B2236 Printer

Service Manual

September 2025

www.lexmark.com

Product information

Product name:
Lexmark B2236dw Printer
Machine type:
1400
Model(s):
438

Edition notice

January 2019

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

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

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

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

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

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

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

All other trademarks are the property of their respective owners.

Contents

Notices, conventions, and safety information

Laser notice

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR, Chapter I, Subchapter J for Class I (1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 60825-1: 2014.
Class I laser products are not considered to be hazardous. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service conditions. The printer has a non-serviceable printhead assembly that contains a laser with the following specifications:
Class: IIIb (3b) AlGaAs
Nominal output power (milliwatts): 15
Wavelength (nanometers): 775–800

Avis relatif à l'utilisation du laser

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

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

Class: IIIb (3b) AlGaAs

Nominal output power (milliwatts): 15

Wavelength (nanometers): 775–800

Aviso de láser

Esta impresora se ha certificado en EE.UU. cumpliendo con los requisitos de DHHS 21 CFR, capítulo I, subcapítulo J para los productos láser de Clase I (1) y en otros países está certificada como un producto láser de Clase I de acuerdo con los requisitos de IEC 60825-1: 2014.

Los productos láser de Clase I no se consideran peligrosos. El sistema láser y la impresora se han diseñado para que el ser humano no acceda nunca a las radiaciones láser por encima del nivel de Clase I durante su uso normal, ni en tareas de mantenimiento o intervenciones de servicio técnico prescritas. El conjunto de cabezal de impresión de la impresora no se puede reparar y contiene un láser con las siguientes especificaciones:

Class: IIIb (3b) AlGaAs

Nominal output power (milliwatts): 15

Wavelength (nanometers): 775–800

Laser-Hinweis

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

Laserprodukte der Klasse I werden nicht als gefährlich betrachtet. Das Lasersystem und der Drucker sind so konstruiert, dass unter normalen Betriebsbedingungen, bei der Wartung durch den Benutzer oder bei den vorgeschriebenen Wartungsbedingungen Menschen keiner Laserstrahlung ausgesetzt sind, die die Werte für Klasse I überschreitet. Der Drucker verfügt über eine Druckkopfeinheit, die nicht gewartet werden kann und mit einem Laser mit den folgenden Spezifikationen ausgestattet ist.

Class: IIIb (3b) AlGaAs

Nominal output power (milliwatts): 15

Wavelength (nanometers): 775–800

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

> **CAUTION—MOVING PARTS**
> Indicates a risk of laceration or abrasion injuries from rotating parts.

Safety information

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

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

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

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

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

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

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

CAUTION—POTENTIAL INJURY
Do not use this product with an inline surge protector. The use of a surge protection device 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
N'utilisez pas ce produit avec un parasurtenseur en ligne. L'utilisation de parasurtenseurs comporte un risque d'incendie et de dégâts matériels, et peut réduire 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
La batería de litio de este producto no debe reemplazarse. Existe riesgo de explosión si se sustituye incorrectamente una batería de litio. No recargue, desmonte ni incinere una batería de litio. Deseche las baterías de litio usadas según las instrucciones del fabricante y las normativas locales.

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

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

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

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

PRECAUCIÓN: POSIBLES DAÑOS
No utilice este producto con un protector de sobretensión. El uso de un dispositivo de protección contra sobretensión puede dar lugar a que el rendimiento de la impresora sea bajo, a daños materiales o a posibles incendios.

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

Sicherheitshinweise

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

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

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

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

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

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

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

VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR
Verwenden Sie dieses Produkt nicht mit einem Inline-Überspannungsschutz. Die Verwendung von 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

August 15, 2025

- Added the Reset device topic in the Service menus chapter. See Reset Device on page 221.

July 25, 2025

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

July 21, 2025

- Added PN 41X6258 and PN 41X6259 in the Electronics topic of the Parts catalog chapter. For more information, see Electronics.

September 4, 2024

- Updated the Controller board connectors topic in the Component locations chapter. See Controller board connectors on page 267.
- Updated the wiring diagram. See wiring diagram.

August 9, 2024

- Added the 42.60–42.64K error codes in the 42 user attendance messages topic of the Diagnostics and troubleshooting chapter. See 42 user attendance messages on page 152.
- Updated the Toner cartridge service check topic of the Diagnostics and troubleshooting chapter. See Toner cartridge service check on page 155.

May 30, 2024

- Updated the Controller board connectors topic in the Component locations chapter. See Controller board connectors on page 267.
- Updated the wiring diagram. See wiring diagram.

July 11, 2023

- Added a note for 40X0296 in the Miscellaneous topic of the Parts catalog chapter. See Miscellaneous on page 280.

January 5, 2023

- Removed the note from the Left cover removal topic of the Parts removal chapter. See Left cover removal on page 242.
- Removed the note from the Front door removal topic of the Parts removal chapter. See Front door removal on page 252.
- Removed the note in the following assembly of the Parts catalog chapter:

  - 41X2450
  - 41X2451

See Covers on page 274.

November 29, 2022

- Added the topic group Securing the printer in the Diagnostics and troubleshooting chapter. It includes the topic Resetting the printer without admin credentials. See Resetting the printer without admin credentials on page 28.

October 6, 2022

- Added a note in the Left cover removal topic of the Parts removal chapter. See Left cover removal on page 242.
- Added a note in the Front door removal topic of the Parts removal chapter. See Front door removal on page 252.
- Added the Applicability of Regulation (EU) 2019/2015 and (EU) 2019/2020 regulatory notice in the Printer specifications chapter.
- Added a note in the following assembly of the Parts catalog chapter:

  - 41X2450
  - 41X2451

  See Covers on page 274.
- Updated the Entering recovery mode topic in the Service menus chapter. See Entering Recovery mode on page 220.

March 25, 2022

- Updated the 42 user attendance messages topic in the Diagnostics and troubleshooting chapter. See 42 user attendance messages on page 152.
- Updated the Toner cartridge service check topic in the Diagnostics and troubleshooting chapter. See Photoconductor and toner cartridge service check on page 144.
- Updated the Restoring the printer configuration topic in the Parts removal chapter. See Restoring the printer configuration on page 225.

January 5, 2022

- Added the following error codes in the 31–33 user attendance messages topic of the Diagnostics and troubleshooting chapter.

  - 31.40C
  - 31.60C

  See 31–33 user attendance messages on page 144.

September 15, 2021

- Added the following PNs in the Parts catalog chapter:

  - 40X0278
  - 40X0282
  - 40X0286
  - 40X0297
  - 40X4596
  - 40X1792
  - 40X0296

- 40X0279
- 40X0271
- 40X1791

See Miscellaneous on page 280.

June 16, 2021

- Replaced the System Software error service check topic with the 900 error service check topic in the Diagnostics and troubleshooting chapter.
- Updated the 9yy error messages topic in the Diagnostics and troubleshooting chapter.

May 26, 2021

- Updated the Printhead removal topic in the Parts removal chapter.

April 7, 2021

- Added the Finding the printer serial number topic in the General information chapter.
- Updated the installation note in the Controller board removal topic in the Parts removal chapter.
- Reinstated the following topics in the Parts removal chapter:
  - Restoring the printer configuration after replacing the controller board
  - Restoring solutions, licenses, and configuration settings

September 7, 2020

- Updated the video removal demonstration links in the Parts removal chapter.

August 3, 2020

- Updated the Controller board removal topic in the Parts removal chapter.
- Removed the following topics in the Parts removal chapter:
  - Restoring the printer configuration after replacing the controller board
  - Restoring solutions, licenses, and configuration settings
  - Backing up eSF solutions and settings

June 2, 2020

- Added the Entering Recovery Mode topic in the Service menus chapter.
- Replaced PN 41X2456 with PN 41X2843 in the Parts catalog chapter.

May 20, 2020

- Updated the Printhead removal topic in the Parts removal chapter.

April 1, 2020

- Updated the description of PN 41X2467 in the Parts catalog chapter.

April 1, 2019

- Updated the 9yy error topics in the Diagnostics and troubleshooting chapter.
- Updated the User attendance messages topics in the Diagnostics and troubleshooting chapter.

- Removed the Intervention required error messages topics in the Diagnostics and troubleshooting chapter.

March 1, 2019

- Added the Intervention required error messages and service checks in the Diagnostics and troubleshooting chapter.
- Updated the Controller board removal topic in the Parts removal chapter.

General information

Printer model configurations

The Lexmark™ B2236dw printer is a small, monochrome, network-capable, laser printer.

Model	Configurations	Machine type/model
B2236dw	Network-ready monochrome laser printer with 2-line LCD display, wireless capability, and internal duplex printing for small workgroups.	1400-438

Finding the printer serial number

1. Pull out the tray.
2. Locate the serial number below the manual feeder.

Supported paper sizes, types, and weights

Supported paper sizes

Note:

- Paper less than 210 mm (8.3 in.) wide always prints at reduced speed.
- Use the manual feeder when printing on paper less than 105 mm (4.1 in.) wide.
- The minimum paper dimension supported for two-sided printing is 210 x 279.4 mm (8.3 x 11 in.).
- The maximum paper length supported by the scanner glass is 297 mm (11.7 in.).
- For two-sided printing on letter-, legal-, or folio-size paper, make sure that the paper size setting in the duplex unit is set to Letter.

Paper size	250-sheet tray	Manual feeder	Two-sided printing	Scanner glass	Automatic document feeder
A4 210 x 297 mm (8.27 x 11.7 in.)	✓	✓	✓	✓	✓
A5 (short edge feed) 148 x 210 mm (5.83 x 8.27 in.)	✓	✓	X	✓	✓
A5 (long edge feed) 210 x 148 mm (8.27 x 5.83 in.)	✓	✓	X	✓	✓
A6 105 x 148 mm (4.13 x 5.83 in.)	✓	✓	X	✓	✓
JIS B5 182 x 257 mm (7.17 x 10.1 in.)	✓	✓	X	✓	✓

Paper size	250-sheet tray	Manual feeder	Two-sided printing	Scanner glass	Automatic document feeder
Oficio (Mexico) 215.9 x 340.4 mm (8.5 x 13.4 in.)	✓	✓	X	X	✓
Hagaki 100 x 148 mm (3.94 x 5.83 in.)	X	✓	X	✓	X
Statement 139.7 x 215.9 mm (5.5 x 8.5 in.)	✓	✓	X	✓	✓
Executive 184.2 x 266.7 mm (7.25 x 10.5 in.)	✓	✓	X	✓	✓
Letter 215.9 x 279.4 mm (8.5 x 11 in.)	✓	✓	✓	✓	✓
Legal 215.9 x 355.6 mm (8.5 x 14 in.)	✓	✓	✓	X	✓
Folio 215.9 x 330.2 mm (8.5 x 13 in.)	✓	✓	✓	X	✓
Universal 98 x 148 mm (3.9 x 5.8 in.) to 216 x 356 mm (8.5 x 14 in.)	X	✓	X	✓	✓

Paper size	250-sheet tray	Manual feeder	Two-sided printing	Scanner glass	Automatic document feeder
Universal 105 x 148 mm (4.1 x 5.8 in.) to 216 x 356 mm (8.5 x 14 in.)	✓	✓	X	✓	✓
7 3/4 Envelope (Monarch) 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
DL Envelope 110 x 220 mm (4.33 x 8.66 in.)	X	✓	X	✓	X
C5 Envelope 162 x 229 mm (6.38 x 9.01 in.)	X	✓	X	✓	X
B5 Envelope 176 x 250 mm (6.93 x 9.84 in.)	X	✓	X	✓	X

Paper size	250-sheet tray	Manual feeder	Two-sided printing	Scanner glass	Automatic document feeder
Universal Envelope 98.4 x 162 mm (3.87 x 6.38 in.) to 176 x 250 mm (6.93 x 9.84 in.)	X	✓	X	✓	X

* This paper source supports paper size only up to 216 x 297 mm (8.5 x 11.7 in.).

Supported paper types

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

Paper type	250-sheet tray	Manual feeder	Two-sided printing	Automatic document feeder
Plain paper	✓	✓	✓	✓
Card stock	X	✓	X	X
Labels	X	✓	X	X
Bond	✓	✓	✓	✓
Envelope	X	✓	X	X
Letterhead	✓	✓	✓	✓
Preprinted	✓	✓	✓	✓
Colored paper	✓	✓	✓	✓
Light	✓	✓	✓	✓
Heavy	✓	✓	✓	✓
Recycled	✓	✓	✓	✓

Supported paper weights

250-sheet tray	Manual feeder	Two-sided printing	Automatic document feeder
60–105 g/m^2 (16–28-lb bond)	60–200 g/m^2 (16–54-lb bond)	70–105 g/m^2 (18.7–28-lb bond)	60–105 g/m^2 (16–28-lb bond)

Tools required for service

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

Diagnostics and troubleshooting

Troubleshooting precautions

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

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

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

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

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

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

CAUTION—MOVING PARTS
To avoid the risk of laceration or abrasion injuries, keep hands away from moving parts in areas marked with this label. Injuries from moving parts may occur around gears and other rotating parts.

Précautions de dépannage

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

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

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

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

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

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

CAUTION—MOVING PARTS
Pour éviter tout risque de coupures ou de frottements, éloignez les mains des pièces en mouvement dans les zones signalées par cette étiquette. Les pièces en mouvement autour des engrenages et autres pièces rotatives peuvent causer des blessures.

Precauciones durante la solución de problemas

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

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

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

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

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

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

CAUTION—MOVING PARTS
Para evitar el riesgo de lesiones por laceración o abrasión, mantenga las manos lejos de las partes móviles en las zonas marcadas con esta etiqueta. Las lesiones causadas por partes móviles pueden producirse cerca de los engranajes u otras piezas giratorias.

Vorsichtsmaßnahmen bei der Fehlerbehebung

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

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

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

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

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

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

CAUTION—MOVING PARTS
Um das Risiko von Verletzungen und Abschürfungen zu vermeiden, halten Sie Ihre Hände von sich bewegenden Teilen in Bereichen fern, die mit diesem Hinweis gekennzeichnet sind. Verletzungen durch sich bewegende Teile treten unter Umständen im Bereich von Zahnrädern und anderen sich drehenden Teilen auf.

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 284.
- 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.

Securing the printer

Resetting the printer without admin credentials

> **Note:**
>
> - Resetting the printer or replacing the controller board deletes all security settings.
> - Before changing the security settings, ask permission from your administrator.

Perform an Out of Service Erase to reset the printer to factory defaults without using admin credentials. For more information, see Data security notice on page 28.

> **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.

Data security notice

Identifying printer memory

- **Volatile memory**—The printer uses standard random access memory (RAM) to buffer user data temporarily during simple print and copy jobs.

- **Nonvolatile memory**—The printer may use two forms of nonvolatile memory: EEPROM and NAND (flash memory). Both types are used to store the operating system, printer settings, network information, scanner and bookmark settings, and embedded solutions.
- **Hard disk memory**—Some printers have a hard disk drive installed. The hard disk is designed for printer-specific functionality and cannot be used for long-term storage of data that is not print-related. The hard disk does not let users extract information, create folders, create disk or network file shares, or transfer FTP information directly from a client device. The hard disk can retain buffered user data from complex print jobs, form data, and font data.

The following parts can store memory:

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

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

Erasing printer memory

To erase volatile memory, turn off the printer.

To erase nonvolatile memory, do the following:

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

To erase hard disk memory, do the following:

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

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

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

1. Remove the hard disk, and then return it to the customer.
2. Request the customer to sign the *Customer Retention* form.

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

3. Take a photo of the signed form, and then upload it to the Service Request debrief tool.

4. Fax or e-mail the signed form to the number or e-mail address shown at the bottom of the form.

Fixing print quality issues

Initial print quality check

Before troubleshooting print problems, perform the following:

- Make sure that the printer is located in an area that follows the recommended operating environment and power requirement specifications.
- Check the status of supplies. Replace supplies that are low or empty.
- Load 20-lb (75-80 g/m^2) plain letter or A4 paper. Make sure that the paper guides are properly set and locked. From the control panel, set the paper size and type to match the paper loaded in the tray.
- From the control panel, navigate to **Settings > Troubleshooting > Print Quality Test Pages**.
- Print and keep the Menu Settings Page. The original page is used to restore the custom settings if necessary. From the control panel, navigate to **Settings > Reports > Menu Settings Page**, and then press **OK**.
- On the Menu Settings page, check if the print resolution is set to 600 dpi and the toner darkness is set to Normal.
- Check the toner cartridges for damage, and replace if necessary.
- Make sure that the correct print driver is used to prevent print problems. If the wrong print driver is installed, then incorrect characters could print and the copy may not fit the page correctly.

Gray or solid background check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

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

Go to step 3.

2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

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

3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

4. Perform the following tests:
   a. Make sure that the toner cartridge is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the developer roller surface is free of damage.
   d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

   Does the problem remain?

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

5. Replace the toner cartridge.

   Does the problem remain?

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

6. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

7. Replace the imaging unit.

   Does the problem remain?

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

8. Perform the following tests:
   a. Check the HVPS toner contact spring for proper installation and damage.
   b. Check the toner smart chip contact for proper installation and damage.
   c. Check the toner contact spring for corrosion and contamination.

   Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

9. Perform the following tests:
   a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
   b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
   c. Reseat the smart chip contact cable.

   Does the problem remain?

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

10. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

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

11. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

12. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
13. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
14. Adjust the toner darkness.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.
16. Replace the HVPS. See HVPS removal on page 246.

    > **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

    Does the problem remain?

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

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

17. Perform the following tests:
    a. Reseat all the cables connected to the LVPS.
    b. Check the cables for proper connection and damage.
    c. Check the fuse for continuity.
    d. Check the electronic components on the LVPS for damage.
    e. Check the LVPS for proper installation and damage.

    Is the LVPS properly installed and free of damage?

    - **Yes**:
      Go to step 20.
    - **No**:
      Go to the next step.

18. Perform the following tests:
    a. Make sure that the LVPS is compatible with the fuser and the printer.
    b. Make sure that the fuser connector has voltage.
    c. Make sure that the correct power input voltage is used.

    Does the problem remain?

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

19. Replace the LVPS. See LVPS removal on page 246.

    Does the problem remain?

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

20. Perform the following tests:
    a. Check the controller board for proper installation and damage.
    b. Reseat all the cables on the controller board.

    Is the controller board properly installed and free of damage?

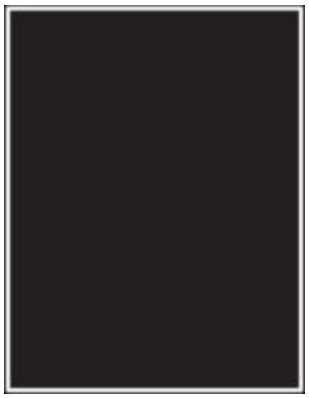
    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.

21. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Solid color or black image check



1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.
2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.

d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

5. Replace the imaging unit.

   Does the problem remain?

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

6. Perform the following tests:
   a. Check the imaging unit contact spring for damage and contamination.
   b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

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

7. Perform the following tests:
   a. Make sure that the toner cartridge is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the developer roller surface is free of damage.
   d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

   Does the problem remain?

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

8. Replace the toner cartridge.

   Does the problem remain?

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

9. Perform the following tests:
   a. Check the HVPS toner contact spring for proper installation and damage.
   b. Check the toner smart chip contact for proper installation and damage.
   c. Check the toner contact spring for corrosion and contamination.

Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

10. Perform the following tests:
    a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
    b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
    c. Reseat the smart chip contact cable.

    Does the problem remain?

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

11. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

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

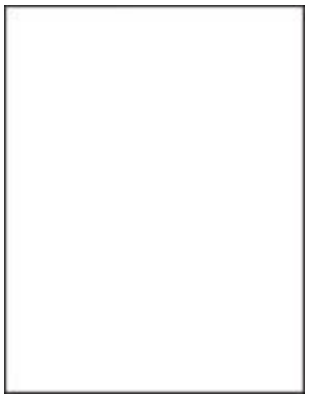
12. Replace the HVPS. See HVPS removal on page 246.

    > **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

    Does the problem remain?

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

Blank or white pages check



1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.
2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.

d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

5. Replace the imaging unit.

   Does the problem remain?

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

6. Perform the following tests:
   a. Check the imaging unit contact spring for damage and contamination.
   b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

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

7. Perform the following tests:
   a. Make sure that the transfer roller is properly installed and free of damage and contamination.
   b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
   c. Make sure that the transfer roller spring is properly installed.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

8. Perform the following tests:
   a. Reseat the transfer roller.
   b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

9. Replace the transfer roller. See Transfer roller removal on page 253.

   Does the problem remain?

   - **Yes**:

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

10. Perform the following tests:
    a. Make sure that the toner cartridge is properly installed and free of damage.
    b. Make sure that the smart chip contacts are free of corrosion and contamination.
    c. Make sure that the developer roller surface is free of damage.
    d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
    e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

    Does the problem remain?

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

11. Replace the toner cartridge.

    Does the problem remain?

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

12. Perform the following tests:
    a. Check the HVPS toner contact spring for proper installation and damage.
    b. Check the toner smart chip contact for proper installation and damage.
    c. Check the toner contact spring for corrosion and contamination.

    Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

    - **Yes**:
      Go to step 14.
    - **No**:
      Go to the next step.

13. Perform the following tests:
    a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
    b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
    c. Reseat the smart chip contact cable.

    Does the problem remain?

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

14. Perform the following tests:
    a. Clean the printhead lens.
    b. Reseat the two printhead cables at both ends.
    c. Perform a print test.

    Does the problem remain?

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

15. Perform the following tests:
    a. Make sure that the printhead cables are properly connected.
    b. Check the printhead for proper installation and damage.

    Is the printhead properly installed and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.
16. Replace the printhead. See .Printhead removal on page 259

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
17. Perform the following tests:
    a. Reseat the HVPS cables.
    b. Check the cables for damage.

    Are the cables free of damage?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 19.
18. Replace the damaged cable.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
19. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

    - **Yes**:
      Go to step 21.
    - **No**:
      Go to the next step.
20. Replace the HVPS. See HVPS removal on page 246.

> **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

Does the problem remain?

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

21. Perform the following tests:
    a. Check the controller board for proper installation and damage.
    b. Reseat all the cables on the controller board.

    Is the controller board properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
22. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Dark print check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

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

- **No**:
  Go to step 3.

2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

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

3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

4. Perform the following tests:
   a. Make sure that the paper type is supported.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the paper has no damage or defects.
   d. Make sure that the paper guides are properly set.
   e. Make sure that the paper size setting in the duplex unit is properly set.

   Does the problem remain?

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

5. Adjust the toner darkness.

   Does the problem remain?

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

6. Perform the following tests:
   a. Make sure that the toner cartridge is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the developer roller surface is free of damage.
   d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

Does the problem remain?

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

7. Replace the toner cartridge.

   Does the problem remain?

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

8. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

9. Replace the imaging unit.

   Does the problem remain?

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

10. Perform the following tests:
    a. Check the HVPS toner contact spring for proper installation and damage.
    b. Check the toner smart chip contact for proper installation and damage.
    c. Check the toner contact spring for corrosion and contamination.

    Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

11. Perform the following tests:
    a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
    b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
    c. Reseat the smart chip contact cable.

Does the problem remain?

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

12. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
13. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
14. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
16. Perform the following tests:
    a. Reseat the HVPS cables.
    b. Check the cables for damage.

    Are the cables free of damage?

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

- **No**:
  Go to step 18.

17. Replace the damaged cable.

    Does the problem remain?

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

18. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

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

19. Replace the HVPS. See HVPS removal on page 246.

    > **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

    Does the problem remain?

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

Light print check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.

c. Check if the toner cartridge is new.

Is the toner cartridge new?

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

2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

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

3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

   > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

4. Perform the following tests:
   a. Make sure that the paper type is supported.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the paper has no damage or defects.
   d. Make sure that the paper guides are properly set.
   e. Make sure that the paper size setting in the duplex unit is properly set.

   Does the problem remain?

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

5. Adjust the toner darkness.

   Does the problem remain?

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

6. Perform the following tests:
    a. Make sure that the toner cartridge is properly installed and free of damage.
    b. Make sure that the smart chip contacts are free of corrosion and contamination.
    c. Make sure that the developer roller surface is free of damage.
    d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
    e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
7. Replace the toner cartridge.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
8. Perform the following tests:
    a. Make sure that the imaging unit is properly installed and free of damage.
    b. Make sure that the smart chip contacts are free of corrosion and contamination.
    c. Make sure that the photoconductor roller surface is free of damage.
    d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
    e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
9. Replace the imaging unit.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
10. Perform the following tests:
    a. Check the HVPS toner contact spring for proper installation and damage.
    b. Check the toner smart chip contact for proper installation and damage.
    c. Check the toner contact spring for corrosion and contamination.

    Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

11. Perform the following tests:
    a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
    b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
    c. Reseat the smart chip contact cable.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
12. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
13. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
14. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
16. Perform the following tests:
    a. Clean the printhead lens.

b. Reseat the two printhead cables at both ends.
c. Perform a print test.

Does the problem remain?

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

17. Perform the following tests:
    a. Make sure that the printhead cables are properly connected.
    b. Check the printhead for proper installation and damage.

    Is the printhead properly installed and free of damage?

    - **Yes**:
      Go to step 19.
    - **No**:
      Go to the next step.
18. Replace the printhead. See .Printhead removal on page 259

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
19. Perform the following tests:
    a. Reseat the HVPS cables.
    b. Check the cables for damage.

    Are the cables free of damage?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 21.
20. Replace the damaged cable.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
21. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

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

Go to the next step.

22. Replace the HVPS. See HVPS removal on page 246.

> **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

Does the problem remain?

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

Paper curl check

1. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

   > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Make sure that the paper type is supported.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the paper has no damage or defects.
   d. Make sure that the paper guides are properly set.
   e. Make sure that the paper size setting in the duplex unit is properly set.

Does the problem remain?

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

3. Perform the following tests:
   a. Check the fuser cables for proper connection and damage.
   b. Check the fuser access door for damage.
   c. Check if the fuser gears are in proper contact with the drive gears.
   d. Make sure that the fuser is compatible with the LVPS.
   e. Check the fuser for proper installation and damage.

   Is the fuser properly installed and free of damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.
4. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests

   b. Select **Motor (transport)**.
   c. Open the rear door, and then check if the fuser exit rollers turn.
   d. Open the fuser access door, and then check if the hot rollers turn.

   Are the rollers properly working?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.
5. Replace the fuser. See Fuser removal on page 255.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
6. Perform the following tests:
   a. Reseat all the cables connected to the LVPS.
   b. Check the cables for proper connection and damage.
   c. Check the fuse for continuity.
   d. Check the electronic components on the LVPS for damage.
   e. Check the LVPS for proper installation and damage.

   Is the LVPS properly installed and free of damage?

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

7. Perform the following tests:
   a. Make sure that the LVPS is compatible with the fuser and the printer.
   b. Make sure that the fuser connector has voltage.
   c. Make sure that the correct power input voltage is used.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
8. Replace the LVPS. See LVPS removal on page 246.

   Does the problem remain?

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

Folded or wrinkled paper check

1. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      Note: Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Make sure that the paper type is supported.

b. Make sure that the paper type and size settings match the paper type and size set on the tray.
c. Make sure that the paper has no damage or defects.
d. Make sure that the paper guides are properly set.
e. Make sure that the paper size setting in the duplex unit is properly set.

Does the problem remain?

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

3. Perform the following tests:
   a. Check the fuser cables for proper connection and damage.
   b. Check the fuser access door for damage.
   c. Check if the fuser gears are in proper contact with the drive gears.
   d. Make sure that the fuser is compatible with the LVPS.
   e. Check the fuser for proper installation and damage.

   Is the fuser properly installed and free of damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.
4. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests

   b. Select **Motor (transport)**.
   c. Open the rear door, and then check if the fuser exit rollers turn.
   d. Open the fuser access door, and then check if the hot rollers turn.

   Are the rollers properly working?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.
5. Replace the fuser. See Fuser removal on page 255.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
6. Perform the following tests:
   a. Reseat all the cables connected to the LVPS.
   b. Check the cables for proper connection and damage.
   c. Check the fuse for continuity.
   d. Check the electronic components on the LVPS for damage.
   e. Check the LVPS for proper installation and damage.

   Is the LVPS properly installed and free of damage?

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

7. Perform the following tests:
   a. Make sure that the LVPS is compatible with the fuser and the printer.
   b. Make sure that the fuser connector has voltage.
   c. Make sure that the correct power input voltage is used.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
8. Replace the LVPS. See LVPS removal on page 246.

   Does the problem remain?

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

Repeating defects check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.
2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

   - **Yes**:

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

3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

4. Measure the distance between the horizontal defects.

   Is the distance equal to 75.4 mm or 34.7 mm?

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

5. Replace the imaging unit.

   Does the problem remain?

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

6. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

7. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:

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

8. Measure the distance between the horizontal defects.

   Is the distance equal to 44.6 mm, 28.3 mm, or 39.3 mm?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 10.
9. Replace the toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
10. Perform the following tests:
    a. Make sure that the toner cartridge is properly installed and free of damage.
    b. Make sure that the smart chip contacts are free of corrosion and contamination.
    c. Make sure that the developer roller surface is free of damage.
    d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
    e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
11. Replace the toner cartridge.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
12. Measure the distance between the horizontal defects.

    Is the distance equal to 44 mm?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 14.
13. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

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

14. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
16. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
17. Measure the distance between the horizontal defects.

    Is the distance equal to 78.1 mm?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 19.
18. Replace the fuser. See Fuser removal on page 255.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
19. Perform the following tests:
    a. Check the fuser cables for proper connection and damage.
    b. Check the fuser access door for damage.
    c. Check if the fuser gears are in proper contact with the drive gears.
    d. Make sure that the fuser is compatible with the LVPS.
    e. Check the fuser for proper installation and damage.

    Is the fuser properly installed and free of damage?

- **Yes**:
  Go to step 22.
- **No**:
  Go to the next step.

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

       Printer diagnostics & adjustments > Motor tests

    b. Select **Motor (transport)**.
    c. Open the rear door, and then check if the fuser exit rollers turn.
    d. Open the fuser access door, and then check if the hot rollers turn.

    Are the rollers properly working?

    - **Yes**:
      Go to step 22.
    - **No**:
      Go to the next step.

21. Replace the fuser. See Fuser removal on page 255.

    Does the problem remain?

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

22. Perform the following tests:
    a. Clean the printhead lens.
    b. Reseat the two printhead cables at both ends.
    c. Perform a print test.

    Does the problem remain?

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

23. Perform the following tests:
    a. Make sure that the printhead cables are properly connected.
    b. Check the printhead for proper installation and damage.

    Is the printhead properly installed and free of damage?

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

24. Replace the printhead. See .Printhead removal on page 259

    Does the problem remain?

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

Skewed print check

1. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Make sure that the paper type is supported.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the paper has no damage or defects.
   d. Make sure that the paper guides are properly set.
   e. Make sure that the paper size setting in the duplex unit is properly set.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Check the tray insert for proper installation and damage.
   b. Make sure that the separator roller is free of dust and contamination.
   c. Check the lift plate for proper operation.
   d. Check the paper guides for proper operation.

