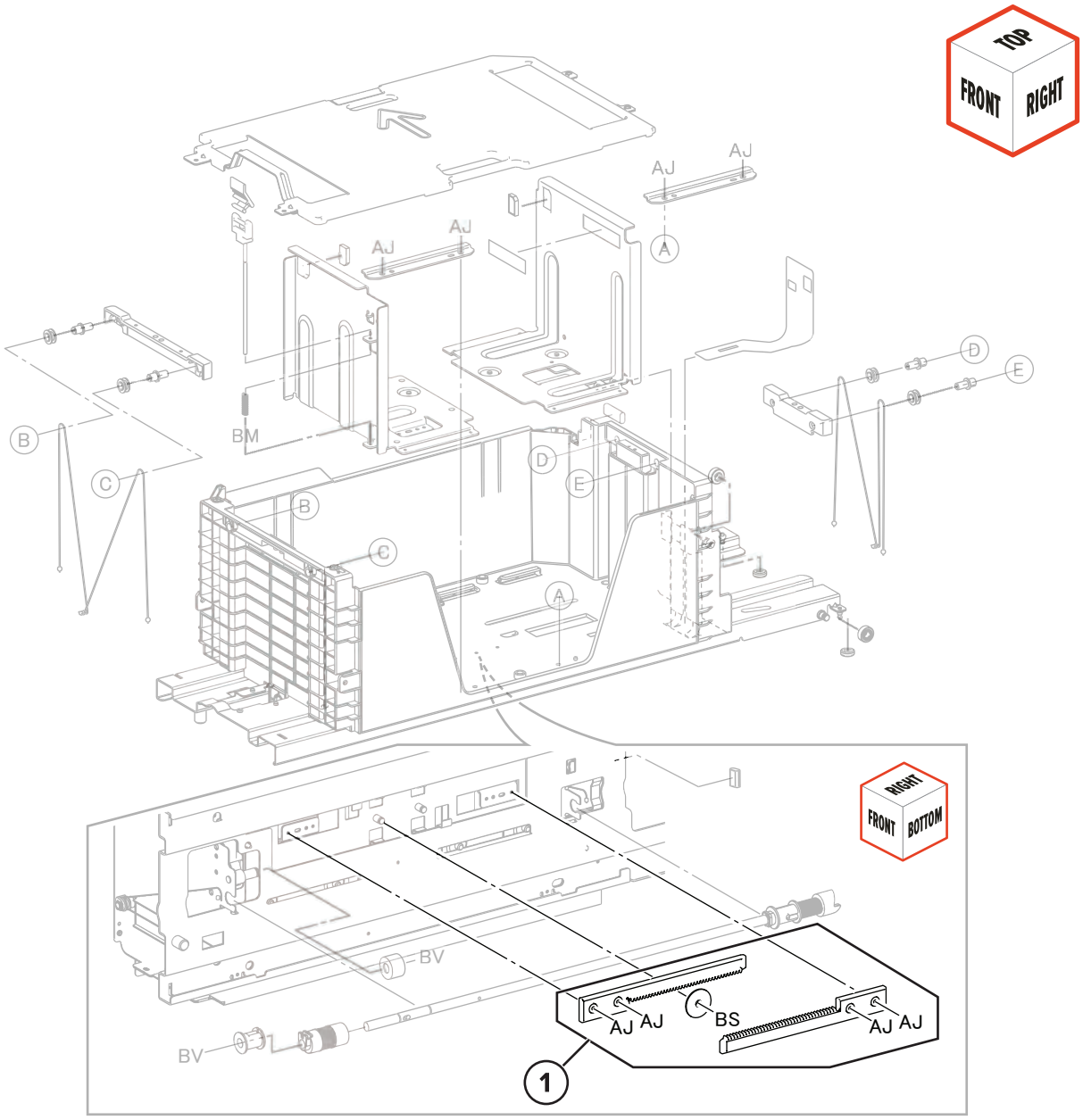
Assembly 87: 2520-sheet tandem tray 2



Assembly 87: 2520-sheet tandem tray 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3941	1	1	2520-sheet tandem tray 3 guide racks and pinion	--

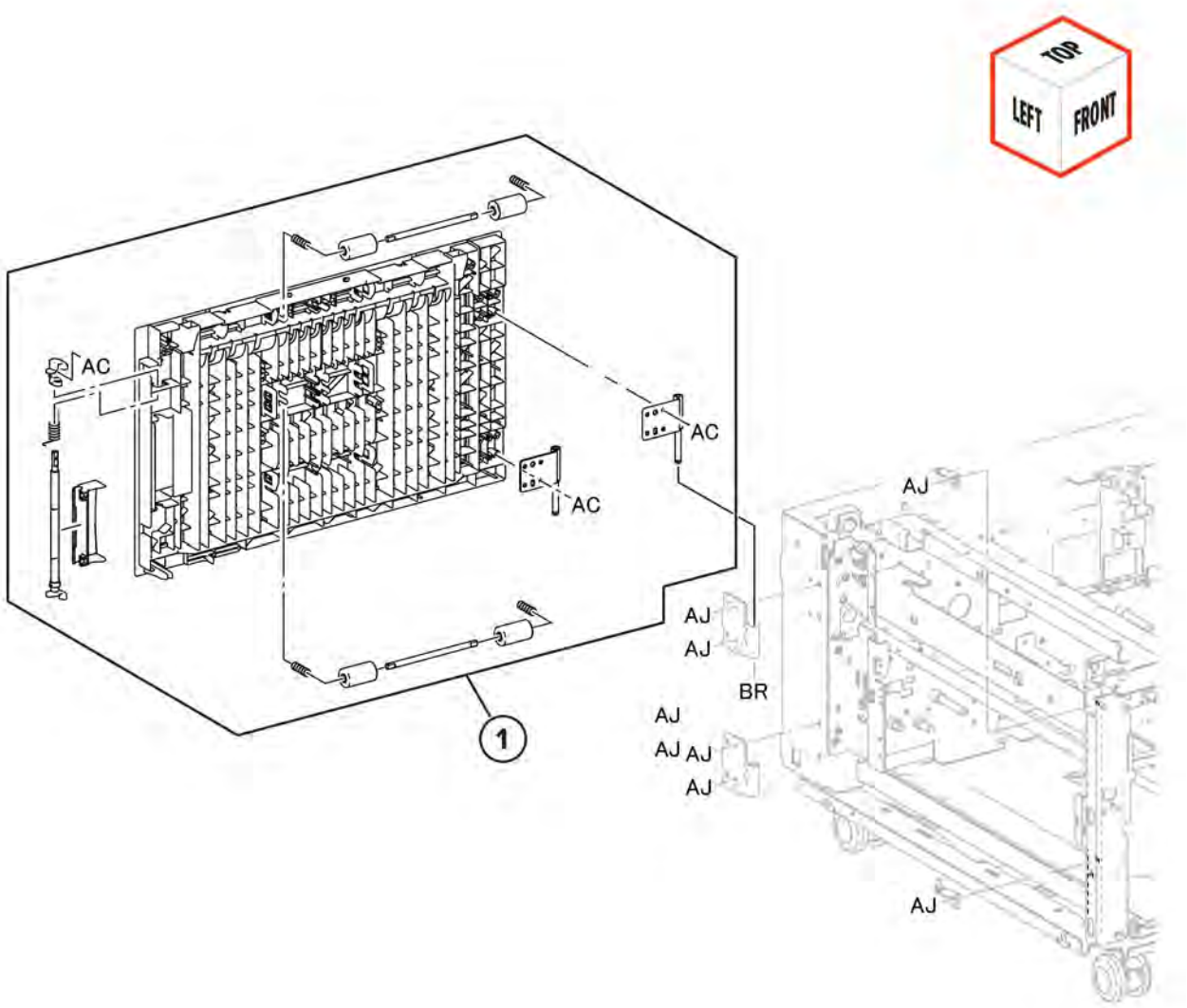
Assembly 88: 2520-sheet tandem tray 3



Assembly 88: 2520-sheet tandem tray 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3941	1	1	2520-sheet tandem tray 4 guide racks and pinion	--

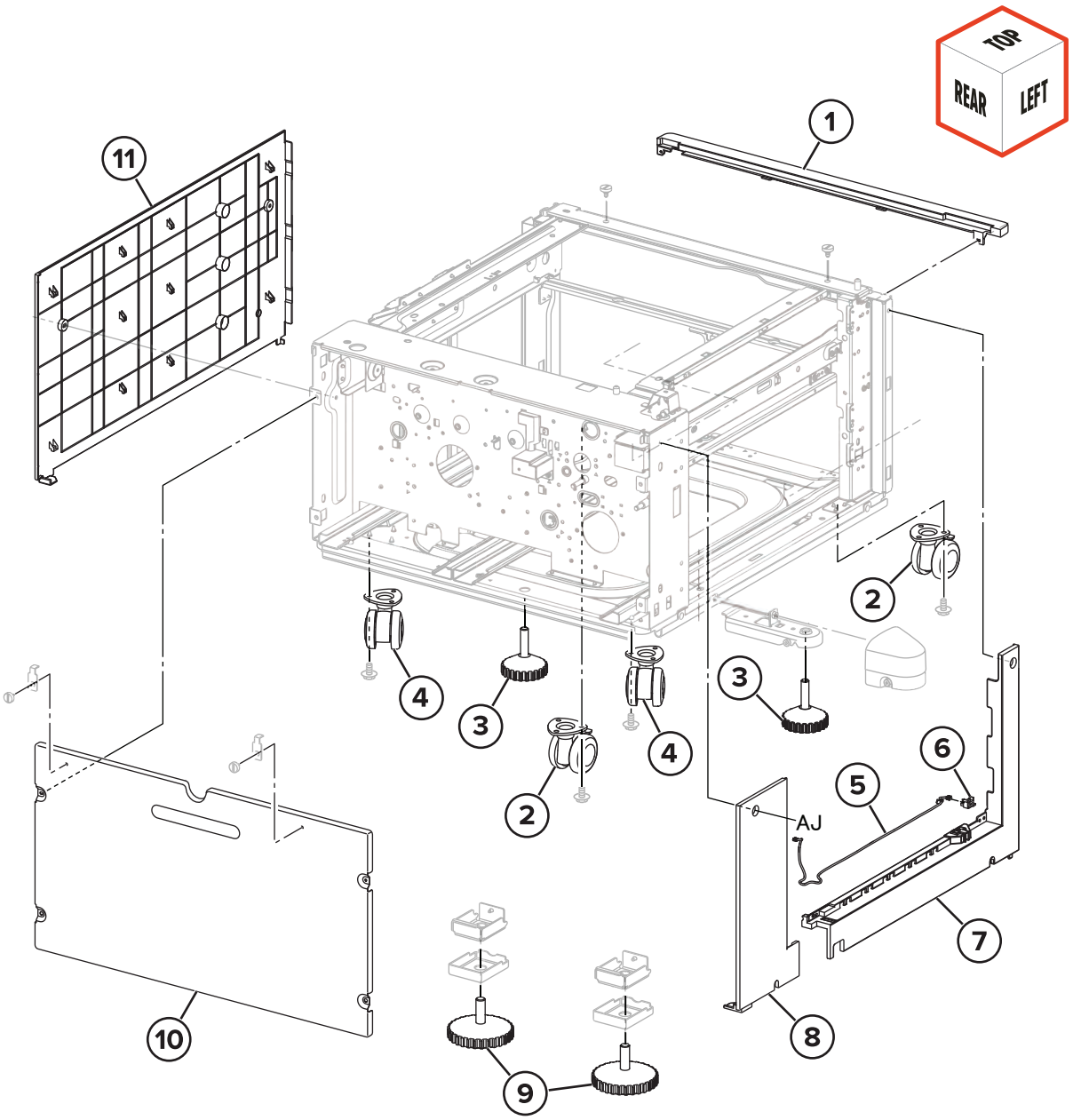
Assembly 89: 2520-sheet tandem tray covers 1



Assembly 89: 2520-sheet tandem tray covers 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3942	1	1	2520-sheet tandem tray left door	--

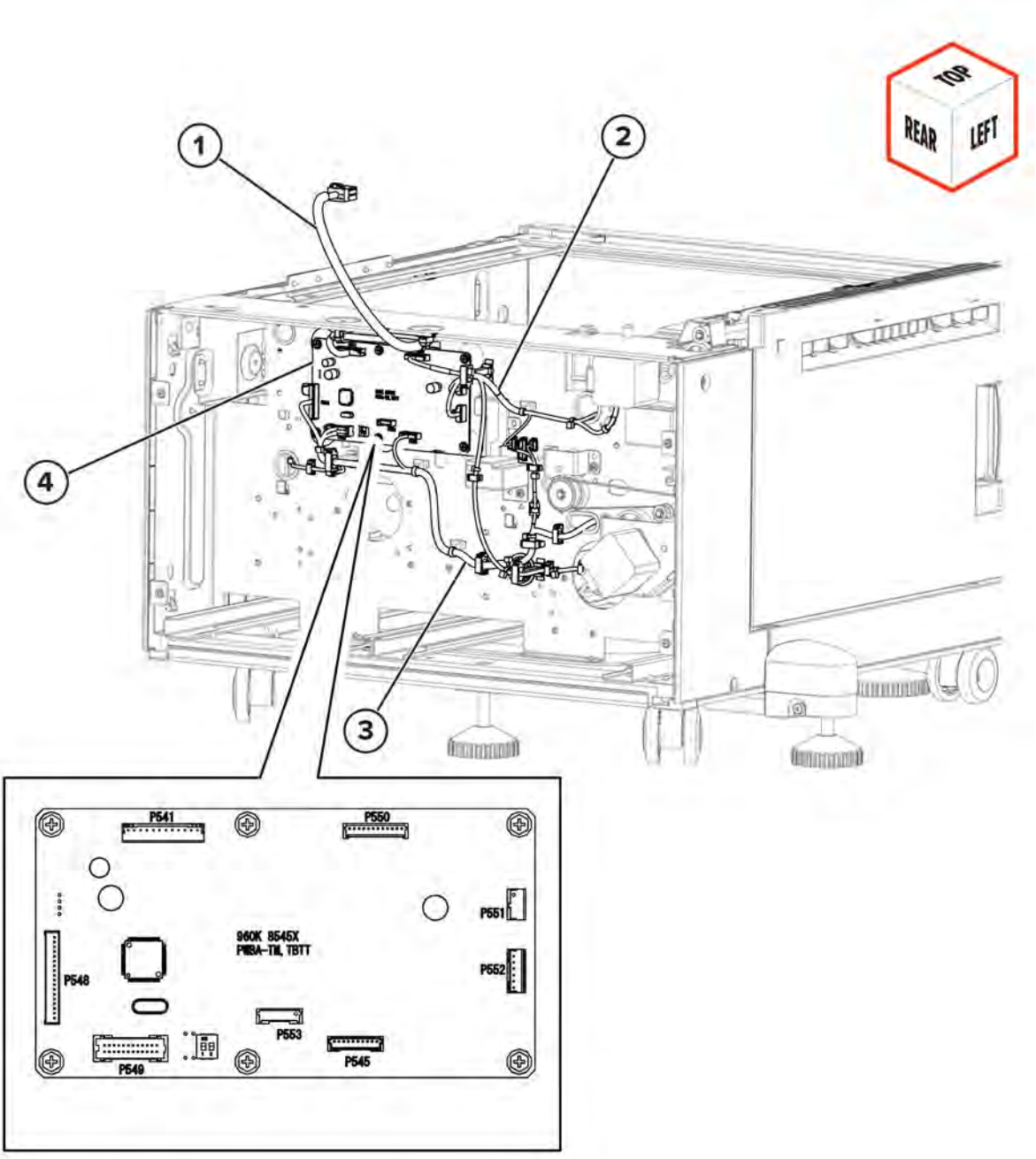
Assembly 90: 2520-sheet tandem tray covers 2



Assembly 90: 2520-sheet tandem tray covers 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3904	1	1	2520-sheet tandem tray top cover	--
2	41X3950	1	1	2520-sheet tandem tray front caster	--
3	41X3917	1	1	2520-sheet tandem tray adjustable feet	--
4	41X3911	1	1	2520-sheet tandem tray rear caster	--
5	41X3955	1	1	2520-sheet tandem tray door switch cable	--
6	40X0610	1	1	2520-sheet tandem tray door switch	--
7	41X3952	1	1	2520-sheet tandem tray front left cover	--
8	41X3902	1	1	2520-sheet tandem tray rear left cover	--
9	41X3957	1	1	2520-sheet tandem tray front adjustable feet	--
10	41X3901	1	1	2520-sheet tandem tray rear cover	--
11	41X3903	1	1	2520-sheet tandem tray right cover	--

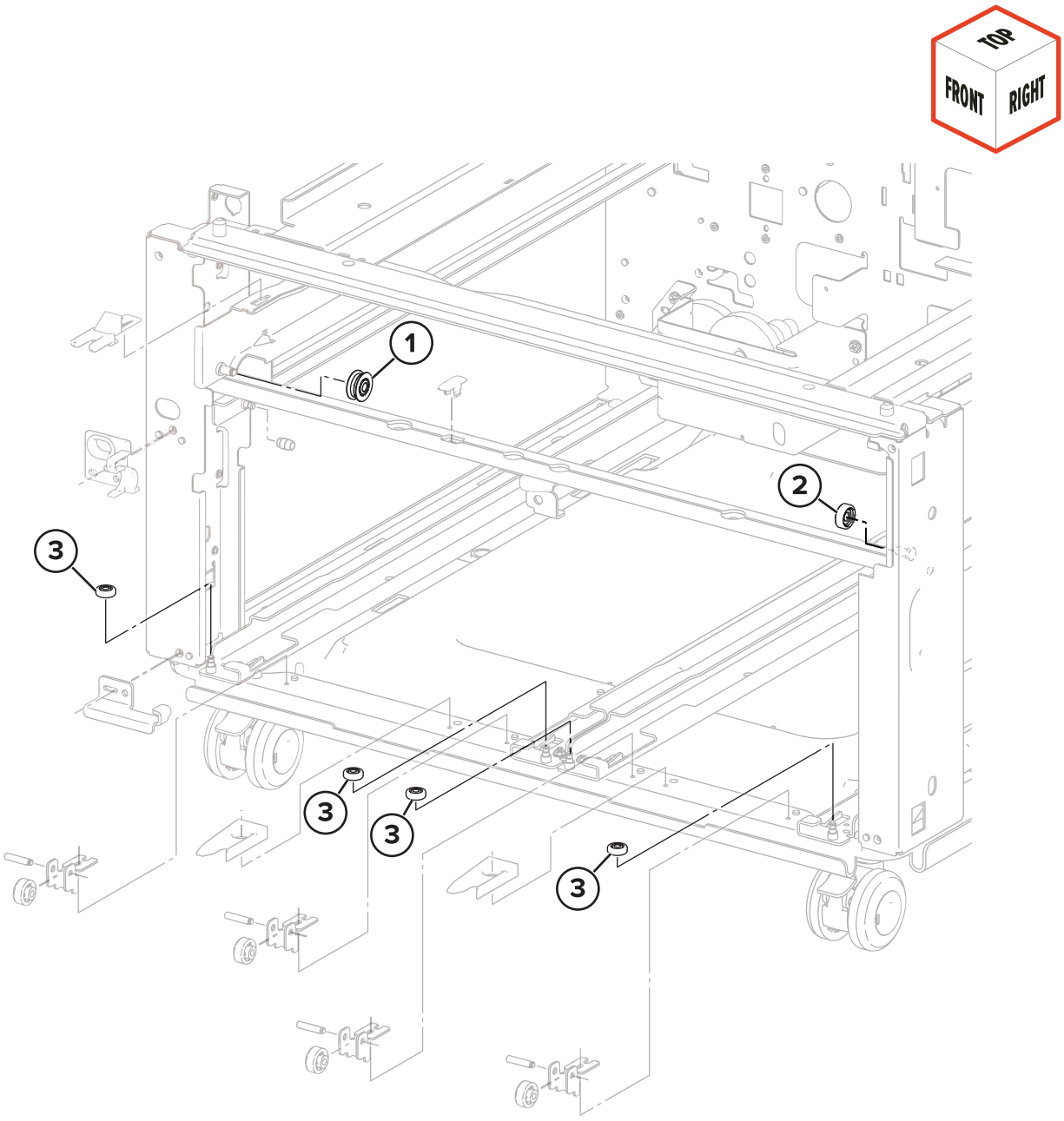
Assembly 91: 2520-sheet tandem tray electronics



Assembly 91: 2520-sheet tandem tray electronics

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3915	1	1	2520-sheet tandem tray interface cable	--
2	41X3949	1	1	2520-sheet tandem tray motor cable	--
3	41X3948	1	1	2520-sheet tandem tray sensor cable	--
4	41X3947	1	1	2520-sheet tandem tray controller board	--

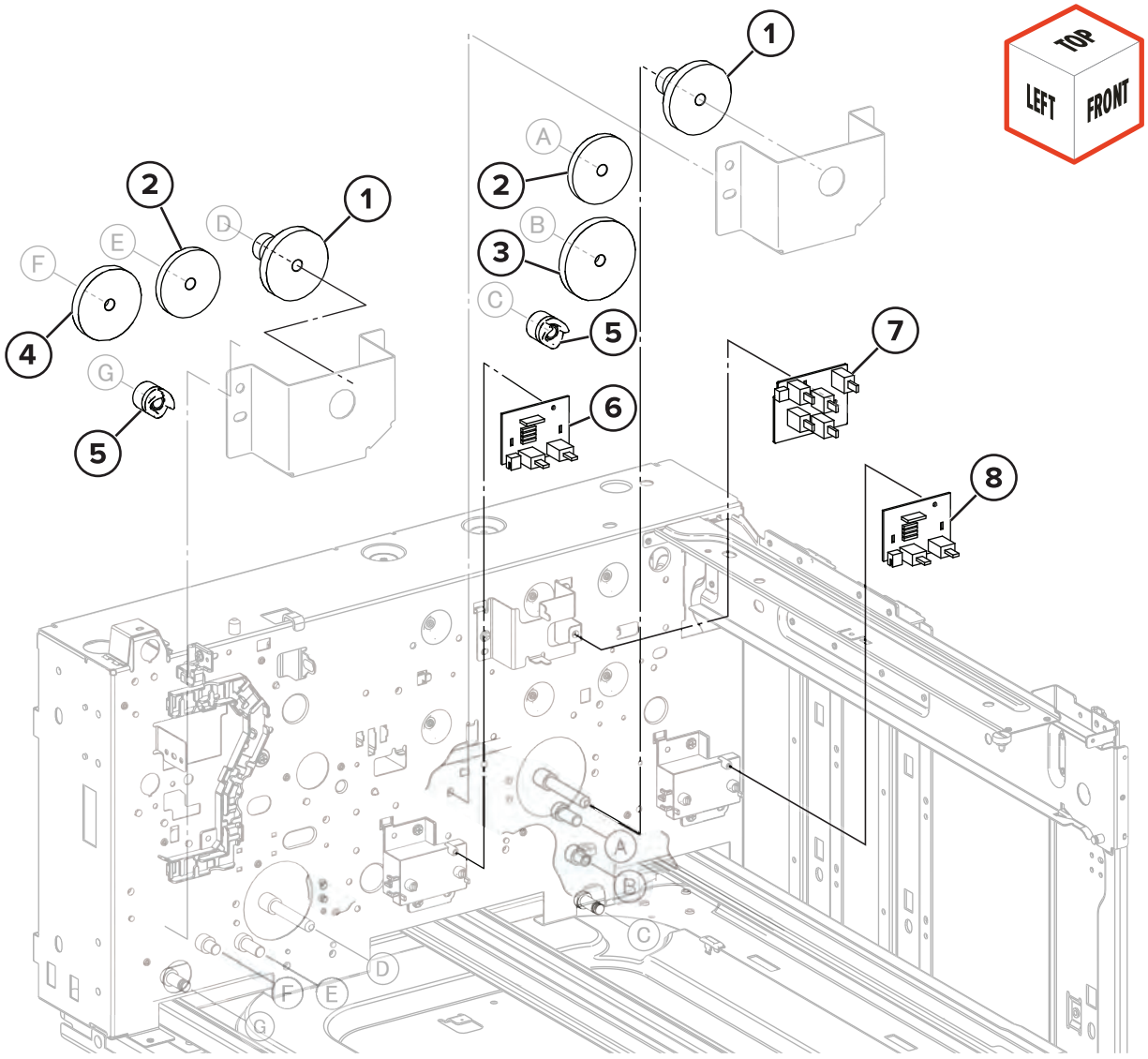
Assembly 92: 2520-sheet tandem tray feed 1



Assembly 92: 2520-sheet tandem tray feed 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X6652	1	1	2520-sheet tandem tray front left roller	--
2	40X6653	1	1	2520-sheet tandem tray front right roller	--
3	40X7344	1	1	2520-sheet tandem tray upper roller	--

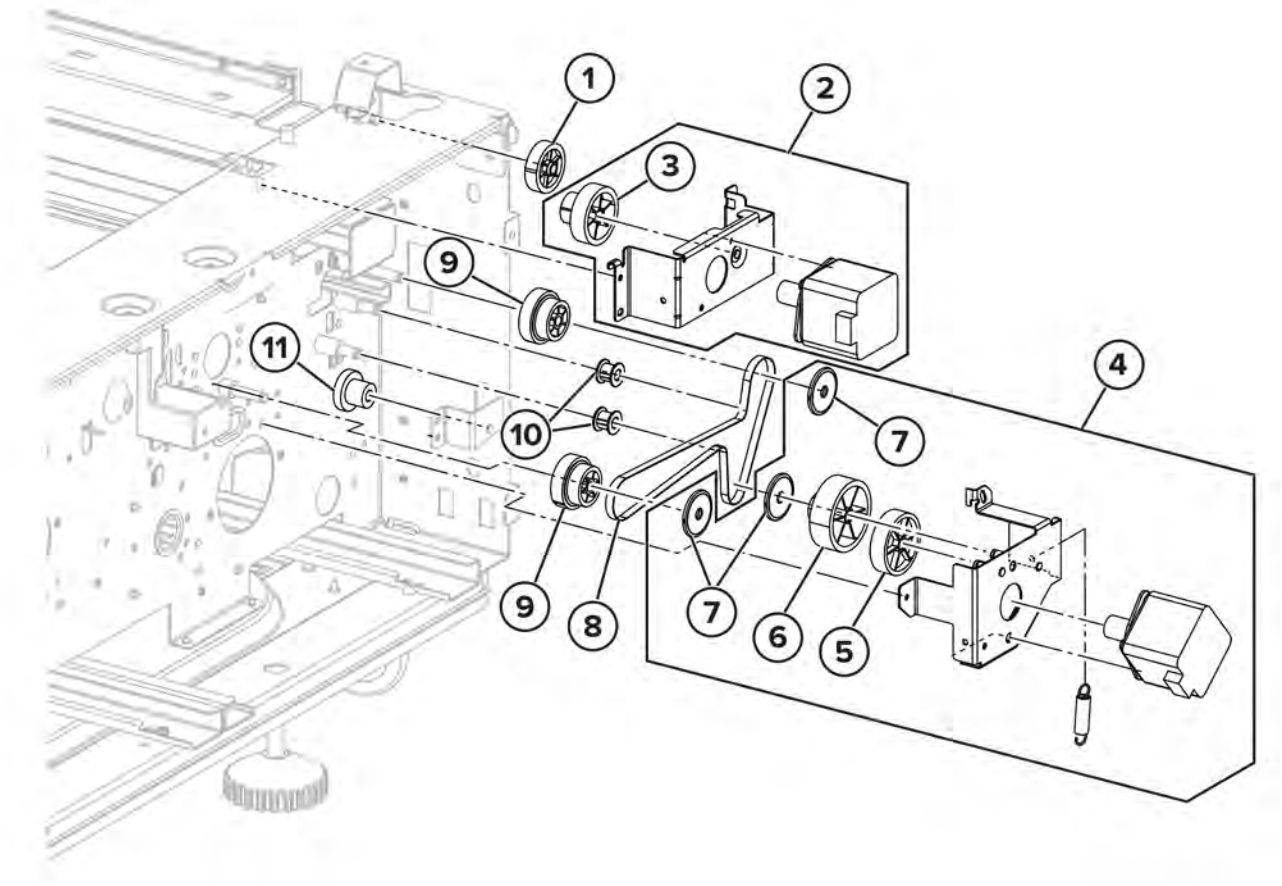
Assembly 93: 2520-sheet tandem tray feed 2



Assembly 93: 2520-sheet tandem tray feed 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X7350	1	1	Feed gear (17/50T)	--
2	40X7351	1	1	Feed gear (16/48T)	--
3	40X7352	1	1	Feed gear (57T)	--
4	40X7350	1	1	Feed gear (51T)	--
5	40X7353	1	1	Feed gear (18T)	--
6	40X0729	1	1	Sensor (2520-sheet tandem tray 3 paper size)	--
7	40X7533	1	1	Sensor (2520-sheet tandem tray 2 paper size)	--
8	v	1	1	Sensor (2520-sheet tandem tray 4 paper size)	--

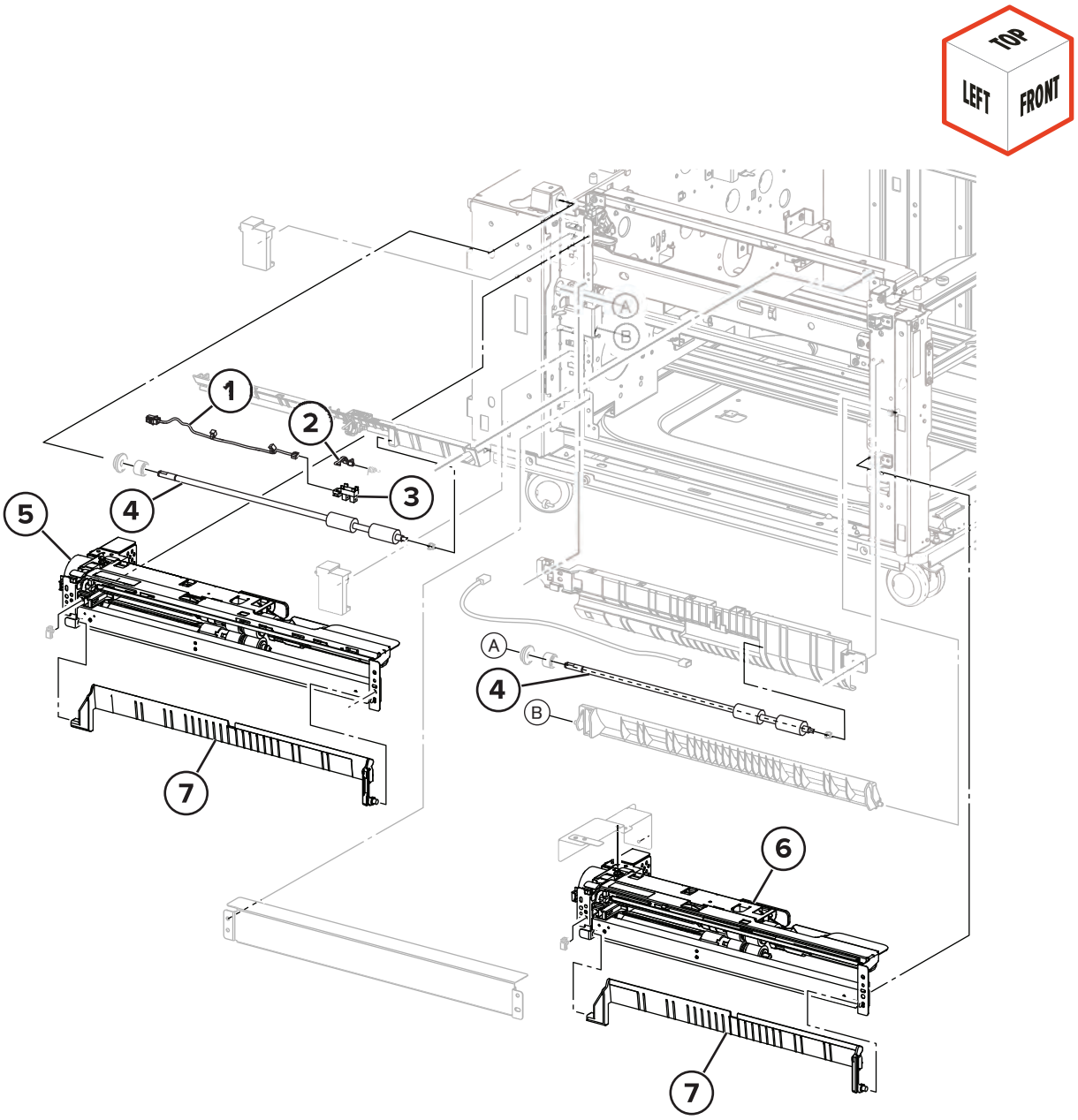
Assembly 94: 2520-sheet tandem tray transport 1



Assembly 94: 2520-sheet tandem tray transport 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X6668	1	1	Transport gear (34T)	--
2	41X3944	1	1	Motor (2520-sheet tandem tray 2 transport)	--
3	41X4904	1	1	Transport gear (M2)	--
4	41X3946	1	1	Motor (2520-sheet tandem tray 3 transport)	--
5	41X4911	1	1	Transport gear (70T)	--
6	41X4910	1	1	Transport gear (81T)	--
7	41X4909	1	1	Transport collar	--
8	41X3945	1	1	2520-sheet tandem tray 3 belt	--
9	40X7357	1	1	Transport (26T)	--
10	40X7358	1	1	Transfer roller	--
11	41X4908	1	1	Transfer gear	--

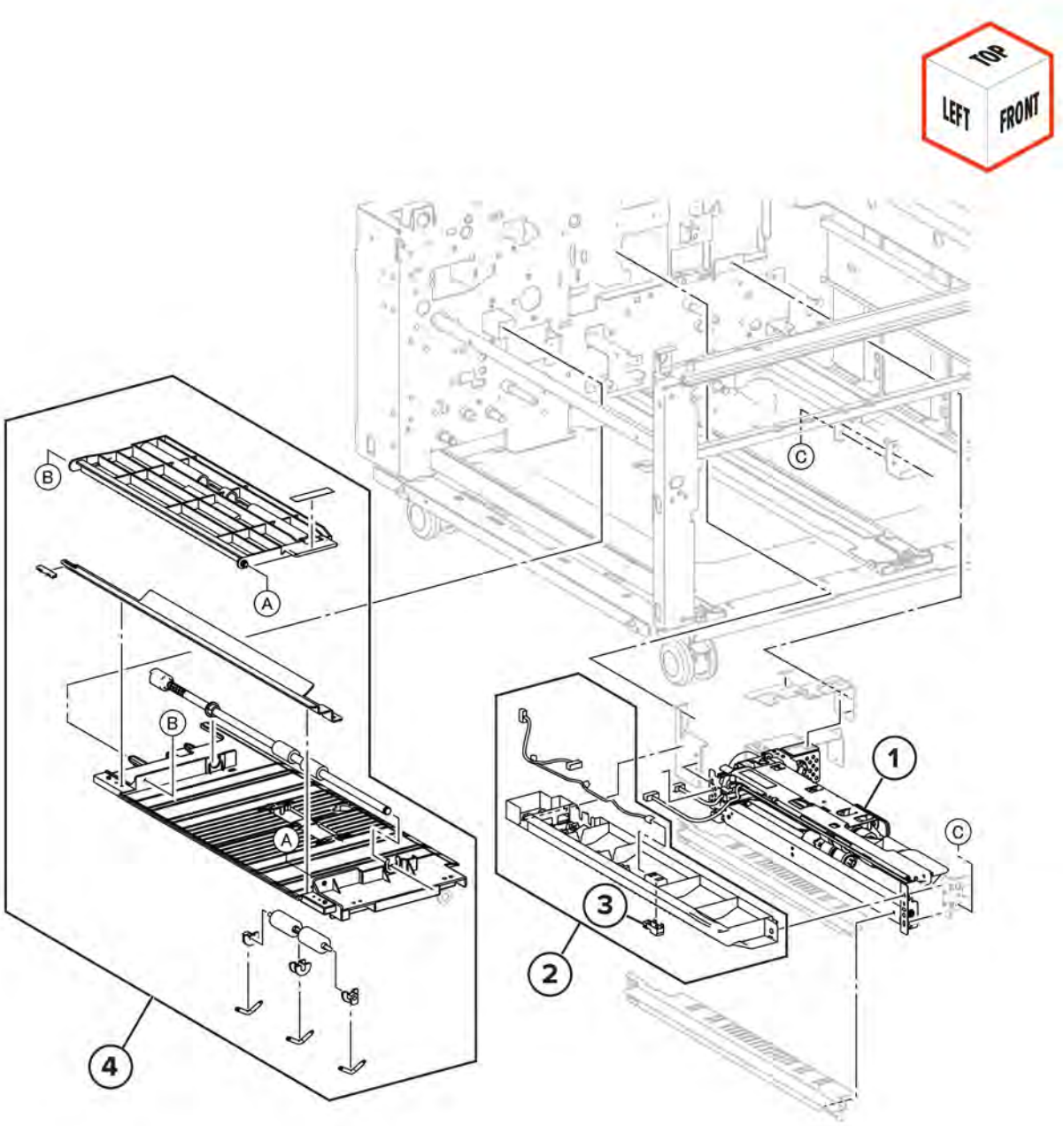
Assembly 95: 2520-sheet tandem tray transport 2



