



Lexmark<sup>TM</sup>

# MB2236adw and MB2236adwe MFPs

---

## 3400

### Service Manual

- [Start diagnostics](#)
- [Maintenance](#)
- [Safety and notices](#)
- [Trademarks](#)
- [Index](#)

July 15, 2019

[www.lexmark.com](http://www.lexmark.com)

---

## Product information

Product name:

Lexmark MB2236adw, Lexmark MB2236adwe MFPs

Machine type:

3400

Model(s):

481, 485

## Edition notice

July 15, 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.

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

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

## Trademarks

Lexmark and 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.

© 2019 Lexmark International, Inc.

All rights reserved.

P/N

# Table of contents

<b>Product information.....</b>	<b>2</b>
<b>Edition notice.....</b>	<b>2</b>
<b>Notices, conventions, and safety information.....</b>	<b>9</b>
Laser notice.....	9
Conventions.....	10
Safety information.....	12
<b>Change history.....</b>	<b>17</b>
Change history.....	17
<b>General information.....</b>	<b>19</b>
Printer model configurations.....	19
Supported paper sizes, types, and weights.....	19
Supported paper sizes.....	19
Supported paper types.....	21
Supported paper weights.....	22
Tools required for service.....	22
<b>Diagnostics and troubleshooting.....</b>	<b>23</b>
Troubleshooting precautions.....	23
Troubleshooting overview.....	25
Performing the initial troubleshooting check.....	25
Fixing print quality issues.....	25
Initial print quality check.....	25
Gray or solid background check.....	26
Solid color or black image check.....	30
Blank or white pages check.....	32
Dark print check.....	36
Light print check.....	40
Paper curl check.....	44
Folded or wrinkled paper check.....	46
Repeating defects check.....	48
Skewed print check.....	52
Streaked vertical lines appear on prints check.....	54
Horizontal white lines check.....	57
Vertical white lines check.....	61

Vertical colored lines or banding check.....	65
Vertical dark streaks with print missing check .....	69
White streaks and voided areas check .....	72
Clipped pages or images check.....	76
Compressed images appear on prints check.....	80
Incorrect margins on prints check .....	83
Toner rubs off check.....	85
Toner specks appear on prints check.....	87
Paper jams.....	90
Avoiding jams .....	90
200 paper jams.....	92
202 paper jams.....	98
206 paper jams.....	108
232 paper jams .....	114
User attendance messages.....	118
<b>Non-Lexmark supply</b> .....	118
8–12 user attendance messages .....	119
31–33 user attendance messages.....	122
34–42 user attendance messages.....	127
55 user attendance messages .....	131
71 user attendance messages.....	133
84 user attendance messages .....	135
88 user attendance messages .....	138
Non-supply user attendance messages.....	138
Printer hardware errors.....	143
111 error messages.....	143
121 errors.....	144
126 errors.....	148
140 errors.....	150
6yy errors.....	151
Procedure before starting the 9yy service checks .....	157
9yy errors.....	159
ADF/Scanner hardware errors.....	169
84y error messages.....	169
Sensor (scan) service check .....	169
Sensor (ADF top door interlock) service check.....	171
ADF feed error service check .....	174
Scanner disabled and scanner communication error service check .....	176
Flatbed home position service check.....	177
Other symptoms.....	178
Base printer symptoms .....	178
Door switch service check .....	179
Load tray 1 with A4 plain paper service check .....	180
Paper did not arrive in the bin service check .....	182



Tray insert obstructed service check .....	184
Unable to remove toner cartridge service check .....	184
Fax not detected service check .....	185
No display service check .....	186
No power service check.....	187
ADF cover open service check .....	188

## **Service menus..... 191**

Understanding the printer control panel.....	191
Using the MB2236adw control panel.....	191
Using the MB2236adwe control panel.....	192
Understanding the status of the power button and indicator light.....	192
Diagnostics menu.....	193
Entering the Diagnostics menu .....	193
Reports .....	193
Advanced Print Quality Samples.....	194
Format Fax Storage .....	194
Event Log.....	194
Input tray quick print.....	195
Output bin quick feed .....	195
Printer Setup .....	196
Printer diagnostics & adjustments .....	197
Scanner Diagnostics.....	199
Config menu.....	201
Entering the Config menu .....	201
Config Menu .....	201
Service Engineer menu.....	203
Entering Invalid engine mode .....	203
Entering the Service Engineer (SE) menu .....	204
General SE .....	204
Network SE .....	204
Fax SE.....	205
Scan SE .....	207

## **Parts removal..... 209**

Removal precautions.....	209
Handling ESD-sensitive parts.....	211
Critical information for controller board or control panel replacement (for MB2236adwe only).....	211
Restoring the printer configuration after replacing the controller board .....	212
Restoring solutions, licenses, and configuration settings .....	215
Updating the printer firmware .....	216
Backing up eSF solutions and settings .....	217
Ribbon cable connectors .....	218

Zero Insertion Force (ZIF) connectors.....	218
Horizontal top contact connector .....	219
Horizontal bottom contact connector .....	221
Vertical mount contact connector .....	223
Horizontal sliding contact connector .....	225
Low insertion force (LIF) connector .....	227
Printhead assembly adjustment .....	228
Data security notice.....	230
Performing the HVPS characterization.....	231
Removal procedures.....	232
Left side removals.....	232
Left cover removal .....	232
Controller board removal .....	234
LVPS removal.....	235
HVPS removal .....	236
Right side removals.....	238
Right cover removal.....	238
Main drive removal.....	239
Pick solenoid removal .....	241
Fan assembly removal .....	242
Front removals.....	243
2-line control panel removal.....	243
2.8-in. control panel removal .....	246
Front door removal .....	248
Transfer roller removal .....	249
Rear removals.....	250
Rear door removal.....	250
Duplex unit removal.....	250
Bottom rear door removal .....	251
Redrive removal.....	251
Fuser removal.....	252
Fuser exit flag removal.....	254
Top removals.....	255
Top cover removal.....	255
Printhead removal .....	262
Bottom removals.....	263
Sensor (fuser exit) removal .....	263
Sensor (paper present) removal .....	264
Sensor (input) removal .....	265
Input sensor flags removal.....	267
Pick rollers removal.....	268
ADF and scanner.....	271
Scanner stand removal .....	271

ADF pick assembly removal.....	272
ADF scanner and flatbed scanner removal.....	273
<b>Component locations.....</b>	<b>279</b>
Printer configuration.....	279
Controller board connectors.....	279
<b>Maintenance.....</b>	<b>287</b>
Cleaning printer parts.....	287
Cleaning the printer .....	287
Cleaning the scanner .....	288
<b>Parts catalog.....</b>	<b>290</b>
Legend.....	290
Assembly 1: Covers (MB2236adw).....	291
Assembly 2: Covers (MB2236adwe).....	293
Assembly 3: Paper path.....	295
Assembly 4: Drive.....	297
Assembly 5: Sensors.....	299
Assembly 6: Electronics.....	301
Assembly 7: Scanner.....	303
<b>Printer specifications.....</b>	<b>305</b>
Power consumption.....	305
Product power consumption .....	305
Sleep Mode .....	305
Hibernate Mode.....	305
Off mode .....	306
Total energy usage .....	306
Selecting a location for the printer.....	306
Noise emission levels.....	307
Temperature information.....	307
<b>Theory of operation.....</b>	<b>309</b>
POR sequence.....	309
Print cycle operation.....	309
Print engine layout .....	309
Print cycle .....	310
Printer operation.....	315
Printer sections .....	315

Printer paper path .....	316
Printer paper path sensors .....	318
Main drive .....	319
ADF and scanner operation.....	320
Flatbed scanner drive .....	320
ADF paper path.....	321
ADF paper path sensors.....	322
<b>Index.....</b>	<b>323</b>
<b>Part number index.....</b>	<b>327</b>
<b>Part name index.....</b>	<b>329</b>

# 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 :

Classe : IIIb (3b) AlGaAs

Puissance de sortie nominale (milliwatts) : 15

Longueur d'onde (nanomètres) : 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:

Clase: IIIb (3b) AlGaAs

Potencia nominal de salida (milivatios): 15

Longitud de onda (nanómetros): 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.

Klasse: IIIb (3b) AlGaAs

Nennausgangsleistung (Milliwatt): 15

Wellenlänge (Nanometer): 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—TIPPING HAZARD:** Indicates a crush hazard.



**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.

## Conventions

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

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

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

Il existe différentes mises en garde :



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



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



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



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



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



**AVERTISSEMENT - PIECES MOBILES** : Signale un risque de coupures ou de frottements à cause des pièces rotatives.

## Convenciones

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

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

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

Estos son los tipos de avisos de precaución que existen:



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



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



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



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



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



**PRECAUCIÓN: PIEZAS MÓVILES:** Indica que existe riesgo de lesiones por laceración o abrasión causadas por piezas giratorias.

## Konventionen

**Hinweis:** Ein *Hinweis* enthält nützliche Informationen.

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

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

Verschiedene Vorsichtshinweise:



**VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Weist auf ein Verletzungsrisiko hin.



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




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



**VORSICHT – KIPPGEFAHR:** Weist auf Quetschgefahr hin.





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


 **ACHTUNG—BEWEGLICHE TEILE** Weist auf das Risiko von Verletzungen und Abschürfungen durch sich drehende Teile hin.


## Safety information


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


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


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

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

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

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








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

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

## Consignes de sécurité


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





-  **ATTENTION—RISQUE D'ELECTROCUTION :** Ce symbole indique un danger lié à des niveaux de tension dangereux dans la zone du produit à manipuler. Débranchez le produit avant de commencer, ou agissez avec prudence si le produit doit être alimenté pour effectuer l'opération.
-  **ATTENTION—RISQUE DE BLESSURE :** La batterie lithium de ce produit n'est pas destinée à être remplacée. Si vous ne respectez pas les instructions de remplacement de la batterie, vous risquez de provoquer une explosion. Ne rechargez pas, ne désassemblez pas et ne brûlez pas la batterie au lithium. Mettez les batteries lithium usagées au rebut selon les instructions du fabricant et les réglementations locales.
-  **ATTENTION—RISQUE DE BLESSURE :** Pour éviter tout risque d'électrocution ou d'incendie, branchez le câble d'alimentation directement à une prise électrique répondant aux exigences requises et correctement mise à la terre, proche du produit et facile d'accès.
-  **ATTENTION—RISQUE DE BLESSURE :** Pour éviter tout risque d'incendie ou d'électrocution, utilisez uniquement le câble d'alimentation fourni avec ce produit ou un câble de remplacement autorisé par le fabricant.
-  **ATTENTION—RISQUE DE BLESSURE :** Ce produit ne doit pas être utilisé avec des rallonges, des barres multiprises, des rallonges multiprises ou des périphériques UPS. La capacité de ces types d'accessoires peut être facilement dépassée par une imprimante laser, d'où un risque de dégâts matériels, d'incendie ou de performances d'impression amoindries.
-  **ATTENTION—RISQUE DE BLESSURE :** Utilisez uniquement un parasurtenseur correctement raccordé à l'imprimante et au câble d'alimentation fourni avec la machine. L'utilisation de parasurtenseurs non fabriqués par Lexmark comporte un risque d'incendie et de dégâts matériels, et peut amoindrir les performances de l'imprimante.
-  **ATTENTION—RISQUE DE BLESSURE :** Si votre imprimante pèse plus de 20 kg (44 lb), l'intervention d'au moins deux personnes est nécessaire pour la soulever sans risque.





## Información de seguridad

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






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

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

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

-  **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** Para evitar el riesgo de incendio o descarga eléctrica, utilice exclusivamente el cable de alimentación que se suministra junto con este producto o el repuesto autorizado por el fabricante.
-  **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** No utilice este producto con cables alargadores, regletas de varias tomas, cables alargadores de varias tomas o sistemas de alimentación ininterrumpida. La potencia de este tipo de accesorios puede sobrecargarse fácilmente si se utiliza una impresora láser, lo que puede dar lugar a que el rendimiento de la impresora sea bajo, a daños materiales o a posibles incendios.
-  **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** Solo debe usarse con este producto un protector de sobretensión insertable Lexmark debidamente conectado entre la impresora y el cable de alimentación que con ella se suministra. El uso de protectores de sobretensión de marcas distintas a Lexmark puede dar lugar a que el rendimiento de la impresora sea bajo, a daños materiales o a posibles incendios.
-  **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** si el peso de la impresora es superior a 20 kg (44 lb), pueden ser necesarias dos o más personas para levantarla de forma segura.

## Sicherheitshinweise

- Die Sicherheit dieses Produkts basiert auf Tests und Zulassungen des Originaldesigns und der spezifischen Komponenten. Sofern nicht autorisierte Ersatzteile eingesetzt werden, übernimmt der Hersteller keinerlei Verantwortung in Bezug auf die Sicherheit dieses Produkts.
  - Die Wartungsinformationen für dieses Produkt wurden für ausgebildete Servicemitarbeiter zusammengestellt und dürfen nicht von anderen verwendet werden.
  - Möglicherweise besteht bei der Demontage und Wartung dieses Produkts eine erhöhte Stromschlag- und Verletzungsgefahr. Ausgebildete Servicemitarbeiter sollten sich dieser Gefahr bewusst sein und die notwendigen Vorsichtsmaßnahmen ergreifen.
-  **VORSICHT – STROMSCHLAGGEFAHR:** Wenn Sie dieses Symbol sehen, besteht eine Gefahr durch gefährliche Spannungen in dem Produktbereich, in dem Sie arbeiten. Trennen Sie das Produkt von seiner Stromverbindung, bevor Sie beginnen, oder gehen Sie vorsichtig vor, wenn das Produkt für die Durchführung der Aufgabe mit Strom versorgt werden muss.
  -  **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Die Lithiumbatterie in diesem Produkt darf nicht ausgetauscht werden. Wird eine Lithiumbatterie nicht ordnungsgemäß ausgetauscht, besteht Explosionsgefahr. Lithiumbatterien dürfen auf keinen Fall wieder aufgeladen, auseinander genommen oder verbrannt werden. Befolgen Sie zum Entsorgen verbrauchter Lithiumbatterien die Anweisungen des Herstellers und die örtlichen Bestimmungen.
  -  **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Um Feuer- und Stromschlaggefahr zu vermeiden, schließen Sie das Netzkabel direkt an eine ordnungsgemäß geerdete Steckdose an, die sich in der Nähe des Geräts befindet und leicht zugänglich ist.
  -  **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Um das Risiko eines Feuers oder elektrischen Schlags zu vermeiden, verwenden Sie ausschließlich das diesem Produkt beiliegende Netzkabel bzw. ein durch den Hersteller zugelassenes Ersatzkabel.
  -  **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Verwenden Sie das Produkt nicht mit Verlängerungskabeln, Mehrfachsteckdosen, Mehrfachverlängerungen oder Geräten für unterbrechungsfreie Stromversorgung. Die Belastbarkeit solcher Zubehöerteile kann durch Laserdrucker schnell überschritten werden, was zu Brandgefahr, Beschädigung von Eigentum oder einer eingeschränkten Druckerleistung führen kann.



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



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



# Change history

## Change history

### July 15, 2019

- Added information for the MB2236adwe printer model.
- Updated the following topics in the Service menus chapter:
  - Entering the Diagnostics menu
  - Entering Invalid engine mode
- Added the Critical information for controller board or control panel replacement topic in the Parts removal chapter.
- Added the 2.8-in control panel removal topic in the Parts removal chapter.
- Updated the Top cover removal topic in the Parts removal chapter.
- Added the following PNs in the Parts catalog chapter:
  - 41X2516 (2.8-in control panel)
  - 41X2515 (MB2236adwe controller board)
  - 41X2617 (Front USB cable)
- Updated the Power consumption topic in the Printer specifications 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™ MB2236adw and MB2236adwe are small, monochrome, network-capable multifunction laser printers.

Model	Configurations	Machine type/model
MB2236adw	Network-ready monochrome laser printer with 2-line LCD display, wireless capability, analog fax, internal duplex printing, and simplex scanning for small workgroups	3400-481
MB2236adwe	Network-ready monochrome laser printer with 2.8-in. LCD display, wireless capability, analog fax, internal duplex printing, and simplex scanning for small workgroups	3400-485

## Supported paper sizes, types, and weights

### Supported paper sizes

#### Notes:

- 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
<b>A4</b> 210 x 297 mm (8.27 x 11.7 in.)	✓	✓	✓	✓	✓
<b>A5 (short edge feed)</b> 148 x 210 mm (5.83 x 8.27 in.)	✓	✓	x	✓	✓
<b>A5 (long edge feed)</b> 210 x 148 mm (8.27 x 5.83 in.)	✓	✓	x	✓	✓
* This paper source supports paper size only up to 216 x 297 mm (8.5 x 11.7 in.).					

Paper size	250-sheet tray	Manual feeder	Two-sided printing	Scanner glass	Automatic document feeder
<b>A6</b> 105 x 148 mm (4.13 x 5.83 in.)	✓	✓	x	✓	✓
<b>JIS B5</b> 182 x 257 mm (7.17 x 10.1 in.)	✓	✓	x	✓	✓
<b>Oficio (Mexico)</b> 215.9 x 340.4 mm (8.5 x 13.4 in.)	✓	✓	x	x	✓
<b>Hagaki</b> 100 x 148 mm (3.94 x 5.83 in.)	x	✓	x	✓	x
<b>Statement</b> 139.7 x 215.9 mm (5.5 x 8.5 in.)	✓	✓	x	✓	✓
<b>Executive</b> 184.2 x 266.7 mm (7.25 x 10.5 in.)	✓	✓	x	✓	✓
<b>Letter</b> 215.9 x 279.4 mm (8.5 x 11 in.)	✓	✓	✓	✓	✓
<b>Legal</b> 215.9 x 355.6 mm (8.5 x 14 in.)	✓	✓	✓	x	✓
<b>Folio</b> 215.9 x 330.2 mm (8.5 x 13 in.)	✓	✓	✓	x	✓
<b>Universal</b> 98 x 148 mm (3.9 x 5.8 in.) to 216 x 356 mm (8.5 x 14 in.)	x	✓	x	✓*	✓
<b>Universal</b> 105 x 148 mm (4.1 x 5.8 in.) to 216 x 356 mm (8.5 x 14 in.)	✓	✓	x	✓*	✓
<b>7 3/4 Envelope (Monarch)</b> 98.4 x 190.5 mm (3.875 x 7.5 in.)	x	✓	x	✓	x
* This paper source supports paper size only up to 216 x 297 mm (8.5 x 11.7 in.).					



Paper size	250-sheet tray	Manual feeder	Two-sided printing	Scanner glass	Automatic document feeder
<b>9 Envelope</b> 98.4 x 225.4 mm (3.875 x 8.9 in.)	X	✓	X	✓	X
<b>10 Envelope</b> 104.8 x 241.3 mm (4.12 x 9.5 in.)	X	✓	X	✓	X
<b>DL Envelope</b> 110 x 220 mm (4.33 x 8.66 in.)	X	✓	X	✓	X
<b>C5 Envelope</b> 162 x 229 mm (6.38 x 9.01 in.)	X	✓	X	✓	X
<b>B5 Envelope</b> 176 x 250 mm (6.93 x 9.84 in.)	X	✓	X	✓	X
<b>Universal Envelope</b> 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
<b>Plain paper</b>	✓	✓	✓	✓
<b>Card stock</b>	X	✓	X	X
<b>Labels</b>	X	✓	X	X
<b>Bond</b>	✓	✓	✓	✓
<b>Envelope</b>	X	✓	X	X
<b>Letterhead</b>	✓	✓	✓	✓
<b>Preprinted</b>	✓	✓	✓	✓

Paper type	250-sheet tray	Manual feeder	Two-sided printing	Automatic document feeder
Colored paper	✓	✓	✓	✓
Light	✓	✓	✓	✓
Heavy	✓	✓	✓	✓
Recycled	✓	✓	✓	✓

## Supported paper weights







250-sheet tray	Manual feeder	Two-sided printing	Automatic document feeder
60–105 g/m <sup>2</sup> (16–28-lb bond)	60–200 g/m <sup>2</sup> (16–54-lb bond)	70–105 g/m <sup>2</sup> (18.7–28-lb bond)	60–105 g/m <sup>2</sup> (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 a soft 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.
-  **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

-  **ATTENTION—RISQUE D'ELECTROCUTION :** Ce symbole indique un danger lié à des niveaux de tension dangereux dans la zone du produit à manipuler. Débranchez le produit avant de commencer, ou agissez avec prudence si le produit doit être alimenté pour effectuer l'opération.
-  **ATTENTION—RISQUE D'ELECTROCUTION :** Ce produit utilise un commutateur d'alimentation logiciel. Il ne déconnecte pas physiquement la tension d'alimentation CA. Pour éviter tout risque d'électrocution, débranchez toujours le cordon d'alimentation de l'imprimante lorsque vous devez déconnecter la tension d'alimentation CA.
-  **ATTENTION—RISQUE D'ELECTROCUTION :** Pour éviter tout risque d'électrocution et éviter d'endommager l'imprimante, débranchez le cordon d'alimentation de la prise électrique et déconnectez toute connexion à tout périphérique externe avant de brancher ou débrancher des câbles ou circuits et assemblages électroniques.
-  **ATTENTION—SURFACE CHAUDE :** L'intérieur de l'imprimante risque d'être brûlant. pour réduire le risque de brûlure, laissez la surface ou le composant refroidir avant d'y toucher.
-  **ATTENTION : RISQUE DE PINCEMENT :** Pour éviter tout risque de blessure par pincement, agissez avec précaution au niveau des zones signalées par cette étiquette. Les blessures par pincement peuvent se produire autour des pièces mobiles telles que les engrenages, portes, tiroirs et capots.
-  **AVERTISSEMENT - PIÈCES MOBILES :** 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

-  **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Cuando vea este símbolo en el producto, existe peligro de tensiones peligrosas en el área del producto en la que está trabajando. Desconecte el producto antes de empezar o tenga cuidado si el producto debe recibir alimentación a fin de realizar la tarea.
-  **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Este producto utiliza un interruptor de corriente de software. No desconecta físicamente la entrada de voltaje de CA. Para evitar el riesgo de descarga eléctrica, desenchufe siempre el cable de alimentación de la impresora cuando sea necesario retirar la entrada de voltaje de CA.
-  **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Para evitar el riesgo de descargas eléctricas y daños en la impresora, retire el cable de alimentación de la toma eléctrica y desconecte todas las conexiones a dispositivos externos antes de conectar o desconectar cualquier cable, placa electrónica o conjunto.
-  **PRECAUCIÓN: SUPERFICIE CALIENTE:** El interior de la impresora podría estar caliente. Para evitar el riesgo de heridas producidas por el contacto con un componente caliente, deje que la superficie se enfríe antes de tocarlo.
-  **PRECAUCIÓN: PELIGRO DE ATRAPAMIENTO:** Para evitar el riesgo de lesión por atrapamiento, preste atención en las áreas marcadas con esta etiqueta. Las lesiones por atrapamiento se pueden producir en torno a partes móviles, tales como engranajes, puertas, bandejas y cubiertas.
-  **PRECAUCIÓN: PIEZAS MÓVILES:** 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

-  **VORSICHT – STROMSCHLAGGEFAHR:** Wenn Sie dieses Symbol sehen, besteht eine Gefahr durch gefährliche Spannungen in dem Produktbereich, in dem Sie arbeiten. Trennen Sie das Produkt von seiner Stromverbindung, bevor Sie beginnen, oder gehen Sie vorsichtig vor, wenn das Produkt für die Durchführung der Aufgabe mit Strom versorgt werden muss.
-  **VORSICHT – STROMSCHLAGGEFAHR:** Dieses Produkt verwendet einen weichen Netzschalter. Er trennt die Eingangswechselspannung nicht physisch. Um das Risiko eines elektrischen Schlags zu vermeiden, ziehen Sie stets das Netzkabel vom Drucker ab, wenn eine Abtrennung der Eingangswechselspannung erforderlich ist.
-  **VORSICHT – STROMSCHLAGGEFAHR:** Um das Risiko eines elektrischen Schlags und Schäden am Drucker zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose und trennen Sie alle Verbindungen zu jeglichen externen Geräten, bevor Sie Kabel, Elektronikplatinen oder Baugruppen einstecken oder abziehen.
-  **VORSICHT – HEISSE OBERFLÄCHE:** Das Innere des Druckers kann sehr heiß sein. Vermeiden Sie Verletzungen, indem Sie heiße Komponenten stets abkühlen lassen, bevor Sie ihre Oberfläche berühren.
-  **VORSICHT – QUETSCHGEFAHR:** Um das Risiko einer Quetschung zu vermeiden, gehen Sie in Bereichen, die mit diesem Etikett gekennzeichnet sind, mit Vorsicht vor. Quetschungen können im Bereich von beweglichen Komponenten auftreten, wie z. B. Zahnrädern, Klappen, Fächern und Abdeckungen.



**ACHTUNG—BEWEGLICHE TEILE** 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 307](#).
- Avoid locations that:
  - Generate ammonia gas
  - Are exposed to direct sunlight
  - Are near open flames
  - Are dusty
- Make sure that the recommended paper for this printer is used.
- Do a test print with paper from a newly opened package, and then check the result.

## Fixing print quality issues

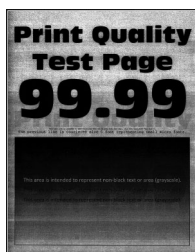
### Initial print quality check

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<sup>2</sup>) 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



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.

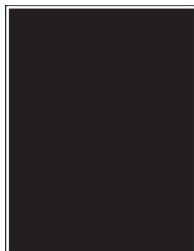
Action	Yes	No
<b>Step 4</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Replace the toner cartridge.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> Replace the imaging unit.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 10.	Go to step 9.

Action	Yes	No
<b>Step 9</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 10</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.
<b>Step 11</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 13.	The problem is solved.
<b>Step 13</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249</a> .  Does the problem remain?	Go to step 14.	The problem is solved.
<b>Step 14</b> Adjust the toner darkness.  Does the problem remain?	Go to step 15.	The problem is solved.



Action	Yes	No
<b>Step 15</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Go to step 17.	Go to step 16.
<b>Step 16</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236</a> . <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Reseat all the cables connected to the LVPS. <b>b</b> Check the cables for proper connection and damage. <b>c</b> Check the fuse for continuity. <b>d</b> Check the electronic components on the LVPS for damage. <b>e</b> Check the LVPS for proper installation and damage.  Is the LVPS properly installed and free of damage?	Go to step 20.	Go to step 18.
<b>Step 18</b> <b>a</b> Make sure that the LVPS is compatible with the fuser and the printer. <b>b</b> Make sure that the fuser connector has voltage. <b>c</b> Make sure that the correct power input voltage is used.  Does the problem remain?	Go to step 19.	The problem is solved.
<b>Step 19</b> Replace the LVPS. See <a href="#">“LVPS removal” on page 235</a> .  Does the problem remain?	Go to step 20.	The problem is solved.
<b>Step 20</b> <b>a</b> Check the controller board for proper installation and damage. <b>b</b> Reseat all the cables on the controller board.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 21.
<b>Step 21</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Solid color or black image check

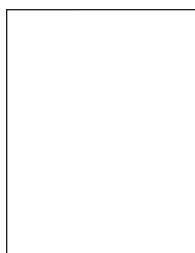


Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
<b>Step 5</b> Replace the imaging unit.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.
<b>Step 7</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> Replace the toner cartridge.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 11.	Go to step 10.

Action	Yes	No
<b>Step 10</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 11</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Contact the next level of support.	Go to step 12.
<b>Step 12</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236</a> . <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Blank or white pages check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.

Action	Yes	No
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Replace the imaging unit.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.

Action	Yes	No
<b>Step 7</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249</a> .  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 11.	The problem is solved.
<b>Step 11</b> Replace the toner cartridge.  Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
<b>Step 12</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 14.	Go to step 13.
<b>Step 13</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 14</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Go to step 17.	Go to step 16.
<b>Step 16</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262</a> .  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Reseat the HVPS cables. <b>b</b> Check the cables for damage.  Are the cables free of damage?	Go to step 18.	Go to step 19.
<b>Step 18</b> Replace the damaged cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
<b>Step 19</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Go to step 21.	Go to step 20.
<b>Step 20</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236</a> . <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Go to step 21.	The problem is solved.
<b>Step 21</b> <b>a</b> Check the controller board for proper installation and damage. <b>b</b> Reseat all the cables on the controller board.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 22.
<b>Step 22</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Dark print check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.



Action	Yes	No
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Make sure that the paper type is supported. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the paper has no damage or defects. <b>d</b> Make sure that the paper guides are properly set. <b>e</b> Make sure that the paper size setting in the duplex unit is properly set.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Adjust the toner darkness.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
<b>Step 7</b> Replace the toner cartridge.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> Replace the imaging unit.  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 12.	Go to step 11.
<b>Step 11</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
<b>Step 12</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.
<b>Step 13</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 14.	The problem is solved.
<b>Step 14</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249</a> .  Does the problem remain?	Go to step 16.	The problem is solved.
<b>Step 16</b> <b>a</b> Reseat the HVPS cables. <b>b</b> Check the cables for damage.  Are the cables free of damage?	Go to step 17.	Go to step 18.
<b>Step 17</b> Replace the damaged cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
<b>Step 18</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Contact the next level of support.	Go to step 19.
<b>Step 19</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236</a> . <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Light print check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Make sure that the paper type is supported. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the paper has no damage or defects. <b>d</b> Make sure that the paper guides are properly set. <b>e</b> Make sure that the paper size setting in the duplex unit is properly set.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Adjust the toner darkness.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> Replace the toner cartridge.  Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
<b>Step 8</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> Replace the imaging unit.  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 12.	Go to step 11.
<b>Step 11</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 12</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.

Action	Yes	No
<b>Step 13</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 14.	The problem is solved.
<b>Step 14</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249</a> .  Does the problem remain?	Go to step 16.	The problem is solved.
<b>Step 16</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Go to step 19.	Go to step 18.
<b>Step 18</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262</a> .  Does the problem remain?	Go to step 19.	The problem is solved.
<b>Step 19</b> <b>a</b> Reseat the HVPS cables. <b>b</b> Check the cables for damage.  Are the cables free of damage?	Go to step 20.	Go to step 21.

Action	Yes	No
<b>Step 20</b> Replace the damaged cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 21</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Contact the next level of support.	Go to step 22.
<b>Step 22</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236</a> . <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Paper curl check



Action	Yes	No
<b>Step 1</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 2.	The problem is solved.



Action	Yes	No
<b>Step 2</b> <b>a</b> Make sure that the paper type is supported. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the paper has no damage or defects. <b>d</b> Make sure that the paper guides are properly set. <b>e</b> Make sure that the paper size setting in the duplex unit is properly set.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Check the fuser cables for proper connection and damage. <b>b</b> Check the fuser access door for damage. <b>c</b> Check if the fuser gears are in proper contact with the drive gears. <b>d</b> Make sure that the fuser is compatible with the LVPS. <b>e</b> Check the fuser for proper installation and damage.  Is the fuser properly installed and free of damage?	Go to step 6.	Go to step 4.
<b>Step 4</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport)</b> . <b>c</b> Open the rear door, and then check if the fuser exit rollers turn. <b>d</b> Open the fuser access door, and then check if the hot rollers turn.  Are the rollers properly working?	Go to step 6.	Go to step 5.
<b>Step 5</b> Replace the fuser. See <a href="#">“Fuser removal” on page 252</a> .  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Reseat all the cables connected to the LVPS. <b>b</b> Check the cables for proper connection and damage. <b>c</b> Check the fuse for continuity. <b>d</b> Check the electronic components on the LVPS for damage. <b>e</b> Check the LVPS for proper installation and damage.  Is the LVPS properly installed and free of damage?	Contact the next level of support.	Go to step 7.

Action	Yes	No
<b>Step 7</b> <b>a</b> Make sure that the LVPS is compatible with the fuser and the printer. <b>b</b> Make sure that the fuser connector has voltage. <b>c</b> Make sure that the correct power input voltage is used.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> Replace the LVPS. See <a href="#">“LVPS removal” on page 235</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Folded or wrinkled paper check



Action	Yes	No
<b>Step 1</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Make sure that the paper type is supported. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the paper has no damage or defects. <b>d</b> Make sure that the paper guides are properly set. <b>e</b> Make sure that the paper size setting in the duplex unit is properly set.  Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
<b>Step 3</b> <b>a</b> Check the fuser cables for proper connection and damage. <b>b</b> Check the fuser access door for damage. <b>c</b> Check if the fuser gears are in proper contact with the drive gears. <b>d</b> Make sure that the fuser is compatible with the LVPS. <b>e</b> Check the fuser for proper installation and damage.  Is the fuser properly installed and free of damage?	Go to step 6.	Go to step 4.
<b>Step 4</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport)</b> . <b>c</b> Open the rear door, and then check if the fuser exit rollers turn. <b>d</b> Open the fuser access door, and then check if the hot rollers turn.  Are the rollers properly working?	Go to step 6.	Go to step 5.
<b>Step 5</b> Replace the fuser. See <a href="#">“Fuser removal” on page 252</a> .  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Reseat all the cables connected to the LVPS. <b>b</b> Check the cables for proper connection and damage. <b>c</b> Check the fuse for continuity. <b>d</b> Check the electronic components on the LVPS for damage. <b>e</b> Check the LVPS for proper installation and damage.  Is the LVPS properly installed and free of damage?	Contact the next level of support.	Go to step 7.
<b>Step 7</b> <b>a</b> Make sure that the LVPS is compatible with the fuser and the printer. <b>b</b> Make sure that the fuser connector has voltage. <b>c</b> Make sure that the correct power input voltage is used.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> Replace the LVPS. See <a href="#">“LVPS removal” on page 235</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Repeating defects check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> Measure the distance between the horizontal defects.  Is the distance equal to 75.4 mm or 34.7 mm?	Go to step 5.	Go to step 6.
<b>Step 5</b> Replace the imaging unit.  Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
<b>Step 6</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> Replace the imaging unit.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> Measure the distance between the horizontal defects.  Is the distance equal to 44.6 mm, 28.3 mm, or 39.3 mm?	Go to step 9.	Go to step 10.
<b>Step 9</b> Replace the toner cartridge.  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 11.	The problem is solved.
<b>Step 11</b> Replace the toner cartridge.  Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
<b>Step 12</b> Measure the distance between the horizontal defects.  Is the distance equal to 44 mm?	Go to step 13.	Go to step 14.
<b>Step 13</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249.</a>  Does the problem remain?	Go to step 14.	The problem is solved.
<b>Step 14</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 16.	The problem is solved.
<b>Step 16</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249.</a>  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> Measure the distance between the horizontal defects.  Is the distance equal to 78.1 mm?	Go to step 18.	Go to step 19.
<b>Step 18</b> Replace the fuser. See <a href="#">“Fuser removal” on page 252.</a>  Does the problem remain?	Go to step 19.	The problem is solved.

Action	Yes	No
<b>Step 19</b> <b>a</b> Check the fuser cables for proper connection and damage. <b>b</b> Check the fuser access door for damage. <b>c</b> Check if the fuser gears are in proper contact with the drive gears. <b>d</b> Make sure that the fuser is compatible with the LVPS. <b>e</b> Check the fuser for proper installation and damage.  Is the fuser properly installed and free of damage?	Go to step 22.	Go to step 20.
<b>Step 20</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport)</b> . <b>c</b> Open the rear door, and then check if the fuser exit rollers turn. <b>d</b> Open the fuser access door, and then check if the hot rollers turn.  Are the rollers properly working?	Go to step 22.	Go to step 21.
<b>Step 21</b> Replace the fuser. See <a href="#">“Fuser removal” on page 252</a> .  Does the problem remain?	Go to step 22.	The problem is solved.
<b>Step 22</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 23.	The problem is solved.
<b>Step 23</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Contact the next level of support.	Go to step 24.
<b>Step 24</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Skewed print check

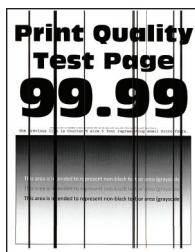


Action	Yes	No
<b>Step 1</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Make sure that the paper type is supported. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the paper has no damage or defects. <b>d</b> Make sure that the paper guides are properly set. <b>e</b> Make sure that the paper size setting in the duplex unit is properly set.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Check the tray insert for proper installation and damage. <b>b</b> Make sure that the separator roller is free of dust and contamination. <b>c</b> Check the lift plate for proper operation. <b>d</b> Check the paper guides for proper operation.  Is the tray insert properly installed and free of damage?	Go to step 5.	Go to step 4.
<b>Step 4</b> Replace the tray insert.  Does the problem remain?	Go to step 5.	The problem is solved.



Action	Yes	No
<b>Step 5</b> <b>a</b> Clear the pick rollers of contamination. <b>b</b> Reseat the pick rollers. <b>c</b> Perform a feed test.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Check the pick rollers for proper installation and damage. <b>b</b> Check the shaft of the pick rollers for damage.  Are the pick rollers properly installed and free of damage?	Go to step 8.	Go to step 7.
<b>Step 7</b> Replace the pick rollers. See <a href="#">“Pick rollers removal” on page 268.</a>  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> Make sure that the roller is free of dirt and contamination.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 9</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Contact the next level of support.	Go to step 11.
<b>Step 11</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Streaked vertical lines appear on prints check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Go to step 7.	Go to step 6.

Action	Yes	No
<b>Step 6</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262.</a>  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> Replace the imaging unit.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Replace the toner cartridge.  Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
<p><b>Step 11</b></p> <ul style="list-style-type: none"> <li><b>a</b> Check the HVPS toner contact spring for proper installation and damage.</li> <li><b>b</b> Check the toner smart chip contact for proper installation and damage.</li> <li><b>c</b> Check the toner contact spring for corrosion and contamination.</li> </ul> <p>Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?</p>	Go to step 13.	Go to step 12.
<p><b>Step 12</b></p> <ul style="list-style-type: none"> <li><b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.</li> <li><b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS.</li> <li><b>c</b> Reseat the smart chip contact cable.</li> </ul> <p>Does the problem remain?</p>	Contact the next level of support.	The problem is solved.
<p><b>Step 13</b></p> <ul style="list-style-type: none"> <li><b>a</b> Check the imaging unit contact spring for damage and contamination.</li> <li><b>b</b> Make sure that the imaging unit contact spring is in proper contact with the HVPS.</li> </ul> <p>Is the imaging unit contact spring properly installed and free of damage and contamination?</p>	Contact the next level of support.	The problem is solved.
<p><b>Step 14</b></p> <ul style="list-style-type: none"> <li><b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination.</li> <li><b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller.</li> <li><b>c</b> Make sure that the transfer roller spring is properly installed.</li> <li><b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b>.</li> </ul> <p>Does the problem remain?</p>	Go to step 15.	The problem is solved.
<p><b>Step 15</b></p> <ul style="list-style-type: none"> <li><b>a</b> Reseat the transfer roller.</li> <li><b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b>.</li> </ul> <p>Does the problem remain?</p>	Go to step 16.	The problem is solved.

Action	Yes	No
<b>Step 16</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249.</a>  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Reseat the HVPS cables. <b>b</b> Check the cables for damage.  Are the cables free of damage?	Go to step 18.	Go to step 19.
<b>Step 18</b> Replace the damaged cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 19</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Contact the next level of support.	Go to step 20.
<b>Step 20</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236.</a> <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Horizontal white lines check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Replace the imaging unit.  Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
<b>Step 6</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> Replace the toner cartridge.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 10.	Go to step 9.
<b>Step 9</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 10</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.

Action	Yes	No
<b>Step 11</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 13.	The problem is solved.
<b>Step 13</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249</a> .  Does the problem remain?	Go to step 14.	The problem is solved.
<b>Step 14</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Go to step 17.	Go to step 16.
<b>Step 16</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262</a> .  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Reseat the HVPS cables. <b>b</b> Check the cables for damage.  Are the cables free of damage?	Go to step 18.	Go to step 19.



Action	Yes	No
<b>Step 18</b> Replace the damaged cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 19</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Contact the next level of support.	Go to step 20.
<b>Step 20</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236</a> . <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Vertical white lines check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262</a> .  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> Replace the imaging unit.  Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
<b>Step 9</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Replace the toner cartridge.  Does the problem remain?	Go to step 11.	The problem is solved.
<b>Step 11</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 13.	Go to step 12.
<b>Step 12</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 13</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.

Action	Yes	No
<b>Step 14</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 16.	The problem is solved.
<b>Step 16</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249</a> .  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Reseat the HVPS cables. <b>b</b> Check the cables for damage.  Are the cables free of damage?	Go to step 18.	Go to step 19.
<b>Step 18</b> Replace the damaged cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 19</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Contact the next level of support.	Go to step 20.

Action	Yes	No
<b>Step 20</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236</a> . <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Vertical colored lines or banding check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.

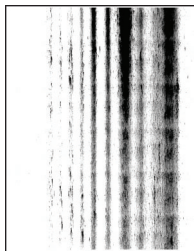
Action	Yes	No
<b>Step 4</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262</a> .  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> Replace the imaging unit.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
<b>Step 10</b> Replace the toner cartridge.  Does the problem remain?	Go to step 11.	The problem is solved.
<b>Step 11</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 13.	Go to step 12.
<b>Step 12</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 13</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.
<b>Step 14</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 15.	The problem is solved.