   Is the tray insert properly installed and free of damage?

   - **Yes**:

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

4. Replace the tray insert.

   Does the problem remain?

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

5. Perform the following tests:
   a. Clear the pick rollers of contamination.
   b. Reseat the pick rollers.
   c. Perform a feed test.

   Does the problem remain?

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

6. Perform the following tests:
   a. Check the pick rollers for proper installation and damage.
   b. Check the shaft of the pick rollers for damage.

   Are the pick rollers properly installed and free of damage?

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

7. Replace the pick rollers. See Pick rollers removal on page 264.

   Does the problem remain?

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

8. Make sure that the roller is free of dirt and contamination.

   Does the problem remain?

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

9. Perform the following tests:
   a. Clean the printhead lens.
   b. Reseat the two printhead cables at both ends.
   c. Perform a print test.

   Does the problem remain?

   - **Yes**:

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

10. Perform the following tests:
    a. Make sure that the printhead cables are properly connected.
    b. Check the printhead for proper installation and damage.

    Is the printhead properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
11. Replace the printhead. See .Printhead removal on page 259

    Does the problem remain?

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

Streaked vertical lines appear on prints check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.
2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

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

The problem is solved.

3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Clean the printhead lens.
   b. Reseat the two printhead cables at both ends.
   c. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Perform the following tests:
   a. Make sure that the printhead cables are properly connected.
   b. Check the printhead for proper installation and damage.

   Is the printhead properly installed and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
6. Replace the printhead. See .Printhead removal on page 259

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

8. Replace the imaging unit.

   Does the problem remain?

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

9. Perform the following tests:
   a. Make sure that the toner cartridge is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the developer roller surface is free of damage.
   d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

   Does the problem remain?

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

10. Replace the toner cartridge.

    Does the problem remain?

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

11. Perform the following tests:
    a. Check the HVPS toner contact spring for proper installation and damage.
    b. Check the toner smart chip contact for proper installation and damage.
    c. Check the toner contact spring for corrosion and contamination.

    Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

12. Perform the following tests:
    a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
    b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
    c. Reseat the smart chip contact cable.

    Does the problem remain?

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

13. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
14. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
16. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
17. Perform the following tests:
    a. Reseat the HVPS cables.
    b. Check the cables for damage.

    Are the cables free of damage?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 19.

18. Replace the damaged cable.

    Does the problem remain?

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

19. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

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

20. Replace the HVPS. See HVPS removal on page 246.

    > **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

    Does the problem remain?

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

Horizontal white lines check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

Is the toner cartridge new?

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

2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

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

3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

4. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

5. Replace the imaging unit.

   Does the problem remain?

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

6. Perform the following tests:

a. Make sure that the toner cartridge is properly installed and free of damage.
b. Make sure that the smart chip contacts are free of corrosion and contamination.
c. Make sure that the developer roller surface is free of damage.
d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

Does the problem remain?

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

7. Replace the toner cartridge.

   Does the problem remain?

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

8. Perform the following tests:
   a. Check the HVPS toner contact spring for proper installation and damage.
   b. Check the toner smart chip contact for proper installation and damage.
   c. Check the toner contact spring for corrosion and contamination.

   Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

9. Perform the following tests:
   a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
   b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
   c. Reseat the smart chip contact cable.

   Does the problem remain?

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

10. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

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

11. Perform the following tests:

a. Make sure that the transfer roller is properly installed and free of damage and contamination.
b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
c. Make sure that the transfer roller spring is properly installed.
d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

12. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
13. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
14. Perform the following tests:
    a. Clean the printhead lens.
    b. Reseat the two printhead cables at both ends.
    c. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Perform the following tests:
    a. Make sure that the printhead cables are properly connected.
    b. Check the printhead for proper installation and damage.

    Is the printhead properly installed and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.
16. Replace the printhead. See .Printhead removal on page 259

    Does the problem remain?

    - **Yes**:

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

17. Perform the following tests:
    a. Reseat the HVPS cables.
    b. Check the cables for damage.

    Are the cables free of damage?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 19.
18. Replace the damaged cable.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
19. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
20. Replace the HVPS. See HVPS removal on page 246.

    > **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

    Does the problem remain?

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

Vertical white lines check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.
2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Clean the printhead lens.
   b. Reseat the two printhead cables at both ends.
   c. Perform a print test.

Does the problem remain?

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

5. Perform the following tests:
   a. Make sure that the printhead cables are properly connected.
   b. Check the printhead for proper installation and damage.

   Is the printhead properly installed and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
6. Replace the printhead. See .Printhead removal on page 259

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
8. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
9. Perform the following tests:
   a. Make sure that the toner cartridge is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the developer roller surface is free of damage.
   d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

   Does the problem remain?

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

10. Replace the toner cartridge.

    Does the problem remain?

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

11. Perform the following tests:
    a. Check the HVPS toner contact spring for proper installation and damage.
    b. Check the toner smart chip contact for proper installation and damage.
    c. Check the toner contact spring for corrosion and contamination.

    Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

12. Perform the following tests:
    a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
    b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
    c. Reseat the smart chip contact cable.

    Does the problem remain?

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

13. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

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

14. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

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

15. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
16. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
17. Perform the following tests:
    a. Reseat the HVPS cables.
    b. Check the cables for damage.

    Are the cables free of damage?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 19.
18. Replace the damaged cable.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
19. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
20. Replace the HVPS. See HVPS removal on page 246.

> **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

Does the problem remain?

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

Vertical colored lines or banding check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.
2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

   > **Note:** Shake the toner cartridge and imaging unit before inserting them.

c. Perform a POR.
d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

4. Perform the following tests:
   a. Clean the printhead lens.
   b. Reseat the two printhead cables at both ends.
   c. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Perform the following tests:
   a. Make sure that the printhead cables are properly connected.
   b. Check the printhead for proper installation and damage.

   Is the printhead properly installed and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
6. Replace the printhead. See .Printhead removal on page 259

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
8. Replace the imaging unit.

   Does the problem remain?

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

9. Perform the following tests:
   a. Make sure that the toner cartridge is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the developer roller surface is free of damage.
   d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

   Does the problem remain?

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

10. Replace the toner cartridge.

    Does the problem remain?

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

11. Perform the following tests:
    a. Check the HVPS toner contact spring for proper installation and damage.
    b. Check the toner smart chip contact for proper installation and damage.
    c. Check the toner contact spring for corrosion and contamination.

    Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

12. Perform the following tests:
    a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
    b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
    c. Reseat the smart chip contact cable.

    Does the problem remain?

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

13. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

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

14. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

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

15. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

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

16. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

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

17. Perform the following tests:
    a. Reseat the HVPS cables.
    b. Check the cables for damage.

    Are the cables free of damage?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 19.

18. Replace the damaged cable.

    Does the problem remain?

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

19. Perform the following tests:
    a. Check the HVPS characterization.

b. Reseat the HVPS cables.
c. Check the HVPS cables for proper installation and damage.
d. Check the HVPS spring contact for proper connection to the board.

Is the HVPS properly installed and free of damage?

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

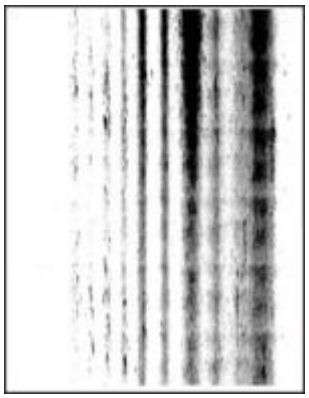
20. Replace the HVPS. See HVPS removal on page 246.

> **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

Does the problem remain?

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

Vertical dark streaks with print missing check



1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.
2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

   - **Yes**:

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

3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Clean the printhead lens.
   b. Reseat the two printhead cables at both ends.
   c. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Perform the following tests:
   a. Make sure that the printhead cables are properly connected.
   b. Check the printhead for proper installation and damage.

   Is the printhead properly installed and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
6. Replace the printhead. See .Printhead removal on page 259

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.

e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

8. Replace the imaging unit.

   Does the problem remain?

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

9. Perform the following tests:
   a. Make sure that the toner cartridge is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the developer roller surface is free of damage.
   d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

   Does the problem remain?

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

10. Replace the toner cartridge.

    Does the problem remain?

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

11. Perform the following tests:
    a. Check the HVPS toner contact spring for proper installation and damage.
    b. Check the toner smart chip contact for proper installation and damage.
    c. Check the toner contact spring for corrosion and contamination.

    Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

12. Perform the following tests:
    a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
    b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
    c. Reseat the smart chip contact cable.

Does the problem remain?

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

13. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
14. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
16. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
17. Perform the following tests:
    a. Reseat the HVPS cables.
    b. Check the cables for damage.

    Are the cables free of damage?

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

- **No**:
  Go to step 19.

18. Replace the damaged cable.

    Does the problem remain?

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

19. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

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

20. Replace the HVPS. See HVPS removal on page 246.

    > **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

    Does the problem remain?

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

White streaks and voided areas check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.

c. Check if the toner cartridge is new.

Is the toner cartridge new?

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

2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

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

3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

4. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

5. Replace the imaging unit.

   Does the problem remain?

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

6. Perform the following tests:
    a. Make sure that the toner cartridge is properly installed and free of damage.
    b. Make sure that the smart chip contacts are free of corrosion and contamination.
    c. Make sure that the developer roller surface is free of damage.
    d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
    e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
7. Replace the toner cartridge.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
8. Perform the following tests:
    a. Check the HVPS toner contact spring for proper installation and damage.
    b. Check the toner smart chip contact for proper installation and damage.
    c. Check the toner contact spring for corrosion and contamination.

    Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

    - **Yes**:
      Go to step 10.
    - **No**:
      Go to the next step.
9. Perform the following tests:
    a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
    b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
    c. Reseat the smart chip contact cable.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
10. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

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

11. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
12. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
13. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
14. Perform the following tests:
    a. Clean the printhead lens.
    b. Reseat the two printhead cables at both ends.
    c. Perform a print test.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Perform the following tests:
    a. Make sure that the printhead cables are properly connected.
    b. Check the printhead for proper installation and damage.

    Is the printhead properly installed and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.
16. Replace the printhead. See .Printhead removal on page 259

    Does the problem remain?

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

17. Perform the following tests:
    a. Reseat the HVPS cables.
    b. Check the cables for damage.

    Are the cables free of damage?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 19.

18. Replace the damaged cable.

    Does the problem remain?

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

19. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

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

20. Replace the HVPS. See HVPS removal on page 246.

    > **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

    Does the problem remain?

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

Clipped pages or images check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.
2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.

d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

5. Replace the imaging unit.

   Does the problem remain?

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

6. Perform the following tests:
   a. Make sure that the toner cartridge is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the developer roller surface is free of damage.
   d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

   Does the problem remain?

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

7. Replace the toner cartridge.

   Does the problem remain?

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

8. Perform the following tests:
   a. Check the HVPS toner contact spring for proper installation and damage.
   b. Check the toner smart chip contact for proper installation and damage.
   c. Check the toner contact spring for corrosion and contamination.

   Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

9. Perform the following tests:
   a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
   b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.

c. Reseat the smart chip contact cable.

Does the problem remain?

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

10. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
11. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
12. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
13. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
14. Perform the following tests:
    a. Clean the printhead lens.
    b. Reseat the two printhead cables at both ends.
    c. Perform a print test.

    Does the problem remain?

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

15. Perform the following tests:
    a. Make sure that the printhead cables are properly connected.
    b. Check the printhead for proper installation and damage.

    Is the printhead properly installed and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.
16. Replace the printhead. See .Printhead removal on page 259

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
17. Perform the following tests:
    a. Reseat the HVPS cables.
    b. Check the cables for damage.

    Are the cables free of damage?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 19.
18. Replace the damaged cable.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
19. Perform the following tests:
    a. Check the HVPS characterization.
    b. Reseat the HVPS cables.
    c. Check the HVPS cables for proper installation and damage.
    d. Check the HVPS spring contact for proper connection to the board.

    Is the HVPS properly installed and free of damage?

    - **Yes**:
      Go to step 21.
    - **No**:
      Go to the next step.
20. Replace the HVPS. See HVPS removal on page 246.

> **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

Does the problem remain?

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

21. Perform the following tests:
    a. Reseat all the cables connected to the LVPS.
    b. Check the cables for proper connection and damage.
    c. Check the fuse for continuity.
    d. Check the electronic components on the LVPS for damage.
    e. Check the LVPS for proper installation and damage.

    Is the LVPS properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
22. Perform the following tests:
    a. Make sure that the LVPS is compatible with the fuser and the printer.
    b. Make sure that the fuser connector has voltage.
    c. Make sure that the correct power input voltage is used.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
23. Replace the LVPS. See LVPS removal on page 246.

    Does the problem remain?

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

Compressed images appear on prints check

1. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

      > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:

a. Check the imaging unit drive lever for proper installation and damage.
b. Open the right cover, and then check the lever assembly for proper installation and damage.

Is the imaging unit drive lever properly installed and free of damage?

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

5. Perform the following tests:
   a. Open the front door.
   b. Remove the imaging unit.
   c. Remove the toner cartridge from the imaging unit.
   d. Slightly close the front door, and then check if the lever actuates the imaging unit drive gear.

   Did the imaging unit drive gear actuate?

   - **Yes**:
     The problem is solved.
   - **No**:
     Contact the next level of support.
6. Perform the following tests:
   a. Remove the imaging unit.
   b. Check the coupling drive gear for proper installation and damage.
   c. Actuate the lever, and then check if the coupling drive gear engages.

   Is the coupling drive gear properly installed and free of damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.
7. Replace the main drive. See Main drive removal on page 249.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
8. Perform the following tests:
   a. Make sure that the transfer roller is properly installed and free of damage and contamination.
   b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
   c. Make sure that the transfer roller spring is properly installed.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

9. Perform the following tests:
   a. Reseat the transfer roller.
   b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
10. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
11. Make sure that the roller is free of dirt and contamination.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
12. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Input tray quick print > Tray 1 > Single

    b. Check if the clip in the middle of the solenoid turns when the paper is transported.

    Did the clip turn?

    - **Yes**:
      Go to step 14.
    - **No**:
      Go to the next step.
13. Reseat the deskew solenoid cable at both ends.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
14. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Printer diagnostics & adjustments > Motor tests

    b. Select **Motor (transport drive)**.

    Did the motor run?

    - **Yes**:

Go to the next step.
- **No**:
  Go to step 16.

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

       Input tray quick print > Tray 1 > Single

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

       Input tray quick print > Duplex > Single

    Does the problem remain?

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

16. Perform the following tests:
    a. Make sure that the main drive is properly installed and free of damage.
    b. Make sure that the main drive gears are properly installed.
    c. Make sure that the drive gears are in proper contact with the gear they are driving.

    Does the problem remain?

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

17. Replace the main drive. See Main drive removal on page 249.

    Does the problem remain?

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

Incorrect margins on prints check

1. Perform the following tests:
   a. Clear the paper path of debris and contamination.

b. Remove, and then insert the imaging unit and toner cartridge.

> **Note:** Shake the toner cartridge and imaging unit before inserting them.

c. Perform a POR.
d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

2. Perform the following tests:
   a. Make sure that the paper type is supported.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the paper has no damage or defects.
   d. Make sure that the paper guides are properly set.
   e. Make sure that the paper size setting in the duplex unit is properly set.

   Does the problem remain?

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

3. Perform the following tests:
   a. Check the tray insert for proper installation and damage.
   b. Make sure that the separator roller is free of dust and contamination.
   c. Check the lift plate for proper operation.
   d. Check the paper guides for proper operation.

   Is the tray insert properly installed and free of damage?

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

4. Replace the tray insert.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Registration adjust

   b. Select **Quick test** or **Duplex quick test**.
   c. Adjust the following margins:

- Top Margin
- Bottom Margin
- Left Margin
- Right Margin

Does the problem remain?

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

6. Perform the following tests:
   a. Clean the printhead lens.
   b. Reseat the two printhead cables at both ends.
   c. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. Make sure that the printhead cables are properly connected.
   b. Check the printhead for proper installation and damage.

   Is the printhead properly installed and free of damage?

   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.
8. Replace the printhead. See .Printhead removal on page 259

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
9. Perform the following tests:
   a. Check the controller board for proper installation and damage.
   b. Reseat all the cables on the controller board.

   Is the controller board properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.
10. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

    - **Yes**:

Contact the next level of support.

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

Toner rubs off check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.
2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

   > **Note:** Shake the toner cartridge and imaging unit before inserting them.

   c. Perform a POR.
   d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

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

4. Perform the following tests:
   a. Make sure that the paper type and size settings match the paper type and size set on the tray.
   b. Check the fuser cables for proper connection and damage.
   c. Check the fuser access door for damage.
   d. Check if the fuser gears are in proper contact with the drive gears.
   e. Make sure that the fuser is compatible with the LVPS.
   f. Check the fuser for proper installation and damage.

   Is the fuser properly installed and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests

   b. Select **Motor (transport)**.
   c. Open the rear door, and then check if the fuser exit rollers turn.
   d. Open the fuser access door, and then check if the hot rollers turn.

   Are the rollers properly working?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
6. Replace the fuser. See Fuser removal on page 255.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. Reseat all the cables connected to the LVPS.
   b. Check the cables for proper connection and damage.
   c. Check the fuse for continuity.
   d. Check the electronic components on the LVPS for damage.
   e. Check the LVPS for proper installation and damage.

   Is the LVPS properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.
8. Perform the following tests:
   a. Make sure that the LVPS is compatible with the fuser and the printer.
   b. Make sure that the fuser connector has voltage.
   c. Make sure that the correct power input voltage is used.

Does the problem remain?

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

9. Replace the LVPS. See LVPS removal on page 246.

   Does the problem remain?

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

Toner specks appear on prints check

1. Perform the following tests:
   a. Make sure that the toner cartridge is supported.
   b. Make sure that the toner cartridge and imaging unit are not empty.
   c. Check if the toner cartridge is new.

   Is the toner cartridge new?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 3.
2. Make sure to remove the packing material on the toner cartridge and imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Clear the paper path of debris and contamination.
   b. Remove, and then insert the imaging unit and toner cartridge.

> **Note:** Shake the toner cartridge and imaging unit before inserting them.

c. Perform a POR.
d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

Does the problem remain?

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

4. Perform the following tests:
   a. Make sure that the imaging unit is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the photoconductor roller surface is free of damage.
   d. Make sure that the imaging unit HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
6. Perform the following tests:
   a. Make sure that the toner cartridge is properly installed and free of damage.
   b. Make sure that the smart chip contacts are free of corrosion and contamination.
   c. Make sure that the developer roller surface is free of damage.
   d. Make sure that the toner HVPS contacts are free of corrosion and contamination.
   e. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Replace the toner cartridge.

   Does the problem remain?

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

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

8. Perform the following tests:
   a. Check the HVPS toner contact spring for proper installation and damage.
   b. Check the toner smart chip contact for proper installation and damage.
   c. Check the toner contact spring for corrosion and contamination.

   Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?

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

9. Perform the following tests:
   a. Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.
   b. Make sure that the HVPS toner contact spring is in proper contact with the HVPS.
   c. Reseat the smart chip contact cable.

   Does the problem remain?

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

10. Perform the following tests:
    a. Check the imaging unit contact spring for damage and contamination.
    b. Make sure that the imaging unit contact spring is in proper contact with the HVPS.

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

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

11. Perform the following tests:
    a. Make sure that the transfer roller is properly installed and free of damage and contamination.
    b. Make sure that the HVPS contact spring is properly connected to the transfer roller.
    c. Make sure that the transfer roller spring is properly installed.
    d. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

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

12. Perform the following tests:
    a. Reseat the transfer roller.
    b. Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

    Does the problem remain?

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

13. Replace the transfer roller. See Transfer roller removal on page 253.

    Does the problem remain?

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

14. Perform the following tests:
    a. Clean the printhead lens.
    b. Reseat the two printhead cables at both ends.
    c. Perform a print test.

    Does the problem remain?

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

15. Perform the following tests:
    a. Make sure that the printhead cables are properly connected.
    b. Check the printhead for proper installation and damage.

    Is the printhead properly installed and free of damage?

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

16. Replace the printhead. See .Printhead removal on page 259

    Does the problem remain?

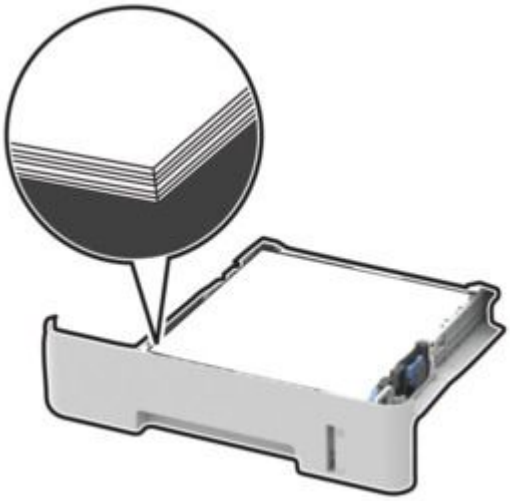
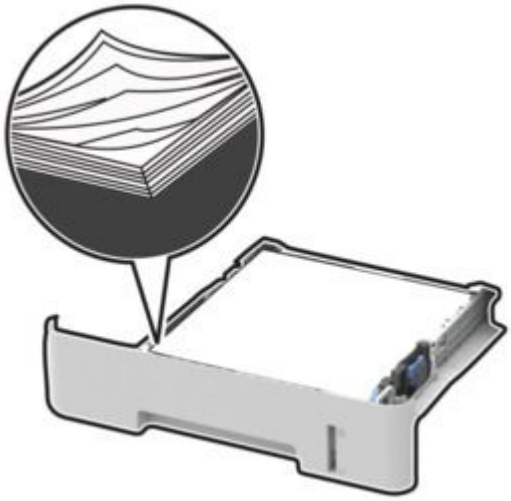
    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.

Paper jams

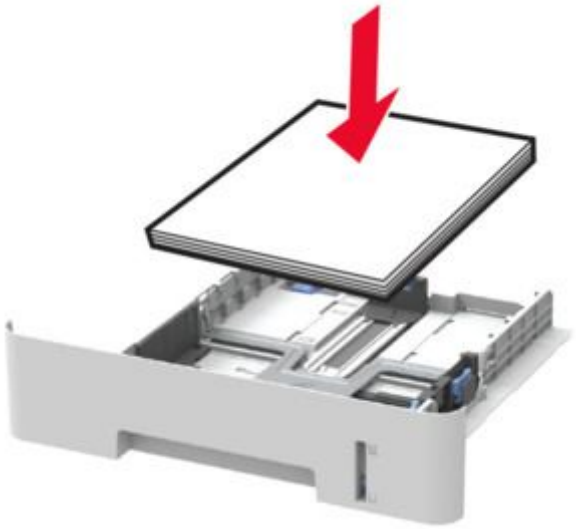
Avoiding jams

Load paper properly

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

Correct loading of paper	Incorrect loading of paper
	

- Do not load or remove a tray while the printer is printing.
- Do not load too much paper. Make sure that the stack height is below the maximum paper fill indicator.
- Do not slide paper into the tray. Load paper as shown in the illustration.



- Make sure that the paper guides are positioned correctly and are not pressing tightly against the paper or envelopes.
- Push the tray firmly into the printer after loading paper.

Use recommended paper

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

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

200 paper jams

200 paper jam messages

Error code	Description	Action
200.04	Paper fed from the manual feeder cleared the sensor (input sensor S3) earlier than expected.	See Sensor (input sensor S3) service check on page 109.
200.05	Paper fed from the manual feeder never cleared the sensor (input sensor S3).	
200.06	Paper fed from the manual feeder was not picked. Paper did not reach the sensor (input sensor S3).	
200.07	Paper reached the sensor (input sensor S3) earlier than expected.	
200.12	Paper fed from tray 1 arrived at the sensor (input sensor S3) earlier than expected.	
200.13	Paper fed from tray 1 was detected later than expected or was never detected at the sensor (input sensor S3).	
200.14	Paper fed from tray 1 cleared the sensor (input sensor S3) earlier than expected.	
200.15	Paper fed from tray 1 never cleared the sensor (input sensor S3).	
200.91	Paper remains on the sensor (input sensor S3) during the warm up sequence.	See Sensor (input sensor S3) static jam service check on page 107.

Sensor (input sensor S3) static jam service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the duplex unit is properly inserted.
   d. Make sure that the paper size setting in the duplex unit matches the printer setting.
   e. Make sure that the front and rear doors are fully closed.
   f. Make sure that the output bin is free from obstructions.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Reseat the sensor cable.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   c. Find the sensor (staging sensor S2).

   Does the sensor status change while toggling the sensor?

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

5. Perform the following tests:
    a. Check the sensor for proper installation and damage.
    b. Check the alignment with the sensor flag.
    c. Check the sensor cable for proper connection and damage.

    Is the sensor properly installed and free of damage?

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

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
7. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Printer diagnostics & adjustment > Sensor tests

    b. Find the following sensors:

       - Sensor (media present in tray1 S1)
       - Sensor (input sensor S3)
       - Sensor (fuser exit sensor S4)

    Does the sensor status change while toggling the sensor?

    - **Yes**:
      Go to step 10.
    - **No**:
      Go to the next step.
8. Perform the following tests:
    a. Check the sensor flags for proper installation and damage.
    b. Check the sensor flags for proper alignment with the sensors.
    c. Check the sensor flag springs for proper installation and damage.

    Are the sensor flags properly installed and free of damage?

    - **Yes**:
      Go to step 10.
    - **No**:
      Go to the next step.
9. Replace the damaged sensor flag.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
10. Check the cables for proper connection and damage.

Are the cables properly connected and free of damage?

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

11. Replace the damaged cable.

    Does the problem remain?

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

12. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

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

13. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Sensor (input sensor S3) service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the duplex unit is properly inserted.
   d. Make sure that the paper size setting in the duplex unit matches the printer setting.
   e. Make sure that the front and rear doors are fully closed.
   f. Make sure that the output bin is free from obstructions.

   Does the problem remain?

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

2. Perform the following tests:

a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
b. Clear all rollers of dirt and contamination.

Does the problem remain?

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

3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Reseat the sensor cable.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   c. Find the sensor (staging sensor S2)**.**

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
5. Perform the following tests:
   a. Check the sensor for proper installation and damage.
   b. Check the alignment with the sensor flag.
   c. Check the sensor cable for proper connection and damage.

   Is the sensor properly installed and free of damage?

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

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:

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

Printer diagnostics & adjustment > Sensor tests

b. Find the following sensors:

- Sensor (media present in tray1 S1)
- Sensor (input sensor S3)
- Sensor (fuser exit sensor S4)

Does the sensor status change while toggling the sensor?

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

8. Perform the following tests:
   a. Check the sensor flags for proper installation and damage.
   b. Check the sensor flags for proper alignment with the sensors.
   c. Check the sensor flag springs for proper installation and damage.

   Are the sensor flags properly installed and free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.
9. Replace the damaged sensor flag.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
10. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

    Input tray quick print > Tray 1 > Single

    b. Check if the clip in the middle of the solenoid turns when the paper is transported.

    Did the clip turn?

    - **Yes**:
      Go to step 12.
    - **No**:
      Go to the next step.
11. Reseat the deskew solenoid cable at both ends.

    Does the problem remain?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      The problem is solved.
12. Check the cables for proper connection and damage.

Are the cables properly connected and free of damage?

- **Yes**:
  Go to step 14.
- **No**:
  Go to the next step.

13. Replace the damaged cable.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests

    b. Select **Motor (transport drive)**.

    Did the motor run?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 16.

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

       Input tray quick print > Tray 1 > Single

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

       Input tray quick print > Duplex > Single

    Does the problem remain?

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

16. Perform the following tests:
    a. Make sure that the main drive is properly installed and free of damage.
    b. Make sure that the main drive gears are properly installed.
    c. Make sure that the drive gears are in proper contact with the gear they are driving.

    Does the problem remain?

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

17. Replace the main drive. See Main drive removal on page 249.

    Does the problem remain?

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

18. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

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

19. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

202 paper jams

202 paper jam messages

Error code	Description	Action
202.03	Paper fed from the manual feeder never arrived at the sensor (fuser exit sensor S4).	See Sensor (fuser exit sensor S4) service check on page 114.
202.05	Paper fed from the manual feeder never cleared the sensor (fuser exit sensor S4).	See Sensor (fuser exit sensor S4) never cleared service check on page 118.
202.13	Paper fed from tray 1 never arrived at the sensor (fuser exit sensor S4).	See Sensor (fuser exit sensor S4) service check on page 114.
202.15	Paper fed from tray 1 never arrived at the sensor (fuser exit sensor S4).	See Sensor (fuser exit sensor S4) never cleared service check on page 118.
202.91	Paper remains on the sensor (fuser exit sensor S4) during the warm up sequence.	See Sensor (fuser exit sensor S4) static jam service check on page 123.

Error code	Description	Action
202.93	Paper never arrive at the sensor (fuser exit sensor S4) which triggered a flush action.	See Sensor (fuser exit sensor S4) service check on page 114.

Sensor (fuser exit sensor S4) service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the duplex unit is properly inserted.
   d. Make sure that the paper size setting in the duplex unit matches the printer setting.
   e. Make sure that the front and rear doors are fully closed.
   f. Make sure that the output bin is free from obstructions.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (fuser exit sensor S4).

Does the sensor status change while toggling the sensor?

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

5. Perform the following tests:
   a. Make sure that the fuser exit sensor cable is properly connected and free of damage.
   b. Make sure that the sensor is properly aligned with the sensor flag.
   c. Check the sensor for proper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
6. Replace the sensor. See Sensor (fuser exit) removal on page 261.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustment > Sensor tests

   b. Find the following sensors:

      - Sensor (media present in tray1 S1)
      - Sensor (input sensor S3)
      - Sensor (fuser exit sensor S4)

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.
8. Perform the following tests:
   a. Check the sensor flags for proper installation and damage.
   b. Check the sensor flags for proper alignment with the sensors.
   c. Check the sensor flag springs for proper installation and damage.

   Are the sensor flags properly installed and free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.
9. Replace the damaged sensor flag.

Does the problem remain?

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

10. Check the rear door for proper installation and damage.

    Is the door properly installed and free of damage?

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

11. Replace the rear door. See .Bottom rear door removal on page 255

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests

    b. Select **Motor (transport drive)**.
    c. Open the rear door, and then check if the fuser exit rollers turn.
    d. Open the fuser access door, and then check if the hot rollers turn.

    Are the rollers properly working?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 14.

13. Perform the following tests:
    a. Check the fuser cables for proper connection and damage.
    b. Check the fuser access door for damage.
    c. Check if the fuser gears are in proper contact with the drive gears.
    d. Make sure that the fuser is compatible with the LVPS.
    e. Check the fuser for proper installation and damage.

    Is the fuser properly installed and free of damage?