Assembly 95: 2520-sheet tandem tray transport 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3910	1	1	2520-sheet tandem tray transport sensor cable	--
2	41X3959	1	1	2520-sheet tandem tray transport sensor actuator	--
3	40X0588	1	1	Sensor (2520-sheet tandem tray transport)	--
4	41X3960	1	1	2520-sheet tandem tray transport roller	--
5	41X3908	1	1	2520-sheet tandem tray 2 paper feeder	--
6	41X4246	1	1	2520-sheet tandem tray 3 paper feeder	--
7	40X6699	1	1	Turn guide	--

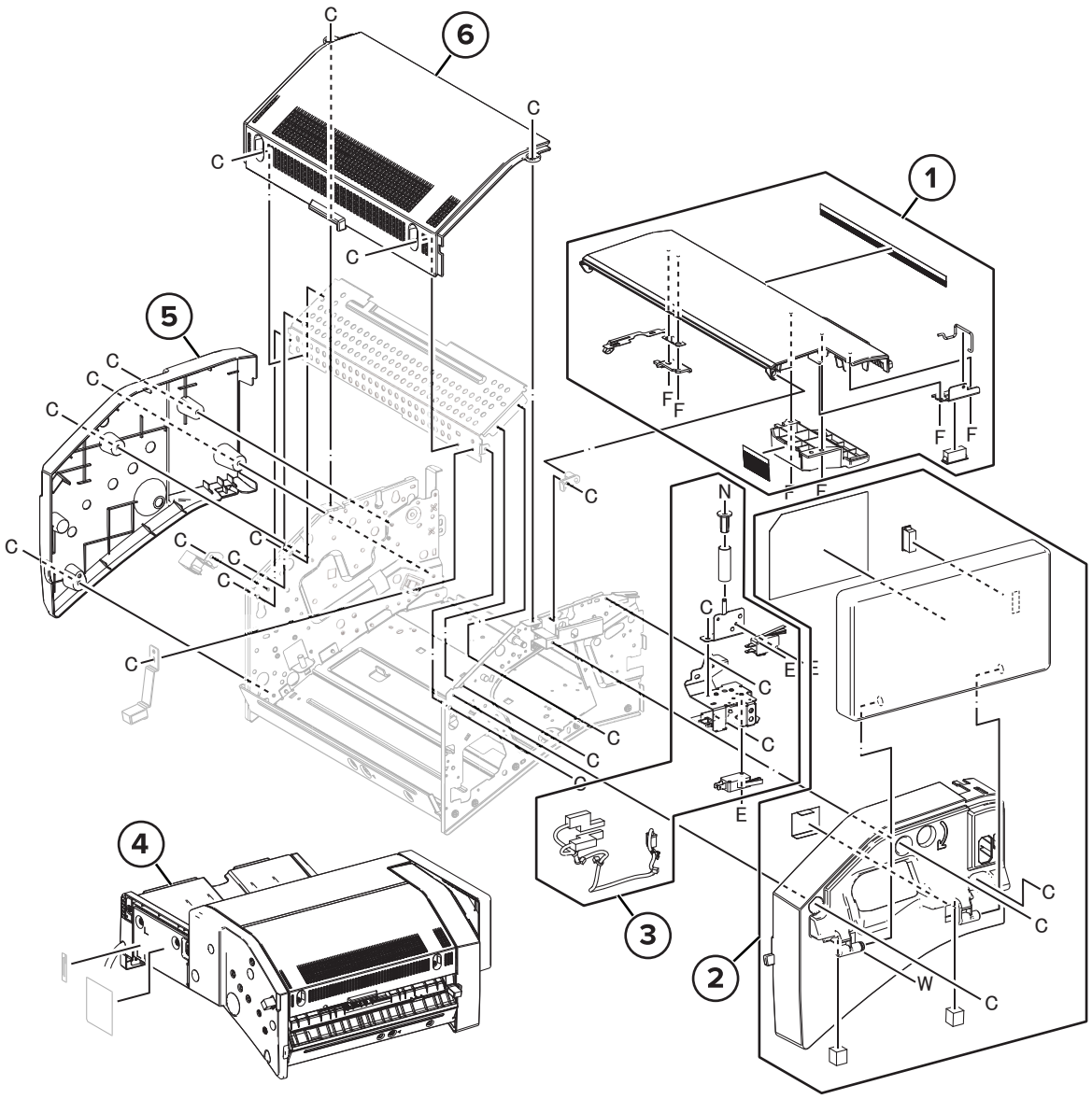
Assembly 96: 2520-sheet tandem tray transport 3



Assembly 96: 2520-sheet tandem tray transport 3

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3961	1	1	2520-sheet tandem tray 4 paper feeder	--
2	41X3962	1	1	2520-sheet tandem tray upper chute	--
3	40X0727	1	1	Sensor (2520-sheet tandem tray 4 transport)	--
4	41X4051	1	1	2520-sheet tandem tray 4 transport	--

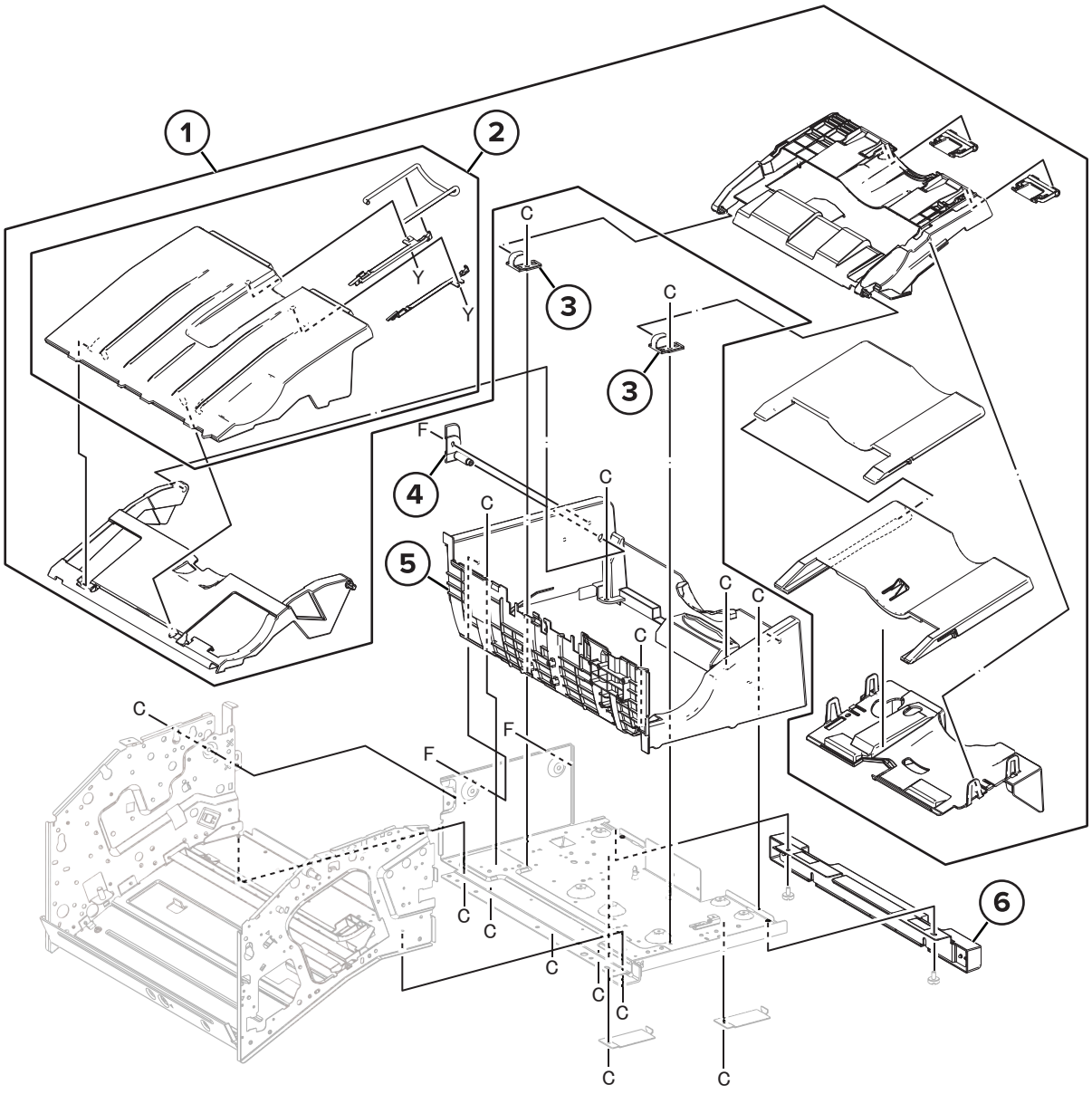
Assembly 97: Staple finisher covers



Assembly 97: Staple finisher covers

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3638	1	1	Staple finisher top eject cover subassembly	“Staple finisher top eject cover subassembly removal” on page 490
2	41X3636	1	1	Staple finisher front cover assembly	“Staple finisher front cover removal” on page 484
3	41X3637	1	1	Staple finisher front interlock bracket assembly	“Staple finisher front interlock bracket assembly removal” on page 491
4	41X3639	1	1	Staple finisher rear cover	“Staple finisher rear cover removal” on page 485
5	41X3640	1	1	Staple finisher top LH cover	“Staple finisher top LH cover removal” on page 487

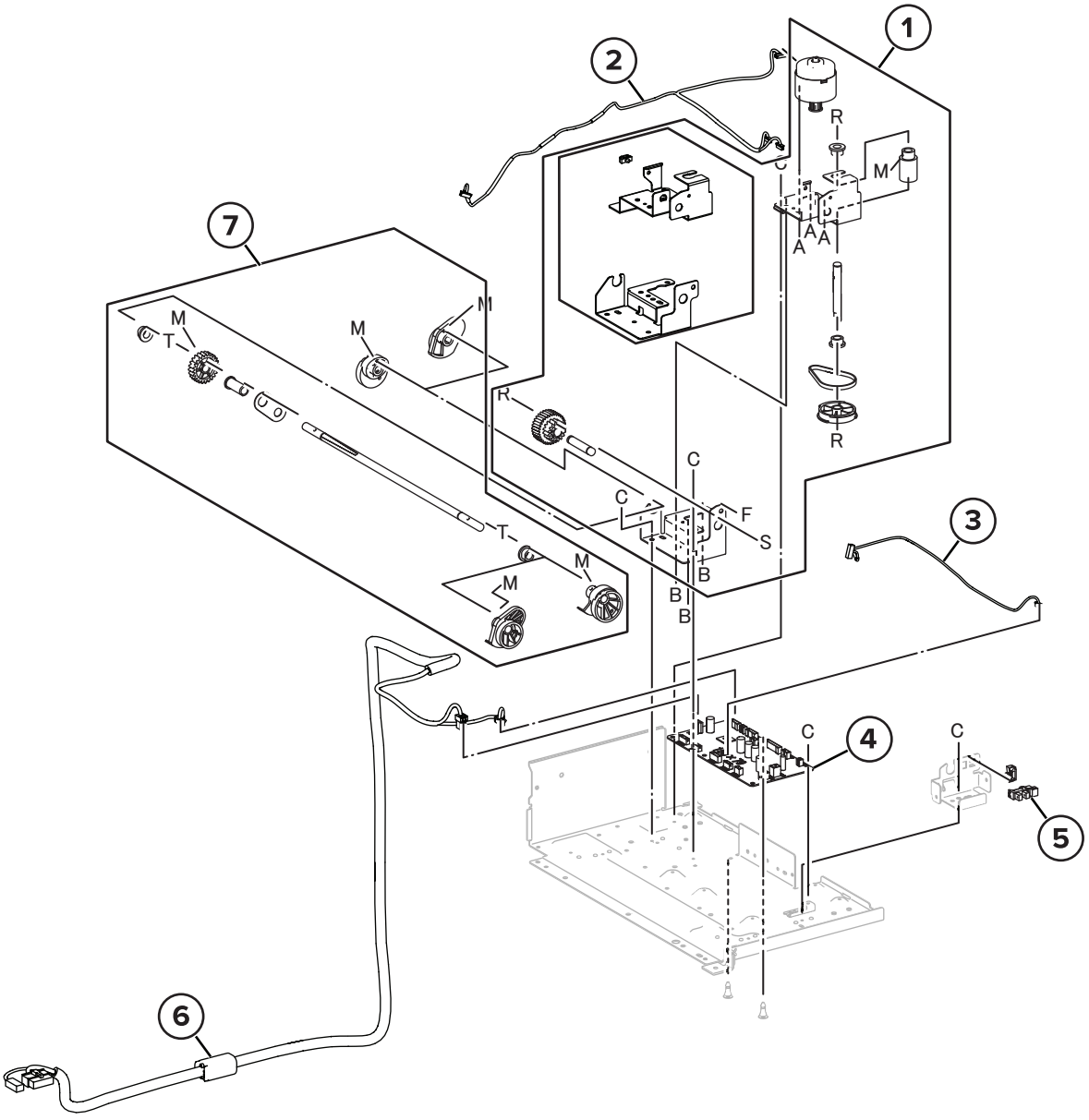
Assembly 98: Staple finisher stapler bin



Assembly 98: Staple finisher stapler bin

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3647	1	1	Staple finisher upper bin	--
2	41X3643	1	1	Staple finisher lower bin	--
3	41X3645	1	1	Staple finisher bin hinge 1	--
4	41X3646	1	1	Staple finisher bin hinge 2	--
5	41X3644	1	1	Staple finisher bin base	--
6	41X3642	1	1	Staple finisher docking bracket assembly	**“Staple finisher docking bracket removal” on page 490**

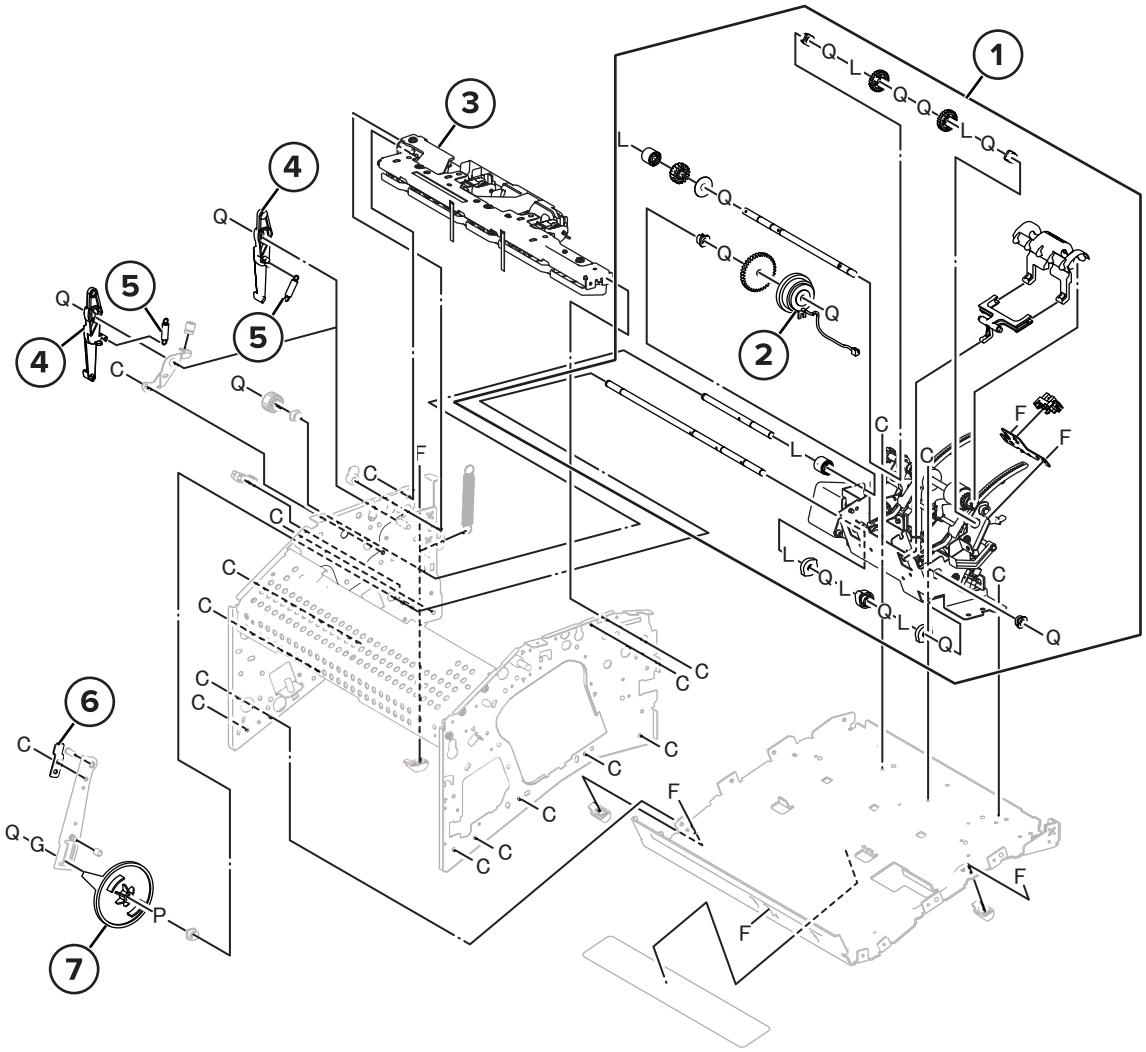
Assembly 99: Staple finisher stacker base



Assembly 99: Staple finisher stacker base

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3650	1	1	Motor (staple finisher stacker lift)	--
2	41X3652	1	1	Staple finisher stacker motor cable	--
3	41X3653	1	1	Motor (staple finisher eject)	**“Motor (staple finisher eject) removal” on page 512**
4	41X3649	1	1	Staple finisher controller board	--
5	40X7403	1	1	Sensor (staple finisher paper present)	--
6	41X3651	1	1	Staple finisher cable	--
7	41X3648	1	1	Staple finisher lift shaft unit	**“Staple finisher lift shaft removal” on page 488**

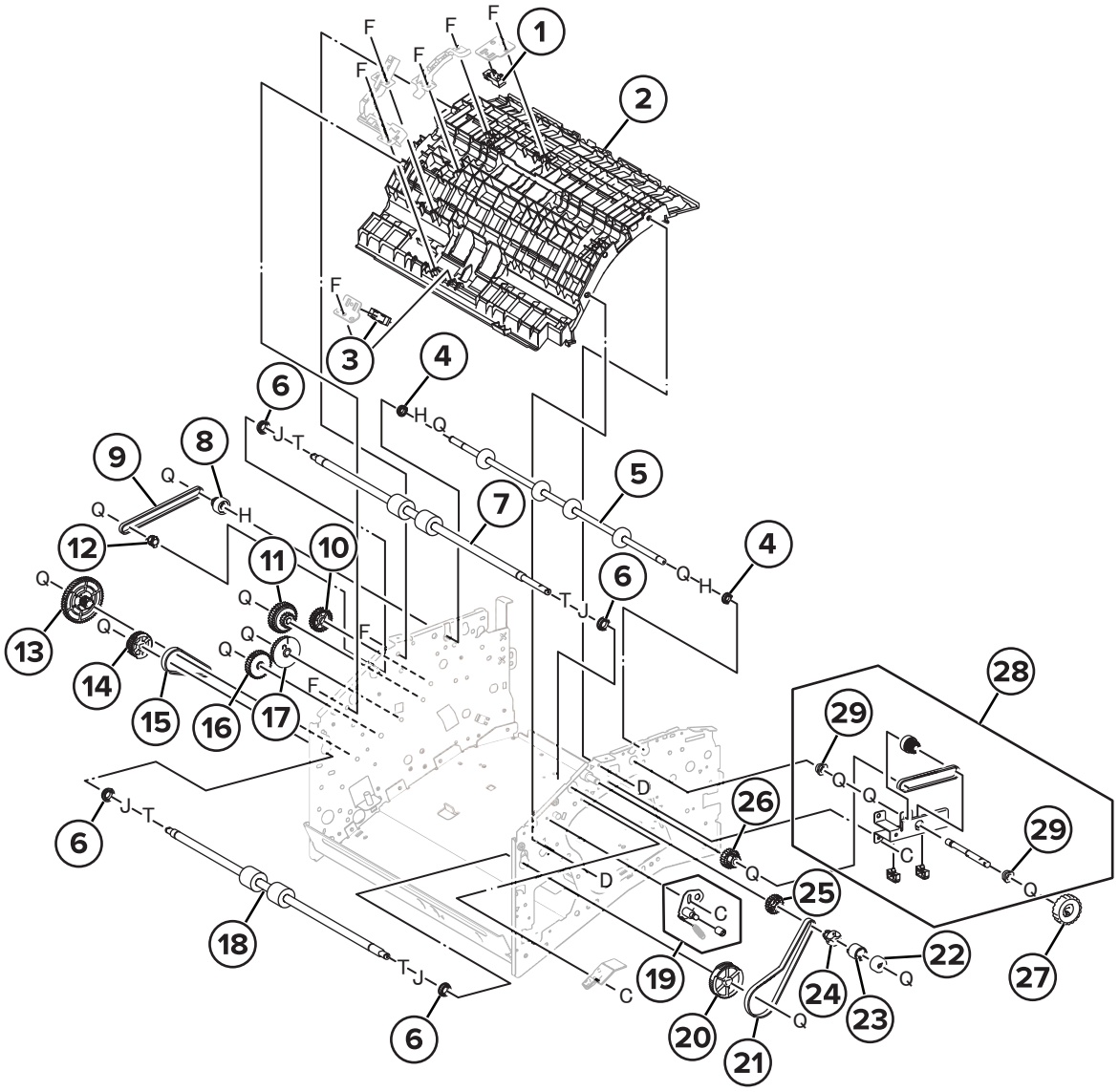
Assembly 100: Staple finisher stapler eject



Assembly 100: Staple finisher stapler eject

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3654	1	1	Staple finisher lower ejector unit	--
2	41X3656	1	1	Staple finisher ejector clutch	--
3	41X3655	1	1	Staple finisher upper ejector unit	--
4	41X3659	2	2	Staple finisher paddle link	--
5	41X3658	2	2	Staple finisher link spring	--
6	41X3661	1	1	Staple finisher stopper bracket	--
7	41X3660	1	1	Staple finisher eject clamp cam	--

Assembly 101: Staple finisher stapler transport 1

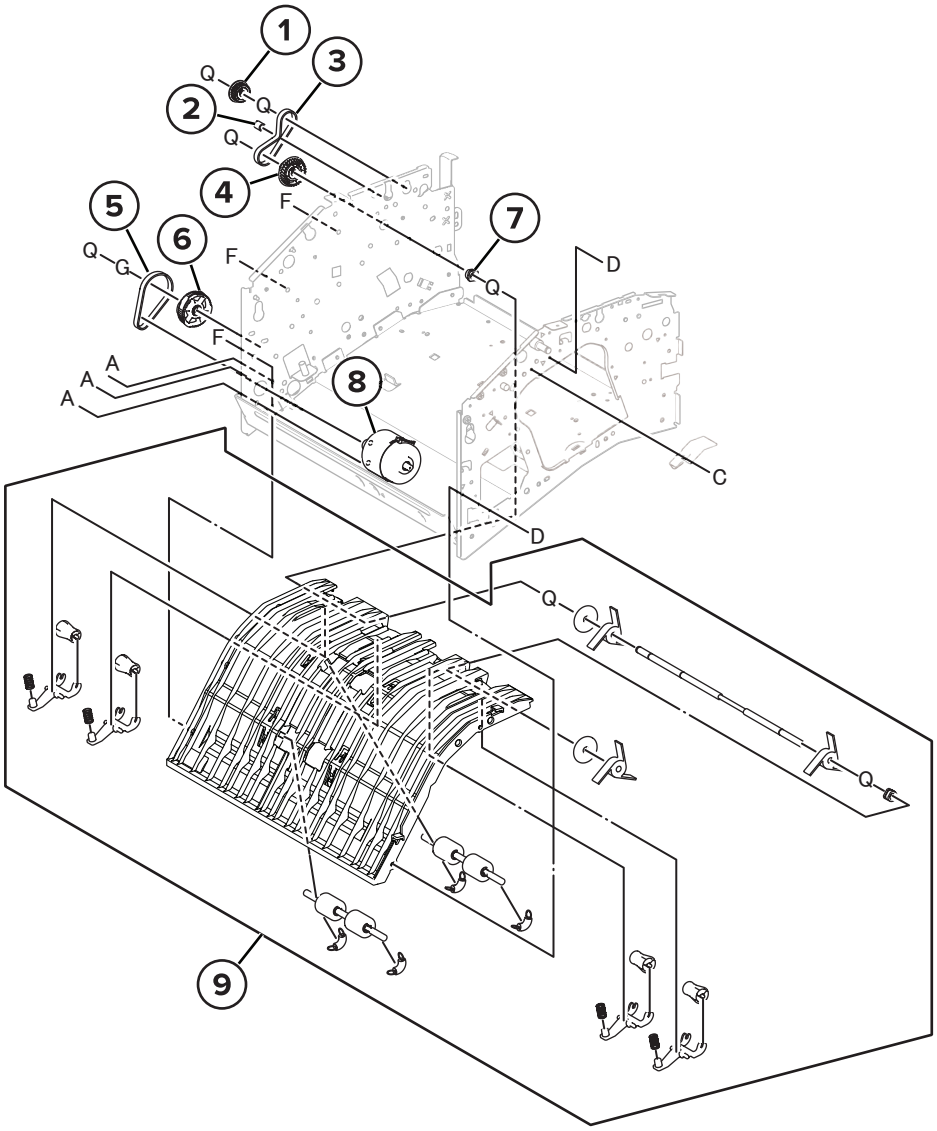


Assembly 101: Staple finisher stapler transport 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0727	1	1	Sensor (staple finisher compiler exit)	--
2	41X3677	1	1	Staple finisher upper transport guide	"Staple finisher upper transport guide removal" on page 492
3	40X0727	1	1	Sensor (staple finisher entrance)	--
4	40X0913	2	2	Staple finisher ball bearing 1	--
5	41X3670	1	1	Staple finisher compiler exit roller	"Staple finisher compiler exit roller removal" on page 498
6	40X3915	4	4	Staple finisher ball bearing 2	--
7	41X3671	1	1	Staple finisher transport roller 2	--
8	41X3663	1	1	Pulley (T16)	--
9	41X3664	1	1	Staple finisher timing belt 1	--
10	41X3685	1	1	Gear (Z27L)	--
11	41X3684	1	1	Paddle idler gear (Z16/Z35)	--
12	41X3672	1	1	Staple finisher idler pulley	--
13	41X3678	1	1	Staple finisher idler gear 2 (Z55L T17)	--
14	41X3674	1	1	Pulley (T40)	--
15	41X3691	1	1	Staple finisher timing belt 3	--
16	41X3682	1	1	Gear (AUG10)	--
17	41X3683	1	1	Gear (Z34)	--
18	41X3669	1	1	Staple finisher transport roller 1	--
19	41X3668	1	1	Staple finisher belt tension bracket	--
20	41X3673	1	1	Pulley (T55)	--
21	41X3665	1	1	Staple finisher timing belt 2	--
22	41X3662	1	1	Staple finisher brake assembly	--
23	41X3676	1	1	Clutch cap	--
24	41X3675	1	1	Clutch pulley (T16)	--
25	41X3679	1	1	Clutch gear (Z22)	--
26	41X3680	1	1	Gear (Z22/T20)	--
27	41X3666	1	1	Staple finisher stapler roll knob	"Staple finisher stapler roll knob removal" on page 484

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
28	41X3667	1	1	Staple finisher jam shaft bracket assembly	--
29	41X3690	2	2	Bearing	--

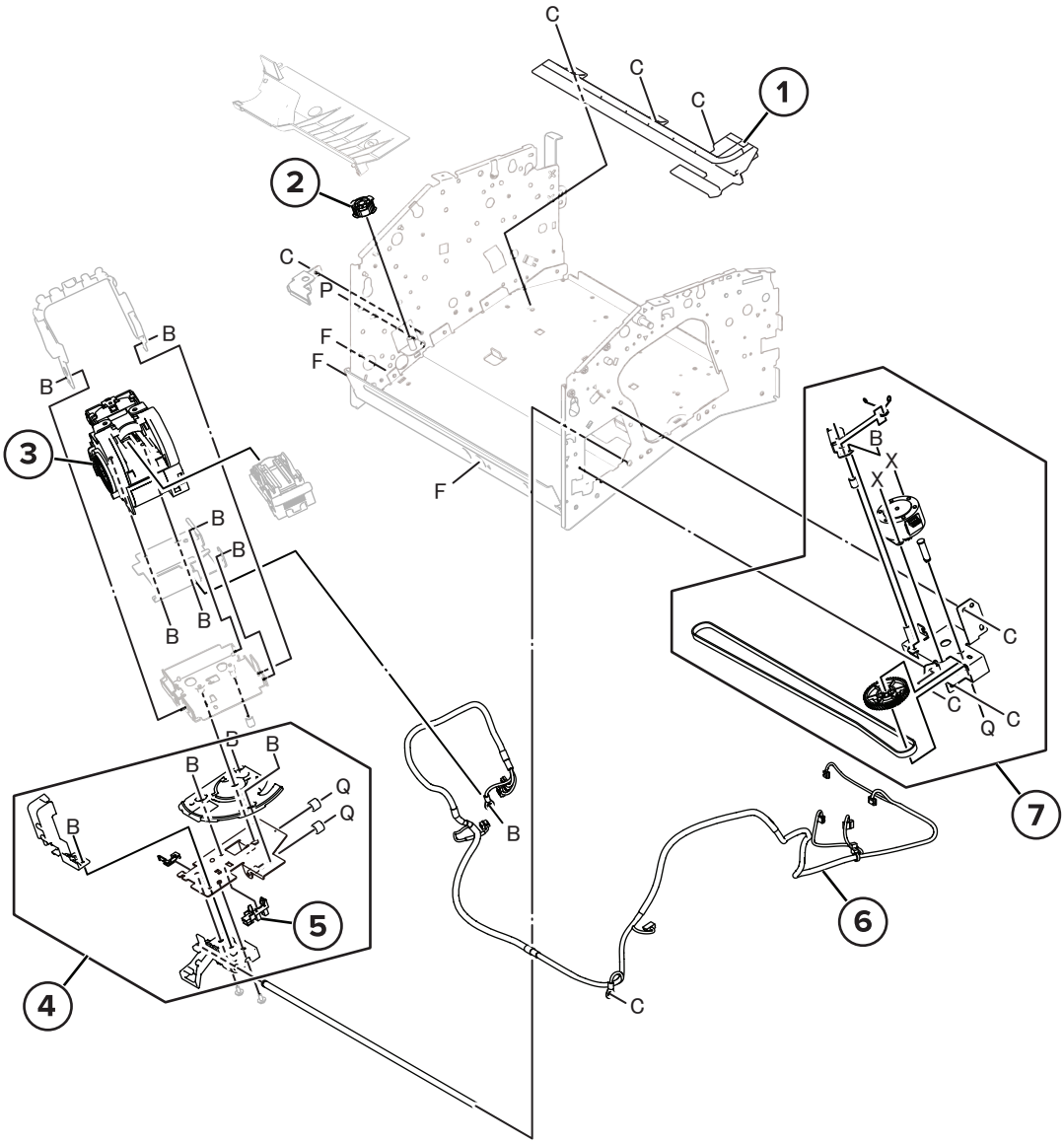
Assembly 102: Staple finisher stapler transport 2



Assembly 102: Staple finisher stapler transport 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3688	1	1	One way pulley (T28)	--
2	41X3152	1	1	Pulley	--
3	41X3691	1	1	Staple finisher timing belt 4	--
4	41X3686	1	1	Main paddle gear (Z29/T28)	--
5	41X3691	1	1	Staple finisher timing belt 4	--
6	41X3687	1	1	Staple finisher motor idler gear	--
7	41X3690	1	1	Bearing	--
8	41X3689	1	1	Motor (staple finisher transport)	**“Motor (staple finisher transport) removal” on page 513**
9	41X3692	1	1	Staple finisher lower transport guide	--

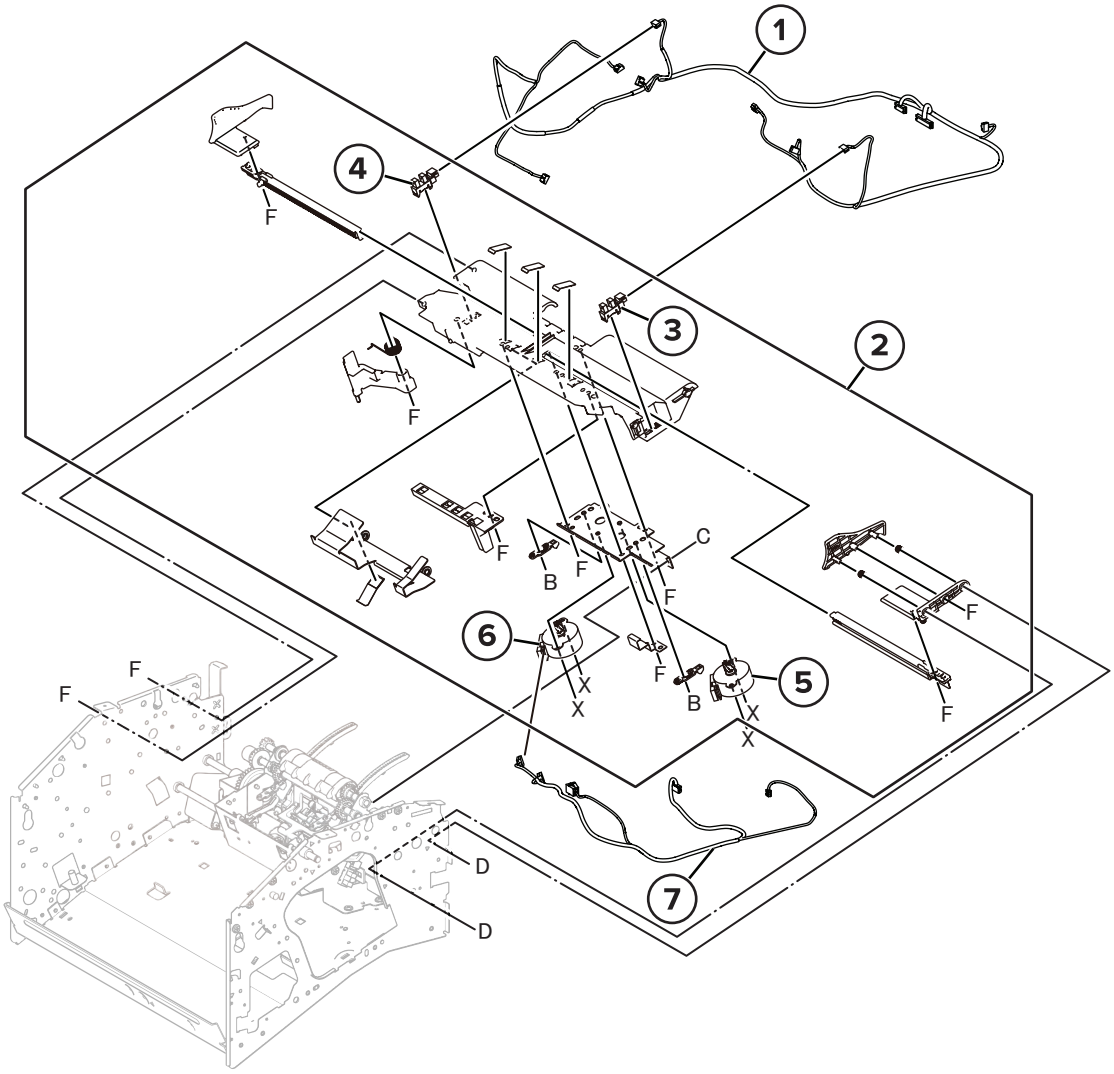
Assembly 103: Staple finisher components