Action	Yes	No
<b>Step 15</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 16.	The problem is solved.
<b>Step 16</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249</a> .  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Reseat the HVPS cables. <b>b</b> Check the cables for damage.  Are the cables free of damage?	Go to step 18.	Go to step 19.
<b>Step 18</b> Replace the damaged cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 19</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Contact the next level of support.	Go to step 20.
<b>Step 20</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236</a> . <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Contact the next level of support.	The problem is solved.



## Vertical dark streaks with print missing check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Go to step 7.	Go to step 6.

Action	Yes	No
<b>Step 6</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262.</a>  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> Replace the imaging unit.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Replace the toner cartridge.  Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
<p><b>Step 11</b></p> <ul style="list-style-type: none"> <li><b>a</b> Check the HVPS toner contact spring for proper installation and damage.</li> <li><b>b</b> Check the toner smart chip contact for proper installation and damage.</li> <li><b>c</b> Check the toner contact spring for corrosion and contamination.</li> </ul> <p>Are the HVPS toner contact spring and toner smart chip contact properly installed and free of damage and contamination?</p>	Go to step 13.	Go to step 12.
<p><b>Step 12</b></p> <ul style="list-style-type: none"> <li><b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge.</li> <li><b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS.</li> <li><b>c</b> Reseat the smart chip contact cable.</li> </ul> <p>Does the problem remain?</p>	Contact the next level of support.	The problem is solved.
<p><b>Step 13</b></p> <ul style="list-style-type: none"> <li><b>a</b> Check the imaging unit contact spring for damage and contamination.</li> <li><b>b</b> Make sure that the imaging unit contact spring is in proper contact with the HVPS.</li> </ul> <p>Is the imaging unit contact spring properly installed and free of damage and contamination?</p>	Contact the next level of support.	The problem is solved.
<p><b>Step 14</b></p> <ul style="list-style-type: none"> <li><b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination.</li> <li><b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller.</li> <li><b>c</b> Make sure that the transfer roller spring is properly installed.</li> <li><b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b>.</li> </ul> <p>Does the problem remain?</p>	Go to step 15.	The problem is solved.
<p><b>Step 15</b></p> <ul style="list-style-type: none"> <li><b>a</b> Reseat the transfer roller.</li> <li><b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b>.</li> </ul> <p>Does the problem remain?</p>	Go to step 16.	The problem is solved.

Action	Yes	No
<b>Step 16</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249.</a>  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Reseat the HVPS cables. <b>b</b> Check the cables for damage.  Are the cables free of damage?	Go to step 18.	Go to step 19.
<b>Step 18</b> Replace the damaged cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 19</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Contact the next level of support.	Go to step 20.
<b>Step 20</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236.</a> <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## White streaks and voided areas check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Replace the imaging unit.  Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
<b>Step 6</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> Replace the toner cartridge.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 10.	Go to step 9.
<b>Step 9</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 10</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.

Action	Yes	No
<b>Step 11</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 13.	The problem is solved.
<b>Step 13</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249</a> .  Does the problem remain?	Go to step 14.	The problem is solved.
<b>Step 14</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Go to step 17.	Go to step 16.
<b>Step 16</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262</a> .  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Reseat the HVPS cables. <b>b</b> Check the cables for damage.  Are the cables free of damage?	Go to step 18.	Go to step 19.

Action	Yes	No
<b>Step 18</b> Replace the damaged cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 19</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Contact the next level of support.	Go to step 20.
<b>Step 20</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236</a> . <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Clipped pages or images check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.



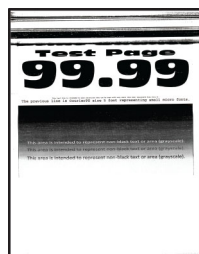
Action	Yes	No
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Replace the imaging unit.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> Replace the toner cartridge.  Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
<b>Step 8</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 10.	Go to step 9.
<b>Step 9</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 10</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.
<b>Step 11</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 13.	The problem is solved.

Action	Yes	No
<b>Step 13</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249.</a>  Does the problem remain?	Go to step 14.	The problem is solved.
<b>Step 14</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Go to step 17.	Go to step 16.
<b>Step 16</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262.</a>  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Reseat the HVPS cables. <b>b</b> Check the cables for damage.  Are the cables free of damage?	Go to step 18.	Go to step 19.
<b>Step 18</b> Replace the damaged cable.  Does the problem remain?	Go to step 19.	The problem is solved.
<b>Step 19</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board.  Is the HVPS properly installed and free of damage?	Go to step 21.	Go to step 20.
<b>Step 20</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236.</a> <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Go to step 21.	The problem is solved.

Action	Yes	No
<b>Step 21</b> <b>a</b> Reseat all the cables connected to the LVPS. <b>b</b> Check the cables for proper connection and damage. <b>c</b> Check the fuse for continuity. <b>d</b> Check the electronic components on the LVPS for damage. <b>e</b> Check the LVPS for proper installation and damage.  Is the LVPS properly installed and free of damage?	Contact the next level of support.	Go to step 22.
<b>Step 22</b> <b>a</b> Make sure that the LVPS is compatible with the fuser and the printer. <b>b</b> Make sure that the fuser connector has voltage. <b>c</b> Make sure that the correct power input voltage is used.  Does the problem remain?	Go to step 23.	The problem is solved.
<b>Step 23</b> Replace the LVPS. See <a href="#">“LVPS removal” on page 235</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Compressed images appear on prints check



Action	Yes	No
<b>Step 1</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
<b>Step 2</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> Replace the imaging unit.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Check the imaging unit drive lever for proper installation and damage. <b>b</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?	Go to step 6.	Go to step 5.
<b>Step 5</b> <b>a</b> Open the front door. <b>b</b> Remove the imaging unit. <b>c</b> Remove the toner cartridge from the imaging unit. <b>d</b> Slightly close the front door, and then check if the lever actuates the imaging unit drive gear.  Did the imaging unit drive gear actuate?	The problem is solved.	Contact the next level of support.
<b>Step 6</b> <b>a</b> Remove the imaging unit. <b>b</b> Check the coupling drive gear for proper installation and damage. <b>c</b> Actuate the lever, and then check if the coupling drive gear engages.  Is the coupling drive gear properly installed and free of damage?	Go to step 8.	Go to step 7.

Action	Yes	No
<b>Step 7</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249</a> .  Does the problem remain?	Go to step 11.	The problem is solved.
<b>Step 11</b> Make sure that the roller is free of dirt and contamination.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 12</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Check if the clip in the middle of the solenoid turns when the paper is transported.  Did the clip turn?	Go to step 14.	Go to step 13.
<b>Step 13</b> Reseat the deskew solenoid cable at both ends.  Does the problem remain?	Contact the next level of support.	The problem is solved.

Action	Yes	No
<b>Step 14</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> .  Did the motor run?	Go to step 15.	Go to step 16.
<b>Step 15</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Duplex &gt; Single</b>  Does the problem remain?	Go to step 16.	The problem is solved.
<b>Step 16</b> <b>a</b> Make sure that the main drive is properly installed and free of damage. <b>b</b> Make sure that the main drive gears are properly installed. <b>c</b> Make sure that the drive gears are in proper contact with the gear they are driving.  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Incorrect margins on prints check



Action	Yes	No
<b>Step 1</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Make sure that the paper type is supported. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the paper has no damage or defects. <b>d</b> Make sure that the paper guides are properly set. <b>e</b> Make sure that the paper size setting in the duplex unit is properly set.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Check the tray insert for proper installation and damage. <b>b</b> Make sure that the separator roller is free of dust and contamination. <b>c</b> Check the lift plate for proper operation. <b>d</b> Check the paper guides for proper operation.  Is the tray insert properly installed and free of damage?	Go to step 5.	Go to step 4.
<b>Step 4</b> Replace the tray insert.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Registration adjust</b> <b>b</b> Select <b>Quick test</b> or <b>Duplex quick test</b> . <b>c</b> Adjust the following margins: <ul style="list-style-type: none"> <li>• Top Margin</li> <li>• Bottom Margin</li> <li>• Left Margin</li> <li>• Right Margin</li> </ul> Does the problem remain?	Go to step 6.	The problem is solved.



Action	Yes	No
<b>Step 6</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Go to step 9.	Go to step 8.
<b>Step 8</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262.</a>  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Check the controller board for proper installation and damage. <b>b</b> Reseat all the cables on the controller board.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 10.
<b>Step 10</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Toner rubs off check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>b</b> Check the fuser cables for proper connection and damage. <b>c</b> Check the fuser access door for damage. <b>d</b> Check if the fuser gears are in proper contact with the drive gears. <b>e</b> Make sure that the fuser is compatible with the LVPS. <b>f</b> Check the fuser for proper installation and damage.  Is the fuser properly installed and free of damage?	Go to step 7.	Go to step 5.
<b>Step 5</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport)</b> . <b>c</b> Open the rear door, and then check if the fuser exit rollers turn. <b>d</b> Open the fuser access door, and then check if the hot rollers turn.  Are the rollers properly working?	Go to step 7.	Go to step 6.

Action	Yes	No
<b>Step 6</b> Replace the fuser. See <a href="#">“Fuser removal” on page 252.</a>  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Reseat all the cables connected to the LVPS. <b>b</b> Check the cables for proper connection and damage. <b>c</b> Check the fuse for continuity. <b>d</b> Check the electronic components on the LVPS for damage. <b>e</b> Check the LVPS for proper installation and damage.  Is the LVPS properly installed and free of damage?	Contact the next level of support.	Go to step 8.
<b>Step 8</b> <b>a</b> Make sure that the LVPS is compatible with the fuser and the printer. <b>b</b> Make sure that the fuser connector has voltage. <b>c</b> Make sure that the correct power input voltage is used.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> Replace the LVPS. See <a href="#">“LVPS removal” on page 235.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Toner specks appear on prints check



Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the toner cartridge is supported. <b>b</b> Make sure that the toner cartridge and imaging unit are not empty. <b>c</b> Check if the toner cartridge is new.  Is the toner cartridge new?	Go to step 2.	Go to step 3.

Action	Yes	No
<b>Step 2</b> Make sure to remove the packing material on the toner cartridge and imaging unit.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Clear the paper path of debris and contamination. <b>b</b> Remove, and then insert the imaging unit and toner cartridge. <b>Note:</b> Shake the toner cartridge and imaging unit before inserting them. <b>c</b> Perform a POR. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Make sure that the imaging unit is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the photoconductor roller surface is free of damage. <b>d</b> Make sure that the imaging unit HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Replace the imaging unit.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Make sure that the toner cartridge is properly installed and free of damage. <b>b</b> Make sure that the smart chip contacts are free of corrosion and contamination. <b>c</b> Make sure that the developer roller surface is free of damage. <b>d</b> Make sure that the toner HVPS contacts are free of corrosion and contamination. <b>e</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
<b>Step 7</b> Replace the toner cartridge.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Check the HVPS toner contact spring for proper installation and damage. <b>b</b> Check the toner smart chip contact for proper installation and damage. <b>c</b> 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?	Go to step 10.	Go to step 9.
<b>Step 9</b> <b>a</b> Make sure that the HVPS toner contact spring is in proper contact with the toner cartridge. <b>b</b> Make sure that the HVPS toner contact spring is in proper contact with the HVPS. <b>c</b> Reseat the smart chip contact cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 10</b> <b>a</b> Check the imaging unit contact spring for damage and contamination. <b>b</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?	Contact the next level of support.	The problem is solved.
<b>Step 11</b> <b>a</b> Make sure that the transfer roller is properly installed and free of damage and contamination. <b>b</b> Make sure that the HVPS contact spring is properly connected to the transfer roller. <b>c</b> Make sure that the transfer roller spring is properly installed. <b>d</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 12.	The problem is solved.

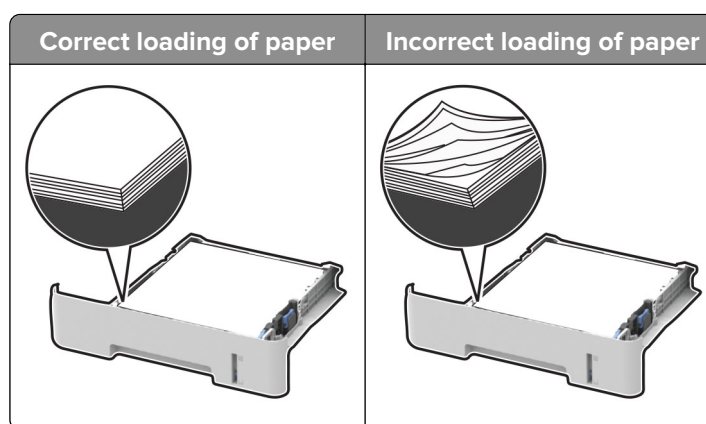
Action	Yes	No
<b>Step 12</b> <b>a</b> Reseat the transfer roller. <b>b</b> Enter the Diagnostics menu, and then select <b>Advanced Print Quality Samples</b> .  Does the problem remain?	Go to step 13.	The problem is solved.
<b>Step 13</b> Replace the transfer roller. See <a href="#">“Transfer roller removal” on page 249</a> .  Does the problem remain?	Go to step 14.	The problem is solved.
<b>Step 14</b> <b>a</b> Clean the printhead lens. <b>b</b> Reseat the two printhead cables at both ends. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Make sure that the printhead cables are properly connected. <b>b</b> Check the printhead for proper installation and damage.  Is the printhead properly installed and free of damage?	Contact the next level of support.	Go to step 16.
<b>Step 16</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Paper jams

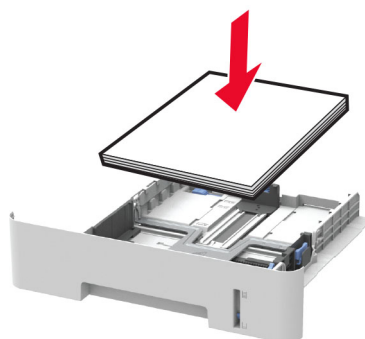
### Avoiding jams

#### Load paper properly

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



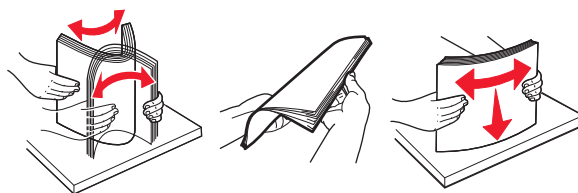
- Do not load or remove a tray while the printer is printing.
- Do not load too much paper. Make sure that the stack height is below the maximum paper fill indicator.
- Do not slide paper into the tray. Load paper as shown in the illustration.



- 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 <a href="#">“Sensor (input sensor S3) service check” on page 95.</a>
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 <a href="#">“Sensor (input sensor S3) static jam service check” on page 92.</a>

### Sensor (input sensor S3) static jam service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.



Action	Yes	No
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Reseat the sensor cable. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>c</b> Find the sensor (staging sensor S2).  Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
<b>Step 5</b> <b>a</b> Check the sensor for proper installation and damage. <b>b</b> Check the alignment with the sensor flag. <b>c</b> Check the sensor cable for proper connection and damage.  Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the sensor.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.

Action	Yes	No
<b>Step 8</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage.  Are the sensor flags properly installed and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the damaged sensor flag.  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 12.	Go to step 11.
<b>Step 11</b> Replace the damaged cable.  Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 13.
<b>Step 13</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Sensor (input sensor S3) service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Reseat the sensor cable. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>c</b> Find the sensor (staging sensor S2).  Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
<b>Step 5</b> <b>a</b> Check the sensor for proper installation and damage. <b>b</b> Check the alignment with the sensor flag. <b>c</b> Check the sensor cable for proper connection and damage.  Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the sensor.  Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
<b>Step 7</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
<b>Step 8</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage. Are the sensor flags properly installed and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the damaged sensor flag. Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Check if the clip in the middle of the solenoid turns when the paper is transported. Did the clip turn?	Go to step 12.	Go to step 11.
<b>Step 11</b> Reseat the deskew solenoid cable at both ends. Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 12</b> Check the cables for proper connection and damage. Are the cables properly connected and free of damage?	Go to step 14.	Go to step 13.
<b>Step 13</b> Replace the damaged cable. Does the problem remain?	Go to step 14.	The problem is solved.

Action	Yes	No
<b>Step 14</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> .  Did the motor run?	Go to step 15.	Go to step 16.
<b>Step 15</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Duplex &gt; Single</b>  Does the problem remain?	Go to step 16.	The problem is solved.
<b>Step 16</b> <b>a</b> Make sure that the main drive is properly installed and free of damage. <b>b</b> Make sure that the main drive gears are properly installed. <b>c</b> Make sure that the drive gears are in proper contact with the gear they are driving.  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Go to step 18.	The problem is solved.
<b>Step 18</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 19.
<b>Step 19</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## 202 paper jams

### 202 paper jam messages

Error code	Description	Action
202.03	Paper fed from the manual feeder never arrived at the sensor (fuser exit sensor S4).	See <a href="#">“Sensor (fuser exit sensor S4) service check” on page 98.</a>
202.05	Paper fed from the manual feeder never cleared the sensor (fuser exit sensor S4).	See <a href="#">“Sensor (fuser exit sensor S4) never cleared service check” on page 102.</a>
202.13	Paper fed from tray 1 never arrived at the sensor (fuser exit sensor S4).	See <a href="#">“Sensor (fuser exit sensor S4) service check” on page 98.</a>
202.15	Paper fed from tray 1 never arrived at the sensor (fuser exit sensor S4).	See <a href="#">“Sensor (fuser exit sensor S4) never cleared service check” on page 102.</a>
202.91	Paper remains on the sensor (fuser exit sensor S4) during the warm up sequence.	See <a href="#">“Sensor (fuser exit sensor S4) static jam service check” on page 106.</a>
202.93	Paper never arrive at the sensor (fuser exit sensor S4) which triggered a flush action.	See <a href="#">“Sensor (fuser exit sensor S4) service check” on page 98.</a>

### Sensor (fuser exit sensor S4) service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
<b>Step 4</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>b</b> Find the sensor (fuser exit sensor S4).  Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
<b>Step 5</b> <b>a</b> Make sure that the fuser exit sensor cable is properly connected and free of damage. <b>b</b> Make sure that the sensor is properly aligned with the sensor flag. <b>c</b> Check the sensor for proper installation and damage.  Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the sensor. See <a href="#">“Sensor (fuser exit) removal” on page 263.</a>  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
<b>Step 8</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage.  Are the sensor flags properly installed and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the damaged sensor flag.  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Check the rear door for proper installation and damage.  Is the door properly installed and free of damage?	Go to step 12.	Go to step 11.

Action	Yes	No
<b>Step 11</b> Replace the rear door. See <a href="#">“Rear door removal” on page 250.</a>  Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Enter Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> . <b>c</b> Open the rear door, and then check if the fuser exit rollers turn. <b>d</b> Open the fuser access door, and then check if the hot rollers turn.  Are the rollers properly working?	Go to step 13.	Go to step 14.
<b>Step 13</b> <b>a</b> Check the fuser cables for proper connection and damage. <b>b</b> Check the fuser access door for damage. <b>c</b> Check if the fuser gears are in proper contact with the drive gears. <b>d</b> Make sure that the fuser is compatible with the LVPS. <b>e</b> Check the fuser for proper installation and damage.  Is the fuser properly installed and free of damage?	Go to step 15.	Go to step 14.
<b>Step 14</b> Replace the fuser. See <a href="#">“Fuser removal” on page 252.</a>  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 17.	Go to step 16.
<b>Step 16</b> Replace the damaged cable.  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Check if the clip in the middle of the solenoid turns when the paper is transported.  Did the clip turn?	Go to step 19.	Go to step 18.



Action	Yes	No
<b>Step 18</b> Reseat the deskew solenoid cable at both ends.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 19</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> .  Did the motor run?	Go to step 20.	Go to step 21.
<b>Step 20</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Duplex &gt; Single</b>  Does the problem remain?	Go to step 21.	The problem is solved.
<b>Step 21</b> <b>a</b> Make sure that the main drive is properly installed and free of damage. <b>b</b> Make sure that the main drive gears are properly installed. <b>c</b> Make sure that the drive gears are in proper contact with the gear they are driving.  Does the problem remain?	Go to step 22.	The problem is solved.
<b>Step 22</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Go to step 23.	The problem is solved.
<b>Step 23</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 24.
<b>Step 24</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Sensor (fuser exit sensor S4) never cleared service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>b</b> Find the sensor (fuser exit sensor S4).  Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
<b>Step 5</b> <b>a</b> Make sure that the fuser exit sensor cable is properly connected and free of damage. <b>b</b> Make sure that the sensor is properly aligned with the sensor flag. <b>c</b> Check the sensor for proper installation and damage.  Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the sensor. See <a href="#">“Sensor (fuser exit) removal” on page 263</a> .  Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
<b>Step 7</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
<b>Step 8</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage. Are the sensor flags properly installed and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the damaged sensor flag. Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Check the rear door for proper installation and damage. Is the door properly installed and free of damage?	Go to step 12.	Go to step 11.
<b>Step 11</b> Replace the rear door. See <a href="#">“Rear door removal” on page 250</a> . Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Enter Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> . <b>c</b> Open the rear door, and then check if the fuser exit rollers turn. <b>d</b> Open the fuser access door, and then check if the hot rollers turn. Are the rollers properly working?	Go to step 13.	Go to step 14.

Action	Yes	No
<b>Step 13</b> <b>a</b> Check the fuser cables for proper connection and damage. <b>b</b> Check the fuser access door for damage. <b>c</b> Check if the fuser gears are in proper contact with the drive gears. <b>d</b> Make sure that the fuser is compatible with the LVPS. <b>e</b> Check the fuser for proper installation and damage.  Is the fuser properly installed and free of damage?	Go to step 15.	Go to step 14.
<b>Step 14</b> Replace the fuser. See <a href="#">“Fuser removal” on page 252</a> .  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 17.	Go to step 16.
<b>Step 16</b> Replace the damaged cable.  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport)</b> . <b>c</b> Check if the exit roller turns.  Did the exit roller turn?	Go to step 20.	Go to step 18.
<b>Step 18</b> <b>a</b> Make sure that the redrive gears are in proper contact with the printer drive gears. <b>b</b> Check the redrive gears for proper installation and damage. <b>c</b> Check the roller for wear, contamination, and damage.  Is the redrive properly installed and free of damage?	Go to step 20.	Go to step 19.
<b>Step 19</b> Replace the redrive. See <a href="#">“Redrive removal” on page 251</a> .  Does the problem remain?	Go to step 20.	The problem is solved.

Action	Yes	No
<b>Step 20</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> .  Did the motor run?	Go to step 21.	Go to step 22.
<b>Step 21</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Duplex &gt; Single</b>  Does the problem remain?	Go to step 22.	The problem is solved.
<b>Step 22</b> <b>a</b> Make sure that the main drive is properly installed and free of damage. <b>b</b> Make sure that the main drive gears are properly installed. <b>c</b> Make sure that the drive gears are in proper contact with the gear they are driving.  Does the problem remain?	Go to step 23.	The problem is solved.
<b>Step 23</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Go to step 24.	The problem is solved.
<b>Step 24</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 25.
<b>Step 25</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Sensor (fuser exit sensor S4) static jam service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>b</b> Find the sensor (fuser exit sensor S4).  Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
<b>Step 5</b> <b>a</b> Make sure that the fuser exit sensor cable is properly connected and free of damage. <b>b</b> Make sure that the sensor is properly aligned with the sensor flag. <b>c</b> Check the sensor for proper installation and damage.  Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the sensor. See <a href="#">“Sensor (fuser exit) removal” on page 263</a> .  Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
<b>Step 7</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
<b>Step 8</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage. Are the sensor flags properly installed and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the damaged sensor flag. Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Check the cables for proper connection and damage. Are the cables properly connected and free of damage?	Go to step 12.	Go to step 11.
<b>Step 11</b> Replace the damaged cable. Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage. Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 13.
<b>Step 13</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a> Does the problem remain?	Contact the next level of support.	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 <a href="#">“Sensor (staging sensor S2): Paper failed to clear service check” on page 108.</a>
206.16	Paper fed from tray 1 never arrived at the sensor (staging sensor S2).	See <a href="#">“Sensor (staging sensor S2): Paper failed to arrive service check” on page 111.</a>

### Sensor (staging sensor S2): Paper failed to clear service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Reseat the sensor cable. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>c</b> Find the sensor (staging sensor S2).  Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.



Action	Yes	No
<b>Step 5</b> <b>a</b> Check the sensor for proper installation and damage. <b>b</b> Check the alignment with the sensor flag. <b>c</b> Check the sensor cable for proper connection and damage.  Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the sensor.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
<b>Step 8</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage.  Are the sensor flags properly installed and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the damaged sensor flag.  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 12.	Go to step 11.
<b>Step 11</b> Replace the damaged cable.  Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
<b>Step 12</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Check if the clip in the middle of the solenoid turns when the paper is transported.  Did the clip turn?	Go to step 14.	Go to step 13.
<b>Step 13</b> Reseat the deskew solenoid cable at both ends.  Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 14</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> .  Did the motor run?	Go to step 15.	Go to step 16.
<b>Step 15</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Duplex &gt; Single</b>  Does the problem remain?	Go to step 16.	The problem is solved.
<b>Step 16</b> <b>a</b> Make sure that the main drive is properly installed and free of damage. <b>b</b> Make sure that the main drive gears are properly installed. <b>c</b> Make sure that the drive gears are in proper contact with the gear they are driving.  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Go to step 18.	The problem is solved.
<b>Step 18</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 19.

Action	Yes	No
<b>Step 19</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

### Sensor (staging sensor S2): Paper failed to arrive service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Reseat the sensor cable. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>c</b> Find the sensor (staging sensor S2).  Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.

Action	Yes	No
<b>Step 5</b> <b>a</b> Check the sensor for proper installation and damage. <b>b</b> Check the alignment with the sensor flag. <b>c</b> Check the sensor cable for proper connection and damage.  Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the sensor.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
<b>Step 8</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage.  Are the sensor flags properly installed and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the damaged sensor flag.  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 12.	Go to step 11.
<b>Step 11</b> Replace the damaged cable.  Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
<b>Step 12</b> <b>a</b> Clear the pick rollers of contamination. <b>b</b> Reseat the pick rollers. <b>c</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single.</b>  Does the problem remain?	Go to step 13.	The problem is solved.
<b>Step 13</b> <b>a</b> Check the pick rollers for proper installation and damage. <b>b</b> Check the shaft of the pick rollers for damage.  Are the pick roller properly installed and free of damage?	Go to step 15.	Go to step 14.
<b>Step 14</b> Replace the pick rollers. See <a href="#">“Pick rollers removal” on page 268.</a>  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Reseat the pick solenoid cable. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>c</b> Select <b>Feed solenoid.</b> <b>d</b> Check if the pick solenoid actuates.  Did the pick solenoid actuate?	Go to step 18.	Go to step 16.
<b>Step 16</b> Check the pick solenoid for proper installation and damage.  Is the pick solenoid properly installed and free of damage?	Go to step 18.	Go to step 17.
<b>Step 17</b> Replace the pick solenoid. See <a href="#">“Pick solenoid removal” on page 241.</a>  Does the problem remain?	Go to step 18.	The problem is solved.
<b>Step 18</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive).</b>  Did the motor run?	Go to step 19.	Go to step 20.

Action	Yes	No
<b>Step 19</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Duplex &gt; Single</b>  Does the problem remain?	Go to step 20.	The problem is solved.
<b>Step 20</b> <b>a</b> Make sure that the main drive is properly installed and free of damage. <b>b</b> Make sure that the main drive gears are properly installed. <b>c</b> Make sure that the drive gears are in proper contact with the gear they are driving.  Does the problem remain?	Go to step 21.	The problem is solved.
<b>Step 21</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Go to step 22.	The problem is solved.
<b>Step 22</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 23.
<b>Step 23</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	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 <a href="#">“Sensor (input sensor S3): Duplex failure service check” on page 115</a> .
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**

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Reseat the sensor cable. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>c</b> Find the sensor (staging sensor S2).  Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 5.
<b>Step 5</b> <b>a</b> Check the sensor for proper installation and damage. <b>b</b> Check the alignment with the sensor flag. <b>c</b> Check the sensor cable for proper connection and damage.  Is the sensor properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the sensor.  Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
<b>Step 7</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 10.	Go to step 8.
<b>Step 8</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage. Are the sensor flags properly installed and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the damaged sensor flag. Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Check if the clip in the middle of the solenoid turns when the paper is transported. Did the clip turn?	Go to step 12.	Go to step 11.
<b>Step 11</b> Reseat the deskew solenoid cable at both ends. Does the problem remain?	Contact the next level of support.	The problem is solved.
<b>Step 12</b> <b>a</b> Clear the duplex paper path of obstructions. <b>b</b> Load the correct paper in the tray. <b>c</b> Make sure that the paper size setting in the duplex unit matches the paper loaded in the tray. <b>d</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Duplex</b> Does the problem remain?	Go to step 13.	The problem is solved.



Action	Yes	No
<b>Step 13</b> <b>a</b> Reseat the duplex unit. <b>b</b> Check the duplex unit gears for damage. <b>c</b> Check the rollers and belts for wear and contamination.  Is the duplex unit properly installed and free of damage?	Go to step 15.	Go to step 14.
<b>Step 14</b> Replace the duplex unit.  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 17.	Go to step 16.
<b>Step 16</b> Replace the damaged cable.  Does the problem remain?	Go to step 17.	The problem is solved.
<b>Step 17</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> .  Did the motor run?	Go to step 18.	Go to step 19.
<b>Step 18</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Duplex &gt; Single</b>  Does the problem remain?	Go to step 19.	The problem is solved.
<b>Step 19</b> <b>a</b> Make sure that the main drive is properly installed and free of damage. <b>b</b> Make sure that the main drive gears are properly installed. <b>c</b> Make sure that the drive gears are in proper contact with the gear they are driving.  Does the problem remain?	Go to step 20.	The problem is solved.

Action	Yes	No
<b>Step 20</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Go to step 21.	The problem is solved.
<b>Step 21</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 22.
<b>Step 22</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	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.

- From the control panel, navigate to:  
**Settings > Device > Maintenance > Config Menu > Supply Usage And Counters**
- 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 <a href="#">“Door switch service check” on page 179.</a>
8.02	Close the door, cover, or latch at location B.	
9	Auto reboot.	See <a href="#">“Auto reboot service check” on page 121.</a>
11.1	Load tray 1.	See <a href="#">“Load tray 1 with A4 plain paper service check” on page 180.</a>
11.8	Load the manual feeder.	See <a href="#">“Manual feeder service check” on page 119.</a>
12.1	Change the paper in tray 1.	See <a href="#">“Load tray 1 with A4 plain paper service check” on page 180.</a>
12.8	Change the paper in the manual feeder.	See <a href="#">“Manual feeder service check” on page 119.</a>

### Manual feeder service check

Action	Yes	No
<b>Step 1</b> Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Shake the toner cartridge. <b>b</b> Clean the toner cartridge smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the toner cartridge spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
<b>Step 3</b> Replace the toner cartridge.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Shake the imaging unit. <b>b</b> Clean the imaging unit smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the imaging unit spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Check the smart chip for proper installation and damage.  Is the smart chip properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the imaging unit.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> From the control panel, navigate to <b>Settings &gt; Reports &gt; Device &gt; Device statistics</b> . <b>b</b> Check if the install date reflects the date that you replaced the cartridge. <b>c</b> Check the supply level of the toner cartridge. <b>d</b> Check the supply level of the imaging unit.  Is there sufficient supply level, and does the install date reflect the cartridge replacement date?	Go to step 8.	Go to step 10.
<b>Step 8</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the damaged cable.  Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
<b>Step 10</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 11.
<b>Step 11</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

### Auto reboot service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 10 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Upgrade the firmware. <b>Note:</b> Contact your next level of support for the correct firmware level to use. <b>b</b> Perform a POR. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 5.	Go to step 4.
<b>Step 4</b> Replace the damaged cable.  Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
<b>Step 5</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 6.
<b>Step 6</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	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 <a href="#">“Photoconductor and toner cartridge service check” on page 122.</a>
32.40	Unsupported toner cartridge.	See <a href="#">“Unsupported imaging unit or toner cartridge service check” on page 126.</a>
32.60	Unsupported imaging unit.	
33	Non-Lexmark Return Program (NLRP) codes.	See <a href="#">“Photoconductor and toner cartridge service check” on page 122.</a>

### Photoconductor and toner cartridge service check

Action	Yes	No
<b>Step 1</b> Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Shake the toner cartridge. <b>b</b> Clean the toner cartridge smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the toner cartridge spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
<b>Step 3</b> Replace the toner cartridge.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Shake the imaging unit. <b>b</b> Clean the imaging unit smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the imaging unit spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Check the smart chip for proper installation and damage.  Is the smart chip properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the imaging unit.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> From the control panel, navigate to <b>Settings &gt; Reports &gt; Device &gt; Device statistics</b> . <b>b</b> Check if the install date reflects the date that you replaced the cartridge. <b>c</b> Check the supply level of the toner cartridge. <b>d</b> Check the supply level of the imaging unit.  Is there sufficient supply level, and does the install date reflect the cartridge replacement date?	Go to step 8.	Go to step 10.
<b>Step 8</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the damaged cable.  Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
<b>Step 10</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 11.
<b>Step 11</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

### Black imaging unit, photoconductor smart chip, or sensor problem service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Open the front door. <b>b</b> Reseat the imaging unit and toner cartridge. <b>c</b> Close the front door.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Shake the toner cartridge. <b>b</b> Clean the toner cartridge smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the toner cartridge spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> Replace the toner cartridge.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Shake the imaging unit. <b>b</b> Clean the imaging unit smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the imaging unit spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 5.	The problem is solved.



Action	Yes	No
<b>Step 5</b> Check the smart chip for proper installation and damage.  Is the smart chip properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the imaging unit.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Check the front door for proper installation and damage. <b>b</b> Check the front door flag for damage. <b>c</b> Check the front door hinge for damage. <b>d</b> Check if the front door properly closes.  Is the front door properly installed and free of damage?	Go to step 9.	Go to step 8.
<b>Step 8</b> Replace the front door. See <a href="#">“Front door removal” on page 248</a> .  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> Check the front door link for proper installation and damage.  Is the front door link properly installed and free of damage?	Go to step 11.	Go to step 10.
<b>Step 10</b> Replace the printer.  Does the problem remain?	Go to step 11.	The problem is solved.
<b>Step 11</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 13.	Go to step 12.
<b>Step 12</b> Replace the damaged cable.  Does the problem remain?	Go to step 13.	The problem is solved.
<b>Step 13</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 14.

Action	Yes	No
<b>Step 14</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

### Unsupported imaging unit or toner cartridge service check

Action	Yes	No
<b>Step 1</b> Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Shake the toner cartridge. <b>b</b> Clean the toner cartridge smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the toner cartridge spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> Replace the toner cartridge.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Shake the imaging unit. <b>b</b> Clean the imaging unit smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the imaging unit spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Check the smart chip for proper installation and damage.  Is the smart chip properly installed and free of damage?	Go to step 7.	Go to step 6.

Action	Yes	No
<b>Step 6</b> Replace the imaging unit.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 9.	Go to step 8.
<b>Step 8</b> Replace the damaged cable.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 10.
<b>Step 10</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## 34–42 user attendance messages

### 34–42 user attendance messages

Error code	Description	Action
34	Paper size mismatch (too short or too narrow).	See <a href="#">“Load tray 1 with A4 plain paper service check” on page 180.</a>
37.1	Insufficient collation area.	See <a href="#">“Scanner collation area service check” on page 128.</a>
37.3	Insufficient memory.	See <a href="#">“Insufficient memory service check” on page 129.</a>
38.1	Memory is full.	
39.1	Complex page.	
41.60	Toner cartridge and imaging unit mismatch.	See <a href="#">“Unsupported imaging unit or toner cartridge service check” on page 126.</a>

Error code	Description	Action
42.xy	<p>Toner cartridge region does not match the printer region.</p> <ul style="list-style-type: none"> <li>x = printer region</li> <li>y = toner cartridge region</li> </ul>	See <a href="#">“Toner cartridge service check” on page 130.</a>

### Scanner collation area service check

Action	Yes	No
<b>Step 1</b> Close all held jobs.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 10 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> Resend a print job or a scan job.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Perform a print test. <b>b</b> Perform a copy job.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Reduce the number of pages to scan.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> Check if the error occurs on documents with text, graphics, or images.  Did the error occur?	Go to step 7.	The problem is solved.
<b>Step 7</b> Change the source document.  Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
<b>Step 8</b> <b>a</b> Upgrade the firmware. <b>Note:</b> Contact your next level of support for the correct firmware level to use. <b>b</b> Perform a POR. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 10.
<b>Step 10</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

### Insufficient memory service check

Action	Yes	No
<b>Step 1</b> Close all held jobs.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 10 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> Resend a print job or a scan job.  Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
<b>Step 4</b> <b>a</b> Reduce the number of pages to print. <b>b</b> Reduce the file size of the print job.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Upgrade the firmware. <b>Note:</b> Contact your next level of support for the correct firmware level to use. <b>b</b> Perform a POR. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 7.
<b>Step 7</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Toner cartridge service check

Action	Yes	No
<b>Step 1</b> Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Shake the toner cartridge. <b>b</b> Clean the toner cartridge smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the toner cartridge spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
<b>Step 3</b> Replace the toner cartridge.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> From the control panel, navigate to <b>Settings &gt; Reports &gt; Device &gt; Device statistics</b> . <b>b</b> Check if the install date reflects the date that you replaced the cartridge. <b>c</b> Check the supply level of the toner cartridge. <b>d</b> Check the supply level of the imaging unit.  Is there sufficient supply level, and does the install date reflect the cartridge replacement date?	Go to step 5.	Go to step 7.
<b>Step 5</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the damaged cable.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 8.
<b>Step 8</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## 55 user attendance messages

### 55 user attendance messages

Error code	Description	Action
55.1	Unsupported USB device.	See <a href="#">“Unsupported USB device service check” on page 132</a> .
55.2	Unsupported USB hub.	

## Unsupported USB device service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 10 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Check if the flash drive is set to the correct file system. <b>b</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?	Go to step 4.	Go to step 3.
<b>Step 3</b> Format the flash drive to the correct file system.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> From the control panel, go to <b>Settings &gt; Device &gt; Restore factory defaults</b> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the damaged cable.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Upgrade the firmware. <b>Note:</b> Contact your next level of support for the correct firmware level to use. <b>b</b> Perform a POR. <b>c</b> Perform a print test.  Does the problem remain?	Go to step 8.	The problem is solved.



Action	Yes	No
<b>Step 8</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 9.
<b>Step 9</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## 71 user attendance messages

### 71 user attendance messages

Error code	Description	Action
71.01	Fax station name is not set.	See <a href="#">“Fax station name service check” on page 133.</a>
71.03	No analog phone line connected.	See <a href="#">“Analog phone line service check” on page 134.</a>
71.10	The SMTP server is not set.	See <a href="#">“Network service check” on page 134.</a>

### Fax station name service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 10 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> From the control panel, go to <b>Settings &gt; Fax &gt; Fax defaults &gt; General fax settings &gt; Fax name.</b> <b>b</b> Enter the fax name.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Analog phone line service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 10 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Make sure that the telephone line is properly connected to the correct port on the fax card. <b>b</b> Check if the telephone line is active.  Is the telephone line active?	Go to step 3.	Check with your service provider.
<b>Step 3</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Contact the next level of support.	Go to step 4.
<b>Step 4</b> Replace the damaged cable.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Network service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 10 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> Make sure that the printer is properly connected to the network.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> Contact your network administrator.  Does the problem remain?	Contact the next level of support.	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 <a href="#">“Toner cartridge or imaging unit low service check” on page 136.</a>
84.02		
84.11	The imaging unit is low.	
84.12		
84.13		
84.19		
84.21		
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

Action	Yes	No
<b>Step 1</b> Make sure that the imaging unit and toner cartridge are genuine Lexmark supplies.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> From the control panel, navigate to <b>Settings &gt; Reports &gt; Device &gt; Device statistics</b> . <b>b</b> Check if the install date reflects the date that you replaced the cartridge. <b>c</b> Check the supply level of the toner cartridge. <b>d</b> Check the supply level of the imaging unit.  Is there sufficient supply level, and does the install date reflect the cartridge replacement date?	Go to step 3.	Go to step 4.
<b>Step 3</b> <b>a</b> Enter the Diagnostics menu, and then select <b>Advanced print quality samples</b> . <b>b</b> Check the test pages for print quality defects.  Are there print quality defects?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Shake the toner cartridge. <b>b</b> Clean the toner cartridge smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the toner cartridge spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Replace the toner cartridge.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Shake the imaging unit. <b>b</b> Clean the imaging unit smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the imaging unit spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
<b>Step 7</b> Check the smart chip for proper installation and damage.  Is the smart chip properly installed and free of damage?	Go to step 9.	Go to step 8.
<b>Step 8</b> Replace the imaging unit.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 11.	Go to step 10.
<b>Step 10</b> Replace the damaged cable.  Does the problem remain?	Go to step 11.	The problem is solved.
<b>Step 11</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 12.
<b>Step 12</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	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 <a href="#">“Toner cartridge or imaging unit low service check” on page 136.</a>
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 messages

### Non-supply user attendance messages

Error code	Description	Action
34B	Short paper.	See <a href="#">“Short paper service check” on page 139.</a>
35A	Deficient memory.	See <a href="#">“Insufficient memory service check” on page 142.</a>
37A	Insufficient collation area.	
37C	Insufficient memory.	
38A	Memory full.	
39A	Complex page.	See <a href="#">“Complex page service check” on page 142.</a>

## Fax card service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the fax card port is free of damage. <b>b</b> Reseat the fax analog line. <b>c</b> Reseat the fax card cable on the controller board. <b>d</b> Perform a POR.  Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
<b>Step 2</b> Replace the top cover. See <a href="#">“Top cover removal” on page 255</a> .  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 4.
<b>Step 4</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

### Short paper service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
<b>Step 4</b> <b>a</b> Make sure that the separator roller is free of dust and contamination. <b>b</b> Make sure that the lift plate is properly working. <b>c</b> Make sure that the paper guides are properly working. <b>d</b> Check the tray insert for proper installation and damage.  Is the tray insert properly installed, and free of contamination and damage?	Go to step 6.	Go to step 5.
<b>Step 5</b> Replace the tray insert.  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Clear the duplex paper path of obstructions. <b>b</b> Load the correct paper in the tray. <b>c</b> Make sure that the paper size setting in the duplex unit matches the paper loaded in the tray. <b>d</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Duplex</b>  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Remove, and then insert the duplex unit. <b>b</b> Check the duplex unit gears for damage. <b>c</b> Check the rollers and belts for wear and contamination.  Is the duplex unit properly installed and free of damage?	Go to step 9.	Go to step 8.
<b>Step 8</b> Replace the duplex unit.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Reseat the sensor cable. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>c</b> Find the sensor (staging sensor S2).  Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 10.