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

14. Replace the fuser. See Fuser removal on page 255.

    Does the problem remain?

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

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

15. Check the cables for proper connection and damage.

    Are the cables properly connected and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

16. Replace the damaged cable.

    Does the problem remain?

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

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

       Input tray quick print > Tray 1 > Single

    b. Check if the clip in the middle of the solenoid turns when the paper is transported.

    Did the clip turn?

    - **Yes**:
      Go to step 19.
    - **No**:
      Go to the next step.

18. Reseat the deskew solenoid cable at both ends.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests

    b. Select **Motor (transport drive)**.

    Did the motor run?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 21.

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

       Input tray quick print > Tray 1 > Single

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

Input tray quick print > Duplex > Single

Does the problem remain?

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

21. Perform the following tests:
    a. Make sure that the main drive is properly installed and free of damage.
    b. Make sure that the main drive gears are properly installed.
    c. Make sure that the drive gears are in proper contact with the gear they are driving.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
22. Replace the main drive. See Main drive removal on page 249.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
23. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
24. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Sensor (fuser exit sensor S4) never cleared service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.

c. Make sure that the duplex unit is properly inserted.
d. Make sure that the paper size setting in the duplex unit matches the printer setting.
e. Make sure that the front and rear doors are fully closed.
f. Make sure that the output bin is free from obstructions.

Does the problem remain?

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

2. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (fuser exit sensor S4).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
5. Perform the following tests:
   a. Make sure that the fuser exit sensor cable is properly connected and free of damage.
   b. Make sure that the sensor is properly aligned with the sensor flag.
   c. Check the sensor for proper installation and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 7.

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

6. Replace the sensor. See Sensor (fuser exit) removal on page 261.

   Does the problem remain?

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

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

      Printer diagnostics & adjustment > Sensor tests

   b. Find the following sensors:

      - Sensor (media present in tray1 S1)
      - Sensor (input sensor S3)
      - Sensor (fuser exit sensor S4)

   Does the sensor status change while toggling the sensor?

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

8. Perform the following tests:
   a. Check the sensor flags for proper installation and damage.
   b. Check the sensor flags for proper alignment with the sensors.
   c. Check the sensor flag springs for proper installation and damage.

   Are the sensor flags properly installed and free of damage?

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

9. Replace the damaged sensor flag.

   Does the problem remain?

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

10. Check the rear door for proper installation and damage.

    Is the door properly installed and free of damage?

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

11. Replace the rear door. See .Bottom rear door removal on page 255

Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests

    b. Select **Motor (transport drive)**.
    c. Open the rear door, and then check if the fuser exit rollers turn.
    d. Open the fuser access door, and then check if the hot rollers turn.

    Are the rollers properly working?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 14.

13. Perform the following tests:
    a. Check the fuser cables for proper connection and damage.
    b. Check the fuser access door for damage.
    c. Check if the fuser gears are in proper contact with the drive gears.
    d. Make sure that the fuser is compatible with the LVPS.
    e. Check the fuser for proper installation and damage.

    Is the fuser properly installed and free of damage?

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

14. Replace the fuser. See Fuser removal on page 255.

    Does the problem remain?

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

15. Check the cables for proper connection and damage.

    Are the cables properly connected and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.

16. Replace the damaged cable.

    Does the problem remain?

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

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

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

       Printer diagnostics & adjustment > Motor tests

    b. Select **Motor (transport)**.
    c. Check if the exit roller turns.

    Did the exit roller turn?

    - **Yes**:
      Go to step 20.
    - **No**:
      Go to the next step.

18. Perform the following tests:
    a. Make sure that the redrive gears are in proper contact with the printer drive gears.
    b. Check the redrive gears for proper installation and damage.
    c. Check the roller for wear, contamination, and damage.

    Is the redrive properly installed and free of damage?

    - **Yes**:
      Go to step 20.
    - **No**:
      Go to the next step.

19. Replace the redrive. See .Redrive removal on page 255

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests

    b. Select **Motor (transport drive)**.

    Did the motor run?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 22.

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

       Input tray quick print > Tray 1 > Single

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

       Input tray quick print > Duplex > Single

Does the problem remain?

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

22. Perform the following tests:
    a. Make sure that the main drive is properly installed and free of damage.
    b. Make sure that the main drive gears are properly installed.
    c. Make sure that the drive gears are in proper contact with the gear they are driving.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
23. Replace the main drive. See Main drive removal on page 249.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
24. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
25. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Sensor (fuser exit sensor S4) static jam service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the duplex unit is properly inserted.
   d. Make sure that the paper size setting in the duplex unit matches the printer setting.

e. Make sure that the front and rear doors are fully closed.
f. Make sure that the output bin is free from obstructions.

Does the problem remain?

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

2. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   b. Find the sensor (fuser exit sensor S4).

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
5. Perform the following tests:
   a. Make sure that the fuser exit sensor cable is properly connected and free of damage.
   b. Make sure that the sensor is properly aligned with the sensor flag.
   c. Check the sensor for proper installation and damage.

   Is the sensor properly installed and free of damage?

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

6. Replace the sensor. See Sensor (fuser exit) removal on page 261.

   Does the problem remain?

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

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

      Printer diagnostics & adjustment > Sensor tests

   b. Find the following sensors:

      - Sensor (media present in tray1 S1)
      - Sensor (input sensor S3)
      - Sensor (fuser exit sensor S4)

   Does the sensor status change while toggling the sensor?

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

8. Perform the following tests:
   a. Check the sensor flags for proper installation and damage.
   b. Check the sensor flags for proper alignment with the sensors.
   c. Check the sensor flag springs for proper installation and damage.

   Are the sensor flags properly installed and free of damage?

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

9. Replace the damaged sensor flag.

   Does the problem remain?

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

10. Check the cables for proper connection and damage.

    Are the cables properly connected and free of damage?

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

11. Replace the damaged cable.

    Does the problem remain?

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

12. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
13. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

206 paper jams

206 paper jam messages

Error code	Description	Action
206.15	Paper fed from tray remains on the sensor (fuser exit sensor S4).	See Sensor (staging sensor S2): Paper failed to clear service check on page 126.
206.16	Paper fed from tray 1 never arrived at the sensor (staging sensor S2).	See Sensor (staging sensor S2): Paper failed to arrive service check on page 130.

Sensor (staging sensor S2): Paper failed to clear service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the duplex unit is properly inserted.
   d. Make sure that the paper size setting in the duplex unit matches the printer setting.
   e. Make sure that the front and rear doors are fully closed.
   f. Make sure that the output bin is free from obstructions.

   Does the problem remain?

   - **Yes**:

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

2. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Reseat the sensor cable.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   c. Find the sensor (staging sensor S2)**.**

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
5. Perform the following tests:
   a. Check the sensor for proper installation and damage.
   b. Check the alignment with the sensor flag.
   c. Check the sensor cable for proper connection and damage.

   Is the sensor properly installed and free of damage?

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

   Does the problem remain?

   - **Yes**:

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

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

      Printer diagnostics & adjustment > Sensor tests

   b. Find the following sensors:
      - Sensor (media present in tray1 S1)
      - Sensor (input sensor S3)
      - Sensor (fuser exit sensor S4)

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.
8. Perform the following tests:
   a. Check the sensor flags for proper installation and damage.
   b. Check the sensor flags for proper alignment with the sensors.
   c. Check the sensor flag springs for proper installation and damage.

   Are the sensor flags properly installed and free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.
9. Replace the damaged sensor flag.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
10. Check the cables for proper connection and damage.

    Are the cables properly connected and free of damage?

    - **Yes**:
      Go to step 12.
    - **No**:
      Go to the next step.
11. Replace the damaged cable.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
12. Perform the following tests:

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

Input tray quick print > Tray 1 > Single

b. Check if the clip in the middle of the solenoid turns when the paper is transported.

Did the clip turn?

- **Yes**:
  Go to step 14.
- **No**:
  Go to the next step.

13. Reseat the deskew solenoid cable at both ends.

Does the problem remain?

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

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

    Printer diagnostics & adjustments > Motor tests

    b. Select **Motor (transport drive)**.

Did the motor run?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 16.

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

    Input tray quick print > Tray 1 > Single

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

    Input tray quick print > Duplex > Single

Does the problem remain?

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

16. Perform the following tests:
    a. Make sure that the main drive is properly installed and free of damage.
    b. Make sure that the main drive gears are properly installed.
    c. Make sure that the drive gears are in proper contact with the gear they are driving.

Does the problem remain?

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

The problem is solved.

17. Replace the main drive. See Main drive removal on page 249.

    Does the problem remain?

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

18. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

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

19. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Sensor (staging sensor S2): Paper failed to arrive service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the duplex unit is properly inserted.
   d. Make sure that the paper size setting in the duplex unit matches the printer setting.
   e. Make sure that the front and rear doors are fully closed.
   f. Make sure that the output bin is free from obstructions.

   Does the problem remain?

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

2. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

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

3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

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

4. Perform the following tests:
   a. Reseat the sensor cable.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   c. Find the sensor (staging sensor S2)**.**

   Does the sensor status change while toggling the sensor?

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

5. Perform the following tests:
   a. Check the sensor for proper installation and damage.
   b. Check the alignment with the sensor flag.
   c. Check the sensor cable for proper connection and damage.

   Is the sensor properly installed and free of damage?

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

6. Replace the sensor.

   Does the problem remain?

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

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

      Printer diagnostics & adjustment > Sensor tests

   b. Find the following sensors:

- Sensor (media present in tray1 S1)
- Sensor (input sensor S3)
- Sensor (fuser exit sensor S4)

Does the sensor status change while toggling the sensor?

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

8. Perform the following tests:
   a. Check the sensor flags for proper installation and damage.
   b. Check the sensor flags for proper alignment with the sensors.
   c. Check the sensor flag springs for proper installation and damage.

   Are the sensor flags properly installed and free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.
9. Replace the damaged sensor flag.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
10. Check the cables for proper connection and damage.

    Are the cables properly connected and free of damage?

    - **Yes**:
      Go to step 12.
    - **No**:
      Go to the next step.
11. Replace the damaged cable.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
12. Perform the following tests:
    a. Clear the pick rollers of contamination.
    b. Reseat the pick rollers.
    c. Enter the Diagnostics menu, and then navigate to:

       Input tray quick print > Tray 1 > Single.

    Does the problem remain?

    - **Yes**:

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

13. Perform the following tests:
    a. Check the pick rollers for proper installation and damage.
    b. Check the shaft of the pick rollers for damage.

    Are the pick roller properly installed and free of damage?

    - **Yes**:
      Go to step 15.
    - **No**:
      Go to the next step.
14. Replace the pick rollers. See Pick rollers removal on page 264.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Perform the following tests:
    a. Reseat the pick solenoid cable.
    b. Enter the Diagnostics menu, and then navigate to:

       Printer diagnostics & adjustments > Motor tests

    c. Select **Feed solenoid.**
    d. Check if the pick solenoid actuates.

    Did the pick solenoid actuate?

    - **Yes**:
      Go to step 18.
    - **No**:
      Go to the next step.
16. Check the pick solenoid for proper installation and damage.

    Is the pick solenoid properly installed and free of damage?

    - **Yes**:
      Go to step 18.
    - **No**:
      Go to the next step.
17. Replace the pick solenoid. See Pick solenoid removal on page 250.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
18. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Printer diagnostics & adjustments > Motor tests

b. Select **Motor (transport drive)**.

Did the motor run?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 20.

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

       Input tray quick print > Tray 1 > Single

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

       Input tray quick print > Duplex > Single

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
20. Perform the following tests:
    a. Make sure that the main drive is properly installed and free of damage.
    b. Make sure that the main drive gears are properly installed.
    c. Make sure that the drive gears are in proper contact with the gear they are driving.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
21. Replace the main drive. See Main drive removal on page 249.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
22. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
23. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

232 paper jams

232 paper jam messages

Error code	Description	Action
232.13	Paper fed from tray 1 never arrived at the sensor (input sensor S3) during a duplex print job.	See Sensor (input sensor S3): Duplex failure service check on page 135.
232.15	Paper fed from tray 1 never cleared the sensor (input sensor S3) during a duplex print job.	

Sensor (input sensor S3): Duplex failure service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the duplex unit is properly inserted.
   d. Make sure that the paper size setting in the duplex unit matches the printer setting.
   e. Make sure that the front and rear doors are fully closed.
   f. Make sure that the output bin is free from obstructions.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

Input tray quick print > Tray 1 > Single

Does the problem remain?

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

4. Perform the following tests:
   a. Reseat the sensor cable.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   c. Find the sensor (staging sensor S2)**.**

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
5. Perform the following tests:
   a. Check the sensor for proper installation and damage.
   b. Check the alignment with the sensor flag.
   c. Check the sensor cable for proper connection and damage.

   Is the sensor properly installed and free of damage?

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

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustment > Sensor tests

   b. Find the following sensors:

      - Sensor (media present in tray1 S1)
      - Sensor (input sensor S3)
      - Sensor (fuser exit sensor S4)

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 10.

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

8. Perform the following tests:
   a. Check the sensor flags for proper installation and damage.
   b. Check the sensor flags for proper alignment with the sensors.
   c. Check the sensor flag springs for proper installation and damage.

   Are the sensor flags properly installed and free of damage?

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

9. Replace the damaged sensor flag.

   Does the problem remain?

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

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

       Input tray quick print > Tray 1 > Single

    b. Check if the clip in the middle of the solenoid turns when the paper is transported.

    Did the clip turn?

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

11. Reseat the deskew solenoid cable at both ends.

    Does the problem remain?

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

12. Perform the following tests:
    a. Clear the duplex paper path of obstructions.
    b. Load the correct paper in the tray.
    c. Make sure that the paper size setting in the duplex unit matches the paper loaded in the tray.
    d. Enter the Diagnostics menu, and then navigate to:

       Input tray quick print > Tray 1 > Duplex

    Does the problem remain?

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

The problem is solved.

13. Perform the following tests:
    a. Reseat the duplex unit.
    b. Check the duplex unit gears for damage.
    c. Check the rollers and belts for wear and contamination.

    Is the duplex unit properly installed and free of damage?

    - **Yes**:
      Go to step 15.
    - **No**:
      Go to the next step.
14. Replace the duplex unit.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Check the cables for proper connection and damage.

    Are the cables properly connected and free of damage?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.
16. Replace the damaged cable.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
17. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Printer diagnostics & adjustments > Motor tests

    b. Select **Motor (transport drive)**.

    Did the motor run?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 19.
18. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Input tray quick print > Tray 1 > Single

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

       Input tray quick print > Duplex > Single

Does the problem remain?

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

19. Perform the following tests:
    a. Make sure that the main drive is properly installed and free of damage.
    b. Make sure that the main drive gears are properly installed.
    c. Make sure that the drive gears are in proper contact with the gear they are driving.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
20. Replace the main drive. See Main drive removal on page 249.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
21. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
22. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

User attendance messages

Non-Lexmark supply

The printer has detected a non-Lexmark supply or part installed in the printer.
The Lexmark printer is designed to function best with genuine Lexmark supplies and parts. Use of third-party supplies or parts may affect the performance, reliability, or life of the printer and its imaging components.

All life indicators are designed to function with Lexmark supplies and parts and may deliver unpredictable results if third-party supplies or parts are used. Imaging component usage beyond the intended life may damage the Lexmark printer or associated components.

> **Warning—Potential Damage**
> Use of third-party supplies or parts can affect warranty coverage. Damage caused by the use of third-party supplies or parts may not be covered by the warranty.

If a customer accepts any and all of these risks and proceeds with the use of non-genuine supplies or parts in the printer, then instruct the customer to press and hold **X** and # simultaneously from the control panel for 15 seconds. Do not perform this action yourself.
If a customer does not want to accept these risks, then remove the third-party supply or part from the printer and install a genuine Lexmark supply or part. For more information, see Using genuine Lexmark parts and supplies.
If the printer does not print after pressing and holding **X** and # simultaneously for 15 seconds, then instruct the customer to reset the supply usage counter.

1. From the control panel, navigate to:

   Settings > Device > Maintenance > Config Menu > Supply Usage And Counters
2. Select the part or supply to reset.
3. Read the warning message, and then select **Continue**.
4. Press and hold **X** and # simultaneously for 15 seconds to clear the message.

> **Note:** If the customer is unable to reset the supply usage counters, then the customer must return the item to the place of purchase.

> **Warning—Potential Damage**
> Supplies and parts without Return Program agreement terms may be reset and remanufactured.

8–12 user attendance messages

8–12 user attendance messages

Error code	Description	Action
8.01	Close the door, cover, or latch at location A.	See Door switch service check on page 196.
8.02	Close the door, cover, or latch at location B.	
9	Auto reboot.	See Auto reboot service check on page 143.
11.1	Load tray 1.	See Load tray 1 with A4 plain paper service check on page 197.

Error code	Description	Action
11.8	Load the manual feeder.	See Manual feeder service check on page 141.
12.1	Change the paper in tray 1.	See Load tray 1 with A4 plain paper service check on page 197.
12.8	Change the paper in the manual feeder.	See Manual feeder service check on page 141.

Manual feeder service check

1. Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Shake the toner cartridge.
   b. Clean the toner cartridge smart chip contacts, and then check the contacts for damage.
   c. Clean the toner cartridge spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Replace the toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Shake the imaging unit.
   b. Clean the imaging unit smart chip contacts, and then check the contacts for damage.
   c. Clean the imaging unit spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

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

5. Check the smart chip for proper installation and damage.

   Is the smart chip properly installed and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
6. Replace the imaging unit.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. From the control panel, navigate to **Settings > Reports > Device > Device statistics**.
   b. Check if the install date reflects the date that you replaced the cartridge.
   c. Check the supply level of the toner cartridge.
   d. Check the supply level of the imaging unit.

   Is there sufficient supply level, and does the install date reflect the cartridge replacement date?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 10.
8. Check the cables for proper connection and damage.

   Are the cables properly connected and free of damage?

   - **Yes**:
     Go to step 10.
   - **No**:
     Go to the next step.
9. Replace the damaged cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
10. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

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

11. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Auto reboot service check

1. Perform the following tests:
   a. Turn off the printer.
   b. Unplug the power cord.
   c. Wait for 10 seconds, and then plug the power cord.
   d. Turn on the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Upgrade the firmware.

      > **Note:** Contact your next level of support for the correct firmware level to use.

   b. Perform a POR.
   c. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Check the cables for proper connection and damage.

   Are the cables properly connected and free of damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.
4. Replace the damaged cable.

   Does the problem remain?

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

The problem is solved.

5. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.
6. Replace the controller board. See .Controller board removal on page 244

   Does the problem remain?

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

31–33 user attendance messages

31–33 user attendance messages

Error code	Description	Action
31.40	Missing black toner cartridge.	See Photoconductor and toner cartridge service check on page 144.
31.40C	Black toner smart chip or sensor failure.	See Photoconductor and toner cartridge service check on page 144.
31.60C	Black imaging unit, photoconductor smart chip, or sensor failure.	See Black imaging unit, photoconductor smart chip, or sensor problem service check on page 146.
32.40	Unsupported toner cartridge.	See Unsupported imaging unit or toner cartridge service check on page 149.
32.60	Unsupported imaging unit.	
33	Non-Lexmark Return Program (NLRP) codes.	See Photoconductor and toner cartridge service check on page 144.

Photoconductor and toner cartridge service check

1. Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.

   Does the problem remain?

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

2. Perform the following tests:
   a. Shake the toner cartridge.
   b. Clean the toner cartridge smart chip contacts, and then check the contacts for damage.
   c. Clean the toner cartridge spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

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

3. Replace the toner cartridge.

   Does the problem remain?

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

4. Perform the following tests:
   a. Shake the imaging unit.
   b. Clean the imaging unit smart chip contacts, and then check the contacts for damage.
   c. Clean the imaging unit spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

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

5. Check the smart chip for proper installation and damage.

   Is the smart chip properly installed and free of damage?

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

6. Replace the imaging unit.

   Does the problem remain?

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

7. Perform the following tests:
   a. From the control panel, navigate to **Settings > Reports > Device > Device statistics**.

b. Check if the install date reflects the date that you replaced the cartridge.
c. Check the supply level of the toner cartridge.
d. Check the supply level of the imaging unit.

Is there sufficient supply level, and does the install date reflect the cartridge replacement date?

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

8. Check the cables for proper connection and damage.

   Are the cables properly connected and free of damage?

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

9. Replace the damaged cable.

   Does the problem remain?

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

10. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

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

11. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Black imaging unit, photoconductor smart chip, or sensor problem service check

1. Perform the following tests:
   a. Open the front door.
   b. Reseat the imaging unit and toner cartridge.
   c. Close the front door.

Does the problem remain?

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

2. Perform the following tests:
   a. Shake the toner cartridge.
   b. Clean the toner cartridge smart chip contacts, and then check the contacts for damage.
   c. Clean the toner cartridge spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Replace the toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Shake the imaging unit.
   b. Clean the imaging unit smart chip contacts, and then check the contacts for damage.
   c. Clean the imaging unit spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Check the smart chip for proper installation and damage.

   Is the smart chip properly installed and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
6. Replace the imaging unit.

   Does the problem remain?

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

7. Perform the following tests:
   a. Check the front door for proper installation and damage.
   b. Check the front door flag for damage.
   c. Check the front door hinge for damage.
   d. Check if the front door properly closes.

   Is the front door properly installed and free of damage?

   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.
8. Replace the front door. See .Front door removal on page 252

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
9. Check the front door link for proper installation and damage.

   Is the front door link properly installed and free of damage?

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

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
11. Check the cables for proper connection and damage.

    Are the cables properly connected and free of damage?

    - **Yes**:
      Go to step 13.
    - **No**:
      Go to the next step.
12. Replace the damaged cable.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
13. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

Is the controller board properly installed and free of damage?

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

14. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Unsupported imaging unit or toner cartridge service check

1. Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.

   Does the problem remain?

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

2. Perform the following tests:
   a. Shake the toner cartridge.
   b. Clean the toner cartridge smart chip contacts, and then check the contacts for damage.
   c. Clean the toner cartridge spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

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

3. Replace the toner cartridge.

   Does the problem remain?

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

4. Perform the following tests:
   a. Shake the imaging unit.
   b. Clean the imaging unit smart chip contacts, and then check the contacts for damage.
   c. Clean the imaging unit spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

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

5. Check the smart chip for proper installation and damage.

   Is the smart chip properly installed and free of damage?

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

6. Replace the imaging unit.

   Does the problem remain?

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

7. Check the cables for proper connection and damage.

   Are the cables properly connected and free of damage?

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

8. Replace the damaged cable.

   Does the problem remain?

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

9. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

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

10. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

34–41 user attendance messages

34–41 user attendance messages

Error code	Description	Action
34	Paper size mismatch (too short or too narrow).	See Load tray 1 with A4 plain paper service check on page 197.
37.3	Insufficient memory.	See Insufficient memory service check.
38.1	Memory is full.	
39.1	Complex page.	
41.60	Toner cartridge and imaging unit mismatch.	See Unsupported imaging unit or toner cartridge service check on page 149.

Insufficient memory service check

1. Close all held jobs.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Turn off the printer.
   b. Unplug the power cord.
   c. Wait for 10 seconds, and then plug the power cord.
   d. Turn on the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Resend a print job or a scan job.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Reduce the number of pages to print.
   b. Reduce the file size of the print job.

Does the problem remain?

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

5. Perform the following tests:
   a. Upgrade the firmware.

      > **Note:** Contact your next level of support for the correct firmware level to use.

   b. Perform a POR.
   c. Perform a print test.

   Does the problem remain?

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

6. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

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

7. Replace the controller board. See .Controller board removal on page 244

   Does the problem remain?

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

42 user attendance messages

42 user attendance messages

> **Note:** The .xy in the error code after 42 indicates the printer and cartridge regions. Where *x* is the printer region and *y* is the cartridge region. The numeric value is from 0 to 6. See the following table for the *xy* definitions:

Region	Numeric code
The printer is not regionalized and matches any regionalized cartridge.	0y
The cartridge is not regionalized and only matches with printer region 0.	x0
North America (United States, Canada)	1
European Economic Area, Western Europe, Nordic countries, Switzerland	2
Asia Pacific	3
Latin America	4
Rest of Europe, Middle East, Africa	5
Australia, New Zealand	6
Invalid region	9

Error code	Description	Action
42.01	Toner cartridge region does not match the printer region.	See Toner cartridge service check on page 155.
42.02		
42.03		
42.04		
42.05		
42.09		
42.10		
42.12		
42.13		
42.14		
42.15		
42.19		
42.20		
42.21		
42.23		
42.24		
42.25		
42.29		
42.30		

Error code	Description	Action
42.31	Toner cartridge region does not match the printer region.	See Toner cartridge service check on page 155.
42.32		
42.34		
42.35		
42.39		
42.40		
42.41		
42.42		
42.43		
42.45		
42.49		
42.50		
42.51		
42.52		
42.53		
42.54		
42.59		
42.60	Toner cartridge region does not match the printer region.	See Toner cartridge service check on page 155.
42.60K		
42.61		
42.61K		
42.62		
42.62K		
42.63		
42.63K		
42.64		
42.64K		
42.90	Toner cartridge region does not match the printer region.	See Toner cartridge service check on page 155.
42.91		
42.92		
42.93		

Error code	Description	Action
42.94		
42.95		

Toner cartridge service check

1. Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Shake the toner cartridge.
   b. Clean the toner cartridge smart chip contacts, and then check the contacts for damage.
   c. Clean the toner cartridge spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Make sure that the toner cartridge is changed from shipped with equipment (SWE) toner to a compatible toner.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Reset the printer configuration. See Restoring the printer configuration on page 225.

   Does the problem remain?

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

55 user attendance messages

55 user attendance messages

Error code	Description	Action
55.1	Unsupported USB device.	See Unsupported USB device service check on page 156.
55.2	Unsupported USB hub.	

Unsupported USB device service check

1. Perform the following tests:
   a. Turn off the printer.
   b. Unplug the power cord.
   c. Wait for 10 seconds, and then plug the power cord.
   d. Turn on the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Check if the flash drive is set to the correct file system.
   b. Check if the flash drive is detected on the computer.

   Is the flash drive set to the correct file system, and is it detected?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.
3. Format the flash drive to the correct file system.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. From the control panel, go to **Settings > Device > Restore factory defaults**.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Check the cables for proper connection and damage.

Are the cables properly connected and free of damage?

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

6. Replace the damaged cable.

   Does the problem remain?

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

7. Perform the following tests:
   a. Upgrade the firmware.

      > **Note:** Contact your next level of support for the correct firmware level to use.

   b. Perform a POR.
   c. Perform a print test.

   Does the problem remain?

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

8. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

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

9. Replace the controller board. See .Controller board removal on page 244

   Does the problem remain?

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

84 user attendance messages

84 user attendance messages

Error code	Description	Action
84.01	The imaging unit is nearly low.	See Toner cartridge or imaging unit low service check on page 158.
84.02		
84.11	The imaging unit is low.	
84.12		
84.13		
84.19		
84.21	The imaging unit is very low.	
84.22		
84.23		
84.31	Replace the imaging unit. Zero estimated pages remain.	
84.32		
84.33	Replace the imaging unit or photoconductor. Zero estimated pages remain. Absolute end of life has been reached due to page count.	
84.41	Replace the imaging kit. Zero estimated pages remain. Absolute end of life has been reached due to the photoconductor rev counter.	
84.42	Replace the imaging unit. Zero estimated pages remain. Absolute end of life has been reached due to waste toner.	
84.43	Replace the imaging unit. Zero estimated pages remain. Absolute end of life has been reached due to page count.	

Toner cartridge or imaging unit low service check

1. Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.

Does the problem remain?

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

2. Perform the following tests:
   a. From the control panel, navigate to **Settings > Reports > Device > Device statistics**.
   b. Check if the install date reflects the date that you replaced the cartridge.
   c. Check the supply level of the toner cartridge.
   d. Check the supply level of the imaging unit.

   Is there sufficient supply level, and does the install date reflect the cartridge replacement date?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 4.
3. Perform the following tests:
   a. Enter the Diagnostics menu, and then select **Advanced print quality samples**.
   b. Check the test pages for print quality defects.

   Are there print quality defects?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Shake the toner cartridge.
   b. Clean the toner cartridge smart chip contacts, and then check the contacts for damage.
   c. Clean the toner cartridge spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Replace the toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
6. Perform the following tests:
   a. Shake the imaging unit.
   b. Clean the imaging unit smart chip contacts, and then check the contacts for damage.
   c. Clean the imaging unit spring contacts, and then check the contacts for damage.

d. Perform a print test.

Does the problem remain?

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

7. Check the smart chip for proper installation and damage.

   Is the smart chip properly installed and free of damage?

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

8. Replace the imaging unit.

   Does the problem remain?

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

9. Check the cables for proper connection and damage.

   Are the cables properly connected and free of damage?

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

10. Replace the damaged cable.

    Does the problem remain?

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

11. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

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

12. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

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

88 user attendance messages

88 user attendance messages

Error code	Description	Action
88.00	The toner cartridge is nearly low.	See Toner cartridge or imaging unit low service check on page 158.
88.09		
88.10	The toner cartridge is low.	
88.19		
88.20	The toner cartridge is very low.	
88.29		
88.30	Replace the toner cartridge. Zero estimated pages remain.	
88.40	Toner cartridge hard stop.	
88.48		

Non-supply user attendance errors

Non-supply user attendance messages

Error code	Description	Action
34B	Short paper.	See Short paper service check on page 161.
35A	Deficient memory.	See Insufficient memory service check.
37A	Insufficient collation area.	
37C	Insufficient memory.	
38A	Memory full.	
39A	Complex page.	See Complex page service check on page 165.

Short paper service check

1. Perform the following tests:

a. Make sure that the tray insert is properly inserted.
b. Make sure that the paper type and size settings match the paper type and size set on the tray.
c. Make sure that the duplex unit is properly inserted.
d. Make sure that the paper size setting in the duplex unit matches the printer setting.
e. Make sure that the front and rear doors are fully closed.
f. Make sure that the output bin is free from obstructions.

Does the problem remain?

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

2. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Make sure that the separator roller is free of dust and contamination.
   b. Make sure that the lift plate is properly working.
   c. Make sure that the paper guides are properly working.
   d. Check the tray insert for proper installation and damage.

   Is the tray insert properly installed, and free of contamination and damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.
5. Replace the tray insert.

   Does the problem remain?

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

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

6. Perform the following tests:
   a. Clear the duplex paper path of obstructions.
   b. Load the correct paper in the tray.
   c. Make sure that the paper size setting in the duplex unit matches the paper loaded in the tray.
   d. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Duplex

   Does the problem remain?

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

7. Perform the following tests:
   a. Remove, and then insert the duplex unit.
   b. Check the duplex unit gears for damage.
   c. Check the rollers and belts for wear and contamination.

   Is the duplex unit properly installed and free of damage?

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

8. Replace the duplex unit.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   c. Find the sensor (staging sensor S2)**.**

   Does the sensor status change while toggling the sensor?