Assembly 103: Staple finisher components

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3698	1	1	Staple finisher staple rail	"Staple finisher staple rail assembly removal" on page 521
2	41X3697	1	1	Pulley (T33/S2M)	--
3	41X3693	1	1	Staple finisher staple head	--
4	41X3699	1	1	Staple finisher staple position bracket	--
5	41X3694	1	1	Sensor (staple finisher staple position)	--
6	41X3695	1	1	Staple finisher stapler cable	--
7	41X3696	1	1	Staple finisher staple drive unit	--
NS	41X4163	1	1	Staple finisher installation kit	--

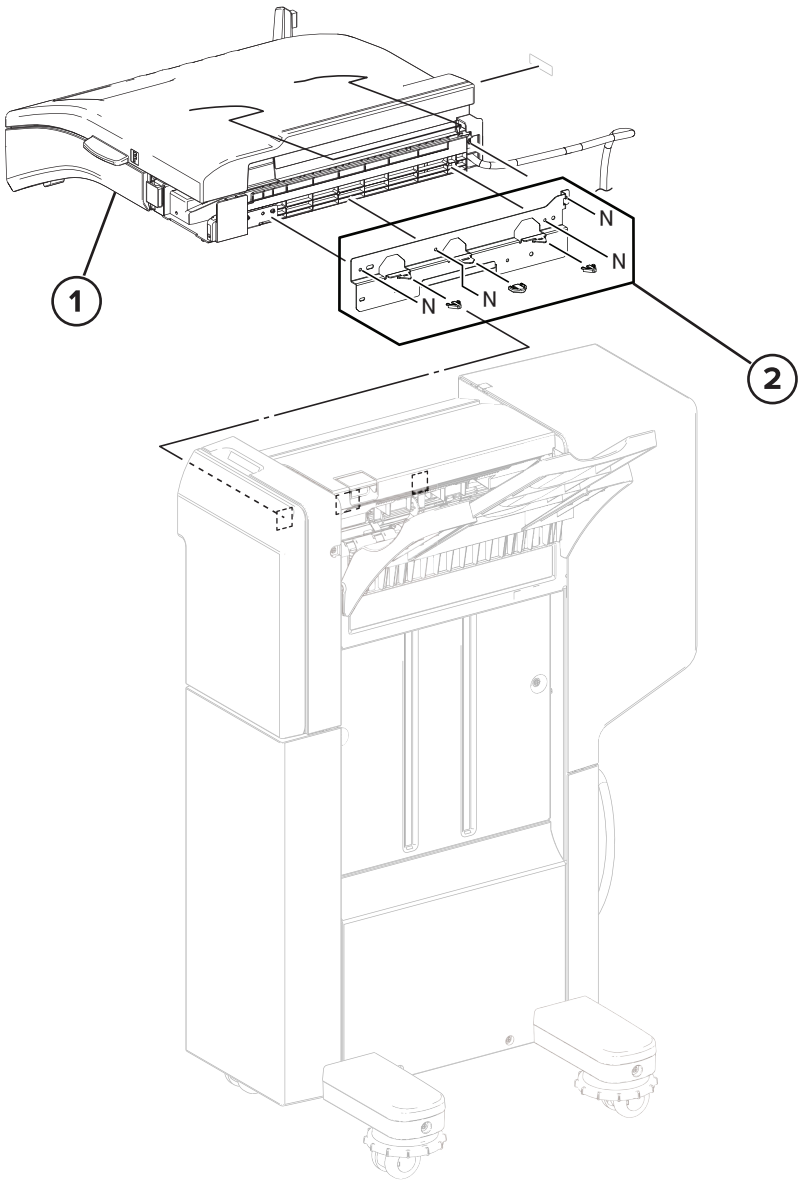
Assembly 104: Staple finisher compiler components



Assembly 104: Staple finisher compiler components

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3703	1	1	Staple finisher tamper sensor cable	--
2	41X3700	1	1	Staple finisher compiler tray	**“Staple finisher compiler tray removal” on page 505**
3	40X7403	1	1	Sensor (staple finisher tamper front)	--
4	40X7403	1	1	Sensor (staple finisher tamper rear)	--
5	41X3701	1	1	Motor (staple finisher tamper front)	--
6	41X3701	1	1	Motor (staple finisher tamper rear)	--
7	41X3702	1	1	Staple finisher tamper cable	--

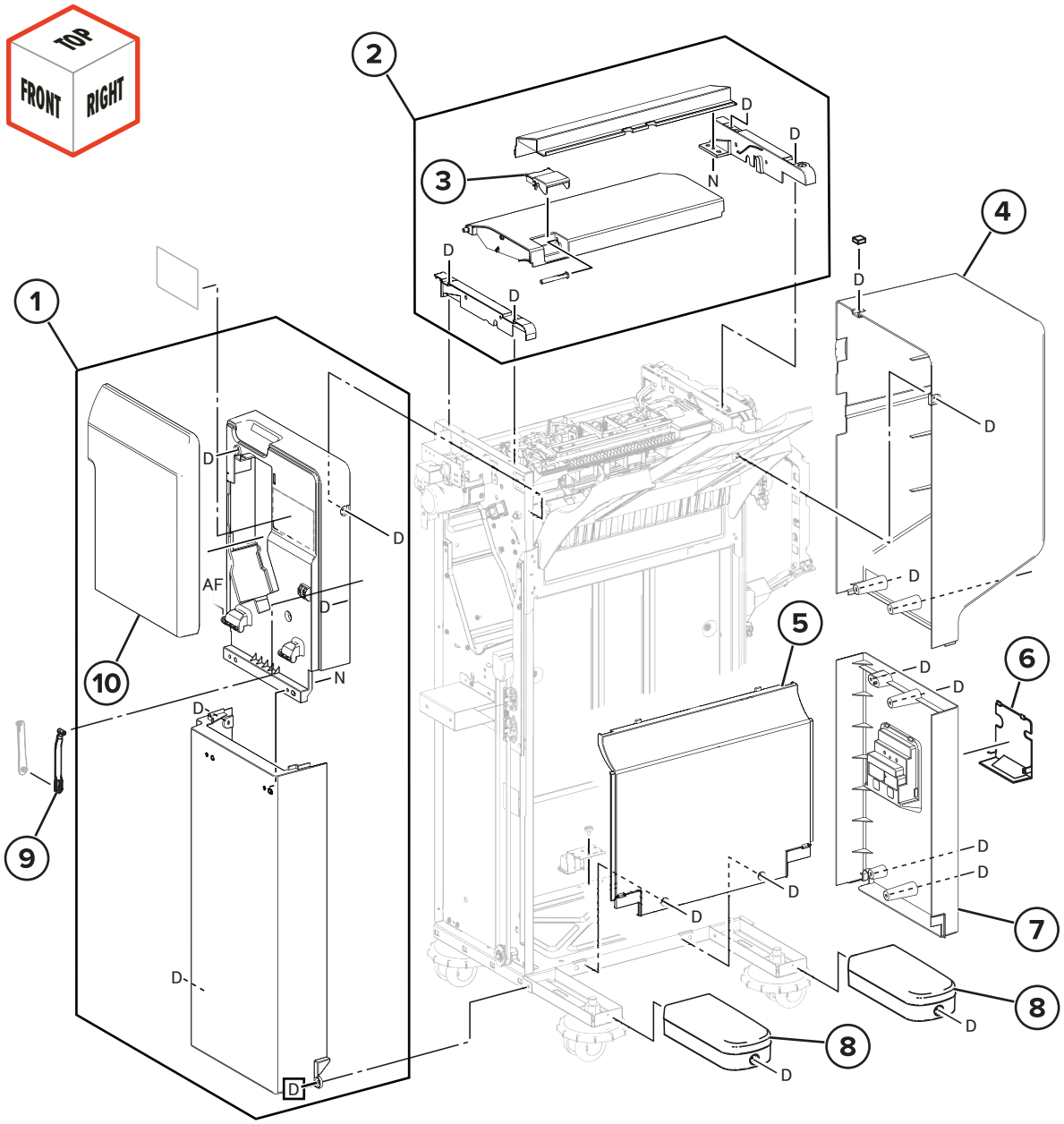
Assembly 105: SHPF



Assembly 105: SHPF

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3963	1	1	HPT	--
2	41X3964	1	1	HPT docking bracket	--

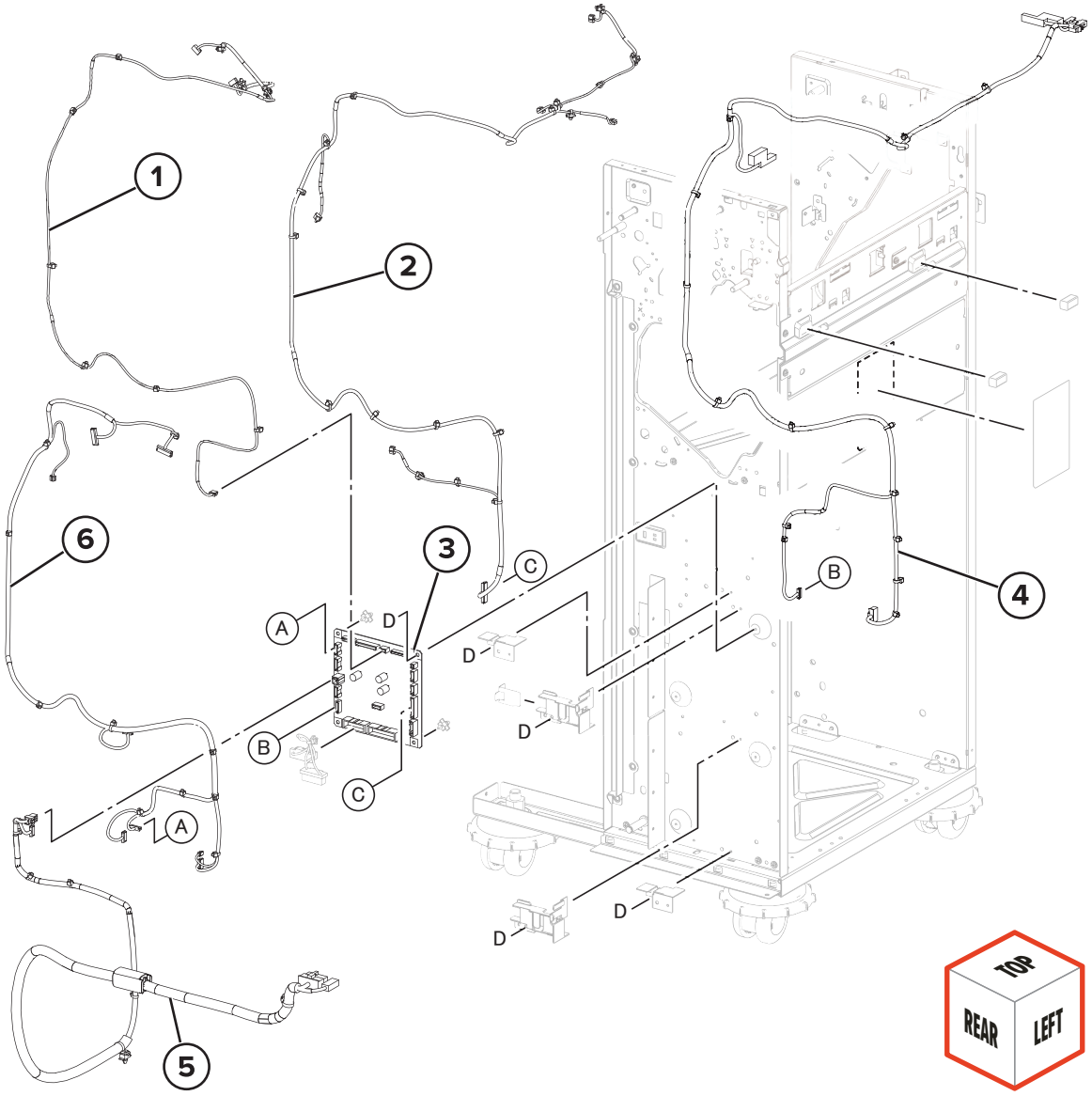
Assembly 106: SHPF covers



Assembly 106: SHPF covers

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3988	1	1	SHPF front cover	“Finisher front cover removal” on page 527
2	41X3986	1	1	SHPF top door	“Finisher top cover assembly removal” on page 531
3	41X3987	1	1	SHPF top door handle	“Finisher top cover assembly removal” on page 531
4	41X3991	1	1	SHPF upper rear cover	“Finisher upper rear cover removal” on page 529
5	41X3994	1	1	SHPF right cover	--
6	41X3993	1	1	SHPF connector cover	--
7	41X3992	1	1	SHPF lower rear cover	“Finisher lower rear cover removal” on page 529
8	41X3995	1	2	SHPF foot cover	“Foot cover removal” on page 526
9	41X3990	1	1	SHPF front door strap	--
10	41X3989	1	1	SHPF front door	--

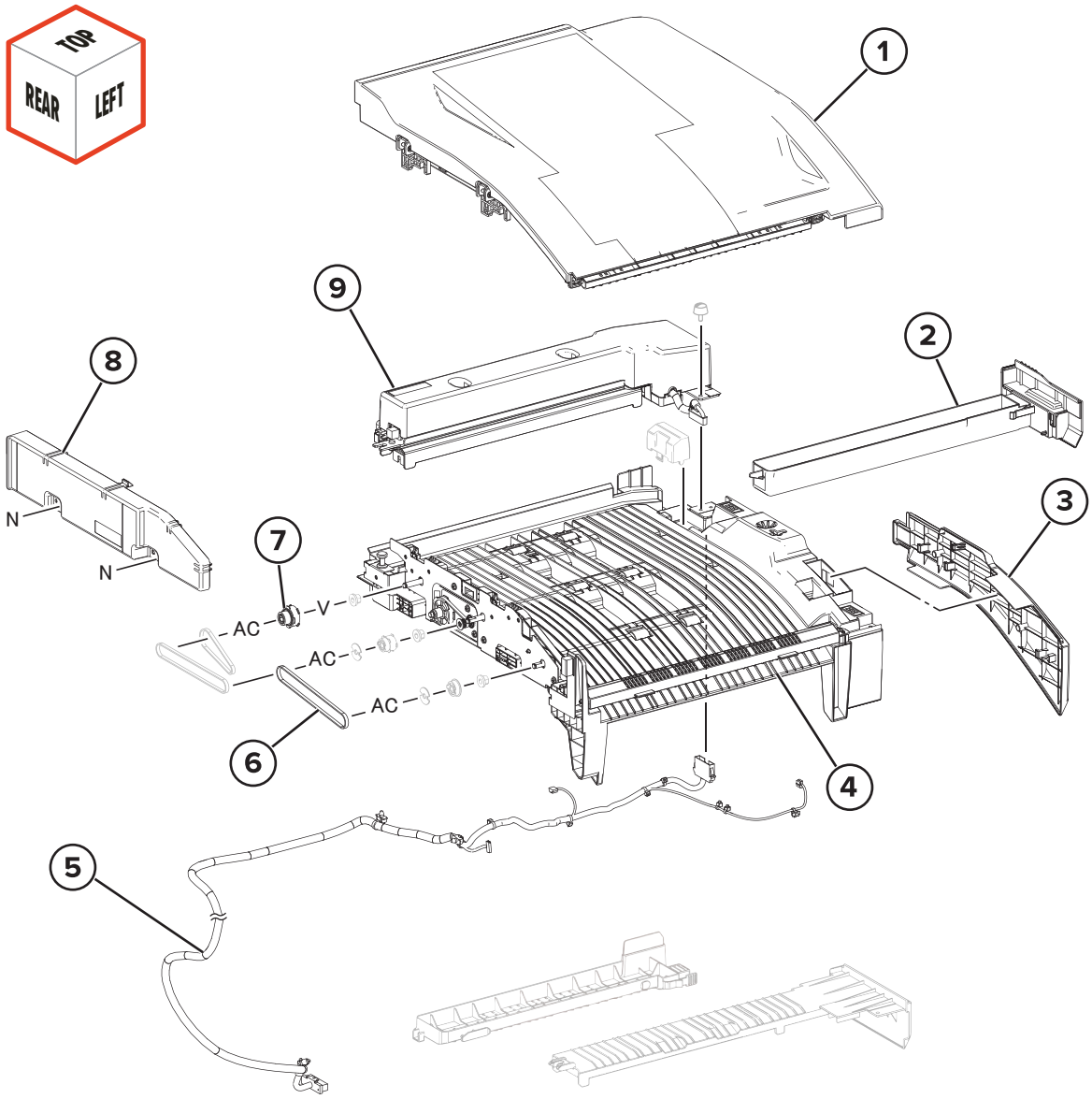
Assembly 107: SHPF electronics



Assembly 107: SHPF electronics

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4031	1	1	SHPF eject cable	--
2	41X4029	1	1	SHPF sensor cable	--
3	41X4026	1	1	SHPF controller board	--
4	41X4028	1	1	SHPF door cable	--
5	41X4027	1	1	SHPF interface cable	--
6	41X4030	1	1	SHPF transport cable	--

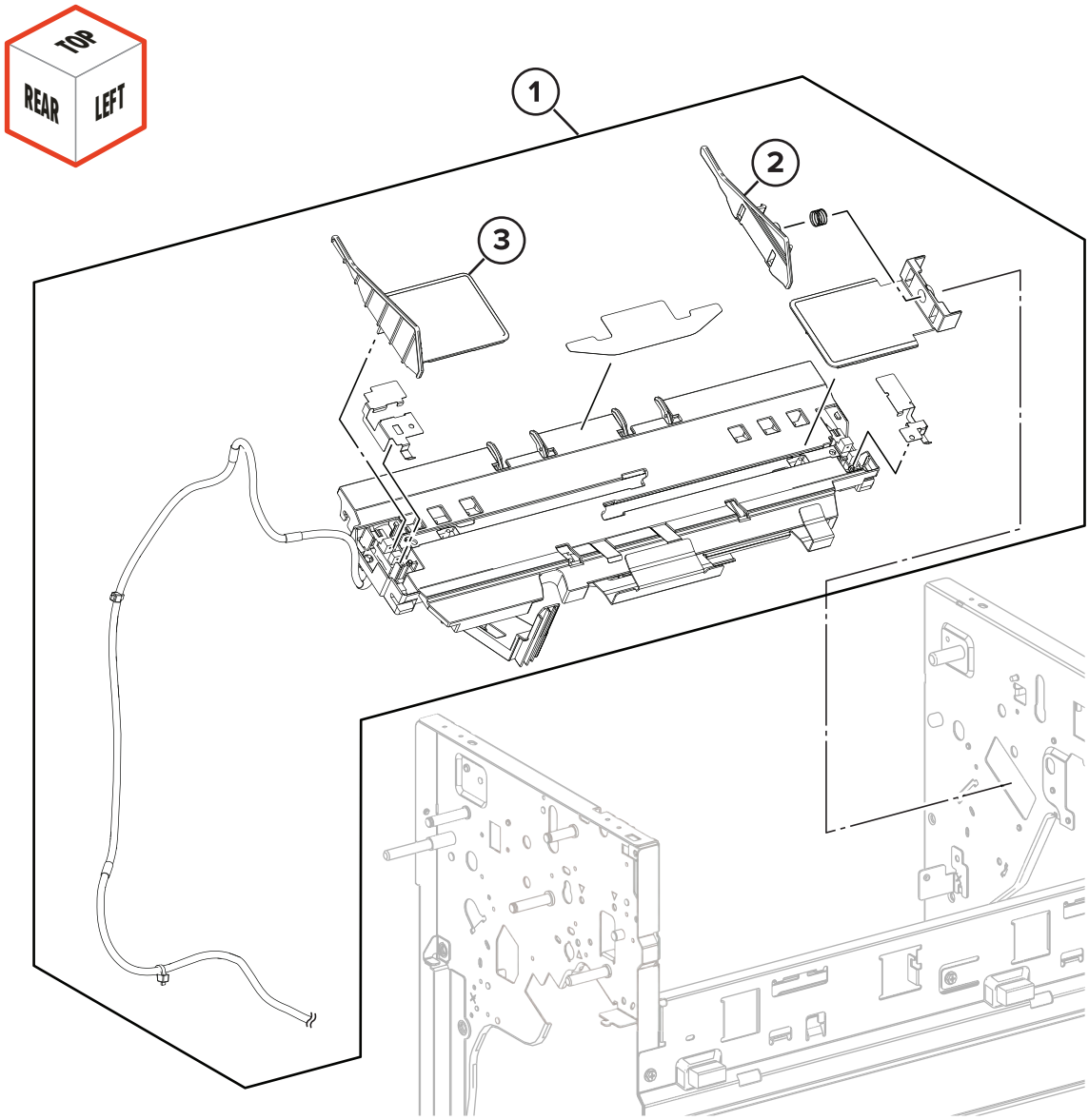
Assembly 108: SHPF HTU punch



Assembly 108: SHPF HTU punch

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3965	1	1	HTU door	--
2	41X3968	1	1	Hole punch box	--
3	41X3971	1	1	HTU front cover	--
4	41X3969	1	1	HTU transport	--
5	41X3974	1	1	HTU interface cable	--
6	41X3972	1	2	HTU transport belts	**"Horizontal transport belt removal" on page 559**
7	41X3973	1	1	HTU transport pulleys	--
8	41X3970	1	1	HTU rear cover	--
9	41X3966	1	1	Hole punch unit (2/4 hole)	--
9	41X3967	1	1	Hole punch unit (2/3 hole)	--
9	41X4528	1	1	Hole punch unit (Swedish)	--

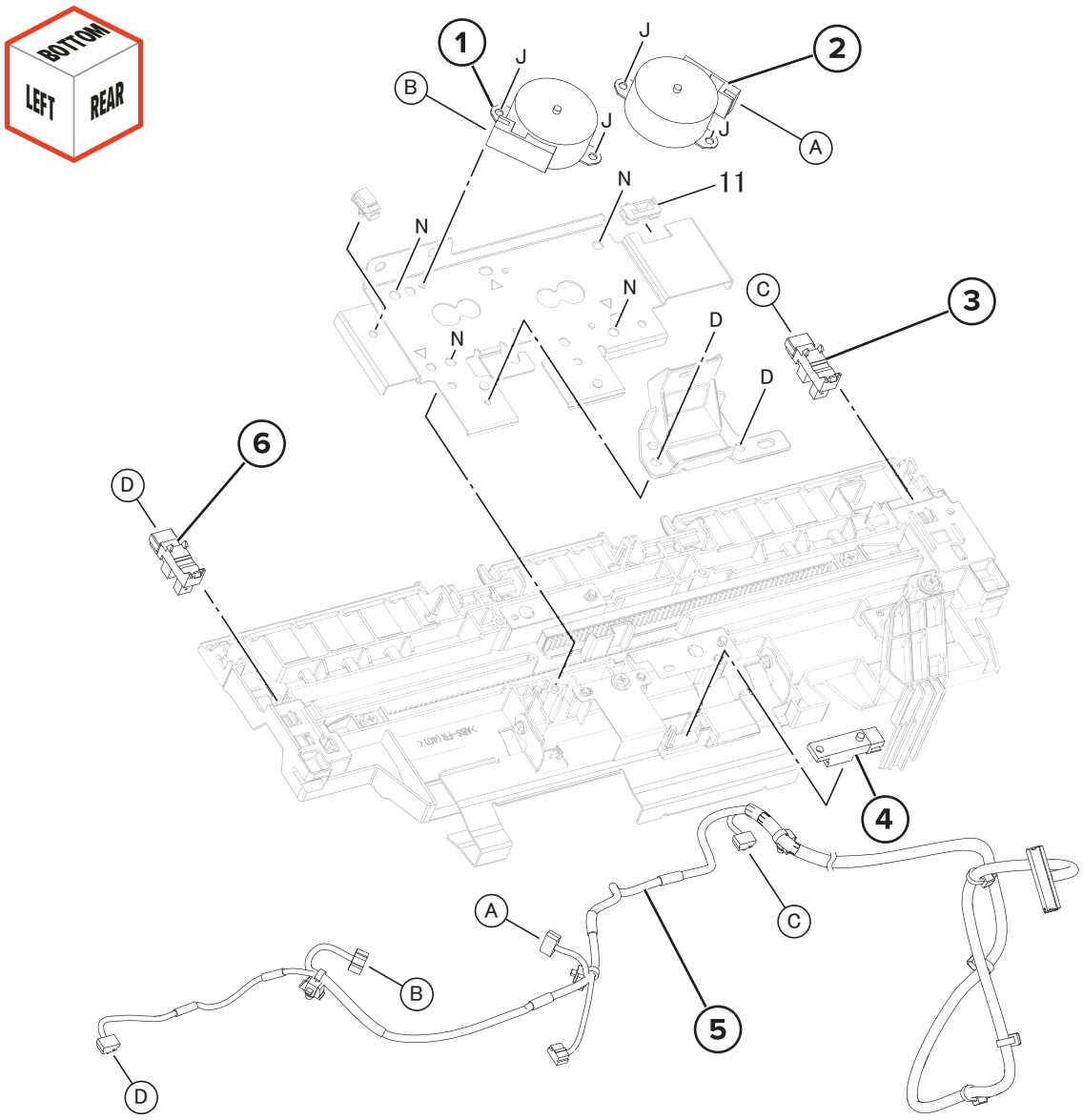
Assembly 109: SHPF compile tray 1



Assembly 109: SHPF compile tray 1

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4015	1	1	SHPF compiler	--
2	41X4016	1	1	SHPF compiler front tamper	--
3	41X4017	1	1	SHPF compiler rear tamper	--

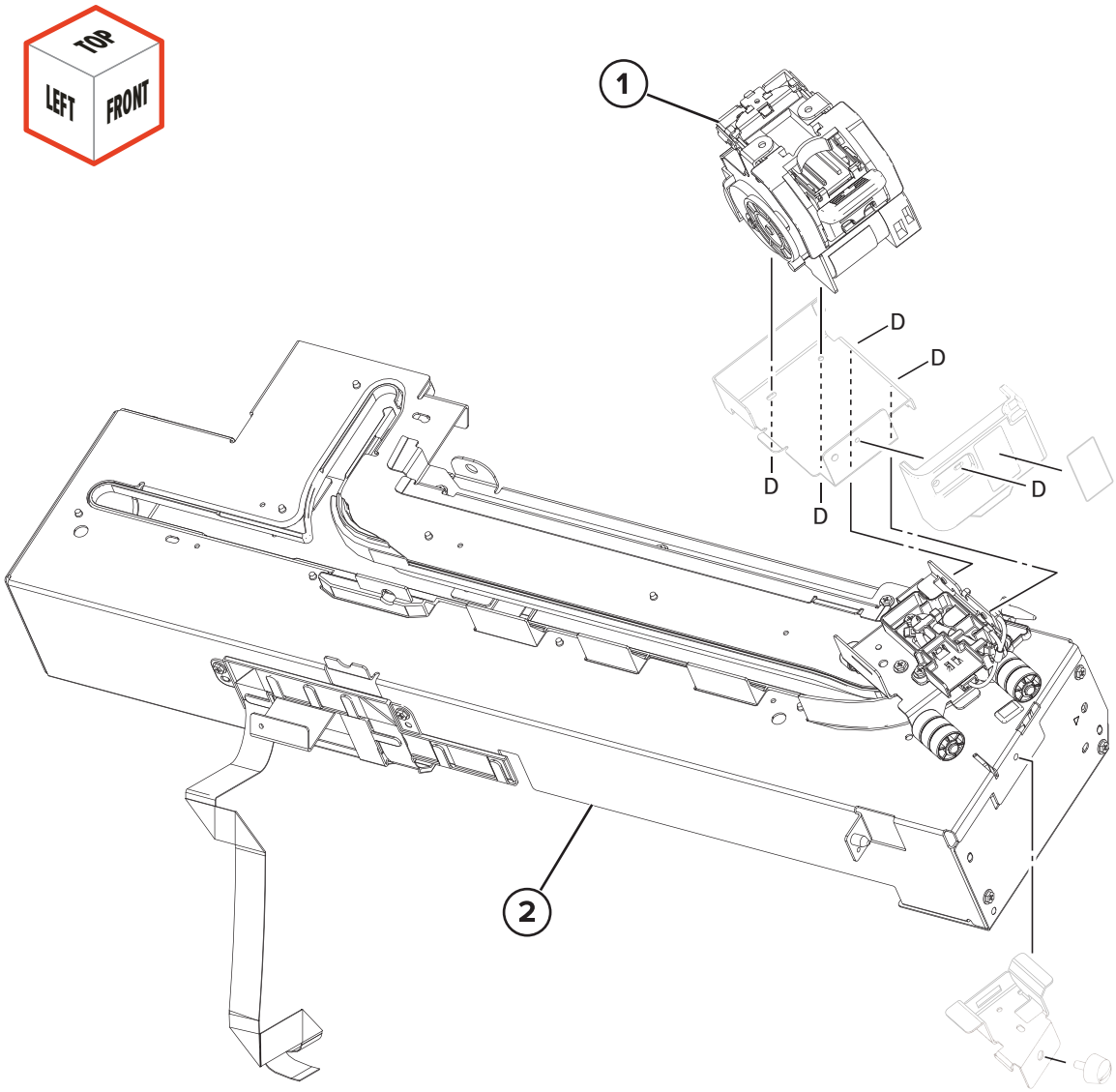
Assembly 110: SHPF compile tray 2



Assembly 110: SHPF compile tray 2

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4018	1	1	Motor (SHPF compiler rear tamper)	--
2	41X4018	1	1	Motor (SHPF compiler front tamper)	--
3	40X0588	1	1	Sensor (SHPF compiler rear tamper)	--
4	41X3976	1	1	Sensor (SHPF compiler paper present)	--
5	41X4019	1	1	SHPF compiler cable	--
6	40X0588	1	1	Sensor (SHPF compiler front tamper)	--

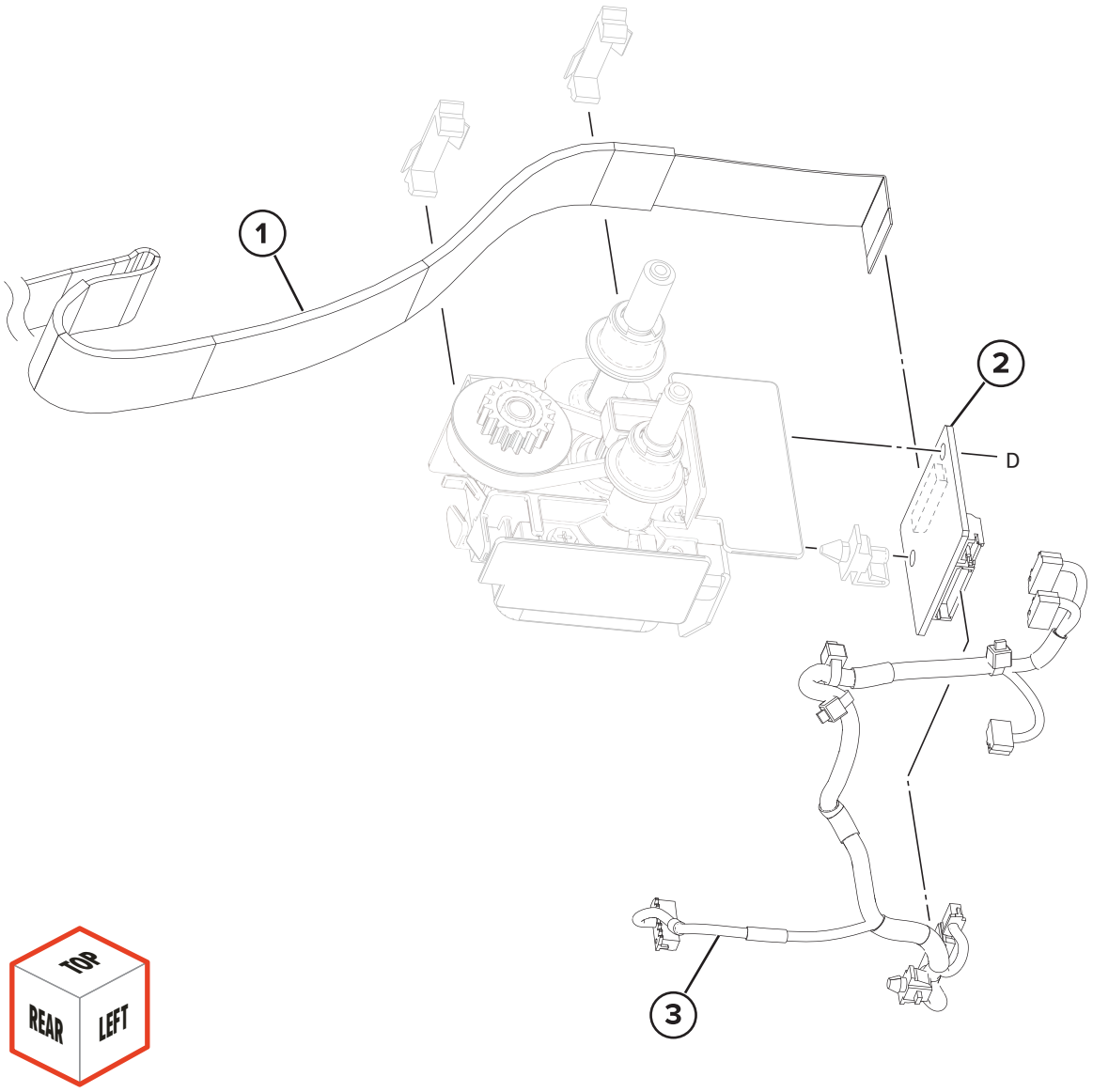
Assembly 111: SHPF staple holder



Assembly 111: SHPF staple holder

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3693	1	1	SHPF staple unit	“Stapler assembly removal” on page 555
2	41X4106	1	1	SHPF staple carriage rail	“Rail assembly removal” on page 556