Action	Yes	No
<b>Step 10</b> <b>a</b> Check the sensor for proper installation and damage. <b>b</b> Check the alignment with the sensor flag. <b>c</b> Check the sensor cable for proper connection and damage.  Is the sensor properly installed and free of damage?	Go to step 12.	Go to step 11.
<b>Step 11</b> Replace the sensor.  Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 15.	Go to step 13.
<b>Step 13</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage.  Are the sensor flags properly installed and free of damage?	Go to step 15.	Go to step 14.
<b>Step 14</b> Replace the damaged sensor flag.  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 16.
<b>Step 16</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Insufficient memory service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Perform a POR. <b>b</b> Send a print job with no image.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Enter the Diagnostics menu, and then select <b>Advanced print quality samples</b> . <b>b</b> Check the test pages for print quality defects.  Are there print quality defects?	Go to step 3.	The problem is solved.
<b>Step 3</b> Make sure that the printer is using the latest firmware version, and update if necessary.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Complex page service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Perform a POR. <b>b</b> Send a print job with no image.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Enter the Diagnostics menu, and then select <b>Advanced print quality samples</b> . <b>b</b> Check the test pages for print quality defects.  Are there print quality defects?	Go to step 3.	The problem is solved.
<b>Step 3</b> Make sure that the printer is using the latest firmware version, and update if necessary.  Does the problem remain?	Contact the next level of support.	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 <a href="#">“Printhead error 1 service check” on page 154.</a>
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.	
111.34	Printhead error (mirror motor lost lock) was detected.	
111.35	Printhead error (mirror motor never got first lock) was detected.	See <a href="#">“Printhead error 2 service check” on page 155.</a>
111.36	Printhead error (mirror motor lock never stabilized) was detected.	
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.	See <a href="#">“Printhead error 1 service check” on page 154.</a>
111.40	The wrong printhead is installed.	

## 121 errors

### 121 error messages

Error code	Description	Action
121.00	The fuser failed to reach temperature during warm-up.	See <a href="#">“Fuser service check” on page 145.</a>
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 <b>Wrong Fuser Installed</b> 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).	
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 <a href="#">“Fuser service check” on page 145.</a>
121.34	The fuser is too cold during steady state control when paper is not in the fuser. <b>Note:</b> 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

Action	Yes	No
<b>Step 1</b> 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?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
<b>Step 4</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Enter Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> . <b>c</b> Open the rear door, and then check if the fuser exit rollers turn. <b>d</b> Open the fuser access door, and then check if the hot rollers turn.  Are the rollers properly working?	Go to step 6.	Go to step 7.
<b>Step 6</b> <b>a</b> Check the fuser cables for proper connection and damage. <b>b</b> Check the fuser access door for damage. <b>c</b> Check if the fuser gears are in proper contact with the drive gears. <b>d</b> Make sure that the fuser is compatible with the LVPS. <b>e</b> Check the fuser for proper installation and damage.  Is the fuser properly installed and free of damage?	Go to step 8.	Go to step 7.
<b>Step 7</b> Replace the fuser. See <a href="#">“Fuser removal” on page 252</a> .  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Fan (main)</b> . <b>c</b> Check if the fan turns.  Did the fan turn?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Reseat the fan cable. <b>b</b> Make sure that the cable is properly connected. <b>c</b> Make sure that the fan and gears are properly installed. <b>d</b> Make sure that the fan is free of grease contamination.  Does the problem remain?	Go to step 11.	Go to step 10.

Action	Yes	No
<b>Step 10</b> Replace the fan. See <a href="#">“Fan assembly removal” on page 242.</a>  Does the problem remain?	Go to step 11.	The problem is solved.
<b>Step 11</b> Replace the damaged cable.  Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Reseat the cables connected to the LVPS. <b>b</b> Check the cables for proper connection and damage. <b>c</b> Check the fuse for continuity. <b>d</b> Check the electronic components on the LVPS for damage. <b>e</b> Check the LVPS for proper installation and damage.  Is the LVPS properly installed and free of damage?	Go to step 15.	Go to step 13.
<b>Step 13</b> <b>a</b> Make sure that the LVPS is compatible with the fuser and the printer. <b>b</b> Make sure that there is voltage coming out of the fuser connector. <b>c</b> Make sure that the correct power input voltage is applied.  Does the problem remain?	Go to step 14.	The problem is solved.
<b>Step 14</b> Replace the LVPS. See <a href="#">“LVPS removal” on page 235.</a>  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> .  Did the motor run?	Go to step 16.	Go to step 17.
<b>Step 16</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Duplex &gt; Single</b>  Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
<b>Step 17</b> <b>a</b> Make sure that the main drive is properly installed and free of damage. <b>b</b> Make sure that the main drive gears are properly installed. <b>c</b> Make sure that the drive gears are in proper contact with the gear that they are driving.  Does the problem remain?	Go to step 18.	The problem is solved.
<b>Step 18</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Go to step 19.	The problem is solved.
<b>Step 19</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 20.
<b>Step 20</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## 126 errors

### 126 error messages

Error code	Description	Action
126.05	The LVPS dropped while not sleeping.	See <a href="#">“LVPS service check” on page 149</a> .
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 <a href="#">“LVPS service check” on page 149</a> . <b>Note:</b> 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

Action	Yes	No
<b>Step 1</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Reseat the cables connected to the LVPS. <b>b</b> Check the cables for proper connection and damage. <b>c</b> Check the fuse for continuity. <b>d</b> Check the electronic components on the LVPS for damage. <b>e</b> Check the LVPS for proper installation and damage.  Is the LVPS properly installed and free of damage?	Go to step 6.	Go to step 4.
<b>Step 4</b> <b>a</b> Make sure that the LVPS is compatible with the fuser and the printer. <b>b</b> Make sure that there is voltage coming out of the fuser connector. <b>c</b> Make sure that the correct power input voltage is applied.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Replace the LVPS. See <a href="#">“LVPS removal” on page 235</a> .  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 7.

Action	Yes	No
<b>Step 7</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## 140 errors

### 140 error messages

Error code	Description	Action
140.82	Motor (transport drive) failure.	See <a href="#">“Motor (transport drive) service check” on page 150.</a>

### Motor (transport drive) service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
<b>Step 4</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> .  Does the motor run?	Go to step 6.	Go to step 5.
<b>Step 5</b> <b>a</b> Reseat the motor cable at both ends. <b>b</b> Make sure that the motor gear is properly aligned with the drive gears. <b>c</b> Check the motor for proper installation and damage.  Is the motor properly installed and free of damage?	Go to step 6.	Contact the next level of support.
<b>Step 6</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 8.	Go to step 7.
<b>Step 7</b> Replace the damaged cable.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 9.
<b>Step 9</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## 6yy errors

### 6yy error messages

Error code	Description	Action
600.01	Toner tally never received.	See <a href="#">“Printer declared jam service check” on page 153.</a>
600.02	The printhead is not ready to image.	See <a href="#">“Printhead error 1 service check” on page 154.</a>

Error code	Description	Action
600.04	Duplex paper was never picked.	See <a href="#">“Printer declared jam service check” on page 153.</a>
600.05	Invalid printhead NVRAM type.	See <a href="#">“Printhead error 1 service check” on page 154.</a>
600.06	No response from the paper port driver.	See <a href="#">“Printer declared jam service check” on page 153.</a>
600.07	Page is at the image point before the EP is ready.	See <a href="#">“Printhead error 2 service check” on page 155.</a>
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 <a href="#">“Printer declared jam service check” on page 153.</a>
600.95	The printer intentionally declared a jam. <b>Note:</b> 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.	
611.35	Mirror motor never got first lock.	See <a href="#">“Printhead error 1 service check” on page 154.</a>
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

Action	Yes	No
<b>Step 1</b> <b>a</b> Shake the toner cartridge. <b>b</b> Clean the toner cartridge smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the toner cartridge spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> Replace the toner cartridge.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Shake the imaging unit. <b>b</b> Clean the imaging unit smart chip contacts, and then check the contacts for damage. <b>c</b> Clean the imaging unit spring contacts, and then check the contacts for damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> Check the smart chip for proper installation and damage.  Is the smart chip properly installed and free of damage?	Go to step 6.	Go to step 5.
<b>Step 5</b> Replace the imaging unit  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 20 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
<b>Step 7</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 8.
<b>Step 8</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Printhead error 1 service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 20 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Reseat the two printhead cables at both ends. <b>b</b> Check the printhead cables for proper connection. <b>c</b> Check the printhead for proper installation and damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> Make sure that the printhead lens is clean and free of contamination.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262.</a>  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 7.	Go to step 6.

Action	Yes	No
<b>Step 6</b> Replace the damaged cable.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 8.
<b>Step 8</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Printhead error 2 service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper is properly loaded in the tray. <b>c</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>d</b> Make sure that the lift plate is properly working.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Reseat the sensor cable. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>c</b> Find the sensor (staging sensor S2).  Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
<b>Step 3</b> <b>a</b> Check the sensor for proper installation and damage. <b>b</b> Check the alignment with the sensor flag. <b>c</b> Check the sensor cable for proper connection and damage.  Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.

Action	Yes	No
<b>Step 4</b> Replace the sensor.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
<b>Step 6</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage.  Are the sensor flags properly installed and free of damage?	Go to step 8.	Go to step 7.
<b>Step 7</b> Replace the damaged sensor flag.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Reseat the two printhead cables at both ends. <b>b</b> Check the printhead cables for proper connection. <b>c</b> Check the printhead for proper installation and damage. <b>d</b> Perform a print test.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> Make sure that the printhead lens is clean and free of contamination.  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Replace the printhead. See <a href="#">“Printhead removal” on page 262.</a>  Does the problem remain?	Go to step 11.	The problem is solved.



Action	Yes	No
<b>Step 11</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 13.	Go to step 12.
<b>Step 12</b> Replace the damaged cable.  Does the problem remain?	Go to step 13.	The problem is solved.
<b>Step 13</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 14.
<b>Step 14</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Procedure before starting the 9yy service checks

Retrieve certain information that helps your next level of support in diagnosing the problem before replacing the controller board.

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

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

**Note:** Not all of the items are retrievable from the printer that you are working on.

### A. Collecting the history information from the SE menu

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

- 1 Open a web browser, type **http://printer\_IP\_address/se**, and then press **Enter**.

**Notes:**

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

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

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

### Notes:

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

**1** Open a web browser, type **http://printer\_IP\_address/se**, and then press **Enter**.

**2** Click **Logs Gzip Compressed**.

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

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

**Note:** To download the FWdebug log to a flash drive, see [“General SE” on page 204](#).

## 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 <a href="#">“System software error service check” on page 161.</a>
910.xx–919.xx	An engine error occurred.	See <a href="#">“Engine error service check” on page 166.</a>
938.04	Supplies security is not enabled.	See <a href="#">“Black imaging unit, photoconductor smart chip, or sensor problem service check” on page 124.</a>

Error code	Description	Action
940	RIP to engine communication failure.	See <a href="#">“Engine error service check” on page 166</a> .
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. <b>Note:</b> .xx points to the setting that does not match.	
952	A recoverable NVRAM cyclic redundancy check error occurred. <b>Notes:</b> <ul style="list-style-type: none"> <li>• n is the offset at which the error occurred.</li> <li>• Performing a POR clears the error.</li> </ul>	
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. <b>Note:</b> <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 <a href="#">“Network software error service check” on page 167.</a>
976	Network error—Unrecoverable software error in the network port.	
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 <a href="#">“Engine error service check” on page 166.</a>
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.	

## System software error service check

Different types of 900.xx errors can occur. There may be a communication problem (bad cable, network connection, and software issues), or a hardware problem with the controller board or ISP (internal solutions port). Check the communication and software problems first. Determine if the problem is constant or intermittent. Use the following troubleshooting procedure to isolate the issue. Take notes as instructed. You will need the information when you contact your next level of support.

Before troubleshooting:

- 1 Perform the [“Procedure before starting the 9yy service checks” on page 157.](#)
- 2 Determine the operating system used when the error occurred. If possible, determine whether a PostScript® or PCL® file was sent to the printer when the error occurred. Ask the customer which Lexmark Solutions applications are installed on the printer.

Action	Yes	No
<b>Step 1</b> Perform a POR.  Does the error remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Write down the exact 900.xx error code that appears on the display. <b>b</b> Turn off the printer. <b>c</b> Clear the print queues. <b>d</b> Disconnect all communication cables, and then remove all memory options. <b>e</b> Remove any installed ISP. <b>f</b> Reset the printer into the Diagnostics menu.  Does the problem remain?	Go to step 3.	Go to step 6.
<b>Step 3</b> Check all the cables on the controller board for proper connection.  Are the cables properly connected?	Go to step 5.	Go to step 4.
<b>Step 4</b> <b>a</b> Connect the cables. <b>b</b> Reset the printer into the Diagnostics menu.  Does the problem remain?	Go to step 5.	Go to step 6.
<b>Step 5</b> <b>a</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> . <b>b</b> Reset the printer. <b>Note:</b> If a different error code appears, then go to the service check for that error code.  Does the problem remain?	Go to step 31.	The problem is solved.
<b>Step 6</b> Print the following: <ul style="list-style-type: none"> <li>• Error Log</li> <li>• Menu Settings Page</li> <li>• Network Settings Page</li> </ul> Does the problem remain while printing these pages?	Go to step 31.	Go to step 7.

Action	Yes	No
<b>Step 7</b> <b>Note:</b> Before performing this step, write down the following information about the file being sent to the printer: <ul style="list-style-type: none"> <li>• Application used</li> <li>• Operating system</li> <li>• Driver type</li> <li>• File type (PCL, PostScript, XPS, etc.)</li> </ul> <b>a</b> Connect the communication cables. <b>b</b> Reset the printer. <b>c</b> Perform a print job.  Does the problem remain?	Go to step 8.	Go to step 10.
<b>Step 8</b> <b>a</b> Reset the printer. <b>b</b> Perform a different print job.  Does the problem remain?	Go to step 9.	Go to step 10.
<b>Step 9</b> <b>a</b> Upgrade the firmware. <b>Note:</b> Contact your next level of support for the correct firmware level to use. <b>b</b> Reset the printer. <b>c</b> Perform a print job.  Does the problem remain?	Go to step 31.	Go to step 10.
<b>Step 10</b> Verify if the printer is an MFP.  Is the printer an MFP?	Go to step 11.	Go to step 13.
<b>Step 11</b> Perform a copy job.  Does the problem remain?	Go to step 31.	Go to step 12.
<b>Step 12</b> Perform a scan to computer job.  Does the problem remain?	Go to step 31.	Go to step 13.
<b>Step 13</b> Verify if an optional memory is installed.  Is an optional memory installed?	Go to step 14.	Go to step 16.

Action	Yes	No
<b>Step 14</b> <b>a</b> Reinstall the memory. <b>b</b> Perform a print job.  Does the problem remain?	Go to step 15.	Go to step 16.
<b>Step 15</b> <b>a</b> Install a Lexmark-recommended optional memory. <b>b</b> Perform a print job.  Does the problem remain?	Go to step 31.	The problem is solved.
<b>Step 16</b> Verify if a modem is installed.  Is a modem installed?	Go to step 17.	Go to step 21.
<b>Step 17</b> <b>a</b> Reinstall the modem. <b>b</b> Reset the printer.  Does the problem remain?	Go to step 18.	Go to step 20.
<b>Step 18</b> <b>a</b> Upgrade the firmware if it was not upgraded in a previous step. <b>Note:</b> Contact your next level of support for the correct firmware level to use. <b>b</b> Reset the printer. <b>c</b> Perform a print job.  Does the problem remain?	Go to step 19.	The problem is solved.
<b>Step 19</b> <b>a</b> Replace the modem. <b>b</b> Reset the printer.  Does the problem remain?	Go to step 31.	The problem is solved.
<b>Step 20</b> Perform a fax job.  Does the problem remain?	Go to step 31.	Go to step 21.
<b>Step 21</b> Verify if an optional ISP is installed.  Is an optional ISP installed?	Go to step 22.	The problem is solved.



Action	Yes	No
<b>Step 22</b> <b>a</b> Reinstall the first optional ISP. <b>b</b> Reset the printer.  Does the problem remain?	Go to step 24.	Go to step 23.
<b>Step 23</b> Perform a job to test the option.  Does the problem remain?	Go to step 24.	Go to step 26.
<b>Step 24</b> <b>a</b> Upgrade the firmware if it was not upgraded in a previous step. <b>Note:</b> Contact your next level of support for the correct firmware level to use. <b>b</b> Reset the printer. <b>c</b> Perform a print job.  Does the problem remain?	Go to step 25.	The problem is solved.
<b>Step 25</b> <b>a</b> Replace the faulty optional ISP. <b>b</b> Reset the printer.  Does the problem remain?	Go to step 31.	Go to step 26.
<b>Step 26</b> Verify if there are more optional ISPs to install.  Are there more optional ISPs to install?	Go to step 27.	The problem is solved.
<b>Step 27</b> <b>a</b> Install the next optional ISP. <b>b</b> Reset the printer.  Does the problem remain?	Go to step 29.	Go to step 28.
<b>Step 28</b> Perform a job to test the option.  Does the problem remain?	Go to step 29.	Go to step 26.

Action	Yes	No
<b>Step 29</b> <b>a</b> Upgrade the firmware if it was not upgraded in a previous step. <b>Note:</b> Contact your next level of support for the correct firmware level to use. <b>b</b> Reset the printer. <b>c</b> Send a print job.  Does the problem remain?	Go to step 30.	Go to step 26.
<b>Step 30</b> <b>a</b> Replace the faulty optional ISP. <b>b</b> Reset the printer.  Does the problem remain?	Go to step 31.	Go to step 26.
<b>Step 31</b> Contact your next level of support. Provide the following information: <ul style="list-style-type: none"> <li>• Exact 900.xx error digits and complete error message</li> <li>• Printed Menu Settings Page</li> <li>• Printed Network Settings Page</li> <li>• Device error log</li> <li>• A sample print file if the error appears isolated to a single file</li> <li>• File/Application used if the error is related to a specific print file</li> <li>• Device operating system</li> <li>• Driver used (PCL/PS)</li> <li>• Frequency of the occurrence of the error</li> </ul>		

## Engine error service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 20 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> Make sure that the printer is using the latest firmware version, and update if necessary.  Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
<b>Step 3</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 5.	Go to step 4.
<b>Step 4</b> Replace the damaged cable.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 6.
<b>Step 6</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Network software error service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Turn off the printer. <b>b</b> Unplug the power cord. <b>c</b> Wait for 20 seconds, and then plug the power cord. <b>d</b> Turn on the printer.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Check the network cable for proper connection and damage. <b>b</b> Make sure that the network cable contacts are free from dirt or corrosion. <b>c</b> Make sure that the network cable is active.  Is the network cable properly connected and free of corrosion and damage?	Go to step 4.	Go to step 3.
<b>Step 3</b> Replace the network cable.  Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
<b>Step 4</b> Check the controller board ports and pins for damage.  Are the controller board ports and pins free of damage?	Go to step 5.	Go to step 9.
<b>Step 5</b> <b>a</b> Make sure that the Wi-Fi is connected to the network. <b>b</b> Make sure that the Wi-Fi setting is correct. <b>c</b> Check the Wi-Fi antenna for proper installation and damage.  Is the Wi-Fi antenna properly installed and free of damage?	Go to step 6.	Go to step 9.
<b>Step 6</b> Make sure that the printer is using the latest firmware version, and update if necessary.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 9.	Go to step 8.
<b>Step 8</b> Replace the damaged cable.  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 10.
<b>Step 10</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## ADF/Scanner hardware errors

### 84y error messages

Error code	Description	Action
840.01	The scanner is disabled by the administrator.	See <a href="#">“Scanner disabled and scanner communication error service check” on page 176.</a>
840.02	The scanner is disabled for other reasons. For example, invalid license and too many hardware errors.	
842.00	Non-responsive scanner communication failure.	
842.01	Hardware protocol scanner communication failure.	
842.02	Logical protocol scanner communication failure.	
843.00	<ul style="list-style-type: none"> <li>Scanner mechanical failure.</li> <li>The flatbed carriage failed to return to the home position.</li> </ul>	See <a href="#">“Flatbed home position service check” on page 177.</a>

### Sensor (scan) service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Open the ADF cover, and then remove the jammed paper. <b>b</b> Make sure that the paper path is free of obstructions. <b>c</b> Raise the ADF assembly, and then make sure that the scan area is free of dust and obstructions. <b>d</b> Make sure that the scanner paper setting matches the paper loaded.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Clean the ADF pick rollers and separator pad. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Feed test</b>  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Check the ADF pick and feed rollers for wear, damage, and contamination. <b>b</b> Check the ADF pick separator pad for wear, damage, contamination, and spring load. <b>c</b> Check if the ADF cover properly closes.  Is the ADF pick assembly properly installed and free of damage?	Go to step 5.	Go to step 4.

Action	Yes	No
<b>Step 4</b> Replace the ADF pick assembly. See <a href="#">“ADF pick assembly removal” on page 272</a> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Sensor tests</b> <b>b</b> Find the sensor (ADF scan).  Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.
<b>Step 6</b> <b>a</b> Make sure that the sensor flag is free of dust or debris. <b>b</b> Reseat all the cables on the controller board.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273</a> .  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Make sure that the ADF cover properly closes. <b>b</b> Check the ADF scan sensor flag for proper installation and damage.  Is the sensor flag properly installed and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273</a> .  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> <b>a</b> Make sure that the ADF paper path rollers are properly installed and free of damage. <b>b</b> Make sure that the rollers are free of dust and contamination.  Are the rollers properly installed and free of damage?	Go to step 12.	Go to step 11.
<b>Step 11</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273</a> .  Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
<b>Step 12</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Motor tests</b> <b>b</b> Select <b>Motor (ADF transport)</b> .  Does the motor run?	Go to step 14.	Go to step 13.
<b>Step 13</b> <b>a</b> Reseat the ADF cable. <b>b</b> Check the ADF cable for proper connection and damage. <b>c</b> Check the ADF assembly for proper installation and damage. <b>d</b> Check the ADF cover sensor for damage.  Is the ADF assembly properly installed and free of damage?	Go to step 15.	Go to step 14.
<b>Step 14</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273</a> .  Does the problem remain?	Go to step 15.	The problem is solved.
<b>Step 15</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 16.
<b>Step 16</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Sensor (ADF top door interlock) service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Open the ADF cover, and then remove the jammed paper. <b>b</b> Make sure that the paper path is free of obstructions. <b>c</b> Raise the ADF assembly, and then make sure that the scan area is free of dust and obstructions. <b>d</b> Make sure that the scanner paper setting matches the paper loaded.  Does the problem remain?	Go to step 2.	The problem is solved.

Action	Yes	No
<b>Step 2</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Sensor tests</b> <b>b</b> Find the sensor (ADF top door interlock).  Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
<b>Step 3</b> <b>a</b> Make sure that the switch actuator is properly installed and free of damage. <b>b</b> Reseat all the ADF and flatbed scanner cables on the controller board.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273</a> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Check the ADF cover sensor flag for proper installation and damage.  Is the sensor flag properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the ADF pick assembly. See <a href="#">“ADF pick assembly removal” on page 272</a> .  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Clean the ADF pick rollers and separator pad. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Feed test</b>  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Check the ADF pick and feed rollers for wear, damage, and contamination. <b>b</b> Check the ADF pick separator pad for wear, damage, contamination, and spring load. <b>c</b> Check if the ADF cover properly closes.  Is the ADF pick assembly properly installed and free of damage?	Go to step 10.	Go to step 9.



Action	Yes	No
<b>Step 9</b> Replace the ADF pick assembly. See <a href="#">“ADF pick assembly removal” on page 272</a> .  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Motor tests</b> <b>b</b> Select <b>Motor (ADF transport)</b> .  Does the motor run?	Go to step 12.	Go to step 11.
<b>Step 11</b> <b>a</b> Reseat the ADF cable. <b>b</b> Check the ADF cable for proper connection and damage. <b>c</b> Check the ADF assembly for proper installation and damage. <b>d</b> Check the ADF cover sensor for damage.  Is the ADF assembly properly installed and free of damage?	Go to step 13.	Go to step 12.
<b>Step 12</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273</a> .  Does the problem remain?	Go to step 13.	The problem is solved.
<b>Step 13</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 14.
<b>Step 14</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## ADF feed error service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Open the ADF cover, and then remove the jammed paper. <b>b</b> Make sure that the paper path is free of obstructions. <b>c</b> Raise the ADF assembly, and then make sure that the scan area is free of dust and obstructions. <b>d</b> Make sure that the scanner paper setting matches the paper loaded.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Sensor tests</b> <b>b</b> Find the sensor (ADF media present).  Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
<b>Step 3</b> <b>a</b> Make sure that the paper present sensor actuator is properly installed and free of damage. <b>b</b> Make sure that the actuator is properly aligned with the sensor. <b>c</b> Reseat all the cables on the controller board.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273</a> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Check the ADF paper present sensor flag for proper installation and damage.  Is the sensor flag properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273</a> .  Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
<b>Step 7</b> <b>a</b> Clean the ADF pick rollers and separator pad. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Feed test</b>  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Check the ADF pick and feed rollers for wear, damage, and contamination. <b>b</b> Check the ADF pick separator pad for wear, damage, contamination, and spring load. <b>c</b> Check if the ADF cover properly closes.  Is the ADF pick assembly properly installed and free of damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the ADF pick assembly. See <a href="#">“ADF pick assembly removal” on page 272.</a>  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Motor tests</b> <b>b</b> Select <b>Motor (ADF transport).</b>  Does the motor run?	Go to step 12.	Go to step 11.
<b>Step 11</b> <b>a</b> Reseat the ADF cable. <b>b</b> Check the ADF cable for proper connection and damage. <b>c</b> Check the ADF assembly for proper installation and damage. <b>d</b> Check the ADF cover sensor for damage.  Is the ADF assembly properly installed and free of damage?	Go to step 13.	Go to step 12.
<b>Step 12</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273.</a>  Does the problem remain?	Go to step 13.	The problem is solved.
<b>Step 13</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 14.

Action	Yes	No
<b>Step 14</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Scanner disabled and scanner communication error service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Open the ADF cover, and then remove the jammed paper. <b>b</b> Make sure that the paper path is free of obstructions. <b>c</b> Raise the ADF assembly, and then make sure that the scan area is free of dust and obstructions. <b>d</b> Make sure that the scanner paper setting matches the paper loaded.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Reseat all the scanner cables on the controller board. <b>b</b> Perform a POR.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Motor tests</b> <b>b</b> Select <b>Motor (ADF transport)</b> .  Does the motor run?	Go to step 5.	Go to step 4.
<b>Step 4</b> <b>a</b> Reseat the ADF cable. <b>b</b> Check the ADF cable for proper connection and damage. <b>c</b> Check the ADF assembly for proper installation and damage. <b>d</b> Check the ADF cover sensor for damage.  Is the ADF assembly properly installed and free of damage?	Go to step 6.	Go to step 5.
<b>Step 5</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273.</a>  Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
<b>Step 6</b> <b>a</b> Reseat all the scanner cables on the controller board. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Motor tests &gt; Flatbed scanner</b>  Did the motor run?	Go to step 9.	Go to step 7.
<b>Step 7</b> <b>a</b> Make sure that the flatbed scanner cables are properly connected and free of damage. <b>b</b> Check the flatbed scanner for proper installation and damage.  Is the flatbed scanner properly installed and free of damage?	Go to step 9.	Go to step 8.
<b>Step 8</b> Replace the flatbed scanner. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273.</a>  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 10.
<b>Step 10</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Flatbed home position service check

Action	Yes	No
<b>Step 1</b> Raise the ADF assembly, and then make sure that the scan area is free of dust and obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Reseat all the scanner cables on the controller board. <b>b</b> Perform a POR.  Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
<b>Step 3</b> <b>a</b> Reseat all the scanner cables on the controller board. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Motor tests &gt; Flatbed scanner</b>  Did the motor run?	Go to step 6.	Go to step 4.
<b>Step 4</b> <b>a</b> Make sure that the flatbed scanner cables are properly connected and free of damage. <b>b</b> Check the flatbed scanner for proper installation and damage.  Is the flatbed scanner properly installed and free of damage?	Go to step 6.	Go to step 5.
<b>Step 5</b> Replace the flatbed scanner. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273.</a>  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 7.
<b>Step 7</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Other symptoms

### Base printer symptoms

Symptom	Action
Front door is closed or open.	See <a href="#">“Door switch service check” on page 179.</a>
Tray 1 is empty.	See <a href="#">“Load tray 1 with A4 plain paper service check” on page 180.</a>
Paper did not arrive in the bin.	See <a href="#">“Paper did not arrive in the bin service check” on page 182.</a>
Tray insert is obstructed.	See <a href="#">“Tray insert obstructed service check” on page 184.</a>
Unable to remove the toner cartridge.	See <a href="#">“Unable to remove toner cartridge service check” on page 184.</a>
Fax not detected.	See <a href="#">“Fax not detected service check” on page 185.</a>

Symptom	Action
No display.	See <a href="#">“No display service check” on page 186.</a>
No power.	See <a href="#">“No power service check” on page 187.</a>
ADF cover is open.	See <a href="#">“ADF cover open service check” on page 188.</a>

## Door switch service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Check the front door flag for damage. <b>b</b> Check the front door hinge for damage.  Are the front door flag and hinge free of damage?	Go to step 3.	Go to step 2.
<b>Step 2</b> Replace the front door. See <a href="#">“Front door removal” on page 248.</a>  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Check the HVPS characterization. <b>b</b> Reseat the HVPS cables. <b>c</b> Check the HVPS cables for proper installation and damage. <b>d</b> Check the HVPS spring contact for proper connection to the board. <b>e</b> Check the door switch for damage and proper alignment.  Is the HVPS properly installed and free of damage?	Go to step 5.	Go to step 4.
<b>Step 4</b> Replace the HVPS. See <a href="#">“HVPS removal” on page 236.</a> <b>Note:</b> Make sure to perform the HVPS characterization when replacing the HVPS.  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check the controller board for proper installation and damage. <b>c</b> Check if the controller board LED lights up.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 6.
<b>Step 6</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Load tray 1 with A4 plain paper service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper is properly loaded in the tray. <b>c</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>d</b> Make sure that the lift plate is properly working.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Reseat the sensor cable. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Sensor tests</b> <b>c</b> Find the sensor (paper present).  Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
<b>Step 3</b> <b>a</b> Check the sensor for proper installation and damage. <b>b</b> Check the alignment of the sensor with the sensor flag. <b>c</b> Check the sensor cable for proper connection and damage.  Is the sensor properly installed and free of damage?	Go to step 5.	Go to step 4.
<b>Step 4</b> Replace the sensor. See <a href="#">“Sensor (paper present) removal” on page 264</a> .  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Sensor tests</b> <b>b</b> Find the following sensors: <ul style="list-style-type: none"> <li>• Sensor (media present in tray1 S1)</li> <li>• Sensor (input sensor S3)</li> <li>• Sensor (fuser exit sensor S4)</li> </ul> Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 6.



Action	Yes	No
<b>Step 6</b> <b>a</b> Check the sensor flags for proper installation and damage. <b>b</b> Check the sensor flags for proper alignment with the sensors. <b>c</b> Check the sensor flag springs for proper installation and damage.  Are the sensor flags properly installed and free of damage?	Go to step 8.	Go to step 7.
<b>Step 7</b> Replace the damaged sensor flag.  Does the problem remain?	Go to step 8.	The problem is solved.
<b>Step 8</b> <b>a</b> Make sure that the separator roller is free of dust and contamination. <b>b</b> Make sure that the lift plate is properly working. <b>c</b> Make sure that the paper guides are properly working. <b>d</b> Check the tray insert for proper installation and damage.  Is the tray insert properly installed, and free of contamination and damage?	Go to step 10.	Go to step 9.
<b>Step 9</b> Replace the tray insert.  Does the problem remain?	Go to step 10.	The problem is solved.
<b>Step 10</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 12.	Go to step 11.
<b>Step 11</b> Replace the damaged cable.  Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 13.
<b>Step 13</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Paper did not arrive in the bin service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>c</b> Make sure that the duplex unit is properly inserted. <b>d</b> Make sure that the paper size setting in the duplex unit matches the printer setting. <b>e</b> Make sure that the front and rear doors are fully closed. <b>f</b> Make sure that the output bin is free from obstructions.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Remove the imaging unit and toner cartridge, and then make sure that the paper path is free of jams and obstructions. <b>b</b> Clear all rollers of dirt and contamination.  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Perform a POR. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b>  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> Check the rear door for proper installation and damage.  Is the door properly installed and free of damage?	Go to step 6.	Go to step 5.
<b>Step 5</b> Replace the rear door. See <a href="#">“Rear door removal” on page 250</a> .  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustment &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport)</b> . <b>c</b> Check if the exit roller turns.  Did the exit roller turn?	Go to step 9.	Go to step 7.

Action	Yes	No
<b>Step 7</b> <b>a</b> Make sure that the redrive gears are in proper contact with the printer drive gears. <b>b</b> Check the redrive gears for proper installation and damage. <b>c</b> Check the roller for wear, contamination, and damage.  Is the redrive properly installed and free of damage?	Go to step 9.	Go to step 8.
<b>Step 8</b> Replace the redrive. See <a href="#">“Redrive removal” on page 251</a> .  Does the problem remain?	Go to step 9.	The problem is solved.
<b>Step 9</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> .  Does the motor run?	Go to step 11.	Go to step 10.
<b>Step 10</b> <b>a</b> Reseat the motor cable at both ends. <b>b</b> Make sure that the motor gear is properly aligned with the drive gears. <b>c</b> Check the motor for proper installation and damage.  Is the motor properly installed and free of damage?	Go to step 11.	Contact the next level of support.
<b>Step 11</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Duplex &gt; Single</b>  Does the problem remain?	Go to step 12.	The problem is solved.
<b>Step 12</b> <b>a</b> Make sure that the main drive is properly installed and free of damage. <b>b</b> Make sure that the main drive gears are properly installed. <b>c</b> Make sure that the drive gears are in proper contact with the gear they are driving.  Does the problem remain?	Go to step 13.	The problem is solved.
<b>Step 13</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Tray insert obstructed service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Make sure that the tray insert is properly inserted. <b>b</b> Make sure that the paper is properly loaded in the tray. <b>c</b> Make sure that the paper type and size settings match the paper type and size set on the tray. <b>d</b> Make sure that the lift plate is properly working.  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Make sure that the separator roller is free of dust and contamination. <b>b</b> Make sure that the lift plate is properly working. <b>c</b> Make sure that the paper guides are properly working. <b>d</b> Check the tray insert for proper installation and damage.  Is the tray insert properly installed, and free of contamination and damage?	Contact the next level of support.	Go to step 3.
<b>Step 3</b> Replace the tray insert.  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Unable to remove toner cartridge service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Check the front door for proper installation and damage. <b>b</b> Check the front door flag for damage. <b>c</b> Check the front door hinge for damage. <b>d</b> Check if the front door properly closes.  Is the front door properly installed and free of damage?	Go to step 3.	Go to step 2.
<b>Step 2</b> Replace the front door. See <a href="#">“Front door removal” on page 248</a> .  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> Check the front door link for proper installation and damage.  Is the front door link properly installed and free of damage?	Go to step 4.	Contact the next level of support.

Action	Yes	No
<b>Step 4</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Printer diagnostics &amp; adjustments &gt; Motor tests</b> <b>b</b> Select <b>Motor (transport drive)</b> .  Did the motor run?	Go to step 5.	Go to step 6.
<b>Step 5</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Tray 1 &gt; Single</b> <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Input tray quick print &gt; Duplex &gt; Single</b>  Does the problem remain?	Go to step 6.	The problem is solved.
<b>Step 6</b> <b>a</b> Make sure that the main drive is properly installed and free of damage. <b>b</b> Make sure that the main drive gears are properly installed. <b>c</b> Make sure that the drive gears are in proper contact with the gear they are driving.  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> Replace the main drive. See <a href="#">“Main drive removal” on page 239</a> .  Does the problem remain?	Contact the next level of support.	The problem is solved.

## Fax not detected service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Reseat all the cables on the top cover. <b>b</b> Check the top cover for proper installation and damage. <b>c</b> Check the fax card cable for proper connection and damage. <b>d</b> Check the cable of the attached controller card switch for proper connection and damage. <b>e</b> Check all electronics attached to the top cover for proper installation and damage.  Are the top cover and all its electronic components properly installed and free of damage?	Go to step 3.	Go to step 2.

Action	Yes	No
<b>Step 2</b> Replace the top cover. See <a href="#">“Top cover removal” on page 255.</a>  Does the problem remain?	Go to step 3.	The problem is solved.
<b>Step 3</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 4.
<b>Step 4</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## No display service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up.  Does the controller board LED light up?	Go to step 2.	Go to step 4.
<b>Step 2</b> <b>a</b> Check the control panel for proper installation and damage. <b>b</b> Check the control panel cable for proper installation and damage.  Is the control panel properly installed and free of damage?	Go to step 4.	Go to step 3.
<b>Step 3</b> Replace the control panel. See <a href="#">“2.8-in. control panel removal” on page 246.</a>  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 5.

Action	Yes	No
<b>Step 5</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## No power service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up when the power is on.  Does the controller board LED light up?	Go to step 5.	Go to step 2.
<b>Step 2</b> <b>a</b> Reseat the cables connected to the LVPS. <b>b</b> Check the cables for proper connection and damage. <b>c</b> Check the fuse for continuity. <b>d</b> Check the electronic components on the LVPS for damage. <b>e</b> Check the LVPS for proper installation and damage.  Is the LVPS properly installed and free of damage?	Go to step 5.	Go to step 3.
<b>Step 3</b> <b>a</b> Make sure that the LVPS is compatible with the fuser and the printer. <b>b</b> Make sure that there is voltage coming out of the fuser connector. <b>c</b> Make sure that the correct power input voltage is applied.  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> Replace the LVPS. See <a href="#">“LVPS removal” on page 235.</a>  Does the problem remain?	Go to step 5.	The problem is solved.
<b>Step 5</b> Check the cables for proper connection and damage.  Are the cables properly connected and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the damaged cable.  Does the problem remain?	Go to step 7.	The problem is solved.

Action	Yes	No
<b>Step 7</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 8.
<b>Step 8</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.

## ADF cover open service check

Action	Yes	No
<b>Step 1</b> <b>a</b> Clean the ADF pick rollers and separator pad. <b>b</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Feed test</b>  Does the problem remain?	Go to step 2.	The problem is solved.
<b>Step 2</b> <b>a</b> Check the ADF pick and feed rollers for wear, damage, and contamination. <b>b</b> Check the ADF pick separator pad for wear, damage, contamination, and spring load. <b>c</b> Check if the ADF cover properly closes.  Is the ADF pick assembly properly installed and free of damage?	Go to step 4.	Go to step 3.
<b>Step 3</b> Replace the ADF pick assembly. See <a href="#">“ADF pick assembly removal” on page 272.</a>  Does the problem remain?	Go to step 4.	The problem is solved.
<b>Step 4</b> <b>a</b> Enter the Diagnostics menu, and then navigate to: <b>Scanner diagnostics &gt; Motor tests</b> <b>b</b> Select <b>Motor (ADF transport).</b>  Does the motor run?	Go to step 6.	Go to step 5.