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

10. Perform the following tests:
    a. Check the sensor for proper installation and damage.
    b. Check the alignment with the sensor flag.
    c. Check the sensor cable for proper connection and damage.

Is the sensor properly installed and free of damage?

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

11. Replace the sensor.

    Does the problem remain?

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

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

       Printer diagnostics & adjustment > Sensor tests

    b. Find the following sensors:

       - Sensor (media present in tray1 S1)
       - Sensor (input sensor S3)
       - Sensor (fuser exit sensor S4)

    Does the sensor status change while toggling the sensor?

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

13. Perform the following tests:
    a. Check the sensor flags for proper installation and damage.
    b. Check the sensor flags for proper alignment with the sensors.
    c. Check the sensor flag springs for proper installation and damage.

    Are the sensor flags properly installed and free of damage?

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

14. Replace the damaged sensor flag.

    Does the problem remain?

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

15. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

Is the controller board properly installed and free of damage?

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

16. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Insufficient memory service check

1. Perform the following tests:
   a. Perform a POR.
   b. Send a print job with no image.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Enter the Diagnostics menu, and then select **Advanced print quality samples**.
   b. Check the test pages for print quality defects.

   Are there print quality defects?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Make sure that the printer is using the latest firmware version, and update if necessary.

   Does the problem remain?

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

Complex page service check

1. Perform the following tests:
   a. Perform a POR.
   b. Send a print job with no image.

Does the problem remain?

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

2. Perform the following tests:
   a. Enter the Diagnostics menu, and then select **Advanced print quality samples**.
   b. Check the test pages for print quality defects.

   Are there print quality defects?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Make sure that the printer is using the latest firmware version, and update if necessary.

   Does the problem remain?

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

Printer hardware errors

111 error messages

111 error messages

Error code	Description	Action
111.20	Printhead error (mirror motor lock) was detected before the motor was turned on.	See Printhead error 1 service check on page 179.
111.21	No printhead power (+5V) when the laser servo started.	
111.30	The printhead failed during power-on tests.	
111.31	Printhead error (no first HSYNC) was detected.	
111.32	Printhead error (lost HSYNC) was detected.	
111.33	Printhead error (lost HSYNC) was detected during servo.	

Error code	Description	Action
111.34	Printhead error (mirror motor lost lock) was detected.	
111.35	Printhead error (mirror motor never got first lock) was detected.	
111.36	Printhead error (mirror motor lock never stabilized) was detected.	See Printhead error 2 service check on page 181.
111.37	Paper reached the sensor (input sensor S3) but the mirror motor was not locked.	
111.38	Paper reached the sensor (input sensor S3) but the printhead startup was not complete.	
111.40	The wrong printhead is installed.	See Printhead error 1 service check on page 179.

121 errors

121 error messages

Error code	Description	Action
121.00	The fuser failed to reach temperature during warm-up.	See Fuser service check on page 169.
121.01	Attempting to heat the fuser, but the fuser is not installed.	
121.02	Attempting to power up the fuser while it is too warm (belt: 50°C, lamp: 76°C) to execute EWC/line voltage detection after a Wrong Fuser Installed error had been previously declared.	
121.10	The fuser did not warm up enough to start EWC/line voltage detection (belt: 60°C, lamp: 88°C) within time-out (belt: 10 seconds, lamp: 90 seconds).	
121.11	The fuser took too long to reach the final EWC/line detection temperature (belt: 90°C, lamp: 149°C).	

Error code	Description	Action
121.12	The fuser never reached final EWC/line detection temperature (belt: 90°C, lamp: 149°C).	
121.13	The fuser heated too fast to the final EWC/line detection temperature (belt: 90°C, lamp: 149°C).	
121.20	The fuser high power trace heating rate from 165°C to 180°C exceeded the error threshold.	
121.22	Open fuser relay detected.	
121.28	The fuser failed to reach the EP warm-up temperature in time.	
121.31	The fuser is too hot.	
121.32	The fuser is too cold for too long while its power is at 100%.	

Error code	Description	Action
121.33	The fuser is too cold when paper is in the fuser.	See Fuser service check on page 169.
121.34	The fuser is too cold during steady state control when paper is not in the fuser. **Note:** This event can occur during printing or standby modes.	
121.50	The fuser went over the required temperature during a global over temperature check.	
121.52	The main thermistor temperature is out of range.	
121.53	The main thermistor temperature change rate is out of range.	
121.71	Open fuser main heater thermistor.	

Fuser service check

1. Make sure that the voltage rating of the printer matches the power supply voltage of the electrical outlet that the printer is plugged into.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the duplex unit is properly inserted.
   d. Make sure that the paper size setting in the duplex unit matches the printer setting.
   e. Make sure that the front and rear doors are fully closed.
   f. Make sure that the output bin is free from obstructions.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Perform the following tests:
   a. Enter Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests

b. Select **Motor (transport drive)**.
c. Open the rear door, and then check if the fuser exit rollers turn.
d. Open the fuser access door, and then check if the hot rollers turn.

Are the rollers properly working?

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

6. Perform the following tests:
   a. Check the fuser cables for proper connection and damage.
   b. Check the fuser access door for damage.
   c. Check if the fuser gears are in proper contact with the drive gears.
   d. Make sure that the fuser is compatible with the LVPS.
   e. Check the fuser for proper installation and damage.

   Is the fuser properly installed and free of damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.
7. Replace the fuser. See Fuser removal on page 255.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
8. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests

   b. Select **Fan (main)**.
   c. Check if the fan turns.

   Did the fan turn?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
9. Perform the following tests:
   a. Reseat the fan cable.
   b. Make sure that the cable is properly connected.
   c. Make sure that the fan and gears are properly installed.
   d. Make sure that the fan is free of grease contamination.

   Does the problem remain?

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

Go to the next step.

10. Replace the fan. See .Fan assembly removal on page 251

    Does the problem remain?

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

11. Replace the damaged cable.

    Does the problem remain?

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

12. Perform the following tests:
    a. Reseat the cables connected to the LVPS.
    b. Check the cables for proper connection and damage.
    c. Check the fuse for continuity.
    d. Check the electronic components on the LVPS for damage.
    e. Check the LVPS for proper installation and damage.

    Is the LVPS properly installed and free of damage?

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

13. Perform the following tests:
    a. Make sure that the LVPS is compatible with the fuser and the printer.
    b. Make sure that there is voltage coming out of the fuser connector.
    c. Make sure that the correct power input voltage is applied.

    Does the problem remain?

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

14. Replace the LVPS. See LVPS removal on page 246.

    Does the problem remain?

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

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

       Printer diagnostics & adjustments > Motor tests

    b. Select **Motor (transport drive)**.

Did the motor run?

- **Yes**:
  Go to the next step.
- **No**:
  Go to step 17.

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

       Input tray quick print > Tray 1 > Single

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

       Input tray quick print > Duplex > Single

    Does the problem remain?

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

17. Perform the following tests:
    a. Make sure that the main drive is properly installed and free of damage.
    b. Make sure that the main drive gears are properly installed.
    c. Make sure that the drive gears are in proper contact with the gear that they are driving.

    Does the problem remain?

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

18. Replace the main drive. See Main drive removal on page 249.

    Does the problem remain?

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

19. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

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

20. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

    - **Yes**:

Contact the next level of support.

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

126 errors

126 error messages

Error code	Description	Action
126.05	The LVPS dropped while not sleeping.	See LVPS service check on page 173.
126.06	An LVPS 25 V line error was detected.	
126.07	An LVPS 5 V rail was down during POR.	
126.12	LVPS mismatch. A 120 V power supply is installed but the controller board reports a 220 V power supply.	See LVPS service check on page 173. **Note:** Go to step 3 directly.
126.13	LVPS mismatch. A 230 V power supply is installed but the controller board reports a 110 V or 100 V power supply.	

LVPS service check

1. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

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

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

3. Perform the following tests:
   a. Reseat the cables connected to the LVPS.
   b. Check the cables for proper connection and damage.
   c. Check the fuse for continuity.
   d. Check the electronic components on the LVPS for damage.
   e. Check the LVPS for proper installation and damage.

   Is the LVPS properly installed and free of damage?

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

4. Perform the following tests:
   a. Make sure that the LVPS is compatible with the fuser and the printer.
   b. Make sure that there is voltage coming out of the fuser connector.
   c. Make sure that the correct power input voltage is applied.

   Does the problem remain?

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

5. Replace the LVPS. See LVPS removal on page 246.

   Does the problem remain?

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

6. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

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

7. Replace the controller board. See .Controller board removal on page 244

   Does the problem remain?

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

140 errors

140 error messages

Error code	Description	Action
140.82	Motor (transport drive) failure.	See Motor (transport drive) service check on page 175.

Motor (transport drive) service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the duplex unit is properly inserted.
   d. Make sure that the paper size setting in the duplex unit matches the printer setting.
   e. Make sure that the front and rear doors are fully closed.
   f. Make sure that the output bin is free from obstructions.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

Printer diagnostics & adjustments > Motor tests

b. Select **Motor (transport drive)**.

Does the motor run?

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

5. Perform the following tests:
   a. Reseat the motor cable at both ends.
   b. Make sure that the motor gear is properly aligned with the drive gears.
   c. Check the motor for proper installation and damage.

   Is the motor properly installed and free of damage?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.
6. Check the cables for proper connection and damage.

   Are the cables properly connected and free of damage?

   - **Yes**:
     Go to step 8.
   - **No**:
     Go to the next step.
7. Replace the damaged cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
8. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.
9. Replace the controller board. See .Controller board removal on page 244

   Does the problem remain?

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

6yy errors

6yy error messages

Error code	Description	Action
600.01	Toner tally never received.	See Printer declared jam service check on page 178.
600.02	The printhead is not ready to image.	See Printhead error 1 service check on page 179.
600.04	Duplex paper was never picked.	See Printer declared jam service check on page 178.
600.05	Invalid printhead NVRAM type.	See Printhead error 1 service check on page 179.
600.06	No response from the paper port driver.	See Printer declared jam service check on page 178.
600.07	Page is at the image point before the EP is ready.	See Printhead error 2 service check on page 181.
600.08	Paper jam is caused by a printhead error.	
600.09	EP update error was detected.	Restart the print job. If the error persists, then contact the next level of support.
600.10	EP started a run-in late with less time than it takes to do the motor ramp.	See Printer declared jam service check on page 178.
600.95	The printer intentionally declared a jam. **Note:** This event is typically used to prevent a kiosk user from printing free pages.	
611.02	An Input ISR error occurred and the printhead was not ready.	Restart the print job. If the error persists, then contact the next level of support.
611.32	Lost HSYNC errors were detected. Laser safety interlock system may be the cause.	
611.33	Lost HSYNC during servo.	
611.34	A mirror motor lock error was detected.	

Error code	Description	Action
611.35	Mirror motor never got first lock.	See Printhead error 1 service check on page 179.
611.36	Mirror motor lock never stabilized.	
611.37	Paper reached the sensor (input sensor S3) but the mirror motor was not locked.	
611.38	Paper reached the sensor (input sensor S3) but the printhead startup was not complete.	
621.01	The fuser heater was not hot enough when the paper entered the fuser nip.	Restart the print job. If the error persists, then contact the next level of support.

Printer declared jam service check

1. Perform the following tests:
   a. Shake the toner cartridge.
   b. Clean the toner cartridge smart chip contacts, and then check the contacts for damage.
   c. Clean the toner cartridge spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Replace the toner cartridge.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Shake the imaging unit.
   b. Clean the imaging unit smart chip contacts, and then check the contacts for damage.
   c. Clean the imaging unit spring contacts, and then check the contacts for damage.
   d. Perform a print test.

   Does the problem remain?

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

The problem is solved.

4. Check the smart chip for proper installation and damage.

   Is the smart chip properly installed and free of damage?

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

5. Replace the imaging unit

   Does the problem remain?

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

6. Perform the following tests:
   a. Turn off the printer.
   b. Unplug the power cord.
   c. Wait for 20 seconds, and then plug the power cord.
   d. Turn on the printer.

   Does the problem remain?

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

7. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

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

8. Replace the controller board. See .Controller board removal on page 244

   Does the problem remain?

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

Printhead error 1 service check

1. Perform the following tests:
   a. Turn off the printer.
   b. Unplug the power cord.

c. Wait for 20 seconds, and then plug the power cord.
d. Turn on the printer.

Does the problem remain?

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

2. Perform the following tests:
   a. Reseat the two printhead cables at both ends.
   b. Check the printhead cables for proper connection.
   c. Check the printhead for proper installation and damage.
   d. Perform a print test.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Make sure that the printhead lens is clean and free of contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Replace the printhead. See .Printhead removal on page 259

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Check the cables for proper connection and damage.

   Are the cables properly connected and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
6. Replace the damaged cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.

c. Check the controller board for proper installation and damage.

Is the controller board properly installed and free of damage?

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

8. Replace the controller board. See .Controller board removal on page 244

   Does the problem remain?

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

Printhead error 2 service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper is properly loaded in the tray.
   c. Make sure that the paper type and size settings match the paper type and size set on the tray.
   d. Make sure that the lift plate is properly working.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Perform the following tests:
   a. Reseat the sensor cable.
   b. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Sensor tests

   c. Find the sensor (staging sensor S2)**.**

   Does the sensor status change while toggling the sensor?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.
3. Perform the following tests:
   a. Check the sensor for proper installation and damage.
   b. Check the alignment with the sensor flag.
   c. Check the sensor cable for proper connection and damage.

   Is the sensor properly installed and free of damage?

   - **Yes**:
     Go to step 5.

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

4. Replace the sensor.

   Does the problem remain?

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

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

      Printer diagnostics & adjustment > Sensor tests

   b. Find the following sensors:

      - Sensor (media present in tray1 S1)
      - Sensor (input sensor S3)
      - Sensor (fuser exit sensor S4)

   Does the sensor status change while toggling the sensor?

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

6. Perform the following tests:
   a. Check the sensor flags for proper installation and damage.
   b. Check the sensor flags for proper alignment with the sensors.
   c. Check the sensor flag springs for proper installation and damage.

   Are the sensor flags properly installed and free of damage?

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

7. Replace the damaged sensor flag.

   Does the problem remain?

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

8. Perform the following tests:
   a. Reseat the two printhead cables at both ends.
   b. Check the printhead cables for proper connection.
   c. Check the printhead for proper installation and damage.
   d. Perform a print test.

   Does the problem remain?

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

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

9. Make sure that the printhead lens is clean and free of contamination.

   Does the problem remain?

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

10. Replace the printhead. See .Printhead removal on page 259

    Does the problem remain?

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

11. Check the cables for proper connection and damage.

    Are the cables properly connected and free of damage?

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

12. Replace the damaged cable.

    Does the problem remain?

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

13. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

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

14. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Procedure before starting the 9yy service checks

Retrieve certain information that helps your next level of support in diagnosing the problem before replacing the controller board.

> **Warning—Potential Damage**
> Do not replace the controller board unless instructed by your next level of support.

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

> **Note:** Not all of the items are retrievable from the printer that you are working on.

A. Collecting the history information from the SE menu

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

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

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

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

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

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

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

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

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

   > **Note:** To download the FWdebug log to a flash drive, see General SE on page 218.

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 control panel, navigate to:

   Settings > Reports > Menu Settings Page

2. Scan the report, and then send it to your next level of support.

D. Collecting information from the user

Ask the user for information about the following:

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

9yy errors

9yy error messages

Error code	Description	Action
900.xx	Unrecoverable RIP software error/illegal trap.	See 900 error service check on page 188.
910.xx–919.xx	An engine error occurred.	See Engine error service check on page 192.
938.04	Supplies security is not enabled.	See Black imaging unit, photoconductor smart chip, or sensor problem service check on page 146.
940	RIP to engine communication failure.	See Engine error service check on page 192.
941	Engine card failure.	
948	Engine card—Pel clock check failed.	
949	Engine card—Delay line calibration failure.	
950	Non-Generic FRU installed. Mismatch between system NVRAM part and mirror NVRAM part. **Note:** .xx points to the setting that does not match.	
952	A recoverable NVRAM cyclic redundancy check error occurred. **Note:** • n is the offset at which the error occurred. • Performing a POR clears the error.	

Error code	Description	Action
953	NVRAM chip failure with mirror part.	
954	NVRAM chip failure with system part.	
955	The NAND flash failed the cyclic redundancy check or the NAND experienced an uncorrectable multi-bit failure. **Note:** <LOC> indicates the source of the failure.	
956	RIP card failure—Processor failure.	
957	RIP card failure—ASIC failure.	
958	Controller board NAND failure.	
959	Invalid firmware—Service system board.	
960	RAM memory error—RAM soldered on the card is bad.	
961	RAM memory error—RAM in slot 1 is bad.	
962	RAM memory error—RAM in slot 2 is bad.	
963	RAM memory error—RAM in slot 3 is bad.	
964	Download emulation cyclic redundancy check error—Checksum failure detected in the emulation header or emulation file.	

Error code	Description	Action
975	Network error—Unrecognizable network port.	See Network software error service check on page 193.
976	Network error—Unrecoverable software error in the network port.	

Error code	Description	Action
978	Network error—Bad checksum while programming the network port.	
979	Network error—Flash parts failed while programming the network port.	
980	The engine is experiencing an unreliable communication.	See Engine error service check on page 192.
981	Engine protocol violation is detected.	
982	Communications error is detected.	
983	Invalid command received.	
984	Invalid command parameter received.	
985	RFID media option hardware error.	
990	An equipment check condition has occurred in the printer, but the printer is unable to identify the exact component failure.	
991	A controller board equipment check is detected.	
992	General software error.	

900 error service check

1. Perform the following tests:
   a. Perform a POR.
   b. Check if a 900.xx error code appears on the display.

   Does a 900.xx error code appear?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.
2. Check if another type of error code appears instead of the 900.xx error code.

   Does a different error code appear?

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

- **No**:
  Go to step 4.

3. See the error code and its service instructions in the printer *Service Manual*.

   Does the problem remain?

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

4. Perform the following tests:
   a. Turn off the printer.
   b. At the rear of the printer, disconnect the network cable, USB cable, and fax line.
   c. Turn on the printer.

   Does the problem remain?

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

5. Perform the following tests:
   a. From the control panel, navigate to the **Reports** menu.
   b. Select **Device Statistics** and **Device Settings**.

   Does the problem remain?

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

6. Check if the printer has a scanner.

   Does the printer have a scanner?

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

7. Using the scanner, perform a one-page copy job in color.

   Does the problem remain?

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

8. Perform the following tests:
   a. Turn off the printer.
   b. At the rear of the printer, connect the network cable, USB cable, and fax line.
   c. Turn on the printer.

   Does the problem remain?

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

- **No**:
  Go to step 10.

9. Perform the following tests:
   a. Start the printer in **Invalid engine mode**. See .Entering Invalid engine mode on page 219
   b. Check if an Invalid Engine Code message appears.

   Does an Invalid Engine Code message appear?

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

10. Using the Device Settings report that is printed in step 5, check if the firmware level is older than the latest available version.

    Is the firmware version older, and does the customer agree to update the firmware?

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

11. Update the firmware to the latest version.

    Does the problem remain?

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

12. Perform the following tests:
    a. Turn off the printer.
    b. Reseat all FFC type cables on the controller board, and then make sure that the cables are properly connected.
    c. Make sure that all the cables on the controller board and scanner are properly connected.
    d. Turn on the printer.
    e. From the control panel, navigate to the **Reports** menu, and then select **Device Statistics** and **Device Settings**.
    f. For MFPs, perform a one-page copy and scan job in color.

    Does the problem remain?

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

13. Check if a hard disk is installed.

    Is a hard disk installed?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 17.

14. Perform the following tests:
    a. Check for buffered print jobs, and then delete them.
    b. Perform a POR.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
15. Perform the following tests:
    a. Turn off the printer.
    b. Uninstall the hard disk.
    c. Perform a POR.

    Does the problem remain?

    - **Yes**:
      Go to step 17.
    - **No**:
      Go to the next step.
16. Replace the hard disk.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
17. Check if the printer has any of the following components installed:

    - Memory options
    - Fax card
    - Modem
    - Wireless and network option cards

    Is any of the components installed?

    - **Yes**:
      Go to the next step.
    - **No**:
      Go to step 21.
18. Perform the following tests:
    a. Turn off the printer.
    b. Remove all the installed components.
    c. Turn on the printer.

    Does the problem remain?

    - **Yes**:
      Go to step 21.
    - **No**:
      Go to the next step.
19. Perform the following tests:
    a. Turn off the printer.

b. Install the following components one at a time:

- Memory options
- Fax card
- Modem
- Wireless and network option cards

> **Note:** Make sure to perform a POR after installing each component.

Does the problem remain?

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

20. Perform the following tests:
    a. Turn off the printer.
    b. Replace the components that caused the error.
    c. Turn on the printer.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
21. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Engine error service check

1. Perform the following tests:
   a. Turn off the printer.
   b. Unplug the power cord.
   c. Wait for 20 seconds, and then plug the power cord.
   d. Turn on the printer.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
2. Make sure that the printer is using the latest firmware version, and update if necessary.

Does the problem remain?

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

3. Check the cables for proper connection and damage.

   Are the cables properly connected and free of damage?

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

4. Replace the damaged cable.

   Does the problem remain?

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

5. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

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

6. Replace the controller board. See .Controller board removal on page 244

   Does the problem remain?

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

Network software error service check

1. Perform the following tests:
   a. Turn off the printer.
   b. Unplug the power cord.
   c. Wait for 20 seconds, and then plug the power cord.
   d. Turn on the printer.

   Does the problem remain?

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

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

2. Perform the following tests:
   a. Check the network cable for proper connection and damage.
   b. Make sure that the network cable contacts are free from dirt or corrosion.
   c. Make sure that the network cable is active.

   Is the network cable properly connected and free of corrosion and damage?

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

3. Replace the network cable.

   Does the problem remain?

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

4. Check the controller board ports and pins for damage.

   Are the controller board ports and pins free of damage?

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

5. Perform the following tests:
   a. Make sure that the Wi-Fi is connected to the network.
   b. Make sure that the Wi-Fi setting is correct.
   c. Check the Wi-Fi antenna for proper installation and damage.

   Is the Wi-Fi antenna properly installed and free of damage?

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

6. Make sure that the printer is using the latest firmware version, and update if necessary.

   Does the problem remain?

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

7. Check the cables for proper connection and damage.

   Are the cables properly connected and free of damage?

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

8. Replace the damaged cable.

   Does the problem remain?

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

9. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

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

10. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Other symptoms

Base printer symptoms

Symptom	Action
Front door is closed or open.	See Door switch service check on page 196.
Tray 1 is empty.	See Load tray 1 with A4 plain paper service check on page 197.
Paper did not arrive in the bin.	See Paper did not arrive in the bin service check on page 199.
Tray insert is obstructed.	See Tray insert obstructed service check on page 202.
Unable to remove the toner cartridge.	See Unable to remove toner cartridge service check on page 203.
No display.	See No display service check on page 204.
No power.	See No power service check on page 205.

Door switch service check

1. Perform the following tests:
   a. Check the front door flag for damage.
   b. Check the front door hinge for damage.

   Are the front door flag and hinge free of damage?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.
2. Replace the front door. See .Front door removal on page 252

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Check the HVPS characterization.
   b. Reseat the HVPS cables.
   c. Check the HVPS cables for proper installation and damage.
   d. Check the HVPS spring contact for proper connection to the board.
   e. Check the door switch for damage and proper alignment.

   Is the HVPS properly installed and free of damage?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.
4. Replace the HVPS. See HVPS removal on page 246.

   > **Note:** Make sure to perform the HVPS characterization when replacing the HVPS.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check the controller board for proper installation and damage.
   c. Check if the controller board LED lights up.

   Is the controller board properly installed and free of damage?

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

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

6. Replace the controller board. See .Controller board removal on page 244

   Does the problem remain?

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

Load tray 1 with A4 plain paper service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper is properly loaded in the tray.
   c. Make sure that the paper type and size settings match the paper type and size set on the tray.
   d. Make sure that the lift plate is properly working.

   Does the problem remain?

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

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

      Printer diagnostics & adjustments > Sensor tests

   c. Find the sensor (paper present).

   Does the sensor status change while toggling the sensor?

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

3. Perform the following tests:
   a. Check the sensor for proper installation and damage.
   b. Check the alignment of the sensor with the sensor flag.
   c. Check the sensor cable for proper connection and damage.

   Is the sensor properly installed and free of damage?

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

4. Replace the sensor. See Sensor (paper present) removal on page 261.

   Does the problem remain?

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

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

      Printer diagnostics & adjustment > Sensor tests

   b. Find the following sensors:
      - Sensor (media present in tray1 S1)
      - Sensor (input sensor S3)
      - Sensor (fuser exit sensor S4)

   Does the sensor status change while toggling the sensor?

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

6. Perform the following tests:
   a. Check the sensor flags for proper installation and damage.
   b. Check the sensor flags for proper alignment with the sensors.
   c. Check the sensor flag springs for proper installation and damage.

   Are the sensor flags properly installed and free of damage?

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

7. Replace the damaged sensor flag.

   Does the problem remain?

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

8. Perform the following tests:
   a. Make sure that the separator roller is free of dust and contamination.
   b. Make sure that the lift plate is properly working.
   c. Make sure that the paper guides are properly working.
   d. Check the tray insert for proper installation and damage.

   Is the tray insert properly installed, and free of contamination and damage?

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

9. Replace the tray insert.

   Does the problem remain?

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

10. Check the cables for proper connection and damage.

    Are the cables properly connected and free of damage?

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

11. Replace the damaged cable.

    Does the problem remain?

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

12. Perform the following tests:
    a. Reseat all the cables on the controller board.
    b. Check if the controller board LED lights up.
    c. Check the controller board for proper installation and damage.

    Is the controller board properly installed and free of damage?

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

13. Replace the controller board. See .Controller board removal on page 244

    Does the problem remain?

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

Paper did not arrive in the bin service check

1. Perform the following tests:
   a. Make sure that the tray insert is properly inserted.
   b. Make sure that the paper type and size settings match the paper type and size set on the tray.
   c. Make sure that the duplex unit is properly inserted.
   d. Make sure that the paper size setting in the duplex unit matches the printer setting.
   e. Make sure that the front and rear doors are fully closed.
   f. Make sure that the output bin is free from obstructions.

   Does the problem remain?

   - **Yes**:

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

2. Perform the following tests:
   a. Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions.
   b. Clear all rollers of dirt and contamination.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Perform the following tests:
   a. Perform a POR.
   b. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Check the rear door for proper installation and damage.

   Is the door properly installed and free of damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.
5. Replace the rear door. See .Bottom rear door removal on page 255

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
6. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustment > Motor tests

   b. Select **Motor (transport)**.
   c. Check if the exit roller turns.

   Did the exit roller turn?

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

7. Perform the following tests:
   a. Make sure that the redrive gears are in proper contact with the printer drive gears.
   b. Check the redrive gears for proper installation and damage.
   c. Check the roller for wear, contamination, and damage.

   Is the redrive properly installed and free of damage?

   - **Yes**:
     Go to step 9.
   - **No**:
     Go to the next step.
8. Replace the redrive. See .Redrive removal on page 255

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
9. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests

   b. Select **Motor (transport drive)**.

   Does the motor run?

   - **Yes**:
     Go to step 11.
   - **No**:
     Go to the next step.
10. Perform the following tests:
    a. Reseat the motor cable at both ends.
    b. Make sure that the motor gear is properly aligned with the drive gears.
    c. Check the motor for proper installation and damage.

    Is the motor properly installed and free of damage?

    - **Yes**:
      Go to the next step.
    - **No**:
      Contact the next level of support.
11. Perform the following tests:
    a. Enter the Diagnostics menu, and then navigate to:

       Input tray quick print > Tray 1 > Single

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

       Input tray quick print > Duplex > Single

    Does the problem remain?

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

The problem is solved.

12. Perform the following tests:
    a. Make sure that the main drive is properly installed and free of damage.
    b. Make sure that the main drive gears are properly installed.
    c. Make sure that the drive gears are in proper contact with the gear they are driving.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
13. Replace the main drive. See Main drive removal on page 249.

    Does the problem remain?

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

Tray insert obstructed service check

1. Perform the following tests:
    a. Make sure that the tray insert is properly inserted.
    b. Make sure that the paper is properly loaded in the tray.
    c. Make sure that the paper type and size settings match the paper type and size set on the tray.
    d. Make sure that the lift plate is properly working.

    Does the problem remain?

    - **Yes**:
      Go to the next step.
    - **No**:
      The problem is solved.
2. Perform the following tests:
    a. Make sure that the separator roller is free of dust and contamination.
    b. Make sure that the lift plate is properly working.
    c. Make sure that the paper guides are properly working.
    d. Check the tray insert for proper installation and damage.

    Is the tray insert properly installed, and free of contamination and damage?

    - **Yes**:
      Contact the next level of support.
    - **No**:
      Go to the next step.
3. Replace the tray insert.

    Does the problem remain?

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

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

Unable to remove toner cartridge service check

1. Perform the following tests:
   a. Check the front door for proper installation and damage.
   b. Check the front door flag for damage.
   c. Check the front door hinge for damage.
   d. Check if the front door properly closes.

   Is the front door properly installed and free of damage?

   - **Yes**:
     Go to step 3.
   - **No**:
     Go to the next step.
2. Replace the front door. See .Front door removal on page 252

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
3. Check the front door link for proper installation and damage.

   Is the front door link properly installed and free of damage?

   - **Yes**:
     Go to the next step.
   - **No**:
     Contact the next level of support.
4. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Printer diagnostics & adjustments > Motor tests

   b. Select **Motor (transport drive)**.

   Did the motor run?

   - **Yes**:
     Go to the next step.
   - **No**:
     Go to step 6.
5. Perform the following tests:
   a. Enter the Diagnostics menu, and then navigate to:

      Input tray quick print > Tray 1 > Single

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

      Input tray quick print > Duplex > Single

Does the problem remain?

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

6. Perform the following tests:
   a. Make sure that the main drive is properly installed and free of damage.
   b. Make sure that the main drive gears are properly installed.
   c. Make sure that the drive gears are in proper contact with the gear they are driving.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Replace the main drive. See Main drive removal on page 249.

   Does the problem remain?

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

No display service check

1. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up when the power is on.

   Does the controller board LED light up?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.
2. Check the top cover for proper installation and damage.

   Is the top cover properly installed and free of damage?

   - **Yes**:
     Go to step 4.
   - **No**:
     Go to the next step.
3. Replace the top cover. See Top cover assembly removal on page 258.

   Does the problem remain?

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

4. Perform the following tests:
   a. Reseat the control panel cable on the controller board.
   b. Reseat the cable on the switch.
   c. Check the cables for damage.

   Are the cables properly connected and free of damage?