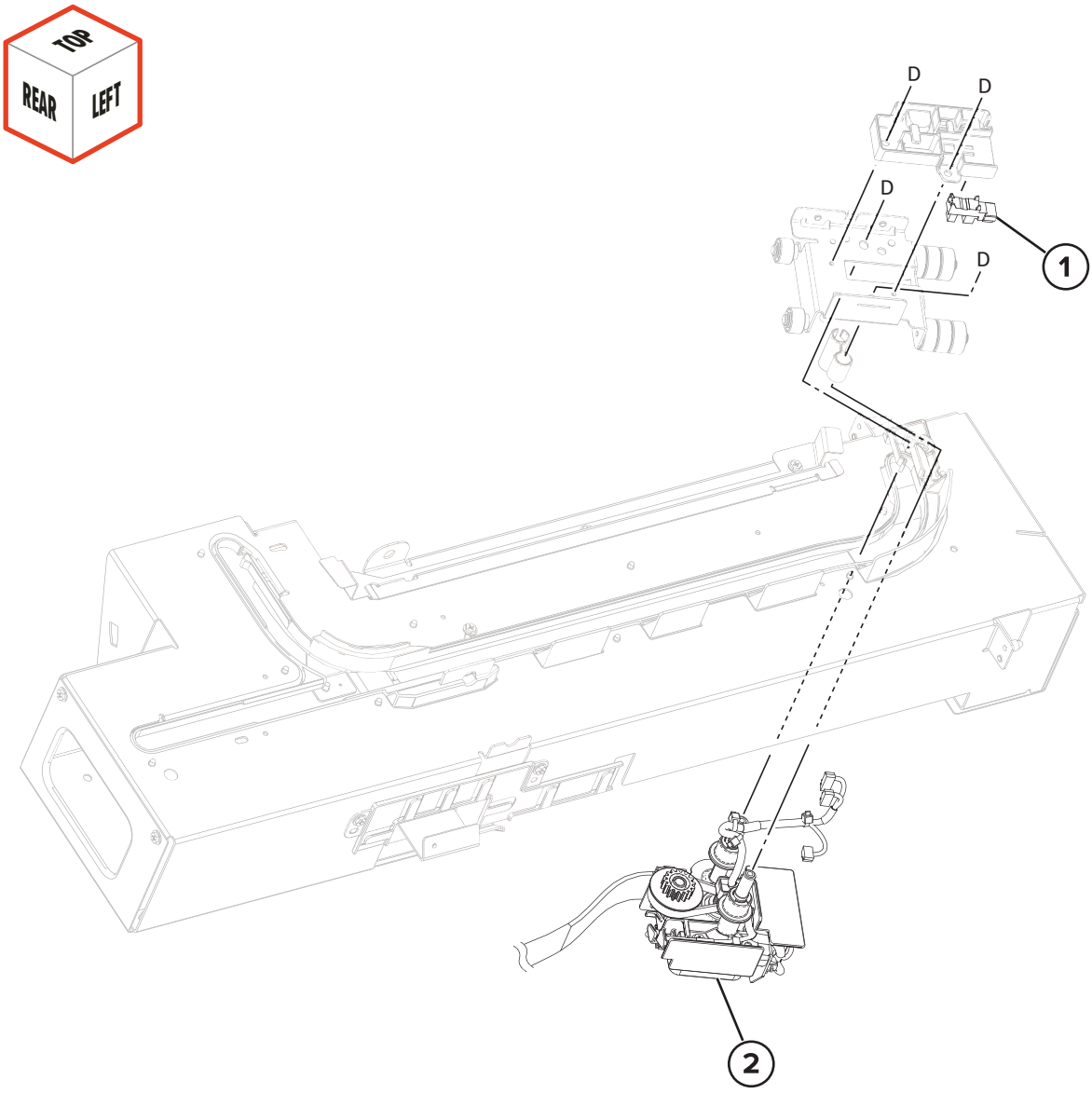
Assembly 112: SHPF stapler drive



Assembly 112: SHPF stapler drive

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4036	1	1	SHPF staple unit carriage FFC	--
2	41X4034	1	1	SHPF staple unit carriage board	--
3	41X4035	1	1	SHPF staple unit cable	--

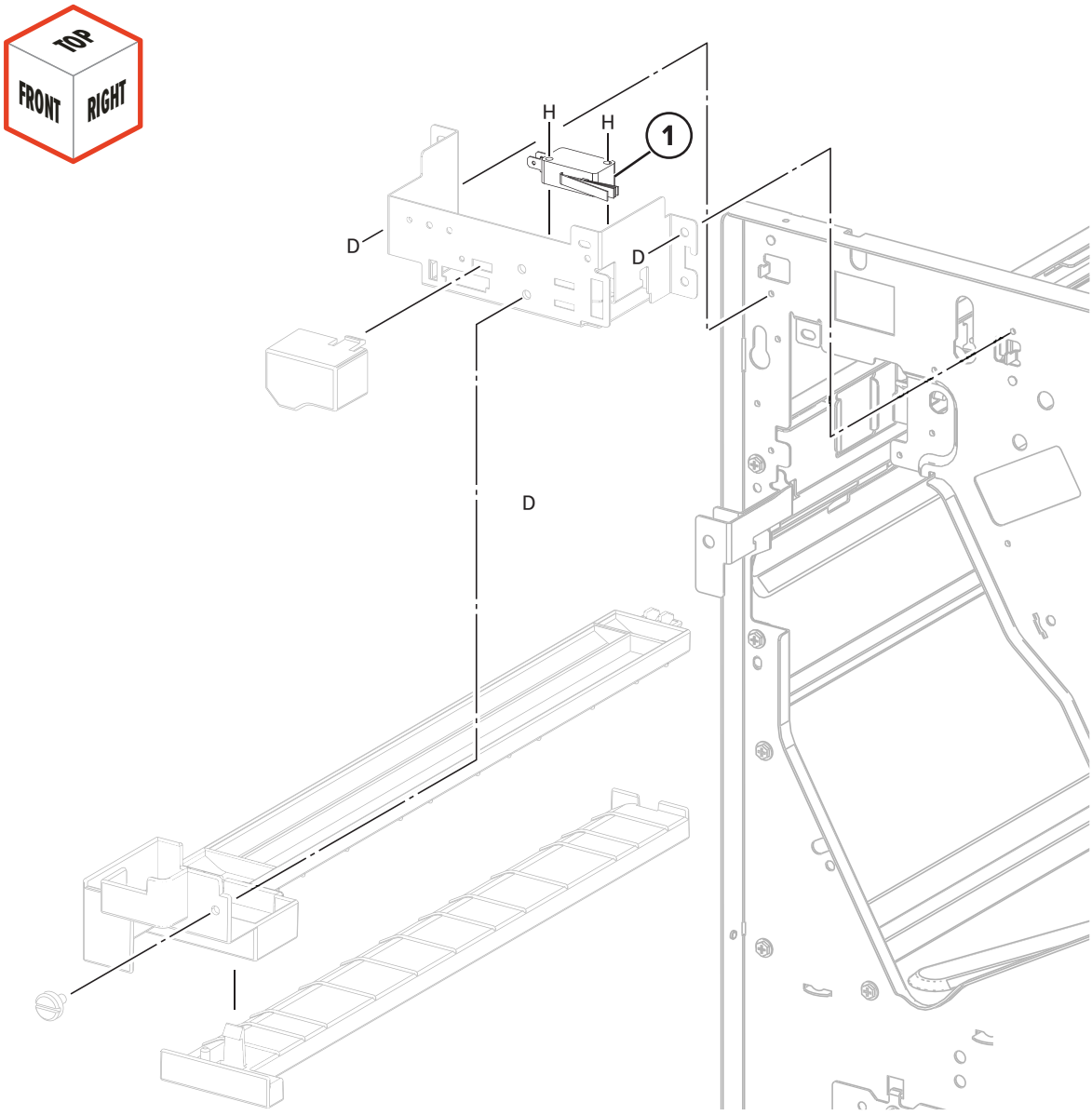
Assembly 113: SHPF stapler rail



Assembly 113: SHPF stapler rail

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	40X0588	1	1	Sensor (SHPF staple unit carriage position)	--
2	41X4033	1	1	SHPF carriage transport	--

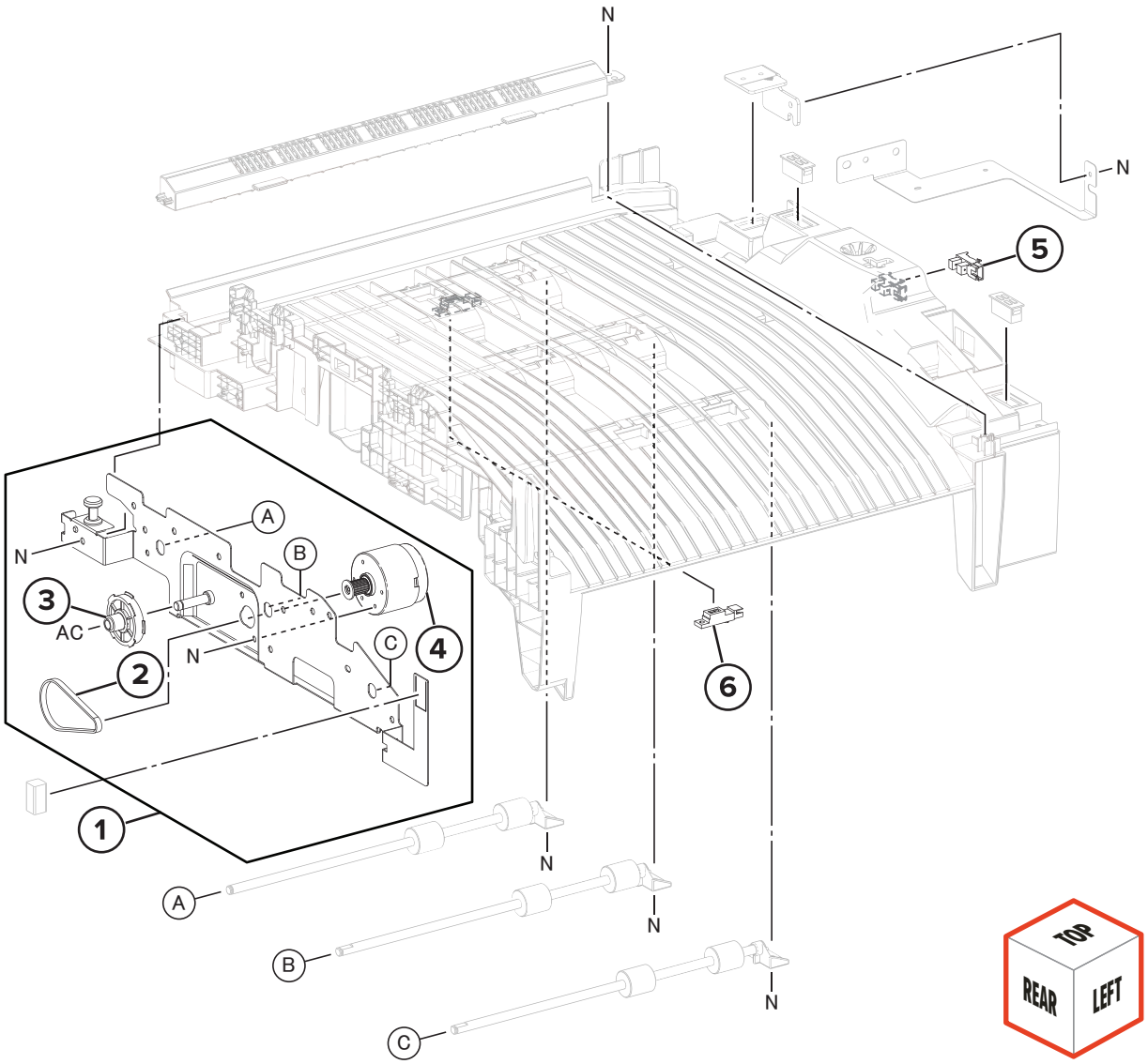
Assembly 114: SHPF folder



Assembly 114: SHPF folder

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4009	1	1	SHPF front door switch	--

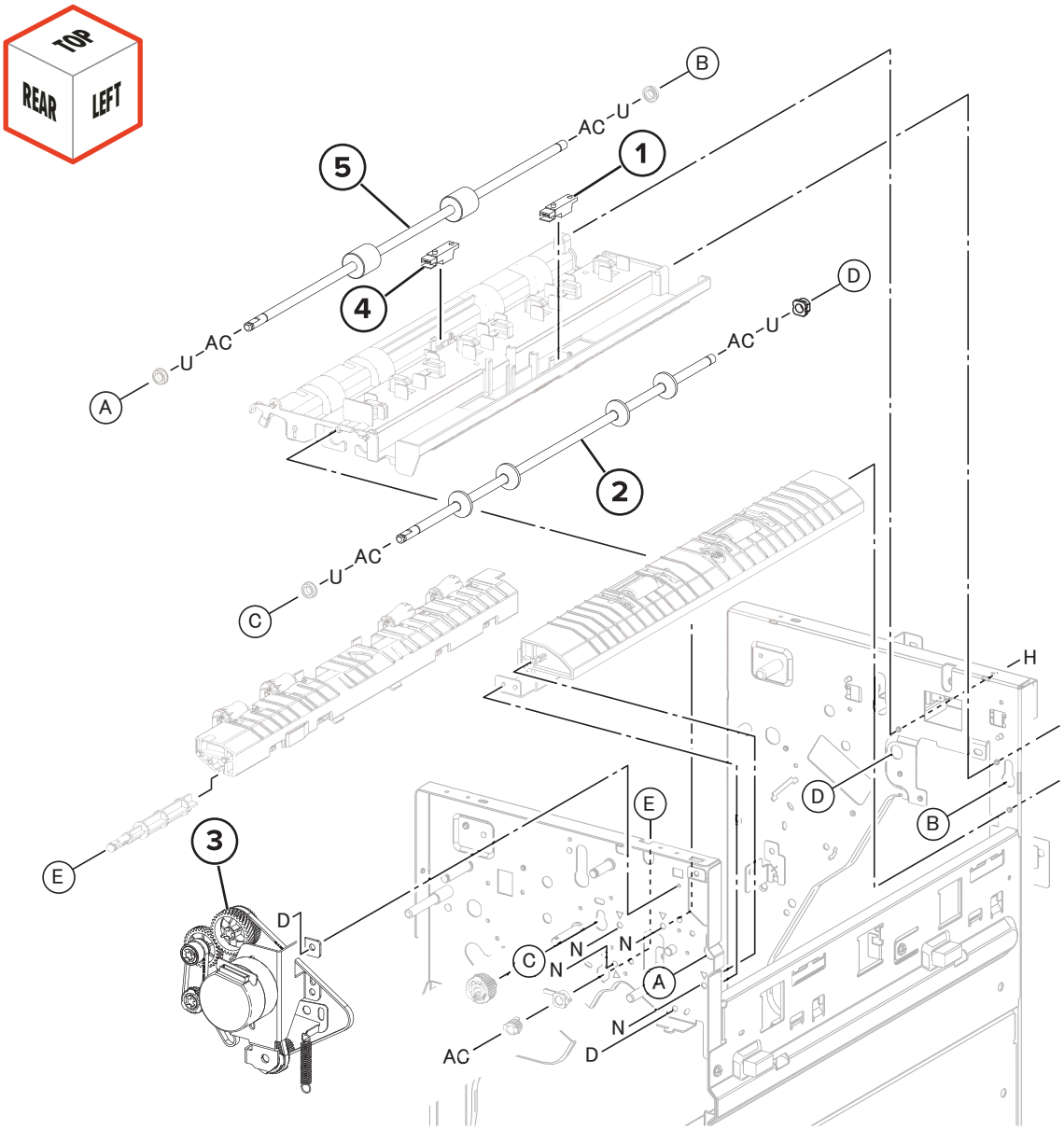
Assembly 115: SHPF lower chute



Assembly 115: SHPF lower chute

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3977	1	1	HTU transport drive	--
2	41X3980	1	1	HTU drive belt	**“Horizontal transport belt removal” on page 559**
3	41X3979	1	1	HTU drive pulley	--
4	41X3978	1	1	Motor (HTU transport)	**“Horizontal transport motor assembly removal” on page 560**
5	40X7403	1	1	Sensor (HTU door)	--
6	41X3976	1	1	Sensor (HTU transport)	--

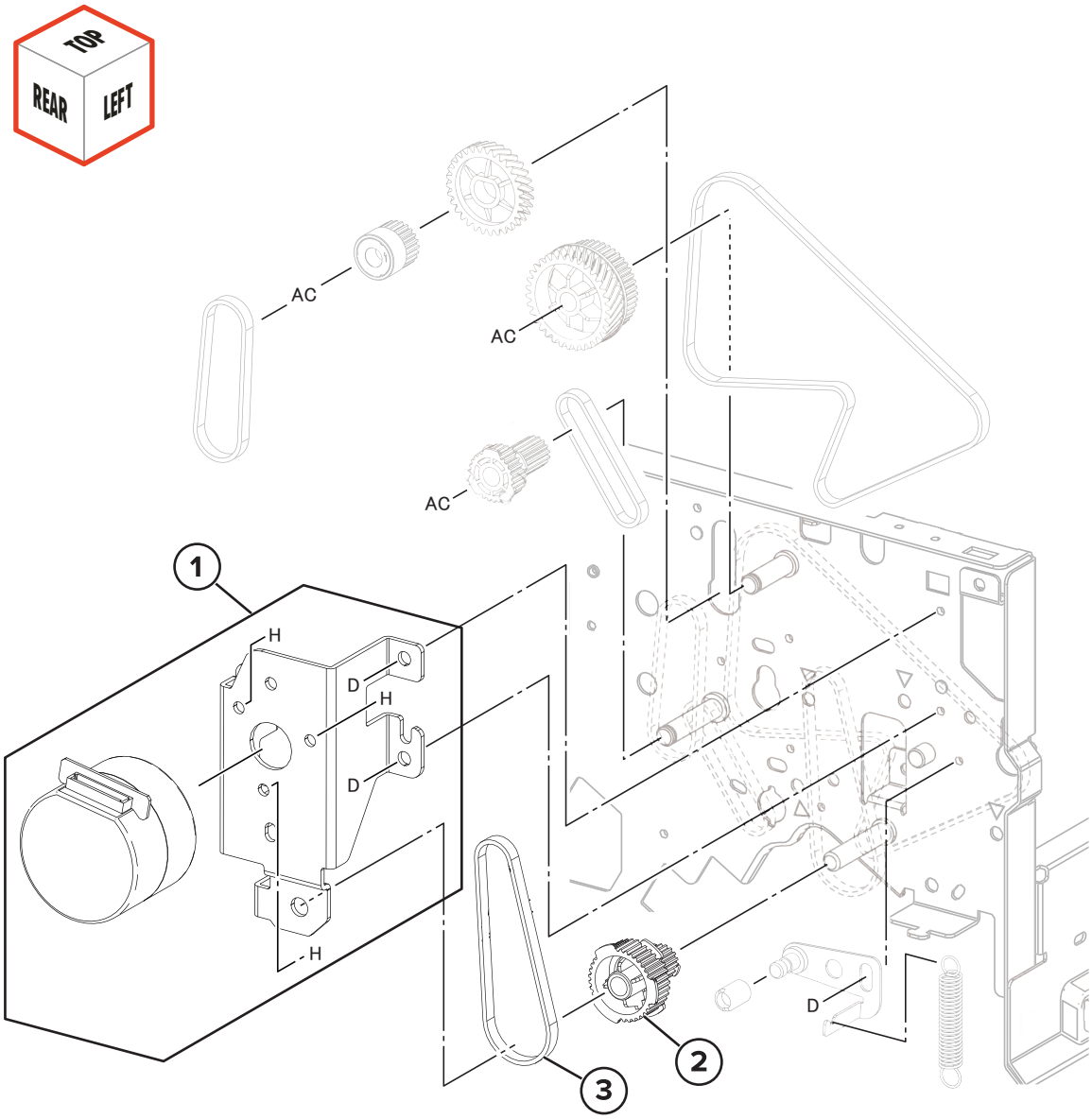
Assembly 116: SHPF transport



Assembly 116: SHPF transport

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3976	1	1	Sensor (SHPF transport)	--
2	41X3976	1	1	Sensor (SHPF feed)	--
3	41X4020	1	1	SHPF feed roller	--
4	41X4021	1	1	SHPF transport roller	--
5	41X4022	1	1	SHPF transport gearbox	--

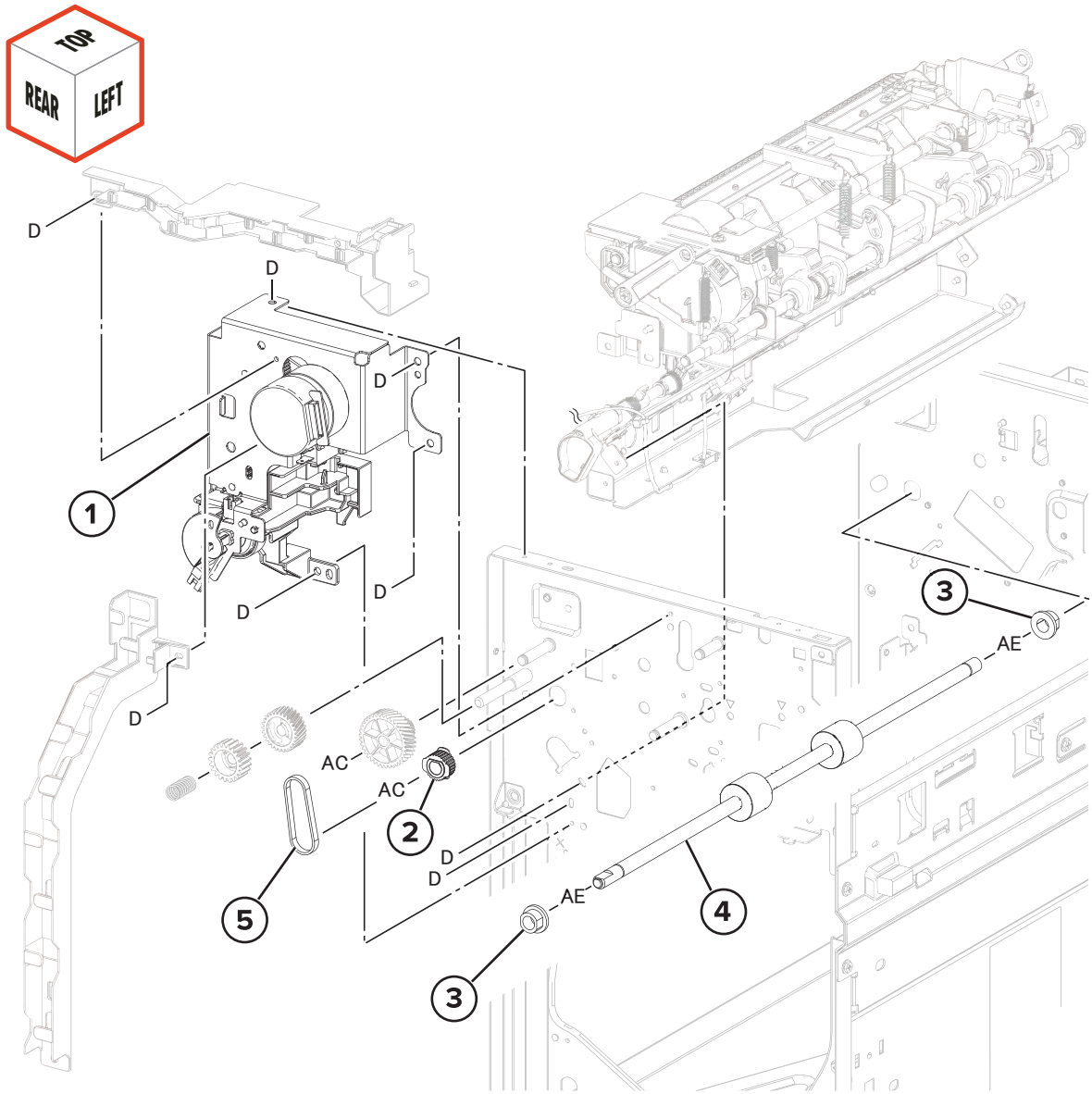
Assembly 117: SHPF transport motor



Assembly 117: SHPF transport motor

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4023	1	1	Motor (SHPF transport)	“Finisher transport motor removal” on page 544
2	41X4024	1	1	SHPF transport pulley	--
3	41X4025	1	1	SHPF transport belt	“Finisher transport belt removal” on page 544

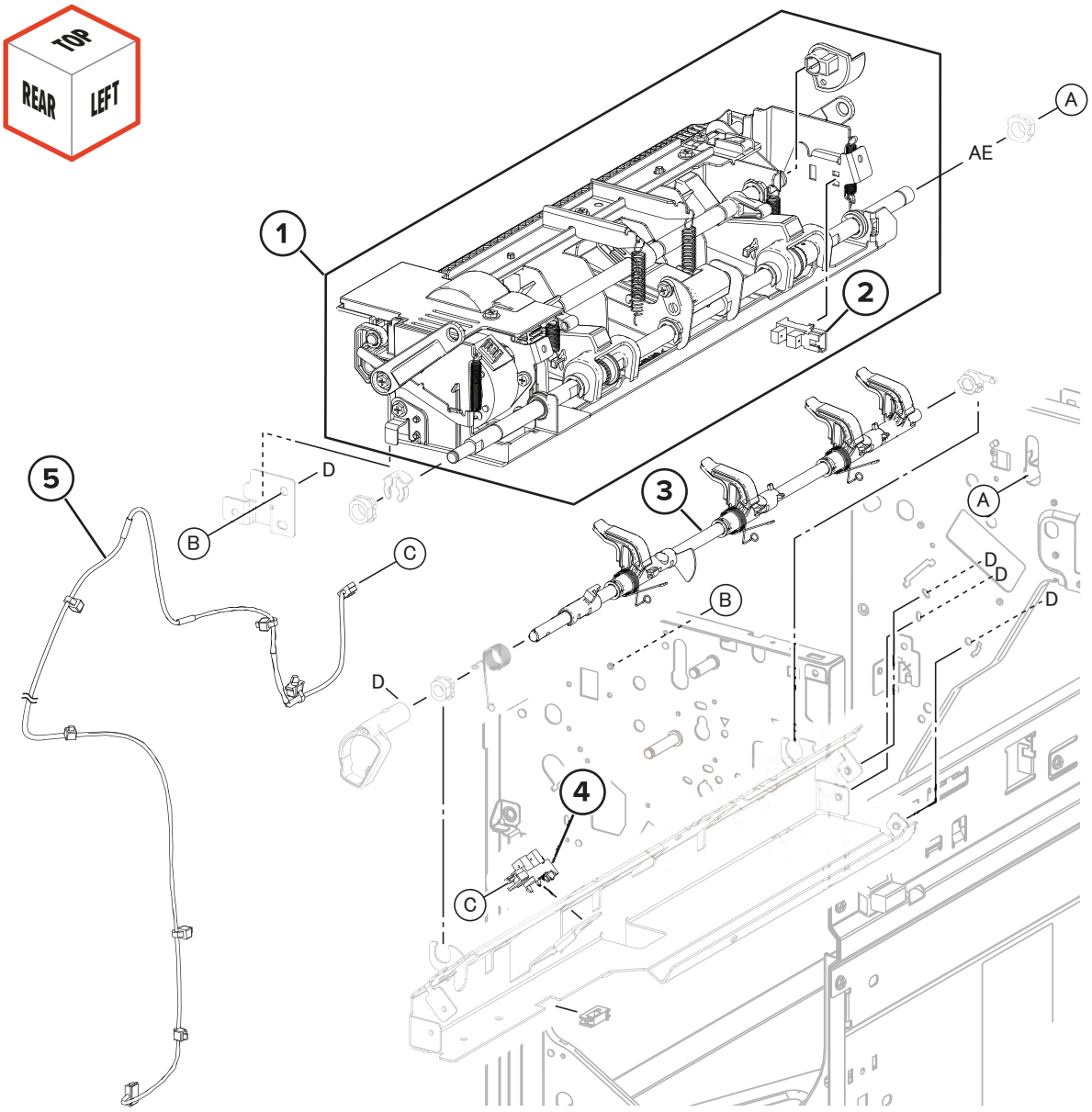
Assembly 118: SHPF eject



Assembly 118: SHPF eject

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4002	1	1	SHPF compiler eject gearbox	--
2	41X4003	1	1	SHPF lower exit pulley	--
3	40X1388	1	2	SHPF bearing	--
4	41X4005	1	1	SHPF lower exit roller	--
5	41X4004	1	1	SHPF lower exit belt	--

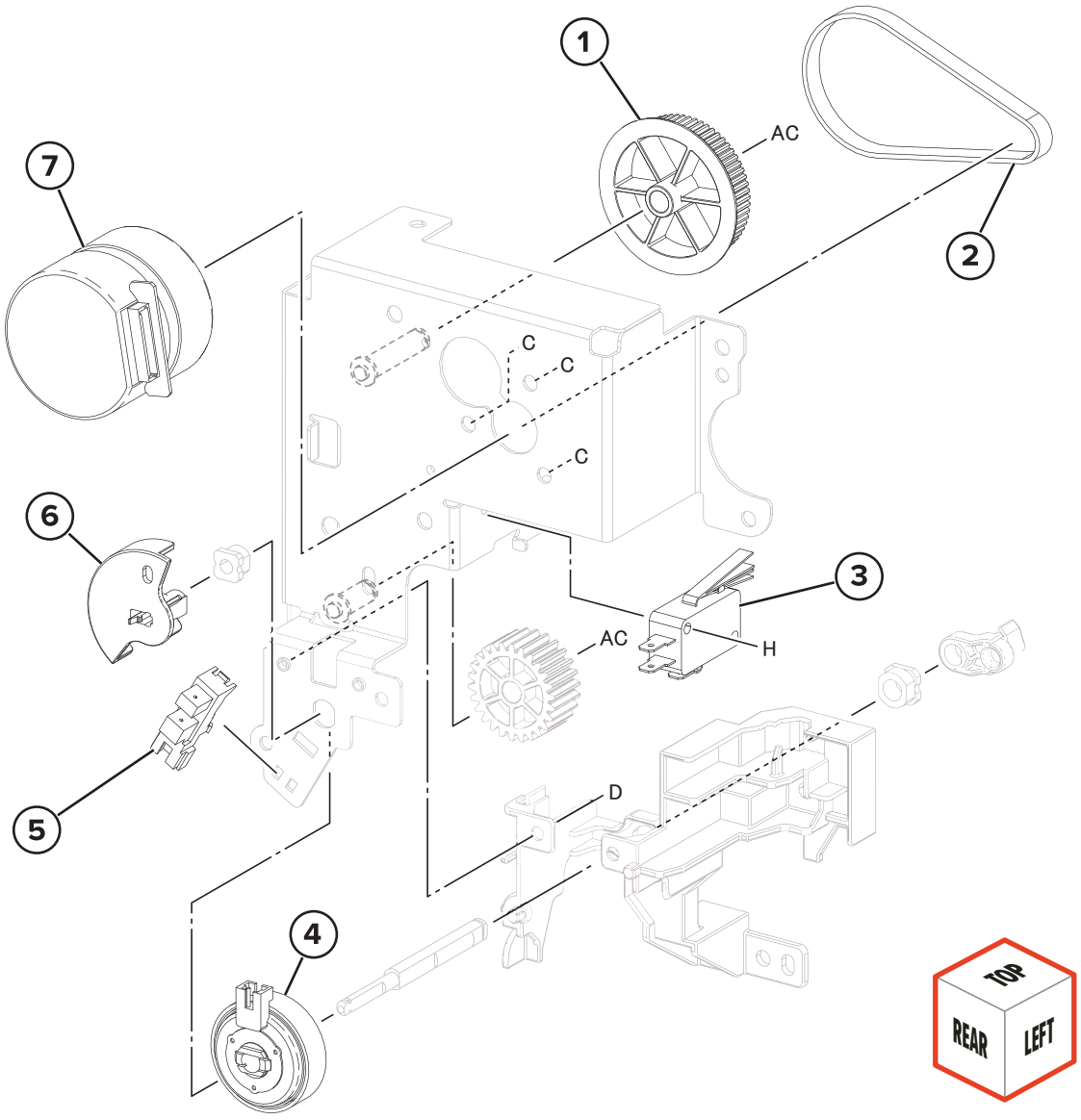
Assembly 119: SHPF eject chute



Assembly 119: SHPF eject chute

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4012	1	1	SHPF eject clamp/paddle	“Eject chute assembly removal” on page 545
2	40X0588	1	1	Sensor (SHPF ejector clamp/paddle)	--
3	41X4013	1	1	SHPF stack clamp	--
4	40X0588	1	1	Sensor (SHPF stack height)	--
5	41X4014	1	1	SHPF stack height sensor cable	--

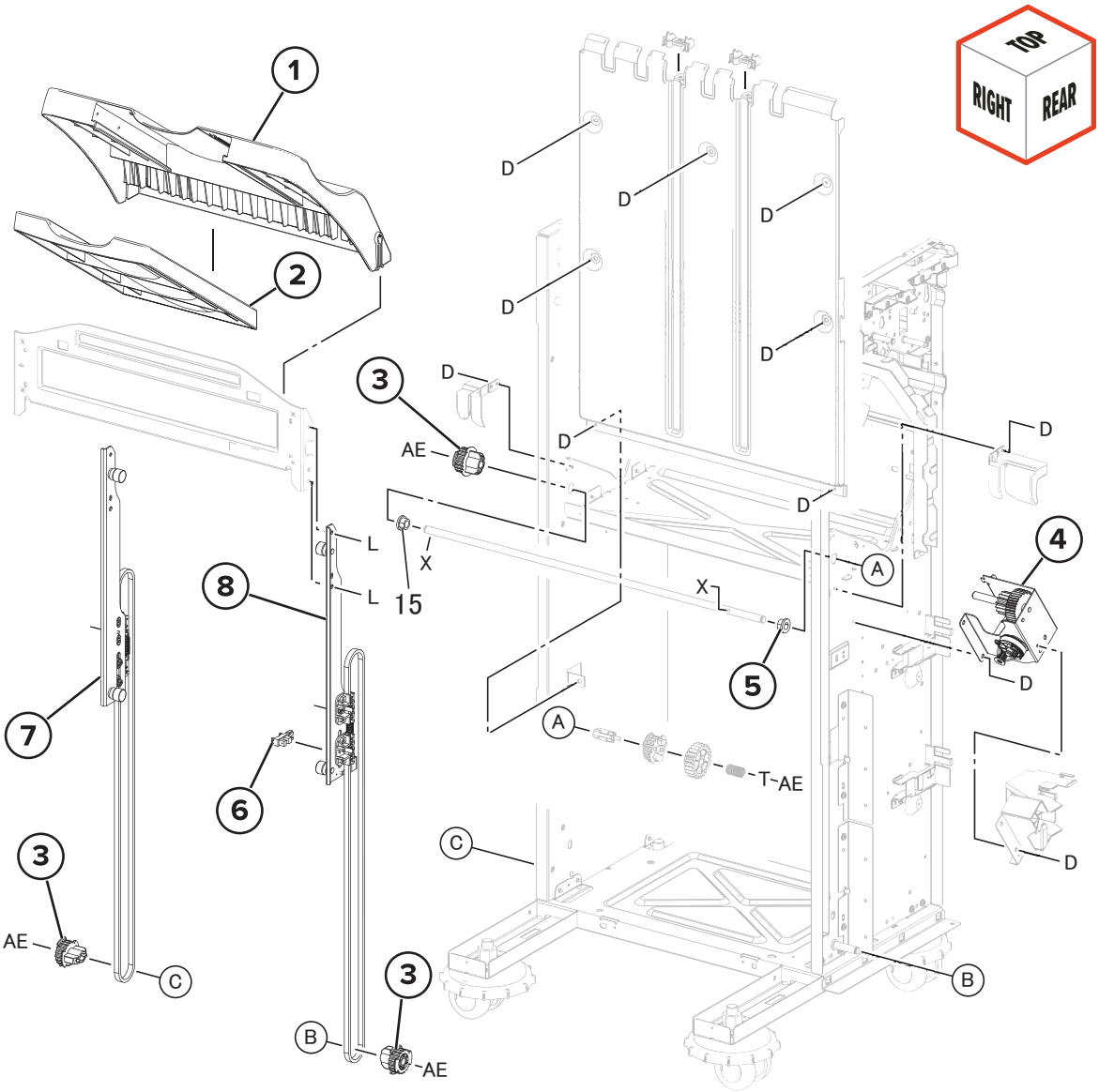
Assembly 120: SHPF eject motor drive



Assembly 120: SHPF eject motor drive

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X4007	1	1	SHPF compiler eject pulley	--
2	41X4008	1	1	SHPF compiler eject belt	--
3	41X4009	1	1	SHPF top door switch	--
4	41X4010	1	1	SHPF stack clamp clutch	--
5	40X0588	1	1	Sensor (SHPF stack clamp)	--
6	41X4011	1	1	SHPF stack clamp sensor actuator	--
7	41X4006	1	1	Motor (SHPF compiler eject)	--

Assembly 121: SHPF stacker



Assembly 121: SHPF stacker

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X3996	1	1	SHPF bin	--
2	41X3997	1	1	SHPF bin extender	--
3	41X4000	1	1	SHPF stacker belt pulley	--
4	41X4001	1	1	Motor (SHPF stacker bin)	--
5	40X1388	1	2	SHPF bearing	--
6	40X0588	1	1	Sensor (SHPF stacker bin)	--
7	41X3998	1	1	SHPF bin front belt	--
8	41X3999	1	1	SHPF bin rear belt	--

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.	One-sided: 381 Two-sided: 371
Copy	The product is generating hard-copy output from hard-copy original documents.	434 W
Scan	The product is scanning hard-copy documents.	103 W
Ready	The product is waiting for a print job.	72 W
Sleep Mode	The product is in a high-level energy-saving mode.	1.1 W
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, or between 1 minute and 114 minutes, depending on the printer model. If the printer speed is less than or equal to 30 pages per minute, then you can set the timeout only up to 60 minutes or 54 minutes, depending on the printer model. 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.