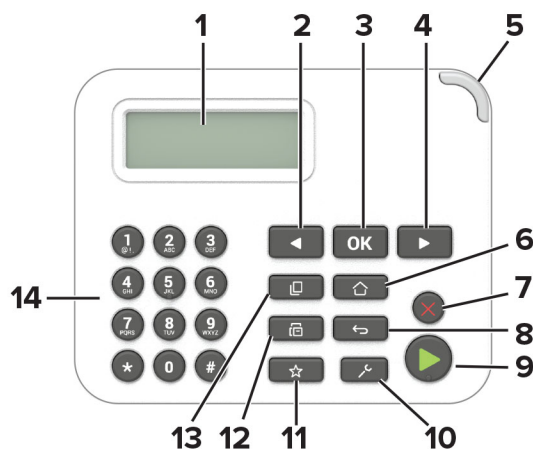
Action	Yes	No
<b>Step 5</b> <b>a</b> Reseat the ADF cable. <b>b</b> Check the ADF cable for proper connection and damage. <b>c</b> Check the ADF assembly for proper installation and damage. <b>d</b> Check the ADF cover sensor for damage.  Is the ADF assembly properly installed and free of damage?	Go to step 7.	Go to step 6.
<b>Step 6</b> Replace the ADF assembly. See <a href="#">“ADF scanner and flatbed scanner removal” on page 273.</a>  Does the problem remain?	Go to step 7.	The problem is solved.
<b>Step 7</b> <b>a</b> Reseat all the cables on the controller board. <b>b</b> Check if the controller board LED lights up. <b>c</b> Check the controller board for proper installation and damage.  Is the controller board properly installed and free of damage?	Contact the next level of support.	Go to step 8.
<b>Step 8</b> Replace the controller board. See <a href="#">“Controller board removal” on page 234.</a>  Does the problem remain?	Contact the next level of support.	The problem is solved.



# Service menus

## Understanding the printer control panel

### Using the MB2236adw control panel



	Control panel part	Function
1	Display	<ul style="list-style-type: none"> <li>View printer messages and supply status.</li> <li>Set up and operate the printer.</li> </ul>
2	Left arrow button	<ul style="list-style-type: none"> <li>Scroll through menus or move between screens and menu options.</li> <li>Decrease the numeric value of a setting.</li> </ul>
3	Select button	<ul style="list-style-type: none"> <li>Select a menu option.</li> <li>Save the changes in a setting.</li> </ul>
4	Right arrow button	<ul style="list-style-type: none"> <li>Scroll through menus or move between screens and menu options.</li> <li>Increase the numeric value of a setting.</li> </ul>
5	Indicator light	Check the status of the printer.
6	Home button	Go to the home screen.
7	Stop or Cancel button	Stop the current job.
8	Back button	Return to the previous screen.
9	Start button	Start a job, depending on which mode is selected.
10	Menu button	Access the printer menus.
11	Shortcuts button	Access shortcuts to frequently used functions with previously saved settings.
12	Fax button	Enter Fax mode.
13	Copy button	Enter Copy mode.
14	Numeric keypad	Enter numbers or symbols in an input field.

## Using the MB2236adwe control panel



	Control panel part	Function
1	Home button	Go to the home screen.
2	Back button	Return to the previous screen.
3	Start button	Start a job, depending on which mode is selected.
4	Indicator light	Check the status of the printer.
5	Display	<ul style="list-style-type: none"> <li>View printer messages and supply status.</li> <li>Set up and operate the printer.</li> </ul>

## Understanding the status of the power button and indicator light

Indicator light		Printer status
MB2236adw	MB2236adwe	
Off	Off	The printer is off or in Sleep mode.
Blinking green	Blinking blue	The printer is ready or processing data.
Blinking red	Blinking red	The printer requires user intervention.
	Blue	The printer is on or ready.
Power button light		Printer status
MB2236adw	MB2236adwe	
Off	Off	The printer is off, ready, or processing data.
On	White	The printer is in Sleep or 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 in MB2236adw printers, perform the following:

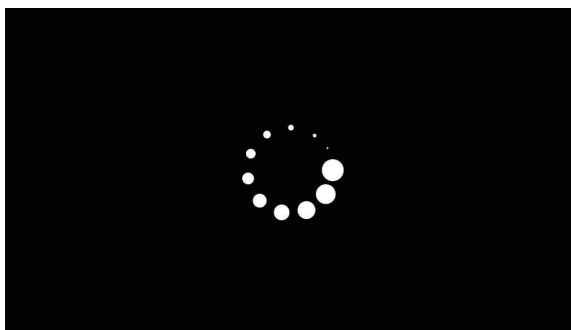
- To access the Diagnostics menu from POST, press and hold **Left arrow** and **OK** on the control panel.
- To access the Diagnostics menu from the home screen, press **Back**, **Right arrow**, **Back**, and **Right arrow** on the control panel.

To access the Diagnostics menu in MB2236adwe printers, perform the following:

- To access the Diagnostics menu from POST:
  - 1 Unplug the printer.
  - 2 Open tray 1.
 

**Note:** Make sure that paper is present in the tray.
  - 3 Plug the printer.

When the display shows the following icon, close tray 1.



- 4 A menu appears on the display.

Select **Diagnostics\_Mode**, and then select **Boot**.

- To access the Diagnostics menu from the home screen, press these buttons in the following sequence:  
**Back, Back, Start, Start**

## 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.

#### Notes:

- The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
- If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.
- For the fuser exit sensor actuator, toggle it toward the rear door.

### List of sensor tests

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.

### Notes:

- If the motor is activated, then it is properly working.
- Some motors require automatic deactivation to avoid secondary issues such as possible damage and contamination.
- Some tests require a special action to activate a motor such as removing a major component.
- If the motor fails, the test failure may not indicate a failed motor. Further troubleshooting may be required. Check the boards and cables for possible issues.
- To stop a running the 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.

## Scanner Diagnostics

### Motor Tests

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

**Scanner Diagnostics > Motor Tests**

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

- 2 Select a motor.

#### Notes:

- If the motor is activated, then it is properly working.
- Some motors require automatic deactivation in order to avoid secondary issues such as possible damage and contamination.
- Some tests require a special action to activate a motor such as removing a major component.
- If the motor fails, the test failure may not indicate a failed motor. Further troubleshooting may be required. Check the boards and cables for possible issues.

#### List of motor tests

Flatbed Scanner
ADF Transport

### Sensor Tests

This test verifies the status of the scanner sensors.

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

**Scanner Diagnostics > Sensor Test**

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

- 2 Select a sensor.
- 3 Find, and then manually toggle the sensor.

#### Notes:

- The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.

- If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.

### List of sensor tests

Sensor (FB CCD home)
Sensor (ADF closed)
Sensor (ADF media present)
Sensor (ADF 1st scan)
Sensor (ADF top door interlock)

### Feed Test

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

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

**Scanner Diagnostics > Feed Test**

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

- 2 Select a paper size.

- 3 Select **Feed Test**.

### Scanner Calibration Reset

Before starting the test, make sure that the scanner glass and scanner glass pad are clean. For more information, see [“Cleaning the scanner” on page 288](#).

- 1 Enter the Diagnostics menu, and then select **Scanner Diagnostics**.

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

- 2 Select **Sensor Calibration Reset**.

To verify the result, do the following:

- 1 Load the ADF with a document containing light and dark content.
- 2 Print both sides of the document.

#### Notes:

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

# 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 in MB2236adw printers, press and hold **Right arrow** and **OK** on the control panel, and then turn on the printer.
- To access the Config menu in MB2236adwe printers, from the control panel, navigate to:  
**Settings > Device > Maintenance > Config Menu**

## Config Menu

Menu item	Description
<b>USB Configuration</b> USB PnP 1* 2	Change the USB driver mode of the printer to improve its compatibility with a personal computer.
<b>USB Configuration</b> USB Scan to Local On* Off	Set whether the USB device driver enumerates as a USB Simple device (single interface) or as a USB Composite device (multiple interfaces).
<b>USB Configuration</b> USB Speed Full Auto*	Set the USB port to run at full speed and disable its high-speed capabilities.
<b>Tray Configuration</b> Show Tray Insert Message Off Only for unknown sizes* Always	Show message about the tray status.
<b>Tray Configuration</b> A5 Loading Short Edge* Long Edge	Specify the page orientation when loading A5 paper size.
<b>Tray Configuration</b> Paper Prompts Auto* Manual Paper Envelope Prompts Auto* Manual Envelope	Set the paper source that the user fills when a prompt to load paper or envelope appears.
<b>Note:</b> An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
<b>Tray Configuration</b> Action for Prompts Prompt user* Continue Use current	Set the printer to resolve paper- or envelope-related change prompts.
<b>Reports</b> Menu Settings Page Event Log Event Log Summary	Print reports about printer menu settings, status, and event logs.
<b>Supply Usage And Counters</b> Clear Supply Usage History Reset Black Cartridge Counter Reset Black Imaging Unit Counter	Reset the supply page counter or view the total printed pages.
<b>Fax Configuration</b> Fax Low Power Support Disable Sleep Permit Sleep Auto*	Specify the printer power setting when it is in fax mode.
<b>Print Configuration</b> Font Sharpening 0–150(24*)	Set a text point-size value below which the high-frequency screens are used when printing font data.
<b>Print Configuration</b> Print Density 1–5 (3*) Copy Density 1–5 (3*)	Adjust the toner density when printing or copying documents.
<b>Device Operations</b> Quiet Mode On Off*	Set the printer to reduce the amount of noise that it makes when printing.  <b>Note:</b> This setting slows down the overall performance of the printer.
<b>Device Operations</b> Panel Menus Enable* Disable	Set the printer to show the control panel menus.
<b>Device Operations</b> Clear Custom Status	Erase all custom messages.
<b>Scanner Configuration</b> Scanner Manual Registration Print Quick Test	Print a Quick Test target page.  <b>Note:</b> Make sure that the margin spacing on the target page is uniform all the way around the target. If it is not, then the printer margins may need to be reset.
<b>Note:</b> An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
<b>Scanner Configuration</b> Scanner Manual Registration Front ADF Registration Flatbed Registration	Manually register the flatbed and ADF after replacing the ADF, scanner glass, or controller board.
<b>Scanner Configuration</b> Edge Erase ADF Edge Erase 0–6 (3*) Flatbed Edge Erase 0–6 (3*)	Set the size, in millimeters, of the no-print area around an ADF or flatbed scan job.
<b>Scanner Configuration</b> Disable Scanner Enabled* Disabled ADF Disabled	Disable the scanner if it is not working properly.
<b>Scanner Configuration</b> Tiff Byte Order CPU Endianness* Little Endian Big Endian	Set the byte order of a TIFF-formatted scan output.
<b>Scanner Configuration</b> Exact Tiff Rows Per Strip On* Off	Set the RowsPerStrip tag value of a TIFF-formatted scan output.
<b>Note:</b> An asterisk (*) next to a value indicates the factory default setting.	

## Service Engineer menu

### Entering Invalid engine mode

This mode allows the printer to load the correct firmware code.

To access the Invalid engine mode in MB2236adw printers, perform the following:

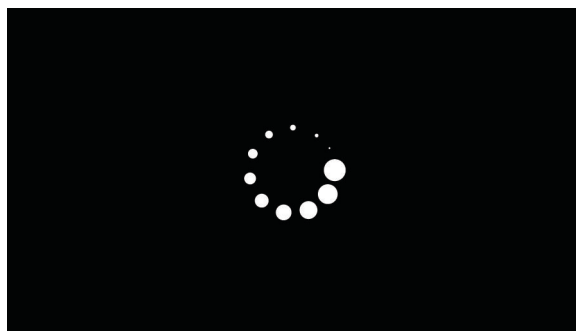
- 1 Turn off the printer.
- 2 From the control panel, press and hold **3**, **4**, and **6** while turning on the printer.
- 3 Release the buttons after 10 seconds.

To access the Invalid engine mode in MB2236adwe printers, perform the following:

- 1 Turn off the printer.
- 2 Open tray 1.

**Note:** Make sure that paper is present in the tray.

- 3 Perform a POR.
- 4 When the display shows the following icon, close tray 1.



- 5 A menu appears on the display.  
Select -> to navigate the menu, and then select **ENGINE\_FLASH**.  
**Note:** ENGINE\_FLASH turns green when selected.
- 6 Select **Boot**.

## 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 Service Engineer (SE) menu in MB2236adw printers, perform the following:

- From the home screen, press these buttons in the following sequence:  
**Back, Left arrow, Back, and Left arrow**

To access the Service Engineer (SE) menu in MB2236adwe printers, perform the following:

- From the home screen, press these buttons in the following sequence:  
**Back, Back, Home, Home**

## 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
History	<ul style="list-style-type: none"> <li>• Print History</li> <li>• Mark History</li> </ul>
MAC	<ul style="list-style-type: none"> <li>• Set Card Speed</li> <li>• LAA</li> <li>• Keep Alive</li> </ul>
NPAP	Print Alerts
TCP/IP	<ul style="list-style-type: none"> <li>• netstat</li> <li>• arp</li> <li>• Allow SNMP Set</li> <li>• MTU</li> <li>• Meditech Mode</li> <li>• RAW LPR Mode</li> </ul>
Wireless	Enable Wi-Fi Direct Sigma Control Agent
Ping Test	<ul style="list-style-type: none"> <li>• Ping</li> <li>• Ping6</li> </ul>
Other Actions	<ul style="list-style-type: none"> <li>• ifconfig</li> <li>• IPtables [Firewall Dump]</li> <li>• IP6tables [Firewall Dump]</li> <li>• IPsec Dump</li> </ul>

## Fax SE

Use this menu for the fax transmission and fax reception service checks.

Enter the Service Engineer (SE) menu, and then select **Fax SE**.

**Note:** Use these settings as directed by the next level of support.

Top-level menu	Intermediate menu
Code Levels	<ul style="list-style-type: none"> <li>• Base: [current value]</li> <li>• Kernel: [current value]</li> <li>• Network: [current value]</li> <li>• Engine: [current value]</li> <li>• Loader: [current value]</li> <li>• Fax: [current value]</li> <li>• Scanner: [current value]</li> </ul>

Top-level menu	Intermediate menu
Agency Test	<ul style="list-style-type: none"><li>• Go Off Hook</li><li>• Ring Detect</li><li>• Generate Tones</li><li>• Modulations</li></ul>
Fax Settings	<ul style="list-style-type: none"><li>• Line Features</li><li>• Fax Modulations</li><li>• Detect EOLS</li><li>• Print Logs</li><li>• AutoPrint T30 Logs</li></ul>

Top-level menu	Intermediate menu
Modem Settings	<ul style="list-style-type: none"> <li>• Caller ID Pattern <b>Note:</b> Changing the value of this setting also changes the value of the Caller ID setting in the Fax Settings.</li> <li>• Dial Timeout</li> <li>• Transmit Level</li> <li>• Receive Thresh</li> <li>• DTMF Low Level</li> <li>• DTMF High Level</li> <li>• Positive Twt Ctrl</li> <li>• Negative Twt Ctrl</li> <li>• ATRA EQM Bias</li> <li>• V34 PreEmph Filt</li> <li>• Dial Tone Thresh</li> <li>• Progress Thresh</li> <li>• Pulse Make Time</li> <li>• Pulse Break Time</li> <li>• Pulse Dial Type</li> <li>• Interdigit Delay</li> <li>• Enable CEQ</li> <li>• V17 TX Filter</li> <li>• DC Characteristic</li> <li>• Impedance</li> <li>• Caller ID Pattern</li> <li>• Busy Tone Cycles</li> <li>• Busy Tone Min On Time</li> <li>• Busy Tone Max On Time</li> <li>• Busy Tone Min Off Time</li> <li>• Busy Tone Max Off Time</li> <li>• Congest Tone Cycles</li> <li>• Congest Tone Min On Time</li> <li>• Adjust Power FSK</li> <li>• Pulse Fall Time</li> <li>• High Ring Impedance</li> </ul>
Reboot System	After this setting is selected, the control panel displays the message: <b>About to reboot. Press Start to reboot. Press Stop to return.</b>

## 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

# Parts removal







## 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 a soft 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.
-  **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 retrait

-  **ATTENTION—RISQUE D'ELECTROCUTION :** Une tension résiduelle peut être présente dans le bloc d'alimentation basse tension (LVPS) et le bloc d'alimentation haute tension (HVPS). Pour éviter tout risque d'électrocution, ne touchez pas les composants du circuit ou le côté soudure de la carte. Tenez-les uniquement par leurs extrémités ou le boîtier en métal.
-  **ATTENTION—RISQUE D'ELECTROCUTION :** Ce produit utilise un commutateur d'alimentation logiciel. Il ne déconnecte pas physiquement la tension d'alimentation CA. Pour éviter tout risque d'électrocution, débranchez toujours le cordon d'alimentation de l'imprimante lorsque vous devez déconnecter la tension d'alimentation CA.
-  **ATTENTION—RISQUE D'ELECTROCUTION :** Pour éviter tout risque d'électrocution et éviter d'endommager l'imprimante, débranchez le cordon d'alimentation de la prise électrique et déconnectez toute connexion à tout périphérique externe avant de brancher ou débrancher des câbles ou circuits et assemblages électroniques.
-  **ATTENTION—SURFACE CHAUDE :** L'intérieur de l'imprimante risque d'être brûlant. pour réduire le risque de brûlure, laissez la surface ou le composant refroidir avant d'y toucher.
-  **ATTENTION : RISQUE DE PINCEMENT :** Pour éviter tout risque de blessure par pincement, agissez avec précaution au niveau des zones signalées par cette étiquette. Les blessures par pincement peuvent se produire autour des pièces mobiles telles que les engrenages, portes, tiroirs et capots.
-  **AVERTISSEMENT - PIÈCES MOBILES :** 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 extracción

-  **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** La fuente de alimentación de bajo voltaje (LVPS) y la fuente de alimentación de alto voltaje (HVPS) pueden presentar voltaje residual. Para evitar el riesgo de descarga eléctrica, no toque los componentes del circuito ni el lateral soldado de la placa. Manipule solo los bordes exteriores o la carcasa metálica.
-  **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Este producto utiliza un interruptor de corriente de software. No desconecta físicamente la entrada de voltaje de CA. Para evitar el riesgo de descarga eléctrica, desenchufe siempre el cable de alimentación de la impresora cuando sea necesario retirar la entrada de voltaje de CA.
-  **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Para evitar el riesgo de descargas eléctricas y daños en la impresora, retire el cable de alimentación de la toma eléctrica y desconecte todas las conexiones a dispositivos externos antes de conectar o desconectar cualquier cable, placa electrónica o conjunto.
-  **PRECAUCIÓN: SUPERFICIE CALIENTE:** El interior de la impresora podría estar caliente. Para evitar el riesgo de heridas producidas por el contacto con un componente caliente, deje que la superficie se enfríe antes de tocarlo.
-  **PRECAUCIÓN: PELIGRO DE ATRAPAMIENTO:** Para evitar el riesgo de lesión por atrapamiento, preste atención en las áreas marcadas con esta etiqueta. Las lesiones por atrapamiento se pueden producir en torno a partes móviles, tales como engranajes, puertas, bandejas y cubiertas.
-  **PRECAUCIÓN: PIEZAS MÓVILES:** 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 Demontage

-  **VORSICHT – STROMSCHLAGGEFAHR:** Im Niederspannungsnetzteil (LVSP) und Hochspannungsnetzteil (HVPS) liegt unter Umständen Restspannung vor. Um das Risiko eines elektrischen Schlags zu vermeiden, berühren Sie keine umliegenden Bauteile oder die Lötseite der Platine. Fassen Sie sie nur an den Außenkanten oder am Metallgehäuse an.
-  **VORSICHT – STROMSCHLAGGEFAHR:** Dieses Produkt verwendet einen weichen Netzschalter. Er trennt die Eingangswechselspannung nicht physisch. Um das Risiko eines elektrischen Schlags zu vermeiden, ziehen Sie stets das Netzkabel vom Drucker ab, wenn eine Abtrennung der Eingangswechselspannung erforderlich ist.
-  **VORSICHT – STROMSCHLAGGEFAHR:** Um das Risiko eines elektrischen Schlags und Schäden am Drucker zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose und trennen Sie alle Verbindungen zu jeglichen externen Geräten, bevor Sie Kabel, Elektronikplatinen oder Baugruppen einstecken oder abziehen.
-  **VORSICHT – HEISSE OBERFLÄCHE:** Das Innere des Druckers kann sehr heiß sein. Vermeiden Sie Verletzungen, indem Sie heiße Komponenten stets abkühlen lassen, bevor Sie ihre Oberfläche berühren.
-  **VORSICHT – QUETSCHGEFAHR:** Um das Risiko einer Quetschung zu vermeiden, gehen Sie in Bereichen, die mit diesem Etikett gekennzeichnet sind, mit Vorsicht vor. Quetschungen können im Bereich von beweglichen Komponenten auftreten, wie z. B. Zahnrädern, Klappen, Fächern und Abdeckungen.



**ACHTUNG—BEWEGLICHE TEILE** 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.

## Handling ESD-sensitive parts

Many electronic products use parts that are known to be sensitive to electrostatic discharge (ESD). To prevent damage to ESD-sensitive parts, do the following:

- Turn off the printer before removing logic boards.
- Keep the parts in their original packing material until you are ready to install them into the printer.
- Make the least possible movements with your body to prevent an increase of static electricity from clothing fibers, carpets, and furniture.
- Put the ESD wrist strap on your wrist. Connect the wrist band to the system ground point. This action discharges any static electricity in your body to the printer.
- Hold the parts by their edge connector shroud. Do not touch its pins. If you are removing a pluggable module, then use the correct tool.
- If possible, keep all parts in a grounded metal cabinet.
- Do not place the parts on the printer cover or on a metal table. If you need to put down the parts, then put them into their packing material.
- Prevent parts from being accidentally touched by other personnel. Cover the printer when you are not working on it.
- Be careful while working with the parts when cold-weather heating is used. Low humidity increases static electricity.

## Critical information for controller board or control panel replacement (for MB2236adwe only)



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



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



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



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

**Warning—Potential Damage:** Replace only one of the following components at a time:

- Control panel
- Controller board

To replace a component and to test whether the problem is resolved:

- 1 Replace the affected component.

**Warning—Potential Damage:** Do not perform a Power-On Reset (POR) until the problem is resolved. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

- 2 Enter the Diagnostics Menu. The Diagnostics Menu allows you to temporarily use the replacement part.

**Warning—Potential Damage:** Some printers will perform automatically a POR if the Diagnostics Menu is not opened within five seconds. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

- 3 Use the Diagnostics Menu to test the replacement part. Do a feed test to check if the problem is resolved.
  - If the problem is not resolved—Turn off the printer, and then reinstall the old part.
  - If the problem is resolved—Perform a POR.

## Restoring the printer configuration after replacing the controller board

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

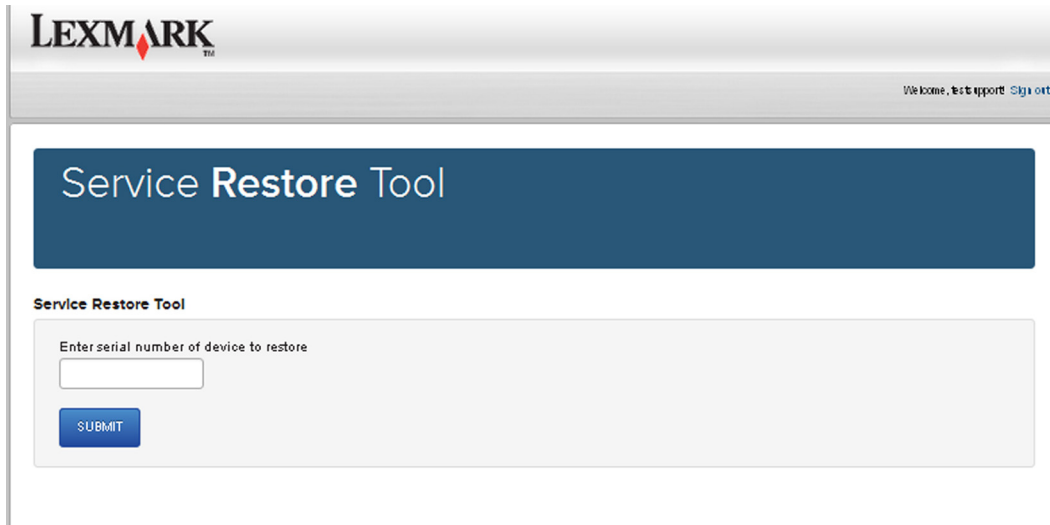
**Note:** The software bundle contains the latest version of the firmware, applications, and software licenses from the Lexmark Virtual Solutions Center (VSC). The printer firmware may be at a different level from what was used before replacing the controller board.

### Using the Service Restore Tool

- 1 Go to <https://cdp.lexmark.com/service-restore-tool/> to access the tool.
- 2 Log in using your Lexmark or partner login.  
If your login fails, then contact your next level of support.

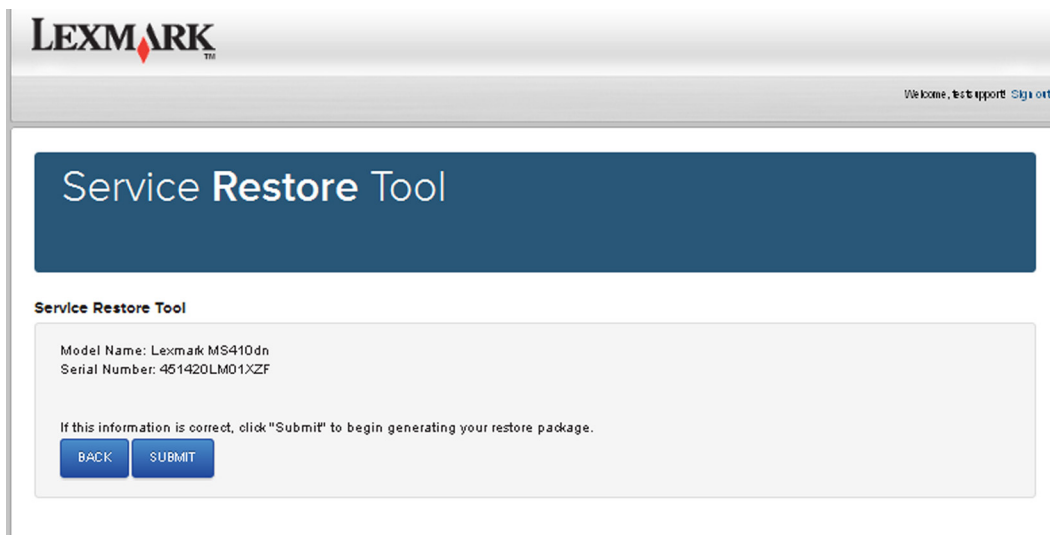


- 3 Enter the printer serial number, and then submit the information.



The screenshot shows the Lexmark Service Restore Tool web interface. At the top is the Lexmark logo and a navigation bar with "Welcome, test support" and a "Sign out" link. Below the navigation bar is a large blue header with the text "Service Restore Tool". Underneath this header is a section titled "Service Restore Tool" containing a form. The form has a label "Enter serial number of device to restore" above a text input field. Below the input field is a blue "SUBMIT" button.

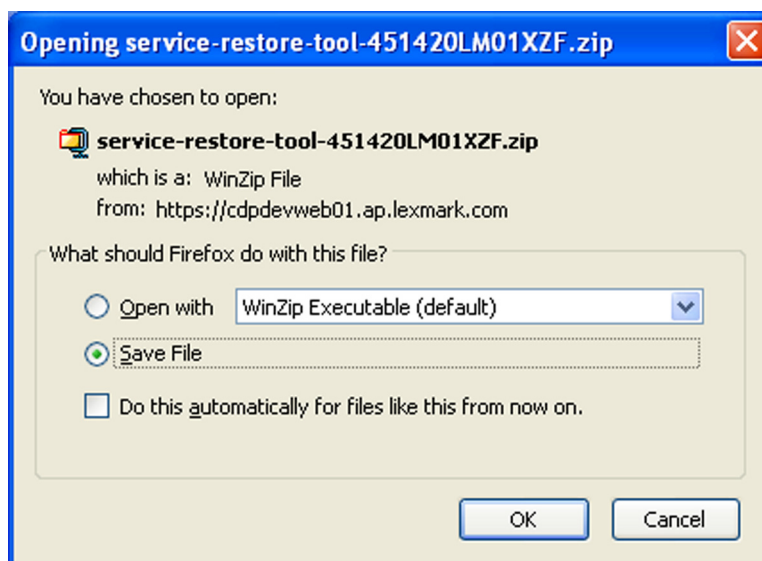
**Note:** Make sure that the serial number that appears on the verification screen is correct.



The screenshot shows the Lexmark Service Restore Tool web interface at the verification step. The top navigation bar and blue header are the same as in the previous screenshot. The "Service Restore Tool" section now displays the following information: "Model Name: Lexmark MS410dn" and "Serial Number: 451420LM01XZF". Below this information is a message: "If this information is correct, click 'Submit' to begin generating your restore package." At the bottom of the form are two buttons: a blue "BACK" button and a blue "SUBMIT" button.

- 4 Save the zip file.

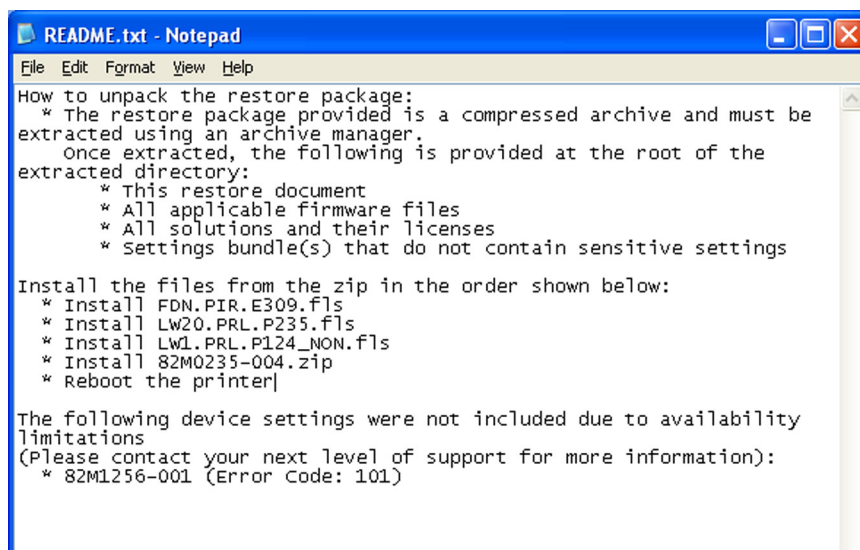
**Note:** Make sure that the serial number in the zip file matches the serial number of the printer being restored.



- 5 Extract the contents of the zip file, open the *Readme* file, and then follow the instructions in the file.

**Notes:**

- Perform the install instructions on the *Readme* file in the exact order shown. Restart the printer only if the file says so.
- For more information on how to flash the downloaded files, see [“Updating the printer firmware” on page 216](#).
- To load the zip files that are extracted from the Service Restore Tool, see [“Restoring solutions, licenses, and configuration settings” on page 215](#).



- 6 After performing the installation instructions in the *Readme* file, confirm from the customer if all the eSF apps have been installed.

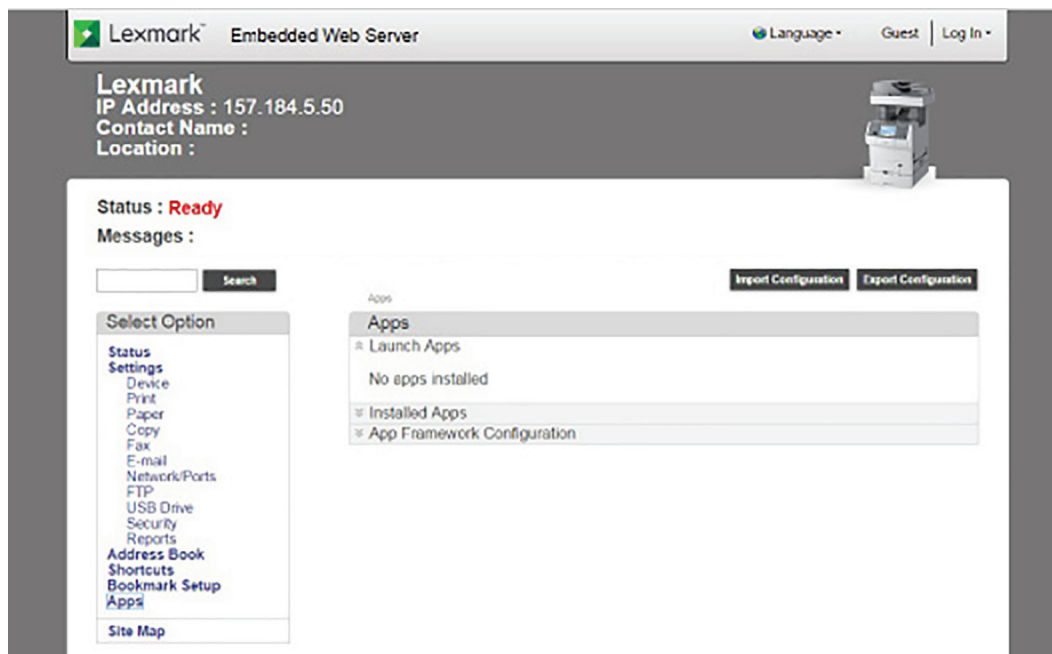
**Notes:**

- If you are unable to access the administrative menus to verify that the printer is restored, then ask the customer for access rights.
- If a 10.00 error appears after you restart the printer, then contact the next level of support.

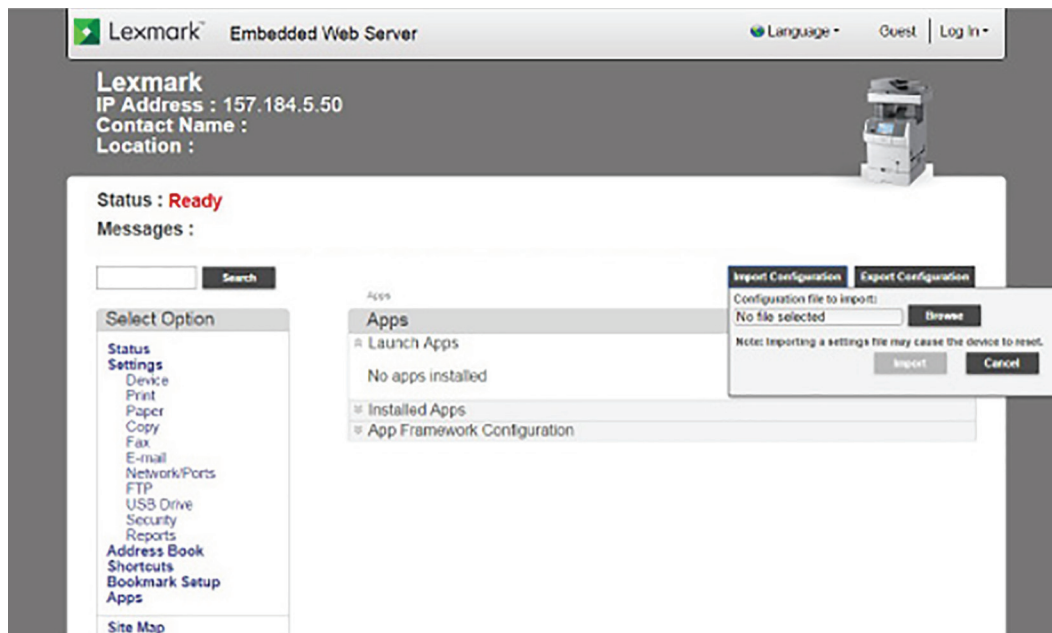
## Restoring solutions, licenses, and configuration settings

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

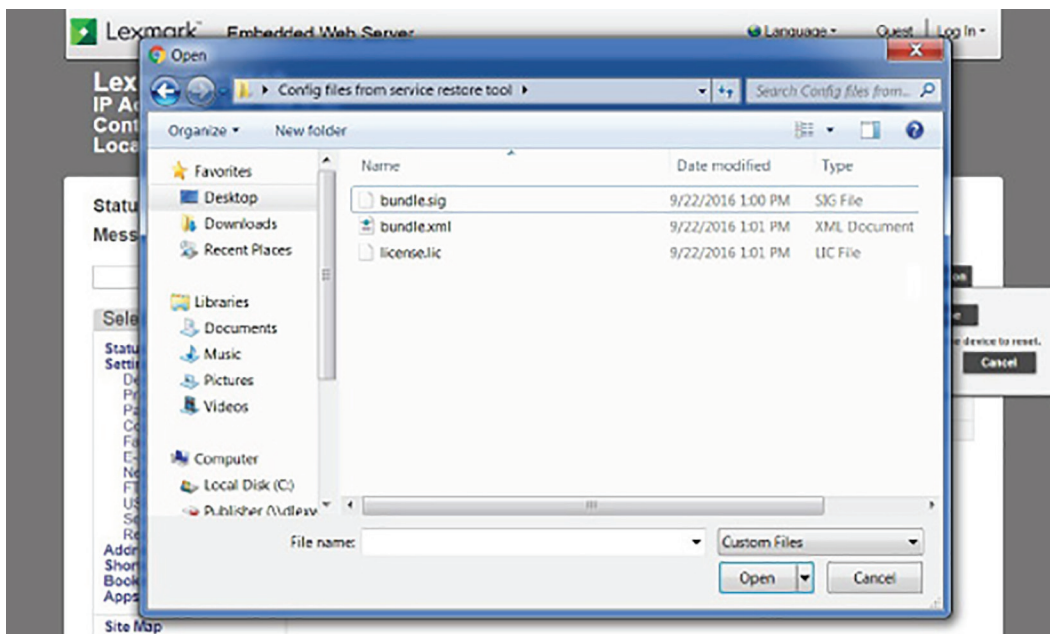
- 1 Open a web browser, and then type the printer IP address.



- 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.

## Updating the printer firmware

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

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

### Using a flash drive

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

Make sure to enable the Enable Drive and Update Code settings. You can find the settings in the Flash drive menu under the Settings menu.

- 1 Insert the flash drive into the USB port.
- 2 From the control panel, navigate to **USB Menu: Print from USB > Accept** or **OK**.
- 3 Select the file that you need to flash.

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

## Using a network computer

### Using the File Transfer Protocol (FTP)

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

- 1 Turn on the printer.
- 2 Obtain the IP address:
  - From the home screen
  - From the TCP/IP section of the Network/Ports menu
- 3 From the command prompt of a network computer, open an FTP session to the printer IP address.
- 4 Use a PUT command to place the firmware file on the printer.  
The printer performs a POR sequence and terminates the FTP session.
- 5 Repeat step 2 through step 4 for the other files.

### Using the Embedded Web Server

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

- 1 Open a web browser, and then type the printer IP address.
- 2 From the home page, navigate to **Configuration > Update Firmware**.
- 3 Select the file to use.  
The printer performs a POR sequence and terminates the FTP session.
- 4 Repeat step 2 through step 4 for the other files.

## Backing up eSF solutions and settings

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

### Exporting eSF solutions and settings file

- 1 Reset the printer into Invalid engine mode. See [“Entering Invalid engine mode” on page 203](#).
- 2 Open a web browser, and then type the printer IP address.  
**Note:** If the web page cannot be accessed or an error occurs when starting the printer into Invalid engine mode, then data backup is not an option. Inform the customer that the data cannot be saved.
- 3 Navigate to **Settings > Solutions > Embedded Solutions**.
- 4 From the Embedded Solutions page, select the applications that you want to export.
- 5 Click **Export**.  
**Note:** The size limit of the export file is 128 KB.

## Importing eSF solutions and settings file

After replacing the controller board, import back to the printer the eSF solutions and settings that were exported.

**1** Reset the printer into Invalid engine mode. See [“Entering Invalid engine mode” on page 203](#).

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

**Note:** If the web page cannot be accessed or an error occurs when starting the printer into Invalid engine mode, then data backup is not an option. Inform the customer that the data cannot be saved.

**3** Navigate to **Settings > Solutions > Embedded Solutions**.

**4** From the Embedded Solutions page, select the applications that you want to import.

**5** Click **Import**.

## Ribbon cable connectors

### Zero Insertion Force (ZIF) connectors

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

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

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

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

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

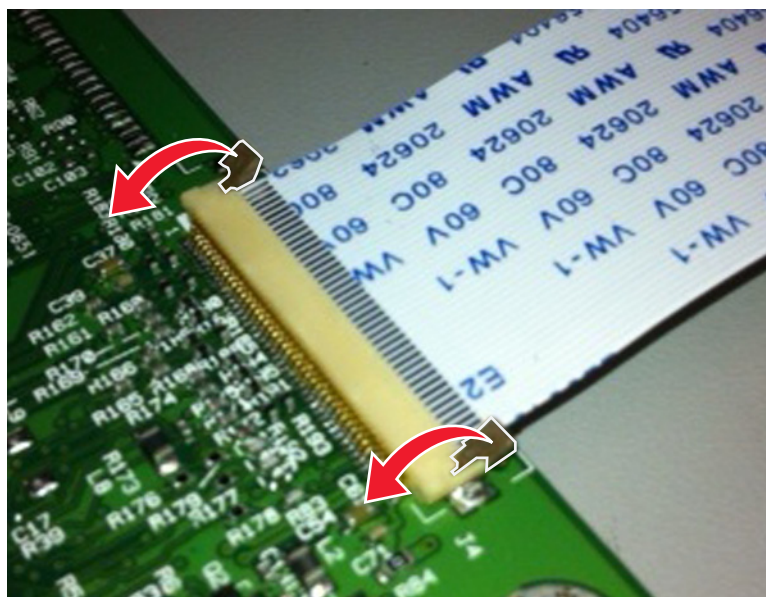
### Horizontal top contact connector

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

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

## Removing the cable

- 1 Unlock the actuator.



- 2** Remove the cable.