   - **Yes**:
     Go to step 6.
   - **No**:
     Go to the next step.
5. Replace the top cover. See Top cover assembly removal on page 258.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
6. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

   - **Yes**:
     Contact the next level of support.
   - **No**:
     Go to the next step.
7. Replace the controller board. See Controller board removal on page 244.

   Does the problem remain?

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

No power service check

1. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up when the power is on.

   Does the controller board LED light up?

   - **Yes**:
     Go to step 5.
   - **No**:
     Go to the next step.
2. Perform the following tests:
   a. Reseat the cables connected to the LVPS.
   b. Check the cables for proper connection and damage.

c. Check the fuse for continuity.
d. Check the electronic components on the LVPS for damage.
e. Check the LVPS for proper installation and damage.

Is the LVPS properly installed and free of damage?

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

3. Perform the following tests:
   a. Make sure that the LVPS is compatible with the fuser and the printer.
   b. Make sure that there is voltage coming out of the fuser connector.
   c. Make sure that the correct power input voltage is applied.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
4. Replace the LVPS. See LVPS removal on page 246.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
5. Check the cables for proper connection and damage.

   Are the cables properly connected and free of damage?

   - **Yes**:
     Go to step 7.
   - **No**:
     Go to the next step.
6. Replace the damaged cable.

   Does the problem remain?

   - **Yes**:
     Go to the next step.
   - **No**:
     The problem is solved.
7. Perform the following tests:
   a. Reseat all the cables on the controller board.
   b. Check if the controller board LED lights up.
   c. Check the controller board for proper installation and damage.

   Is the controller board properly installed and free of damage?

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

8. Replace the controller board. See .Controller board removal on page 244

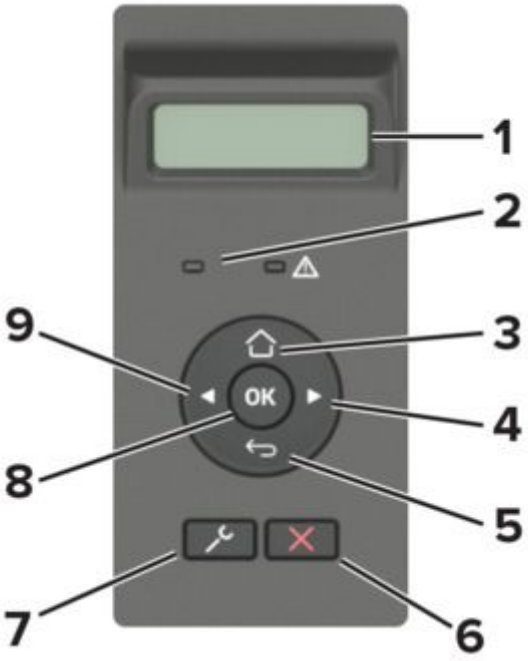
   Does the problem remain?

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

Service menus

Understanding the printer control panel

Using the control panel



	Control panel part	Function
1	Display	• View printer messages and supply status. • Set up and operate the printer.
2	Indicator light	Check the status of the printer.
3	Home button	Go to the home screen.

	Control panel part	Function
4	Right arrow button	• Scroll through menus or move between screens and menu options. • Increase the numeric value of a setting.
5	Back button	Return to the previous screen.
6	Stop or Cancel button	Stop the current job.
7	Menu button	Access the printer menus.
8	Select button	• Select a menu option. • Save the changes in a setting.
9	Left arrow button	• Scroll through menus or move between screens and menu options. • Decrease the numeric value of a setting.

Understanding the status of the power button and indicator light

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

Power button light	Printer status
Off	The printer is off, ready, or processing data.
Solid white	The printer is in Sleep mode.
Blinking white	The printer is in Hibernate mode.

Diagnostics menu

Entering the Diagnostics menu

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

- To access the Diagnostics menu from POST, press and hold **Left arrow** and **OK** on the control panel.
- To access the Diagnostics menu from the home screen, press **Back**, **Right arrow**, **Back**, and **Right arrow** on the control panel.

Reports

Device Settings

This report lists all the current printer settings.
Enter the Diagnostics menu, and then navigate to:
Reports > Device > Device Settings

For non-touch-screen printer models, press 

to navigate through the settings.

Installed Licenses

This setting lists all the installed licenses and their feature data.
Enter the Diagnostics menu, and then navigate to:
Reports > Licenses > Installed Licenses

For non-touch-screen printer models, press 

to navigate through the settings.

Advanced Print Quality Samples

This setting prints a list of the printer settings and sample pages to check print quality.
Enter the Diagnostics menu, and then select **Advanced Print Quality Samples**.

For non-touch-screen printer models, press 

to navigate through the settings.

Format Fax Storage

This setting deletes stored fax jobs.
Enter the Diagnostics menu, and then navigate to:
Format Fax Storage > Format Fax Storage

For non-touch-screen printer models, press 

to navigate through the settings.

Event Log

Display Log

This setting displays the panel text that appears when the event occurs.
Enter the Diagnostics menu, and then navigate to:
Event Log > Display Log

For non-touch-screen printer models, press 

to navigate through the settings.

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

For non-touch-screen printer models, press 

to navigate through the settings.

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

Print Log Summary

This setting lists a brief summary of the various printer events.
Enter the Diagnostics menu, and then navigate to:
Event Log > Print Log Summary

For non-touch-screen printer models, press 

to navigate through the settings.

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

Mark Log

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

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

   Event Log > Mark Log

   For non-touch-screen printer models, press 

 to navigate through the settings.
2. Select a log that you want to create.

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**.

   For non-touch-screen printer models, press 

 to navigate through the settings.
2. Select where you want to print the pages from.
3. Select whether to print a single or continuous test page.

Output bin quick feed

This setting lets you feed a single or continuous page from the standard bin.

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

   Output bin quick feed > Standard bin

   For non-touch-screen printer models, press 

 to navigate through the settings.
2. Select whether to print a single or continuous test page.

Printer Setup

Printed page count (mono)

This setting displays the amount of pages printed in mono.

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

   Printer Setup > Printed page count (mono)
2. View the printed page count for mono.

Permanent page count

This setting displays the total number of pages printed. After all the print tests are completed, this value resets to zero.

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

Printer Setup > Permanent page count
2. View the permanent page count.

Processor ID

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

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

   Printer Setup > Processor ID
2. View the processor ID.

Serial number

This setting displays a read-only value of the printer serial number.

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

   Printer Setup > Serial number
2. View the serial number.

Model name

This setting displays the model name of the printer.

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

   Printer Setup > Model name
2. View the model name.

Engine setting [x]

> **Warning—Potential Damage**
> Do not change this setting without specific instructions from the next level of support.

This setting allows you to select a printer engine setting. Possible values are 0–255. 0 is the default.

For non-touch-screen printer models, press 

to navigate through the settings.

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

   Printer Setup > Engine setting [x]
2. Select a setting, and then enter a value.

EP setup

> **Warning—Potential Damage**
> Do not change this setting without specific instructions from the next level of support.

This setting allows you to adjust the EP setup of the printer.

For non-touch-screen printer models, press 

to navigate through the settings.

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

   Printer Setup > EP setup
2. Select a setting.

Printer diagnostics & adjustments

Sensor tests

1. Enter the Diagnostics menu, and then select **Printer diagnostics & adjustments**.

   A list of sensor tests appears.
2. Find, and then manually toggle the sensor.

> **Note:**
> - The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
> - If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.
> - For the fuser exit sensor actuator, toggle it toward the rear door.

List of sensor tests

Sensor (front door)
Sensor (media present in tray1 S1)
Sensor (staging sensor S2)
Sensor (input sensor S3)
Sensor (fuser exit sensor S4)

Motor tests

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

   Printer diagnostics & adjustments > Motor tests

   For non-touch-screen printer models, press 

 to navigate through the settings.
2. Select a motor.

Note:

- If the motor is activated, then it is properly working.
- Some motors require automatic deactivation to avoid secondary issues such as possible damage and contamination.
- Some tests require a special action to activate a motor such as removing a major component.
- If the motor fails, the test failure may not indicate a failed motor. Further troubleshooting may be required. Check the boards and cables for possible issues.
- To stop a running motor in non-touch-screen printer models , press 

.

List of motor tests

Motor (transport drive)
Feed solenoid
Skew correction solenoid
Fan (main)

Registration adjust

This setting lets you adjust the skew, margins, or print a Quick test page.

For non-touch-screen printer models, press 

 to navigate through the settings.

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

   Printer diagnostics & adjustments > Registration adjust
2. Select a setting to adjust.

Universal Override

This setting allows the user to feed custom media sizes to a Custom Media Tray.

For non-touch-screen printer models, press 

to navigate through the settings.

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

   Printer diagnostics & adjustments > Universal Override
2. Select a setting to adjust.

HVPS adjust

This setting allows the HVPS calibration data to be recovered or entered for the specific HVPS installed. The HVPS calibration data must come from the next level of support.

For non-touch-screen printer models, press 

to navigate through the settings.

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

   Printer diagnostics & adjustments > HVPS adjust
2. Select a setting to adjust.

Config menu

Entering the Config Menu

The Config menu consists of menus, settings, and operations that are used to configure the printer.
To access the Config menu, press and hold **Right arrow** and **OK** on the control panel, and then turn on the printer.

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

Menu item	Description
Tray Configuration Show Tray Insert Message Off Only for unknown sizes* Always	Show a message about the tray status.
Tray Configuration A5 Loading Short Edge* Long Edge	Specify the page orientation when loading A5 paper size.
Tray Configuration Paper Prompts Auto* Manual Paper	Set the paper source that the user fills when a prompt to load paper appears.
Tray Configuration Envelope Prompts Auto* Manual Envelope	Set the paper source that the user fills when a prompt to load envelope appears.
Tray Configuration Action for Prompts Prompt user* Continue Use current	Set the printer to resolve paper- or envelope-related change prompts.
Reports Menu Settings Page Event Log Event Log Summary	Print reports about printer menu settings, status, and event logs.
Supply Usage And Counters Clear Supply Usage History Reset Black Cartridge Counter Reset Black Imaging Unit Counter	Clear the supply usage history or reset the counter after installing new supplies.
Print Configuration Font Sharpening 0–150(24*)	Set a text point-size value below which the high-frequency screens are used when printing font data. For example, if the value is 24, then all fonts sized 24 points or less use the high-frequency screens.
Print Configuration Print Density 1–5 (3*)	Adjust the toner density when printing documents.

Menu item	Description
Device Operations Quiet Mode On Off*	Set the printer to reduce the amount of noise that it makes when printing. **Note:** Enabling this setting slows down the printer performance.
Device Operations Panel Menus Enable* Disable	Enable access to the control panel menus.
Device Operations Clear Custom Status	Erase user-defined strings for the Default or Alternate custom messages.
Clear all remotely-installed messages	Erase messages that were remotely installed.

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

Service Engineer menu

Entering the Service Engineer (SE) menu

This contains several functions that a service engineer may need in order to diagnose and fix problems on the printer.
To access the SE menu, press **Back**, **Left arrow**, **Back**, and **Left arrow** on the control panel.

General SE

This setting allows you to save a log file to a USB drive.
Enter the Service Engineer (SE) menu, and then navigate to:
General SE > Capture Logs to USB Drive

Network SE

Enter the Service Engineer (SE) menu, and then select **Network SE**.

Note: Use these settings as directed by the next level of support.

Top-level menu	Intermediate menu
Print SE Menus	Print SE Menus

Top-level menu	Intermediate menu
History	• Print History • Mark History
MAC	• Set Card Speed • LAA • Keep Alive
NPAP	Print Alerts
TCP/IP	• netstat • arp • Allow SNMP Set • MTU • Meditech Mode • RAW LPR Mode
Wireless	Enable Wi-Fi Direct Sigma Control Agent
Ping Test	• Ping • Ping6
Other Actions	• ifconfig • IPtables [Firewall Dump] • IP6tables [Firewall Dump] • IPsec Dump

Scan SE

This setting displays the current scanner registration values for each scanner source (flatbed, ADF front, ADF rear).
Enter the Service Engineer (SE) menu, and then navigate to:
Scan SE > Scanner Info

Entering Invalid engine mode

This mode allows the printer to load the correct firmware code.

1. Turn off the printer.
2. From the control panel, press and hold **HOME** and **OK** while turning on the printer:
3. Release the buttons after 10 seconds.

Entering Recovery mode

This mode allows the printer to boot from a secondary set of instructions and flash firmware code. While in this mode, you can only flash firmware code through a USB cable directly connected to a PC.
Depending on your printer model, do any of the following:

For LED display

1. Turn off the printer.
2. Open the front door.
3. Press and hold the **Stop** button.
4. Turn on the printer.
5. When all the icons flash, release the button.

For 2-line display

1. Turn off the printer.
2. Press and hold the **OK** and **Back** buttons.
3. Turn on the printer.
4. When the display shows the following icon, release the buttons.

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

1. Turn off the printer.
2. Press and hold the **2**, **7**, and **8** buttons.
3. Turn on the printer.
4. When the display shows the following icon, release the buttons.

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

1. Turn off the printer.
2. Open tray 1.

   > **Note:** Make sure that paper is loaded in the tray.

3. Turn on the printer.
4. When an ellipses appears on the upper-left corner of the display, close tray 1.

   > **Note:** If tray 1 is not closed, then the printer boots normally.

Reset Device

This menu erases nonvolatile memory, device and network settings, security settings, and embedded solutions.

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

Depending on your printer model, do any of the following to enter the menu and reset the printer.

- For printers with a 4.3-inch, 7-inch, or 10-inch display, select *** * 7 3**, select **OK**, and then select **Out of Service Erase**.
- For printers with a 2.8-inch display, select the **Back, Back, Home, Start** buttons in this sequence, and then select **Out of Service Erase**.
- For printers with a 2.4-inch display, select *** * 7 3**, select **OK**, and then select **Out of Service Erase**.
- For printers with a 2-line display, select the **Back, Left, Back, Right** buttons in this sequence, and then select **Out of Service Erase**.

Parts removal

Important removal information

Removal precautions

CAUTION—SHOCK HAZARD
The low-voltage power supply (LVPS) and the high-voltage power supply (HVPS) may have residual voltage present. To avoid the risk of electrical shock, do not touch their circuit components or the solder side of the board. Only handle them by their outer edges or metal housing.

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

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

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

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

Précautions de retrait

CAUTION—SHOCK HAZARD
Une tension résiduelle peut être présente dans le bloc d'alimentation basse tension (LVPS) et le bloc d'alimentation haute tension (HVPS). Pour éviter tout risque d'électrocution, ne touchez pas les composants du circuit ou le côté soudure de la carte. Tenez-les uniquement par leurs extrémités ou le boîtier en métal.

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

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

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

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

Precauciones durante la extracción

CAUTION—SHOCK HAZARD
La fuente de alimentación de bajo voltaje (LVPS) y la fuente de alimentación de alto voltaje (HVPS) pueden presentar voltaje residual. Para evitar el riesgo de descarga eléctrica, no toque los componentes del circuito ni el lateral soldado de la placa. Manipule solo los bordes exteriores o la carcasa metálica.

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

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

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

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

Vorsichtsmaßnahmen bei der Demontage

CAUTION—SHOCK HAZARD
Im Niederspannungsnetzteil (LVPS) und Hochspannungsnetzteil (HVPS) liegt unter Umständen Restspannung vor. Um das Risiko eines elektrischen Schlags zu vermeiden, berühren Sie keine umliegenden Bauteile oder die Lötseite der Platine. Fassen Sie sie nur an den Außenkanten oder am Metallgehäuse an.

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

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

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

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

Handling ESD-sensitive parts

Many electronic products use parts that are known to be sensitive to electrostatic discharge (ESD). To prevent damage to ESD-sensitive parts, do the following:

- Turn off the printer before removing logic boards.
- Keep the parts in their original packing material until you are ready to install them into the printer.
- Make the least possible movements with your body to prevent an increase of static electricity from clothing fibers, carpets, and furniture.
- Put the ESD wrist strap on your wrist. Connect the wrist band to the system ground point. This action discharges any static electricity in your body to the printer.
- Hold the parts by their edge connector shroud. Do not touch its pins. If you are removing a pluggable module, then use the correct tool.
- If possible, keep all parts in a grounded metal cabinet.
- Do not place the parts on the printer cover or on a metal table. If you need to put down the parts, then put them into their packing material.
- Prevent parts from being accidentally touched by other personnel. Cover the printer when you are not working on it.
- Be careful while working with the parts when cold-weather heating is used. Low humidity increases static electricity.

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.

Notes:

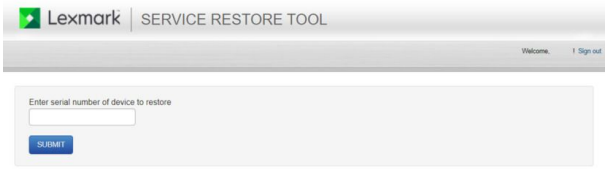
- If you do not have access to Service Restore Tool, then contact your next level of support.
- The software bundle contains the latest version of the firmware, applications, and software licenses from the Lexmark CFM and Package Builder. The printer firmware may be at a different level from what is used before replacement of the part.

Using the Service Restore Tool

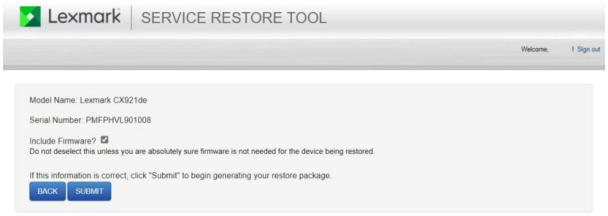
1. Go to https://iss.lexmark.com/cdp/service-restore-tool/.
2. Log in using your Lexmark or partner login.

   If your login fails, then contact your next level of support.

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

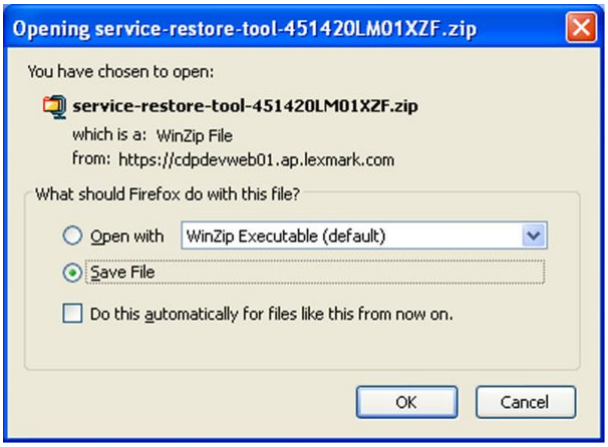


Note: Make sure that the serial number that appears on the verification screen is correct.



4. Save the zip file.

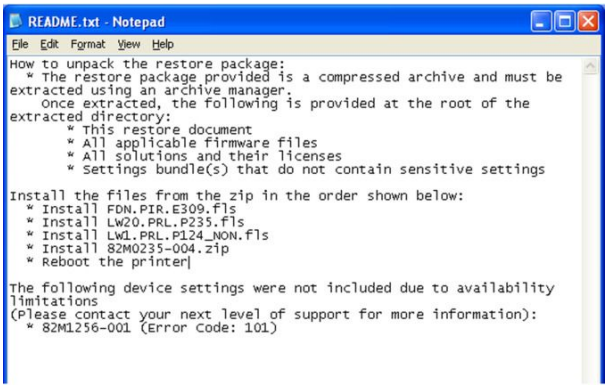
Note: Make sure that the serial number in the zip file matches the serial number of the printer being restored.



5. Extract the contents of the zip file, open the *Readme* file, and then follow the instructions in the file.

Note:

- 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 firmware using a flash drive on page 231.
- To load the zip files that are extracted from the Service Restore Tool, see Restoring solutions, licenses, and configuration settings on page 227.



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.

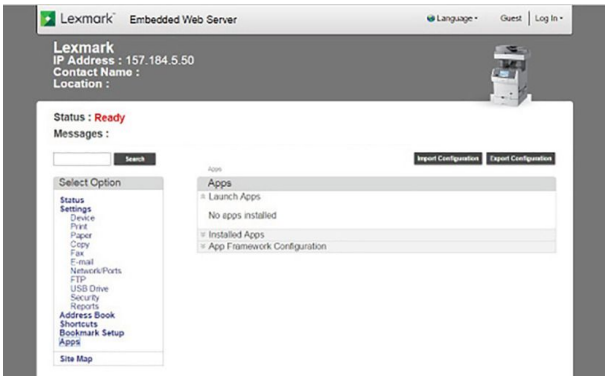
Note:

- If you are unable to access the administrative menus to verify that the printer is restored, then ask the customer for access rights.
- If a 10.00 error appears after you restart the printer, then contact the next level of support.

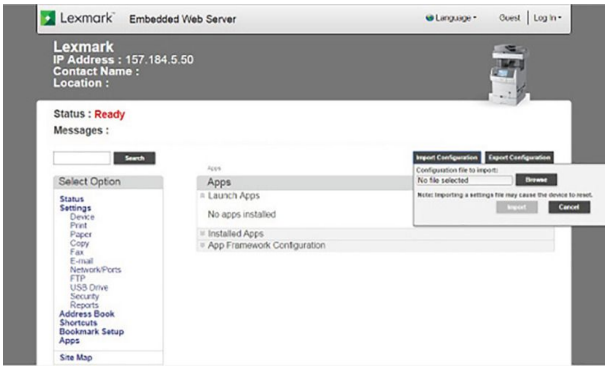
Restoring solutions, licenses, and configuration settings

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

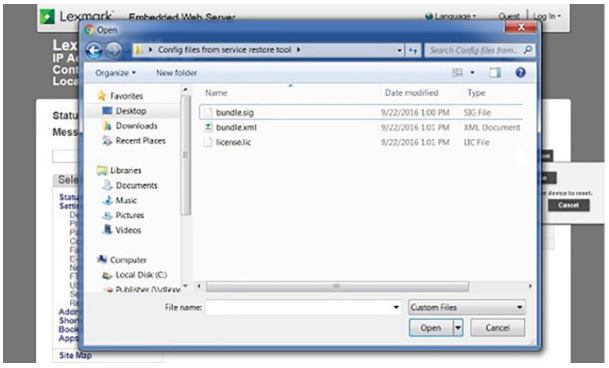
1. Open a web browser, and then type the printer IP address.



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



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.

Printer firmware instructions

Checking the printer firmware version

Using the Embedded Web Server

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

   Note:
   - You can find the IP address at the top of the printer display.
   - Make sure that the printer and computer are connected to the same network.

2. Click **Reports › Device › Device Information**.
3. Look for **Base**.

   Note: The firmware version appears as sets of letters and numbers separated by periods. For example, ABCDE.123.123.

Using the control panel

1. From the home screen navigate to **Settings › Device › About this printer**.
2. Look for **Firmware Version**.

   > **Note:** The firmware version appears as sets of letters and numbers separated by periods. For example, ABCDE.123.123.

Downloading the printer firmware

1. Go to www.lexmark.com/downloads.
2. Type the printer model, and then click **Find Drivers & Downloads**.
3. In the **Recommended Firmware** section, click the ZIP file.
4. Accept the End-User License Agreement, and then start the download.

   > **Note:** You can save the file either to your computer or flash drive.

5. Extract the ZIP file, and then locate the firmware flash file **(.fls)**.

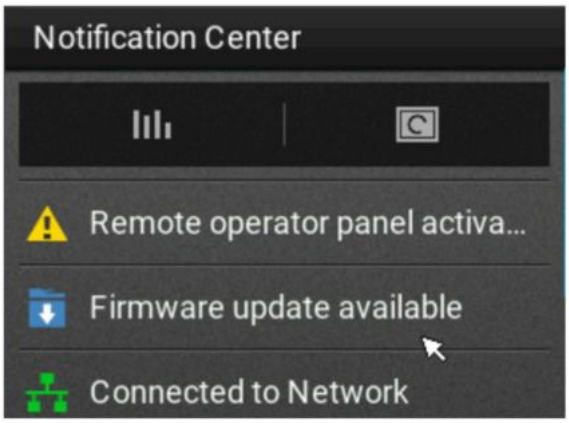
Updating firmware

Updating the firmware using the control panel

Using the Notifications center

> **Note:** These instructions apply only to some printer models.

1. From the home screen, tap the notification icon to go to the Notifications center.
2. Select **Firmware update available**.



3. Select **Install now**.

The printer restarts automatically after the update.

Using the Settings menu

1. From the control panel, navigate to **Settings › Device**.
2. Depending on your printer model, do either of the following:
   - Select **Firmware Update › Check for updates**.
   - Select **Update firmware › Check for updates now**.
3. If an update is available, then select **Install now**.

The printer restarts automatically after the update.

Updating the firmware using the Embedded Web Server

Before you begin, make sure that:

- You have downloaded the firmware and saved it on your computer or flash drive. For more information, see Downloading the printer firmware on page 229.
- You have downloaded the firmware and saved it on your computer or flash drive. For more information, contact the place where you purchased the printer.
- Make sure that the printer and computer are connected to the same network.

Using the update button

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

   Notes
   - You can find the IP address at the top of the printer display.
   - Make sure that the printer and computer are connected to the same network.

2. Click **Device**.
3. Click **Firmware Update**.

4. Depending on your printer model, do either of the following:
    - Select **Firmware Update › Check for updates**.
    - Select **Update firmware › Check for updates now**.
5. If an update is available, then select **Install now**.

The printer restarts automatically after the update.

Using the firmware flash file (.fls)

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

    Notes
    - You can find the IP address at the top of the printer display.
    - Make sure that the printer and computer are connected to the same network.

2. Click **Device**.
3. Click **Firmware Update**.
4. In the **Update Firmware from File** section, click **Browse**.
5. Search, and then select the **.fls** file.
6. Click **Upload**.

The printer restarts automatically after the update.

Updating the firmware using a flash drive

Before you begin, make sure that:

- You have downloaded the firmware and saved it on your computer or flash drive. For more information, see Downloading the printer firmware on page 229.
- You have downloaded the firmware and saved it on your computer or flash drive. For more information, contact the place where you purchased the printer.
- The flash drive is formatted to FAT32.

1. Insert the flash drive into the front USB port of the printer.

    The flash drive contents appear automatically on the printer display. If the files do not appear, then select **USB Drive** on the home screen.
2. Search, and then select the **.fls** file.
3. Select **Update Code**.

The printer restarts automatically after the update.

Ribbon cable connectors

Zero Insertion Force (ZIF) connectors

These connectors are used on the boards and cards that are installed in the printer. To avoid damaging the connectors and their cables, observe the following:

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

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

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

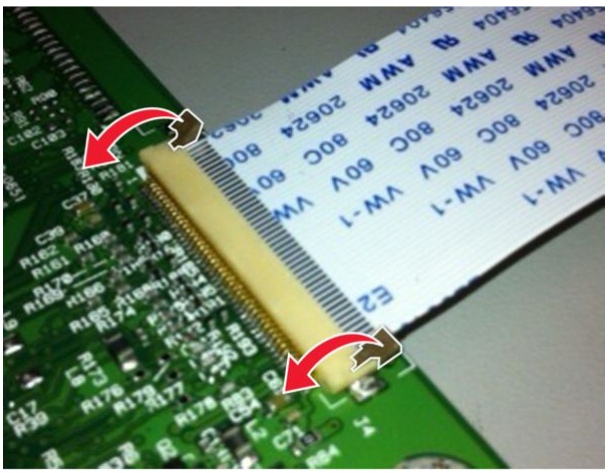
Horizontal top contact connector

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

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

Removing the cable

1. Unlock the actuator.



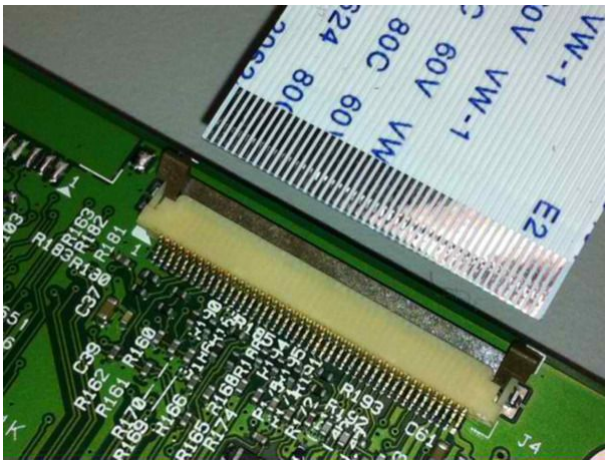
2. Remove the cable.

Inserting the cable

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

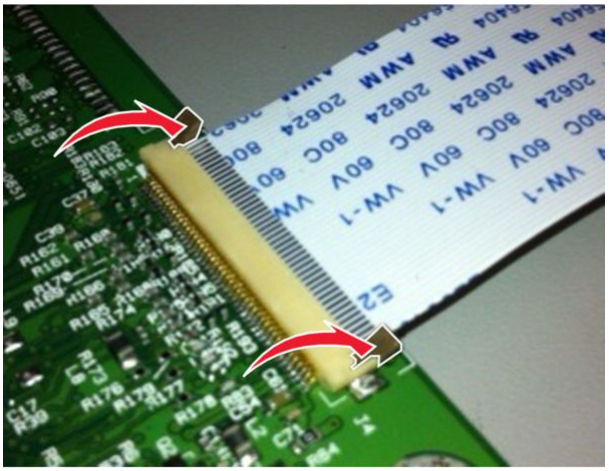
1. Insert the cable on top of the actuator with the contacts facing up.

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



2. Rotate the locking actuator to the locked position.

   Note:
   - Do not move the cable while locking the actuator.
   - If the cable moves, open the actuator, reposition the cable, and then close the actuator.