Some models support a *Deep Sleep Mode*, which further reduces power consumption after longer periods of inactivity.

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.

Notes on EPEAT-registered imaging equipment products:

- Standby power level occurs in Hibernate or Off mode.
- The product shall automatically power down to a standby power level of ≤ 1 W. The auto standby function (Hibernate or Off) shall be enabled at product shipment.

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 estimate 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.

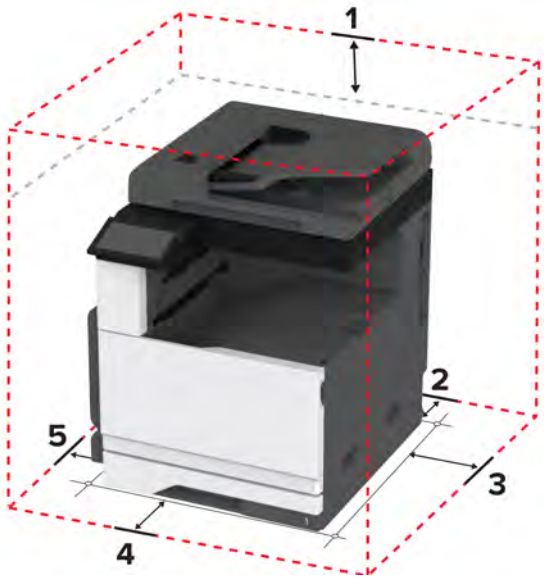
Selecting a location for the printer

- Leave enough room to open trays, covers, and doors and to install hardware options.
- Set up the printer near an electrical outlet.
- 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 32.2°C (50 to 90°F)
Storage temperature	15.6 to 32.2°C (60 to 90°F)

- Allow the following recommended amount of space around the printer for proper ventilation:



1	Top	400 mm (15.70 in.)
2	Rear	120 mm (4.80 in.)
3	Right side	120 mm (4.80 in.)
4	Front	444.5 mm (17.50 in.)
5	Left side	400 mm (15.70 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	50
Scanning	55
Copying	55

1-meter average sound pressure, dBA	
Ready	15

Values are subject to change. See **www.lexmark.com** for current values.

Temperature information

Operating temperature and relative humidity	10 to 32.2°C (50 to 90°F) and 15 to 80% RH 15.6 to 32.2°C (60 to 90°F) and 8 to 80% RH Maximum wet-bulb temperature[2]: 22.8°C (73°F) Non-condensing environment
Printer / cartridge / imaging unit long-term storage[1]	15.6 to 32.2°C (60 to 90°F) and 8 to 80% RH Maximum wet-bulb temperature[2]: 22.8°C (73°F)
Printer / cartridge / imaging unit short-term shipping	-40 to 40°C (-40 to 104°F)

[1] Supplies shelf life is approximately 2 years. This is based on storage in a standard office environment at 22°C (72°F) and 45% humidity.

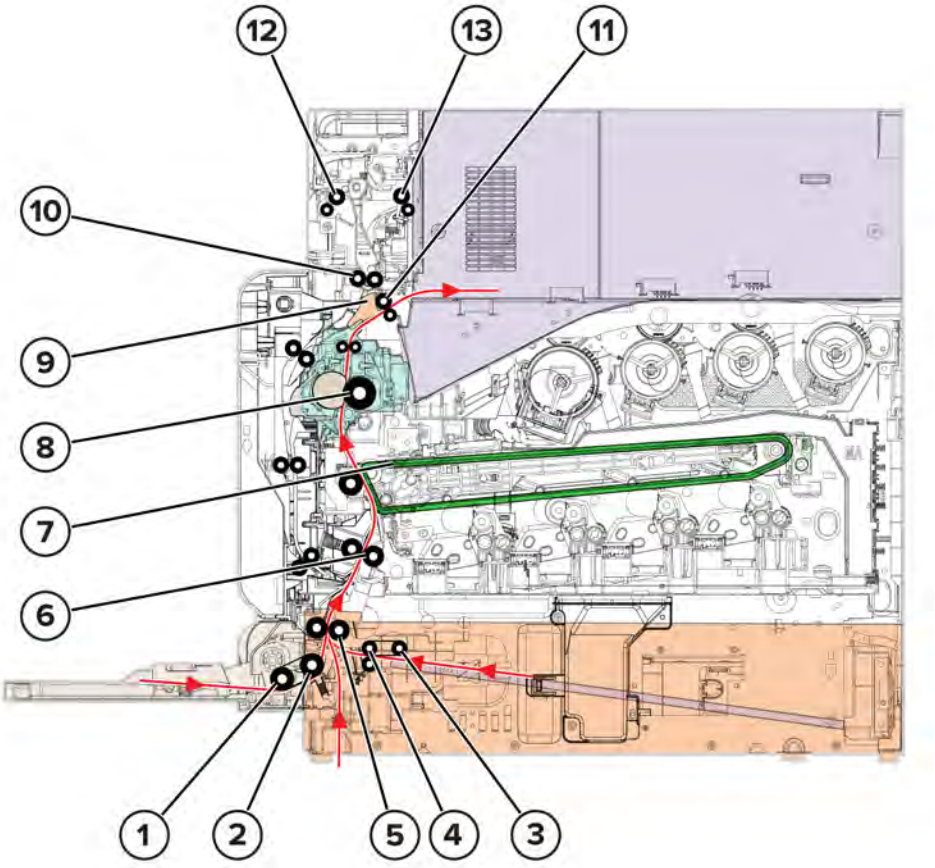
[2] Wet-bulb temperature is determined by the air temperature and the relative humidity.

Theory of operation

Paper path and drive components

Printer paper path

Standard print job



1	MPF pick roller
2	MPF feed roller
3	Tray 1 pick roller
4	Tray 1 feed roller
5	Transport roller
6	Registration roller
7	Transfer belt
8	Fuser heat roller

9	Diverter
10	Redrive roller
11	Exit 1 roller
12	Left bin exit roller
13	Exit 2 roller

Paper from tray 1 is picked by the tray 1 pick roller and fed into the printer by the tray 1 feed roller.

For MPF print jobs, the paper is picked by the MPF pick roller and fed into the printer by the MPF feed roller.

The transport roller receives the paper from tray 1 or the MPF and transports them to the registration section.

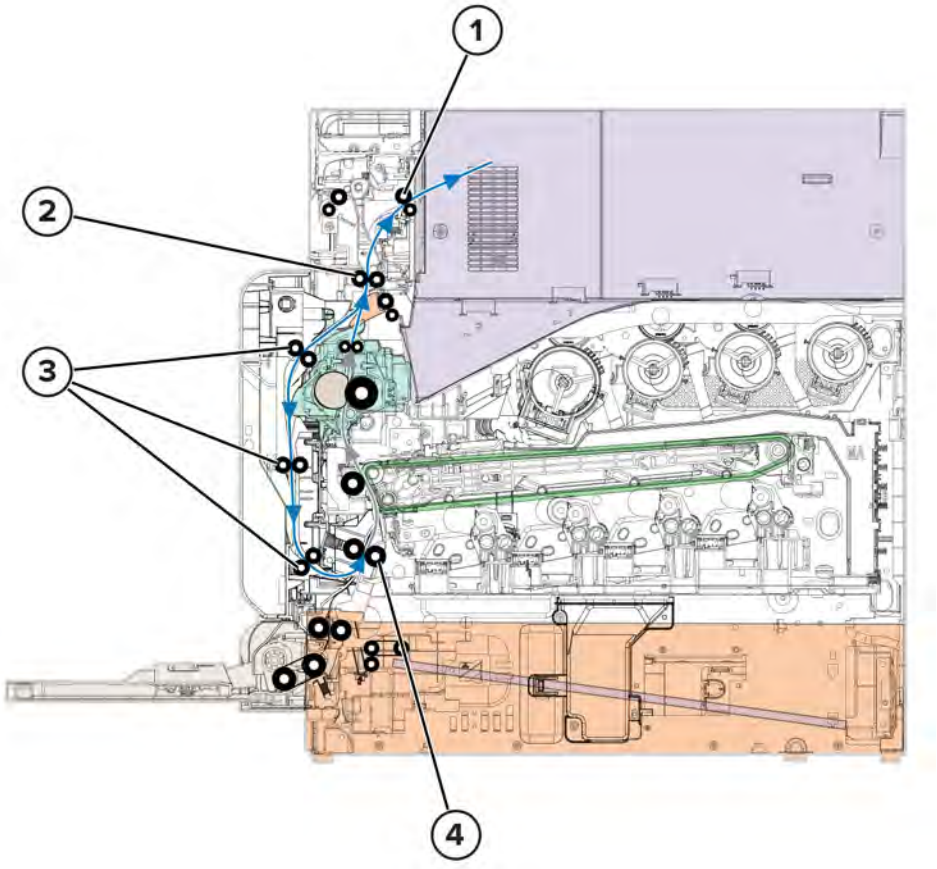
The registration roller corrects the skew of the paper. The registration roller pushes the paper in between the transfer belt and the second transfer roller. The toner image is transferred to the paper.

The paper goes through the fuser section to permanently bond the toner image to the sheet.

When the fusing is done, the default position of the diverter directs the paper towards the exit 1 roller.

The redrive roller receives the paper and transports it to the exit 2 roller.

Duplex print job



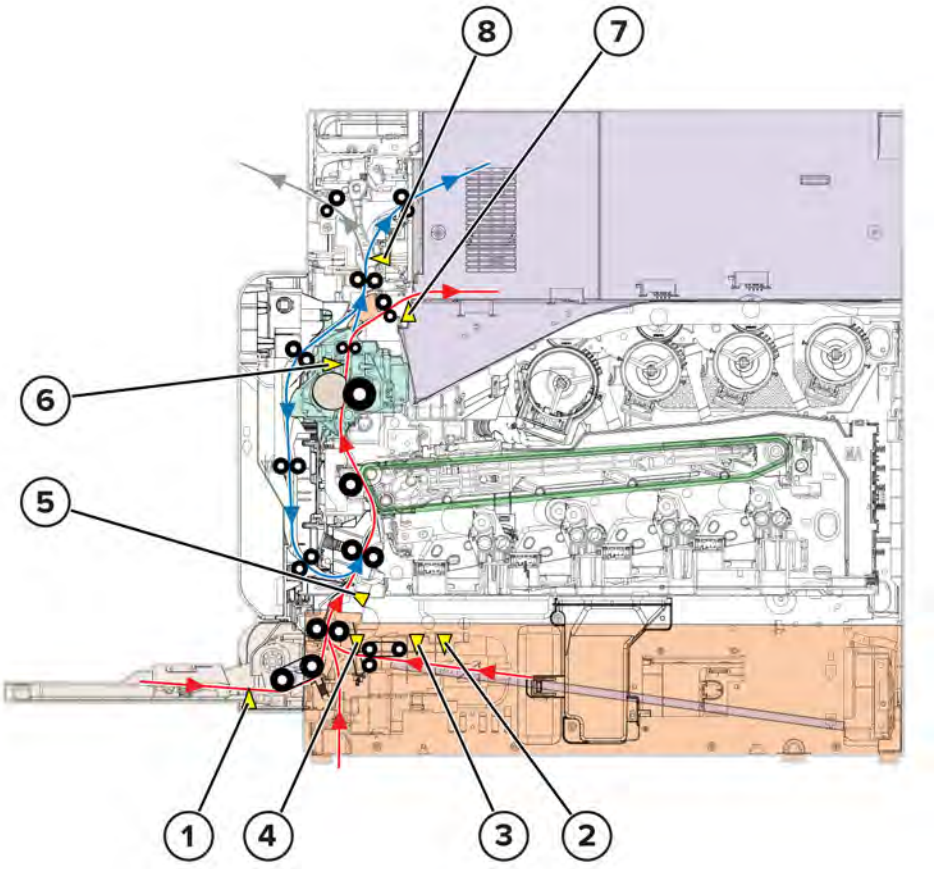
1	Exit 2 roller
2	Redrive roller
3	Duplex transport rollers
4	Registration roller

When the fusing is done, the diverter position determines if the paper is to be fed again for duplex print jobs or to exit through the finisher or bins.

After the first side is printed, the exit 2 roller and redrive roller push the paper to the duplex paper path. The paper travels along the duplex paper path using the duplex transport rollers.

The paper enters the printer again with its opposite side ready for printing. The paper is received by the registration roller and follows the standard paper path until the print job is done.

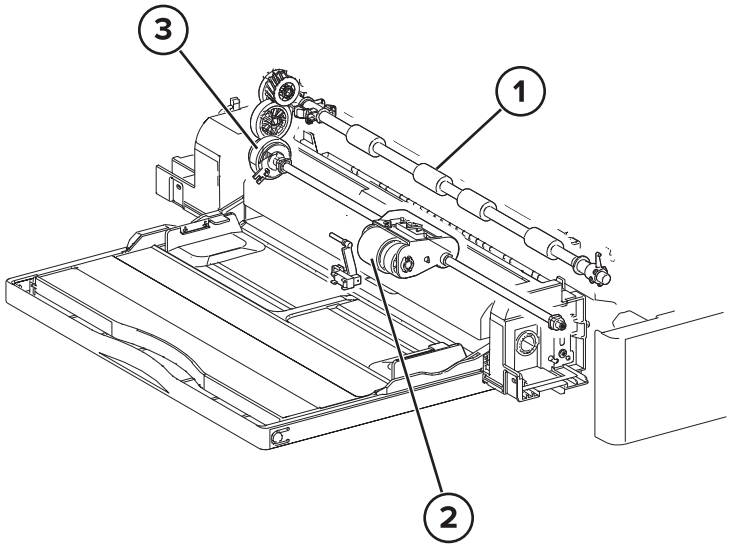
Printer paper path sensors



#	Sensor	Function
1	Sensor (MPF paper present)	Detects paper presence in the MPF tray.
2	Sensor (tray 1 pick position)	Detects if the pick roller is in pick position.

#	Sensor	Function
3	Sensor (tray 1 paper present)	Detects paper presence in the tray 1.
4	Sensor (tray 1 feed)	Detects the paper as it is fed into the printer.
5	Sensor (registration)	Detects the paper as it passes though the registration roller. Synchronizes the paper position and the image prepared on the transfer belt.
6	Sensor (fuser exit)	Detects the paper as it passes through the fuser.
7	Sensor (bin full)	Detects if the bin is full.
8	Sensor (exit 2)	Detects the paper as it passes the redrive roller.

MPF pick drive



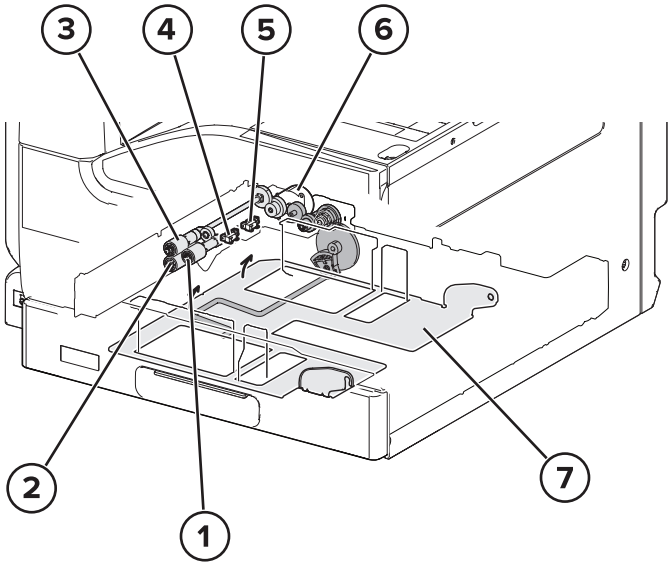
1	Transport roller
2	MPF pick roller
3	MPF fee clutch

During MPF paper feed, the MPF pick arm lowers until the MPF pick roller makes contact with the paper and it rotates to insert the paper between the MPF feed roller and the separator pad.

The separator pad makes sure that only one sheet is fed at a time.

The MPF feed clutch controls the rollers.

Tray 1 lift and pick drive



1	Tray 1 pick roller
2	Tray 1 separator roller
3	Tray 1 feed roller
4	Sensor (tray 1 paper present)
5	Sensor (tray 1 pick position)
6	Motor (tray 1 pick/lift)
7	Lift plate

The motor (tray 1 pick/lift) causes the lift plate to elevate. This causes the paper to press against the tray 1 pick roller.

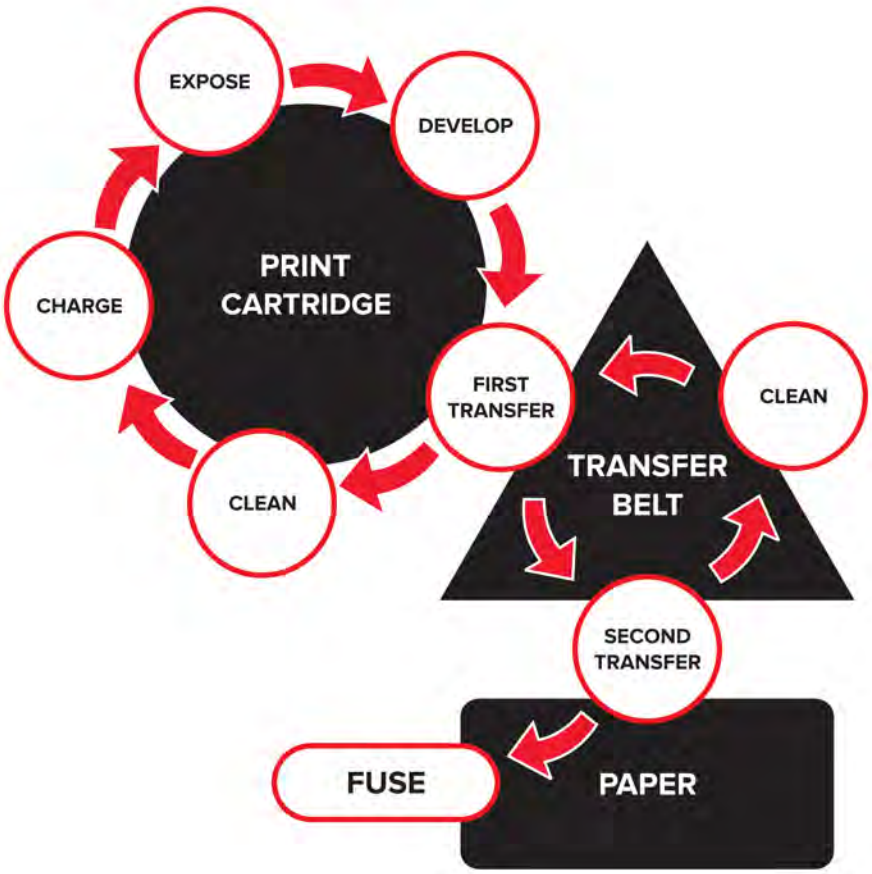
After the pick position is reached, the motor (pick/lift) reverses its rotation to drive the tray 1 pick and feed rollers. The tray 1 pick roller rotates to insert the paper between the tray 1 feed roller and the tray 1 separator roller.

The tray 1 separator roller is a free rotating roller. It provides resistance to make sure that only one sheet is being fed.

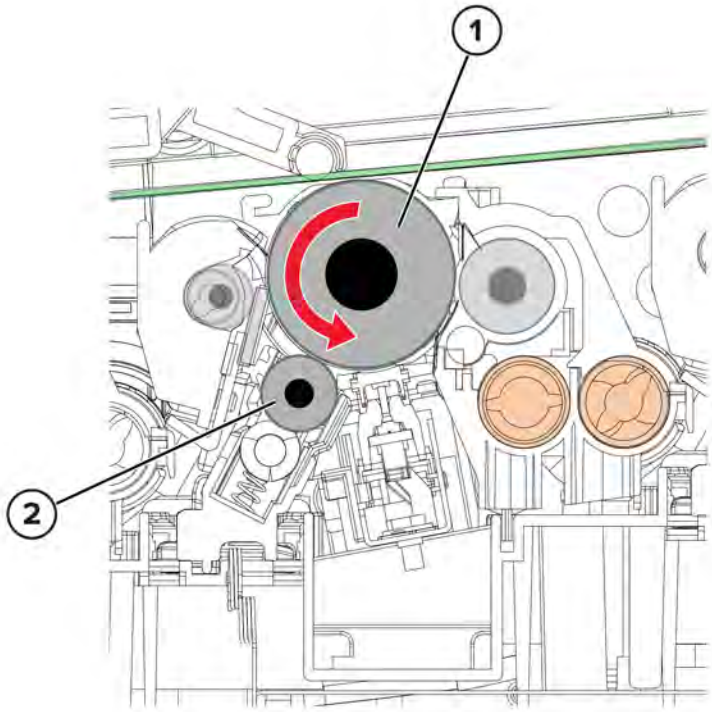
Print cycle operation

EP process

Flowchart



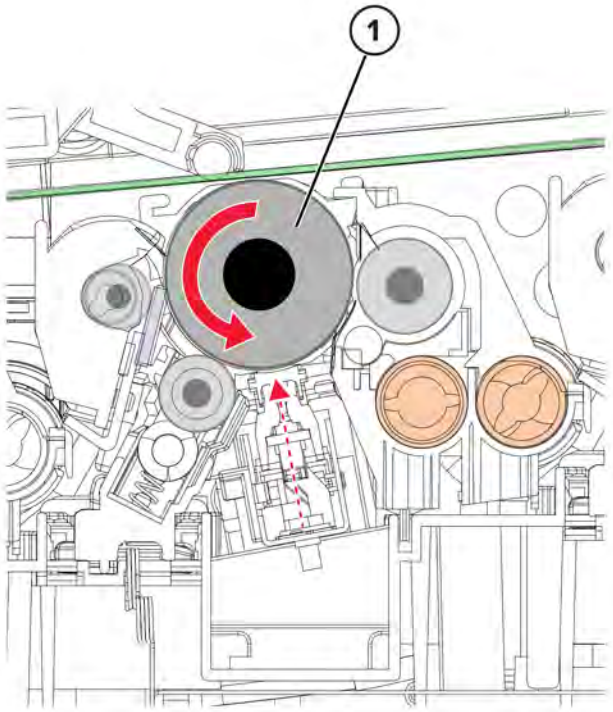
Charge



1	Photoconductor drum
2	Charge roller

The HVPS supplies the charge roller with voltage. The charge roller places a uniform negative electrostatic charge on the surface of the photoconductor drum. The electrical charges hold on to the photoconductive surface of the drum as long as the drum is not exposed to light, which causes the surface charge to neutralize.

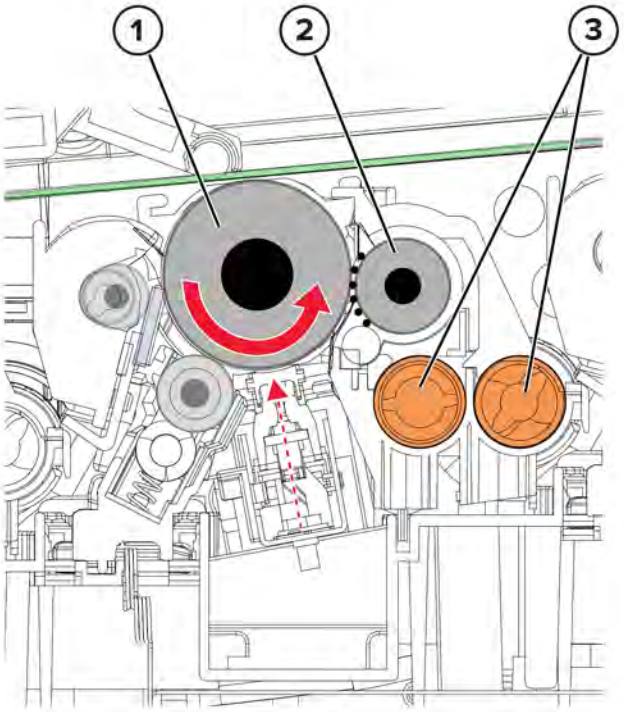
Expose



1	Photoconductor drum

The printhead emits light that contacts the surface of the photoconductor drum. The light turns on and off on specific areas of the drum according to the digital latent image. The exposed areas of the drum are discharged and have reduced negative charge. The less negative areas form the latent image.

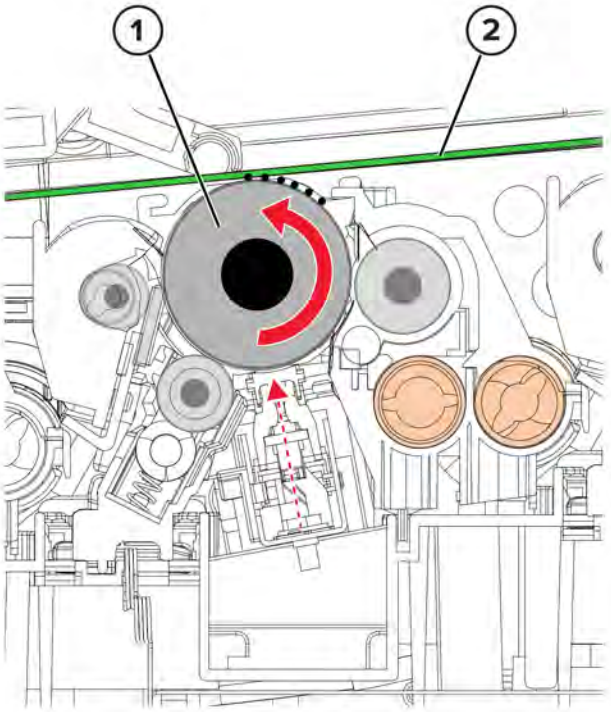
Develop



1	Photoconductor drum
2	Developer roller
3	Auger

The developer unit applies toner from the toner cartridge to the photoconductor drum. The electrically charged toner adhere to the formed electrostatic latent image on the drum surface.

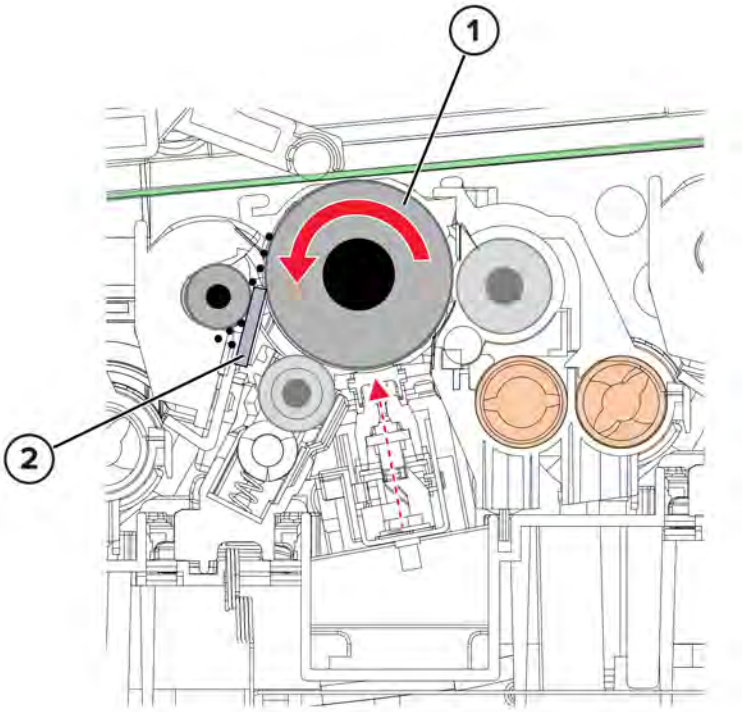
First transfer



1	Photoconductor drum
2	Transfer belt

The developed image from the photoconductor drum transfers to the transfer belt. The HVPS charges the first transport roller in the transfer belt. The charge difference between the developed image on the drum surface and the first transfer roller causes the images to transfer to the surface of the transfer belt.

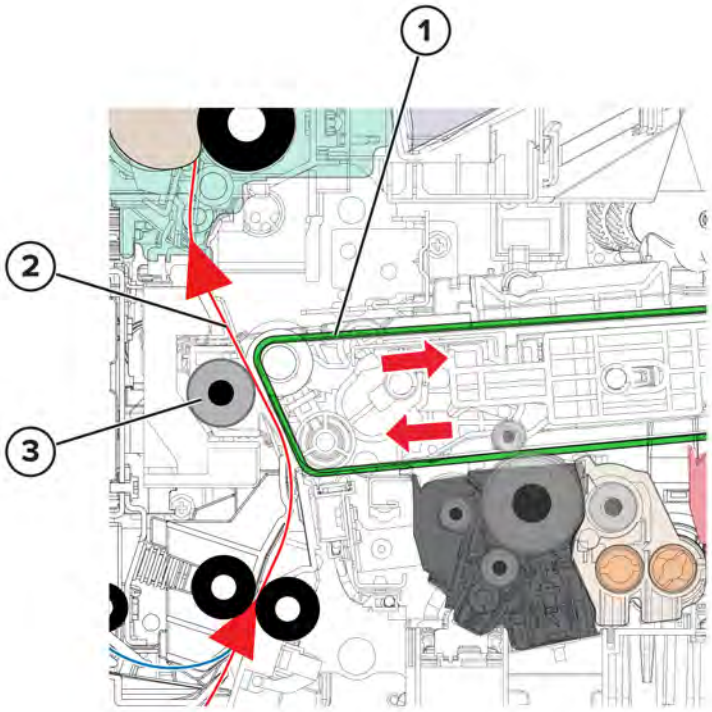
Clean (photoconductor)



1	Photoconductor drum
2	Cleaning blade

After the first transfer, the cleaning blade remove excess toner from the photoconductor drum. The cycle (charge, expose, develop, first transfer, clean) repeats until the whole image is transferred to the transfer belt.

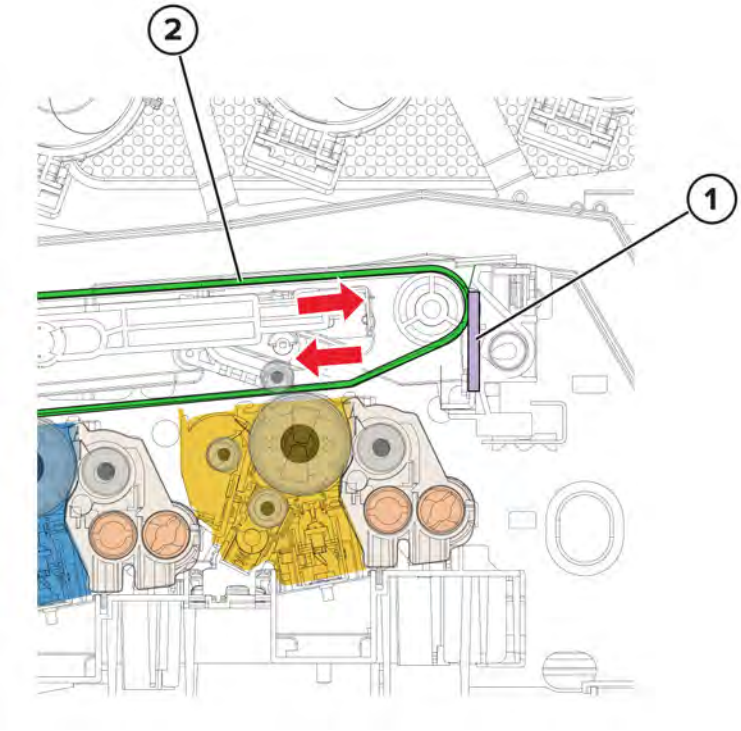
Second transfer



1	Transfer belt
2	Paper
3	Second transfer roller

The image from the transfer belt transfers to the paper. The HVPS charges the second transport roller in the transfer belt. The relative electrical differences causes the toner image to transfer from the transfer belt to the paper.

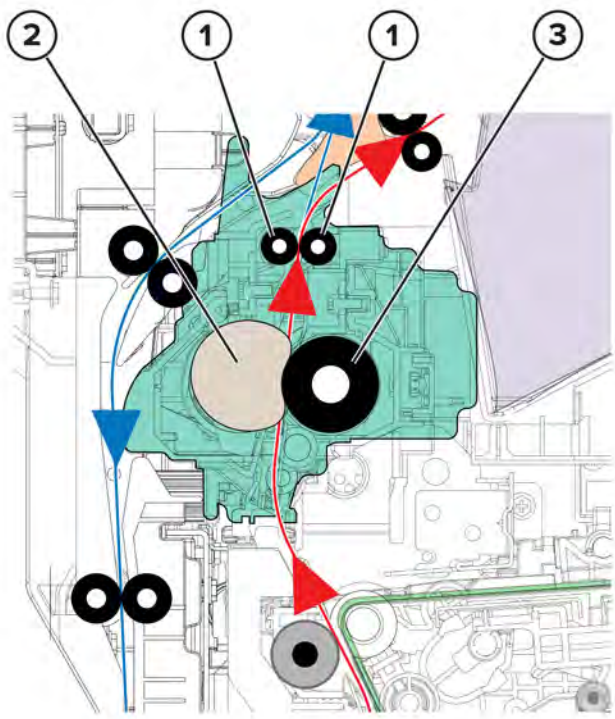
Clean (transfer belt)



1	Cleaning blade
2	Transfer belt

To prevent contamination on the next image, a cleaning blade scrapes off the toner from the transfer belt surface. Excess toner from both cleaning processes (photoconductor and transfer belt) is transported to the waste toner bottle. The cycle (first transfer, second transfer, clean) repeats for the succeeding print jobs.

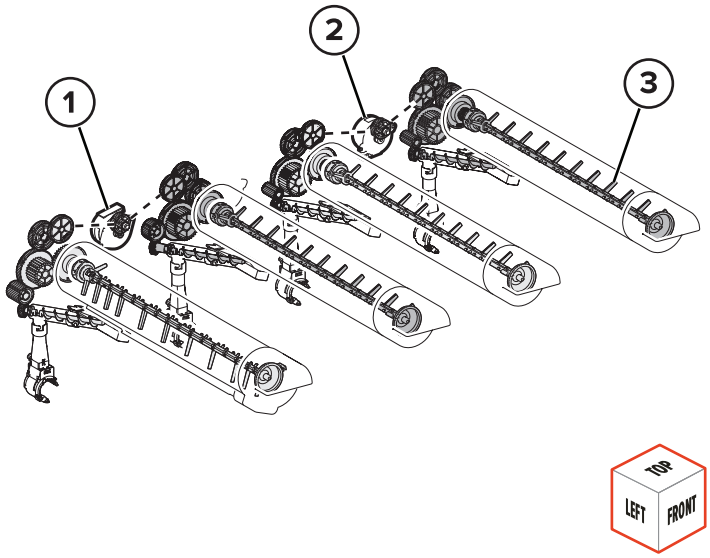
Fuse



1	Decurler rollers
2	Fuser belt
3	Fuser heat roller

To permanently bond the toner to the paper surface, 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.