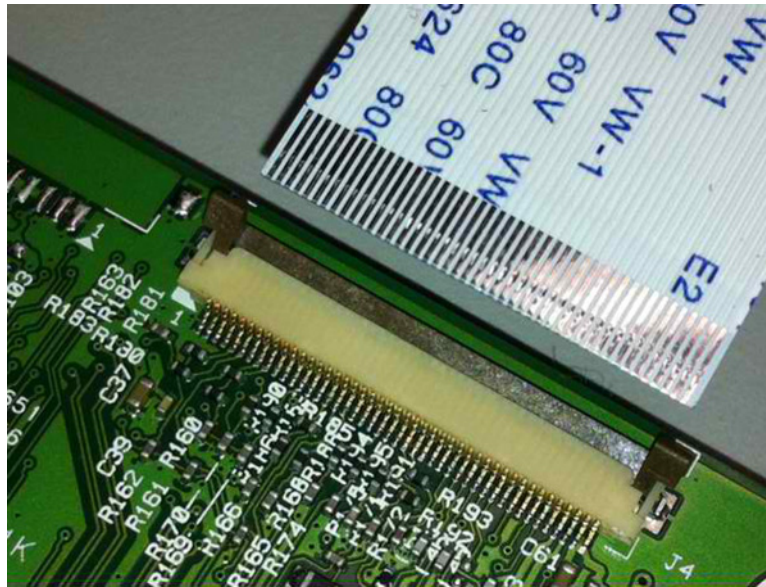
## Inserting the cable

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

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

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

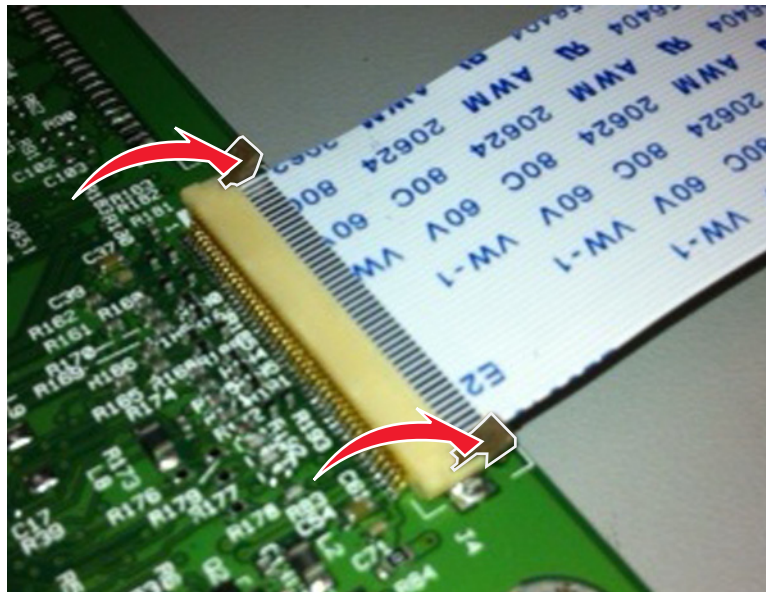




**2** Rotate the locking actuator to the locked position.

**Notes:**

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





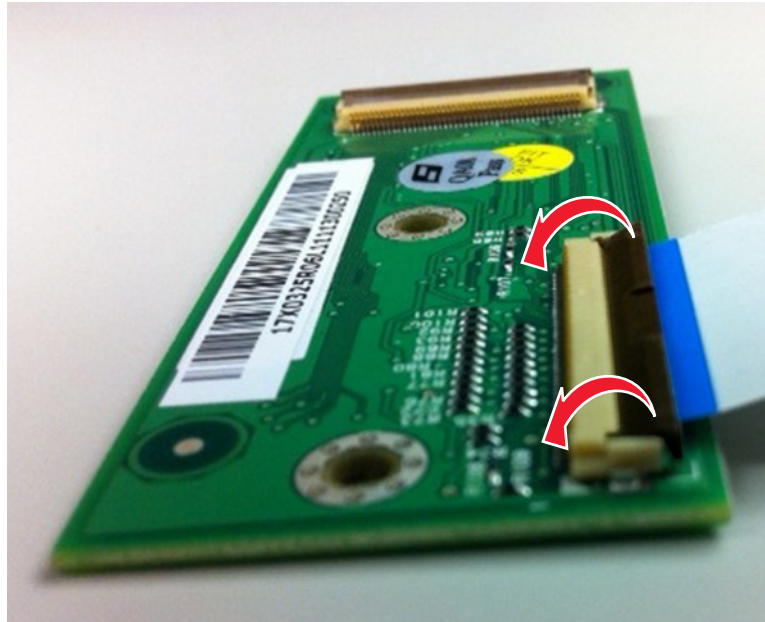
## Horizontal bottom contact connector

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

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

### Removing the cable

- 1 Unlock the actuator.



- 2 Remove the cable.

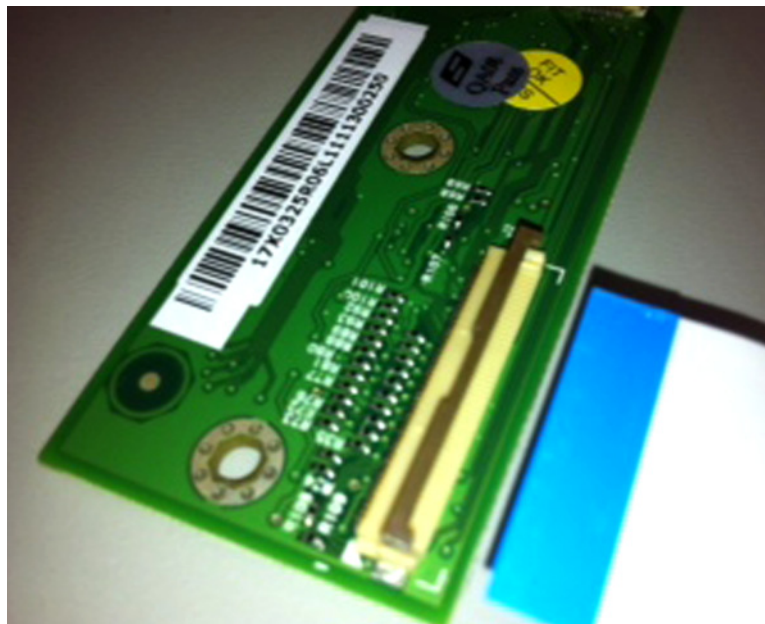
## Inserting the cable

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

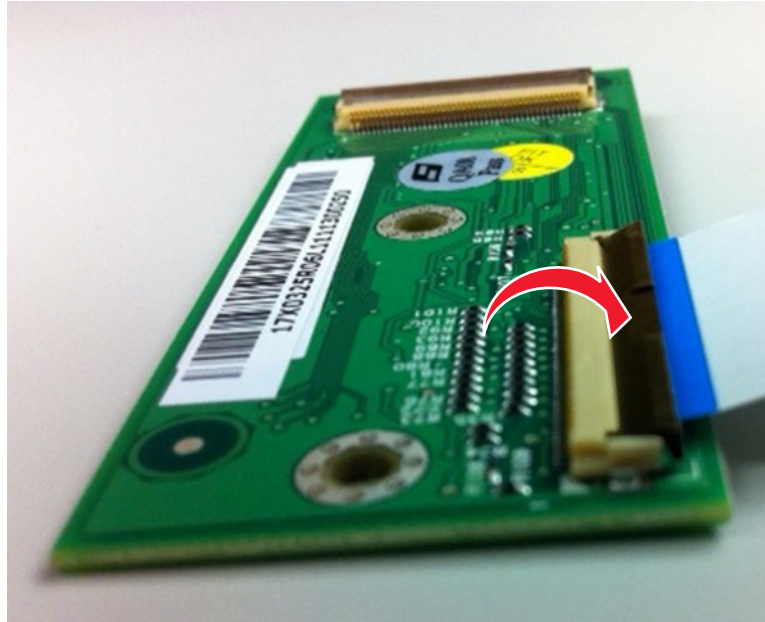


- 2 Insert the cable below the actuator with the contacts facing downward and away from the locking actuator.

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



- 3 Rotate the locking actuator to the locked position.



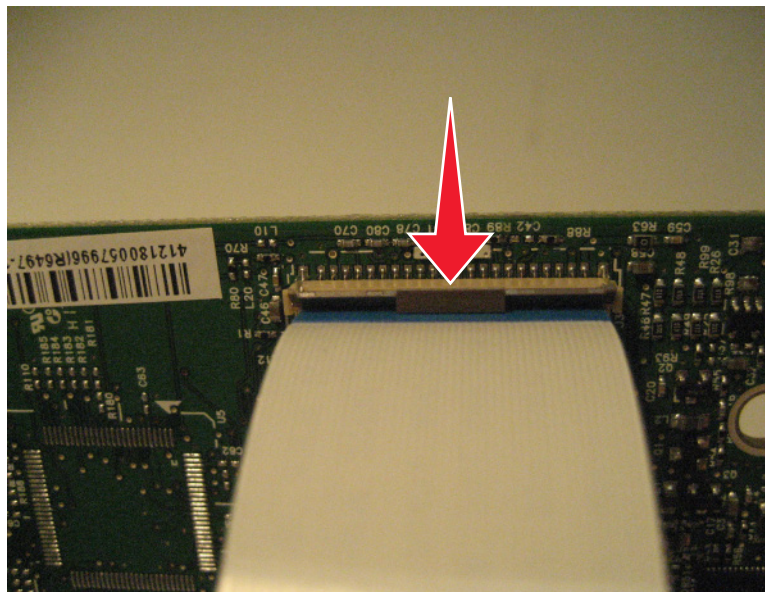
### Vertical mount contact connector

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

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

### Removing the cable

- 1 Rotate the locking actuator from the center of the actuator to the unlocked position.



- 2 Remove the cable.



## Inserting the cable

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



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

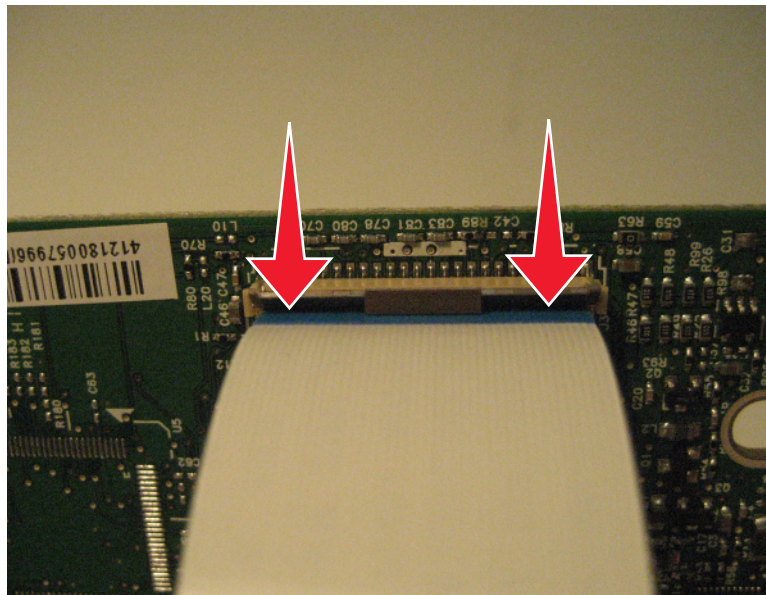
**Note:** Make sure that the cable is installed squarely into the connector to avoid intermittent failures.



- 3 Rotate the locking actuator to the locked position.

### Notes:

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



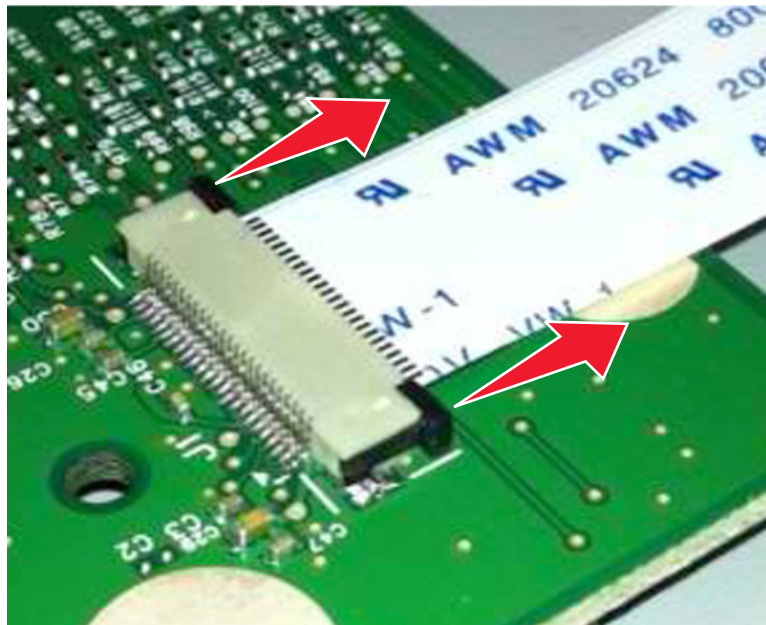
### Horizontal sliding contact connector

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

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

### Removing the cable

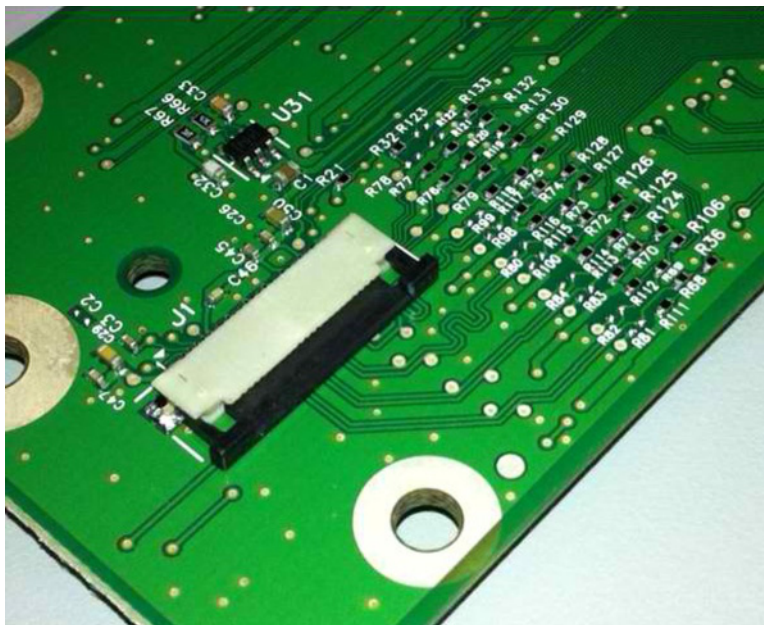
- 1 Slide the tabs away from the connector.



- 2 Remove the cable.

## Inserting the cable

- 1 Make sure that the locking actuator is in the open position. If you are opening the connector, then pull back the end tabs using equal force to avoid breaking the connector.



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

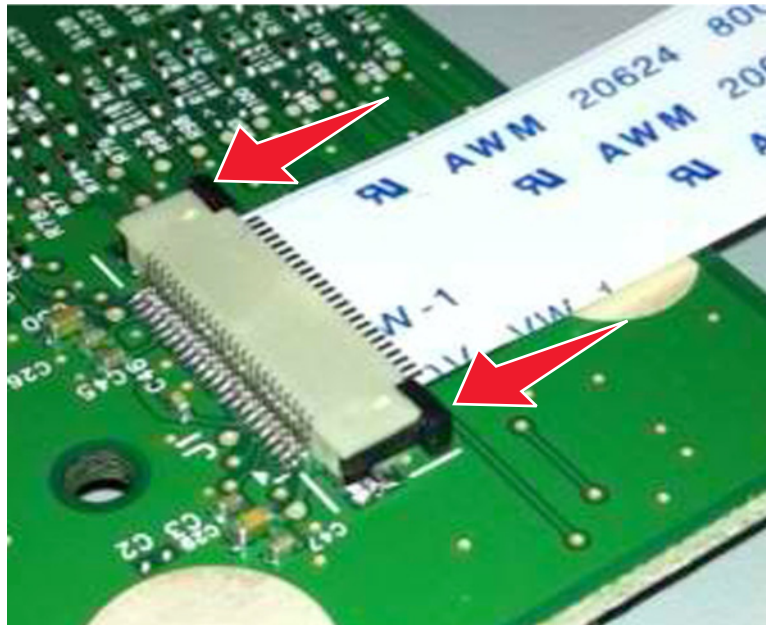


- 3 Slide the locking actuator toward the connector to lock the cable.

### Notes:

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



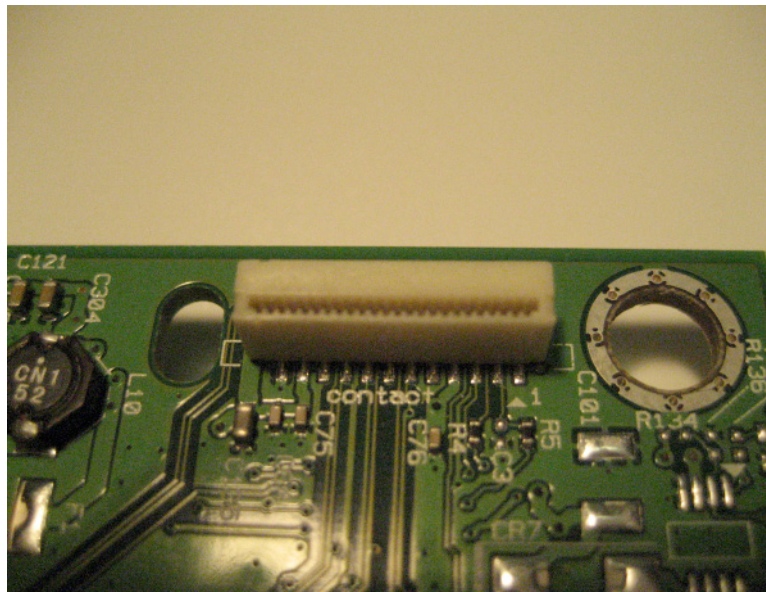


### Low insertion force (LIF) connector

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

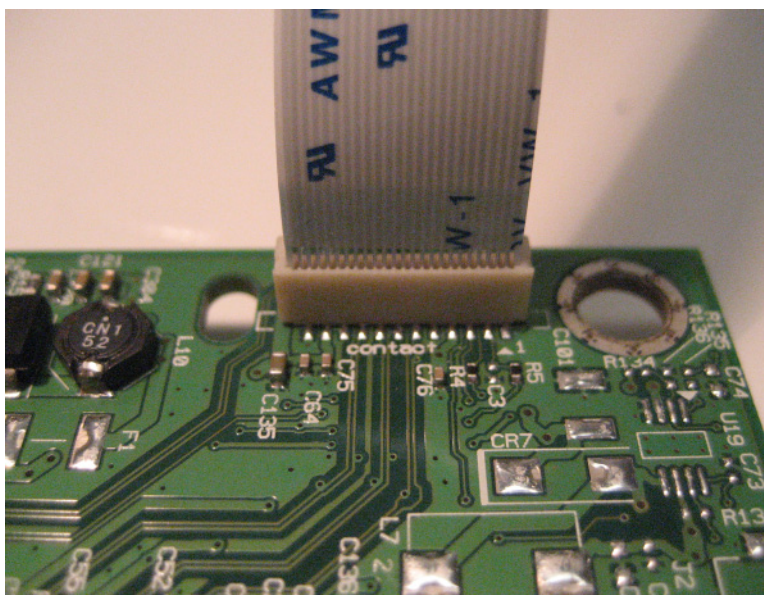
#### Inserting the cable

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



- 2 Insert the cable.

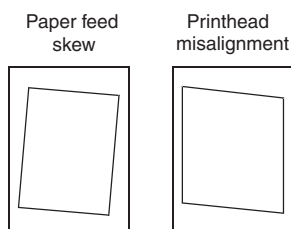
**Note:** Make sure that the cable is installed straight into the connector to avoid intermittent failures.



## 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.

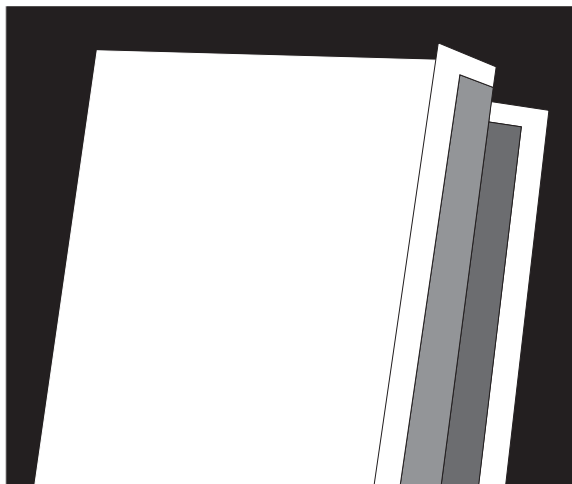


To adjust the printhead:

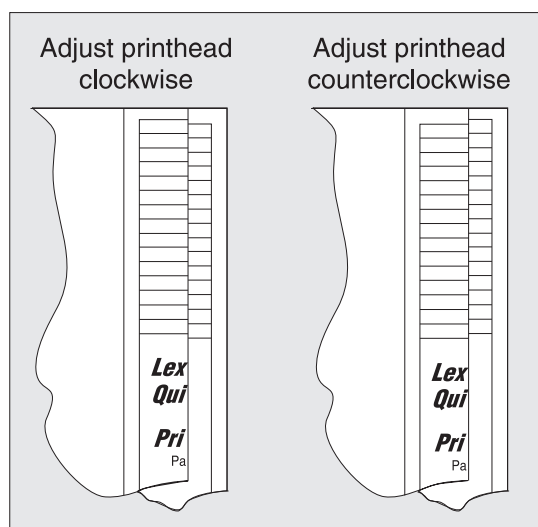
- 1 Perform a POR.
- 2 Enter the Diagnostics menu, and then print a Quick test page:  
**Diagnostics Menu > Print Tests > Tray 1 > Single**
- 3 Fold the printed test page on the left side so that a few millimeters of grid lines wrap around the outside of the fold.



- 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 198](#).

# 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.

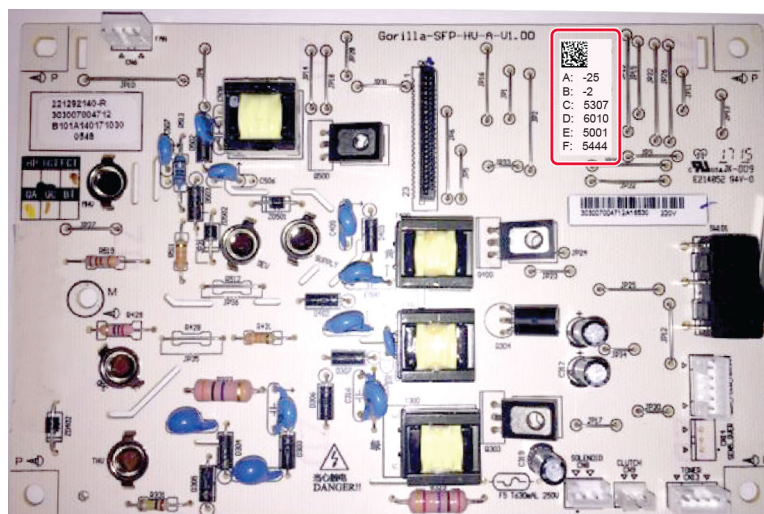
**Note:** You can get printed copies of the form from your Lexmark partner manager.

- 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.

## 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

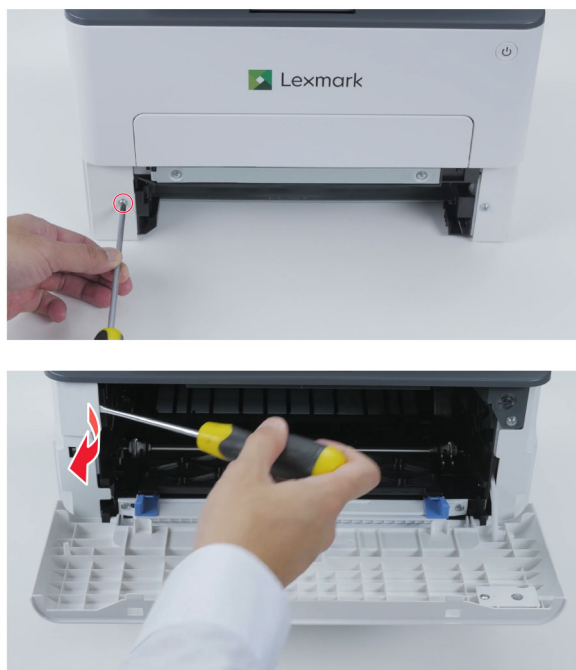
Keep the following tips in mind as you replace parts:

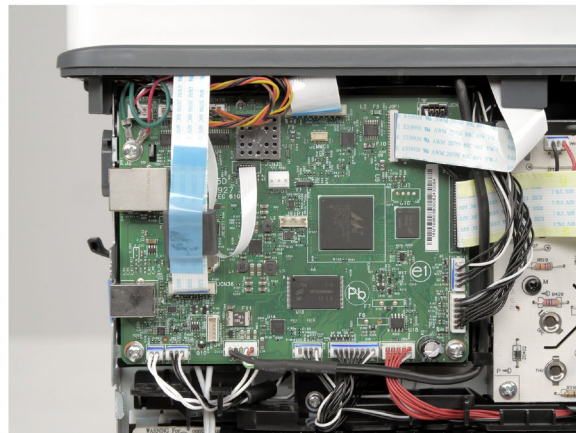
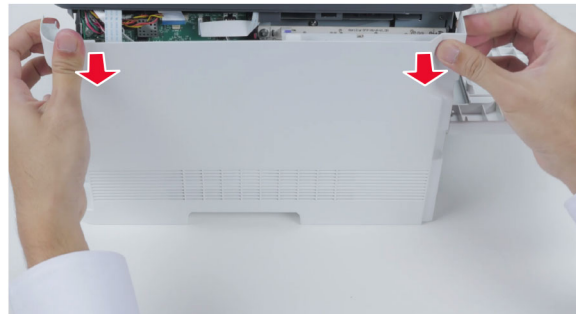
- Some removal procedures require removing cable ties. You must replace cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.
- Remove the toner cartridges, imaging kit, and trays before removing other printer parts. The imaging kit must 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 [“Rear door removal” on page 250](#).
- 4 Remove the bottom rear door. See [“Bottom rear door removal” on page 251](#).
- 5 Remove the left cover.

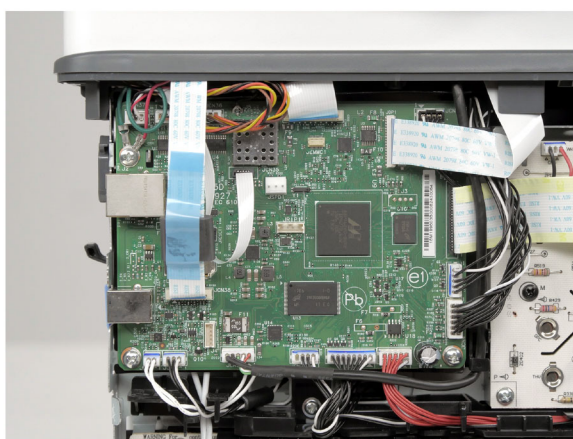




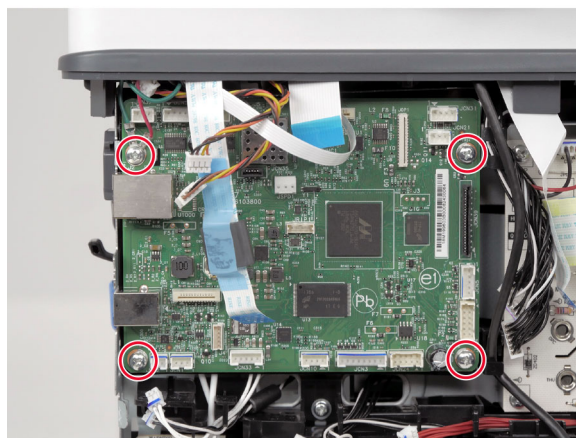
## Controller board removal

**Warning—Potential Damage:** Do not replace or remove the control panel when replacing or removing the controller board. See [“Critical information for controller board or control panel replacement \(for MB2236adwe only\)” on page 211.](#)

- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 4 Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)
- 5 Remove the left cover. See [“Left cover removal” on page 232.](#)
- 6 Disconnect all cables.

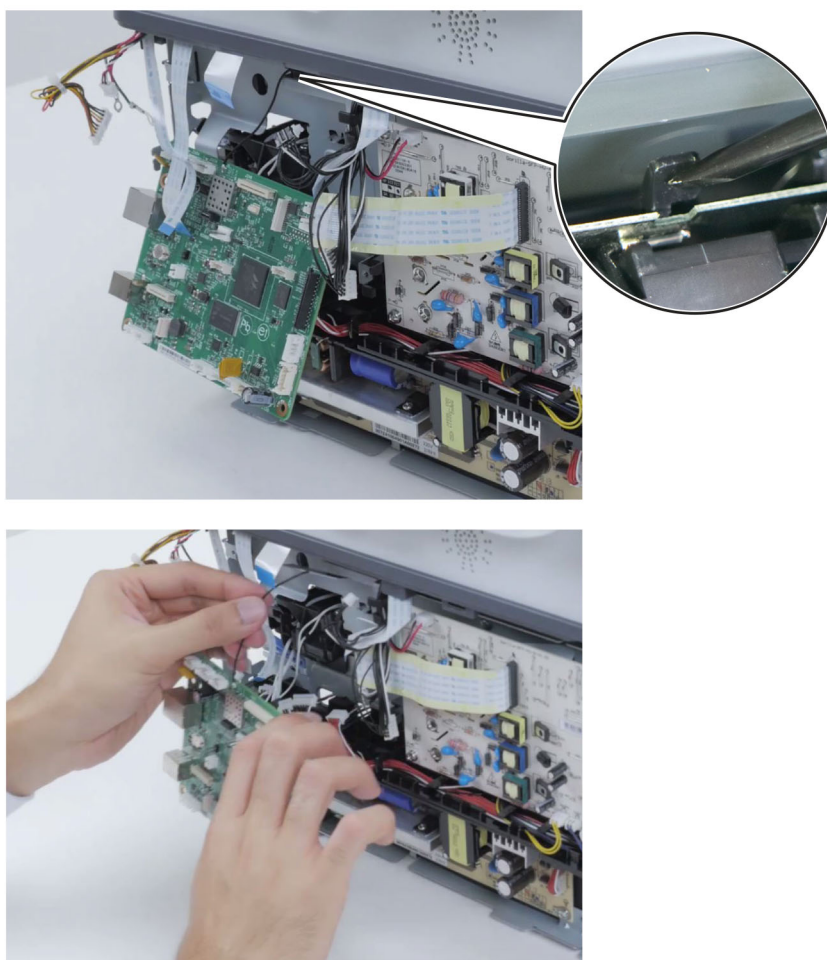


- 7 Remove the controller board.





## 8 Remove the Wi-Fi antenna.



### Installation notes:

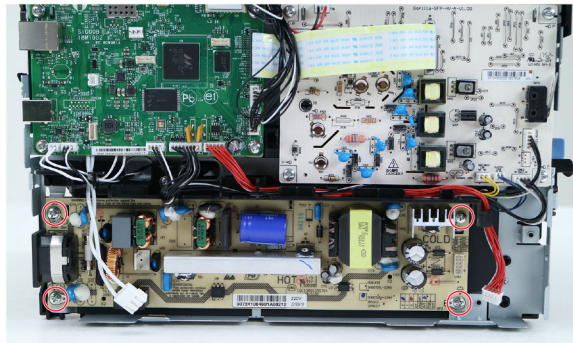
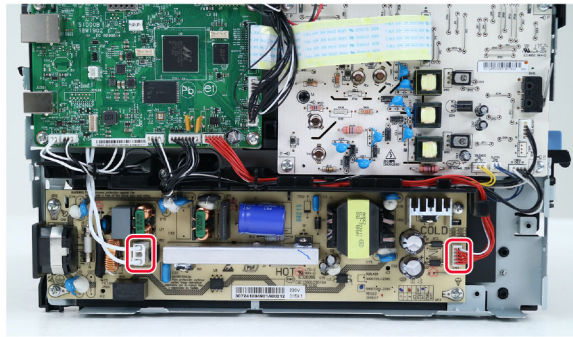
- a** Make sure to perform a POR twice after replacing the controller board.
- b** Restore the printer configuration after replacing the controller board. See [“Restoring the printer configuration after replacing the controller board” on page 212](#).

**Note:** For a video demonstration, see [Controller board removal](#) at [infoserve.lexmark.com/ids/sma](http://infoserve.lexmark.com/ids/sma).

## LVPS removal

- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the rear door. See [“Rear door removal” on page 250](#).
- 4 Remove the bottom rear door. See [“Bottom rear door removal” on page 251](#).
- 5 Remove the left cover. See [“Left cover removal” on page 232](#).

## 6 Remove the LVPS.



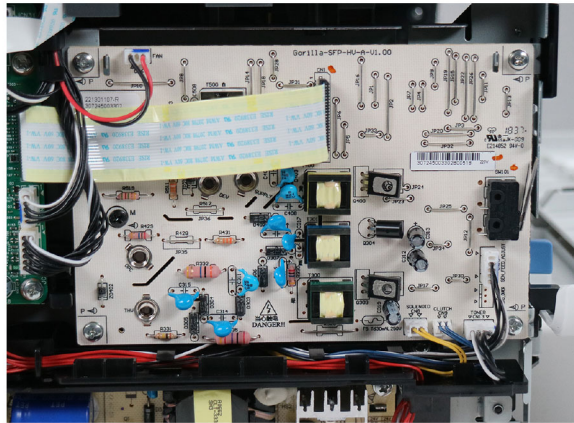
## HVPS removal

**Note:** Make sure to perform the HVPS characterization when replacing the HVPS. See [“Performing the HVPS characterization” on page 231](#).

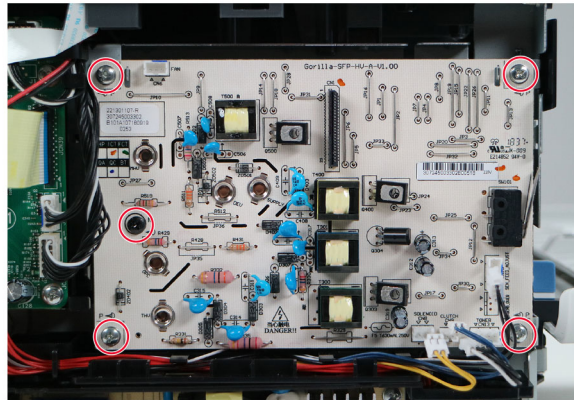
- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the rear door. See [“Rear door removal” on page 250](#).
- 4 Remove the bottom rear door. See [“Bottom rear door removal” on page 251](#).
- 5 Remove the left cover. See [“Left cover removal” on page 232](#).



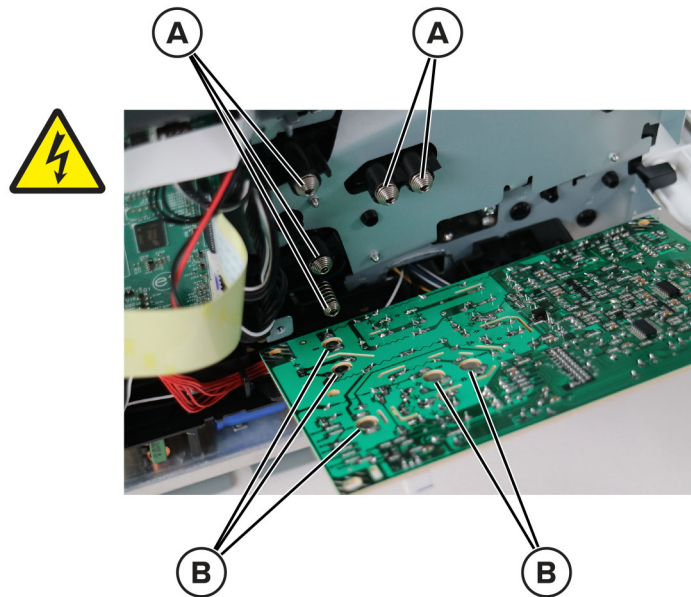
6 Disconnect all the cables.



7 Remove the HVPS.



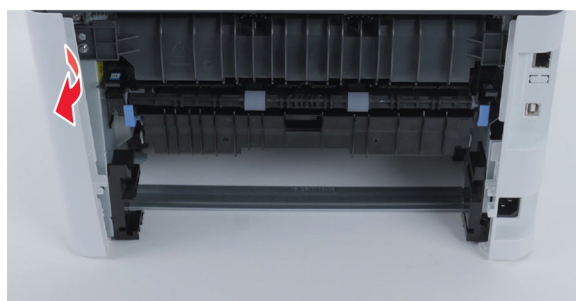
**Installation note:** Make sure that the spring contacts on the printer (A) are properly aligned with the contacts on the HVPS (B).



## Right side removals

### Right cover removal

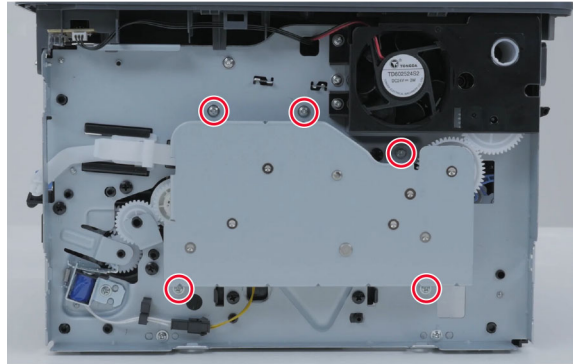
- 1 Remove the tray insert.
- 2 Remove the duplex unit.

**3** Remove the right cover.**Main drive removal**

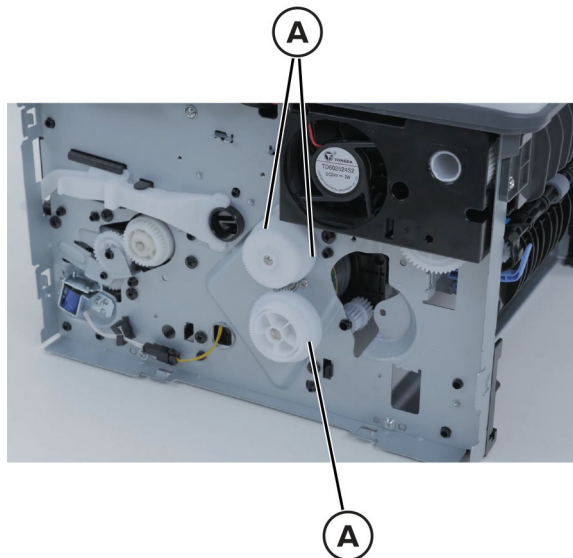
- 1** Remove the tray insert.
- 2** Remove the duplex unit.

Parts removal

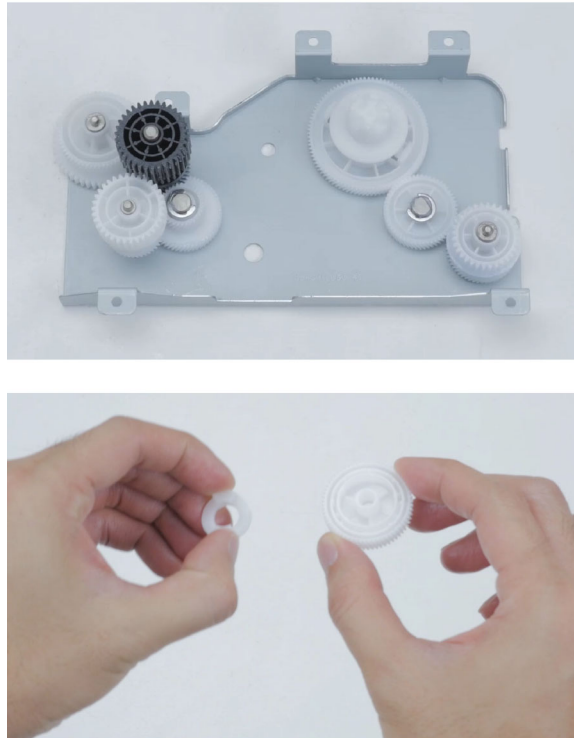
- 3 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 4 Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)
- 5 Remove the right cover. See [“Right cover removal” on page 238.](#)
- 6 Remove the main drive.



- 7 Remove the three gears (A).



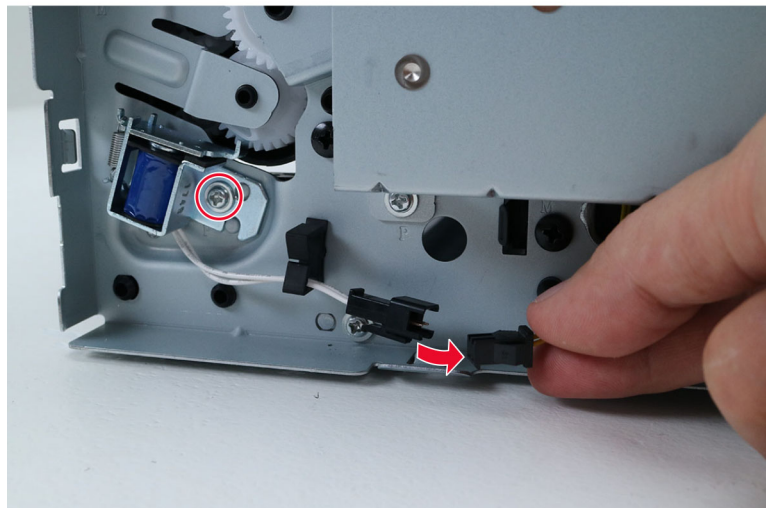
**Installation note:** Pay attention on how the gears are installed on the main drive and on the printer. Some gears may have a coupler within them. For more information, see the *Main drive removal* video.