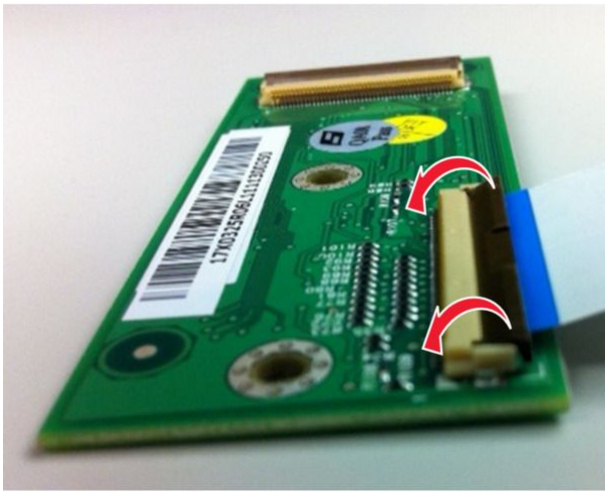
Horizontal bottom contact connector

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

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

Removing the cable

1. Unlock the actuator.



2. Remove the cable.

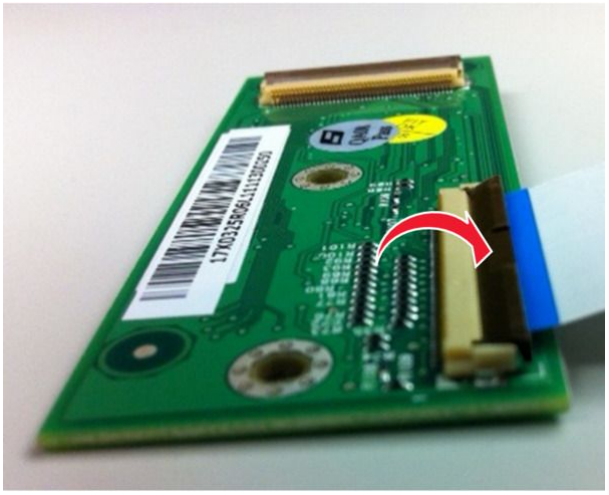
Inserting the cable

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

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

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

3. Rotate the locking actuator to the locked position.



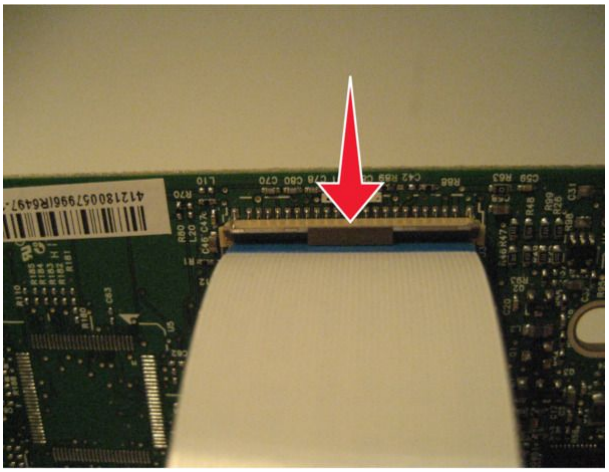
Vertical mount contact connector

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

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

Removing the cable

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



2. Remove the cable.

Inserting the cable

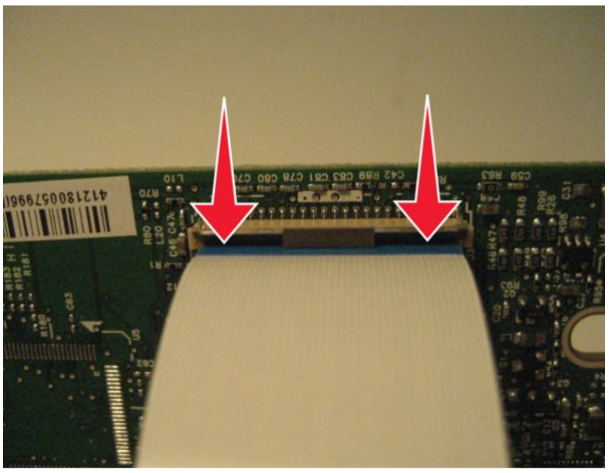
1. Make sure that the locking actuator is in the open position.

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

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

3. Rotate the locking actuator to the locked position.

> **Note:**
> - Do not move the cable while locking the actuator.
> - If the cable moves, open the actuator, reposition the cable, and then close the actuator.



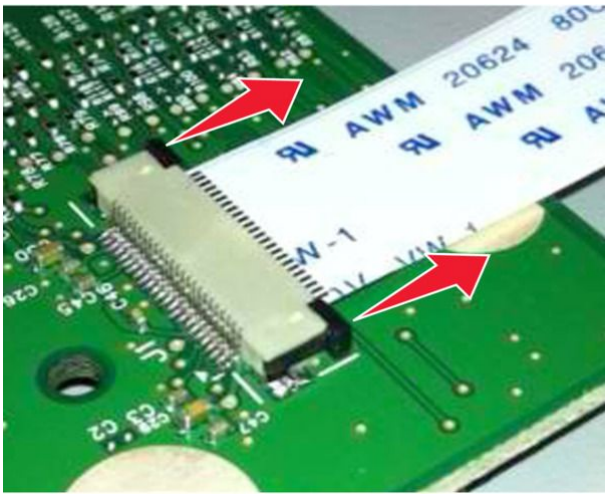
Horizontal sliding contact connector

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

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

Removing the cable

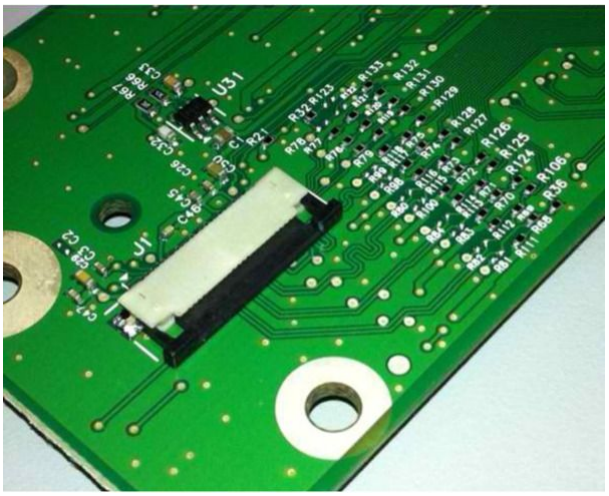
1. Slide the tabs away from the connector.



2. Remove the cable.

Inserting the cable

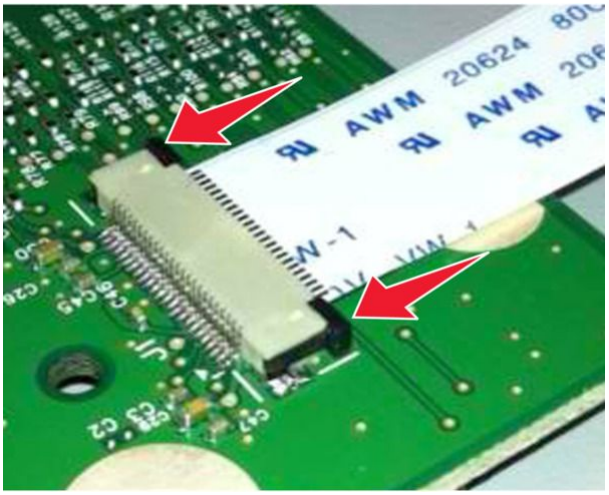
1. Make sure that the locking actuator is in the open position. If you are opening the connector, then pull back the end tabs using equal force to avoid breaking the connector.



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

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

> **Note:**
> - Do not move the cable while locking the actuator.
> - If the cable moves, open the actuator, reposition the cable, and then close the actuator.

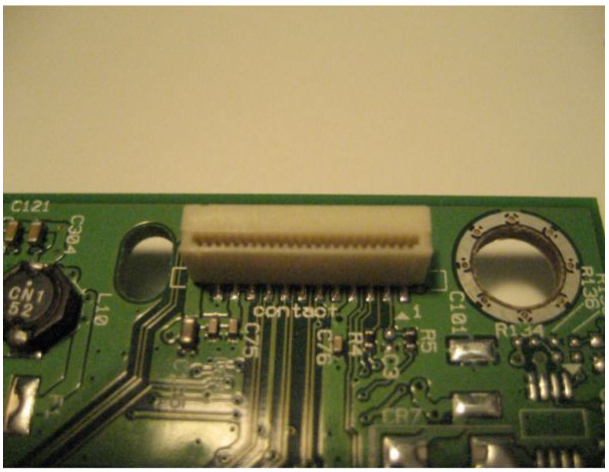


Low insertion force (LIF) connector

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

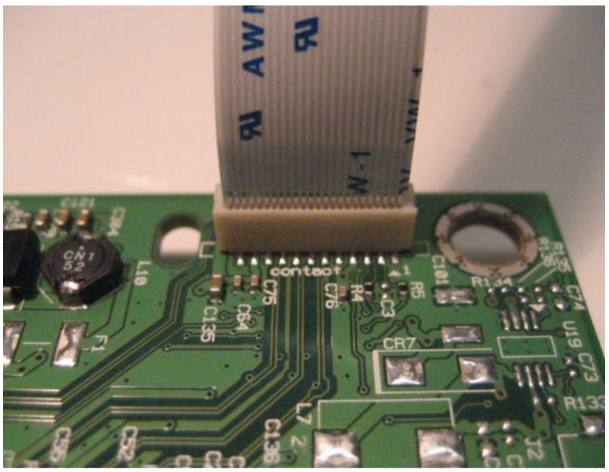
Inserting the cable

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



2. Insert the cable.

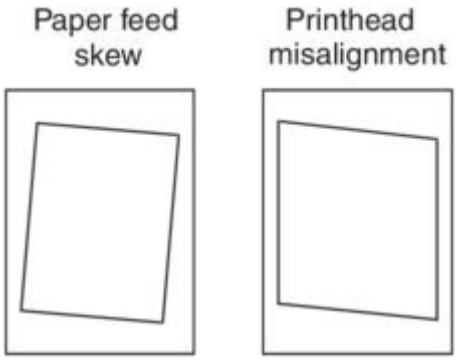
Note: Make sure that the cable is installed straight into the connector to avoid intermittent failures.



Printhead assembly adjustment

A printhead must be correctly positioned after it has been removed. Use a sharp pencil or a small, flat-blade screwdriver to mark the location of the old printhead on the printer frame. Align the new printhead relative to the location of the old printhead.

Note: Skew is caused by a sheet being fed through the printer while misaligned. The entire image is rotated relative to the sheet edges. However, a mechanically misaligned printhead causes the horizontal lines to appear skewed, while the vertical lines remain parallel to the vertical edges. The skew cannot be adjusted. Check the pick tires for wear, the paper path for obstructions, the fuser for proper setting, and the tray paper guides for proper setting.

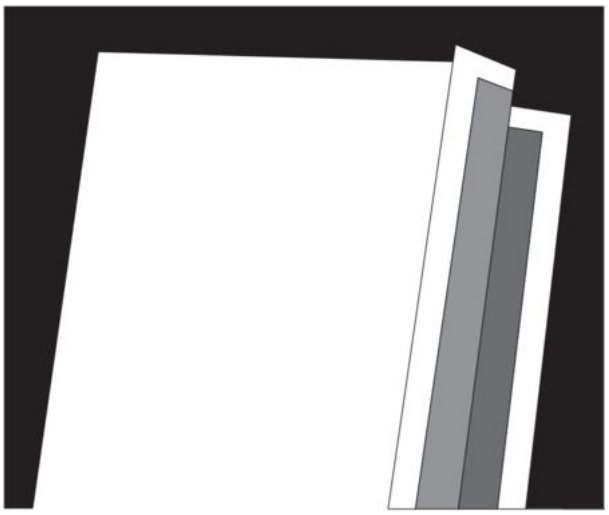


To adjust the printhead:

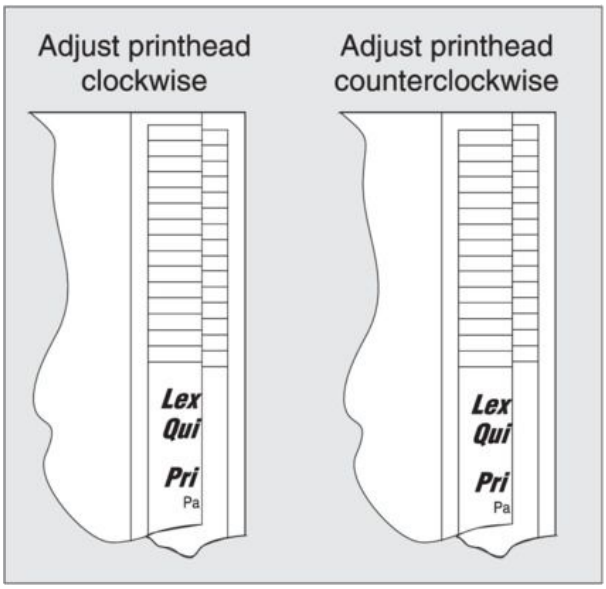
1. Perform a POR.
2. Enter the Diagnostics menu, and then print a Quick test page:

   Diagnostics Menu > Print Tests > Tray 1 > Single
3. Fold the printed test page on the left side so that a few millimeters of grid lines wrap around the outside of the fold.

4. Make a second vertical fold near the center so that the left side top edge aligns with the right side top edge.



5. If the grid lines of the right flap align below the corresponding lines on the left side, then adjust the printhead clockwise relative to the printer, and recheck. If the grid lines of the left flap align below the corresponding lines of the right side, then adjust the printhead counterclockwise.



6. Print another Quick test page, and check if adjustments are still needed.
7. After obtaining a properly adjusted image on the paper, tighten all the screws.

Note: If necessary, print a Quick test page again and perform the Registration adjust procedure to correct the skew and misalignments. See Registration adjust on page 215.

Performing the HVPS characterization

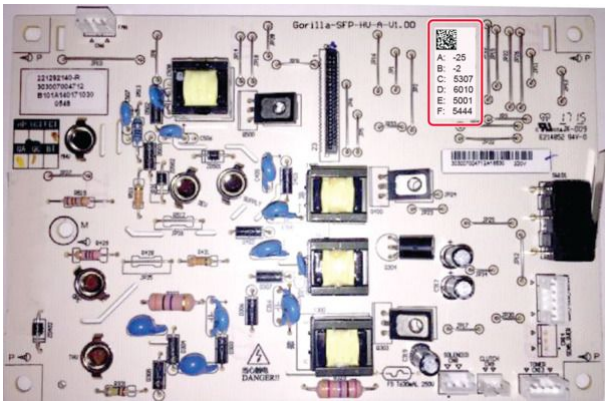
Make sure to perform the following procedure when replacing the HVPS.

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

Reports > Device > Device settings

2. Take note of the HVPS adjust values.
3. Turn off the printer.
4. Remove the old HVPS.
5. Install the new HVPS.
6. Perform a POR.
7. Enter the Diagnostics menu, and then navigate to:

   Printer diagnostics & adjustments > HVPS adjust
8. For each letter under the HVPS adjust section, enter the values as indicated on the sticker of the new HVPS.



9. Perform a POR.
10. Enter the Diagnostics menu, and then navigate to:

    Reports > Device > Device settings
11. Check if the new HVPS adjust values were saved.

Removal procedures

Keep the following tips in mind as you replace parts:

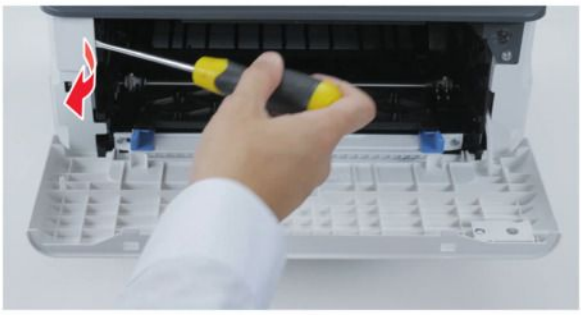
- Some removal procedures require removing cable ties. You must replace cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.
- Remove the toner cartridges, imaging kit, and trays before removing other printer parts. The imaging kit must be carefully set on a clean, smooth, and flat surface. It must also be protected from light while out of the printer.
- Disconnect all external cables from the printer to prevent possible damage during service.
- Unless otherwise stated, reinstall the parts in reverse order of removal.
- When reinstalling a part held with several screws, start all screws before the final tightening.
- For printers that have a soft power switch, make sure to unplug the power cord after powering off.

Left side removals

Left cover removal

1. Remove the tray insert.
2. Remove the duplex unit.

3. Remove the rear door. See Bottom rear door removal on page 255.
4. Remove the bottom rear door. See Bottom rear door removal on page 255.
5. Remove the left cover.



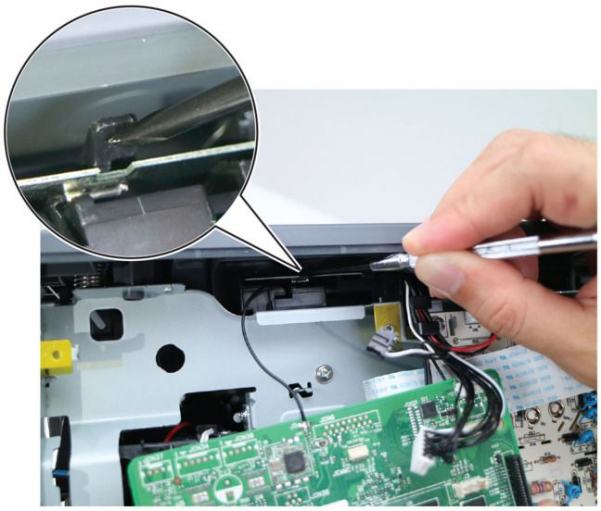
Controller board removal

> **Warning—Potential Damage**
> Do not remove the toner cartridge when replacing or removing the controller board.

1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the rear door. See Bottom rear door removal on page 255.
4. Remove the bottom rear door. See Bottom rear door removal on page 255.
5. Remove the left cover. See Left cover removal on page 242.
6. Disconnect all cables.

7. Remove the controller board.

8. Remove the Wi-Fi antenna.



Installation Note

After replacing the controller board, perform the following:

a. Make sure that the toner cartridge is installed.
b. Enter the Diagnostics menu. See Entering the Diagnostics menu on page 210.
c. Wait for 30 seconds.
d. Navigate to **Printer Setup > Serial number**.

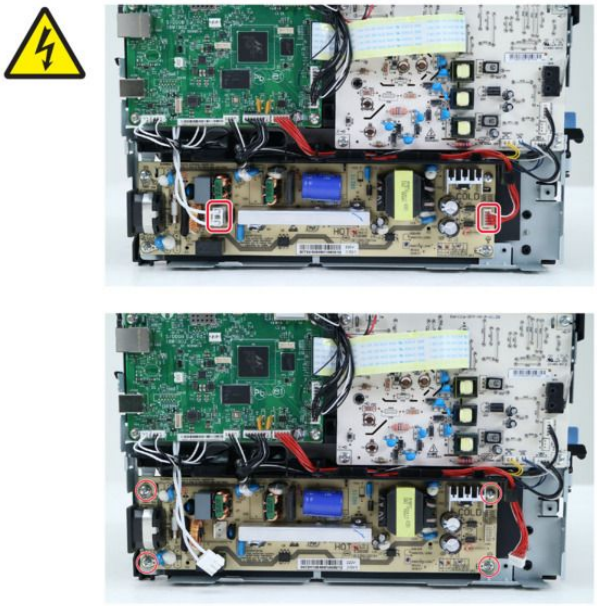
e. Check if the correct printer serial number is displayed on the screen.

> **Note:** If the serial number is not updated to the correct one after 10 minutes, update the printer firmware to the latest version, and then check the serial number again.

f. Perform a POR.
g. Restore the printer configuration. See Restoring the printer configuration on page 225.

LVPS removal

1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the rear door. See Bottom rear door removal on page 255
4. Remove the bottom rear door. See Bottom rear door removal on page 255
5. Remove the left cover. See Left cover removal on page 242.
6. Remove the LVPS.

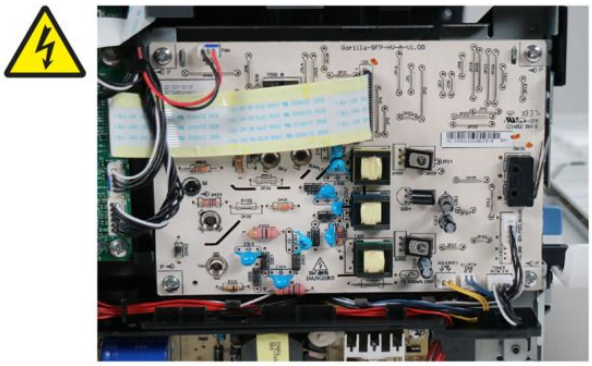


HVPS removal

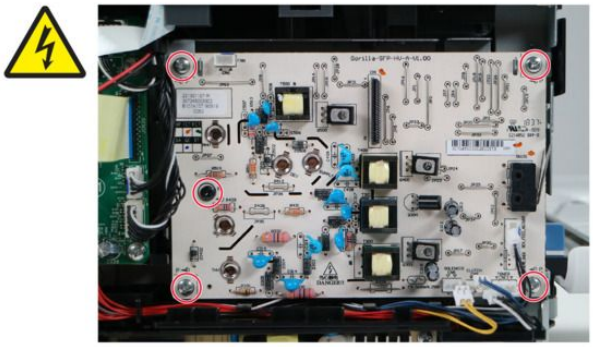
> **Note:** Make sure to perform the HVPS characterization when replacing the HVPS. See Performing the HVPS characterization on page 241.

1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the rear door. See Bottom rear door removal on page 255.

4. Remove the bottom rear door. See Bottom rear door removal on page 255.
5. Remove the left cover. See Left cover removal on page 242.
6. Disconnect all the cables.

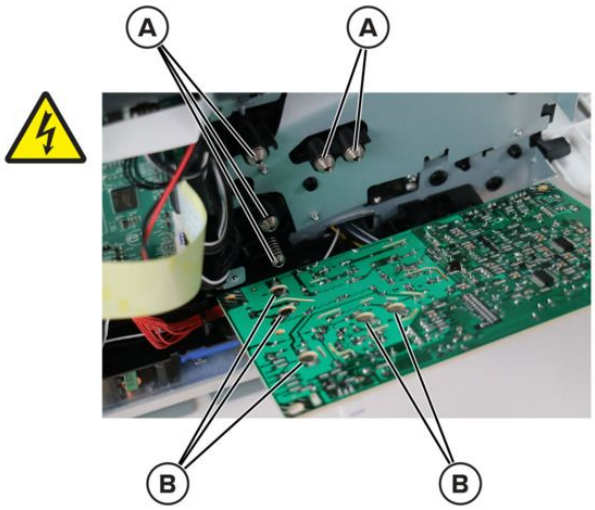


7. Remove the HVPS.



Installation Note

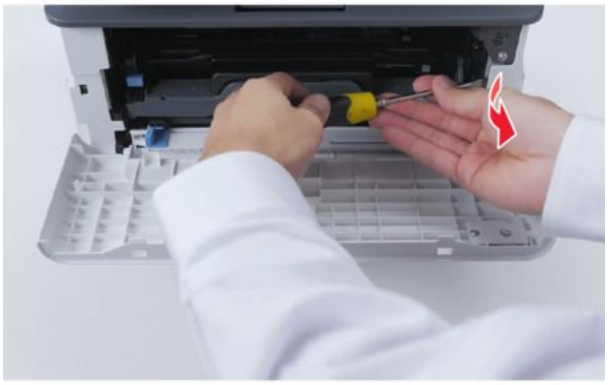
Make sure that the spring contacts on the printer (A) are properly aligned with the contacts on the HVPS (B).



Right side removals

Right cover removal

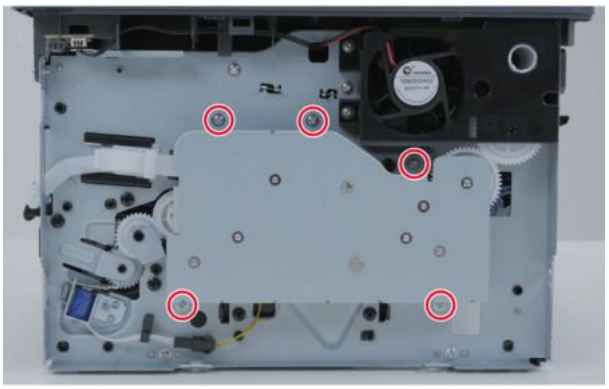
1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the right cover.



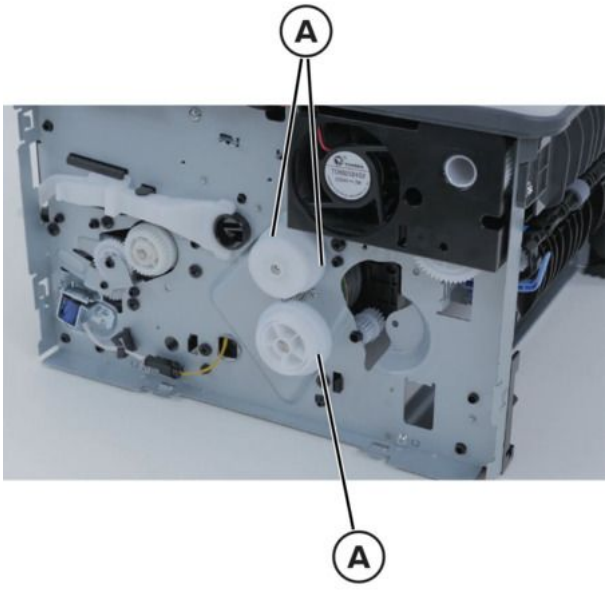
Main drive removal

> **Note:** For a video demonstration, see Main drive removal.

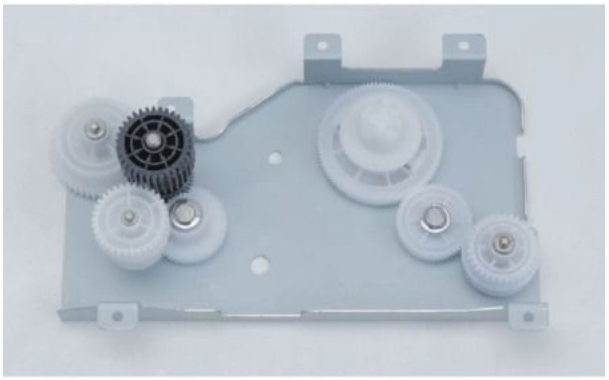
1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the rear door. See Bottom rear door removal on page 255.
4. Remove the bottom rear door. See Bottom rear door removal on page 255.
5. Remove the right cover. See Right cover removal on page 248.
6. Remove the main drive.



7. Remove the three gears (A).

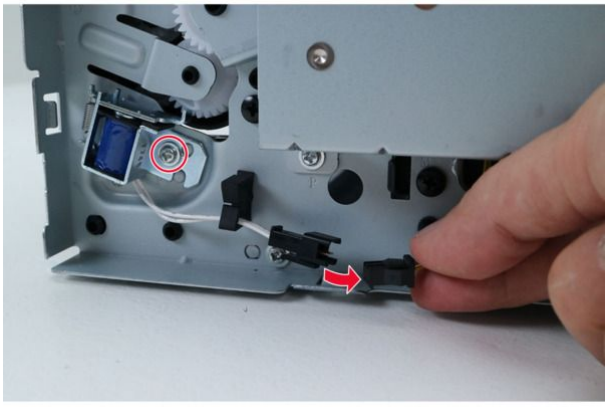


Installation Note
Pay attention on how the gears are installed on the main drive and on the printer. Some gears may have a coupler within them. For more information, see the *Main drive removal* video.



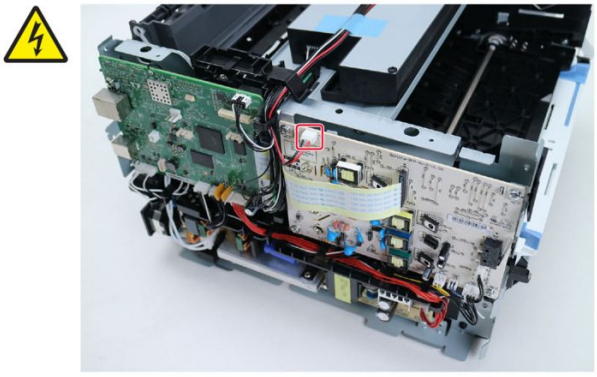
Pick solenoid removal

1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the right cover. See . Right cover removal on page 248
4. Remove the pick solenoid.

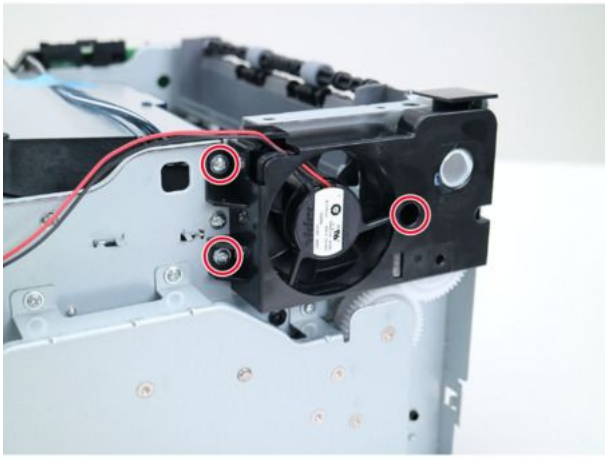


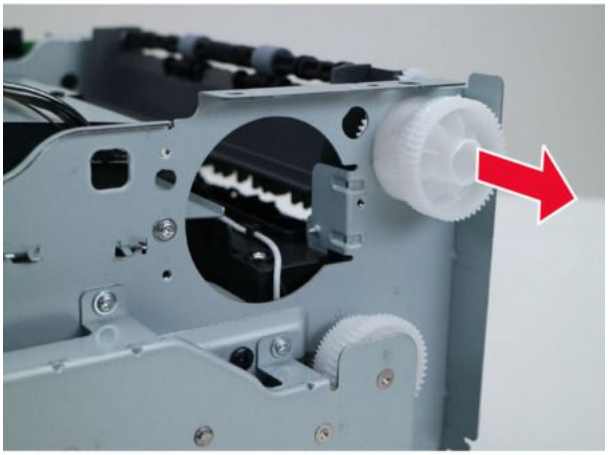
Fan assembly removal

1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the rear door. See Bottom rear door removal on page 255.
4. Remove the bottom rear door. See Bottom rear door removal on page 255.
5. Remove the left cover. See Left cover removal on page 242.
6. Remove the right cover. See Right cover removal on page 248.
7. Remove the top cover assembly. See Top cover assembly removal on page 258.
8. Disconnect the cable, and then remove it from the frame.



9. Remove the fan, and then remove the gear.





Installation Note
Before installing the gear, make sure that it is properly greased.

Front removals

Front door removal

1. Detach the door strap.

2. Remove the front door.

Transfer roller removal

1. Remove the toner cartridge.
2. Remove the transfer roller.

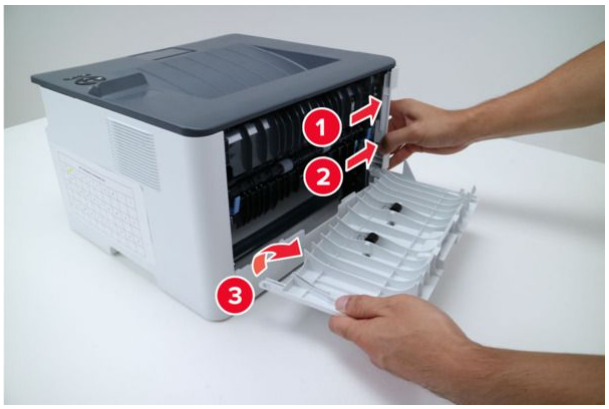
Installation Note

- Do not touch the foam on the roller.
- The shaft is greased. To avoid contaminating the roller, do not touch the shaft.
- Make sure that the spring is properly installed on the right side of the roller.