Fresh toner delivery drive

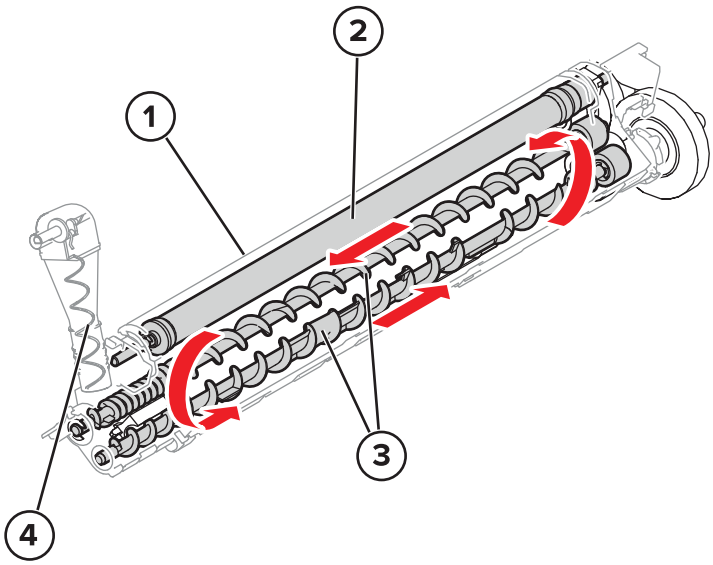


1	Motor (C, K toner add)
2	Motor (Y, M toner add)
3	Paddles

Toner cartridges supply fresh toner to the developer units. Inside the cartridges, the toner is agitated by paddles so that it is properly delivered to the developer unit.

A motor drives the paddle in each toner cartridge.

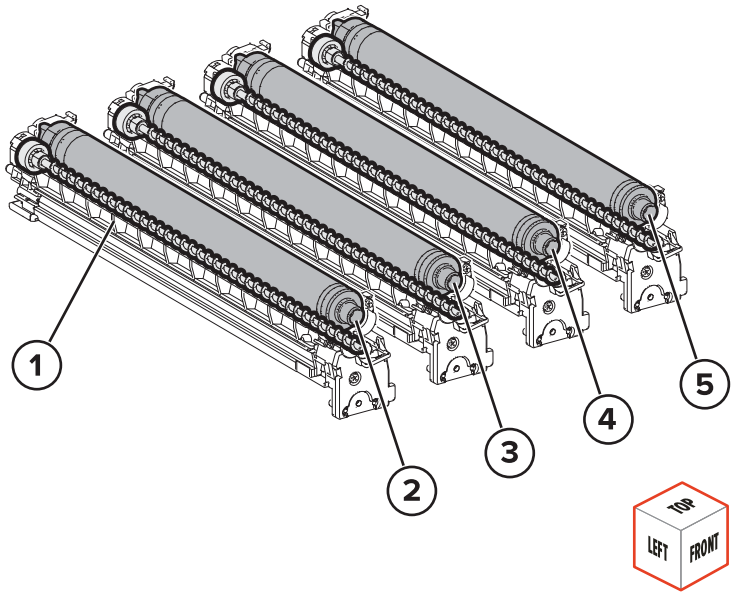
Developer drive



1	Developer unit
2	Developer roller
3	Auger
4	Toner dispense auger

A toner dispense auger in each developer unit receives toner from the toner cartridge. Inside the developer unit, the augers circulate and distribute the toner particles into the developer roll surface before they reach the photoconductor drum.

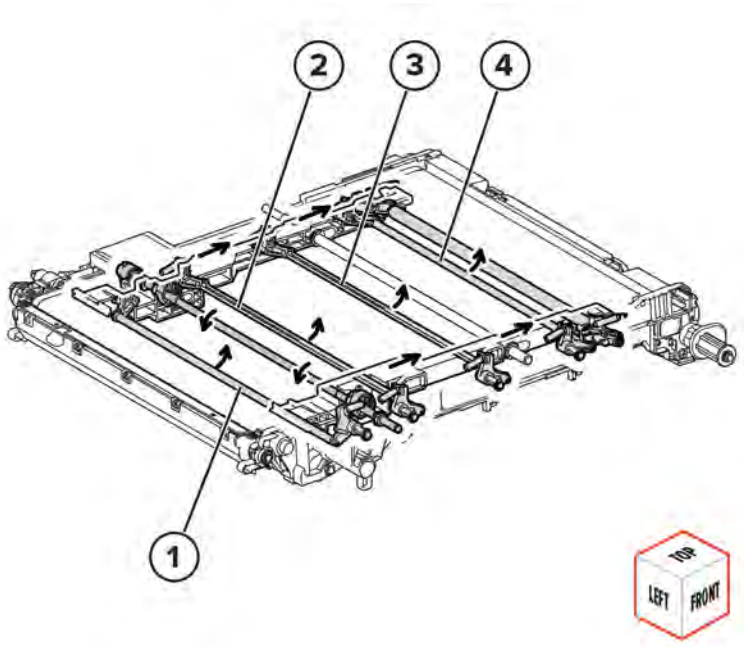
Photoconductor drive



1	Waste toner auger
2	Photoconductor drum (K)
3	Photoconductor drum (C)
4	Photoconductor drum (M)
5	Photoconductor drum (Y)

The photoconductor drum rotates during the print cycle (charge, expose, develop, first transfer, clean). A waste toner auger for each photoconductor drum transfers the residual toner to the waste toner bottle.

Black only retract (BOR) drive

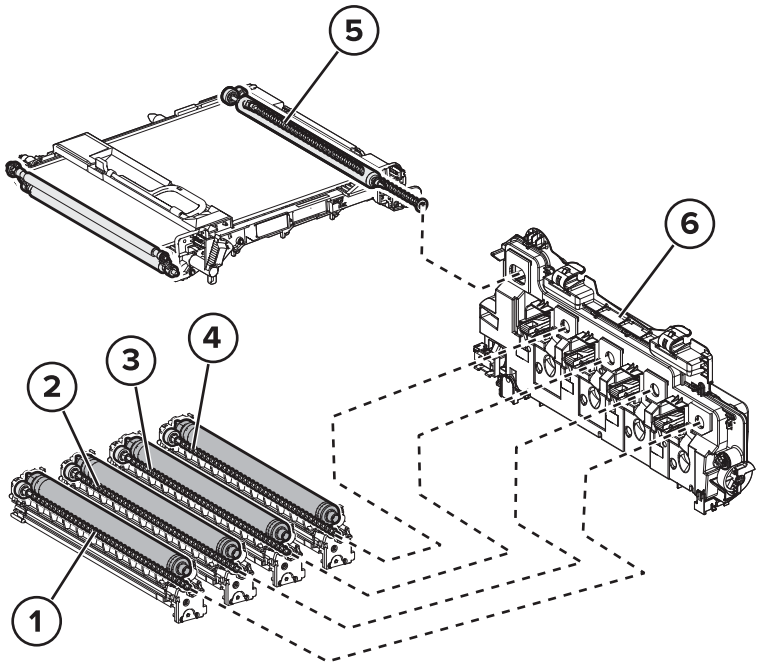


1	First transfer roller (K)
2	First transfer roller (C)
3	First transfer roller (M)
4	First transfer roller (Y)

For colorless printing, the C, M, and Y first transfer rollers inside the transfer belt retract to move away from the C, M, and Y photoconductor drums. As a result, image transfer only occurs on the K photoconductor drum.

The BOR solenoid controls the positions of the first transfer rollers.

Waste toner delivery drive



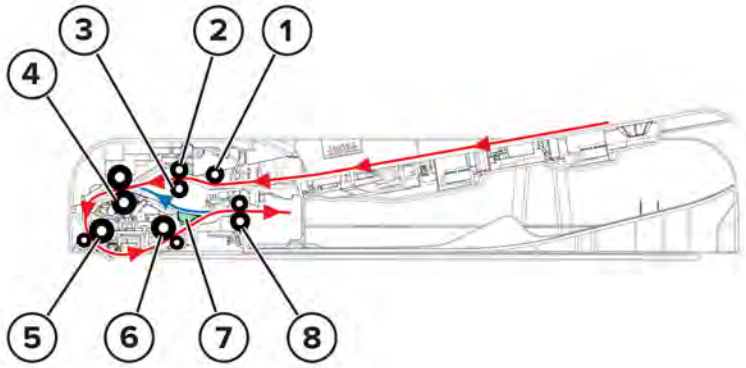
1	Waste toner auger (K)
2	Waste toner auger (C)
3	Waste toner auger (M)
4	Waste toner auger (Y)
5	Waste toner auger (transfer belt)
6	Waste toner bottle

Toner residue from the photoconductor drums and transfer belt is removed by the waste toner augers, and then transferred to the waste toner bottle.

ADF and flatbed scanner operation

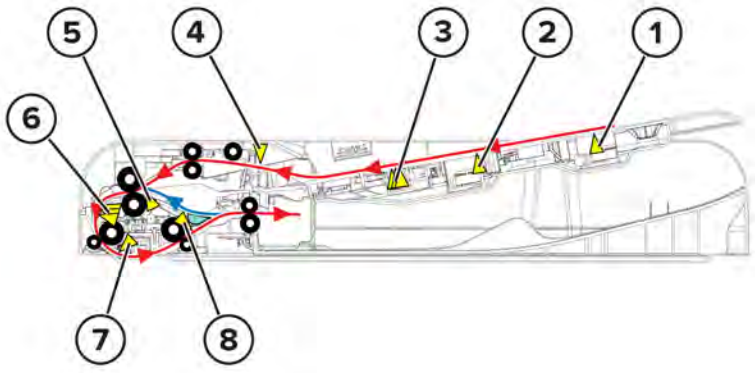
ADF paper path

ADF paper path rollers

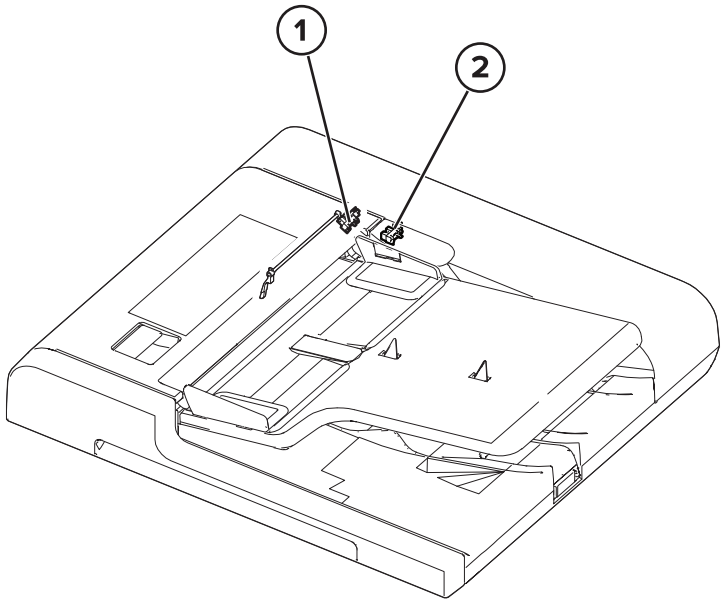


1	ADF pick roller
2	ADF feed roller
3	ADF separator roller
4	ADF transport roller
5	ADF scan roller 1
6	ADF scan roller 2
7	Diverter
8	ADF exit roller

ADF paper path sensors



#	Sensor	Function
1	Sensor (ADF paper length 2)	Detects paper length in the ADF tray.
2	Sensor (ADF paper length 1)	
3	Sensor (ADF paper width 1,2,3)	Detects paper width in the ADF tray.
4	Sensor (ADF paper present)	Detects paper presence in the ADF tray.
5	Sensor (ADF transport)	Detects the paper entering the ADF transport roller for skew correction.
6	Sensor (ADF mixed paper width 1,2,3)	Detects and confirms mixed paper width.
7	Sensor (ADF scan 1)	Detects paper passage through the ADF scan roller 1 and into the scan area.
8	Sensor (ADF scan 2)	• Detects the trailing edge of the scanned paper to signal feeding the paper again for duplex jobs. • Detects the trailing edge of the scanned paper to signal that the next sheet is ready for scanning.



#	Sensor	Function
1	Sensor (ADF paper present)	Detects paper presence in the ADF tray.
2	Sensor (ADF cover)	Detects if the ADF cover is open.

ADF scan drive

ADF paper pick

The ADF pick roller lowers until it touches the paper, and then rotates to transport the paper to the ADF feed roller and ADF separator roller to the registration section.

The motor (ADF feed) drives all the rollers in the ADF except the ADF separator roller. The ADF separator roller is a free rotating roller. It provides resistance to make sure that only one sheet of paper is being fed.

ADF paper registration

The ADF transport roller corrects the skew of the paper.

When the ADF transport roller feeds the sheet toward the ADF scan roller 1, the size of the paper is detected and confirmed by the sensors (ADF mixed paper width 1, 2, and 3).

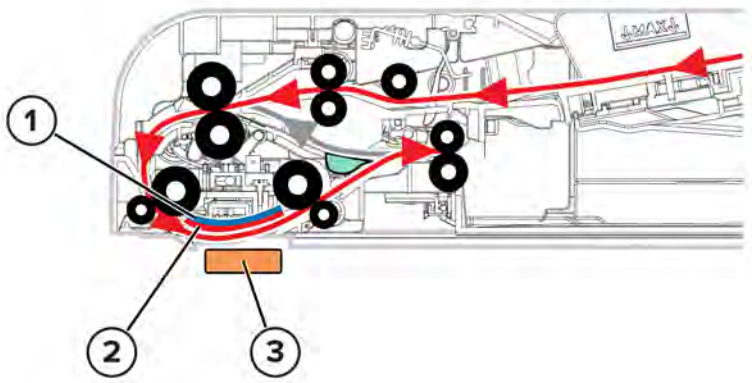
ADF scan operation

The scanning operation uses a reversing automatic document feeder (RADF).

The ADF scan roller 1 transports the paper to the scan area. The paper passes through the flatbed scanner for scanning.

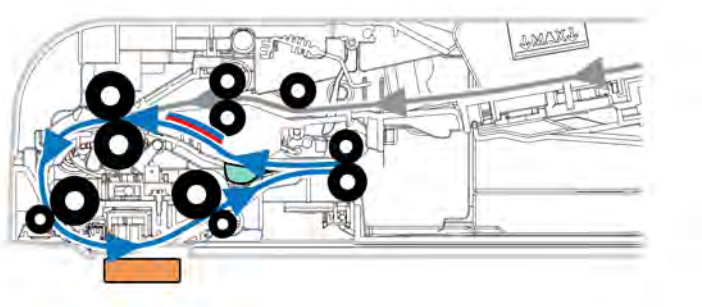
During duplex scan jobs, paper is fed three times in the following order:

1. The front side of the paper is scanned.

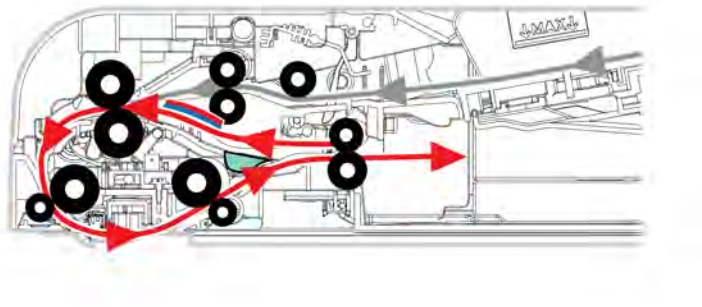


1	Paper front side
2	Paper back side
3	Scanner lamp

2 The paper is flipped and fed again using the duplex paper path to scan the back side of the paper.



3 The paper is flipped again and fed for the last time to ensure that the output is the front side facing down.



ADF paper exit

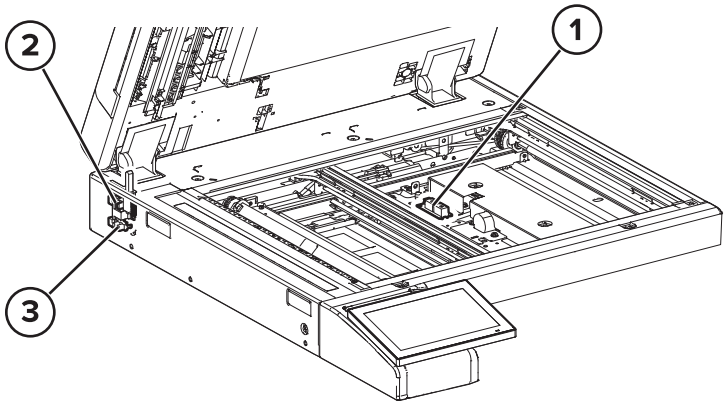
After scanning, the ADF scan roller 2 receives the scanned paper and then transports it to the ADF exit roller.

For a simplex scan job, the ADF exit roller transports the scanned paper to the ADF output bin.

For a duplex scan job, the trailing edge of the scanned sheet actuates the sensor (ADF inverter) and triggers the diverter to change position to reroute the paper path.

The ADF exit roller reverses direction to feed the paper again and scan the opposite side.

Flatbed scanner paper size detection

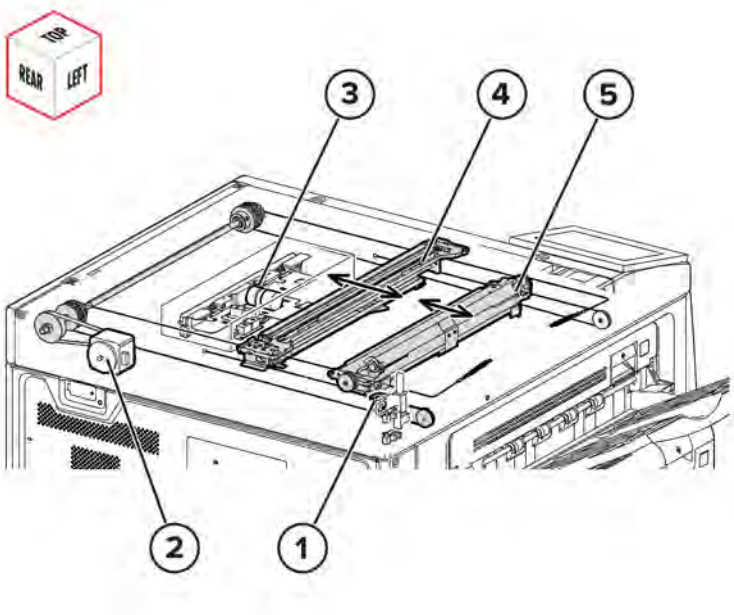


1	Sensor (scanner paper size)
2	Sensor (scanner cover angled)
3	Sensor (scanner cover closed)

The sensor (scanner cover angled) detects if the scanner cover is opened at an angle. The sensor (scanner cover closed) detects if the scanner cover is closed.

The sensor (scanner paper size) detects the size of the document in preparation for scanning.

Flatbed scanner drive



1	Motor (scanner)
2	Sensor (scanner lamp)
3	Scanner CCD module
4	Scanner lamp
5	Scanner mirror

The position of the scanner lamp is detected based on the computed distance relative to the sensor (scanner lamp).

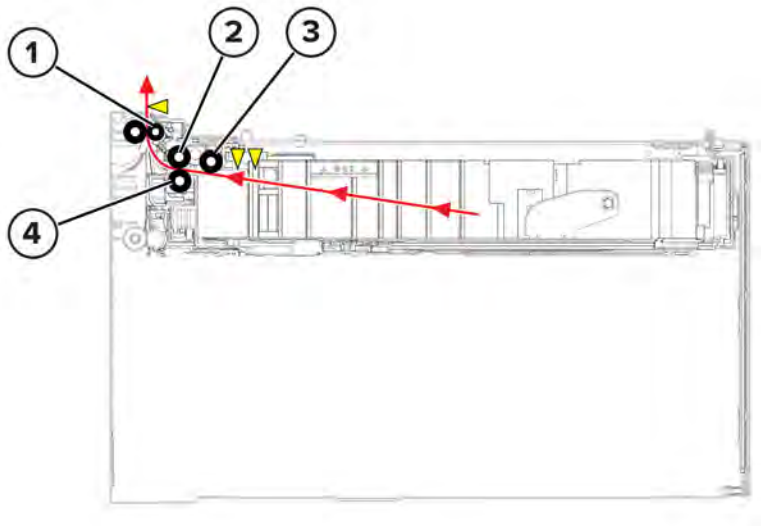
The motor (scanner drive) drives the scanner lamp to move through the scan area during a scan job.

The scanner lamp exposes the document to LED light. The light reaches the scanner CCD module by using the scanner mirror. The scanner CCD module processes the reflection to form a digital image.

Optional trays paper paths

520-sheet tray with cabinet optional tray paper path

520-sheet tray with cabinet optional tray paper path rollers

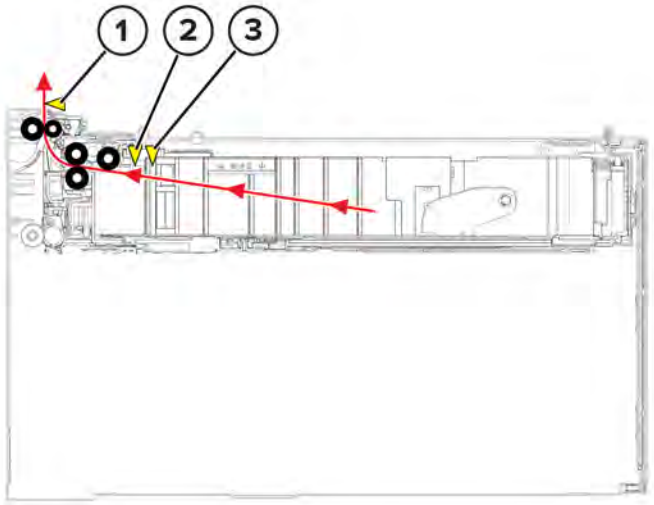


1	520-sheet tray with cabinet transport roller
2	520-sheet tray with cabinet feed roller
3	520-sheet tray with cabinet pick roller
4	520-sheet tray with cabinet separator roller

Paper from the tray is fed into the printer through the pick roller. The lift plate elevates to press the paper against the pick roller. The pick roller rotates to insert the paper between the feed roller and the separator roller.

The separator roller is a free rotating roller. It provides resistance to make sure that only one sheet is being fed.

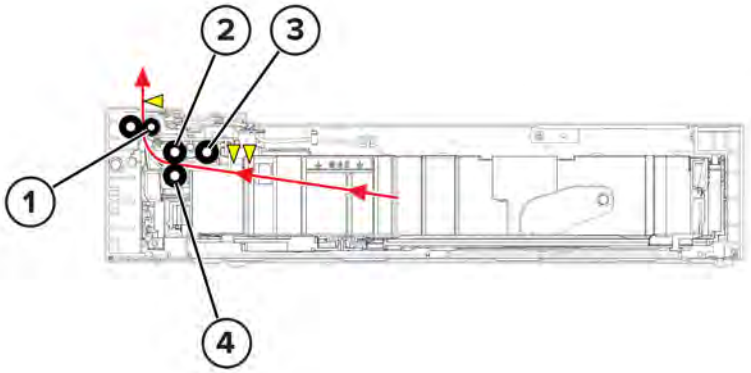
520-sheet tray with cabinet optional tray paper path sensors



#	Sensor	Function
1	Sensor (520-sheet tray with cabinet feed)	Detects paper entry into the printer.
2	Sensor (520-sheet tray with cabinet paper present)	Detects paper presence in the tray.
3	Sensor (520-sheet tray with cabinet pick position)	Detects if the pick roller is in pick position.

520-sheet tray optional tray paper path

520-sheet tray optional tray paper path rollers

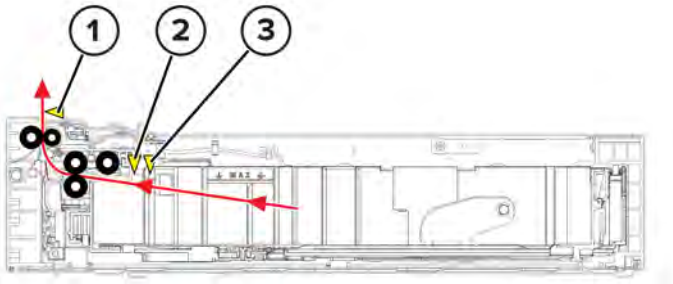


1	520-sheet tray transport roller
2	520-sheet tray feed roller
3	520-sheet tray pick roller
4	520-sheet tray separator roller

Paper from the tray is fed into the printer through the pick roller. The lift plate elevates to press the paper against the pick roller. The pick roller rotates to insert the paper between the feed roller and the separator roller.

The separator roller is a free rotating roller. It provides resistance to make sure that only one sheet is being fed.

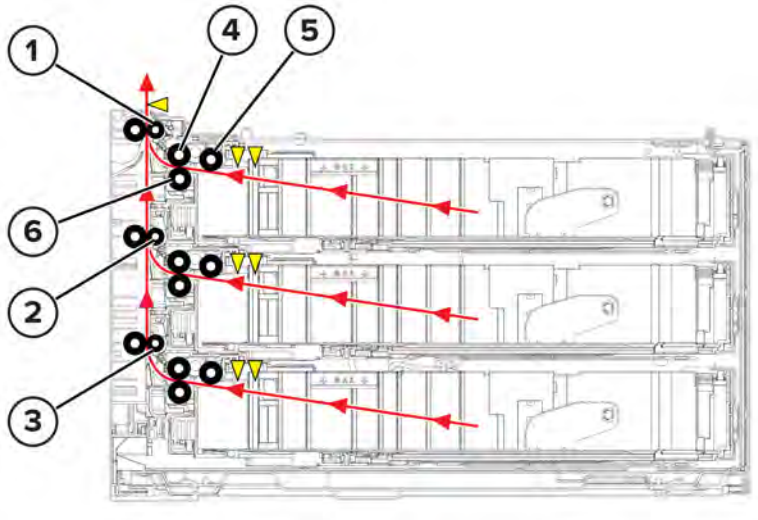
520-sheet tray optional tray paper path sensors



#	Sensor	Function
1	Sensor (520-sheet tray feed)	Detects paper entry into the printer.
2	Sensor (520-sheet tray paper present)	Detects paper presence in the tray.
3	Sensor (520-sheet tray pick position)	Detects if the pick roller is in pick position.

3 x 520-sheet tray optional tray paper path

3 x 520-sheet tray optional tray paper path rollers



1	Tray 2 transport roller
2	Tray 3 transport roller
3	Tray 4 transport roller
4	Tray 2 feed roller

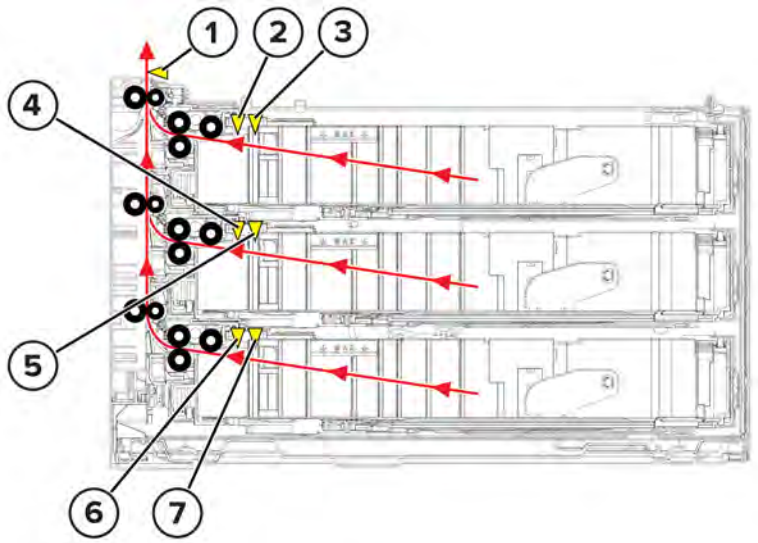
5	Tray 2 pick roller
6	Tray 2 separator roller

Paper from the trays is fed into the printer through the pick rollers. The lift plate elevates to press the paper against the pick roller. The pick roller rotates to insert the paper between the feed roller and the separator roller.

The separator roller is a free rotating roller. It provides resistance to make sure that only one sheet is being fed.

The transport rollers receive paper from the lower trays.

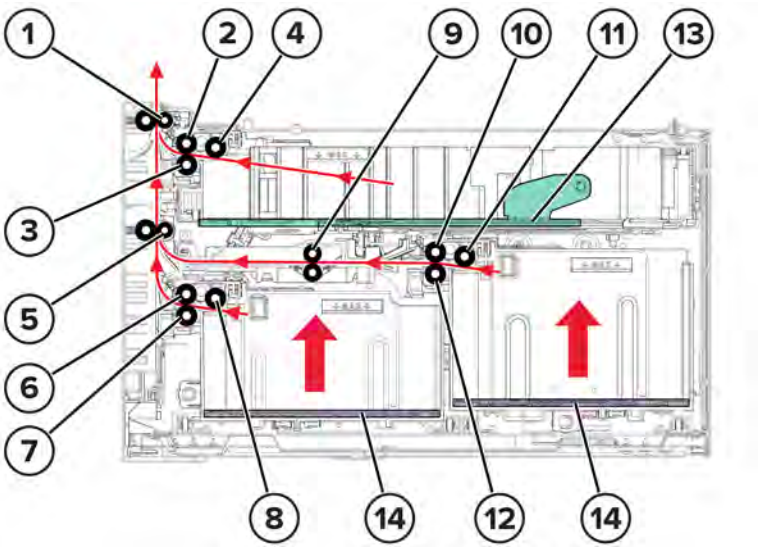
3 x 520-sheet tray optional tray paper path sensors



#	Sensor	Function
1	Sensor (3 x 520-sheet tray feed)	Detects paper entry into the printer.
2	Sensor (tray 2 paper present)	Detects paper presence in tray 2.
3	Sensor (tray 2 pick position)	Detects if the tray 2 pick roller is in pick position.
4	Sensor (tray 3 paper present)	Detects paper presence in tray 3.
5	Sensor (tray 3 pick position)	Detects if the tray 3 pick roller is in pick position.
6	Sensor (tray 4 paper present)	Detects paper presence in tray 4.
7	Sensor (tray 4 pick position)	Detects if the tray 4 pick roller is in pick position.

2520-sheet tandem tray optional tray paper path

2520-sheet tandem tray optional tray paper path rollers



1	Tray 2 transport roller
2	Tray 2 feed roller
3	Tray 2 separator roller
4	Tray 2 pick roller
5	Tray 3 transport roller
6	Tray 3 feed roller
7	Tray 3 separator roller
8	Tray 3 pick roller
9	Tray 4 transport roller
10	Tray 4 feed roller
11	Tray 4 separator roller
12	Tray 4 pick roller
13	Lift plate
14	Elevator plate

The 2520-sheet tandem tray optional tray has one tray that uses the lift plate and two trays that use the elevator plate.

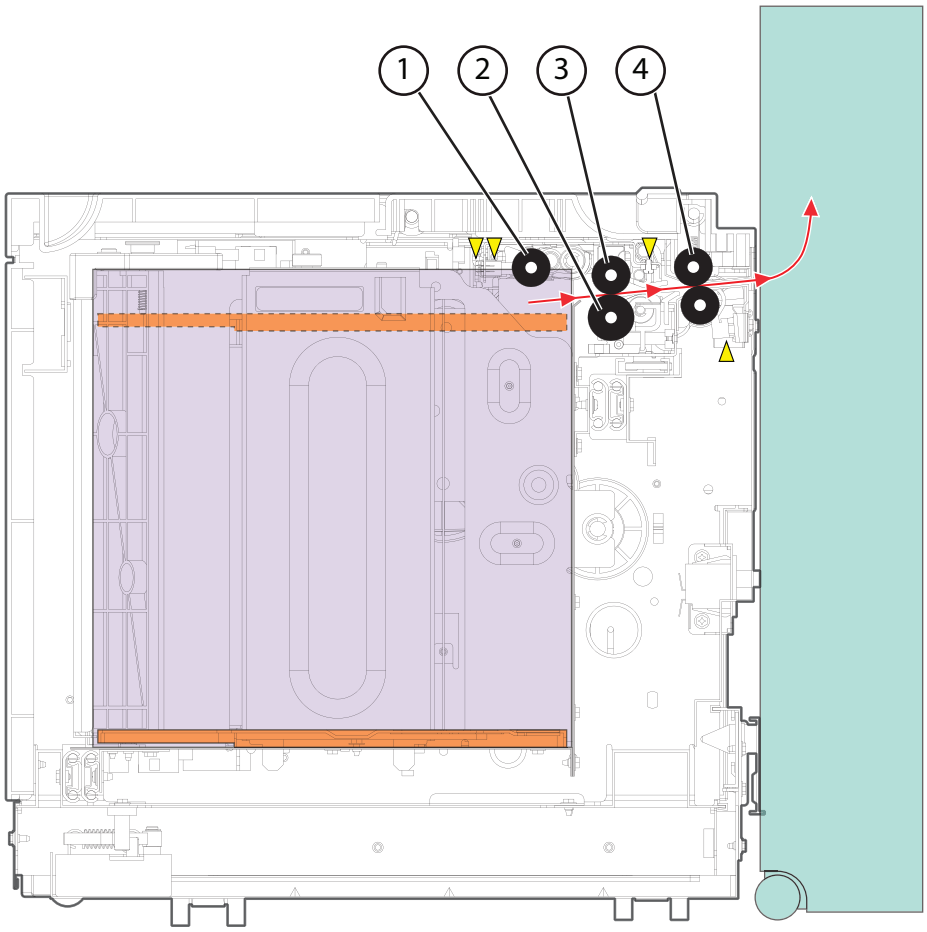
Paper from the optional trays is fed into the printer through the pick rollers. The lift plate or elevator plate rises to press the paper against the pick roller. The pick roller rotates to insert the paper between the feed roller and the separator roller.

The separator roller is a free rotating roller. It provides resistance to make sure that only one sheet is being fed.