**Note:** For a video demonstration, see [Main drive removal](#) at [infoserve.lexmark.com/ids/sma](http://infoserve.lexmark.com/ids/sma).

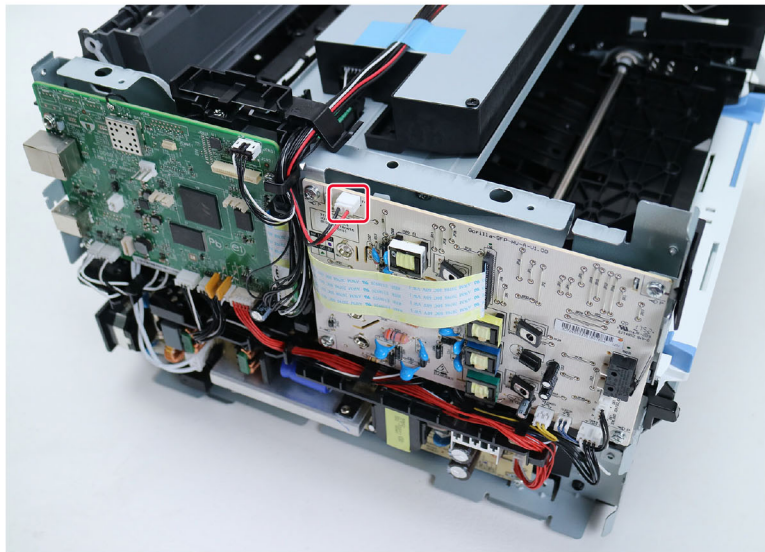
## Pick solenoid removal

- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the right cover. See [“Right cover removal” on page 238](#).
- 4 Remove the pick solenoid.



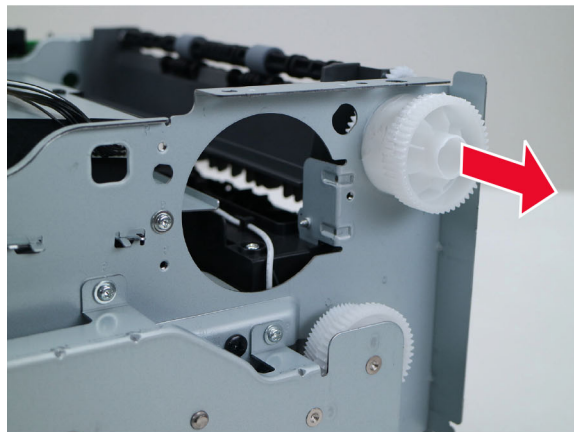
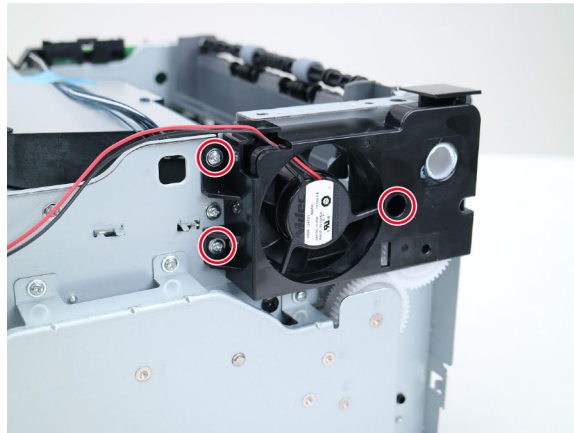
## Fan assembly removal

- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 4 Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)
- 5 Remove the left cover. See [“Left cover removal” on page 232.](#)
- 6 Remove the right cover. See [“Right cover removal” on page 238.](#)
- 7 Remove the top cover. See [“Top cover removal” on page 255.](#)
- 8 Disconnect the cable, and then remove it from the frame.





- 9 Remove the fan, and then remove the gear.



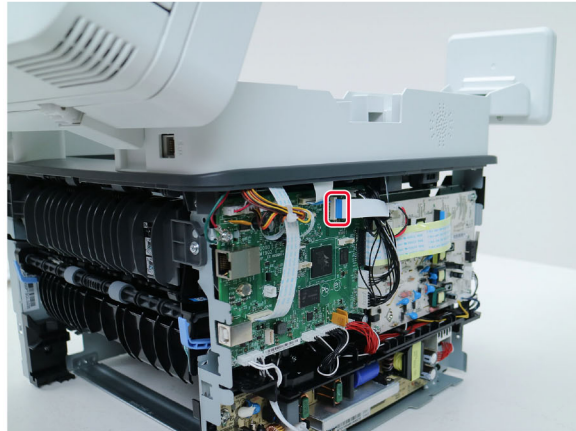
**Installation note:** Before installing the gear, make sure that it is properly greased.

## Front removals

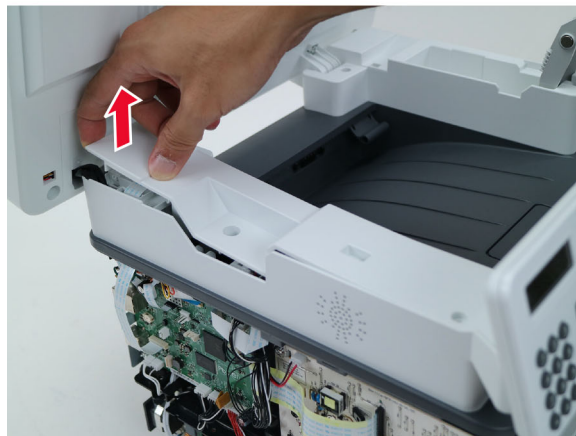
### 2-line control panel removal

- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 4 Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)
- 5 Remove the left cover. See [“Left cover removal” on page 232.](#)
- 6 Remove the right cover. See [“Right cover removal” on page 238.](#)

**7** Disconnect the cable, and then detach the ADF link.



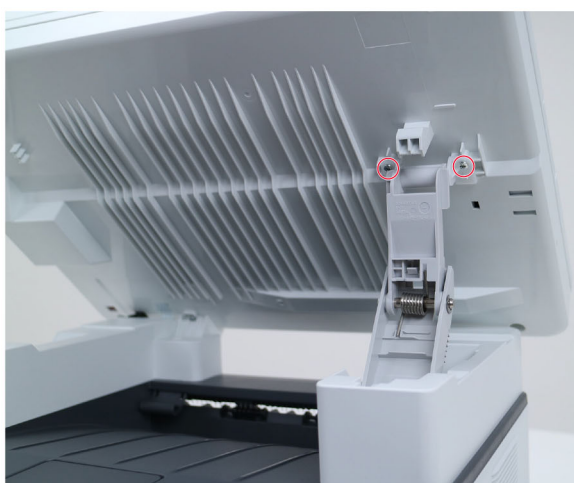
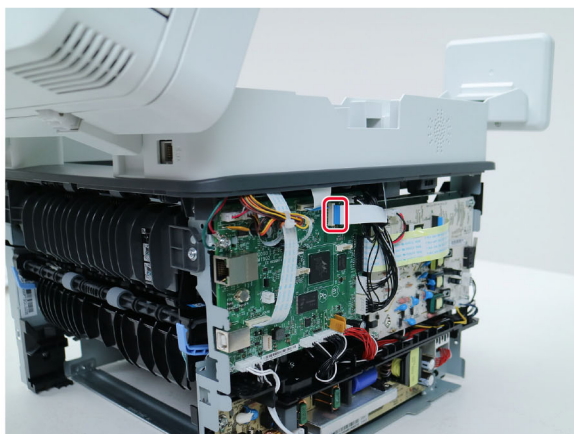


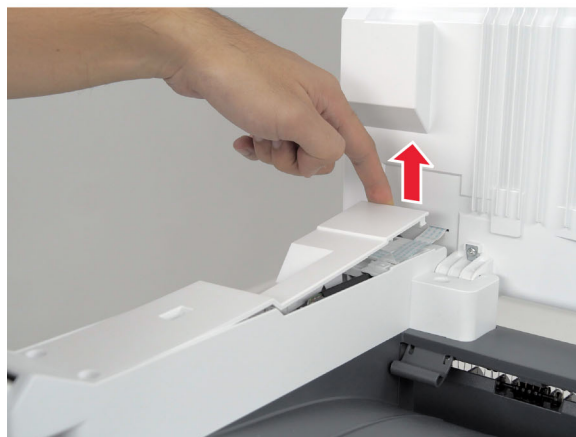
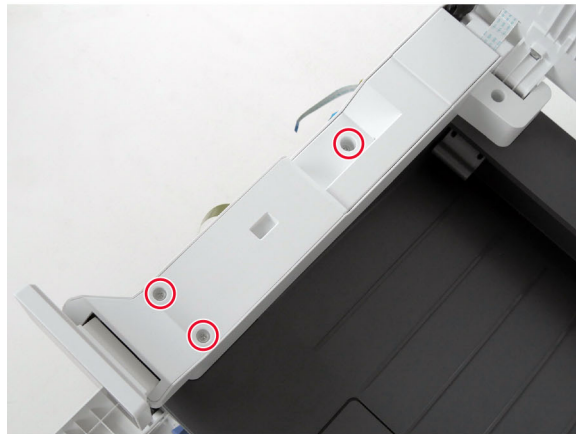
**8** Remove the control panel.

## 2.8-in. control panel removal

**Warning—Potential Damage:** Do not replace or remove the controller board when replacing or removing the control panel. See [“Critical information for controller board or control panel replacement \(for MB2236adwe only\)” on page 211.](#)

- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 4 Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)
- 5 Remove the left cover. See [“Left cover removal” on page 232.](#)
- 6 Remove the right cover. See [“Right cover removal” on page 238.](#)
- 7 Disconnect the cable, and then detach the ADF link.



**8** Remove the control panel.

## 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 notes:

- 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

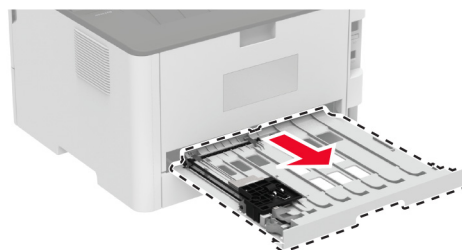
### Rear door removal

- 1 Remove the duplex unit.
- 2 Detach the upper rear latch of the right cover to remove the rear door.



### Duplex unit removal

- 1 Remove the duplex unit.





## Bottom rear door removal

- 1 Remove the duplex unit.
- 2 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 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 232.](#)
- 4 Remove the right cover. See [“Right cover removal” on page 238.](#)
- 5 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 6 Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)

- 7 Remove the redrive.

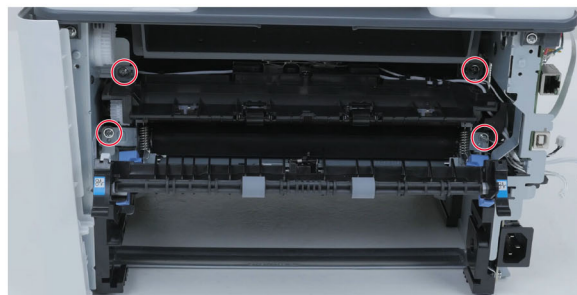
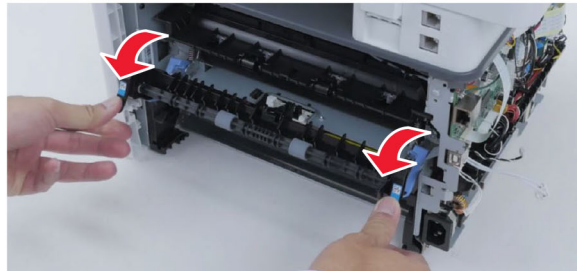
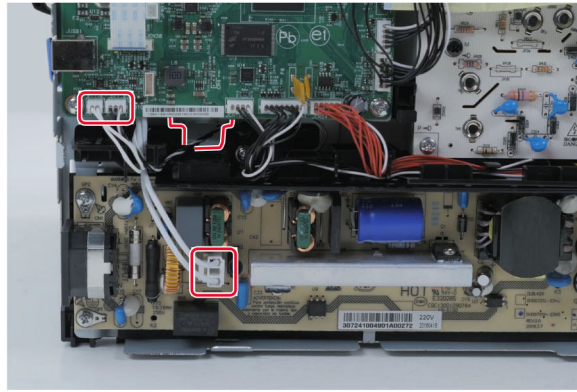


## Fuser removal

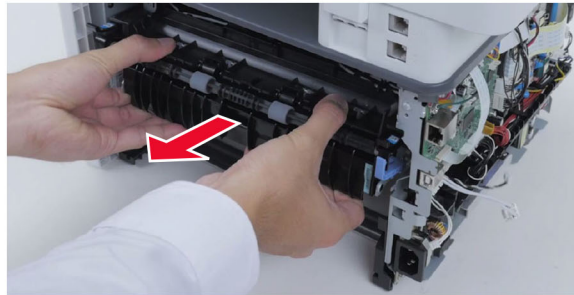
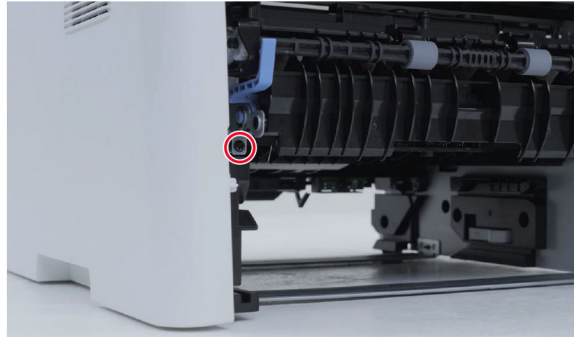
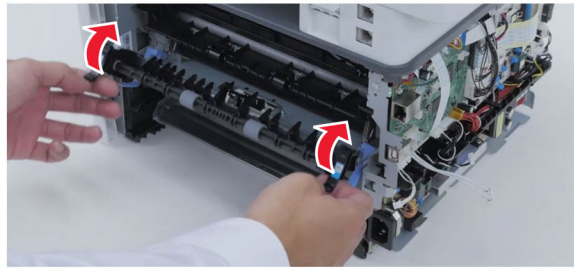
- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the front door. See [“Front door removal” on page 248](#).
- 4 Remove the rear door. See [“Rear door removal” on page 250](#).
- 5 Remove the bottom rear door. See [“Bottom rear door removal” on page 251](#).
- 6 Remove the left cover. See [“Left cover removal” on page 232](#).
- 7 Remove the redrive. See [“Redrive removal” on page 251](#).
- 8 Remove the fuser.

**Installation note:** Pay attention to the cable routing.





Parts removal

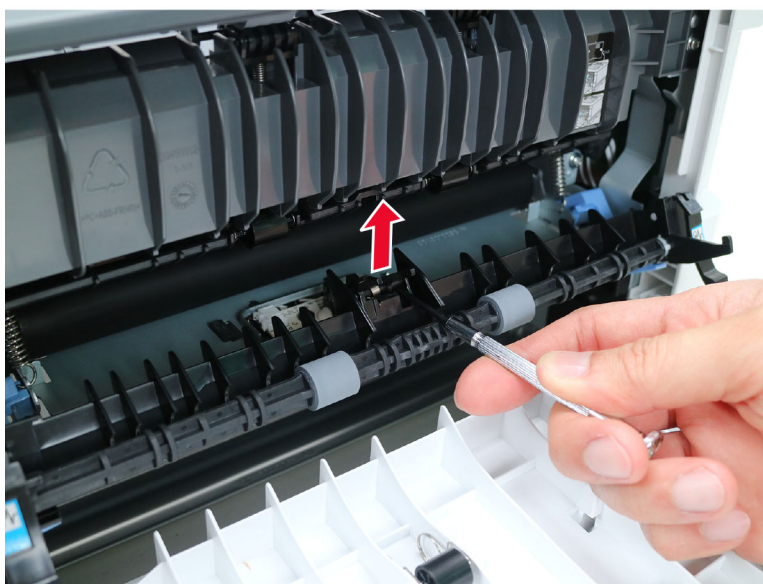


**Note:** For a video demonstration, see [Fuser removal](https://infocenter.lexmark.com/ids/sma) at [infocenter.lexmark.com/ids/sma](https://infocenter.lexmark.com/ids/sma).

## Fuser exit flag removal

- 1 Remove the rear door. See [“Rear door removal” on page 250](#).
- 2 Open the fuser door.

- 3 Remove the fuser exit flag.



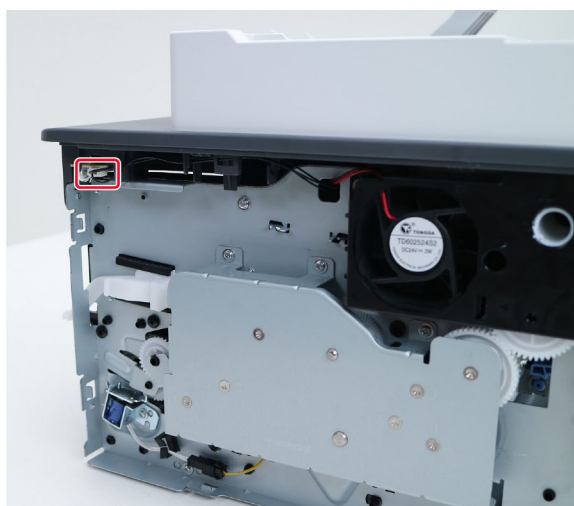
## Top removals

### Top cover removal

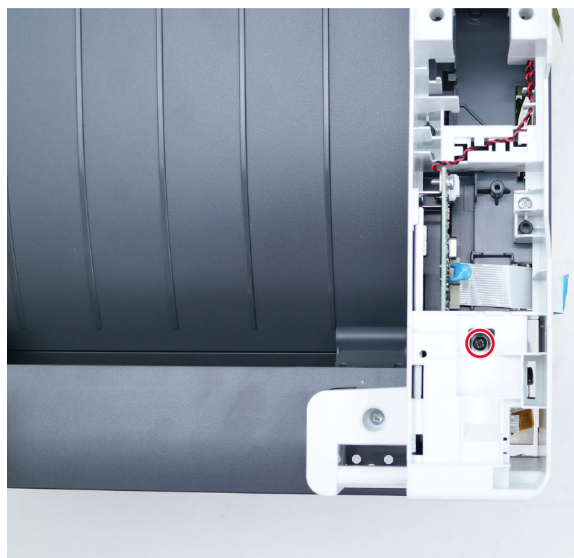
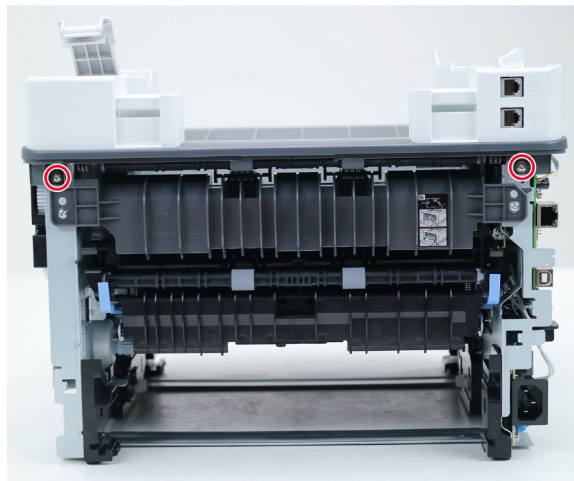
#### MB2236adw top cover removal

- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the front door. See [“Front door removal” on page 248.](#)
- 4 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 5 Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)
- 6 Remove the left cover. See [“Left cover removal” on page 232.](#)
- 7 Remove the right cover. See [“Right cover removal” on page 238.](#)
- 8 Remove the ADF scanner and flatbed scanner. See [“ADF scanner and flatbed scanner removal” on page 273.](#)
- 9 Remove the control panel. See [“2-line control panel removal” on page 243.](#)

- 10** Disconnect the cable from the left and right sides of the printer.



**Note:** Make sure to release the right side cable from the frame.

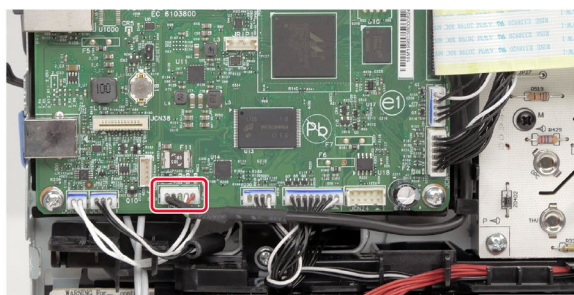
**11** Remove the top cover.

**MB2236adwe top cover removal**

- 1** Remove the tray insert.
- 2** Remove the duplex unit.
- 3** Remove the front door. See [“Front door removal” on page 248.](#)
- 4** Remove the rear door. See [“Rear door removal” on page 250.](#)
- 5** Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)
- 6** Remove the left cover. See [“Left cover removal” on page 232.](#)
- 7** Remove the right cover. See [“Right cover removal” on page 238.](#)
- 8** Remove the ADF scanner and flatbed scanner. See [“ADF scanner and flatbed scanner removal” on page 273.](#)
- 9** Remove the control panel. See [“2.8-in. control panel removal” on page 246.](#)

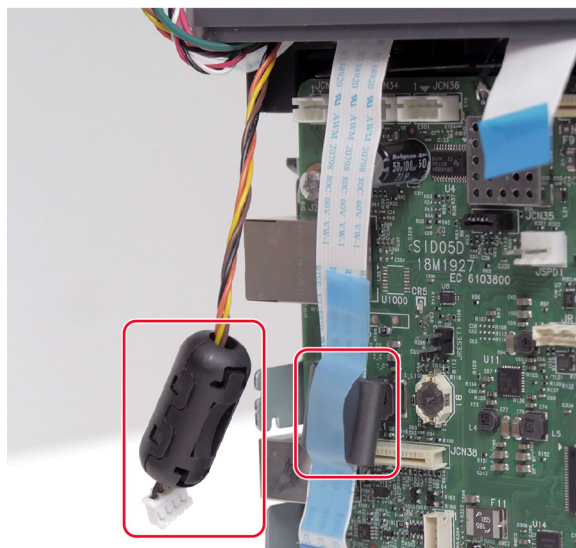


- 10 Disconnect the cable from the left and right sides of the printer.

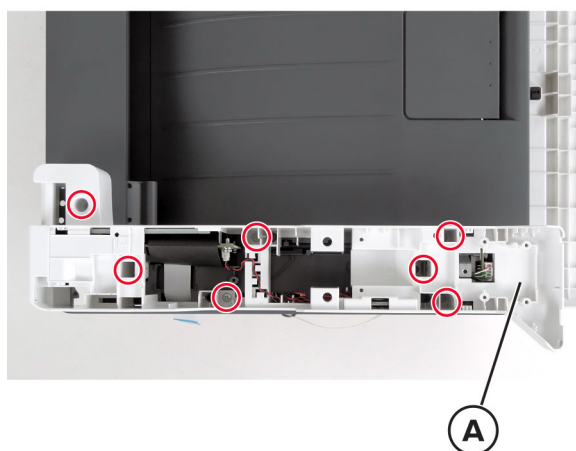


**Note:** Make sure to release the right side cable from the frame.

- 11** Disconnect the cable, and then remove the toroids.

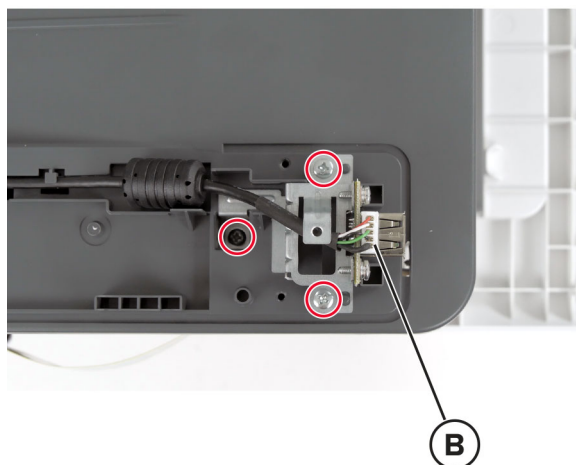


- 12** Remove the screws, and then remove the fax card holder (A).





- 13** Remove the screws, and then remove the USB cable (B) from the guides.



- 14** Remove the top cover.



**Installation note:** Remove the USB port cover.



## Printhead removal

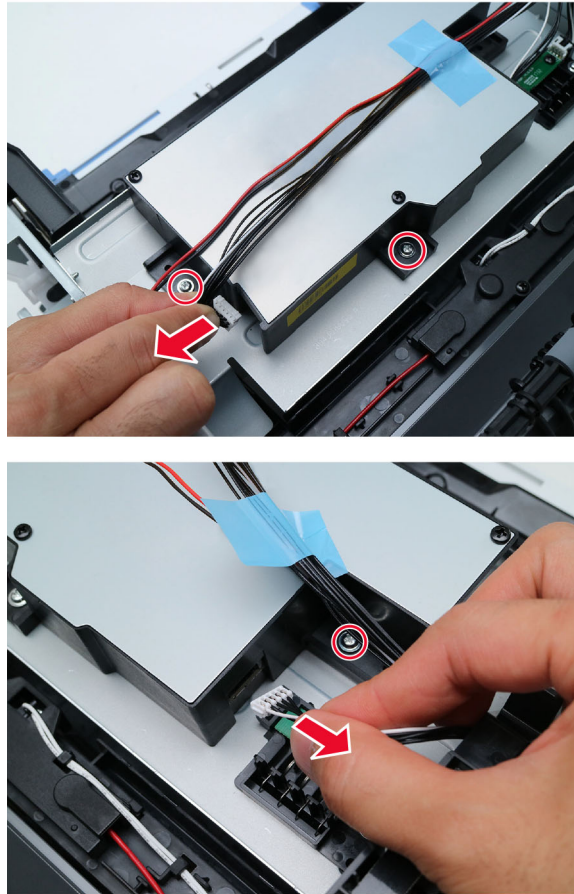
- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the left cover. See [“Left cover removal” on page 232.](#)
- 4 Remove the right cover. See [“Right cover removal” on page 238.](#)
- 5 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 6 Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)
- 7 Remove the top cover. See [“Top cover removal” on page 255.](#)
- 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.



## Bottom removals

### Sensor (fuser exit) removal

- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 4 Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)

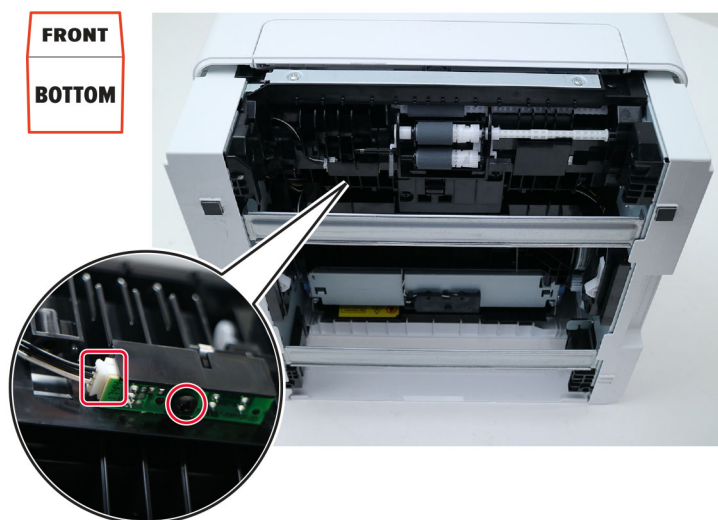
- 5** Place the printer on its front, and then remove the sensor.



## Sensor (paper present) removal

- 1** Remove the tray insert.
- 2** Remove the duplex unit.

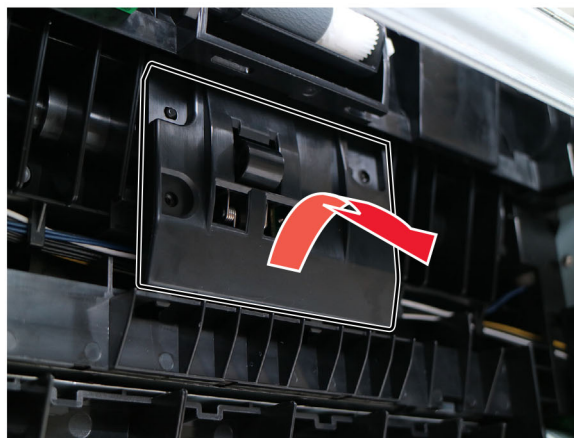
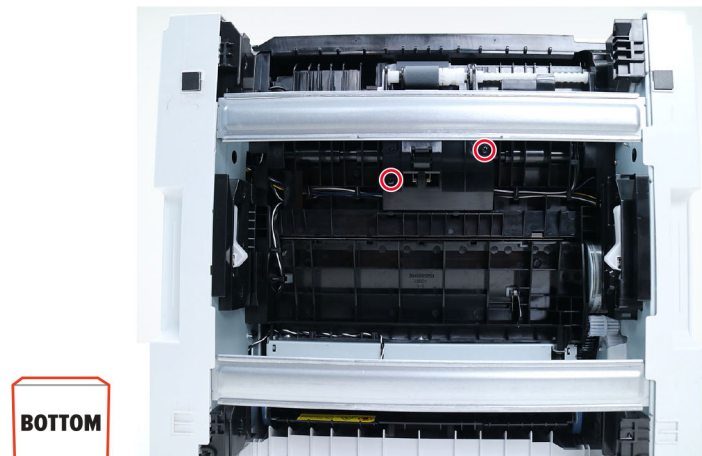
- 3** Place the printer on its rear, and then remove the sensor.



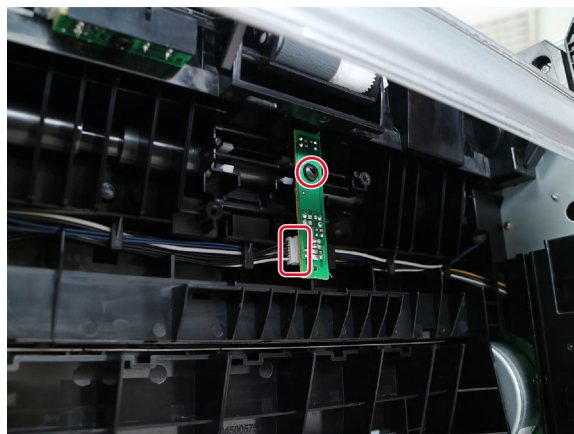
## Sensor (input) removal

- 1** Remove the tray insert.
- 2** Remove the duplex unit.

- 3 Place the printer on its rear, and then remove the sensor cover.



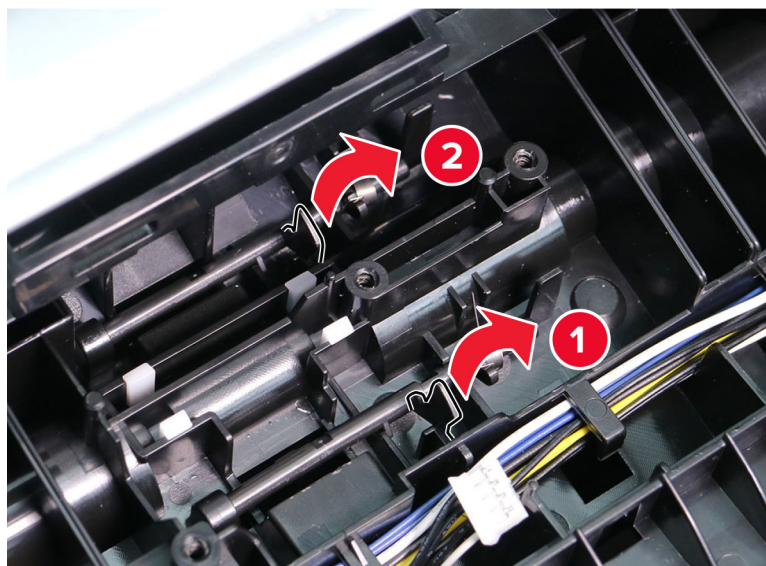
- 4 Remove the sensor.



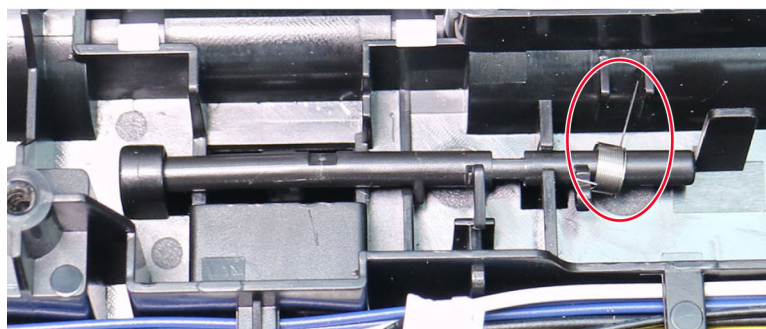


## Input sensor flags removal

- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the sensor (input). See [“Sensor \(input\) removal” on page 265](#).
- 4 Remove the two sensor flags.

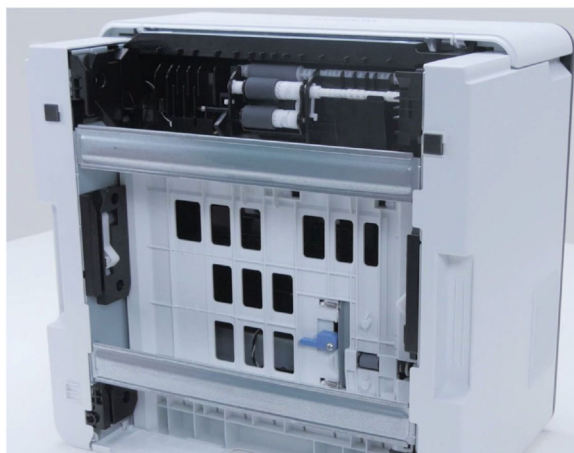


**Installation note:** Pay attention to the position of the spring on each flag.



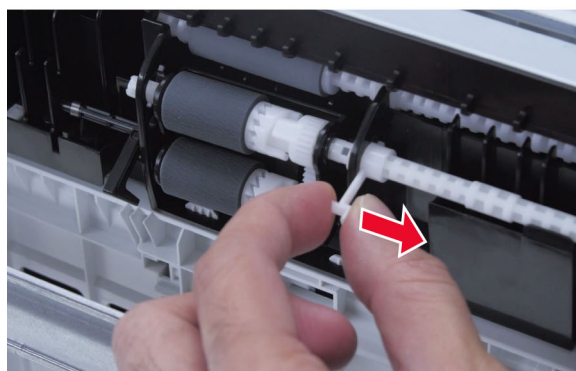
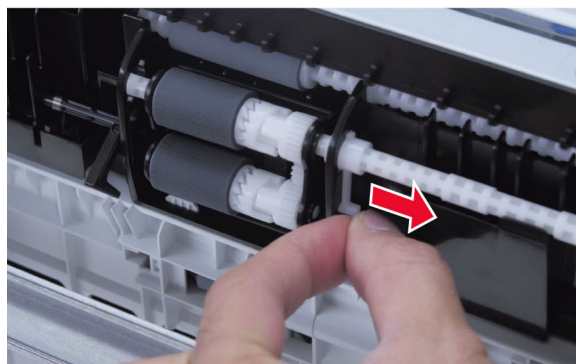
## Pick rollers removal

- 1 Remove the tray insert.
- 2 Place the printer on its rear.

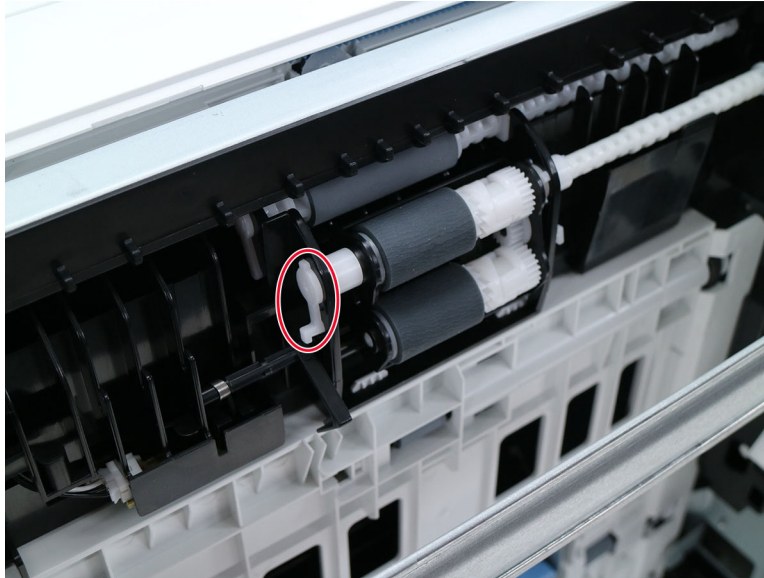




- 3 Remove the left and right pick roller retainers.



**Note:** Perform the same procedure to remove the left pick roller retainer.



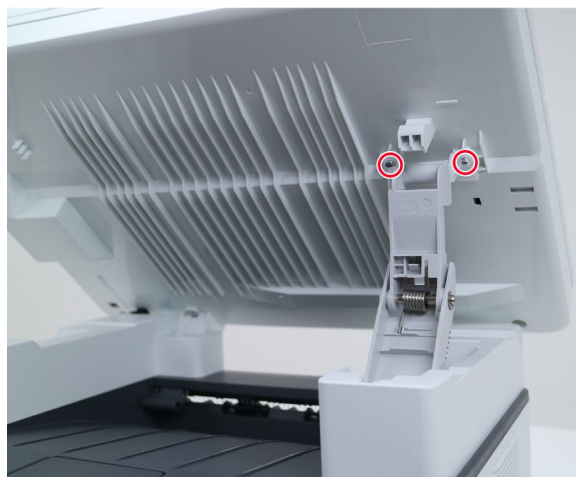
**4** Remove the two pick rollers.

**Note:** For a video demonstration, see [Pick roller removal](https://infoserve.lexmark.com/ids/sma) at [infoserve.lexmark.com/ids/sma](https://infoserve.lexmark.com/ids/sma).

## ADF and scanner

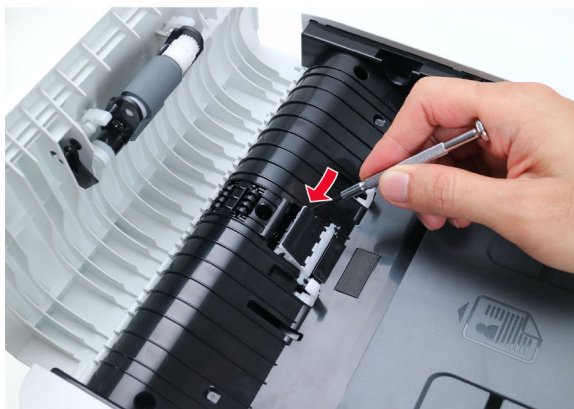
### Scanner stand removal

- 1 Raise the ADF and scanner assembly.
- 2 Remove the scanner stand.



## ADF pick assembly removal

- 1 Open the ADF cover.
- 2 Remove the separator pad.



### Notes:

- Pay attention to the position of the spring under the pad.
- Do not lose the spring.

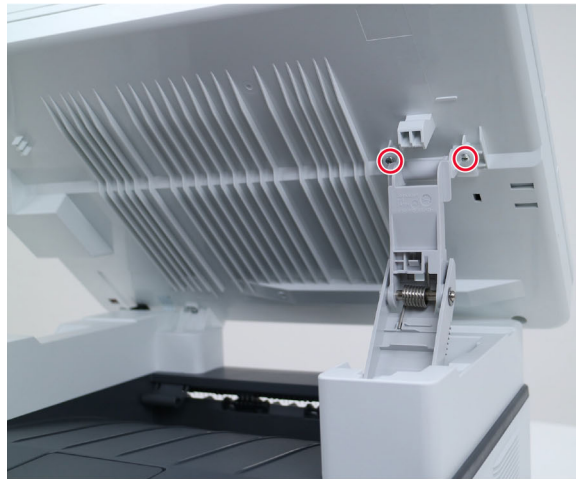
- 3 Remove the ADF pick assembly.



## ADF scanner and flatbed scanner removal

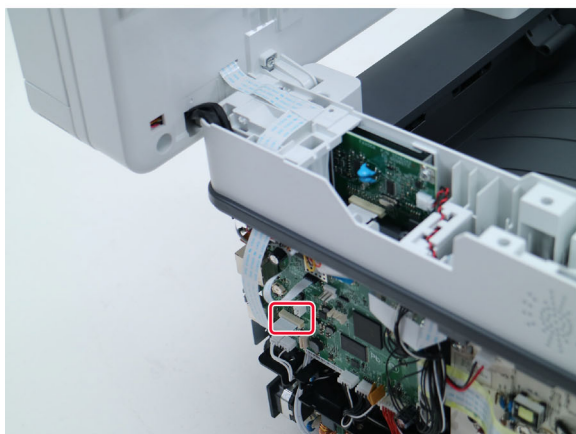
- 1 Remove the tray insert.
- 2 Remove the duplex unit.
- 3 Remove the rear door. See [“Rear door removal” on page 250.](#)
- 4 Remove the bottom rear door. See [“Bottom rear door removal” on page 251.](#)
- 5 Remove the left cover. See [“Left cover removal” on page 232.](#)

- 6** Detach the scanner stand, and then remove the fax card cover.