Rear removals

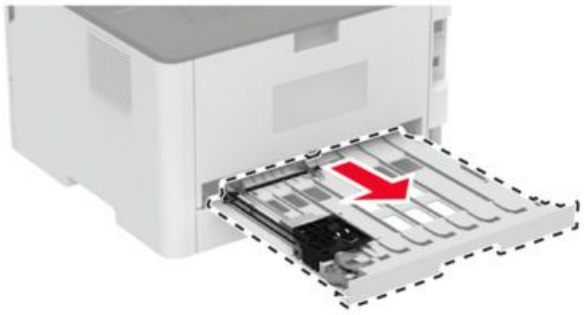
Rear door removal

1. Remove the duplex unit.
2. Remove the rear door.



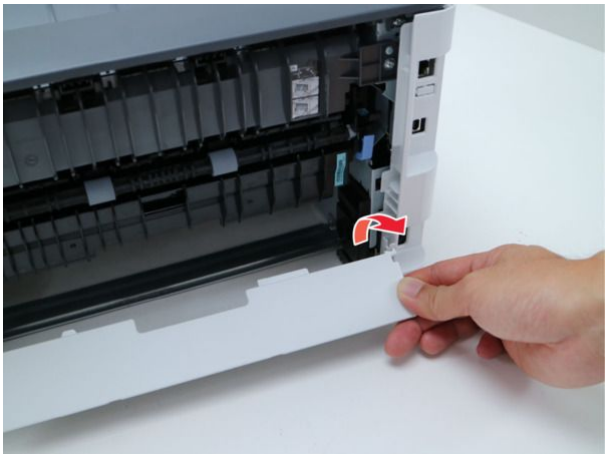
Duplex unit removal

Remove the duplex unit.



Bottom rear door removal

1. Remove the duplex unit.
2. Remove the rear door. See Rear door removal on page 254.
3. Remove the bottom rear door.



Redrive removal

1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the left cover. See Left cover removal on page 242.
4. Remove the right cover. See Right cover removal on page 248.
5. Remove the rear door. See Bottom rear door removal on page 255.
6. Remove the bottom rear door. See Bottom rear door removal on page 255.
7. Remove the redrive.

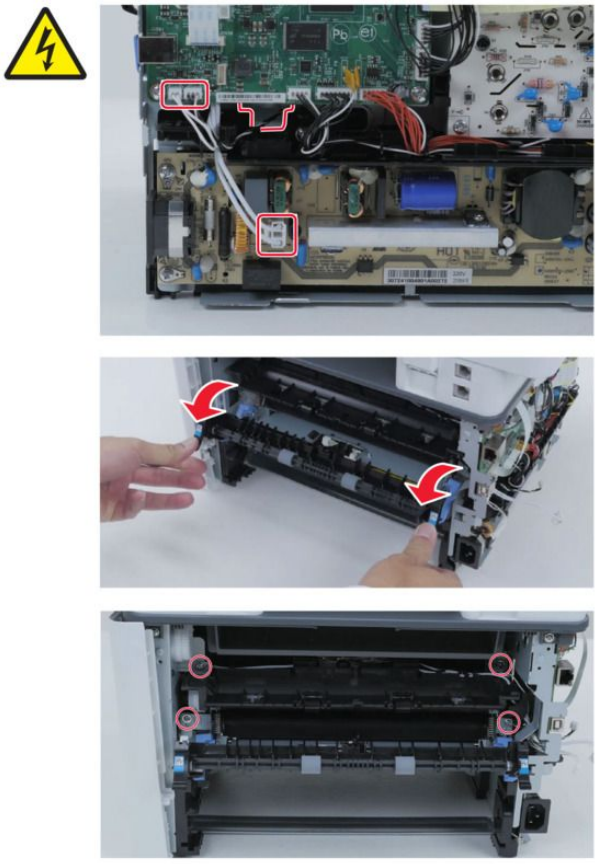
Fuser removal

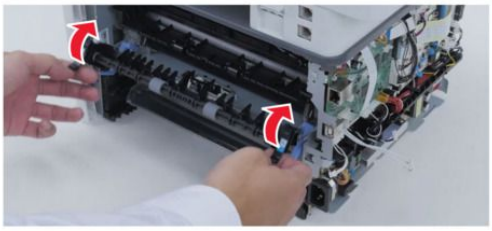
> **Note:** For a video demonstration, see Fuser removal.

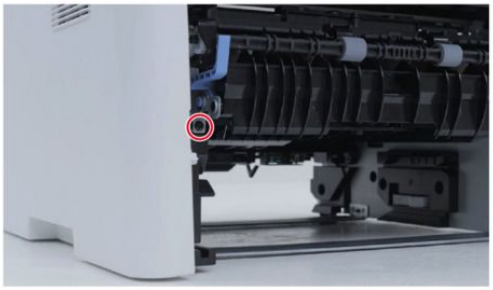
1. Remove the tray insert.
2. Remove the duplex unit.

3. Remove the front door. See Front door removal on page 252.
4. Remove the rear door. See Rear door removal on page 254.
5. Remove the bottom rear door. See Bottom rear door removal on page 255.
6. Remove the left cover. See Left cover removal on page 242.
7. Remove the redrive. See Redrive removal on page 255.
8. Remove the fuser.

> **Installation Note**
> Pay attention to the cable routing.

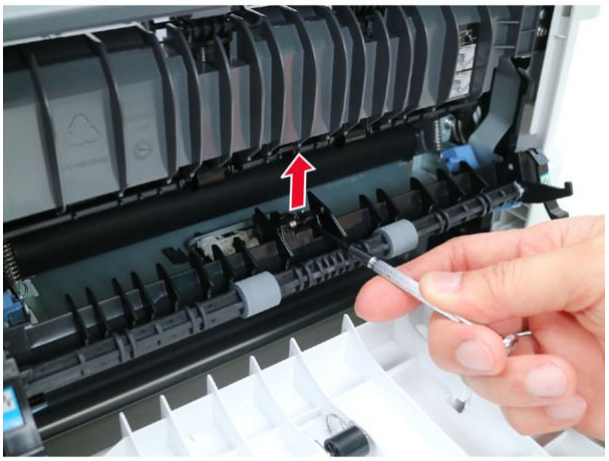






Fuser exit flag removal

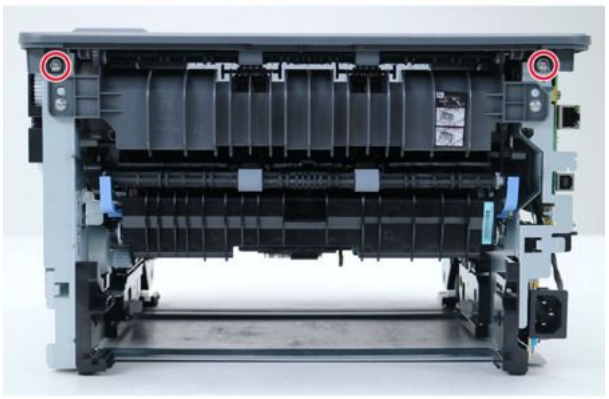
1. Remove the rear door. See .Bottom rear door removal on page 255
2. Open the fuser door.
3. Remove the fuser exit flag.



Top removals

Top cover assembly removal

1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the left cover. See Left cover removal on page 242.
4. Remove the right cover. See Right cover removal on page 248.
5. Remove the rear door. See Bottom rear door removal on page 255.
6. Remove the bottom rear door. See Bottom rear door removal on page 255.
7. Remove the top cover assembly.



Printhead removal

Note: If the printhead is like the one shown, then replace the printhead with PN 41X2843, and then make sure to replace the printhead cables and install the EMC bracket.

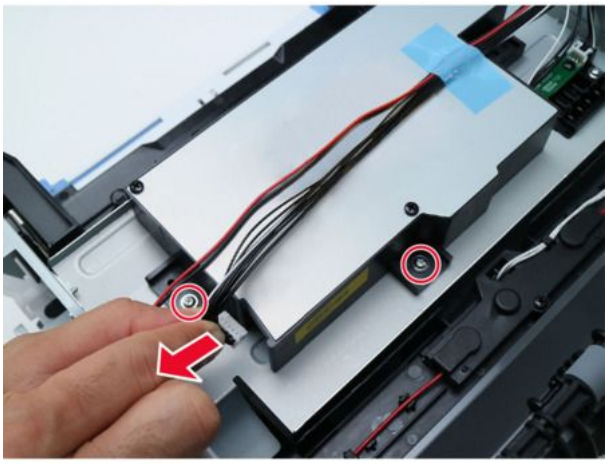
1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the left cover. See Left cover removal on page 242.
4. Remove the right cover. See Right cover removal on page 248.
5. Remove the rear door. See Bottom rear door removal on page 255.
6. Remove the bottom rear door. See Bottom rear door removal on page 255.
7. Remove the top cover assembly. See Top cover assembly removal on page 258.
8. Remove the printhead.

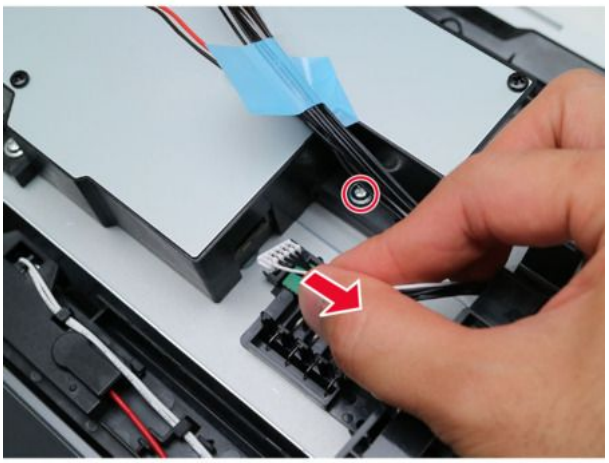
   WARNING: Class 3b invisible laser radiation when open and interlocks defeated. Avoid exposure to the beam.

   AVERTISSEMENT: Rayonnement laser invisible de classe 3b - en cas d'ouverture et de verrouillage defectueux. Evitez toute exposition au faisceau.

   ADVERTENCIA: Radiación láser invisible de clase 3b en caso de apertura y neutralización de la seguridad. Evitar exposición al haz.

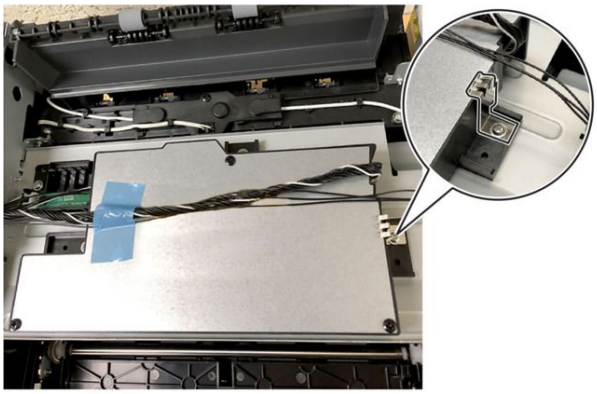
   WARNUNG: Unsichtbare Strahlung von Laser Klasse 3b wenn offen und Verriegelungen entriegelt. Kontakt mit Laserstrahl vermeiden.





9. Remove the printhead.

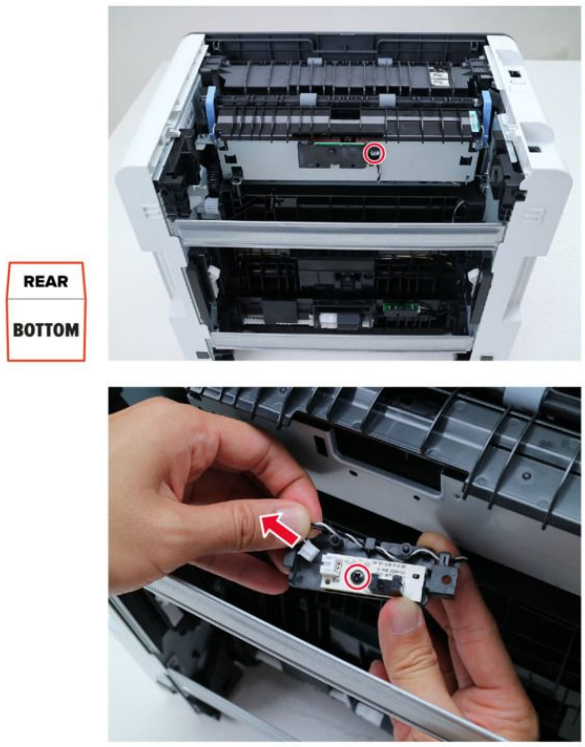
> **Installation Note**
> Make sure that the EMC clip is properly installed.



Bottom removals

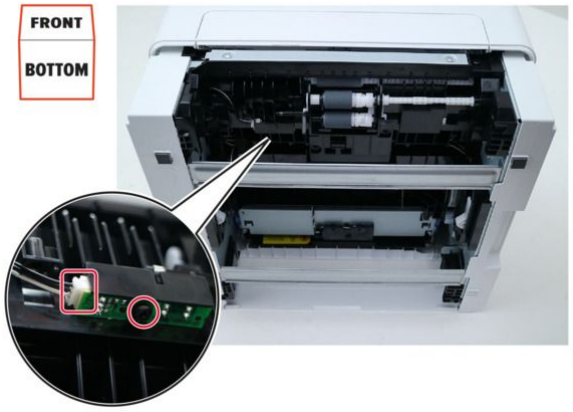
Sensor (fuser exit) removal

1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the rear door. See . Bottom rear door removal on page 255
4. Remove the bottom rear door. See . Bottom rear door removal on page 255
5. Place the printer on its front, and then remove the sensor.



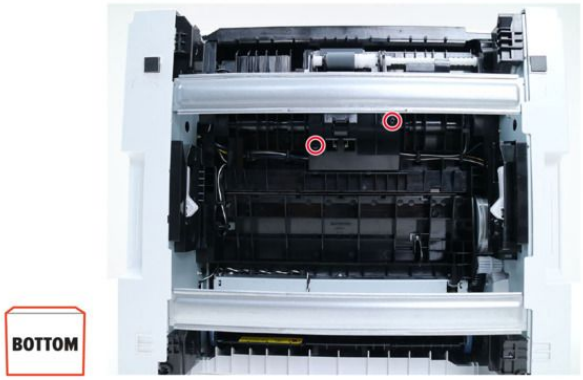
Sensor (paper present) removal

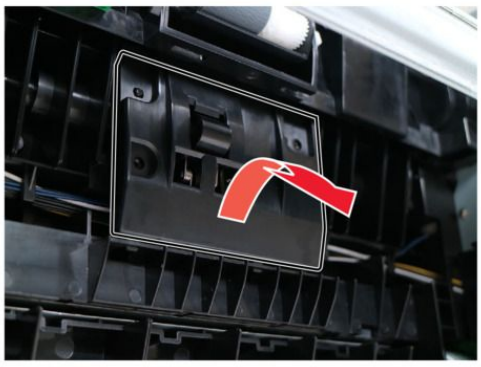
1. Remove the tray insert.
2. Remove the duplex unit.
3. Place the printer on its rear, and then remove the sensor.



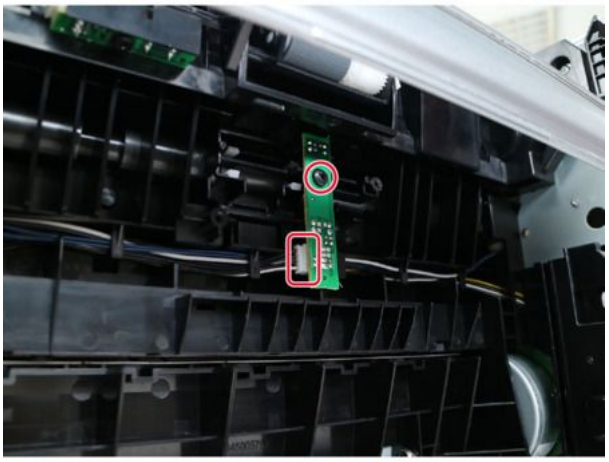
Sensor (staging and input) removal

1. Remove the tray insert.
2. Remove the duplex unit.
3. Place the printer on its rear, and then remove the sensor cover.



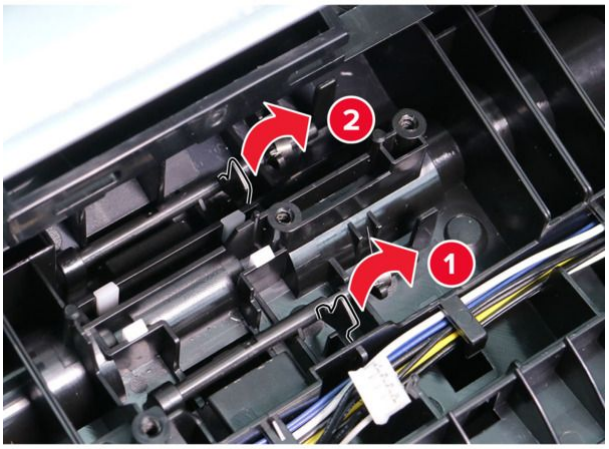


4. Remove the sensor.

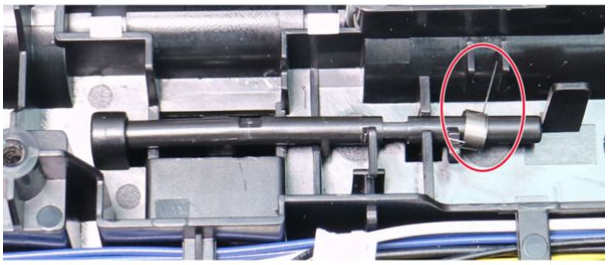


Input sensor flags removal

1. Remove the tray insert.
2. Remove the duplex unit.
3. Remove the sensor (staging and input). See Sensor (staging and input) removal on page 262.
4. Remove the two sensor flags.



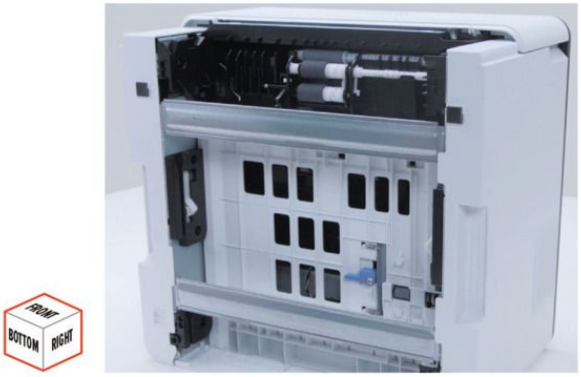
Installation Note
Pay attention to the position of the spring on each flag.



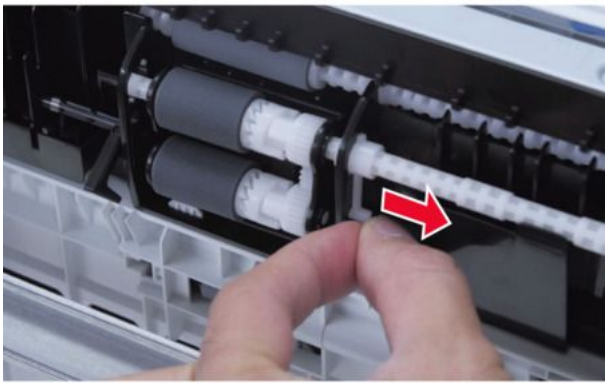
Pick rollers removal

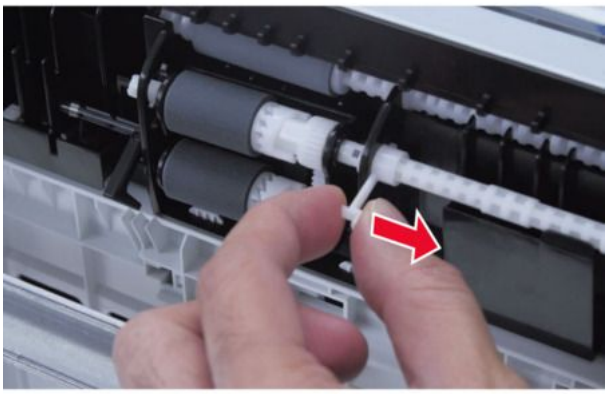
> **Note:** For a video demonstration, see Pick roller removal.

1. Remove the tray insert.
2. Place the printer on its rear.

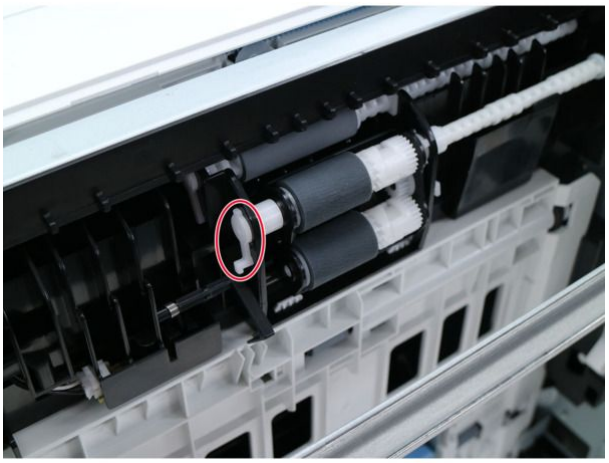


3. Remove the right pick roller retainers.





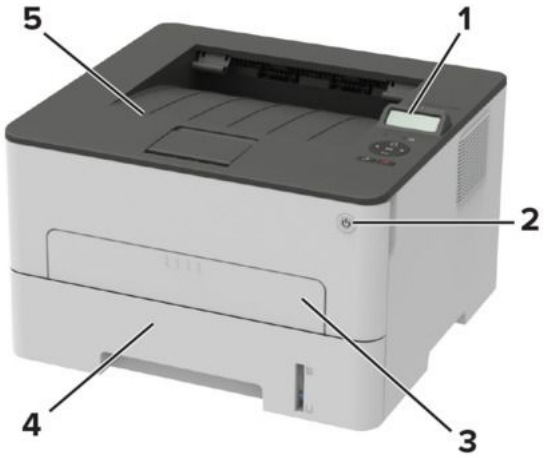
Note: Perform the same procedure to remove the left pick roller retainer.



4. Remove the two pick rollers.

Component locations

Printer configuration



1	Control panel
2	Power button
3	Manual feeder
4	250-sheet tray
5	Standard bin

Controller board connectors

Connector	Connects to	Pin number	Signal
J1	Control panel	1	3.3 V UI
		2	GROUND
		3	5 V CONT
		4	LCD CS RJ
		5	LCD RSTN RJ
		6	LCD CD RJ
		7	LCD SCK SFP
		8	LCD SDA RJ
		9	GROUND
		10	JCN21

Connector	Connects to	Pin number	Signal
		11	ROW0
		12	ROW1
		13	ROW2
		14	LCD ON
		15	COL 0
		16	COL1
		17	COL2
JCN31	Imaging unit contact	1	3.3 V SCHIP
		2	IU SDA C
		3	IU SCL C
		4	GROUND
JCN39	HVPS	1	25 V
		2	25 V
		3	GROUND
		4	HVPS ID C
		5	3.3 V_ENG
		6	3.3 V_SCHIP
		7	CART SDA C
		8	CART SCL C
		9	FDOOR OPEN C
		10	FAN EN C
		11	3.3 V ENG SNS
		12	PICK EN C
		13	BUMP ROLL EN C
		14	INPUT SNSN C
		15	BUMP SNSN C
		16	(NO CONNECTION)
		17	UNUSED SNSN C
		18	DEV PWM C
		19	XFR PWM C

Connector	Connects to	Pin number	Signal
		20	CHG PWM C
		21	XFR POS C
		22	A XFR SERVO C
		23	GROUND
JCN5	Printhead (mirror motor)	1	MMTR REFCLK C
		2	MMTR LOCKN C
		3	MMTR STARTN C
		4	GROUND
		5	25 V SW
JCN4	Printhead (video)	1	VDO HSYNCNC
		2	GROUND
		3	VDO ADJ0N C
		4	VDO K1 -C
		5	VDO ADJ1N C
		6	VDO K1 +C
		7	VDO LENAN C
		8	GROUND
		9	VDO LPOW C
		10	VDO K0 -C
		11	VDO PWR C 3.3 V
		12	VDO K0 +C
JCN24	LVPS	1	25 V CONT
		2	25 V CONT
		3	25 V CONT
		4	GROUND
		5	GROUND
		6	GROUND
		7	LV SLEEPN C
		8	LV HEAT C
		9	25 V SW

Connector	Connects to	Pin number	Signal
		10	AC RELAY ON C 3 V
JCN3	Motor (main)	1	GROUND
		2	GROUND
		3	25 V SW
		4	25 V SW
		5	BLDC LOCKN C
		6	BLDC ENN C
		7	BLDC PWM C
		8	BLDC DIR C
JCN10	Sensor (tray empty)	1	TRAY EMPTY LED C 1.1 V
		2	TRAY EMPTY C
		3	GROUND
		4	No connection
JCN1	Sensor (fuser exit)	1	3.3 V
		2	EXIT SNS C
		3	GROUND
JCN2	Sensor (fuser)	1	A FUSER THERM C 1.8 V
		2	GROUND

Maintenance

Cleaning printer parts

Cleaning the printer

CAUTION—SHOCK HAZARD
To avoid the risk of electrical shock when cleaning the exterior of the printer, unplug the power cord from the electrical outlet and disconnect all cables from the printer before proceeding.

CAUTION—SHOCK HAZARD
pour éviter tout risque d'électrocution lors du nettoyage de l'extérieur de l'imprimante, débranchez le cordon d'alimentation électrique de la prise et déconnectez tous les câbles de l'imprimante avant de continuer.

CAUTION—SHOCK HAZARD
Para evitar el riesgo de descarga eléctrica al limpiar el exterior de la impresora, desconecte el cable de alimentación de la toma eléctrica y desconecte todos los cables de la impresora antes de realizar la operación.

CAUTION—SHOCK HAZARD
Um das Risiko eines elektrischen Schlags beim Reinigen des Druckergehäuses zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose, und ziehen Sie alle Kabel vom Drucker ab, bevor Sie fortfahren.

Note:

- Perform this task after every few months.
- Damage to the printer caused by improper handling is not covered by the printer warranty.

1. Turn off the printer, and then unplug the power cord from the electrical outlet.
2. Remove paper from the standard bin and manual feeder.
3. Remove any dust, lint, and pieces of paper around the printer using a soft brush or vacuum.
4. Wipe the outside of the printer with a damp, soft, lint-free cloth.

Note:

- Do not use household cleaners or detergents, as they may damage the finish of the printer.
- Make sure that all areas of the printer are dry after cleaning.

5. Connect the power cord to the electrical outlet, and then turn on the printer.

Parts catalog

Legend

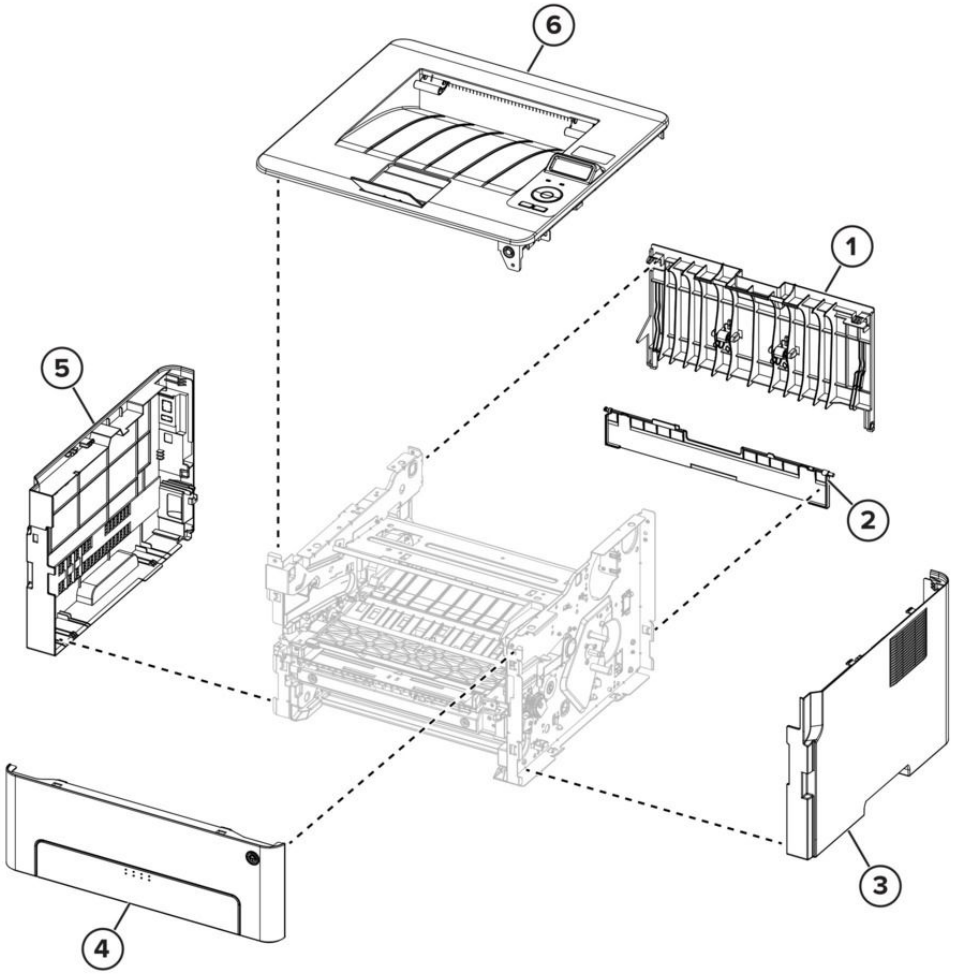
The following column headings are used in the parts catalog:

- **Asm-index**—Identifies the item in the illustration.
- **Part number**—Identifies the unique number that correlates with the part.
- **Units/mach**—Refers to the number of units actually used in the base machine or product.
- **Units/FRU**—Refers to the number of units in a particular FRU.
- **Description**—Describes the part.