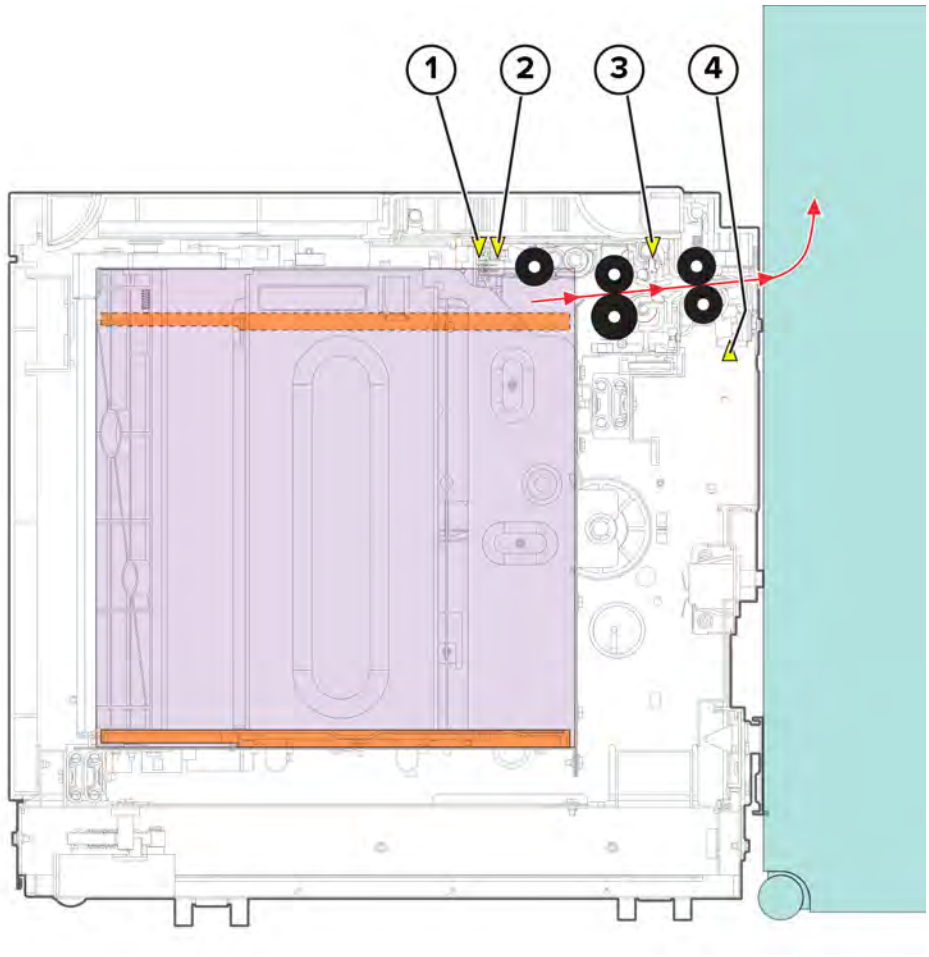
The transport rollers along the paper path transport paper to the printer.

Optional 2000-sheet tray

2000-sheet tray paper path rollers and sensors layout

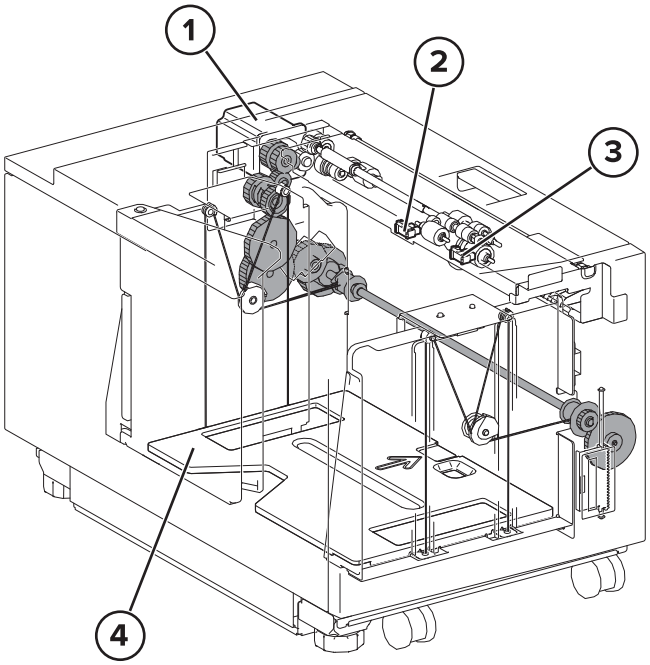


#	Roller	Function
1	Pick roller	Picks the topmost paper to the feed roller.
2	Separator roller	Makes sure that only one sheet is fed at a time.
3	Feed roller	Sends paper from the pick roller to the transport roller.
4	Transport roller	Pushes paper out of the tray.



#	Sensor	Function
1	Sensor (pick position)	Detects if the pick roller is in the pick position.
2	Sensor (paper present)	Detects paper presence in the tray.
3	Sensor (feed)	Detects paper from the feed roller.
4	Sensor (transport)	Detects paper as it passes the transport roller.

2000-sheet tray elevation drive

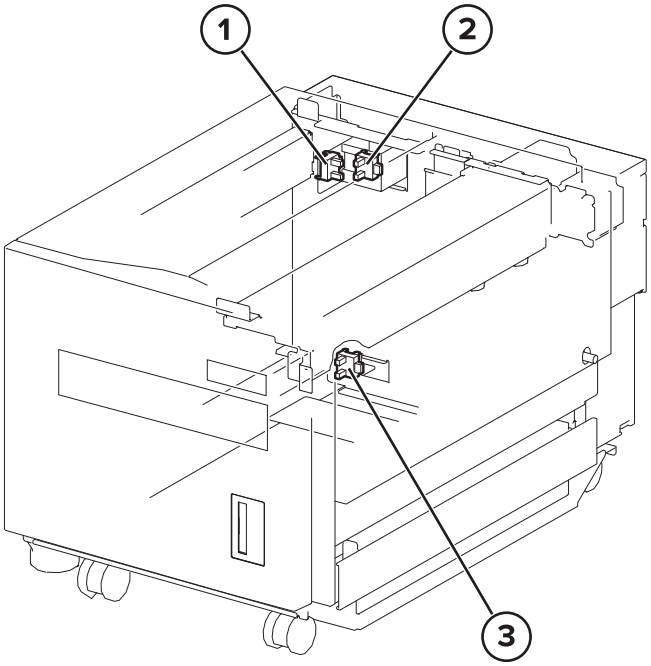


1	Motor (pick/lift)
2	Sensor (pick position)
3	Sensor (paper present)
4	Elevator plate

In preparation for picking, the elevator plate raises to push the paper against the pick roller.

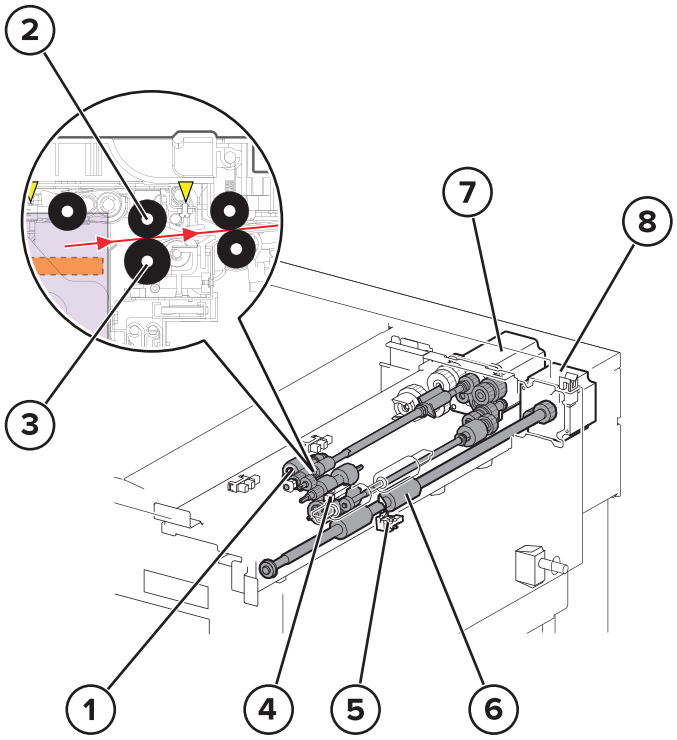
The motor (pick/lift) drives a network of cables and pulleys to control the movement of the elevator plate.

2000-sheet tray pick and transport drive



1	Sensor (paper size, letter)
2	Sensor (paper size, A4)
3	Sensor (tray present)

Before the paper is picked, the sensor (paper present) detects if the tray is empty. Paper guide positions are also detected to determine paper size.



1	Pick roller
2	Feed roller
3	Separator roller
4	Sensor (feed)
5	Sensor (transport)
6	Transport roller
7	Motor (pick/lift)
8	Motor (transport)

The pick roller is lifted by the elevator plate until it triggers the sensor (pick position). At the pick position, the pick roller rotates to pick the topmost paper. The motor (pick/lift) drives the pick roller and the feed roller.

To avoid multiple sheet picking, the friction from the separator roller prevents the extra sheet from entering the printer.

The picked paper is then passed to the transport roller of the tray on the right. The motor (transport) drives the transport roller of the 2000-sheet tray.

Staple finisher operation

Staple finisher

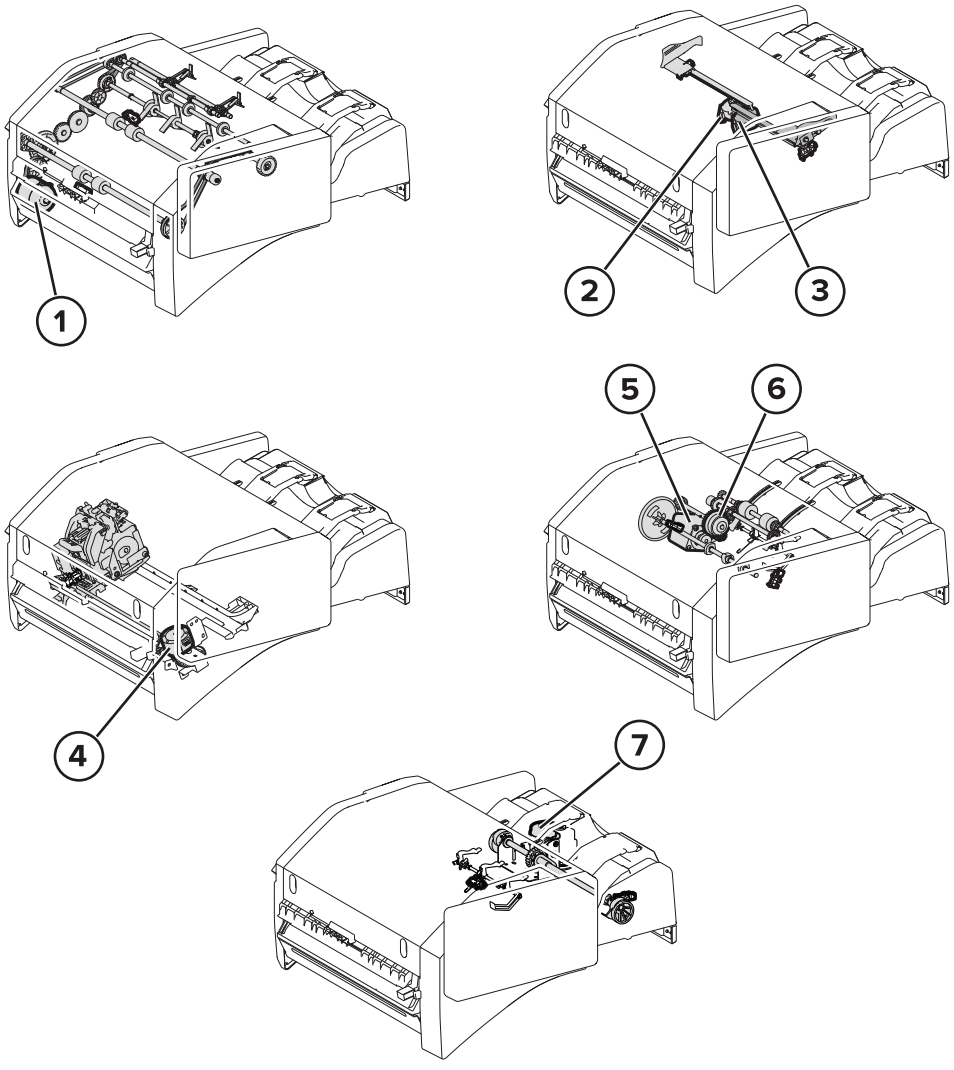
The staple finisher offsets and staples the paper transported from the printer.

The staple finisher consists of the following components:

- Transport
- Compiler
  - Ejector
  - Tamper
  - Stapler
- Stacker tray

Staple finisher motor and sensor components

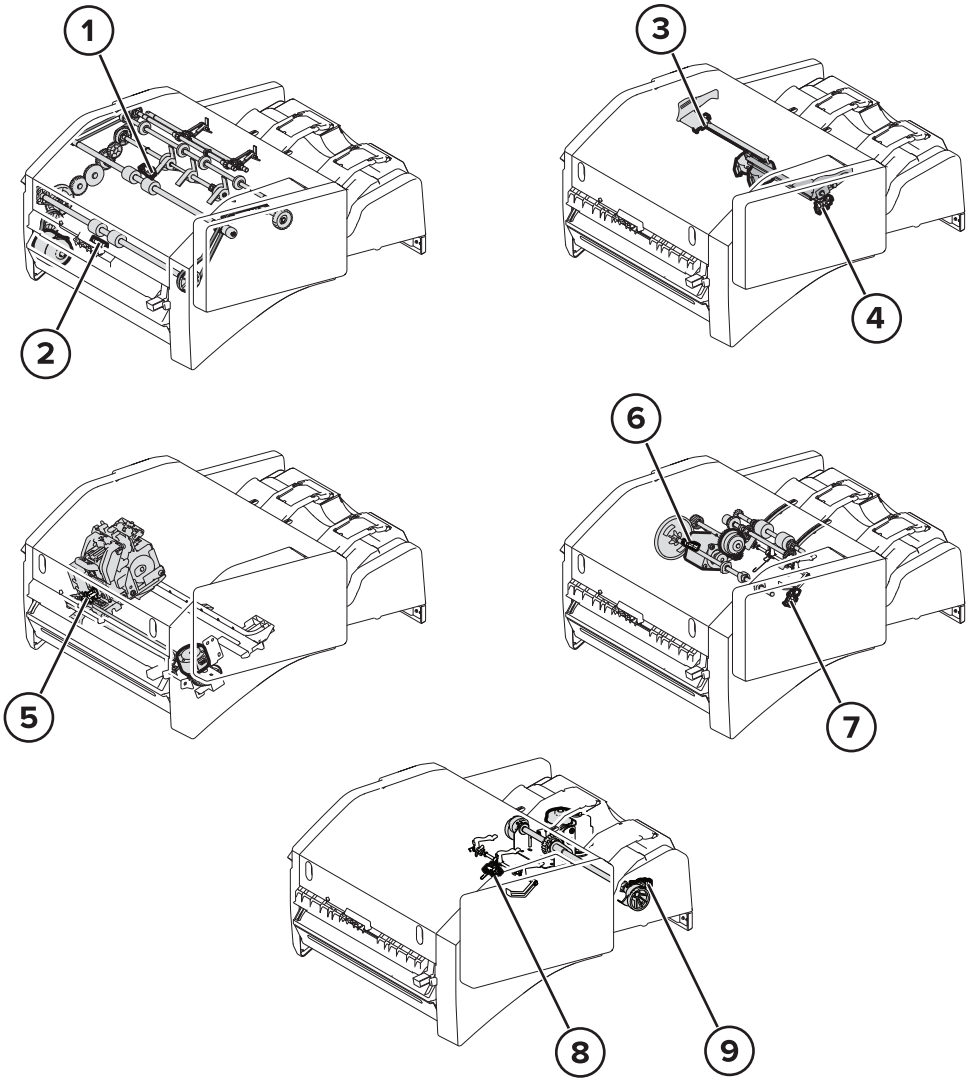
Staple finisher motors



1	Motor (staple finisher transport)
2	Motor (staple finisher rear tamper)

3	Motor (staple finisher front tamper)
4	Motor (staple finisher staple)
5	Motor (staple finisher eject)
6	Motor (staple finisher eject clutch)
7	Motor (staple finisher stacker)

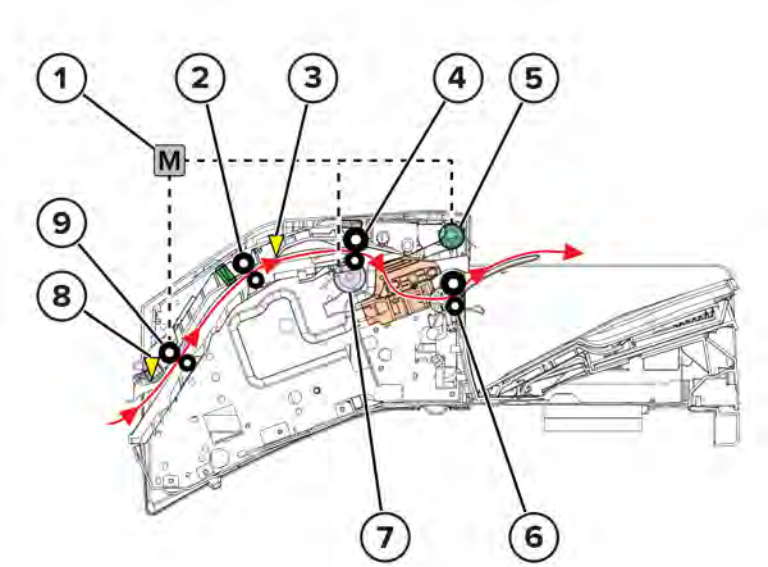
Staple finisher sensors



1	Sensor (staple finisher compiler feed)
2	Sensor (staple finisher feed)
3	Sensor (staple finisher rear tamper home)
4	Sensor (staple finisher front tamper home)
5	Sensor (staple finisher staple unit position)

6	Sensor (staple finisher eject)
7	Sensor (staple finisher bin stack)
8	Sensor (staple finisher stack height)
9	Sensor (stale finisher bin empty)

Transport



1	Motor (staple finisher transport)
2	Staple finisher transport roller
3	Sensor (staple finisher compiler feed)
4	Staple finisher compiler exit roller
5	Subpaddle
6	Staple finisher exit roller
7	Main paddle
8	Sensor (staple finisher feed)
9	Staple finisher feed roller

Paper is transported from the printer through the staple finisher, and then into the compiler tray. The motor (staple finisher transport) drives the following components to transport paper into the compiler:

- Staple finisher feed roller
- Staple finisher transport roller
- Staple finisher compiler exit roller
- Main paddle
- Subpaddle

The sensor (staple finisher feed) detects paper transported from the printer. The sensor (staple finisher compiler feed) detects paper transported to the compiler tray.

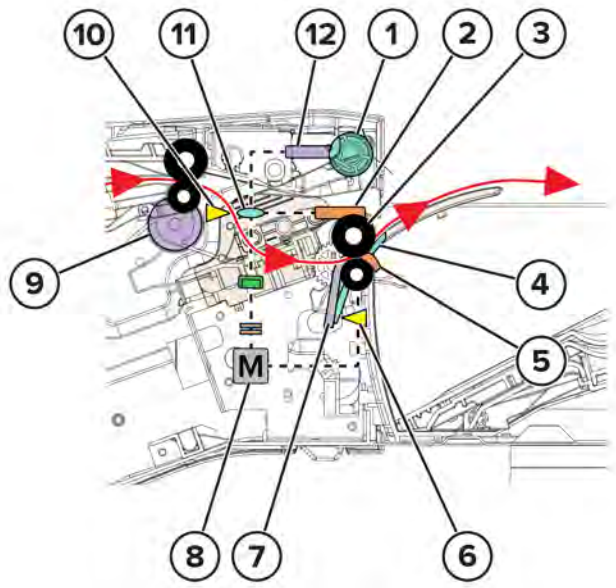
Compiler

The compiler aligns the paper transported from the printer in the compiler tray. The stapling and offset processes are also performed in the compiler.

The compiler consists of the following components:

- Compiler ejector
- Compiler tamper
- Compiler staple finisher

Compiler ejector



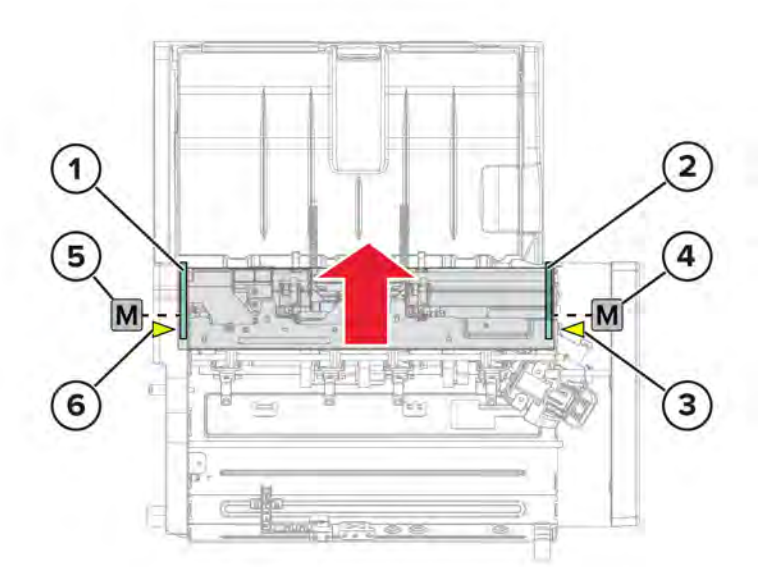
1	Subpaddle
2	Eject clamp
3	Staple finisher eject roller
4	Shelf
5	Set clamp
6	Sensor (staple finisher bin stack)
7	Roll guard
8	Motor (staple finisher eject)
9	Main paddle
10	Sensor (staple finisher eject)
11	Eject cam
12	Subpaddle arm

The ejector aligns the paper on the compiler tray, and then transports the paper to the stacker tray.

The motor (staple finisher eject) drives the eject roller, shelf, set clamp, roll guard, eject clamp, and the subpaddle arm. The main paddle aligns the trailing edge of the paper on the compiler tray. The subpaddle arm raises and lowers the subpaddle. The subpaddle performs back scraping of the paper that is transported into the compiler tray. The sensor (staple finisher bin stack) detects the set clamp at its home position and the sensor (staple finisher eject) detects the eject cam at its home position.

The shelf stacks paper that is for transport to the compiler tray. The roll guard lifts the paper when it is compiled. The eject clamp pinches the paper after it is compiled. The eject roller transports paper from the compiler tray into the stacker tray. The set clamp presses the paper onto the stacker tray.

Compiler tamper



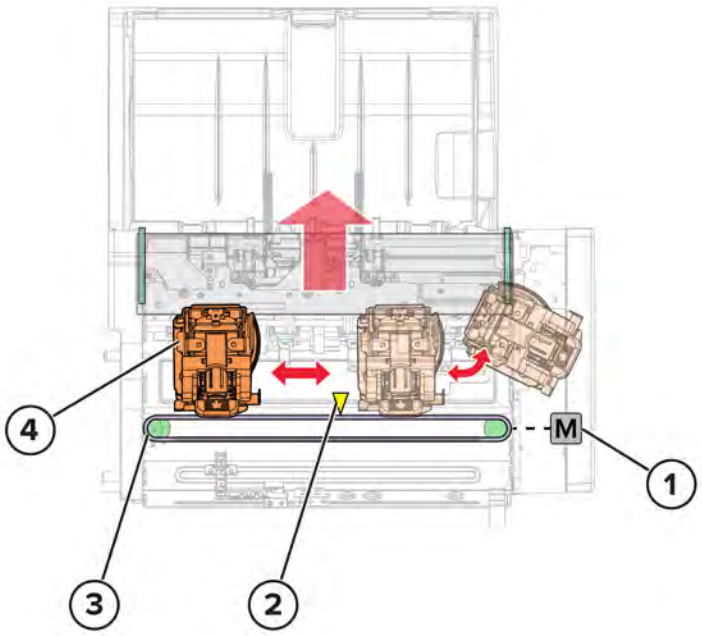
1	Staple finisher rear tamper
2	Staple finisher front tamper
3	Sensor (staple finisher front tamper home)
4	Motor (staple finisher front tamper)
5	Motor (staple finisher rear tamper)
6	Sensor (staple finisher rear tamper home)

The tamper aligns the side edges of the paper on the compile tray.

The motor (staple finisher front tamper) drives the front tamper. When the motor rotates clockwise, the front tamper moves to the rear. When the motor rotates counterclockwise, the front tamper moves to the front. The motor (staple finisher rear tamper) drives the rear tamper. When the motor rotates clockwise, the rear tamper moves to the front. When the motor rotates counterclockwise, the rear tamper moves to the rear.

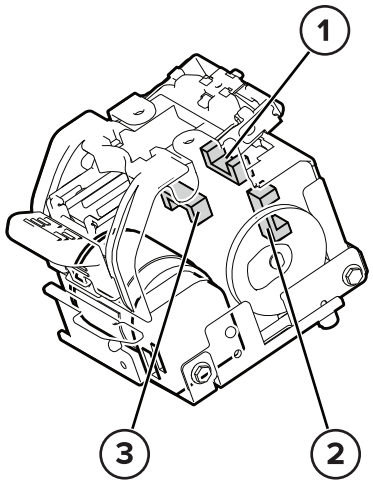
The sensor (staple finisher front tamper home) and sensor (staple finisher rear tamper home) detects the front tamper and rear tamper at their home position.

Compiler staple finisher



1	Motor (staple finisher staple unit carriage)
2	Sensor (staple finisher staple unit position)
3	Staple finisher staple drive belt
4	Staple finisher stapler

The motor (staple finisher staple unit carriage) drives the position of the stapler head and performs the stapling operation. When the motor rotates clockwise, the stapler head moves to the front. When the motor rotates counterclockwise, the stapler head moves to the rear. The sensor (staple finisher staple unit position) detects the stapler at its home position, rear staple corner position, and rear staple straight position.

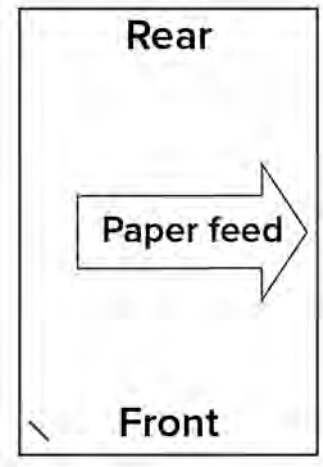


1	Sensor (staple finisher staple head home)
2	Sensor (staple finisher staple low)
3	Sensor (staple finisher staple unit position)

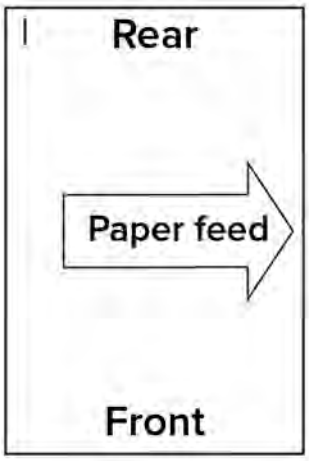
The sensor (stapler finisher staple unit position) detects when the stapler reaches the staple finisher head and detects a stapling failure. The sensor (staple finisher staple low) detects when the staple cartridge is low. The sensor (staple finisher staple head home) detects the staple head at its home position, detects stapling failure, and determines when to stop the motor (staple finisher staple unit carriage).

The following are the supported staple positions:

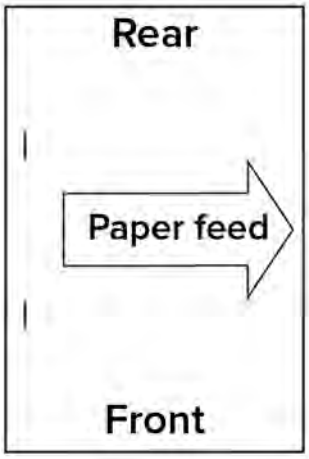
1 Front staple (corner)



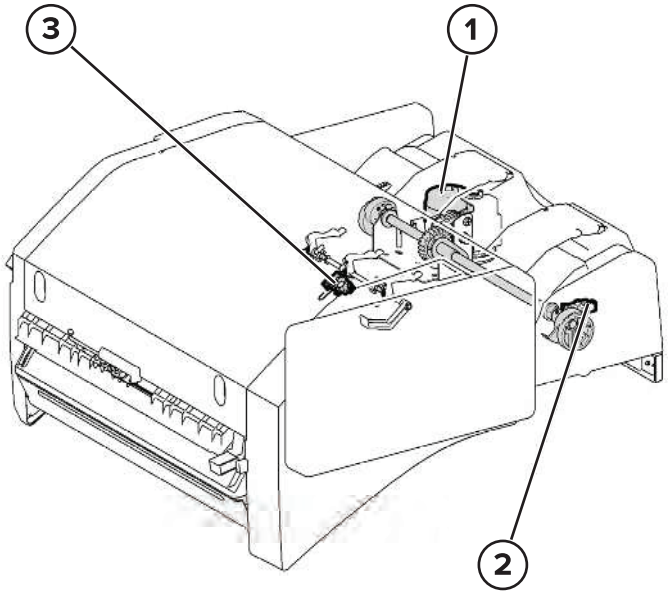
2 Rear staple (straight)



3 Dual staple



Stacker tray

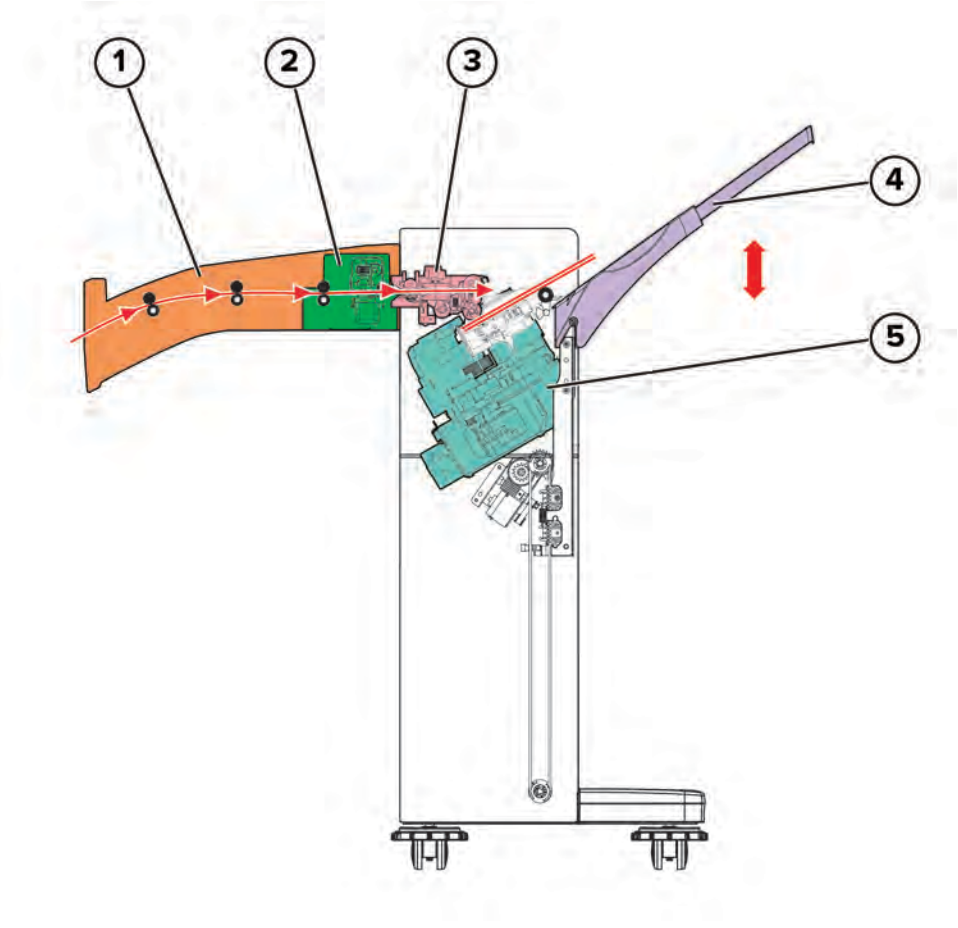


1	Motor (staple finisher stacker)
2	Sensor (staple finisher bin empty)
3	Sensor (staple finisher stack height

The motor (staple finisher stacker) drives the stacker tray. The sensor (staple finisher stacker bin empty) detects paper presence on the stacker tray. The sensor (staple finisher stacker height) detects the stacker tray height and paper height on the stacker tray.

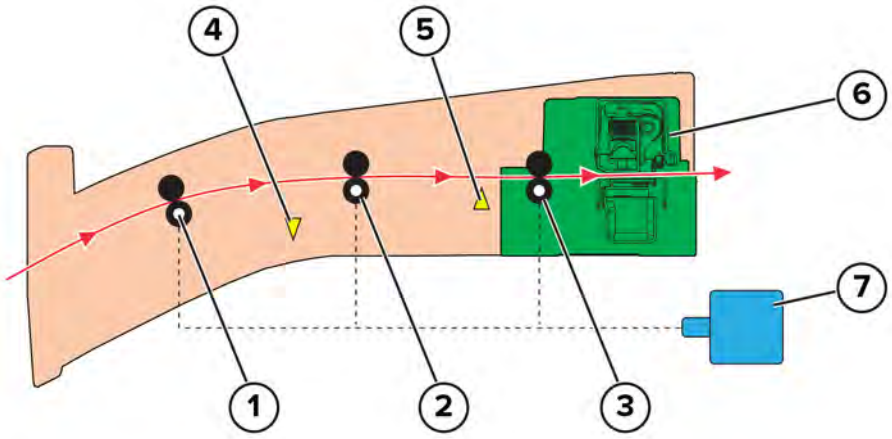
Multiposition staple, hole punch finisher operation

Finisher sections



1	Horizontal paper transport (HPT)
2	Puncher
3	Transport
4	Stacker
5	Compiler and stapler

HPT paper path rollers and sensors



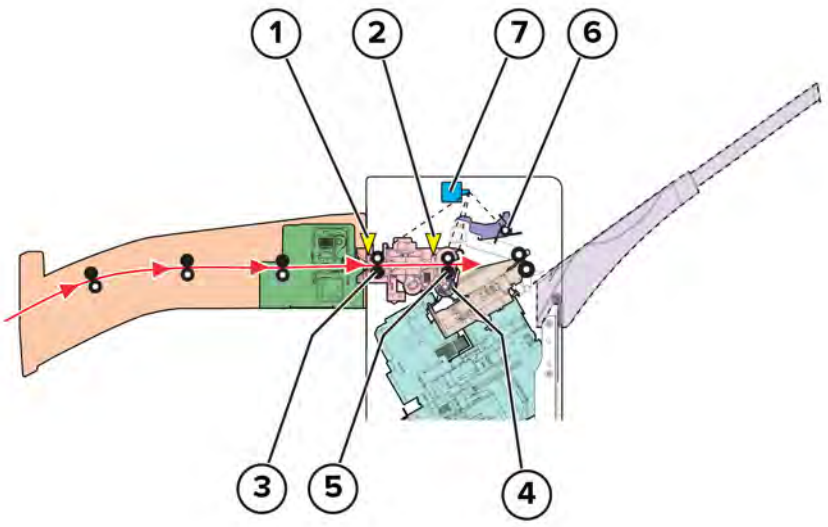
1	HPT transport roller 1
2	HPT transport roller 2
3	HPT transport roller 3
4	Sensor (HPT open)
5	Sensor (HPT entrance)
6	Hole punch unit (HPU)
7	Motor (HPT)

The HPT transport rollers 1, 2, and 3 transport the paper from the printer to the finisher. The motor (HPT) drives the rollers.

The sensor (HPT entrance) detects the paper as it passes through the HPT. The sensor (HPT open) detects if the top cover is open.

For print jobs that require hole-punching, the HPU punches holes on the paper as it passes through the HPT.

Transport section rollers and sensors



1	Sensor (finisher entrance)
2	Sensor (transport)
3	Finisher entrance roller
4	Main paddle
5	Compiler transport roller
6	Subpaddle
7	Motor (compiler transport)

The finisher transport section transports paper received from the HPT to the compiler.

The sensor (finisher entrance) detects the paper ejected from the HPT. The sensor (transport) detects the paper as it moves to the compiler.