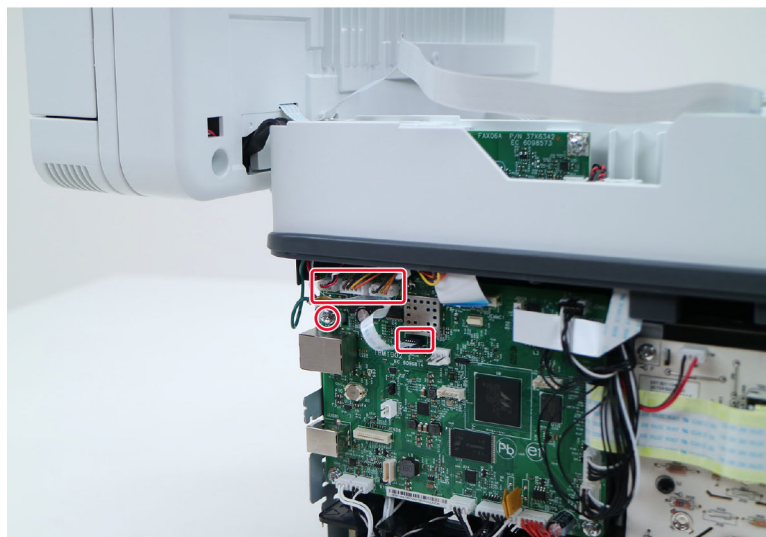




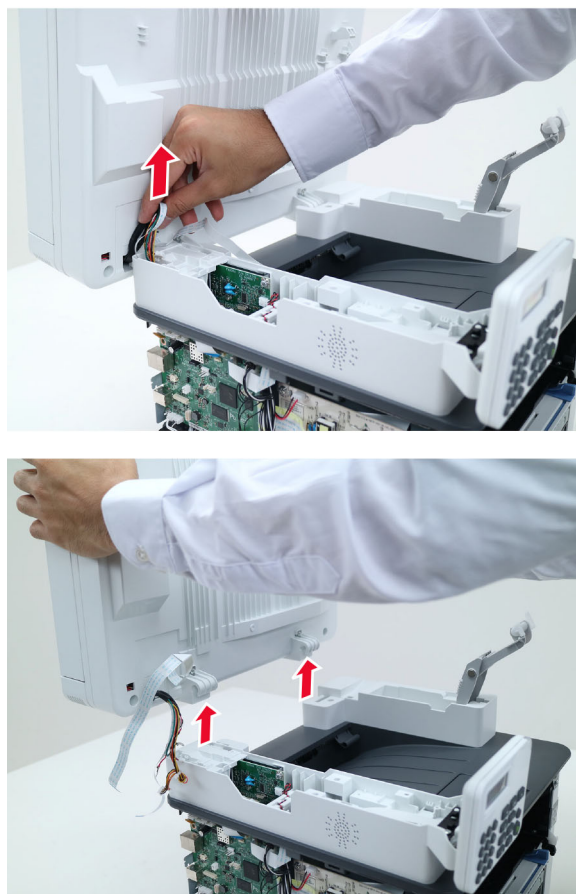
- 7** Disconnect the FFC cable, and then remove it from the frame.



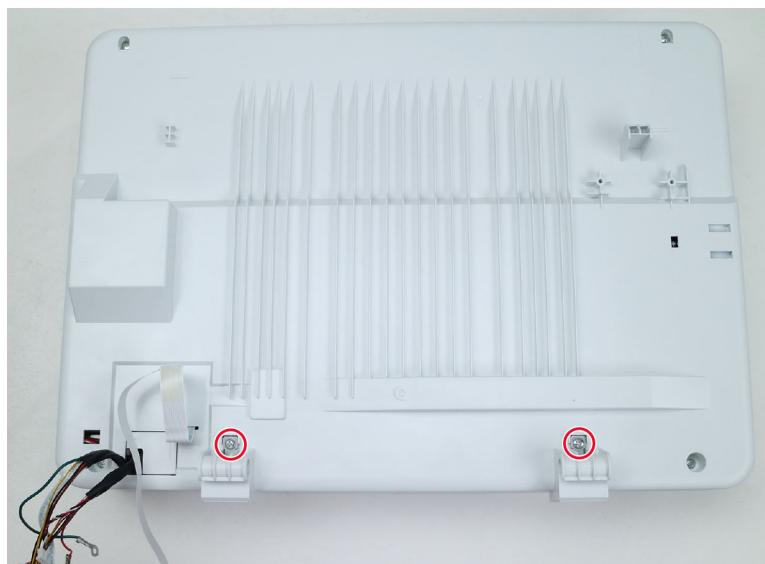
- 8** Disconnect the four cables, and then remove the screw securing the two ground cables.



- 9 Remove the ADF cables from the printer, and then remove the ADF scanner and flatbed scanner.

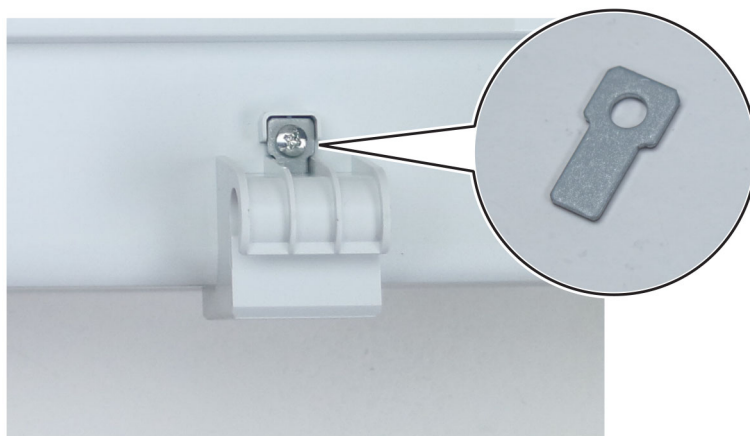


- 10 Detach the ADF scanner from the flatbed scanner.



**Note:** Do not lose the two brackets.





**11** Remove the ADF scanner from the flatbed scanner.



**Note:** For a video demonstration, see [ADF/scanner assembly removal](https://infoserve.lexmark.com/ids/sma) at [infoserve.lexmark.com/ids/sma](https://infoserve.lexmark.com/ids/sma).



# Component locations

## Printer configuration



<b>1</b>	Automatic document feeder (ADF)
<b>2</b>	ADF tray
<b>3</b>	ADF bin
<b>4</b>	Standard bin
<b>5</b>	Power button
<b>6</b>	Manual feeder
<b>7</b>	250-sheet tray
<b>8</b>	Control panel

## Controller board connectors

Connector	Connects to	Pin number	Signal
JCN37	Sensor (flatbed)	1	1.2 V
		2	GROUND
		3	FB home Sns
JCN34	Motor (ADF)	1	ADF BOUT1
		2	ADF BOUT2
		3	ADF AOUT1
		4	ADF AOUT2
		5	Not used

Connector	Connects to	Pin number	Signal
JCN36	Motor (flatbed)	1	FB BOUT1
		2	FB BOUT2
		3	FB AOUT1
		4	FB AOUT2
JCN35	Sensor (ADF)	1	ADF ENTRYN C
		2	ADF COVER OPEN C
		3	3 V
		4	GROUND
		5	ADF FEEDN C
JCN38	CIS scanner	1	JCIS P1
		2	GROUND
		3	GROUND
		4	3.3 V
		5	SCAN VREF
		6	JCIS P6
		7	FB CIS PCLK2
		8	5 V
		9	JCIS P9
		10	JCIS P10
		11	JCIS P11
		12	GROUND

Connector	Connects to	Pin number	Signal
JCN6	Fax	1	3.3 V FUSED RIP
		2	GROUND
		3	5 V FUSED
		4	FAX POR
		5	FAX IRQ
		6	3.3 V FUSED RIP
		7	GROUND
		8	BSPI CLK FAX
		9	GROUND
		10	BSPI TXD FAX
		11	GROUND
		12	BSPI RXD
		13	GROUND
		14	BSP1 CS FAX
		15	RING FAX
		16	SLEEP
		17	FAX RELAY

Connector	Connects to	Pin number	Signal
JCN25	Control panel	1	COL3
		2	COL2
		3	COL1
		4	COL0
		5	GROUND
		6	ROW7
		7	ROW6
		8	ROW5
		9	ROW4
		10	ROW3
		11	ROW2
		12	ROW1
		13	ROW0
		14	LCD ON
		15	LCD SDA
		16	LCD SCK
		17	LCD RSTN
		18	OP PAN DETECT
		19	LCD CD
		20	LCD CS
		21	LCD BK
		22	GROUND
		23	3.3 V
		24	3.3 V
JCN31	Photoconductor contact	1	3.3 V SCHIP
		2	IU SDA C
		3	IU SCL C
		4	GROUND
JCN21	Power switch	1	5 V
		2	POWER LED OUT
		3	GROUND

Connector	Connects to	Pin number	Signal
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
		20	CHG PWM C
		21	XFR POS C
		22	A XFR SERVO C
		23	GROUND
JCN5	Printhead	1	MMTR REFCLK C
		2	MMTR LOCKN C
		3	MMTR STARTN C
		4	GROUND
		5	25 V SW

Connector	Connects to	Pin number	Signal
JCN4	Printhead	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
		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







Connector	Connects to	Pin number	Signal
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.
-  **ATTENTION—RISQUE D'ELECTROCUTION :** pour éviter tout risque d'électrocution lors du nettoyage de l'extérieur de l'imprimante, débranchez le cordon d'alimentation électrique de la prise et déconnectez tous les câbles de l'imprimante avant de continuer.
-  **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Para evitar el riesgo de descarga eléctrica al limpiar el exterior de la impresora, desconecte el cable de alimentación de la toma eléctrica y desconecte todos los cables de la impresora antes de realizar la operación.
-  **VORSICHT – STROMSCHLAGGEFAHR:** Um das Risiko eines elektrischen Schlags beim Reinigen des Druckergehäuses zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose, und ziehen Sie alle Kabel vom Drucker ab, bevor Sie fortfahren.

#### Notes:

- Perform this task after every few months.
- Damage to the printer caused by improper handling is not covered by the printer warranty.

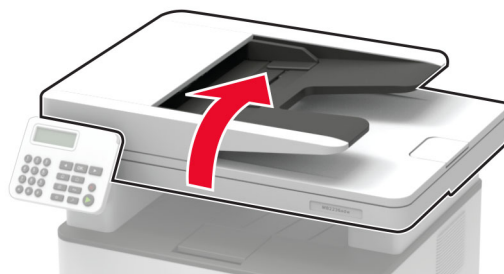
- 1 Turn off the printer, and then unplug the power cord from the electrical outlet.
- 2 Remove paper from the standard bin and manual feeder.
- 3 Remove any dust, lint, and pieces of paper around the printer using a soft brush or vacuum.
- 4 Wipe the outside of the printer with a damp, soft, lint-free cloth.

#### Notes:

- Do not use household cleaners or detergents, as they may damage the finish of the printer.
  - Make sure that all areas of the printer are dry after cleaning.
- 5 Connect the power cord to the electrical outlet, and then turn on the printer.

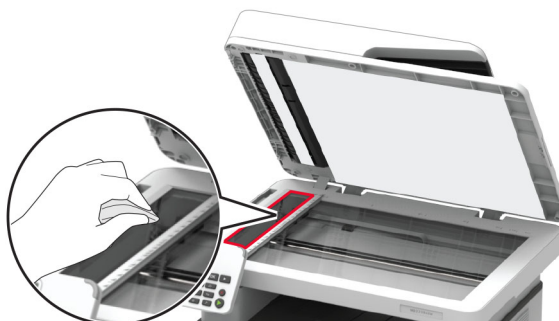
## Cleaning the scanner

- 1 Open the scanner cover.



- 2 Using a damp, soft, lint-free cloth, wipe the following areas:

- ADF glass



- ADF glass pad



- Scanner glass



- Scanner glass pad



**3** Close the scanner cover.

# Parts catalog

## Legend

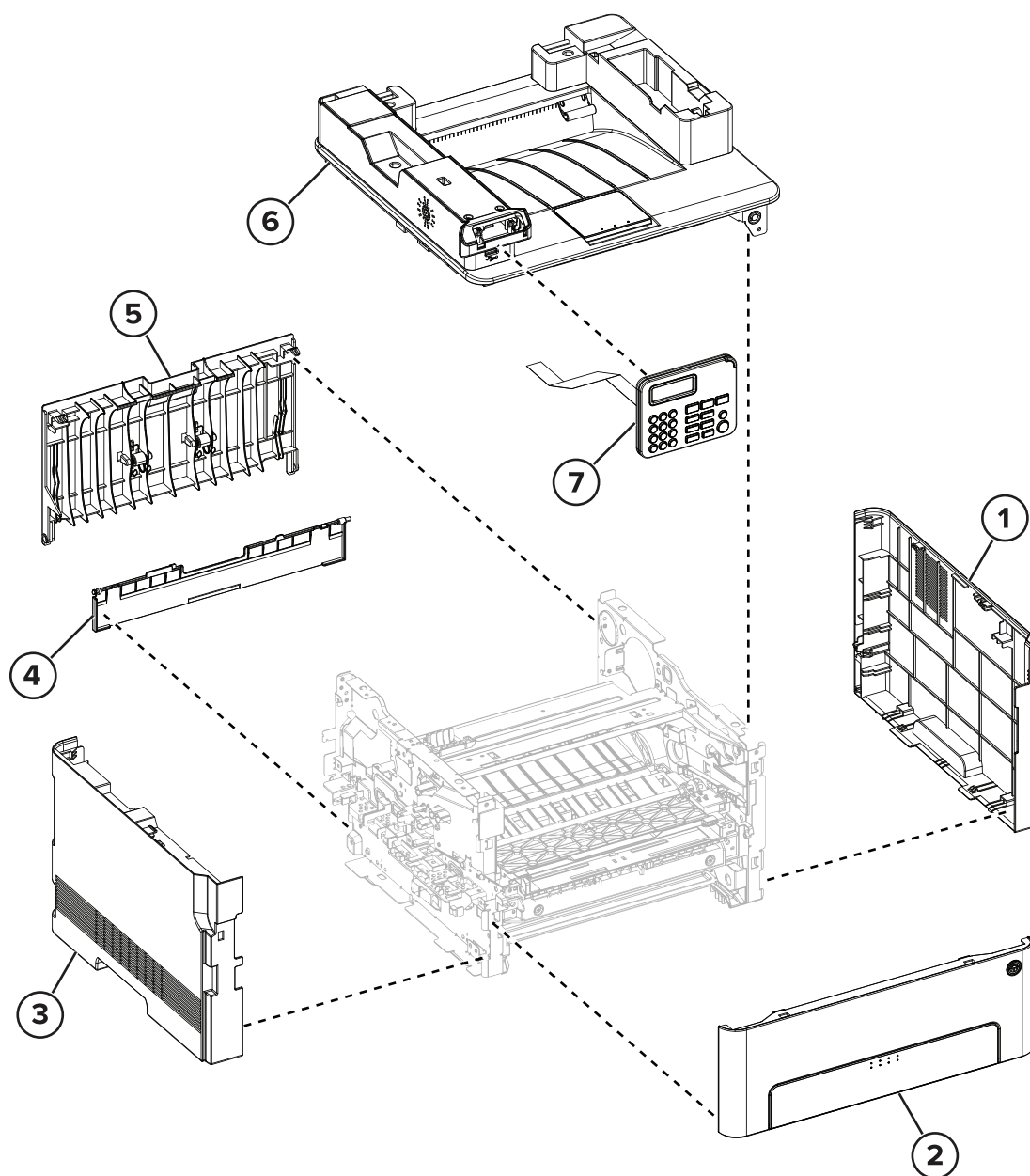
The following column headings are used in the parts catalog:

- **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.

## Assembly 1: Covers (MB2236adw)

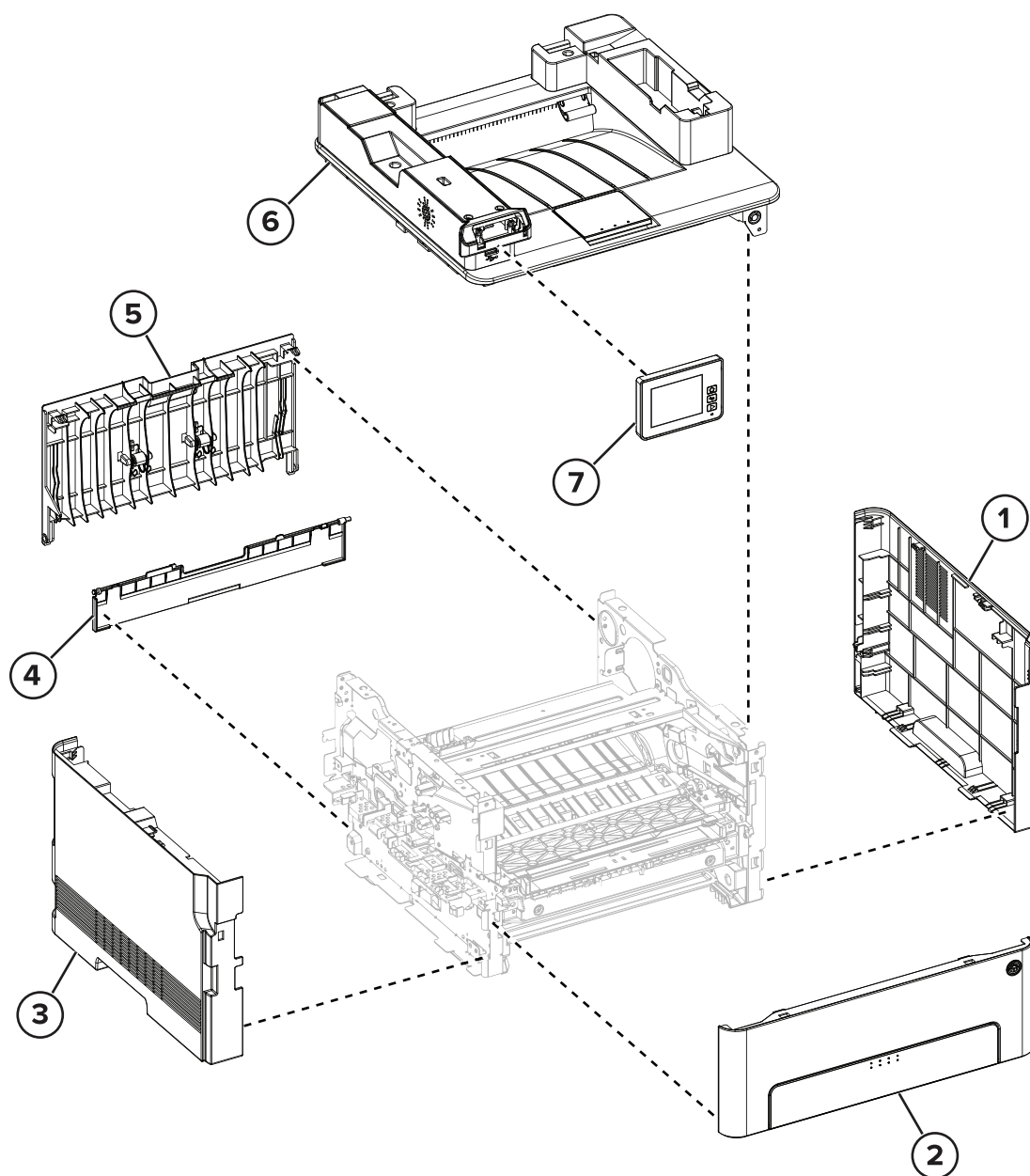


## Assembly 1: Covers (MB2236adw)

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2449	1	1	Right cover	<a href="#">“Right cover removal” on page 238</a>
2	41X2450	1	1	Front door	<a href="#">“Front door removal” on page 248</a>
3	41X2451	1	1	Left cover	<a href="#">“Left cover removal” on page 232</a>
4	41X2448	1	1	Bottom rear door	<a href="#">“Bottom rear door removal” on page 251</a>
5	41X2447	1	1	Rear door	<a href="#">“Rear door removal” on page 250</a>
6	41X2446	1	1	Top cover	<a href="#">“Top cover removal” on page 255</a>
7	41X2479	1	1	2-line control panel	<a href="#">“2-line control panel removal” on page 243</a>



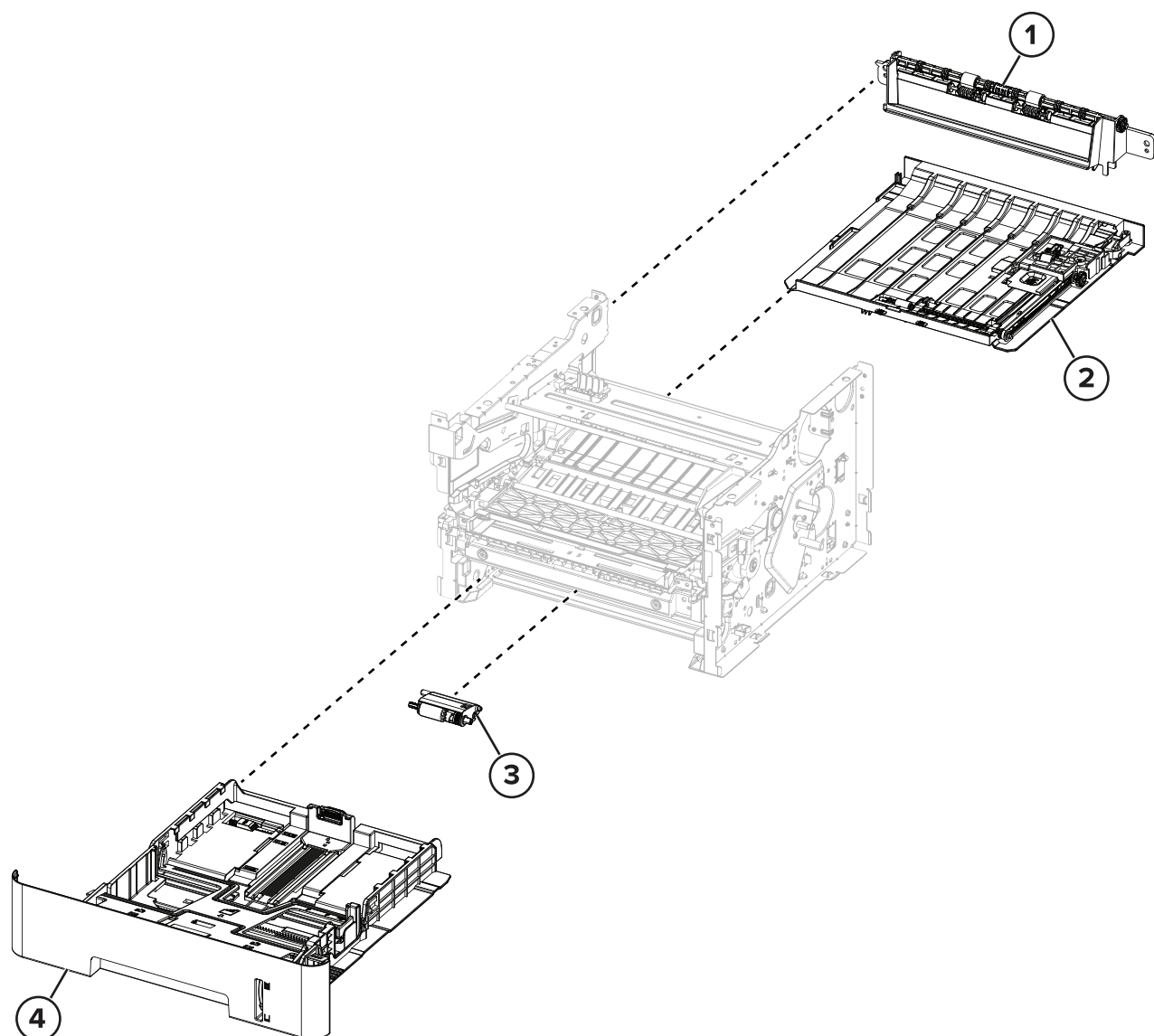
## Assembly 2: Covers (MB2236adwe)



## Assembly 2: Covers (MB2236adwe)

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2449	1	1	Right cover	<a href="#">“Right cover removal” on page 238</a>
2	41X2450	1	1	Front door	<a href="#">“Front door removal” on page 248</a>
3	41X2451	1	1	Left cover	<a href="#">“Left cover removal” on page 232</a>
4	41X2448	1	1	Bottom rear door	<a href="#">“Bottom rear door removal” on page 251</a>
5	41X2447	1	1	Rear door	<a href="#">“Rear door removal” on page 250</a>
6	41X2446	1	1	Top cover	<a href="#">“Top cover removal” on page 255</a>
7	41X2516	1	1	2.8-in. control panel	<a href="#">“2.8-in. control panel removal” on page 246</a>

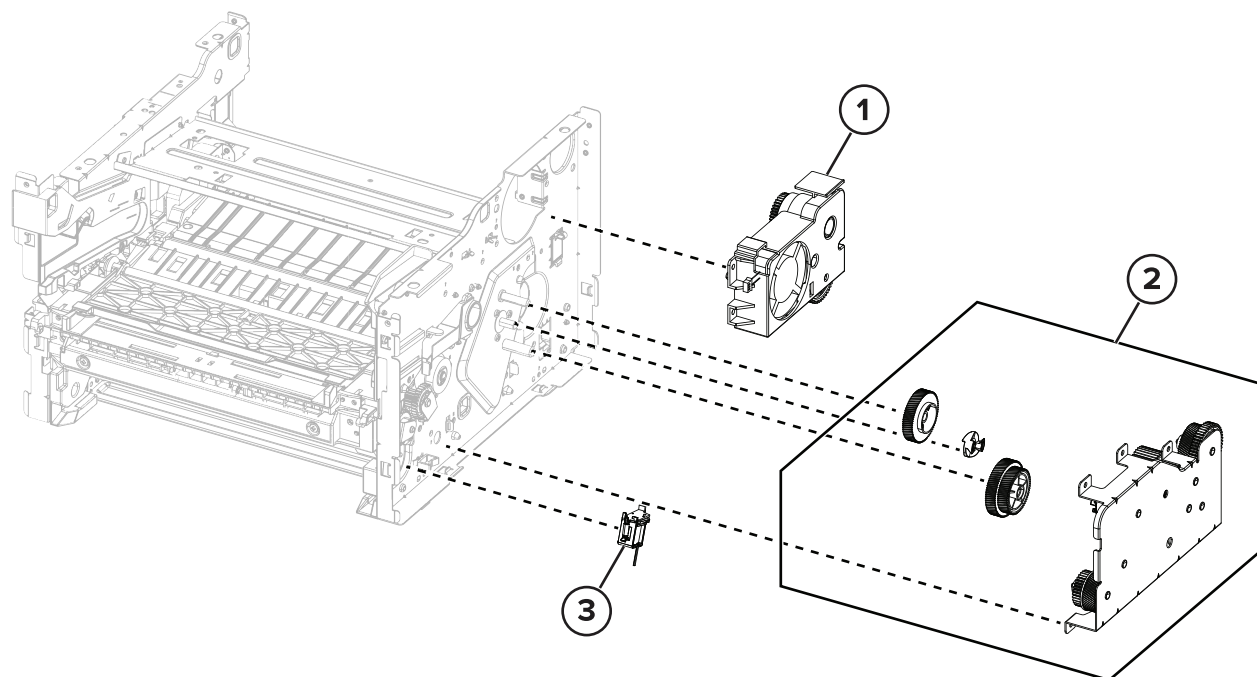
## Assembly 3: Paper path



## Assembly 3: Paper path

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2453	1	1	Redrive	<a href="#">“Redrive removal” on page 251</a>
2	41X2454	1	1	Duplex unit	<a href="#">“Duplex unit removal” on page 250</a>
3	41X2455	1	1	Pick roller	<a href="#">“Pick rollers removal” on page 268</a>
4	41X2452	1	1	Tray insert	--

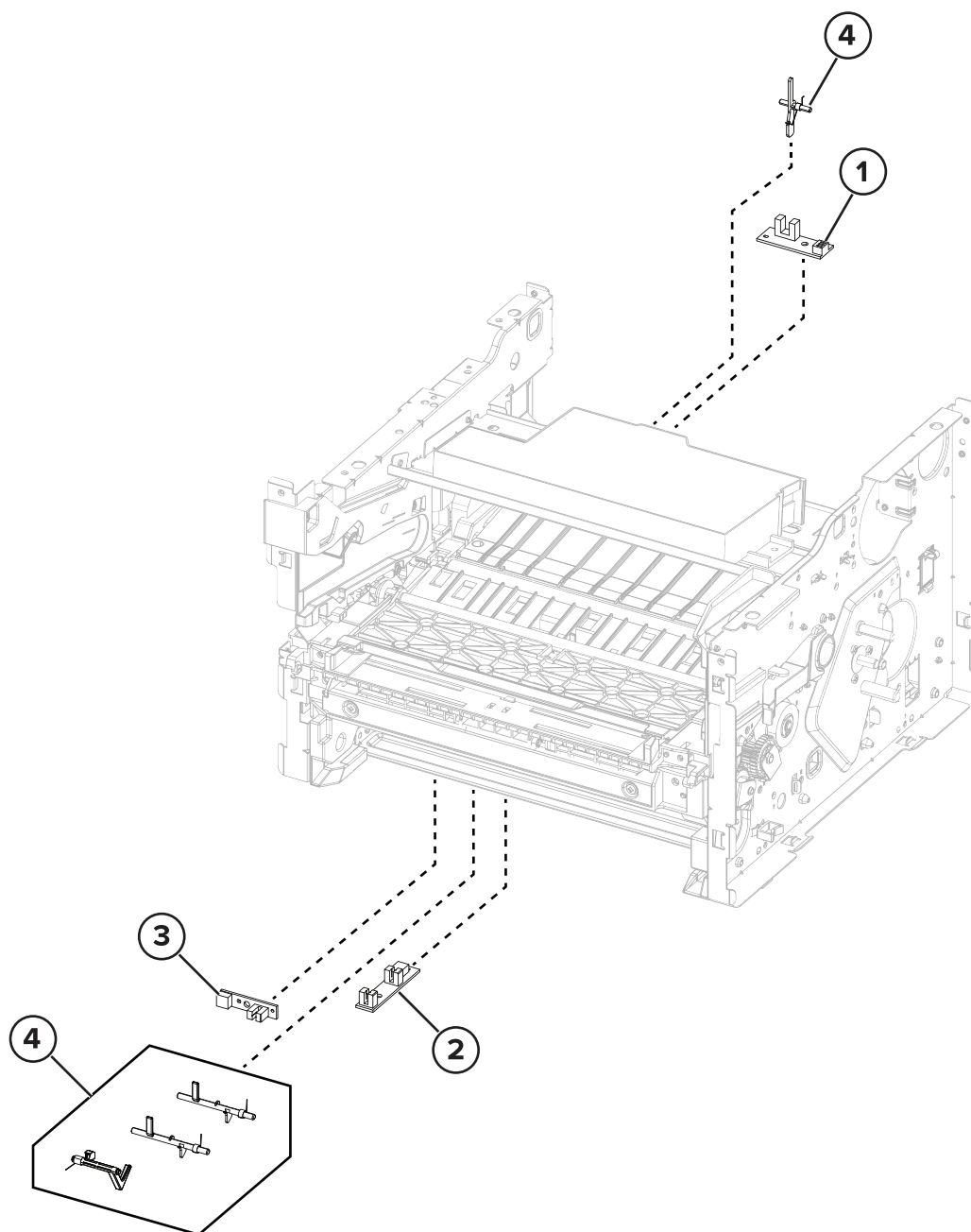
## Assembly 4: Drive



## Assembly 4: Drive

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2470	1	1	Fan assembly	<a href="#">“Fan assembly removal” on page 242</a>
2	41X2471	1	1	Main drive	<a href="#">“Main drive removal” on page 239</a>
3	41X2472	1	1	Pick solenoid	<a href="#">“Pick solenoid removal” on page 241</a>

## Assembly 5: Sensors

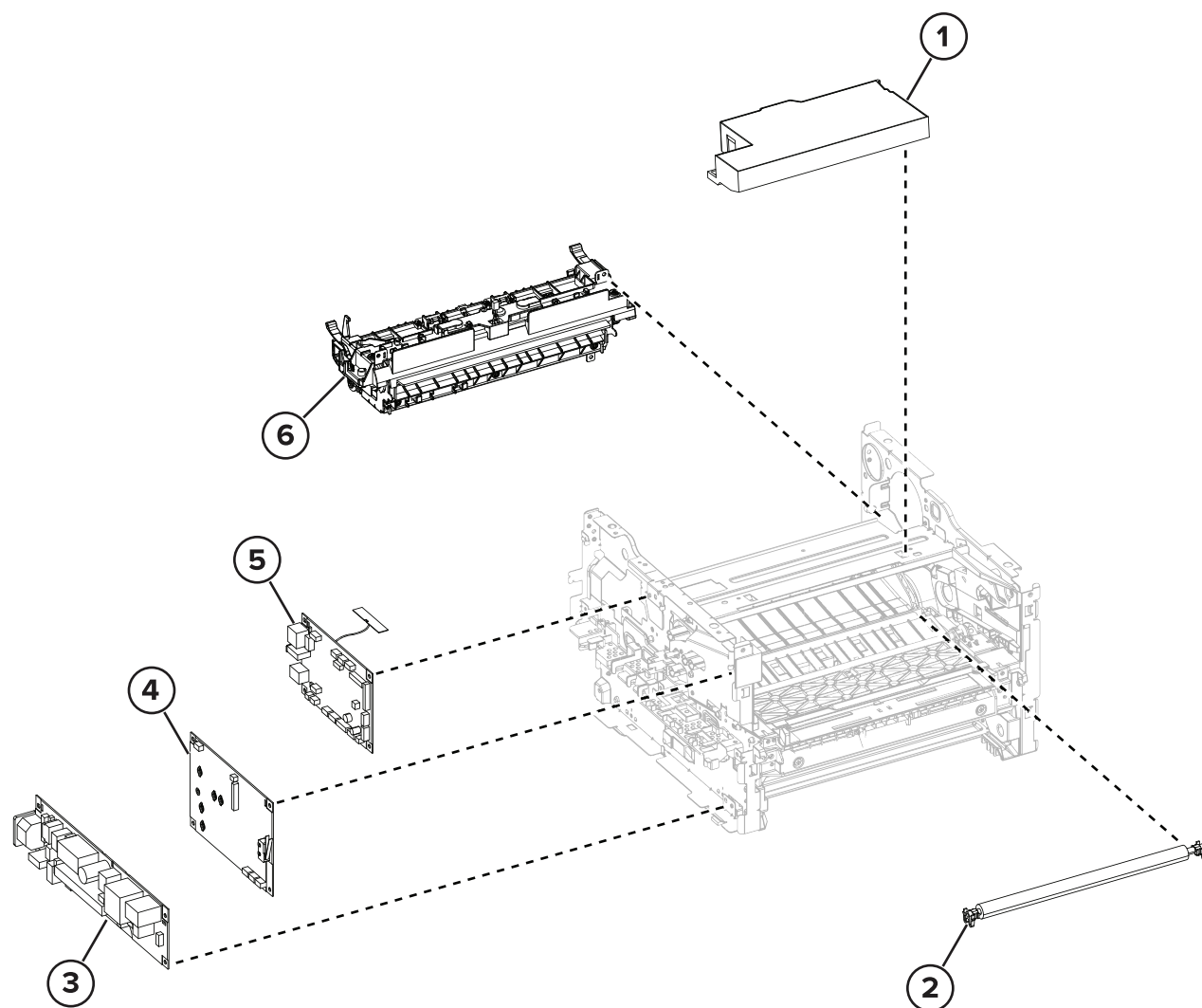


## Assembly 5: Sensors

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2468	1	1	Sensor (fuser exit)	<a href="#">“Sensor (fuser exit) removal” on page 263</a>
2	41X2467	1	1	Sensor (input)	<a href="#">“Sensor (input) removal” on page 265</a>
3	41X2466	1	1	Sensor (paper present)	<a href="#">“Sensor (paper present) removal” on page 264</a>
4	41X2469	1	1	Sensor flags	<a href="#">“Input sensor flags removal” on page 267</a> <a href="#">“Fuser exit flag removal” on page 254</a>



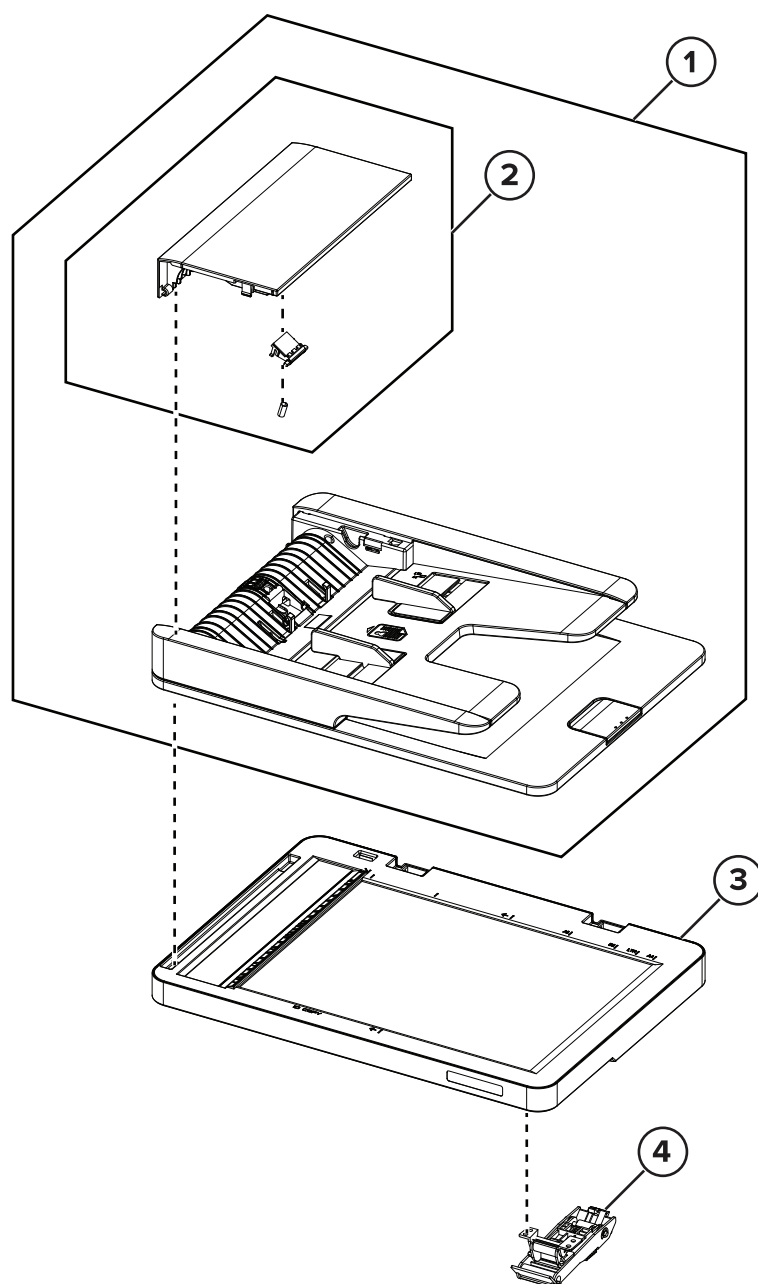
## Assembly 6: Electronics



## Assembly 6: Electronics

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2456	1	1	Printhead	<a href="#">“Printhead removal” on page 262</a>
2	41X2457	1	1	Transfer roller	<a href="#">“Transfer roller removal” on page 249</a>
3	41X2459	1	1	LVPS, 110 V	<a href="#">“LVPS removal” on page 235</a>
3	41X2460	1	1	LVPS, 220 V	<a href="#">“LVPS removal” on page 235</a>
4	41X2458	1	1	HVPS	<a href="#">“HVPS removal” on page 236</a>
5	41X2461	1	1	Controller board (MB2236adw)	<a href="#">“Controller board removal” on page 234</a>
5	41X2515	1	1	Controller board (MB2236adwe)	<a href="#">“Controller board removal” on page 234</a>
6	41X2463	1	1	Fuser, 110 V	<a href="#">“Fuser removal” on page 252</a>
6	41X2464	1	1	Fuser, 220 V	<a href="#">“Fuser removal” on page 252</a>
NS	41X2482	1	1	Cable kit parts pack	--
NS	41X2634	1	1	Control panel and fax FFC cable	--
NS	41X2617	1	1	Front USB cable	--

## Assembly 7: Scanner



## Assembly 7: Scanner

Asm-index	P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2476	1	1	ADF scanner assembly	<a href="#">“ADF scanner and flatbed scanner removal” on page 273</a>
2	41X2480	1	1	ADF pick assembly	<a href="#">“ADF pick assembly removal” on page 272</a>
3	41X2478	1	1	Flatbed scanner	<a href="#">“ADF scanner and flatbed scanner removal” on page 273</a>
4	41X2629	1	1	Scanner stand	<a href="#">“Scanner stand removal” on page 271</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)	
		MB2236adw	MB2236adwe
Printing	The product is generating hard-copy output from electronic inputs.	460	460
Copy	The product is generating hard-copy output from hard-copy original documents.	460	460
Scan	The product is scanning hard-copy documents.	14.5	14.5
Ready	The product is waiting for a print job.	5.5	6.0
Sleep Mode	The product is in a high-level energy-saving mode.	1.2	1.1
Hibernate	The product is in a low-level energy-saving mode.	N/A	0.2
Off	The product is plugged into an electrical outlet, but the power switch is turned off.	0.1	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](http://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. If the print speed is less than or equal to 30 pages per minute, then you can set the timeout only up to 60 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

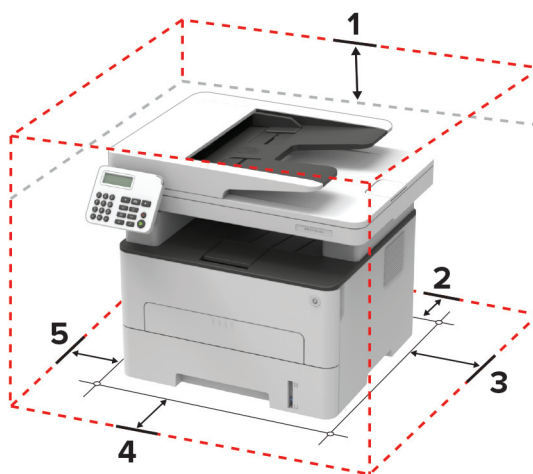
It is sometimes helpful to estimate the total product energy usage. Since power consumption claims are provided in power units of Watts, the power consumption should be multiplied by the time the product spends in each mode in order to calculate energy usage. The total product energy usage is the sum 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 temperature range.