The following abbreviations are used in the parts catalog:

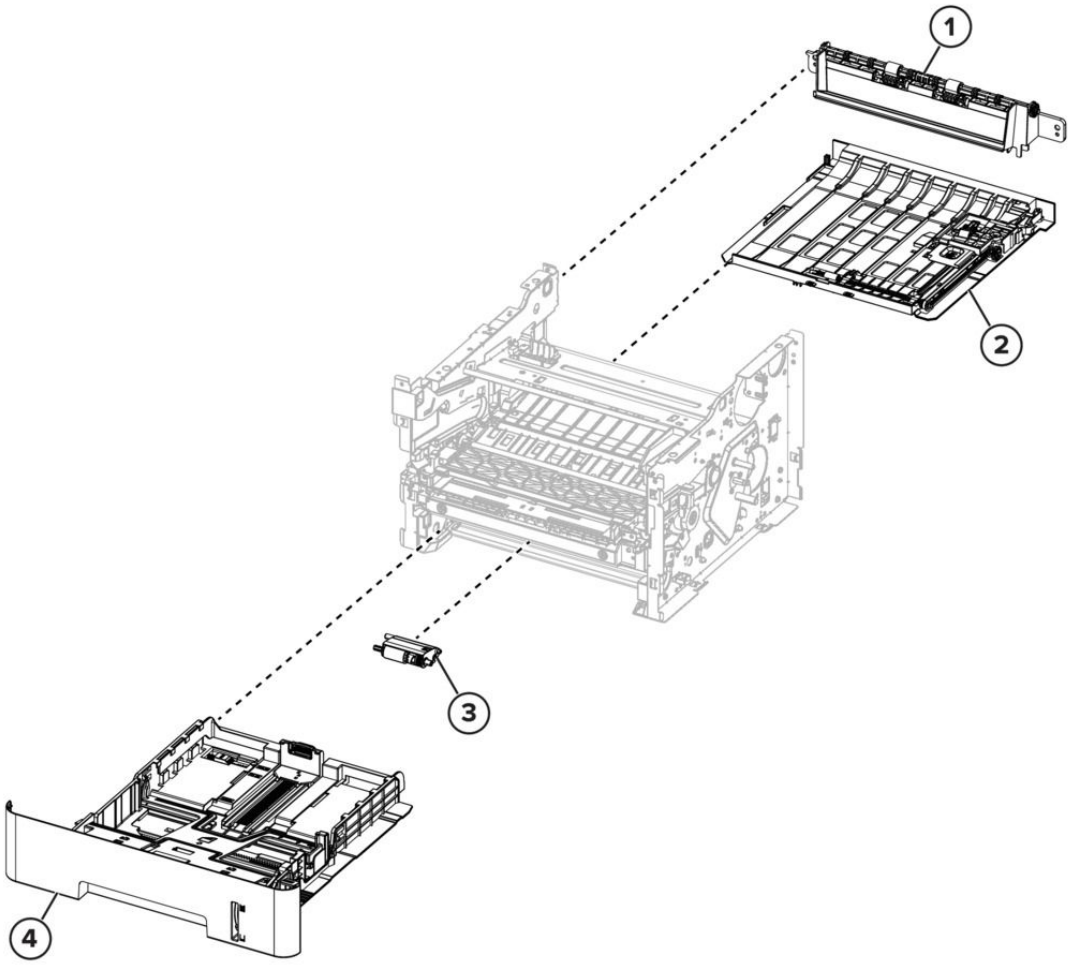
- **NS** (not shown) in the Asm-index column indicates that the part is procurable but is not pictured in the illustration.
- **PP** (parts packet) in the Description column indicates that the part is contained in a parts packet.

Covers



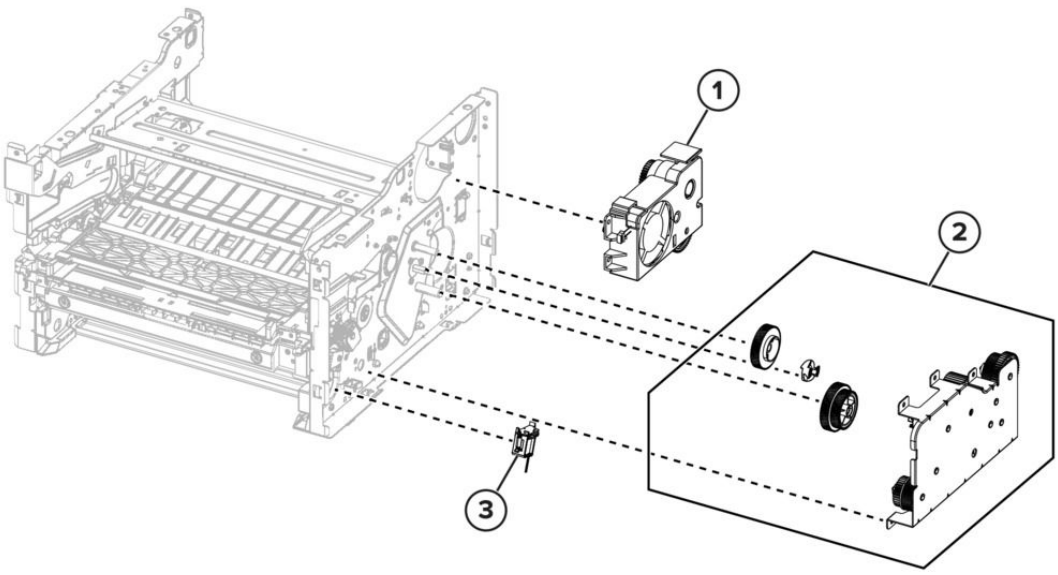
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2447	1	1	Rear door	Bottom rear door removal on page 255
2	41X2448	1	1	Bottom rear door	Bottom rear door removal on page 255
3	41X2449	1	1	Right cover	Right cover removal on page 248
4	41X2450	1	1	Front door	Front door removal on page 252
5	41X2451	1	1	Left cover	Left cover removal on page 242
6	41X2486	1	1	Top cover assembly	Top cover assembly removal on page 258

Paper path



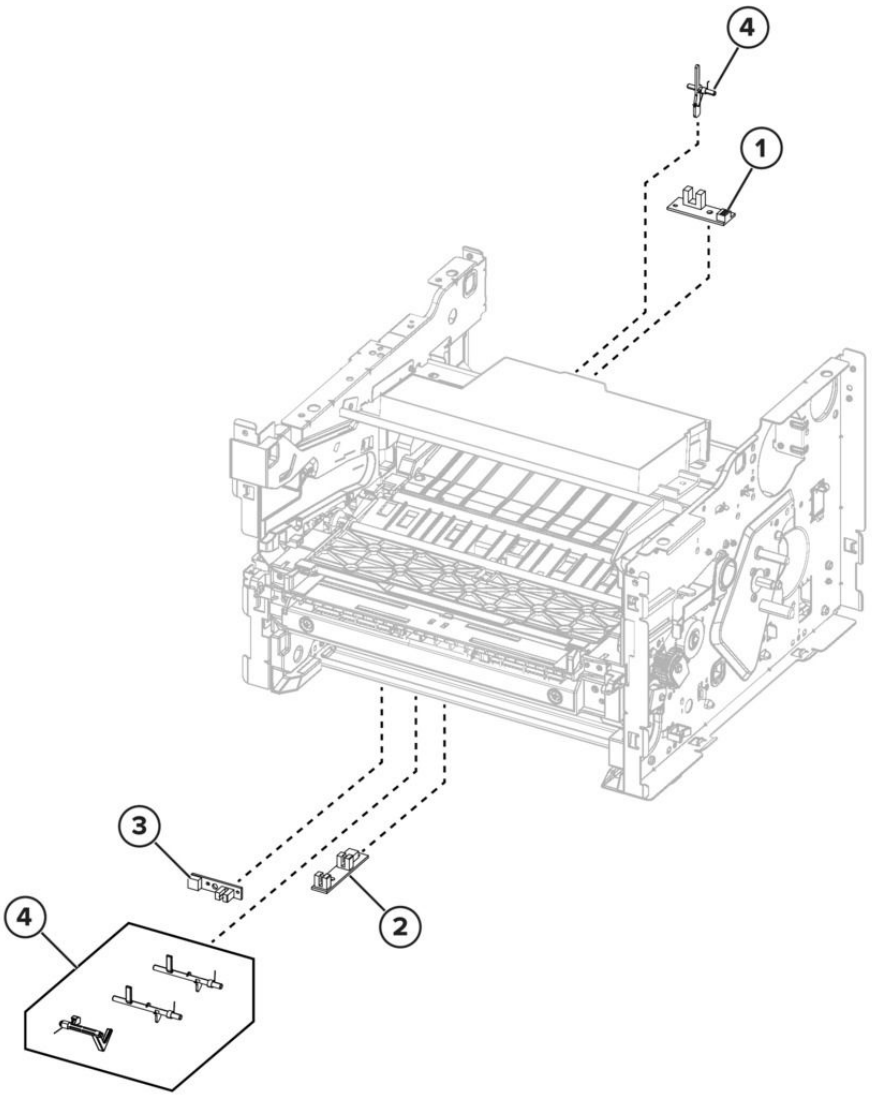
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2453	1	1	Redrive	Redrive removal on page 255
2	41X2454	1	1	Duplex unit	Duplex unit removal on page 254
3	41X2455	1	1	Pick roller	Pick rollers removal on page 264
4	41X2452	1	1	Tray insert	--

Drive



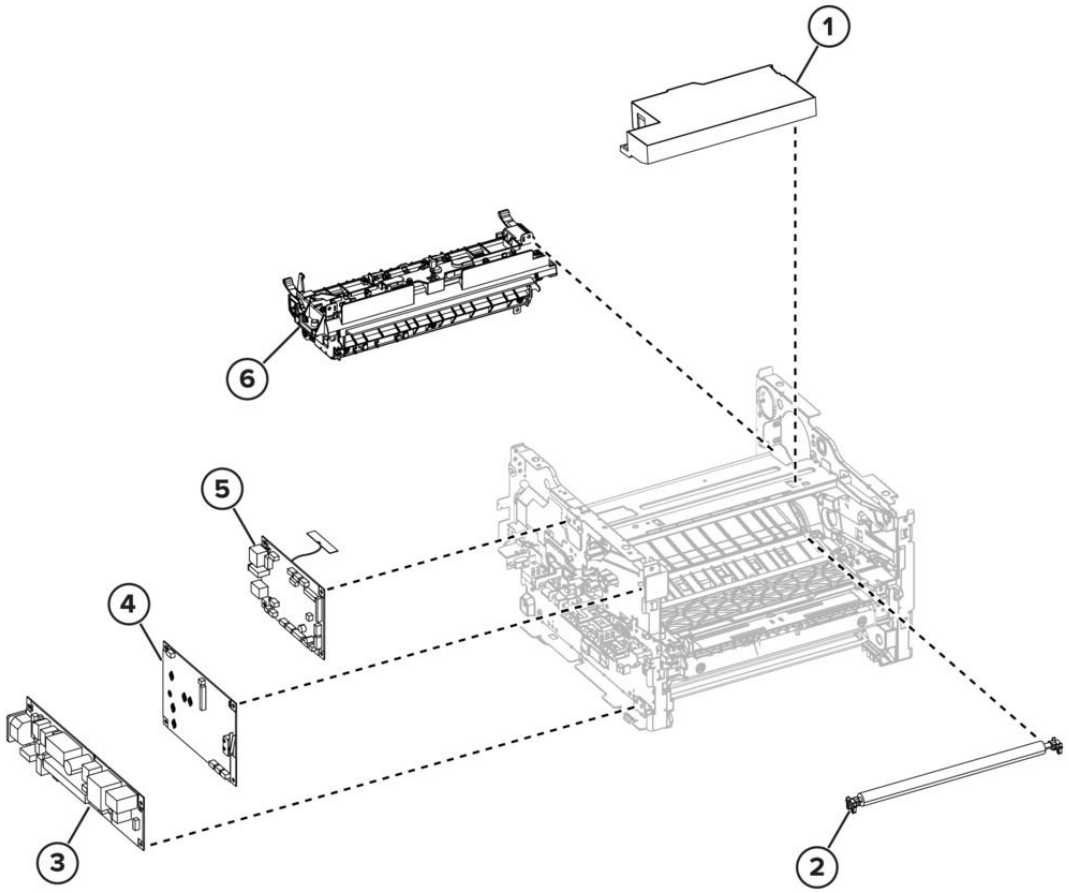
Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2470	1	1	Fan assembly	Fan assembly removal on page 251
2	41X2471	1	1	Main drive	Main drive removal on page 249
3	41X2472	1	1	Pick solenoid	Pick solenoid removal on page 250

Sensors



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2468	1	1	Sensor (fuser exit)	Sensor (fuser exit) removal on page 261
2	41X2467	1	1	Sensor (staging and input)	Sensor (staging and input) removal on page 262
3	41X2466	1	1	Sensor (paper present)	Sensor (paper present) removal on page 261
4	41X2469	1	1	Sensor flags	Input sensor flags removal on page 263 Fuser exit flag removal on page 257

Electronics



Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2843	1	1	Printhead	For more information, see Printhead removal on page 259.
2	41X2457	1	1	Transfer roller	For more information, see Transfer roller removal on page 253.
3	41X2459	1	1	LVPS, 110 V	For more information, see LVPS removal on page 246.
3	41X2460	1	1	LVPS, 220 V	For more information, see LVPS removal on page 246.
4	41X2458	1	1	HVPS	For more information, see HVPS removal on page 246.
5	41X2462	1	1	Controller board	For more information, see Controller board removal on page 244.

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
6	41X2463	1	1	Fuser, 110 V **Note:** If this FRU is no longer available, then you may order PN 41X6258.	For more information, see Fuser removal on page 255.
6	41X6258	1	1	Fuser, 110V **Note:** This is the new fuser with the updated bearing. This fuser can only be ordered if the old FRU is no longer available.	
6	41X2464	1	1	Fuser, 220 V **Note:** If this FRU is no longer available, then you may order PN 41X6259.	For more information, see Fuser removal on page 255.
6	41X6259	1	1	Fuser, 220V **Note:** This is the new fuser with the updated bearing. This fuser can only be ordered if the old FRU is no longer available.	
NS	41X2482	1	1	Cable kit parts pack	--
NS	41X2634	1	1	Control panel and fax FFC cable	--

Miscellaneous

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
NS	40X0278	1	1	Power cord, straight—Austria and Russia	N/A
NS	40X0282	1	1	Power cord, straight—PRC	N/A
NS	40X0286	1	1	Power cord, straight—Ireland, Bahrain, Cyprus, Kuwait, Lebanon, Malta, Oman, Qatar, United Arab Emirates, and United Kingdom (England, Scotland, Wales, and Northern Ireland)	N/A
NS	40X0297	1	1	Power cord, straight (6 feet)—US, Canada, and Latin America (Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Puerto Rico, Venezuela, and the US Virgin Islands)	N/A
NS	40X4596	1	1	Power cord, 3-wire (10A, 2500 mm)—Brazil	N/A
NS	40X1792	1	1	Power cord, straight (8 feet)—Korea	N/A
NS	40X0296	1	1	Power cord, straight—Australia **Note:** This part is obsolete.	N/A
NS	40X0279	1	1	Power cord, straight—Denmark	N/A
NS	40X0271	1	1	Power cord, straight—United Kingdom	N/A
NS	40X1791	1	1	Power cord, straight (8 feet)—Taiwan	N/A

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.	460
Copy	The product is generating hard-copy output from hard-copy original documents.	N/A
Scan	The product is scanning hard-copy documents.	N/A
Ready	The product is waiting for a print job.	4.0
Sleep Mode	The product is in a high-level energy-saving mode.	1.2
Hibernate	The product is in a low-level energy-saving mode.	N/A
Off	The product is plugged into an electrical outlet, but the power switch is turned off.	0.1

The power consumption levels listed in the previous table represent time-averaged measurements. Instantaneous power draws may be substantially higher than the average. Values are subject to change. See www.lexmark.com for current values.

Sleep Mode

This product is designed with an energy-saving mode called **Sleep Mode**. The Sleep Mode saves energy by lowering power consumption during extended periods of inactivity. The Sleep Mode is automatically engaged after this product is not used for a specified period of time, called the **Sleep Mode Timeout**.

Factory default Sleep Mode Timeout for this product (in minutes):	15

By using the configuration menus, the Sleep Mode Timeout can be modified between 1 minute and 120 minutes. Setting the Sleep Mode Timeout to a low value reduces energy

consumption, but may increase the response time of the product. Setting the Sleep Mode Timeout to a high value maintains a fast response, but uses more energy.

Hibernate Mode

This product is designed with an ultra-low power operating mode called **Hibernate mode**. When operating in Hibernate Mode, all other systems and devices are powered down safely.
The Hibernate mode can be entered in any of the following methods:

- Using the Hibernate Timeout
- Using the Schedule Power modes

Factory default Hibernate Timeout for this product in all countries or regions	3 days

The amount of time the printer waits after a job is printed before it enters Hibernate mode can be modified between one hour and one month.

Off mode

If this product has an off mode which still consumes a small amount of power, then to completely stop product power consumption, disconnect the power supply cord from the electrical outlet.

Total energy usage

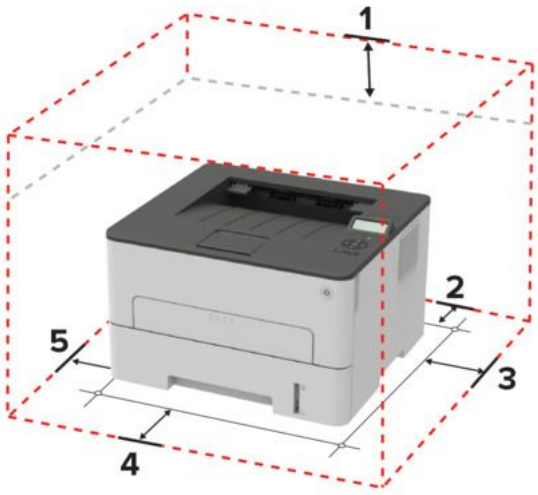
It is sometimes helpful to estimate the total product energy usage. Since power consumption claims are provided in power units of Watts, the power consumption should be multiplied by the time the product spends in each mode in order to calculate energy usage. The total product energy usage is the sum of each mode's energy usage.

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	-40 to 43.3°C (-40 to 110°F)

- Allow the following recommended amount of space around the printer for proper ventilation:



1	Top	120 mm (5 in.)
2	Rear	260 mm (10 in.)
3	Right side	120 mm (5 in.)
4	Front	550 mm (22 in.) **Note:** The minimum space needed in front of the printer is 76 mm (3 in.).
5	Left side	120 mm (5 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	One-sided: 53; Two-sided: 50
Ready	16

Values are subject to change. See www.lexmark.com for current values.

Temperature information

Ambient operating temperature	10 to 32.2°C (50 to 90°F)
Shipping temperature	-40 to 43.3°C (-40 to 110°F)
Storage temperature and relative humidity	-40 to 43.3°C (-40 to 110°F) 8 to 80% RH

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.

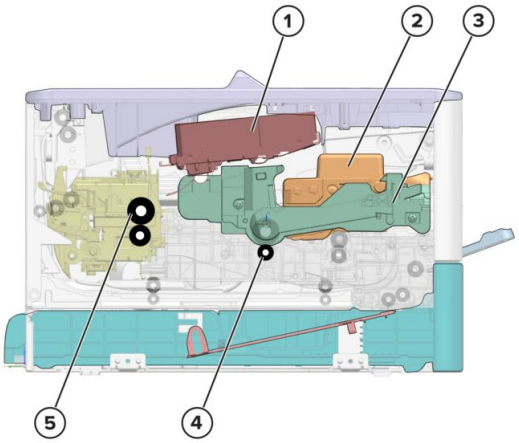
Theory of operation

POR sequence

As the printer is turned on, the engine code goes through a series of tests to verify hardware integrity. If a hardware failure is detected, then it is reported to the printer. If the POR sequence cannot be completed successfully, then the printer may post an error message. The message states that service may be needed.

Print cycle operation

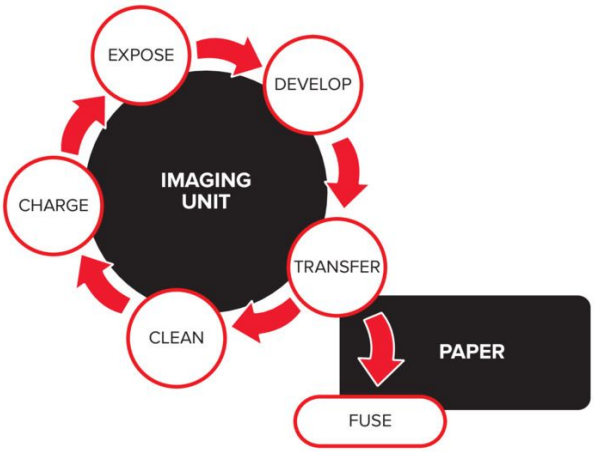
Print engine layout



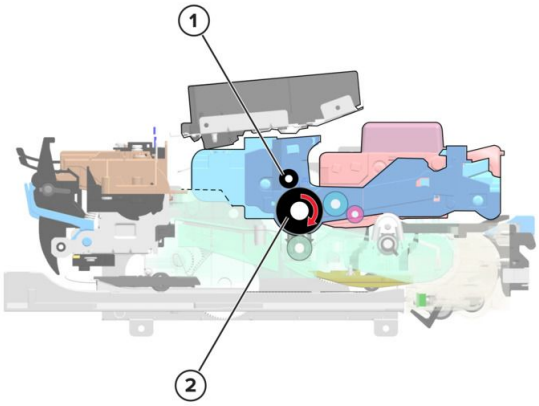
1	Printhead
2	Toner cartridge
3	Imaging unit
4	Transfer roller
5	Fuser

Print cycle

Flowchart



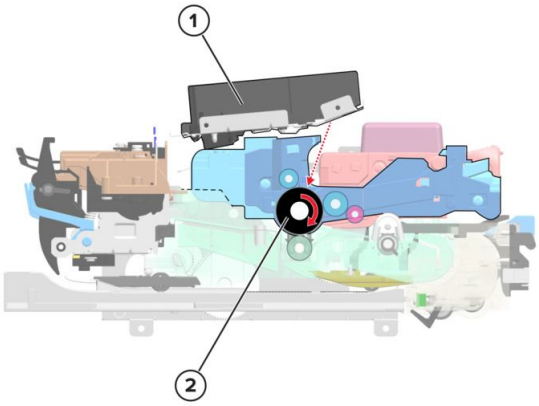
Charge



1	Charge roller
2	Photoconductor drum

The charge roller applies a uniform negative electrical charge to the surface of the photoconductor drum. The photoconductive properties of the surface material allow it to hold the charge as long as it is not exposed to light.

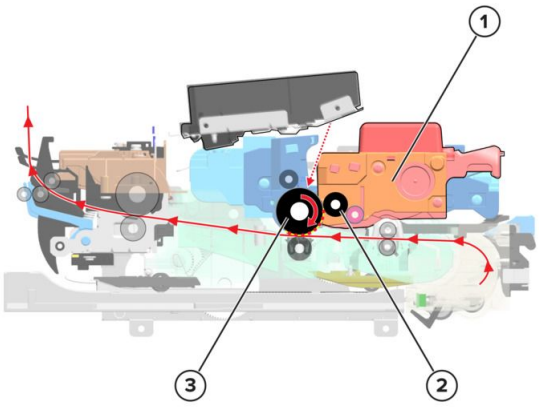
Expose



1	Printhead
2	Photoconductor drum

The printhead emits the light that contacts the surface of the photoconductor drum. The light turns on or off coinciding with the digital latent image. The light causes areas of the photoconductor drum surface to lose charge, resulting in a relative opposite polarity.

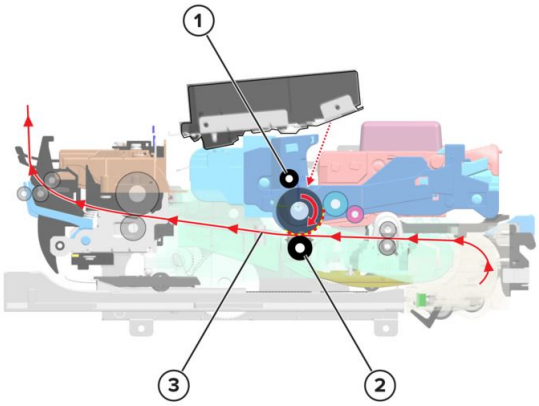
Develop



1	Toner cartridge
2	Developer roller
3	Photoconductor drum

The developer unit applies the toner from the toner cartridge to the photoconductor drum. The difference in charge causes the toner particles to attract to the photoconductor drum areas which are exposed to light.

Transfer



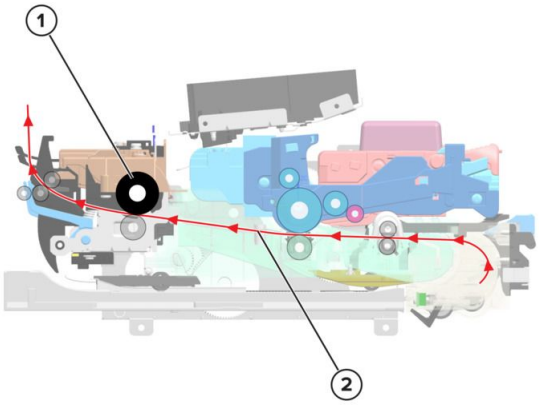
1	Charge roller
2	Transfer roller
3	Paper

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

Clean

The cleaning blade removes the residual toner from the photoconductor after the transfer. After cleaning, the process moves again to the charge process and repeats each cycle until the entire image is transferred to a side of the paper.

Fuse

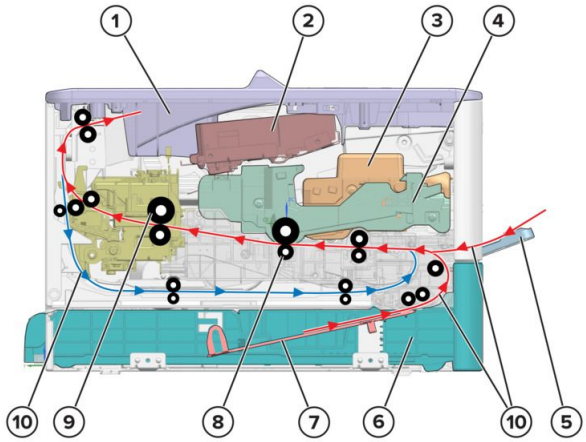


1	Fuser
2	Paper

Even if the toner image is already on the paper, the toner particles are not yet permanently bonded to the surface. For the final part of printing, the paper is transported to the fuser where heat and pressure are applied to it. As a result, the toner particles melt and permanently fuse with the paper, completing the print process. The print cycle repeats for the succeeding pages.

Printer operation

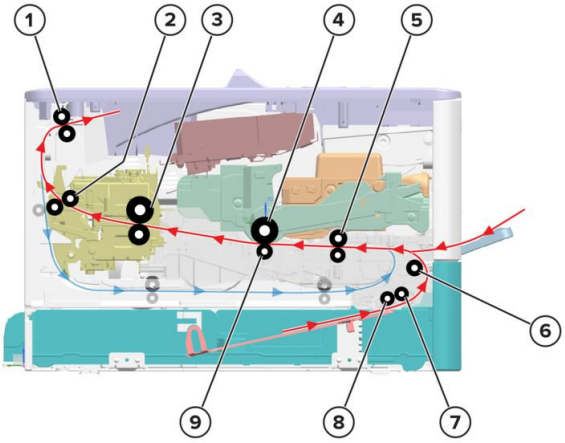
Printer sections



1	Output bin
2	Printhead
3	Toner cartridge
4	Imaging unit
5	Manual feeder
6	Tray
7	Lift plate
8	Transfer roller
9	Fuser
10	Paper paths

Printer paper path

Simplex print job



1	Paper exit roller
2	Fuser exit roller
3	Fuser
4	Photoconductor drum
5	Deskew roller
6	Transport roller
7	Feed roller
8	Pick roller
9	Transfer roller

The pick and feed rollers pick the paper, and then feeds it to the transport roller. The transport roller moves the paper to the deskew roller where the paper skew is corrected.

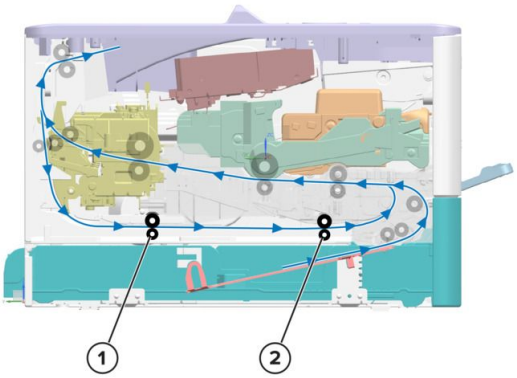
The deskew shutter along the deskew roller corrects the paper skew.

The deskew roller feeds the paper to the transfer roller for image transfer. At the transfer roller, the photoconductor drum transfers the developed image to the paper to create the printed image.

As the paper passes the fuser, heat and pressure are applied to bond permanently the toner to the paper.

After the image transfer process is complete, the paper is transported to the fuser exit roller, to the paper exit roller, and then to the output bin.

Duplex print job

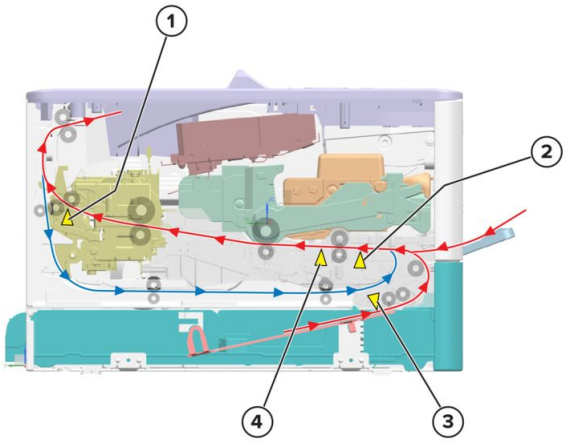


1	Duplex rear roller
2	Duplex front roller

After the first side is printed, the paper stops at the output bin while still in the exit roller. The paper is fed back into the duplex paper path to have the opposite page printed.

The paper travels along the duplex path until it reenters the second input roller. From there, the paper continues its path until the print job is done.

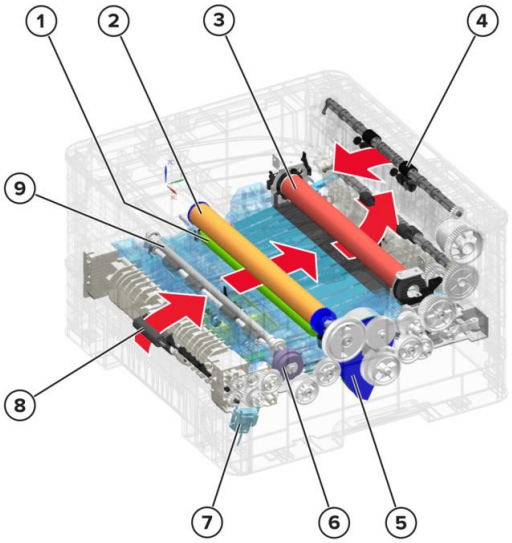
Printer paper path sensors



#	Sensor	Function
1	Sensor (fuser exit)	Detects the paper exiting the fuser
2	Sensor (staging)	Detects the paper travelling between the pick rollers and the deskew roller
3	Sensor (paper present)	Detects paper presence in the tray

#	Sensor	Function
4	Sensor (input)	Detects the paper travelling between the deskew roller and the transfer roller

Main drive



1	Transfer roller
2	Photoconductor
3	Fuser
4	Paper exit
5	Motor (main drive)
6	Deskew solenoid
7	Pick solenoid
8	Transport roller
9	Deskew roller

The motor (main drive) powers the drive mechanism of the printer. The gearbox provides mechanical power to the printer which transfers power through several gears to the following parts:

- Manual feeder
- Paper pick using the pick solenoid
- Paper feed using the deskew solenoid
- Transport roller
- Toner cartridge
- Photoconductor
- Fuser

- Duplex unit
- Redrive

Index

R

S

T

U

V

Z

Service Manual