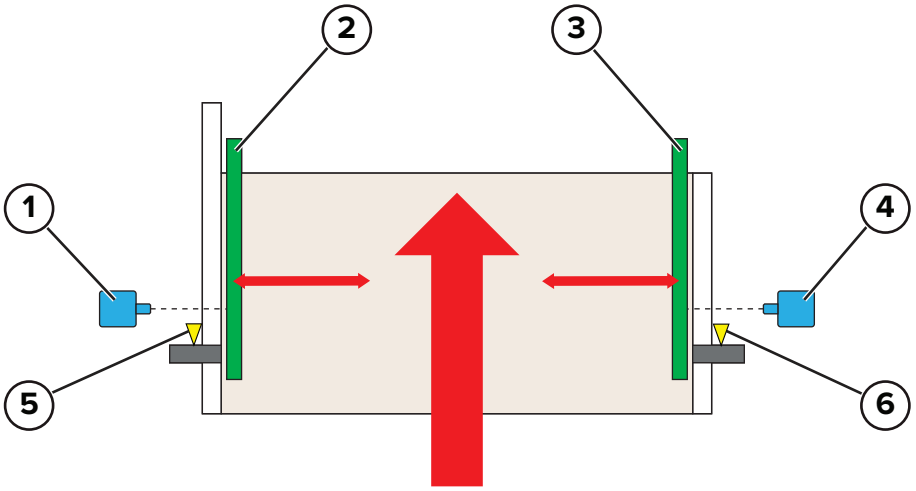
The finisher entrance roller and compiler transport roller move the paper to the compiler.

After the paper arrives at the compiler, the subpaddle pulls the paper to deliver it to the main paddle. The main paddle pushes the trailing edge of the paper to the compiler tray catch.

The compiler tray catch aligns the trailing edge of the paper stack. The motor (compiler transport) drives the rollers and paddles.

Compiler sections

Tamper rollers and sensors



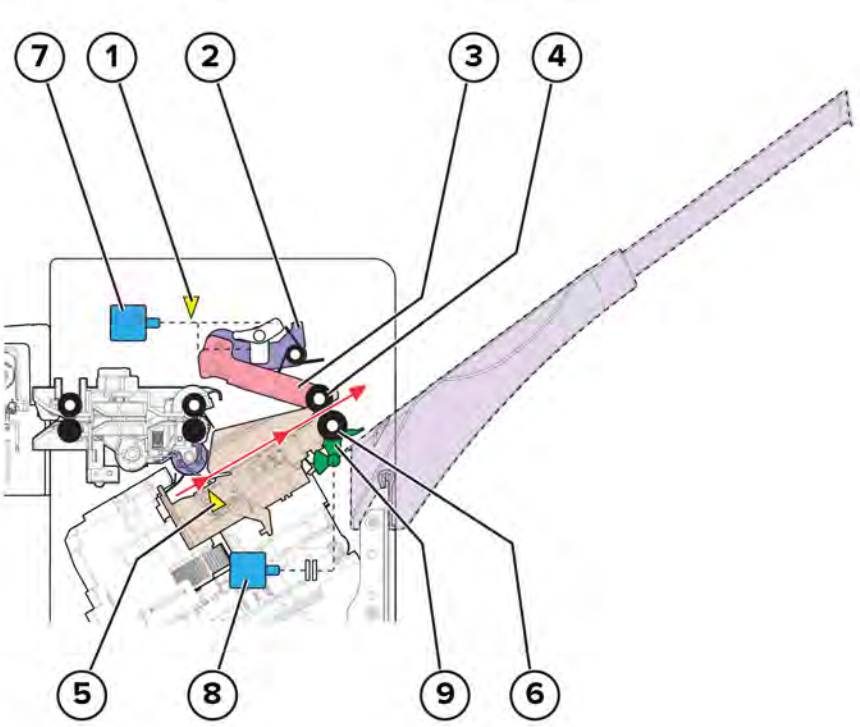
1	Motor (rear tamper)
2	Rear tamper
3	Front tamper
4	Motor (front tamper)
5	Sensor (rear tamper home position)
6	Sensor (front tamper home position)

The front and rear tampers align the edges of the paper for offset stacking.

Each of the tampers has a sensor (home position) that detects the tampers at their home position.

Each of the tampers has a motor (tamper).

Ejector rollers and sensors



1	Sensor (eject arm subpaddle home position)
2	Subpaddle arm
3	Eject arm
4	Eject partner roller
5	Sensor (compile tray paper present)
6	Eject roller
7	Motor (eject lift)
8	Motor (eject)
9	Stacker clamp

The ejector section of the compiler ejects the processed paper to the stacker.

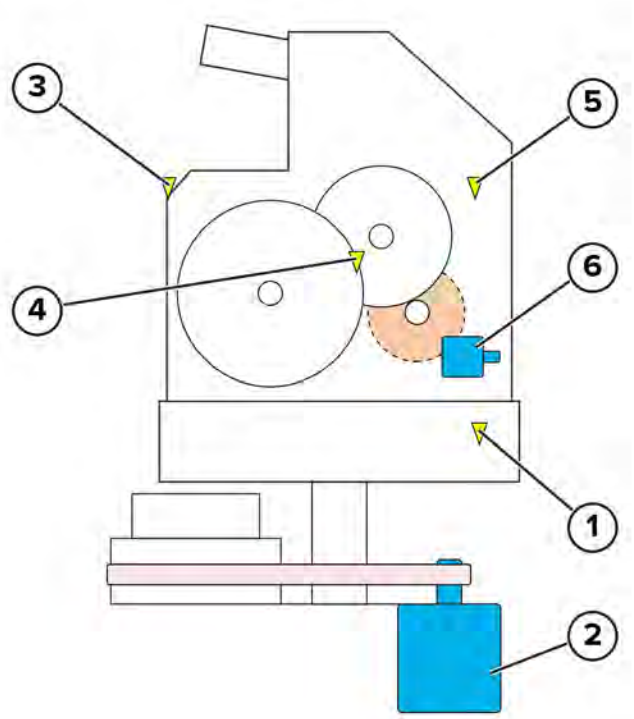
The sensor (compile tray paper present) detects if a paper stack is on the compiler tray.

The sub-paddle arm drives the subpaddle to move vertically. The eject arm lowers the eject partner roller, and then the eject partner roller works with the eject roller to transport the paper to the stacker.

The sensor (eject arm subpaddle home position) detects if the eject arm and sub-paddle are at their home positions. The motor (eject) drives the eject arm, sub-paddle, eject roller, and stacker clamp.

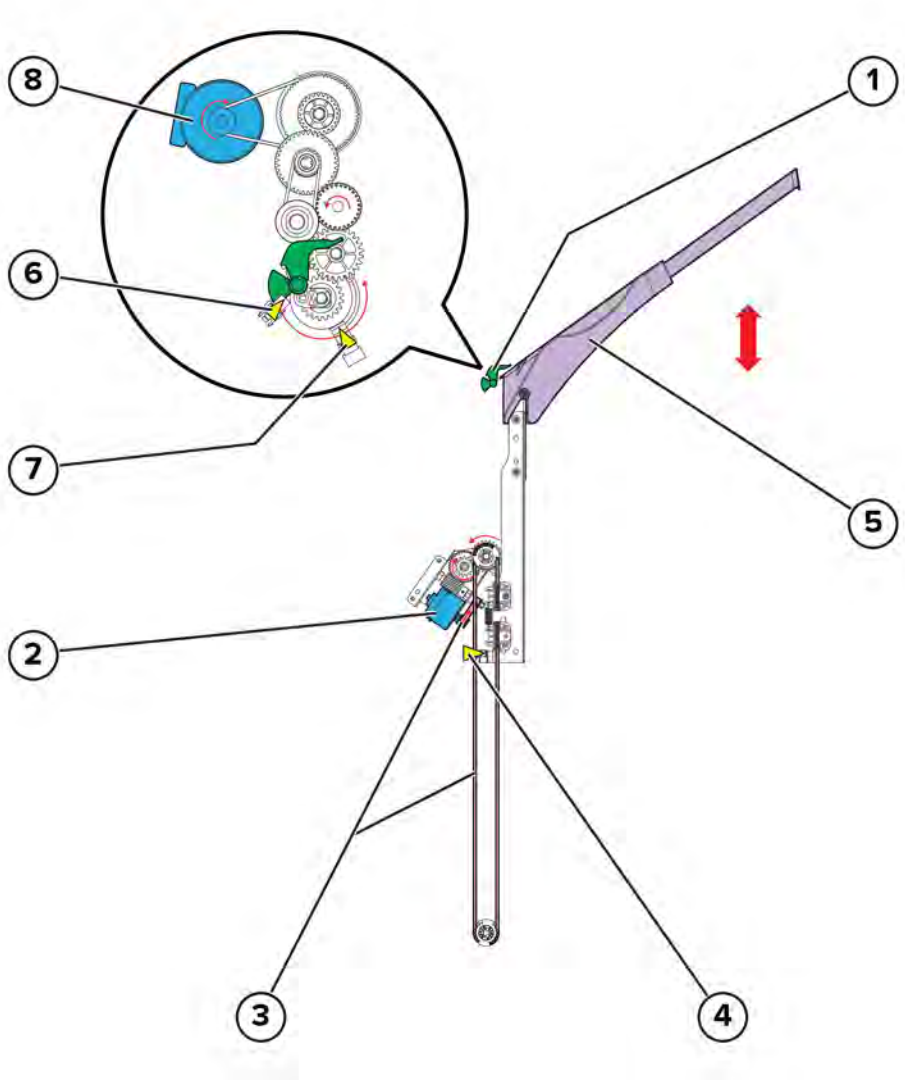
The stacker clamp holds down the paper stack on the stacker.

Staple sensors and motors



#	Sensor	Function
1	Sensor (stapler move position)	Detects if the stapler head is at its various positions.
2	Motor (stapler move position)	Drives the stapler head to perform a stapling operation.
3	Sensor (staple ready)	Detects if a staple is loaded in the stapler head.
4	Sensor (staple home position)	Detects if the stapler head is at its home position.
5	Sensor (staple low)	Detects if the staple head is low on staple supply.
6	Motor (staple)	Drives the inside of the stapler head when a staple job is performed.

Stacker tray operation



1	Stacker clamp
2	Motor (stacker)
3	Timing belt
4	Sensor (stacker tray home position)
5	Stacker tray
6	Sensor (stacker tray height)
7	Sensor (stacker clamp home position)
8	Motor (eject)

The stacker drives the stacker tray to move vertically to accommodate the volume of the paper stack.

The stacker clamp serves as an actuator for the sensor (stacker tray height) to detect the height of the paper stack in the stacker tray.

The sensor (stacker clamp home position) detects the position of the stacker clamp. The motor (eject) drives the stacker clamp.

The sensor (stacker tray home position) detects the position of the stacker tray.

The sensor (stacker tray home position) with the sensor (stacker tray height) detects if a paper stack is on the stacker tray.

The motor (stacker) drives the stacker tray.

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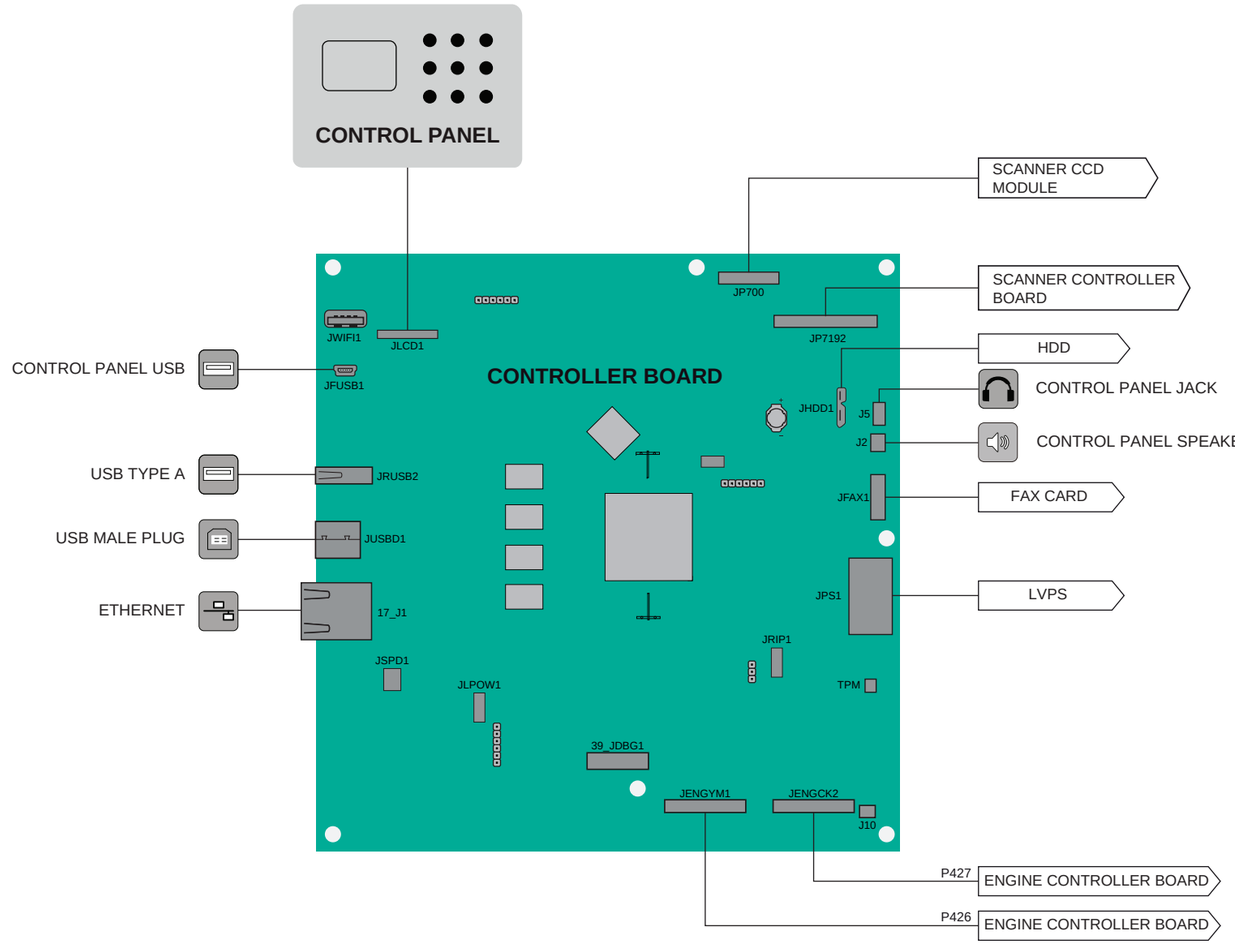
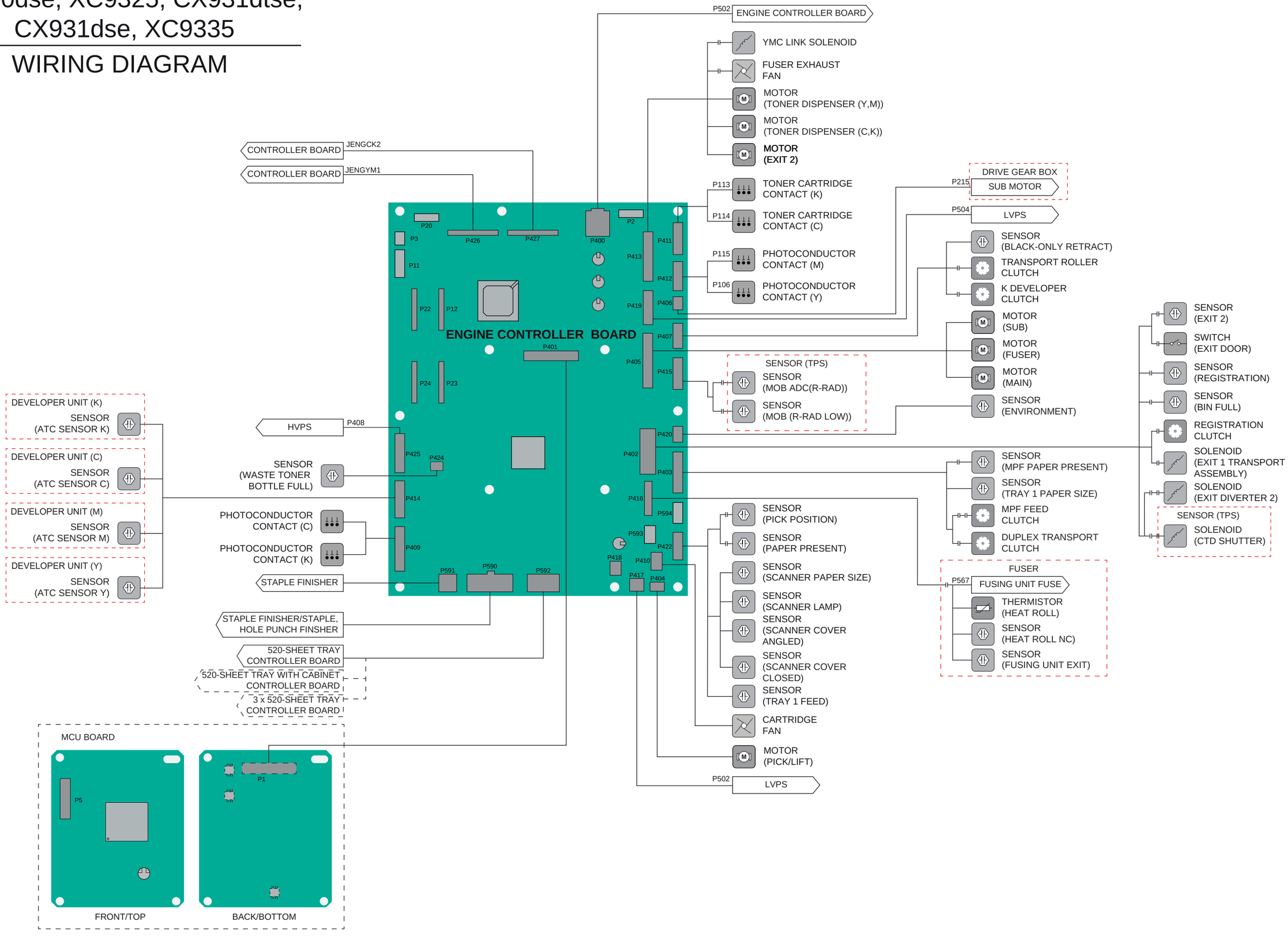
CX930dse, XC9325, CX931dtse, CX931dse, XC9335

WIRING DIAGRAM



CX930dse, XC9325, CX931dtse, CX931dse, XC9335

WIRING DIAGRAM



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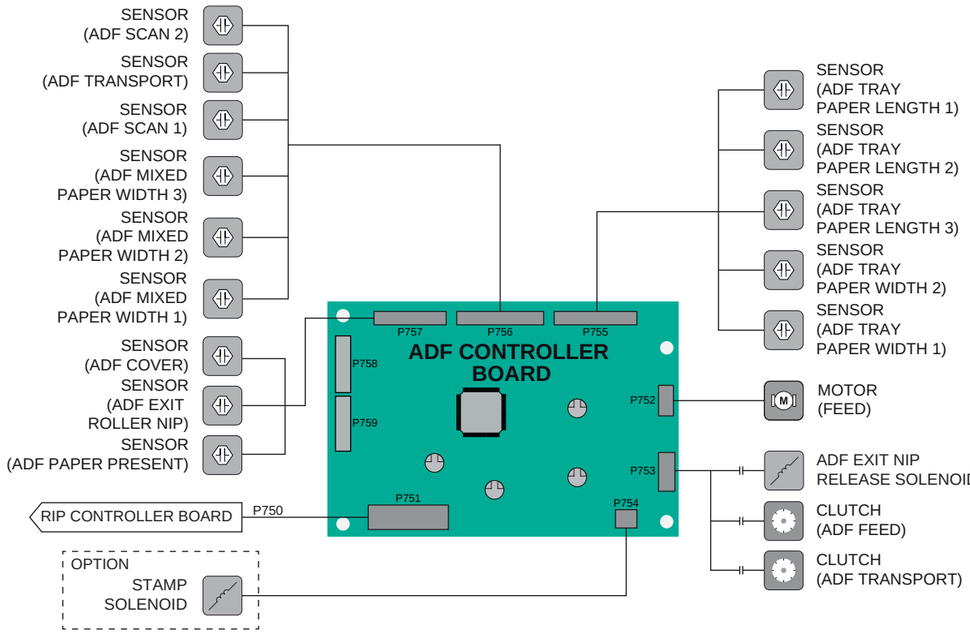
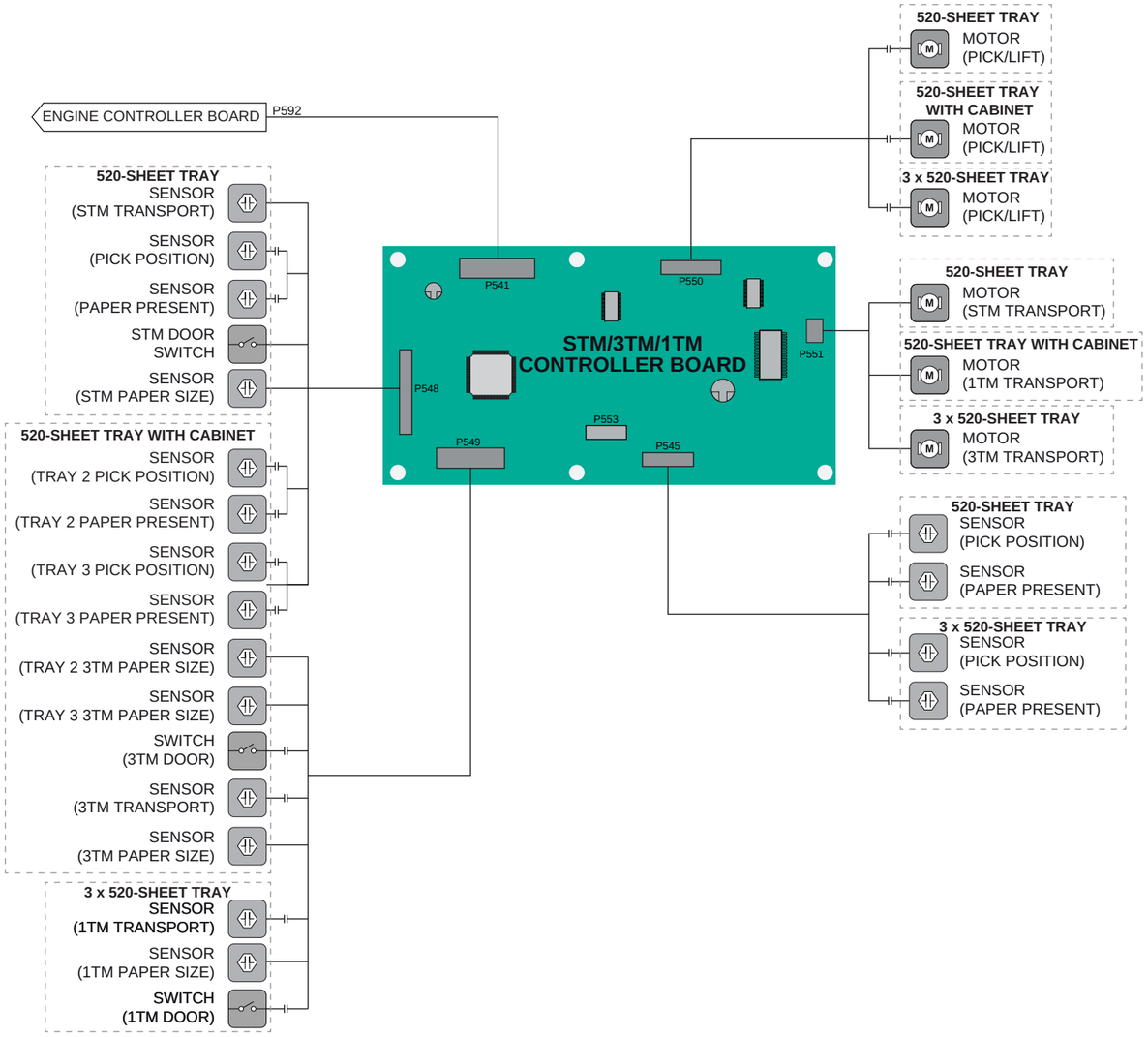
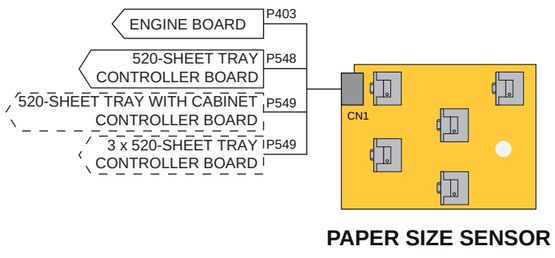
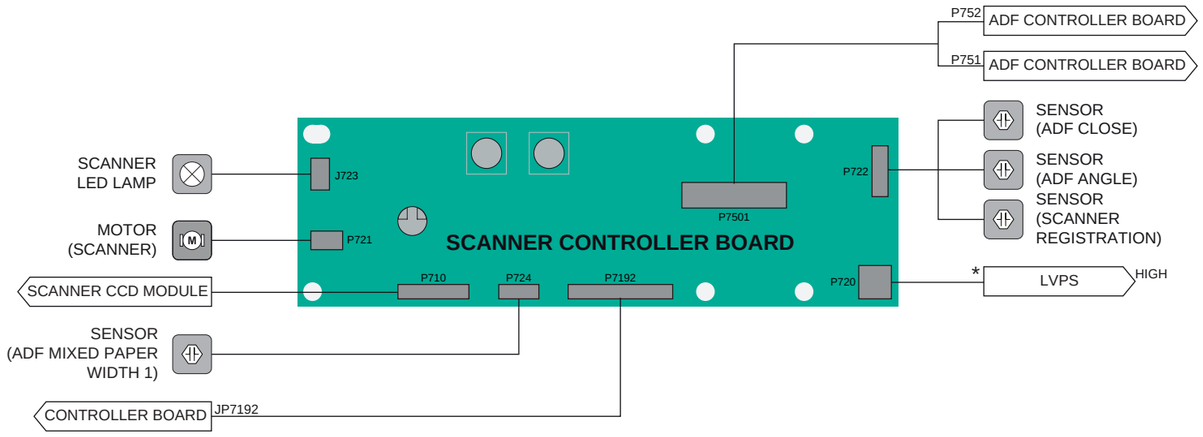




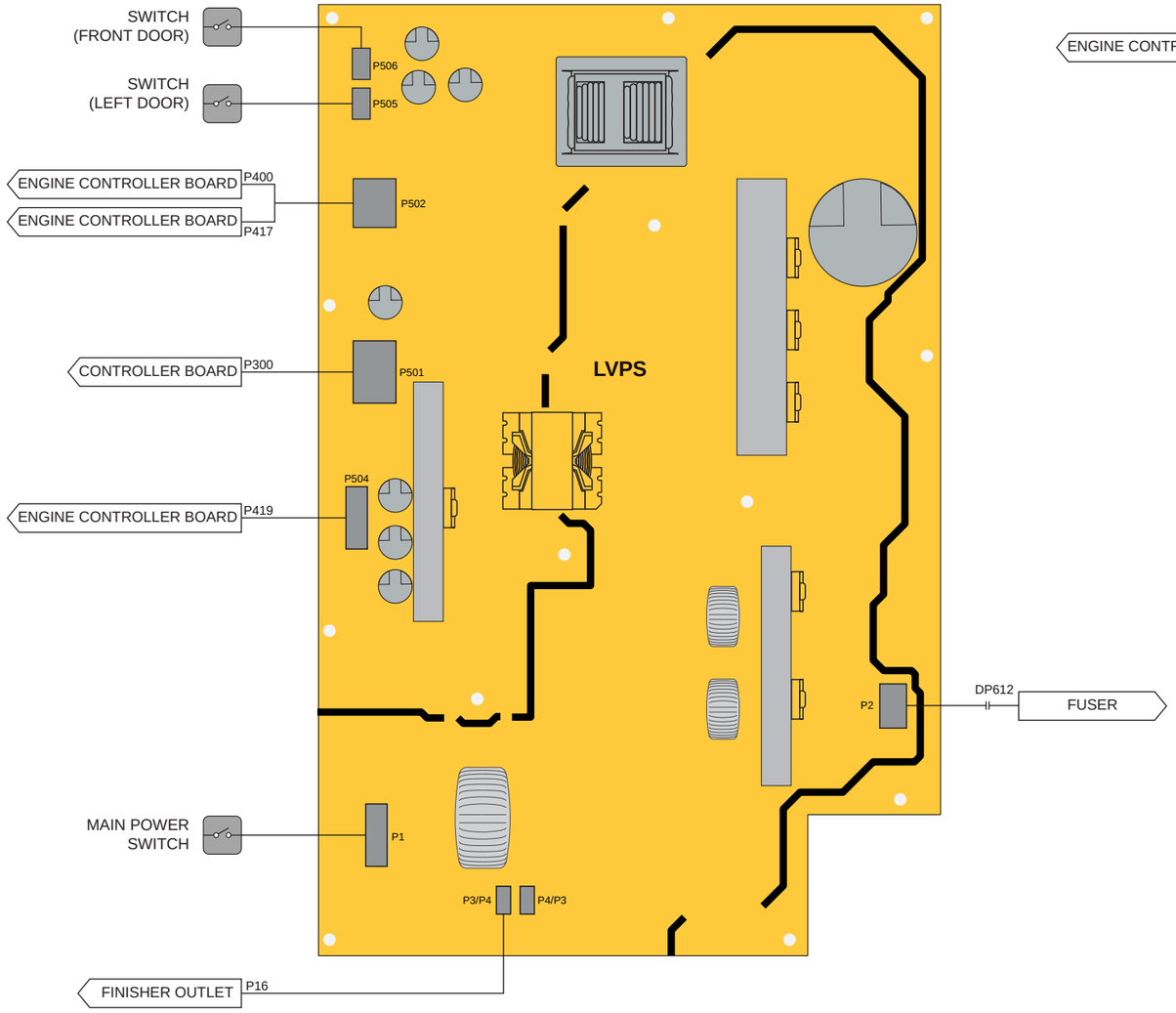


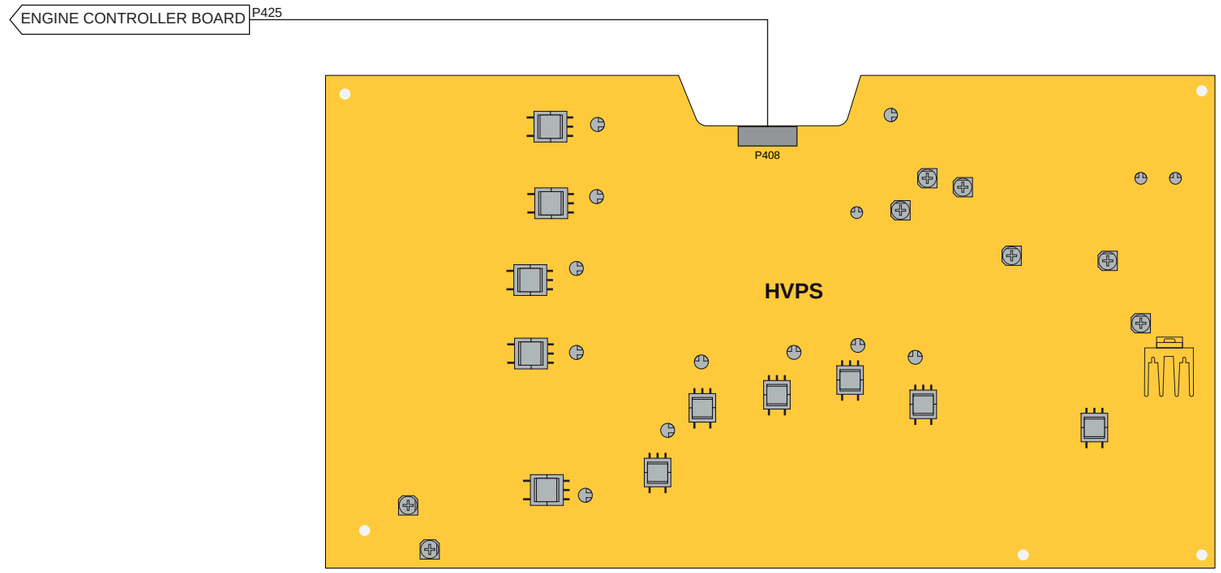
PAPER SIZE SENSOR



CX930dse, XC9325, CX931dtse, CX931dse, XC9335

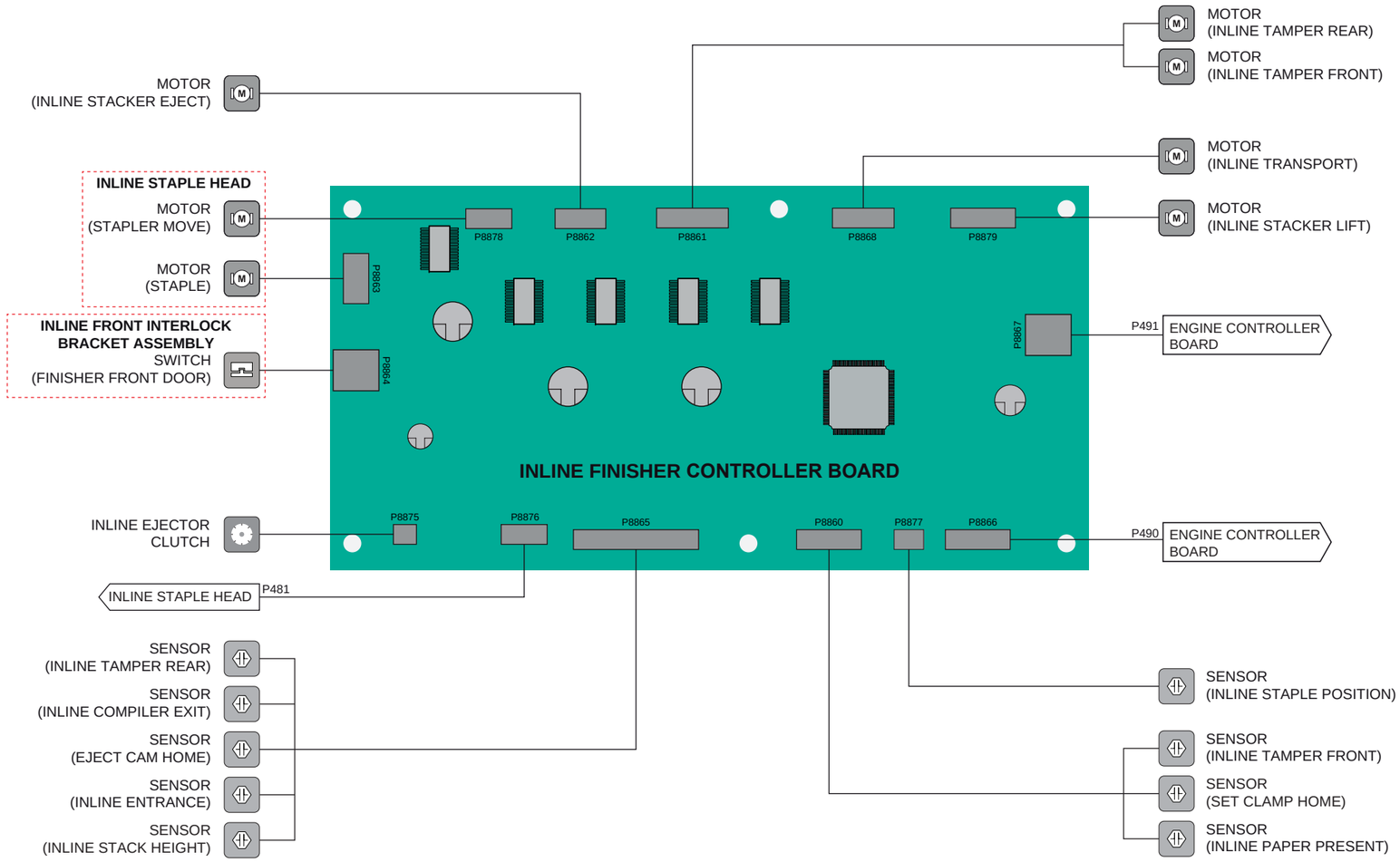
WIRING DIAGRAM





STAPLE FINISHER

WIRING DIAGRAM



STAPLE, HOLE PUNCH FINISHER

WIRING DIAGRAM