Operating temperature	10 to 32.2°C (50 to 90°F)
-----------------------	---------------------------

- Allow the following recommended amount of space around the printer for proper ventilation:



1	Top	360 mm (14 in.)
2	Rear	260 mm (10 in.)
3	Right side	200 mm (8 in.)
4	Front	550 mm (22 in.) <b>Note:</b> The minimum space needed in front of the printer is 76 mm (3 in.).
5	Left side	200 mm (8 in.)

## Noise emission levels

The following measurements were made in accordance with ISO 7779 and reported in conformance with ISO 9296.

**Note:** Some modes may not apply to your product.

1-meter average sound pressure, dBA	
Printing	One-sided: 52; Two-sided: 50
Scanning	52
Copying	55
Ready	14

Values are subject to change. See [www.lexmark.com](http://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





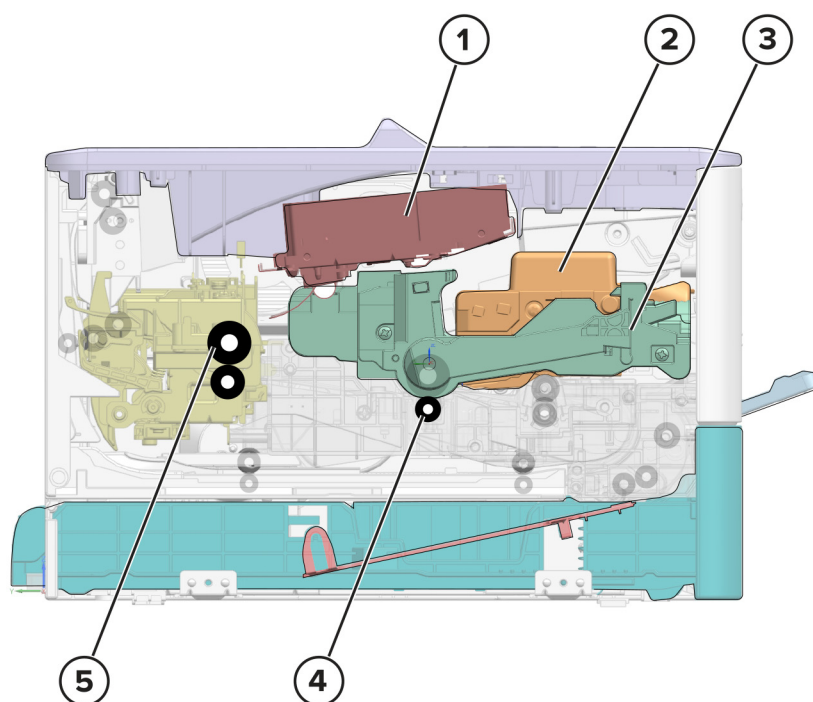
# Theory of operation

## POR sequence

As the printer turns 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

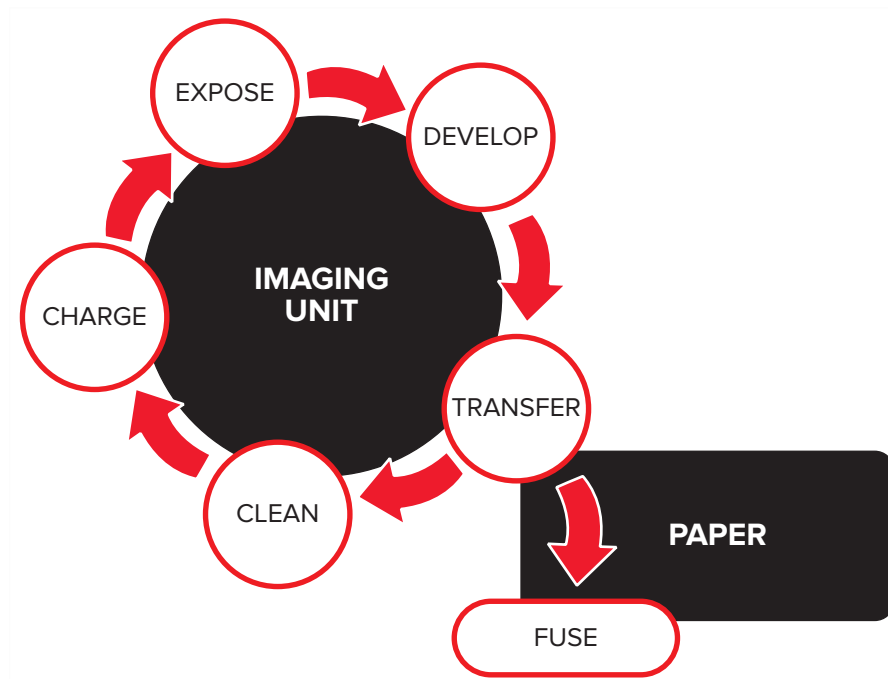
### Print engine layout



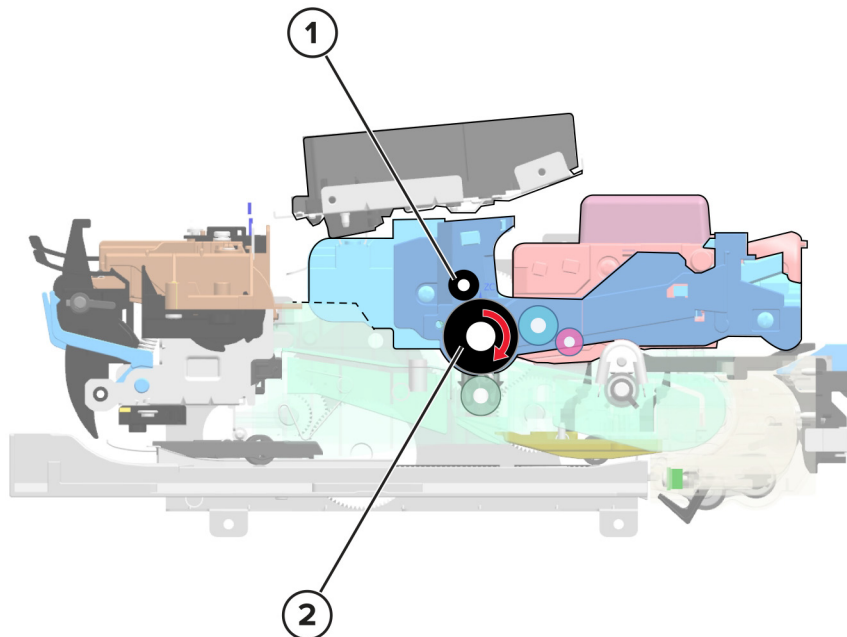
1	Printhead
2	Toner cartridge
3	Imaging unit
4	Transfer roller
5	Fuser

## Print cycle

### Flowchart



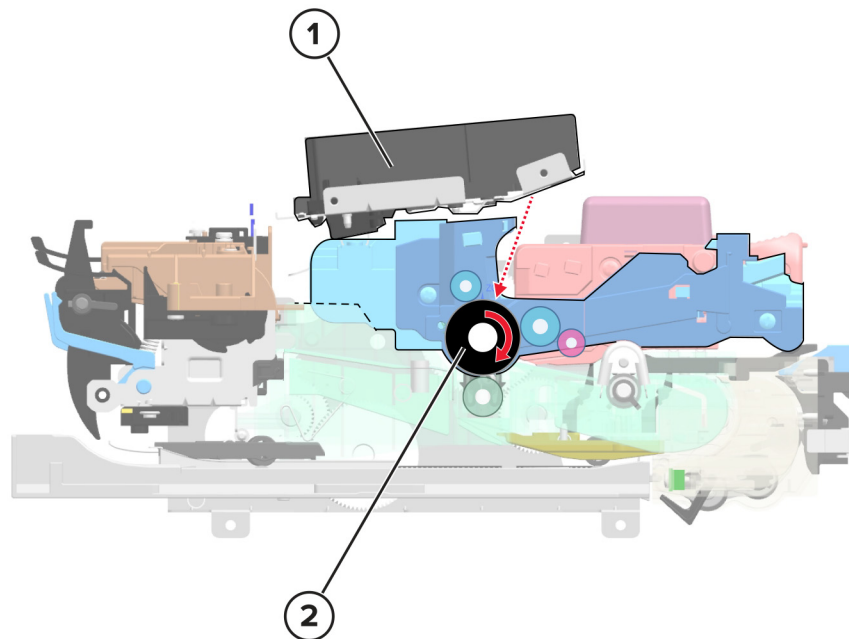
### Charge



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.

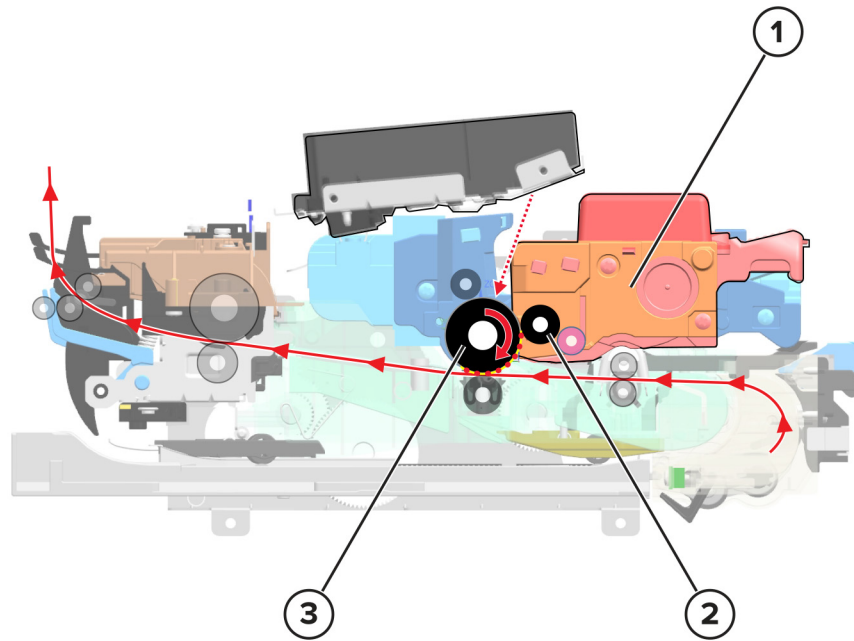
## Expose



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.

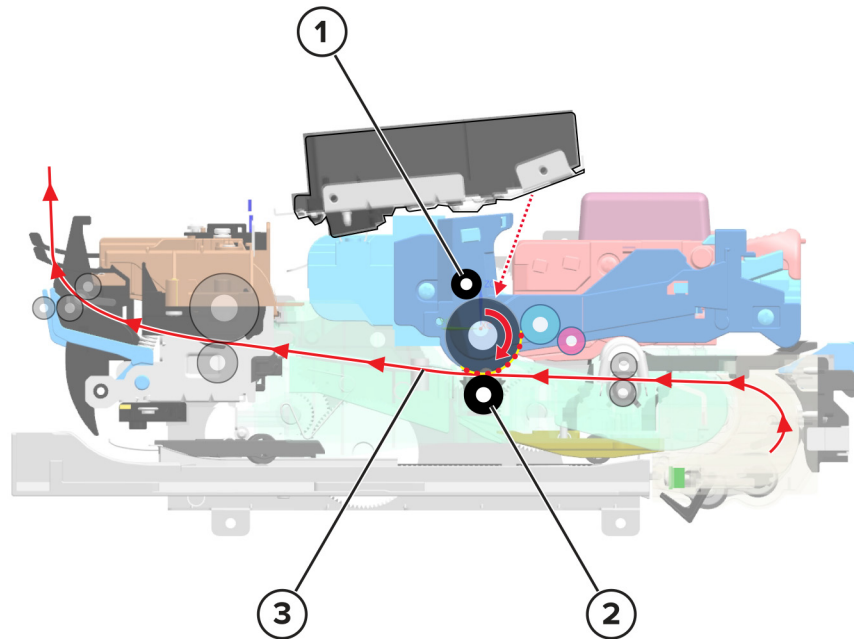
## Develop



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



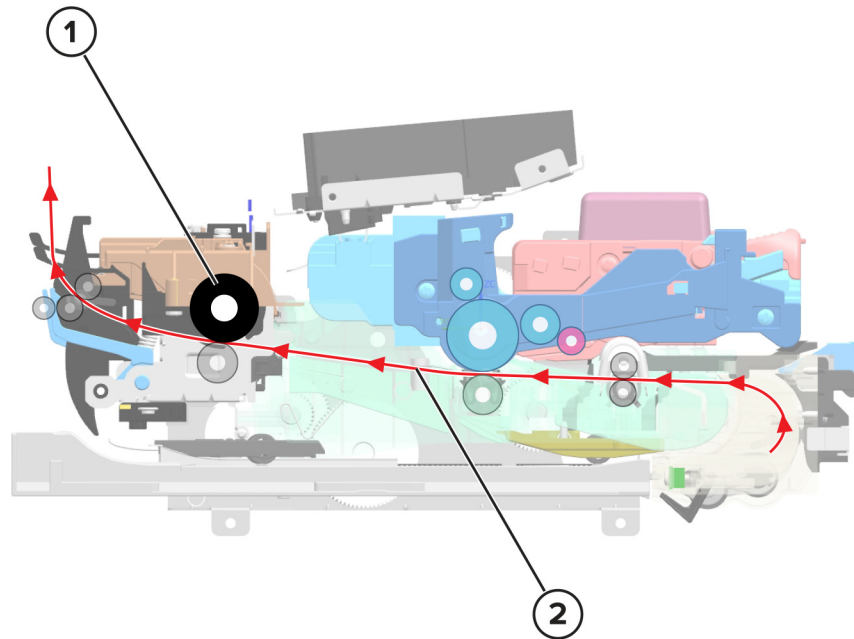
<b>1</b>	Charge roller
<b>2</b>	Transfer roller
<b>3</b>	Paper

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 toner residue from the photoconductor drum after the transfer. The cycle (charge, expose, develop, transfer, and clean) repeats until the whole image is transferred to the paper.

## Fuse

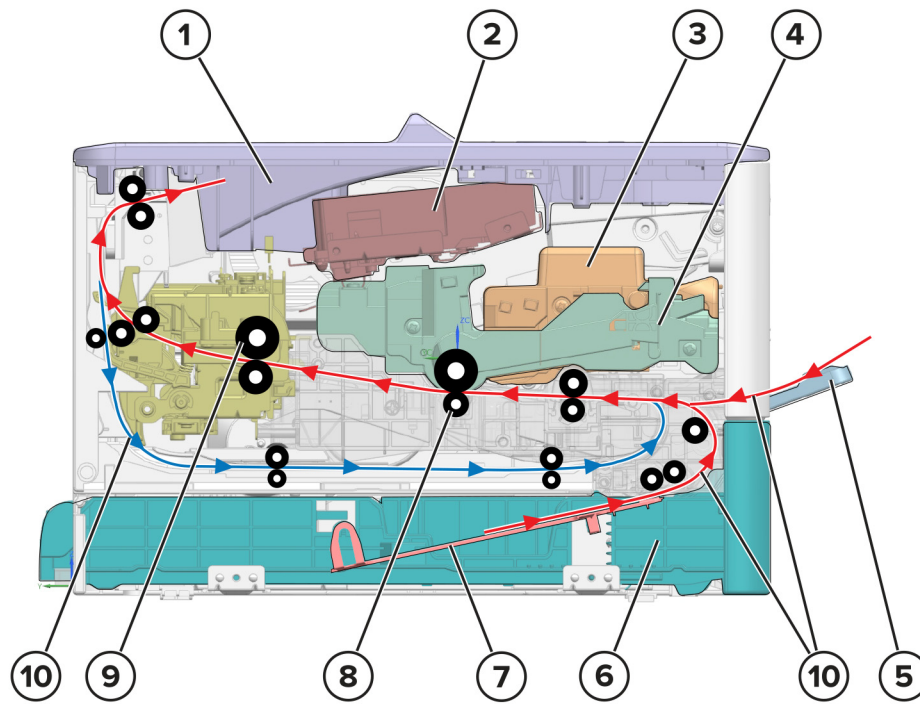


1	Fuser
2	Paper

Even if the toner image is already on the paper, the toner particles are not yet permanently bonded to the surface. For the final part of printing, the paper is transported to the fuser where heat and pressure are applied to it. As a result, the toner particles melt and permanently fuse with the paper, completing the print process. The print cycle repeats for the succeeding pages.

# Printer operation

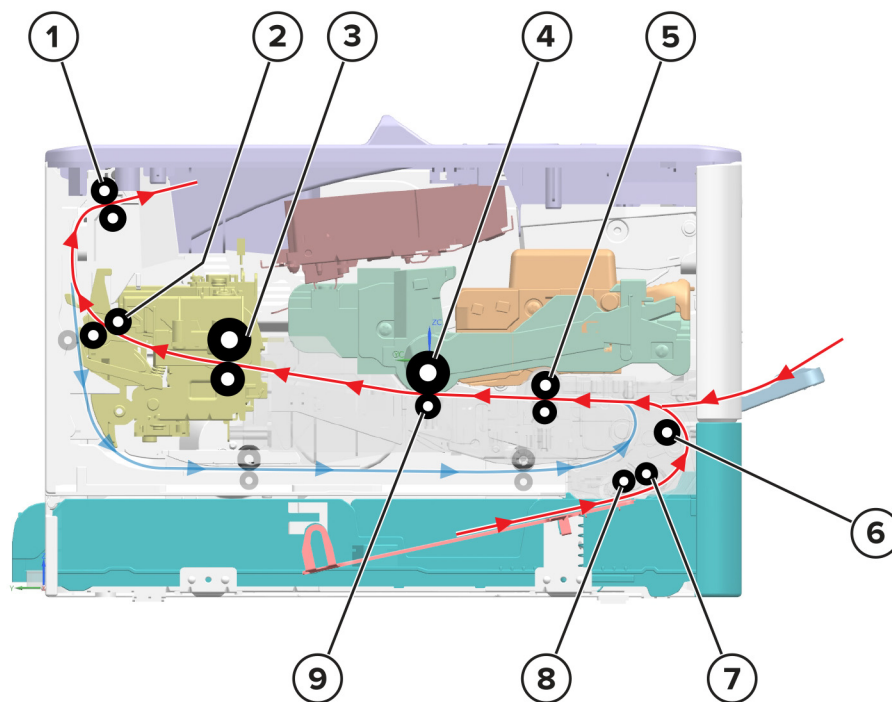
## Printer sections



1	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



<b>1</b>	Paper exit roller
<b>2</b>	Fuser exit roller
<b>3</b>	Fuser
<b>4</b>	Photoconductor drum
<b>5</b>	Deskew roller
<b>6</b>	Transport roller
<b>7</b>	Feed roller
<b>8</b>	Pick roller
<b>9</b>	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.

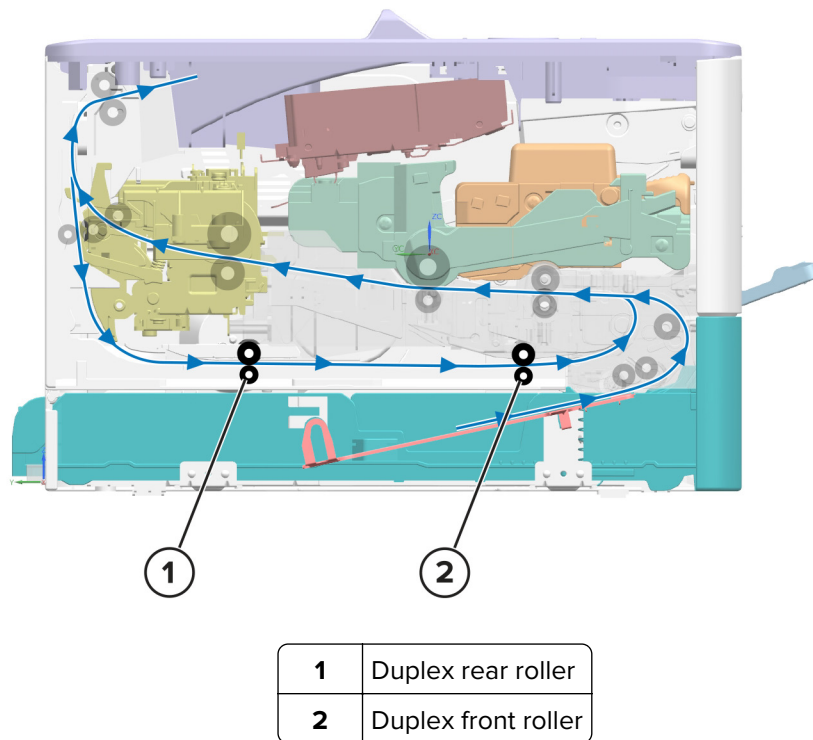
The deskew roller feeds the paper to the transfer roller for image transfer. At the transfer roller, the photoconductor drum transfers the developed image to the paper to create the printed image.

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.



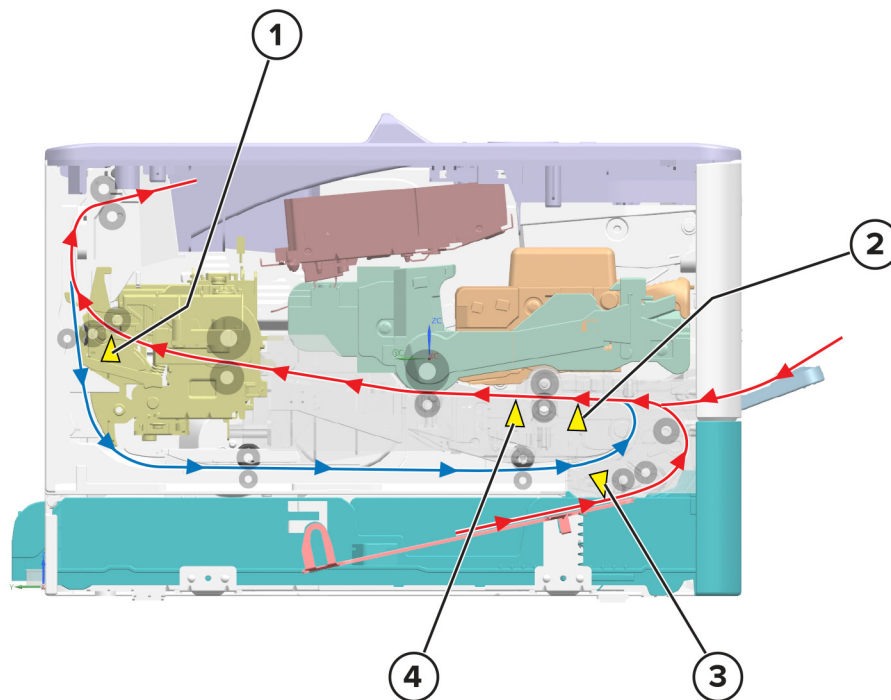
## Duplex print job



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.

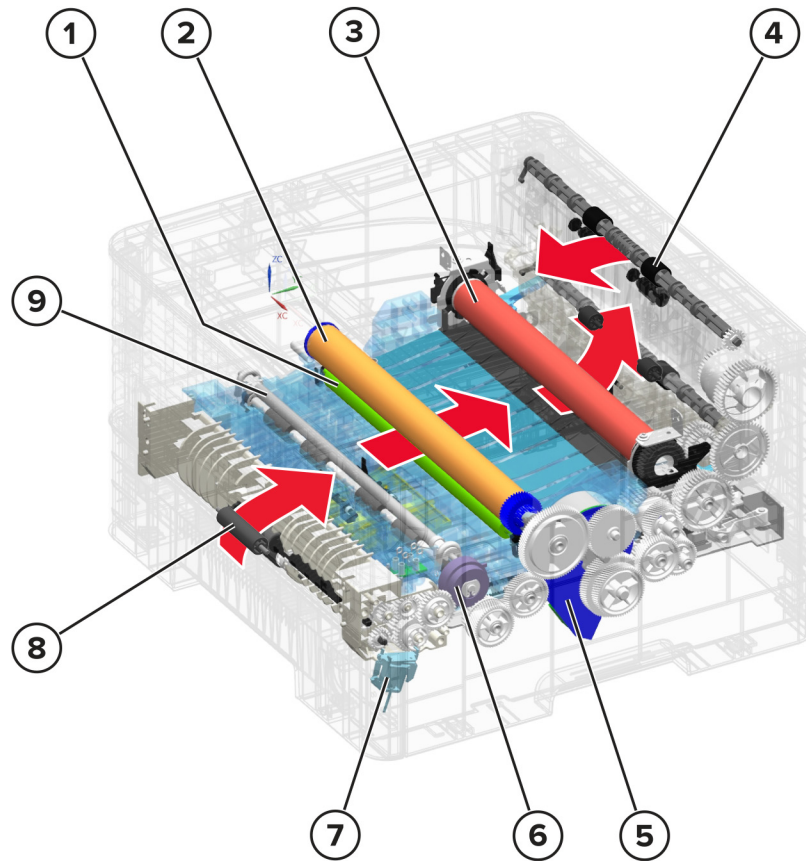
The paper travels along the duplex path until it reenters the second input roller. From there, the paper continues its path until the print job is done.

## 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
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

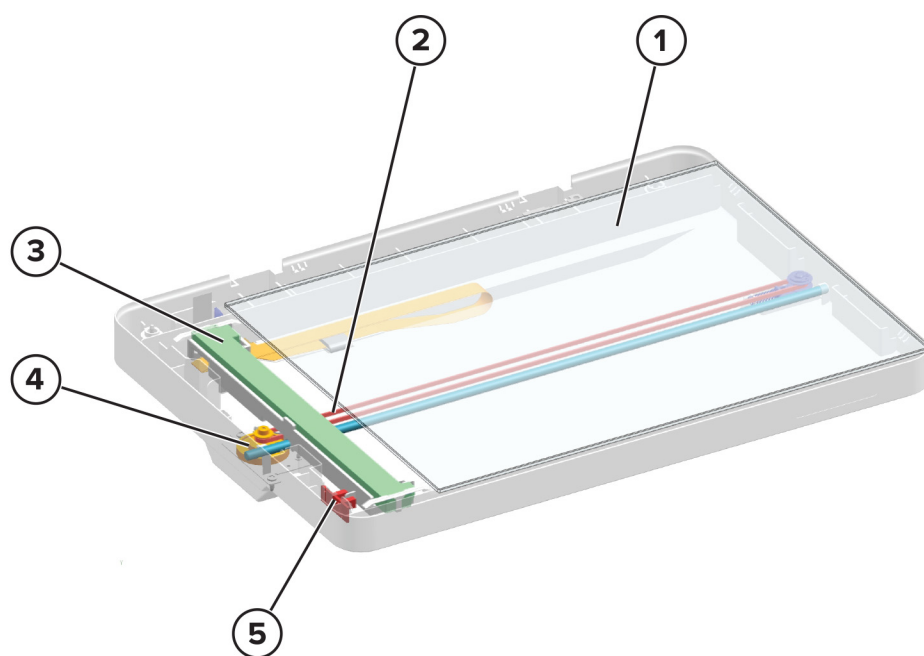
The motor (main drive) powers the drive mechanism of the printer. The gearbox provides mechanical power to the printer which transfers power through several gears to the following parts:

- Manual feeder
- Paper pick using the pick solenoid
- Paper feed using the deskew solenoid

- Transport roller
- Toner cartridge
- Photoconductor
- Fuser
- Duplex unit
- Redrive

## ADF and scanner operation

### Flatbed scanner drive



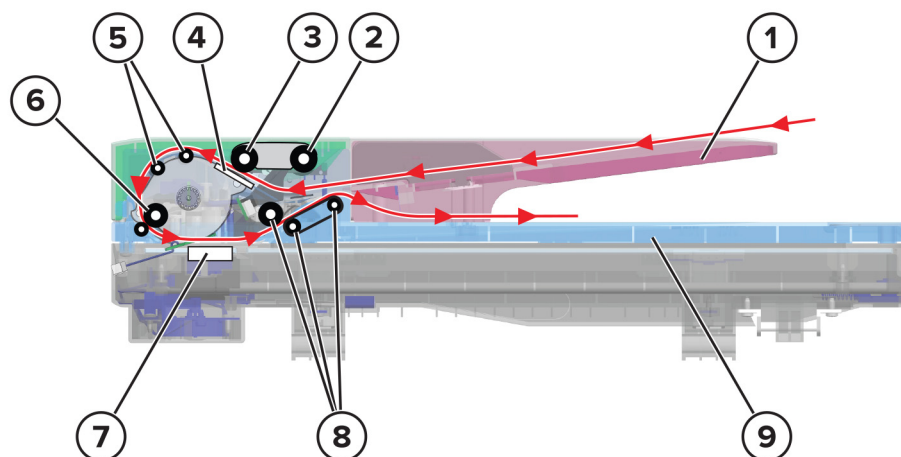
1	Scanner glass
2	Belt
3	Scanner lamp
4	Motor (scanner)
5	Sensor (scanner home)

The flatbed scanner has a scanner lamp that illuminates the surface of the document. The reflections produced are processed to create the scan image.

For flatbed scan jobs, the flatbed scanner moves across the scanner glass area to scan the front side of the document. The motor (scanner) drives the belt and controls the scanner position. The sensor (scanner home) detects the scanner at its home position.

For ADF scan jobs, the scanner lamp stays at the left side to scan the document.

## ADF paper path



1	ADF tray
2	Pick roller
3	Feed roller
4	Separator pad
5	Transport rollers
6	Scanner roller
7	Scan area
8	Exit rollers
9	ADF bin

After the sensor (ADF paper present) detects paper in the ADF tray, the pick roller moves the paper into the ADF.

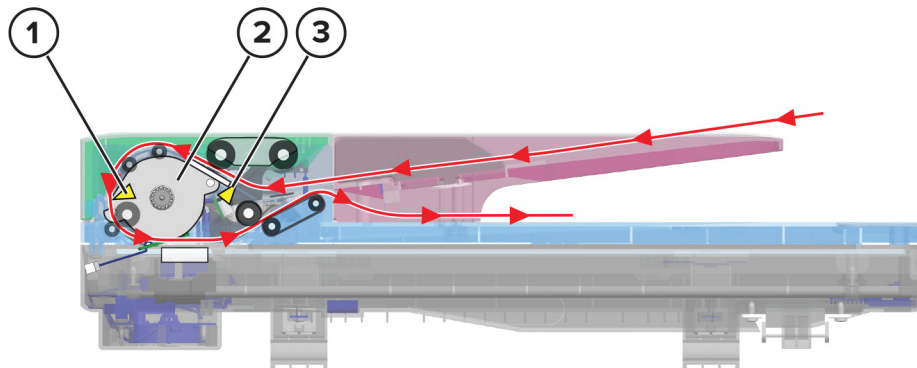
The paper passes through the feed roller and separator pad. The separator pad minimizes the possibility of feeding multiple sheets.

The paper passes through the transport rollers, and then actuates the sensor (ADF scan). The scan roller moves the paper to the scan area, and then the document is scanned.

The scan rollers continue to move the paper to the scan area until the trailing edge of the paper reaches the sensor (ADF scan). When the trailing edge of the paper reaches the sensor (ADF scan), the sensor goes to the off position. Scanning continues for a predetermined length of time.

The exit rollers move the paper into the ADF bin.

## ADF paper path sensors



#	Sensor	Function
1	Sensor (ADF paper present)	Detects paper presence in the ADF tray
2	Motor (ADF transport)	Drives the rollers that transport paper through the ADF
3	Sensor (ADF scan)	Detects paper for scanning

# Index

## A

ADF theory  
   paper path 321  
   paper path sensors 322  
 advanced print quality samples 194  
 avoiding paper jams 90

## C

change history 17  
 charge 310  
 clean 313  
 cleaning  
   exterior of the printer 287  
   interior of the printer 287  
 cleaning the printer 287  
 cleaning the scanner 288  
 config menu  
   accessing 201  
 configurations  
   printer models 19  
 connectors  
   controller board 279  
 control panel  
   critical information 211  
 controller board  
   critical information 211  
 controller board, restoring configuration 212

## D

data security notice 230  
 develop 312  
 diagnostics menu  
   accessing 193  
   feed test 200  
   scanner calibration reset 200

## E

electrostatic-sensitive parts 211  
 embedded solutions 217  
 emission notices 307  
 error codes  
   200 paper jam messages 92  
   202 paper jam messages 98  
   206 paper jam messages 108  
   232 paper jam messages 108  
 ESD-sensitive parts 211  
 eSF solutions 217

event log  
   display log 194  
   mark log 195  
   print log 194  
   print log summary 195  
 expose 311

## F

format fax storage 194  
 fuse 314

## H

horizontal bottom contact connector 221  
 horizontal sliding contact connector 225  
 horizontal top contact connector 219

## I

indicator light  
   understanding the status 192  
 invalid code, fixing 203  
 invalid engine mode  
   accessing 203

## J

jams  
   avoiding 90

## L

low insertion force (LIF) connector 227

## M

menu  
   Config Menu 201  
 moving the printer 306

## N

noise emission levels 307  
 Non-Lexmark supply 118  
 notices 305, 306, 307

## P

paper jams  
   avoiding 90  
 paper path, duplex 316  
 paper path, simplex 316

- paper sizes
  - supported 19
- paper types
  - supported 21
- paper weights
  - supported 22
- parts catalog legend 290
- performing the HVPS characterization 231
- POR sequence 309
- power button light
  - understanding the status 192
- print cycle 310
  - charge 310
  - clean 313
  - develop 312
  - expose 311
  - flowchart 310
  - fuse 314
  - transfer 313
- print engine layout 309
- print quality
  - initial check 25
- printer
  - minimum clearances 306
  - moving 306
  - selecting a location 306
- printer configuration 279
- printer diagnostics
  - input tray quick print 195
  - output bin quick feed 195
- printer diagnostics & adjustments
  - motor tests 198
  - sensor tests 197
  - universal override 198
- printer diagnostics and adjustments
  - HVPS adjust 199
  - registration adjust 198
- printer messages
  - Non-Lexmark supply 118
- printer model
  - configurations 19
- printer sections 315
- printer setup
  - engine setting [x] 196
  - EP setup 197
  - model name 196
  - permanent page count 196
  - printed page count (mono) 196
  - process ID 196
  - serial number 196
- printer status 192

## R

- removal procedures
  - tips 232
- removals
  - 2.8-in. control panel 246
  - ADF pick assembly 272
  - ADF scanner and flatbed scanner 273
  - bottom rear door 251
  - control panel 243
  - controller board 234
  - duplex unit 250
  - fan assembly 242
  - front door 248
  - fuser exit flag 254
  - fuser removal 252
  - HVPS 236
  - input sensor flags 267
  - left cover 232
  - LVPS 235
  - main drive 239
  - pick rollers 268
  - pick solenoid 241
  - printhead 262
  - rear door 250
  - redrive 251
  - right cover 238
  - scanner stand 271
  - sensor (fuser exit) 263
  - sensor (input) 265
  - sensor (paper present) 264
  - top cover 255
  - transfer roller 249
- reports
  - device settings 193
  - installed licenses 194
- resetting
  - supply usage counters 118
- resetting the supply usage counters 118
- restoring
  - configuration file 215
  - license file 215

## S

- scanner
  - cleaning 288
- scanner diagnostics
  - feed test 200
  - motor tests 199
  - scanner calibration reset 200
  - sensor tests 199



- scanner theory
  - flatbed 320
- selecting a location for the printer 306
- sensors, paper path 318
- service checks troubleshooting
  - 111 service error messages 143
  - 121 service error messages 144
  - 126 service error messages 148
  - 140 service error messages 150
  - 600 service error messages 151
  - 84y service error messages 169
  - 900 service error messages 159
- service engineer (SE) menu
  - accessing 204
  - fax SE 205
  - general SE 204
  - network SE 204
  - scan SE 207
- supply usage counters
  - resetting 118
- supported paper sizes 19
- supported paper types 21
- supported paper weights 22
- symptoms
  - printer 178

## T

- theory
  - duplex paper path 316
  - main drive 319
  - paper path sensors 318
  - simplex paper path 316
- theory, ADF paper path 321
- theory, ADF paper path sensors 322
- theory, flatbed scanner 320
- tools, required 22
- transfer 313
- troubleshooting
  - initial check 25
- troubleshooting, service checks
  - 111 service error messages 143
  - 121 service error messages 144
  - 126 service error messages 148
  - 140 service error messages 150
  - 600 service error messages 151
  - 84y service error messages 169
  - 900 service error messages 159

## U

- updating the printer firmware
  - using a flash drive 216

- using a network computer 216
- user attendance messages
  - 31–33 user attendance messages 122
  - 34–42 user attendance messages 127
  - 55 user attendance messages 131
  - 71 user attendance messages 133
  - 84 user attendance messages 135
  - 88 user attendance messages 138
  - 8–12 user attendance messages 119
  - non-supply user attendance messages 138
- using the MB2236adw control panel 191
- using the MB2236adwe control panel 192

## V

- vertical mount contact connector 223

## Z

- zero insertion force (ZIF) connectors 218



# Part number index

P/N	Part name	Page
41X2446	Top cover.....	292, 294
41X2447	Rear door.....	292, 294
41X2448	Bottom rear door.....	292, 294
41X2449	Right cover.....	292, 294
41X2450	Front door.....	292, 294
41X2451	Left cover.....	292, 294
41X2452	Tray insert.....	296
41X2453	Redrive.....	296
41X2454	Duplex unit.....	296
41X2455	Pick roller.....	296
41X2456	Printhead.....	302
41X2457	Transfer roller.....	302
41X2458	HVPS.....	302
41X2459	LVPS, 110 V.....	302
41X2460	LVPS, 220 V.....	302
41X2461	Controller board (MB2236adw).....	302
41X2463	Fuser, 110 V.....	302
41X2464	Fuser, 220 V.....	302
41X2466	Sensor (paper present).....	300
41X2467	Sensor (input).....	300
41X2468	Sensor (fuser exit).....	300
41X2469	Sensor flags.....	300
41X2470	Fan assembly.....	298
41X2471	Main drive.....	298
41X2472	Pick solenoid.....	298
41X2476	ADF scanner assembly.....	304
41X2478	Flatbed scanner.....	304
41X2479	2-line control panel.....	292
41X2480	ADF pick assembly.....	304
41X2482	Cable kit parts pack.....	302
41X2515	Controller board (MB2236adwe).....	302
41X2516	2.8-in. control panel.....	294

<b>P/N</b>	<b>Part name</b>	<b>Page</b>
41X2617	Front USB cable.....	302
41X2629	Scanner stand.....	304
41X2634	Control panel and fax FFC cable.....	302

# Part name index

P/N	Part name	Page
41X2516	2.8-in. control panel.....	294
41X2479	2-line control panel.....	292
41X2480	ADF pick assembly.....	304
41X2476	ADF scanner assembly.....	304
41X2448	Bottom rear door.....	292, 294
41X2482	Cable kit parts pack.....	302
41X2634	Control panel and fax FFC cable.....	302
41X2461	Controller board (MB2236adw).....	302
41X2515	Controller board (MB2236adwe).....	302
41X2454	Duplex unit.....	296
41X2470	Fan assembly.....	298
41X2478	Flatbed scanner.....	304
41X2450	Front door.....	292, 294
41X2617	Front USB cable.....	302
41X2463	Fuser, 110 V.....	302
41X2464	Fuser, 220 V.....	302
41X2458	HVPS.....	302
41X2451	Left cover.....	292, 294
41X2459	LVPS, 110 V.....	302
41X2460	LVPS, 220 V.....	302
41X2471	Main drive.....	298
41X2455	Pick roller.....	296
41X2472	Pick solenoid.....	298
41X2456	Printhead.....	302
41X2447	Rear door.....	292, 294
41X2453	Redrive.....	296
41X2449	Right cover.....	292, 294
41X2629	Scanner stand.....	304
41X2468	Sensor (fuser exit).....	300
41X2467	Sensor (input).....	300
41X2466	Sensor (paper present).....	300
41X2469	Sensor flags.....	300

<b>P/N</b>	<b>Part name</b>	<b>Page</b>
41X2446	Top cover.....	292, 294
41X2457	Transfer roller.....	302
41X2452	Tray insert.....	296

## LEXMARK MB2236adw WIRING DIAGRAM

